The dynamic land use-transport connections and the impacts on travel behaviour: evidence from China

Abstract

There seems to be a consensus on the interdependence between the built environment and transport among academics and practitioners: the evolution of transport could lead to changes in urban form, and the changes in land use could also result in transport consequences. However, there is quite little empirical evidence to verify the hypothesis. In this paper, we aim to examine the dynamic relationship between built environment and transport system, using the case study of Nanjing metropolitan area in China where unprecedentedly fast pace of economic, social and spatial transitions have taken place. Through a comparative study based on the cross-section data of Nanjing Residents Travel Survey (NRTS), 2008 and 2011, it is found, on the one hand, fast motorization and huge investment in public transport have caused the urban form of Nanjing transforming toward low densities expansions with spread-out opportunities; on the other hand, the changing built environment has resulted in enlarged daily travel distance and considerably increase in the use of private cars and the ridership of public transport at the expense of non-motorized transport modes. The paper also finds that the impacts of the built environment are even pronounced in determining travel behaviour in 2011 while the 'classic' socio-demographics of individuals show attenuated impacts.

Keyword: Built environment; Travel behaviour; Dynamic relationship; Urban China

1. Introduction

Urban China is now experiencing unprecedentedly fast pace of economic, social and spatial transitions (Logan 2011; Friedmann 2005; Ma and Wu 2005). The fast economic growth with more than 8% rise every year (CSB 2000-2011) has greatly facilitated individual affluence. According to statistics, the average income of urban resident tripled in the last five years (CSB 2000-2011). Alongside the income rises, car ownership also rapidly increases. From 2005 to 2009, the car ownership ratio has raised from 3.4% to 10.9% in China. The increase in income and car ownership might lead to substantial changes in travel behavior as showed by studies conducted in western countries (Giuliano and Narayan 2003; Susilo and Maat 2007).

Economic growth also resulted in some social consequences. The first is the increasing social inequality caused by the widening gap in income. While majorities have improved their economic status a lot, some minorities, especially the urban poors slid further into economic despair, reflecting the nation's great economic polarization (Wang 2004; Ma and Wu 2005). Another change is 'rise of the individual and the consequential individualization of society' (Yan 2010, p.489). Individuals in Chinese society are getting more free form most previous social categories, such as family, kinship, gender, etc., and show more individualistic treats, such as self-reliance and pursuit of personal interests (Inglehart and Baker 2000). These transformations supported by higher income and car ownership will be expressed in more

differentiated and diversified lifestyles of the individuals which will eventually influence people's travel behaviour.

Besides economic and social transitions, some spatial changes are also observed. The most prominent result is the accelerating urbanisation and expansions of cities. Statistics show that yearly about 12 millions people flood into Chinese cities (CSB 2000-2011). In order to accommodate those huge new urban residents, cities expand rapidly. Taking Nanjing for example, from 2005 to 2009, the city expanded with 85 km^2 (NSB 2006-2011). Secondly, the fast motorization of transport has fuelled suburbanisation. Emerging luxury villas and gated communities have been built for a growing class of car-driving homeowners in the suburbs (Feng and Zhou 2005). Thirdly, the affluent society also provides people new options and activity opportunities, such as big shopping malls in the suburbs as well as specialized shopping, eating and entertainment districts (Wang and Jones 2002), for instance, *Xintiandi* in Shanghai.

Urbanization and development of functional specialization have offered urban residents more choices opportunities. However, in the meanwhile, they also induce dramatic increase in travel demands and therefore place intense pressures on the urban transport system (Shen 1997; Ng et al. 2010). To alleviate the tension, Chinese cities have encompassed a broad range of urban and suburban public transport investments including subway, light rail and rapid bus transport. It is reported that from 2009 to 2015, China will construct 87 mass transit rail lines, totalling 2,495 km, in 25 cities at the cost of 98.9 billion EUR (Business Sohu 2010). It is to be expected the fundamental changes in the built environment and transport supply will have large consequences for destinations and modes choice.

All three macro transitions, the economic, social and spatial changes, as mentioned above, will have important implications on travel behaviour. We might expect that travel distance will be considerably enlarged and the share of car and public transport use will increase dramatically at the expense of non-motorized transport modes as a consequence of the macro transitions. To date, most of existing literature about the determinants of travel behaviour draws on analyses of cross-sectional data gathered at a single point in time from Western countries. Quite little is known about the dynamic relationship between the built environment and travel behaviour ***over time***s, especially for the unique context of China where unprecedentedly fast and voluminous changes is occurring, which is never seen in Western countries. The study aims to understand the meaning of the changes of socio-demographics and built environment on travel behaviour, particularly with the expectation it can gain a richer, deeper and perhaps more general understanding of the true nature of the built environment-travel connections.

Drawing on data from the repeated cross-section data of Nanjing Residents Travel Survey (NRTS), 2008 and 2011, this paper will trace the trends of mode choice, daily travel distance and time in Nanjing metropolitan area and examine the impacts of the changing social-demographics and the built environment on above travel behaviour over time. The remainder of the paper starts with a review of relevant literature on the dynamic linkage between built environment and transport in section 2. An overview of the data and methods used is presented in section 3. Then we turn to some descriptive empirical results in section 4, which is followed by a discussion of regression analyses in section 5. The results will be further discussed in the concluding section 6.

2. The dynamic linkage between built environment and transport

There seems to be a consensus on the interdependence between built environment and transport in the transport and geography academia (Giuliano 1986; Badoe and Miller 2000; Wegener and Furst 2009). It is widely believed that the evolution of transport could lead to changes in urban form, and the changes in land use could also result in transport consequences. The most famous case could be Muller's four-stage model of intrametropolitan transport eras and associated urban growth patterns, which demonstrates the persistently strong relationship between the intraurban transport system and the spatial form of the metropolis of the US urban history in the past two centuries: walking-housecar era, the electric streetcar era, the recreational automobile era and the freeway era (Muller 1995). A similar classification could also be found in Newman and Kenworthy's (1996) research, who put forward three types of cities throughout urban history concomitant with the dominant transport modes that is, the walking city, the transit city and the automobile city. This classification again confirmed the closely inter-linked urban form and transport connection.

Actually, the dynamic linkage between transport and land use could be decomposed into two directions: the impacts of urban form on transport and the effects of transport on land use (Wegener and Furst 2009). For the influence of urban form on transport, the land use locations of activities in space, together with the transport resources connecting them, impact people's daily activity (travel) pattern which is expressed as flows on the transport network, therefore affects the transport system. And for the effects of transport on land use, it is the characteristics of the transport systems which configure accessibility-the ease of moving one place to another-through which the locations of activities and the land use pattern are influenced (Giuliano 1986). Jointly, these two directions form the so called 'land-use transport feedback cycle' which is commonplace in the planning literature (Handy 2003; Wegener and Furst 2009).

Both of the two directions have attracted numerous attentions from researchers. With respect to the influence of the built environment on transport, in the last few decades, a spate of studies originating from a diversity of sources and encompassing a variety of geographic scales and locations has contributed to this theme (Ewing et al. 2001; Zhang 2004; Susilo and Maat 2007). Those studies observed that various aspects of built environment have impacts on travel patterns, albeit in some cases only limited effects could be found. Compared with the effects of urban form on transport, the reverse impact from transport to land use is relatively less well known (Wegener and Furst 2009). Research in this domain is mainly concentrated in the influence of two transport means: automobile (highway) and transit on local and regional accessibility, redistribution of employment and population, economic consequences, etc. (Boarnet and Chalermpong 2001; Cevero and Landis 1997; Nelson and Sanchez 1997). They observed both highway and transit operation have been a necessary but not sufficient condition for the scale of suburban growth, low development density, dispersed employment and population and urban sprawl (Handy 2003).The land use-transport connection developments are also related to some social consequences (Preston and Rajé 2007). The famous 'spatial mismatch hypothesis' is the case in point, which addresses the problem that the social vulnerable groups, especially the urban poor, get economically and socially excluded in the urban form developed based on fast transport mode, especially, private car (Kain 1992; Gobillon, et al. 2007).

To data, there is quite limited research focusing on the dynamic relationship between land use and transport ***over times***. Susilo and Maat (2007) examined the influence of the built environment on commuting parameters at three points in time: 1995, 2000 and 2005 in the Netherlands, and found that the contribution of built environment in commute distance and commute mode choice models has increased. Through a comparison of commuting duration in 1977 and 1996 in Quebec city, Vandersmissen, et al. (2003) found that due to decentralization and the scatteration development, accessibilities measuring the degree of mutual co-location of jobs and housing have decreasing effects on commuting time. With respect to the research in China, to the best of our knowledge, there is no literature examining the dynamic linkage between land use and travel. The limited research draws on analysis at single point of time. For example, Pan et al. (2009) examine the impacts of urban form on travel behaviour in four neighbourhoods of Shanghai and find that people of pedestrian/cyclist-friendly neighbourhoods travel shorter distances than those of other types of neighbourhoods. Wang et al. (2011) reported that residents of the newly developed built environments, such as commodity housing community and social welfare housing community tend to travel longer distance and time with more private cars than people living in traditional *danwei* community in Beijing.

Our review of the literature has revealed that few studies have focused on the dynamic relationship between socio-demographics, built environment and travel behaviour ***over times***, especially in China. In the current paper, we have the following hypothesis: due to the expansion of the metropolitan area, the increase in car ownership and huge investment in public transport, especially in transit system, it is expected daily travel distance will be enlarged accompanied by the increase in the use of private cars and the ridership of public transport while travel time remains steady according to 'time budget hypothesis' in Nanjing metropolitan area, just as what have taken place in western counties; the 'classic' socio-demographics are expected to be less influential in determining travel behaviour owing to the more individualized society; as a result of the constructions of new metro lines as well as more diversified group composition in built environment in terms of density and mixed land use compared three years ago, the built environment is expected to get even weight in influencing travel behaviour.

3. Research design

3.1 Data and case study area

Our case study area is Nanjing metropolitan area. It is the capital of Jiangsu Province, and the second largest commercial centre in East China. As a former national capital, the city has a prominent place in Chinese history and culture (Cotterell 2008). Our data on travel behaviour in Nanjing results from the Nanjing Residents Travel Survey (NRTS; in Chinese: Nanjingshi jumin chuxing chouyang diaocha). It is conducted on all Tuesdays, Wednesdays and Thursdays in June every year. Our sample contains 2991 cases in 2008 and 1990 cased in 2011. The big difference in sample size is because that in 2008, Nanjing Transport Planning Committee made so called 'Comprehensive Transport Planning', and thus more samples are conducted. The reason why we choose 2008 as the start point is because since that year, the suburbs of Nanjing city have been included in the survey.

One might argue that the time period is too short to have sufficient changes for comparing. However, urban China is experiencing fast transitions in economic, spatial and social aspects nowadays and the speed for Nanjing, one of the pioneering cities in the east part of China, is even notable. Table 1 shows some of the basic socio-demographic, the built environment and public transport supply information in Nanjing in 2008 and 2010. Because the statistical data for 2011 is not yet released, here we use the data of 2010 by which we can see that huge changes are already observed. As indicated by Table 1, the pace of built-up area increase is much faster than that of population, which results in a large reduction in population density. Household car ownership increases at a speed of more than 2% every year which could be the consequence of the rapid rise of income. With regard to public transport, both bus and transit supply increase considerably in only two years. It is needed to note that in 2008 there is only one metro line while in 2011, there are two more. The built environment changes can also been found in figure 1.

Insert Table 1 here

Insert Figure 1 here

3.2 methods

In investigating the changes of daily travel behaviour, what are the appropriate characteristics? Daily travel behaviour can be measured in terms of travel frequency, distance and time spent travelling, and mode choice. Travel frequency captures the total number of activities conducted, but provides limited information because of the small variations between individuals (Giuliano and Narayan 2003) and is thus excluded in our analysis. Existing literature shows that mode choices vary substantially with travel purposes (Zhang, 2004). In our analysis, we split mode choice into two sets: mode choice for commuting and for shopping-leisure trips (including shopping trips, social visits, sports, culture, recreation, waling or cycling around). The daily travel distance can fairly measure the 'everyday competence' or the ability to accomplish maintenance activities and to participate in social and economic activities of a person (Mercado and Paez 2009) and total daily travel time represents an indicator for the ability of people to move through the city for pursuing their daily life. In sum, in this paper we will focus on four travel characteristics: mode choice for commuting, mode choice for shopping-leisure, daily travel distance and time.

The general model for travel behaviour is:

$$Y=f(X, B, \mu)$$

Where, Y=daily travel behaviour; X= attributes of the individual; B= attributes of the built environment; μ= unobserved factors. The X variables capture the main socio-demographic characteristics related to travel. In this paper, we include gender, age, education level, household car ownership, household composition and household income in the regression models. The built environment variables including in the paper are population density, access to transit measured as distance to the nearest metro station and land-use mix (add note here, for methods of the calculation of land-use mix).

The present research intends to examine the changing impacts of socio-demographics and the built environment on travel behaviour between year of 2008 and 2011. To do so, the two sets of observations are pooled into one set. Here, the 2991 observations for 2008 are added to the 1990 observations for 2001, producing a pooled sample of 4981. Dummy variables are then

used to test both independent and first-order interaction effects (Giuliano and Narayan, 2003; Vandersmissen, et al.; 2003) as shown in the following equation:

$$Y=f(X, B, \mu, XR, BR, R)$$

Where, R= yearly dummy, which equals 0 for 2008 observations and 1 for 2011 observations, are used to test the difference between the intercepts. XR and BR are the interaction variables of the original independent variables multiplying by the yearly dummy variable R, which are used to test the difference between the regression coefficients of each variable.

4. Descriptive analysis

Insert Table 2 and Table 3 here

In this section, we show the changes in mode choice, daily travel distance and time by some cross-tables. The discussion here serves as a background of multivariate analysis.

As demonstrated in Table 2, big changes in mode choice have occurred in only three years time. The use of public transport and car both increase by 4 percent at the expense of decline of cycling. These changes are duo to, firstly, the great increases in public transport supplies in both bus and metro systems and fast motorization, as shown in Table 1. Secondly, the fast urban expansion and suburbanisation has enlarged the average trip distance which stimulate use of fast transport modes.

Compared with 2008, travel distance shows a sharp increase of 0.8 km per person per day. Checked for specific travel purposes, it shows the increase mainly stems from commuting trips. This might be caused by urban expansion and residence suburbanisation. As shown in Table 1, Nanjing metropolitan area has been extended with 32 km^2 in only two years, which leads to increase of travel distance. The statistics show that in 2010, the population of the central part of the metropolitan area decreased about 5 000 person while in the suburbs, the population increased with 30 000 person (NSB 2006-2011). Economic reconfiguration, fast motorisation and expansion of infrastructure are the main reasons for this spatial redistribution (Feng and Zhou 2005). Nanjing is still at an early stage of suburbanization so far, only residences of the urban population moved out to the suburbs while employment is still concentrated in the central city. This causes substantial increase in commuting distance from 3.8 km to 5.6 km (Table 3).

Unlike with mode choice and travel distance, total daily travel time shows negligible change in the last three years. This seems to be in line with the so called 'travel time budget' hypothesis (Zahavi and Ryan 1980). Table 3 shows that the stable total travel time is actually a react of a large increase in commuting time and a decrease in travel time for shopping and other travel purposes.

Turning to specific transport modes, all transport modes show increase in travel time. The exception is public transport which could be the consequence of the operation of two new metro lines in Nanjing which greatly improved the speed of the public transport system. Our dataset shows that trip time of public transport decreased from 51.7 to 43.9. The time for commuting by car increased the most, which might be caused by the increasing car ownership

and usage. Less time is spend on shopping, leisure and other purposes by car which might be a reflection of the chaining of these trips.

In sum, in only three year time, large differences are already shown in mode choice and travel distance. In the next section, we will employ regression analyses to reveal what are the reasons for those changes. We have conducted regression models for mode choice and travel distance and time. However, in the travel time model, quite few variables have significant changes, moreover, the information of those significant result could be sufficiently covered by the models of travel distance and mode choice. Also for the reason of limited space, here we only demonstrate models for mode choices and travel distance.

5. Multivariate analysis

5.1 Mode choice for commuting trips

Insert Table 4 here

As indicated in Table 4, the dummy variables of the year of 2011 for both walking, public transport and car are positive and significant, meaning that the possibilities that people choose these transport modes for their work trips increase compared with cycling when independent variables are zero. This is in line with the descriptive result that cycling decreases the most among the four modes. The dummy variables here capture the many differences between the two points in time that are not explicitly controlled for in the model. For example, the road environment is becoming more and more crowded and unsafe for cycling, owing to more cars flooding into the roads which are mixed used by both bicycles and cars (Li et al. 2010). This change will make people hesitate to cycle. In this section we only focus on significant parameter for changes.

There is only one variable having significant change in the column of walking. The effect of distance to the nearest station on choosing walking relative to cycling decreases significantly. In 2008, as there is only one metro line, stations are located at the employment and shopping centres where all kinds of facilities distribute compactly. Consequently, the nearer to the metro stations, the high propensity to walk. But in 2011, more metro lines and more stations were constructed. Some new stations are no longer located at employment and shopping centres. For instance, some of them were located in residential areas which might be far away from employment centres. People living there therefore have to commute by other means rather than walk. For this reason, the impact of access to metro station diminishes.

With respect to public transport, women are less likely to take public transport for commuting than men, but in 2011 the gap was significantly narrowed. This might be interpreted by the diminishing gender difference in commuting distance. Our dataset show that the gap decreases from 0.6 km in 2008 to 0.3 km in 2011. The diminishing gender differences actually is the result of more provision of daily care facilities for children and elderly (Goh 2009), more higher educated women and the emancipation of the society (Leund 2003), which all relieve women from heavy household task and allow them to have the same jobs as men. For the households with cars, the propensity of using public transport for commuting increases significantly. In Nanjing most households have only one car which means other members except the one who use car have to commuting by public transport. The impacts of

household composition do not change so much with only couples having significant increases in the usage of public transport. Since the big increases in public transport supply have encouraged all people to commute with public transport, especially for couples who confront less time pressure and easily make coordination with family members, however, public transport is less attractive to core families, due to the inconvenience to combine other trips such as sending child to school with commuting. Only one measure of built environment has significant changes: population density shows decreasing negative impacts on the choice of public transport. The reason is that recent public transport provisions are located in the suburban communities where the density is not so high, which makes density not so efficient indicator for public transport use as before.

Gender differences also significantly diminish in choosing private car for commuting in 2011. Again, the decreasing gap of commuting distance between men and women might account for this change. The gap between people of more than 50 years and young people in using private car is significantly widened due to the lower rate of car and licence ownership of the employed elderly. With respect to the effect of income, people of low income are less likely to commute by car than they were three years ago relative to high income which is a consequence of relatively low car ownership amongst low income category. Couple is the only household type showing significant increasing in choosing private car in household types. The gap between core families and couples is narrowed, which might be a consequence of the complex travel patterns and tight time budgets of families. As for the built environment, in contrary to the changes in public transport, population density is even more influential in choosing private cars for commuting. The emergence of lower density communities in the fringe of the city in which people mainly use car for commuting to cover the long distance might account for the effect (Zhou and Logan 2008). People who live far away from the metro stations are more likely to use cars for commuting than they were three years ago. This could be the case that the places far away from metro stations are actually the places far away from employment centres. Consequently, when public transport is not an option, people will rather likely commute by cars.

5.2 Mode choice for shopping-leisure trips

Insert Table 5 here

Similar to the model for commuting trips, the dummy variables of 2011 for waling, public transport and car are significantly positive. The same reason could be found. The other significant change appearing in the column of walking is from people of more than 50 years old. Compared to three years ago, people of this category are more inclined to choose to walk instead of cycling. This is not surprising, given that the elderly should be more sensitive to the 'cycling-unfriendly' road environment changes mentioned above (Mercado and Paez 2009).

With regard to public transport, people of more than 50 years old again show increasing propensity to use public transport instead of cycling compared with three years ago. The improved public transport service could have changed their perception of using public transport, and consequently more use of public transport are observed. A short distance to the nearest metro station has a strong positive impact on the use of public transport, and in 2011 the impact is enhanced. The reason might be that more shopping and leisure centres are linked by metro lines compared with three years ago, which induces more people to use it for shopping and leisure trips.

More significant changes appear in car use. Females are more likely to use car for shopping and leisure than three year ago, which partly is the result of a dramatic increase of driving license from 13% to 21% among women. The difference in car use for shopping and leisure trips between people of more than 50 years old and the young people is enlarged in 2011. In the three years, more rural resorts are emerging in the fringe of the metropolitan area to provide opportunities for the urban residence to experience farm life (Gao et al. 2009). Compared with the elderly, young people are more likely to drive car there for recreational activities.

The importance of household income is more pronounced in 2011 on car use. The difference between people of high income and middle income is decreased while the gap between people with high income and low income was deepened. For the middle income people, the relatively lower cost for owning and using private car compared with their income increase, encourage them to own and use more of cars (Ng et al. 2010). But for the low income people, especially for the urban poor, things go the other way around. Due to the increasing inflation, the increase of transport cost is actually relative higher than their income increase. Compared with three years ago, extended families are more likely to use car for shopping and leisure activities relative to cycling. This makes sense since: extended families have more financial resources to afford the ownership and use of car than core families. Cars are more suitable for complex travel patterns in extended families than other modes.

Compared with the commuting trip model, the impact of the built environment is less changed in affecting car use. The only significant change is the enhancement of the positive impacts of distance to the nearest metro station, suggesting that people living far away from metro station are even more likely to choose car for shopping and leisure trips. The reason could be same as that in commuting trip model. Generally, the results here indicate that when public transport is not an option, people will choose the car if they live far away from city centres.

5.3 Daily travel distance

Insert Table 6 here

Table 6 shows the regression result for total daily travel distance. The last two columns indicate the changes of confidents of independent variables, which actually are our main focus. The Yr 2011 dummy has a significant positive coefficient as expected and of reasonable magnitude. Like the dummy variables in the regression models of mode choices, it also captures the many differences between the two years not explicitly controlled for in the model, for example, social changes in values (more intention to have out-home activities due to the tendency toward recreation and consumerist society (Chao and Myers 1998; Stockman 2000)), expansion of the metropolitan area (longer trip distance), relative low transport cost compared with income increase in general (financial support for longer travel), and transport supply differences (more bus lines available), etc, which contribute to the longer distance in 2011.

With regard to socio-demographic attributes, people of more than 50 years old travel significant longer than they were three years ago. Due to the social changes mention above, people tend to have more out-home activities than before, and the elderly confront less time constrains which ensure them travel more (Mercado and Paez 2009). Household car ownership shows no significant impact on distance travelled in 2008 but significant positive

influence in 2011. This might be related to the change in value of use of car from status symbol to instrumental purposes (Li et al. 2010). Similar to model for shopping-leisure trips, the two categories of household income changes in different directions. The same reason could be expected. With respect to household structure, couples travel significant longer distance than they were three years ago relative to core families. This could be an effect of social changes mentioned above that couples who live together are more inclined to make more out-of-home activities, while for the adult member of core families, the presence of a child largely offsets the effect.

All of the three measures of the built environment have expected impacts on total travel distance. The significant coefficient of the interaction term of population density indicates that it has larger impacts compared with three years ago. Two possible reasons might be given. First of all, population density can be considered, to some extent, a surrogate of distance to city centre (Levinson and Kumar 1997). Duo to the concentration of jobs in city centre and residential suburbanization, commuting distances have increased. Secondly, during the three years, more lower density and relatively mono-functional communities are developed in the suburbs (Zhou and Logan 2008). Compared with high density communities, these low density areas are more diversified in that high density places are more similar with each other in levels of accessibility, transit availability, etc. (Giuliano and Narayan 2003). The more diversified group compositions increase the importance of population density. People living near to metro stations seem to be inclined to travel larger distance. Those two new metro lines in Nanjing have created network effects that have greatly promoted the accessibility of more places and induce people travel longer distance.

6. Conclusion and discussion

The present study set out to explore the changes of mode choice, travel distance and time in Nanjing metropolitan area. As expected, impressive changes have occurred in only three years. The ridership of public transport and use of private cars increased sharply at the expense of cycling. Meanwhile, daily travel distance also enlarged considerably. Through analysis, it is found that those changes can be partly explained by two interrelated causes. On the one hand, economic development results in individual affluence, fast motorization and expansions of infrastructure, which provide more opportunities to use the fast transport modes. Motorization and investments of infrastructure, on the other hand, fuel expansions and suburbanization of the metropolitan area, which increases the average travel distance and in turn facilitates the need to use fast transport modes. The results here lend some supports to the hypothesis of Muller (1995) which assumed that urban form and the dominant transport systems are dynamically linked as mentioned above, It is worth noting that the significant yearly dummy variables in the regression models for travel distance and mode choice indicate that the changes in travel behaviour are also partly the result of other period-specific factors that not directly incorporated in the models. For instance, the lower transport cost relative to the income increase provides more financial resources for ownership and use of private car and longer travel.

Our analyses support the hypothesis that the classic socio-demographics of individuals show attenuated impacts on travel behaviour. The economic growth and spatial transformations have provided people more opportunities in terms of more financial resources, more

specialized destinations, and more transport mode choices, etc. which make it possible that majority of the population to choose from various options in their consumer, specifically travel, behaviour and lead to more individualized and contextual behaviour. Many researchers have claimed that some of the objective socio-demographics such as gender, age and education, will lose weight in determining travel behaviour and make way for the subjective elements including personal attitudes, values and preference and wishes (Scheiner 2010). The current empirical study supports the hypothesis. In our model, the travel differences caused by 'classic' socio-demographic such as gender, education and age are diminishing. Our results here suggest that to make precise projections of travel behaviour of metropolitan residents in the future as the base for policy making, it is not insufficient to count only on the conventional factors, other lifestyle-oriented variables including personal attitudes and preferences, etc. are also needed.

In contrast to the increasing influence of socio-demographics on travel behaviour, the built environment are even pronounced in determining travel behaviour in 2011, also as expected. This could be the result of more diversified group compositions in urban configurations of 2011. For instance, communities in 2008 show more similarities with each other in built environment in terms of high population density. While in 2011, more low density commutes are developed and consequently, more diversified communities is emerging. Since land use, which is considered as effective means to achieve desirable transport objectives is premised on that residents' travel behaviour can be influenced by the regulation of land use patterns, our results here have implications for transport policy. The increasing impacts of the built environment on travel behaviour enhanced the premise and therefore provide theoretical base for planning initiatives.

However, the picture of urban China also shows some dissimilar to western countries. Due to the urban form of Nanjing transforming toward development with spread-out opportunities, the number of economic and social opportunities in the same radius decreases and causes social inequalities for social vulnerable groups, especially the urban poor, in that less economic and social opportunities can be accessed within the same distance compared 3 years ago. Unlike western countries, which developed at a much lower speed and have time to relieve the tension of the mobility inequality between different social groups, the massive changes taken places in a very short time in urban China make them confront even severe situation. More attentions should be paid to promotion of the mobility of special social groups and the reduction of the transport-related social exclusion in the future to guide the development towards socially sustainable direction.

Another negative consequence of the current developments is the transformation of land use-transport system of Nanjing metropolitan area towards a direction away from environment sustainability. Fast motorization, more use of private cars and longer travel distance all contribute to the increasing emission of CO2 and noise and energy consumptions. Statistics show that China has already become the world's single largest emitter of greenhouse gases (International Energy Agency 2010), while the country is still in the early stages of motorization, with just 32 vehicles per thousand persons in 2007, compared to 595 per thousand persons in Japan and 820 in the United States (World Bank 2010). How to guide the Chinese cities to develop in a sustainable way will become the biggest challenge for the policy-makers in urban China.

As mentioned in the literature review, Muller has identified four eras of land use pattern in line with dominated transport modes for the US urban development history: the 'Walking-Horsecar Era', the 'electric Streetcar Era', the 'Recreational Automobile Era', and the 'Freeway Era'. The theory is also suitable for the urban development of some European countries. However, when applied into Chinese cities, the four-stage model needs modifications. Due to the fast and massive urbanization, industrialization and motorization coming at the same instant, we might see that urban China seems to be compressing these four eras into a single hybrid. It is possible that the urban form of Chinese cities will be much more fragment in land use configuration than their western counterparts: some parts of the cities is 'walking-cycling' city , some parts 'transit city' and other parts automobile city shaped by the dominated transport modes-walking (cycling), transit and automobile-respectively.

The fast and massive changes in economic, social and spatial dimensions have made China a quite unique and complex case and pose great challenge for the policy-makers. Thanks for the strong capability of controlling land and other resources (Pan et al. 2009), the government can quickly and effectively respond to those changes and resolve the problems, to some extent, through land use planning and other policy instruments. However, as there is always lag between planning and the reality as well as uncertainty of planning outcomes, there still are big risks that the Chinese cities go in an unintended and unsustainable direction.

The research has some obvious limitations. For instance, we only have a three year period, which might be too short for the social changes, especially the changes in people's world view and perception, though economic changes are considerable. It should be more valuable to investigate the dynamic connections between socio-demographics, built environment and travel behaviour in a long term. Another shortcoming is that we only include the conventional 'object' socio-demographics in our models with no subject lifestyle-oriented variables, such as personal values and preferences. Since the society is transforming toward more individualized settings, those variables are expected to explain more of people's behaviour. Therefore, in the future, more research that incorporates those effects is needed. Despite these limitations, however, the results provide a pioneer research for systematic comparative analysis on travel behaviour and its determinants over times.

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Seismic Risk Study for the Sustainable Development of Tbilsi City Urban Area

Nino Chachava[1], Malkhaz Lekveishvili[2], Nikoloz lekveishvili[3]

Abstract

The international Experience of Developed countries and the Socio-Economical losses during the recent earthquakes happened in Tbilisi City underlined the importance of seismic factor consideration at all stages of governmental policy

- In governmental will, caused by social needs
- In city development concept at the realization level
- In Tbilisi City Master Plan Development at the legislation level

For integration of seismic aspects into Tbilisi City Master plan the evaluation of all city-forming factors becomes necessary in accordance with seismic hazard of territory.

Recent several years we have been working in this direction, especially on the problem of urban seismic risk reduction [1].

This gave us, the Association “Engineering Idea”, the possibility, by the support of Swiss Agency for development and cooperation, UNDP, Georgian National Committee of Disaster Risk Reduction and Environment Sustainable Development, in collaboration with the M.Nodia Institute of Geophysics, the K.Zavriev Institute of Structural Mechanics and Earthquake Engineering, “Idea Design Group” LTD and Georgian Technical University, to develop the special model of seismic risk study for Tbilisi urban area [2,3].

The urban factors were ranged according to their relation with seismic effect.

According to the limitations and special requirements the urban factors’ data were grouped and defined by the level of seismic vulnerability and fixed as the seismic risk.

The model of seismic risk assessment which was transformed and developed in ARC GIS System gave us possibilities for visual assessment of any urban area according to the factors separately or in complex.

The positive points of this methodology were: the opportunity of scenarios development; visualization of results; simplification of Urban factors seismic risk arrangement; creation of close links between the urban databases and city maps; strong management between city layers.

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This gave us possibility for quick testing of all urban decisions and visual analyses of their outcomes.

The seismic risk urban analysis show the diversity of urban factors nature in different environments, influence of seismic micro-zoning data on seismic risk assessment, impact of urban factors to each other during this assessment.

The special recommendations were prepared for Tbilisi Master Plan Development, for private and Institutional organizations involved into the City system and construction management, expertise, insurance and estimation.

The general outcomes were developed for urban seismic risk mitigation

1. Introduction

The increase of population in cities and urbanization in seismic-prone areas causes the growth of infrastructure. The goal of society is to create infrastructure that is protected from destructive earthquakes and to minimize the expected losses. The proper assessment of seismic risk is of crucial importance for sustainable economic development of cities and protection of society.

2. Case Study for Tbilisi Urban Area

This problem is of vital importance for Tbilisi as it is a capital of Georgia and one of the most important cities of Caucasus Region. According to the last seismological

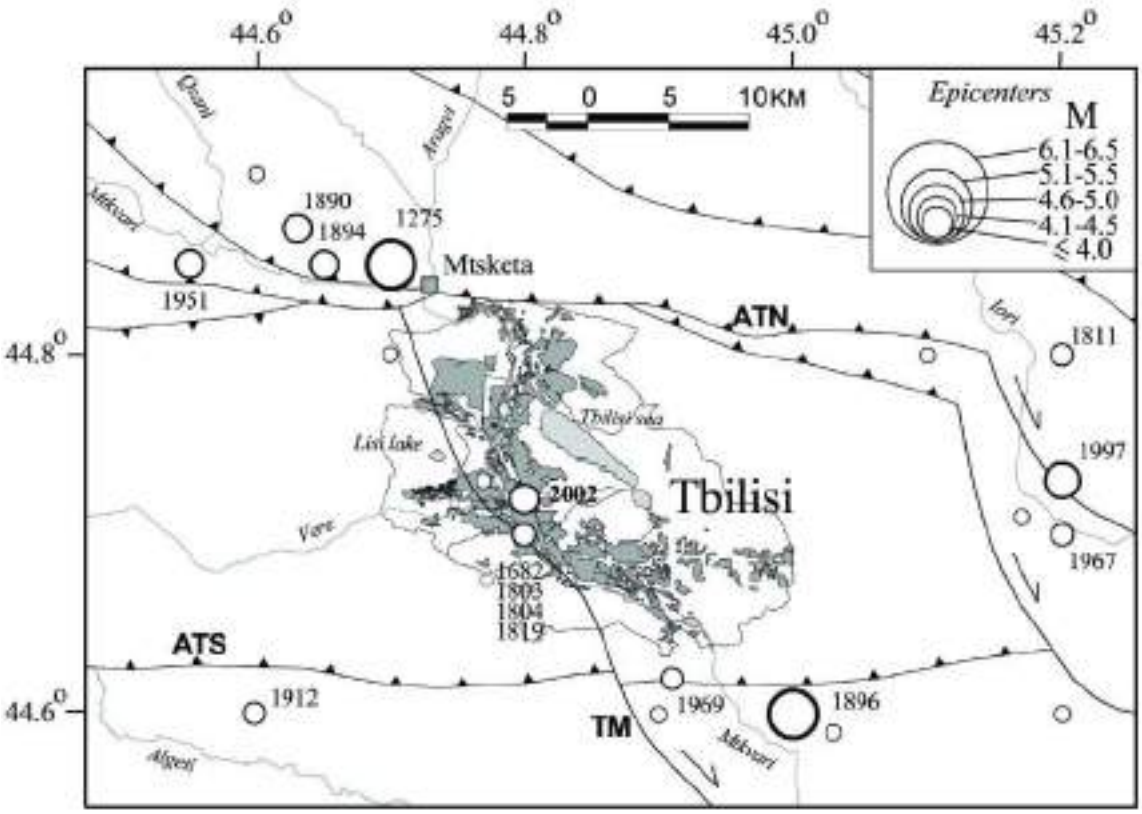

Fig. 1 ATN -The North Achara-Trialeti thrust fault; ATS - The South Achara-Trialeti thrust fault; TM - Tbilisi-Mtkvari dextral strike-slip with reverse fault.

investigations and databases new seismic foalt was developed across the river Mtkvari exactly under the City [3] (Fig.1)
New seismic building codes can't keep up the rapid growth of the city demands. That is why the risk to be injured by the collapses, fires or floods caused by the earthquakes increased significantly.

It must be mentioned that the tourist infrastructure, governmental, nongovernmental activity, private business development concentrate the intensive construction works exactly across the river line as well as in the most densely populated historical built up environment, without the a seismic analyze during the general reconstructions of engineering and transport communications. This was confirmed by Tbilisi earthquake of 2002 years.

The new Master Plan for Tbilisi City future development (Fig.2) was excepted in 2009 (registration N 010.270.000.36.101.013.215, Georgia, 2009). But unfortunately the seismic hazard and risk factors were not included there again . Due to this there was significant gap in the evaluation of main transport, functional and other potential distribution units.

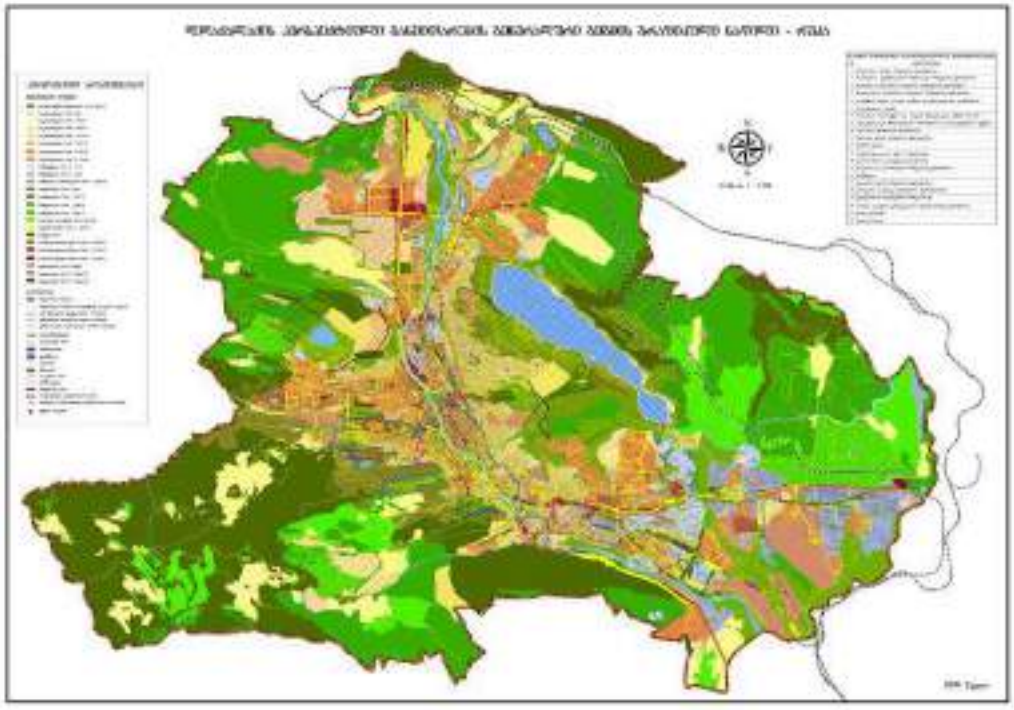

Fig. 1 ATN -The North Achara-Trialeti thrust fault; ATS - The South Achara-Trialeti thrust fault; TM - Tbilisi-Mtkvari dextral strike-slip with reverse fault.

The Municipality of Tbilisi suffered big socio-economical losses in the city after the 2002 earthquake, which provoked intensive damages in the city, especially in its historical part not only during the seismic shakes but after them too.

By the support of Swiss Agency for development and cooperation UNDP, in collaboration with the Georgian National Committee of Disaster Risk Reduction and Environment Sustainable Development, Georgian Technical University, M.Nodia Institute of Geophysics, the K.Zavriev Institute of Structural Mechanics and Earthquake Engineering, Association "Engineering Idea", "Idea Design Group" LTD, the special model of seismic risk study for Tbilisi urban area was developed.

3. Methodological Bases of Urban Seismic Risk Study

The scheme below shows the methodological bases and objectives of urban Seismic risk study (Fig. 3).

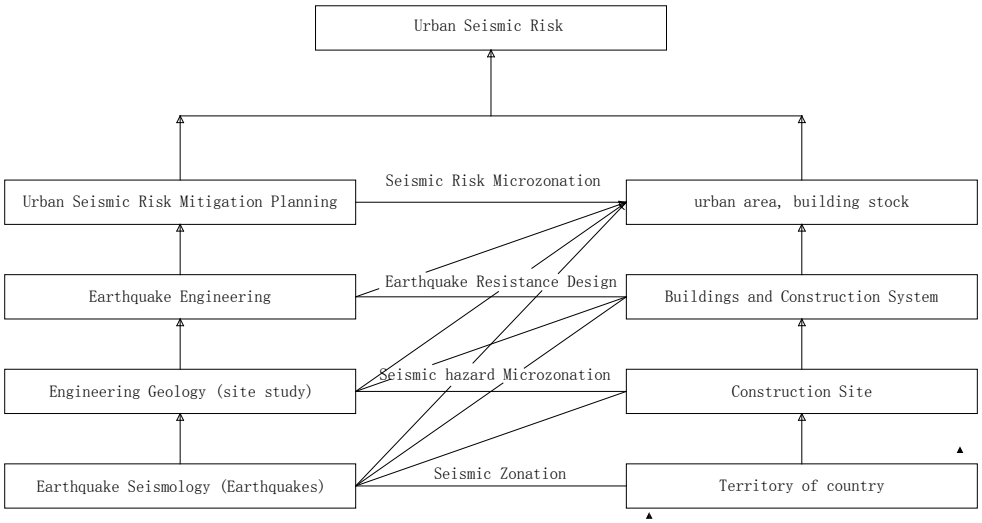

Fig. 3. The methodological bases and objectives of urban seismic risk study

For integration of seismic aspects into the Master Plan of Tbilisi City development we evaluate the seismic vulnerability of deferent city-forming factors.

This enable us to develop the special model of relative seismic risk R, which becomes the indicator of seismic hazard influence on the urban factors' seismic vulnerability [3]. (fig. 4)

$$R_j = \frac{\sum_{i \in S} f_i\left(k_{i,j}\right)}{\sum_{i=1}^{n} f_i\left(k_{ij}^{\max}\right)}$$

Fig.4 The Formula of relative seismic risk R identification

In Fig 4. R_j - value of relative seismic risk of the site; f – value of a function or modifier which define risk; s - number of factors which define risk of one element; n-number of factors which define risk; j – index of a site.

The main regions of Tbilisi City were investigated in this work empowering us to fix the significance of urban factors influence on urban seismic risk reduction across the large territory that gives the possibility of efficient construction and planning management for sustainable development of the city.

According to the limitations and special requirements the urban factors' data were grouped and defined by the level of seismic vulnerability.

According to the limitations and special requirements the urban factors' data were grouped and defined by the level of seismic vulnerability (Table 1).

Table 1. Vulnerability Evaluation for Functional Factor

Code	Usage of Object	Level of seismic Vulnerability
A	Unusable objects (Open Spaces, parks, playgrounds)	1
B	Not very usable objects (2-3 story, 1-4 multifamily apartments)	2
C	Very usable objects (Banks, 4-8 multifamily residential, small commercial and office apartments.)	3
D	Highly usable objects (big banks, hotels, schools, fire and police stations, railway and bus stations, theatres, industries, high-rise residential and commercial buildings)	4

In Table 2 is presented the vulnerability evaluation for city roads

Table 2. Vulnerability evaluation for city roads

	Type of the Roads/ The level of vulnerability	1	2	3	4
A	The Roads of City Significance and main trunk highways	>45	30-45	10-20	10>X
B	The Regional Roads	>30	25-30	25-15	15> X
C	Local Roads	>30	25-30	25-15	15> X
D	The Roads of trunk communication between cities	>65	45-65	30-40	20-30

Table 3. Vulnerability evaluation for historical heritage

Code	Usage of Object	Level of seismic Vulnerability
A	New building Stocks	1
B	All Buildings in Historical Area (Old Quarters)	2
C	The Monuments of Local Importance	3
D	The Monuments of National Importance	4

As a result, it became possible to unite all urban factors in one system and assess the relative seismic risk for any urban area as a whole or separately, for each factor (Table 4).

Table 4. Vulnerability level of Building type and other factors

		Weight Coefficient	Width of the Roads m			
A	The Roads of City Significance and main trunk highways	3	>45	30-45	10-20	10>X
B	The Regional Roads	2	>30	25-30	25-15	15> X
C	Local Roads	2	>30	25-30	25-15	15> X
D	The Roads of trunk communication between cities	1	>65	45-65	30-40	20-30
	The level of vulnerability		1	2	3	4

The model of risk assessment was transformed and further developed in ARC GIS System.

This gave us possibilities for visual assessment of any urban area according to the factors separately or in complex.

The positive point of GIS methodology is its capacity to develop various scenarios, visualize results, simplify urban factors seismic risk arrangement, create close links between the urban databases and city maps, rank the data and strong management between city layers represented various urban factors. This gives us possibility for quick testing of all urban decisions and visual analyses of its outcomes.

4. Impact of Urban Factors to the Evaluation of Seismic Risk across the Territory of Tbilisi

Below is presented relative urban seismic risk according the various factors separately or in complex

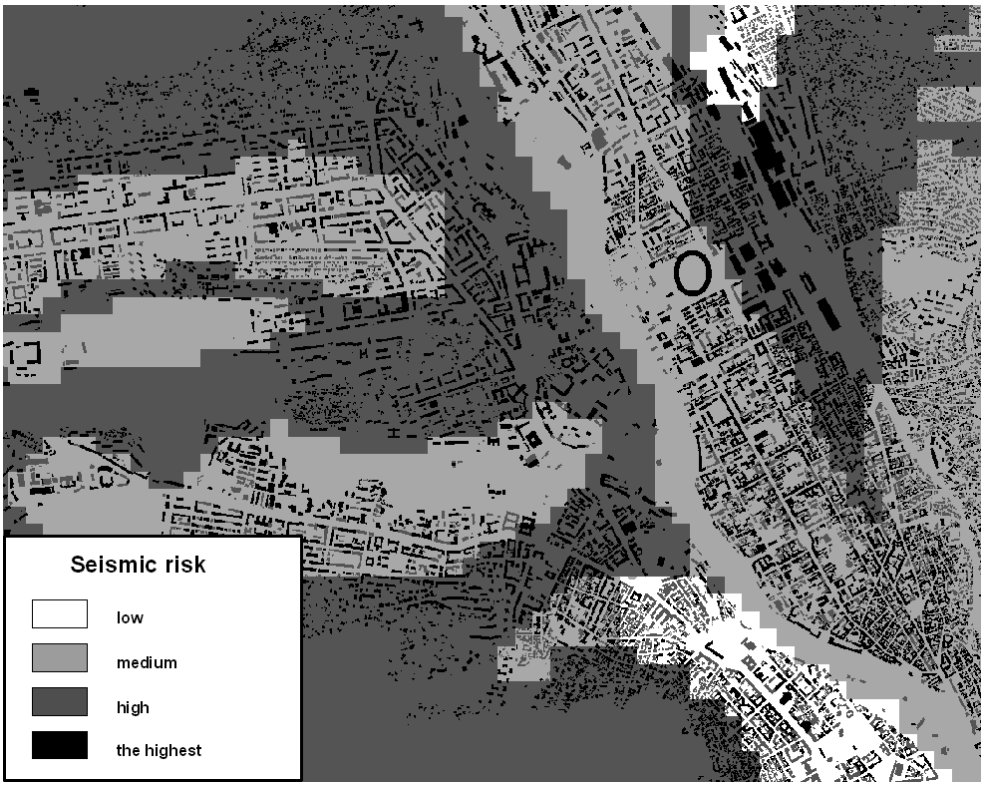

Figure 5. The seismic vulnerability of Building type, functionality, building density and seismic hazard

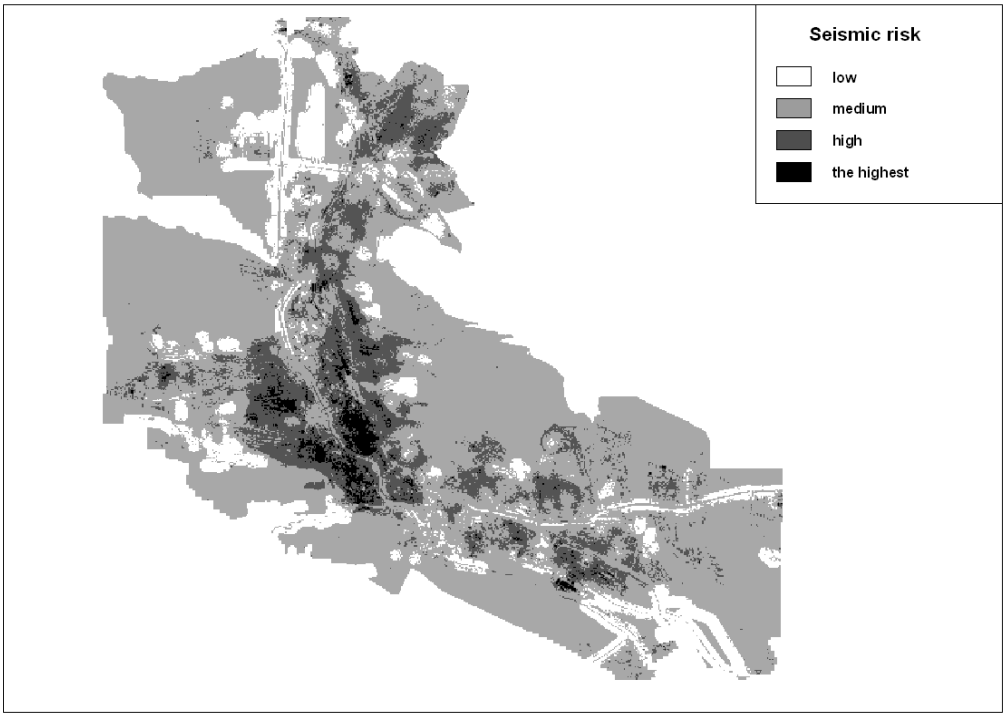

Figure 6. The seismic vulnerability of building type, functionality, building density, population density, roads and seismic hazard

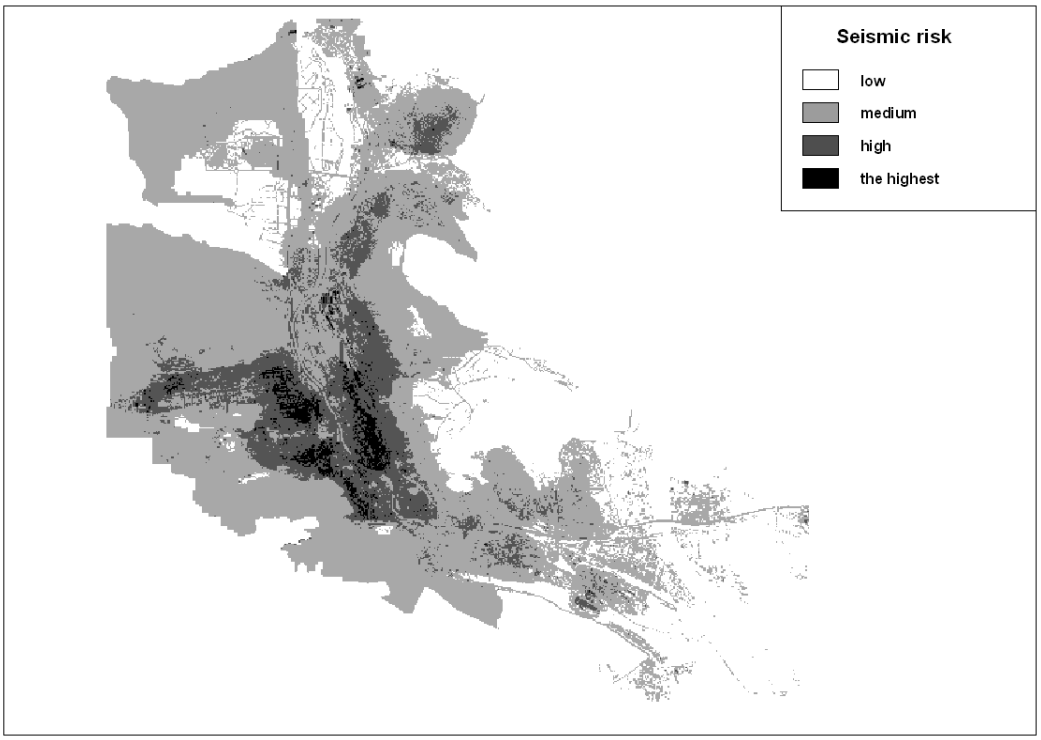

Figure 7. The seismic vulnerability of building type, functionality, building density, population density, road, distance from safe area and seismic hazard

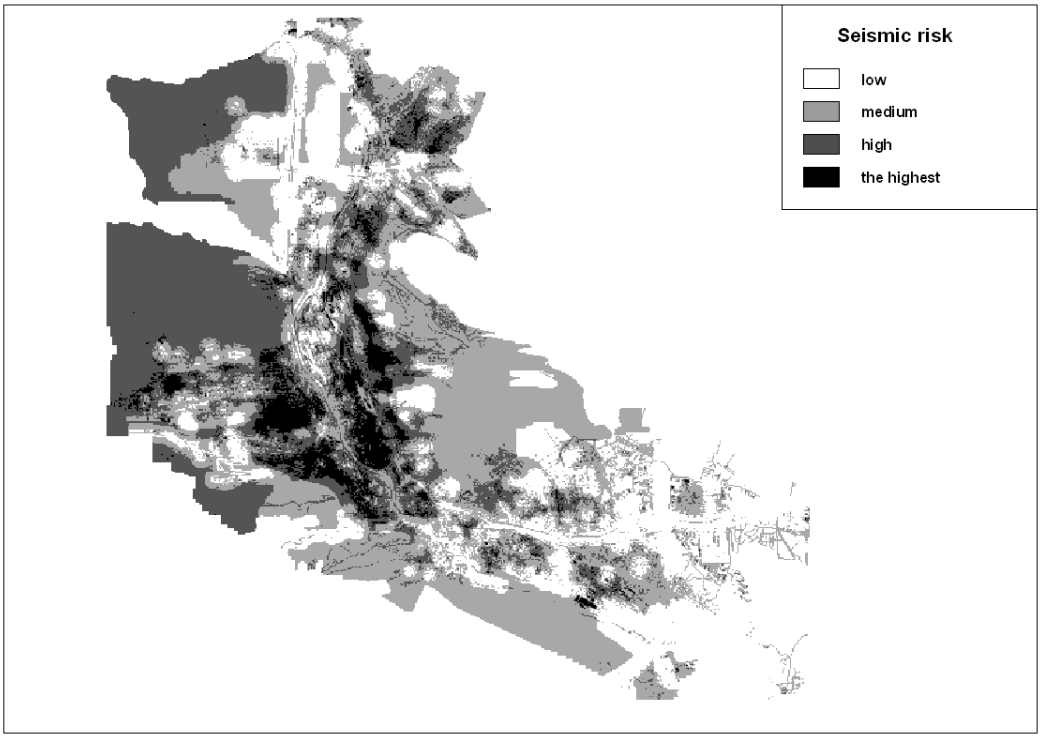

Figure 8. The seismic vulnerability of building type, functionality, building density, population density, road, distance from safe areas, cultural heritage and seismic hazard

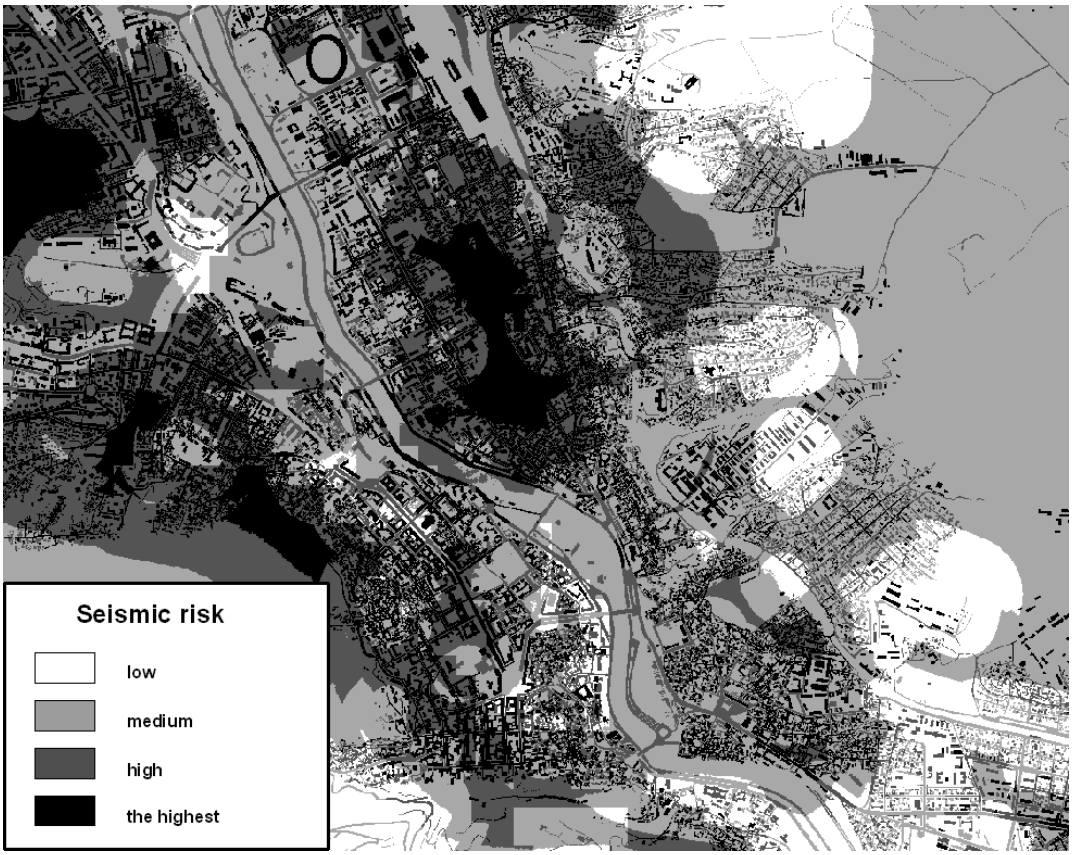

Figure 9. Relative seismic risk without seismic hazard will be added.

5. Results

Seismic risk analysis shows the diversity of urban factors nature in different environments, influence of seismic micro-zoning data on seismic risk assessment, impact of urban factors to each other during this assessment.

Thus, the urban seismic risk study results must become the natural undetached part of Tbilisi City Master Plan Development.

This should give the governmental, private and non-governmental bodies possibility to manage correctly their work and financial activity.

The urban seismic risk assessment creates good basement for bank and insurance system to be involved into sustainable development of City.

The protection and regulation of the social and functional processes in the cities located in seismic prone areas can be realized by urban planning and seismic risk testing.

The concentration and location of urban functions is based on the usual social relations between the inhabitants, their general demands, their work , their ways to relaxation.

6. Conclutions

In order to regulate the seismic risk in the process of the designing and planning it is desirable to follow the recommendations given below:

- To consider the seismic intensity of the site during the general plan development.
- To Organize the main transport distribution areas as potential logistic points during the strong earthquakes
- To Create special life lines for replacement in the case of damages on the main lifeline roads
- To protect the areas of high seismic risk, by the regulation of building stock and population density
- To define the directions of safe City development by the way of functional zoning
- To carry out the demolition of heavy damaged buildings in time.
- The disposition of the buildings of public significance and responsible buildings in convenient territories.
- Making of parks, green recreational areas in seismic hazard areas.
- Building of underground garages and parking-lots in order to unload heavy traffic in the center of the city
- Organization of the movement system in the region – creation of new passages instead of damped buildings by partial opening of ground-floors and deadlocks, which will significantly facilitate the evacuation of population and other salvage operations during the earthquakes, other disasters and their secondary element (fire, flood, landslide etc.).
- The positive influence of basements on the earthquake resistance of the buildings in case of regulation of underground waters, can be used as additional territories, that will safe historical buildings from high rising during the reconstruction process.

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UNEASY AND CONTRADICTING COHABITATION OF NEOLIBERALISM AND PLANNING: WHAT IS NEXT?

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---Draft version, not for circulation!---

Abstract

Neoliberalism may be a widely used term in both scientific and popular writings, but there remains much confusion over what its exact contents are – Brenner et al. (2010a) have called it a 'rascal' concept but confirm elsewhere (Brenner et al. 2010b) that it remains a "keyword for the understanding of regulatory reforms of our time". Infact, neoliberalisation manifests itself as a "prevailing pattern of market-oriented, market-disciplinary regulatory restructuring" (Peck, Theodore, and Brenner 2009a, p. 51). The neoliberalisation of social, economic and political processes pervades urban development, planning and governance discourses and practices, and pushes them in a market-oriented direction; however the terms 'neoliberalisation' and 'planning' are seldom heard together in the same phrase. The concept of neoliberal planning may actually seem to be a contradiction to some planners; while to others it may be a signal to 'give up'. Planning, if anything, may be seen as being in direct contrast to neoliberalism, as something that should be rolled back or even annihilated through neoliberal practice. To combine 'neoliberal' and 'planning' in one phrase then seems awkward at best, and an outright oxymoron at worst. To admit to the very existence or epistemological possibility of 'neoliberal planning' may appear to be a total surrender of state planning to market superiority, or in other words, the simple acceptance that the management of buildings, transport infrastructure, parks, conservation areas etc. beyond the profit principle has reached its limits in the 21st century. Planning in this case would be reduced to a mere facilitator of 'market forces' in the city, be it gentle or authoritarian. Yet in spite of these contradictions and outright impossibilities, planners operate within, contribute to, resist or temper an increasingly neoliberal mode of producing spaces and places, or the revival of profit-driven changes in land use. This paper aims to tackle this uneasy cohabitation of neoliberal planning and show the contradictions created by it while underlining the need for new planning approaches to 'deal with' neoliberalization of urban development.

1. Introduction

Neoliberalisation and market-friendly policies have been affecting the way cities develop and function for more than three decades. While cities have been going through a massive transformation process due to the deindustrialisation during the 20th century, there has also been a transformation from traditionally interventionist land-use planning dynamics towards neoliberal planning dynamics. Slowly but surely, planning institutions began to agree more and more with the changing priorities of local governments who are slowly left on their own

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by the neoliberalising states to provide necessary services and infrastructure. This required new mechanisms to allow flexible interventions to accommodate multiple actors to the process of urban development and planning. This also meant deregulations to allow involvement of new actors and also to allow the accumulation of capital in cities.

The aim of this paper is not to understand the processes of neoliberal urbanism but to underline the challenges to planning in neoliberalising cities, which need to respond to contradictory processes. Neoliberal planning can best be understood as the embodiment of a set of contradictory urbanities that typify contemporary urban neoliberalism across the Western world (Baeten 2011). This paper will put these contradictions within a framework and will highlight the growing need for new approaches in planning.

The most interesting of these contradictions is in the neoliberal urban development system, which is based on market-oriented dynamics and can only function if land-use decisions are regulated by planning institutions. In other words planning is a prerequisite for neoliberal urban development. In the absence of control, property owners and landlords are at liberty to act as they please in the way they develop their property, and this will have a direct influence on the value of other land and properties. Thus, land-use planning specifically, and planning institutions in general, are needed to regulate the land and property market. Why then, has there been a transformation from traditionally interventionist land-use planning dynamics towards neoliberal planning dynamics that require more flexible intervention mechanisms?

As a result of globalisation and the increasing mobility of capital, large-scale capital investments were mobilised into the cities, especially in the form of large-scale property-development projects. Such investment opportunities became a target for capital investors, who replaced small-scale individual property owners. Looking from the land-use planning point of view, controlling and regulating the intervention of large capital investments in the city is a lot easier than controlling small-scale investments across the city. The city is now divided among major capital holders who are willing to pay the high cost of land development (and redevelopment) and small-scale property investors who invest in the rest of the land market. This division in the urban land and property market allows both small- and large-scale capital investors to exist in the city without interfering in each other's activities. Obviously, when compared to a rigid and regulatory land-use planning process, a more flexible and negotiable strategic planning process will do more to encourage such land and property market dynamics, and it is this trend to which the neoliberalisation of planning refers.

Instruments of neoliberalism have been adopted within different policy contexts in different periods, and naturally they have different meanings and outcomes in different institutional contexts. What these neoliberal agendas, strategies and policies have in common is that they all create contradictions between the principles and practices of planning for urban development. While planning literature is replete with critiques of neoliberal urban development, it ignores the consequences for the planning profession itself. In spite of these contradictions and problems, planners operate within, contribute to, resist or temper an increasingly neoliberal mode of producing spaces and places, or the revival of profit-driven changes in land use. We all agree that new planning perspectives are needed to understand the increasing weakness of cities with respect to economic, social and ecological pressures and

threats; to pay attention to the growing concerns on risks in the globalised economic system; and to bear in mind the processes that misguided development under the hegemony of capitalism (Eraydin, forthcoming). Yet, new planning approaches and concrete studies on credible alternatives are missing.

There is enough literature that points out the evils of neoliberal urban development and planning processes. Already two decades ago Albrechts (1991, p. 126) invited planners to take a new approach, calling for a paradigm shift 'from planning for capital' to 'planning for society'. He advised the planner not to become an entrepreneur and avoid attempts to steer economic forces, but so far that shift has not taken place. The blame lies not with the planners, but with the system in which they necessarily serve as agents of neoliberal urbanism. While planners keep rejecting the idea that neoliberalisation is occurring in urban spatial development and policy processes, neoliberalisation is slowly finding its way into every subfield of planning. Moreover, this 'prevailing pattern,' including its embodied contradictions, is settling into everyday practice. Marketisation initiatives have caused uneven economic stagnation, thereby intensifying inequality, inter-local competition, coordination problems, and social insecurity (Peck, Theodore, and Brenner 2009b, p. 51). While participation and bottom-up approaches are encouraged and regulated in contemporary urban societies, their effectiveness is limited by public decision-makers whose principles may be a result of pressure from market forces.

Private sector intervention has always been an issue for public policy makers but the growing problem is that planning operates more than ever within the one-size-fits-all market solutions, without powerful alternative visions of urban justice trickling down to the planning office. New planning approaches that began to mushroom everywhere, although fragmented and small scale, are not put together below umbrella conceptual frameworks. In a recent publication (Tasan-Kok and Baeten, 2011) we pointed out what is wrong in this planning approach and what contradictions are created by the system for cities and their residents with some case studies from Africa, Asia, North-America and Europe. These studies revealed the uneasy cohabitation of 'planning' – some kind of state intervention for the betterment of our built and natural environment – and 'neoliberalism' – a belief in the superiority of market mechanisms to organise land use and the inferiority of its opposite, state intervention. These contradictions included dynamics that are not alien to the scholarly literature: Displacements due to property-led gentrification processes, global processes intervening local networks of governance, marginalisation, proactive role of the state in the introduction of market principles, self-responsibilization, privatisation of infrastructure provision, opportunism, entrepreneurialism, etc. In this paper we plan to provide an overview of the outcomes of this study, putting the contradictions into a structured framework.

The paper will first give an overview on the historical development of neoliberalization of the planning institution, followed by a section that systematically defines the contradictions that neoliberal planning creates. Finally we will end the paper with a discussion on our ideas for future approaches.

2. A bit of history: Changing approaches of planning

Since the late 1970s the twin processes of deterritorialisation and reterritorialisation of capital are played out at various scales: in the neighbourhood, city and metropolitan region. Public-sector responsibilities are decentralised or privatised, economic sectors are deregulated and welfare services are replaced by workfarist social policies that favour innovative and competitive economic development (Leitner et al. 2007; Jessop 1993). While the state is being hollowed out, 'a dramatic intensification of coercive and disciplinary forms of state interventions' (Peck et al. 2009b) is occurring to cope with the effects of these marketisation initiatives and their consequences. In response, the wealthiest nations had to bail out their financial institutions as they teetered on the brink of bankruptcy during the credit crunch of 2008–2009, yet individuals and homeowners were able to take no benefit from state intervention.

Over the past two decades or so, urban development has become a common activity of a diverse group of stakeholders: public agencies, semi-independent public organisations, private companies and public-private partnerships, who have shared the responsibilities and risks of pursuing decentralised goals through individualism and entrepreneurialism. The stakeholders of neoliberal urban and regional governance (policy-makers, planners, mayors, decision-makers, municipal commission members, NGOs, civil society organisations, neighbourhood committees, urban residents, etc.) all take part in planning, either directly or indirectly, but are increasingly dependent on the neoliberal debt-oriented economy as individuals or organisations that are being held responsible for their own actions. This complex system has accelerated the trends of entrepreneurialism, consumerism and property-led development, and thereby, actors in the urban land and property market have been elevated to the position of key players in urban development. As the expanding role of governance engenders more participatory practices and a further democratisation of urban society, some public responsibilities are decentralised to semi-dependent public bodies, while others are transferred to private organisations or public-private enterprises.

During the 1950s, comprehensive land-use planning became the most prominent approach to planning. Few of the adopted plans had much legal effect, however, policy-makers tended to ignore them (Altshuler 1966). In the 1960s, many planners believed in a future in which social problems could be controlled and humanity liberated from the constraints of scarcity and hunger; while critics of this vision argued that planners were more concerned with formal planning procedures than with their outcome (Albrechts, 1991). From the late 1970s onwards, greater flexibility and the loosening of rigid rules became a common thread in planning discourse (Healey and Williams 1993). In the 1980s the Anglo-American experience suggested that plans should be continually revised to take into account new information and events. As a consequence, flexible, short- or middle-range planning gradually came to replace long-range, end-state planning (Taşan-Kok 2008), and the focus of planning practices shifted to projects (Albrechts 2004; Healey and Williams 1993; Motte 1994) and land-use regulations. Since the beginning of the 1990s planning scholars have increasingly supported strategic spatial planning as a solution to the growing complexity and increasing concern about rapid, random and fragmented development in many West European countries (Albrechts 2004; Healey 2004), where this method was considered more realistic and effective. Traditional planning practices and processes had become ineffective and were too passive to deal with property-led urban development (Fainstein 1994). Entering the 2000s, the planning profession lacked clear boundaries and a recognisable identity (Myers and Banerjee

2005). In the practitioners' eyes, the field was porous and vaguely defined, and the increased flexibility in planning was related to this openness (Taşan-Kok 2008). Besides being more flexible, the role and scope of the planner became more ambiguous during this predominantly neoliberal era, when a blurring of the boundaries became evident not only in the field, but also in planning literature. This change was precipitated by a few developments (Tasan-Kok, 2011):

- *Varieties of capitalism*, fragmented spread of neoliberal economic policies, and diverse reactions of planning institutions due to 'contextual embeddedness and path-dependency of neoliberal restructuring projects' (Peck et al. 2009b);
- *Ambivalent position of planning institution* due to the blurred boundaries between public sector and private markets (Alexander 2008);
- Increasing *opportunity-led approach* of planning institutions.

3. Contradictions of neoliberal planning

The contradictions of neoliberalism and the neoliberal state have been dis-cussed explicitly in previous literature, however their implications for urban planning have been largely ignored. The ambivalent position of planning, as set forth above, has created contingent path-dependencies and specific contradictions in the functioning of planning institutions. In this regard, it may be enlightening to con-sider the analytical framework advanced by Peck, Theodore, and Brenner (2009b, p. 55), which applies the Schumpeterian notion of the creative destruction of cities. When analysing the destructive and creative moments of institutional restructuring there are two assumptions that should be kept in mind. First, the conceptualisation of destructive and creative moments helps to simplify the highly contradictory trajectories of institutional change; and secondly, these moments are interconnected. In this light, the neoliberalisation of planning may be seen as a process of creative destruction that results in a cluttered and contested institutional environment where newly created and highly unstable spatial dynamics contradict inherited regulatory arrangements (Peck, Theodore, and Brenner 2009b, p. 57). In short, the dynamics of property-led urban development prevail in a city where a comprehensive planning system has been well established; but the destructive moment arises when a new large-scale commercial property appears at a crucial spot in the centre of a traditionally social-democratic city where some other service functions were foreseen in the zoning plans. The local government allows a change in the zoning plan, convinced that a large commercial facility in the centre would enhance the city's competitive advantage. The expected outcome of the land transaction includes a new image for the city, besides rent (and tax) revenue for the local government. Thus, despite opposition from surrounding neighbour-hoods seeking to avert high-density development and gentrification, the local government revises the zoning plan. Allowing this new type of large-scale mixed-use project requires not only altering the zoning plans, but also reversing the chain of command. Though contested, a new space of neoliberalisation is thereby created on the basis of property-led dynamics. This is just one of many examples to be gleaned from the institutional responses to the demands of neoliberal actors. That said, creative destruction does not happen systematically, nor does it conform to a standard model due to the path-dependencies mentioned earlier. The contradictions created in each planning system are path-dependent and unique due to the contradictory trajectories of institutional change. Figure 1 depicts this relationship schematically.

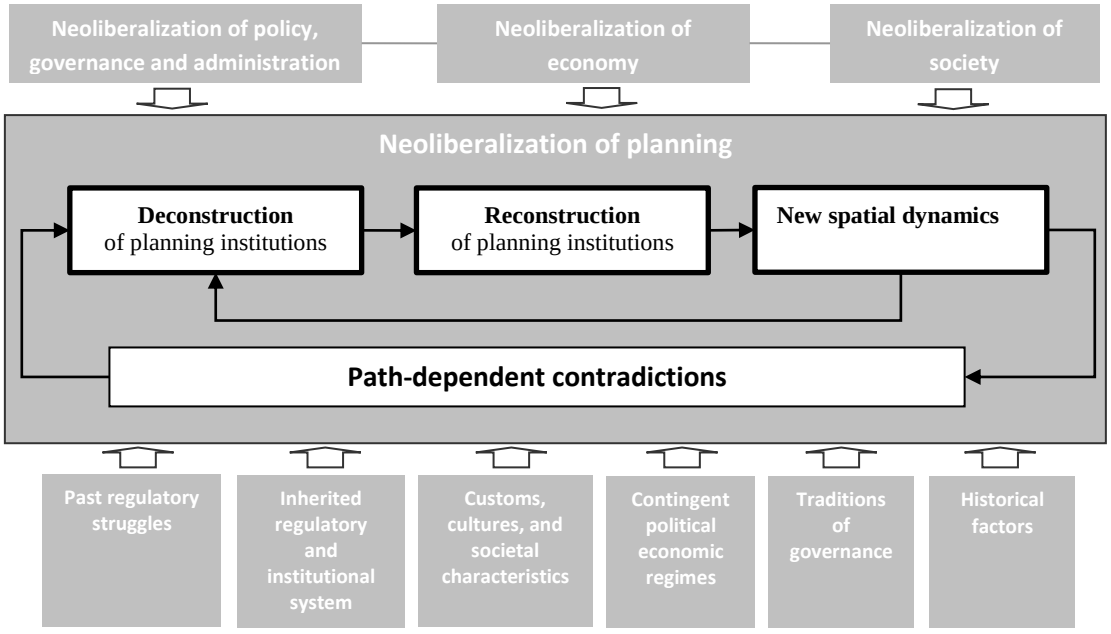

Figure 1. Neoliberalization of planning (Tasan-Kok 2011)

Harvey (2005) explored the shadowy areas and conflicts within the general theory of neoliberalism and came up with a number of general contradictions. Peck, Theodore and Brenner (2009b, p. 51) have pointed out some serious disjunctures between the neoliberal ideology and its everyday political operations. Combining these analyses, we can group the divergent incongruities into a few contradictions that are inherent in the neoliberal state. What is in common in diverse institutional structures is that they all reveal the uneasy coexistence of 'planning' and 'neoliberalism,' and explore the diverse contradictions created as a result of this coexistence.

First of all, *the transfer of responsibilities to the general public or private companies creates contradicting processes*. The general public are expected to become entrepreneurial and responsible, creating their own chances, which on the one hand create opportunities for democratic/bottom-up participation (van Dyck, 2011), but on the other result in exclusive processes (Raco, 2011; Smith and Coombes, 2011). This aspirational political approach sees citizens as entrepreneurs or consumers and this kind of policy framework requires individuals to contribute to the competitiveness of the places, and is aimed at upgrading places, as derelict areas diminish the aspirations of the public (Raco 2011). Raco (2011) argues that neoliberal policy defines a citizen profile on the basis of aspirational citizenship (competitive, entrepreneurial, highly educated, commercialised etc.), where citizens with low aspirations should take people with high aspirations as a model in attempts to become successful and competitive. In this respect, aspirational policies in the UK promoted the idea of social sustainability, while also facilitating increased social polarisation. Moreover, as Smith and Coombes (2011) argue, responsibilisation reframes individuals as agents of their own destinies, although van Dyck (2011) shows that in Canada this type of responsibilisation may also increase chances of participation and social economic progress (even though the practice

of social entrepreneurship is limited). Private companies are expected to take over the tasks that cause fragmentation (or hybridisation), and the meaning of service provision changes a result, becoming more technocratic and delimiting public access to decision-making, thus excluding certain parts of society.

Secondly, the changing role of planners creates contradictions in that *neoliberalisation increasingly frames planners as information providers whose role is merely to recommend the thresholds of safe behaviour to consumer-citizens* (Smith and Coombes 2011). Planners may shift the balance in property rights to promote risk avoidance, but the consequential decision on how to use land is transferred to occupiers, developers or tenants to the benefit of those economic actors with access to scientific and legal expertise. Consequently, responsibility is offloaded from planners, as private matters and their consequences are rightfully contemplated at the level of individual households (Smith and Coombes, 2011). Oranje (2011) also emphasises some contradictions that have been created by neoliberalism for planners and politicians, exploring ways and the extent to which neoliberalism has created a setting of rules and actions that have facilitated the continuation, development and sustenance of the approaches and actions of property developers. Oranje's (2011) case also shows how neoliberalism has increased the appetite for transformation among urban planners in South Africa, turning them into willing agents of neoliberal accumulation.

Thirdly, planning practice has moved away from *democratic and participatory processes* (Beaten, 2011). Despite the frequent 'participative planning' discourse, in planning practice the participation of ordinary citizens goes no further than including some of their reflections in the shaping of the ongoing competitive developments (if the community is participating at all), but not in such fundamental decisions as whether the project should be carried out in the first place. As Taşan-Kok and Korthals Altes suggest (2011), local networks of participation are also affected by the interference of transnational trade agreements (such as European Competition regulations).

Fourthly, the *competitiveness agenda creates contradictions for the social cohesion of cities.* Neoliberal urban policies are confronted with the uneasy task of matching competitiveness goals with the provision of collective goods and ensuring social cohesion, as Loopmans and Dierckx (2011) show in the case of Belgium. They argue that neoliberal urban development projects appear to be too divisive for the local populace to provide a basis for broad-based collective mobilisation. In the same vein, and complementing Baeten's (2011) arguments, Raco (2011) argues that the persistence of deprived or problematic groups are seen by policy makers as a hindrance to national competitiveness and generate additional financial burdens on the welfare state and society. Thus, the distinctions and differences that exist between social groups are beginning to have a negative impact on the overall competitiveness of cities and regions in this policy framework.

Fifthly, in the neoliberal agenda, *urban development strategies of central and local governments can be inconsistent and in conflict*. Eraydin (2011) shows in the case of Turkey that while the central government transferred certain planning rights to local governments, it sought to retain, or even extend, its privileges in major urban areas, especially in metropolitan regions.

Finally, property-led development creates contradictions, as Jou, Lund and Wu (2011) show in the case of Taiwan. Their findings suggest that strategies of 'flexible' accumulation by dispossession centring on land acquisition and property development are key elements in the 'prevailing pattern' of contemporary neoliberal planning, and that cities have become important spaces of neoliberalism and entrepreneurial urban politics (Harvey 1989) that are more accommodating towards investors and developers, as implemented in cities throughout the globe. This, as also emphasised by Baeten (2011), has led to the creation of disconnected patches of elite islands, and thus discontinuity and detachment in the city.

4. Discussion: What is next?

The contradiction of neoliberal planning lies in the epistemological impossibility to tackle obvious urban injustices in the absence of a convincing theoretical and conceptual framework, even if the need for planning intervention that goes beyond paving the institutional way for more market-friendly planning is obvious, acute even. Of late, leading authors in geography and planning have started to tackle this obvious conceptual hiatus that has been steadily growing during decades of neoliberal urbanism. Susan Fainstein (2010) has launched the concept of 'the just city', centered around diversity, democracy and equity, as an alternative for the 'ideological triumph of neoliberalism' which has caused "the allocation of spatial, political, economic, and financial resources to favor economic growth at the expense of wider social benefits". In Seeking Spatial Justice, Soja (2010) insists on the assertive recognition of the social-spatial dialectic (the spatial will be a constitutive part of any form of urban justice). Harvey (2008) and Mitchell (2003), inspired by Lefebvre (1968), have tried to revive the notion of 'right to the city', while both Friedmann (2000) and Amin (2006) have tried to answer the question what constitutes the 'good city'.

Meanwhile, regardless of the increasing momentum in reconceptualising notions of urban justice in academic circles, planning operates more than ever within the one-size-fits-all market solution, without powerful alternative visions of urban justice (so far) trickling down to the planning office. The success of the neoliberal restructuring ethos as an organising principle for urban policy and planning is perhaps less dependent on some form of admirably coherent economic theory than it is on keeping possible alternatives at bay. As Leys (1990, quoted in Peck et al., 2009a) formulates it, "for an ideology to be hegemonic, it is not necessary that it be loved. It is merely necessary that it have no serious rival", and, without trying to suggest the existence of mystically conspiring neoliberal powers, there seem to be tactics at work in different parts of the world that try to exactly keep alternatives out of the limelight. One is to incorporate critical social movements into the mainstream of planning through neoliberal logics such as 'social entrepreneurship' that forces social movements to prioritise the logic of funding and financial survival rather than the attainment of original social goals (van Dijck, 2011). Another tactic is to portray market-led solutions not as an option but as a necessity. In times of 'geo-Darwinism', only cities fit to successfully compete with other cities for scarce resources of capital, be they financial or human, will be or become prosperous places to live and locations where the creative classes will thrive. The 'good city', then, is the neoliberal city that successfully prioritises market so-lutions and attracts its 'fair' share of people and investment – which can be interpreted as 'just' – even if this Darwinian survival logic contradictorily leads to deeply uneven urban development at a larger scale. But cities, within this impeccable market logic, have the right to compete for profitable

investment, and urban dwellers have the right to try their luck in the world of urban opportunities created by market-led development. Further, the portrayal of neoliberal urban development as desirable, necessary, unique, or unavoidable, has a highly divisive effect on urban actors. If neoliberalisation is about the 'restoration of class power' as Harvey (2005) would summarise it, then neoliberalisation can be a strongly desirable project for those who are – or think they are – empowered by it, whether house owners selling their property with a sizeable profit in gentrifying areas, or community groups successfully bidding for financing, planners pushing through (large) development projects, politicians leaving their mark through flagship projects, or developers, estate agents and construction companies making profits from the systematic transformation of urban space under neoliberal conditions.

Neoliberal planning, however paradoxical, is tempting in many ways for many users of urban space, not necessarily including those who gain most from it, and often after the temporal suspension of genuine social concern amongst planners, politicians or community groups to enable 'development' in the first place. The thrill of competing for funding, pushing through plans, seeing spectacular architecture rising from the soil, or contributing to favourable statistics on investment, population, local GDP, etcetera can be far larger than the search for democracy, equity and diversity in the city. Neoliberal planning, then, involves the installation of a new 'planning subjectivity' in town halls and grey administrative buildings where planners do their everyday work. The excitement, pride, respect and recognition that follow from successful neoliberal planning implementations, stand per-haps in sharp contrast with the management of the poor and their poor neighbour-hoods within very limited and ever shrinking social budgets. Contributing to the overall 'gain' for the city, to the 'good' for the city, as defined by neoliberal planning principles, acts as an aphrodisiac for planners and other policy makers, since those principles form the parameters of urban success. At the same time, it be-comes increasingly difficult to stand up for the 'other' city, the city of 'loss', the 'bad' city. Seen through this lens, 'punishing the poor' (Wacquant 2009) may be an undesirable part of the urban neoliberalisation process, but nonetheless necessary and unavoidable in an age of unforgiving interurban competition in which the ghetto has no place. Moving out of sight those who are obviously guilty of failing to grab the opportunities offered by the neoliberal city, has become a constitutive part of neoliberal urbanism.

This leads us to a final contradiction of neoliberal planning. Reducing the city to an 'economy' defines everything and everybody as either economic gain or loss, with nothing outside this dichotomy. Economic reductionism, on the one hand, simplifies the view of what constitutes good planning – planning that triggers economic gain – but, on the other hand, turns planning practice more complex, as all planning issues that fall outside the economic imperative lack an over-all vision to effectively deal with (other than 'removal', as described by Wacquant 2009). The separation of the economic sphere and the social sphere under neoliberal conditions, in other words, turns the planning profession schizophrenic, as it has to pursue goals that only suit part of the urban public. The dichotomy between the social and the economic in the age of neoliberal planning is reflected in the gradual separation of planning frameworks for either 'social' or 'economic' planning. Cities have 'hard' planning-theoretical frameworks for economic policy, with Richard Florida's hypothesis about the mobile 'creative class' (2002) as the undisputed paradigm. It unashamedly suggests to favour the highly qualified, private enterprise and technology, in a chauvinistic attempt to plan for the muscled, 'masculine', assertive city that shows no patience with democratic reflections about

how people may want 'their' city to be. Conversely, cities have 'soft' conceptual tools to plan for social purposes, or plan in poorer neighbourhoods. In sharp contrast with Florida's proposals, the communicative turn in planning theory, headed by Patsy Healy (1997), amongst others, offers democratic, considerate, 'feminine', dialogical, inclusive planning frameworks that sensitively take people's preferences and feelings into account. It goes almost without saying that this planning-theoretical dualism, grown out of and reinforcing the separation of the 'social' and the 'economic' in neoliberal times, disempowers planning that engages with the social, and empowers planning that prioritises economic growth. The contradiction lies in the theoretical and practical impossibility to separate social and economic aspects in urban planning – it belongs to the *raison-d'être* of planning to be integrative in order to come to 'good' land use decisions.

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What Explains Urban Poor's Access to Water? Case Study: Kabad Khana, BHOPAL

Tuba Dogu[1]

Abstract

Access to water is one of the critical issues for urban poor in India (12th Plan) and globally. While there are attempts being made to address the issue, still 50.3% of the urban households have no access to piped water within their premises in all Indian cities (BDP, 2005).

Recognizing this continuing urban poverty challenge, this paper analyses whether urban poor can really access the formal water supply system, taking a case study of slum area on Bhopal, India. To do this, effects of different levels of governance and power relations on the ability of the poor to access water from different sources and supply systems are assessed. The paper starts with identifying the actors involved in various processes of water supply management planning and implementation in Bhopal. Three levels of analysis are captured – household, community and city, all of which together determine and shape whether a poor person in slum area has access to water. We provide rich account of how these multiscale processes, governance and facilitation by different actors affect the water access on household level at the location of urban poor. We further advance the analysis by looking at the how poor and disadvantaged groups are represented in the planning processes and to what extent the city level governance actors are accountable to the voice of the poor people as citizens. We locate serious gaps in planning and management approach of the municipality and suggest alternative approaches that involve better understanding of the poor and their livelihoods, better community engagement and accountable governance system.

1. Introduction

1.1. Urban Poverty

There is no universally accepted definition of poverty but in the context of our research we defined poverty in the view of the Asian Development Bank (ADB), as a deprivation of essential assets and opportunities to which every human is entitled (ADB, 1999). This includes the basic services and infrastructure facilities such as access to clean and quality drinking water, sewerage and sanitation facilities.

Urban poverty is quiet different and presents more unique challenges as compared to rural poverty. Thereby, it is very essential to understand and study the scale of urban poverty. The study depicts that urban inequalities are increasing in terms of basic services such as food, water and sanitation.

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In the case of Bhopal which is one of the urbanising cities of Madhya Pradesh (India) emerging as one of the busiest commercial centre with an area of 2,772 km², and a population of 1,836,784 (Census, 2001). Population in Bhopal is ever increasing due to the rapid urbanization stressing on the resources of the city which in turn has resulted in the formation of squatter settlements and slums. 35% of the population in Bhopal lives in the slums (ibid.).

Bhopal has only two main water sources which come from the Upper Lake and Kolar Dam. Old city, comprising the majority of the slums, receives water from the Upper Lake. Although this source has the capacity to supply the demand, due to the inadequate water supply network and the limited number of community stand posts, majority of the slums are lack of basic infrastructure as sufficient water supply.

Based on JNNURM (2005), many Government interventions have been implemented to improve the urban poverty especially in the slum area but they lacked of integrated approach.

1.2. Access to Water

According to Adriana Allen, the quality of water, its' affordability, sufficiency, regularity, safety, distance to source and user density are commonly used key determinants affecting the levels of access to water (Allen et. al. 2006). Allen also underlines the meaning of the socio-cultural context, inside which the process of water supply takes place. This means that the parameters affecting water access are embedded in a specific socio-cultural context. There we are focusing on governance, where access being one of the critical components of the water governance from the urban poor's perspective (Figure 1). By governance we refer to the process of decision making, involving actors on multiple scales. Thus interpreting Allen, we can draw a following graph:

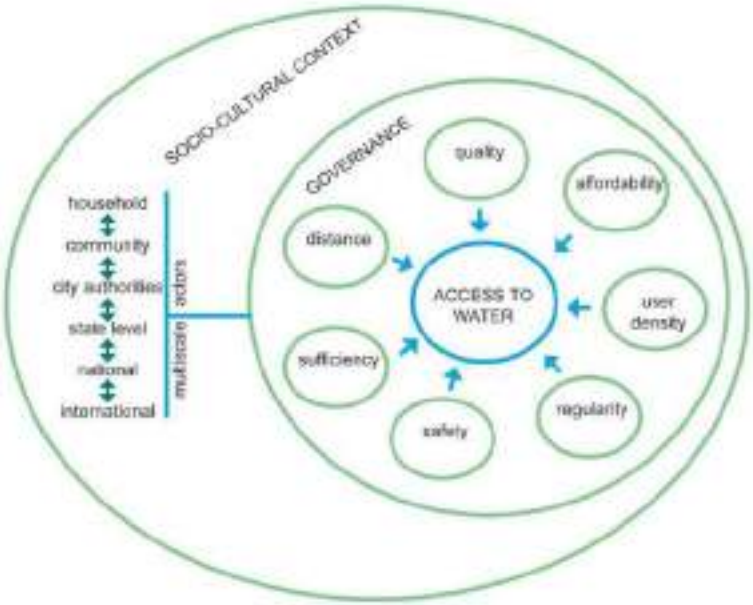

Figure 1: Access to Water

1.3. Climate Change and Water

Strong connection between climate change and urban poor is to help them adapt and resilient to possible change which is initiated, although to date attention has focused on mitigation rather than adaptation (Muller , 2007).

The effects of climate change on available water are more difficult to predict due to overlaping number of effects. To illustrate; if temperatures increase, there will be more evaporation from soil and transpiration from plants, and less water will flow into rivers or seep into the underground aquifers; but if rainfall is more intense, a larger proportion of water will flow off the ground as floods or infiltrate through the soil into the deeper groundwater (ibid.). According to IPCC, it is confirmed that South Asia's water system will be critically affected through decline in water flow and increase in flash floods (Bates et al., 2008). This will bring challenges to the South Asia countries particularly India to organize water management from local communities and government from various levels.

Water conflict is already severe, and would be more complicated with the climate change impact. In India, more than 60 case studies related to water have been done (Joy et al., 2008). Most of these case studies reflect patterns of conflict over water users and among diverse water users in India. But those studies have not really linked the dimensions of climate change into water conflict and governance.

1.4. Methods

By undergoing the existing water issues and look through the water accessibility to the urban poor, we found that access to water is critical issue for urban poor in India. Variety of documents such as the City Development Plan supported this subject. Several key points based on the issues crossed our mind and it guided us to come out with specific research questions. In overall, this paper aims to investigate the main question of what affects urban poor's access to water in the slum community level. To this end, specified under three main sections, each section addresses a specific research question that are:

1. Policy Analysis: How are the current policies including the issue of water access to urban poor?
2. Empirical Research: What are the key issues of water access from the perspective of urban poor? What are the perceptions of different actors in relation to water access to a slum community?
3. Initial Analysis and Interpretation: How do analysis of these different views help us to understand the urban poor's access to water?

To answer the above questions, a case of Bhopal is selected which represents various power relations among different actors. The case study approach was used to explore access to (or lack of) water of urban poor through various levels of actors.
Regarding the research methods, the following steps are taken:

- Actor-oriented approach

- Multiscalar Analysis
- Mixed Methods
  - Qualitative: narratives, short interviews, collected experiences
  - Quantitative: survey, literature and previous studies
- Case Study: Kabad Khana Slum Area
  - Survey of 30 households
  - Deep interviews of 5 households
  - Snowballing amongst inhabitants
- Deep interviews of 10 key actors from BMC, academics, NGO's, private sector

2. Case Study: Kabad Khana

Figure 2: Map of Bhopal city and the focus into Kabad Khana Slum Settlement

Kabad Khana is a slum squatter settlement in the old city area. The voting population of Kabad Khana is 2913 people though the actual population is assumed to be around 5000 people. Referring to Bhopal Municipal Corporation (2011), this is a private (BMC) land having an area of 96 acres (Table 1).

Type of land	Size (acres)
Commercial and Manufacturing	72
Inhabitants squatters (e.g: Patta)	14

Table 1: Existing Land Use in Khaba Khana

Due to increasing population and inadequate resource from the existing clean water, the water supply for the area cannot only depend on the Upper Lake located in the Old City catchment area. This situation leads to the use of other alternatives such as groundwater and tankers, particularly exploiting ground water for daily needs.

However, there are some arguments regarding the quality of the groundwater and particularly its safety. A reason to that is the Kabah Khana area emerging around the scrap-commercial area of old city where recycling and manufacturing activities are actively involved. The scrap activity has resulted with lots of waste dump and improper waste management in Kabad Khana. This indirectly causes contamination and polluted ground water. Yet not directly relevant but still being an important factor, the industrial disaster known as gas tragedy which took place in 1984 has long term effects on the living standards of these people and the ground water resources. This tragedy is said to have contaminated the ground water resources in and around the union carbide site. Many inhabitants of Kabad Khana are said to be gas victims and the second generations affected genetically or by drinking the toxicated ground water which they were unaware of till 2009 (Sambhavana Clinic, 2012). However, the ground water resources in the Kabad Khana area may or may not be toxicated since there has not been any precise study conducted in the area.

Water supply infrastructure covers 66% of Bhopal (Bhopal CDP) and rest is covered by water tankers and common piped connections of bore wells . In Kabad Khana specifically, water is supplied on alternate day basis maintaining a capacity of 160 lpcd (BMC) which is more than the actual parameter entitled to each household that is 135 lpcd. This is to maintain the sufficiency of water for two days. However, based on the site surveys in Kabad Khana, only 40% people have in-house connections whereas the rest have to collect water from piped connections from the bore wells outside. This is one of the reasons why water supply is insufficient in the areas where all the inhabitants of one street collects water from these piped connections.

As this area follows the same living standards of a slum, the inhabitants neither have proper in-house connections nor have any overhead tanks to store water. Since they have to go and collect water from outside, the people use buckets or water drums to carry and store water in their premises. According to the site survey, it is evident that all these households require minimum 3-4 buckets of water for daily use which they manage to divide it for the basic purposes of drinking, cooking , bathing and washing.

3. Findings on the Status of Access to Water

Since urban poverty is multidimensional and complex issue, uniformly designed programs and strategies do not give space for addressing context specific needs nor for available potentials and opportunities (Amis, 2007). With this given information, this section evaluates the determinants of access to water one by one and utilises the diagram defined by Allen et al. as an assessment tool, meanwhile raises a critical view in regards to the sufficiency of the parameters. Consequently, we first look into all the other determinants of access than the socio-cultural practices and governance, allowing the latter determinant formed under another section in order be examined more in detail.

3.1. Quality

According to the conveyed surveys at the site area, 40% of the respondents mentioned that water is not clean (Figure 3). 36% of these respondents futher expressed that there are health issues occurred due to the unhygiene conditions of water (Figure 4). Moreover, based upon the visual observations during the site visits and the interviews with the inhabitants, several cases highlighted the facts of the quality of water such as: drinking water having green color and insects being present in the water. Site surveys revealed out the fact that the unhygiene state of water is due to pipelines not being proper and that wastewater is getting mixed with drinking water through the leakages.

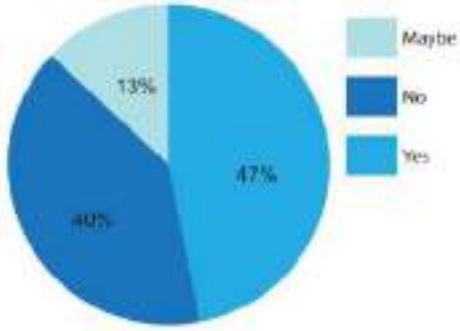

Figure 3: Cleanliness of Water

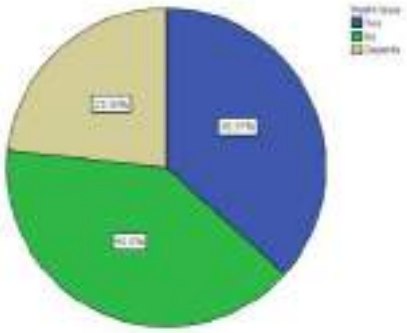

Figure 4: Presence of health issues related to water

3.2 Affordability

Monthly income of Kabad Khana residents generally range between 1000Rp and 9000Rp. According to the family members constituting the average number of seven members per household, it can be claimed that at least 23% of the households remain below poverty line (Tendulkar Committee, 2011) in the area (Figure 6). According to Urban Administration Development Department (UADD) in Bhopal, people below the poverty line (BPL) pay only the half of the water charges. However, despite the presence of the residents falling BPL, water prices seem to be fully charged (Figure 8). Yet, an opponent remains interesting. The majority of people living in the area either are not charged for water due to their illegal occupation of the land or simply do not pay their water charges (Figure 7).

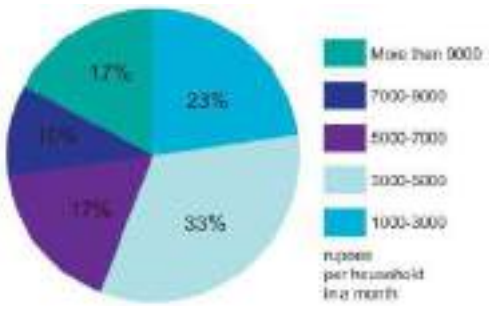

Figure 6: Percentage of Income Levels for Water

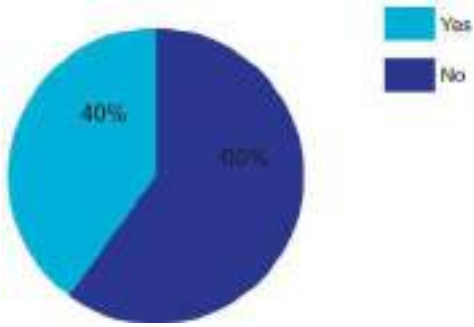

Figure 7: Percentage of People Charged

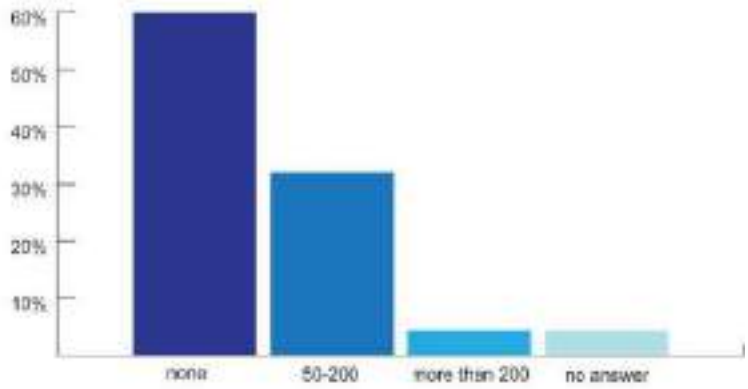

Figure 8: Percentage of Charged Water Prices

3.3 User Density

This parameter of access to water can be defined through the number of users utilising the water sources and facilities in sequence (Allen et. al. 2006). It is evident that the user density has increased as the population of Bhopal has grown with an approximate rate of 35% within the last 10 years (BDP, p.26). Even though the implications of these factors currently remain vague, in the long run they are likely to become primary factors effecting the user intensity in relation to water access.

Yet, there is another scale of user intensity found to be effective. Although it is hard to ascertain the number of people sharing one water connection, during our open questions, seven people mentioned that they queue for water. Additionally, it is known that 60% of the inhabitants of the case area do not have water connection at their homes.

3.4. Regularity

The two main identifying components of regularity are frenquency and timing of service availability (Allen et. al. 2006). Even though it is believed that the city of Bhopal has sufficient quantity of water, there is still challenge in distribution due to the problems of availability with certainty (Academic, 2012). This factor is also supported through the data maintained in the area of Kabad Khana. According to the Figure 10, it can be observed that the practice of collecting water take place usually in early morning time where only 10% of habitants can receive water any time they need. The situation tends to get harder especially during the period when septic tanks need to be emptied as the process can take months to get someone to do the job. Temporary precautions such as storing water are taken to overcome the issue of water being received each day at different hours. As a result, since certainty in receiving or collecting water is highly lack in the area, it would not be too far to state that the issue of receiving water is more likely to be irregular.

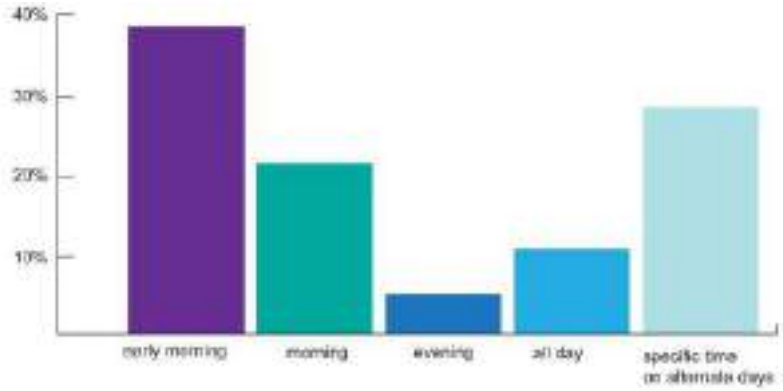

Figure 9: Percentage of Time to Receive Water

3.5. Sufficiency

This determinant is measured by water availability per capita (Allen et. al. 2006). However, since time being a major constraint, the analysis is done per household quantifying the amount of water measured on bucket basis. Almost the 60% of the residents living in the area receive more than 10 buckets, whereas the amount is limited to 6-10 buckets of water in 30% of the inhabitants (Figure 10). Nevertheless, it should be mentioned that the average number of members living in each household is seven and that water is not being collected on a regular basis.

The universal recognition of reasonable access to improved sources has been defined by WHO&UNICEF and stated as the 'availability of at least 20 litres per person per day within one kilometre of the user's dwelling' (WHO & UNICEF 2000, p.77). Based upon this state and referring the data collected, it could be said that the amount of water received is not sufficient. Further prove can be provided through the open questions where seven people out of thirty mentioned that summer time is often difficult since there is just simply not enough water.

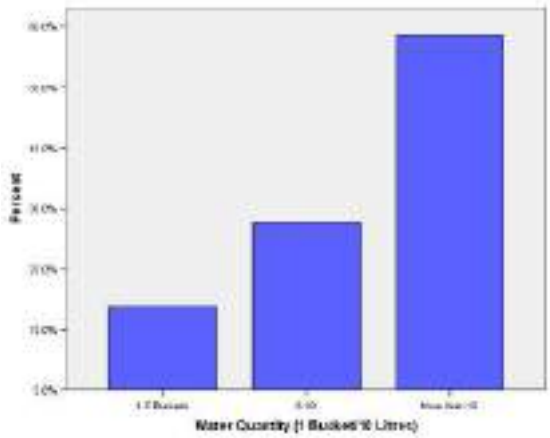
Figure 10: Received Water Quantity

3.6. Safety

This measure has been defined in terms of access to the use of facility (Allen et. al. 2006). Although there is no quantitative data specifically attributed to this parameter, open questions obtained during the site visits certainly stress out that there are evidences regarding the level of safety. An inhabitant stated that there are fights for water and other controversies especially in summer time when demands for water is higher. Another women inhabitant puts the situation into words such that due to the existance of fights regarding the collection of water, women do not let men fetch water anymore. Supposing that this is due being men and naturally having a more violent nature, she continues that men are much more aggressive than the ladies and that they start the fights more easily.

3.7. Distance

This parameter of access can defined as the physical road covered in order to reach the source or the facility. Figure 11 below presents that 40% of the inhabitants reach the water facility in 5 minutes walk whereas 35% states that they have water facilities in their homes. Although this data reflects that a quiet well percentage do not require any personal challenges to receive water, nearly 18% still walks half an hour to reach the water source. On the other hand, 8% claims that distance to water source depends on the various criteria which are mentioned as the seasonal changes, natural occurances such as flood in the open surveys.

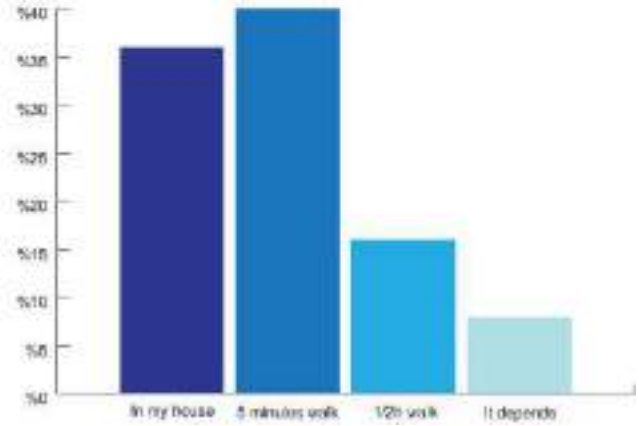

Figure 11: Distance from Water Source

4. Actors in Multiple Scales

4.1. Household Level Actors

Priorities in access to water is highly dependant on the gender factor among urban poor communities (Academic, 2012). This factor is due to the traditional practices that frames out each genders role as well as determined by employment situation and education levels in each family. In most cases, it is common to come across with situations where the one who goes to earn or learn has the priority to utilise water than the one who is neither employed nor assigned in any education institute (ibid.).

According to MPUSP, in various slum areas in Bhopal, it has been seen that women and children has been actively engaged in participatory practices in the context of health and hygiene. However, men remain less engaged and show less interest in access to water as they strongly believe that it is women's duty to collect water (Mittal 2010, p.41).

This very situation is also observed during the site visits conducted in Kabad Khana Slum area. Based upon the site surveys being held, it is seen that the task of collecting water is mostly done by women (Figure 12). Moreover, with reference to the qualitative data, it is observed in Kabad Khana that women use water for cooking whereas men getting ready for work and school.

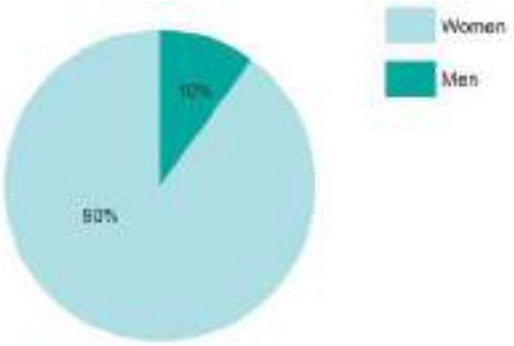

Figure 12: Water Collection by Gender

4.2. Community Level Actors

In localities of urban poor there are communities within communities and inside these a rich variation of actors with different levels of water access. In Kabad Khana neighborhood, there are strong power relations at community level that define access to water. Several conditions such as tenureship patterns and duration of habitance in the area might have implications on these power relations. During the site visits, these power relations were expressed by many inhabitants. As a vivid example, several people mentioned the conditions of exclusion and inclusion when they are forced to queueing system which has no rules, thereby one with more power stands simply first in the line to collect water. Strong community leaders could also be identified. Their power was visible in situations such as the community leader allowing us to communicate when he was present only with the inhabitants he preferred. Moreover, another inhabitant mentioned that due to these power relations strongly existing in the neighborhood, the ones who have no power can even be totally excluded from public water system.

Despite the strong power relations, there are still traces of collective action. Once more, open questions imply that community members gathered together to cover the open drainages in front of their houses, collected money in the community to bore a tube well to get their own pipeline connection.

4.3.The municipal and upper level actors

The assessment of drinking water supply and sanitation in India is the result of a collaborative exercise between the Planning Commission of India, the World Health Organization (WHO), and the United Nations Children's Fund (UNICEF) as part of a joint monitoring programme (JMP) for the sector. This country-level report in India comes in the wake of the four global assessments (JMP reports of 1991, 1993, 1996, and 2000) completed through the JMP process.

Water supply and sanitation is a State responsibility under the Constitution of India and following the 73rd and 74th constitutional Amendments, the States may give the responsibility and powers to the Panchayati Raj institutions (PRIs) and Urban Local Bodies (ULBs). At present, States generally plan, design and execute water supply schemes through their State Public Health Engineering Departments or as in the case of some States, through Panchayati Raj Engineering Departments or Rural Development Engineering Departments and Water Boards. In Bhopal there are 400 people employed to look after the water supply in co-operation both in BMC and PHE.

Of the total wastewater generated in the Bhopal, barely 30 per cent is treated before disposal. Thus, untreated water finds its way into water systems such as lakes and groundwater, causing serious water pollution. In Bhopal, the Lake Conservation Authority and BHOJ Wetland Project look after the discharge of municipal sewerage and solid waste to lake.

There is plenty of overlapping in the development of current policies. There are so many actors and projects going on. We encountered at least twenty different policy projects at national level dealing with water supply and sewerage management. When one of these schemes arrive to municipal level, it usually forms several action plans and thus the amount of projects rise further (India Assesment 2002). However, due to existing rivalries and disagreements in-between two projects acting on similar tasks, leading to outcomes where these two projects cancel each other is likely to happen.

At the municipal level we found problematic understandings on what the slums are and how urban poverty is conceptualized. We came across with situations, where it was claimed that development in one area requires underdevelopment at another part of the city. We were also informed that it would not be possible for a contemporary middle-class family to survive without employees in house to do the shopping, cooking and cleaning and that being the reason of why the poor people are needed. A municipal level planner stated that there is not enough space inside the city, so the poor people from the slums need to be moved outside the city where there are better conditions. We also encountered views such as the poor people just don't care about cleaniness or hygiene, they buy a two-wheeler or a mobile phone rather than invest on sanitation.

Climate awareness has not reached the municipal scale of actions. Currently, there are no policies on climate change. When interviewing planners and higher officers at BMC, the usual response was that there are much more important questions than climate climate change. There were also doubts on whether climate change is even an issue on the city of Bhopal.

There are highly contradictory views on water supply system. The most relevant ones concern whether the groundwater in Kabad Khana after the Union Carbide disaster is drinkable or not. According to State Research Unit, the Environmental Quality Monitoring Group, the groundwater in Kabad Khana is not contaminated. Municipal level planner shares this view. However, independent research units working together with local NGOs such as Sambhavna clinic have diverse views. A central person of the clinic stated that if a 3,5km radius circle around the Union Carbide site is drawn, all the groundwater until the depth of 100m is contaminated. Khabad Khana lies inside that circle. Contradictions rise also in several examples such as whether flooding is considered as a problem. According to municipal level interviews, flooding does not really occur in Kabad Khana. Nevertheless, during the surveys, flooding was often mentioned by the inhabitants and further stated that over a four hour rain, houses are flooded till their rooftops.

5. Analysis of Water Governance Practices

5.1. Equity

Based on our observations, we found out that there is little gender equity among the community members. Women are undertaking the role of collecting water. This can be due to the traditional practices as well as forced situation since in most cases only men work for household's income. Regarding the distributional equity, priority in access to water is for the habitants who are either working or studying. Women living in the case area stated that every night they wake up in order to make sure that there is enough water in the house for the morning. People who go out from the house to school or work need to wash themselves before leaving. If there is not enough water in stock for this, women would get out and look for it, because the water simply is needed to be there.

On the other hand, there are also strong commitments to be equal at community level. The neighbourhood in the case area has a rule of giving every household the right of having four buckets of water daily. No one takes more, because if someone exceed this limit, it would mean that someone else would get only two.

At city level, we cross the question of equity especially when talking of what is identified as a disadvantage in relation to prevalent situation and where these limits are drawn. This applies to whether an area is defined as a slum and at what state, if a person is identified to have a below-poverty-line card allowing cheaper tariffs on services or if someone is recognized as a gas tragedy victim having rights to compensations. Urban project manager at municipal level describes the situation

causing lots of frustration. According to him there is a problem with strict rules. As an illustrative example he asks to imagine that he is asked to provide slums with water. What happens if an area is not identified as a slum and still is not having adequate water services? To him the answer is clear, the area is to be left out.

In terms of physical access to water, we found no priorities given for the more vulnerable ones such as elderly and children in access to water.

5.2. Accountability

In formal decision making mechanisms in urban bodies the actors are often seen strictly accountable to upper lever or to larger scale actors, but not really to citizens. The accountability of urban bodies to slum dwellers is even weaker.

The planner from municipal level explains how this strict accountability to bigger scale actors can also become a burden. According to him, the selling and buying of land is a state level issue. Nevertheless planning remains as a municipal level task. This means that the city needs first to ask from the state to have ownership on the land, only then can city start to makes plans on the plot. Once plans are ready, they still need to get admitted at state level. Process is slow and leads to situations, where only 5-6% of the Master Plan becomes ever built.

Lack of accountability also exists inside the urban bodies themselves. Project manager at state level was critical on the practice of establishing new departments and changing responsibilities from one actor to another. According to him, new staffs are hired seldomly. If the subject of that new department was not familiar to staff before, how could they be competent? A retired higher level officer added to this that he does not see the municipal corporation or any other urban body being able to manage any controlling. According to him the Pollution Control Board has had many failings, as well as the Health Department.

People in the slums feel that they cannot count on services provided by municipal corporations. In situations such as the constant blockage of sewerage lines or water cut downs due to accidents, the inhabitants have difficulties in reaching the authorities. Even though they had made formal complaints which could take whole day meaning that losing a daily wage, there was neither physical action nor reply by the authorities. Taking almost a year to fix the water lines, there has been cases where the inhabitants were totally dependant on the water tankers.

The politicians are seen even less accountable towards the urban poor. Several inhabitants mentioned the policy of votes, that the politicians make promises only to get votes, however those promises are never met after getting the votes. According to a municipal planner, residents of the area are now aware of this issue, thus the voting rates have lately been really low.

In India the problematics of accountability towards the citizen has been identified. Although the consequences have not been observed in the case of Kabadkhana, the Right to Information Act was established in 2005. The importance of the right to information lies in its role in enforcing democratic accountability. This right is important not only for the exercise of political and civil rights but also social and economic rights. Independent information is also important for the people to make informed choices. In order to implement Right to Information to its full extent the support of social groups is needed. Social groups campaign for the enactment and use of a right to information law to be effective and accessible to all, and support people's efforts at developing the ability and motivation to use the right to information for addressing individual and social problems. They work at disseminating the RTI law and encourage and support the development of materials related to transparency and governance, the raising of awareness about the fundamental value of information, the conduct of research, and the setting up of information clearing houses (RTI, 2005).

5.3. Representation

Based on the site survey, figure 13 below clearly indicates that inhabitants are only weakly present in the decision-making processes on their water management. Respondants were asked to consider on whatever decision making, in a community or city level, into which they might have been participated.

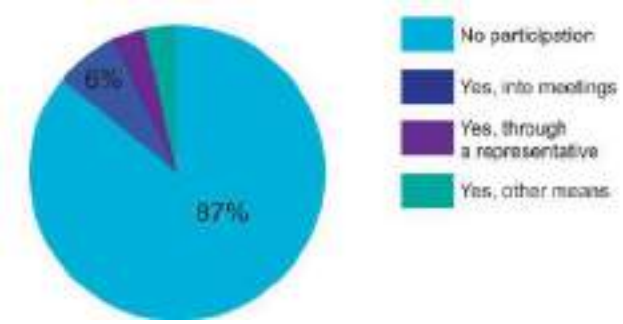

Figure 13: Decision making on water management

Although there are meetings being held among the community, they might be exclusive or they remain at community level without reaching city authorities. With representation people mostly refer to a community leader or other powerful person in their community that acts as a link towards the city authorities. Here participation through other means refers mostly to demonstrations or riots.
The community leader being a representative towards the authorities is both seen as a positive empowering possibility and a problem. According to a man in her thirties, one has to go several times to talk to our community leader. He might send people off and ask back and send off. When he feels like it, he will hear their concerns and then he will make the applications for water connection to work for them. He felt that there is no other means to reach the authorities.

In Kabad Khana a young man pointed a board of politicians and asked us a question: how come could those people represent slum-dwellers? They don't even dare to come to Kabad Khana, their prestige would be threatened if they would be seen here.

6. Conclusions

6.1. Community level governance is critical.

Community level governance is found to be more critical in determining water access than assumed by current policy analysis and scientific discussions. We found that the distribution of water happens in the end at micro-scale, even inside households. Municipality supposes that they are reaching all the rest who have no pipeline connection by covering those communities with tankers. Nevertheless the community level power relations come into play and determine who gets water first, how much, where and at what price. We found also water connections used by groups of people. We can say that there often lies a one more dealer in between the municipal water supply system and the household or individual urban poor and that this dealer is critical in determining how accessible water is.

6.2. There are problematic understandings on what urban poverty is.

At policy and implementation level there are problematic understandings on what urban poverty is. The diversity of different levels of access to water is not recognized. Neither is the variety of actors at community level. The genesis of slums is more usually seen to lie in insufficient housing stock rather than in insufficient income of people and thus in the migration of people in search for livelihood. Housing is often seen more essential than developing basic services. Poor people are regarded to as passive consumers or receivers of services, not so much as active agents to be included in development as sources of skills or labour. We can also find traces of thinking that follow dependency theory, in a way that among authorities there are beliefs that an area cannot develop without another area being underdeveloped. In these few examples it did not come into question, that several parts of the city could thrive and actually mutually gain from that thriving.

6.3. Interaction in-between different actors at different scales is lacking.

There is a lack of poor to be presented in decision making on water supply system. From the perspective of urban poor the possibility of inclusion is seen almost impossible. Trust in government or politicians is lacking. At the level of authorities, there are several urban bodies with overlapping tasks at different scales and the actions are experienced bureaucratic and slow. On the other hand, the division in-between state being responsible for land ownership issues and city of the planning and implementation is experienced challenging.

6.4. There are no precautions on climate change.

There is little or no awareness to external stresses to the water supply system, such as posed by climate change. At municipal level , there are no mitigation or adaptation programs. We found climate change related data being collected at state level only. On international scientific arenas the challenges of climate change and its extra stress on water systems has been identified. In scientific discussions it has also been identified, that climate change will pose stress especially on the water supply of urban poor. Many international cities, such as New York, have seen it important to prepare climate change adaptation programs.

7. Implications

In its newest plans on developing water supply, Bhopal municipality is proposing Private-Public Partnership as a method to implement and maintain the system. Private sector is seen as rather independent actor that would also be responsible on collecting water charges. Collection of revenue, implementation of new systems, as well as maintenance have been experienced as almost impossible tasks for the municipality. Thus by bringing in a new independent actor, it is supposed, that the efficiency and quality of service would rise.

In privatization of basic services, the affordability of water and inclusion of urban poor as customers is nevertheless endangered. If private sector invests in water infrastructure, it covers the costs by the revenue from the charges. There are less risks and more money to make in offering services to people with better income. Urban poor also live in areas to which the implementation of infra can be more difficult and costly. This all biases the water supply system towards the rich.

Instead of relying on private sector as such, here lies an opportunity to bring in an enterprise, that might actually re-establish the connections in-between authorities and urban poor communities, enable more context sensitive implementations, employ local people, share ownership of the enterprise with local communities and help in re-structuring the power relations in community level. We are talking of social enterprises, that can be defined as organisations with an explicit aim to benefit the community, initiated by a group of citizens and in which the material interest of capital investors is subject to limits. They place a high value on their independence and on economic risk-taking related to ongoing socio-economic activity.“The social impact on the community is not only a consequence or a side-effect of economic activity, but its motivation in itself.” (Nyssens, 2006)

8. Acknowledgements

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ABBREVIATIONS

BMC	Bhopal Municipal Corporation
BPL	Below Poverty Line
CDP	City Development Plan
JMP	Joint Monitoring Programme
MPSUP	Madhya Pradesh Urban Services for the Poor
JNNURM	Jawaharlal Nehru National Urban Renewal Mission
PHE	Public Health Engineering
PRI	Panchayati Raj Institution
ULB	Urban Local Body
UADD	Urban Administration Development Department
WHO	World Health Organization

ACTIONS TO IMPROVE SOUNDSCAPE IN THE "PLAZA NUEVA" IN BILBAO.

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Abstract

One of the main challenges of the cities is to improve the quality of life of their citizens by means of the urban design. To achieve this goal, urban design should integrate the sensorial dimension of spaces considering not only aesthetic aspects, but also the sound atmosphere or soundscape.

Plaza Nueva is a characteristic Square of Bilbao (municipality in the north of Spain) with the main function of allowing on it meetings with friends in pubs and in public areas, including conversations, food and drinks. The square also offers places where children can play around. These activities are directly connected with the cultural heritage of people from Bilbao, which is interesting to be preserved.

The square is placed in the historical district of Bilbao and the municipality has opened a public participation process to define the strategy for the renewal of this district. One of the objectives defined in this strategy is to maintain the places for leisure activities, balancing their use with a more comfortable environmental experience. Tecnalia proposed to consider sound dimension as an urban design parameter in this renewal strategy. On that sense, one of the public spaces analysed is the Plaza Nueva. As a first step a diagnosis of the current soundscape was developed.

The methodology for the soundscape study combines two approaches: development of acoustic measurements and psychosocial assessment (questionnaires). This study is complemented with an analysis of the architectural elements of the area to identify which of them deals with soundscape and how do they influence in the sound atmosphere.

This approach is useful to identify the urban elements that can improve this sensorial dimension of public places and to propose actions in which possible interventions could be defined once the renewal process would start.

Key words: Soundscape, urban public spaces, sound atmosphere, urban design

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1. Introduction

For the first time in human history there is more people living in cities than in rural areas [1]. It is known that spending time in natural areas contributes to well being and health [2, 3]. But the possibilities of citizens enjoying these benefits depend on the proximity of these natural areas to their residential areas. It is a fact that the citizens of urban areas do not have many opportunities of being in natural areas.

A possible solution to this handicap is creating areas in the cities, as "natural" as possible. Citizens refer to "quietness" as one of the aspects that they associate with the natural dimension of places [4, 5]. This concept involves much more than the acoustical atmosphere of the places, although this is one of the items to be considered.

On the other hand, there are a lot of references that conclude that the acoustical comfort of places not only requires low noise pollution, but it also needs to consider the soundscape concept, that is related with the perception of sounds [6, 7, 8].

Finally, improving the quality of life by means of the urban design involves considering the integration of all the senses, not only the aesthetical and functional dimensions. This approach of considering other senses (such as hearing) is especially interesting in squares and parks (areas to be enjoyed).

All these different points of view derive in the same conclusion: it is necessary to consider the acoustical comfort (soundscape) as a parameter to be integrated in the urban design of places.

The Bilbao municipality, being aware of this fact and with the main objective of improving the quality of life of citizens, is collaborating with Tecnalia to integrate the soundscape approach in urban squares renewal processes. The challenge is that soundscape analysis would give relevant conclusions to be considered when making decision about the renewal interventions to be adopted in public places.

In this approach, soundscape study involves not only the consideration of the acoustical atmosphere analysis (objective and physical dimension of sounds), but also the perception approach (in this case using questionnaires).

2. Description of the study area

The area that was studied is an urban square located in the historic district of Bilbao called "Plaza Nueva".

The area is divided in subareas, applying variables of differentiation of the spaces based on their functionality and use. In the Plaza Nueva two differentiated subareas were identified.

Each subarea is considered as a homogeneous unit for the soundscape approach. Each subarea has common characteristics regarding to soundscape, so, it must have, not only the same sound atmosphere, but its use or functionality must also be similar, since this characteristics influence the expectations of the citizens [(9)].

Subarea 1: Arcade unit. This area is covered by arcades and people meet in the vicinity of bars in the area. It is an area with cultural meaning.

Subarea 2: Square center unit: it is an open area used by children to play, while adults are enjoying their time at Subarea 1.

The municipality has opened a citizen's participation process to define the renewal strategy in the historical district. On that sense, different forums and meetings with stakeholders are in course. This analysis includes Plaza Nueva, since it s one of the most popular places in the district. The results of the soundscape approach presented in this paper will be one of the inputs in the decision making process of selecting renewal actions to be considered.

3. Soundscape approach

The analysis was developed on weekdays (always on Wednesday or Thursday) during the timetable of use of the areas by the citizens (from 17:30 to 19:00). The evaluation was done during a total of an hour and a half, but the data were processed for each half-hour, as this is the average time of use of areas (estimated time that the same person spends at the same place).

The assessment involves two complementary approaches:

A- Physical Acoustic Measurements: ESEI (Environmental Sound Experience Indicator).

In each homogeneous unit, the measurements were developed at two points. The locations of the points were selected avoiding the limits or the centre of the area.

Subarea 1: Arcade unit	Subarea 2: Square center unit

The acoustic setting of the measurements were fixed to a temporary resolution of 1 s, and a spectral analysis of 1/3 octave resolution. The physical acoustic indicators analysed were: L_{Aeq}, L_{AFmax}, L_{AFmin}, L_{10}, L_{50} and L_{90}.

Besides, the sounds present in the area during the measurements were stereo recorded. The aim of this recording is to obtain complementary information to process the information in order to calculate the ESEI (Environmental Sound Experience Indicator).

The ESEI indicator takes into account the following inputs to assess the acoustical atmosphere:

- Sound levels: the amount of acoustic energy that is received in the area.
- Sound sources that are dominant in the generation of the acoustical atmosphere. Identification of those sources present during more time and with more energy.

- Number of acoustical events that are relevant with respect to the background noise level [10].
- Subjective evaluation of sound sources: it relates to whether the sources that characterize the sound atmosphere are perceived by the people as "pleasant" or "unpleasant" and if they are congruent (expected to be listened) or not in the specific place [11].

As it is shown, the ESEI indicator not only considers the results of the acoustic measurements, but it also considers some data from the psychosocial study about user's evaluation of sound sources. The recordings are also useful for a "post in-situ" evaluation.

The ESEI indicator values range from 0 to 12.. A high value of the indicator means a positive soundscape (perception of the sound atmosphere). The sound quality of an urban public space can be divided in 3 classes depending on the ESEI results:

- ESEI values between 0 and 5 mean that the soundscape is not suitable for the area. In the case of urban areas it can be related with the presence of environmental noise (pollution).
- ESEI values between 5 and 10 means that it is possible to include soundscape concepts in the area, going beyond aspects merely related to acoustic pollution. Therefore, in this range of ESEI values, possible actions to improve soundscape will not only include noise abatement measures.
- ESEI values between 10 and 12: (10 is the threshold of excellence). A soundscape with these results of ESEI means a good situation, so it must be preserved or protected.

B- Psychosocial approach: Soundscape questionnaire

The main objective of the psychosocial approach is to collect the users´ evaluation about soundscape. Besides this, the questionnaires also provide information regarding the general perception of the place. There are several previous researches about the analysis of the acoustic comfort by means of the sound perception [12, 13, 14].

The psychosocial evaluation was partially based on conducting questionnaires to people present at the place, simultaneously to the acoustic measurements. A total of 50-60 questionnaires were gathered at each unit of analysis .The questionnaire includes open and closed questions. The content of the questionnaire was defined, trying to optimize the time to fill it, getting a good compromise between maintaining the interest of people answering the questions and obtaining of as much quality information as possible. The questionnaire requires a total of 5-10 min to be answered by citizen

Other interesting information was also collected by the questionnaires. This type of data can be described as it follows:

- Socio demographic information of the person.
- Information about their health and lifestyle.
- Psychosocial factors: satisfaction, noise sensibility …
- Experience at the place and perception of it: frequency of visiting it, activity developed on it, time of presence, descriptors selected for the place, best and worst rated items…
- Emotions: regarding the experience of being in the place.

Information obtained from the acoustic measurements and the questionnaires is very useful for the soundscape approach. The analysis combining information from both approaches allows a good understanding of the reasons of a particular soundscape perception. This understanding will be a solid base to define actions to improve the soundscape.

4. Results of the analysis at Plaza Nueva

4.1 Soundscape Assesment

The following paragraphs show the ESEI results for each subarea. Each resulting value is acoustically explained for a better understanding of its meaning. It is also presented the information obtained on the psychosocial analysis considering, not only the soundscape assessment, but also more information regarding the use and the perception of the place.

These inputs are used to propose some key aspects in which interventions could be focused for the soundscape improvement of the place.

Subarea 1: Arcade unit

ESEI value: 6.6
The sound levels in the area are around 70 dBA LAeq. Sound levels are mainly associated with human activities. There are some sound events and most of them are well perceived by citizens.

Psychosocial analysis:
The main use of the area is social meeting with friends, talking and drinking outside the bars in the area. People are mainly standing up in groups outside the bars.
The place is perceived as pleasant and spacious.
- The most appreciated characteristic of the area is that is pedestrian and covered.
- The less appreciated characteristic of the area is that it is too noisy (due to reverberation at arcades) and it is a bit crowded.

Description of Soundscape: citizens consider that the soundscape is not relaxing. Sound of voices (40%) and some natural sounds (wind) are considered as unpleasant.

Other sound sources that are identified in the area are related with bars activities: ventilation, air conditioning, kitchens, etc.

Subarea 2: Square center unit

ESEI value: 7.5
The sound levels in the area are around 65 dBA LAeq. Sound levels are mainly associated with human activities. There are some sound events and most of them are well perceived by citizens.

Psychosocial analysis:
The main use of the area is relaxing and caring of the children. People are mainly sit down in benches and secondly going through(walking). Children are playing around, running and moving all around the area.
The place is perceived as pleasant and noisy.

- The most appreciated characteristic of the area is its quietness and aesthetic.
- The less appreciated characteristic of the area is the fact that children play with balls. Neither it is well appreciated that the area is windy and crowded.

Description of Soundscape: citizens consider that is a harmonic and natural soundscape. Regarding identification of sound sources, in most cases sound of voices (including children) is considered as pleasant.

4.2 Key aspects for possible interventions

Ideas and key aspects that could lead to possible intervention actions to improve soundscape were defined following a two steps methodology:

- Defining the clue ideas or general requirements that would condition any proposal.
- Developing a "brain-storming" process with acousticians, architects and psychologists to obtain the more proposals as possible, as open ideas.

Some open ideas were obtained through the application of this process. Anyhow, all of them should be discussed with responsible of the municipality to select the most interesting ones and to analyse their possible integration at the moment of addressing the renewal of the square Plaza Nueva.

The results obtained for each subarea of the square are described as follows:

Subarea 1: Arcade unit
General requirements: it is an area highly valued because of its use (connected with the cultural heritage of being a citizen of Bilbao). The main aspect to change regarding the sound atmosphere is the chaotic situation caused by the high acoustical reverberation caused at the arcades. It is considered as a non relaxing soundscape.

Key aspects for possible interventions:

- Reduction of acoustical reverberation in arcade.
- Abatement of noise sources related with bars activities: ventilation, air conditioning, kitchens, etc.

Subarea 2: Square center unit

General requirements: Enhance the natural value and pleasantness that is referred at the place, but avoiding elements that can increment the windy sensation. The presence of children is assessed positively, but not some of the activities they do (play with balls).

Key aspects for possible interventions:

- Increase the option of enjoying the place with relaxing activities. Extend the options to people of being sat.
- Strengthen the perception that the square is natural. It is excluded the option of installing some water elements in the square since the square is perceived as windy and the water could worsen the perception, creating a sensation of cold. The open idea is to include more greenery items (more natural elements).
- Make it difficult for children to play with balls and, instead of this, encourage alternative activities for children to play. It might be interesting to build some installation to facilitate other types of games.

5. Conclusions and expected results

This paper presents an initiative for the consideration of soundscape as an interesting point of view in urban renewal processes.

To develop this task, after analysing different approaches [(15)], a five steps methodology has been defined:

A- Preliminary analysis of the area: delimitation of homogeneous units for the soundscape approach, identification of relevant urban elements and design of the measurement campaigns for the second step.

B- Soundscape assessment: acoustical and psychosocial analyses are combined to obtain conclusions regarding the sound atmosphere quality in the area and the elements that originate it.

C- Identification of aspects of soundscape to be improved and definition of general requirements for the interventions. The actions and the variables that condition the interventions are defined taking into account the results of the previous step, and also the general characteristics of the place, its perception and the interactions between the place and the citizens, derived from the psychosocial evaluation.

D- Definition of open ideas about the interventions: to obtain as much ideas as possible, a brain storming dynamic is proposed. In this process is recommended to involve diverse professional profiles, such as, Acousticians, Architects, Psychologists and Urban designers. This step finishes with the selection of the specific actions that are interesting for the interventions.

E- Final design of the interventions: this step includes the definition of a prototype and a very detailed design of each solution or action that will be implemented to improve soundscape. This step deals with the challenge of adjusting the action to the particular environment of implementation.

In the case of the area studied, the square in Bilbao called “Plaza Nueva”, the process is at this moment in the forth step. All the open ideas found in the process should be discussed with responsible of the municipality to select the most interesting ones and to analyse their possible integration at the moment of addressing the renewal of the square Plaza Nueva. The most challenging aspect will be to be able to provide a prediction of the effects of the actions designed in the fifth step on the soundscape of the studied area. Tecnalia foresees showing the outputs of this prediction in terms of ESEI and soundscape semantic differential scale.

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USAGE OF THE URBAN GREEN AND OPEN SPACES IN CASE OF EARTHQUAKE- KUCUKCEKMECE-CENNET DISTRICT AS A CASE STUDY

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Abstract

Urban green and open spaces are getting more important day by day and these spaces which have really important functions in urban areas were destructed after 1950 by the urbanization development process of the cities without planning. After the Marmara Earthquake in Turkey in 1999, significance of the earthquake was understood more importantly that we are under risk and it pointed the green and open spaces which are used as a shelter, a evacuation after Marmara earthquake that we haven't got enough capacity. The purpose of this study is to find out a analytical method to determine the urban green and open spaces whether we have got enough or not which will be used in case of any earthquake risk. Initially on this study it was touched on the concept of urban and urbanization, the importance of the urban green and open spaces, the concept of earthquake and the relationship between earthquake and planning. It was advised methods to be able to determine areas which will be used as a shelter and evacuation points after earthquake and to examine their sufficiency according to the sample studies. The urban green and open areas which will be use as evacuation and shelter areas after earthquake in Cennet quarter, Kucukcekmece administrative district which was chosen as an example were determined and these areas were analyzed in terms of their efficiency. Within the context of being prepared for earthquake, determining the green and open spaces which will be used as shelter, evacuation areas and analyzing their sufficiency and giving advises in case of where these places are insufficient.

Keywords: Urban Green and Open spaces, Earthquake, Gathering Area, Sheltering, Evacuation Area,

1. Introduction

During the rapid urbanization in Turkey, urban population growth created by the migration to the towns has conduced to toward the urban deposition area in unplanned developing urbanization area. Due to the fact that the open and green areas in rapid urbanization process have been damaged and due to the increasing the population density, the green area amount per person has been decreasing. And the problem has faced with because of unawareness of the open-green areas in the unhealthy structured towns and the attention has not paid to the existence of the urban reinforcement area. On

the other hand, because of the earthquakes occurred in Turkey, usage of the open and green areas in the cities has become important and the problem has occurred because of the insufficiency of this area in the qualitative and quantitative terms. In this study, in case of any possible earthquake risk in Turkey where is located in the earthquake zone and the aim is to define the functions of the urban open and green spaces after the earthquake occurred, and to determine the urban open and green spaces to be used by the population after the earthquake and as well as to define an analysis method to measure the capabilities of these areas.

2. Disaster And Earthquake

The disasters are very difficult to cope with is natural, technological or man-made event that cause physical, economic and social losses and that interrupts ordinary life, social and economic activities or stops them as well as affects the societies indeed (Kadıoğlu, 2002). Among disasters, the most destroying and destructive one is earthquakes, which cause the loss of life and most. Because of crustal deformation, the earthquake occurs suddenly and it spreads and shakes the land accordingly.

Turkey is located in the most active region of Alpine-Himalayan earthquake belt. Northern Anatolian fault line affects all around Turkey from west to east. 96% of Turkish land and 98% of Turkish population are under the earthquake risk because of various earthquake risk (Palpal, 2000). The possibility of seismic earthquake risk in Istanbul has not finished after the earthquakes occurred in 1999. In accordance with the current researches, depending on the historical earthquake risk of the area, the most destructive earthquake has been expecting in the Marmara Sea that affected Istanbul several times (Kubat et al, 2008).

Due to the uncontrolled and rapid urbanization in Istanbul, the wrong applications of city and region planning and failure construction techniques and applications, lack of infrastructure and services, environmental degradation, the earthquake risks have achieved the highest levels. It is inevitable that the disaster preparation and emergency response methods must be defined and must be put into application before, during and after the earthquake in Istanbul if the disaster happens (İDMP, 2003). Natural disasters and particularly earthquakes induce disasters when occur in the large settlements such as metropolitan areas (Kubat et al, 2008).

3. Usage of Urban Open and Green Spaces After the Earthquake

When the disaster occurs, in parallel to the rescue and first aid activities, in spite of the fact that it takes long term to repair or reconstruct the buildings damaged by the disaster, the accommodation and basic needs of the earthquake victims should be covered within this process (Yılmaz, 2003).

During and after the disaster, people whose homes have damaged or destroyed should seek for sheltering alternatives until the permanent resident solutions will be determined. Temporarily sheltering could be considered as a step of re-sheltering process after the earthquake and a type of physical sheltering stock after the earthquake indeed (Johnson, 2007).

The urban open and green areas have undertaken a leading role in the urban sense by means of their usage and transformation before, during and after the earthquake. Open and green areas have been undertaking different functions before and after earthquake.

The open areas which is the indicator of a prosperity and life standard in daily life has become vital for emergency access, gathering, access by air, storage and distribution of emergency rescue materials, emergency tent using or temporary sheltering area. During emergency conditions, urban open areas have been required by many reasons. Security and temporary sheltering, temporary storing activities that are important for survival are more than important during and after the earthquake. Green areas, sport areas, car parking areas squares and etc. should have sufficient size and should be close to the population in order to serve them efficiently and effectively and these area must be empty. For this reason, these areas must be in proper size and close to the settlements and should be allocated these areas in the master plans. (IDMP, 2003).

After the major earthquake, many people have faced with great difficulties to find a place in a small evacuation center due to the fact that the damaged buildings have blocked the roads. In case of emergency evacuation, the large open and green areas as well as large evacuation roads are required. In the high-density housing areas, it could be more than difficult to find large open and green spaces. In the risk and disaster situation, in spite of the fact that it could not be known when and how the disaster occurs, it is vital to prepare relevant plants and area for emergency evacuation (Shiozaki et al, 2006).

In order to protect population in the earthquake-affected region, a new emergency evacuation system is needed because of the reasons below (JICA, 2002):

- To decrease the loss of lives resulted from second/third aftershocks,
- To decrease the loss of lives resulted from second disasters,
- In order to carry out the distribution of response teams and emergency materials etc. effectively, the relevant information about preliminary damage should be collected from the local community to be evacuated.

In the coming days after the earthquake, during the emergency process, the families whose houses have damaged are evacuated in different places. These areas are composed of empty public buildings, hotels, homes belonged to their families, tents and other arrangements. (Coburn and Spence, 2002).

3.1. Classification Of Urban Open And Green Spaces According To Their Usage Types After The Earthquake

After the earthquake, the urban green and open spaces can be used for different aims such as temporary gathering areas, tent areas and temporary settlement areas in different scales and in different timelines.

Temporary Gathering Areas

Immediately after the earthquake, people inside the buildings want to go out in order to protect themselves against the aftershocks and to protect from the major earthquake as well. In this situation, if there is any open area where the buildings are located, people will prefer these areas and if not, they have to go closest open public space.

The gathering areas and sheltering places which are close to the building and business places and where the information and organization could be found should be defined accordingly. These area should be publicized and should provide gathering area function to act as counter after the earthquake as well as should perform their functions for emergency mobilization. In the most density structure where the high rise buildings are located, it could not be so easy to find gathering areas Many towns do not have sufficient area for 1 m^2 per person to plan gathering places(Coburn and Spence, 2002).

It was suggested that the evacuation areas should be located in each neighborhood unit for the inhabitants of that region and all people (gross minimum area: 1.5 m^2/person).
The gathering areas should be equipped to enable people staying outside for hours. Particularly in the harsh weather condition, it could be difficult to prevent people from going back to their home and business places. For this reason, the relevant equipment should be provided against the extended evacuation process by including rest rooms, shelters, food, tents for sleeping and blankets. After one or several days, if such kind of equipments could not be provided, people would like to go back their homes for their clean clothes, shower needs and other requirements. If the requirements of the people could not be covered, it will be impossible to prevent them from going back to their homes accordingly. (Coburn and Spence, 2002).

Tent Areas

In order to provide emergency sheltering for great number of homeless people, the tent areas are most appropriate sheltering form. Because the tents could be easily stored, pitched-up and could be protected against the weather conditions. The tent areas are safe against the major earthquakes and aftershocks that could be occurred. Generally, people would like to pitch up their tents next to their destroyed homes or around their houses (Coburn and Spence, 2002).

Temporary Settlement Areas

It could take long time to carry out planning and implementation activities regarding the reconstruction and resettlement of the buildings affected by devastating earthquakes. In this process, it is considered that there are emergence sheltering and Temporary Settlement coordination activities as well. For the transitional process to the Temporary Settlement and regarding the reconstruction to be selected, the strategies generally take too much time and the problem could be faced in the next steps (Coburn and Spence, 2002). While organizing the land use plans in the earthquake risky region, the reservation area should be allocated to be used as Temporary Settlement and to be also used for the green area requirements in the existing situation (IDMP, 2003).

3.2. Classification Of Urban Open And Green Spaces According To Their Ownership

The urban areas will be used for the purpose of temporary gathering area after the earthquake, tent area, temporary settlement area and other management areas are made in three types as public, semi-private and public, private areas. Urban open and green areas are the public areas and these spaces that have been used actively and passively in the cities such as park area, children play grounds, sport areas, exhibition and festival areas, private thematic gardens (in small and large size), refuges, squares have been mostly used after the earthquake.

Neighborhood parks have been used as the temporary sheltering area during and after disasters as well as temporary health and other technical requirements. On the other hand, the neighborhood parks must have infrastructure and must be planned to provide service within the storing area for the relief material and food distribution after the earthquake (IDMP, 2003). In these areas, due to the fact that the infrastructures such as toilet, fountain, lights, recreation and sitting areas are available in the existing conditions, it would be more than easy to transform them into the tent towns (Orhon, 2002).

The squares that have been used in different purposes in the towns have become a resource in the establishment of disaster management center during the activities of relevant authorizations during the disasters. In spite of the fact that the squares have been representing the towns and each one, in case of shock and astonishment during the disaster, has very well known these could be a gathering area where everybody could meet easily. For this reason, after the earthquake, these areas have been undertaken very important roles to provide organization after the disaster and to collect relief materials for the victims of the earthquake as well as to distribute the relief materials. Besides, the exhibition and fairground could be used at the same purpose (Orhon, 2002). After the possible earthquake, the public areas could be transformed into the temporary meeting/evacuation, tent town and temporary settlement areas.

Semi-private and public spaces cover the open areas of the public buildings that are not completely open to the public use in the towns. Open areas or gardens of official, education, health and religion facilities among others which have been used after the earthquakes. After the earthquake, in these official buildings and their gardens, in order to continue vital activities of people ,the relevant materials and equipments for the victims of the earthquake should be stored before the earthquake. In order to continue the vital activities in the education buildings, these could be easily transformed to the gathering areas and tent towns for their evacuations. Religion facility areas are mostly important to provide the vital requirements such as toilet and water after the earthquake.

4. Definition of the Method

In the process of generating this method, It has been searched and analyzed different approaches and methods about determination and measurement of sufficiency of urban open and green spaces used gathering areas after earthquake

In the first step of the method, lands uses of the parcels are determined. By defining the current structure parcels, the urban open and green areas to be used as evacuation and gathering areas have been defined. In the process of defining open and green areas, the field trips, have been carried out and by defining physical specifications such as open area position and topographic situation. After the analysis the most suitable areas have been determine that will be used as gathering areas. The urban open and green areas to be used after the earthquake and their intention of purpose are defined as follows:

- Parking Areas
  - Neighborhood Parks: Gathering/Sheltering Places
  - District Parks: Gathering /Sheltering Places
  - City Parks: Temporary Settlement Area
- Open Areas/Gardens Of Education Facilities
  - Primary School: Gathering Area
  - Secondary School: Gathering Area
  - High School: Gathering Area
- Open Area Of Health Facilities: Health Services
- Open Area Of Public Facilities: Disaster Management Centers
- Car Parking Areas: Gathering Area
- Empty Spaces: Gathering Area
- Open Area Of Mass Housing Area: Gathering Area

Only education facilities among the public facilities have been accepted because the open areas of health facilities will be used for the purpose of treatment. On the other hand, the open areas of the official institutions will be used for the disaster management center indeed. During the determination process of urban open and green spaces, each

area has been reviewed on the site and the pictures of those areas have been taken as well as the risky position of the areas have been ascertained. Risky position of the open areas could be assessed in accordance with the building availability on the boarder of parcel by individual observance, the distance to the nearby buildings and height of the buildings as medium and low safety.

The areas where the buildings are not located on the parcel building are classified as high security areas. The areas where at most four layer buildings are located in the parcel border are classified as medium and the areas where more than four layers are located are classified as low security indeed. As a result of the analysis made in the site, the obtained data are associated with ArcGIS program. Data of gathering areas prepared on the basis of parcel, by associating with the gathering area number as Tn, classification information and name of the place, current land use, risk status through the A, B and C symbols as well as risky situation and total parcel area information through ArcGIS program, the tables that show the gathering area information have been established.

- High security areas: A
- Medium security areas: B
- Low security areas: C

In the second stage, the structure parcels that will provide services as the gathering areas have been defined and in accordance with the population. By carrying out the sufficiency analysis of the areas based on the structure parcel, the structure parcels where the gathering areas could not provide service are defined in accordance with the distance to the structure parcel. As the movement distance from the city block to the gathering area, the maximum walking distance has defined as 200 meter. For this study, in the first step, by means of gathering areas associated with the ArcGIS program, the city blocks are defined accordingly. For the measurement of areas, firstly, capacity of open and green areas are calculated. For each gathering area, the structural elements of the area have removed from total parcel area and total open area for each area could be determined. Depending on the area standards per person, it is defined as 1,5 m^2. The number of people to be served that is the capacity of the gathering areas are calculated by dividing the open area to 1,5 m^2. The calculation of each gathering areas capacity is as follows:

- Ct: Capacity (person)
- Et: Total parcel area (m^2)
- Eu: Total built-up area (m^2)
- Ex: Open area (m^2)
- Size of gathering area per person: 1,5 m^2
- $Ct = (Et – Eu) /1,5$

Calculating the capacity of gathering areas and defining city blocks within 200 meter sphere of influence, the city blocks that will serve for the each gathering areas and number of people have been defined accordingly. The process of the method can be seen In Figure 1.

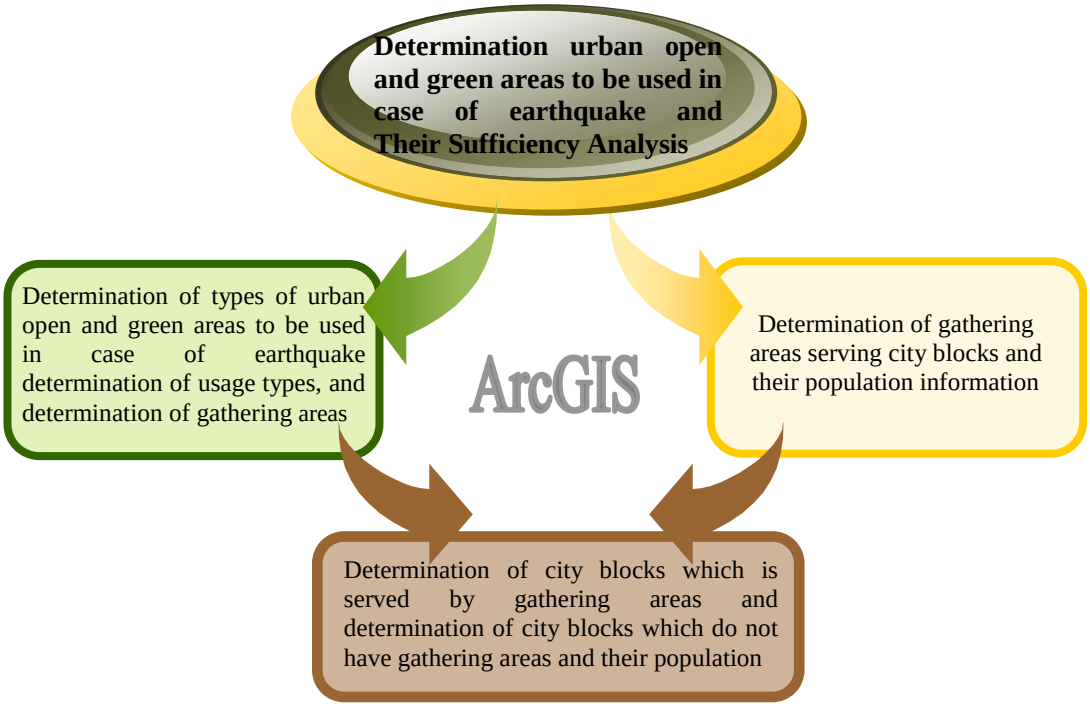

Figure 1. Scheme of the Method

As a result of the study, it has been defined that which person will use which gathering area and the city blocks that the gathering area could not provide service. By means of the calculations associated with ArcGIS program, the analysis could be organized as map and tables. The information could be seen regarding each gathering areas as mentioned in Table 1.

Table 1. Gathering Area Information

Area no	Name of the Area	Function of the Area	Total parcel area	Total Building Area	Open Area Amount	Capacity	Risk Status	Served Population amount	Served city blocks
Tn	-	-	Et	Eu	Ex	Ct	A,B,C	Number of people	City block number

For the definition of gathering areas and analyzing their sufficiency, the data in the Table 2 has been used.

Table 2. Data used in the analysis method

Parameters	Data
Spatial distribution of the population	Numerical value in the table in the city block data
Road routes that help people to access safety areas	The access roads to the open area, the evacuation roads that must be open at all times for the emergency
Risk status of the open areas	Symbol A-B-C that characterized the risk status in the feature table of the open areas
The gathering area size per person	The value of the open area in the feature table ; 1,5 m^2
Capacities of open areas	The numerical values of open areas in the feature table (capacity)
Option right for the safety place	Symbol in the feature table
Maximum distance from their homes	The numerical value defined for every going-200 m

5. Usage Of The Urban Green And Open Spaces In Case Of Earthquake-Kucukcekmece-Cennet District-Case Study

In order to determine the urban open and green areas that will be used after the earthquake and to analyze the sufficiency of these gathering areas, the Cennet Street of Küçükçekmece country is selected as s. The reason of this selection is that Küçükçekmece is one of the ten districts under the earthquake risk in accordance with JICA studies. On the other hand, due to the fact that Cennet Street that is located in the southern part of the district are among the risky neighborhood unit according to the JICA studies and the organized and disorganized structure are combined together, the urban open and green area sizes are not sufficient.

5.1.Cennet Neighborhood in Küçükçekmece District

Cennet neighborhood is neighbor with E-5 highway in the southern part of Küçükçekmece district. In the South of the street, Bakırköy district and in the east, Yeşilova neighborhood, in the West, Fatih neighborhood and in the North, Yenimahalle is located accordingly. The information and datas about Cennet neighborhood was collected in 2008. The location of Cennet neighborhood in Küçükçekmece district is

seen in Figure 2. Cennet Street is at the size of 88 ha and it is composed of 2.35% of the district. The population of the district is 38.460 persons.

Figure 2. Location of Cennet Neighborhood in Küçükçekmece District

Cennet Neighborhood is one of the central commercial area of Küçükçekmece. In the working area, it is considered that urban social infrastructure areas such as education, health, religion facilities are not sufficient according the population of the area. In the area, there is totally 4 park areas with 1.4 ha and only one park area is over 5000 m^2 . The 3 park areas are under 5000 m^2 and the park areas are not sufficient for the population. There is approximately 3.1 empty areas in the working field.

Active green areas, health facilities, primary school- secondary school areas, religion facilities and technical infrastructures have been compared with their normal ground sizes as per the population defined in the planning regulations. As it is seen in Table 3 active green areas, urban social infrastructure areas and urban technical infrastructure areas are not in the proper size as much as they are.

Table 3. The Amount Of Facilities According to Planning Regulation and Comparison with the Current Conditions in Cennet Neighborhood

Land Use	Area (ha)	Standards in Planning Regulation m^2/person	Necessary Area for population in Planning Regulation (ha)	Areas Covered in Existing Situation (%)
Park Areas	1,4	10	39,0	%4
Health Facilities	0,2	1	3,9	%6
Primary School	2,1	4	15,6	%14
Secondary	-	3	11,7	-
Religion Facilities	0,8	0,5	1,9	%42
Technical Infrastructure	0,2	2	7,8	%3

Urban open and green areas that are one of the most important indicators for the urban prosperity and quality of life are not sufficient in terms of urban social infrastructure areas and this case has decreased the life quality of the Neighborhood.

5.2.Defining Urban Open and Green Areas to be used in Cennet Neighborhood after the earthquake and Analyzing its Sufficiency

In case of possible earthquake, the gathering areas that will provide sustainability of vital activities and will cover the sheltering needs of the affected population who could not go back their homes and whose homes were damaged by the earthquake are composed of urban open and green areas. In Cennet Neighborhood that is faced with the earthquake risk within the preparation activities against the possible earthquake, the gathering areas where 38.460 population will use have been defined.

The study of definition of gathering areas are not only for people whose homes have damaged or lost their homes but also assessed for all population. The proposed method has been used to define the urban open and green areas and to analysis, their sufficiency's in Cennet Neighborhood after the earthquake.

5.3. Determination of Urban Open and Green Areas to be used after the Earthquake

In case of possible earthquake, while the gathering areas have been defining to cover the requirement of entire population in Cennet Neighborhood, urban open and green areas have been used. The following current areas in the site have comprised of urban open and green areas:

- Parking areas
- Open sport areas
- Training areas
- Open car parking areas
- Empty areas.

The religion facilities in the site have not been proposed as gathering areas because of structural specifications of the mosques and also public facilities have not been suggested, because these areas could be disaster management center in case of earthquake. In the Cennet Neighborhood, the urban open and green areas which are able to be used as gathering areas have been analyzed according to their physical specifications such as topography, open area status and these areas selected among others having at least 100 m^2 unstructured areas. One empty area available in the field has very much plant area and because of its curved structure could not be proposed as gathering area.

Afterwards, the risk position of the gathering areas have been defined depending on the proximity to the building having risk and height of the buildings by individual observations. The areas that do not have any building on their parcel border are classified as high security, the areas that have at most 4 layer buildings on the parcel border are classified as medium security and the areas that have more than 4 layers are classified as low security.

- High security area: A
- Medium security area: B
- Low security area: C as classified.

In the neighborhood, Total 14 gathering areas have defined. 3 of them are composed of primary school are, 1 is for secondary school field and 4 of them are composed of education facilities, 4 empty areas, 4 parking areas, 1 open sport area, 1 car parking area have been proposed. Gathering areas which belong to private ownership are suggested to be publicized. Name, current position, total parcel areas, security levels and their explanations of the gathering areas are submitted in Table 4.

Table 4. Gathering Area Information

Name of the Gathering Area	Explanation	Function of the Area	Risk Status	Et (Total parcel area) m^2
T1	Marmara High School	Education	B	5439
T2	Remzi Yurtsever Primary School	Education	B	2683
T3	Yeşilyuva Primary School	Education	B	6980
T4	Empty Space	Empty Space	A	6903
T5	Empty Space	Empty Space	A	6685
T6	Antikalar Park	Park Area	A	3890
T7	İ. Gaffar Okkan Park	Park Area	A	5373
T8	Open Sport Area	Sport Area	A	7483
T9	Sevgi Park	Park Area	B	1212
T10	Empty Space	Empty Space	A	6026
T11	Behiye Selim Pars Primary School	Education	B	6269
T12	Open Car Parking Area	Car park	A	4694
T13	Şair Nedim Park	Park Area	A	4018
T14	Empty Space	Empty Space	A	3385

There are not any low security areas in the proposed gathering area in the site. Due to the fact that there are not any buildings in the parcels of park areas and car parking areas. Only Sevgi Park has 1212 m^2 area has been assessed as medium security due to the fact that it is close to the building on the parcel next to the Park. Within the parcels of the education facilities defined as gathering areas, in spite of the fact that there is not any high structures more than 4 layers , they have been defined as medium secured structures.

It is seen that the gathering areas in Cennet neighborhood have not been dispersed homogenously. Gathering areas in field of study locational distribution and land use in the current status and total areas have been seen in Figure 3.

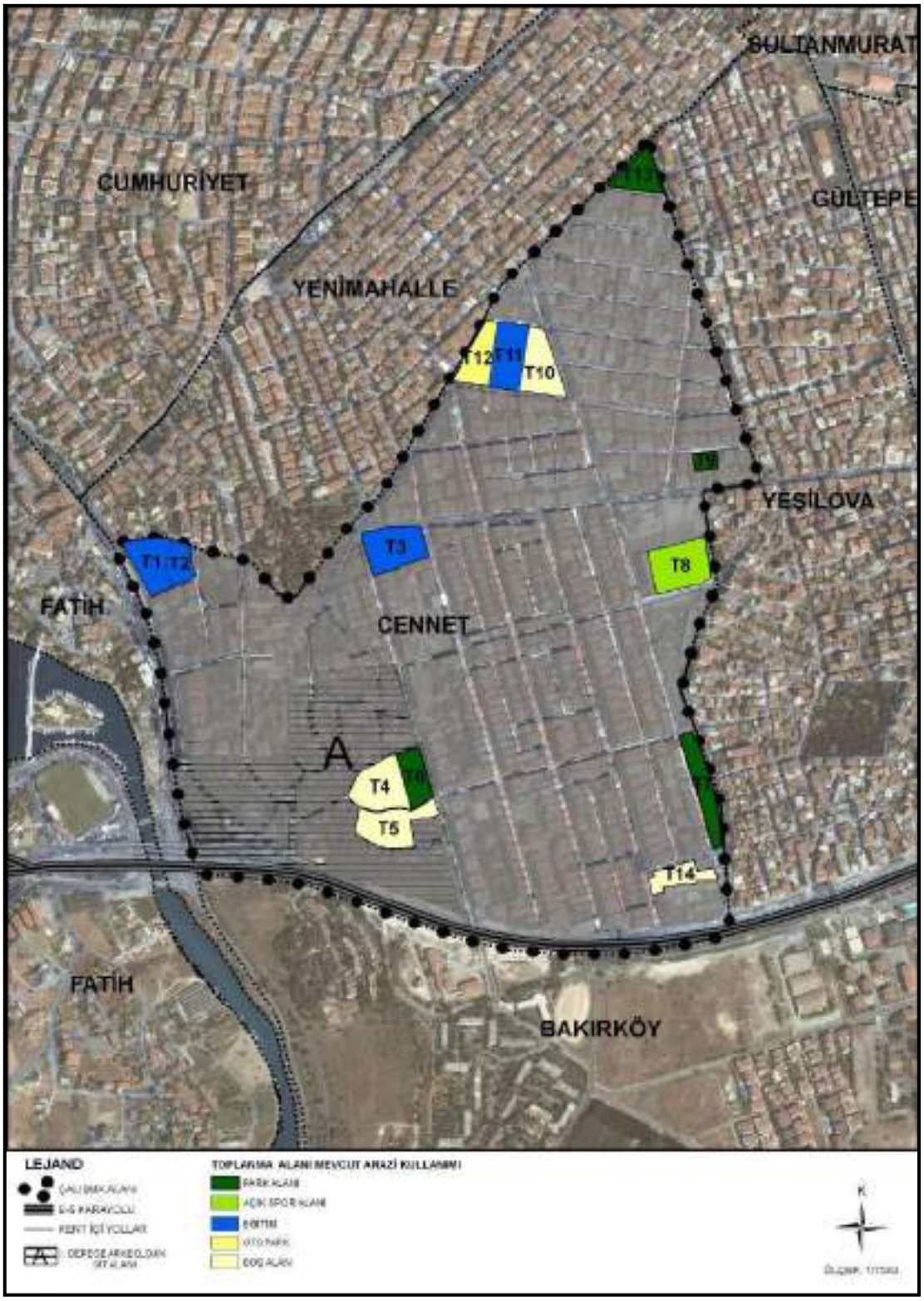

Figure 3. Location of Gathering Areas and Their Functions

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5.4.Measuring the Sufficiency of The Urban Open and Green Area to be used in case of Earthquake in Cennet Neighborhood

After defining the gathering areas, as the second stage, measuring the sufficiency of these areas have been carried out. Firstly, in order to determine the city block which will be served by gathering areas and population, 200 meters of influence area of every gathering area and city blocks which are in this influence area has been identified. In figure 4, 200 meters of influence area for the gathering areas could be seen. In case of that more than 50% of city blocks areas are in 200 m influence area and when 200 meters maximum distance have not been exceeded, these city blocks have accepted as city blocks in the influence area. The capacity of gathering areas and population amount to be served has been calculated as 1.5 m^2 per person. The capacity of the gathering areas are calculated with follows:

- Ct: Capacity (person)
- Et: Total parcel area (m^2)
- Eu: Total Building area (m^2)
- Ex: Open area (m2)
- Size of gathering areas per person: 1,5 m^2
- Ct = (Et – Eu) /1,5

After calculating the capacity of gathering areas, considering city blocks within 200 meters sphere of influence, city blocks which gathering areas will serve have been determined according to capacity of them.

As a result of analysis, it has been identified that the gathering areas for the population in any case of earthquake and city blocks that do not have any gathering areas. As it is seen in Figure 3, the color of gathering areas and served city blocks are the same. Thus, it could be defined which gathering areas have been served for which city blocks. In case of possible earthquake, the connection between the evacuation corridors and gathering areas that must be open at all times has established accordingly. The total capacity of defined gathering areas are composed of 42.979 people and the total population to be served is 29.444 people. The information about gathering areas is seen in Table 5.

As a result of analyses, the city blocks which do not have gathering area have been determined. In the current situation, it has been also determined that the gathering areas for 9016 persons in 19 city block are not available after the earthquake. It is seen that the city blocks that do not have gathering areas are located in four different locations that are next to each other. In the case study, some city blocks could not benefit from the service from gathering areas, although these city blocks have been located are in the 200 meters influence area of gathering areas, due to the fulfilling the capacity of the gathering areas. On the other hand, although some gathering areas have the capacity to provide service for the more population, they could not provide any service to the city blocks due to fact that they are not located are not in the 200 meters influence area of gathering areas. As a result, in the analyzing the sufficiency

of the gathering areas, there are two important criteria's so that the cross correlation of these two variables could be seen.

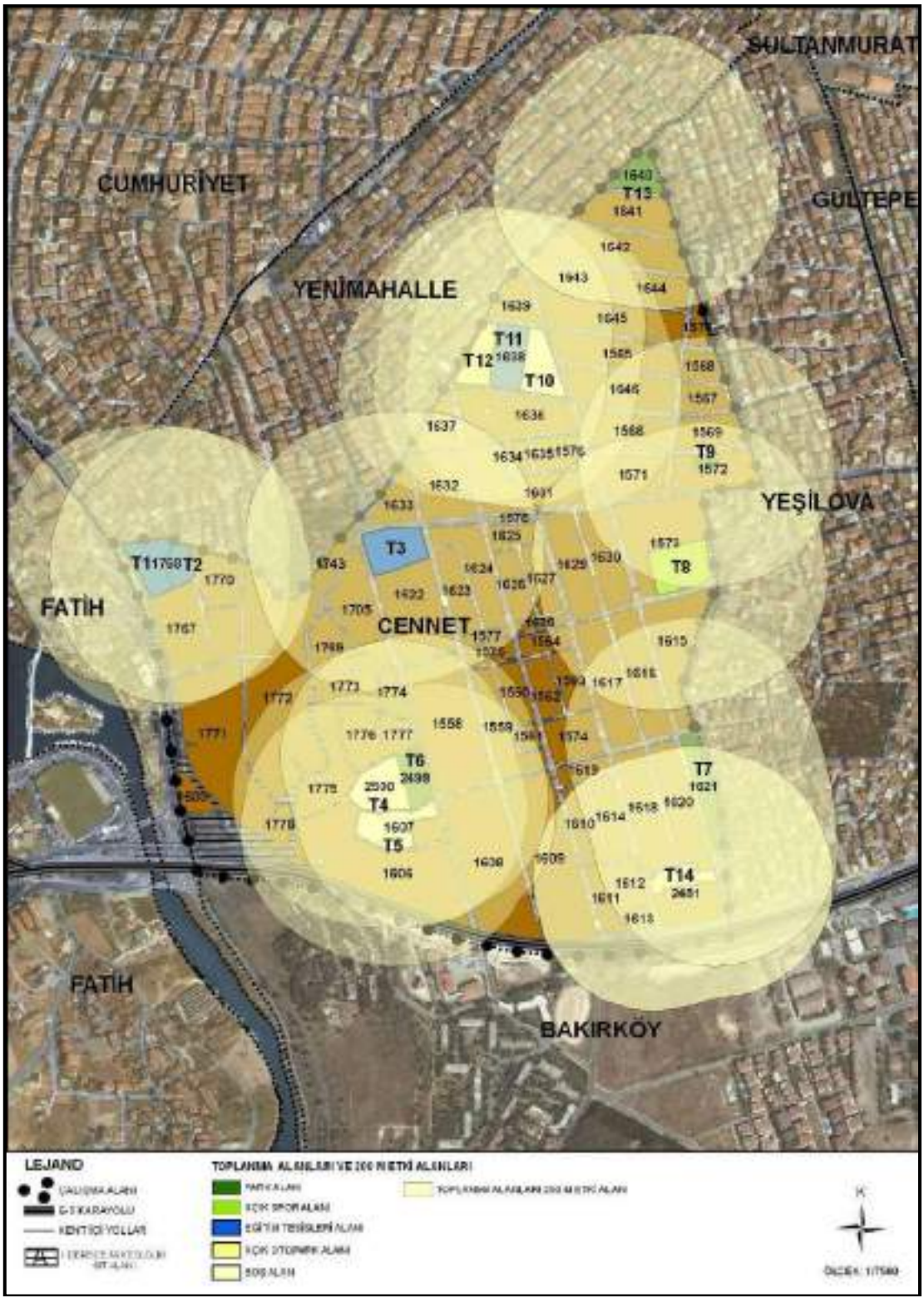

Figure 4. 200 Meter Influence Area Of Gathering Areas

Table 4. Gathering Area Information

Area no	Name of the Area	Function of the Area	Et Total parcel area	Eu Total Building Area	Ex Total Open Area	Ct Capacity	Risk Status	Served Population amount	Served city blocks
T1	Marmara High School	Education	5439	834	4605	3070	B	810	1767
T2	Remzi Yurtsever Primary School	Education	2683	972	1711	1140	B	184	1770-1768
T3	Yeşilyuva Primary School	Education	6980	2026	4954	3302	B	3224	1743-1705-1622 1623-1624-1577-1633
T4	Empty Space	Empty Space	6903	0	6903	4602	A	2510	1558-1606-1777-1774-1773-1776-1775-
T5	Empty Space	Empty Space	6685	133	6552	4368	A	1478	1607-1608
T6	Antikalar Park	Park Area	3890	601	3289	2192	A	1624	1559-1560-1561-2499
T7	İ. Gaffar Okkan Park	Park Area	5373	0	5373	3582	A	3032	1612-1618-1619-1620
T8	Open Sport Area	Sport Area	7483	432	7051	4700	A	3926	1629-1630-1616-1617-1573-1615
T9	Sevgi Park	Park Area	1212	0	1212	808	B	525	1572
T10	Empty Space	Empty Space	6026	0	6026	4017	A	3357	1645-1639-1565-1646-1566-1571
T11	Behiye Selim Pars Primary School	Education	6269	1253	5016	3344	B	2478	1631-1632-1638
T12	Open Car Parking Area	Car park	4694	211	4483	2988	A	2449	1576-1634-1635-1636-1637
T13	Şair Nedim Park	Park Area	4018	52	3966	2644	A	2096	1641-1642-1643-1644-1640
T14	Empty Space	Empty Space	3385	51	3334	2222	A	1751	1610-1611-1612-1613 2481

As a result of analysis for entire population in Cennet district, there is not any sufficient urban open and green areas that will be used for gathering/sheltering purpose after the earthquake. The city blocks that do not have any meeting areas and their population could be seen in Table 6 and Figure 5. It can be said that 19 city blocks and 9016 will not be able to use any gathering areas.

Table 6. City blocks that do not have any gathering areas and their population

City Block Number	Population of City Block
1772	1034
1769	228
1771	989
1605	8
1575	236
1574	619
1564	305
1627	468
1578	12
1625	370
1626	411
1628	171
1563	326
1562	399
1570	8
1568	204
1567	220
1569	411
1609	2597

Figure 5. City blocks that do not have any gathering areas

6. Results And General Assessment

Because of sudden occurrence of the earthquakes, the panic could be experienced mostly after the earthquake and immediately after the earthquake, people generally could not decide on what they should do in the short time. It is essential that the towns should be prepared for the earthquakes.

The urban open and green areas that have very important functions such as ecological, recreational, economic and social functions have been acted as key elements to continue for vital activities after the earthquake. In case of possible earthquake, urban open and green areas could be evacuation areas. After the earthquake, people whose homes have been damaged and could not go back their homes because of earthquake risk have been sheltered in such kind of areas until the problem will have been solved. After the earthquake occurred, the several problems occurred in the gathering/sheltering areas and particularly in Turkey where such kind of places are not sufficient, it has been seen that any planning activities has not been carried out before earthquake.

For this reason, urban open and green areas that have been used as gathering points, temporary sheltering and tent areas should be handled to prepare for the earthquakes and to mitigate the earthquake losses and must be planned systematically in case of earthquake. When the earthquake occurs, these areas must be ready in accordance with the number of population. The qualification and numbers of these areas should be analyzed if these are sufficient or not in case of disaster.

As a result of defining the gathering areas to be used after the earthquake in Cennet neighborhood and analyzing its sufficiency, it could be seen that the urban open and green areas that are insufficient to cover the needs of the affected population will be insufficient in case of the earthquake indeed. In order to make urban open and green areas ready after the earthquake, the more reconstruction activities must be allowed accordingly.

The temporary gathering and tent areas have been defined as gathering areas must be reorganized. In order to provide livelihood and to cover the needs of food, water, sheltering etc., the storing areas and infrastructure systems should be established. The park areas should be organized to transform into the earthquake park after the extraordinary situations.

The evacuation corridors must be organized in case of possible earthquake to be used for life supports and open in each time for the access. The Evacuation corridors must provide access to the gathering areas and the access between the gathering areas and city blocks accordingly.

The temporary settlement areas and tent towns have been handled in the city scale and associated with the neighbor regions as well as assessed in the town integrity. In the short term gathering points/areas, in the middle term temporary settlement areas

and tent locations must be defined previously and their sufficiency's must be measured.

In the regions where the gathering places are not sufficient, the urban open and green areas must be produced to be benefited from entire population and to raise the life conditions in the towns. First, by determining the urban open and green areas that have proposed in the master plans, which have not been applied, the relevant actions must be taken for these green areas. In addition, taking into the consideration of possible earthquake risk in the new the plans, and these new plans must be integrated with disaster plans.

Active functions must be added to such kind of areas defined before the earthquake occurred in the daily life and the relevant infrastructure should be provided to be used after the earthquake. On the other hand, these areas must be announced to the local people before the earthquake and the information must be conveyed to the people to find these places easily during the earthquake.

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The Power that Influence Cirebon's Urban Form and Urban Process
Case Study: Cirebon, West Java, Indonesia

Ira Irawati[1]

Abstract

Urban process through the time indicates the influence of process of city-making by some power through legal and economic history (Kostof, 1991). Cirebon as a coastal area in North Java had unique historical phase that shaped by the power of the legitimate authority for 532 years. Begin from a small vilage, Lemahwungkuk, that built based on Moslem culture, Cirebon became a traditional moslem-based monarchy or *Kesultanan.* Furthermore, the power breakdown of tradional monarchy changed by Colonial government, had reshaped Cirebon as a unique city feature that can be seen in the mix of urban character between traditional (monarchy) and colonial city artefacts.

This paper would explore physical evolution of the city that could be reflected by the history of spatial urban shape and structure from Kasultanan or pra-colonial and early-colonial era, colonial era, and pasca-colonial era. Moreover, using urban physical element clasification from Kevin Lynch (1982) and diachronic historical method (Kuntowijoyo, 2003), identification of the shape and structure of the city was constructed. Through identification of Lynch (1982) elements which are paths, edges, districts, nodes, and landmarks through the three eras, urban process had been formed Cirebon as fan shaped cities, expanded from the grid pattern of the urban path in the pra-colonial and early colonial era to radial pattern in the colonial era. At last, in the pasca-colonial era, the mix of grid and radial pattern has been a combination archetype due to the changing of city transportation infrastructure from river and sea orientation to road and railway orientation.

The Cirebon's urban structure alteration itself has been change from concentric in the pra-colonial era, where Keraton as the palace of monarchy building was the center of the city, to multiple-nuclei in the colonial era that last until today, where Keraton is not the main orientation of the city; but city hall, main mosque, and some retail area also as city's point of references. Although this monarchy city could shape the cosmic city in the beginning, due to existence social hierarchy which refer to Kostof (1991) as a model cosmic city, Cirebon with moslem's culture and economic orientation had shaped the practical city. The reason for this is the monarchy that shape the city only has cosmic city model in limited Kesultanan area; and, the rest of the city had functional construct of interrelated parts to support economic activities.

Key words: *Urban shape, urban structure, planning history.*

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1. Introduction

City is manifest of human activities that change by the time. Some factors that support that development are human itself, activities of human, and network and movement among some centre of activities (Sujarto, 1990). The motive of the people and the authority that lead the city will give a power to shape the city. Political power will always exist through the time. However, people power as part of participation of stakeholder in urban development will justify the political power in the precise portion. This mixture of power will be sharpened the city shape in different way for various places.

Cirebon as one important city in the West Java Province has been passing the transformation of city pattern and city authority. Begin with small village, to Islamic monarchy; and then, the colonial city, all changes had brought significantt footstep in Cirebon's pattern and culture. Finally, how the post-modern city nowadays adapt to those changes with different motive, power, and obstacles will be part of Cirebon's history.

Trough identification of physical elements of the city (Lynch, 1991), urban structure and shape that formed could be traced. Moreover, who and how this transformation done is very important to identify as lesson learn for city planner and other stakeholder to plan and fill the city with activities.

Figure 1. Cirebon Orientation in West Java and Banten Province

2. Analysis and Result

2.1 Urban Growth Periods

Diachronic approach used on this paper has an objective to capture social structure and function of society and activities in the time-frame or time stages (Kuntowijoyo, 2003). Thus, Cirebon's development phases could be analyzed by the time when the power or even political power had formed the city.

Kostof (1991) simply categorized the cities by three kinds which two of them are clasified to time periods. Furthermore, these consideration could identify the land use, activities, and social structure that belong on it which are *pre-industrial* city and *industrial* city. First, *Pre-industrial* city as a city with relative-small size and also small population, whose only two groups of inhabitants which are an elite and a lower class. In the centre of the city is for government, religion facilities, and residences of the elite; with no specific land use classification. Second, on the other hand, industrial city has more segregation uses of land, based on rent of the land property.

Categorization of the city in Indonesia itself, stated by Sujarto (1990) on four genetic time stratification for urban development in Indonesia, which are:

1. Pre-colonial era (before colonial),
   In the early of this era, cities were influenced by Hindu religion; and later on, Islam unified them until 1400. The identity of this era from both cultures was the mixture of monarchy urban structure with mosque's orientation. Furthermore, while early-colonial government had strengthened the commercial area in the harbour and its nearby area; China's trading company had influence especially in the exclusive settlement and commercial centre architect which also commonly placed in the harbour area.
2. Early-colonial era
   In this era, cities had grown in the VOC (Netherland's Commercial Company) who had built wall not only for a fortress in the city as a prevention tool from other colonial countries and Islam's influence; but also to expand the trading area and occupation of the land.
3. Colonial era
   This era begin in the early 19 century when VOC governed Indonesia as "Bataafschen Republiek". As well as industrial revolution was happened in Europe, colonial government applied "Cultuurstelsel" which had shaped Indonesian cities as centre of plantation production such as rubber and tea and centre of collection and distribution for that products.
4. After-industrial revolution era
   Indonesian cities in the late 19 century were called as Indonesian Modern Cities. These cities had grown and developed based on modern cities planning concept which had been fully fledged in West-European countries; and also as reaction of degradation that resulted by industrial revolution.

Cirebon growth age itself in this research devide in three stages that first and second era in the periods above is combined in one stage which are:

1. Pre-colonial until early-colonial era (1479 – 1906)
   In this era traditional city was grown; and in 1479 Cirebon Monarchy (Kesultanan Cirebon) was established. Later on, in 1677, VOC that was existed in Cirebon acted as guardian for this Kesultanan.
2. Colonial modern era (1906-1945)

In 1906 Kesultanan Cirebon had no *de jure* power to the region due Dutch Government as Colonial had taken over the authority; and change Cirebon name to *Gementee Cheirebon*

3. After-colonial era (1945-now)
   This era begin with Indonesia's independence as well as new development of Indonesian modern cities.

2.2 Urban Shape and Urban Structure Elements

Physical elements of the city are the city shaping component, like social and economic, which could be seen as clear as can seen. These constituents had explained by Lynch (1982) as part of city image, Branch (1995) and Shirvani (1985) as aspects that develop the city. In this paper, Lynch's elements are used for identify Cirebon's pattern and shape, due to availability of historical data. However, although Lynch's used as primary aspect; but, others elements from Shirvani and Branch also support the detail as can seen at Table 1.

Urban shape and urban structure itself generally called urban pattern or just urban form. According to Kostof (1991), there are three urban form that modelled by Kevin Lynch in the Good City Form book (1981) called as "normative models". First is *cosmic model*, or holy city, as construal of the universe and gods as expression of power. Monumental axis, gates to protect, major landmark, regular grid, and spatial structure by hierarchy are the characteritics. Second, *the practical model*, or the city as machine, where space are divided on differentiated functional cluster which are small, autonomous; although, every parts are undifferentiated; but there are linked up as a one huge machine. The last, *the organic model*, or the biological city, city is similar to living thing which has a specific border and an optimum size, a unified, indivisible internal structure.

Furthermore, in this paper, the basic urban forms divided in the two type urban forms which are *urban shape* and *urban structure*. *Urban shape* is physical pattern of built environment that take place based on transport network especially street, land carrying capacity, a spread of natural resources, and government policy. Additionally, urban shape has several types which are the square cities, retangular cities, fan shaped cities, rounded cities, ribbon shaped cities, star shaped cities, and grid cities (Yunus, 2000). Moreover, Kostof (1991) defined some shape for the political diagram in linear system where axis alignment exist as urban diagram that link the authority buildings. Next is centralized systems, concentric (relative-circle) and radial organization (combination of concentric and street arrangement connect the centre).

Urban structure is a pattern of activities and land use which are created by like the urban shape; but with one additional aspect which is functional relation between activities and land use. Moreover, types of urban structure (Yunus, 2005) imply by Burgess in 1924 is *concentric model* where CBD in the central, continued in the next-larger circle by commercial and light-manufacturing area, then by low-class

settlement, then by middle-class settlement, and finally in the outer ring is for high-class settlement. Another type is *sectoral model* designed by Hoyt in 1939 where CBD still in the centre, however other functions spread outward the centre in certain axis. The last type is multiple-nuclei model designed by Ulman-Harris in 1945 which could accomodate high growth urban activities, population, and size where severeal city centre and some groups of other functional areas. Later on, this two urban form will be identified by Lynch's elements on the three Cirebon's time phase as follow.

Table 1. Physical Elements For Indentify Cirebon's Form and Shape

Primary Elements (Lynch)	**Supporting Elements**		**Urban Shape**	**Urban Structure**
	Branch	**Sirvani**		
District	Open space, vegetation, density	Landuse, open space, activities		•**
Path	Topography, park, pedestrian, and street furniture	Circulation and parks, pedestrian	•*	•**
Landmark	Building	Building shape and mass	•	
Edges	Edges		•*	•
Nodes	Density			•

Notes: Path* = primary transport network that generate urban built environment
Edges* = linear or curve-linear shape as border beetween built environment and non-built environment
Path** = streets or primary transport network that connected city main activities
District** = domination function or activities of land use

2.3 Cirebon Structure and Shape Evolution

A. Pre-Colonial and Early-Colonial Era (1979-1906)

In the early-city development, the city ancestor would adjusted their settlement to condition of topography such as riverine settlement, natural port, linear rim, hilltop town, and sloped landscape (Kostof, 1991). This condition also came about in

Cirebon, with sloped land on the bay, early dweller started built small village on the harbour area called Muara Jati and subsequently grown as small city called Nagari Singapura (Kusuma, 2010). In this time there were two power that created activities and settlement, first was *religion power*, Hindu and Budha and then Islam as guidance for social and religious activities, and second was *economic power* which had extended the harbor function as a gate for trading to other Nusantara region (Indonesia name before independence). However, due to limited data, this small city had no specific urban settlement structure and shape precisely.

Afterwards, as well as the growth of Islam in this area, the enlargement of population had moved settlement to Lemahwungkuk, 5 km to the south; and then Kesultanan Cirebon, Keraton Kasepuhan, as local monarchy established at 1479 based on Islam philosophy. The combination of traditional and religion culture, as happened in other Javanese monarchies or keraton has resulted specific civic centre design that still last until this post-modern era. In addition, this civic centre has some components park or alun-alun in the middle encircle by keraton building on the south heading the alun-alun, mosque in the west, social or commercial or building on the east and the north (Sunardjo, 1983). Moreover, this arrangement show the hollines concept of Islam or cosmic model that expressed the universe and gods as expression of power (Kostof, 1991). This pattern expressed multiple function of city centre especially civic centre for administrative and civic, economic, social, cultural, and even defence (Poerbo on Kunto, 1986).

Dutch colonial company VOC, in the beginning, in 1677, acted like guardian for the kesultanan due an advance war equipment, later acted as colonial government and attained full power for economic with built *De Bescherming* castle as military defence for Cirebon and also as the centre of the authority (Sunardjo, 1983), kesultanan Cirebon itself acted as symbol for local authority and local community. Along with the growth of trading activities, Chinesse trader came and built settlement, and made successful acculturation which proven by ceramic ornament on the kesultanan dan mosque buildings (Irawati, 1996). In this time, VOC was not change the inner-structure of the city. However, the existence of the VOC bastion in Cirebon was a part of trading stations along north-sea Java in Tegal, Semarang, Jepara, and Surabaya (Margana, 2010).

The urban shape of Cirebon in this era characterized by elements that formed *fan-shape type* (modified from Kusuma (2010)):

a. Landmarks: Keraton Kasepuhan as the centre of the city
b. Paths:
    - Internal: river pathway around the keraton area, street in grid pattern that arranged the city centre (keraton, commercial area, port, and settlements)
    - External: linear street along the sea bay on the east that connect Jakarta (Batavia) and the north part of Cirebon with East Java, curve-linear street from the west to east Java that join in the linear street mention before, and linear street from the city centre to the Bandung on the West of Java
c. Edges: Java Sea on the east, some river on the west, south, and north.

Figure 2. Cirebon's Fan-Shape Model in the Pre-Colonial and Early-Colonial Era

However, the urban structure in this phase created a *concentric type*, although the centre not in the middle of the city but in the right-part near to the sea which characterized by (modified from Kusuma (2010)):

a. Paths and edges: same as above
b. Nodes: Muarajati Port, *De Bescherming* castle, industrial cluster for pottery products, markets in Kanoman and Jagasatru.
c. District: city centre consist of keraton, commercial centre, warehouse and port, outer ring was settlement district for Chinese, Arabic, and European, the outest ring was settlement for local community.

Figure 3. Cirebon's Concentric Structure Model in the Pre-Colonial and Early-Colonial Era

Both Cirebon's shape and structure built up firstly by the power of politics, colonial for the external connection and Kesultanan Cirebon for the internal network, secondly by the power of economic especially for colonial trading activities.

B. Colonial Era (1906-1945)

This colonial era also called modern-colonial era, modern-colonial era in world-war II era, and independence war era which has function and motive or power to develop (Sujarto, 1990). Cirebon, like other colonial area in Nusantara, has function as centre of government authority, centre of military activities, centre of plantation and mining administration, and centre of port and commercial facilities. Obviously, the motive or power of Cirebon spreading out was politic and economic similar to previous era.

After a kesultanan authority's break up on three kesultanans which are Kasepuhan and Kanoman (1677), and Kacirebonan (1803) that had made powerless traditional monarchy, Dutch Colonial Government got more strong dominance on Cirebon. Furthermore, the legal authority of Kesultanan Cirebon was removed with *Gemantee Cheirebon* statement (Cirebon City) which covered 1.100 hectare area and 2,000 populations (Stlb. 1906 No. 122 dan Stlb. 1926 no. 370) (Sunarjo, 1983).

In addition, colonial government constructed several facilities and infrastructure to support the colonial function for centre of mining, plantation, and trading such as warehouse, tobacco processing company, central bank, post office, and church. For the accessibility of the plantation product distribution from its hinterland (Cirebon, Kuningan, and Indramayu) they developed railway (Kusuma, 2010).

The urban shape of Cirebon in this era still formed *fan-shape type* with more large area and especially to the north and east (port extension); and *a change of grid pattern of internal city centre to radial* (modified from Kusuma (2010)) which charaterized by:

a. Landmarks: Keraton Kasepuhan as the centre of the city, and city hall for colonial government administration.
b. Paths:
    - Internal: river pathway around the keraton area, street in grid pattern that arranged the city centre (keraton, commercial area, port, and settlements)
    - External: extended linear street along the sea bay on the east that connect Anyer and Panarukan via Cirebon as part of Daendels post network transportation, linear street from the city centre to the Bandung on the West of Java, and linear street from the city centre to Kuningan.
c. Edges: Java Sea on the east, two rivers on the south and north, and flood canal on the west.

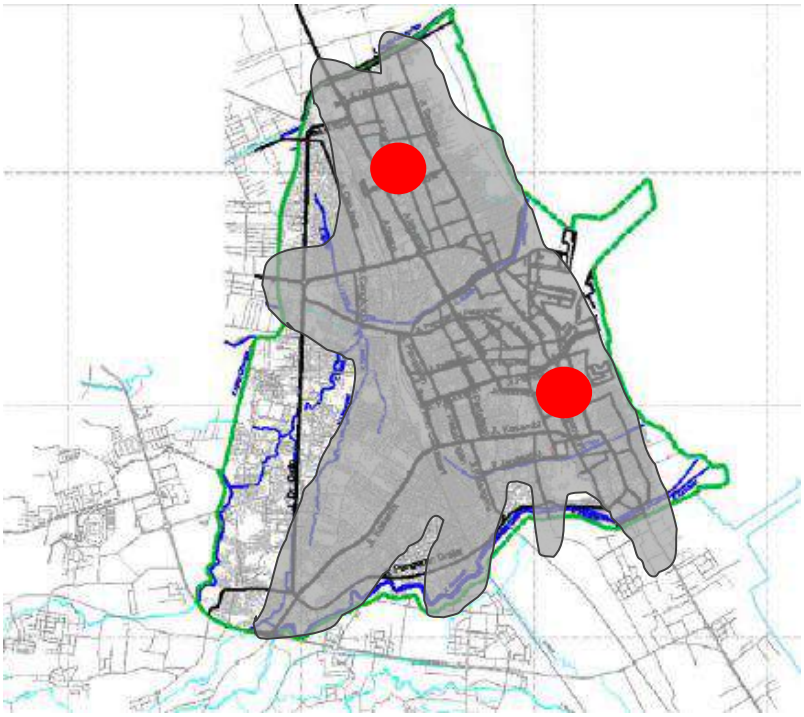

Figure 4. Cirebon's Fan-Shape Model in the Colonial Era

Cirebon's urban structure in this stage was a *multiple-nuclei type*, which characterized by (modified from Kusuma (2010)):

a. Paths and edges: same as above
b. Nodes: Muarajati Port, *De Bescherming* castle, Kanoman and Pasar Pagi market place, two main railway stations.
c. District: i) inner city district where there are several important building such as city hall of colonial government administration, social meeting building, hotel, main park, pendopo for local officer administration, ii) sport and reacreation centre, iii) central bussiness district (consist of tobacco processing company, central bank, post office, and church) and port, iv) settlement districts, v) retail distict, vi) port and warehouse district.

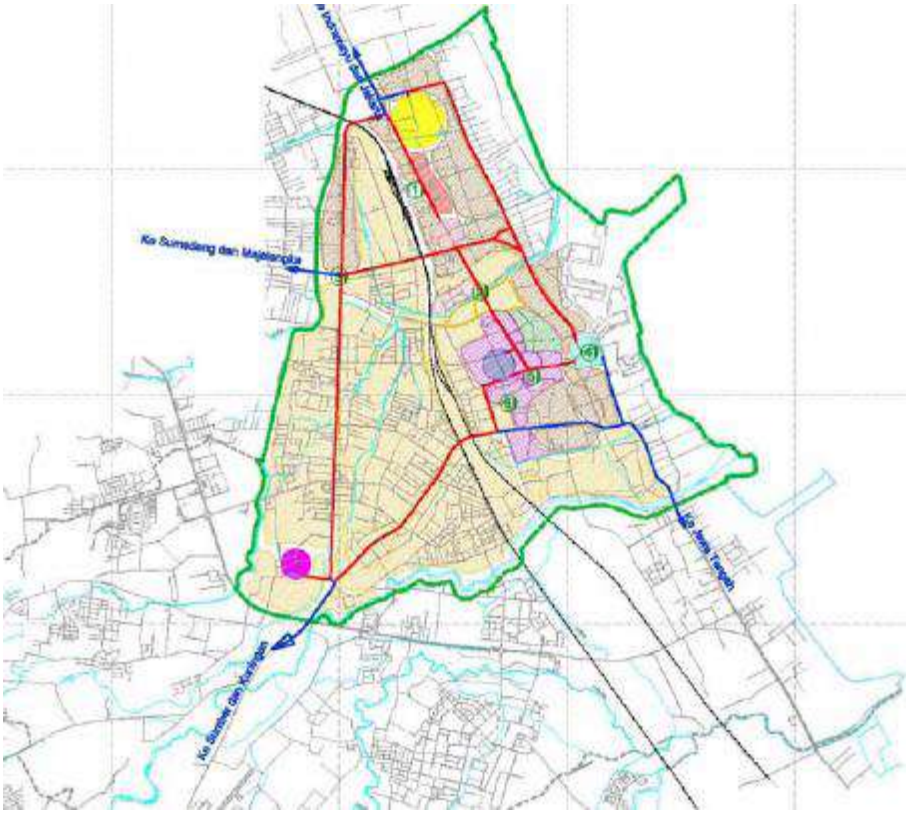

Figure 5. Cirebon's Multiple-Nuclei Structure Model in the Colonial Era

In this era the politic power for economic reason of colonial government had strong influence in both Cirebon's shape and structure, tradional monarchy and religion power has been removed. A change of colonial government to Japan was not change the urban pattern.

C. After-colonial era (1945-now)

Cirebon enter modern and post-modern era which start from independence of Indonesia from colonial government (from Japan). From independence until 1960's Indonesian government faced instability of social, economic, and political condition; and, in the same time urbanisation which is growing population moved in from rural area to the cities (Sujarto, 1990). In addition, cities confronted with a lack of city management, resources, appropriate law and policy, effective city planning, and segregation of urban growth. This also happened to Cirebon. In 1957 Cirebon declared as municipal with 3,300 hectare and more extended to 3,600 hectare.

Nowadays, Cirebon is centre for national activity with leading sectors such as industri, fishery, agriculture, and mining. Furtermore, Cirebon also stated as orientation centre for its hinterland: Indramayu, Palimanan, Jatibarang, Sumber, Majalengka, Kuningan, and Ciledug (Kusuma, 2010). In this post-modern city, not like in the colonial era which the goverment had great power to set up the city and

community had formidable power to do their activities, the transpose condition happened with a broader public control on private property and how government should set regulation to compromise the private property right with the process of urban facilities development (Levy, 2009). Consequenly, with the lack of city planning vision, Cirebon driven by market such as malls development and retail area that spread all over the city as products of post-modern era. However, some memories of colonial planning survived and emergent in modern forms (Ward, 2002) which appear in Cirebon on the preservation of old central business district and some government building style.

Those transformation create rencently *extended fan-shape type*); and a mixture of *grid pattern of internal city centre and radial* (modified from Kusuma (2010))
that characterized by:

a. Landmarks: city hall as city centre, grand mousque, Keraton Kasepuhan, mall
b. Paths:
    - Internal: primary street that connect government buildings area, connect city center with sport and recreation centre, and connect city centre with hospital.
    - External: extended linear street along the sea bay on the east that Jakarta with East Java, west outer ring road to connect Bandung and Indramayu, south outer ring road to connect city to central Java, and linear street from the city centre to Kuningan.
c. Edges: Java Sea on the east, one river on the north, and Cirebon Residence on the south and west.

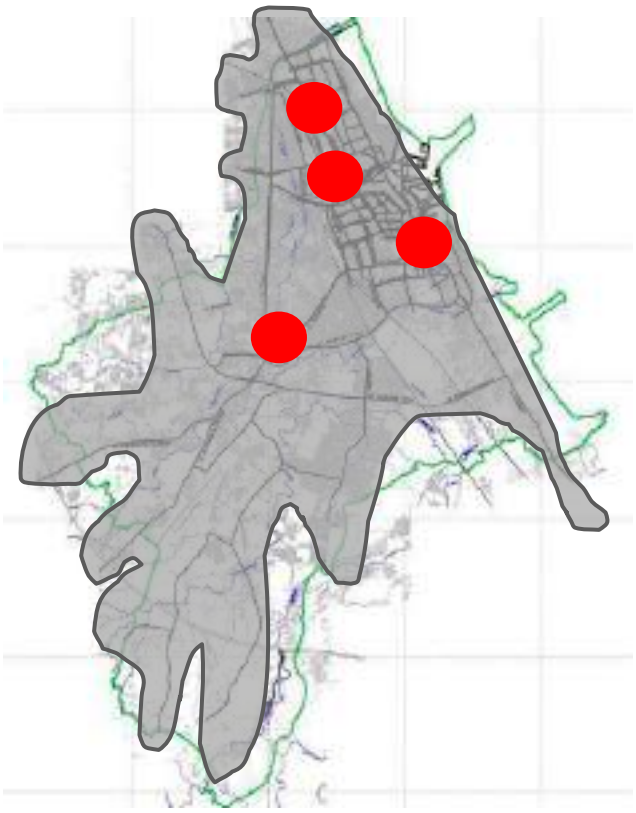

Figure 6. Cirebon's Fan-Shape Model in the After-Colonial Era

Cirebon's urban structure in this stage was a *multiple-nuclei type*, which characterized by (modified from Kusuma (2010)):

a. Paths and edges: same as above
b. Nodes: Muarajati Port, some market places, two main railway stations, bus terminal, local transport terminal.
c. District: government administration district, commercial district, settlement (spread all over the city), centre of education facilities district, industrial district, and health facility district.

However, the port and warehouse in this era are not exist anymore due low of sea level on the bay area.

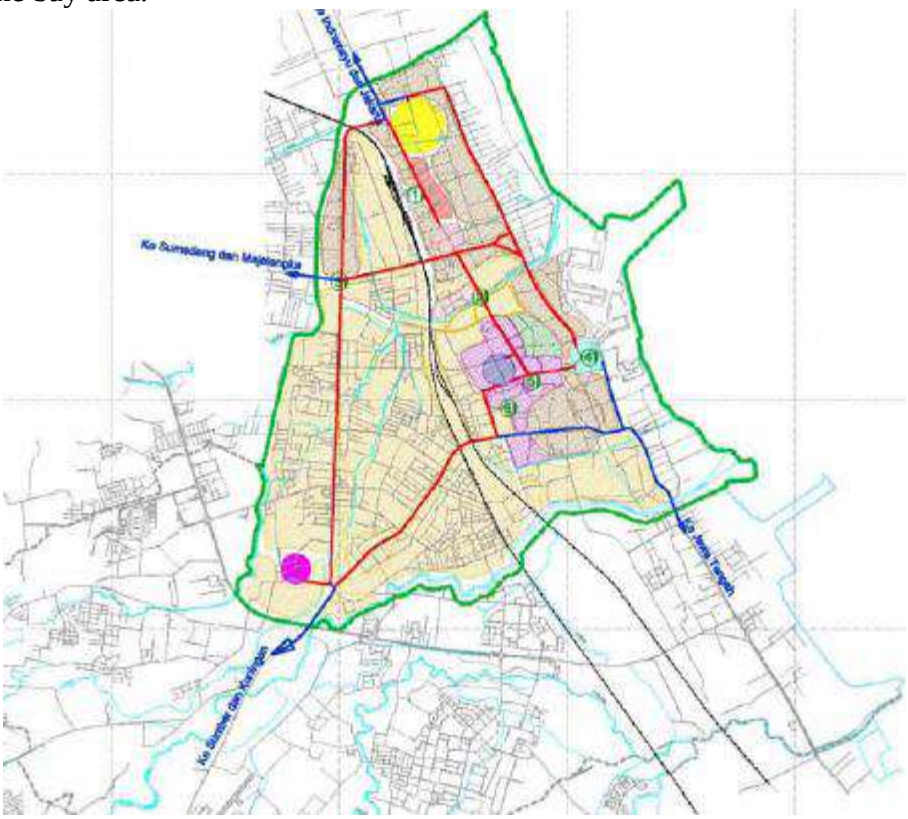

Figure 7. Cirebon's Multiple-Nuclei Structure Model in the After-Colonial Era

Those transformation although still came out from political government power, but market or economic power and community power had been shape Cirebon right now.

3. Conclusion

Cirebon urban evalution has been change in two different city model from the small religion city and tranditional local monarchy as cosmic model to practical model which is commercial and other functional land use composed the city. The reason of

this tranformation is the changing power that govern and influence the city, first Cirebon's pattern shapping by the power of local authority as religious-monarchy power. Second, with the changing of authority to Dutch colonial government political power as well as economic power change the city pattern. Finnaly, in the indepence and postmodern era, again political power of municipal government marks the city shape side by side with market or economic power and community power to private property. Furthermore, nowadays, kesultanan just as symbol of the past without any power to shape the city.

Although the power through three time has been change, howerver, the limitation, geoposition, and natural landscape and disaster of Cirebon could not be avoided. The natural force that has been made the bay steeper make the port function as the most important hub to collected and distributed Cirebon and its hinterlands products denied. Consequently, some industrial centre and warehouse changes to retail and commercial area. However, learn from the history will always beneficial for Cirebon to step forward as sustainable city in its own power.

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Socioeconomic Changes and Suburban Housing Forms in the Bangkok Metropolitan Region of Thailand under the Globalizing Economy

Shigeru Fukushima[1]

Abstract

Rapidly expanding metropolitan areas of Bangkok are frontiers of industrialization and housing. This study aims to analyze suburban housing forms and their socio-economic characteristics of the Bangkok Metropolitan Region (BMR), an area that is transforming into a modern society, with integration into the global economic system. I have attempted to understand the housing forms of the BMR from a socio-economic perspective, using the conceptual framework "integration into the global economy — industrialization and changes in employment and household economy—land and house markets / housing policies / urban development — housing forms." The questionnaire survey targeted married families was conducted to clarify the socio-economic attributes of the households and their housing forms in the Eastern Development Corridor (Samutprakarn) and Northern Development Corridor (Pathumthani) of the BMR. A total of 324 sets of valid responses were obtained.

The housing markets of the BMR has been transforming rapidly. Overall housing forms of the BMR has been formalizing and improving in the national economic growth and the modernization of urban society. However, for every generation, there was a large income gap, with a ratio of 1.8 to 3.3 times between different levels of educational groups. This gap in economic strength resulted in a housing disparity in terms of housing ownership, the quality of housing and living environments, and the formality of housing, since in Thailand there is little government intervention in the

housing market. In the BMR, the following four factors worked to inhibit the gap in income from leading directly to a housing disparity: (1) easy access to housing loans by provided by the GHB and private financial institutions, (2) an affordable rental housing market, (3) purchase timing, and (4) the government housing programs such as the BUA program and the BM program.

1. Introduction

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Based on its outward-oriented economic policy, Thailand has incorporated capital and technology from the outside through direct foreign investments to achieve rapid modernization in industry, a process often referred to as "compressed industrialization." What socio-economic changes did the industrialization and economic development of Thailand produce in different generations and social strata under the global economic system, and what housing opportunities did they provide? Rapidly expanding metropolitan areas in ASEAN countries are frontiers of industrialization and housing. This study aims to analyze suburban housing forms and their socio-economic characteristics in the Bangkok Metropolitan Region (BMR), an area that is transforming into a modern society as a product of the global economic system.

This study is an extension of the ongoing research into global cities, the aim of which has been to analyze changes and the reorganization of spaces in urban societies under the global economic system (Friedmann, 1986; Sassen, 1994; McGee, 1991; Scott, 2001, etc.), but this study focuses on changes in housing forms in an Asian newly industrial society, in particular the BMR, Thailand. I have attempted to understand the housing forms of the BMR from a socio-economic perspective, using the conceptual framework "integration into the global economy — industrialization and changes in employment and household economy—land and house markets / housing policies / urban development — residential forms." Fukushima et al (1996) examined the changes in suburban housing forms in the BMR under rapid industrialization and globalization based on their field survey conducted in 1995, which corresponds to the early stage of the industrialization process. Fukushima (2000, 2001) evaluated the impact of the Asian financial crisis on suburban housing forms, in particular on the fluctuation in housing ownership. This study functions as a kind of follow-up to these past studies.

2. Analytical Framework and Main Surveys

Economic growth, development, and industrialization have had particular influences on different generations and social groups, resulting in varied occupation structures and economic conditions. Different generations and social classes have had varied housing options at the time of settlement and also during successive eras, along with distinct economic conditions. These varied options, together with housing preferences, have created diverse housing demands and conditions. Thus, it is clear that industrialization and rapid economic development have influenced the housing forms of different generations and social groups. (Figure 1)

In this study, I will categorize sample households based on the generations and educational level of the family heads. The heads of the households are classified into three generational groups: those in their forties who entered the labor market in the 1980s when Thai society and its economy were at a turning point, those in their twenties and thirties who entered the labor market during years of drastic change, i.e. during the booming economy, Asian financial crisis and recovery from that crisis, and those in their fifties or older who entered the labor market when the economy was that of a developing country. In Thai society, educational background is a primary factor that determines the social stratum to which one belongs. I will distinguish three educational categories, and regard respondents with a primary-school-level education or lower as the "low education group (LEG)," those who graduated from junior or senior high school or vocational schools as the "medium education group (MEG)," and those with two-year college, technical college, or university level education or higher as the "high education group (HEG)." Sample households are therefore classified into nine groups, since each of three generational groups are each split up into three educational background groups. Based on this nine-group classification, the characteristics and mechanisms of formation of each housing form were analyzed.

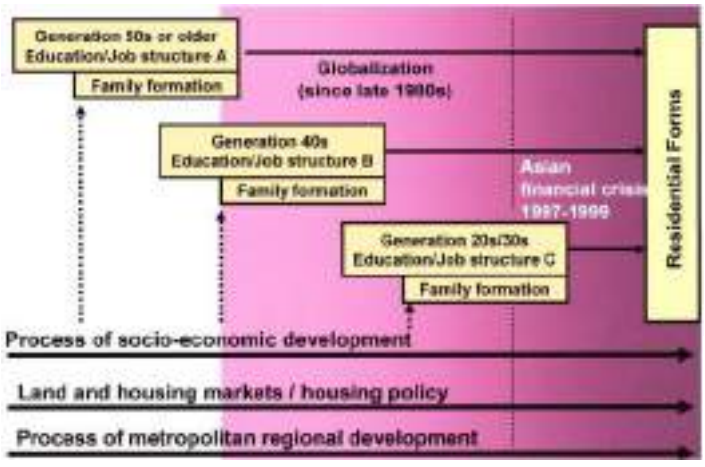

Figure 1.
Analytical framework: Suburban residential forms in development process

The questionnaire survey targeted married families living in the suburban areas of the BMR was conducted to gain the data of socio-economic attributes of the residents and their housing forms, by visiting each household in January 2005. A total of 324 sets of valid responses were obtained. The BMR consists of the Bangkok Metropolitan Administration (BMA) and five surrounding provinces, including Nonthaburi, Pathumthani, Samutprakarn, Samut Sakhon, and Nakhon Pathom. In this study, the Eastern Development Corridor (Samutprakarn) and Northern Development Corridor (Pathumthani) were selected as the areas to be surveyed. The Eastern Development Corridor is expanding from Bangkok to the east coast industrial area, and the Northern Development Corridor is expanding northward from Bangkok to the central development area, such as Ayutthaya and Saraburi. In conducting these questionnaire surveys, sampling was carried out using the point sampling method.

3. Developments and Housing Market Trends of the BMR

3.1 Socio-economic Developments and Changes in the Housing Markets in BMR

Industrialization has accelerated since the late 1980s in the BMR as direct investment increased rapidly, and the economic growth caused the employment structure and labor market to undergo changes. The BMR became a very important node linking the global economy and the national economy. The city center of Bangkok accumulated the functions for financial, business and commercial center, while the development of many manufacturing, housing, and retail facilities took place in the nearby provinces (Tasaka, 1998). Although the Asian financial crisis of 1997-1999 affected the Thai economy and society very seriously, the Thai economy was able to recover by promoting export-oriented industries with the depreciation of Thai bahts and continuous inward foreign direct investments. The GDP per capita which had fallen by 1,827 dollars in 1998 recovered to the same level as just before the crisis in 2006, and reached 4,984 dollars in 2010. The population of the BMR has expanded from 7,537,700 for the BMA and 3 vicinity provinces in 1988 to 10,326,100 for the BMA and 5 vicinity provinces in 2010 due to the economic development of the BMR. Young workers continued to form households, creating a demand for housing.

The housing markets in the BMR have been changing in association with these

economic development circumstances. The housing market trends of the BMR can be described as follows: (1) a dual structure of housing delivery with formal and informal housing before the mid-1980s, (2) the housing boom from 1990 to 1996, (3) the deadlock in the housing supply from 1998 to 2002 after the Asian financial crisis, (4) recovery and stable housing developments since 2003. Since the late 1980s, the commercialization and formalization of housing delivery have progressed. Private

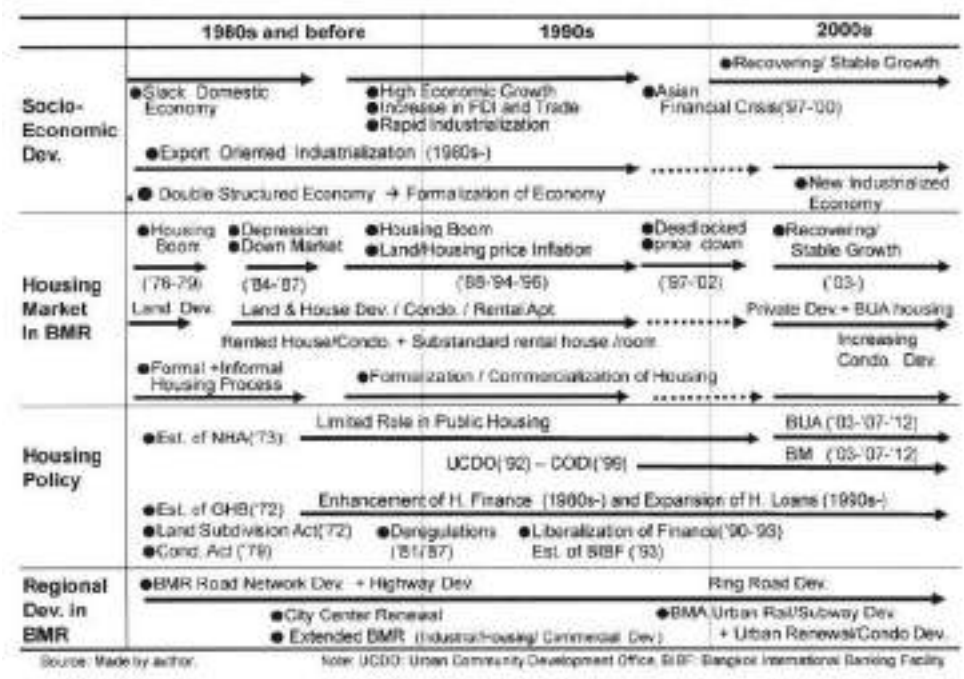

Figure 2. Development Process and Housing Market in BMR

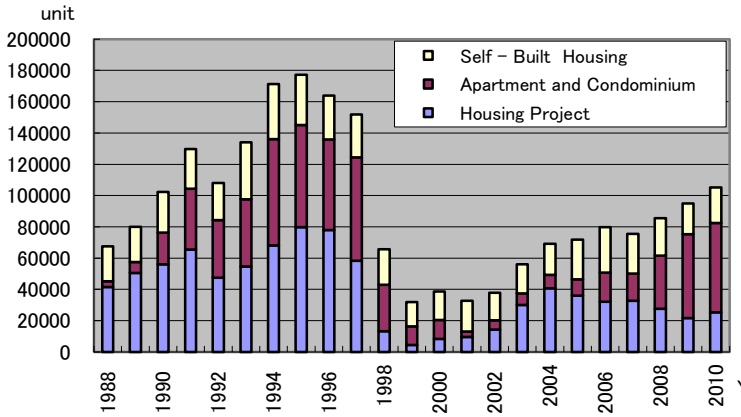

Figure 3.
Housing Supply Trends in BMR
Source :
Made by author based on data of GHB

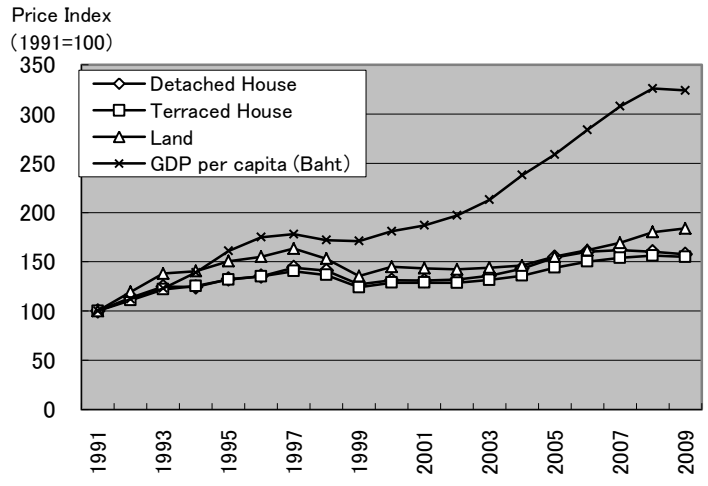

Figure 4.
Housing Price Trends in BMR
Made by author based on data of REIC

housing developers responded to the increased housing demand in the BMR very actively. During the housing boom, 142,279 housing units were supplied annually on average, among which 113,012 units were developed by developers.

This large supply of housing units was made possible by the lenient regulations on land and housing development and an ample supply of funds through domestic and foreign money markets (Yap and Kirinpanu, 1998). However, this huge housing supply did not develop only in response to the real housing demand, but also to the speculative demand. The inflation trends in housing prices after the late 1980s attracted many speculators and lowered housing affordability for workers in lower income groups. The Government Housing Bank (GHB) reported that the price of land and townhouses in the BMR increased 1.63 and 1.41 times, respectively, during the period from 1991 to 1997 (GHB, 1999).

The financial crisis caused the housing market of the BMR to change completely. Many housing development projects reached deadlock as the supply of funds was discontinued. After the crisis, the number of housing developers dropped drastically, from around 2,000 to only 200 companies (Vanichvatana, 2007). The annual housing supply also dropped to 41,350 units on average from 1998-2002, and most of these were completed units started before the crisis or self-built by the owners. Since 2000, as the Thai economy has recovered, the housing markets of the BMR have followed suit, and the housing supply recovered gradually, from 56,040 units in 2003 to 105,152 units in 2010.

3.2 Characteristics of Thai Housing Policy

Thai housing policies are traditionally characterized by little public intervention. Although the government has been promoting public housing developments through the National Housing Authority (NHA) since 1972, the share of public housing, remained only a few percent of all housing supplied. The government’s stance on housing policy seems to be closer to an enabler that promotes private housing

development through the deregulation of development control, the enhancement of housing finance by the GHB, and community development and improvement of the living environment by the Community Organizations Development Institute (CODI) (Yap, 2002; Yap and De Wander, 2010). In particular, the GHB has increasingly helped to supply housing loans and development financing in, response to the expansion of the housing demand during rapid economic development. Both the expansion of housing finance and the deregulation of the Land Subdivision Control Act in 1981 and 1987 led housing developers to supply lower-priced housing units, opening up segments of the market for the lower medium income group (Archer, 1991; Angel and Chuated, 1987).

Under the former Taksin administration, the government started to intervene in the housing market in 2003, although it did so through temporary programs rather than the permanent public housing system. The NHA has conducted the *Baan-Ua-Arthorn* (BUA; "we are concerned with housing" in Thai) program, a home ownership promotion program for low income people. The government provided a subsidy of 80,000 bahts per unit for the BUA program, and the NHA sold the units for 390,000 bahts per unit. The NHA completed construction of 172,107 low-cost housing units in the BMR by 2012 (Kolaka, n.d.), although there are criticisms such as delivering the units to not only low income group (the eligible income level was later relaxed from 15,000 bahts to less than 40,000 bahts). The CODI has conducted the *Baan-Mankong* (BM; "housing security" in Thai) program which supports poor communities in securing land and housing tenures and improving their housing and living environments. The CODI has conducted 282 of the BM projects, which benefitted 35,933 households in BMR by 2010.

4. Housing Options and Housing Forms in the Suburban Areas of the BMR

Based on an analysis of the survey results and the analytical framework mentioned in Section 2, I will examine the housing options and housing forms of the suburban areas in the BMR.

4.1 Housing Options in the Suburban Areas of the BMR[1]

Here I examine the options for housing available in the housing market and public housing delivery to verify how the suburban areas had functioned as a frontier for housing. It should be noted that there were transitional points along the hierarchy of

household income at which one option for housing changed to another. The transitional point between formal and informal housing was in the income range of 5,000 to 10,000 bahts (monthly household income, hereafter referred to as household income). If the household income was less than 5,000 bahts, the available options were squatter housing or a rented room in a slum settlement. There were hardly any households whose household income was less than 5,000 bahts in the BMR, where double incomes were commonplace and even unskilled factory workers could usually earned 5,000 to 7,000 bahts monthly. As income increased to the 5,000 to 10,000 bahts range, formal rental housing became an option. This rental housing, in ascending order of price, included wooden tenements with shared utilities and rented rooms (rent: 1,000 to 1,500 bahts), simple wooden row houses (rent: 1,200 to 1,800 bahts), and apartment houses with utilities (rent: 1,800 to 2,500 bahts). Wooden tenements, rented rooms and wooden row houses were regarded as a kind of substandard rental housing, although these were not like slum and squatter housing. In the 10,000 to 15,000 bahts income range, the percentage of people living in substandard rental housing decreased, with terraced houses, detached houses or condominiums for rental (32%) or apartment houses with utilities or low-cost flats for rental (29%) becoming prominent. As the people in this income range could not afford to purchase a small terraced house that would involve paying the monthly installment of about 5,000 bahts for a housing loan, they opted to rent a terraced house and pay 3,000 to 4,000 bahts for the rent.

There were many terraced houses and condominiums that were bought as investments and then turned over to the rental housing market until their resale time (Pornchokchai and Perera, 2005)[2]. The owner of a rental house made investments in anticipation of a rise in the price, and expected that when it would be sold, the interest payment burden and other investment costs, as well as part of the opportunity cost, would be covered by the rent until a profit could be secured. More importantly, the rent of such an investment property was usually undervalued, as the rent was determined based on its affordability to potential tenants. Thus, this type of rental house helped to improve living conditions for people in the income range of 10,000 to 20,000 bahts.

The income range of 15,000 to 20,000 bahts must be a transitional point between owned and rental housing, as the levels of ownership and rental were comparable. The home ownership rate likewise increased to 67%, 74%, 84% and 91% as household income moved up along the hierarchy of income ranges, i.e. the income

ranges of 20,000 to 30,000 bahts, 30,000 to 50,000 bahts, 50,000 to 70,000 bahts, and more than 70,000 bahts.

There were several options for home ownership for people in the income range 10,000 to 15,000 bahts, such as low-cost flats, BUA housing provided by the NHA, and self-built simple detached houses in spontaneous development sites. Low-cost flats as owner-occupied housing were unpopular due to maintenance problems and to their low quality, while self-built simple detached houses were losing popularity among the younger generations. The number of BUA housing units supplied was still very limited at the time when the survey was conducted. As suggested by the fact that the NHA relaxed the eligible income condition for BUA housing from less than 15,000 bahts to 40,000 bahts, the lower creditability of housing loans for people in this income range made it difficult for them to achieve homeownership.

The owner-occupied low-cost flats were unpopular due to maintenance problems. According to our survey, 92% of low-cost flats were rented, while only 20% of terraced houses were rented.

Table 1 Housing Options of the Suburban BMR (2005)

Household Income [baht]	Ownership		Rental	
	Price range [1000 baht]	Options	Rent range [baht]	Options
50,000 and over	3,000 and over	●Detached house [Upper grade estate]		Prefer to ownership
30,000 - 50,000	1,500 - 3,000	●Terraced house [Upper grade estate] ●Detached house [Ordinary grade estate] ●Shop-house [Local town center]		Prefer to ownership
	800 - 1,200	●Terraced house [Ordinary grade estate]		
20,000 - 30,000	600 - 800	●Small terraced house [Ordinary grade estate] ●Small simple detached H. [Lower grade estate]	5,000-7,000 3,000-4,500	●Shop-house [Local town center] ●Terraced house [Ordinary grade estate]
10,000 - 20,000	200 - 500	●Self-built house [Land subdivision site]		
	300 - 500	●Low cost condo	2,500-3,500	●Rental apartment with better finishing/design
	390	●BUA house (by NHA)		
5,000 - 10,000	-200	●Self-built simple house [Spontaneous dev. Site without infrastructure]	2,000-2,500	●Low Cost Condo
			1,500-2,500	●Factory workers' apartment with utilities
			1,000-2,000	●Wooden row house ●Wooden simple house
			1,000-1500	●Rental room of wooden apt. with shared utilities
Less than 5,000	Less than 50	●Squatter/slum house [Informal settlement]	Less than 1,000	●Rental room [Informal settlement]

Source: Author's survey 2005

4.2 Housing Forms in the Suburban Areas of the BMR by Generation and Level of Education

(1) The Generation in Their Fifties or Older

1) Socioeconomic attributes

In this generation, the majority (76%) belonged to the LEG, while the shares belonging to the MEG and HEG were estimated to be 15% and 8%, respectively, based on the 2000 census. There is a clear tendency for different employment patterns according to the level of education. As of the survey conducted in 2005, 20 to 30% of people in this generation had retired from active life. Therefore, I checked the past occupational status of the heads of households as of 1995. High percentages of the HEG and MEG worked as government employees (33% and 45%, respectively). Other major occupations included managerial/specialist personnel in private companies (33%) for the HEG and self-employed workers (25%) for the MEG. The employment patterns of the LEG in 1995 varied rather widely: other unskilled wage workers (27%), factory workers (18%), self-employed workers (25%), informal workers (14%) and farmers (13%). In 2005, the share of self-employed workers increased to 34% due to people retiring from their original jobs and shifting from agriculture.

Differences in educational background affected household income. The monthly household incomes (median value) of the HEG, MEG and LEG were 27,500 bahts, 23,000 bahts, and 15,000 bahts, respectively. The income disparity of 1.8 times between the HEG and LEG was not very large compared with those of the younger generation. This was because (1) many of the HEG and MEG members were government employees whose salary level was not very high, (2) around 20-30% had already retired, and (3) the LEG included successors to ownership of small-scale businesses.

2) Housing forms

There were considerable differences in housing forms among the different education groups. This housing gap seems to be larger than the level of difference in their incomes due to the accumulation of income over the years, differences in accessibility to housing loans, and differences in the assets and family support available. Ninety-four per cent of the HEG and 71% of the MEG had their own houses, while only 57% of the LEG was able to achieve formal home-ownership (excluding owned houses built on leased lands). With regard to types of housing, 93% of the HEG and 79% of the MEG lived in detached or terraced houses, while 47% of the LEG lived in such housing types and more impressively, 20% of them lived in informal houses such as slum and squatter settlements and 14% lived in simple detached houses or simple wooden row houses in spontaneous development

sites. With respect to public services and local infrastructure, 10 to 15% of the LEG, mainly those living in informal settlements, could not access drainage facilities, garbage collection services, or access roads, although almost 100% had access to water and electricity supply services.

Table 2. Household Attributes and Housing Forms in the Suburban BMR

Age	Level of education	Occupation	Household income (baht/)	Housing ownership rates	Type of housing	Ownership status and housing quality	Room configuration	Purchase price (1,000s of baht)	Average rent (baht/)
Twenties and thirties	LEG	① Self-employment (46%) ② Other types of wage labor (17%) ③ Informal employment (13%)	11,600 12,910 (1.6 persons) Has stable income: 67%	① Rental house (42%) ② Own house (29%) ③ Own informal house (13%) Rented room (13%)	① Terraced house (35%) ② Apartment house, detached house, informal house (13% each)	① Rental - A (30%) ② Ownership- A (26%) ③ Informal (13%) ④ Rental-B (13%)	① 2BR +LR+DK (34%) ② One room (26%) ③ 1BR+LR+DK (13%)	645 581 [1999]	2796
n = 34									
	MEG	① Factory work (30%) ② Other types of wage labor (28%) ③ Self-employment (22%)	18,250 22,340 (1.9 persons) Has stable income: 82%	① Rental house (46%) ② Own house (33%) ③ Owned family house (9%)	① Apartment house (26%) ② Terraced house (21%) ③ Detached house (19%) ④ House with shop (11%)	① Rental-B (32%) ② Ownership -A (30%) ③ Rental- A (13%)	① One room (37%) 2 BR + LR (33%) ③ 1BR +LR+DK (11%) ④ 4-5BR +LR+DK (10%)	425 773 [1997]	2716
n = 44									
	HEG	① Self-employment (37%) ② Other types of wage labor (20%) ③ Govt employee (administrative work, specialist work) (14%)	36,240 45,870 (2.0 persons) Has stable income: 88%	① Own house (68%) ② Rental house (31%)	① Terraced house (42%) ② Detached house (28%) ③ Apartment house (14%)	① Ownership- A (61%) ② Rental - B (22%) ③ Rental - A (11%)	① 3BR +LR+DK (46%) ② 2BR +LR+DK (31%) ③ One room + L (13%)	1,400 1,846 [2000]	2942
n = 36									
Forties	LEG	① Self-employment (43%) ② Other types of wage labor (23%) ③ Factory work (14%), Informal employment (14%)	15,000 28,860 (1.8 persons) Has stable income: 68%	① Rental house (41%) ② Own house (36%)	① Simple detached house (19%) ② Detached house, terraced house, apartment house, wooden row house (14% each)	①Ownership - A (27%) ② Rental - B, (18%) Rental - C, (18%) ③ Rental - A (14%) Ownership- B (14%)	① One room + L (41%) ② 2BR +LR+DK (23%) ③ 1BR +LR+DK (14%) 3BR +LR+DK (14%)	733 877 [2000]	2859
n = 22									
	MEG	① Self-employment (36%) ② Other types of wage labor (30%) ③ Factory work (12%)	23,020 29,990 (1.9 persons) Has stable income: 88%	① Own house (72%) ② Rental house (18%) ③ Owned family house (8%)	① Terraced house (31%) ② Detached house (25%) ③ Simple detached house (12%) ④ House with shop (10%)	① Ownership - A (32%) ② Ownership - B,(14%) Rental - A (14%) ④Ownership - B (5) (12%)	① 2BR +LR+DK (46%) ② 3BR +LR+DK (26%) ③ One room + L (18%)	562 834 [1997]	3453
n = 50									
	HEG	① Managerial/specialist work (35%), Other types of wage work (26%) ② Self-employment (22%) ③ Govt employee (administrative work, other types, 13% each)	41,870 54,480 (1.8 persons) Has stable income: 96%	① Own house (87%) ② Rental house (13%)	① Terraced house (48%) ② Detached house (30%) ③ Apartment house (9%)	① Ownership - A (78%) ② Rental - B (9%)	① 3BR +LR+DK (57%) ② 2BR +LR+DK (26%) ③ 4BR +LR+DK (9%)	935 1,359 [1997]	- - - -
n = 23									
Fifties or older	LEG	① Self-employment (34%) ② Retired, unemployed (18%) ③ Other types of wage labor (13%), Factory work (13%), ④ Informal employment (7%)	15,310 23,450 (2.3 persons) Has stable income: 64%	① Own house (57%) ② Own informal house (16%) ③ Rental house (12%) ④ Leased land, own house (10%)	① Detached house (28%) ② Terraced house (27%) ③ Informal house (16%) ④ Simple detached house (9%)	① Ownership - A (49%) ② Informal (20%) ③ Rental - B (12%)	① 2BR +LR+DK (43%) ② 3BR +LR+DK (19%) ③ One room + L (17%) ④ 4BR +LR+DK (7%)	380 999 [1997]	2025
n = 69									
	MEG	① Retired, unemployed (29%) ② Govt employee (administrative work, specialist work) (21%) Other types of wage labor (21%) ③ Self-employment (18%)	23,800 33,480 (1.9 persons) Has stable income: 85%	① Own house (71%) ② Owned family house (14%) ③ Rental house (7%)	① Detached house (34%) ② Terraced house (25%) ③ LC-Condo (7%)	① Ownership - A (75%) ② Ownership -B (F) (11%) ③ Rental - A, (7%) Informal (7%)	① 2BR +LR+DK (33%) 3BR +LR+DK (33%) ② One room + L (15%)	450 677 [1997]	- - - -
n = 38									
	HEG	① Managerial/specialist work (20%) Govt. employee (administrative work, specialist work) (20%) Retired, unemployed (20%) ② Clerical work (13%)	27,500 50,530 (2.1 persons) Has stable income: 100%	① Own house (93%) ② Rental house (7%)	① Detached house (69%) ② Terraced house (31%)	① Ownership - A (93%)	① 3BR +LR+DK (33%) ② 4BR +LR+DK (21%) ③ 2BR +LR+DK (19%) 5BR +LR+DK (19%)	800 939 [1993]	- - - -
n = 15									

*1: Age, education level, and occupation are those of the head of the household.
*2: The household income at the top is the median value. That at the bottom is the average value. In the household income row, the value shown in parentheses is the average number of income earners per household.
*3: In the type of housing column, * "own house A" includes detached houses, terraced houses and shop-houses; * "own house B" includes simple detached houses and LC-Condos; * "rental house A" includes detached houses, terraced houses, and houses with shops; * "rental house B" includes apartment houses and LC-Condos; and * "rental house C" includes wooden row houses and rented rooms.
*4: In the purchase price row, the value at the top is the median value, the value at the bottom is the average value, and the year shown in brackets is the average year when housing was purchased.
*5: The differences between the categories are significant at 1% level by the analysis of variance.

It could be said that the HEG and MEG were able to enjoy a stable life and better housing conditions. This was not true for the LEG as mentioned above, since the majority of members of this group were self-employed and their economic and housing situations were dependent on whether or not their businesses were successful. As the majority of individuals in this generation were in the LEG, this created an overall polarization between those with satisfactory and unsatisfactory living situations.

(2) The Generation in Their Forties

1) Socioeconomic attributes

The education level of the respondents improved in comparison with the older generation. Although more than a half (56%) still belonged to the LEG, the HEG and MEG made up 17% and 28%, respectively. Amid the rapid expansion of direct investment and the rapid economic growth that occurred from the late 1980s until the mid-1990s, many people in the HEG and MEG were employed as high-level or middle managerial personnel, as there was a scarcity of qualified labor force. However, because the impact of the Asian financial crisis on the labor market was so serious, the share of self-employed workers increased greatly for all of the education groups between 1995 and 2005. In 2005, the major occupations of the HEG included government administrators (26%), managers/specialists in the private sector (26%), sales/service personnel (26%) and self-employed workers (22%), while the MEG and LEG worked as self-employed workers (36% and 32% respectively), sales/service personnel (30% and 23%) or factory workers (12%, and14%). Fourteen per cent of the LEG was engaged as informal workers, although there were no informal workers in1995 before the crisis.

Differences in monthly household income (median value) according to level of education were large. The household incomes of the HEG, MEG and LEG were 50,000 bahts, 21,750 bahts, and 15,000 bahts, respectively. The household income of the HEG was 3.3 times more than that of the LEG. Involvement in the global economy caused the wages of the workforce with higher levels of education to rise

significantly and, as a result, caused the income gap between the HEG and LEG to widen (Fukushima et al. 1996, Funatsu and Kagoya 2002).

2) Housing Forms

Diverse socioeconomic conditions and being in a life stage transitional for home ownership caused diversity in the forms of housing this generation used. The home ownership (formal) rate for people in their forties varied greatly depending on level of education. Although 87% of the HEG and 72% of the MEG had achieved home ownership, only 36% of the LEG had done so. There was also a gap in the level of housing quality. The HEG and MEG generally lived in terraced houses or detached houses (78% and 60%, respectively), while only 14% of the LEG did so, and a considerable number of them lived in low-quality housing. i.e., 19% in simple detached houses and 19% in simple wooden row houses or rented rooms in spontaneous development sites. The percentage of those living in informal housing, however, was 5%, which is much lower than that of people in their fifties or older.

In the BMR, the rental housing market gained attention as a mechanism to reduce the housing disparity. Many members of the MEG and LEG used this sector of rental housing. MEG households living in rental housing paid an average rent of 3,455 bahts; they lived in terraced houses or housing at an equivalent level. A large income gap among the LEG led to a housing disparity in this group, ranging from substandard rental housing to rented terraced houses.

(3) The Generation in Their Twenties and Thirties

1) Socioeconomic attributes

The level of education of people in this young generation was substantially improved compared with the previous generation. The ratio of the LEG dropped to 33%, while those of the MEG and HEG rose to 44% and 23%, respectively (estimated based on the 2000 Census). The MEG became the majority, and one out of four or five people had a high-level educational background.

The improvements in educational background affected the labor market. As the number of new graduates of tertiary education expanded rapidly, the time when university graduates were automatically promoted to be white-collar employees or managerial level personnel was passing. The marginalization of the labor force with a low level education progressed, because a large young labor force with a secondary education entered the labor market. The HEG worked as self-employed workers

(37%), sales and service personnel (20%) or specialist/managerial level personnel (12%), while the MEG worked as factory workers (30%), sales or service personnel (28%) or self-employed workers (22%), and nearly a half of the LEG worked as self-employed workers (46%). There were also people in the LEG who were informally employed (13%) and some who were not employed (4%) at all. This was evidence of the marginalization of the LEG. It is difficult to judge whether this tendency to opt for self-employment among all the education groups was driven by the financial crises, mismatches in the labor market, or was a step that the younger generation took in order to become successful.

Although the gap in employment patterns depending on level of education decreased, there was still a large gap in household income. The monthly incomes (median values) of households in the HEG, MEG and LEG were 37,500 bahts, 18,250 bahts, and 12,000 bahts, respectively. The income for households in the HEG was 3.1 times that for those in the LEG.

2) Housing Forms

For this younger generation, there had already been a gap in the home ownership rate (for formal housing) depending on the level of education due to the income disparity. While 64% of the HEG had their own houses, the corresponding percentage was only 29% for the LEG and 33% for the MEG. Although a gap was also seen with regard to their housing types, it was smaller than that in the ownership rate due to the presence of affordable rental options. For example, even 47% of the MEG and 57% of LEG lived in detached houses, terraced houses or shop houses, while 75% of the HEG did so. In fact, there was not a large difference in the average rent paid by the different education groups, i.e. 2,700 to 2,900 bahts. Even 30% of the LEG rented terraced houses or similar quality of housing, spending more than 30% of their household income for rent. This was not seen for the LEG of the other generations. However, the fact that 22% of the LEG lived in wooden row houses (tenements), rented rooms or informal housing showed the polarization of living conditions for the LEG.

5. Conclusions

In this study, I researched how the industrialization and rapid economic development of Thailand have influenced the suburban housing forms of the BMR for different generations and social groups. For every generation, there was a large household income gap, with a ratio of 1.8 to 3.3 times between different levels of educational

groups. This gap in economic strength resulted in a housing disparity in terms of housing ownership, the quality of housing and living environments, and the formality of housing, since in Thailand there is little government intervention in the housing market.

There were transitional points along the hierarchy of household income at which one option for housing changed to another. The transitional point between formal and informal housing was in the income range of 5,000 to 10,000 bahts. If the household income was less than 5,000 bahts, the available option was informal housing. As income increased to the 5,000 to 10,000 bahts range, formal rental housing became an option. The transitional point between owned and rental housing was in the income range of 15,000 to 20,000 bahts. With regard to household income (median value) categorized by level of education, the LEG earned 11,600 bahts to 15,000 bahts, the MEG earned 18,300 bahts to 23,800 bahts, and the HEG earned 27,500 bahts to 41,700 bahts. Home ownership was, therefore, very affordable for many members of the MEG and most members of the HEG, while it was not so for many in the LEG. As there were hardly any households whose household income was less than 5,000 bahts in the BMR, the forms of housing were becoming more formal, and fewer informal housing options were chosen.

In the BMR, the following four factors worked to inhibit the gap in income from leading directly to a housing disparity: (1) easy access to housing loans by provided by the GHB and private financial institutions, (2) an affordable rental housing market, (3) purchase timing, and (4) the government housing programs such as the BUA program and the BM program. For the lower medium or the above income group, it was easy to gain access to housing loans, and the inflation of wages allowed housing loan debtors to enjoy “subsidies from the past”. Many houses acquired for speculative and investment purposes were then supplied to the rental housing market at reasonable rents. Many of the members of the MEG and LEG in the younger generation who could not afford to purchase a house were thus able to rent adequate housing units. With regard to purchase timing, some of the LEG and MEG members in their fifties or older acquired private low-cost housing in the early 1980s, when a down-market trend prevailed, before land values and housing prices soared in the booming economy. Some members of the younger generations could buy a house during the period when housing prices dropped and during the initial recovery stage in the early 2000s.

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Track: Heritage, Urban Cultures, Urban Design

Heritage, neighbourhood communities and planning in the context of change

Identifying conditions to analyze the appreciation and assimilation of neighbourhoods with historical and cultural values within regions of change in Europe and China.

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1.1 Introduction

Our paper will present the first results of a 3 years research project called 'Pumah' on 'Planning, Urban Management and Heritage'. The project will identify the varying roles, positions, ideas and functions of sites, surroundings and objects through which time and place are culturally connected, within regions with varying speed of urban development: Europe and China.

The paper presents the outcome of two interrelated studies at the neighbourhood level. One looks at Europe, its economic conditions to heritage and how this affects life of neighbourhood communities. The other looks at China, linking heritage to processes of urban renewal, community participation and gentrification.

These neighbourhoods qualified as heritage (in China these are called 'hutong') connect identities of the past with today's cultural, physical and social manifestations. These neighbourhoods are not relics from the past, just representing a world that 'once was', isolated from its contemporary spatial context, functionally excluded from daily life and related social activities. These neighbourhoods can be and are almost always functional parts of contemporary live, while embedding symbols of the past. Keeping these symbols high could contribute to the appreciation of the neighbourhood by its community and its wider social and cultural environment. However, maintaining these symbols will not be without any costs. It will have constraining effects on the neighbourhood's community, such as gentrification, social exclusion and environmental

nuisance. These neighbourhood communities and their interactions with and their adaptation to the neighbourhood's spatial and cultural qualities is what is at stake in this paper. We are seeking for conditions, causalities and perceptions which relate a neighbourhood's wellbeing with consequences of being qualified as heritage, within regions which are open to change but differ in the pace of change taking place. These conditions, causalities and perceptions are essential in answering questions about how to maintain a robust representation of an appreciated past while being able to make use of its artifacts in a flexible and reasonable way, allowing as well various trajectories in time to progress and to evolve, such as spatial and social transformation and cultural identity.

1.2 The case of the Jewish Quarter in Budapest

Decision making in urban planning in Budapest is officially in the hands of the chief architect, mandated by mayor of Budapest every 4 (or 5?) years. (The local chief architects are mandated by the mayor of the local governments.) Albeit, in the last years, every chief architect resigned from their own free will before their mandate expired. They did it mostly without providing a reason, except István Schneller, who said that "as a leader who wanted to make technical decisions… [I] was opposed with political and financial lobby interests day by day" (Index, 2006).

Mechanism: During the Communist Regime, everything was state-owned. In 1990, the local governments became the owners of buildings in their district and they sold the building, mostly for the people who were already renting them. Many building got empty, because many people moved to suburbs. Also there were a lot of gipsy families moved into the empty building, which is illegal so they could get easily get kicked out, same for those who are renters because they are not protected by law in Hungary.

From 2002 (Sipos-Zolnay, 2009), some houses became very attractive even though the area was empty and remote (in Jewish District, the location is great for offices as well as small flats for those who really want to leave in the heart of Pest). There is great pressure from financial lobby interests on the obviously very corrupt local government who sells the houses for very little price, the houses end up in foreign investors' hands and people are obligated to move out but they get some substitution. If the investor want to demolish or make changes on houses (heritage houses) than the political interests put a great pressure to the National Heritage Office, who will allow it at the end.

"State capture is the phenomenon in which outside interests (often the private sector, mafia networks, etc.) are able to bend state laws, policies and regulations to their (mainly financial) benefit through corrupt transactions with public officers and politicians. The notion of state capture deviates from traditional concepts of corruption, in which a bureaucrat might extort bribes from powerless individuals or companies or politicians themselves steal state assets. State capture is recognized as a most destructive and intractable corruption problem, above all in transition economies with incomplete or distorted processes of democratic consolidation and insecure property rights." (U4 Anti-Corruption Resource Centre, ?)

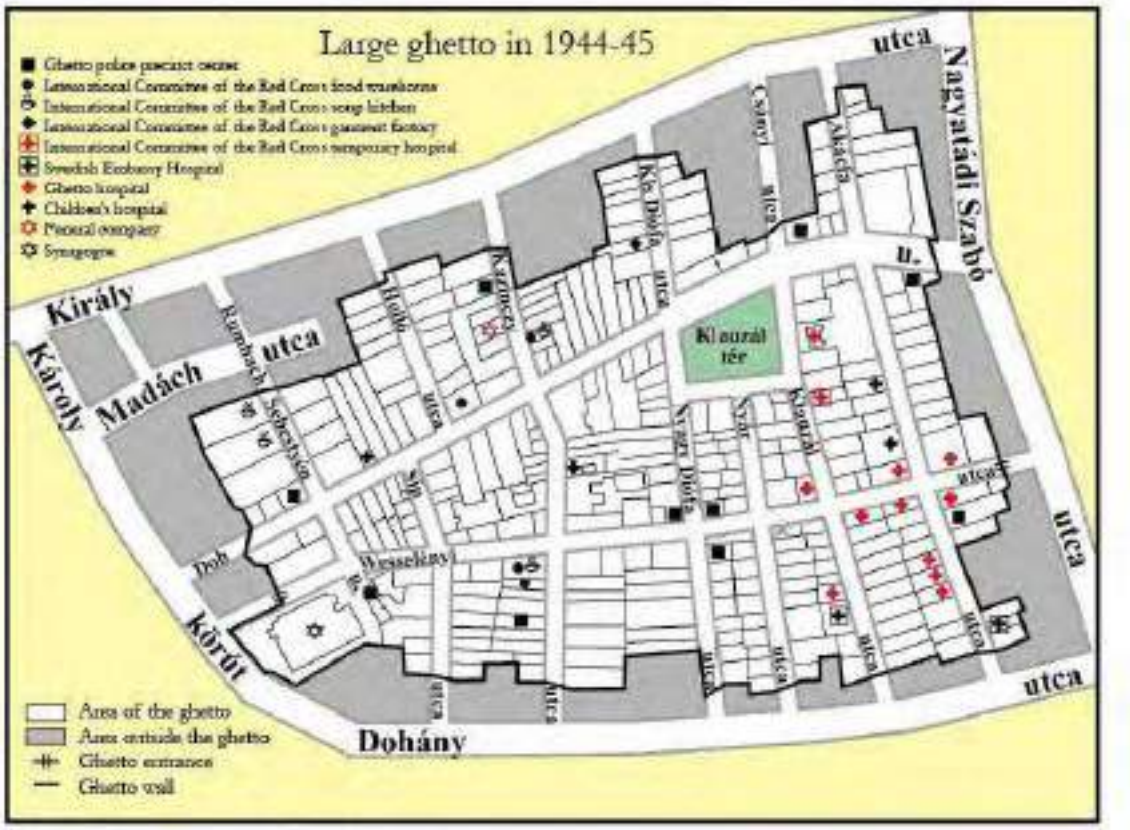
The History of the Jewish Quarter in Budapest

The Jewish, settling down in great numbers in Budapest in the 18th century, were facing a society with mixed signs of condemnation and reception in Austro-Hungarian Empire. In order to subsist and blossom, they had to define their ways of contribution to the modern and bourgeois Hungarian society.

The regulation of Enlightenment monarch Franz II (1741-1790) in 1781 made it possible for the Jewish to move to the cities, although in Budapest, they could only settle down (build a synagogue) in the areas outside the inner-city wall. They were also able to buy land and carry out farming and merchant activities. The law also required them to use German language, the official language of the Austro-Hungarian Empire that time but during religious activities the use of Hebrew language was allowed. In 1833, the Jewish community in Budapest were officially registered. In 1867, Emperor Franz Joseph I (1830-1916) legislated equal rights to the Jewish.

This liberal milieu enhanced the process of disjunction of Hungarian Jewish between those who wanted to assimilate and those who wanted to hang on to the traditional religious-communal forms of lifestyle. During the 19th century, a great proportion of Hungarian Jewish assimilated on their own will, especially the rich living in the cities (Reiche, 2006). The religious Jewish in Budapest belonged mostly to the mild reformed Neologue movement of Judaism, who adopted Hungarian language which became official language as well in the Hungaro-Austrian Empire under Franz Joseph II. Assimilation and retraining tradition were carried out on various levels and diverse ways, of course.

Budapest evolved 1973, has a symmetrical …. This area has been fringed upon three synagogues in Dohány Street (by architect Ludwig Förster in 1859), in Rumbach Sebestyén Street (by architect Otto Wagner in 1872) and in Kazinczy Street (by architect Béla Löffler in 1913). All were occupied by three different Jewish religious movements, forming the "Jewish Triangle in Pest". This part of Budapest's 7th district (Belső-Erzsébetváros) evolved during the turn of the 19th century. The quarter has been a traditional Jewish merchant centre, the main neighbourhood of Jewish people in Budapest. The Jewish Quarter became a ghetto in 1944-1945.



Map 1. The WWII Ghetto in Budapest. Source http://epiteszforum.hu/node/11736, 16 March 2012

During WWII, about 70% of the Jewish population of Budapest was deceased in Holocaust. After 1948 under the communist regime, due to religious restrictions and anti-zionist actions, assimilation was the only way to sustain for the remaining Jewish in Hungary.

After the fall of the Soviet Union in 1989, Hungary became a democratic country. Since then, there has been a renaissance of Jewish religious-communal lifestyle national wide. The area lieing in the East part of Budapest's inner city now has been called Jewish Quarter (Zsidónegyed) since 1990. The reconstruction of the Great Synagogue in Dohány Street (the largest synagogue in Europe) ended in 1998 and it is now available for touristic purposes, it is also a memorial (for example graveyard in the garden) and by the Neologue Community it is used for religious purposes as well. The Rabbinerseminar (the oldest existing Rabbinerseminar of the world, founded in 1877) started to function legally again, Holocaust memorials were set up and some cultural-religious associations were founded. For instance "Negyed6Negyed7 Festival" is a festival of the quarter, organized a few times in the year to keep traditions and represent Jewish culture and heritage for everybody. The synagogue in Kazinczy street is also restored and occupied by the Orthodox Jewish community but the third on in Rumbach Sebestyén street is still in a very bad condition. Close to the synagogue in Kazinczy street, the building of the Mikveh (a bath used in a purpose of ritual immersion in Judaism, it is central to an Orthodox Jewish community) was also party restored and can be used now for religious purposes.

In the Jewish Quarter, kosher shops and restaurants were opened again. Even though the symbols of Jewish traditions and the merchant life of the quarter still remains far less remarkable as it was before 1944 and the Jewish community has been heterogeneous in religion, these initiatives resuscitate the Jewish identity, heritage and religious life.

The heritage of the Jewish Quarter

In the 18th century, the spontaneous urban development generated an organic urban landscape in this area. During the 19th century, the quarter attained its peculiar atmosphere where the majority of the population was Jewish. The quarter, which was entitled as Jewish Quarter later in the 21st century, was located between the city border and the main access road towards the Danube, which is now called Rákóczi Avenue. It became a densely populated, vibrant merchant area. The residential area buildings were influenced by mixed classicists and secessionist architecture and the religious centres were influenced by oriental-style Jewish art. The quarter mostly consisted of narrow, scraggly lined streets with hick town-like houses which had spacious yards for storage and workshops. Businesses were run in the shops on the ground level and in cafes and bazaars of the arcades and passages.

Heritage issues related to Jewish Quarter

The decline of the quarter started before WWII and it is still continuing. After the collapse of Soviet Union in 1989, there has been an emerged demand of saving the heritage of this area. The Jewish Quarter of Budapest was added to UNESCO's World Heritage List in 2002. In 2004 it was entitled as protected area because its role as a puffer zone of Andrássy Avenue, which was recognized as UNESCO World Heritage Site in 2002. As being a protected area of heritage, the buildings and public spaces should be legally saved of destructing and building actions which do not add or decrease the value of the quarter. At the same time, the general regulation plan (which were first established in 1990) are often accused to be biased for holding the quarter for property development purposes rather than for the purpose of preserve its traditional character (Sipos-Zolnay, 2009). The Jewish Quarter has been facing contention of civilians, businesses and local governmental stakes.

Town planning and architecture

Between 2002 and 2006, the local government of the 7th district was trading 47 buildings to private investors, mainly with demolishing admission and with the condition of vacate the habitants of protected residences. According to the urban regulation plan, Madách Avenue was planned to built, during which a great amount of houses would have been demolished, but at the end only the smaller Madách Square was constructed. The local government changed the structure of several streets which destroyed the traditional passages and gave permissions to build new buildings and extensions which did not meet a warm response from the public.

Some architects support demolition but demand a deliberate conception of rehabilitation of the area. Whereas most of the houses are in a danger of complete

demolition, some of houses are changed to hotel- and housing complexes in a way that they keep the original frontage and a passage with its surrounding residential buildings called Godzsu Garden (Gozsdu Udvar) was partly restored and extended to the inherited original state in 2008, after it as empty for more than 10 years due the process of settling out the inhabitants. The building originally consisted of big 39 apartments, which were split into 120 small flats. On the ground floor, there were several small shops, which were gone through just the opposite because they were merged into a few bigger shops. Somehow, many of them go out of business (MTV, 2008)

Keeping the façade is not a good solution:

1. Because they were block buildings, with a big yard in the middle, which gets build-in.
2. Because the new building are higher, than the original was
3. Heritage still gets removed, because it was also represented inside (like handrails with David star motives).
4. Atmosphere is still gone because of the new (glass and steal for example in Gozsdu Garden and cheap material they are using.

Local NGOs

The civil society association 'ÓVÁS!' (PROTECTION!), founded is 2004, actively tries influence the decision making process about the Jewish Quarter and wants to conserve many of the remaining buildings of the quarter. They want the original houses to be restored in the original form.

Entrepreneurship

This system of corrupt businesses dates back from 2004. The mechanism of the system is explained by Sipos and Zolnay (2009). First, a very young limited company with minimal capital stock gets the call option of the chosen real estate. This financial instrument conveys the buyer the right to buy something at a specific, fixed price (strike price), but not the obligation to engage in that transaction, while the seller incurs the corresponding obligation to fulfill the transaction. This company is now appreciated with the option call. In the second phase the majority of the company business share will be owned by a foreign offshore company and it will be sold to the real investor. The original price of the real estate at best just covers the buyout of the owners and the costs of the moving out of the renters, but the limited company with the right of the option call usually do not even pay for that when entering into the contract. Their capital stock is less what would be required for that. The strike price is of course a depressed price and this could be realized because the local governments own trustee itself is estimating the value of the real estate. In the third phase, the difference of the values of the business shares are enormous, usually around twenty times. The company usually pays the amount of the strike price, which is a small change at this point.

Preservation of Jewish culture

It is very true that the Jewish associations make efforts to get conserved the cultural and religious heritage of the place for those who want to identify themselves by these. Some of them attract tourists as well (Great Synagogue). There is synagogue for the Orthodox and Neologue community and a community house for the Reformed (Moishe House of Budapest). There are festivals, cafes, restaurants, shops and other communities (Bálint House, Marom etc.)… But still, the majority of Jewish people live elsewhere and if visit this place than only for religion-related activities (Shabbat, Hanukah etc.).

Jewish people have been very heterogenous in assimilation or retraining to tradition. In an interview, a young, Jewish man who returned to his roots says: "You do not need to be religious to be Jewish… [I] believe in tradition rather than in God." (HVG, 2011). Those who have Jewish roots and aware of that, do not automatically wish to have the traditional lifestyle what is required by most associations and communities. Without a demand, there are not as much shops (only 6), restaurants etc. and there is a much less vibrant Jewish life going on in the quarter, as it used to be before 1944.

The biggest association representing the Hungarian Jewish is Mazsihisz, which is often accused by ÓVÁS! Association to express little resistance towards the demolition of houses or even got related to these issues, like Péter Torday's company, who was a president of the association (Gadó, 2009).

The problem evaluated

Aesthetical:

- Because of the efforts of ÓVÁS! Civil Association, …. buildings have been granted with protection because of their heritage value. Still, they have been or will be potentially demolished.
- The small passages disappear, the street structure changes, which results that it's peculiar atmosphere (oriental, merchant) disappear.
- Because of the many offices, during the day streets are crowded with cars and in the night they are empty.

Ethical:

- heritage and Jewish culture is disregarded (except the Great Synagogue in Dohány steet and its surrounding, but that is at the edge of the quarter).
- Because of a new building, the very last piece of the ghetto wall was removed. According to UNESCO, the ghetto wall should have been preserved as much as possible, as a memorial.

Emotional:

- feeling treated unfair/unjust and not protected by juridical institutions,
- seeing the things getting gone forever,
- unsuccessfulness of civil associations and activist gives the feeling of defencelessness to corruption,
- even those who are not directly affected get upset. Activists continuingly say, that it is a matter for whole Budapest.

1.3 The case of Nanluoguxiang Hutong in Peking

With China's rapid urban development from the 1980s, the urban areas are enduring continuous regeneration. Beijing, as China's capital city and with its substantial cultural heritage in the inner city area, is rather typical in its process of redeveloping the neighborhoods. The preservation of heritage, the relocation of residents, the revitalization of houses and the expropriation of land for development for the needs of different stakeholders are in great tension.

The Hutong representing heritage

The Beijing courtyard house and Hutong is a traditional type of residential neighborhoods built hundreds of years ago which symbolize old Beijing. Since the old courtyard houses are too decayed, from 1990s on, the People's Municipal Government made a plan called Beijing's Old and Dilapidated Housing Renewal program to renew the city center. The housing renewal program quickly became a large-scale speculative form of development involving massive demolition and ruthless displacement, resulting in an enormous loss in social and cultural values of this ancient city (Zhang and Fang, 2003). From 1990s till 2002, as many as 700, 000 residents were relocated (Goldman, 1999) and in the year 2003 to 2006 third of the central old city has been destroyed (Opendemocracy, 2006). Those incredible figures remind us the urgent need for a good mechanism for conservation.

Hutong, as a cultural heritage, symbols the meaning of the past glorious Beijing but remains a living style for the present people residing there. Why we shall preserve the hutong and who are we preserving for are very key questions here. There are many stakeholders in this heritage planning process, such as the affected community, the government, the developers, the academics, and even the tourists. Nevertheless, by analyzing the case of Ju'er hutong's renewal, Zhang et al. think that economic growth became the real motivation for emerging political coalitions between local government and local enterprises and the interests of the residents, the intended beneficiaries who have had little voice in the redevelopment process, were largely sacrificed (Zhang and Fang, 2002).

Heritage is created and produced in, and as a resource for the present thus it is more about meanings and values than material artifacts (signed by Waterton).In the worldwide, the authorized heritage discourse (AHD) is challenged and more attention now is paid on community inclusion, participation and consultation. Amenity and government bodies can engage with heritage conservation and preservation to promote the greater inclusion of a range of often-marginalised stakeholder groups into the management process (Waterton et al., 2006).The conservation is not only for the heritage's physical structure but also for the people and with the people in the affected community. How in this process different stakeholders prioritize their interpreted image of heritage and use their discursive power to practice it, decides the outcome of the heritage conservation, whether it be renovation, gentrification or redevelopment.

Besides, the residents in hutongs have their individual different needs, and they have the right to improve their living standard. The living condition of these Hutong residents is

rather below the average standard living in Beijing. The lack of modern facilities and sanitary equipment and lack of space are major problems facing them. The historical residential houses are their property and the co-management is necessary. It is very important to create discursive space for community participation in the process with the aid of expert knowledge and in the framework of government policy.

The conceptual model can be understood as follows:

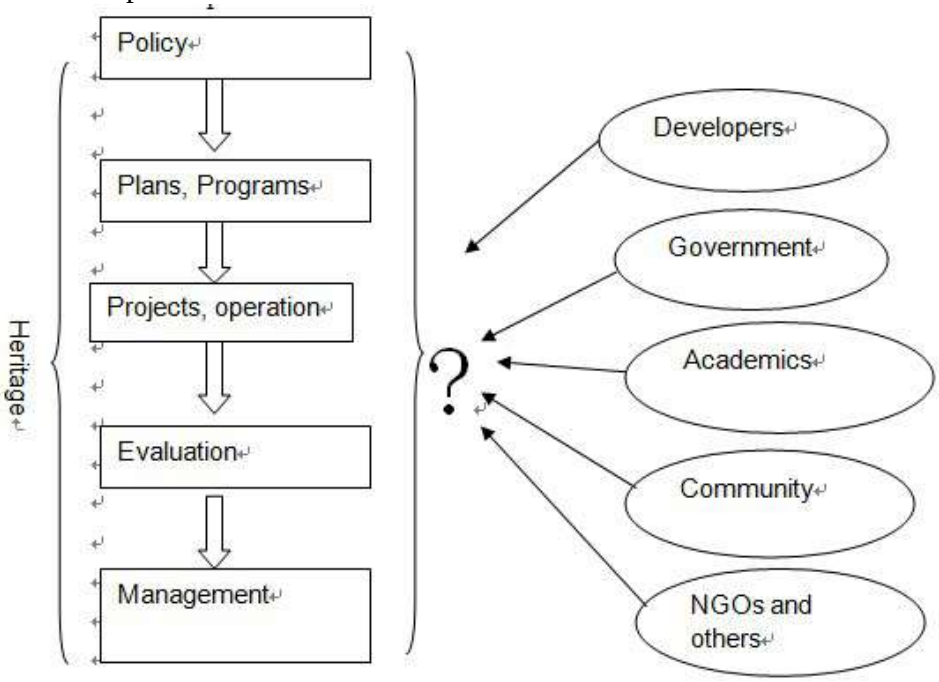


Figure 1 Conceptual model of heritage process (made by author)

Discursive space for community participation

With this case we will investigate the heritage discourse by the case of Beijng hutongs and identify how the different stakeholders interpret, manage and preserve the heritage. By analyzing the dynamic interaction and participation of various actors in the face of heritage changing process, the discursive capability and power relations lying behind would appear up. Finally the mechanism for an inclusive and participative mode of dealing with heritage could be advised generally.

Nanluoguxiang, also named South Luogu Lane, is one of the oldest alleyways (hutongs) in the Beijing city center. It has a history of 800 years and a must-see attraction in Beijing. It is 800 meters long vertically and located on the northeast of the Forbidden City and has a population of more than 50,000. It is one of 25 “Traditional Courtyard Housing Preservation Districts” designated by the 1982 Master Plan of Beijing (Zhang et al., 2003). In the neighborhood, there are more than sixteen hutongs stretching horizontally and a main street called South Luogu Lane vertically right across the middle (see figure 2). However, in the recent 10 years, the houses in the hutongs of the area have been going through many times’ demolitions by various renewal projects. Lots of old-style courtyard houses were redeveloped into high-rise buildings in the historical streets and thousands of people are affected.

Among this, Ju'er Hutong is a typical example of converting decrepit into new hi-rise courtyard houses and won the World Habitat Award in the 1990s. But it also gets some criticism, for example, Zhang and Fang (2002) claim that the case of the Ju'er Hutong project illustrates that neighborhood revitalization is inherently a profoundly value-laden process in which a society redistributes power and resources. And that local governments and local State-Owned-Enterprises (SOEs) built growth coalitions to accumulate wealth (exchange value) at the expense of providing local residents with adequate places to live and work (use value)(Zhang and Fang, 2002).

There are many other interesting stories happened or happening in this neighborhood, which arose my interest to target it as my case study area. For example, by the report of The Telegraph, there was an opposition to the conversion of Drum and Bell Tower and the surrounding hutongs into an underground shopping complex and a themed "Time City" in 2010.

Since 2005, the research team led by Prof. Lü Bin of Peking University has been working on the comprehensive hutong planning programme aided by the local government to foster preservation and cultural creative industry in the hutong complex.

Figure 2 Location and layout of Nanluoguxiang
Source: http://www.courtyard7.com/contact.php
http://www.beijinghotelchina.com/beijing-hotels/nanluogu-xiang.html

Figure 3 The 16 Hutongs crossing the Nanluoguxiang district
Source: Beijing Cultural Heritage Protect Center, http://en.bjchp.org/?page_id=4336

Figure 4 the exterior appearance of the Hutongs
Source: http://www.travelaroundbeijing.com/nanluoguxiang-hutong/

Through in-depth interviews with semi-structured questions members of affected community will be approached. But the sample size is not fixed in case of inadequate information collected and resources limitation. In this way, a simultaneous data review

and analysis can be done in conjunction with data collection. Additional interviews will be done to get more insights to the research question. Snowball sampling is also a useful tool to discover potential respondents. By making use of participants or informants' social networks, the researcher can refer to other participants who could contribute to the study.

Focusing on people having local experience, know about, or have insights into the Hutong heritage revival, the goal will be to discover process of planning and decision-making behind the stories told.

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Mobility in the child (and carer) friendly city: SEQ vs. Stockholm

Deanna Grant-Smith[1], Peter Edwards[2] & Laurel Johnson[3]

"I felt humiliated – I had the impression that, as a woman with two inconvenient children and some inconvenient luggage [a pram], I was barely tolerated on that bus system. Obviously two factors influenced my feelings there – the attitude of the driver and the design of the bus, neither of which made allowance for my – not-extraordinary – needs."
(Wright 1994:33)

"...the physical environment both reflects and conditions the wellbeing of children and gives children a very clear message about how they are valued (or not) within their community."
(Woolcock & Steele 2008:5)

Notions of public good and community obligations underpin public transport provision and are based on principles of equal citizenship and people's individual rights.
(Tedmanson 1994:13)

Abstract

The rationale for providing state subsidized public transport has changed over time from a social obligation to provide transport options for those without access to private transport to an environmental and economic imperative to minimize congestion and greenhouse gas emissions. In many jurisdictions this shift has seen a greater focus on the provision of peak hour commuter services and a shift in the demographic profile of the riding public and a significant increase in the number of commuter passengers relative to others. The scheduling of commuter services is not geared to meet the needs of children and their generally female carers who often need to engage in trip chaining and travel outside peak commuting periods and on weekends. In addition to service scheduling difficulties, transport infrastructure, both onboard and supporting infrastructure such as bus stops, train stations and connecting footpaths often do not support children and their carers to use public transport services. Combined with a negative attitude by passengers and service providers, such as bus drivers, which may see children, babies and young people as out of place and unwelcome on commuter services, these issues conspire to hinder the use of public transport by children and their carers. Overlaying feminist geography analysis and insights and child-friendly cities objectives, this paper proposes some basic criteria for the provision of public transport services and supporting infrastructure which meets the needs of children, babies and their carers and juxtaposes the achievement of these in South East Queensland, Australia and Stockholm, Sweden.

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Introduction

Our interest in this research project was sparked by a recent controversy in inner city Brisbane, Australia in 2010 (Ironside 2010) involving claims of discrimination on public transport by mothers with prams. The story reported in *The Courier-Mail* shared the experience of Anita Flowers who was turned away from two buses and a train on her way to work at around 7 o'clock one Monday morning. Ms Flowers claimed that the bus drivers told her she could not board unless she folded up the pram carrying her sleeping five-month-old daughter. Ms Flowers says that she "accepted this and walked to the nearest train station where [she] waited for at least 15 minutes, and when the train finally arrived, the guard told [her] that [she] would have to wait for the next one as this one was full." She alleges the he then proceeded to tell her that "all trains are full at this time, you should wait".

Based on her experience, Ms Flowers lodged an online petition to the government calling for a pram friendly carriage on trains. Other parents who signed her petition said they had experienced similar acts of discrimination and some admitted to spending thousands of dollars each year to park in the city rather than catch the train because of the discrimination experienced when travelling with their child. Supporters of Ms Flowers said that "Other passengers are on the whole not tolerant of children in their space".

The comments provided on the Courier-Mail's online comments following the story were vitriolic demonstrating negative attitudes toward the use of public transport by mothers and their children, with or without a pram; both of which were deemed to be 'out of place' on peak hour services, despite the fact that Ms Flowers herself was a commuter on her way to work.

In affluent countries (with relatively high measured female workforce participation rates) like Australia and Sweden, the rationale for providing state subsidized public transport has changed over time from a social obligation to provide transport options for those without access to private transport to an environmental and economic imperative to minimize congestion and greenhouse gas emissions and service the economy through commuter travel. In many jurisdictions this shift has seen a greater focus on the provision of peak hour commuter services and a shift in the demographic profile of the riding public. It has also seen a significant increase in the number of commuter passengers relative to others and a withdrawal of some non-commuter services. The scheduling of these services is generally not geared to meet the needs of children and their carers who might need to engage in trip chaining and travel outside peak commuting periods and on weekends. As Ms Flowers' experience shows, even parents travelling during peak hours with their children experience difficulties.

In addition to service scheduling difficulties, transport infrastructure, both onboard and supporting transit infrastructure such as bus stops, train stations and connecting footpaths do not support parents with children. As the vitriolic comments surrounding Ms Flowers' experience demonstrate, these physical barriers are often combined with a negative attitude by passengers and service providers, such as bus drivers, which may see parents travelling with children and babies as out of place and unwelcome on commuter services. This is not surprising as it has been noted for many decades in the feminist geography and social justice fields that the needs of women are often overlooked in the planning and delivery of public transport services (Hanlon 1996, PLM&GTA 1995, Fritze 2007). What Ms Flowers' story demonstrates most clearly is that there is also a deficiency in transport planning and service delivery with respect to meeting the travelling needs of children and babies and their carers.

The needs and aspirations of children and young people are often overlooked in the planning, design and management of our cities and neighbourhoods (Baker et al 2010). This is also often the case with transport planning and design. The child friendly cities agenda has generated some discussion on the need for effective models for involving children in the governance and development of their communities (UNICEF 2012:55). This approach recognises the right to safe and accessible transport as a prerequisite to delivering just cities for all citizens, but most particularly children.

The delivery of child friendly transport can slow the observed decline in children's independent mobility (Love & Whitzman 2011:1) and can welcome children and young people back into our communities. As well as a children's rights framework, the development of child friendly transport criteria in this paper is also informed by an understanding of the feminist geography literature on women's transport issues which recognise mothers as carrying a disproportionate burden of travel with children and for having to deal with the consequences of child unfriendly design and services.[4]

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As in Australia, Swedish women are also disproportionately responsible for journeys related to care and purchasing (Vagland 2004:192). This paper proposes some basic criteria for the provision of public transport services and infrastructure which meets the needs of children and their carers and juxtaposes the achievement of these to date in South East Queensland, Australia and Stockholm, Sweden.

Transport and gender

Because of their youth, children often travel with others, however, the burden of transporting children is not equally distributed among parents with young children more than five times as likely to travel with their mothers than their fathers (McDonald 2006:1).

It is generally agreed that women carry a greater transport burden than men (Mashiri et al 2005). For example, women are primarily responsible for domestic work, including shopping and child rearing, regardless of their employment status (Hamilton 2001:3). As a result women's trips are more likely to relate to caring and family responsibilities while men are more likely to travel for business and leisure (Scottish Government 2002). Mothers are more likely to have responsibility for meeting children's travel needs, and children make more go-along trips with mothers and those trips on which mothers take them along are for household-sustaining purposes, such as shopping (McDonald 2006:4). Indeed it has been suggested that much of this travel is "babysitting on the go", particularly for single mothers for whom there may be no other form of child care available or by working mothers attempting to spend some time with their children (McDonald 2006:6).

As a result women make the majority of non-work trips with the exception of social/recreational, return home trips and childcare and education trips which are predominantly undertaken by children or women with children (Abrahams 1998). Women make more trips to and from education (including escorting children) and more shopping trips than men (Scottish Government 2002). Women are more likely than men to work part-time, to be responsible for child care and housework, and to perform tasks that are considered inherently "interruptible". The division of paid and unpaid labour and the assumption that women's work (paid or unpaid) can be interrupted may shape women's travel patterns in ways that men do not experience because women's travel patterns often reflect and reinforce the same message of interruptibility that characterizes their work (Spain 1996:276). As a result, journey to work is of less significance to women because women's travel patterns are more complex in duration, time of day and mode, due mainly to family and domestic responsibilities (Abrahams 1998).

Women are more likely to be accompanied by children and encumbered by baggage when travelling (Abrahams 1998). Women with family responsibilities have particular travel needs and for them the transport task is complex and multi-faceted. Their journeys are more likely to involve a range of different modes of transport (Scottish Government 2002) and to rely on trip chaining (completing multiple tasks within a single journey) to meet the complex demands of their multiple roles.

[4] Certainly not all women are the same or have the same life experiences, however, research suggests that there are sufficiently significant differences between women's transport demands and experience as opposed to those of men in terms of access, patterns of commuting and in childcare responsibilities to justify treating women separately (Hamilton 2011:2).

The result is that women need more travel flexibility than men (Spain 1996:277). Despite this transport planning has tended to focus on peak hour movement, the journey to work and movements into and out of the CBD (Mashiri et al 2005; Dowling & Göllner 1997). This focus is more appropriate to middle class men's employment (industrial areas are generally poorly served, if at all) and travel patterns than to women's and children's. As a result "they are poorly and disadvantageously serviced by current transport arrangements, and in particular public transport" (Dowling & Göllner 1997:8). As Ms Flowers' experience shows even women and children who attempt to mirror male commuter travel patterns and to take advantage of the services provided are not afforded equal access. Based on these constraints women travellers often seek more frequent and reliable services, safety and security, and good physical access (Costain 1995, Wright 1994, Ybarzabal 2010). Transport policy-makers need to understand that women with family responsibilities, particularly those who work outside the home and have children often have negative transport experiences (Austin 1994). These transport difficulties create significant barriers to accessing services, social networks and community participation for parents and their children (Fritze 2007).

Transport in the child-friendly city

While children have been variously described as including anyone from the age of birth to 18 (UN 1989), the transport needs and unmet transport demand of each of these groups is very different (table 1). In recent years a great deal has been written about that unmet transport needs of older children, young people and young adults, particularly in Australian regional and rural Australia (e.g. Currie et al 2005, Currie 2007). As relatively autonomous and independent travellers, in some respects the transport needs of these groups are not too different to those experienced by other able bodied adults, particularly with respect to a demand for frequent, reliable and affordable public transport services that operate outside non-peak periods (Demasi, Grant-Smith, Poulsen & Doring 2007). Significantly less has been written about the transport needs of younger children who are seen more as travel companions than travellers in their own right, perhaps because the majority of trips for infants are escort trips travelling with patents (Currie 2007).

Indeed in many respects these children are considered incidental travellers and their needs subordinate to other travellers. This is despite them having specific needs that are more in line with those of travellers with a disability and other special needs travellers, a point that Ms Flowers also made.

Table 1: categories of children and their transport needs and characteristics

category	indicative age	transport needs/characteristics
infants and toddlers	0-3 years *babies & toddlers*	Do not travel alone. Often undertake companion/care trips. Require carrying or travel in a stroller/pram some or all of the time. Requires high level of public transport accessibility and a good pedestrian environment where walking is required.
pre-school children	4-5 years *pre-school*	Can move more independently (i.e. not confined to stroller) but do not travel alone and often undertake companion/care trips. Require high level of public transport accessibility and a good pedestrian environment where walking is required. A strong emphasis is placed on the safety of transit situations because children of this age may act unpredictably (Gilbert & O'Brien 2005:21).
young children	6-10 years *primary school*	Some journeys are made without supervision (eg. school transport where they may travel with other children but are met at pick-up/drop off points by adults) but most travel tends to be with parents, carers and other family members.
older children	11-14 years *early to middle high school*	Many day-time journeys (walking, cycling and public transport) are made without supervision. Often travel in groups rather than alone.[5]
young people	15-18 years *high school or vocational training*	Start to begin to move independently within the community. May have a licence and access to a car in later years.

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It has been noted that public transport

> *trips are imagined as being made by independent individuals, each contained in a body that is a distinct, separate and equivalent unit. Although there is some recognition of the physical needs of particularly groups (such as people with impaired mobility), bodies appear in conventional transport planning models as discrete entities with independent trajectories. However, we might query to what extent that model holds true. For example, someone travelling by train with a baby must carry the infant with them to ticket office, toilet stall, boarding platform and train compartment, and must manage the physical demands of embarking and disembarking while carrying baby (not to mention stroller and baggage). In a sense, then the bodily boundaries of the adult escort expand to encompass the small child.* (Law 1999:581)

While such a view recognises the travelling needs of the parents it still views the child as part of the adult and not a traveller in its own right and with its own rights. Certainly a large number of responses to Ms Flowers' story questioned the right of her child to be transported on a commuter bus during peak hour at all either in or out of a pram. This view of children as being subpersons without the full rights of adults is not uncommon and is part of the rationale behind the United Nations Convention on the Rights of the Child (1989) and the child-friendly cities movement it spawned.

Cities aspiring to be child-friendly commit to implementing the principles of the Convention on the Rights of the Child, including through a strong participatory approach and the mainstreaming of children's rights in budgets and policies. The convention is based on four core principles: non-discrimination; the best interests of the child; the right to life, survival and development; and considering the view of the child in decisions which affect them (according to their age and maturity) (UN 1989). UNICEF (2012:55) believe that within the urban context, an inclusive environment can be created with a focus on two major issues: transportation (the focus of this paper) and space.

[5] Hanlon (1996:652) makes the interesting observation that while parents are often happier if their children travel in a group for safety reasons, "this 'group' of children, seen through the eyes of a bus driver, may easily be regarded as a 'gang'".

Internationally, the concept of child and youth friendly cities has been led by the United Nations as a means to improve the lives of children and young people in developed and developing countries. The United Nations Convention on the Rights of the Child (1989) promotes the rights of children and young people to influence their communities, participate in family and community life, access basic non-discriminatory services and green and unpolluted spaces and live safely. This rights framework has been extended by some Australian Governments (State Government of New South Wales and various Local Governments) to include the design of the built environment. Safe public transport and well-regulated traffic are vital components of a city fit for children. For instance, successful initiatives in Colombia, Sweden and the Netherlands have combined car-free areas, dedicated bicycle and pedestrian routes, and public transport to reduce injuries and deaths (UNICEF 2012:71). In Australia, a number of local governments have adopted child friendly cities principles to inform the delivery of their services and their engagement with local communities (e.g. Baker et al 2010).

The Australian Research Alliance for Children and Youth (ARACY 2006) has defined a child friendly community as one in which children are valued, supported, respected, provided for and actively included. Based on this view ARACY developed a range of indicators or criteria for encouraging child-friendliness within communities (Table 2).

Table 2: Themes for encouraging child-friendliness within communities (ARACY 2006)

criteria	description
welcome and connection	learning how to listen, plan and take action with local children
value	recognising that local children and their families are valuable contributors to community life
safety	providing safe places to play close to home and connect communities with the care of children
meaningful action and self-determination	developing a joint community vision and imagining together what a child friendly community will look like locally
space	designing creative spaces for and with children and providing people with a reason to come into those spaces and use them
learning and development	recognising that learning and development happens in everyday places and in many different ways and that it is important to utilise these places, and to document the processes and outcomes for children as they learn and grow in everyday spaces
support	establishing practical and friendly pathways for families to get services they need
time	taking time and making time when working with children to counter the idea that consultation with children is a one-off event

The concept of a child friendly city is not based on an ideal end state or a standard model. It is a framework to assist any city to become more child friendly in all aspects of its environment, governance, and services. Access to appropriate transport is often identified as a factor in the achievement of child friendly cities (Commission for Children & Young People and Child Guardian 2006:7).

This idea has been expanded by researchers at the Centre for Sustainable Transportation in Canada (Gilbert & O'Brien 2005, 2010; O'Brien, Ramanthan, Gilbert & Orsini 2009) through the development of a set of guidelines for child and youth friendly land use and transport planning. These guidelines (Table 3) centre around four principles: putting children and youth first; providing for children and youth as pedestrians; providing for children and youth on bicycles (and other wheels); and providing for children and youth as public transport users.

Table 3: Guidelines for child and youth friendly land use and transport planning[6]

Putting children and youth first
The needs of children and youth should receive as much priority as the needs of people of other ages and the requirements of business in transport and land-use planning decisions
Within each municipality, designate a staff member or council member, or both, as responsible for bringing the perspectives of young people to consideration of transport and land-use planning issues.
As may be appropriate, establish or adapt one or more forums for children and youth to ensure that their perspectives are considered by land-use and transport planners.
Providing for children and youth as pedestrians
Identify where children and youth want to go or need to go and, to the extent possible, provide ways of getting there by foot.[7]
Assess pedestrian routes used or to be used by children, youth and a person wheeling a stroller to ensure that they are as safe and suitable/usable for them as possible.
Separate sidewalks used by children and youth from heavily travelled roads to avoid harm.
Ensure that sidewalks are always cleared of ice and snow and debris.[8]
Providing for children and youth as public transport users
Ensure that every part of a public transport system is safe and welcoming to young people and children, and affordable.
Avoid transfers by routing vehicles where children and youth want to and need to go; make transfers easy where necessary.
Examine every aspect of a public transport system from the perspective of a parent with a child in a stroller, and make adjustments to meet such a traveller's needs.[9]
Keep fares for children low, so as to encourage their use of transit systems.
Help ensure that school policies and practices favour walking, cycling, and other modes of active transport for trips to and from school, and also regular public transport where this is available and appropriate.
For younger children, help arrange walking school buses[10] and other means of supervision.
Where destinations cannot be reached by foot, bicycle or public transport, arrange land uses so that in-car time is reduced.
Post and enforce much lower speed limits, particularly in urban areas (and around schools).
Do what is possible to reduce amounts of motorised traffic generally and reduce its adverse impacts.

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[6] It should be noted that guidelines were also provided for children and youth on bicycles and other wheels. Although we recognise their importance in increasing child mobility and travel independence these guidelines have been excluded as they do not related directly to the public transport task.

[7] Similar considerations apply to children and youth who use wheelchairs.

[8] It's hard to push a stroller or wheelchair through uncleared snow, an icy sidewalk or uneven path or to expect a toddler or even a slightly older child to walk there.

[9] Among the most challenged users of transit systems are passengers with young children in strollers. These users have particular difficulties when there are stairs or steps and when vehicles are overcrowded. (Gilbert & O'Brien 2010)

[10] The essential feature of a walking bus is a line of children, even holding a rope if they are under five years, led by and followed by one or more adults.

Preliminary criteria for child and carer friendly public transport

An engagement with feminist approaches to public transport is characterised by a political agenda to effect change and "to challenge the conductions that have led and continue to lead to gender inequalities in transport" (Buiten 2007:23). So too the child friendly cities agenda is trying to affect a similar change for children. Thus combining the two approaches is not incompatible given the overlap in their interests and the disproportionate role mothers have in ensuring their children's travel needs are met.

In the past policy makers and service providers have not always recognised the differential effects of their provision on some groups and the barriers they may impose on people who do not fit within the dominant pattern of need for which the provision has been developed (Scottish Government 2002). The frustrations and safety concerns of trying to use transport systems and a built environment which is not designed for parents with young children make completing daily activities unnecessarily difficult (Fritze 2007: 34).

From Ms Flowers' case we can understand that child-friendly passenger transport is as much about infrastructure and service deficiencies as it is about less tangle issues like the provision of assistance and the attitudes of other passenger transport users. Based on the child-friendly transport criteria and understanding of the challenges facing parents travelling with small children the following tentative criteria for child and carer friendly public transport are proposed (figure 1).

Figure 1: Criteria for child and carer friendly public transport

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Accessibility

Accessibility is one of the most significant barriers to using public transport identified by the parents of small children (Fritze 2007). The use of public transport by people travelling with children is affected by physical and practical considerations relating to the structural design of buses, trains and trams. Inaccessible vehicles not only make travel physically difficult and emotionally stressful but also in some cases prevent carers from travelling at all (Fritze 2007:10-11). Buses are generally considered to be worse than trains because parents can generally move a pram on and off a train relatively easily. Issues with bus accessibility are exacerbated by policies requiring carers to fold up their prams before entering a bus. Many researchers have highlighted the indignity and difficulty associated with this issue (Fritze 2007:10-11, Wright 1994). Because those travelling with small children are often further encumbered by baby strollers and heavy shopping the design of many vehicles and carriages makes getting on and off under such circumstances extremely difficult (Hanlon 1996). The provision of physical access to vehicles, facilities and the surrounding built environment is important. This includes the development and provision of facilities for children to meet the needs of women travelling with

children and the provision of adequate space on vehicles and within facilities (such as waiting areas) to allow for the storage of prams, bags and others items (Scottish Government 2002:9).

Practical constraints that seriously hinder access and ease of movement include: high steps which are difficult to negotiate for the very young; a lack of storage space for shopping, baby strollers, and other paraphernalia; lack of proper provision of seating for children and no seat belts; lack of organized assistance for women getting on and off who are laden with children, strollers/prams and shopping (Hanlon 1996). Accessibility constraints often extend beyond the actual vehicles to include: impractical siting of bus stops and train stations; inadequate provision of seating and shelter at stops and stations; toilets at stations and interchanges which are too small to accommodate an adult with a baby stroller/pram; awkward steps and crossings at railway stations and the quality of the paths to bus stops and train stations. In some instances, these 'constraints' and difficulties' can be dangerous. At the very least, they serve to deter parents and carers from using public transport and hamper them when they do choose to use it (Hanlon 1996).

Assistance

The barriers presented by inaccessible vehicles are exacerbated in many cases by policies in some areas requiring parents to fold prams before entering the bus, and by bus drivers failing to provide assistance. Difficulties in boarding and alighting from inaccessible buses and the need to fold up prams create a corresponding need for assistance using services. Current occupational health and safety 'no-lift' policies, nominally in place to protect bus drivers (but, ultimately, to protect bus operators from workers' compensation risk), have unintentional impacts on the ability of parents and carers to use bus services and can result in parents having to rely on strangers to hold their babies or to put the children down on the nature strip or pavement while they fold their prams or assist their other children on to the bus (Fritze 2007).

The availability of assistance for parents at transport facilities and onboard vehicles by staff who have an awareness of the issues faced by parents travelling with children can also have a positive impact on the travel of children and their carers and should be encouraged (Scottish Government 2002:10). It has been suggested that the development of policies to increase the usability of transport services for carers of young children should include designation and publication of when accessible services are timetabled; removal of operating policies that require prams to be folded; more assistance from drivers and other staff to assist women with prams or small children to board vehicles; and more involvement of drivers in ensuring that those holding young children have access to priority seating (Fritze 2007:13).

Affordability

On the whole women have lower income levels than men and some groups of women (such as single parents) are likely to be disproportionately represented among lower income earners. There is a need to encourage the general provision of public transport at a reasonable cost. The provision of flexible options which can reduce the costs of transport (such as multi-journey and through ticketing) can support affordability (Scottish Government 2002:15). Similarly, discounted or free travel for children can support affordability. An example of this principle is in operation in the Metropolitan Region of Helsinki which offers free use of the public transport system for people travelling with babies to encourage care givers travelling with their children to use public transport (UN Habitat 2008:193).

Availability, frequency & reliability

Public transport travel can be long and arduous, especially with young children in tow, due to lack of connectivity between services and long waiting times as well as a lack of direct services (Fritze 2007:20). It has been suggested that most transportation planning and modelling is based upon assessing the capacity of the system to handle rush hour loads and home-based-work trips, not off-peak, non home-based trips. This single minded attention overemphasizes capacity considerations on major facilities and de-emphasizes the difficulties faced by women forced to trip chain, make suburb to suburb or inner city to suburb trips and generally lavishes funding and

attention on the part of the travel market dominated by men (Dittmar 1996:669). The provision of integrated services without identifiable gaps in services is important (Scottish Government 2002:11) as waiting with children can be difficult especially in uncomfortable or unsafe environments such as those exposed to the weather or traffic.

Amenities & Services

A more carer and child friendly transport system would incorporate design features and service standards that reflect the realities of travelling unassisted with prams, baggage and young children (Fritze 2007:32). The lack of availability of baby change and toilet facilities of an acceptable standard in and around public transport is often a significant issue for parents travelling with children. Parents will often prefer to change their babies in their prams or cars rather than use public toilet and baby change facilities that are considered unsafe or unhygienic, or in some cases simply unusable or unavailable (Fritze 2007:21). This also extends to the provision of appropriate safety features onboard vehicles.

Attitudes

In the past, policy makers and service providers have not always recognised the different effects of their provision on women and the barriers they may unwittingly impose on groups which do not fit the dominant pattern of need for which the provision has been developed (Scottish Government 2002). Traditional transport planning has a tendency to determine and direct transport investments based largely on mainstream (unencumbered and able-bodied) commuter patterns and to tackle transport issues through a top-down approach, concentrating on technical requirements (Buiten 2007:28). Hanlon (1996:649) suggests that a contributing factor to the fact that these issues are not adequately addressed by the transport planning industry is that "women are woefully under-represented as professionals and as service providers". This has resulted in public transport provision and planning is "an industry which is male dominated and little influenced by any awareness of the importance of gender" (Hanlon 199:654).The child friendly cities agenda recognises a similar absence of concern with the needs and voices of children, which their parents can assist in providing (particularly for very young children).

Mainstreaming these issues requires the examination of the policy process to ensure that issues relating to parents travelling with children have been examined and built into public transport policy and delivery. This involves actively seeking the views of parents and children specifically and taking action to address their identified issues (Scottish government 2002:4).

While the needs of carers with young children must be considered as part of accessible transport planning, including the design of public transport vehicles, buildings and facilities (Fritze 2007), a child and carer friendly public transport system also relies on the goodwill and attitudes of drivers, transport staff and other passengers (Wright 1994) in making women and their children feel welcome on public transport.

Child and carer friendly transport in SEQ

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South East Queensland is one of the fastest growing regions in Australia with its population expected to grow from 3.1 million in 2009 to 4.4 million in 2031 (TMR 2010). In July 2008, TransLink Transit Authority was established as the statutory authority responsible for leading, planning, specifying and providing mass transit in South East Queensland – an area that stretches from Gympie and the Sunshine Coast to Coolangatta on the Gold Coast, and west to Helidon. TransLink operates across 23 zones and 7 regions in South East Queensland (map 1). By 2016 there will be significant extensions to TransLink services in line with the predicted SEQ (South East Queensland) Regional Plan urban footprint for 2026 (TransLink 2012c). TransLink delivers bus, train and ferry services, information, ticketing and infrastructure across South East Queensland – one of the largest integrated public transport networks in the world with TransLink and its partners providing more than 178.6 million passenger trips in 2010–11 (TransLink 2011). TransLink coordinates nearly five million bus, train and ferry services across the 10 000 square kilometre region of South East Queensland. The TransLink network spans 23 zones in a service area that is six and half times the size of London's Oyster card network

(TransLink 2011:8). Unlike metropolitan based public transport systems, which traditionally service large numbers of customers within a small geographical area, the size of South East Queensland means that TransLink must provide services and infrastructure to customers across a broader, more dispersed area.

Map 1: TransLink area of service
(http://translink.com.au/resources/about-translink/our-service-area/region-map.jpg)

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Availability

TransLink works with nineteen different public transport operators to plan and deliver more than 4.9 million services to South East Queensland (TransLink 2012d)[11]. The TransLink network encompasses: **rail** with 201 three-car trains (generally coupled to make six car trains) which operate across 145 train stations and 740km train track; **buses** with 21 busway stations, 25km of busway system, more than 12,000 bus stops and more than 2300 buses; and **ferries** with 17 city cats and 9 city ferries (TransLink 2011:38). Public transport operations are both publicly and privately owned, with services provided under service contract arrangements with the Queensland Government.

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The TransLink authority has improved the availability of public transport in the region by enhancing timetable integration across modes. Nevertheless, the frequency of public transport services in South East Queensland favours commuters travelling to the Central Business District of Brisbane at peak times. In peak commuting times, there are generally more scheduled buses and trains and more express public transport services. The cost of travel in peak periods is slightly higher than a comparative trip in an off-peak period. This is designed to discourage non-commuters from travelling on peak hour public transport services. The common "hub and spoke" system of service provision such as the South East Queensland network can make travel between suburbs difficult (Scottish Government 2002:12) and is better suited to meeting the needs of commuters travelling to the CBD. It should be noted that the Queensland Government does provides dedicated school transport services (for high school and primary students) on some routes.

Affordability

The high cost of public transport travel in South East Queensland is a contentious issue for the region's communities. This concern, which has been accompanied by a decline in patronage, has been attributed to ongoing fare increases of 15 per cent per annum (PS News 2012b) since 2009. A single 15 km trip can cost an adult traveller up to $8.00. Pre-paid travel (using a *go-card*) is up to 30% cheaper than *pay as you go* travel. Children aged four years and younger travel for free on TransLink buses, trains and ferries while children aged 5-14 (inclusive) are eligible for a concession fare (TransLink 2012) though they are not entitled to a seat if adults are standing.

The Queensland Government has committed to reintroducing discounted weekly fares for regular users of buses, trains and ferries (LNP 2012a) which will include free travel after nine journeys in a Monday-to-Sunday week for *go* card users (LNP 2012b, PS News 2012b). This is part of a strategy to deliver public transport in South East Queensland that works for commuters by delivering a reliable, frequent and safe network (LNP 2012a) and is unlikely to result in cost savings to those who are not employed in a full-time capacity.

Accessibility

TransLink, like all Australian public transport networks, works under the Australian Government's *Disability Discrimination Act 1992* and *Disability Standards for Accessible Public Transport 2002*. TransLink is continuing its program of upgrading infrastructure and rolling out new buses, trains and ferries to meet the *Disability Standards for Accessible Public Transport 2002*. TransLink is also upgrading its existing 12 000 bus stops in the TransLink network to meet the Commonwealth Government's target of 100 per cent DDA compliance by December 2022. This shift to DDA compliant transport infrastructure will assist service accessibility for parents and carers travelling with children as more lifts, ramps and onboard wheelchair bays combine to support the travelling needs of infants and young children.

Assistance

Due to workplace health and safety concerns TransLink staff are not required to assist in folding and loading prams and other large objects (TransLink 2012a). It is Translink policy that children may travel on buses and trains in a pram or stroller provided it is parked in the designated

[11] This does not include dedicated school transport services which are provided by private providers on behalf of the State Government through Department of Transport and Main Roads.

wheelchair space with its brake on and the child is secured in the pram or stroller harness. However, children need to be removed from prams and strollers and the pram or stroller folded and stored in the luggage rack under the following conditions: if travelling during peak times[12] if the bus driver advises that there is not enough space on-board the bus to safely park the pram, if it is not a wheelchair accessible bus, or if the designated wheelchair space is already occupied or it is required (for a wheelchair) throughout the trip (TransLink 2012a). It is TransLink policy that adults travelling with small children should be given priority seating on all TransLink services (TransLink 2012a). While the allocation of priority seating is a positive recognition of the additional needs of some passenger groups, it relies on the good will of passengers to relinquish their seats or on the confidence of passengers with special needs to request them to do so. Realistically, this does not guarantee access to these seats for those who need them (Fritze 2007).

image 1. getting onto a bus with a toddler and folded stroller

Amenities

Safety handles on buses are connected to the roof and are designed for adult travellers. Stop request buttons are also generally positioned at adult height. There is limited storage on buses and school bags are a particular problem during before and after school travel. You can only travel on a bus with a bike if it is a small fold up bike. Travelling with bikes on trains is also highly restrictive and is not allowed between 7am and 9.30am Monday to Friday (towards the city) and 3pm and 6.30pm (travelling away from the city). Drinking water fountains are provided at train stations in south-east Queensland (PS News 2012a).

Attitudes

TransLink consults with a range of interest groups in planning and providing services including those advocating for the interests of older people, people with a disability, students and people from culturally and linguistically diverse backgrounds. They do not appear to have specific engagement with women or children (with the exception of parents and citizens group). In her PhD research into gender issues in public transport in SEQ Ybarzabal (2010) concluded that there is a lack of effective engagement with women in SEQ and that greater attention to gender consideration in developing public transport policies is required. She notes that while the Queensland Government has made a commitment to improving public transport provision for women it appears that such rhetoric has not yet translated into practice.

Child and carer friendly transport in Stockholm

Stockholm County is the capital region of Sweden, comprising more than 2 million inhabitants and growing at a rate of 30-40 000 inhabitants per year (Länsstyrelsen I Stockholms län, 2011a).

[12] Off-peak times are from 9am to 3.30pm and after 7pm weekdays until 2am the following day and all day weekends and gazetted public holidays (TransLink 2012b).

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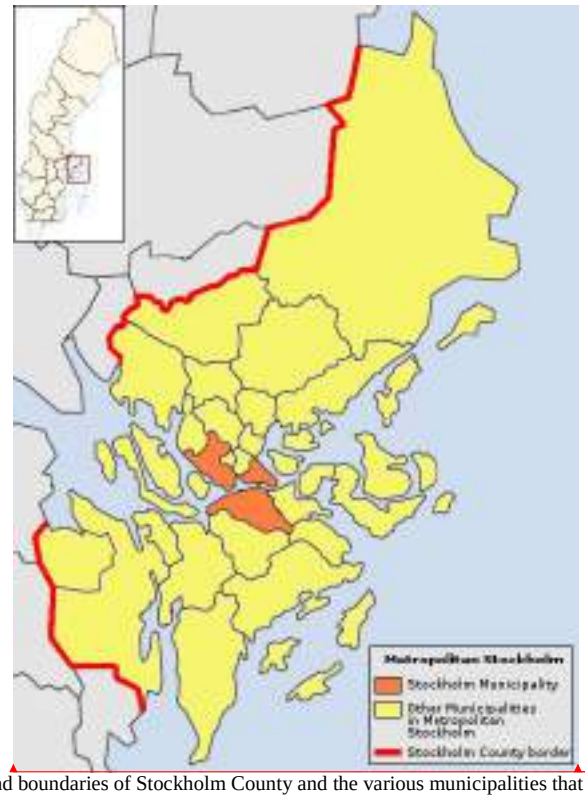
The county covers 6488 km2, with approximately half of the county area covered by forests (Länsstyrelsen 2011a). This is approximately 2/3 of the TransLink area in SEQ, with 2/3 the population, making Stockholm County more densely populated. Within the county, there is a further administrative sub-division into 26 municipalities (map 2).The higher administrative structures have different roles, with the County Administrative Board (a central government appointed board) responsible for planning and development in the county, coordinating among other things, transport planning and gender equality (Länsstyrelsen, 2011b). The county also comprises the County Council (landstinget) (2011b), an elected policy-making body, mainly responsible for health and public transport. The County Council controls public transport through a limited-liability company with a politically appointed board, *AB Storstockholms lokaltrafik, SL* (Landstinget, 2011a).



Map 2: Location and boundaries of Stockholm County and the various municipalities that make up the county. Illustration - TimSE.

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Availability

There is a similar mix of public transport options in Stockholm and SEQ. In Stockholm, SL oversees the running of buses on 450 routes, commuter trains on 200km of track with 51 stations, local trains on 110km of track and 98 stations, trams and three metro lines with 107km of track and 105 stations (SL, 2011a). Ferries also operate throughout the Stockholm Archipelago, but are run through a separate limited liability company (Waxholms Ångfartygs AB) (Landstinget, 2011a). In many ways, SL operates in a similar way to SEQ's TransLink. Both agencies oversee public transport without actually providing the services themselves. SL contracts out transport services to seven private operators. Focusing on bus services, SL notes that there are over 700 000 passengers using public transport in Stockholm on a normal weekday, with approximately 40% of those passengers taking the bus (Landstinget, 2011b).

Accessibility

From personal observation, there are two 'types' of bus service – there is one type of service that is oriented towards commuters, moving people between outer municipalities and the central city and another type of service that moves people around a municipality. The commuter services seem to generally use high floored buses with steps and no capacity to 'kneel' (image 2a), thus making access difficult or impossible for parents with prams. The 'city' services generally seem to use newer MAN Lion's City buses with low floors and 'kneeling' abilities to allow access for parents with prams (image 2b).

image 2a (left) and 2b (right).

2a shows an older style commuter bus without the capacity to kneel and with narrow entry and exit doors. Additionally, there are 2-3 steps up once inside the bus, making it additionally difficult to load a pram. 2b shows a city bus that is low floored, able to kneel and has double mid-bus exit doors allowing easy access for prams.

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SL has introduced a number of enhancements to bus operations and policies to ensure that it is easier for parents with prams to travel on buses within Stockholm County. These include rear or middle door entry, large designated spaces to 'park' prams, ability to secure prams and payment policies. Each of these will be described and discussed in the following paragraphs.

SL provides designated pram 'parking' in the front and mid third of each bus. The pram parking is therefore directly opposite and/or adjacent to the rear or mid exit door (depending on the specific bus model). For ease of entry, the mid or rear exit door has a door opening button on the exterior of the bus (image 3) so parents with prams are able to open the door (if no one is exiting the bus) and directly enter the bus to park their pram in the designated area. An additional feature of allowing parents with prams to enter the bus via the mid or rear exit doors is that there is a much higher chance that space will be available to them, rather than having to take their chances in the queue with other passengers.

image 3. Button on the exterior of the buses by the mid exit door to allow parents with prams and people in wheelchairs to enter the bus easily.

Affordability

When accessing an SL bus with a pram that holds an infant or toddler, the parent is not required to pay where the fare (25 SEK or ~3 Euro) is collected or ticket stamped by the driver. SL explains that this is a safety issue so that the parent does not have to leave the pram and their child unattended while they move forward to pay or have their ticket stamped (SL 2010; M. Ellman personal communication 2012-05-15). This policy however, does not extend to commuter and local trains, trams, the metro or even buses where the driver does not collect the fare of stamp the ticket. An example of this would be at Liljeholmens bus terminal, where fares are checked or collected by a ticket attendant upon entering the bus terminal.

There is one other exception to the no fare for parents with a pram policy – if the pram is empty or is being used to transport other things, the person with the pram must pay the fare. The child does not have to remain in the pram while on the bus – the parents are welcome to hold the child and still ride for free.

While SL appears to note that allowing parents with a child in a pram to travel free on buses is a convenience and safety feature, it is also a step towards the County Administrative Board's goal of ensuring gender equality through improving access to public transport for parents (mothers in particular) and their children. It also allows stay at home parents the ability to get out of their residence and conduct 'normal' daily activities. However, if this were the case, having fare-free access to local trains, metro and trams would be a greater indicator of this goal. Having access for prams via the exits also allows parents an equal chance of 'getting a place' on the bus with other passengers who do not have an additional burden of a pram.

Children under the age of 6 should be accompanied on SL services. As long as the accompanying older person has a valid ticket, the child travels for free. From age 7 to 20, children and adolescents pay a cheaper concession fare when travelling on SL public transport services (SL, 2011b).

Assistance

While bus drivers generally do not provide assistance to parents with prams, there is some 'mechanical' assistance provided – having kneeling buses to reduce the gap between the floor and sidewalk, and allowing parents with prams to enter via the mid-exit doors.

Amenities

Depending on the specific bus model, there may be room for three to five prams (with no wheelchairs present) (figure 6). Once on board the bus, there is the possibility to secure the pram to the bus using provided straps, and there are signs asking that parents ensure that the pram is secured. Pram brakes are expected to be applied. Some bus models have fold-down seating so when there are no prams, more passengers can be seated.

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image 4. Depending on the configuration of the bus, there may be room for 2 to 5 prams. The figure on the left shows the pram area directly opposite the mid exit doors. The figure on the right is adjacent to the mid exit doors. There are some bus configurations (mainly articulated buses) that have both pram areas.

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Attitudes

Women need to be involved in planning, implementing and evaluating gender-sensitive transport policies and programs (Mashiri et al 2005). It has been noted that gender equality has a long and successful history in Swedish politics. Indeed the incorporation of gender into the transport sector began in the mid-1990s when the Swedish parliament adopted a national directive requiring all committees and working groups to include an analysis of how their proposals might affect gender equality (Polk 2004:181). By the turn of the century, Swedish transport departments made gender equity the sixth goal of transport policy in response to legislation enacted in 2001. The transport policy equity goal reads: “the transportation system shall be designed so that both women’s and men’s travel needs are satisfied; women and men shall be given the same possibilities to influence the system’s design, formation and administration; and women’s and men’s values shall receive equal consideration” (Proposition 2001/02:20, translated in Polk 2004:180). By 2003 this commitment had been further extended to include an objective to achieve “an equal distribution of power and influence between men and women in every mode of transport” (Vagland 2004:193).

A Network for Women in Transport Policy with around 100 members across Sweden was established in 2002 to make a contribution to attainment of the gender equality objectives (Vagland 2004:193). However, Polk (2004:182) notes that although gender mainstreaming has a prominent role in official transport policy and has encouraged more attention to what gender equity could mean in practice it has not necessarily resulted in any real integration in subsequent works. Indeed, it has been noted that “there is still a dominance of men in the transport sector, and most of the decisions concerning planning, designing, or managing the transport system are taken with out a proper gender analysis” (Vagland 2004:194).

Conclusion

In 1921, Edith Cowan, the first woman to be elected to an Australian Parliament raised the issue of women and children and transport in her maiden speech. She referred to the problems women with children had in getting prams onto trains and demanded that the Minister for Railways "parade the streets...for the whole of one afternoon with a heavy infant in one arm and a bag of groceries in the other!" (Tedmanson 1995 in PLM&GTA 1995:2). More than a century later the fundamental issues relevant to parents travelling with children have not changed significantly. This paper has argued that a just public transport system must take into account the travel needs of its most vulnerable users, children, and their parents.

Our transport systems are failing to meet the needs of parents and children (and other disadvantaged groups). In part this is because their transport needs need to be better understood "and not just defined as deviations from the normal" (Gallagher 1994:49). While this paper is by no means intended as an exhaustive or comprehensive analysis of the issues related to public transport for women and children it does aim to stimulate debate around and engagement with the political and practical issues associated with meeting their transport needs. It also aims to demonstrate the benefits of extending feminist analysis to include the concepts embodied in the child friendly cities agenda to delivery transport benefits to both children and their most often female carers. The idea of the child friendly city may be another way of addressing issues experienced by women, especially mothers because it draws attention to meeting the needs of vulnerable groups. It is hoped that applying the criteria in this paper may go some way toward assisting them to do so and delivering a public transport system in which both parents and children feel valued, welcome and as though they have "a rightful place on the buses" (Wright 1994:33).

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THE EFFECT OF LAND USES LEGISLATION IN THE FUNCTIONAL STATUS OF THE GREEK URBAN TISSUE

Dimelli Despina[1], Vakalopoulos Dimitrios[2], Dimelli Maria[3].

Abstract

The paper will focus on the way the land uses legislation has until today shaped the Greek cities functional character. It is divided in two parts. In the first part, the historical frame that shaped the Greek cities functional status is examined in an effort to realize the parameters that have influenced the functional character of the Greek cities. The period that will be examined starts in 1831 when the first decree for the development of the remains of the war gave every Greek citizen the right to own a certain piece of land where he could construct his house, with some restrictions. Through time the effort of the state was to control cities through restrictions, aiming to their development based on hygiene rules as rapid population increase was noticed. The paper will examine the basic legislative rules that have tried to control land uses until today and it will focus on their effect in the Greek urban web.

In the second part the research will evaluate the effectiveness of today's land uses legislative framework, using two case studies. The first area that will be examined is the metropolitan basin of Athens, the area that concentrates the country's population and employment majority. The second case study is Athenians municipality the core that today is the central area of the basin, the initial core that has been constantly functioning since the creation of the Greek state

The methodology that will be used includes three steps. In the initial step it will focus on the kinds and posts of land uses before the application of the plan that defined the desired land uses structure and allocation. That will be realized with the use of Principal Components Analysis on the recorded employment in urban functions and the investigation of its allocation. In the second step it will examine the intentions of planning and the result it aims to induce. Finally in the third step the same procedure with the first step will take place, but with the use of records that were selected ten years later, in order to reveal the kinds and posts of land uses after planning. The evaluation will result from the compare of the aims of planning and the shaped status after the legislative plan's application. This will show if planning was effective and the examined areas have been developed as they were planned or if finally other parameters have

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deteriorated the initial plan and finally city is shaped under the influence of other stronger incentives.

1. Introduction

After the creation of the Greek state, the efforts for the development of Greek cities were taking place with different intensity through the years. The first plans of the proposed cities initially showed the shapes of the building blocks and the posts of public uses. Through time, more kinds of uses that were allowed to be allocated in certain city's posts and progressively more restrictions were legislated. The initial intension for the regulation of public uses was replaced by the creation of rules that tried to manage the mixture of all uses. These continuous changes have led to the functional changes of the areas where they were applied. These changes and the degree of the effect of urban legislation are the subject of the current research. Because of the plethora of the many and different laws that have been legislated and concern all Greek cities the research will focus only in the laws that concern land uses as these constitute the basic factors that shape the city's functional structure.

The case studies that will be examined are the metropolitan basin of Athens, which concentrates the majority of population and employment. The research will focus on its functional structure before and after the application of its regional plan in order to evaluate its effectiveness. The second case study is the Athenians municipality. The research will evaluate if Planning took into consideration the existing functional structure of the capital's center and then it will investigate the degree of effectiveness of the existing legislative framework.

2. The land uses legislation from 1833 until today.

The creation of the New Greek state was a fact since 1831. The ruins of the war were the remains where the Greek cities had to be developed. The first effort for the new cities reconstruction took place with a decree that was signed by the first Greek Governor J. Kapodistrias. According to this decree, every Greek citizen had the right to take a piece of land (from 300-450 square meters) where he could construct his residence. The restrictions that this decree had were that the houses had to be built in one year, this property could not be sold and that the State could primarily choose the areas where the public buildings could be built.

A representative plan of the way land uses were allocated in the cities is the plan of Kleanthis and Shaubert that was designed in 1833. This plan was never applied but it is a strong example of the way Urban Planning defined the positions of public uses. It is also characteristic that planning took into consideration public buildings and high income class. The low-income class and the industries were allocated in areas close to the cities without any restriction. Two years later, a decree that was legislated and was named as "the decree for the healthy construction of cities" defined that public buildings had to be

constructed in the cites, the hospitals and the slaughterhouses out of the cities in areas where the air was clean, the industries could be constructed after they ensured police license and finally the tanneries in a half hour distance away from the cities.

A. Palace
B. Barracks
C. Weapon storage
D. Mint
E. Academy
F. Grant
G Post Office
H. Police
I. Temple
J. Chamber of deputies
L. Botanic Garden
M. Barracks
N. Slaughterhouses

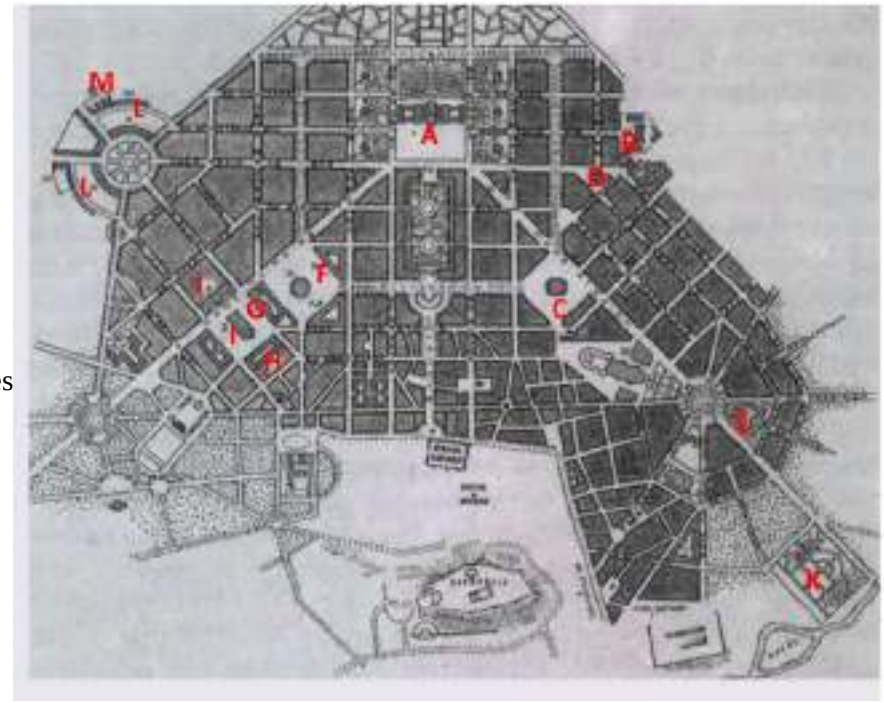


Fig. 1- The Kleanthis and Shaubert plan.

Progressively most of the Greek cities were planned this way, until 1922 when 1,5 million refugees arrived in Greece. This arrival led to the need for the creation of new residence areas that were allocated on the empty fields close to the existing industries. Except from the rich refugees that chose the suburb of Nea Smirni, the rest were directed to the West industrial basin where small houses with cheap materials were constructed and the living conditions were difficult.

All this pressure led one year later to the creation of a decree that has affected decisively the Greek Urban status. As for land uses, in this decree restrictions were mentioned in four articles. The first innovation that was imported was that all areas primarily would be residential and after this condition was satisfied, all other uses would be allocated. The second innovation that was imported was that industries could not be allocated in the city's tissue, as they were until now, but they had to be away from urban areas.

The decree that changed the way land uses were allocated in Greece was legislated 56 years after 1923. In articles 3 and 4 of the 1979 decree, two categories of land uses are

defined, the general uses and the particular uses. The innovation of this decree was that it imported categories of land uses, attempting to create multi-functional areas.

Only one year later (1980) a new decree for land uses was legislated. It was innovate as it tried to connect the land uses with the building restrictions. It defined eleven categories of land uses, it separated the industrial uses from residence and the rest urban functions and it defined for the first time two categories of residence, the Unmixed residence and the General residence. The Unmixed residence aimed to the creation of areas where strictly residence was allowed with some small supplementary uses, as small shops. On the contrary, the General residence was a category that included residence, shops, hotels, restaurants, education and cultural uses and other functions.
Two years later, in 1983 a new decree tried to "manage" the Greek cities. It was the time the "Enterprise of Urban Reconstruction" was founded and it focused in the creation of Greek cities with standards, trying to provide the necessary infrastructures for the Urban tissue.

Although this decree did not have specific rules for land uses, the majority of plans that were created after its legislation were based on categories as urban centers, residence, industry, education, disconnecting land uses from building restrictions.
The fact that no certain decree for land uses existed, led four years later, in the legislation of a decree that until today constitutes the base for urban planning. The decree of 1987 defined nine categories of land uses and its main objective was the mixture of land uses. It is characteristic that land uses participate in many categories. It is also interesting that residence exists in seven of the total nine categories.

Although many laws have since then been legislated regarding urban planning it is remarkable that a new land uses decree has yet not been legislated, but Planning is still based on a decree that was legislated 24 years ago. The explanation that can be formulated is that this decree is successful so it does not have to be changed. But is the existing decree for land uses of Greece successful? For the evaluation of the decree's effectiveness, the current paper will focus on the way land uses are allocated after the application of the existing land uses legislation examining two case studies of its application in the most complicated areas of the Greek urban tissue.

3. Methodology

The main aim of the research is to examine the form and the composition of land uses groupings. The land uses groupings will be revealed with the use of Principal Components Analysis. This statistical technique reveals the structures of the variables that are inserted in the Analysis, which in our case are land uses, measured by their recorded employment (Dixon, 1983). These Analyses reveal the functional structure of the examined area expressed by the extracted Components. These Components are structured by the best linear relationship of the land uses. That is to say, which land uses

are areally related. Finally, the Components are rotated in Varimax rotation, which allows the best thematic and areal correlation of land uses (Brannen,1989).

4. The Athenians basin.

The concentration of the population's majority in Athens the capital of Greece with different intensity that varied according to political, social and economic conditions with the simultaneous lack of Planning led to a laissez-faire in land uses allocation. Although many plans were created, after the second world, it was 1985 when for the first time a regional plan for the Athenians basin was legislated. Its main aim was to encourage a multi-centric development in order to decongest the central overpopulated center. The question that arises is if this aim was achieved or if the freedom that was provided allowed a different status in land uses allocation.

4.1. The Athenians basin in 1978.

In 1978 the Athenians basin was a pole of new residents attraction, with industrial zones developing in its around while the tertiary activities were developing in its central core. The employment that was recorded was 619.664 people. The majority of employees were concentrated in the tertiary sector (57%) while the industrial and manufacture activities gathered the 43% of the recorded employment. This time as told, in the Athens basin existed nor regional neither urban planning, in order to define the detailed allocation of the 37-differnent kinds of land uses. So, the main parameter that influenced land uses allocation was the coverage of the basin's citizen's everyday life needs that ensured the best activity's function, hence it's maximum profit.The extracted functional structure, from the Principal Component Analysis, in 1978 is composed by five components that explain the 24,5% of the total variance of the existing employment situation (Table 2). The first group of land uses (composed by 12 of the 14 tertiary activities) defines Urban Centers while the rest four groupings are formed exclusively by the remaining 23 industrial uses.

The study of the central uses allocation (Fig. 3) shows that they are concentrated on the Athens center and they have also shaped five (5) sub-centers distributed in areas that cover the wider region's needs. The industrial uses are all (and the four components) allocated with common principles. They are concentrated in the central area due to the lack of planning restrictions and also distributed in the total of the basin, with intense condensation in the west traditionally industrial area (Fig.4).

It has revealed that although restrictions regarding land uses did not exist, the activities themselves seeking to take advantage of the profits that can be ensured by certain areas position have shaped cores where activities are concentrated. It has also revealed that industrial uses have shaped groups as they need areas with common characteristics that

means low land prices and adjacency with main axes and in some cases they function on an assembly line.

Table 2. The Land Uses Groupings in 1978

Component	Economic activity
CENTRAL DAILY NEEDS LAND USES	Retail Trade
	Wholesale Trade
	Transactions of Affairs
	Brokers and representatives
	Insurances
	Clothing and footwear Industries
	Restaurants and Hotels
	Rest Industries
	Personal Services
	Banks and rest Economic Institutions
	Printing, Publications and relevant activities
	Services of Recreation and Culture
	Medical and Sanitary Services
INDUSTRIL USES	Industries of products from tyre and plastic material
	Textile Industries
	Industries of not metal mining products
	Industries of Furniture and goods of furnishing
	Industries of Timber and Cork
	Industry of Food except drinks
	Chemical industries
	Basic Metallurgic Industries
	Wholesale trade of Litter and Clippings
	Manufacture of machines and appliances
	Manufacture of electric machines, appliances and remaining tyres
	Tobacco industries
	Industries of Oil and Mine products
	Mobile Renting
	Paper Industries
	Transports
	Leather and furs Industries
	Manufacture of Carrier means
	Storages
	Drinks Industries
	Manufacture of metallic products
	Communications
	Services of Hygiene and Cemeteries

4.2. The Regional plan of 1985.

The congestion of the Athenians center and the intense air pollution led in 1985 in the legislation of the first regional plan for the Athenians basin. Its basic aim was the development of sub-centers in order to achieve multi-centric development. The regional plan was followed by local plans for each of the 54 municipalities that were based on sub-centers development. The new legislated centers hierarchy and their allocation in the Athenians basin is shown in Figure 5. In these areas the land uses that were allowed to be allocated were central uses that is to say trade, offices and other tertiary activities as well as residence.

4.3. The Athenians basin in 2001.

Since 1978 the basin's population and employment was continuously increasing and from the middle of the 90's it is stabilising with a very small reduction. Meanwhile, planning has discouraged the manufactures that pollute the environment but it has also allowed land uses mixture. The majority of employment is recorded in tertiary sector while the employees in manufacture are reduced.

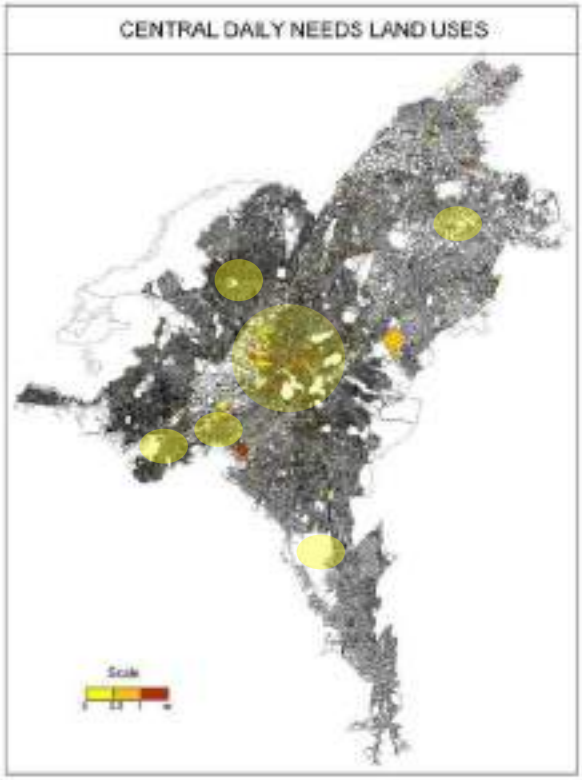


Fig. 3 The allocation of Central daily needs land uses

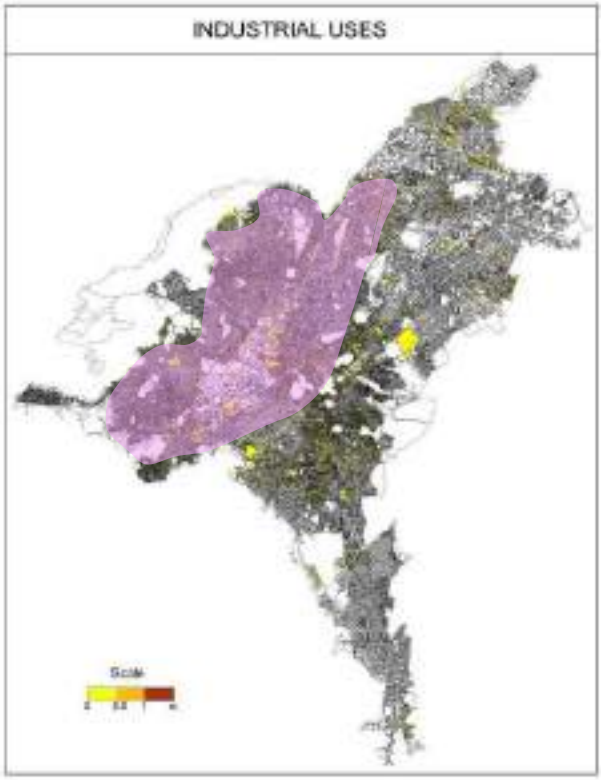


Fig.4 The allocation of industrial uses

Fig.5 The allocation of central activities according to the 1985 regional plan.

The examination of the activities structures that have been created according to the 2001 census, shows that five groupings of land uses are revealed (Table 6). The first grouping concentrates the majority of activities. It is composed by manufacture, constructions, trade, hotels and other incompatible activites. Some of its elements are functionally related while others seem to take advantage of each area's characteristics. The second grouping includes central bussiness district functions as it is composed by supralocal activities that require accessability (Bourne,1972) . The third and the forth groupings are composed by manufacture activities that are functionally related and "prefer" areas with low land prices. Finally it is characteristic that the fifth grouping includes only transport activities, fact that shows that some activities create specialized structures.

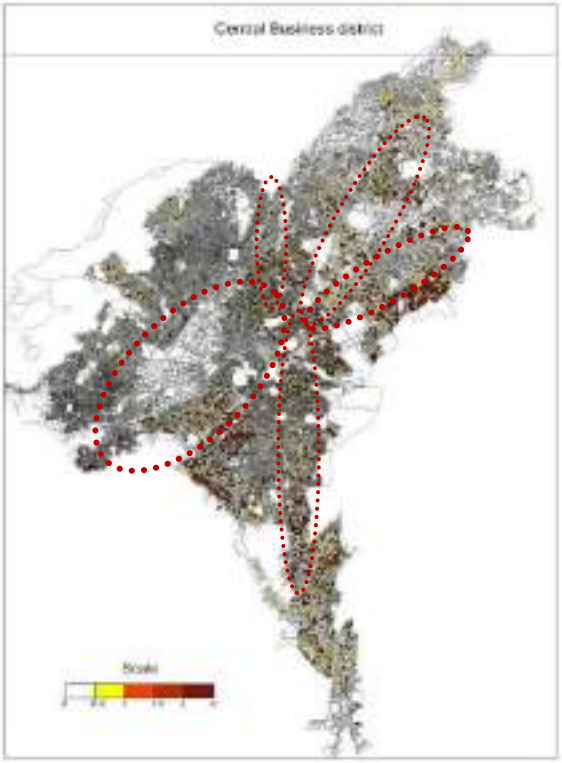
Table 6. The Land Uses Groupings in 2001.

Component	Economic activity
Constructions, trade and services	Constructions
	Clothing manufacture
	Hotels and restaurants
	Retail trade
	Manufacture of metallic products
	Furniture manufacture
	Recreation, cultural and athletic activities
	Travel agencies
	Food manufacture
	Publications
	Transport
	Administration and social seervices
	Other services.
	Textile manufacture
	Trade
	Plastic equipment manufacture
	Timber manufacture
	Paper production
	Basic metals productin
	Leather production
	Organisations
Central bussiness district	Finance organsation
	Education
	Health
	Information technology and relevant activities.
	Post offices and telecommunications
	Insurances
	Air transports.
	Chemical goods production
Rentings and manufactures.	Equipment renting
	Tobacco pruduction
	Oil and fuel Production
	Vehicles trade
	Research
	Computer production
	Real estate
Manufactures of engines	Production of engines
	Medical tools production
	Electrc engines production
	Manufacture of equipment
	Cars production
Transports	Water transport
	Manufacture of of transports equipment.

The areal distribution of the five groupings is shown in Figures 7-11. The first grouping appears with intense condensation in the central area of the basin where intense residence is also recorded in 2001 and it is less intense in more distant from the center areas (Fig. 7). The second, central businesses district grouping is concentrated on main road axes that "begin" from the center of the basin and cross it towards all directions except the east industrial area (Fig. 8). Finally, the three rest groupings are almost uniformly distributed in the basin's area. The fact that the central activities, as trade services and offices, are concentrated in the center shows that the aim of multi-centric development has not been achieved while the fact that the rest groupings are uniformly distributed is a sign of satisfactory service in local level. So the fact that groups of incompatible activities are concentrated in the basin's center is evaluated negatively as functions as manufactures of plastic and timber overload the environmentally congested central area.

Figure 7. The allocation of trade constructions and services.

Figure 8. The allocation of central business district



In 2001, the majority of the recorded cases shows that tertiary and manufacture activities are more intensively mixed. Therefore, the thematic mixture of land uses remains random in the majority of the recorded cases. In the north south and east basin in 2001

the new mixed uses groupings are scattered in all areas where intense central functions groups are also allocated. It seems that the activities of this grouping, that are mixed in a random way, are allocated with the criterion of the maximum coverage of the until then not satisfactory served areas. Therefore, new enterprises of all kinds avoid the congested center and prefer areas that had not until then developed functional centers but had increasing population.

Figure 9. The allocation of Rentings and manufacture

Figure 10. The allocation of Manufactures of engines

Figure 11. The allocation of Transports

So, autonomous areas have started to develop, concentrating all kinds of functions. This auto-regulation that is not exactly following the legislated plans, that tend to sub-centers creation, show that traffic minimization has up to a point been achieved, while autonomously functioning sectors are created with a big degree of randomness. It is concluded that a thematic and areal balance has not yet been achieved. This phenomenon is related to the constant employment and population increase of many areas assisted by the freedom that is provided by the existing legislative framework**.**

5. The Athenians municipality.

The Athenians municipality constitutes the most populated municipality of Greece, as it concentrates 313.177 residents. The first Urban plan for the municipality was created in 1989 and it was modified two times in order to adjust to small local level changes. Its recorded employment has decreased in all sectors more intensively in manufacture and industries.

5.1. The functional structure of the Athenians municipality in 1988.

The execution of Principal Components Analysis in the 1988 recorded employment has revealed 15 kin land uses groupings, that can be grouped in four categories: the Urban centers (4 components), the manufacture uses (5 components), the industrial uses (4 components), and the incompatible uses (2 components). The last group includes uses that should not co-exist (schools and industries) but they are recorded in the same areas taking into advantage the lack of restrictions. The revealed components are shown in Table 12. It is realized that although there was not any legislative restriction to define the kind and the position of land uses, they have created groups that optimize their function The allocation of the four groupings categories is shown in Figure 13.
The industrial and manufacture uses are allocated in the municipality's center and in its west areas while urban centers are allocated not only in the central area but also on main road axes sides. Finally, the incompatible uses groupings are allocated in residential areas.

Table 12 The functional structure of the Athenians municipality of 1988.

Components	Economic activities	Loadings
Manufacture uses	Leather and furs Industries	0,802
	Clothing and footwear Industries	0,769
	Rest Industries	0,618
	Wholesale Trade	0,539
Urban Centers	Banks and rest Economic Institutions	**0,670**
	Brokers and representatives	**0,588**
	Retail Trade	**0,522**
	Transactions of Affairs	**0,460**
Incompatible grouping	Industries of Oil and Mine products	0,595
	Insurances	0,837
Manufacture uses	Industries of products from tyre and plastic material	**0,746**
	Industries of Furniture and goods of furnishing	**0,627**
	Industries of Timber and Cork	**0,583**
Manufacture uses	Tobacco industries	0,824
	Printing, Publications and relevant activities	0,783
Urban Centers	Education	**0,760**
	Services of Recreation and Culture	**0,618**
Industrial uses	Chemical industries	0,804
	Textile Industries	0,794
Industrial uses	Basic Metallurgic Industries	**0,684**
	Manufacture of metallic products	**0,600**
	Manufacture of electric machines, appliances and	**0,425**
Industrial uses	Industries of not metal mining products	0,615
	Manufacture of machines and appliances	0,615
Manufacture uses	Storages	**0,830**
	Wholesale trade of Litter and Clippings	**0,446**
Industrial uses	Paper Industries	0,762
	Manufacture of Carrier means	0,706
Incompatible grouping	Restaurants and Hotels	**0,595**
	Transports	**0,535**
	Personal Services	**0,485**
Urban Centers	Communications	**0,744**
	Social Security	**0,722**
Manufacture uses	Drinks Industries	0,769
	Industry of Food except drinks	0,550
Urban Centers	Mobile Renting	**0,726**

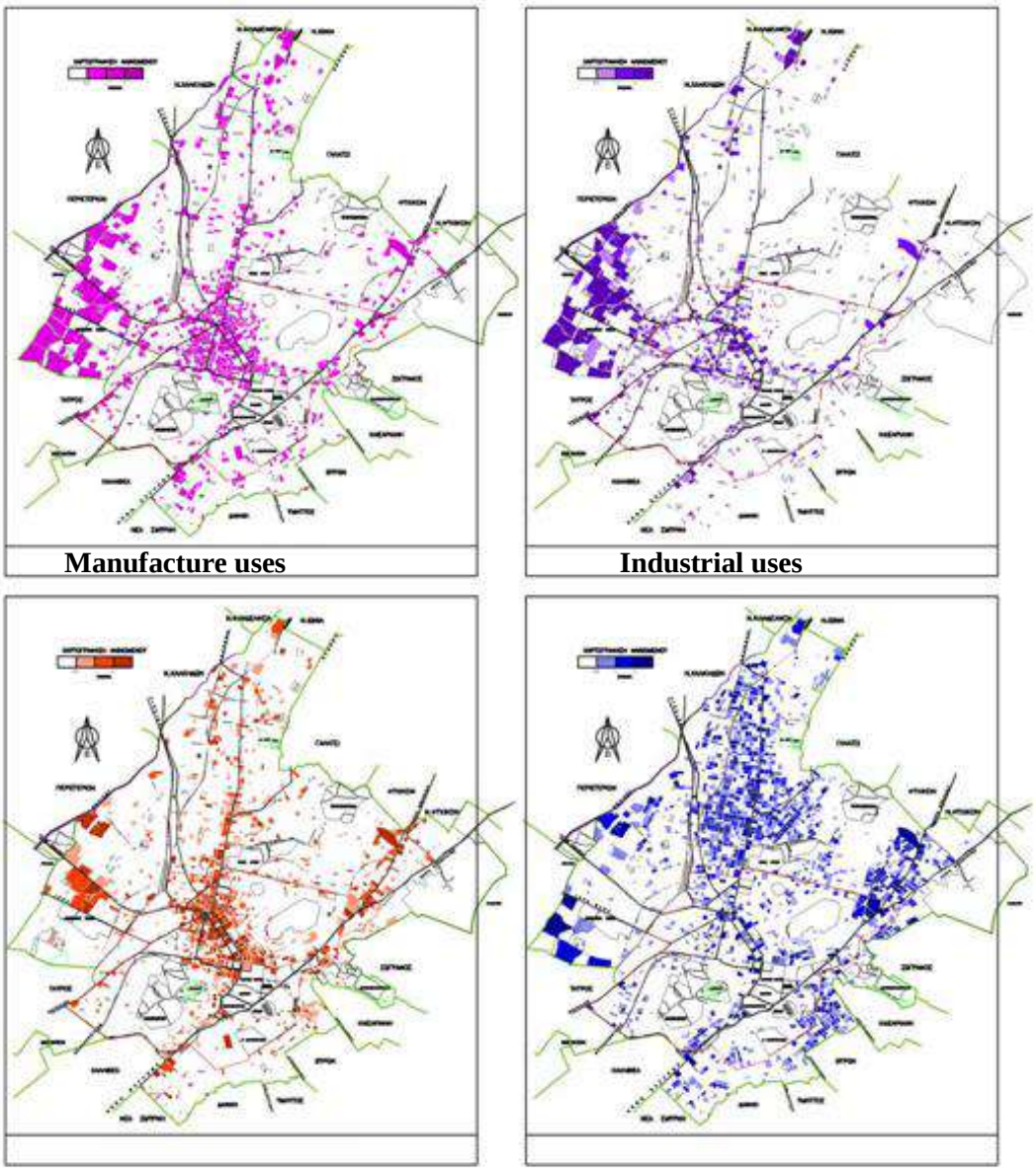


Figure 13. The allocation of the functional structure's components in the Athenians municipality in 1988.

5.2. The Athenians municipality urban plan.

The priority of this plan that was legislated in 1989 was the reveal of the municipality as a metropolitan center with the simultaneous removal of all the uses that degraded the

area. The kinds and posts of the allowed uses are shown in figure 14. It encouraged land uses mixture but it limited the incompatible uses, as the allowed uses were all compatible.

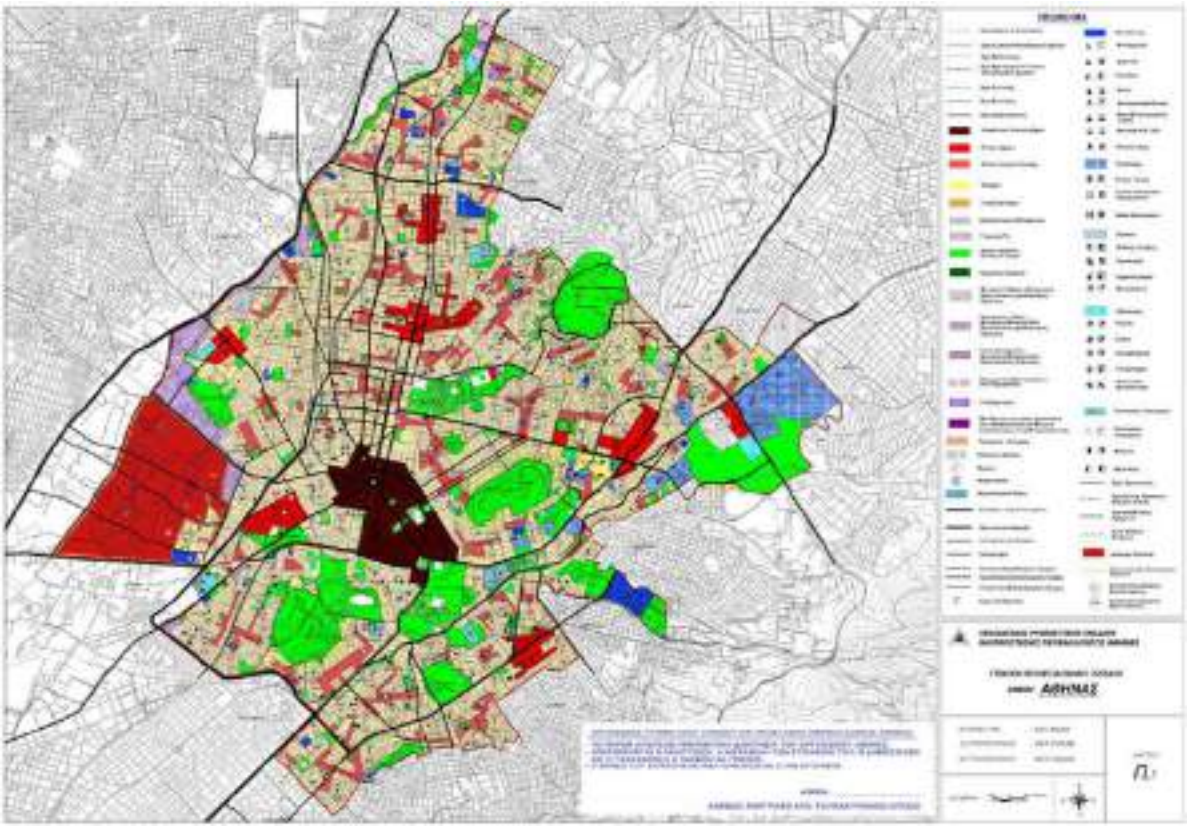


Figure 14. The Urban Plan of the Athenians municipality.

It is obvious that manufacture areas were delimited in specific city's parts while the center concentrated the supra-local central activities. It is also realized that a multi-centric development was proposed as urban sub-centers are legislated in many city's parts.

5.3. The functional structure of the Athenians municipality in 2001.

The execution of Principal Components Analysis in the 2001-recorded employment revealed nine land uses groupings that are grouped only in three categories as incompatible land uses groupings don't exist. It is shown that since 1988 urban centers

have been created and are divided in three different groups, while manufacture and industrial groupings are reduced (Table 15).

Table. 15 The functional structure of the Athenians municipality of 2001.

Components	Economic activities	Loadings
Urban Centers	Education	0,75
	Other services.	0,73
	Health	0,67
	Recreation, cultural and athletic activities	0,64
	Hotels and restaurants	0,57
	Publications	0,56
	Information technology and relevant activities.	0,54
	Retail trade	0,52
	Post offices and telecommunications	0,49
	Insurances	0,44
	Research	0,41
	Air transports.	0,33
	Chemical goods production	0,32
Industrial uses	Water transport	0,71
	Constructions	0,65
	Textile manufacture	0,58
	Manufacture of metallic products	0,56
	Land transports	0,51
	Clothing manufacture	0,44
	Furniture manufacture	0,43
	Food manufacture	0,42
	Manufacture of equipment	0,40
	Electrc engines production	0,39
	Timber manufacture	0,35
	Plastic equipment manufacture	0,34
Industrial uses	Oil and fuel Production	0,48
	Paper production	39,00
Urban Centers	Real estate	0,66
	Finance organsation	0,30
Manufacture uses	Medical tools production	0,60
	Manufacture of of transports equipment.	0,34
Urban Centers	Organisations	0,86
	Administration and social seervices	0,55
Manufacture uses	Tobacco pruduction	0,54
	Leather production	0,36
Industrial uses	Production of engines	0,65
	Vehicles trade	0,51
Industrial uses	Engines production	0,78

The above groupings allocation is shown in Figure 16. It is obvious that the manufacture and industrial activities have moved from the municipality's center, while central activities are allocated there in a nucleus form.

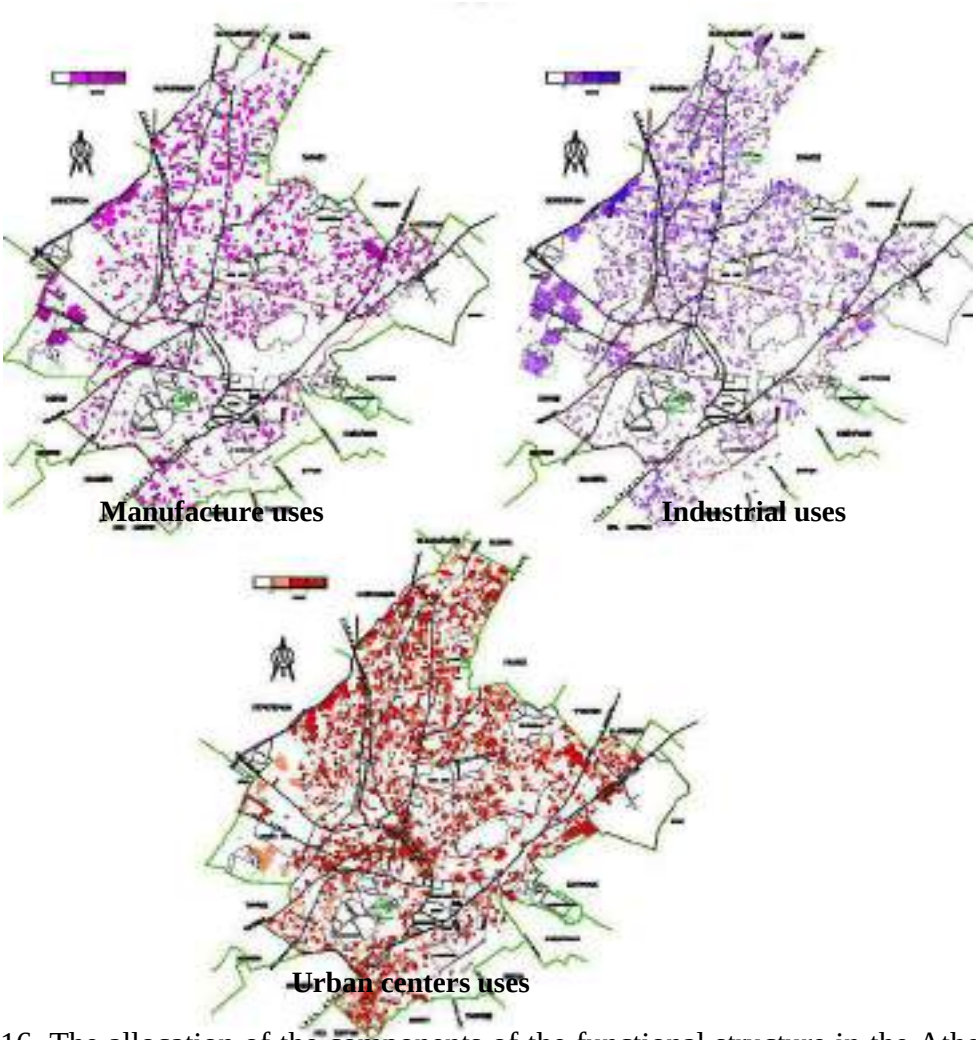


Figure 16. The allocation of the components of the functional structure in the Athenians municipality in 2001.

Therefore, it is concluded that in the case of the Athenians municipality, Planning that took into consideration the existing functional status did not succeed to shape a new functional character in the municipality. The new groupings that have been shaped are composed by functionally relevant activities that are up to a point allocated in the proposed by Planning posts. New sub centers have been created while incompatible functions co-existence does not exist. But is has failed to result its initial aim as still manufacture and industrial uses are recorded in scattered form in areas where residence and its supplementary uses that is to say manufacture with no further specification are allowed The fact that the land uses decree provides a freedom in the allowed categories shows that land values and market forces can shape their own functional status

It results that Urban Planning must focus on the particularities the cities have and the parameters that shape city's development and propose specialized solutions in order to achieve the best urban function that will lead to the city's citizen's best living conditions.

6. Conclusions

The aim of the current research was the investigation of the effectiveness of the existing land uses decree of Greece. The two case studies that have been examined are the most complicated functionally areas of the Greek urban tissue so they constituted the proper areas for the aim of the research.

It is concluded that in the Athenians basin as well as in the Athenians municipality land uses structures and allocation have up to a point been achieved according to the existing corresponding regional and urban plan. It is obvious that urban planning does not seek for zones of certain activities and that land uses have to be mixed in order to create livable cities. However, when this mixture is thoughtless and market forces create structures based on the highest possible profit then it is concluded that restrictions should be imposed. Legislation has up to a point influenced this development as it has some restrictions especially in the allocation of industrial uses but it also provides freedom for the rest land uses to be allocated in the majority of urban web. Therefore, it is obvious that Urban Planning must focus on the particularities the cities have and the parameters that shape their development and propose specialized solutions in order to achieve the best urban function that will lead to the city's citizens best living conditions.

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THE RESILIENCE CONCEPT IN THE TRANSITION TOWN MOVEMENT. TOWARDS A NEW TERRITORIAL GOVERNANCE IN URBAN DEVELOPMENT AND SPATIAL PLANNING?

Grazia Brunetta[1], Valeria Baglione[2]

Abstract - 1. Introduction - 2. Resilience. Definition, origin and evolution - 2.1 The origin of the concept in ecology - 2.2 Evolution of the concept in spatial planning - 3. Resilience in the transition town movement - 3.1 The idea of transition - 3.2 Origins and quantitative consistency – 3.3 Purpose and principles - 3.4 Common characteristics – 4. Conclusions. Towards new territorial governance in urban development and spatial planning? - References.

Abstract

The concept of resilience, typical of natural sciences, is some years joined in the glossary of spatial planning. In particular, in the urban scale, it is usually associated with initiatives of the transition town movement (Hopkins, 2008 and 2011). This movement is one of the recent and bottom-up initiatives led by civil society. The transition towns, better called “urban initiatives for the transition”, are a set of bottom-up practices of urban organization, inspired by the concept of resilience, aimed at achieving a self-sufficient, sustainable and “zero impact” model of urban development. In this perspective, the research question is: are the transition towns model the only possibity to apply the cultural concept of resilience in spatial planning?

The paper will explore the ethical dimension of the concept of resilience in spatial planning. The purpose is to understand the real innovation extent in planning practices and territorial governance. The paper will also investigate common elements and characteristics of resilient communities with particular reference to the role of institutions and to territorial governance (North,

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1990). As initial hypothesis, the concept of resilience is unexplored in spatial planning. As Walker B. says, resilience is « […] *the capacity of a system to absorb disturbance and reorganise while undergoing change, so as to still retain essentially the same function, structure, identity and feedback*» (Walker et al., 2004, p. 5). The resilience is therefore a bottom-up process that could deeply change the role of institutions and the community in the territorial governance. Could this new paradigm of development and spatial organization really be – in what mean and by what tools - a new approach in the local governance?

The paper will provide first a reflection on the ethical value of the concept of resilience applied to spatial planning. Secondly, the paper will identify a list of elements, common to all resilient communities. The survey will look how the concept of resilience is declined in the main and most significant experiences of the transition town movement. More specifically, it will be referred to a collection of virtuous examples of transition town, belonging to the European and global context. Some elements investigated in empirical analysis are: spatial extent, the role of actors, fields of action, tools and policies.

The main outcome aims to reflect on the epistemological dimension of the concept of resilience. In particular, the reflection is about the implications of the concept in spatial planning. The related outcomes aim to reflect the perspective of the istitutional innovation. In other words, the paper will demonstrate, starting from the empirical analysis and the comparison between similar experiences of transition town, if could be promoted institutional learning. Finally the paper will attempt a prospect of a new territorial governance.

1. Introduction

The concept of resilience, widely studied in ecology, has recently become part of the glossary of spatial planning.
According to an theoretical initial hypothesis, it means «*the capacity of a system to absorb disturbance and reorganise while undergoing change, so as to still retain essentially the same function, structure, identity and feedback*» (Walker et al., 2004, p. 5). This definition has been randed in the spatial metaphor of “resilient city”.
A more thorough inquiry (Folke, 2006) into the adaptive capacity of social-ecological systems instead underlined the real innovation of the concept of resilience. This second definition allows the study of a recent phenomenon in which the resilience concept has been implemented in the spatial metaphor of “transition town” (Hopkins, 2008 e 2011). This movement has already spread

into several contexts. Yet despite this phenomenal growth and the wave of positive publicity the movement has received, there has to date been very little empirical research into the development and character of these initiatives, or the impact they have achieved and the barriers to be overcome (Seyfang, 2009).

The paper will discuss the following three issues concerning to the concept of resilience in spatial planning: (i) the first relates to its origin and evolution in theoretical debate, (ii) the second identifies its innovational meaning in spatial planning and (iii) the third considers an approach linked to the ongoing territorial governance processes.
In particular, the paper proposes:

- a review of the main theories of resilience;
- a list of criteria for empirical analysis (spatial extent, role of actors, fields of action, planning tools, local policies) of the transition town experiences;
- a perspective on the true extent of the innovative concept of resilience and possible implications in terms of territorial governance.

The aim is to formulate the first answers to some fundamental research questions: is the transition town the only model to apply the concept of resilience in spatial planning? Could this new paradigm of urban development really be a new approach in local governance?

2. Resilience. Definition, origin and evolution

The concept of resilience has been widely studied in many disciplines (Seyfang, Haxeltine, 2009). First formulated in ecological sciences (in the 1960s-1970s), and particularly in a special branch of ecology, this concept has influenced many other research fields including anthropology, human geography and other social sciences (Folke, 2006).
Today it is the heart of the research and debate in the sustainable development field. Recently, the concept of resilience has also been discussed in the urban and regional planning sector.

2.1 The origin of the concept in ecology

Early studies in the Sixties and Seventies[3], essentially based on empirical

3 See: Holling, C.S., 1961. Principles of insect predation. Annual Review of Entomology, 6, pp. 163–182; Lewontin, R.C., 1969. The meaning of stability. In: Diversity and Stability of Ecological Systems. Brookhaven Symposia in Biology, 22. Brookhaven: New York;

analysis of ecosystem dynamics through mathematical models, focused on resilience as the capacity to absorb shocks and still maintain its functions. Holling (1973) proposed that «resilience determines the persistence of relationships within a system and is a measure of the ability of these systems to absorb changes of state variables, driving variables, and parameters, and still persist» (p. 17).
In this theoretical perspective, the consequent policies relating to natural resource management were “linear approach” type (Folke, 2006).

Since the Nineties[4], when ecosystems analysis on a large-scale included the social sphere (institutions and people), the necessity for policies to manage by change rather than simply to react to external shocks emerged. These policies should imply uncertainty and surprise[5], or - as we say today - a dynamic ability to adapt to the evolving external disturbances through time and space. This vision has led to the study of socio-ecological systems (Folke 2006; Gallopin 2006), which are conceptualization models of linkage between the human and ecological spheres, useful to identify practices of adaptive management[6]. In this approach, the concept of resilience shifts from a system capacity which maintains its original status towards a system capacity able to adapt, innovate and transform, under certain conditions, into new more desirable configurations. It also «*concerns the capacity for renewal, re-organization and development, which has been less in focus but is essential for the sustainability discourse.* […] *In a resilient social-ecological system, disturbance has the potential to create opportunity for doing new things, for innovation and for development*» (Folke, 2006, p.259).

Pickett et al. (2004) therefore recognize two distinct research phases in the evolution of the concept of resilience, one based on balance and the other based on imbalance. In the first phase, the resilience is the system's ability to

Rosenzweig, M.L., 1971. Paradox of enrichment: destabilization of exploitation ecosystems in ecological time. Science, 171, pp. 385–387 and May, R.M., 1972. Will a large complex ecosystem be stable? Nature, 238, pp. 413–414.

4 Especially after the publication of the volume *Barrier and Bridges to the Renewal of Ecosystems and Institutions* by Gunderson et al. (1995).

5 For a further, see: Carpenter, S.R., Gunderson, L.H., 2001. Coping with collapse: ecological and social dynamics in ecosystem management. BioScience, 51, 451–457 and Berkes, F., Colding, J., Folke, C., eds., 2003. Navigating Social–Ecological Systems: Building Resilience for Complexity and Change. Cambridge (UK): Cambridge University Press.

6 Recent advances include understanding of social processes like, social learning and social memory, mental models and knowledge–system integration, visioning and scenario building, leadership, agents and actor groups, social networks, institutional and organizational inertia and change, adaptive capacity, transformability and systems of adaptive governance that allow for management of essential ecosystem services (Folke, 2006).

return to the starting point by overcoming a crisis period; in the second more inclusive one, it is the system's ability to adapt to internal and external disturbance (Gunderson, Holling, 2002; Gunderson et al., 2010).
So Folke (2006) defines resilience as the characteristic which «*emphasizes non-linear dynamics, thresholds, uncertainty and surprise, how periods of gradual change interplay with periods of rapid change and how such dynamics interact across temporal and spatial scales*» (p. 258).
Following Carpenter et al. (2001), social-ecological resilience is interpreted as (Folke 2006):

- the amount of disturbance a system can absorb and still remain within the same state or domain of attraction.
- the degree to which the system is capable of self-organization (versus lack of organization, or organization forced by external factors).
- the degree to which the system can build and increase its capacity for learning and adaptation.

Even today, resilience is defined in the literature as the ability of a system to absorb external disturbance and reorganize itself on the basis thereof to return to the same function, structure and original identity (Walker et al., 2004). According to social system analysis, resilience is defined as the ability of human communities to withstand external shocks such as social, environmental, economic or political ones (Adger, 2000). In the opinion of Folke (2006) «[…] *resilience is not only about being persistent or robust to disturbance. It is also about the opportunities that disturbance opens up in terms of recombination of evolved structures and processes, renewal of the system and emergence of new trajectories*» (p. 259). From this perspective, he proposes (2006) the theory of the adaptive renewal cycle, a heuristic model based on dynamic ecosystems observation, divided into four phases of development driven by discontinuous events and processes: «*there are periods of exponential change (the exploitation or r-phase), periods of growing stasis and rigidity (the conservation or K-phase), periods of readjustments and collapse (the release or omega-phase) and periods of re-organization and renewal (the alpha-phase). The sequence of gradual change is followed by a sequence of rapid change, triggered by disturbance*» (p. 258). The cycle rapidly repeats itself over time retaining the experiential memory of the previous phases (Panarchy model): «*the panarchy is therefore both creative and conservative through the dynamic balance between rapid change and memory, and between disturbance and diversity and their cross-scale interplay*» (Folke, 2006, p. 259).
The latter definition adapts to peculiarities of the complex systems «*because it is more dynamic and evolutionary*» (Pickett et al., 2004, p. 373). It enables the use of the concept of resilience in spatial planning. Cities, by their nature, are

evolving complex systems and, thereby, they are subjected to constant external disturbances. At the same time, they are able to respond to disturbance with a spontaneous and self-organised behavior (Jacobs, 1961).

2.2 Evolution of the concept in spatial planning

What led spatial planning to tap into the ecology glossary and toolbox?
According to Pickett et al. (2004), ecology and spatial planning share both the use of metaphor and the relationship between structure and function.
In spatial planning metaphor has traditionally had a particular appeal; the most famous is Howard's Garden City but there are also the first hypotheses of bioregionalism formulated by Geddes and Mumford at the beginning of the Twentieth century.
Today the new metaphor of “resilient city” (Musacchio, Wu, 2002; Newman et al., 2009; Otto-Zimmermann, 2011) could be the synthesis between ecology and spatial planning. It suggests the vision of the city as a complex system able to withstand external disturbance and, at the same time, to react flexibly, to adapt gradually and to learn from the past. In this synthesis the metaphor, based on resilience, seems to outstrip the traditional and well-established paradigm of sustainable development. This traditional paradigm foresees growth (also in an urban context) which safeguards the wellbeing of future generations. The resilience paradigm ensures the development of urban systems through the ability to react to external disturbances by storing past experiences. In other words, it means ensuring the future, absorbing present disturbances and looking back.
In these terms, spatial planning has the aim of putting metaphor into action in a territorial dimension.

Taking the concept of resilience from the theory of the adaptive renewal cycle and panarchy model (Folke, 2006), the reaction of systems to external disturbances depends on a certain degree of their self-organization and creativity. Accordingly, in order to propose a comprehensive definition of the resilience concept in spatial planning, it is useful to study empirical experiences which also take these aspects into account. Examples are the recent experiences of transition towns (Hopkins, 2008 and 2011; Hopkins, Lipman, 2009). Rob Hopkins, author of the first transition town in the UK, proposed the original use of the concept of resilience as reaction to the external disturbance of peak-oil.

3. Resilience in the transition town movement

The concept of resilience is the central principle of the experiences of the

transition town movement. We will understand how it is used in recent international experiences.
According to the main resilience definition in ecology, we can list four principal elements of application to the urban scale, as indicated below:

Socio-ecological systems. The first element concerns the linkage between the ecological and social dimensions of systems. Urban systems are based on the close relationship between environmental resources and human capital, they are socio-ecological systems. This is particularly clear in the transition town movement, the new paradigm of urban development indeed refers to primary resources (eg. energy and food supply).

Complex systems. The second element concerns systems as a whole and not only part of them (Folke et al., 2010). Cities are indeed complex systems wherein several subsystems interact. The transition town model proposes a new paradigm of urban development which is a comprehensive strategic vision of the city and does not just consider a single subsystem (Brangwyn, Hopkins, 2008).

Adaptive renewal cycles. The third element concerns the adaptive renewal cycle theory. It is composed of the sequence of several status phases. Each status phase involves the loss of resilience and the consequent vulnerability of the system. In the transition town model the sequence is clear and closely linked to the widespread use of oil; peak oil – or at least its shortage - is the external disturbance which involves the loss of resilience and the consequent vulnerability of the system (Hopkins, 2008). Following this approach, the urban system has passed the period of growing stasis - K-phase - and is now going through the readjustment and collapse period – Omega-phase. The transition town model proposes over coming the current phase of crisis and reaching the last phase of renewal and re-organizing – a-phase[7]. The adaptive renewal process also has memory ability. The memory of the urban system is a key feature of the transition town model (eg. Key role of the elders knowhow and wisdom in terms of lifestyle not yet dependent on oil) (Brangwyn, Hopkins, 2008).

Self-organizing capacity. The fourth and final element is the self-organizing capacity of complex systems. Folke's theory (2006) proves that complex systems are in a continuous adaptive renewal cycle, which never stops but is

7 Each transition initiative takes into account that «[...] *life with dramatically lower energy consumption is inevitable and it's better to plan for it than to be taken by surprise and our settlements and communities presently lack the resilience to enable them to weather the severe energy shocks that will accompany peak oil*» (Hopkins, 2008, p. 134).

able to react creatively to external disturbances. The transition town movement is a practical example. It is a bottom-up movement, it is part - even without knowing it - of the a-phase of the cycle and so it is an example of the reaction of the urban system to external disturbance. It proposes a new paradigm of urban development and a consequent social organization model.

3.1 The idea of transition

Another key assumption of the transition town movement is transitioning.
The usage of most relevance to discussions on sustainability is the body of research on transition in socio-technical niches[8], «[...] *protected spaces where new social and technical practices can develop*» (Seyfang, Haxeltine, 2009, p. 3). This concept has been the subject of numerous scientific projects and debates with reference to its innovative solutions and alternatives to the sustainable development topic (Foxon et al., 2008; Smith, Stirling, 2010).
Extending this concept into the social economy, Seyfang and Smith (2007) propose a model of grassroots innovations to describe «*community-led, value-driven initiatives for sustainability, which respond to local problems and develop innovative socio-economic arrangements as much as (or in preference to) new technologies*» (p. 3). The benefits of grassroots innovations for sustainable development derive principally from their creation of a space for the development of new ideas and practices, for experimenting with new systems of provision, and for enabling people to express their alternative green and socially progressive values, and from the tangible achievement of environmental and social sustainability improvements, albeit on a small scale (Seyfang, Smith, 2007; Seyfang et al., 2010).
Assuming the socio-technical niches theory, the transition town movement proposes a bottom-up paradigm of urban development which comes from the creativity of the urban community. In other words, «*the transitions movement represents an example of a new type of civil society movement, with a focus on bringing together diverse parts of a community to act and produce change and innovation at the whole systems level*» (Seyfang, Haxeltine, 2009, p. 21). Creativity becomes new ideas, practices and policies for urban management.

8 On Strategic Niche Management (SNM) and, especially, Netherlands case studies, see for example researches by Rip, A., Kemp, R., 1998. Technological change. In Rayner, S., Malone, E., eds. Human Choices and Climate Change II. Battelle: Columbus: 327-399. Also Rotmans, J., Kemp, R., van Asselt, M., 2001. More evolution than revolution: transition management in public policy. Foresight, 3 (1): 15-31. Also Smith, A., Stirling, A., Berkhout F., 2005. The governance of sustainable sociotechnical transitions. Research Policy, 34: 1491-1510. Also Geels, F. W., 2005. Technological transitions and system innovations: a co-evolutionary and sociotechnical analysis. Elgar: Camberley. Also Loorbach, D., 2007. Transition management: new mode of governance for sustainable development. International Books: Utrecht.

3.2 Origins and quantitative consistency

The transition town movement was founded in 2005 in Kinsale, Northern Ireland, by Rob Hopkins, a permaculture teacher[9].
The first transition town initiative involved the small town of Totnes (2006), in south-west Britain. Starting from this initial experience, which actively began in 2009, the transition town movement quickly spread, first in the UK and then in other European and non-European countries (Seyfang, Haxeltine, 2009).
To date, we could list hundreds of initiatives[10] worldwide. According to recent researche, the transition towns are located in Europe (about 50% in the UK and the remainder in Ireland, Germany, the Netherlands and Italy), but also in Oceania (Australia, New Zealand) and North and South America (the USA, Canada, Brazil and Chile) (Hopkins, Lipman, 2009; Smith, 2011).

Tab. 1_Geographical distribution of Transition Town initiatives

Region	**Formal initiatives (July 2009)**	**Mullers (Sept 2008)**
UK and Ireland	119 (83)	496
Continental Europe	4 (1)	48
North America (of which)	37 (5)	143
USA	33 (5)	113
Canada	4 (–)	30
Latin America	1 (1)	7
Asia	1 (1)	4
Africa	– (–)	4
Australasia (of which)	24 (15)	100
Australia	17 (9)	54
New Zealand	7 (6)	46
Total	186 (106)	802

Source: Bayley et al., 2010

As with other current organizational movements (eg. cohousing), the

9 Permaculture, another key assumption of the transition initiatives, is not discussed here. For more information see Holmgren, D. (2002). Permaculture: Principles and Pathways Beyond Sustainability. Hepburn Springs: Victoria.

10 It seems difficult to determine a list of the initiatives currently active in the world. The literature shows a lack of data: according to Bailey et al. (2010) to July 2009, the phenomenon involved more than 186 cities, according Seyfang and Haxeltine (2010) to January 2010 it involved only 156 even in the UK and 109 in the rest of the world.

transition town movement is a social-niche phenomenon that also involves a small part of society. A recent survey on Uk transition initiatives (Smith, 2011), shows that 86% of respondents are well-educated to post-graduate level. It is not possible to determine whether this trend is valid for all initiatives, but we can stress that - at least according to recent researche - the phenomenon is progressively spreading. This trend also depends on the different kinds of initiatives in terms of location (urban, rural and island) and extent (local transition initiatives, regional transition networks, regional hubs, national transition support organisations/networks, temporary groupings of local initiatives to carry out particular projects, as well as other manifestations) (Hopkins, Lipman, 2009).

3.3 Purpose and principles

Hopkins and Lipman (2009) define the transition initiatives as «[...] *an emerging and evolving approach to community-level sustainability*» (Hopkins, 2008, p. 134). Bailey et al. (2010) complete this definition by considering the transition town movement as «*an environmental movement that has both drawn extensively on the perspectives and techniques of its predecessor and peer environmental movements, and adapted these to the specifics of peak oil, climate change and relocalisation*» (p. 601).

The formation process of each transition initiative follows seven principles[11], twelve steps[12](Connors, McDonald, 2011) and three stages[13]. Although this set of guidelines, listed by the Uk Transition Town Network, should only provide directions for the process (Hopkins, Lipman, 2009), in some cases it is considered quite binding and prescriptive (Connors, McDonald, 2011).

Following the concept of resilience, the purpose of transition initiatives is «*to support community-led responses to peak oil and climate change, building resilience and happiness*» (Hopkins, Lipman, 2009, p. 7). According to socio-

11 The seven principles are (Hopkins, Lipman, 2009): positive visioning, help people access good information and trust them to make good decisions, inclusion and openness, enable sharing and networking, build resilience, inner and outer transition, subsidiarity.

12 According to Brangwyn and Hopkins (2008), the 12 steps of transition initiative are: set up a steering group and design its demise from the outset; awareness raising; lay the foundations; organise a great unleashing; form working groups; use open space; develop visible practical manifestations of the project; facilitate the great reskilling; build a bridge to local government; honour the elders; let it go where it wants to go; create an energy descent plan (EDAP).

13 According to Hopkins and Lipman (2009), each transition initiative should follow a succession of stages: the initial stage (meeting and gathering around the principles of the transition), the mulling stage (contacting and joining the Transition Network Ltd) and the formal transition initiative (declaration of intention).

technical niches theory, these initiatives are virtuous examples of interplay between system supply/use of resources and new models of social institutions and regulation especially in terms of their influence on sustainable lifestyle (Seyfang, Haxeltine, 2009).
In particular, at local level[14], transition initiatives concern crosswise all urban management fields with particular reference to oil-led ones (such as food and energy supply). For each field there is an organization subgroup that deals with strategic and propositive activities. The final goal is to outline the Energy Descent Action Plan[15] (EDAP).

Tab.2_Main activities of Transition Town Totnes.

Working group	**Main activities**
Building and housing	Eco-construction Co-housing
Economics and livelihoods	Local currency: the Totnes pound ATMOS: sustainable business park Oil vulnerability audits with local companies
Education	Transition tales with local schools Public future scenario workshops
Energy	Totnes renewable energy supply company Solar water heater challenge Partnership with good energy
Food	Garden share project Sustainable fisheries Seed and plant swaps Allotments association
Health and well-being	Directory of complementary health practitioners Collections of illness-to-wellness stories Discussion group on national health service and sustainability
Heart and soul	Meetings to discuss events and experiences Meditation meetings
Local government	Building of links with town, district and county councils to support and encourage inclusion of climate change and peak oil in decision-making

14 At regional level, the best practices in the transition initiatives are shared in order to support those that are newly active and those in the process of formation and to manage partnership with private or public corporations. At national level, these collect and monitor all the initiatives (eg. Uk and USA)(Hopkins, Lipman, 2009).

15 Two other assumptions of the transition town movement are: *«we have to act collectively, and we have to act now and by unleashing the collective genius of those around us to creatively and proactively plan our energy descent, we can build ways of living that are more connected, more enriching and that recognise the biological limits of our planet»* (Hopkins, 2008, p. 134).

The arts	Events utilising the arts to explore peak oil, climate change and transition
Transport	Totnes cycling group Totnes rickshaw company

Source: Bayley et al., 2010

The EDAP anticipates three phases of aims (Brangwyn, Hopkins, 2008): a local resources framework, a transition timeline and a set of resilience indicators (such as the percentage of food grown locally, the amount of local currency in circulation, the number of businesses owned locally, the percentage of energy produced locally, the quantity of renewable building materials, and so on).

The Energy Descent Action Plan constitutes a strategic urban plan of a future vision to be carried out through specific practical activities. It differs from traditional strategic planning for a voluntary and shared community-led vision. The public sector role, especially of local government, is still central but it has to support - not to drive - transition initiatives, as happened in the Totnes, Lewes, Stroud, Penwith transition towns (Brangwyn, Hopkins, 2008).

3.4 Common characteristics

The comparison of the main international transition towns enables the common characteristics, both in terms of promoter organizations and initiative typologies[16], to be listed as follows.

According to the first term, the main characteristics are:

- *voluntary*[17]. Unlike traditional strategic planning for urban sustainable development, the transition initiatives focus on community-level action, essential to the success of the initiative (Seyfang, Haxeltine, 2009). Common action implies the voluntary of community members toward a shared goal.

16 In literature there are no surveys, the only exception is the work of Seyfang and Haxeltine (2009) on the British case studies.

17 The survey of Seyfang and Haxeltine (2009) underlines that «[...] *the vast majority (89.0%) are set up by individual citizens (76.7% are set up by several individuals coming together to instigate the group, and another 12.3% are set up by just one person at the outset). At the same time, 19.2% have one or more pre-existing groups involved in setting up the group. Only one of the respondent groups (1.4%) had a business involved in setting up the group, and none of them were started by local councils*» (p. 6).

- *common mission.* The common mission is building local self-reliance[18], shared by all community members at the time of agreement.
- *legal form*. This ensures greater legal credit is given the organizations' actions and facilitates external partnerships. Different contexts affect the legal form of the transition organizations.
- *internal network*. The internal network is made up of working groups and subgroups. There is no leadership but network organization. Interplay between members is inclusive and participative (Hopkins, 2008).
- *external network*. The transition movement is not isolated but it interacts with other local and pre-existing social organizations[19] (Seyfang, Haxeltine, 2009). The goal is to focus the actions of civil society on a common aim, without losing the identity and specificity of each initiative. Network organization also avoids the risk of excessive localism. At the same time, there is a network between all the transition initiatives (eg. sharing best practices).

According to the second term, the transition initiatives are characterized by:

- *same strategic actions*. The strategic actions concern fields of energy (renewable resources), transport (sustainable mobility), open space (community gardens) and building planning (eco-compatibility), urban economy (food supply, local currency) and community (learning, sense of community, human capital)(Hopkins, 2008; Bailey et al., 2010). Local currency is not a necessary criteria.
- *relationship with the public sector*. The relationship with the public sector is usually promoted by transition organizations but it may be the case that local governments are interested in the transition initiatives in terms of forms of cooperation (Bailey et al., 2010).
- *EDAP as final goal*. Although sharing strategic actions fields, each plan concerns a set of initiatives that originated from the local contexts. Therefore, each plan is different because it is flexible within local contexts.

4. Conclusions. Towards new territorial governance in urban development and spatial planning?

Folke's theory (2006), especially related to the adaptive renewal cycle and the

18 Data confirm that 55.2% of the respondents share this mission (Seyfang, 2009).

19 Seyfang and Haxeltine's survey (2009) emphasizes that 82,4% of the initiatives are linked to other initiatives promoted by pre-existing social organizations (in particular 86,5% are environmentalist ones).

panarchy model, enables the transition town movement as a practical example of the use of the resilience concept in a spatial dimension to be analyzed.

In particular, the resilience concept in the transition town movement emerges as a *new paradigm of urban growth and development* (Connors, McDonald, 2011) based on oil-free ideas, practices and policies for urban management.
In this movement, resilience is the capacity of systems to react to the external disturbance of peak-oil. Regarding this disturbance, the transition initiatives propose new ways of using environmental resources that focus on energy conservation and closing energy cycles (eg. food supply based on local production).
However, peak-oil is not the only external disturbance (Trapese, 2008). There are indeed several external disturbances that could spark off system shocks (eg. the current economic crisis). Consequently, resilience is not only the capacity of systems to react to peak-oil disturbance but is closely linked to the adaptive and progressive capacity to react to all evolving external disturbances (Folke, 2006). It is a progressive, adaptive (also to context) and learning process, that could take a long time and may not involve all urban systems in the same way, at the same time. In this sense, the transition towns movement is only one model in terms of the use of the resilience concept in spatial planning.
As a first conclusion, we can affirm that resilience has a broad extent. It concerns the rethinking of the traditional idea of urban growth and development that outstrips the traditional paradigm of sustainability and concerns the use of resources in general (Latouche, 2005).

On the other hand, resilience concept in the transition town movement also emerges as *innate capacity of systems* to propose *bottom-up ideas, practices and policies for urban management*.
In fact, extending our gaze to the nature of the phenomenon itself, the transition town movement is a social movement – like several others - that provides solutions in order to manage urban complex systems, especially on a local scale.
As Jane Jacobs said (1961), the renewal of cities – as complex systems – is innate in the capacity and interest of citizens. The transition town movement was indeed born in and spread through the urban context and it is a practical reaction promoted by the urban community. The movement never refuses the idea of the city. Bottom-up strategic actions aim at new common and shared solutions in terms of urban management.
In this sense, the concept of resilience underlines how some events could be chances to improve the current system status, trigger social mobilization,

recombine sources of experience and knowledge for learning, and spark novelty and innovation. It may lead to new kinds of adaptability or possibly to transformational change (Folke et al., 2010).
As a second conclusion, we can affirm that resilience is the innate adaptive capacity and creativity of urban systems to react to various external disturbances and propose new paradigms of growth and development. In other words, system reactions to external disturbances (not only peak-oil) are not related to top-down solutions but to solutions innate in the systems, especially in their characteristics and memory.

According to both meanings of resilience in spatial planning – as a *new paradigm of urban growth and development* and *innate capacity of system to propose bottom-up ideas, practices and policies for urban management* – we can stress that it is an approach, a way of thinking, able to propose a *new territorial governance perspective* (Folke et al., 2002).
This new territorial governance, based on the concept of resilience, concerns urban systems management relating to bottom-up learning capacity and the adaptive ability to propose new paradigms and practices. In other words, it means rethinking urban management through a new rules framework that concerns the three features of *stakeholders*, their *roles* and consequent *tools*, as follows:

- *Stakeholders*. Community-led movements – and those of transition towns – could be stakeholders able to propose new paradigms of urban development and planning practices, like the public sector (Friedmann, 2011).
- *Roles*. Citizens may have a more central role in public choice and, on the other hand, the public sector could innovate itself, learning from bottom-up experiences. In other words, the new territorial governance perspective concerns restoring the balance of the stakeholders' role. It means understanding the relevance of inclusive decision-making and (horizontal) subsidiarity (Hirst, 1994; Hirst and Bader, 2001; Brunetta, Moroni, 2012).
- *Tools*. Finally, both features - regarding all stakeholders and their new balanced roles - may have repercussions on urban management tools (policies and practices). In particular, it means promoting more inclusive policies and practices, which also learn from bottom-up experiences (eg. EDAP).

To sum up, the resilience concept and its use in the transition towns movement suggests a new territorial governance perspective that takes into account evolving social, economic and territorial organization and consequent

systems complexity. It may be based on a new balance between institutional and social stakeholders in both decision-making (policies) and subsidiarity (tools achievement).

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The inadequacy and problematic functionality of public open space in the modern Greek city and the need to overcome its deficiencies

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Abstract

Public amenities and public space in particular in Greek cities constitute a major aspect of concern, as their inadequacy impacts upon the environmental degradation of urban spaces with direct negative consequences on the quality of urban life. The inadequacy of public spaces has been accentuated by the escalation of urbanization and the increase of urban population in the recent past as throughout the postwar period and especially during its early decades, Greek cities experienced acute pressure for urban expansion. Legislation has played a significant role towards this direction as it has been particularly late in establishing the means to secure the open spaces and public amenities required by a comprehensive and balanced urban development program. Still it is made clear that the inadequacies in public open space are also due to objective and subjective difficulties such as financial restrictions, and tedious legal and administrative procedures. Furthermore and despite the pressing character of the need for efficient planning, local plans conducted in the ‘80s and ‘90s encompassing a holistic approach to the provision of public amenities, were only partially implemented. It lies beyond doubt that the development of cities in Greece however, presents an example in which the organization of public open space has not been properly approached, the main reason being that urban development has tended to follow the needs of individual stakeholders, whether small scale or large scale. Thus, as the urbanization trends escalated, planning legislation in Greece has been particularly late in establishing the means to secure the open spaces and public amenities required by a comprehensive and balanced urban development program, even at times when the dimension of sustainability and the requirements it has set on environmental performance were not overtly expressed. The present paper examines the adequacy and contribution of public open spaces in the large urban centers in Greece. More specifically it attempts to provide a critical overview of past and current legal instruments and policies pertinent to the issue, paying particular attention to their functionality. The above will be tested against the present situation in medium sized cities like Patras and Volos where haphazard development has been less acute than the main urban centers of the country.

1. Introduction

As modern cities are continually aware of the need to maintain an adequate standard of environmental performance, a major issue concerning their capacity to develop resisting mechanisms to the degradation of their environmental parameters relates to the distribution, shape and above all availability of open spaces in the urban fabric. Taking into consideration the requirements of the compact city as the means to sustain development within the urban milieu, space and especially public open space may be considered as a luxury that needs to be well organized and managed so as to support the requirements of urban land uses while also maintaining its symbolic function needed.

More specifically, cities require open spaces, whether public or private, because they cater for the needs of urban communities in a manifold manner, not only covering their social and recreational needs but also, at a psychological level, relating to the

needs for symbolism and identification (Norberg-Schulz,1980; see also Gehl, 2011). Thus, apart from purely functional, the benefits of public open spaces may be classified as environmental, social and economic ones. Still research has shown that Greek cities tend to follow an even more deprived pattern of public open space coverage than cities in other Mediterranean countries, which still are trailing behind the ample northwestern European archetype (Fuller & Gaston, 2009). Even though there is evidence to suggest that public space and especially parks in Greece may be used differently (as examined in Tsopouridou, 2008), the question is to examine the extent to which the ancient Greek Agora (as in Madanipour, 2010: p. 7) and other forms of public open space still manage to secure the needed coverage so as function in medium sized Greek cities as it did in the past.

2. The Legal Framework

The traditional method to secure open space in a city on Greece has been land expropriation as based on the legal framework of the 1920's. This method that has often taken the form of compulsory purchase, apart from being costly, was not readily accepted by the general public and especially those who lost their property. Apart from the most evident reasons for the negative notions associated with this, one must take into consideration that in earlier years compensation for the purchase of property tended to be very low, a fact further accentuated by the strong attachment of Greeks to private property as a result of many decades of political uncertainly and turmoil. The security feeling provided by having a house of one's own is depicted characteristically on the high percentage of home ownership in Greece that has always tended to exceed 80%.

Much later, it was during the 1980's that new legal instruments provided more flexible means to urban planning. This shift in the country's legal framework with reference to the development of cities was based on the notion that the land needed for open space and public amenities in general was drawn from land contributions by individual property owners prior to their property's incorporation within the official city plan. Thus there was no need to employ land expropriation, a measure which apart from its unpopular character relied on financial resources that had usually been hard to secure (Lalenis, 2004). In addition to that, contemporary legal framework not only requires ample coverage for public open space but also specifies a standard of 8 square meters per person for green spaces. Yet even then, in reality local plans still had to face the difficulty of having to conform with neighborhoods of usually unauthorized building activity that had already developed in the periphery of the existing official city plan. As a result and although well conducted in as much as their interest in public open space is concerned, local plans seldom manage to be fully implemented

The difficulty in securing open space in Greek cities is elucidated when one focuses on specific paradigmatic cases and approaches the manner in which their urban fabric has developed. Thus in the present context, two medium sized cities in Greece, Volos and Patras, are addressed, focusing on the legislative frameworks as it has

been shaped during the years and aiming to examine the reasons behind the inadequacies of public amenities. The reason of selecting the particular case studies lie on the facts that (a) they are both medium sized cities that are representative of the Greek paradigm, (b) their urban fabric presents notable similarities as they are both coastal and (c) they both present a record of sizeable urban sprawl. Furthermore both cases represent typical examples of the implementation of urban development policies that have been applied so far in Greece, unpacking the critical policy's issues that led to the present situation with reference to public space.

3. The case of Volos

Volos is a medium sized city with a population of around 150.000 people located in Thessaly in central Greece. Volos has a long history, traced back in the prehistoric period, indicating that the specific area has been continually inhabited since then. However the present form of the city is fairly new and has little geographic relation with the original settlements. It is a city that has basically emerged a few decades before the year 1900 based on a mid-19th century plan that covered a fairly extensive coastal zone between the already inhabited stronghold of Palia and the uphill village of Ano Volos (Haritos, 2004). Since then a extensive number of annexes gave the city its present form. In as much as the central quarters are concerned, the original city plan did not specify land use and hence has been unable to secure open spaces, the provision and organization of public amenities being a matter of negotiation. As a result, the city center is characteristically poor in public open spaces as the few squares created were in fact nothing more than the necessary breathing space provided for the few centrally located churches built before 1881 (Hastaoglou, 2007).

To become more precise, it is worthwhile explaining the current situation with specific reference to the provision and adequacy of public amenities through the examination of the city's urban development during the last two centuries in the city. From 1840 onwards and especially after its independence from the Turkish 15th-19th century occupation in 1881, the city started to expand to the southeast, an area formerly used for storage. Indeed, within a period of 25 years the particular area has grown in size from 80 warehouses to more than 1200 dwellings. The road network consisted of four main streets parallel to the waterfront and forty roads vertical, thus creating a settlement of nearly 200 blocks. At that period urban development did not follow other official plans apart from the original overall grid merely adjusted to individual needs (Hastaoglou, 2007).

This problematic situation was further intensified due to the population increase. The transformation of the city's profile in one of the most important industrial cities in Greece generated the need to accommodate new land uses and increased the demand for public amenities and open space in general. By the turn of the century, the inadequacies of public space in the city center obliged the municipality to expand the width of the waterfront. The Volos waterfront is until today very popular, both due to its image and its functionality, operating as the principal zone of entertainment based on the leisure activities it has attracted.

In as much as both the creation and distribution of public space in Volos is concerned, it is important to note that middle income districts tend to be better equipped compared to those of lower incomes. In particular, areas that attracted population of higher incomes, such as Agios Nikolaos in the southeast, have been benefited by more open space, whereas lower income areas, such Analipsi at the western part of the city was not given particular attention in terms of public spaces until very recently.

The issue of public amenities and public space in particular has attracted increasing attention after the 1920's leading to the establishment of the relevant legislation for the first time in Greece. At that period the Volos city plan was adjusted so as to meet the new legislative requirements. However, the updated plan which still covered only the central zone of the contemporary city, envisaged only one more public square with no concern for other forms of public space. In addition to this, even this only square provided by the plan did not actually function as a purely open space since it was occupied by the municipal gym. What underlines further the lack of concern for public space is the fact that the new urban blocks as indicated by the plan, reached the edge of both streams that surround the city center, leaving no room for the development of a sizeable green belt between the urban fabric and the stream. Furthermore, these two streams which might potentially offer the public space and greenery needed, are not only in a state of dereliction, but also threatened by new urban development in the very recent past.

The plan adopted in 1930, despite its inefficiencies, was not transformed or updated before 1957. Hence, for a period of almost 30 years the development of the city was based on a plan with little concern for public amenities. The plan was amended only two years after 1955 following two massive earthquakes that devastated the city providing an opportunity to reconsider its condition and expansion. Still it was as late as 1968 that a more substantial amendment was conducted following the residents' demand. In as much as public amenities are concerned, the new plan suggested the allocation of 17% of total space for open spaces. However this venture was particularly complicated and was never implemented, due to the difficulty of intervening in an environment that already existed and for this reason involved excessive funding to acquire the space required.

The most decisive changes with regards to public spaces in Volos have taken place after 1980. In particular, the aim was to decentralize land uses in order (a) to enhance the quality of peripheral districts in the urban fabric and (b) to allow public space to develop in the packed city center. However, it should be noted that these changes usually tended to remain in paper, not reaching the stage of implementation both because of the financial shortages mentioned above and because of subjective public and private sector inadequacies (see also Lalenis, 2004). Thus despite some changes that are already evident in new peripheral quarters of the city, the percentage of public space in Volos still remained low.

It was as late as 1982 when the first contemporary local plan was adopted. The plan was based on the grid that already existed and attempted to allow the areas of expansion to blend with the already established layout of the city so as to become a homogeneous entity. Although the plan is characterized by a number of innovative elements, the concern for public amenities has still remained low and the six new public squares provided were not only failed to meet the per capita coverage criteria, but were also randomly distributed in the urban fabric. It is noted however that this inadequacy was more due to the objective difficulty in employing the instrument of compulsory purchase in the expropriation of property in view of the lack of economic resources, rather than a purely subjective one.

Furthermore, public amenities have attracted major attention by the Master plan adopted in 1986. This envisaged the creation of public squares at neighborhood level, the organization of pedestrian and cycling networks and the unification of private back yards in a manner that may allow them to be used as public space. The Master Plan also suggested the upgrading of the area around the stream of Krafsidonas and the need to regenerate the area of Palia. What must be noted at this stage is that although the plan introduced a number of changes that could improve the condition of public space in Volos, these changes were either not implemented at all or have not been operating as planned. More specifically, the plan's provisions relevant to open space were concerned with the following:

- Proliferation of public squares: The plan envisaged the creation of 11 public squares which were intended to be distributed in different neighborhoods of the city. However these interventions required substantial economic resources causing severe implementation problems.
- Organization of pedestrian and cycling networks: an extended network for cyclists has been established, still being characteristically problematic as (a) the cyclist network is not functional as a whole, (b) cyclist routes do not blend with the geometry of the existing road network and (c) the separation between the road and the cyclist surface is made by barriers that are dangerous for cyclists.
- Upgrading the area around the stream of Krausidonas: Although the stream is acknowledged that it may function as an important element that could enhance public open space and the presence of the natural environment along the edge of the urban fabric, nothing has been done towards this direction so far.
- The regeneration of Palia area: Although the plan indicates the need to upgrade the specific district and certain actions and measures have already been implemented two decades ago, little has been done by the public sector to sustain the initiatives already taken and support the private sector towards this direction.

4. The case of Patras

Patras is a medium sized city with a population of around 210,000 people located in the south of Greece at the north-western corner of the Peloponnese. In as much as urban development is concerned, the city of Patras bears a number of similarities compared to Volos, i.e. Patras' inhabitancy has a long history traced back to the 3rd millennium BC, while the form of the contemporary city is a product of continual expansions and transformations. Furthermore, public space tends to be integrated in the rectangular grid plan principle followed by a sizeable portion of the city's layout.

During the 19th Century, the development of the city of Patras boosted following the country's independency. Still, unlike Volos, from the very early stages of the evolution of modern Patras, planning had to deal with the existing built environment which restricted the adoption of decisive interventions. In view of the above, public spaces were formed accordingly, their quantity and quality usually being confined by the existing situation and by the insufficiency of economic means to implement planning intentions.

These intentions have been expressed through a series of plans, the first of which was prepared by St. Voulgaris immediately after the independence of the Greek State from the Turkish occupation in 1829. One of the most important elements in the plan's rationale lied basically on its attempt to follow the principles of contemporary urban design according to which the main roads axes were directly linked to major reference points. Another important concern directly linked to the provision of public space, has been the creation of green zones around the archaeological sites (Tsonakas, 1997).

In addition to interventions relating to the already developed built environment, the plan suggested the expansion of the city across the western side of the waterfront. The layout of the expansion zone followed the rectangular rationale and approached the need for public amenities and pubic space in particular by providing a green walkway along the coast and five public squares distributed evenly in the urban grid. A major innovative suggestion with regard to public space was the attempt to unify patches of un-built private space, which when made accessible to the general public, would increase the total coverage of open spaces in the city. It is important to note that this idea had been coined in the case of Patras much earlier than in Volos. Still this suggestion as well as the ones mentioned earlier, were not finally implemented as they were rejected in several occasions for a number of reasons. More specifically, the final plan, approved in 1858 included both areas mentioned above but ended up having adopted very few of the initial concerns for public space:

- Public squares and green zones around archaeological sites have finally been reduced dramatically compared to the initial plan. In particular, only two out of five squares proposed were approved and implemented, while the green zone around the city's castle has never been established, new building development literally touching its walls.
- The green walkway, suggested by the plan, was never implemented although the area was built.

- The idea of the unification of un-built private space was abandoned as the compulsory purchase procedure of properties from the municipality was considered exceptionally costly and time-consuming, being further hindered by legal complexities.

Furthermore it is interesting to follow the approach to the provision of public space as the city later gradually expanded, starting from the years between 1877 and 1929. It is evident that the issue of public spaces was neither on the focal point of planning nor of implementing the interventions. In fact, as the city's size reached 384.5 Ha, its public space consisted of only the 2.2% of its total coverage, thus merely allowing a measure of only 1.41 square meters per resident (Tsiatoura, 2011). More specifically:

- Two expansions of the city were suggested and took place in 1877 and 1882 respectively. However, in both cases the issue of public space was neglected. The zone around the Roman amphitheater was finally conceded to private development as in the case of the green belt protecting the south side of the castle that had been abandoned earlier.
- Similarly the expansions adopted in 1886, 1900 and 1903, which were almost symmetrical to the city center, did not entail a comprehensive approach to the need for public space.
- Likewise, public space was not considered important in the case of the unavoidable expansions of the city from 1903 to 1929 a measure of which catered for the housing needs of the refugees from Asia Minor.

In contrast to the years between 1877 and 1929, the period between 1929 and 1971 is characterized by planning inactivity. The absence of organized urban development paired with the dramatic demands for urban sprawl gave rise to the phenomenon of unauthorized building activity, threatening the image of the city and setting the concerns for public space aside. It is interesting to note that central government authorities at the time conducted a fairly extensive Patras Development Plan in which both living conditions in the residential areas but also the need for public space attracted minimal attention (Ministry of Coordination, 1967).

It is further important to note that after 1971, both the coverage and the population of the Patras conurbation developed differentially as the coverage of 1996 was six times the size of 1971 with only a 0.6% population increase for the same period (Pappas et al, 2000). This dramatic change in the city's institutional character in fact rested on the fact that the city plan expanded so as to gradually incorporate extensive neighborhoods of unauthorized building, devoid of public amenities, that had already been developed in the form of clusters along the outskirts of the existing official city plan. Thus areas that chiefly consisted of low-cost haphazard unauthorized development became officially parts of the city in 1971 and 1972. Although these areas are characteristically poor in public amenities, their low densities produce a misleading picture of exceptionally favorable densities for Patras (Papadatou-Giannopoulou, 1991).

The amendment of the Master plan during the aforementioned period and the expansions that have taken place respectively have increased the proportions of

public spaces both within individual neighborhoods and the entire city. However it must be noted that some neighborhoods, particularly new ones, have been benefited more in terms of public space as they are not susceptible to comply with earlier restrictions. Hence, the expansions and amendments of the Master plan between the years 1971 and 1979 led gradually to the allotment of 5.73% of the city's total coverage to public space, which corresponds to 10.49 square meters of public space per resident (including roads). The above proportions vary among the different neighborhoods ranging from 3 to 7% of the total public space coverage and from 5 to 36 square meters of public space per resident respectively.

Similarly, in the case of expansions of the city plan that have taken place after 1980, the proportion of public space is 4.79% of the total area. The allotment of public space coverage per resident for the whole city is respectively 12 square meters, reaching in specific neighborhoods the figure of 190 square meters. The discrepancies in public space coverage among the various neighborhoods indicate not only the imbalances among the different parts of the city, thus questioning its functionality, but also the failure of the plan to approach the issue of public space holistically (Polydoridis, 1986).

In total, the proportion of envisaged public space for the whole city comes up to 37% of the total area, 32% of which concerns roads while only 5% is allotted to public squares, open spaces and public greenery in general. It is important to note that from the above envisaged percentages less than the 2/3 have been acquired by the municipality in order to implement the plan. More specifically, out of 32% public space (including roads) proposed by the plan, only 69% has been already acquired, while the remaining 31% is still to be obtained. At this point it should be noted again that economic restrictions do not allow the purchase of the land required. Indeed what normally happens is that as delays in acquiring the land allocated for public space are usually too long, private owners generally manage to claim their property back.

This indicates that although current legislation allows local plans to arrive at comprehensive suggestions towards the right direction in as much as public amenities and especially public open space are concerned, their implementation tends to be particularly tedious. Planners and policy makers are already aware of this situation and they are very careful in arriving at too radical proposals concerning public space, the result being that plans tend not to envisage adequate land coverage for public space.

5. Conclusions

The preceding brief overview of the history of the development of the urban fabric for the cases of the two cities with reference to their open spaces has attempted to show the difficulties involved in securing them, while it also elucidated a number of key issues explaining their inadequacy. It is clear that the shortages in open space observed in the central quarters of both cities are not only due to earlier legal

framework which did not emphasize the need to provide public amenities bit also a matter of economic and practical reasons. In many cases private ownership has not been against land expropriation due to unfavorable compensation. Thus compulsory purchase becomes tedious. Furthermore, as owners are faced with their prime property being unable to be exploited, the procedure is often legally invalidated. Thus even when local plans are particularly favorable in terms of the public open space they provide, as in the case of the early Voulgaris plan for Patras, the interests of individual owners and the private sector in general may annihilate the plan's intentions.

It is interesting to note the case of multiple expansions of city plans to incorporate unauthorized urban sprawl of the post war period. In most cases as in the case of Patras, the approach of new local plans could do nothing more than to grant official status to extended neighborhoods built without any provisions for open space and public amenities. It is evident that such approaches are fragmented and do not contribute to the improvement of the living standards in the urban milieu.

On the other hand, local plans conducted after the 1980's were more efficient in providing open space as not only they had to conform to better standards concerning their land coverage but they also could rely on land contribution of individual property owners as the main instrument for securing it.

Apparently for the cases of both cities, the delay in the formulation of the required legal framework, paired with specific objective and subjective deficiencies of the public as well as private sector, have been responsible for the sizeable inadequacies in the provision of open space in the urban milieu. Some of these difficulties, like those concerning the legal aspect, do not pose the same problems as they did in the past. Taking into account the European standards of cities in terms of the proportion of green spaces per resident (such as London and Paris with 9 square meters per resident, Berlin with 13sq meters, Amsterdam with 27 sq m., Vienna with 20sq.m.) and the fact that in Greek cities in general public space (including roads) does not exceed 10 square meters per resident, it is evident that a lot of work is needed to be done towards the direction of achieving cities with adequate and more functional public space

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Improving trust and communication between experts to facilitate a learning use of the cost benefit analysis

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Introduction

Transport planning is known as a traditional field of planning in which technical and quantitative knowledge and information is of prior importance (Willson, 2001). This appears more and more problematic for several reasons. First, transport planning is no isolated profession. It is mingled with other fields of planning and non-planning. Integrated approaches of urban issues are very relevant to coop with complex planning assignments (Bertolini et al., 2005, Banister, 2008, Straatemeier and Bertolini, 2008). Seeing transport and infrastructure developments separately from housing, recreation and other developments is hardly possible any more. An integrated approach, though, asks for a different approach for assessing transport plans, namely an integrated one (Curtis, 2008, Hull et al., 2011) that takes local and context specifics into account. Second, society has changed in a way that it demands different assessment assets. Issues like quality of life and sustainability have become core subjects of public debates and not solely accessibility or decreasing traffic jams. Not that these later more traditional issues are not important anymore, but intangible effects like increasing the quality of life are added and the public desires both to be addressed. This, again, changes the demand for planning and assessing transport plans (Handy, 2008, Willson, 2001).

In the Netherlands the cost benefit analysis (CBA) is an important tool for assessing integrated spatial transport plans as it is mandatory for national government funding (Ministry of transport and water management and Ministry of housing spatial planning and the environment, 2009). However, it has been questioned how a traditional assessment tool like CBA with a welfare economic foundation can assess complex integrated spatial transport plans (Annema et al., 2007, Jong and Geerlings, 2003, Beukers et al., 2012, Mackie, 2010, Naess, 2006, Mackie and Preston, 1998). Assessing complex plans in CBA comes along with several process bottlenecks (Sager and Ravlum, 2005, Martinsen et al., 2010, Eliasson and Lundberg, 2010).

Practitioner's experiences with applying CBA in Dutch planning practice gave more background for some of these doubts (Beukers et al., 2012). From a (local) planners perspective the CBA appeared to be experienced mainly as a final assessment; a final examination which judges if the plan fits the CBA criteria and experienced by some planners as hurdle which needs to be taken (Page et al., 2009, Beukers et al., 2012). This, though, leaves out the desired opportunity to use the CBA output to improve the analyzed plan (ECMT, 2004, Beukers et al., 2012). Furthermore, Dutch CBA processes have been characterized by two opposing groups of practitioners: the planners as well as the plan owners (the ones who feel responsible for the assessed plan) on the one side and the economist as well as the evaluators (the ones who conduct the CBA) on the other side. These two groups appeared to have trouble in their mutual communication and expressed a low level of mutual trust (Beukers et al., 2012).

This article presents a theoretical search for improving the CBA process when assessing complex integrated spatial transportation plans. The overall question is: How to improve the bottlenecks in CBA processes theoretically? These bottlenecks are articulated in section 1. In section 2 a theoretical framework is made on how these bottlenecks are interrelated, which forms the fundaments for a hypothesis. This is the starting point for a thorough literature research in section 3 on how to improve communication and build trust between different kinds of experts to support a learning use of assessment tools in planning. This search is focused on the research fields of deliberative planning and organizational learning. In section 4 the lessons from these two research fields are synthesized and analyzed with the CIMO-framework (context, intervention, mechanism and output) (Denyer et al., 2008). This gives the necessary input for a theoretical design on how to improve the bottlenecks in the CBA process and increase the fitness of this traditional evaluation instrument to the contemporary demands of transport planning.

Section 1: CBA process bottlenecks

Research on CBA process bottleneck gave three main findings: the CBA was experienced as a final assessment, whereas its use as a learning tool was desired (1); the two main participant groups in the CBA process, the planners and evaluators, expressed mutual distrust (2) and deficient communication (3) (Beukers et al., 2012). These bottlenecks are discussed further in this section.

1.1 Perception of CBA as final assessment

The overall experience on the use of CBA in Dutch planning processes was that the CBA was mainly carried-out when the assessed plan was already finalized and the process of designing, discussing and forming compromises to gain public support was closed. This timing of CBA at the end of the planning process downgraded its function to only examining whether a plan is good or bad in CBA terms, which is expressed in the summary table of the CBA in a number. This practice was perceived as undesirable for two reasons. First,

the planners, felt the CBA didn't do justice to the total benevolence of the plan. Hence, many intangible planning objectives are often not or poorly assessed in CBAs and not or poorly integrated in the overall balance (Naess, 2006, Mackie and Preston, 1998, Mackie, 2010). Therefore, a fully informed decision about a plan based on CBA is not possible as a CBA will give a limited overview of the plan's expected impacts. Hereby it should be noticed that the formal role of CBA in Dutch planning is not to make decisions, but to support decision-making (Eijgenraam et al., 2000). Nevertheless, the Dutch planning participants experienced a judgmental use of the CBA. This perception was increased by the obligatory character of CBA in Dutch planning. Every large spatial transportation plan funded by national government needs a CBA assessment. This obligatory character was experienced especially frustrating if the CBA method does not or partly fit the characteristics of the assessed plan. Secondly, the described late and perceived judgmental use of CBA was expressed as undesirable, because participants felt frustrated that they could not use the output of CBA to improve the assessed plan anymore. Even though the planning process was more or less closed at the time of assessment, it was perceived as a lost chance not to use the CBA output for improving the plan and possible improving the CBA balance.

1.2 Distrust between planner and evaluator

Another experienced bottleneck was a low level of trust in the CBA process among the planners and evaluators as well as towards the plan and the CBA itself. This experience was expressed for example in the fear of the planners that using CBA to support decision making could result in a dominancy of 'hard' effects over 'soft' effects. The CBA is better equipped to assess the so called hard effects; tangible effects which have a market value and can be translated in monetary terms quit easily (Meyer and Miller, 2000). Soft or intangible effects have, on the contrary, no market value and are more difficult to be monetized (Meyer and Miller, 2000). These soft effects, like effects on the air quality, loss of nature or sustainability, are sometimes monetized by the use of shadow prized and sometimes appear in the CBA balance as PM (pro memory) items. In either way, monetized or not, the integration of these effects in the total of the CBA balance is disputable (Wee, 2011, Mackie and Preston, 1998, Naess, 2006, Page et al., 2009). Planners feared that soft effects might be overlooked in decision making and were therefore suspicious towards the assessment tool. Especially because these soft effect often represent very important planning objectives like, improving the quality of life, sustainability or regional competitiveness.

Furthermore, the planners experienced that the evaluators tent to pay less attention to the soft effects in comparison to the hard effects. This behavior of the evaluators was characterized by the planers as rigid and fuelled the planners perception that the soft effects were not or poorly included in the CBA balance. By this the CBA was giving an incomplete assessment of the plan, which discouraged the planners to take the CBA and its output seriously. So, the planners not only distrusted the CBA as not equipped to fully assess their plan, they also were suspicious towards the evaluators because of their indifferent behavior towards integrating soft effects in the assessment.

The evaluators, however, also expressed a sense of distrust towards as well the planners as to the assessed plan itself. The evaluators, namely, experienced that planners tented to use the CBA strategically. They felt that planners were often too optimistic and would embellish the expected plan effects. Furthermore, the CBA experts experienced that the CBA output was used selectively by the planners following the political preferences. They perceived that if the CBA showed a positive balance, the analysis was not under debate. If the CBA showed a negative balance, though, the evaluators experienced that the methodology and calculation assumptions were attacked intensively, which would position the CBA as being useless and not worthy to support decision making.

1.3 Deficient communication

The third discussed CBA process bottleneck is a perceived communication deficit. Communication in the CBA process was characterized as being done too late, too little, too limited and too little structured. The experiences were for example that not enough time was planned for a necessary discussion on the used assumptions and fixed numbers in a CBA. These discussions, which could not be overlooked anyway, caused therefore delays and put pressure on the process. Also the process of testing the CBAs in second opinions (which is an obligatory step in Dutch planning) was described as unstructured and therefore less effective.

Furthermore, the planners criticized the CBA as not transparent: as a black box of which it was not clear what was actually calculated and how. They perceived a limited communicative value of the CBA report and of the evaluators, who did not manage to explain sufficiently what the CBA actually does and calculates. The urge of the planners, however, to know exactly what and how the CBA calculates is strongly related to the second bottleneck. Because of the sense of distrusting the CBA and the evaluators, the planners wanted to control what happened in the assessment of their plan and demanded to open up the black box.

Another example of limited communication was the perception of the evaluators that the CBA and decision-making process had too little room for uncertainties. Considering a CBA balance without its limitations does not support well informed decisions, so the uncertainties needed to be described too. However, the evaluators expressed that decision-makers and planners expected clear cut information and tended to overlook mentioned uncertainties in the CBA report.

1.4 Dichotomy between planner and evaluator

These CBA process bottlenecks made clear that the planner as well as the plan and the evaluator as well as the CBA form a dichotomy of two different and clashing rationalities in the CBA process in relation to the lack of trust and deficient communication. Conflicting rationalities as between the planner and evaluator in the CBA process resonated too in other studies. Similar conflicts between rationalities are noticed for example between transport planning and urban planning (May et al., 2008, Willson, 2001) and between technical rational

approaches and communicative rational approaches for plan evaluations (Owens et al., 2004). In this latest stereotype the technical rational approach represents a positivist belief that rational knowledge exists and can be provided by technical instruments (such as CBA) operated by experts. The communicative rational approach, on the contrary, is fundamentally a reaction to this positivist thinking. Its basic premise is that knowledge is a construction whereby the role of the planning expert is to create a space or place for different actors to communicate and to let inter-subjective knowledge come into existence (see for example Huxley and Yiftachel, 2000). Within this dichotomy, the CBA and its prescribed use seems to be an exponent of the technical rational approach, whereas the transport planning domain, especially when considering integrated plans, seems to increasingly tend towards communicative rational approaches (Durning, 1999, Te Brömmelstroet and Bertolini, 2011, Willson, 2001). Thereby, planners and evaluators represent different values and thinking which, apparently, does not fit easily together.

The description by Rayner (2003) of what he calls the (contemporary) age of assessment is illustrative for the setting of conflicting rationalities in the CBA process. In the assessment age governmental decision making is strongly dominated by scientific-based or evidence-based approaches. Technical experts and professionals tent to dominate, whereas at the same time electoral participation is declining. As Rayner noted, social scientist try to counter this movement by designing participation processes to involve the non-expert public. Although planners are often typified as being experts themselves, in the age of assessment they may represent the urge to open-up the assessment process and involve values and perspectives from non-experts through participation. This, however, is not incorporated in the natural behavior of the evaluators who are used to deliver the information required for scientific-based and evidence-based decision making. Moreover, although participatory techniques may be implemented in political culture of scientific and evidence based expertise, the technical assessment rationality may still dominate the assessment context. Rayner (2003: 168) substantiated this by the example that British citizens were consulted about the technical term ‘genetically modified crops’ instead of in every-day language; about ‘food and the country-side’.

Essential in the theme of conflicting rationalities is that two types of professionals, with their own set of concepts and values, have to cooperate to make a useful assessment of a plan. The appeared dichotomy between the planner and evaluator in the CBA process will form the focus of the remaining of this article, starting with theoretically framing the use of assessment tools, trust and communication in section 2.

Section 2: Relating communication, trust and conceptual use of CBA: A hypothesis

The emerging variables that form important bottlenecks in CBA processes, namely trust, communication and the use of the CBA (as a final assessment or as a learning tool), brought forth the questions if and how these three variables are interrelated. What is the importance of mutual communication and mutual trust for the use of an assessment tool in a learning way? And how are communication and trust interrelated? These questions are answered is this section through a literature review.

2.1 Communicative and trust conditions for a learning use of assessments

A desired shift from a judgmental and instrumental use to a learning use of CBA was described as well by Khakee (2003). With the rejection of a positivistic perspective and the development of post-positivistic approaches like communicative planning, central issues of evaluation were evolved too. Instead of expecting to measure all performances of a plan or program in an objective way the aim of evaluation has moved into facilitating an integrative and learning approach.

> *"[…] the central issues of evaluation are how best to organize an inclusive discourse, to promote a learning process which is emancipatory and expedites progress, and to emulate political, social and intellectual capital. […] Evaluation is thus a question not only of effectiveness and legitimacy but also of integrity and mutual understanding. Evaluation itself becomes a form of interactive discourse where all those involved can explain their values, problems and concerns."* (Khakee, 2003: 346).

Evaluation then may be a cognitive process in which social realities are constructed and actors develop self-reflective learning abilities, find unexpected meanings in their actions and build up networks of people actions and thoughts (Selicato and Maggio, 2011). Thereby it appeared crucial that actors actually meet the other actors, appreciate them, recognize their commitments and struggles, and their strong and weak points. Instead of using evaluation for problem solving by comparing alternatives, evaluation could be used for problem setting whereby the definition of the problem will not be a starting point, but is one goal of the evaluation process. Selicato and Maggio (2011: 173) made a strong plea for an increased learning perspective in evaluation processes instead of a judgmental perspective.

> *"Research […] shows more and more the need to consider evaluation not as the final outcome of administrative actions, with the aim of approving or rejecting the contents of a given planning tool, but as a work methodology, a "process of gradual learning" that it is useful to undertake even small steps at a time and by partial experiments (Brunetta and Spaziante, 2000). In fact, the aims of evaluation are not so much to formulate a judgment of the admissibility of the choices in terms of characteristics and the availability of resources, but to increase the awareness of the choices taken, within the context of the decision-making process."*

Kidd and Fisher (2007) recognized as well that both within integrated appraisal methodologies as well as within sustainability literature a strong plea is made to intensify a participatory dimension in assessment processes. This relates to the concerns for stakeholder engagement and openness in decision making. Likewise, Saarikosi (2000: 5) explored the integration of participation into environmental impact assessments (EIA): not just as a supplement, but as *"a collective process where different actors—affected citizens, interest groups, authorities, and experts—can deliberate and exchange their views of the goals and their knowledge on the impacts of the proposed developments*". This requires citizens to acknowledge and respect each other's perspectives and moral positions and disapprove the use of stereotypes. Parties need to learn about each other's identities to

understand where everybody stands and what is really important to them. Moreover, in order for EIA to serve as a learning process, participants should discuss conclusions and search for mutual solutions collectively. Furthermore Saarikosi (2000) emphasized the need for a safe environment as a condition for effective communication: an environment where each participant can speak, where non-expert knowledge and speech is acknowledged, where active listening is encouraged and where people can explore ideas freely.

Communication and trust as conditions for a learning assessment process

The articulation of a learning use of assessment tools made clear that the setting for such a use differs from the setting for an instrumental or judgmental use. When considering a learning use of assessment tools the focus has to be on organizing an inclusive discourse and promoting a process which is emancipatory so that all those involved can explain their values, problems and concerns. It relates to stakeholder engagement and an open decision-making process. A process in which different actors can exchange views and knowledge without the dominance of expert knowledge in an environment which feels safe to share and explore ideas together.

When the generation of (new) knowledge and ideas are considered or the acquiring of a profound and shared understanding in assessment processes, it relates to how actors communicate and how individual knowledge, tacit and explicit, can be combined and integrated. This relates as well to how communication between involved participants in the assessment process should be organized. Also the importance of mutual trust and a trustworthy environment is present. When acknowledging and respecting each other's perspectives and identity without using stereotypes it shows interest in each other which may encourage sincerity, sharing of personal knowledge and mutual trust. This is encouraged by a trustworthy environment in which participants feel safe to communicate and share ideas freely.

We therefore conclude that a high level of communication and trust between assessment participants form important conditions for a learning use of assessment tools. It appears that these conditions determine if a process of gradual learning is possible and if an interactive discourse can be formed where all those involved can explain their values, problems and concerns. How participants communicate with each other is of influence on a learning use of assessment tools as well as the level of trust among participants and a trustworthy environment..

2.2 Interrelatedness of communication and trust

Due to the relevance of trust and communication for a learning use of assessment tools a deeper understanding of these variables and their relatedness are necessary. A definition of communication may be of help in this, although communication is a muddy and dynamic concept. Communication could be describes as, for example, the transmission of information or as a system for communicating information (Littlejohn and Foss, 2008). A more detailed description is given by Lievrouw and Finn (1990: 49).

> *"Communication is human behavior that facilitates the sharing of meaning and takes place in a particular social context. Any interacting set of social and technical structures which facilitates the sharing of meaning among people is a communication system."*

Within the CBA process communication takes place especially between planners and evaluators. The communication then is a form of dialogue or face-to-face communication between people. Such a dialogue is a process in which concepts are built in cooperation with others and which provides the opportunity for one's hypothesis or assumptions to be tested (Nonaka, 1994). Or, as Healey (1999: 117) wrote,

> *"Conversations imply the exchange of knowledge and understanding and of claims for attention. Their 'performance' requires some degree of trust and a preparedness for some degree of mutual understanding."*

So communication in the CBA process is a form of interpersonal communication or small group communication which takes place in a dialogue or conversation. Interpersonal communication relates to interpersonal behavior and interpersonal relationships (Miller, 1978). It is a form of communication in which minimal two actors are involved, the degree of physical proximity is relatively high, the availability of channels (communication modes) are high and the opportunity for immediate feedback is optimal. According to Miller (1978) the development of communication to move from impersonal to interpersonal depends on the growth of qualitative characteristics of the relationship over time. Through getting to know each other, the uncertainties about possible reactions and feedback on communication diminishes. Furthermore, this feedback estimation can be based more and more on explanatory information about someone's behavior and believes and less on social cultural information (to which social group the other person belongs). So the communication is more and more becoming personal and between persons as more personal details are shared.

Moreover, a shift from impersonal to interpersonal means a shift in the communication rules.

> *"With impersonal relationships these* [communication] *rules are based on social norms and exist before the communication takes place. With interpersonal communication these rules are negotiated and defined by the communicators when their relationship is getting shape. So the conditions move from being extrinsic to intrinsic. These changes imply that the communication takes place more and more between individuals, instead of between undifferentiated role occupants." (Miller, 1978: 170).*

As with communication, the literature on trust is divers and entails very different perspectives, which makes is hard to form one definition.

> *"Economists tend to view trust either as calculative or institutional. Psychologists commonly frame their assessments of trust in terms of attributes of trustors and trustees and focus upon a host of internal cognitions that personal attributes yield. Sociologists often find trust in socially embedded properties among relationships among people and institutions." (Rousseau et al., 1998: 393).*

Nevertheless, literature agrees that trust is very important in several ways. It enables cooperative behavior; promotes adaptive organizational forms, like network relations; reduces harmful conflicts; decreases transaction costs (in for example a business transaction); facilitates rapid formation of working groups; and promotes effective responses to crisis (Rousseau et al., 1998). Furthermore, literature agrees that trust is a complex and multi-dimensional concept that is in its essence relational. There is a strong and reciprocal relationship with risk, which means that risk creates an opportunity for trust that leads to risk taking. Besides risky, trust is interdependent: the interests of one party cannot be achieved without reliance upon another (Rousseau et al., 1998). This is clarified if the following quotation.

> *"A (the trustor) trusts B (the trustee) with regard to X. Trust is A's subjective assessment of the probability that B will act as agreed when B's actions significantly affect A, independently of A's capacity to monitor B's actions." (Gambetta, 1988 in: Laurian, 2009: 371).*

Where the communication literature emphasizes the importance of forming relationships, the trust literature describes how trust is a necessary component to from such relationships. Moreover, the trust literature describes that communication between actors is necessary to build trust: by getting to know each other through communicating with each other relationships can take shape and can become more personal which increases the degree of interpersonal communication and trust. Interpersonal communication and interpersonal trust are thus interrelated concepts. These insight are, if not literally, recognized by several planning scholars. For Stein and Harper (2003) for example, trust is essential for community, social, political, familial, and even linguistic relations. For them trust forms a basic concept for understanding human relationships and institutions. It forms a necessary condition for any kind of communication, cooperation, understanding, knowledge, or learning. Or, as they stated it, trust is essential to the work of planners, because without it everything will collapse. Also in the work of communicative planners, trust forms an essential element for a communicative performance and a degree of mutual understanding (Healey, 1999). As Laurian (2009: 384) described:

> *"While trust is necessary for open communication and collaboration, open communication and collaboration are also preconditions of trust. […] When participants trust each other (even if they hold different values or goals) and trust the fairness of the process, they are more likely to communicate actively, listen empathically, and work toward consensual solutions*" (Laurian, 2009: 382)

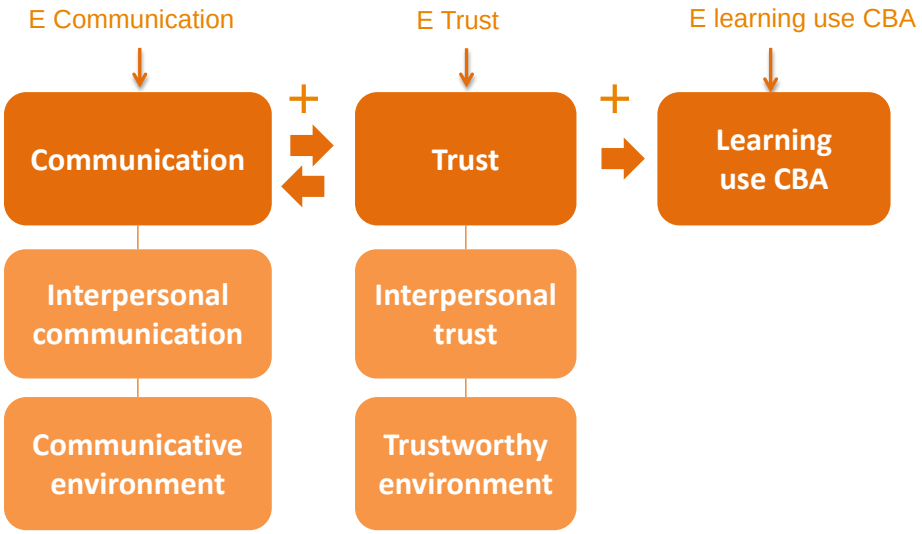
2.3 A hypothesis: High levels of communication and trust lead to learning use of CBA

The experiences of CBA participants (Beukers, et.al., 2012) of both a low level of communication between planners and evaluators as well as a low level of mutual trust are not surprising anymore considering the concepts of communication and trust and their interrelatedness. Even more, the finding that the learning use of CBA is experienced as low, and instead an instrumental and judgmental use is experienced, seems to be a logical result considering that a learning use of assessment tools requires high levels of communication and

trust. It seems evident that the levels of interpersonal communication and trust need to be increased in the an equal way to materialize the expressed desire by the CBA process participants to use the CBA as a learning tool. This forms the basis for a hypothesis: ***High levels of communication and trust between planners and evaluators are conditions for a high learning use of CBA.*** This hypothesis is illustrated in the conceptual model in figure 1. It focusses on interpersonal communication and trust between planners and evaluators, the interrelatedness of these variables and their relation to a learning use of CBA. Other influences on the possible use (or not) of the CBA as a learning tool are plausible too. For instance, the timing of the CBA in the planning process, as set in planning legislation or policy rules, determines if the plan is still open for changes through learning or not. Also power imbalances between the planner and evaluator in the CBA process may be of influence on its use as a learning tool. These explanations, though, are not within the scope of this article.

It seems necessary to increase the levels of communication and trust between the planners and evaluators to improve the CBA process and the use of CBA as a learning tool. The aim in section 3 is therefor to clarify how to increase the levels of communication and trust between experts, the planner and evaluator, engaged in a learning process.

Figure 1. Conceptual model on communicational and trust conditions for increasing the conceptual use of CBA



Section 3: Communicative and trust mechanisms and interventions

Two questions form the leitmotiv of section 3:

- How to improve communication between planners and evaluators in a CBA process?
- How to build trust between planners and evaluators in a CBA process?

These questions are answered through a literature review of research on cooperation between experts in learning assessment processes with a focus on communication and trust. The literature review concentrates on the research fields of deliberative planning and organizational learning. These fields contain many studies on communication and trust between different kind of actors and thus form a core source for potential directions on how to improve these aspects.

Firstly, the research field of deliberative planning elaborated extensively how planners should and could act in communicative interaction with various kinds of stakeholders. Although deliberative planning theorists mainly focus on improving communicative processes between planners and the community (see for example Innes and Booher (2010); Bickerstaff and Walker (2005); Huxley and Yiftachel (2000); MacCallum (2008); McAlister (2010)), their work is insightful as well for improvement of communication and trust between experts from different rationalities. Secondly, the research field of organizational learning gives helpful insights on improving communication and building trust between different experts as it has focused on for example understanding how innovation takes place within organizations or how to create interactive and shared knowledge. The focus of many organizational learning researches is on how firms can improve their innovative capacity through the creation of innovative knowledge (Nonaka, 1994, Argyris, 1991). Hence, organizational learning is about the learning capacity of an organization as whole to create innovative knowledge and use that knowledge in its development of adjusted and new products and strategies. Similarly, planning, evaluation and CBA practices or processes may be seen as (temporarily) organizations. Insights from organizational learning have therefore inspired several planning studies (Te Brömmelstroet and Bertolini, 2008, Suárez-Herrera et al., 2009).

The search within these two fields on how to improve communication and build trust concentrated on those articles which represent the main lines of thinking on communication and trust. The publications were selected on the basis of how often they have been cited in the field and can be considered as leading articles. Furthermore, publications were selected on the basis of their richness of communication and trust directions. In processing these publications all directions on how to improve communication and trust between different kinds of experts were selected and grouped based on the similarities in their reasoning. This gave a comprehensive overview of how-to-directions from both research fields. In prevention of a loss of the richness of the selected items the groups of directions on communication and trust are presented in appendix 1. Furthermore the grouped directions from the two research fields were compared and synthesized in section 4.

3.1 Deliberative planning

Open conversation

Much effort has been put by deliberative planning researchers in understanding and effectuating Habermas' ideas on open conversation among diverse people through which truth and values can be established. Healey (1999) for example argued to use Habermas' social theories to shape places and form policy.

> "*Through the work of discussion itself, new knowledges, ways of organizing, and networks may be established. […]Through such processes of exchange of conceptions and interpretations, learning is likely to take place that could change understandings and provide new bases for constructing place identities"* (Healey, 1999: 118).

According to Healey, a condition for conversation to take place is the acceptance of a degree of collaboration and reciprocity. This means that one must have an open perspective towards comments of another and accept the state of being that a scientific truth does not exists as absolute truth and values are the outcome of social interaction within specific contexts. Innes (1998) too showed that it is not the end product, i.c. an impact analysis or country report, that has the biggest effect on its developers. Instead, it is the process of collectively making and shaping information.

> *"The process of producing information shapes perceptions that become part of the assumptions and given knowledge - and those frame the choices"* (Innes, 1998: 56)

Although quantitative analysis and expert knowledge are to her not considered as unnecessary, a process of collectively creating meaning is desired for information to become embedded in the understanding of participants. The conventional instrumental model, with its presumed objective expertise, fails to do so, because it is not integrated in political and bureaucratic processes. Only if there is "plenty of talk" about the meaning of information, its accuracy and implications, it will become shared knowledge (Innes, 1998: 56). However, to let a communicative process take place, Innes states that it is necessary that not only formal knowledge is accepted and addressed. Other kinds of knowledge needs to be allowed too, like participants' own experiences, personal stories and intuition.

Habermas' structure in three steps of when what kind of knowledge needs to be addressed is helpful in this. It explained that if we want to produce predictions and choose strategies, scientifically grounded information is needed. Secondly, if we want to interpreted the meaning and consequences of these predictions and want know its practical implications, we are served by knowledge grounded in experience, in stories and metaphors that help participants make collectively sense of a complex and uncertain array of facts and contentions. And finally, if we want to break out of assumptions, rules, and expectations to stimulate innovation, intuitive knowledge is crucial (Innes, 1998).

To create the right kind of talk for deliberation and learning in a collective and communicative way an effort is required.

> *"[…] we need appropriate rules, parallel to those of the scientific method, to ensure that the products of these discussions are acceptable and socially worthwhile, as well as properly informed"* (Innes, 1998: 60).

Rules which should be aimed for in a communicative process are for example that the individuals representing all the important interests must be at the table; that all must be equally empowered in the discussion; power differences from other contexts must not influence who can speak or who is listened to, or not; that the discussion must allow all claims and assumptions to be questioned, all constraints to be tested; and finally that the group should seek consensus (Innes, 1998).

Planner's communicative experiences

Another seminal description of communicative directions between planners and stakeholders can be found in the work of Forester (1987). In this research he focused on what communicative strategies worked in planning processes and what not, based on the experiences of planners in practice. It elaborated for example that planners have to deal with a lot of distrust in the planning process from all sides; from stakeholders towards each other and towards the planner. Building up trust appeared an important element of the planner's tasks. To do that, the planner needed to listen carefully and, even more, assure that the thoughts and feelings of all stakeholders were acknowledged and respected. Doing so, the attention had to be first on the person and then on the words. Furthermore, special attention should be given to anger. This particular emotion should get the right attention, but not too much as it can predominate throughout the process. The planner's experience was that stakeholders should get the opportunity to 'let off steam' in order to move on and let the anger go.

According to Forester (1987) the planner had a role in finding a balance in building up trust and streamlining the appropriate communicative action to achieve that. Thereby, it seemed crucial for the planner not to behave arrogantly as the one who knows best as it will offend people. Furthermore, the planner had a role in preparing the stakeholders to face each other by mentioning the objectives from both sides at forehand and letting the stakeholders formulate their arguments in preparation of the discussion. This may prevent discussions from becoming too emotional if stakeholders felt confronted with (unpleasant) surprises. In this, the planner has a role of a mediator to negotiate between the stakeholders and their several interests.

Within this mediation process, however, Forester (1987) underlined that the planner is not an objective and neutral party, since he or she often has their own interests. If a planner acted neutrally and detached this attitude may even be experienced by the stakeholders as not really being interested in the case. If stakeholders had for example financial or emotional interests in a certain spatial development, they wanted their interests to be heard and a planner who is concerned and not neutral. This, again, asks for finding

balance and giving enough room for feelings and emotions, besides the facts and figures. Moreover, it requires the planner to act as a diplomat. Thereby, a strong overall condition is needed that "*no single party is so dominant that is does not need to negotiate at all*" (Forester, 1987: 444). Hence, planners cannot solve problems of radical power imbalances and need to be clear about that.

In a later work Forester (1999) stressed that even though negotiation is important, the intention of deliberative planning is not just to build consensus. Instead it is about acting and learning together, building relationships and finding win-win situations in which everybody gains. This entails several behavioral challenges in a deliberative process: to be close and keep a distant at the same time; to show empathy and critical judgment; to recognize and respect, rather than to dismiss human emotions of anger, fear, impatience and suspicion.

> *"The quest for understanding requires asking and listening, correctly interpreting the others language and putting oneself in the other's place. It requires making suggestions that the other may not have thought of, and learning from both acceptance and refusal."* (Forester, 1999: 63)

Doing so, deliberative action requires a dialogue space, which could be in meetings, negotiations, discussions, project reviews and hearings that bring affected citizens, regulators, developers and public officials face-to-face. Moreover, Forester (1999) noted that also informal meetings are important in deliberative processes, because then participants can develop more familiar relationships by learning more about each other. This happens typically during coffee breaks, small workshops or informal gatherings.

Communication modes and attributes can also function as a dialogue space. Forester (1999) gave an insightful example of a deliberative process where a sketch of a plan played an important role. It regulated and facilitated the deliberative process, because the plan was presented as a sketch still open for discussion. Every participant could take the initiative to pick up a pencil and draw some ideas on the sketch to illustrate them for the other participants. The sketch helped the participants to make clear what they meant and to share and sharpen their arguments. Nonetheless, because the sketch already gave some rough outlines of the plan, it focused the discussion as well by giving some borders and a clear topic. This regulated the discussion and prevented it from becoming too broad. So, the sketch was a means to encourage asking questions as well as a way to steer the questions. Thereby, the essential condition for a sketch, plan, evaluation or other mode to foster a deliberative process is not to present it as *the* ultimate sketch or plan, but as work in progress.

Collaborative dialogue

Innes and Booher (2003) shared insights for a collaborative dialogue as a deliberative process with many communication and (to some extent) trust building lessons. As a basic condition they explain the heuristic of a collaborative dialogue, which is listening to others, treating them respectfully and looking for common interests rather than differences and challenging assumptions. They used these basics to formulate some

principles for negotiation as an element of collaborative dialogue. In such negotiations parties must begin with sharing their interests rather than their positions; learn about each other; seek mutual gain solutions as far as possible; and accept that there is a tension between cooperation and competition and advocacy and inquiry in public policy cooperation (Innes and Booher, 2003: 37).The experience is that when stakeholders explain their own situation and needs they begin to learn about their interdependence and the need to negotiate.

However, Innes and Booher (2003) stated that participants not only need to listen and ask questions, they also need to interact with one another in, for example, brainstorming or scenario building.

> *"A truly collaborative discussion has the typical form of cooperative scenario building and role playing by participants who tell the stories of what is wrong and develop alternative stories until they find the narrative of the future that is plausible and appealing to all of them." (Innes and Booher, 2003: 42)* .

Thereby, scientists and agency staff need to be engaged with lay people who challenge assumptions and analyses, using their local knowledge. Through interacting in a collaborative dialogue relationships are build which help people to build trust among them. Moreover, the dialogue in itself helps participants to articulate their identity and develop shared meanings.

To achieve this collaborative dialogue a professional facilitator has a critical role in ensuring that the group makes a shared analysis of interests and conflicts, does joint-fact-finding, addresses issues deeply and feels comfortable and safe to say what is on their minds. Moreover, participant have to be stimulated to think outside of the box as well as to be willing to put forward half-baked ideas (Innes and Booher, 2003: 46). A facilitator can stimulate this by asking for clarifications or examples when needed and challenge assumptions and question status quo. Furthermore, it is essential that only recognized representatives of an interest group participate and that they check regularly back with their constituencies.

Spatial strategy making

As with collaborative dialogue, presented as a deliberative process, spatial strategy making can be interpreted as such (Healey, 2007) and contains several thoughts on communication and trust building. When considering spatial strategy making, Healey emphasized that this is created in a process of filtering and focusing attention, highlighting some issues and pushing others aside. Moreover, spatial strategy making happens in social construction sides or arenas in which multiple ways of knowing about what is significant, and about what could happen, are explored, conceptualized and symbolized and tested (Healey, 2007: 236). Thereby, the challenge is to translate feeling and potentials of an ambiance, such as accessibility and urbanity, into particular qualities that could be deliberatively cultivated by public intervention. Spatial strategy making requires therefore a specific approach to the production of knowledge and the development of understanding through the creation of meaning shaped by situations, trajectories, activities and values of particular social groupings (Healey, 2007: 243). This is especially relevant when different stakeholders are involved with multiple frames of references,

logics and value, which preferably happens as urban development dynamics are too complex to be grasped through the work of a single discipline.

So, spatial strategic ideas need to be validated and legitimated in an interactive way through talk, social encounters, discussion, debate and exchange of thoughts. More specifically, spatial strategy-making requires (Healey, 2009: 452):

- A capacity to know a place and all its complexities, its collective expressions and relations, and in the fine grain of its social, environmental, political and physical fabric
- The imaginative capacity to see opportunities
- The necessity to engage in systemic thinking, drawing together understanding and insights to imagine future trajectories and select specific pathways

This puts a lot of attention on how to produce knowledge in order to be useful in spatial strategy making. Besides recognizing the value of multiple sources of knowledge about places and their development, it is important to maintain an open-minded stance towards what is going on and what is at stake. Open-mindedness means actively stretching out to access multiple perspectives, challenging established assumptions and cultivating debate and arguments among different viewpoints (Healey, 2009: 448).

Healey (2009: 453) formulated four dimensions which characterize the process steps in (transformative) spatial strategy making which may function as a guideline to steer and stimulate this process. Namely through mobilize attention, scope the situation, enlarge intelligence, create frames and select actions. In the dimension of mobilizing attention the aim is to re-orientate attention to issues which lie behind immediate agendas, where this would highlight neglected opportunities and challenges. When scoping the situation the aim is to identify where the energy for change may lie and build coalitions for change which expand this energy. In the dimension of enlarging intelligence the focus is to explore and recast agendas of problems, issues and potential actions and stakes, through accessing multiple sources of knowledge. The dimension to select actions means to articulate strategic ideas within which specific issues and actions can be prioritized and given some justification and coherence.

Planning and trust

The review on deliberative (and collaborative) planning showed many communicative lessons and some references towards the importance of trust. However, the issue of trust has a slightly underrepresented position in deliberative and collaborative planning literature although the interest of planning scholars in this theme is growing. Stein and Harper (2003) explained this underexposed status by an overexposed interest on the issue of power based on the critical work by Foucault and Foucauldians. Even though Stein and Harper did not undermine the Foucault argumentation that all social relations are affected by power (or repression), they did argue that this approach may function like a doctrine and leaves too little hope for democratic and

deliberative processes to function and contribute to planning. Instead of describing the world in power relations and using mainly this vocabulary, Stein and Harper suggested that another vocabulary would be more productive; namely the vocabulary of trust which they present as its opposite.

> *"Whereas unequal power relations can undermine and thwart a community, trust can underwrite it"* (Stein and Harper, 2003: 135).

Even though trust is often identified as a missing element in ineffective processes, the planner profession's theoretical and empirical understanding of the interactions between trust and planning is still limited (Laurian, 2009). However, with the communicative and collaborative turn in planning, the importance of trust is only increased, since trust facilitates cooperation and in turn trust can be increased through successful cooperation. As noted by Ehrman and Stinson (1999), while consensus does not require common values, it does requires the existence of trust among stakeholders, agencies and mediators.

As elaborated in section 2, trust is a prerequisite for deliberation processes, communication, cooperation, the resolution of collective action problems and effective democratic governance (Laurian, 2009). Laurian (2009) gave several directions for building trust; for example through face-to-face interactions and sharing decision-making power. When sharing decision making power an agency, like a planner, shows trustworthy behavior and displays trust in the public. It can narrow the distance between, for example, the expert and non-expert. Information sharing, deliberation and democratic governance to enable shared decision-making are thus important to support the emergence of trust, and planners can play an integral role in this process (Laurian, 2009: 375, Switzer et al., Forthcoming). Another way to facilitate trust (or to mitigate distrust) is the use of mediators in support of open and effective communication. Moreover, Laurian emphasized that the ideal speech conditions for undistorted communication by Habermas are as well conditions that support trust: namely through comprehensibility, truthfulness, sincerity, legitimacy, equal standing and respect for all forms of knowledge, inclusiveness, openness and transparency mutual disclosure and information sharing. This again underlines the reciprocity of trust and communication.

The importance of open communication to build trust was supported in a study by Switzer et al. (Forthcoming) as well as a timely and sincerely sharing of information between parties. Not sharing information or learning about it through other (media) circuits could lead to suspicion and distrust especially when it confirms prejudices. Furthermore, the trust relations were benefited by getting to know the counterparts and by fulfilling promises.

How to improve communication and build trust according to deliberative planning literature?

The communicative and trust building lessons from deliberative planning have underlined that the planner has to take a different role when acting in complex and uncertain contexts. The planner should not act as the one who knows best and can provide politics and civil society with the answers needed. Although many

deliberative planning literature has a problem orientation which often only indicates mal communication and distrust, the cited literature shows that there are plenty ideas on how to overcome these communication and trust related problems. However, the main focus in deliberative planning is still on the planners who have to choose a different and deliberative role. Within the CBA-process the roles of involved actors cannot be characterized as a planner versus lay person. In contrary, in the CBA-process the planner has an experts role as well as the evaluator or the planner even is the lay person when considering specific CBA-knowledge. Therefore, when engaged in a more deliberative and learning CBA-process, both planner and evaluator have to choose a different role. The communicative and trust lessons from deliberative planning are grouped in appendix 1 and summarized in table 3.1 and 3.2.

Table 3.1 Directions on improving communication in deliberative planning

1) Have an open approach to all knowledge: a) Exchange different kinds of knowledge, feelings and interpretations b) Allow all knowledge in the discussion and allow to question it c) Give attention to issues behind immediate agendas
2) Behave appropriately: a) Have an open perspective towards each other b) Have an open attitude to change one's own assumptions and understandings c) Behave actively by asking questions and listen carefully
3) Have interaction: a) Create shared and embedded knowledge and understanding b) Have all stakeholders involved, empowered and interacting c) Act and learn together to develop familiar relationships d) Focus on (shared) interests and win-win solutions
4) Have a supportive communicative context: a) Create a safe environment to say what is on one's mind b) Prepare stakeholders for a constructive discussion and formulate arguments at forehand c) Create a dialogue space d) Use familiar dialogue modes e) Use a mediator

Table 3.2 Directions on building trust in deliberative planning

1) Show trustworthy behavior: a) Don't behave arrogantly b) Fulfill promises c) Listen carefully and focus on the person first, then on the words d) Timely and sincerely sharing of information and decision-making power e) Communicate comprehensively, truthfully, sincerely, supportively and legitimately
2) Have interaction: a) Acknowledge and respects all knowledge, thoughts and feelings

	b) Build relationships c) Use a dialogue space d) Use a mediator
3)	Prepare participants to participate in the discussion: a) Prevent confrontation with unpleasant surprises b) Formulate arguments at forehand c) Mention objectives from both sides

3.3 Organizational learning

A critical point in organizational learning is the argument that knowledge is more than an universal justified true belief, as many (western) scholars used to think. This notion of knowledge is too limited as it leaves out for example physical skills, tacit aspects, language, experiences and perceptions (Nonaka 1991: Nonaka et al., 2006: 1181). It has been emphasized that knowledge is never free from human values and ideas, history dependent, context specific and sensitive. In this notion, the core of organizational learning is how to overcome the fragile transmission of knowledge between individuals in the organization. Akgün et al.(2003) explained that the success of an internal learning processes of an organization can be depicted by the organization's interactive cycle of individuals' behaviors and actions. These cycles are affected by the knowledge structures of an organization, which are shaped by social interactions, culture and reflexivity. In this sense, knowledge develops from, and is manifested by, a complex web of relationships and social activities among people. This view thus emphasized the importance of culture, communication and group activities in organizations (Akgün et al., 2003).

Several cultural aspects can facilitate learning, like openness, transformational leadership, a participative decision-making culture, learning orientation, positive supervisory behavior and organizational support (Bapuji and Crossan, 2004). Furthermore, factors that influence the organizational learning capacity are for example formal procedures for learning, cross-functional communication and stability of team membership. While the type of organization structure and procedures affect learning within an organization, similarity between systems and structures facilitates learning between organizations (Bapuji and Crossan, 2004).

Knowledge creation

Nonaka and Takeuchi (1995, in: Nonaka et al., 2006) formulated four-stages for knowledge creation or for knowledge to transform from being to becoming in an interactive process. In such knowledge conversion, personal subjected knowledge is validated, connected to and synthesized with others' knowledge (Nonaka et

al., 2006, Nonaka et al., 2000). This process evolves in the four stages of socialization; externalization; combination; and internalization (SECI).

- Socialization aims at sharing tacit knowledge among individuals
- Externalization aims at articulating tacit knowledge into explicit concepts
- Combination aims at combining different entities of explicit knowledge
- Internalization aims at embodying explicit knowledge into tacit knowledge

In this process innovative knowledge evolves from being individual and internal to become shared, explicit, external and collective to become internal again in the last stage of internalization. In the process of such knowledge conversion, the individuals externalize their experiences and due to social justification it can be shared with others. Then, for newly created knowledge from combining externalized and shared tacit knowledge to become useful in the organization, it needs to be integrated in the organization's knowledge system. Or, from an individual's perspective, newly created knowledge needs to be made of one's own.

The process of SECI was related to the concept of *ba*: a shared space for emerging relationships as the context for knowledge creation, in which individual experiences are required, as well as reflections of the experiences of others (Nonaka and Konno, 1998, Nonaka et al., 2006).

> *"To participate in ba means to become engaged in knowledge creation, dialogue, adapt to and shape practices, and simultaneously transcend one's own limited perspective or boundaries." (Nonaka et al., 2006: 1185)*

The concept of ba knows different stages when the different steps in the SECI process are relevant. The originating ba is about meeting face-to-face, sharing emotions, feelings, experiences and mental models. This represents the socialization of the individuals. The interacting *ba*, supports externalization and combination. Through dialogue the mental models and skills are probed, analyzed and converted into common terms and concepts. Then in the exercising *ba* the individual's internalization of explicit knowledge are supported, for example through training with instructors or colleagues or repetitive exercises to stress behavior (Nonaka et al., 2006, Nonaka et al., 2000).

Central in organizational learning are insights on double-loop learning, which explain why it is so difficult for organizations to change internal structures and really solve problems instead of covering them up, as happens in the more common single loop learning. To detect and correct errors in an organization, double loop learning asks for publicly questioning underlying policies and goals, assumptions, norms and objectives, instead of enabling the organization to carry on its present policies (Argyris, 1977, Argyris, 1991). The underlying aim of a double loop learning process is to produce valid information, make informed choices and develop internal commitment to those choices. Moreover, this approach emphasizes the building of trust.

A critical factor of for double loop learning is an awareness of prepositions. To change private assumptions people need to become aware of their internal maps and see that some assumptions are

counterproductive for learning. Moreover, it is necessary to produce new assumptions by combining articulated views with questions by others. Furthermore, all must acknowledge their own mistakes, recognize defensive behavior and have an open dialogue. Workshops and seminars are useful in stimulating this change and learning process to move from old to new and shared assumptions (Argyris, 1977). As Argyris (1977) ideally saw, in such learning process people would advocate their views in a way that it would invite confrontation, challenge positions and stimulate testing them publicly.

Reflection-in-action

The work by Schön (1983) on the reflective practitioner relates to the change and learning process in double loop learning as elaborated by Argyris. It seems essential to reflect on how one thinks and acts and how it may influence a learning process. A basic notion thereby is that professionals think while acting, conscious or not, which influences the acting and vice versa. Therefore, not only the trained knowledge is used while acting, but also past experiences with acting in different and similar situations (see also Flyvbjerg (2001) on how professionals reflect in action). This is phrased by Schön as 'tacit knowing' or 'reflecting-in-action' (1983: 54). However, reflecting in action happens somewhat unaware and is sometimes even ignored or not considered as real knowledge.

Professionals were often taught to solve problems with an agreed set of solutions, but when situations are uncertain, disordered and indeterminate the fixed solutions may not work. Besides the problematic starting point of this approach that all problems need to be known at forehand to find a fit solution, the focus on solving problems in itself seems problematic. Hence, finding the problem is many times part of finding the solution. Moreover, the challenge is to keep the means and ends unseparated and to define them interactively to frame a problematic situation (Schön, 1983: 68). In the process of collective problem-setting, the problem is to be named and framed, which is in itself not a technical but rather a non-technical process (Christensen, 1985).

> *"Technical rationality depends on agreement about eds. When ends are fixed and clear, then the decision to act can present itself as an instrumental problem. But when ends are confused and conflicting, there is as yet no 'problem' to solve."* (Schön, 1983: 41)

Schön gave several directions to achieve this in a reflective manner (1983: 231 - 232). He stated that it is necessary for reflection to give and get valid information and speak in direct observable categories. Doing so, this information, data, reports and speech are open to disconfirmation. Furthermore, Schön underlined the urge to create awareness in the reflective process: awareness of the values at stake in decisions and of the limits of one's capacities. Moreover, there is the need to make designing and managing a bilateral task so that the several parties involved can work towards freedom of choice and internal commitment. Also a protected environment is needed to ensure that no one withholds negative information from the others or withholds testing this information and assumptions publicly. When following such directions, professionals may see the

other as minimally defensive, open to learning, committed to their position but equally committed to testing and confirming them, open to the reciprocal exploration of risky ideas, open to test assumptions publically and open to set a learning-cycle in motion.

Practitioners use various modes to reflect in their action, such as media, languages, and repertoires to describe reality (theories, role-playing, story-telling) and to conduct experiments. Independent of the modes used in reflection-in-action, it is important that the practitioners are familiar with the same modes they use when working together. Furthermore, reflection-in-action requires a reflective surrounding: a social context which supports reflective actions as well as cooperation with other reflective practitioners or clients. A classical professional-client relationship, for example, whereby the professional has all authority and the client submits to it is not possible. In reflecting-in-action the client has to participate in a reflective conversation with the professional and has to give valuable input of its own. This asks for an expert that does not act arrogantly and encourages the client to share thoughts and feelings. It asks for a different attitude of the client too whereas the experts cannot be approached just to solve the client's problems. The client therefor has to ask questions and questioning the experts knowledge, without hostility (Schön 1983: 300).

Organizational learning and trust

Many studies in organizational learning focused specifically on trust: how it relates to innovations, contracts, competitiveness, institutions (Bachmann and Inkpen, 2011), team work, group performances or cooperation (Peters and Karren, 2009, Jones and George, 1998, Bachmann and Inkpen, 2011, Erhardt, 2011) and how to build trust in an organizational context (Six and Sorge, 2008, Mayer et al., 1995, Abrams et al., 2003, Lander et al., 2004, Edelenbos and Klijn, 2007).

Edelenbos and Klijn (2007) for example, explain that trust is generated in social interaction and is influenced by existing codes and institutional rules and vice versa. Trust, then, develops especially in embedded relationships, through stable, frequent and tight interactions as '*trust does not appear as at the snap of a finger, but must be built up in the interaction among actors."* (Edelenbos and Klijn, 2007: 33). Furthermore, Edelenbos and Klijn (2007) emphasized that trust is fragile and needs to be nurtured and cherished. They give three guidelines for trust management to build and maintain trust:

- Intensify interactions: Create reciprocity in the relationships and repeated interaction
- Process management: Stabilize and manage interactions. For example through mediators and facilitators
- Institutional design: Design process rules to frame risk and opportunistic behavior. Decide on what to do when in conflict, how benefits are distributed and what to do if one of the involved actors wants to change the relationship.

Abrams et al. (2003) have a more abstract view on building trust. When engaged in a network for information sharing and knowledge creating two dimension of trust are to them of main importance: benevolence and

competence. Benevolence relates to the experiences of caring and being interested in the well-being of another and one's goals. Competences relates to the notion that one has relevant expertise. This brings them to the following factors which may develop one's trustworthiness (Abrams et al., 2003: 68):

- Act with discretion so that people need to feel safe to share confidential information
- Be consistent between word and deed
- Ensure frequent and rich communication on a personal as well as on a professional level
- Engage in collaborative communication in which both sides feel free to share and really listen to each other's thoughts and ideas
- Ensure that decisions are fair and transparent
- Establish and ensure a shared vision and language
- Disclose your expertise and limitations by being open about strengths and weaknesses

Another variation of trust building factors are given by Lander et al. (2004: 512). They asserted that trust building was influenced by repeated and positive interactions, integrity (being forthright and truthful in interactions and fulfilling promises) and perceived reputation. Moreover, communication turned-out the most relevant factor in trust building; communication which enabled sharing of relevant information and knowledge, provision of timely feedback, creation of a common language, creation of a shared vision and offering of explanations for decisions. Besides communication, Lander et al. (2004) noticed that when control and responsibility was shared this was perceived as an act of showing trust.

According to Six and Sorge (2008), the challenge is to be more precise in how organizations may build trust and what policies might be of influence. Their research focused on how to stimulate an interactive process in which individuals learn to establish and maintain trustworthiness, under given organizational (contextual and structural) settings and subject to policies directly or indirectly, positively or negatively sanctioning the building of interpersonal trust. They outlined several concrete policies which may be relevant to reach this stage of trust:

- Promote a relationship-oriented culture: Enable informal meetings; give (public) compliments
- Discuss at forehand how to deal with conflicts: Address troublemakers directly and *"in a way that you say 'yes' to the person, send a clear positive relational signal, and then allow the individual to be direct about the troubling behavior ('no' to the behavior)."* (Six and Sorge, 2008: 871)
- Explicit socialization to make newcomers understand the values and principles of the organization and how things are done

How to improve communication and build trust according to organizational learning literature?

The cited literature from organizational learning showed a wide range of views and approaches to communication and trust. Even though all are convinced of the relevance and importance of communication

and trust when considering the functioning of organizations (it's innovative capacity, competitiveness, learning capacity, knowledge and information sharing capacity, et cetera) the literature shows that the studies have their specific focal points as well as many overlap. Table 3.3 and 3.4 summarize these different (and similar) views on how to improve communication and how to build trust within an organizational context. A more detailed overview can be found in Appendix 1.

Table 3.3 Directions on improving communication in organizational learning

1) Interpersonal behavior to support communication a) Open attitude to test assumptions b) Open attitude towards learning, including from risky ideas c) Be explicit and accurate
2) Interaction a) Sharing and combining tacit and explicit knowledge b) Define means and ends unseparated and interactively c) All actors meet, discuss and become engaged in a knowledge creation process d) Use various modes to reflect which are familiar to all practitioners involved
3) Organizational context to support communication a) Leadership open to transformation and sharing of decision-making b) Supportive structure: stability of team members, learning procedures, training c) Safe environment and emerging relationships

Table 3.4 Directions on building trust in organizational learning

1) Personal awareness of others and trustworthy behavior a) Awareness of (underlying) (pre)positions and openness to discuss them b) Trustworthy behavior: act integer, discrete, really listen, be honest about expertise and limitations, give compliments, address troublemakers directly c) Fulfill promises
2) Interaction and forming relationships a) Create knowledge together through communication b) Have stable, frequent and informal interactions to form relationships c) Form a shared language or vision
3) Trustworthy environment a) Share control b) Make fair and transparent decisions c) Make rules to frame risks, opportunistic behavior, how to deal with conflicts

Section 4: Synthesis and conclusion

The research fields of deliberative planning and organizational learning are rich on directions, experiences, perceptions and lessons on how to improve communication and build trust between different kinds of experts. These insights were grouped as summarized in the tables 3.1, 3.2, 3.3 and 3.4. A closer look to these tables reveals the resemblance between the two fields. In this section, we are going to synthesize the lessons on improving communication and building trust in order to develop an overall answer on the question how to improve the bottlenecks in CBA processes theoretically that forms the leitmotiv of this article.

Communication and trust: Two sides of the same coin

Both research fields show that communication and trust are interrelated. This is widely acknowledged in communication and trust literature as described in section 2. However, the literature research on deliberative planning and organizational learning shows that this notion is not common knowledge; not yet at least. The importance of trust to improve, increase and intensify communication is often somewhat hidden under the surface of many other insights. Nevertheless, both concepts ask for the same elements. Building trust and improving communication requires, in short, appropriate interpersonal behavior (open, sincere, non-defensive, et cetera), interaction (to get to know each other, to build a relationship, to share knowledge and ultimately to create shared visions and knowledge), a proper preparation (to avoid unpleasant surprises and defensive behavior) and a supportive environment or context (a safe place to meet, management that stimulates interactions, et cetera).

The communication lessons from both research fields, though, have in comparison to the trust lessons a stronger focus on what to communicate and how: that all knowledge needs to be integrated and therefor all stakeholders need to take part in the interaction; and that it should be encouraged to discuss or question all knowledge and assumptions openly. Stakeholders need therefor to open up in order to communicate in this way. They need to be explicit what their concerns and insecurities are about, where they stand for, be honest and let the other 'take a look into their kitchen'. This means that one have to accept to be vulnerable, which requires a lot of interpersonal trust to do so. On the other hand, taking a look in one's kitchen will increase the level of personal information. One gets to know each other better and knows better what the other is capable of, which in turn will increase the interpersonal trust.

The resemblance as well as the differences between deliberative planning and organizational learning insights on communication and trust can be linked to their overall effort to be innovative. Within deliberative planning the concern is to develop innovative (strategic) plans to improve a location's competitiveness. Whereas with organizational learning the objective is to create innovative products to improve the organization's competitiveness. Both fields agree that in order to do so and to be innovative different kinds of

knowledge need to be integrated. However, the kinds of knowledge to integrate are slightly different in the two fields. In deliberative planning concerns are mostly about local and context specific knowledge that is embedded in history, location, politics and people (Allmendinger, 2002). Whereas organizational learning focuses more on the integration of inter- and intra-organizational knowledge; formal and informal knowledge; implicit (tacit) and explicit knowledge.

These subtle differences are welcome additions to each other, but do not change the overall view on how to improve communication and build trust between different kind of experts.

- One needs to behave appropriately: open, critical, non-defensive, sincere.
- Interact to create shared knowledge and form relationships
- Have the interaction guided by rules, a facilitator and discussion modes.
- Be prepared to interact, share and create knowledge collectively
- Have a supportive environment: safe, stable and supported by the management/ politics.

Conclusion: Context, intervention, mechanism and outcome

The overall aim of this article was to make a theoretical design on how to improve the bottlenecks in the CBA process articulated as low levels of communication and trust between planners and evaluators and the use of the CBA as a final assessment instead of as a learning tool. The final challenge in this article is to relate the described lessons from the literature review to the CBA process and the participating planners and evaluators. The CIMO-framework (context, intervention, mechanism and outcome), introduced by Denyer et al. (2008) is helpful for this. The overall question of CIMO is: Within a specific context, what interventions can be used to trigger the necessary mechanisms in order to get a desired outcome. Thereby, the mechanisms reveal how something works and how the different elements function in relation to each other, whereas the interventions inform what concrete action is needed to trigger these mechanisms.

In the scope of this article this CIMO-question would be translated as: In the context of a CBA process, what interventions can be used to trigger the necessary mechanisms in order to have high levels of communication and trust between planners and evaluators? The context of the CIMO-framework is a CBA process (and more precisely when assessing integrated spatial infrastructure plans) and the desired outcome is increased, enriched and improved communication as well as build trust between planners and evaluators. This outcome was hypothesized in section 2 as a condition to use the CBA as a learning tool which is the desired outcome one abstraction level higher. So, the interventions must trigger mechanisms for improving communication and building trust. The lessons from the literature review are ordered in line with this reasoning in communication and trust building interventions and the related mechanisms as articulated in table 3.5.

Table 3.5 Interventions and related mechanisms to improve communication and build trust in a CBA process

Context = CBA process that supports communication and trust building between participating planners and evaluators	**Intervention = A dialogue space where planners and evaluators meet face-to-face** **Triggered mechanisms =** Planners and evaluators have the opportunity to get to know each other and build a relationship, so that they can judge better how the other will react in possible interaction and build interpersonal trust. Doing so, they may feel more safe and can be more open, share more and more detailed information and listen more carefully. Then they may pay more attention to issues behind the immediate agendas, ask and receive critical questions and collectively change and build assumptions.	**Outcome =** A learning use of the CBA: reciprocity between the development of the plan and its assessment in CBA
	Intervention = Share and discuss knowledge together **Triggered mechanisms =** Planners and evaluators understand better each other's standpoints and may see shared interest which may increase the opportunity for finding win-win solutions. They get more information about each other (the plan and the CBA) which increases the predictability of how they might respond and therefor increases the interpersonal trust. This might support to be even more open, critical, share even more knowledge and possibly change one's own perceptions based on the perspectives of others.	
	Intervention = Be prepared to share and discuss knowledge together **Triggered mechanisms =** Planners and evaluators do not feel unpleasantly surprised or attacked by new arguments, know better how to make their own standpoints and reasoning explicit, know how to incorporate or internalize outside critique without acting defensively. Furthermore, Planners and evaluators may feel support by the management to act communicatively and trustworthy if they receive training on these matters and are more likely to act that way.	
	Intervention = Have the interaction guided by a moderator **Triggered mechanisms =** The moderator makes sure that all can speak freely, feel safe, all kinds of knowledge are taken seriously and get a worthy place in the discussion and the attention of the discussion is on finding shared interest, win-win solutions and issues behind immediate agendas. When Planners and evaluators feel guided and protected by the moderator, they may be encouraged to share more, more detailed and divers knowledge; be more open towards each other; give and receive criticism without attacking the person and without responding defensively.	
	Intervention 5 = Use dialogue modes (sketches, simulation, story board, role play): presented as 'work in progress' **Triggered mechanisms =** Planners and evaluators may feel encouraged to give their standpoints, to illustrate their arguments, make them context specific and explicit. This gives the others the opportunity to respond in their turn and illustrate, contextualize and explicate their points of views.	

It is our expectation that applying these interventions early in a CBA process will stimulate the involved planners and evaluators to improve their interpersonal communication and to build interpersonal trust so that they can use the CBA as a learning tool. Moreover, we expect that this will increase the fitness of the CBA when assessing integrated spatial transportation plans. These expectations, though, need to be tested in, for example, simulated CBA processes or ex-post analyses of CBA processes in which the CBA was used as a learning tool.

Appendix 1: Grouping of directions on communication and trust improvements from deliberative planning and organizational learning

Directions on improving communication between experts in deliberative planning
1. Have an open approach to all knowledge: **A. Exchange of different kinds of knowledge, feelings, interpretations** Exchange conceptions and interpretations Give room to feelings and thoughts **B. Allow all knowledge in the discussion and allow to question it** All kinds of knowledge allowed, like experiences, personal stories, and intuition All claims, assumptions and constraints are allowed to be questioned and tested Recognize and respect human emotions of anger, fear, impatience and suspicion Stretch out to access multiple perspectives Challenge established assumptions and cultivate debate and argument among different viewpoints Challenge assumptions and analyses by using local knowledge Ask for clarifications or examples when needed and challenge assumptions and question status quo. Encourage to ask questions **C. Give attention to issues behind immediate agendas** Re-orientate attention to issues which lie behind immediate agendas Address issues deeply **2. Behave appropriately:** **A. Have an open perspective towards each other** Have an open perspective towards comments of another Have an open-minded stance towards what is going on and what is at stake Prevent discussions from becoming too emotional Treat each other respectfully **B. Have an open attitude to change one's own assumptions and understandings** Stimulate a change of understandings Explore and recast agendas of problems, issues and potential actions and stakes, through accessing multiple sources of knowledge Learn from both acceptance and refusal **C. Behave actively by asking questions and listening carefully** Be close and keep a distant at the same time Show empathy and critical judgment Ask and listen Interpret the others language correctly Put yourself in the other's place Make suggestions that the other may not have thought of Think 'outside of the box' and put forward 'half-baked' ideas

3. Have interaction:

A. Create shared and embedded knowledge and understanding

Stimulate information to become embedded in the understanding of participants
Shared knowledge
Share and sharpen arguments and meanings
Ensure that the group makes a shared analysis of interests and conflicts
Stimulate the creation of meaning shaped by situations, trajectories, activities and values of particular social groupings

B. Have all stakeholders involved, empowered and interacting

All relevant individuals at the table and equally empowered
Scientists and agency staff need to be engaged with lay people

C. Act and learn together to develop familiar relationships

Accept a degree of collaboration and reciprocity
Act and learn together
Learn about each other
Build relationships
Have a process of collectively creating meaning and shaping information
Have conversations or "plenty of talk" about the meaning of information, its accuracy and implications
Have a dialogue
Organize brainstorming; scenario building; role playing; telling stories; and joint-fact-finding
Be validated and legitimated in an interactive way through talk, social encounters, discussion, debate and exchange of thoughts

D. Focus on shared interests and win-win solutions

Look for common interests rather than differences and challenging assumptions
Focus on the shared interests rather than the positions
Seek mutual gain solutions as far as possible;
Develop alternative stories that are plausible and appealing to all
Find win-win situations in which everybody gains
Negotiate between the stakeholders and their several interests
Identify where the energy for change may lie and build coalitions for change which expand this energy.

4. Have a supportive communicative context:

A. Create a safe environment to say what is on one's mind

Feel comfortable and safe to say what is on one's minds

B. Prepare stakeholders for a constructive discussion and formulate arguments at forehand

Prepare stakeholders to face each other by mentioning the objectives from both sides at forehand and
Help the stakeholders prepare for a constructive discussion
Let the stakeholders formulate their arguments in preparation of the discussion
Help participants to articulate their identity

C. Create a dialogue space, use familiar dialogue modes and use a mediator

Dialogue space
A sketch still open for discussion
Use a mediator or facilitator

Directions on building trust in deliberative planning

1. Show trustworthy behavior:

Do not behave arrogantly
Fulfill promises
Listen carefully and focus attention first on the person, then on the words
Timely and sincerely sharing of information and decision-making power
Communicate comprehensively, truthfully, sincerely, supportively and legitimately

2. Have interaction:

A. Acknowledge and respects all knowledge, thoughts and feelings

Assure that thoughts and feelings of all stakeholders were acknowledged and respected
Equal standing and respect for all forms of knowledge,
Openness and transparency mutual disclosure
Assure inclusiveness

B. Build relationships

Develop familiar relationships by learning more about each other
Build relationships to build trust
Getting to know the counterparts

C. Use a dialogue space

Create a dialogue space: meetings, negotiations, discussions, project reviews and hearings that bring affected citizens, regulators, developers, and public officials face-to-face, informal meetings
Have face-to-face interactions

D. Use a mediator

Use a mediator
negotiate between the stakeholders and their several interests

3. Prepare participants to participate in the discussion:

Prevent discussions from becoming too emotional if stakeholders felt confronted with (unpleasant) surprises
Formulate arguments at forehand
Prepare stakeholders to face each other by mentioning the objectives from both sides at forehand
Give attention to anger

Directions on improving communication in organizational learning

1. Interpersonal behavior to support communication

A. Open attitude to test assumptions

Transcend one's own limited perspective or boundaries.
Be open to test assumptions publically
No one withholds negative information from the others or withholds testing this information

B. Open attitude towards learning, including from risky ideas

Open to set a learning-cycle in motion
Open to the reciprocal exploration of risky ideas

See the other as minimally defensive, open to learning and committed
Have a learning orientation

C. Be explicit and accurate
Give and get valid information
Speak in direct observable categories (opening them to disconfirmation)
Create awareness of the values at stake and the limits of one's capacities

2. Organizational context to support communication

A. Leadership open to transformation and sharing of decision-making
Transformational leadership
Make designing and managing a bilateral task
Participative decision-making culture

B. Supportive structure: stability of team members, learning procedures, training
Stability of team membership
Positive supervisory behavior
Formal procedures for learning
Training with instructors or colleagues or repetitive exercises to stress behavior

C. Safe environment and emerging relationships
Work towards freedom of choice and internal commitment
A shared space for emerging relationships
Create a protected environment

3. Have interactions

A. Sharing and combining tacit and explicit knowledge
Sharing tacit knowledge among individuals
Articulating tacit knowledge into explicit concepts
Combining different entities of explicit knowledge
Embodying explicit knowledge into tacit knowledge
Individuals externalize their experiences
Personal subjected knowledge is validated, connected to and synthesized with others' knowledge
Produce new assumptions by combining articulated views with questioning by others of these views

B. Define means and ends unseparated and interactively
Keep the means and ends unseparated
Define the means and ends interactively to frame a problematic situation

C. All actors meet, discuss and become engaged in a knowledge creation process
Clients participate with the professional and give valuable input of their own
Become engaged in knowledge creation, dialogue, adapt to and shape practices
Have cross-functional communication
Meet face-to-face, sharing emotions, feelings, experiences, and mental models
Through dialogue mental models and skills are probed, analyzed and converted in common terms and concepts

D. Use various modes to reflect which are familiar to all practitioners involved

Directions on trust building in organizational learning

1. Personal awareness of others and trustworthy behavior

A. Awareness of (underlying) (pre)positions and openness to discuss them

Be aware of prepositions

Be aware of internal maps and see when present assumptions are counterproductive for learning

Advocate their views in a way that it would invite confrontation,

Challenge positions

Stimulate testing them publicly

Question publicly underlying policies and goals, assumptions, norms and objectives

B. Trustworthy behavior: act integer, discrete, really listen, be honest about expertise and limitations, give compliments, address troublemakers directly

Acknowledge mistakes

Recognize defensive behavior

Act discrete; people need to feel safe to share confidential information

Really listen to each other's thoughts and ideas

Disclose one's expertise and limitations (being open about ones strengths and weaknesses)

Being forthright and truthful in interactions

Give (public) compliments

Address troublemakers directly saying 'yes' to the person and 'no' to the behavior

C. Fulfill promises

Be consistent between word and deed

2. Interaction and forming relationships

A. Create knowledge together through communication

Move from old to new and shared assumptions

Have workshops and seminars

Have both sides feel free to share

Reflect on how one thinks

Have an open dialogue

Open communication to build trust

Use mediators and facilitators

B. Have stable, frequent and informal interactions to form relationships

Form embedded relationships

Through stable, frequent and tight interactions

Create reciprocity in the relationships and repeated interaction

Stabilize and manage interactions

Ensure frequent and rich communication on a personal as well as on a professional level

Engage in collaborative communication

Repeated and positive interactions

Enable informal meetings

C. Form a shared language or vision

Establish and ensure a shared vision and language

Make newcomers understand the values and principles of the organization and how things are done

3. Trustworthy environment

A. Share control, fair and transparent decisions

Trust emerged when control and responsibility was shared

Ensure that decisions are fair and transparent

B. Make rules to frame risks, opportunistic behavior, how to deal with conflicts

Discuss at forehand how to deal with conflicts

Design process rules to frame risk and opportunistic behavior

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Inter-sector cooperation in emergency preparedness: The Israeli case.

Alex Altshuler

Abstract

Emergency preparedness process involves a wide range of stakeholders. Clearly, efficient coordination is necessary between them (Peek & Sutton, 2003), and the quality and extent of inter-organizational and inter-sector partnerships highly influence the level of emergency preparedness (Drabek, 2007). Enhancement of the inter-sector and inter-organizational cooperation throughout the emergency preparedness process on the local level was one of the main conclusions drawn after hurricanes Rita and Katrina (Simo & Bies, 2007). Importance of the cooperation between local authorities' emergency managers and various governmental and non-governmental stakeholders in the framework of preparedness for a war-caused disaster was highlighted also in the nationwide study in Israel (Altshuler, 2008).

In Israel, periodic warfare is, unfortunately, a common source of disaster, which injures the civilian population, Jewish and Arab alike (Laor, Wiener, Spirman & Wolmer, 2005). A fairly recent reminder of this type of disaster is the Israel-Lebanon war in summer 2006 (Ben-Harush, 2007; Sharkansky, 2007); in addition are the successive flare-ups since 2000 in the southern regions of Israel on the Gaza border, indicating the possibility of full-scale warfare between Israel and Gaza, as indeed happened in the winter of 2008-2009 (Altshuler, 2011b). In such situations emergency preparedness for becomes extremely important.
The current article will present a coherent, up-to-date and integrated picture regarding the inter-organizational and inter-sector cooperation in emergency preparedness for a war-caused disaster in Israel. It will be based on the recent scientific empirical findings that are first-of-its-kind in the country and a thorough analysis of the public policy trends.

Introduction

Emergency preparedness involves multiple organizations and groups (Peek & Sutton, 2003). These stakeholders include representatives of governmental sector and the two non-governmental sectors (the private sector and the third sector, which includes non-profit organizations). There is a fundamental difference between the governmental sector and the two non-governmental sectors. While the relevant public agencies and authorities (such as, emergency management authority, fire department, relevant military representatives and more) have formal and legal obligations to deal with emergency preparedness, the non-governmental sectors deal with that issue usually on a voluntary basis. This principle difference creates a substantial challenge of finding the ways to encourage the non-governmental sectors' involvement in emergency preparedness and create effective inter-sector cooperation. Additional differences between the governmental and non-governmental sectors in organizational culture, values, regulation and more may also affect the establishment of partnerships between them. In order to achieve a continuous interaction and mutually benefitting cooperation between the sectors all the above differences should be discussed between the interacting parties and mechanisms to overcome barriers should be established (Altshuler, 2011a).

The quality and extent of cooperation and coordination between the various stakeholders are highly influential factors among those concerned with the level of emergency preparedness (Drabek, 2007). Systematic improvement and expansion of inter-sector and inter-organizational cooperation in emergency preparedness on the local level was one of the main conclusions drawn after hurricanes Rita and Katrina in USA (Simo & Bies, 2007). Similar lessons regarding the local and the national level, in both the Jewish and the Arab sector, were learned in Israel following the war between Israel and Lebanon in 2006 (Katz, Raviv, Yogev, Yaacobi, Levinson, Alon & Gidron, 2006). The positive statistical relationship between the extent of inter-sector cooperation and the level of emergency preparedness of local authorities was also found in scientific empirical study in Israel (Altshuler, 2008).

In Israel, periodic warfare is one of the most frequent sources of disaster in the country's history, which injures civilian population, Jewish and Arab alike (Laor et al., 2005; Sharkansky, 2007). The two recent major reminders of this type of disaster were the Israel-Lebanon war in summer 2006 (Ben-Harush, 2007; Sharkansky, 2007) and full-scare warfare between Israel and Gaza in the winter of 2008-2009 (Altshuler, 2011b). In addition, it should be mentioned that there are successive flare-ups since 2000 in the southern regions of Israel on the Gaza border, while the last escalation occurred in August 2011. In such unstable reality emergency preparedness for war-caused disaster and its increase through inter-sector cooperation becomes extremely important issue.

Recent empirical research findings regarding inter-sector cooperation in emergency preparedness on the local level in Israel.

Until recently, there was no scientific empirical research regarding the various aspects of emergency preparedness of local authorities in Israel and the factors that influence them. This lacuna was filled by the first-of-its-kind nationwide research on emergency preparedness for war-caused disaster of local authorities in Israel that was conducted by the author in 2008 (Altshuler, 2008). This examination is currently the only empirical scientific source for thorough analysis of emergency preparedness issues in Israel. Among the central issues that were examined in this study was inter-sector cooperation in emergency preparedness. This cooperation was measured through the level of joint activities of local emergency managers with various non-governmental stakeholders. Regarding each of the private stakeholders, the chief local emergency managers related to the extent of the joint activities with them according to the five- point Likert scale (1- not at all, 5 – very high extent). The level of cooperation was examined in most of the local authorities in Israel (141) in the Jewish and the Arab sector. This research found empirically that the extent of joint activities of local emergency managers with non-governmental stakeholders was among the most significant predictors of the level of preparedness of local authorities for a war-caused disaster. This fact highlights the theoretical foundations and practical implications regarding the importance of inter-sector cooperation as one of the important measures to promote the actual level of emergency preparedness.
On the basis of the above study (Altshuler, 2008), it is possible to present the data regarding the specific levels of cooperation between the local emergency managers and the 12 non-governmental stakeholders. These findings appear in the following table:

Table 1: Means of joint activities of local emergency managers with non-governmental stakeholders according to the five- point Likert scale (1- not at all, 5 – very high extent).

Description of the non-governmental stakeholders	*Mean*
Community centers	3.28
Local assistance and volunteer organizations	3.27
Health funds	2.79
Lay residents in the local authority	2.70
Neighborhood committees	2.38
External professional experts	2.14
National assistance and volunteer organizations	2.05
Local businesses	1.92
Professional unions	1.76
Local philanthropies	1.63
National philanthropies	1.54
National businesses	1.36

The data in the above table is presented in descending order. In general, it may be said that with most of the stakeholders the partnerships are not so strong. Only with two of them – community centers and local assistance and volunteer organizations – the appraisal of partnership was higher than 3. These two stakeholders are central "players" on the local social arena and the cooperation with them is very important, but additional partnerships should also be strengthened. Given the significant relationship, found in the research, between inter-sector cooperation and the actual level of emergency preparedness, the current not high levels of cooperation reveal the fact that the level of preparedness could be substantially increased through greater public-private cooperation. In the above research (Altshuler, 2008) the average level of preparedness for a war-caused disaster was found as medium-high (3.52), but could be even higher if inter-sector cooperation were more widespread.
It is interesting to mention that the cooperation with lay residents (2.70) was found to be higher than with most of the formal stakeholders. It may reflect a non-trivial desire of a substantial portion of citizens to be involved in emergency preparedness. Another prominent finding is that businesses and philanthropies are less involved in cooperation with local emergency managers than other non-governmental stakeholders. Since the war between Israel and Lebanon in 2006, the involvement of businesses and philanthropies in emergency management was increased, although it is more "natural" for them to be involved in disaster relief (when the consequences of the disaster are already evident) than in emergency preparedness (when disaster cannot be actually "seen"). There is no doubt that if philanthropies and businesses will be interested and able to provide additional financial and other resources, it will substantially increase the preparedness and will enable to save more human lives in the case of emergency.

Analysis of the public policy trends regarding inter-sector cooperation

The war between Israel and Lebanon in 2006 was kind of a turning point in development of inter-sector cooperation and coordination in the field of emergency preparedness in Israel. In this war, the civilian population of a country – Jewish and Arab alike – was exposed to massive missile attacks that lasted 33 days and affected most of the northern region in Israel. The public structures aimed to deal with civic aspects of emergencies were unable to address the whole

range of multiple needs of the population in that situation (Elran, 2011). However, various private stakeholders, that do not have any formal responsibilities in that field, were highly involved in assistance to the civilians in northern Israel during the war. Their activities started spontaneously in most of the cases and the cooperation between them and the relevant governmental bodies was not substantial. However, some of those stakeholders continued their assistance to the population during the recovery phase and usually coordination with the governmental authorities at this period was much higher than throughout the war.

The expansion of activities of non-governmental stakeholders in emergency-related issues was related also to major socio-economic long-term processes that characterize the Israeli society: 1) continuous expansion of the third sector (Gidron & Alon, 2007; Gidron, Bar & Katz, 2003; Yishai, 1998), which increases the involvement of non-governmental associations in multiple social spheres, 2) privatization and outsourcing (Azriel, 2007; Dekel, 2006), which transfer the actual operative responsibility from the governmental organizations to private businesses or social organizations. The above policy trends served as additional catalysts for change of the governmental "monopoly" in emergency management.

Emergency preparedness became a much more prominent issue on the public agenda in Israel as a result of the war consequences, in both the Jewish and the Arab sector. The change in the Arab sector was even more substantial since prior to the war, most the local leaders in this sector preferred not to deal with emergency preparedness, since they believed that other Arab countries surrounding Israel will not attack Arab towns and villages inside Israel. In this war, for the first time, it was not the case and Arab civilian population also suffered from massive missile attacks. The functioning of the governmental bodies was revealed as insufficient and the need for the involvement of private stakeholders in emergency preparedness became more and more evident. There are two main categories of private stakeholders: 1) business corporations and philanthropies which donate money for specific activities in the field of emergency management, 2) non-governmental social organizations that are involved in practical activities aimed to increase the level of emergency preparedness. In most of the cases, the main financial resources of these social organizations come from donations of philanthropies and business corporations. Since 2006 private money was invested in the fields such as renovation and building of public shelters in the neighborhoods with severe socio-economic problems, education programs for volunteers in the field of emergency management, enhancement of inter-organizational cooperation on a local and regional level, and more. Following the war of 2006, the involvement of social organizations in emergency management in the Jewish and the Arab sector was substantially increased. Some of those organizations deal mainly with emergency management, while others are active in parallel in additional social and educational fields. Among the organizations, there are different scopes of activities in geographical terms: local, regional and national. Most of the organizations deal either in the Arab or in the Jewish sector, although there are some important exceptions to that general tendency: 1) The Israel Trauma Coalition for Preparedness and Response operates regional resilience center in both the Jewish and the Arab sector, 2) The Association for Children at Risk and its Resilience Center actively deal with educational programs in emergency management for the local municipalities' employees in both the Jewish and the Arab sector. In parallel to the substantial increase of activities of the non-governmental stakeholders in the field of emergency preparedness since 2006, fundamental changes took place also in the public sector. In organizational terms, there were created two new structures that were mainly aimed to improve cooperation and coordination among the public and the private stakeholders. In 2007 the National Emergency Authority (NEA) was established and in 2011 the Ministry for Home Front Protection was created. NEA was established in the framework of the Ministry of

Defense, to coordinate the activities of all agencies dealing with emergency preparedness, on the national as well as the regional and the local level. Gradually, this organization increased cooperation with both public and private stakeholders. One of the central tools it used to facilitate collaborative processes and increase inter-sector cooperation was active participation of multiple stakeholders from the private and public sector in annual National Home Front Drills, which examined various aspects of civilian emergency preparedness. The learning process prior, during and after those annual drills increased partnerships and working connections between public and private stakeholders on the local, regional and national levels. In continuation to the process of higher prioritization of emergency management in public policy in the recent years, the Ministry for Home Front Protection was created in 2011. Its exact structure was not finalized yet, but what is already clear is that NEA will be its main operational body. The new ministry is aimed cooperate with both the relevant public structures (such as, the Home Front Command of the Israeli Defense Forces, emergency departments of the governmental ministries and local authorities) and the private stakeholders, that are involved in emergency management. The establishment of this new ministry embodies the potential of further improvement and expansion of inter-sector cooperation, although at this stage it is not possible to determine to what extent this potential for a substantial positive change will be actually exploited.

Conclusion and summary

This chapter presented the important potential that inter-sector cooperation have to increase the level of emergency preparedness for a war-caused disaster. However, it also showed that in the Israeli case of preparedness on a local level, the exploitation of this potential is still rather limited. The combination of the above two facts poses challenge for emergency managers and for all the relevant public and private stakeholders to find more effective and efficient ways to expand and improve the inter-sector cooperation.

The analysis of public policy trends regarding the emergency preparedness in Israel in the recent years reveals that the system gradually becomes more integrated, new important national bodies are established and more efforts are taken to increase inter-sector cooperation. The direction seems positive in terms of greater cooperation between the sectors, although the current stage is still initial and the potential for cooperation is still exploited only in part. In the Arab sector in Israel emergency preparedness activities were very limited prior to 2006 and in the recent years were substantially expanded. It is hoped that this direction will continue in the future.

In conclusion, I would like to relate to a more general point. It is clear that emergency preparedness is not limited to war-caused disaster. Another major source of risk in that region is an earthquake. A strong earthquake in that region, at least in the last few centuries, occurred approximately every 80-100 years (Avni, 1999; Begin, 2005; Salamon, 2005). The last such earthquake happened in 1927. A future earthquake will affect both Israelis and the Palestinians, and this fact should urge the two sides to promote the cooperation between them. However, because of the political disagreements this did not happen until now. The scientists may serve as a bridge for cooperation and the author of the chapter participated in one such a meeting with Palestinian colleagues in 2006. It is hoped that future efforts will be more successful and will result with achievement of the ultimate goal for which we all make research, act and hope – to save more human lives when disaster strikes.

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‘STRATEGIC PLAN’ AND ‘ENVIRONMENT PLAN’ IN TURKEY IN THE CONTEXT OF A QUESTION: “CAN ‘ENVIRONMENT PLAN’ BE COMBINED TO ‘STRATEGIC PLAN’ TO GET A NEW PLANNING TYPE NAMED ‘STRATEGIC SPATIAL PLANNING’ IN TURKEY?”

Cihan Erçetin [1]

Abstract

In recent decades, new planning approaches have been applied to spatial planning field in the world. Rapid transformation of the world’s new socio-economic organization particularly in urban areas and traditional planning methods were criticized because they remain insufficient in front of the new obstacles and facts. In this case, Strategic Spatial Planning approach appeared in planning field. Besides this, Turkey does not have proper planning system in terms of the integrity of spatial planning; therefore, there are many problems with regard to determination of the metropolitan regional development strategies. In Turkey, Strategic Plans include existing situation analysis, future strategies, vision, policies as in the Regional Plans and this helps to make criticism for Turkish experiences: Strategic Plans are lacking of spatial proposals and remain only as written documents. On the other hand, ‘Environment Plan’ exists in the hierarchy of Turkish planning system as an upper scale blueprint plan including strict spatial proposals similar to the ones in each scale of Master Plans and with its policies. Thus, a critique stands as ‘Environment Plan’ has many problems in terms of its overlapping scale and boundary with municipal Master Plans; and this plan has been still discussed about which actors take part in planning, how to establish planning-implementation relationship and what the content of the plans will be. Consequently, in this study, the hypothesis will be the unification of two perceptions of above mentioned planning types in Turkish planning practices: combination of the concept of ‘Strategic Plan’ with ‘Environment Plan’ to get ‘Strategic Spatial Plan’ concept. In other words, in Turkish planning practice, both Strategic Planning’ and ‘Environment Plans’ have problems and the discussion will be carried out in the context of the question of why there is a need for such unification.

Keywords: Strategic Spatial Plan, Environment Plan, upper scale planning, spatiality.

1. Introduction

In recent decades, the planning authorities in many countries have argued the irrelevancy of mainstream planning perspectives because of the rise of globalization processes. This resulted in emergence of new concepts, dynamics and problems in urban areas and affected the urban space (Gedikli, 2010). Until the emergence of these changes, the spatial patterns and regional development were determined according to strict, physical plans that were prepared according to vertical hierarchy as in Turkish current planning system.

New facts and new obstacles in recent years have experienced because of influential transformation of the world’s new socioeconomic organization particularly in urban areas. In addition, traditional planning methods were judged for the inadequacy of them in front of

these new obstacles and facts in large cities. As a result of this new era, Strategic Spatial Planning approach has become prominent in current agenda (Gedikli, 2007).

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Turkey is one of the countries that considered these developments inevitable to adopt in its planning legislation as 'Strategic Plan' in order to meet the newly constituted demands in a most effective manner. When Turkish planning system is investigated depending on the 6th title of 3194 Zoning Law, plan types were categorized into two main groups: the first one is upper scale plans (Regional Plan) and lower scale plans (Master Plan, and Development Plan). Nevertheless, in the 5th title of the law introduces a new scale and new type of plan named 'Environment Plan' ('*Çevre Düzeni Planı'* in Turkish) as a physical land use one (Ersoy, 2006). It may be considered as an upper scale plan; however, it is still a problematic question whether it is a type of Regional Plan or not with its strict spatial and physical decisions and uncertain scale proposals. In other words, the administrative and structural problems of Environment Plan make it controversial for the current upper scale planning discussions.

Another type of newly introduced plan named Strategic Plan in Turkey is differentiated from the ones practiced in other parts of the world in terms of its spatial content which was preferred to be named as 'Strategic Plan' not 'Strategic Spatial Plan'. The question of 'to what extend it is spatial' is crucial for its implementation priorities of responsible institutions. Besides, it is still not included in Zoning Law of Turkish planning legislation which means the borders, responsible institutions, its content and scale are not designated exactly.

When these two types of plans –Environment Plan and Strategic Plan- are discussed with their problems, a solution proposal will stand exactly in themselves: combination of two types of plans in terms of their different aspects to constitute a new upper scale, spatial and participatory plan named 'Strategic Spatial Plan' for Turkey.

2. Strategic Spatial Planning in General and its Reflection on Turkish Planning System

Planning can be considered as a legal tool to make the potentials visible. Sub-scale development plans are only interested in the borders of a small piece of land aimed to create land use plans, therefore there is a need for a regional perspective for these potentials.

The concept of Strategic Spatial Planning has become prominent in agenda in recent decades and two-channel development can be mentioned to examine its revival period. First channel is represented by the processes of globalization including their effects on space in general. The "competitiveness agenda" stands as the distinctive characteristic in this process; in addition the reflection of this agenda on space can be exemplified as investments in transportation infrastructure, tourism, etc. The "environmental agenda" has also emerged in this period which means preservation of environmental/urban assets and development of life quality in living spaces (Albrechts, 2005). Accordingly, the aims of spatial planning interested in two important aspects –environmental and economic policy agendas- as multi-dimensional concept in the first channel development. (Gedikli, 2010)

After the late 1980s, in the second-channel development, spatial planning has started to be affected from post-modern philosophy which characterized the new understanding as decision making after consensus and expression of opinions of each stakeholder without considering positivist methods in planning (Blotevogel, 1999). Gedikli (2007) summarizes this process as "this new approach has led to the involvement of social networks in urban decision-making processes… A 'Communicative Rationality' paradigm comes into effect here, contrasting the 'instrumental rationality' paradigm of modernist era".
The emergence of multi-dimensional approach and new interactive processes enabled the revival of Strategic Spatial Planning that can be defined as "a public sector-led, socio-spatial process through which a vision, actions and means for implementation are produced that shape and frame what a place is and may become" (Albrechts, 2004). It consists of wide range of different participators to achieve multi-level governance in planning process such as national governments, sectoral units, agencies, banks, universities, chamber of commerce, non-governmental organizations, etc. (Albrechts, 2008). Another viewpoint developed by Sartorio (2005) describes the general characteristics of Strategic Spatial Planning as:

- Necessity to planning for a long term period
- Interaction
- Process oriented
- Comprehensiveness with a multi-actor process
- High participation
- Mutual connectedness

The process of Strategic Spatial Planning has become significant in realization of the plan after effective decision-making and determination of objectives in its process (Figure 1). The vision, objectives and guiding principles should be reflected into urban space through the help of spatial proposals within plan about development macroform, economic development or the ways of increasing life quality. According to Cavenago (2004), there are several components that always need to be parts of the process.

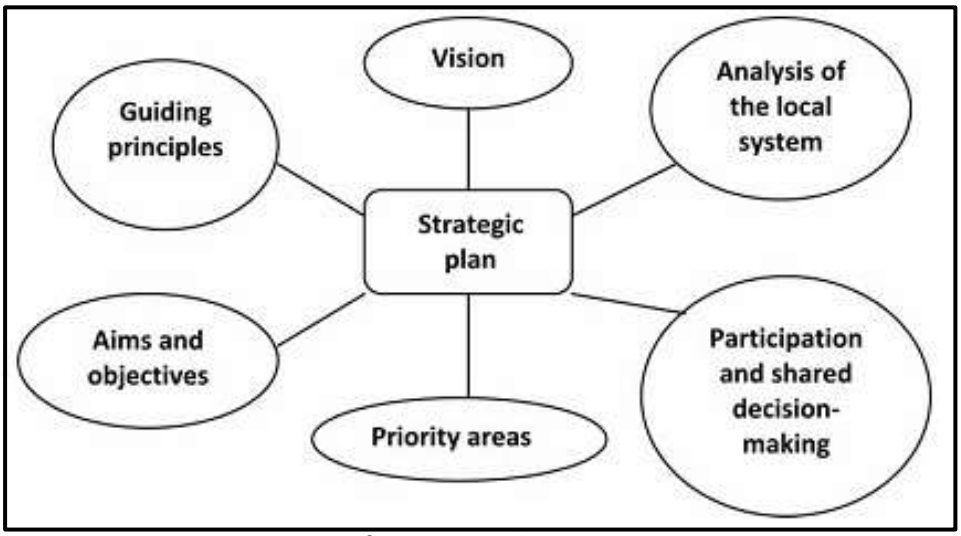


Figure 1. Components of Strategic Planning Process

2.1. Strategic Spatial Planning in Turkey

A common consensus on the definition of Strategic Spatial Planning does not exist despite its increasing popularity. Its perspective has widely accepted common characteristics and it is

practiced in different manners in different countries, because each country has its own planning technique, method and tradition. The perception and the use of this concept can be affected from different perspectives and personal experiences in different spatial units (Gedikli, 2007; Sartorio, 2005). Turkey is one of the countries which adopted Strategic Spatial Planning depending on its own planning traditions and methods.

Turkish planning system has adopted an increasing concern for participatory processes in its methods and practices. Since the beginning of 1970s, social democrat municipalities in metropolitan administrations embraced the significance of public participation in local processes in municipalities (Özcan, 2000). New perspectives of development and region comprehension, new world economy and also adaptation process to EU have created an increasing interest in 'Strategic Planning' in Turkey (Polat, 2011). By 1980s and 1990s -the years of increasing authorities of local governments- adaptation of participatory methods has become prominent. In addition, after the acceptance of the principle of local actor participation in local decision making process in United Nation Rio Conference on 1992 which Turkey is the participant country, participatory local decision making practices have started to become widespread. Particularly, after Local Agenda 21, local strategic plans were practiced in several cities in Turkey through Local Agenda 21. At the beginning of 2000s, in the 8th Five Year Plan (2001-2005-prepared by State Planning Organization) strategic approach in regional and sub-regional planning scales was stated and finally, Strategic Plan have found its legislative base in 2004 in a series of laws related to public administrations such as Municipalities, Special Provincial Administrations and Ministries (Gedikli, 2010).

2.2. Strategic Planning in Turkish Legislation System

After 2004, Strategic Planning emerged in Turkish Legislation System. After the change in 'Municipal Law' and 'Special Provincial Administration Law', those interested institutions have become responsible to prepare and control Strategic Plans as Corporate Strategic Plans (Hazanay, 2006). In this study, only the existence of Strategic Plans in municipal Law will be mentioned including its recent changes because of its similarity in titles of 'Special Provincial Administration Law about Strategic Planning.

- **5393 Municipal Law (2005)**

  - **"Functions and powers of the Municipal Council"**

"To discuss and approve the strategic plan, investment and work programs, activities of the municipality and performance scale of the personnel".

  - **"Duties and powers of the Mayor"**

"To manage the municipality according to the strategic plan, to develop corporate strategies of the municipal administration, to prepare the budget, to direct municipal activities and to determine scale of performance on the basis of these strategies; and to undertake implementation, follow-up and assessment of the same; to submit report to the Municipal Council related to these activities".

  - **"Strategic Plan and Performance Plan"**

"… the Mayor shall prepare a development plan and program, as well as a strategic plan in compliance with the regional plan (if any) … to be submitted to the municipal council. The strategic plan shall be prepared by obtaining the opinion of the universities and chambers, and

non-governmental organizations and shall be put into force upon approval of the municipal council. It is not necessary to prepare a strategic plan in the municipalities with population less than 50.000."

2.3.Concluding Remarks

After all, the definition of Strategic Spatial Planning in literature can be summarized as "a participatory approach through which people from different institutions come together and produce visions, strategies and projects for the development of their locality" (Gedikli, 2010). Turkish planning system has adopted main characteristics of Strategic Spatial Planning; but, a significant component of it is failed to be noticed: its relationship with space as mentioned in its title which is 'Strategic Plan', not 'Strategic Spatial Plan'. In the following sections of the study, the problems, a new model to overcome them and the roles of spatial planners in the process by mentioning another planning title named 'Environment Plan' in Turkey will be discussed in detail.

3. The Concept of 'Environment Plan' in Turkey

In Turkish planning legislation there are plans that represent upper scale regional policies in hierarchy (Table 1). By 1990s, Environment Plan has emerged between Regional Plans and Urban Development Plans hierarchically depending on 3194 Zoning Law. (Gedikli, 2009)

Table 1. Planning Hierarchy in Turkey

PLAN TYPE	RESPONSIBLE AUTHORITY
Five-year Development Plan	Ministry of Development
Regional Plan	Regional Development Agencies
Provincial Environment Plan	Greater City Municipalities in metropolitan cities Special Provincial Administrations and central municipalities in other cities
Environment Plan	Ministry of Environment and Urban Planning
Provincial Strategic Plan	Special Provincial Administrations
Municipal Strategic Plan	Municipalities
Urban Development Plan	Municipalities

According to the 5th title of Zoning Law, Environment Plan is defined as 'a plan which determines the land use decisions of housing, industry, tourism and transportation compatible with national and regional decisions". In addition, 'Regulation about Principles of Plan Making' introduces the legal definition of Environment Plan as:

'Environment Plan,

- provides the balance of protection-use between urban-rural structure and development, natural and cultural resources, and housing, industry, agriculture, tourism and transportation sectors;
- determines the land use decisions within the borders that displays spatial and functional integrity;
- prepared compatible with Regional Plan decisions (if any) and on the scales of 1/25000, 1/50000, 1/100000 or 1/200000;
- consists of physical plan, plan notes and plan report;
- can contain one or more provincial boundaries;
- is made or have it made by the Ministry of Environment and Urban Planning;
- includes collecting opinions of institutions about disaster areas, infrastructures, conservation areas, etc. in its preparation process;

- includes field studies, threshold studies, and economic, social, cultural, political, historical, sectoral and technologic analysis; also, macro scale population distribution and density decisions;
- provides the policies which represent data to sub-scale planning'.

Afterwards, it is reasonable to define Environment Plan which exists on hierarchically second stage and is prepared on region, basin and provincial level in accordance with Regional Plans. Thus, Ministry of Environment and Urban Planning is responsible to prepare 1/50000, 1/100000 or 1/200000 scale Environment Plan on region and basin level; Special Provincial Administrations, Greater City Municipalities or other municipalities are responsible to prepare Provincial Environment Plan which contains just provincial borders and on inexplicit scales (Ersoy, 2006).

3.1. Historical Background of Environment Plan

In Turkish planning history, it is believed that the concept of Environment Plan emerged as a result of the need to plan adjacent areas of cities. According to Duyguluer (2005), "1/25000 scale and the name of 'Adjacent Area Plan' were called Environment Plan over time". The concept of Environment Plan was included in 1985 dated Zoning Law as a planning type; however there was no information about its content, scope, scale, and preparation and approval process in the law. Afterwards, the failure of Regional Plans increased the significance of sub-scale development plans and preparation of Environment Plan explicitly which was undertaken by Ministry of Public Works –today's Ministry of Environment and Urban Planning-. By 1985, a detailed regulation is prepared named 'Regulation about Principles of Plan Making' which determined the definition, scales, content and preparation and approval processes. The change in this regulation in 2001 made Ministry of Public Works the only authority for Environment Plan, but Ministry of Environment and Forestry started a new discussion and disagreement for the preparation of the plan and finally, in 2003, a new law determined the new responsibilities and authorities of Ministry of Environment and Forestry. In this law, there was a title which designated the ministry as only Environment Plan making authority (Ersoy, 2006).

Besides, in 2005, Special Provincial Administration had also been an authority to prepare another type of Environment Plan named Provincial Environment Plan which extended the scale of the discussion. Finally, in 2011, there has been an important shift for the structures of Ministries in Turkey: Ministry of Public Works is transformed to 'Ministry of Environment and Urban Planning', and Ministry of Environment and Forestry to 'Ministry of Forestry and Water Works which means Environment Plan authority has been designated to Ministry of Environment and Urban Planning exactly and some of the planning authorities for ministry level have been given to it.

Environment Plan is defined as a strict land use plan in terms of its content and it is located under the scale of Regional Plan and above the Development Plan. Thus, an important question rises here that to what extend it has to be spatial and regional when it is considered together with Turkish version of Strategic Spatial Planning named 'Strategic Plan'.

3.2.The 'Puzzle' of Environment Plan

In Turkey, the complexity of planning legislation by means of too much additions and authority transfers, the reflection of unrelated upper scale plans on urban space in implementation process, and even failure of some of upper scale plans affected the existing planning system in a negative manner. Particularly after 2000s, despite the abundance of plans, it was experienced that their implementations revealed different results than expected before (Eraydın, 2008).

Environment Plan puzzle has made an important contribution to the complexity of upper scale planning in Turkey. The reason to entitle it as puzzle is about its problems of authority ownership, scale complexity, implementation problems, administrative dilemmas, practicing difficulties and the language of the plan. In other words, although the complexity of upper scale planning has been tried to be organized by the improvements in the concept of Environment Plan, the plan could not respond the purpose of planning on that scale and even damaged it. Consequently, it can be stated that the concept of Environment Plan has to be restructured or recreated or even removed by using some other planning channels. In order to construct evidences for a proposal of such a radical change in upper scale planning, the problems of Environment Plan is classified in two groups as administrative and structural problems.

3.2.1. Administrative Problems

The condition of centralization rather than localization stands as the first significant question at the top of the upper scale administrative planning problems in Turkey. Centralization of policy making power in developing countries can be analyzed as an important obstacle for the rise of governance in any practices of administration. Therefore, some of the authorities of central governments have been shifted to local governments (Yüksel et al., 2005). This kind of localization and strengthening local governments are essential in terms of democratization; in this way, transfer of power to local governments is assumed to provide easy delivery of the needs and expectations of local people, increase participation in decision making and strengthen the perception of decentralization (Şengül, 2009). After 1990s Turkey has also experienced the concept of participation on a more concrete manner especially in planning community by defending two causes of participation. Firstly, participation has become a worldwide trend after 1990s with a milestone of United Nations Rio Conference (1992). Another cause that is past planning experiences of Turkey stated that city plans without local participation were not able to regulate urban development as expected (Tekeli, 1993). In this case, bottom-to-top relation rather than top-to-bottom hierarchy is more acceptable in policy making areas including upper scale plan making.

Turkey has also shown some efforts to adopt these kinds of global changes and transformations in its planning practices; however Environment Plan is still a plan which contains a strict top-down hierarchy and almost non-participatory planning process. Central government decides what the borders of Environment Plan regions will be, what kinds of land uses will exist in urban space, where to macroformal urban pattern will be oriented in future and also who to ask about opinions and ideas. For instance, Ministry of Environment and Urban Planning designates the planning region -generally one or more provincial boundaries-, then the ministry initiates a tender for plan making, after that mostly a special firm gets the tender and starts collecting necessary data like maps, photos, infrastructural information etc. In the next period, institutional opinions are collected and Environment Plan documents are

prepared. As a result, here it can be easily mentioned that such a process is not absolutely compatible with any current transitions in the world like transition from government to governance, from top-to-bottom to bottom-to-top relations, and in general, from hierarchy to participatory democracy (Figure 2).

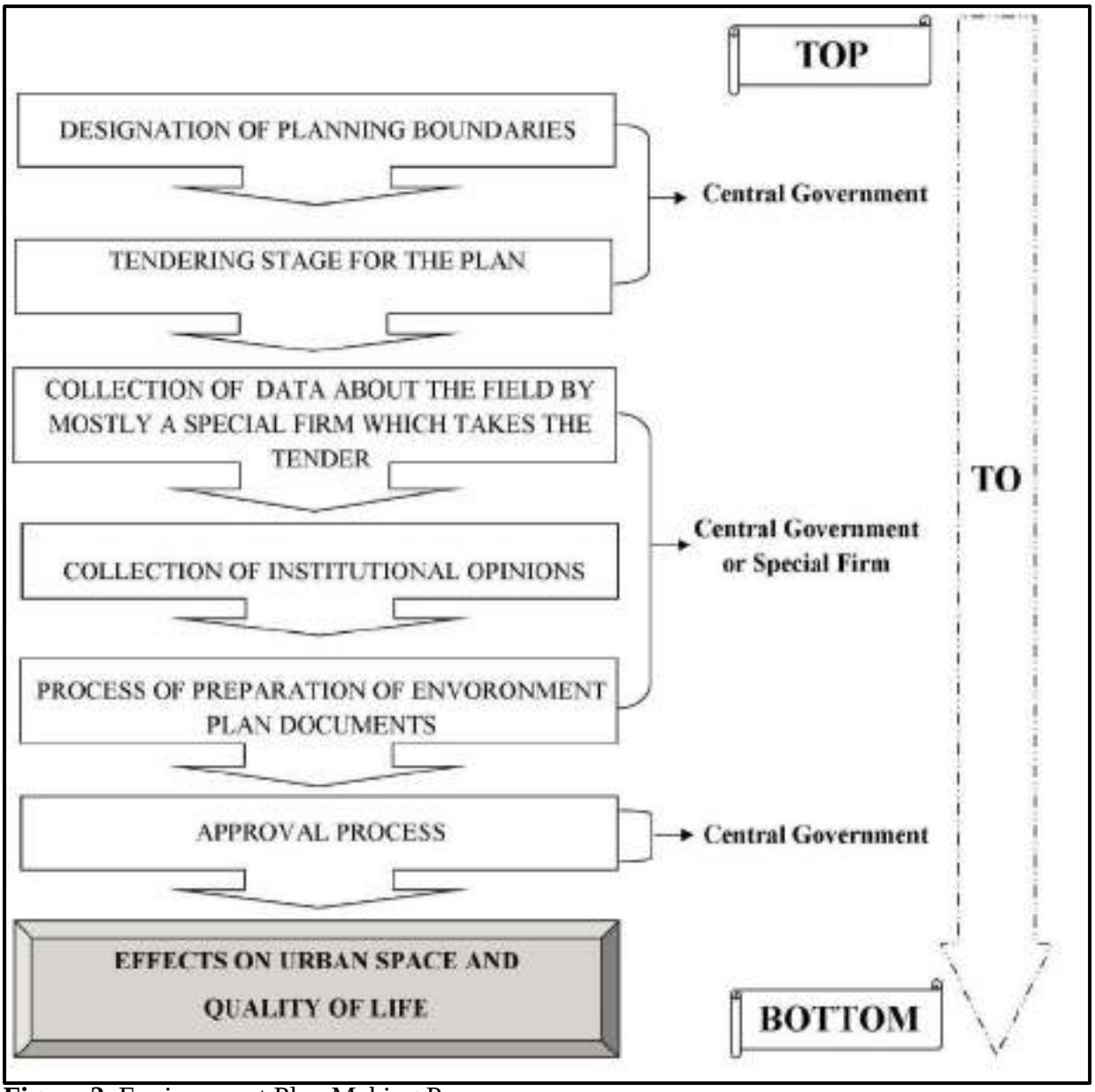


Figure 2. Environment Plan Making Process

In addition, in most of the European Union (EU) countries, planning perspective is differentiated from Turkey, and an implementation and concept named as Environment Plan does not exist in any other part of the world. In EU countries, while planning system can be summarized as 'Regional Plan, Urban Plans and detailed plans' (Ercoşkun, 2005); in Turkey, there is also an Environment Plan concept after Regional Plan in this arrangement within a strict top-to-bottom vertical hierarchy.

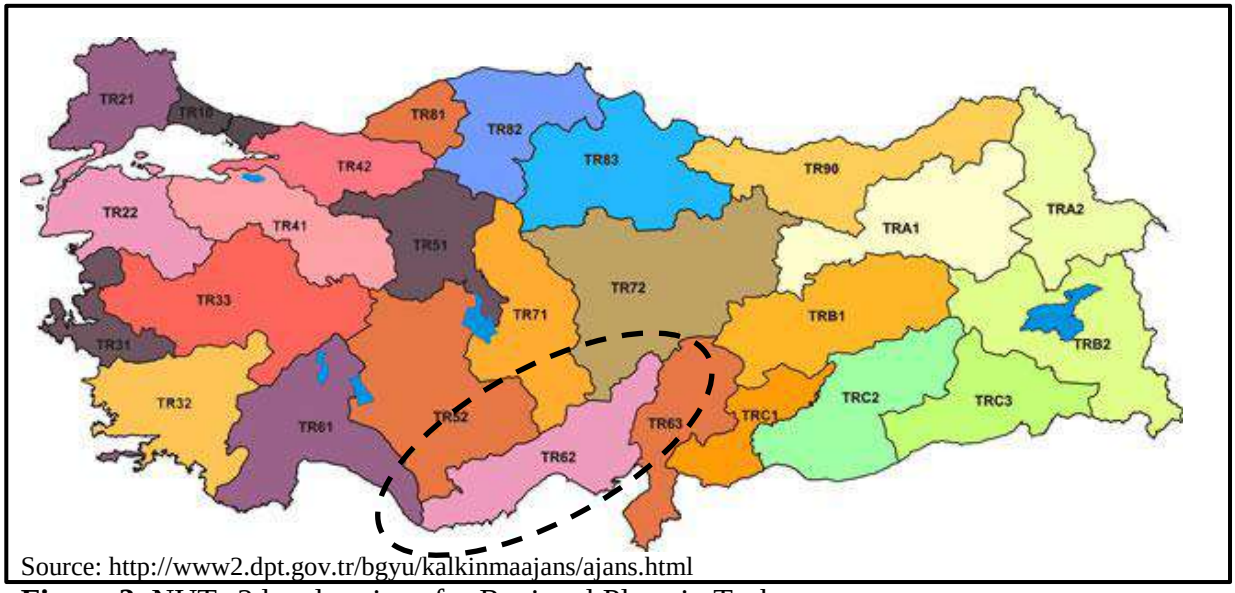
Another administrative problem contributing to Environment Plan puzzle is the scale problem. It can be stated that there are contradictions about 1/25000 scale plans depending on new definitions that were introduced to planning. In 2004, it was stated in the Greater City

Municipal Law in its 7th title that providing compatibility with the existing Environment Plan, Greater City Municipalities are authorized for preparing Master Plans inner and outer parts of Greater City Municipality boundaries with a 1/5000 to 1/25000 scale. In fact, by this new regulation in law, the scale of Master Plan has increased from 1/5000 to 1/25000. This caused two main problems: the first is the mystery of the content and the scope of 1/25000 Master Plan compared to 1/5000; and the second is the overlapping boundaries of this kind of Master Plans in 1/25000 scale and Environment Plans in 1/25000 scale that prepared before (Ersoy, 2006). Afterwards, by the emergence of renewed 'Environment Law' in 2006, although Ersoy (2006) stated that "the scale complexity in Environment Plan making finished up by the new title which designated the scale of Environment plan as 1/50000 and 1/100000", two problems still exist and have to be taken into account in the solving the scale complexity. The first one is overlapping boundaries and policies of 1/25000 scale Master Plans and Environment Plan with the same scale that had been made before. Particularly, the other one is dilemma between new 'Environment Law' and 'Regulation about Principles of Plan Making' in this context. As mentioned before, according to 'Environment Law', the scales of Environment Plan are 1/5000 and 1/100000; besides, 'Regulation about Principles of Plan Making' mentions 'Environment Plan…is prepared compatible with Regional Plan decisions (if any) and on the scales of 1/25000, 1/50000, 1/100000 or 1/200000…'. According the hierarchy between laws and regulations, it is obvious that regulations have to be compatible with laws and in the condition of complexity between them, the law would be valid. However, institutional authorities are the process planner and the implementer of 'Environment Plan' and there will always be confusion about scale against them to decide the boundaries of the plan. To sum up, only legislative solutions cannot remove scale challenge of Environment Plan.

This kind of puzzle of Environment Plan also involves the problem of authority conflict. Before the establishment of Ministry of Environment and Urban Planning in 2011, a seriously chaotic circumstance has existed and as mentioned before, removed Ministries of 'Environment and Forestry' and ''Public Works' could not share the authority to Environment Plan making. Finally in 2011, establishment of Ministry of Environment and Urban Planning has partially removed the authority problem by giving all responsibility to this ministry in this case, but the conflict between Special Provincial Administration and Ministry of Environment and Urban Planning still exists. In 2005, 5302 'Special Provincial Administration Law' introduced a new type of Environment Plan named Provincial Environment Plan prepared by the leadership of governor. However, this plan creates many concerns about overlapping boundaries and scales, different proposals due to lack of cooperation between institutions, and implementation troubles since competition between institutions.

Later, some legal changes have limited the boundaries of Provincial Environment Plan to provincial borders, therefore if the district or region is smaller or larger than provincial boundaries, then Ministry of Environment and Forestry was authorized in these areas –then transferred to Ministry of Environment and Urban Planning in 2011-. However, this cannot change the fact that there may be two different and disjoined upper scale plans for one common space or region within a strict hierarchical order in inter-institutional relationships of authorized administrations.

The difference between Regional Planning boundaries depending on NUTs classification (Nomenclature of Territorial Units for Statistics) and Environment Plan regions constitutes the last part of administrative problems of Environment Plan puzzle. The problem here is that two upper scale plans involve different provinces in their regional zoning.



Source: http://www2.dpt.gov.tr/bgyu/kalkinmaajans/ajans.html

Figure 3. NUTs 2 level regions for Regional Plans in Turkey

Source: http://www.cedgm.gov.tr/CED/AnaSayfa/CevreDuzeniPlani.aspx?sflang=tr

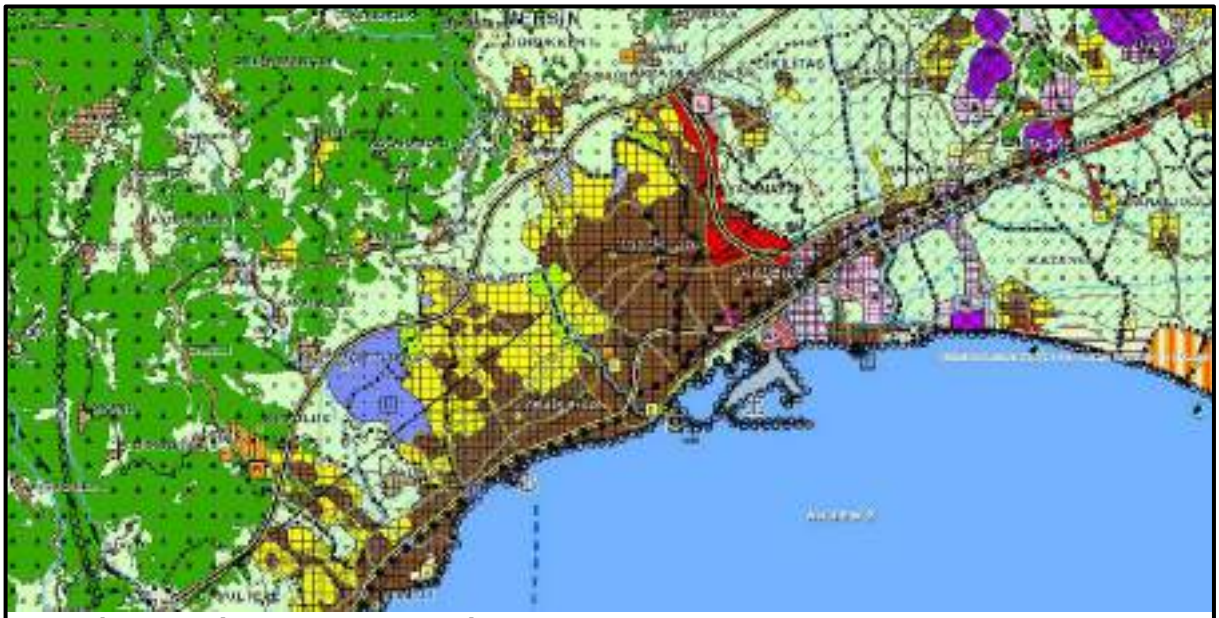
Figure 4. Environment Plan regions authorized to Ministry of Environment and Urban Planning

When the Regional Plan and Environment Plan including Mersin province in their territories is taken as an example, it can be seen that Mersin is combined with Adana province in the territory of TR62 of NUTs 2 level classification for Regional Plan; besides, regarding Environment Plan, Mersin was combined with Karaman province as a region and Adana was introduced as a single territory (Figure 3 and Figure 4). These zonings are both for upper scale planning in Turkey and different kinds of association in terms of regional zoning here may create incompatible regional strategies and disjoined policies which emerge in between the hierarchy of Turkish planning system.

3.2.2. Structural Problems

At the beginning of these problems, strict and inflexible structure of land use decisions comes first. Environment Plan does not provide any flexibility to sub scale plans and it makes other sub scales limited to the boundaries that is designated by Environment Plan practice as seen in some part of 1/100000 scale Mersin-Karaman 2009 Environment Plan which constitutes a

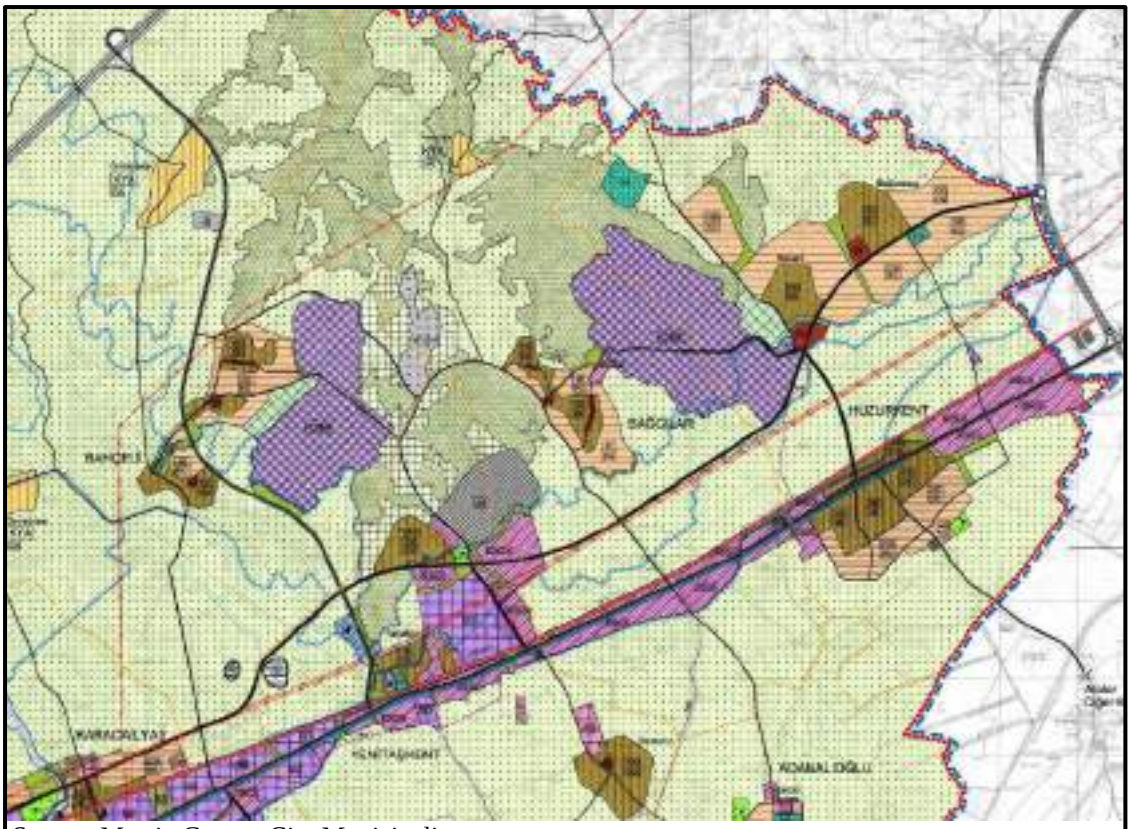
clear example of mentioning strict land use decisions (Figure 5). In addition, some parts of these plans contain 1/1000 and 1/5000 scale detailed policies and decisions which means Environment Plan is sometimes a candidate to be a substitute for sub scale plans; thus this cannot be acceptable for any upper scale plan.



Source: http://gisapl1.cevreorman.gov.tr/cdp/

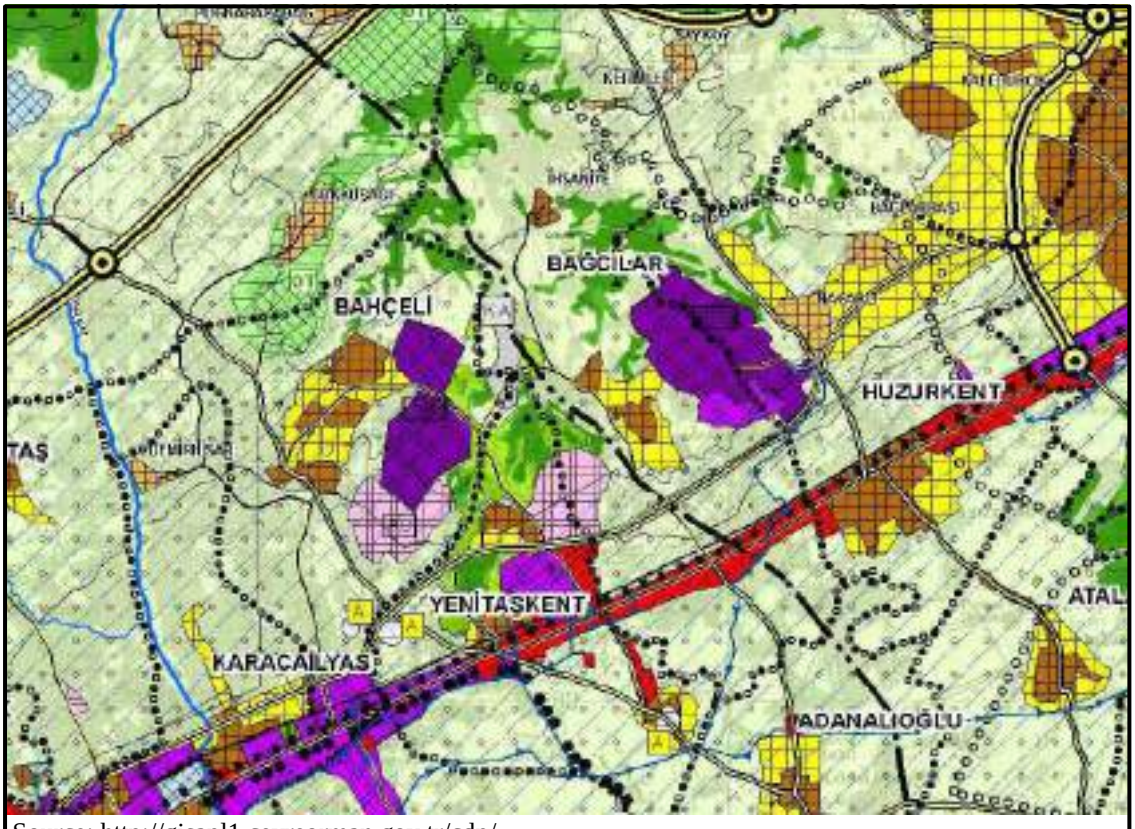
Figure 5. Central part of Mersin province in 1/100000 scale Mersin-Karaman 2009 Environment Plan

Demonstration in an upper scale plan (1/200000, 1/100000 or 1/50000) have to contain a more conceptual and schematic representations to be differentiated from physical land use decisions of a Master Plan, moreover this also supports the firstly introduced problem item of Environment Plan about lack of flexibility. Therefore, the more legible Environment Plan will be by using conceptual and schematic demonstration techniques, the more flexible and understandable upper scale planning will emerge. When a small part of 1/100000 scale Mersin-Karaman 2009 Environment Plan and 1/25000 scale Mersin Master Plan -contain a part of Mersin Organized Industrial Zone district- are discussed, it can be easily seen that there is almost no difference between them in terms of their demonstration although one of them is an upper scale, another one is a subscale Master plan (Figure 6 and Figure 7).



Source: Mersin Greater City Municipality

Figure 6. A part of Mersin Organized Industrial Zone District in 1/25000 scale Master Plan



Source: http://gisapl1.cevreorman.gov.tr/cdp/

Figure 7. A part of Mersin Organized Industrial Zone District in 1/100000 scale Environment Plan

Finally, the last structural problem that contributes Environment Plan puzzle is about its lack of strategic decisions and consideration of it as a data bank. Nowadays, the practice of Environment Plan is just oriented to collection of data like infrastructure, existing properties, photographs etc. from the field and it is seen as a tool to reach many kinds of information about the interested region instead of producing strategic decisions, determining priority areas and development axes.

After all, these administrative and structural problems constitute satisfactory evidences for having such a puzzle, thus it can be concluded that this kind of an upper scale plan is not indispensable for Turkish planning system. The main question here is about how this puzzle can be solved by using what kinds of tools. Before the answer, problems of Strategic Planning in Turkey will be mentioned, since the solution for this puzzle contains mainly the method of Strategic Spatial Plan making.

4. The Problems of Strategic ('Spatial') Planning in Turkey

In Turkey, local governments have the authority to prepare Strategic Plans for urban spaces to provide the public interest basically. Local governments try to meet different expectations for urban services and also, overcome increasing and diversifying service demand with limited resources (Emrealp and Yıldırım, 1993). Therefore, the newly world trend of Strategic Spatial Planning can be an effective tool for local governments in Turkey to tackle;

- Rapid urbanization
- Technological and social changes
- Increasing urban problems
- Migration
- Need for a sustainable development
- Lack of urban infrastructure
- Expectation of high quality services
- Need for a strategic, long term decisions for local governments. (Akın and Güleç, 2003)

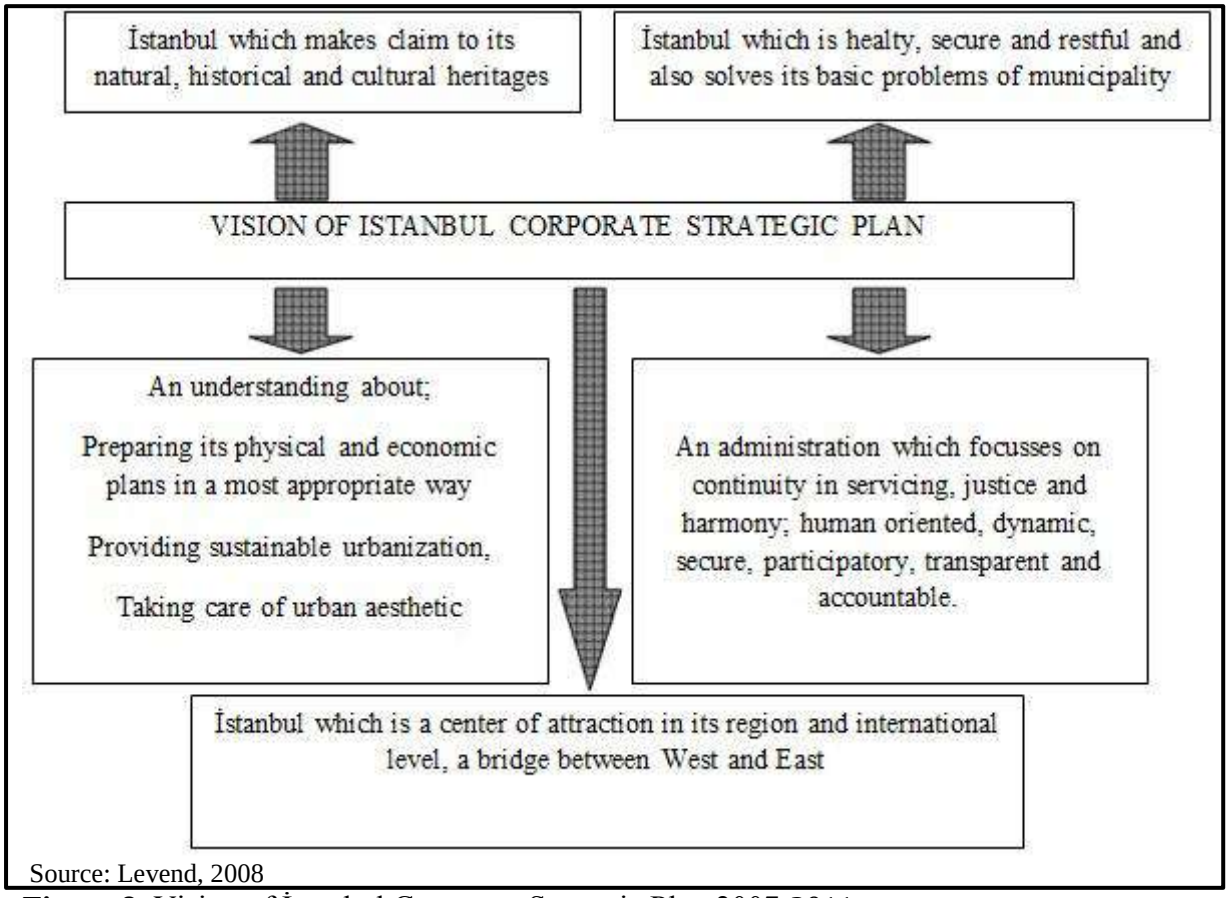
By the emergence of Strategic Spatial Planning practice, most of the characteristics of it have tried to be adopted in Turkey. Nevertheless, two main problems still exist which constitute the most fundamental components of the plan: firstly, the spatiality problem comes depending on the name of 'Strategic Plan', not 'Strategic Spatial Plan', and then lack of efficient cooperation in process stands as a second problem.

4.1. Lack of Spatiality

The name of the plan -called as Strategic Plan- in Turkey constitutes the first problem. This means the term 'spatial' is missing; if it is put differently, the relationship of vision, policies and strategies with urban space has remained missing. Instead of dealing with spatial demonstrations like schemes, strategic policy areas, development corridors and the effects of sectoral proposals on space; the Strategic Plan deals with vision, policies, strategies and usually projects that make the plan be realized. However, any kinds of suggestions about how the space takes what kind of form are not brought forward within the plan.

Strategic Plans have also started to resemble each other in Turkey. They have to contain strong spatial base, proposals and development patterns, thus these kinds of spatiality

concerns will make Strategic Plans differentiated, diversified and most importantly, practicable. Nevertheless, how this kind of Strategic Spatial Plan is prepared and what the general rules of it will be have to be exactly determined at first (Beyhan, 2008). In addition, the increased role of urban planner in Strategic Planning process is directly proportional with spatiality of the plan. Only the public administrators, politicians or representatives of non-governmental organizations cannot challenge spatial proposals, therefore the roles of urban planners have to be carefully considered within the process.



Source: Levend, 2008

Figure 8. Vision of İstanbul Corporate Strategic Plan 2007-2011

In İstanbul Corporate Strategic Plan 2007-2011 prepared by the Greater City Municipality of İstanbul, any spatial proposal cannot be seen to increase the practicability of the vision for İstanbul. There are only written policies and strategies in document (Figure 8). It has already the name of 'corporate Strategic Plan' –not spatial- which consists of "10 strategic service areas, 64 strategic aims, 190 strategic targets and 415 actions" in its policy document (İBB, 2006), but it most probably will remain as a written document without referring the urban space of İstanbul. Thus, what the kind of spatiality of Strategic Plans will be in Turkey remains still as a question in current practices.

4.2. Lack of Efficient Cooperation in the Process

Collaboration between stakeholders has a vital role in Strategic Spatial Planning, since main strategies and policies are constructed onto the efficiency of a participatory process. Efficient participation to the process for both the citizens and the institutions prevents the Strategic Plan to be an institutionally owned one in Turkey, because the ultimate target of Strategic Plan is providing public interest and efficient urban and sectoral development. Therefore, this

target can become realized in case of agreement on common ideas for the future of interested region.

In Turkey, the practice of Strategic Plan exists in both local government units of Municipalities and Special Provincial Administrations. Disconnectedness between both institutions results in two different Strategic Plans for the same territory rather than keeping together in one single Strategic Spatial Plan with an active participatory process. This results in difficulties in implementing the policies of the plan and damaging the targets of the plan. Consequently, cooperation rather than competition between stakeholders stands as a significant point for the efficiency of the plan.

5. New Model in Upper Scale Planning in Turkey: STRATEGIC 'SPATIAL' PLANNING

In recent decades, the significance of upper scale planning has increased in globalizing world, therefore increasing needs and expectations should be managed effectively and the impacts on urban space should be controlled by planning with upper scale visions, policies, strategies and spatial demonstrations in this new era. In this context, Turkey has experienced a dramatic articulation process to this new trend by emergence of two different upper scale planning called Strategic Plan without referring to urban space and Environment Plan with its inflexible planning approach by using classic land use planning logic. In this case, it can be mentioned that significant problems exist in these kinds of upper scale planning concepts and they are not practiced compatible with their ultimate aims (Table 2).

Table 2. Problems of Environment Plan and Strategic Plan in Turkey

Environment Plan	Strategic Plan
• Nonexistence in any other part of the world	• Lack of spatiality
• Vertical rather than horizontal hierarchy	• Ineffective participation
• Scale problem	
• Authority conflict for plan making	
• Confusion between NUTs 2 regions and Environment Plan regions	
• Traditional land use planning	
• Not schematic and flexible demonstration enough	
• Lack of strategic decision and existence as data bank	

In addition, existing planning perspective in Turkey can be criticized for the reasons of:

- being exceedingly technical,
- concentrating on physical dimension of development rather than social,
- remaining plans as only a written document and difficulties in implementation,
- not responding the needs emerging from the changes in the world.

Thus, the significance of Strategic Spatial Plans has increased that constitutes a flexible, short term, project oriented and easily adaptable to political and market pressures approach (Genç, 2008). In this context, upper scale planning in Turkey necessitates either strategic or spatial approaches instead of Environment Plan in order to be adapted to the changes in global world.

5.1. Results and Discussion: Creation of Strategic Spatial Planning Model and its Characteristics

This circumstance of complexity in upper scale planning reminds a question: can Environment Plan be combined to Strategic Plan to get a new planning type named Strategic Spatial Planning in Turkey? Initially, only the spatiality context of Environment Plan can be handled for the new model by formation of a more flexible content of it. Apart from that, other characteristics –mostly the problems- of Environment Plan are not compatible with the current understanding of upper scale planning, which means there is no reason to exist such type of a plan as if it represents upper scale. Then, another question may rise here: in that case, to what extend and how can both plans be combined? Strategic Planning in Turkey necessitates spatial context as mentioned before, therefore the spatiality context of Environment Plan is articulated to Strategic but non-spatial Plan, because the most contemporary and effective planning tool in current agenda can be seen as Strategic Spatial Planning and Turkey has to follow such changes in order not to stay stable rather than dynamic in terms of adaptation to the current developments (Figure 9).

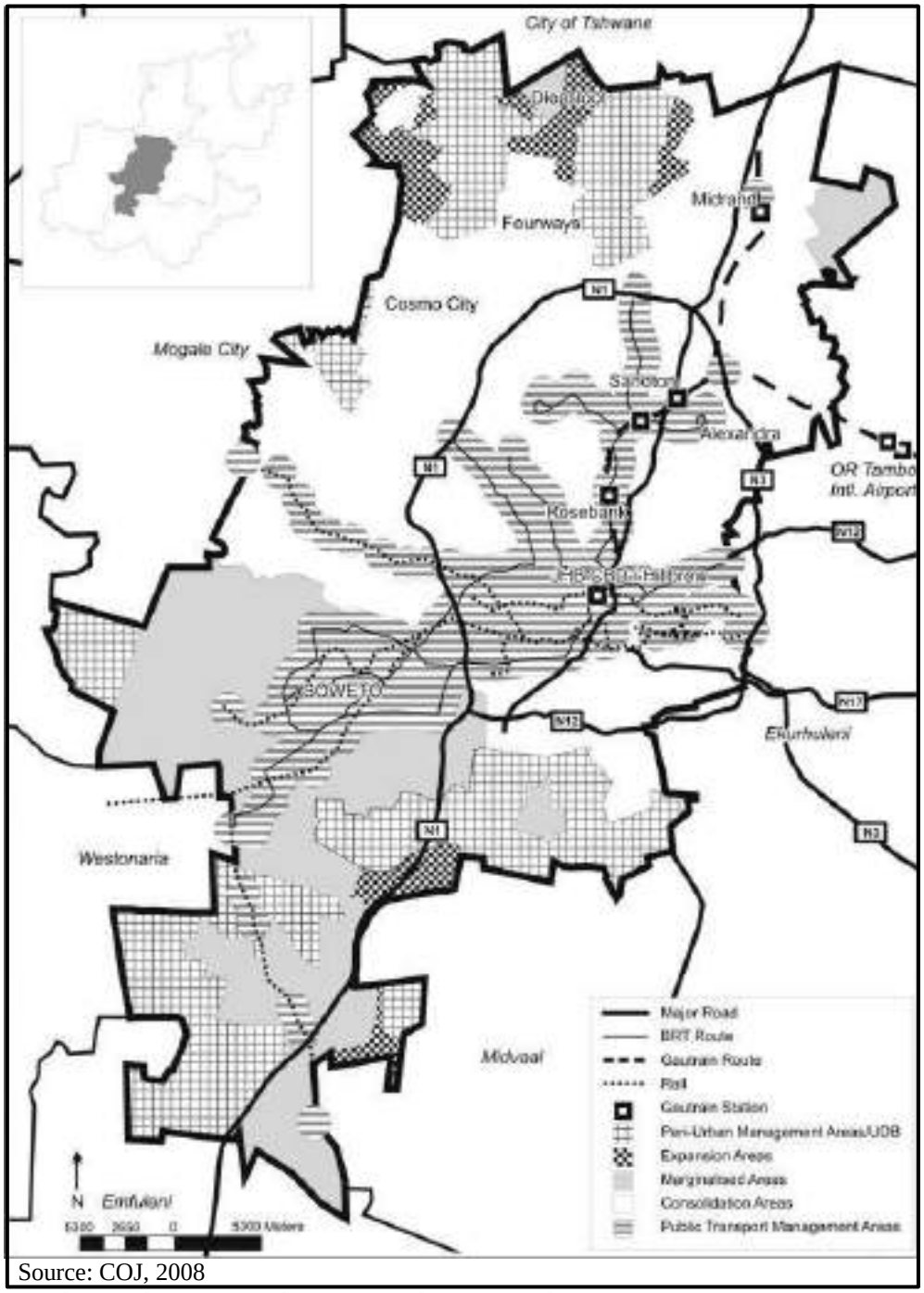
Figure 9. Creation of a New Strategic Spatial Planning Model in Turkey

At the top of its characteristics, bottom-to-top horizontal hierarchy in planning process is adopted. In Environment Plan, lack of participation and central dominance in plan making constitute an important part of its puzzle (Figure 2); instead of it, Strategic Spatial Plan will be prepared by the leadership of local governments' partnership with the participation of representatives from civil society including citizens and non-governmental organizations, central administration and private sector as stated in the concept of government to governance shift.

In this case, institutional cooperation will highly contribute to new model. Both Environment Plan and Strategic Plan processes in Turkey deprive of such kind of cooperation, and institutions are in competition between each other in plan making. Instead of preparing separate Strategic Plans by different administrative institutions, one unique Strategic Spatial Plan will be experienced for a definite region or province by coming together in the process participation of different institutional levels. In addition, the borders of the plan will also be flexible and the decisions of Regional Plans will have to be taken into account within the process of this collaborative environment.

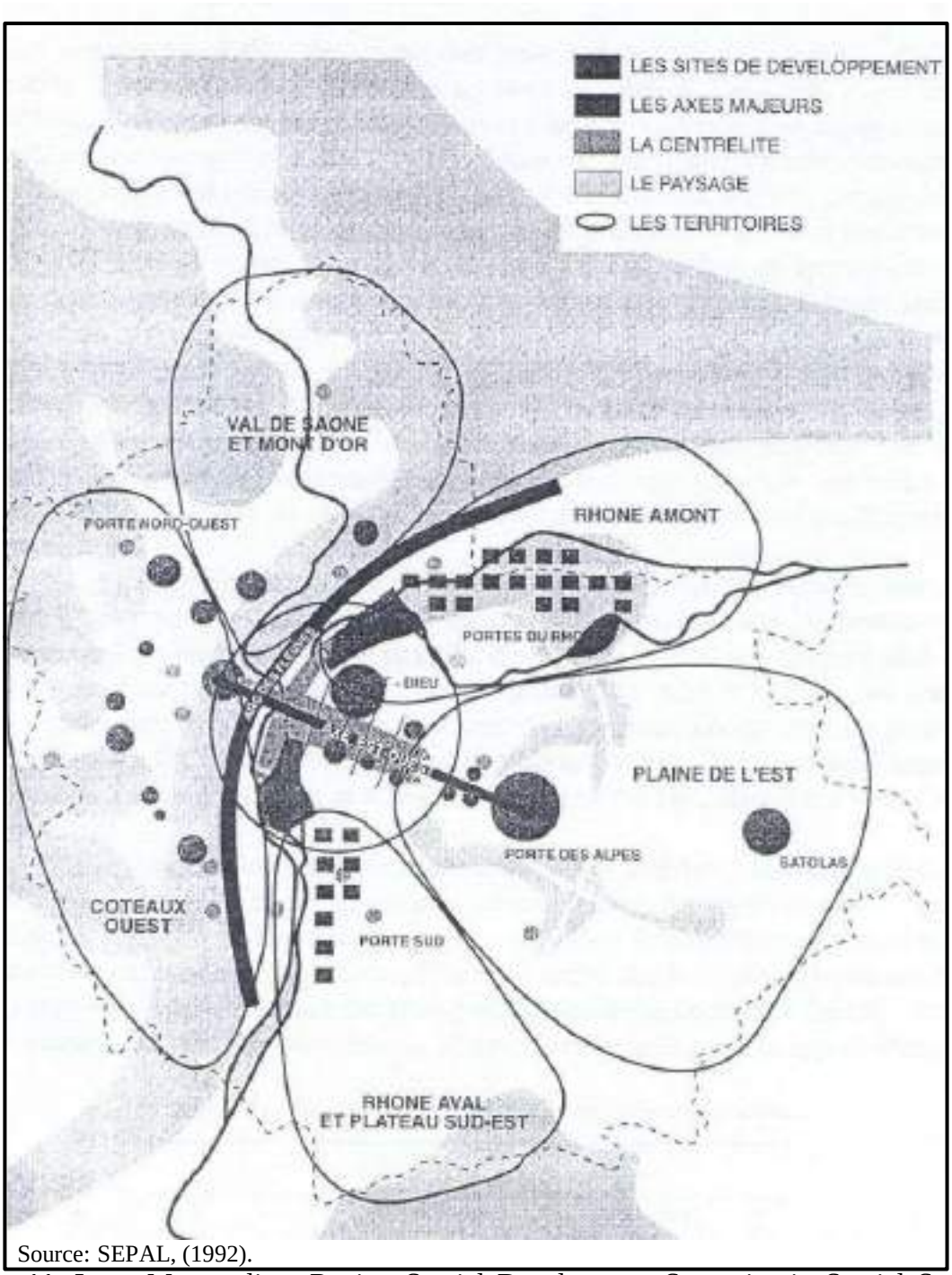
In Turkey, urban plans exist as having either highly a strict spatial structure or a non-spatial written policy document. This Strategic Spatial Plan model will be located in the middle of these patterns. For instance, Environment Plan decides even in sub-scale level and restricts other plans that have to be compatible with it. In this case, an abstract spatial content will exist in the new model of Strategic Spatial Planning which focuses on development corridors, strategic development areas, conservation of necessary fields, sectoral developments,

relationship with other provinces or countries in global scale etc. by using abstract demonstration techniques in a more general and flexible manner as seen in some examples from other countries (Figure 10 and Figure 11).



Source: COJ, 2008

Figure 10. Johannesburg Spatial Framework in Growth Management Strategy



Source: SEPAL, (1992).

Figure 11. Lyon Metropolitan Region Spatial Development Strategies in Spatial Strategic Plan

This kind of spatiality highly depends on the increased role of qualified urban planners by using their perception of space as a whole in Strategic Planning process to achieve efficient spatiality of the plan. In this case, the reason why spatiality is so important rises as a question. In fact, planning would be meaningless without implementation, and relationship of policies and strategies with space facilitates and enables realization of plans.

6. Conclusion

Turkish planning system has tried to be adapted to the changes in current upper scale planning developments in the world. Some parts of the reflection of this adaptation appeared as Environment Plan and Strategic Plan which represent upper scale strategies and policies. However, the problems highly affect the efficiency of plans and realization on urban space. In order to regulate urban development through the aims of public interest and providing increasing and diversifying service demand with limited resources, a new perspective in upper scale planning is needed as an advanced manner of Strategic Planning including spatial context.

Spatiality in Strategic Plan enables the realization of policies on urban space. Through this kind of relation with space, active participation of different kinds of stakeholders in decision making process of the plan can be practiced. As a result, a collaborative environment can be constituted and sub-scale Master and Development Plans can easily be referred to the Strategic Spatial Plans that make them more reasonable and most importantly applicable for urban space.

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DETERMINATION OF SEISMIC VULNERABILITIES AND RISKS FOR URBAN MITIGATION PLANNING IN TURKEY

Tuğçe SÖNMEZ[1]

Abstract

As the number of events and the losses from disasters are increasing worldwide, disaster reduction has become an increasingly important issue on the international agenda and the reduction of risks that are particularly concentrated in cities become the major objective and challenge of international disasters policy. As a result of this policy United Nations has established the International Strategy for Disaster Reduction in 2000, organized World Conferences on "Risk Reduction" in Yokohoma-1994, Toronto-2004, Kobe-2005 and announced 2010-2011 as the campaign years for 'Resilient Cities'. These conferences have extended and sharpened awareness about natural hazard risks and efforts of risk reduction on global agenda.

Chronic seismic hazards and resulting secondary impacts are due to the geological conditions of Turkey and the nature of current response mechanisms. Local know-how of building and settlement that evolved over centuries eroded with the growth in population, and the introduction of reinforced concrete building economics. This makes cities the most vulnerable geographical and social entities in Turkey. On the contrary, Turkish disaster policy has mainly focused on the post-disaster period and remains limited due to development of regulations that can not be fully implemented. No incentives or legislation existed to encourage risk analysis, risk mitigation or risk spreading approaches.

With this point of view, the aim of this research is to examine the factors that determine seismic vulnerabilities and risks of settlements and establish if analysis of seismic risks in cities and living environments could be determined on the basis of a set of attributes of the building stock. The scope is to exhibit and analytically compare such factors in settlements of Turkey. Quantitative information about a set of attributes of settlements is investigated statistically to determine which of the factors contribute most to risk levels described locally. Correlation and Regression analyses are employed to determine what combinations of the independent variables might best denote city-level risks. The seismic hazard maps of the Kandilli Observatory and Earthquake Research Institute and statistics published by the Turkish Statistical Institute, like census and housing data have a leading contribution to make. These secondary sources of information help to compose the database for a series of comparisons in the seismic vulnerabilities and risk levels of cities.

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This study is expected to provide information about the critically vulnerable assets in cities, whether this could be considered as a function of hazard-proneness. Otherwise, interpretations of the most effective attributes that could describe vulnerabilities best and be related to risk information in cities could be explored. Findings of such analysis could provide guiding criteria for mitigation policies in Turkey and the research may thus generate information for a more effective disaster policy.

1. Introduction

Over the past decade, countries across the world have witnessed thousands of major natural disasters that threaten the sustainability of cities, disrupting their resources and affecting millions of people through losses of life, serious injury and loss of assets and livelihoods. The number of reported natural disasters and their impact on human and economic development worldwide has been increasing yearly and shows a relentless upward movement. Considering that half of the world's population is expected to live in urban areas by 2020 and over three-quarters of the 100 largest cities are exposed to serious natural hazards, it is time to adopt a new approach and invest in pro-active disaster reduction strategies.

In recent years, there has been a major shift in peoples' attitudes and behaviors towards coping with natural disasters. In the past more emphasis was placed on humanitarian response and relief activities, with little attention being paid to disaster reduction that have the potential to save thousands of lives. Today, there is increasing recognition that while humanitarian efforts are important and need continued attention, risk and vulnerability are crucial elements in reducing the negative impacts of hazards and thus essential to the achievement of sustainable development.

The idea for conducting a global review of disaster reduction initiatives was born in the millennium, following the United Nations International Decade for Natural Disaster Reduction (IDNDR) 1990-1999. In 1999, UN decided to continue the activities on disaster prevention and vulnerability reduction carried out during the IDNDR. It thus established the International Strategy for Disaster Reduction (ISDR), which is supported by the scientific and technical expertise and knowledge accumulated during the IDNDR.

Following this idea, a series of declarations of interest and determination to reduce risks have taken place at the international context (Balamir, 2005). These are; World Conferences on "Risk Reduction" in Yokohoma-1994, Toronto-2004 and Kobe-2005 have extended and sharpened this awareness about natural hazard risks and efforts of risk reduction on global agenda.

The reduction of growing rates of risks that are particularly concentrated in cities today is the major objective and challenge of the national and international disasters policy. As recent international policy emphasis has focused on risks and mitigation, the issue of seismic vulnerabilities and risk assessment are the primary objectives of the study.

On the other hand, Report on Disaster Reduction prepared by the Republic of Turkey for the World Conference on Disaster Reduction in Kobe reveals that the approach in Turkey to risk assessment, risk reduction and risk mapping are deficient and remains limited due to development of regulations that can not be fully implemented.

With this point of view, the examination and prioritization of the risk and seismic risk concepts in Turkey with an overview of current understanding and the evolution of the subject from its academic and scientific beginnings to its political implications in the realm of sustainable development of today constitutes the starting point of the study.

1.1. The Aim, Objectives and Scope of the Study

The World Conference on Disaster Reduction in Kobe provided a unique opportunity to promote a strategic and systematic approach to determination and reducing seismic vulnerabilities and risks of settlements. It is a guiding framework on disaster reduction for the twenty-first century.

The Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters determined five priorities for action:

1. Ensure that disaster risk reduction is a national and a local priority,
2. Identify, assess and monitor disaster risks and enhance early warning,
3. Reduce the underlying risk factors,
4. Use knowledge, innovation and education to build a culture of safety and resilience,
5. Strengthen disaster preparedness for effective response at all levels.

The overall objective of this research is to evaluate how these priorities are served in Turkey especially; in the identification, assessment and monitoring of disaster risks, the reduction of the risk factors and the use of knowledge to build a culture of safety and resilience.

The major purpose of this research is to develop a method for the identification of vulnerabilities and prioritization of most vulnerable settlements in anticipation of earthquake related hazards.

With this purpose, the aim of this research is to examine the factors that determine seismic vulnerabilities and risks of settlements and establish if analysis of seismic risks in cities and living environments could be determined on the basis of a set of attributes of the building stock. The scope is to exhibit and analytically compare such factors in settlements of Turkey.

1.2. The Approach and Method of the Study

Quantitative information about a set of attributes of settlements is investigated statistically to determine which of the factors contribute most to risk levels described locally.

The seismic hazard maps of the Kandilli Observatory and Earthquake Research Institute (KOERI) and statistics published by the Turkish Statistical Institute (TurkStat), like census and housing data have a leading contribution to make. These secondary sources of information help to compose the database for a series of comparisons in the seismic vulnerabilities and risk levels of cities.

In the determination of seismic vulnerabilities and risks of settlements, “loss levels” in the building stock in each settlement will evaluate based on seismic hazard intensity via seismic hazard maps produced by KOERI and building stock vulnerability curves derived by Demircioglu (2010). Settlement level loss in the building stock is the basic indicator of assumed risk and provides the dependent variables of the research.

The independent variables of the research are composed of building inventory data and related attributes of building stock on each settlement obtained from TurkStat. ‘Building Construction Statistics’ and ‘Building Census’ prepared by Turkish Statistical Institute is used within this research. Independent variables of the research are; Settlement Population, Population Growth Rate, Rates of Agglomeration, Population/Total Number of Buildings and Development Index.

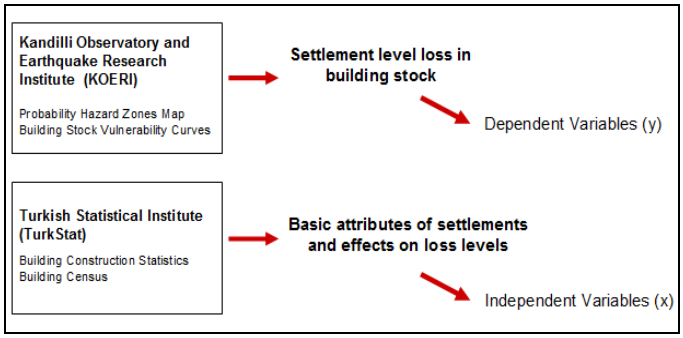


Figure 1. Dependent and Independent Variables of the Research

The study is expected to provide information about the critically vulnerable assets in cities, whether this could be considered as a function of hazard-proneness. Otherwise, interpretations of the most effective attributes that could describe vulnerabilities best and be related to risk information in cities could be explored.

Findings of such analysis could provide guiding criteria for mitigation policies in Turkey.

2. Loss Estimations and Determinants of Vulnerabilities in Settlements of Turkey

In order to determine and compare seismic vulnerabilities and risks in settlements of Turkey, statistical surveys and statistical analyses are used. Quantitative information about a set of attributes of settlements is investigated statistically to determine which of the factors contribute most to risk levels described locally.

Settlement level loss in the building stock is the basic indicator of assumed risk and provides the dependent variables of the research. The independent variables of the research are composed of building inventory data and related attributes of building stock on each settlement obtained from TurkStat.

The basic question of the research is: "How do loss levels in building stock correlate to independent variables?" and regression analyses are used to examine this question.

2.1. Loss Levels in Building Stock as Dependent Variables of the Research

Risk in settlement units is defined as a function of material loss in the building stock with respect to the expected seismic event. It is assumed that loss in the building stock in each settlement can be used as a proxy to express the comparative loss of human life, economic loss, damages in infrastructural systems, as well as secondary and indirect levels of losses in the settlement.

Therefore, settlement level loss in the building stock is the basic indicator of assumed risk and provides the dependent variables of the research.

Y1 = Loss Levels in Building Stock

Determination of Settlement level loss in the building stock has been realized by the following steps:

1. Assessment of the probabilistic seismic hazard, and production of Settlements in Hazard Zones Map (72-years; 50% probability),
2. Determination of Settlement Categories According to Size,
3. Identification of Categories of Building Types in Each Settlement,
4. Determination of Loss Levels of Each Building Category with Reference to Vulnerability Curves,
5. Identification of Loss Levels (Risks) Aggregated at Settlement Level

Following above described procedure, identification of most vulnerable settlements in each size-category and 'provinces with high-risk' are accomplished.

1. Assessment of the probabilistic seismic hazard and production of Settlements in Hazard Zones Map

The intensity distribution for 72 years period and %50 probability map produced by Erdik (2002) used in the assessment of the probability seismic hazard and production of Settlements in Hazard Zones Map.

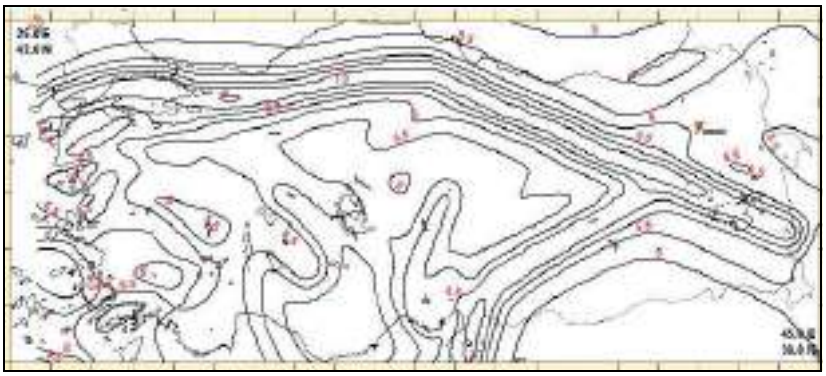


Figure 2. Intensity distribution for 72 years and %50 probability (Erdik, 2002)

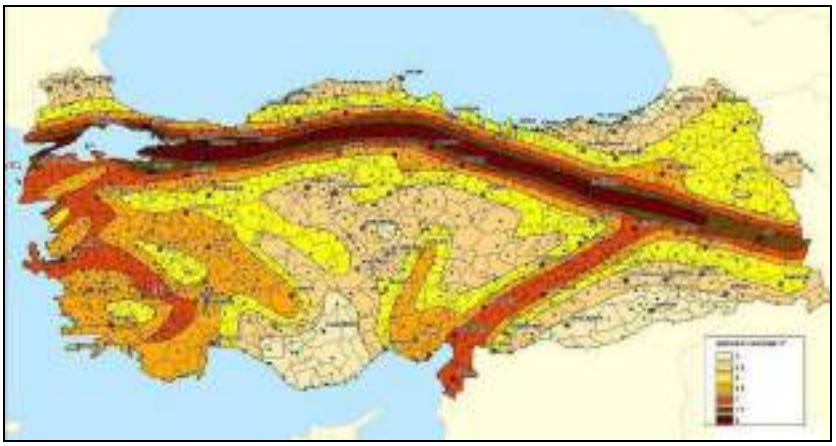


Figure 3. Spatial distribution of 72-year return period intensity and 50% probability

When we examine the distribution of settlements with reference to all seismic intensity levels, we saw that 45% of settlements are subject to intensities lower than 6.0 and 55% of settlements in the country is subject to intensities 6.5 and upper.

Table 1. The distribution of province and sub-province centers with reference to all seismic intensity levels according to number of settlements

Settlement Size Categories	Settlements Subject to Intensity of **5.0**	Settlements Subject to Intensity of **5.5**	Settlements Subject to Intensity of **6**	Settlements Subject to Intensity of **6.5**	Settlements Subject to Intensity of **7**	Settlements Subject to Intensity of **7.5**	Settlements Subject to Intensity of **8**
0- 50.000	43	142	160	154	108	32	38
50.000-490.000	13	21	24	35	22	4	5
Metropolitan p.	0	2	5	22	19	43	16
Total	56	165	189	211	149	79	59
Total %	6	18	21	23	17	9	6

All settlements with an expected hazard intensity level of 6.0 and less are excluded from the analyses assuming that insignificant damage is likely to take place in these settlements.

2. Determination of Settlement Categories According to Size

If absolute vulnerabilities are measured in terms of likely loss levels, a bias for larger settlements and developed regions is inevitable. In order to avoid bias in favour of larger settlements and developed regions, a method of sub-grouping is to be employed. Therefore, it may be appropriate to categorize the hazard-exposed settlements in terms of population size and a categorization of settlements with reference to population is considered as an initial step of the research.

Three groups of settlements are considered according to categorization of settlements with reference to population.

i- Metropolitan cities are identified as a separate category at the upper end. Irrespective of size and location, such province and sub-province centers are considered as a single settlement unit.

The remaining smaller cities are distinguished in two parts, almost identical in terms of total population. This marks the threshold size of 50.000.

ii- Sub-provincial and provincial centers of 50’000-500’000 are identified as a second category of settlements. These are often well-established settlements with higher rates of growth and expanding economies.

iii- Smaller sub-provincial and provincial centers with a population less than 50’000 make the third group of urban centers. These are relatively stagnant settlements.

The frequency distributions of province and sub-province centers subject to seismic disturbance of 6.5+ within 72 years with a probability of 50% are given below in terms of total population. The break-point of 50’000 is indicated in red.

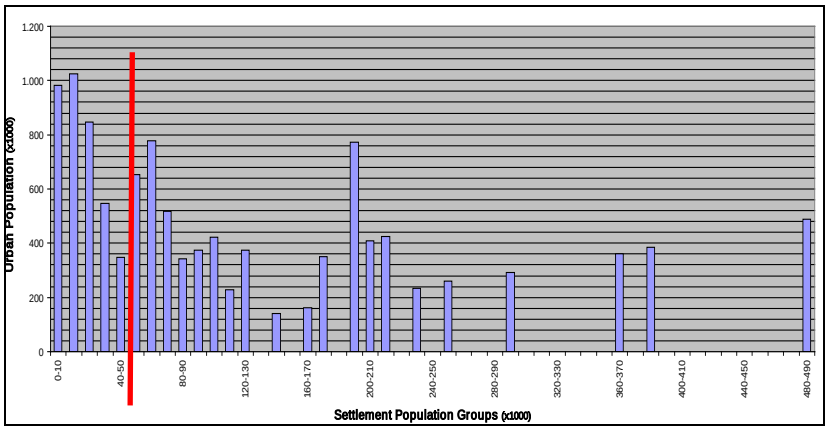


Figure 4. The frequency distributions according to population

The distributions of settlements within each size-category are given below.

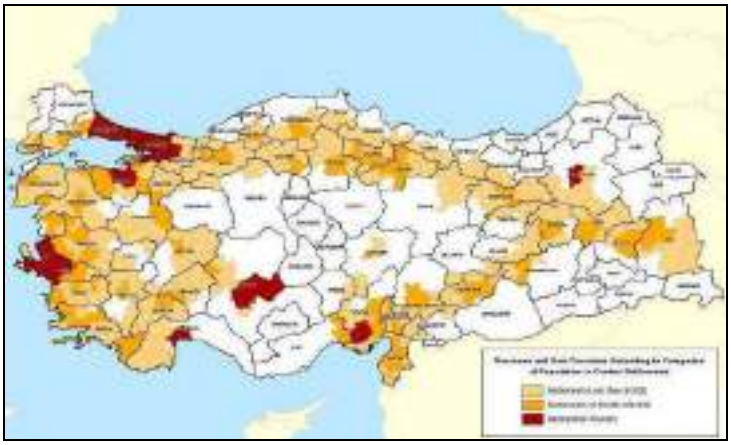


Figure 5. Spatial Distribution of Settlement Categories

When we examine the population distribution of settlements with reference to all seismic intensity levels, we saw that 35 % of all urban population live in settlements subject to intensities lower than 6.0. 65% of urban population lives in settlements subject to intensities 6.5 and upper. As 6.5+ intensities can be classified as the high hazard impact zone, we can easily say that approximately two third of all population lives under serious threat.

Table 2. The distribution of province and sub-province centers with reference to all seismic intensity levels according to total population

Settlement Size Categories	Settlements Subject to Intensity of **5.0**	Settlements Subject to Intensity of **5.5**	Settlements Subject to Intensity of **6**	Settlements Subject to Intensity of **6.5**	Settlements Subject to Intensity of **7**	Settlements Subject to Intensity of **7.5**	Settlements Subject to Intensity of **8**
0- 50.000	578.088	1.256.877	1.520.341	1.780.609	1.213.371	302.697	451.537
50.000-490.000	1.671.998	2.360.181	2.818.789	4.339.446	2.538.841	678.810	415.451
Metropolitan p.	0	5.140.959	4.067.916	4.216.666	3.137.913	14.466.195	1.841.525
Total	2.250.086	8.758.017	8.406.916	10.336.721	6.890.125	15.447.702	2.708.513
Total %	4	16	15	19	13	28	5

Distribution of settlement categories indicates significant variation with reference to intensity of seismic hazard. Almost half of the smaller settlements prove take place at the lowest end of the seismic scale under consideration. This is reversed in the case of metropolitan centers. This trend is observed to repeat itself with even greater shares in terms of population.

3. Identification of Categories of Building Types in Each Settlement

Information concerning building stock properties in each settlement is obtained from Building Census-2000 produced by TurkStat. The publication however of this source of information was not aggregated at the settlement level. A special disaggregated version of the building census 2000 at the level of settlements was accessed for this research.

Following the categorization of the building stock provided in Demircioğlu (2010), four distinct groups of buildings have been identified. Load-bearing buildings, reinforced concrete structures of low-rise, medium-rise, and high-rise building categories are available in terms of number of buildings in each settlement. Apart from 'construction type', the Census of year 2000 contains information on 'number of storeys', 'construction date', and 'use' for every settlement.

Table 3. Building stock categories of settlements according to construction type and number of storeys

Settlement Size Categories	**Wall Bearing Construction (1-3 storeys)**	**Frame Construction Low- Rise (1-3)**	**Frame Construction Mid–Rise (4-9)**	**Frame Construction High–Rise (10+)**
0-50.000	440.905	341.875	54.309	80
50.000 – 500.000	482.844	357.630	128.564	619
Metropolitan provinces	655.200	899.892	541.888	10.862
Total	1.578.949	1.599.397	724.761	11.561

4. Determination of Loss Levels of Each Building Category with Reference to Vulnerability Curves

Fragility (vulnerability) curves for each category of the building stock in Turkey, as empirically derived in Demircioğlu (2010) are employed here to determine the likely loss levels/risks in settlements. According to this procedure, each of the four categories of the building stock in every settlement is separately evaluated in their likely response to the estimated intensity of shake. As a statistical distribution, specific levels of loss from each category of the building stock can be determined by means of the fragility curves.

These curves are devoted for low-rise reinforced concrete buildings, as well as mid-rise and high-rise reinforced concrete buildings. The vulnerability curve of the 'load-bearing' category is assumed to approximate with the low-rise RC type of buildings.

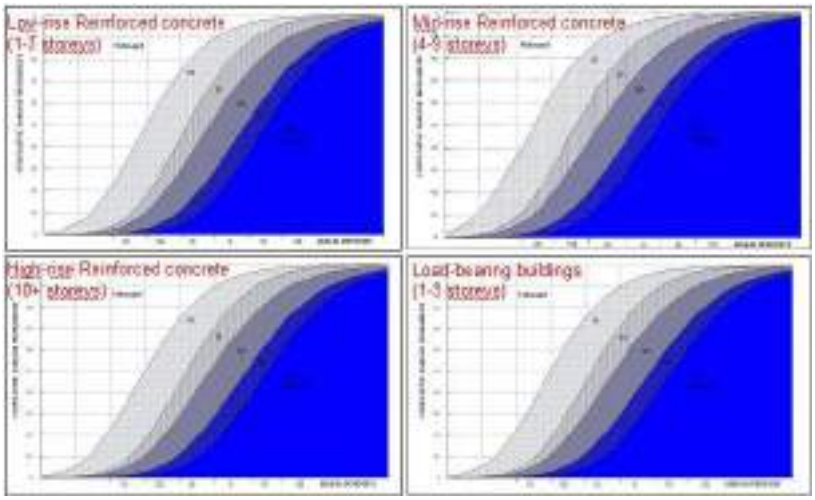


Figure 6. Intensity based vulnerability curves (Demircioğlu, 2010)

Using definitions from MSK-81 Scale, Coburn and Spence (1992) associates damage grades as D1-Slight, D2-Moderate, D3-Heavy, D4-Partial Destruction and D5-Collapse. Damage levels encompassing damages D3, D4 and D5 is an important descriptor of the earthquake damage since D3 represents an approximate borderline between repair and replacement of the building stock exposed to an earthquake.

With reference to the seismic hazard intensity that any settlement is likely to experience, total loss in building stock with its various types and categories are estimated in each group of settlements relying on the vulnerability curves of each building type. The approximate ratios of loss according to seismic intensity and level of damage in each category are observed as given in Table 4 below.

Table 4. Coefficients of likely forms of loss in the building stock of settlements subject to varying levels of seismic intensity

Seismic Intensity	D1 Slight Damage	D2 Medium Damage	D3 Heavy Damage	D4 Partial Collapse	5 Collapse
Low – Rise & Load-Bearing:					
6.5	0.12	0.02	0.01	0	0
7	0.22	0.04	0.03	0	0
7.5	0.37	0.10	0.05	0.01	0
8	0.50	0.18	0.11	0.0.3	0.01
Mid – Rise:					
6.5	0.26	0.05	0.03	0	0
7	0.40	0.12	0.05	0.01	0
7.5	0.52	0.20	0.11	0.03	0.01
8	0.65	0.32	0.19	0.05	0.03
High – Rise:					
6.5	0.12	0.01	0	0	0
7	0.22	0.03	0.02	0	0
7.5	0.36	0.09	0.05	0.01	0
8	0.50	0.18	0.11	0.02	0.01

Number of buildings lost is determined by the combined levels of loss, which means adding up the three categories of the most severe forms of damage in buildings. These are “heavy damage” (D3), “partial collapse” (D4), and “total collapse” (D5) as identified in the building vulnerability curves for each ‘type’ of building.

This level of loss can be expressed in absolute terms (total number of buildings lost), or in relative terms as a ratio of loss from the total building stock. It is then possible to have priority lists in each category of settlement-size in absolute and relative terms.

5. Identification of Loss Levels/Risks Aggregated at Settlement Level

Following above described procedure, identification of most vulnerable settlements in each size-category and ‘provinces with high-risk’ are accomplished. A list of the provinces from the one with the highest risk to the one with the lowest is completed.

The top-10 settlements of the complete list in each size category according to absolute loss levels (Table 5, Table 6, Table 7) and the spatial distribution figures of settlements according to absolute loss and rates of loss is given below (Figure 7, Figure 8).

Table 5. The Top-10 Settlements for Category I According to Absolute Loss Levels

CATEGORY I 0-50.000	Sub-Province	Intensity	Absolute Loss	Total Building	Loss Rate	Sub-Province Population (2009)
TOKAT	NIKSAR	8	1400	8343	0,17	64.930
KASTAMONU	TOSYA	8	1364	8575	0,16	40.894
SAKARYA	HENDEK	8	869	4969	0,17	74.084
CORUM	OSMANCIK	8	786	5037	0,16	45.080
SAMSUN	HAVZA	8	735	4620	0,16	45.933
TEKIRDAG	SARKOY	8	712	4059	0,18	30.248
SAKARYA	AKYAZI	8	681	3668	0,19	83.220
AMASYA	SULUOVA	7,5	633	9653	0,07	47.448
ERZINCAN	UZUMLU	8	631	4187	0,15	15.960
BOLU	GEREDE	8	583	3439	0,17	34.665
Group Average			**96**	**2540**	**0.04**	**27.276**

In the small-sized group of settlements, greatest loss is observed as in the table above, exhibiting the number of building loss. The top 10 of the settlements listed here are significantly above the category averages in terms of total loss, total number of buildings, rates of loss and settlement population.

Table 6. The top-10 Settlements for Category II According to Absolute Loss Levels

CATEGORY II 50.000-490.000	Sub-Province	Intensity	Absolute Loss	Total Building	Loss Rate	Sub-Province Population (2009)
VAN	CENTRAL	7,5	2285	36235	0,06	360.810
ERZINCAN	CENTRAL	8	2025	12678	0,16	90.100
BOLU	CENTRAL	8	1841	10516	0,18	120.021
YALOVA	CENTRAL	8	1507	8302	0,18	92.166
TEKIRDAG	CENTRAL	7,5	1347	15683	0,09	140.535
TOKAT	ERBAA	8	1251	7895	0,16	58.845
BURSA	ORHANGAZİ	8	945	5313	0,18	54.319
MANISA	CENTRAL	7	919	24785	0,04	291.374
OSMANIYE	CENTRAL	7	905	29408	0,03	194.339
HATAY	ANTAKYA	7	768	23471	0,03	202.216
Group Average			**454**	**14743**	**0,03**	**120796**

In contrast to the previous category of settlements, many cases here prove high levels of absolute loss determined less dependently on strength of seismic shake.

There are variations in seismic intensity levels and rates of loss. Apart from a very few of the cases here, rates of loss seem to be lower than observed in the previous category.

Ordering seems to follow seismic intensities rather than absolute size of the building stock in metropolitan provinces.

Table 7. Metropolitan Provinces According to Absolute Loss Levels

CATEGORY III Metropolitan Provinces	Sub-Province	Intensity	Absolute Loss	Total Building	Loss Rate	Sub-Province Population (2009)
ISTANBUL	ISTANBUL (M)	7,5	83824	864540	0,10	10.149.637
KOCAELI	KOCAELI (M)	8	24077	139423	0,17	970.642
BURSA	BURSA (M)	7,5	16506	204907	0,08	1.515.911
IZMIR	IZMIR (M)	7	14531	421397	0,03	2.885.314
SAKARYA	SAKARYA (M)	8	8070	49609	0,16	490.560
ADANA	ADANA (M)	6,5	1913	175697	0,01	1.303.082
ANTALYA	ANTALYA (M)	6,5	1402	114998	0,01	603.190
KONYA	KONYA (M)	6,5	1355	113267	0,01	742.690
ERZURUM	ERZURUM (M)	6,5	439	32458	0,01	114.508

Figure 7. Absolute Loss Distributions

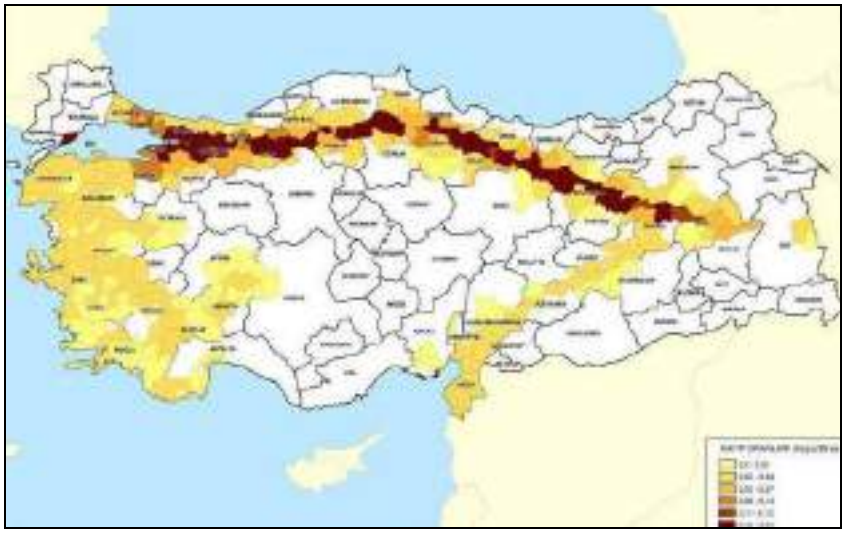


Figure 8. Loss Rate Distributions

2.2 Population-Building Stock Attributes as Independent Variables of the Research

The independent variables of the research are composed of building inventory data and related attributes of building stock on each settlement obtained from Turkish Statistical Institute. 'Building Construction Statistics' and 'Building Census' prepared by TurkStat is used within this research.

Independent variables of the research are;

X1 = Settlement Population
X2 = Population Growth Rate (‰)
X3 = Rates of Agglomeration
X4 = Population/Total Number of Buildings
X5 = Development Index

X1=Settlement Population

We can consider that as the settlement population increases, building densities will increase also and this will increase the potential loss. Besides larger settlements in general have higher index of development implying greater likelihood of direct and indirect economic loss. So, we can say that larger the settlement population, greater is the risk.

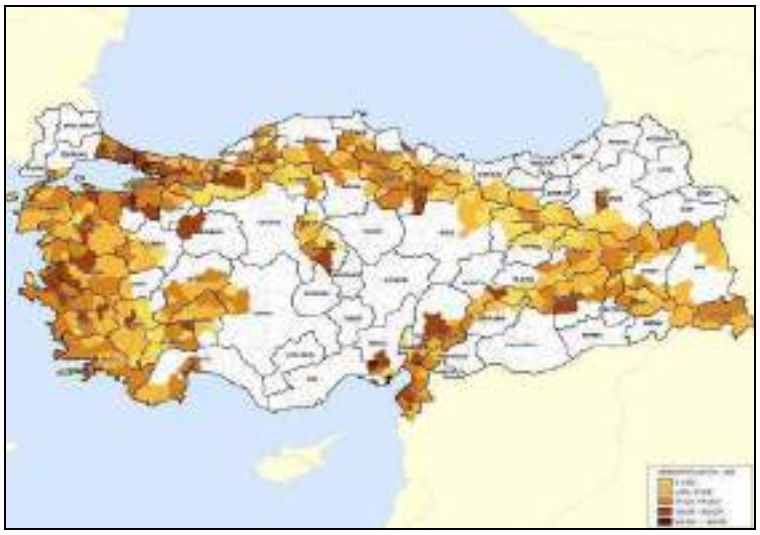


Figure 9. Urban Population Distributions

X2=Population Growth Rate

We can consider that as the rate of growth increases, control deficiencies will increase and this will increase the potential loss.

According to the Table 8; The smaller settlements in the average are either losing population or are stagnant. On the contrary larger cities and metropolitan cities are significantly growing and at the same pace.

Table 8.Average Values of Population Growth Rates in Settlements Categories

AVERAGE VALUES	Total Number of Buildings	Settlement Population (2000)	Total Population (2000)	Settlement Population (2009)	Total Population (2009)	Population Growth Rate (Log-%)
0-50.000	2540	12.292	32.033	11.290	27.276	-0,945
50.000-490.000	14.743	96.999	152.395	120.796	169.592	2,438
Metropolitan P.	235.144	2.086.170	187.9779	2.629.144	2.697.045	2,570

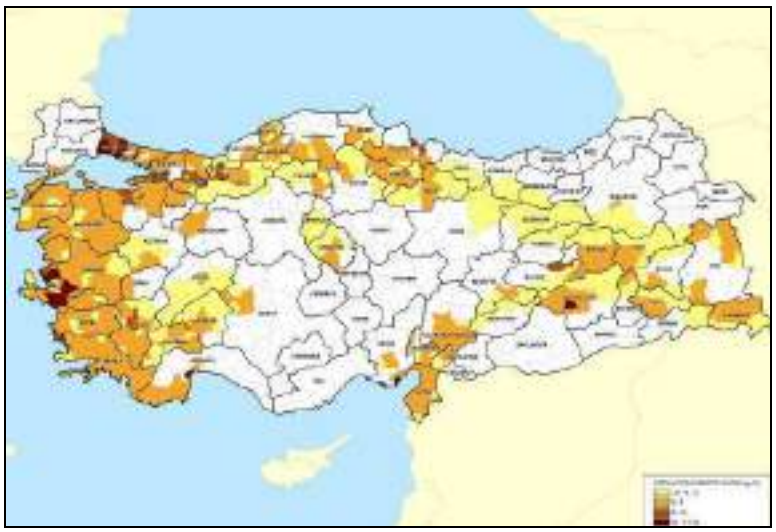


Figure 10. Population Growth Rates

X3=Rates of Agglomeration

Distinct rates of agglomeration are also a good indicator of how rural/urban natures of the sub-province or province differ. We can consider that as the rate of agglomeration increases, required urban services will increase and this will increase the potential loss.

According to the Table 9; Metropolitan settlements seem to have absorbed almost all of the population. However in provinces with smaller central settlements, greater parts of population live in the rural area.

Table 9. Average Values of Agglomeration Rates in Settlements Categories

AVERAGE VALUES	Total Number of Buildings	Settlement Population (2000)	Total Population (2000)	Settlement Population (2009)	Total Population (2009)	Rate of Agglomeration
0-50.000	2540	12.292	32.033	11.290	27.276	0,41
50.000-490.000	14.743	96.999	152.395	120.796	169.592	0,71
Metropolitan P.	235.144	2.086.170	187.9779	2.629.144	2.697.045	0,97

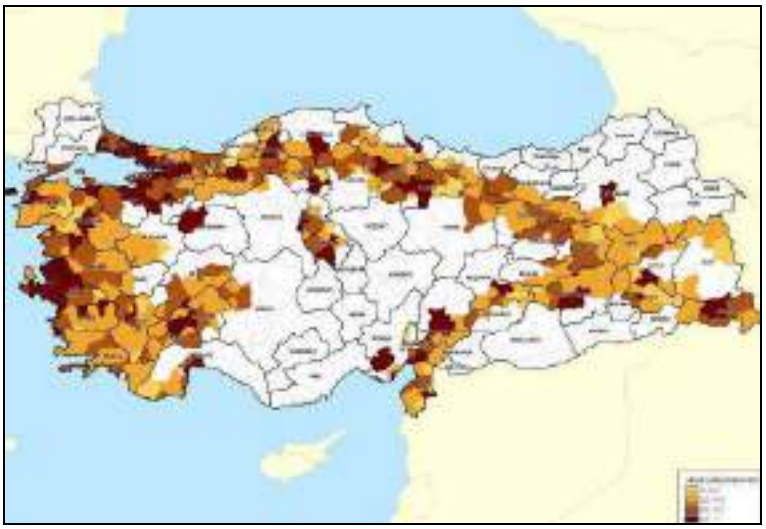


Figure 11. Urban Agglomeration

X4=Population/Total Number of Buildings

Average population density per building is significantly different in the categories identified. This is also a measure or indication of the increasing rate of human life losses in larger cities, another factor to reinforce the probable bias favoring larger settlements.

Table 10. Population Density in Settlement Categories

Settlement Size Categories	Population (2000)	Total Number of Buildings	Population / Building
0-50.000	4.080.822	843.188	4,84
50.000-490.000	6.401.962	973.014	6,58
Metropolitan provinces	18.775.534	2.116.296	8,87
Total	29.258.318	3.932.498	7.44

X5=Development Index

Socio-economic Development Index prepared by State Planning Organization covers demography, employment, education, infrastructure, construction and other welfare indicators.

The group of settlements with lower levels of population than 50.000 has a negative average development index of (-0.171). The average development index of category of 50.000-490.000 is 1.096. The average development index available for the third group representing metropolitan settlements is distinctly higher 5.73946 (Adana, Bursa and Konya only). This index is obviously higher for Istanbul, Ankara, and Izmir to increase the average further.

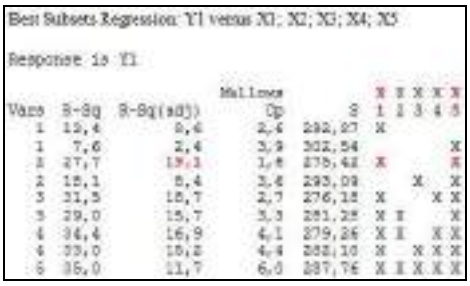
3. Evaluation of Risk Prioritization Variables of the Research

Dependent and independent variables of the research are determined as shown above. Best subsets regression analyses are employed to determine what combinations of the independent variables might best denote city-level risks. The results of the best subsets analyses should give us the "most appropriate combination" for the regression analyses.

3.1. Best Subsets Regression Analyses

Best Subsets Regression Analyses – Category I (0-50.000)

The first best subsets regression analyses is employed between the first dependent variable Y1 (absolute loss) and independent variables (X1, X2, X3, X4, X5) in order to see which independent variable is more related with Y1. In best subsets regression analyses the more related variable is the one that have the biggest number of R-Sq (adj.). According to the Figure 12 the biggest R-Sq (adj.) is 19, 1% in the third line and this means that the most related variables with Y1 is X1 and X5.

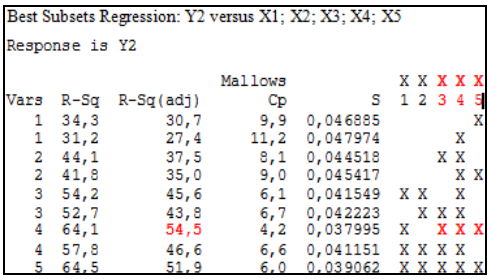

Best Subsets Regression: Y1 versus X1; X2; X3; X4; X5

Response is Y1

Vars	R-Sq	R-Sq(adj)	Mallows Cp	S	X1	X2	X3	X4	X5
1	15,4	8,6	2,6	282,87	X				
1	7,6	2,4	5,9	302,54					X
2	27,7	19,1	1,8	275,42	X				X
2	15,1	8,4	3,6	293,09			X		X
3	31,5	18,7	2,7	276,18	X			X	X
3	29,0	15,7	3,3	281,29	X	X			X
4	34,4	16,9	4,1	279,26	X	X		X	X
4	33,0	15,2	4,4	282,10	X		X	X	X
5	35,0	11,7	6,0	287,76	X	X	X	X	X

Figure 12. Best Subsets Regression: Y1 versus x1; x2; x3; x4; x5

The second best subsets regression analysis is employed between the second dependent variable Y2 (rate of loss) and independent variables, Figure 13 shows us that the biggest R-Sq (adj.) is 54,5% and this means that the most related variables with Y2 is X3, X4 and X5.


Best Subsets Regression: Y2 versus X1; X2; X3; X4; X5

Response is Y2

Vars	R-Sq	R-Sq(adj)	Mallows Cp	S	X1	X2	X3	X4	X5
1	34,3	30,7	9,9	0,046885					X
1	31,2	27,4	11,2	0,047974			X		
2	44,1	37,5	8,1	0,044518			X	X	
2	41,8	35,0	9,0	0,045417				X	X
3	54,2	45,6	6,1	0,041549	X	X		X	
3	52,7	43,8	6,7	0,042223		X	X	X	
4	64,1	54,5	4,2	0,037995	X		X	X	X
4	57,8	46,6	6,6	0,041151	X	X	X	X	
5	64,5	51,9	6,0	0,039062	X	X	X	X	X

Figure 13. Best Subsets Regression: Y2 versus x1; x2; x3; x4; x5

Five regression analyses are performed according to the results of best subsets regression analyses for the Category I (0-50.000). These are;
Regression Analysis: Y1 versus X1, Y1 versus X5, Y2 versus X3, Y2 versus X4 and Y2 versus X5.

Best Subsets Regression Analyses – Category II (50.000-490.000)

Best subsets regression analyses is employed between the Y1 (absolute loss) and other independent variables. According to the Figure 14 the biggest R-Sq (adj.) is 19,3 % and this means that the most related variables with Y1 is X2 and X4.

Best Subsets Regression: Y1 versus X1; X2; X3; X4; X5

Response is Y1

			Mallows		X	X	X	X	X
Vars	R-Sq	R-Sq(adj)	Cp	S	1	2	3	4	5
1	22,4	18,0	0,1	488,91				X	
1	7,3	2,2	3,2	534,07		X			
2	27,8	19,3	1,0	485,11		X		X	
2	27,6	19,1	1,0	485,88				X	X
3	30,1	17,0	2,5	491,99			X	X	X
3	29,8	16,6	2,6	493,19		X		X	X
4	31,9	13,7	4,1	501,71		X	X	X	X
4	31,2	12,9	4,3	504,14	X	X		X	X
5	32,6	8,5	6,0	516,65	X	X	X	X	X

Figure 14. Best Subsets Regression: Y1 versus x1; x2; x3; x4; x5

The second best subsets a regression analysis is employed between Y2 (rate of loss) and other independent variables, Figure 15 shows us that the biggest R-Sq (adj.) is 45, 8 and this means that the most related variables with Y2 is X_1 and X4.

Best Subsets Regression: Y2 versus X1; X2; X3; X4; X5

Response is Y2

			Mallows		X	X	X	X	X
Vars	R-Sq	R-Sq(adj)	Cp	S	1	2	3	4	5
1	25,6	21,5	6,7	0,053812	X				
1	16,3	11,7	9,6	0,057075				X	
2	51,5	45,8	0,8	0,044715	X			X	
2	30,1	21,8	7,4	0,053701	X				X
3	53,1	44,3	2,4	0,045351	X		X	X	
3	52,6	43,7	2,5	0,045585	X	X		X	
4	54,2	42,0	4,0	0,046251	X	X	X	X	
4	53,2	40,7	4,3	0,046775	X		X	X	X
5	54,2	37,9	6,0	0,047874	X	X	X	X	X

Figure 15. Best Subsets Regression: Y2 versus x1; x2; x3; x4; x5

Four regression analyses are performed according to the results of best subsets regression analyses for the Category II (50.000-490.000). These are;
Regression Analysis: Y1 versus X2, Y1 versus X4, Y2 versus X1 and Y2 versus X4.

Best Subsets Regression Analyses – Category III (Metropolitan provinces)

Best subsets regression analyses is employed between Y1 (absolute loss) and other independent variables. According to the Figure 16 the biggest R-Sq (adj.) is 95, 5% and this means that the most related variables with Y1 is X1, X3 and X4.

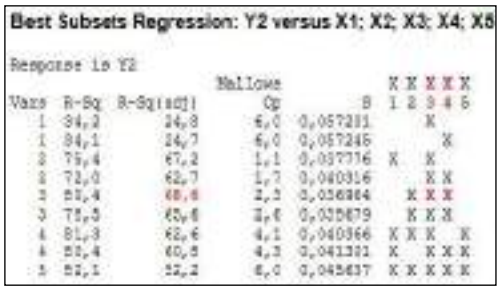
Best Subsets Regression: Y1 versus X1; X2; X3; X4; X5

Response is Y1

			Mallows		X	X	X	X	X
Vars	R-Sq	R-Sq(adj)	Cp	S	1	2	3	4	5
1	92,2	91,1	5,7	7871,2	X				
1	55,4	49,0	56,6	18873				X	
2	96,1	94,8	2,4	6040,9	X		X		
2	93,2	90,9	6,4	7960,2	X			X	
3	96,5	94,4	3,9	6278,2	X	X	X		
3	96,4	94,3	3,9	6327,2	X		X		X
4	97,8	95,5	4,1	5579,2	X		X	X	
4	97,5	95,0	4,5	5917,6	X		X	X	X
5	97,8	94,2	6,0	6364,5	X	X	X	X	X

Figure 16. Best Subsets Regression: Y1 versus x1; x2; x3; x4; x5

The second best subsets regression analysis is employed between Y2 (rate of loss) and other independent variables, Figure 17 shows us that the biggest R-Sq (adj.) is 68, 6% and this means that the most related variables with Y2 is X3 and X4.



Best Subsets Regression: Y2 versus X1; X2; X3; X4; X5

Response is Y2

Vars	R-Sq	R-Sq(adj)	Mallows Cp	S	X1	X2	X3	X4	X5
1	34,2	24,8	6,0	0,057231			X		
1	34,1	24,7	6,0	0,057245				X	
2	75,4	67,2	1,1	0,037716	X		X		
2	72,0	62,7	1,7	0,040916			X	X	
3	81,4	68,6	2,1	0,036864		X	X	X	
3	78,5	65,6	2,6	0,039879			X	X	X
4	81,3	62,6	4,1	0,040966	X	X	X		X
4	81,4	60,5	4,3	0,041321	X		X	X	X
5	81,1	52,2	6,0	0,045837	X	X	X	X	X

Figure 17. Best Subsets Regression: Y2 versus x1; x2; x3; x4; x5

Five regression analyses are performed according to the results of best subsets regression analyses for the Category III (Metropolitan Provinces). These are;
Regression Analysis: Y1 versus X1, Y1 versus X3, Y1 versus X4, Y2 versus X3 and Y2 versus X4.

3.2. Analyses by Means of Regression Methods

Analyses by Means of Regression Methods – Category I (0-50.000)

Five regression analyses are performed according to the results of best subsets regression analyses for the I. Category (0-50.000). These are;
Regression Analysis: Y1 versus X1, Y1 versus X5, Y2 versus X3, Y2 versus X4 and Y2 versus X5.

Regression Analysis 1:

Regression Analysis 1 is performed with Y1 (absolute loss) and X1(settlement population). In regression analyses in order to say that there is a relation between variables, the R-Sq (adj.) must be minimum 64%. As shown in the Figure 18, the R-Sq (adj.) is 8, 6%. This ratio is insufficient to verify the relationship between Y1 and X1, so we can say that there is a **no relation** between the regression equations of Y1 versus X1.

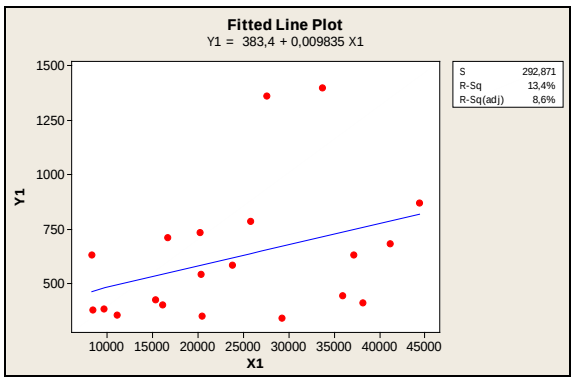


Figure 18. Regression Analysis 1: Y1 versus X1

Regression Analysis 2:

Regression Analysis 2 is performed with Y1 (absolute loss) and X5 (development index). As shown in the Figure 19, the R-Sq (adj.) is 2, 4%. This ratio is insufficient to verify the relationship between Y1 and X5, so we can say that there is a **no relation** between the regression equations of Y1 versus X5.

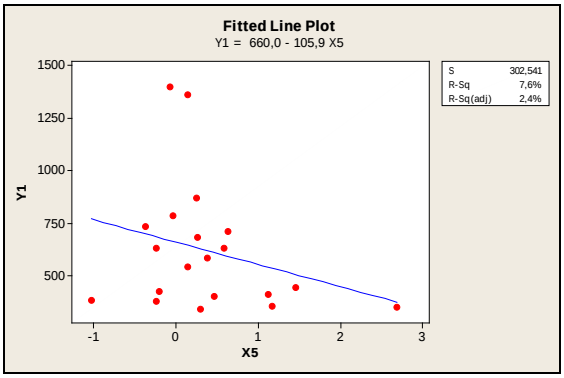


Figure 19. Regression Analysis 2: Y1 versus X5

Regression Analysis 3:

Regression Analysis 3 is performed with Y2 (rate of loss) and X3 (rates of agglomeration). As shown in the Figure 20, the R-Sq (adj.) is 21, 9%. Although this ratio isn't sufficient enough to verify the relationship between Y2 and X3, we can say that there is a **weak relation** between the rate of loss and the rate of agglomeration.

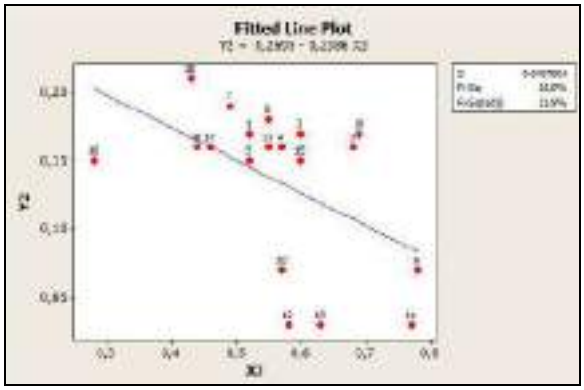


Figure 20. Regression Analysis 3: Y2 versus X3

Regression Analysis 4:

Regression Analysis 4 is performed with Y2 (rate of loss) and X4 (pop. /total number of buildings). As shown in the Figure 21, the R-Sq (adj.) is 27, 4%. Although this ratio isn't sufficient enough to verify the relationship between Y2 and X4, we can say that there is a **weak relation** between the rate of loss and the ratio of population to the number of buildings.

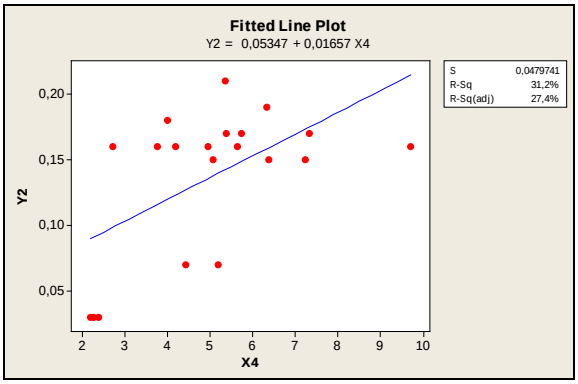


Figure 21. Regression Analysis 4: Y2 versus X4

Regression Analysis 5:

Regression Analysis 5 is performed with Y2 (rate of loss) and X5 (development index). As shown in the Figure 22, the R-Sq (adj.) is 30, 7%. Although this ratio isn't sufficient enough to verify the relationship between Y2 and X5, we can say that there is a **weak relation** between the rate of loss and the ratio of population to the number of buildings.

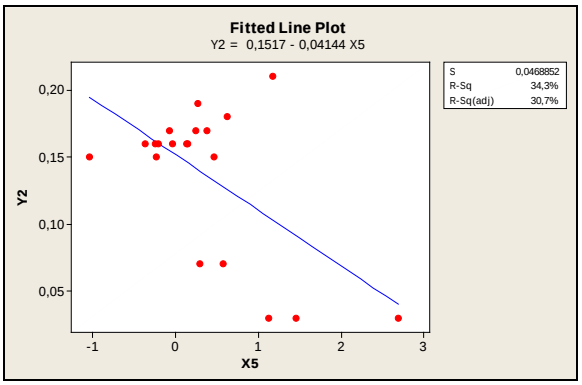


Figure 22. Regression Analysis 5: Y2 versus X5

Five regression analyses are performed for top-20 settlements in Category I. The Results of these analyses show that;

Y1 (absolute loss) has no relation with independent variables and,
Y2 (rate of loss) has weak relations with X3 (Rates of Agglomeration)
X4 (Pop. /Total Number of Buildings)
X5 (Development Index)

Analyses by Means of Regression Methods – Category II (50.000-490.000)

Four regression analyses are performed according to the results of best subsets regression analyses for the Category II (50.000-490.000). These are;
Regression Analysis: Y1 versus X2, Y1 versus X4, Y2 versus X1 and Y2 versus X4.

Regression Analysis 6:

Regression Analysis 6 is performed with Y1 (absolute loss) and X2 (population growth rate). As shown in the Figure 23, the R-Sq (adj.) is 2, 2%. This ratio is insufficient to verify the relationship between Y1 and X2, so we can say that there is a **no relation** between the regression equations of Y1 versus X2.

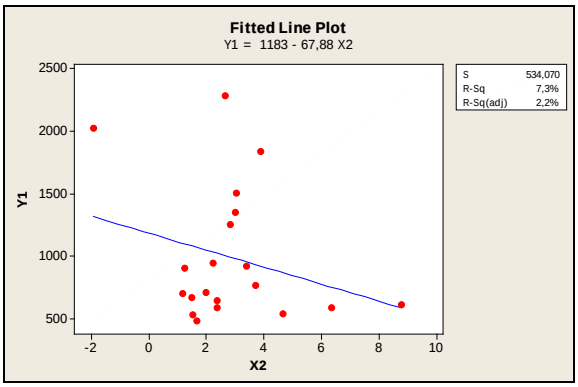


Figure 23. Regression Analysis 6: Y1 versus X2

Regression Analysis 7:

Regression Analysis 7 is performed with Y1 (absolute loss) and X4 (pop./total number of buildings). As shown in the Figure 24, the R-Sq (adj.) is 18, 0%. Although this ratio isn't sufficient enough to verify the relationship between Y1 and X4, we can say that there is a **weak relation** between absolute loss and the ratio of population to the number of buildings.

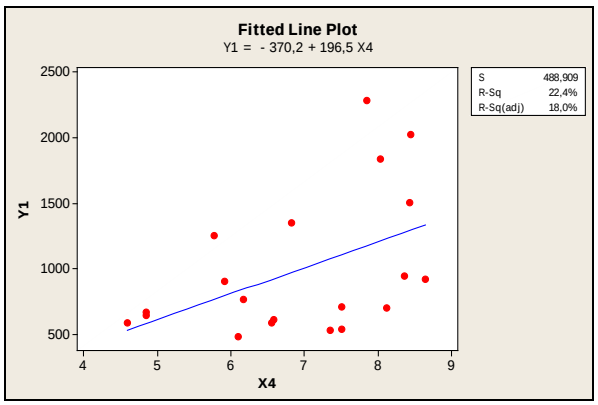


Figure 24. Regression Analysis 7: Y1 versus X4

Regression Analysis 8:

Regression Analysis 8 is performed with Y2 (rate of loss) and X1 (settlement population). As shown in the Figure 25, the R-Sq (adj.) is 21, 5%. Although this ratio isn't sufficient enough to verify the relationship between Y2 and X1, we can say that there is a **weak relation** between the rate of loss and settlement population.

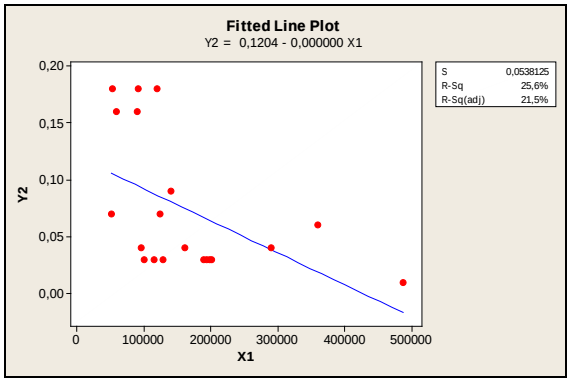


Figure 25. Regression Analysis 8: Y2 versus X1

Regression Analysis 9:

Regression Analysis 9 is performed with Y2 (rate of loss) and X4 (pop./total number of buildings). As shown in the Figure 26, the R-Sq (adj.) is 11, 7%. This ratio is insufficient to verify the relationship between Y2 and X4, so we can say that there is a **no relation** between the regression equations of Y2 versus X4.

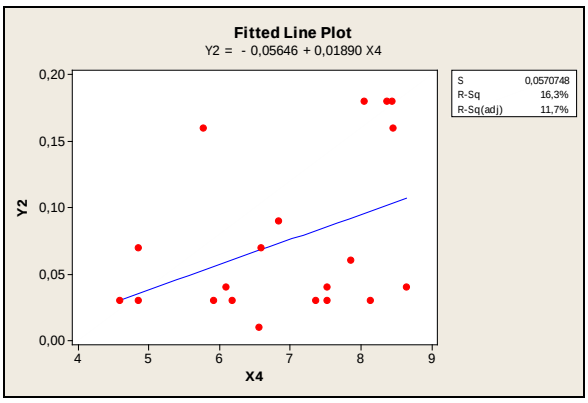


Figure 26. Regression Analysis 9: Y2 versus X4

Four regression analyses are performed for top-20 settlements in Category II. The Results of these analyses show that;

Y1 (absolute loss) has no relation with X2 (population growth rate) and weak relations with X4 (Pop./Total Number of Buildings).

Y2 (rate of loss) has weak relations with X1(settlement population) and no relation with X4 (Pop./Total Number of Buildings).

Analyses by Means of Regression Methods – Category III (Metropolitan pro.)

Five regression analyses are performed according to the results of best subsets regression analyses for the Category III (Metropolitan Provinces). These are;
Regression Analysis: Y1 versus X1, Y1 versus X3, Y1 versus X4, Y2 versus X3 and Y2 versus X4.

Regression Analysis 10:

Regression Analysis 10 is performed with Y1 (absolute loss) and X1(settlement population). As shown in the Figure 27, the R-Sq (adj.) is 91, 1%. This ratio is sufficient to verify the relationship between Y1 and X1, so we can say that there is a **strong relation** between the regression equations of Y1 versus X1.

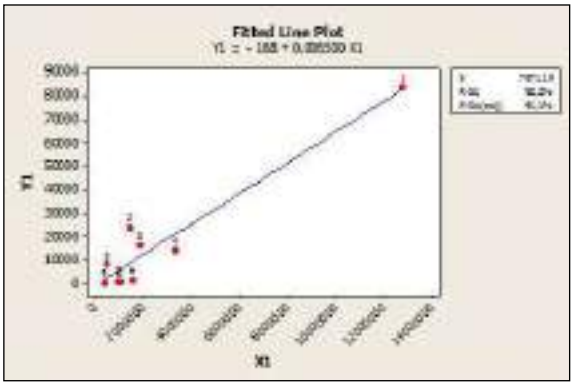


Figure 27. Regression Analysis 10: Y1 versus X1

Regression Analysis 11:

Regression Analysis 11 is performed with Y1 (absolute loss) and X3 (rates of agglomeration). As shown in the Figure 28, the R-Sq (adj.) is 5, 0%. This ratio is insufficient to verify the relationship between Y1 and X3, so we can say that there is a **no relation** between the regression equations of Y1 versus X3.

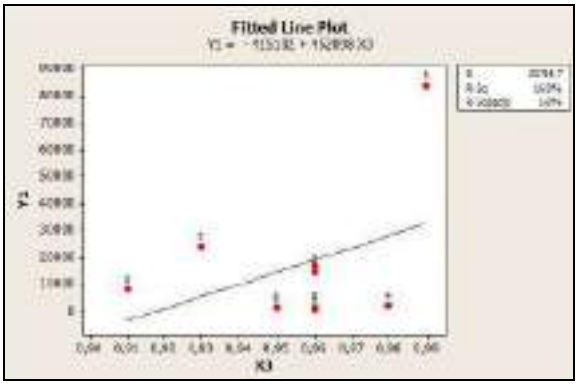


Figure 28. Regression Analysis 11: Y1 versus X3

Regression Analysis 12:

Regression Analysis 12 is performed with Y1 (absolute loss) and X4 (pop./total number of buildings). As shown in the Figure 29, the R-Sq (adj.) is 49, 0%. Although this ratio isn't sufficient enough to verify the relationship between Y1 and X4, we can say that there is a **weak relation** between the rate of loss and settlement population.

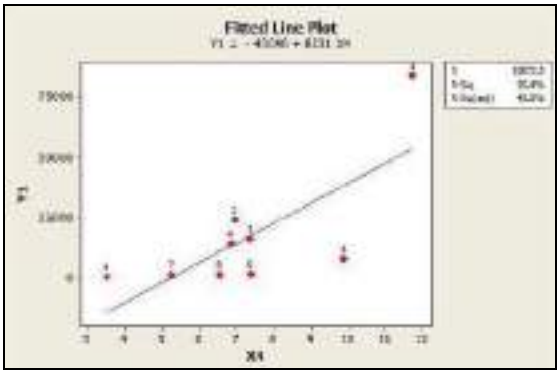


Figure 29. Regression Analysis 12: Y1 versus X4

Regression Analysis 13:

Regression Analysis 13 is performed with Y2 (rate of loss) and X3 (rates of agglomeration). As shown in the Figure 30, the R-Sq (adj.) is 24, 8%. Although this ratio isn't sufficient enough to verify the relationship between Y2 and X3, we can say that there is a **weak relation** between the rate of loss and settlement population.

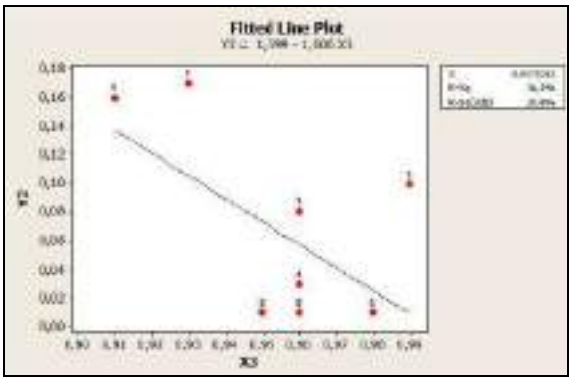


Figure 30. Regression Analysis 13: Y2 versus X3

Regression Analysis 14:

Regression Analysis 14 is performed with Y2 (rate of loss) and X4 (pop./total number of buildings). As shown in the Figure 31, the R-Sq (adj.) is 24, 7%. Although this ratio isn't sufficient enough to verify the relationship between Y2 and X4, we can say that there is a **weak relation** between the rate of loss and settlement population.

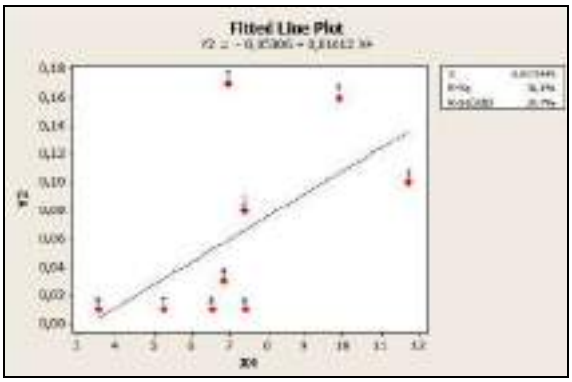


Figure 31. Regression Analysis 14: Y2 versus X4

Five regression analyses are performed for the top-20 settlements in Category III. The Results of these analyses show that;

Y1 (absolute loss) has strong relations with X1 (settlement population), no relation with X3 (Rates of Agglomeration) and weak relations with X4 (pop./ total number of buildings).

Y2 (rate of loss) has weak relations with X3 (rates of agglomeration) and X4 (pop./total number of buildings).

4. Conclusions

This study is set out with the aim to examine the factors that determine seismic vulnerabilities and risks of settlements and establish if analysis of seismic risks in cities and living environments could be determined on the basis of a set of attributes of the building stock. The scope is to exhibit and analytically compare such factors in settlements of Turkey. The basic question of the research is: “How do loss levels in building stock correlate to independent variables?” and regression analyses are used to examine this question.

Five regression analyses are performed for top-20 settlements in Category I. The results of these analyses show that; Y1 (absolute loss) has no relations with independent variables, Y2 (rate of loss) has weak relations with X3 (rates of agglomeration), X4 (pop. /total number of buildings) and X5 (development index).

Four regression analyses are performed for top-20 settlements in Category II. The results of these analyses show that; Y1 (absolute loss) has no relations with X2 (population growth rate) and weak relations with X4 (pop./total number of buildings). Y2 (rate of loss) has weak relations with X1(settlement population) and no relations with X4 (pop./total number of buildings).

Five regression analyses are performed for the top-20 settlements in Category III. The results of these analyses show that; Y1 (absolute loss) has strong relations with X1 (settlement population), no relation with X3 (rates of agglomeration) and weak relations with X4 (pop./ total number of buildings). Y2 (rate of loss) has weak relations with X3 (rates of agglomeration) and X4 (pop./total number of buildings).

5. Acknowledgements

I would like to thank my supervisors Prof. Dr. Murat Balamir and Prof. Dr. Melih Ersoy for their advice and criticism.

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Planning for degrowth in big Chinese cities

Jin Xue[1]

Abstract

Discourses on sustainability have led to the development of two distinct ideal societal paradigms: ecological modernization and ecosocialism. Urban planning is on one hand defined by the features of a certain paradigm and on the other hand a vehicle inspiring changes towards that paradigm. China's recent shift in development path as a response to social and environmental issues has a strong salience of ecological modernization. This is evident from the newly enacted national territory development plan. However, the emphasis on promoting competitiveness in wealthy city regions along the eastern coast line and extending economic growth to inland China is argued to be environmentally and socially unsustainable in a long run. For a long-term sustainability, economic non-growth/degrowth is necessary in the affluent cities, while growth opportunities should be channeled to poor regions. This requires a degrowth planning agenda in China and changes in planning rationality and spatial logics over the country. Such an alternative development path can be seen as in line with the ecosocialism paradigm. China's present economic-political conditions and traditional philosophies provide potentials and advantages for such a transition.

Keywords: China, ecological modernization, ecosocialism, urban planning, degrowth

1. Introduction

The emergence of global environmental problems and discourses on sustainability have led to the development of various ideological responses in relation to the societal paradigm and development path. Despite variations, two distinctive camps can be identified: ecological modernization and ecosocialism. The former one pursues green growth within the capitalist society, while the latter advocates overthrowing capitalism and argues for an ecologically friendly socialism. The two strands of societal paradigms for sustainable development confront fundamentally with each other in that they disagree on the possibility of obtaining sustainability within the capitalist mode of production. It is not difficult to imagine an interactive relation between socio-economic-political conditions and urban planning. In particular, a societal paradigm exerts great influences on planning ideologies, and planning practices are able to play a significant role in achieving some of the objectives of that societal ideology.

China has since the late 1970s attempted to build up a socialist market economy. After 30 years of unprecedented economic growth and urbanization, despite rising

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average affluence level, China is now in the predicament of resource scarcity, a wide range of environmental pollution, and social inequality. The fruits of growth have not been distributed equally across the country, but been concentrated in some cities especially along the eastern coastline where average affluence level is much higher than that in the inland and western China. In this context, it is therefore interesting to investigate the contemporary dominant discourse on the development path as an approach to those ecological and social problems and how planning is related to it. A lately enacted national territory development plan represents such a shift in development path.

The paper aims to discuss the potentials of this development path and its planning ideologies in relation to the aspiration for environmental and social sustainability in China, and proposes an alternative planning pathway informed by Chinese ancient philosophy and modern socialist traditions. This alternative points out that the prospect for sustainable development rests on a transition to ecosocialism, for which China has advantages and potentials. This implies economic non-growth/degrowth in affluent and big Chinese cities. With its focus on degrowth and urban planning in a Chinese context, the paper aims to enrich the sustainability discourse and to stimulate research that can link the degrowth paradigm with the urban planning profession. The line of the argument is organized as follows.

The paper starts with a discussion about the varied roles and values of planning in two ideal societal paradigms in the light of concerns over environmental and social sustainability. This part will be limited to a theoretical level. Then, the paper will offer a brief overview of Chinese national developmental strategies since the economic reform, with particular attention given to the recent plan for change in the development path in order to deal with sustainability issues. This will be followed by an analysis of the opportunities and limitations of this planned development path in terms of achieving sustainability. Economic non-growth/degrowth in big Chinese cities is argued to be a precondition for both local and global environmental sustainability. Finally, an alternative planning pathway corresponding to the degrowth paradigm and ecosocialism in the Chinese context will be explored.

2. Urban planning under different societal paradigms

If planning is seen as a vehicle to proactively realize a certain societal paradigm, the role, values, and rationality of urban planning must fit the objectives and characteristics of that paradigm. In the other way around, a certain political economy of a society defines the necessity of urban planning and its features, and a changing socio-economic paradigm corresponds to a changing planning paradigm. The discussion will limit itself to two types of socio-economic-political paradigms, i.e. ecological modernization and ecosocialism. The increasing environmental concerns give rise to the concept of ecological modernization which requires transformations within capitalist society. Ecosocialism is an ideology incorporating a strong sustainability vision and advocating the dismantling of capitalism for this vision. As illustrated in Figure 1, the elements and structures of each paradigmatic society delineates the planning ideology (role, values, rationality), which in turn determines planning strategies, policies, system, contents, procedures, etc. at a more concrete

level. These concrete aspects of planning are also associated with specific contextual conditions at a given time and place. The discussion in this section is limited to a theoretical and abstract level without taking into account concrete contexts. Therefore, the focus is on planning ideology. This will be linked to the next section in an attempt to develop a degrowth planning agenda for big Chinese cities with an emphasis on the third level of the diagram.

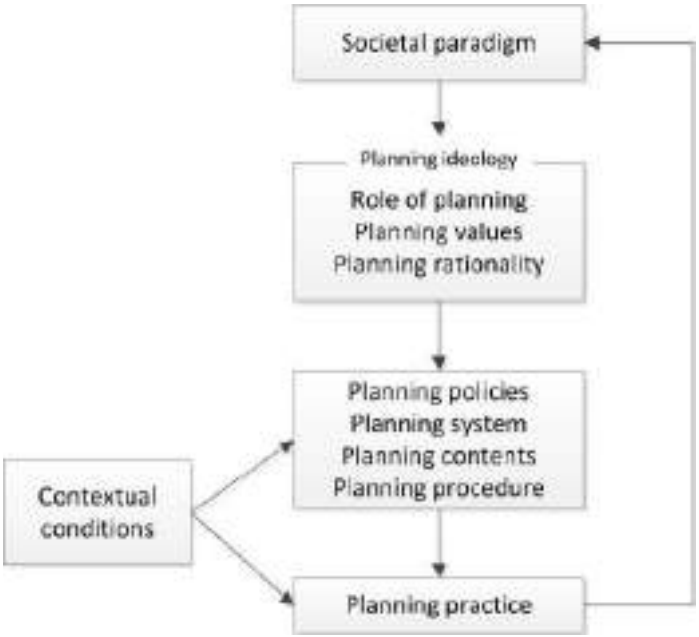

Figure 1. How societal paradigm defines planning paradigm

2.1 Ecological modernization

Ecological modernization theory portrays a paradigm reconciling economic, environmental and social sustainability within the capitalist organization of production and consumption. The adherents of ecological modernization believe that 'there is no principle or theoretical argument making a 'modern' organization of production and consumption and its technology antithetical to sustainability' (Spaargaren, 2000). Reconciliation between economic growth and environmental sustainability mainly relies on the use of market dynamics to resolve environmental problems. The features of an ecological modernization society can be depicted as follows:

1. It is necessary to institutionalize ecologically rational actions into the central social institutions of modernity (such as the economic sphere, the political sphere, the cultural sphere, etc.), i.e. the phrase of 'ecologizing of economy'.
2. Modern science and technology are central institutions for the environmentally induced rationalization of production and consumption (Fisher & Freudenburg, 2001; Jänicke, 2008). Environmentally friendly technologies are the solutions to environmental problems.

3. The innovation and diffusion of eco-efficiency technologies should be carried on by economic agents through market forces, while the state takes the role of 'enabler', providing incentives, standards, and regulations.
4. Ecologizing of economy through market mechanisms requires economizing environmental goods by placing economic values on the environment, characterized as 'economizing of ecology'.
5. The above points suggest cooperation between business, government and social movements in the decision-making process.

The modernization of the existing institutions of society toward environmental sustainability will also influence the practices of urban planning. Constrained by this social and political context, the purpose of planning is to facilitate market processes in order to stimulate economic growth and meanwhile mitigate negative environmental consequences of the market-led economic activities. As an area of public policy which conveys the state's will, the role of planners is to set rules and incentives in relation to land use for capital accumulation in both economically and environmentally efficient ways. It thus draws on a role of growth management. In addition, a cooperative relationship between business, government and social movements implies that planners will have to play the mediator role to balance the interests of various stakeholders in project-led development. Because of the market-oriented planning characterizing the ecological modernization paradigm, planning tends to be issue-based, sectoralized and fragmented, and lacks integration and long-term strategic perspective (Davoudi, 2010). As Blower (2000) put it: 'planning has a necessary but limited role which does not challenge the market/state relationship which is the defining principle of political and ecological modernization'.

The primacy of market mechanisms within ecological modernization theory suggests utilitarianism in urban planning, which pursues maximizing individual pleasure rather than collective well-being. With utilitarianism's emphasis on the summation of individual self-interests, planning based on such philosophical thinking may tend to ignore the distributive aspects of burdens and benefits. Since market mechanisms usually benefit the already better off considerably more than the worst off, planning is likely to contribute to unequal distribution between social groups. In neo-liberal market economy, individual pleasure is usually measured by monetary values. As such, cost-benefit analysis becomes the most popular method to evaluate the goodness of consequences and the basis for decision-making in, e.g. infrastructure planning (Campbell & Marshall, 1999). Nature in this case is economized, seen as a capital stock useful for human beings. This instrumentalism with respect to nature ignores the inherent value of nature.

The typical planning strategy under ecological modernization takes the name of 'smart growth' or 'compact city'. This strategy is considered to be able to both enhance a city's diversity, economic viability which fulfills the vision of growth and counters urban sprawl (Qiu, 2006; Bunce, 2007). However, ecological modernization's emphasis on technologies to secure environmental sustainability encounters limits in the case of the smart growth (Xue, 2012). While it is possible to economize on land use and adopt a densification strategy for a short term, undeveloped land will have to be taken up when the opportunities for densification

are exhausted. Planning under the ecological modernization paradigm is weak in coping with long-term environmental sustainability. Furthermore, as argued by Davoudi (2010), ecological modernization's belief in a technology-based approach to environmental policy is likely to lead to a technocratic and elitist planning process.

2.2 Ecosocialism

Ecosocialism also attempts to build up an ecologically benign society. In contrast to ecological modernization theory, ecosocialism is an ideological and theoretical field associated with Marxism and thus fundamentally challenges capitalist productivism. As ecosocialists believe that ecodestruction is inherent to capitalism due to its relentless capital accumulation which drags nature wantonly regardless of ecosystem's inherent regulation, an ecologically viable alternative – socialism - should replace the capitalist mode of production, its institutions and worldview, if ecological breakdown and even the demise of our species is to be avoided (Kovel, 2008). Socialism undoes the separation of the producers from the means of production, the absence of which is argued to be the essential condition for the ecodestructive dynamics of capitalism. By attaining a freely associated labor and thus ending the alienation form nature, people will have a strong ecological consciousness. Key characteristics of an ecosocialist society are:

1. Fundamentally, ecosocialism requires the public ownership of means of production. This change in property relations will liberate labor from being a commodity for sale on the market. Released from the chains of capital, humans would become freed from the false addictive needs of consumerism (Kovel, 2008).
2. In relation to the first point, the overcoming of separation of producers from means of production leads to the predominance of use values over exchange values which is for profit-making and maximizing surplus in capitalism. Production is to satisfy social needs rather than driven by profit motives.
3. The realization of use values implies that nature is not treated as a commodity. Instead, the intrinsic value of nature is respected. All elements including human beings are integral parts of the ecosystem.
4. As a society embedded with ecological values, ecosocialism acknowledges ecological limits to growth and insists that production should stay within these limits. Therefore, human needs ought to be altered towards authentic needs and sustainability. This will lead to a new ecosocialism civilization beyond capitalist consumerism (Löwy, 2007).
5. Technological development in ecosocialism does not aim to accelerate capital accumulation and pursue exchange value, but is directed to the enhancement of use value and restructuring of needs.
6. Democracy is emphasized at all levels of production and decision-making in order to rule out hierarchical and exploitative relations of labor and avoid totalitarianism.

Within an ecosocialist society, planning will play a more significant role than that in the ecological modernization society, because communal ownership of means of production and discarding market mechanism make planning a public decision in

relation to the goals of development, production, investment, and allocation of resources. As a result, planning becomes a central institution of ecosocialism, in stark contrast to its role as serving the purpose of market in the ecological modernization paradigm. To realize the goal of ecosocialism which is 'a new society based on ecological rationality, democratic control, social equity, and the predominance of use value over exchange value' (Löwy, 2007), planning must place great emphasis on *social purposes* and *ecological sustainability*. Thus, under ecosocialism, focus on economic growth as well as competitiveness as overarching goals would soon be in violation with the primary concerns for social and ecological sustainability. As other public policy areas in ecosocialist society, planning is liberated from the imperatives of capital and profit-making. In the transition to ecosocialism, planning should in some cases counter and supplant market mechanisms in terms of converting the growth-oriented role of planning at the strategic level and containing the amount of land allocated for industries, houses, highways, airports, etc. at the spatial level.

For concerns of ecological integrity, urban planning would need to replace anthropocentric thinking with ecocentrism ethics showing human obligations for non-human nature. This requires planning to show fundamental concern and respect to the inherent values of non-human life and to preserve the richness and diversity of life forms. It also means abandoning the dominant economic rationality as a determinant of decision-making in the planning process (such as cost-benefit analysis in transport planning) which tends to value things according to their instrumental use for humans in a monetary form. The dominance of ecological rationality necessitates a long-term strategic and holistic horizon in planning, as environmental issues have transboundary and transgenerational effects and refer to many sectors and population groups.

The issue of 'limits to growth' is addressed by transformation of needs from a quantitative to a qualitative dimension (Kovel & Löwy, 2002). The implication of this is that planning should aim to combine 'selective degrowth' and 'selective improvement'. The former could include degrowth in the size of the population, urban sprawl, high-speed transport infrastructure, consumption of cars, per capita consumption of dwellings and other material items, export and import, etc. However, the selective degrowth should arguably accompany selective improvement of social services and welfare for the deprived within the city, including affordable housing, medical care, education opportunities and mass transit.

This last point is also associated with the social purposes of urban planning, which concerns social equity and distributive justice. An ecosocialist society does not mean there are no conflicts, e.g. between different population groups in relation to social needs or environmental protection. As a society aiming at no domination and exploitation at all levels, it will be partly the task of planning to solve the conflicts through land use for different activities and purposes based on the principle of social justice. Since the potential for devastating conflicts over distribution of resources is much higher when human activities are to be kept within the ecological limits, the interests of the marginalized and vulnerable population should be fully represented by urban planners, who would to some extent need to work as advocates. In addition, social justice should also be promoted in a deontological approach, which, for

planning, suggests participant diversity, democratic discussion and transparency in the planning process. The role of planners, according to Löwy (2007), will be to present their expert views rather than make decisions. The promotion of democratic process is to avoid top-down and authoritarian decision-making.

3. A recent shift in China's development path: from trickle-down strategy to balanced development

China's development strategy since the economic reform in 1978 can be characterized as a 'trickle-down' policy, which encourages a proportion of population and regions to become rich in the first place and then let other regions catch up later on. With preferential treatment for the eastern coastal areas, most of the country's limited resources and growth-stimulating measures are devoted to a few selected cities (Yao & Zhang, 2001). During the late 1970s, the entire 1980s and the beginning of 1990s, five cities were selected as special economic zones, and 14 cities were designated as coastal cities of open economy, the majority of which are located along the eastern coast line.[2] They are cities open to international investment with preferential development policies. Some of these cities have gradually grown into metropolitan areas and evolved into national or regional growth centers making a vast contribution to the growth of the national economy. However, an overall repercussion of this strategy has been imbalanced development across the country in terms of income, material living standards and social welfare (Kanbur & Zhang, 2005). After 30 years of reform with formidable growth rates, the trickle-down policy is not as effective as what has been expected by the Chinese government. The beneficiaries are those living in mega-cities where wealth is concentrated and polarized, accompanying on average higher per capita consumption levels and a widening gap with populations in impoverished regions.

This period is characterized as a period giving priority to economic growth as its ultimate development goal. Since growth-oriented policies of promoting housing market, attracting foreign investment and constructing large infrastructures are closely related to land use and urban development, physical planning has taken on a local pro-growth role by providing land and proposing large infrastructure projects. Planning decisions are justified based on economic efficiency and technical feasibility (Yeh & Fu, 1999). As a result of decentralization of decision-making to localities, deregulation of market and local government's priority on urban growth, urban planning has difficulties in intervening and controlling development but always has to change to meet the policies of governments on different levels (*ibid.*). In environmental terms, the aftermath has been loss of valuable land resources due to rampant economic development zones and building construction boom, and local environmental degradation.

Environmental problems have to some extent been addressed in the process of economic growth. In the recent couple of years, the inequality issue has become a

[2] The five special economic zones are: Shenzheng, Zhuhai, Shantou, Xiamen, and Hainan (province). The 14 coastal cities of open economy are: Dalian, Qinhuangdao, Tianjin, Yantai, Qingdao, Lianyungang, Nantong, Shanghai, Ningbo, Wenzhou, Fuzhou, Guangzhou, Zhanjiang, and Beihai.

political concern. At the national level, a new development strategy addressing balanced and harmonized development substitutes the single-minded pursuit of high economic growth rates in certain regions. Evident from the twelfth five-year plan for economic and social development (2011-2015), as well as several recent government policy documents, China's state government has been trying to limit the speed of economic growth and set more comprehensive goals focusing on changing the economic structure, building an equitable society, and reducing environmental impacts. Such a shift stems from the rising inequality which threatens political and social stability and from a realization of environmental limits to growth. This shift is clearly illustrated in the authoritative and legally binding national territory development plan issued in 2011, the first of its kind in China's modern history (National Development and Reform Commission of China, 2011).

This national plan sets out the idea of pursuing efficient, balanced and sustainable regional development upon the basis of designation of four types of development priority zones on the country scale. Within this frame, the spatial economic, population and land development strategies are made for each zone. The four types of priority development zones, their key functions and development strategies are listed in Table 1.

Table 1. Types of priority development zones, functions and development strategies

	Cover areas	Functions	Development principles
Development zone to be optimized	Three city regions along the coastal line, which are economically well developed[a]	• Key regions of lifting the country's international competitiveness • Locomotive of national social and economic development • Regions of national innovation • Influential regions capable of participating in global division of labor • Economic and population concentration area	• Upgrade economic structure and develop green economy • Optimize spatial structure, contain urban sprawl and industrial areas • Contain population scale • Optimize infrastructure distribution • Optimize ecological pattern
Key development zone	Cities in middle and western part of China with potentials of developing economy and concentrating population	• National economic growth center • Pivot enhancing balanced regional development • Economic and population concentration area	• Enlarge city scale • Speed up population concentration • Develop modern industries • Improve infrastructure • Protect environment
Limited development zone	Main production areas of agricultural products, and	• Provide agricultural products • Important areas	• Limit extensive and intensive industrialization and

	key ecological function areas	guaranteeing national ecological safety	urbanization
Prohibited development zone	Representative ecological systems, areas of endangered species and valuable natural and cultural heritage	• Key protection areas of national natural and cultural resources • Gene pool of endangered species	• Prohibit extensive and intensive industrialization and urbanization

a The three city regions are: Bohai Economic Rim (economic hinterland surrounding Beijing and Tianjin), Yangzi River Delta region, and Pearl River Delta region.

The areas designated as the zone to be optimized are in line with the definition of big and rich cities in this article. For these city regions, even though economic growth is not explicitly stressed, the pursuit of enhanced competiveness and sociotechnical innovation clearly indicates the influence of globalization and a neo-liberal climate on the selection of development strategy. The assumption behind this strategy is that growth will automatically continue, therefore government interference will change its role from growth stimulation to growth management addressing the quality of growth. For the key development zone, policy concentration on growth stimulation continues to be the first priority, allowing for urban spatial and population growth and subordinating the social and environmental concerns. As stated in the plan, the overall purpose of a balanced regional development is to *extend* economic growth from the east to west and from south to north, in order to form an economically polycentric and network spatial structure. It can be seen from the above that the state attempts to shift its development path from a single-minded pursuit of economic growth to the ecological modernization model. It clearly stated in the plan that 'the building-up of the development zone to be optimized and key development role relies on the market mechanisms, while the government will channel the means of production to concentrate in those areas through making plans and policies' (National Development and Reform Commission of China, 2011).

Emphasis on GDP is superseded by *competitiveness* as an overarching goal for the wealthy regions. According to the plan, to realize the goals in the development zone to be optimized, concrete urban planning strategies include containing urban sprawl, industrial areas and scattered development of economic development zones, enlarging space for service sectors, transport, residences and public infrastructures, promoting compact city development, specifying the functional specialization of cities surrounding the central city in order to advance economic connection and regional competitiveness, controlling inner-city population scale of mega-cities and increasing the capability of peripheral cities in attracting inhabitants, protecting farmland, other types of undeveloped land areas and green open land between cities. However, the question is raised: are the ecological modernization policies capable of obtaining an ecologically and socially sustainable society across the whole country?

4. The necessity of economic non-growth/degrowth in big cities

Recently, a report based on an evaluation of Chinese cities' sustainability index positively concludes that 'some of Chinese cities (rich ones) have been able to *couple* economic growth with gains in sustainability' (Urban China Initiative, 2012). Through an investigation of 112 cities, the report reveals a positive correlation between income and environmental sustainability score, in line with the environmental Kuznets curve hypothesis (*ibid.*). Nevertheless, some caveats need to be addressed. Given the environmental indicators chosen in the report which takes the form of environmental impacts per unit of GDP, an increase of the environmental sustainable score merely means an increase of eco-efficiency, hardly suggesting a decline in aggregate environmental impacts, i.e. absolute decoupling. Thus, a higher environment sustainability score can only indicate that environmental impacts do not increase as fast as economic growth, which is *relative* decoupling. Economic growth in the already rich cities is still at the cost of environmental quality and resources, however with lower environmental costs than before due to efficiency improvement. This general conclusion is supported by an in-depth study on the housing sector in Hangzhou. Residential energy consumption in Hangzhou in the past 20 years has increased but at a slower rate than GDP growth in that building energy efficiency has been increased considerably (Xue, 2012).

One point worth attention in the report is that the correlation between eco-efficiency and economic growth is not as strong in high-income cities as in low-income cities. It indicates that growth in wealth in already rich cities may no longer predict further gains in sustainability (Urban China Initiative, 2012). This can be attributed to the fact that the room for eco-efficiency to improve is decreasing when it is high at the outset. Therefore, continual growth in rich cities or regions cannot be obtained without further degrading the natural environment. The idea that continual growth in those big cities would not undermine the future growth in the impoverished regions is hardly plausible, especially if the national-scale environmental load is to be kept within acceptable limits. To achieve the goal of poverty elimination, environmental protection and satisfaction of long-term needs requires economic *degrowth* in the rich regions. Priority for growth should be channeled to poor regions in inland China and low-income population groups. Giving priority to the worst off regions would be an appropriate response to the fact that resources are limited.

Development in the rich regions has already exceeded the capacity of their bioregion. Such a realization constitutes one of the reasons for avoiding further population immigration and location of resource-intensive industries in those cities as pointed out in the national territory development plan. No doubt, the national territory development plan represents a departure from the previous strong commitment to economic growth in the decades since the 1980s. But it is no more than a strategy framed by the growth paradigm, seeking a combination of competitiveness and social and environmental sustainability. Altogether, this shift in national development strategy does not indicate an escape from the growth paradigm. I am sympathetic to the idea of transferring factors of production to the lagging behind regions and the designation of key development zone as well as its development strategies to

eradicate poverty. However, a strategy oriented towards promoting competiveness of the rich city regions actually aims to convert the growth sectors from being the second industries to the service sectors, a substitution which is usually claimed to be less environmentally harmful. However, the environmental consequences of the service sectors are argued to be not as low as expected (Næss & Høyer, 2009).

In addition to the above argument for economic degrowth in big cities, as far as the local environment of the big cities per se are concerned, degrowth is also relevant. Big cities in China usually suffer from overcrowding, high population density, traffic congestion, noise, water and air pollution, lack of open space, slums and social segregation more than the medium- and small-sized cities (Chan & Yao, 1999). These environmental and social problems have been in part attributed to the agglomeration effects of these city regions, which attract continuous in-migration of floating population and concentration of economic activities, which exceeds the local ecological carrying capacity. Local environmental quality has been moving along a downward curve, adversely affecting citizen's health and eroding the significant economic gains (*ibid.*). To alleviate these pressures on big cities, coordinated development strategies which pursue economic degrowth in the wealthy regions and fuel the growth potential in the middle and western China are needed.

5. Planning pathway to degrowth in the Chinese context

The current climate of the Chinese government's public policy is dominated by the discourse of ecological modernization and its interpretation of the planner's role, which is evident from the national territory development plan. The approaches to the environmental and social problems in the urban context as identified in the ecological modernization paradigm have a very limited potential for obtaining sustainability in a long run. Furthermore, taking a global perspective, the limited natural resources may not support a global affluence level where China is on a par with the present wealthy countries, since technological improvements cannot develop fast enough (Xue et al., 2012). The gaps in affluence level across the country require differentiated regional development strategies. As agued, economic non-growth/degrowth in the affluent regions is necessary for long-term environmental sustainability, while for social equity growth opportunities should be given to the poor regions.

A departure from the growth paradigm to degrowth requires reframing planning rationality and spatial logics. Coordinated and synergetic regional planning which aims at weakening the status of big cities and providing development opportunities for other regions are required. For those wealthy cities and regions, the traditional role of planning in attracting capital and industries under the domination of economic rationality should be shifted to containing growth and promoting social development. Planning should pursue a just and environmentally friendly city rather than focusing on competitiveness.

Degrowth in big cities in the Chinese context refers to decline in the size of population and per capita material consumption level which can include car ownership, dwellings, high-speed transport infrastructure and other material

commodities. Current policies trying to curb population influx into big cities are regarded as socially unsustainable because local authorities of big cities tend to employ the household registration system to protect the interests of the locals at the cost of the interests of the immigrants. Greater emphasis should be given to social injustice between population groups at the city level in terms of unequal education and medical services, and housing affordability. What matters in the degrowth paradigm is not local GDP which has been a single-minded pursuit of Chinese cities in the past three decades, but development with the concern over environmental sustainability and social equity inside and outside the big cities.

On the other hand, planning strategies should aim to upgrade peripheral cities and rural regions to stimulate growth in a socially sustainable manner, as growth will really make a difference in those regions. Note that planning efforts should also be made to decouple the environmental impacts from such growth as much as possible. This requires certain planning solutions in place to obtain high eco-efficiency in land use and energy consumption.

The requirements for revision in planning for degrowth is distinct from current planning practices in big cities that are still endeavoring in competition with other cities in local economic growth. A body of literature has supported Marx' (1858) conclusion that a capitalist market economy is subject to a growth imperative (Gordon & Rosenthal, 2003; Fotopoulos, 2010; Harvey, 2010). The market-oriented economic reforms in the late 1970s have given the neo-liberal thinking a dominant position in China over the last three decades. As such, it is difficult to accept a degrowth paradigm both at the ideological and practical levels. Nevertheless, China's economic system is different from its Western counterpart's capitalist market economy. Some socialist features can still be identified, like public ownership of land resources and the state-owned enterprises. This implies that compared to traditional capitalist societies, China can to a larger extent choose to grow or not. As claimed by ecosocialists, a socialist society does not exist for profit-making and environmental degradation is not inherent to such a society. China as a country claiming to be a socialist country has more potentials and advantages to transit towards ecosocialism (Pan, 2006). The proposed alternative development path for economic non-growth/degrowth fits well with the themes of the ecosocialist paradigm. Moreover, the principles of ecosocialism are compatible with traditional Chinese philosophy (Pan, 2006; Xue et al., 2012). The degrowth planning agenda can be seen as a vehicle inspiring the transformations to ecosocialism.

6. Conclusion

The paper has discussed the limitations of urban planning defined by the development path shaped by the ecological modernization paradigm as a response to ecological deterioration and social inequality in China. Instead, ecosocialism, which is in accordance with China's socialist features and traditional philosophy, provides an alternative development path for long-term sustainability. This entails urban planning to discard a neoclassical/capitalist economic rationality and takes on the role of promoting social justice, articulating the intrinsic value of nature and restructuring human needs. The practical implication is planning for differentiated

and coordinated regional development across the country, with a degrowth planning agenda in the wealthy city regions. Planning should assume the responsibility to facilitate the transition toward an ecosocialist society.

As argued by Kovel (2008), ecosocialism should be universal in order to be successful. This means that if sustainability is to be achieved on a global scale, apart from China, the advanced industrial societies may also need an ecosocialist revolution. Their higher affluence and consumption levels make this transition more urgent than in the developing countries.

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CONTRACTING SUSTAINABLE SOCIAL HOUSING? A DEVELOPMENT TOOL FOR NEW URBAN AREAS

Betül Bretschneider

Abstract

The contribution deals with a planning and coordinating method for the new urban development areas within the existing urban fabric of Vienna. Social housing is the main use of these new urban development areas. The emerging housing projects affect the whole urban transformation process in Vienna, the city of 'social housing' since almost 100 years.
This special planning method - 'the housing contractor competition' model - of the City of Vienna has been developed in 1995 to improve the quality of (subsidized) social housing with regard to architectural design, cost efficiency and ecological impact. It is a competition model for the development and planning of new housing buildings and areas: the architects, construction engineers and housing contractors develop together building concepts for an affordable and high-quality housing production. This housing development method requires guaranteed maximum construction and user costs based on the architectural planning of the competition project. By co-operating from an early stage onward, the stakeholders (planners, housing subsidy department and housing contractors) are involved in the planning process to optimize the project under technical, economical and ecological aspects. The competition aims at a better performance and stronger competition between the teams, involving the architect teams and the housing contractors in financial optimization of housing projects.
During the last years architects and contractors appeal for changes in the competition process showing controversial positions and planning traditions. All players of the process are recently seeking new solutions. Involving all players of the urban planning process creates new perspectives in planning practices, which can help to improve and optimize the current planning methods.
The main question of my contribution is: How could Vienna's planning tool for housing production be modified to guarantee the sustainable quality of urban transformation and urban development of the city dominated by historic urban fabric?
What are the controversial positions and conflicting targets of the urban development process? How has the built environment been affected in the last decades by the housing contractor competition? The study investigates the social and ecological character of current practice of urban development regarding building typologies and structures, common and public spaces,

traffic organization and ground-floor-zone. In this context comparable depth-in interviews, hearings, discussion series with the involved architects, planners, contractors, users and planning authorities, as well as newspapers and online publications of city of Vienna deliver new findings.

1. Which city? Eco city, knowledge city or finance centre?

Since the 1990s, in the period of deindustrialization and liberalization of economies, as city has become the major address of capital accumulation and economic growth, the local governments have been forced to install new redevelopment strategies to transform the cities to attractive places for consumption, tourism and headquarters of trans-national companies, which require a fundamental restructuring in urban policy. Various terms have been used to describe this process such as urban regeneration, revitalization, revival, redevelopment, reconstruction and improvement. The 'competition of cities' has changed the urban planning tradition in the European cities. Also in Vienna the city government has transformed the planning strategies by opening up to private developers to build high raise office buildings on the waterfronts, on former brown fields and even in the recreational green areas.
The first head quarter towers have begun to rise in unexpected new development areas. One oft them is Danube City, on the huge concrete platform 'Donau Platte' by the riverside. This huge concrete slab has been originally planned and prepared as Expo-ground, but was not realized after putting Expo to a referendum in 1991 with a negative feedback of the population. A series of new urban development areas, all named as City (Wienerberg City, Siemens City, Bahnhof City, etc.) is already developed or going to be developed.

Parallel to this development, several international institutions (OECD, UN[i], Territorial Agenda for EU[ii], EC[iii], CEC[iv], EEA) issued position papers and declared a cohesion policy towards a sustainable urban development and urban regeneration. Within a very short time the sustainable development has become the most important discourse based on economical growth. (Jenks, Burton, Williams, 2000).[v] Various position papers giving the agenda of sustainability challenge the city governments and local authorities by the implementation of major targets such as strengthening cities, social and physical regeneration in urban areas, protecting and improving the urban environment to achieve the local and global sustainability targets.[vi] One of the recent position papers of the European Commission defines the following economy based objectives as a collective target, besides the revitalization of historic centres: economic development in areas with social problems, exploitation of the technological assets of cities and environmental action linked to economic goals. While compensating the loss of production industries and replacing them with service and knowledge industries, the ecologicalisation of urban policy promoted also energy-efficiency activities in the building sector. However the conflicting interests of the real estate market constrain the rapid implementation of really sustainable development measures.

1.1 High demand on housing as impact of increased migration

Besides the major issue of competitiveness and attractiveness of the cities, social housing, migration and ageing population have been the key issues of the urban policy since 1990s also in Vienna.
Vienna's population has grown slowly but constantly due to the immigration from the neighbouring countries caused by the deindustrialization of the post-socialist territories i.e. in the cities in Germany, Poland and Slovakia and in the cities of Ex-Yugoslavia as well as due to the ongoing immigration from the rural areas and small towns to Vienna within the country. In the last 10 years, the population of the city has grown around 200.000, to 1.8 Mio.[vii] However there are some estimations referring i.e. to the water consumption data of the city population as indicator, that the population has grown already over 2 Mio, due to the unregistered migrants from the neighbouring countries.

1.2 The increasing demand for affordable housing and urban policy

As increased immigration has caused a high demand on (affordable) housing, Vienna's city government began to pay more attention to the subsidized housing and began to reorganize the housing production, to regulate the housing market and to keep increasing rents and property prices under control.

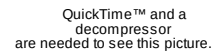

Figure 1. Population growth 1997-2007, City of Vienna,
Municipal Department 23 - Economic Affairs, Labour and Statistics

1.3 Urban renewal versus urban development?

The city government in Vienna has the two main activity fields of urban planning and policy:

- urban renewal authorities managing and promoting the renewal of existing housing stock and regeneration of urban fabric,

- urban development managing and promoting the production of new housing and steering urban (re)development.

The urban renewal program has been established for the renovation and modernization of Vienna's historic housing stock built between the end of 19th century and at the beginning of 20th century, in the period of mass immigration and mass industrialization. 2001 about 1/5 of the building stock and 34% of the total housing units in Vienna have been built before 1919, the First World War (Fassmann, 2009).[viii] These historic buildings are giving the character of the central city areas. Towards the end of the 19th century the older smaller sized building blocks were demolished in only 20 years to make place for the regular block raster system. So the structure of the city was changed fundamentally. The intensive urban renewal program of City of Vienna started in 1984 with the foundation of urban renewal authorities (wohnfonds_wien). After the big city expansion projects of the 1970's (e.g. Schöpfwerk, Alterlaa) and 1980's (e.g. Brünnerstraße), the city of Vienna attached importance to urban renovation and to improvement of urban fabric in the central city areas. Until today a big amount of the housing units in the historical buildings has been modernized by providing bathroom, modern technical equipment and central heating system. Since the mid 1980's the historic building stock has been renovated successfully. Only a small rate of them is still not modernized. Today only a very limited amount of low cost housing units, which are affordable for new citizens, young people and elderly people and for lower income groups, are left in the historic buildings (in low standard). (Bretschneider, 2008)[ix]

The problems such as 'segregation' and 'decline' have been challenging the city government more or less. The ongoing 'gentrification' is going to be also a problem of the well fare city Vienna. During increasing imigration from the de-industrialized cities of neighbouring countries, the City of Vienna has been concentrated on the following goals: to stabilize the economy by attracting transnational companies and by promoting the local real-estate market and the construction industry as well as by producing new housing stock for the increasing demand.

Figure 2. Transformation of the Central Railway Station into a new district Bahnhof City (Sonnwendtviertel) S: www.hauptbahnhof-wien.at (Access. 2012)

Vienna's **urban development program** sets strategies for the development of new social housing and mixed-use urban areas in the central city areas. Vienna's strategic urban development plan (STEP 2000 and 2005)[x] embraces 13 target areas as future development areas. (Fig. 3)
The new development areas are in most cases brown fields of local production companies or the vacant or only partly used rail transport areas (i.e. Bahnhof City, Nordbahnhof, See Stadt Aspern).
The inward development of the city brought more density, new uses and high rise building complexes structured in new urban typologies, which are significantly different than the existing homogeneous block raster structures. (Figure 3)

Figure 3. Vienna's current 13 urban redevelopment target areas
Source: STEP 2005, City of Vienna

Vienna's historic urban fabric consisting of perimeter block structures with internal courtyards and street spaces between the blocks is traditionally the place of functional and cultural diversity, mix in small-scale. The social and functional mix of new development areas is not small scaled like the traditional urban fabric. The high-rise and more density building complexes have been built in urban typologies, which are different than existing homogenous urban structure. The new urban development areas remain as pheripheric areas to the central city without showing the traditional 'urban' character of the rest of the city.

2. The tenure of households in social housing

Both the urban renewal program and urban development program are based on the 'social'housing. Social housing as term here means 'housing run by not-for-profit

or public landlords for rent, normally at below-market rents' (Hills, 2007).[xi] Social housing consists of two main forms of housing tenure in Vienna:

- council housing let by the city of Vienna and
- housing let by the non-profit or limited-profit housing associations using housing subsidies following the housing act (Wiener Wohnbauförderungs- und Wohnhaussanierungsgesetz – WWFSG 1989)

The city of Vienna is the biggest Landlord in Europe owning 220.000 council housing units, all built after the First World War up to the 1970`s. Highly standardized construction and building components produced for the council housing (Blau, E., 1998)[xii] have been the beginning of 'housing as mass-product' with strong working class identity. In Vienna there are 77 % tenants and only 13% owners.[xiii]
Since the 1970's, the city government stopped to build council housing. After the intensive urban regeneration program of the 1980's to modernize the existing housing stock built before the First World War, in the 1990's the housing initiative of the city government had the target of 10.000 new subsidized housing units per year.

2.1 New housing development toolkit: Housing contractor competition

The city government has been regulating and supporting the development of housing in Vienna more than 80 years long. As mentioned before, the main component of the emerging development areas also in Vienna is housing. The new housing projects are mainly developed and built by 'Austrian Limited-Profit Housing Associations' (Gemeinnützige Wohnbaugesellschaften) dealing with the development of subsidized housing.
In 1995 the housing fund of the city of Vienna (wohnfonds_wien) implemented a development model - so-called 'housing contractor competition - for subsidized housing projects to achieve the following aims:

- to increase the spatial and architectural quality of the (subsidized) social housing,
- to reduce the construction costs and the (rental) housing costs for the tenants,
- as well as to improve ecological efficiency and architectural quality.

The housing property development competitions affect directly the urban development in Vienna. Since the implementation of housing contractor competitions in 1995, 44 competitions were carried out on 163 plots by using 752 million Euro housing subsidies for about 18.000 housing units (Vice-major of Vienna M. Ludwig, 2010).[xiv]

The so called 'housing contractor competition' requires a collaborative teamwork of architects, construction engineers, landscape architects and the (limited-profit) housing associations for the development of large-scale multi-storey housing (between 200 and 300 Housing units).[xv] The competition entries contain a

architectural concept for one or more housing blocks including construction costs, time schedule as well as landscape design.
In the recent years the housing competitions have been issued with various emphases such as passive (energy) housing standard, timber and timber containing construction technology, intercultural housing and government assisted housing for the low income groups.

2.2 High-tech standards versus affordability: Assessment Proceeding

An advisory commission consisting of architects, planning experts and housing authorities assesses the competition entries according to the following selection criteria to select the winner project:

- innovation in architectural concept including landscape design,
- social sustainability (mix of different income groups),
- ecology (energy saving standards and material choice),
- economy (construction costs and logistic costs),
- financial conditions for tenants and property owners.

Producing more housing reduces the high demand in the housing real estate market and as a consequence decreases rents and property costs. Since 1970s the majority of the target tenant groups of subsidized housing projects have been middle-income groups.
The new legislations leading to higher security measures (i.e. fire protection, earthquake resistance) and to higher energy efficiency increased the rents and property prices significantly. However the current building regulations require low-energy standards in Austria. Even passive house standards for housing are no rarity anymore.

2.3 The aims and consequences of housing policy:

Generally a new urban development area is planned in two steps: the first step is the preparation of master plans by an architect's office. The second step is the housing contractor competition for the subsidized housing block/s on the current urban development area.
The master plans regulate the parcelling, building structures and building functions. The commercial concerns of 'housing associations' define the way and size of parcelling: They determine (in correlation with the cost limits for construction and building plots) the decision process as well as the physical and social structure of future urban development. The development area is divided into building lots in proper dimensions taking into account the capacities of housing associations. The feasibility of housing blocks (planned for at least 60 housing units) affects the dimensions of the building plots and so the urban character in the master plans. Moreover the building legislations as well as the parcelling system make overlapping small-scale and mixed-use building structures that would be similar to the existing urban fabric very difficult.

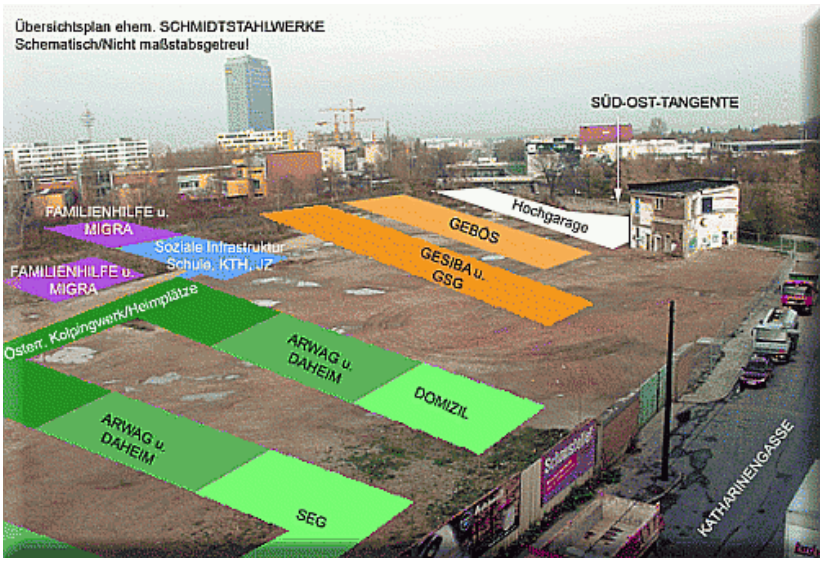

Figure 4. The parcelling of a housing contractor competition area, Source: IS wohn.bau, 2007

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decompressor
are needed to see this picture.

Figure 5. Masterplan of the most extensive urban development area Aspern Seestadt on a former airfield, Source: www.schicker.at 2007

2.4 Architectural urban quality versus cost-effective building?

In the past years architects and housing associations having contradictory interests appealed for an optimization of the contractor competition model to guarantee more architectural urban qualities while reducing construction costs and rental costs. The architects, housing developers and planning authorities discussed several times the city making process during the last years. The social and ecological aspects of urban and building planning have gained more importance due to a recent revision of the existing collaborative competition. The subsidized housing sector shows recently the following challenges:

- decreasing amount of subsidies for social housing,
- growing competition between two programs due to the budget cuts

between urban development by producing new subsidized housing and urban renewal by renovation of existing housing stock,

- hardly any available building lots/vacant areas in the central city areas
- increasing final costs of housing for tenants and owners due to the increasing building lot costs and due to the higher technical requirements and strict energy saving standards (the construction costs and as a result rental or property costs are not allowed to exceed the maximal price level given by the housing subsidy authorities).

On the other side for the other stakeholders of the process such as architects and urban planners the problems to realize housing projects have following obstacles:

- over-regulation in planning and design; by the legislative restrictions and regulations (high-tech construction standards and enforcing safety and comfort regulations), by the housing act, by the 'conservative' housing real estate market,
- peripheric character of emerging neighbourhood culture without having vital open spaces and street life (partly accompanied by shortage of children play grounds and places for young people),.[xvi] Difficulties by improving an 'attractive and interactive' ground floor zone and adjacent open spaces between the blocks and within the blocks (the ground floors of the 'new' housing blocks generally belong to garages, garage accesses, storages and waste containers).
- 'conservative' housing real estate market and housing associations forcing a anti-innovative discourse by controlling the architectural design, size and typology of the housing units with classical spatial organization for families with children (although almost the half of Vienna's population like in other European cities are living in single households)[xvii]

Figure 6. A competition site for 650 Housing units on the brown field of former Mautner Markhof ground Source: City of Vienna, wohnfonds_wien, 2010

Recently the interdisciplinary jury of housing contractor competitions consisting of architects, engineers and housing authorities (wohnfond_wien) have focused on the functionality and vitality of ground floor zone and the quality of common

spaces, play grounds, local supply, social facilities, traffic calming measures as important criteria for the selection of the winner project.[xviii]

Another problem is the decreasing quality of the architectural concept of the competition project during the realization process. Especially the quality and usability of open spaces and ground floors are not ensured, due to the obligatory cost savings measures of the contractors or disinterest for the urban quality.[xix]

3. Conclusions: Are affordability and sustainability compatible?

Currently the housing associations and housing contractors finance their housing projects increasingly without using housing subsidies, because in that case the additional regulations and restrictions of the housing act are not valid and therefore the housing construction costs are lower. Furthermore the rental income (yield) is not limited as in the case of the subsidized housing. Although the housing associations are only allowed to be limited profit-oriented, they have to invest furthermore for a guaranteed circulation of capital. As mentioned before, the pressure on the real estate market and the shortage of buildable land in the central areas of the city with easy public transport accessibility are the further reasons for this trend.
Although the city government plans to build additional social housing units, and declares a paradigm shift by the contracting structures (e.g. property owner cooperations, participative housing developing) there are still no convenient measures that are already implemented. The commitments to optimization and promotion of social housing are not concrete. The governance of social housing and urban planning is rather complex, conservative and inflexible.
To ensure the quality of the open spaces and ground floors in new development areas,

- on the one hand a deregulation (less restriction for new users and other or unconventional uses)
- - on the other hand new legislative regulations are necessary to enable the ‘urban’ quality particularly focused on the ground floors and open spaces (restrictions by garage and storages in the street level or the guaranteed realisation of open space improvement measures).

At the end the following questions are still omnipresent: Are the current high buildings standards of building practice the only way to guarantee the ecological qualities and living comfort? How can the transformability of built environment for the future generations relating to demographic changes be ensured?

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THE ABANDONED VILLAGES AS A REGIONAL RESOURCE

Luca Di Figlia[1],

Abstract

In recent years, we have witnessed the rediscovery of urban rural realities. Even if these realities may be of small dimensions, they are characterized by a deep-rooted local identity. In many regions, these realities have been exploited to promote actions and policies of local development. Within the same territory, urban, environmental and landscape resources have been identified that could preserve the uniqueness of these places and could counteract the pervasive effects of supra-local development. In this framework, the presence of abandoned villages can gain significant importance.

The uninhabited villages, given their general state of deterioration and abandonment, can be considered both as a discarded element of modern consumer society, which erroneously fails to recognize in them any practical use, as well as a regional asset, reinterpreted from a qualifying perspective which does not stop at observing the current state of decay but instead comes to recognize the value of the identity of such places. The abandoned village is a place of interest for its architecture, built in accordance with ancient tradition, for the dialectical relationship with nature that the construction has established over time, and for the rarefied context of the urban landscape that becomes an evocation of the past. The uninhabited villages reflect the essence of the bond that was dissolved between man and territory.
While the ghost villages have lost their "life function", they are abandoned but not forgotten: their present is located in the past and they do not remember the future, thus they become places in the memory.
However, by attributing new meaning, these villages can acquire a new function, a new use *in* and *for* the territory. Recognizing in the abandoned village a resource identity foreshadows the possibility of tangible and intangible trigger actions for its recovery- actions which can nourish a local economic development in tourism with benefits for the entire territory in which they are located.

The proposal aims to investigate the phenomenon and the reality of ghost villages in order to understand the meaning and role to be given to each abandoned village, to define the areas of comparison between cases identified, and to identify possible models of revitalization.

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Finally, the work hopes to stand as a simple witness, because it is in the transmission of knowledge and the evocation of memory that abandoned villages can be brought back to life.

1 Introduction

The land, in its current configuration, manifests itself as a definitive design, a fait accompli, composed of villages and open fields, cities and forests, roads and rivers, man-made and natural elements. Its true reality, however, is revealed only through an awareness that it is the end result of an extensive and diverse web of processes and occurrences, of natural events and historical dynamics, of an intricacy in continuous and progressive change. The complex history of a territory largely coincides with that of the whereabouts of man, or human settlements. Its population depends on a multifaceted interaction of causes of geographical and historical nature and, especially, a subtle and inseparable relationship between man and place. The formal and existential reason for the fabric of the settlement is inserted in an environmental and natural context; its shape is, therefore, a product in and of the earth. The synthesis of ongoing changes in the land can only be evinced as the city itself, a formal and concrete symbol of processes of urbanization perpetrated over time. The settlement, be it a city or village, represents the best opportunity to humanize the natural environment and in to insert the human heritage in a specific place; it delivers to the environment a cultural and externalized form of permanent, collective dynamics.

The city in its form, then, is inseparable from its content: its aesthetic value rests in his appearance, but it is the presence of the man which fills the form. There is an inseparability between the social and the aesthetic issue; physical space constitutes an experienced and historical reality, for this gives validity, value and affective quality to the construct and to architecture[2]. Cities are born from the social necessity to integrate across occupations and human experiences, which being multiple and complex, are organized on the basis of various processes and dynamics. These intertwine and compensate for one other, generating systems which are not absolute, but are imperfect and are therefore subject to change. The true wealth and power of a system , however, lies precisely in this inherent weakness and imperfection, since it is starting from such deficiencies that it is able to evolve. The city system is not rigid but is organically malleable and adaptable to continuously changing human needs[3]. If the city system is strong and well-structured, it confidently confronts various issues and develops in turn, but if the organization of an urban environment is weak and based on rigid dynamics of life, the moment it is subjected to new difficulties, it will fail to preserve its state of being: the equilibrium reached until that point will become

[2] "It is evident and clear that a space acquires the majority, if not all of its meanings through the life that is carried out within it, that also shapes it " (Romano, 2001, p.15).

[3] This concept is explained by the thought of Lewis Mumford: "(...) many elements necessarily rejected by the individual systems are essential to developing the highest creative potential of life (...) from time to time, it is necessary to utilize different systems in order to do justice to the infinite needs and circumstances of life "(Mazzoleni, 2001, p.30).

unbalanced and will give way. This is the case for abandoned cities or villages, in which sudden and violent changes have led the inhabitants to move away permanently and to seek new places to live. The city without the human presence is rendered inevitably empty, stripped of its content, its existential reason; what remains is only a shell, a form without an idea, volume without substance; it is reduced to a pure and simple space, that is, ultimately, to only a sign / design in the territory.

The research proposal intends to present the reality of abandoned villages in their relationship to the land and in the context of the current times. If it is true that the uninhabited village has lost its raison d'être by being deprived of the human element, it may present itself with a new role. The uninhabited village transforms its role within the territory, just before, during, and after being abandoned, acquiring a new identity.
Might the reality of abandoned villages in Italy constitute a phenomenon in itself? What value is attributed to abandoned villages? Is it possible to imagine new scenarios or roles for abandoned villages?

2 The phenonmenon of abandonment in Italy

According to the most recent Italian census conducted in 2001[4] more than 72 percent of the 8,100 Italian municipalities have less than 5,000 inhabitants[5] . There are a total of 3,644 municipalities with fewer than 2,000 inhabitants. These municipalities, composed of small villages and hamlets, carry out a fundamental activity in presiding over the territory. Even if these municipalities are regarded as places of cultural value, they are found to have an uncertain future and can be included in that category defined as "difficult settlements"[6]. These small inland villages and hamlets, concentrated mostly in upland areas in what were once considered mostly strategic locations, are now completely overtaken by the new territorial assets along the coast and in the valleys. Today, they are characterized by a weak economy, low population density and devalued real estate, and are subject to the dynamics of economic impoverishment and a lack of services[7].

In this historical and geographic context, we must analyze the modest reality of the abandoned villages from the beginning of the 1900's until modern times. The phenomenon of depopulation, or more generally of emigration, is a continuing reality. In proceeding forward, it can bring about a demographic increase or decrease of a localized territorial area, until the point in which the territory is completely

[4] The census is conducted every ten years, and the most recent data was actually collected in 2011. However, these data have not yet been disclosed.
[5] With a 7% increase from the census of 1991
[6] *Italy and the difficult settlement*: a survey conducted by Legambiente in collaboration with Confcommercio in 2005.
[7] Data, statistics and percentages cited on this page were taken from surveys sponsored by the following associations: Piccola Grande Italy, Legambiente and snapiccolicomuni Confcommercio. They can be found at the following sites: www.piccolagrandeitalia.it, www.piccolicentrieuropei.com, www.legambientepadova.it, www.confcommercio.it.

abandoned. It is worth highlighting, in fact, that the historical content of the recent past in Italy was profoundly marked by large migratory fluxes, both internal and external: both the internal migratory fluxes, limited to the regional or national territory and the external fluxes, bound towards foreign nations, impacted the density of inhabitants on the Italian territory.

Figure 1. Map of uninhabited villages in Italy

After a thorough investigation carried out with surveys, bibliographical research[8], internet research, and the aid of information furnished by local experts in mail correspondence, 110 urban centers were identified which were evaluated as being in a state of abandonment. This means that these are urbanized places in which, at the current moment, neither the presence of current residents nor the conditions that constitute the customary form of living in a settlement in a permanent or continuous manner may be found[9]. The research was limited to places which were abandoned in the 20th and 21th century. The deepening of the issue has led, first and foremost, to the realization that the presence of abandoned villages in Italy can be considered a real phenomenon. Furthermore, it has led to an awareness of the issue's complexity and its characterization by both common elements and the peculiarities of individual cases .

Through the comparison of data collected, it was possible to obtain an overview of the phenomenon, which has been interpreted on the basis of the following items:

- geographic location, with reference to the region of origin (Figure2);
- period of abandonment (Figure 3);
- reason for abandonment, categorized under natural causes (earthquake, landslide, flood) and unnatural causes (migration, construction of public works, war, declarations of unfitness) (Figure 3).

[8] There are very few bibliographical sources available which are related to the topic.

[9] According to this definition, excluded from the survey were places which are occupied by even a single person and those in which even the subject of recovery work related to temporary events (such as festivals, cultural and commercial activities, etc.) are not found to be situations of a purely residential nature. Also, note that the 110 abandoned villages which are the subject of comparison and evaluation are the result of a selection from a larger series: the exclusion of some cases was decided, not based on the observation of the presence of permanent residents, but because of the difficulty in obtaining of verifiable information and research limits due to the vastness of the area under analysis. In light of this, it may be stated for justification that we note the presence of a greater number of uninhabited villages compared to that which is reported; the work presented, in fact, is part of a research path which is being updated and is evolving over time.

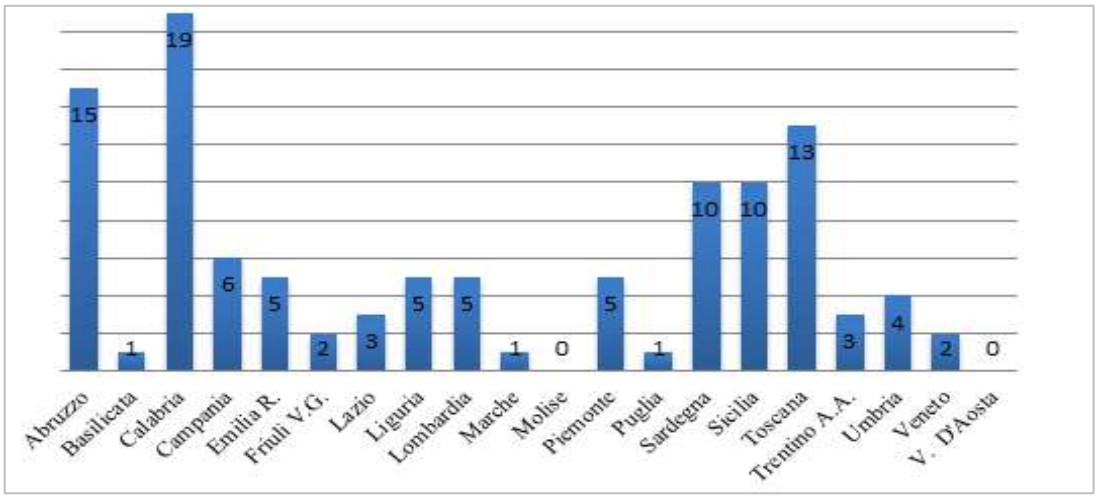

Figure 2. The graphic reports the number of abandoned villages in each region of Italy

From the data that emerges it is evident that, on the National territory, there are areas and regions which are most affected by the phenomenon of depopulation:
• *the Calabrian Aspromonte* area;
• mountain areas have been subject to intense emigration, which led to the abandonment of entire towns, among them, even geographically distinct and distant ones, including areas of *the Tuscan-Emilian Appenines* as well as *the upland areas of Liguria and Abruzzo*;
• the villages in the *Belice Valley*;
• *the agricultural villages of Sicily*;
• *the mining villages of Sardinia*.

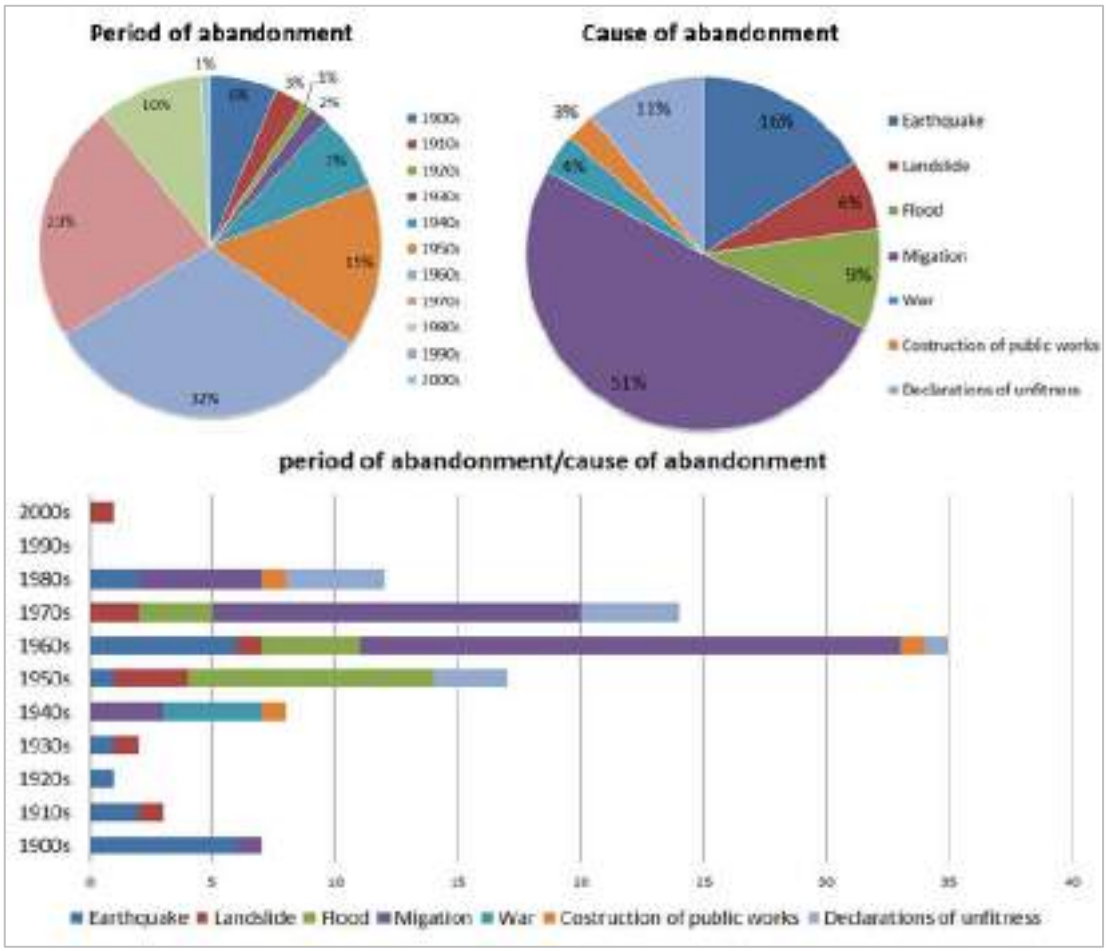

Figure 3. The diagrams show the rapport between period and cause of abandonment

The comparison of the period and the cause of abandonment reveals that the phenomenon peaked in the 1960s and the cause that has most conditioned abandonment in the majority of cases is related to the dynamics of migration. The supported hypothesis is that even in cases where abandonment is related to natural disaster events, significant importance must be attributed to social, economic and cultural factors that influenced the choice.

To understand the dynamics of this choice and the value attributed to the uninhabited village, we will examine two regions which were significantly affected by the phenomenon: the Aspromonte and the Belice Valley.

2.1 The abandoned villages in Aspromonte

Aspromonte is a mountainous area, located in the southern Calabria region. It is bordered on the east by the Ionian Sea, on the west by the Tyrrhenian Sea and the north by the river Petrace. At various points in history, the land of Aspromonte was considered an impenetrable one. However, it was also considered a land rich in

history and popular culture, being part of the Ionic area of Hellenic origin, a recognized area *grecanica* [10] . In Aspromonte, eight uninhabited towns were identified, whose abandonment is concentrated in the early and mid- 20th century. As reported in the table below (Table 1), the causes that led to the abandonment are directly related to natural disasters or catastrophic geological instability. In most cases, the evacuation of the town was followed by a phase of regional planning which, for governmental decisions and with the support of local authorities, led to the reconstruction of the village in a completely different location: the mountain village was rebuilt in the valley, or even along the coast, a great distance from the old village (in the case of Africo, the distance between the new and old village is 33 kilometers). It is clear that these choices were conceived by the inhabitants as an opportunity to radically change the status of living with the prospect of changing from one system linked to agriculture and away from the areas developed a system based on practices of more modern urban life. The link between population and the old town is still alive and is evinced during the feasts of the patron saint: during the religious procession, the statue of the patron saint is placed back in the church of the old village, which has become a pilgrimage destination.
As we report the case of Roghudi as an illustrating example, in which some of the social dynamics related to abandonment emerge more clearly, it should, indeed, be remembered that this action was planned by its citizens as an extreme and unavoidable choice, and that it was taken with conflicting feelings and conflicting inclinations.

Town	**Year ab.**	**Cause ab.**	**New Town**	**old/new town**
Africo Vecchio	1951	flood	Africo Nuovo	33,5 Km
Amendolea Vecchia	1953	flood	Amendolea	0,5 Km
Bianco Vecchio	1908	earthquake	Bianco	3 Km
Brancaleone Superiore	1950	declaratio unsafe	Brancaleone	5 Km
Casalinuovo d'Africo	1951	flood	Africo Nuovo	22 Km
Precacore	1908	earthquake	Ø	Ø
Roghudi Vecchio	1973	flood	Roghudi	38,5 Km
Zoparto	1908	earthquake	Ø	Ø

Table 1. Uninhabited villages in Aspromonte

[10] A clear sign of this cultural tradition is the so-called *"grecanico"* or *"griko"* language, which is still being passed down as an oral tradition from one generation to another.

2.1.1 Roghudi

The name Roghudi is derived from either the word *rochùdi*, meaning cliff, or *rechodes/rexodes*, meaning spiny and rough[11]. Both toponomastic sources emphasize the inhospitality of the place. The village, in fact, is located on a steep spur of rock overlooking the *Fiumara Amendolea*[12]. Roghudi is an uninhabited village, and currently has crumbling houses, rough roads and tracks from the period before depopulation. The depopulation of the country, which occurred in the early 1970s, was caused by a disastrous flood, the latest in a long series of natural catastrophes. The community, by then exhausted, did not react to this additional hardship and somehow accepted an inevitable fate.

The territorial implications have greatly influenced the vicissitudes of the population which found itself confined in a narrow space; this condition led to an inevitable isolation, limited adequate urban sprawl and, consequently, a limited potential population growth. The layout of the area determined an organization of the urban fabric that developed organically, adapting to the mountain ridge[13]. In the eyes of its neighbors, the village appeared to be dogged by bad luck, so it earned the nickname "the unhappiest village in Italy, perhaps the world" (Teti, 2004, pg. 65). The life of the small community of roghudesi (according to the Census of 1911, they numbered 1488) depended on farming and livestock farm. It was in the 1940s that a process of migration began- to the coast of Calabria, or to distant lands- a process which was spurred by a feeling of aversion to a place where nature is revealed to be a step-mother.

The story of Roghudi ends in the early 1970s, when the waters of one of the innumerable floods dragged away with it the gardens, crops, the houses and more importantly, the community's sense of hope and attachment to the place. Roghudi was evacuated due to the flooding and landslides of October 1971 and December 1972- January 1973. Soon after, it was declared unfit for habitation by engineers, but by that time, the village was already empty. The issue of abandonment of Roghudi and villages like it which have met a similar fate is rooted in the history of these places: the flood was just the triggering cause, not the true or sole motivation. From various evidence shows that the decision to evacuate the village was not made without hesitation, and in an instant. Most of the inhabitants had no intention of leaving their homes, but a small minority, most unrelated to the territory, was inclined to leave. In this group, there was also the only dealer who provided the village with a weekly supply of goods and products of basic necessity. The removal

[11] Rochùdi is a word from the Gracanica language while rechodes is a Latin word.
[12] The *fiumara* is a watercourse characteristic of southern regions like Calabria and Sicily. It is characterized as having a very large bed made of pebbles and by the fact that while over the winter, it is full and its waters run swiftly, in other periods of the year it is partially or totally dry. Fiumara Amendolea has a very wide river bed, with a width in some areas up to 5 kilometers.
[13] The difficulty of links and movement is documented by the nails fixed on the outer walls of many homes: some witnesses report in fact, that the children were tied at the waist with a rope, anchored to the nails so to avoid having them fall and roll down.

of this figure, so essential to the survival of the community, caused a domino effect: the other residents were convinced that the abandonment could not be the only choice to make. Within days, the village was depopulated. The catastrophic event in itself must therefore be included in a wider, local, long-term historical context: the "escape" was probably an hypothesis that lived the public imagination for some time and the flood was the pretext that gave a moral justification for taking such an action.

After the depopulation, a new village that was given the name Roghudi Nuovo was constructed near Melito Porto Salvo, nearly forty kilometers from the old village. Its construction was completed in 1988, but only a few roghudesi moved there; most emigrated to other cities. Even though it was much more comfortable, the new village lacked a true identity of its own. Perhaps the re-established village is the real ghost town, as it fails to transmit the residents the strong sense of attachment to place that was inherent in the old village[14].

2.2 The abandoned villages in the Belice Valley

The Belice Valley, located in the upland of western Sicily, is comprised of the district's portion of the river Belice, 76.5 km long. The area of the Belice Valley, inhabited since prehistoric times, is rich in archaeological sites, a testimony to the settlements of the Phoenicians and Greeks. The main economic resource of the plain has always been the agri-food sector and in particular the cultivation of olives. During the night, between 14 and 15 January 1968, an earthquake caused a real emergency in the valley, deeply upsetting the lives of thousands of people. It generated a radical change in the development and organization of many local communities and, as an inevitable consequence, the earthquake was followed by abandonment.
In the 20th century, the economic development of the valley was not comparable to that of the industrialized areas of Italy in the same period. The lack of growth can be attributed to various factors, such as long periods of cyclic drought, frequent floods of the river Belice, the scarcity of fertile soil, an inefficient road network, and lack of dams and infrastructure. Belice, therefore, was an area that was quite backward by comparison. The situation of distress and crisis was not so much due to issues related to the cultivation of the soil, but one of delays resulting from disorganization and the lack of industrial activity. The lack of job opportunities in the '50s and '60s led to an intense migration which drove the residents to move to other Italian regions. Shortly before the earthquake, however, due to the agrarian reform of the ‘50s, the territory of Belice was undergoing a phase of renewal and promising development. Plans included an intensive cultivation of the fields in which rows of vineyards were planted, along with other productive activities linked to the establishment of new roads. As the State’s presence was fading, the fields were increasingly vulnerable to

[14] “(…) it is basically a dormitory, a village with no identity, with nothing. On second thought, lately has actually improved a little: there is a little bit of greenery, some flower beds, but they made houses without balconies, all alike, without a reference point. There is no village square (...) "(Teti, 2004, pg.73).

illegal activities. The community, however, maintained close cultural and religious ties with the territory.

The earthquake of 1968 certainly laid bare in a dramatic way the state of underdevelopment in this part of Sicily: the dilapidated dwellings built on tufa, a population mostly made up by the so-called vulnerable groups (the elderly, women and children) etc.. The morning after the earthquake, there were two types of reactions among the residents: those who found their homes destroyed did not hesitate to leave the village, while those whose homes were only damaged wanted to stay on so that they could guard their property. Tent cities were set up to house some residents, while others were temporarily moved to private homes and in public buildings. To make matters worse, on January 20, Belice Valley was hit by torrential rains which resulted in a veritable exodus: twenty thousand people migrated to the continent, motivated by government incentives.

During the initial emergency, residents gathered in tents, but in the weeks that followed, they were housed in villages-slums, consisting of forty-six prefabricated structures[15]. After the first phase of emergency relief, a multifaceted process of reconstruction began which targeted not only the destroyed and damaged villages, but the entire territory and its economy. Now that more than forty years have passed, the flaws of this restoration attempt now seem obvious, from deficiencies in terms of the design, to problematic timelines for implementation, to the imbalance between the work that was actually completed and the funding allocated. 270 billion lire were allocated for the reconstruction and 57 billion for initial urgent necessities. In 1979, after eleven years had passed and about 900 billion lira had been spent on the project, 8,600 families were still living in shacks. In 2007, it was estimated that the total expenditure for the earthquake amounts to about 7 billion euro. The political management of this event has inevitably attracted many criticisms. However, there is no doubt that the reconstruction of Belice, with the building of homes, entire villages, urban infrastructure on a large and small scale, access to roads, has profoundly changed the characteristics and shape of the entire territory. The earthquake was interpreted by many as a positive opportunity for the development of a land that until then had remained anchored in the past. After the earthquake came proposals to industrialize the area in order to close the persistent gap of cultural, social and economic order which had persisted between those places and others who had instead taken the road of modernization. As a result, the community that had historically inhabited the territory of Belice for generations was traumatically catapulted into a new urban context, deprived of its fundamentally rural identity and assigned a new, artificial, modern one. The population thus moved from the old center to the slums and shantytowns in the new city, which was built in a different

[15] Over the years, these centers, usually located between the damaged village and the new village under the construction, turned into real villages themselves, with lighting, underground cables, water and telephone.

location with urban connotations which differed significantly from those in the original center.
Over the course of the interventions which followed the earthquake in Belice Valley, urban centers were partially and sometimes entirely reconstructed: the villages of Gibellina Salaparuta and Poggioreale were completely abandoned and rebuilt from scratch. The process of abandonment and complete reconstruction of whole settlements reveals dynamic similarities in terms of implementation, in terms of the final result and in terms of the comparisions between the new and old settlements. In the case of reconstruction of the Belice Valley, given the extent and the severity of the case, all of the evidence presents a hyperbolic demonstration of this process.

The new settlements were located in flat areas, according to a criterion based on vicinity to the main network of regional connections or industrial centers, facilitating the construction work. In addition to location, the radical differences between the new and old models of the settlement resulted in a veritable collapse of the local historical narrative. The new urban contexts have redrawn suburban blueprints which were organized according to planners zoning criteria, i.e., the distinction of specific functional areas; clear separation between the constructed element and the countryside, the urban fabric characterized by a marked privilege of open spaces rather than closed ones, so the road becomes the primary element that draws the block, use of serially repeated housing units, formal and perceptual breakdown of the city into two opposing sides: the standard reproduction of the housing unit and the uniqueness of the structure and volume of public buildings. The old villages, in contrast, were characterized as having an organic urban fabric made of clusters situated on the disconnected terrain, low houses built with traditional methods and open spaces conducive to a convivial rapport among neighbors. Two totally different models, particularly indicative is the difference of the index of population density: an of average 3,000 inhabitants per hectare decreased to 350 in the new establishment.

Town	**Year ab.**	**Cause ab.**	**New Town**	**old/new town**
Gibellina Vecchia	1968	earthquake	Gibellina	18,5 Km
Poggioreale Vecchio	1968	earthquake	Poggioreale	0,5 Km
Salaparuta Vecchia	1968	earthquake	Salaparuta	5 Km

Table 2. Uninhabited villages in Belice Valley

3 The sense of abandoned places[16]

At the heart of the phenomenon of the abandonment of a village, even if the decision originated from multiple motives and contingencies, one can note a situation of difficulty and profound discomfort in daily living. In the processes of depopulation,

[16] The title of the paragraph intentionally recalls the name of Teti Vito's book "Il senso dei luoghi" (The sense of places).

is it significant to analyze, along with the specific natural disaster, what happened immediately before, and if a latent process of abandonment was already in place or not. It is also interesting to consider the period immediately after the event, i.e., the reaction the population of the village following the severe damage that was suffered.

With this, we can say that the exodus is largely endemic and it is not exclusively related to catastrophic events, but it is determined by the territory's weak economic, political, and cultural infrastructure. Sometimes the traumatic occurrence becomes a sort of moral justification for making the choice to leave their native land. Most often, a destructive occurrence does not determine the abandonment and relocation of a settlement, but dramatically accelerates a process which has already begun, even when this process has not yet been clearly manifested. Furthermore, with the construction of a new village come materialized plans for change, development and modernization whose elements would otherwise be difficult to construct. Prospettive su cui al momento della scelta sono state riposte molte aspettative e che ad oggi, però, non si sono rivelate tali e hanno evidenziato varie criticità soprattutto in considerazione della perdita d'identità. Outlooks were based on the many positive expectations that were placed at the moment of the choice. To date, however, they have not materialized and various problems have been highlighted, especially the loss of identity. The natural conflict between old and new village is intrinsic to their evolutionary dynamics: if the first is the result of a slow and constant human presence in the territory, the second is due to the frenzy generated by the immediate emergency situation. The image of a place is related to the time factor and the spatial and social processes of evolution. In these contexts, the most crucial aspect is not so much the inevitable dislocation of identity which occurred as a result of the disaster and abandonment, as much as the creation of a new identity, which must be tied to the paths of the memory in order to give the new village a sense of belonging. But this is not an easy journey as seen in the case of Gibellina: The new urban center, based on the model of the garden city, has been enriched by architecture and works of art created by people with great fame and international recognition in order to give the village a new identity[17]. However, even if many people consider this to be an attempt of significant interest, it not inspire within the citizens any real bond to the place [18].

[17] In the 1970s Gibellina became a center of architectural experimentation. We can thus see a series of works: Ludovico Quaroni's Chiesa Madre; the Palazzo Di Lorenzo by Francesco Venezia; Pietro Consagra's Il Mettine, a materialization of the concept of the città frontale; the Municipio by Alberto Samonà, Giuseppe Samonà and Vittorio Gregotti; the Casa del Farmacista and the Casa Pirrello by Franco Purini; the Sistema delle Piazze by Franco Purini and Laura Thermes. Additionally, Gibellina is currently the city with the world's highest ratio between number of works of art and number of inhabitants. In the center of town are: the Città di Thebes, Tris, and the Stella (which acts as a portal of entry to the city) by Pietro Consagra; La freccia indica l'ombra di una freccia by Emilio Isgrò; *Senza Titolo* by Mirko; *Omaggio a Tommaso Campanella* by Mimmo Rotella; *Contrappunto e Sequenze* by Fausto Melotti; the *Torre civica* by Alessandro Mendini; and the *Montagna di sale* by Mimmo Paladino. In addition, there is Burri's renowned *Cretto*, a work that covers much of the old town.

[18] For a deeper analysis of the case of Gibellina, see CRISTALLINI E., FABBRI M., GRECO A., *Gibellina. Per una società estetica*, Gangemi, Roma 2004; NICOLIN P., a cura di, *Dopo il terremoto. Belice 1980:*

The urban construct, no longer a place for residing and living, is deprived of its original meaning by the act of abandonment. However, it is through this occurrence that it earns in the same instant, through what Marc Augé defines as a *form of oblivion*, a new sense. The reality of an abandoned town is configured in a domain of knowledge pertaining to remembrance and the memory. The uninhabited village becomes both the material memory and the concrete impression of one's own past, a past that will deteriorate with the passage of time. In fact, if every place has its unique identity, and if the identity of a living space is represented by consciousness, common values, and behaviors resulting in a feeling of belonging to the given context, what identity can an abandoned village have, if it is not one inherent in the memory of those who lived there? This process corresponds to the creation of what in anthropology is defined as a *re-invention of tradition and identity*. The village, once abandoned, loses its fundamental raison d'être, namely, a place which documents human activities. Emptied of its primary meaning, it becomes a shell with no content and is deprived of the value function for which it was conceived. However, according to testimony and documents gathered, we can say with certainty that at the time a settlement loses its former meaning, it acquires a new one: the uninhabited village changes - just before, during and after abandonment – the image and the value that had been attributed to it until then, by undertaking a process of renewal and a shift in meaning. The deserted villages can be reinterpreted through new lenses, in which they earn:

a sense of identity tied to the memory of the place: every village is the result of a formal stratification of human processes, and the resulting urban transformation of historical events that have followed it over time. As an experienced space, emotional and affective meanings are projected on it. The result is a process that roots a community to its own place. This relationship persists even in abandoned villages, even if there is no longer a direct physical relationship between man and place. Indeed, membership of mind to the abandoned site becomes even more intense and stronger, as it takes on symbolic and nostalgic feelings that project toward the figurative interpretation, subject to myth-creation and emphases, of a past that now cannot return. The uninhabited village, firm and immutable over time, becomes the transposition of a material remembrance of its own history[19];

significance attached to a model of the life of the past: ghost towns tell of a time not far away, still present in the collective memory. These places have not undergone

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Laboratorio di progettazione, Electa, Milano 1983; TRAINA M., *Valle del Belice: introduzione alla storia di dieci anni di terremoto*, Fiamma serafica, Palermo 1978.

[19] This is evident in re-established villages, in which the community perceives the new urban center as anonymous and not representative, but it feels linked to the old village, rich in history, tradition and memory.

any urban change or urban development since their abandonment, and so they remain motionless and unchanged over time. The settlements were not involved in the process of modernization, industrialization, massive urbanization, to which most Italian cities in the Twentieth century have been subject. These are places that reflect, in the residents' collective imagination, the life of the past, tied to a respect for nature and a less hectic pace of life. Symbolically, this model can be placed in contrast to the model of the modern city;

the charm of the ruins: the buildings and the road network of the abandoned village - left in neglect, to the passage of time and to oblivion- presents itself in an evident state of ruin and decay. The unusual atmosphere that is created in these places holds a kind of sacredness connected to time that stands still, to the typical evocative reminder of the ruins, to incompleteness, and to the transience of human activity.

Ultimately, uninhabited villages have lost their purpose for living. They are abandoned, but are not forgotten. Their present is found in the past and it does not remember the future. Therefore, they become places in the memory.

3.1 Scenarios of revitalization

Aside from being a place of emotional and cultural interest, the abandoned village is also a practical resource in the area. The deserted towns have a traditional urban fabric which is typical of medieval centers- typical of the historical and "multilayered" city. In these urban complexes, organic building development is easily recognizable as is space is free of congestion induced by the urban expansion of the 1960s. The buildings themselves may be considered of historical and architectural interest, in that they remain unchanged from the original condition, according to local construction traditions. Another peculiar element that characterizes many of the deserted villages is their location in natural surroundings within a largely unspoiled landscape. The presence of a natural component becomes an added value for considering these places a territorial resource.

It is interesting to consider that most of the features which were once among the factors that led to the abandonment of these locations (e.g., isolation and remoteness from industrial centers, etc.) can now be assessed as qualifying elements for their recovery. This fact shows that, within a few years, there has been a change of mentality, a cultural evolution that has led to greater attention to environmental issues and the rediscovery of cultural traditions. It is precisely on this evolutionary process one that must base a cultural, and later, material plan for the revitalization of *ghost towns*. The revaluation may be undertaken through two pathways:

cultural development: establishing an objective interest in the individual abandoned village and organizing cultural initiatives at the site of the village, so as to involve - through a network of contacts and relationships - the possible actors in the local context who may be interested in this process . These may include local authorities,

associations and groups those members are directly or indirectly related to the abandoned village. Based on the available human resources in the area, a series of activities might be planned and carried out in uninhabited village. The village could be used as a backdrop and venue for theater, conferences, workshops, festivals, exhibitions, tours and tourist routes. All of this may be done to encourage more people to relate to and to rediscover the individual center that was abandoned, then triggering a series of social and cultural processes suitable for dissemination and awareness;

administrative value: defining, in administrative terms, the concept of "abandoned town" in the legislative municipal, provincial and regional level, particularly in those areas where the presence of uninhabited locations is greater, and then giving that entity a specific legal identity; by collecting the guidelines of interventions that enable protection and recovery plans of territorial and landscape planning; stimulating the attention of the Superintendent of Historic, Artistic and Landscape Heritage, so that the specific abandoned village can be subjected to its constraints, in order to grant it the status of a "*resource of public interest*."

It is only by recognizing an abandoned village's intrinsic value that revaluation projects may be planned or implemented. The possible recovery scenarios are briefly presented here, based on a survey of proposed or finished projects and of models consistent with the context of analysis. The types identified are divided into two categories:
• Recovery for tourism
• New anthropization

The recovery for tourism forsees the recovery of the abandoned site to enhance it as a tourist attraction by one the following means:
• Route tourism: the village is inserted in a network of trails for hiking, biking, trekking,etc;
• Park-museum: the newly accessible village is enhanced and preserved as a outdoor museum.
• Vacation homes and apartments, farmhouses, country-hotels: the village, restructured mainly by private initiatives, is used solely for accommodation / tourism;
• Popular hotels: the village, restructured through public / private sector initiatives has reclaimed following a hospitality project which foresees a widespread partnership among tourist/reception activities, craft activities, commercial activities and residential activities, where the tourist component is of paramount importance.
The first two of these practices enhance the urban characteristics of the urban artifact and its decaying appearance, making no significant changes or renovations to buildings that comprise the village. The image of the ruin and the atmosphere of decay are interpreted and highlighted as part of the tourist attraction, to be included

in broader convergence of regional tourism[20].
The process of converting the abandoned village in a system of cottages, farmhouses, country-hotels and popular hotels provides, instead, a program of restructuring and reconsolidation of the entire residential complex, with the renovation of buildings, access roads and the surrounding landscape. The appearance of the place is then totally changed; and it loses both its aesthetic of decay and its previous designated use as housing. From a place for living and then, a place in ruins, the village then becomes a holiday resort. The recovery for tourism is a well- planned process, providing for the establishment of an architectural and commercial project, often involving both the public and private structures.

Finally, the revival of the abandoned village through means of new human activity is to be considered more rare, also because it involves it complex dynamics and difficult planning. In this case, the revitalization of the abandoned town involves a process of new human settlement by individuals or small groups of people, carried out independently, through self-management or through sharing with one another. The village does not undergo a conversion function, but it is re-used for its original intention, namely, as a place for living.

4 Conclusions

The uninhabited village, given its general condition of decay and neglect, may be regarded either as a reject of modern society, which - framed in a predominantly utilitarian and functionalist logic geared at instant profit - does not recognize it in any practical utility and forgets about it, or, as a territorial asset, reinterpreted in a qualifying perspective that does not stop to consider only the current state of decay, but takes awareness of the existential quality and identity value of that place. By assigning a new meaning, it can acquire a new function- a new use within the territory and for the territory.

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[20] It must be stressed, in reference to the scheme of the research, that even when the village is inserted in touristic routes or itineraries and thus valued for its new role and its presence in the territory, it does not lose its connotation as an *abandoned town*.

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URBAN GROWTH - UNDERSTANDING THE DOMINANT DRIVERS AND SPATIAL DYNAMICS OF RISK

Harry Storch[1], Nigel Downes [2]

Abstract

Asian cities located in deltaic settings such as Ho Chi Minh City (HCMC), exhibit higher exposure levels to flood risk primary as a result of their location, their low elevation and if located in tropical regions, the significant annual variations of climatic and weather extremes they incur. In these regions, adaptation to climate change and disaster risk reduction and management needs to focus on minimising exposure and reducing vulnerability via strengthening urban resilience. Scientifically predicted are the direct impacts of climate change on populations (i.e. by urban flooding) and the indirect effects through impacts on the climate-sensitive urban sectors (i.e. housing, energy system). Geographic context gives rise to the biophysical exposure, which includes factors such as topography, connectivity and urban structures which can be mediated by spatial planning or construction technology. Further the urban fabric of a society underlies the patterns of social vulnerability, including issues such as population density, levels of income, education and risk awareness and institutional capacity. Spatial planning measures to enhance the adaptive capacity should be directed towards decreasing biophysical exposures and the social vulnerability from the viewpoint of place-based risk assessments. Key urban impact and vulnerability indicators in megacities and metropolises vary considerably from settlement to settlement and even within settlements. The location, the urban structure types present, dominant building types, social-economic characteristics and existing institutional capacities are all key factors that affect the ultimate exposure, vulnerability and overall environmental performance of a settlement within a mega urban context. Exposure and vulnerability are highly dynamic factors with an important spatio-temporal dimension. Rapid urbanisation and settlement patterns driven by fast changes in socioeconomic development conditions are the key factors influencing the future levels and in exposure and vulnerability to climate extremes. Traditionally only snapshots of the current urban situations have been partially integrated into risk assessments, resulting often for highly dynamic urban regions in an overestimation of climate extremes as a stressor of risk. Our impact assessment study for HCMC highlights, that the influence of non-climatic stressors – like urbanisation as the spatial manifestation of socio-economic processes is still widely under acknowledged. An urgent need has arisen to readdress and improve the scientific methods and datasets to examine these

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non-climatic key drivers of future urban risk and to assess their relative importance for risk propagation compared to primary changes in climate. The most significant issue here is the integration of the future dynamics of urban development.

1. Introduction – The mega-urban region of Ho Chi Minh City, Vietnam

Coastal Asia is facing an urban century in which not only the population growth of cities will ultimately determine their resilience and sustainability, but also their patterns of development. The empirical interrelationship between rapid urbanisation processes in coastal Asia and the associated increases of risk to weather and climate-related disaster risks cannot fully be explained solely in terms of changes in population. Much more important however, is the consideration of the spatial distribution of people and economic assets in risk-prone areas, primarily as a result of rapid urbanisation. Here the sensitivity of the exposed population and assets can be used as an indicator for the ability to cope with and reduce risk. There can be little doubt, that a dominant factor contributing to increased vulnerability is urbanisation itself. How this dynamic pattern of urban development assists or hinders risk adapted planning and management is the critical issue that will be highlighted in our indicator-based assessment.

Figure 1. Skyline of Ho Chi Minh City's Central Business District and low-lying areas on the riverbank of Saigon River (Photo courtesy of Joep Janssen).

The southern Vietnamese city of HCMC represents one of the most dynamic examples of urban development and a megacity in the making (see Figure 1). The

city is precariously located on the banks of the Saigon River, 60 kilometres from the South China Sea and northeast of the Mekong Delta, in an estuarine area of Dong Nai River system. In a short space of time, the city has grown into Vietnam's largest and most populous settlement, becoming an important port city for Southeast Asia and beyond and contributing a dominant share to the national economy. The official population of the city as of 2009 was 7.2 million, spread over a total administrative area of 2095 km^2 (Storch & Downes 2011a).

2. Analysing urban development trends in HCMC

The official population forecast estimates that HCMC will become a megacity and reach a population of 10 million by 2020. According to official urban development strategy, HCMC will be developed in the future based on a multi-center pattern along the northeast, south/southeast, north/northwest, southwest direction. Therefore HCMC's planning administration has recently established so-called new urban areas as focal point for this new satellite development, which will integrate fringe areas in the currently more rural outer city districts. The city's current radial development structure is still impractical, resulting in insufficient land available for public services and for open space.

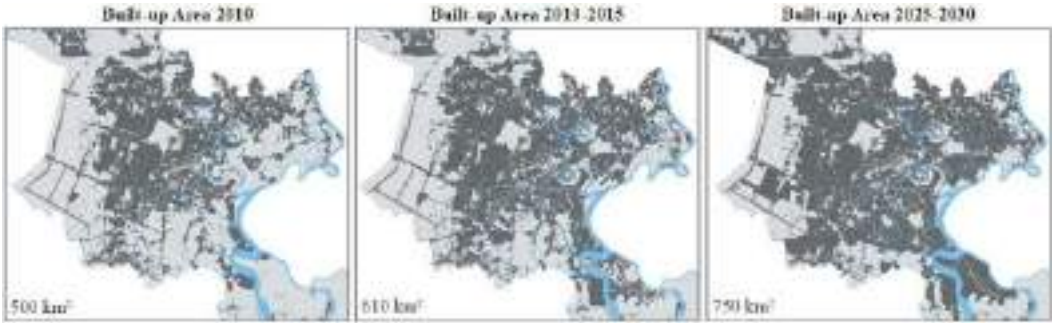


Figure 2. Ho Chi Minh City's official Urban Development Scenario up to 2025/30

Figure 2 illustrates the future urban growth process of HCMC based on the official land-use plans for the next planning period. The implementation of the land-use plans for the years 2010 up to 2025 will increase the total built-up area to 750 square kilometres (an increase of 50 percent) (Storch & Downes 2011a). In order to accurately define the precise spatial extent of the current built-up area, the digitalised version of the official land-use map 2010 at a scale 1:25,000 provided the common spatial geometry based on which a 'current land-use' map for the year 2010 was compiled. Current land-use was determined from visual interpretation of high resolution panchromatic satellite imagery; the classification was based on our urban structure type classification for the entire HCMC urban area (Storch & Downes 2011b; Downes et al 2011). A limitation of simple urban growth scenarios is that the simplified mapping of built-up areas over time does not show real land-use densities and often ignores the structural changes and alterations of the current and future urban settlement typologies.

2.1 Urban structural indicators to analyse development patterns

Urbanization is an extreme form of land use change. Rapid and dense urban expansion and inner-city redevelopment in HCMC in particular have had direct impacts at the local scale by changing the visible urban structure and form, thus triggering indirect effects like changing the urban climate and modifying the urban water-cycle and increasing energy demands for indoor cooling (Storch 2007; Storch et al 2007). The following questions will be explored for climate-related impacts in the urban environment of HCMC:

- Where and how does urban development change the land use pattern of the metropolitan area of HCMC, and to what extent does this affect the climate change related impacts on of the urban environment?

- Which urban structure typologies can be distinguished, and what is the relation between their characteristics and the assessed level of resilience against climate-related impacts?

- How adequate are the existing land use planning and urban-environmental management approaches to the relevant governance structures; to what extent do they contribute to an urban development that takes climate-related urban-structural indicators into account?

- Which hotspot areas can be identified in the context of the predominant climate-related impacts in HCMC, like inner-urban flooding caused by high-degrees of imperviousness, and urban climate caused by high-dense building structures?

An important first step to estimate these hotspot areas is to describe the observable indicators related to urban form and structure. The most dominant feature of the urbanisation process in HCMC is the rapid growth of the city itself and the surrounding urban agglomerations. Urban population growth due to birth surplus and in-migration causes heightened land demands. In HCMC, urban growth and land consumption indicators are just about to be recognized in planning decisions, while a more regulating use of core urban indicators is still limited. Until recently the available information is often inadequate or spatially not explicit enough for assisting urban policies like indicator-based planning regulations.

In general, the ratio between built-up and unbuilt land gives a first overall impression of the spatial character of the city (Gill et al 2008). Built-up areas typically include residential areas, industrial, and commercial areas. In emerging Asian megacities – like HCMC – the monitoring of the building footprint will not be sufficient. In order to analyse urban land use and urban density and spatial development trends over time typically a stepwise indicator approach is used. An initial indicator framework is composed of core sets of indicators measuring different aspects of urban land use and building density. The first step in assessing

the existing urban structure and land-use efficiency is to evaluate changes of the urban form and housing structure and their relation to building density and land utilisation efficiency. The indicator framework leads from basic land use indicators to building density measurements and finally to a combined analysis of population densities and land use intensity. The most important efficiency indicator here is the ratio between built-up and unbuilt areas.

2.2 Dense Urban Development as Adaptation to Natural Flood Conditions

HCMC administrative area is divided into 24 districts, hosting in 2004 an official population of 6.2 million, 5.2 million of which lives in the 17 urban districts occupying an area of 494 km^2 have an average population density of around 11,000 inh/km^2. The inner-city urban areas are concentrating on an area of 140 km^2 more than half of the population resulting in an average density of 26.000 inh/ km^2, with peak values in inner-city informal settlements with up to 80.000 inh/ km^2 (GSO HCMC 2006).

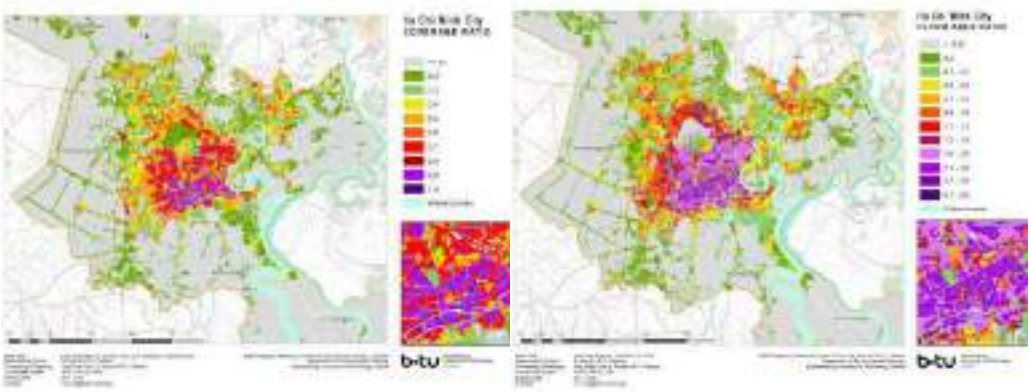


Figure 3. Coverage Ratio and Floor Area Ratio in HCMC's Urban Core in 2005

This extremely high-dense development of the inner city, with built-up (coverage) ratios of more than 0.6 (60% ground coverage) and floor area ratios of 1.5 and more (Figure 3), is mainly a manifestation of the necessary to adapt to the dominant flood risk situation of the city. Originally founded on relatively higher grounds, the city has densified through the infilling of open spaces or the redevelopment of existing buildings. However recently, great concern has bene raised at the city's rapid expansion into the lower-lying and former wetland surroundings, primarily at the expense of urban greenscape and valuable multifunctional natural areas. The city is currently incised by a dense network of rivers and canals of around 8,000 kilometres in length, which account for 16% of the total area. These waterways are affected by a semi-diurnal tide, subjected a high-tide level as high as 1.5 m AMSL. Often coincident with annual rainfall peaks a significant percentage of the city's neighbourhoods regularly experiences floods, due to a combination of tides, heavy monsoon rains and storm surge floods. The dimensions of this flooding are however constantly changing due to the ongoing rapid urbanisation.

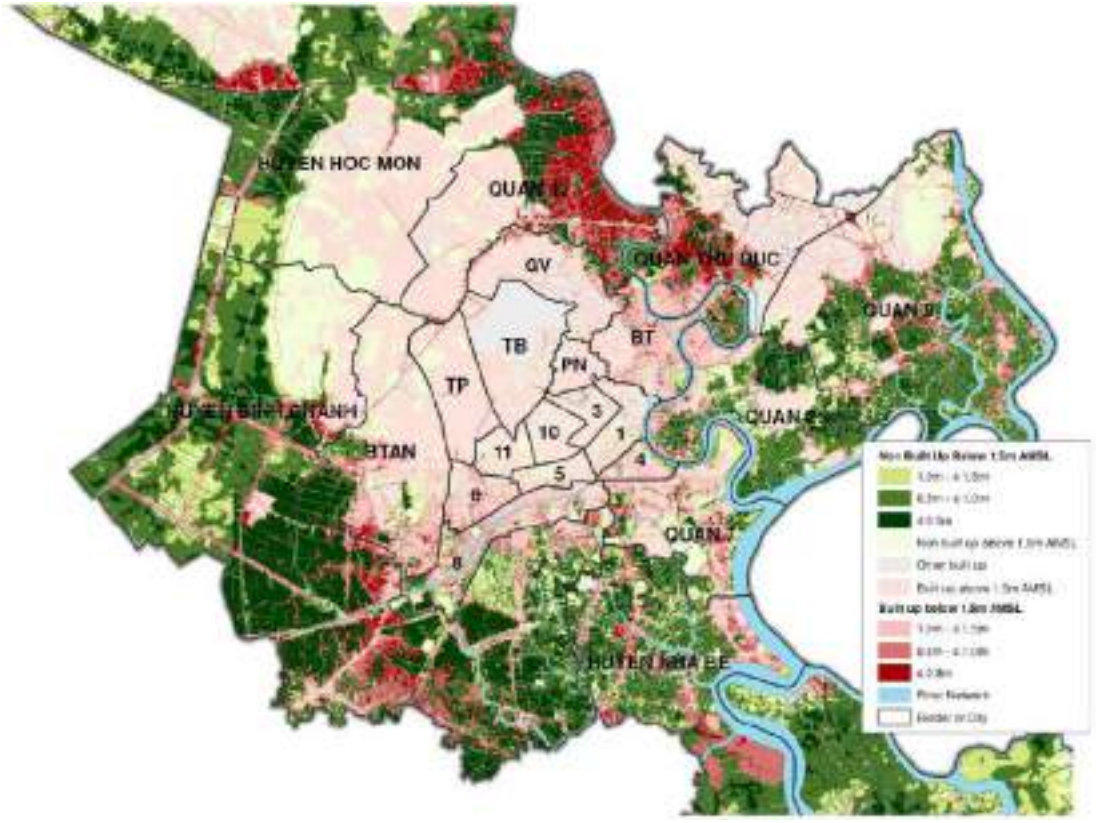


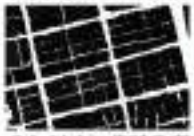
Figure 4. Ho Chi Minh City's Built-up Areas in Flood-risk Areas (areas below high-tide-level 1.5 m AMSL)

Figure 4 highlights well that the current urban form and structure of HCMC is strongly influenced and to some extent constrained by its surrounding natural conditions. The few remaining open spaces surrounding the extremely dense core – mainly agricultural land –have an elevation of below the current high-tide level of 1.5 m AMSL. These spaces act as a natural blue and green belt – akin to flood risk zoning by nature – and strongly influences the ongoing inner-city re-densification. Hence an understanding the interrelationship between urban densification and adaptation processes to current flood risk can guide the spatial adaptation processes of HCMC in the uncertain times of rapid urban growth and climate change.

The dominant building typology in HCMC is currently the so-called shophouse typology, seen often as a flat-roofed row house on a parcel with a plot size of approximately 4 x 20 m. The shophouse typologies are dominant in HCMC, accounting for 95% of the residential Urban Structure Types (Table 1). With building heights between two and five floors, very high levels of density are achieved. It is important to understand the future urbanisation challenges and the requirements for the provision of basic urban services and technical urban infrastructure preparation. Besides sprawling new urban developments, the ongoing continuous compacting and densification, horizontally as well as

vertically, of existing settlement structures are a visible trend for HCMC's development pattern.

Table 1. Density-Indicators of HCMC's Shophouse-based Urban Structure Types

Code /Urban Structure Type Name	Building Footprint	Plan View	3D View	Built-up Ratio (%)	Floor-Area Ratio (%)	Avg. no. of floors
111 / Shophouse Reg. New				45	123	2.7
112 / Shophouse Reg. New Community				26	88	3.4
113 / Shophouse Reg. Alleyways				37	133	2.7
114 / Shophouse Reg. w/ Yards				28	64	2.2
121 / Shophouse Irreg. High-dense				38	134	2.7
122 / Shophouse Irreg. w/ Yards				38	88	2.3
123 / Shophouse Irreg. Scatt. (Peri-urban)				14	30	2.2
124 / Shophouse Irreg. Clust./Line (Peri-urban)				15	29	2.0
125 / Shophouse Irreg. w/ Irr. Fields (Peri-urban)				5	9	1.9
131 / Shophouse w/ Indust.				38	81	2.1

2.3 Urban Indicators describing the change of Built-up Structures

The core indicator set measures the issues linked to the extent and growth of built-up areas and the efficiency of the land utilisation (floorspace) in relation to the common spatial unit of the official land-use blocks. The following urban growth and (re-)development oriented aspects are measured by a comparison of core-indicators over time, describing more specifically the growth rate at which built-up areas and floorspace have expanded and evolved over time, between 2005 to 2010.

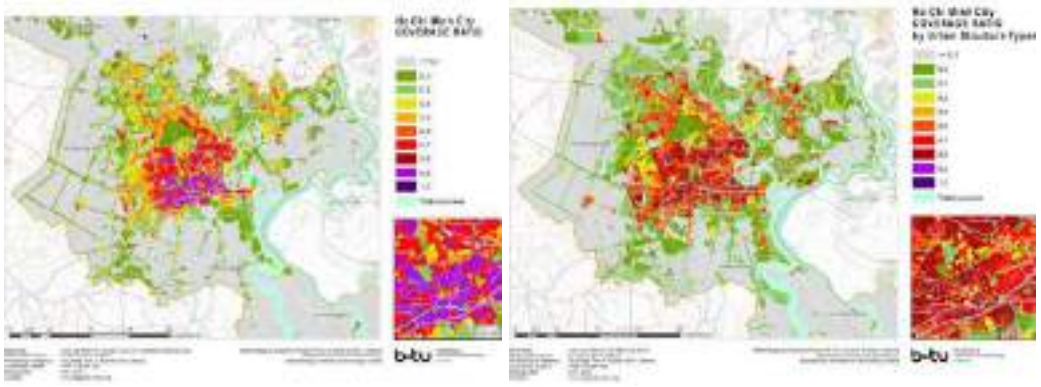


Figure 5. Comparison of the Indicator "Coverage Ratio" between 2005 and 2010 (Map for 2005 (left) is based on building footprint data. Map for 2010 (right) is based on urban structure type mapping).

Figure 5 illustrates the urban development for the period 2005 to 2010 for built-up areas based on the indicator ground coverage ratio. Ongoing sprawl development has taken place along main transportation routes on agricultural land, counteracting the official development according to the satellite urban model. Additionally recent and current residential areas are dispersing towards eastern (District 2, 9 & Thu Duc), southern (District 7, Nha Be) and western directions (District Tan Phu, Binh Tan, Binh Chanh).

Even in the existing urban core (District 6, Binh Thanh) (re-)development activities are high. Overdevelopment in the existing urban core will result in an overload of the limited urban basic services and infrastructure.

Figure 6 (overleaf) illustrates the individual new developments and redevelopment activities – mapped on the level of building types (Table 2) – between 2005 and 2010 lie within the current urban core area. Even if the concentrated developments are focused in new urban areas in the outer districts are more 'visible', the huge number of individual construction activities on multiple single construction sites on building level is surprisingly – while counteracting the official development strategy – dominate in the inner city core areas.

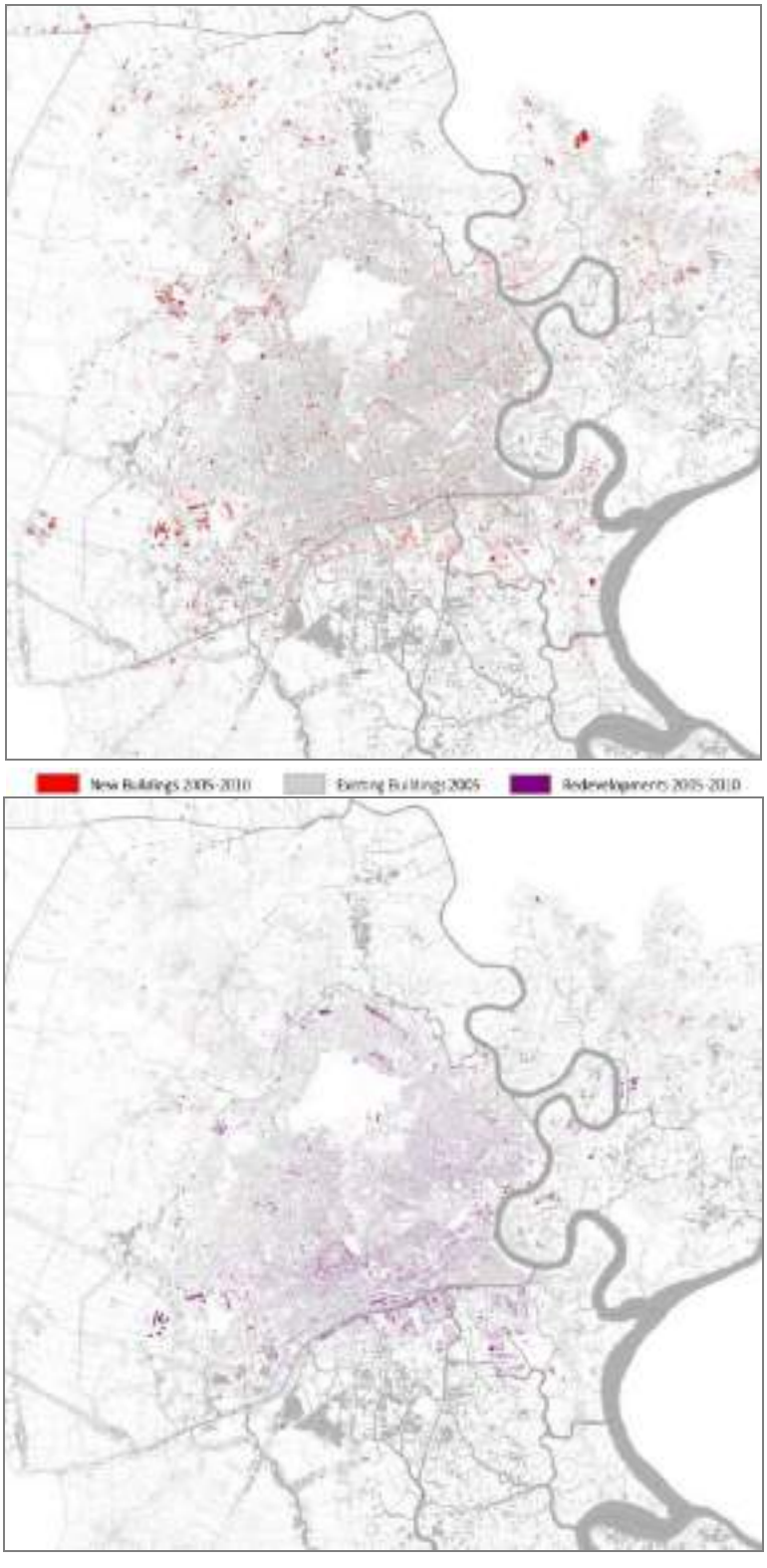


Figure 6. New Developments (Top) and Redevelopment Activities (bottom) between the years 2005 and 2010. (The Analyse is based on a detailed Mapping of Building Typologies, shown in Table 2, on a scale 1:5000 in 2005 and 2010)

Table 2 additionally underlines with the comparison of urban structural indicators (ground coverage and floorspace) and the ongoing densification pattern trend between 2005 and 2010. Except the more informal building types, all building types are significantly increasing in built-up (coverage) and additionally in floorspace density. Especially the dominant shophouse-related building type show a doubling of the total ground coverage and – due to an increase in average height – the floorspace for this type has increased more than 150% in only 5 years.

Table 2. Urban Structural Changes in HCMC from 2005-2010 - Core Indicators for dominant Building Types.

Building Type		Coverage (ha)	Floorspace (ha)	Height (fl)	Coverage (ha)	Floorspace (ha)	Height (fl)	Coverage (%)	Floorspace (%)	Height (%)
		2005			2010			Change 2005- 2010		
Apartment		113	569	5.0	166	890	5.3	48	57	6
High-rise		19	120	6.4	28	223	7.9	51	86	23
Detached		2189	2824	1.3	2872	5893	2.1	34	109	56
Semi detached		317	334	1.1	458	724	1.6	45	117	50
Temporarily-built and others		37	41	1.1	17	21	1.2	-54	-50	8
Terraced		3496	7001	2.0	7154	18001	2.5	105	157	26
Villas		893	1504	1.7	897	1777	2.0	0	18	18
Wood-framed, thatch-roofed		54	56	1.0	52	53	1.0	-5	-6	-1
Markets		8	29	3.5	17	66	3.8	108	126	9
Hotels		39	160	4.1	45	226	5.0	16	41	22
Office building		113	593	5.3	131	777	5.9	16	31	13

3. Administrative Integration and Implementation

Figure 7. Discussion of Planning Recommendations for Adapting HCMC's Land-use Plan to Climate Change, Department of Natural Resources and Environment 2011).

This study highlights the importance of effective land-use planning as a strategy and a key tool for sustainable adaptation, as well as the importance of a better understanding of the relationship between future urbanisation and climate change impacts. Land use planning is seen as having a key role to play in developing strategies to climate-proof HCMC. As such, our research has not been carried out in isolation but from the outset was foremost intended to assist the Department of Natural Resources and Environment (DONRE) with administrative policy making—in making informed decisions underpinned by the latest assessment techniques. Our approach assessing climate change and urban development scenarios aid the development of long-term adaptation strategies. The results presented in this paper show the gravity of the grave challenges faced by DONRE with respect to climate proofing future urban development. Ultimately, DONRE has the task to determine the overall land use, spatial zoning and environmental quality of HCMC. As such, DONRE possesses executive powers over one of the most important instruments for the adaptation of HCMC to climate change, the steering and management of land-use. To their credit, DONRE has become very conscious of its responsibility in relation to climate change responses and the management of associated impacts. Externally, these matters have gained increasing acceptance and importance within the wider administrative structure of

HCMC, while, internally they have reinforced the essential need to adapt their own planning (Storch & Downes, 2011b; Storch et al., 2011). However integrating climate change considerations into land use planning in HCMC is inherently a complex decision-making problem, which requires the careful assessment of the current decision situation, related to space.

4. Summary and Conclusion

In the face the complexity and uncertainty of urban environmental planning for adaptation and mitigation in rapidly growing urban risk areas, spatial urban form matters. It is however often overlooked. Denser and compacter urban environments generally have lower per capita greenhouse gas emissions because they enable public transit. At the same time, a larger blue and green infrastructure is in general beneficial to adaptation, as it provides room for urban open spaces and urban agriculture, the natural spaces for retention of storm and flood water management, and areas to generate and transit cool and fresh air lowering and offsetting the energy demands for cooling in tropical climates. Urban development strategies need to reconcile both goals – mitigation and adaptation - to be really climate resilient.

Planning for risk and uncertainty for future urban growth will not just be a challenge for high flood prone areas; it will be a broader challenge impacting on the nature and location of future urban development, particularly in planning for climate change. There is a strong correlation between the urban vulnerability and physical exposure. Here land use planning that takes into account disaster risks is the single most important adaptation measure for minimising future disaster losses. The spatial planning framework and subsequent urban planning decisions, as currently applied, do not attach sufficient importance to physical exposure and the rate of urban growth being associated with the risk of disaster losses. Urban growth does not increase exposure of population to risks per se. In general, urban governments are responsible for regulating either building or development in a way that reduces risks. For high-dense Asian megacities, the complexity of risk and vulnerability requires high resolution spatial information systems in order to identify hazard patterns, vulnerability and risk at a scale that can provide information for urban land-use and development planning. Urbanisation does not necessarily have to lead to an increasing hazard portfolio and can, if managed properly, contribute to reduce risk. However, there are a number of key characteristics of the urbanisation process that do directly contribute to the configuration of risk. Spatial and physical exposure alone does not explain nor directly lead to increased urban risk. If urban growth in risk-prone locations is directed by adapted land-use zoning and guided by adequate building standards, resulting risk patterns can be effectively managed and reduced. It is the ‘spatial dimension’ the form and structure of urban settlement that concerns urban and regional planning.

5. Acknowledgments

The contribution is based on results of the research project ‘‘Integrative Urban and Environmental Planning for Adaptation of Ho Chi Minh City to Climate Change’’ which is funded as part of the research programme ‘‘Sustainable Development of the Megacities of Tomorrow’’ by the German Federal Ministry of Education and Research (BMBF). The authors would like to express their gratitude to Le Thanh Hoa, Thong Nhat Tran and Hendrik Rujner who partly supported the geoprocessing and Kiduk Moon who assisted the illustration of the urban typologies.

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Participatory Democracy and the Governance of Smart Cities

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Abstract

Citizens' participation in urban planning and policy-making develops the traditional top-down governance model via promotion of bottom-up approaches to policy development and decision-making. This evolution drives social innovation in support of planning initiatives and results in more public-oriented policy specification for better governance and sustainable urban environment. Innovative ICT solutions offer significant opportunity to ameliorate the substantial challenges arising from these developments. Smart city defined initiatives promote the use of ICT solutions for better governance in terms of improved communication and information services, as well as offering the potential to provide policy-makers and urban planners with the tools and intelligence needed to actively manage the urban environment. In this paper, we present and discuss smart planning and urban governance in a smart city perspective. Also, we present a case study based on the UrbanAPI project which aims to develop and deploy different ICT solutions for public participation in planning initiatives and policy making at various scales of urban governance.

Keywords: urban democracy, urban governance, smart cities, stakeholder engagement and public participation.

1. Introduction

The effective governance of the cities and city regions of Europe today fundamentally must address urban complexity, whereby the high degree of interconnectedness and multiple interactions between socio-economic and environmental factors in a territorial context create major barriers to the effective specification and implementation of sustainable urban development.

In this context there is a major opportunity for the application of enhanced ICT driven intelligence in urban management to secure the proactive governance of

cities and the delivery of more sustainable compact cities. In particular ICT enabled urban governance can support the production of an effective basis for the assessment of urban complexity, and decision-making support. In a broader perspective ICT enabled urban governance offers a significant new potential to simultaneously achieve effective management of the complexity of the city, as well as engaging citizens in defining their urban futures.

ICT enabled innovations can enhance public engagement and allow a wider audience to simultaneously contribute to the political debate. This is particularly evident as the convergence of broadband with ICT-enabled innovations (e.g. especially user driven applications based on social computing and mobile technologies) is transforming the way people use the Internet to communicate and interact. Most European citizens embrace the "collaborative Internet" and expect to be able to interact with city governments using ICTs (EXPGOV 2009) . ICTs thereby are seen as enablers of more and better participation (e-Participation), and democracy (e-Democracy) and more inclusive societies (inclusive e-Governance and e-Inclusion), extending beyond enhanced service delivery, to facilitate interactions between actors. Overall technological opportunity is prompting a transformation of the relations between citizens and government agencies, and at the same time the driving forces of ICT enabled governance are also responding to the dynamic of transformational governance and changes in regulatory and governance processes.

Despite all of the above, at the city level there is as yet only limited evidence of the direct effects of ICT-enabled innovations on city governance systems, and in many respects the smart cities revolution is still in infancy and clearly more research, particularly the pan-European level, is required to define the most effective tools and methodologies to support ICT enabled governance.

Research directed by the Interactive Analysis, Simulation and Visualisation Tools for Urban Agile Policy Implementation (UrbanAPI) project (2011 - FP7 DG Information Society[1]) aims to fill this gap in understanding and application. UrbanAPI provides ICT enabled innovations for city governance and adapted governance models to support new stakeholder engagement and citizen participation, in order to enhance sustainable urban policy development and delivery.

The enhanced ICT tools developed by UrbanAPI offer new opportunities for the development of both intelligence sources as well as tools for decision-making support at three levels of urban governance from neighbourhood to city region level, thereby addressing the key dimensions of the management of urban complexity. At the same time by providing a simplified language of communication between different stakeholder groups (virtual reality, visualisation and simulation-

[1] The UrbanAPI project is partly funded from the 7th Framework Programme (FP7) of the European Commission, call identifier: FP7-ICT-2011-7, under the grant agreement no: 288577, started in October 2011.

based communication) developed on a common platform of communication between the different levels of governance including local (virtual reality), citywide (GSM) and city region (simulation). UrbanAPI also advances the state of the art in relation to the necessary collectivity of city governance.

The conceptual frame for the project is based upon the understanding that urban managers throughout Europe face common challenges in responding to the desire for a more participatory democracy, in order to define the basis for urban economic vitality, social inclusion and environmental sustainability. The commonality of the drivers of urban change including global economic instability, demographic and migratory change, as well as climate change offers a major opportunity for the development of common solutions grounded in effective citizen and wider stakeholder engagement in the planning process.

UrbanAPI directly addresses these potentials for the development of common models of policy formulation and implementation in respect of both information generation and management, as well as stakeholder engagement, thereby supporting the potential for widespread application in the cities and regions of Europe.

The structure of this paper as follows: in section 2, we discuss in detail smart governance and urban planning using ICT tools. We also briefly indicate need for information integration at local scale across various administrative units for better intelligence and flow of information between different levels of governance. Then in section 3 we briefly present a smart city perspective followed by the UrbanAPI project example in section 4. Finally, we conclude in section 5.

2. Smart Governance and Urban Planning

Cities sustain 80% of the population of Europe (EEA 2006) and naturally form the focus of political initiatives to secure a more sustainable development plan in response to multiple global and local environmental, social and economic challenges. The core principles of sustainable urban management highlight the need for effective stakeholder engagement and public consultation in relation to the complex of the tensions at play within a multiple system of interactions and often conflicting views between the three pillars of sustainable development (economic, social and environmental) (Jacquier, 2008).

Urban management aims to address the key political concerns of European cities in responding to the challenges of climate change, arising as a consequence of excess greenhouse gas emissions, frequently driven by uncontrolled urban sprawl, and impacting adversely on urban health and biodiversity loss etc. However, urban management is far from straightforward, as cities are extremely complex systems, and the various drivers of change, environmental impacts and political responses

are strongly interrelated, support, alter or compete with each other.

The political priority to ensure that climate change adaptation and mitigation is consistent with, and promotes healthy and economically viable urban communities, is in turn a prime driver of initiatives to secure integrated urban management, reflecting the view that effective solutions must be based on better land use policies as part of an integrated policy response.

Failure to integrate policy can be attributed to a variety of factors including notably organizational and procedural barriers between sectoral planning agencies responsible, for example, for land-use, transport and environment, primarily at the local level, on the one hand, and on the other poor communication between agencies responsible for policy development at local, regional, national and EU levels. A further casualty of the lack of connectivity in the policy model, is the fragmentation of the information and intelligence essential to support integrated policy definitions and policy implementation.

These failures of communication and coordination between government agencies that underpin the concerns of the policy-making community for integrated urban management frameworks, are in turn reflected in the demand for new assessment methodologies and decision-making tools to support urban and regional governance. It is clear that ICT enabled urban governance offers major potential to deliver these assessment methodologies and decision-making supports. However, in accordance with Shared Environmental Information System (SEIS 2008) and other related principles, ICT investment in governance tools and methods must be based on new governance models and not the existing failing model. Accordingly, beyond new assessment methodologies an entirely new paradigm of integrated monitoring (policy model) is required in order to provide a consistent framework and context to systematise the information flows from data collection to assessment and policy support.

Furthermore this new policy paradigm and model of urban governance must be fully user defined, and fully cognisant of the opportunities created by the emergence of transformational governance models.

Classical models of urban governance emphasise expert, centralised, hierarchical, top-down perspectives, supported by departmental defined implementation, delivering one-dimensional solutions. Transformational governance critical to the realisation of sustainable development, demands a new synthesis of expert governance fully articulated with bottom-up stakeholder and citizen engagement to inform decision-making. These new models of governance and management in support of sustainable development require greater stakeholder engagement, partnership between stakeholders, and integration of information and analysis

(cross departmental/multiscalar), with a focus on management of urban complexity, including management of the peri-urban (interface urban and rural), where key challenges for urban planning include issues concerning the containment of urban sprawl and the creation of the compact city.

In this framework of transformational governance new assessment methodologies and decision-making tools must be defined and developed by the ICT community in collaboration with end-user communities according to the requirements of the new models of urban governance. In particular requirements arising from integrated urban management, the defining concept of the new governance model, demands transformation towards enhanced connectivity/communication in two respects. First, in relation to both vertical and horizontal dimensions of government agency engagement and communication in urban governance, and second in support of enhanced communication with stakeholder groups according to the principles of sustainable urban development.

From a technology perspective the development of new methodologies for information acquisition and increase of computing capacities to unprecedented levels opens new fields for monitoring and assessment with high information flow and capacity to manipulate it. The end user defined policy paradigm of integrated urban monitoring and management offers the opportunity for the development of a data model to which improved integrated intelligence can be applied and thereby overcome deficiencies in sustainable urban policy formulation and implementation addressing the key urban challenges including urban sprawl.

2.1 Urban sprawl in Europe – exemplar of challenge and opportunity

The specifications of the end user defined policy paradigms for integrated urban monitoring and management are usefully explored in relation to a more detailed assessments of the challenges arising in the management of cities focused on urban sprawl and its associated environmental, economic, and social impacts.

Apart from wealth, health and happiness, the ideals of the good life and quality of life are often equated with maximum person mobility and car ownership facilitating life in the green suburban environments surrounding Europe's cities. These aspirations provide important drivers for the sprawling urban area, which is arguably the antithesis of sustainable urban development.

Indeed the evidence for the unsustainable nature of Europe's sprawling cities abounds. Car based transport growth associated with the sprawling cities of Europe is a key driver of the growth of transport related greenhouse gas emissions. In 2005 transport emissions accounted for almost 20% of greenhouse gas emissions in

EU25. Road transport is responsible for 93% of all transport emissions and urban transport accounts for half of these emissions. The correlation between the expansion of urban land use and the growth of transport related greenhouse gas emissions is very strong, much stronger than for other factors including population growth and GDP.

Furthermore, it is not just the issue of urban sprawl as a driver of greenhouse gas emissions that raises cause for concern, but also the connection between sprawl and a variety of other environmental impacts in the urban area. For example, car based urban transport growth associated with the sprawling cities of Europe is a prime driver of not only greenhouse gas emissions, but also associated pollutants (Green Paper on Urban Mobility (2007)). Urban transport accounts for 70% of pollutants and 40% of GHG emissions, driving climate change and impacting adversely on human health in the urban area. Emphasis in the analysis of urban challenges and their causality, from a sustainable development perspective is therefore given to the interconnected nature of the challenges in the city, which reflects the ecosystems perspective on the city.

Political concerns with climate change, greenhouse gas emissions, poor air quality and biodiversity loss etc are all fundamentally related in the land-use - transport - environment nexus, in which the complex interrelationship between land-use planning, transportation planning and associated environmental impacts are critically related to the nature of urban form, and in particular the extent to which the urban area is more sprawling or more compact.

These complex interactions between the drivers of change in the urban environment, including land-use and transport planning, the resulting sprawling urban form, and the environmental impacts resulting from these interactions are illustrated in Figure 1: Policy Model - Urban Change Drivers and Impacts.

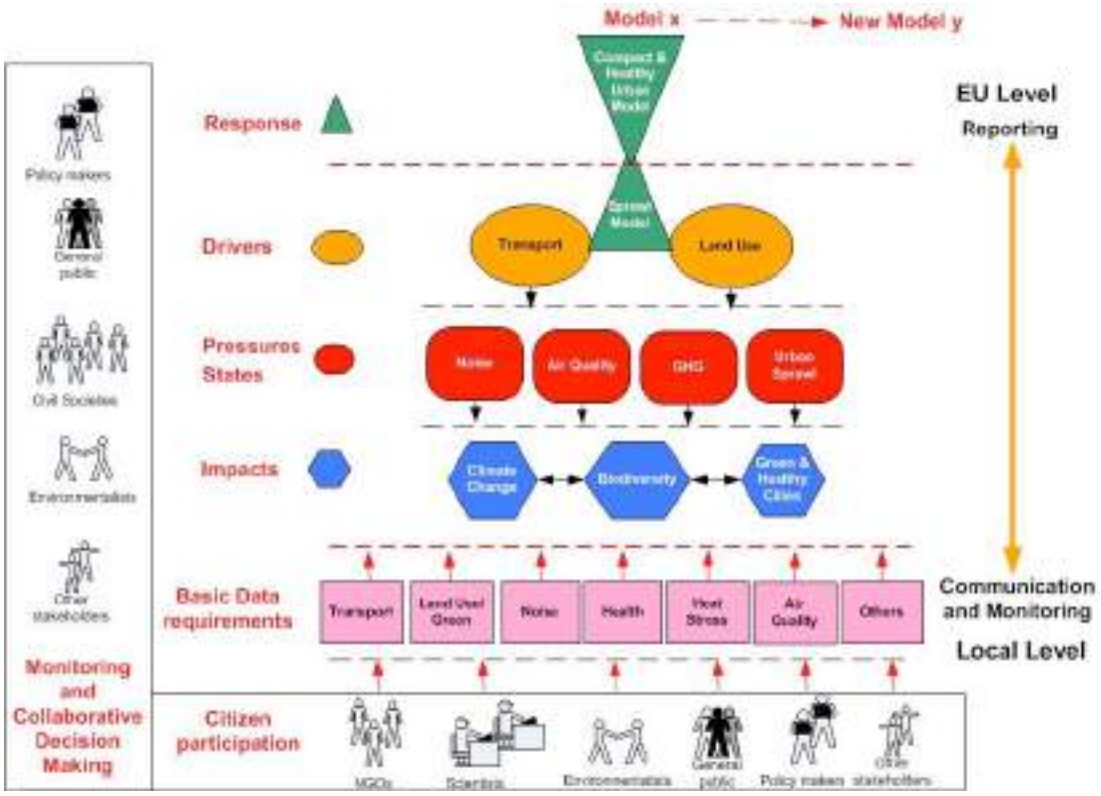

Figure1: Policy Model - Urban Change Drivers and Impacts

2.2 Policy integration – win-win opportunities

Clearly the challenges of urban management are substantial, however set against these challenges the opportunities for sustainable urban development in prising open this complexity are great. Appropriate policies to address the growth of transport related emissions in the context of the land-use - transport - environment nexus can secure the “win-win” possibilities of positive management of climate change, and also effectively address other environmental and social priorities without limiting the economic growth of the city.

This political opportunity to ensure that climate change adaptation and mitigation is consistent with, and promotes healthy and economically viable urban communities, underpins numerous initiatives over the past decade to secure integrated urban management, recognising that more effective solutions must be based on better land use policies according to principles of integrated and holistic policy making.

These principles are well illustrated by the example of urban sprawl impacts. Critical to the formulation of appropriate policies for the management of urban sprawl is the understanding provided by the Green Paper on Urban Transport (Com (2007) 551 final) that the low density environments created by urban sprawl including

dispersed home, work and leisure facilities result in increased transport demand that cannot be effectively satisfied by collective transport solutions. In other words sprawl cannot be fixed by investment in public transport alone, and effective solutions must be based on better land use policies as part of an integrated policy response. Such integrated policy responses inevitably demand collaboration between numerous sectoral agencies at the local level.

Equally, collaboration is required between the levels of government from local to EU levels. This is evident from examination of the widespread failure of local governments to prevent ever greater sprawling of cities. Evidence from the European Environment Agency urban sprawl report indicates that EU infrastructure investments conflict with and thereby undermine local policy initiatives to contain sprawl. Consequently coordination and collaboration is required, and urban planning can no longer be considered just a local or national issue, but that its impact on climate change make it also a matter where EU has clear responsibility to act in cooperation with the local and regional levels of governance. Neglect of this reality furthermore threatens to undermine the achievements of other climate change policies.

Indeed, a principal concern undermining the integrated approach to policy formulation and implementation is the lack of connectivity between levels of governance in both vertical and horizontal policy dimensions, with an accompanying fragmentation of information and intelligence essential to support integrated policy definitions and policy implementation. In For example, at the local level agencies addressing the management of urban regions to contain urban sprawl have a critical need to integrate data across the sectoral domains of land-use and transport. However, given their distinctive departmental identities, the prime sources of information and data, information management and decision support tools developed for land-use and transport policy analysis are typically not interoperable.

Active communication and data integration not only between sectoral agencies at the local level, but also between the levels of governance from local to EU, is clearly critical to the attainment of all policy objectives for urban areas.

These horizontal and vertical dimensions, not surprisingly, also define the prime lines of communication and connectivity between sectoral agencies at the local level, as well as between levels of governance in a vertical perspective, all essential to the development of an integrated policy response. These dimensions for the engagement of agencies in the planning process, thereby provide the structuring principles for policy integration and for the policy implementation model, as identified in Figure 2: Implementation Model - Structuring Principles, below.

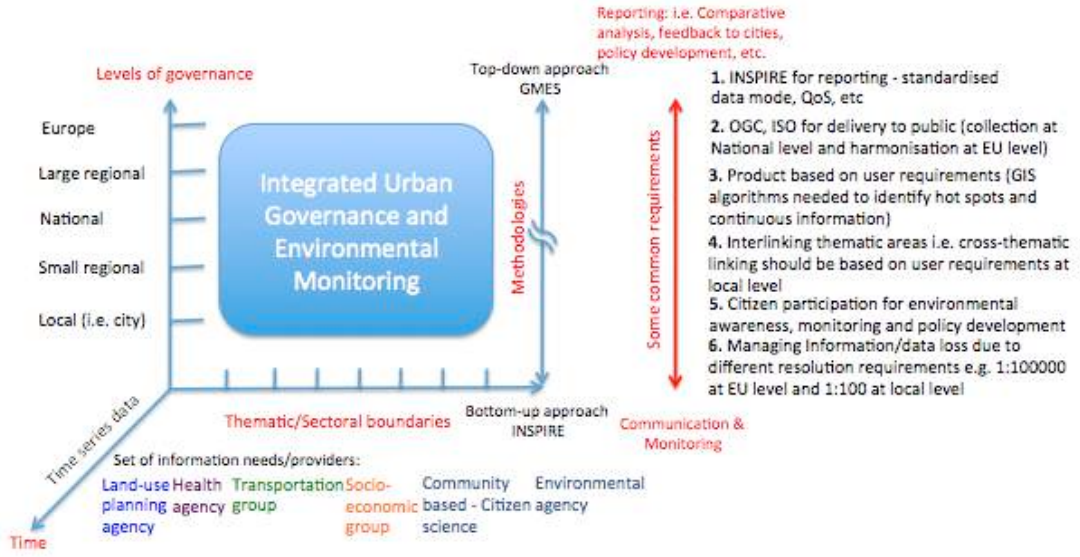

Figure 2: Implementation Model - Structuring Principles (Khan Z, et al. 2011)

2.3 Integrated urban management – new smart governance

Looking forward the structuring principles for the policy and implementation models identified above (Figure 2), offer the basis, according to the necessary interactions between planning agencies, to provide the essential user-defined building blocks for full deployment of ICT applications to secure more effective and transformed integrated urban governance.

This model aims to provide a consistent framework and context to systematise the information flow from data collection to assessment and policy support. The end user defined policy model of integrated urban monitoring and management thereby offers the opportunity for the development of a data model to which enhanced integrated intelligence can be applied and thereby address deficiencies in policy responses. From a technology perspective the development of new methodologies for information acquisition and increase of computing capacities to unprecedented levels opens new fields for monitoring and assessment with high information flow and capacity to manipulate it.

These principles of enhanced communication and technology in support of urban governance are developed primarily in response to classical models of centralised, hierarchical, top-down perspectives mobilising departmental defined solutions and implementation. As we have seen transformational governance critical to the realisation of sustainable development, stimulated by the demands arising from the management of urban sustainability, advocates a new synthesis of expert

governance fully articulated with bottom-up stakeholder as well as citizen engagement to inform decision-making. The emphasis here is upon the need for bottom-up process and effective stakeholder engagement in relation to the conflicting views at the community level (as depicted in Figure 1).

This new governance approach provides additional emphasis on networks of enabling, influencing, mobilisation, coalition and relationship building, between multiple stakeholders at multiple levels, characterised by the following components:

- Linking territories to networks which cross multiple boundaries, with sometimes highly mobile and globalised social-economic groups;
- Multifunctional policy agendas for urban planning relating to energy and carbon, food, leisure, ecology, business park, retail park etc.;
- Multilevel decision making where strategic and local objectives need to be coordinated;
- Multi-sector working, which aims to realise the potential and added value from a wide range of stakeholders and 'communities of interest'.

Accordingly the demands of new governance have challenged existing governance systems, different sectoral agencies speaking different "languages" with different incentives, to respond to agendas which are multi-functional, multi-level, multi-agency, and intergenerational. As a consequence sectoral agencies are able to not only generate more information, but also new intelligence applied through the whole policy cycle from capacity building, to analysis, strategy, implementation and evaluation.

The necessary translation of new governance principles to urban planning processes and structures lies at the heart of the concept of 'strategic policy intelligence' (Plurel 2011). Strategic policy intelligence provides a conceptual framework in response to the new governance model requirements which translates governance priority into urban planning principles and their associated information demands including:

- Exchange of technical information from different sectors;
- Application to the policy cycle, with stages including survey, analysis, strategy, implementation and evaluation;
- Anticipatory governance through foresight and future studies, systems thinking and strategic planning.

Building on these foundations the ICT enabled innovations offer planners, new information and intelligence, new decision-making tools to meet these challenges, and new means of fully engaging stakeholders in the development process. ICT enabled innovations thereby facilitate this process of transformation, and

simultaneously drive further the transformation process, supporting interactions actions between actors, enabling changes in policy-making, and thereby driving change in regulatory and governance processes.

3. Towards Smart cities

The dynamics of ICT enabled urban management identified above in which ICT innovation facilitates the transformation of urban governance, and at the same time is stimulated independently by the dynamics of urban governance, forms one component of wider drives towards Smart cities, in respect of thematic and sectoral responsibilities at the local level. Such an ICT driven urban management can therefore be considered as one step towards smart cities which can be defined as:

"A smart city is a city which invests in ICT enhanced governance and participatory processes to define appropriate public service and transportation investments, that can ensure sustainable socio-economic development, enhanced quality-of-life and intelligent management of natural resources."

ICT innovation brings a significant change in cities' governance, particularly in terms of improved communication and information services, as well as offering the potential to provide urban planners with the tools and intelligence needed to actively manage the urban environment. In addition, it facilitates data acquisition from various sources by using different mechanisms such as remote sensing, sensors, smart phones, census, satellite imagery, etc and performs integration of cross-disciplinary information to obtain knowledge and intelligence for the sustainable governance of cities. The more information intelligence cities possess, the greater the opportunity to realise smarter decision making and governance, and to justify claims for smart city status.

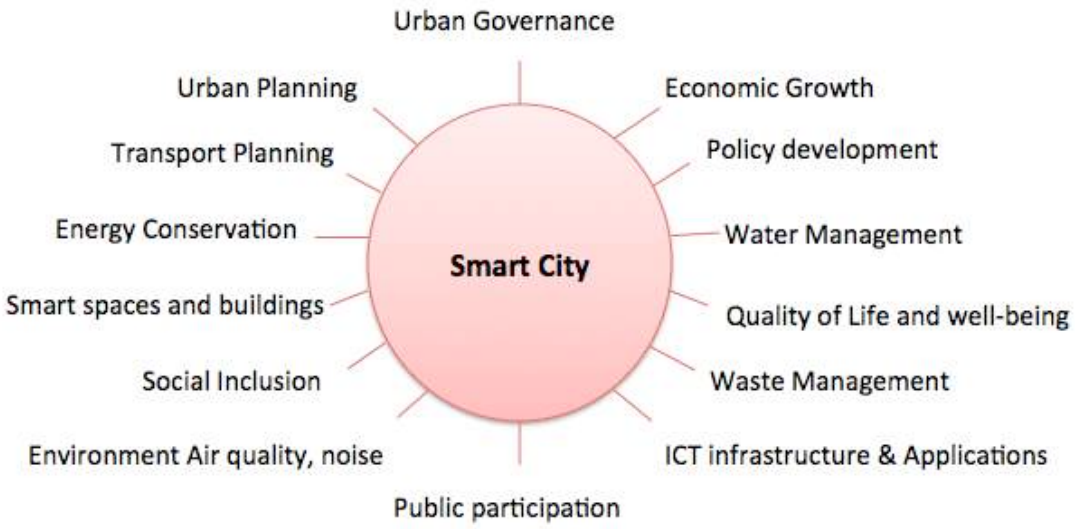

Figure 3: Smart City: Thematic Conceptual Framework

A conceptual framework for the definition of smart cities developed according to a thematic specification is identified in Figure 3, above. These thematic components include: governance, policy development and decision making; efficient use of natural/environmental resources such as water, electricity etc; reduced carbon footprint; efficient energy utilisation; citizens well-being, informed citizens and empowerment; and availability and advancement in ICT such as smart phones with ubiquitous connectivity with internet for context-aware information etc.

ICT as prime enabler for smart cities mainly utilises digital data and transforms it into a useful information, knowledge and intelligence. Cities typical already possess land use, transport, census, environmental monitoring data which is derived from various local sources but rarely is used as integrated source of information for urban governance and planning decisions. The main challenge here is to acquire integrated information from disintegrated data sources at various scales and use this information intelligently to enhance the sustainability of the city. This information can then be effectively utilised to support urban planning and management, citizens engagement, policy development and collaborative decision making.

In the above context, a smart city is primarily defined in relation to the development of ICT solutions for two interrelated issues: i) better governance and management and ii) informed citizens. Former is to get integrated information intelligence about city entities including socio-economic, road networks, structural health of buildings, demographics, environment, transport, utility services, energy consumption, water management, noise, waste management, public health etc for urban planners, policy and decision makers for better governance and sustainable

development of the city. The later is to facilitate general public with access to context aware information such as services, environment, etc. This later perspective can also be used as citizen science i.e. citizens participate in information collection such as environmental sensing data collection, biodiversity and green infrastructures, public/citizen participation for policy development and collaborative decision making. These initiatives empower general public and raise awareness about their environment and health which can result in behavioural changes for green and sustainable healthy city-wide initiatives.

4. UrbanAPI: An example

Evidence from recent surveys of European cities engagement in ICT enabled urban governance, and wider smart city related initiatives demonstrates that with notable exceptions of innovatory progress, there is as yet only limited evidence of the positive impacts of ICT-enabled innovations on city governance systems. It is reasonable to conclude that the smart cities revolution remains in its infancy and that progression towards a more mature status, and wider acceptance by European cities, will benefit from further research to identify a more comprehensive vision of its effective application, particularly where a clear user defined requirement is established. It is precisely this sort of ambition that it is addressed by the UrbanAPI project (2011).

UrbanAPI provides ICT enabled innovations for city governance and adapted governance models to support new stakeholder engagement and citizen participation, in order to enhance sustainable urban policy development and delivery. In this context, the ICT solutions proposed by UrbanAPI offer the potential to provide urban planners with the tools and intelligence needed to actively manage the urban environment. These tools aim to provide planners with precisely the information they need to fully expose the socio-economic and environmental impacts associated with alternative options for territorial development and thereby create conditions in which the political mandate and the basis for more effective management is secured.

UrbanAPI adopts an agile development methodology: cyclic and multiple tasks running in parallel. Furthermore, the UrbanAPI toolset aims to provide advanced ICT-based intelligence in relation to three urban planning contexts as depicted in Figure 4. First, UrbanAPI will directly address the issue of stakeholder engagement and citizen participation in the planning process by the development of enhanced 3D virtual reality (3DVR) visualisation of neighbourhood development proposals. Second, at the city-wide scale, UrbanAPI will develop mobile (GSM) based applications that permit the analysis and visual representation of public movement patterns across the city. Finally, UrbanAPI will develop an ICT simulation application in the city-region context addressing multiple challenges in responding to the

simultaneous demands of both expanding city populations and attractiveness of regions based on settlement and business opportunities.

The key added value offered by UrbanAPI is the extent to which these applications support the development of transformational governance - the shift from a purely top-down planning approach to one which is fully engaged with bottom-up initiatives supported by public intervention. Such applications collectively provide vital decision-making aids for urban planners in the management of the territory, as well as for the associated responsibilities in political negotiation, and wider stakeholder engagement regarding the future development of the territory.

The UrbanAPI ICT toolset and applications are being developed by the case study cities of Vienna, Sofia, Vitoria-Gasteiz, and Bologna. Local initiatives in the four urban regions working in this project are encouraged to participate within the planning process, to contribute to the final solutions and understand and finally accept the expected impacts on environment and habitants. Based on the toolset, adapted urban planning applications will be created, deployed, evaluated and used to support policy makers, planners and stakeholders at different governance and spatial levels (urban quarter level, municipal level, urban region level).

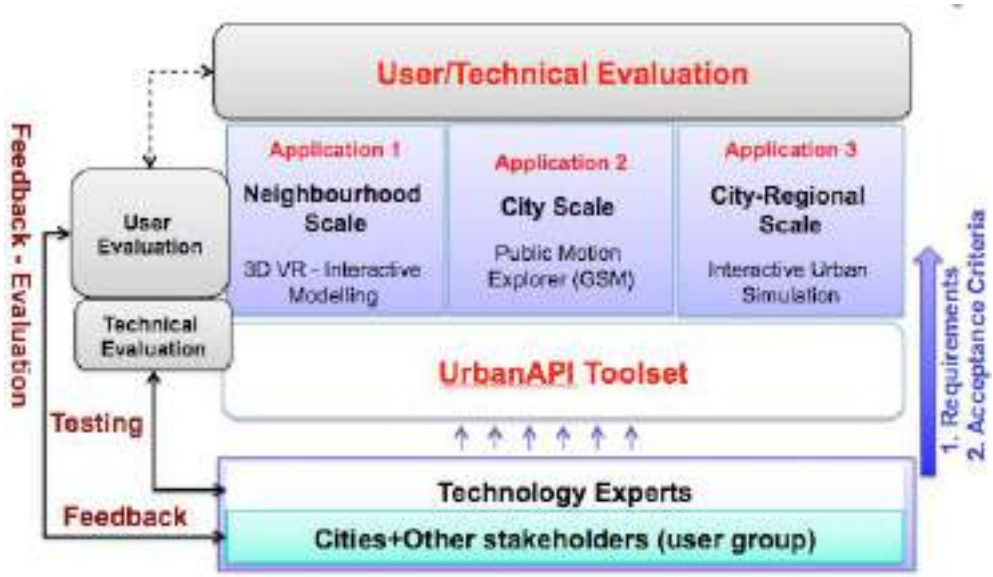

Figure 4: UrbanAPI: requirements, applications and evaluation

Each application developed in one city context is paired with another similar application in another and different city and national context, where context specific socio-economic, environmental and territorial characteristics, as well is governance structures and practices will be evident.

At the same time it is evident that the drivers of change influencing the

development of European cities, including the governance and management of urban areas, have common global and pan-European origin. Therefore lessons will be sought from the comparative assessment of the applications developed in the differing city contexts that will form the basis for the future development of generic ICT tools that can be utilised in the majority of the 500 cities of Europe with populations over 100,000, as well as other smaller cities and towns throughout Europe.

Preliminary analysis derived from the stakeholder engagement and requirement engineering process of UrbanAPI indicates that nearly 50% commonalities exist between two or more city requirements for the 3D VR application. Furthermore, usability aspects including visual aid; data synchronisation and integrity; public participation and ease of interaction with the application; accessibility of the application using different platforms e.g. web, smart phones; change impact assessment; importing new data and exporting results in common formats; and conformance to city administration IT policies form the most common functionalities required by all cities.

In addition, individually specified requirements from cities indicate new potentials which can be developed to improve the overall functionality of the 3D VR application. This suggests that based on commonalities in city requirements, that generic tools and services can be developed which can be adopted and further extended to fulfill the specific needs of new city administrations.

In a similar fashion to 3D VR, there exist about 60% commonalities between two or more city requirements for the public motion explorer (GSM) application. Furthermore, usability aspects including intuitive user interface; visualisation of aggregated population; indicating places attracted by public; extrapolation to reflect the results for overall city population; identifying social biasing; visualising motion traces between city districts/zones; intra-city and extra-city origin-destination matrices and travelling mode; accessibility using different platforms; importing new GSM data and exporting results in common formats; integration of GSM data with data from other sources e.g. GPS, polls; city administration IT standards compliance; and workflow documentation are the most commonly required capabilities for the GSM application. This again suggests that generic tools can be developed to facilitate wider adoptability of the GSM application where more specific requirements from cities add value to these common capabilities.

5. Conclusions

A smart city driven ICT enabled urban governance offers huge potential to secure effective management of the complexity of the city, incorporating new potentials for engaging citizens in defining their urban futures. ICT enabled innovations are

driving the opening up of governance models enhancing public engagement and allowing a wider audience to simultaneously contribute to the political debate and improve the quality of public service delivery. A smart city managed by contemporary ICT solutions not only facilitates enhanced intra and inter-city communication and information exchange but also enables flow of information between various levels of governance at city, regional, national and EU scale.

UrbanAPI project provides a huge potential for participatory planning and policy development by using interactive ICT applications at different urban governance scales. Furthermore, preliminary analysis of the requirements specification of four different European cities indicate that there are commonalities in policy development and decision making processes and hence demand for generic capabilities in the participatory applications can be useful and applicable in other European cities.

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REDEVELOPING TO ACHIEVE, REDEVELOPING TO AVOID : A CASE STUDY in the ŞENTEPE SQUATTER NEIGHBOURHOOD of ANKARA

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Transformation of informal housing settlements into legal housing by urban redevelopment has become one of the major tasks of Turkish urban policy in the last decades. However, in some cases, urban redevelopment could not be facilitated at all, despite prepared plans. Moreover in most of the transformed settlements, added difficulties brought out by urban transformation itself such as lower levels of physical quality, gentrification or dislocation could not be avoided. The study has got use of an empirical research with a case study in Şentepe Neighbourhood of Ankara hypothesizing that there would be available fiscal and non-fiscal policy options for local and central authorities and planning institutions relying on their political and regulative power and resources to overcome most of these bottlenecks. The findings of the empirical study revealed that first and foremost, the problem of disinvestment and very low levels of transformation in the area have been solved dramatically by a new 'project' prepared by the local authority in 2005, after almost twenty years passed since the first redevelopment plans were prepared. Moreover, the results indicate that the Şentepe Transformation Project could also be managed to avoid the common and well-known unintended or undesirable social outcomes of redevelopment like dislocation of residents or lack of social integration of initial and new residents.

Keywords: Urban transformation, urban renewal, urban redevelopment, informal housing

Context, Rationale and Models of Redevelopment Practices in Turkey:

The squatters in Turkey mainly emerged since 1950s and have been perceived as a problem by policy makers and urban dwellers since then. While the responses to this problem have been as diversified as ignoring, banning, granting amnesties or upgrading in the first years, redevelopment have been the major urban policy after 1980s. Despite various efforts, today's Turkish cities still have a considerable amount of untransformed squatter settlements. Moreover, the transformed settlements also still lack what was intended to be achieved by redevelopment; having physical, social and economic problems. This study aims to understand and discuss the underlying

mechanisms of bottlenecks in urban redevelopment processes and availability of certain options to overcome these blockages.

Until now, two major models of urban redevelopment has been implemented to transform the squatter settlements into regular and legal housing environs in Turkey; 'transformation through improvement and development plans' and 'transformation through urban transformation projects' (Dündar, 2001). The first one, dates back to 1984, the enactment of a law numbered 2981 and known as Improvement and Redevelopment Law[1]. The law enclosed those structures built before 1985 and made it possible to make redevelopment plans for the squatter settlements, suggesting a plot-by-plot demolish and reconstruction of housing dwellings by the private sector to create a new subdivision each allowing construction of four-storey apartment buildings reformulating the land ownership structure. Provision of secure tenure and public services to the settlement according to an improvement plan was expected to increase the demand for the settlement where the developers would find it profitable to convert squatter housing paying for land through an exchange of a number of flats to be produced. These plans enabled the squatter dwellings, which are at favourable locations to be converted into apartment buildings in building-selling mechanisms together with an upgrade also in terms of infrastructure such as road network and facilities. However, this mechanism could not work in places, where ownership problems created a bottleneck for redevelopment or in places which do not have locational advantages where construction investment may not be profitable for the house-builders due to low rents.

The second model, "transformation projects" emerged as an alternative model for those areas, which couldn't be transformed by improvement and redevelopment plans at the end of 1980s. Dikmen Valley Transformation Project in 1989, Portakal Çiçeği Valley Project in 1992 and Geçak Project in 1995 were the pioneers of this model. While the 'improvement plan' model have used private resources, which generate extra values to be shared by squatter owners, and speculative house builders; the model of transformation through "transformation projects" uses private resources generated through the project itself, where the extra value generated is shared by more diversified groups of stakeholders, such as local government, project company, squatter owners, landowners and city inhabitants (Türker-Devecigil, 2005). Like improvement plan model, transformation projects too, used extra development rights as the driving factor. Large- construction firms not only introduced more advanced construction technologies, but also manage to cope with ownership problems and bureaucratic difficulties since they have political influence and financial power. On the other hand these firms tried to answer the demands of middle and high-income groups, composed of luxury dwellings of multi-storey apartments.

1 the original name of the legislation is; "Procedures to be applied to Buildings not Conforming to Reconstruction and Squatter Housing Legislation and Modification of an Article of Law No.6785".

Currently urban transformation model is used very prevalently in cities in the form of a number of sub-models of 'transformation projects' differing in terms of organisational schemes, funding and participation levels. Very recently, a central government authority; Housing Development Administration (HDA) has taken over the responsibilities of Ministry of Public Works and of city and greater city municipalities defined by related municipality laws. By 2000s the central government has been directly involved in urban transformation and production of housing through large-scale projects undertaken by HDA. New draft legislations are also being prepared directly related with urban transformation tasks.

By the 1980s, in Turkey informal settlements covered almost almost half of the urban land, some of which were in central locations surrounded by the expanding city. Therefore, the most significant task of redevelopment activities in Turkey are related to these informal settlements which lack sufficient standards, but at the same time being sources of potential location rent. Due to the volume of informal housing stock which is intended to be transformed and lack of conformable financial and technical instruments as well as integral know-how due to the relatively new agenda of urban transformation, the interventions in Turkey to the informal housing stock have not yet to achieve a comprehensive approach such as in urban regeneration practices employed by 1990s in the European cities integrating social, economic and environmental aspects. For instance, in the rationale of the law 2981, the aim of the law is defined as; "providing housing for people who migrated to cities which have become attraction nodes due to economic and social reasons and to legalize the informal housing stock as long as they fulfill certain conditions of urban development legislations and plans". As can be seen from this phrase, the law did not aim or consider any economic, social and environmental aspects of redevelopment; but approaches the problem limited to an ownership and construction requirements level. Nevertheless, the common approach of governments and society has been to expect that the physical transformation would solve the socio- cultural and economic problems as well.

Implications of Redevelopment or Lessons learned; what to achieve, what to avoid:

Almost thirty years of urban redevelopment experience have legalised and transformed a considerable amount of housing stock. However, the implications of urban redevelopment reveals that these interventions have also downsides. A set of four problems of urban transformation in Turkey can be cited;

1. Many informal settlements remain untransformed since they are unattractive for developers and thus disinvested or underinvested although they are envisioned to be transformed by development plans.

Location and locational factors have determining affects in urban redevelopment. Şenyapılı (1996) distinguishes three channels in the process of transformation according to the Improvement and Redevelopment Law since 1984. First, the most advantagely located areas mostly close to city centres have been transformed into large scale, high-rise prestigious residential neighbourhoods by large development firms. Secondly, although not located in or close to city centres, but still advantageously located, like near access roads, near prestigious residential neighbourhoods or urban recreation areas transformations take place into small-scale, four- to five-storey family houses within "build-and-sell" model by small-scale developers. And lastly, in *squatter* areas that are not so advantageously located, the owners attempted to transform their *squatters* into small-scale family apartment houses with their own savings or preferred to wait for the land rent to increase to the levels that would attract small-scale build-and-sellers (Şenyapılı, 1996: 16,19). The last category, are those which mostly remain disinvested or underinvested areas. These areas, which are usually the most inaccessible, having low rent levels, excluded and depredated parts of the cities, remain untransformed and problematic areas. The redistributed income could not reach most of the squatter owners since the regularized development would also follow the locational preferences of the population (Türel, 1985).

In order to facilitate urban redevelopment under any circumstances, some social, economical and physical goals and consequences were not taken into consideration which further created three more problems in the transformed areas.

2. In most transformed neighbourhoods, the built environment still lacks sufficient physical quality and standards.
3. In most transformed neighbourhoods, unintended changes might be observed in social composition; such as gentrification.
4. The socio-economic implications of transformation give rise to ethical debates and social discontent within various sections/ classes of the society.

The second problem of low physical quality and standards in the new built environment produced is associated with the lower standards in Improvement Plans compared to Development Plans. Improvement and Redevelopment Law 2981 gives the flexibility to improvement plans not to fulfil all the service standards of development plans regulated by the Development Law Numbered 3194. In order to obtain additional shares from the increasing rent, potential social infrastructure such as green areas and socio-cultural services occupy minimum shares in the land use, which cause increases in construction and population density and low quality living environs. Considering that the transformation of these newly created and legalized neighbourhoods would be more difficult than transforming the squatter settlements, this would create future challenges for our cities and for the planning profession.

The third group of problems are associated with the social dimensions of urban transformation practices. Various research on redevelopment practices especially those which are carried out by 'transformation projects' model, have shown us that,

they might result in changes in the entire social composition of the transformed neighbourhoods (Dündar, 2001, 2005; Uzun, 2002, 2006; Görk, 2002; Türker-Devecigil, 2003; Kuyucu and Ünsal, 2010). Rather than producing affordable housing for the disadvantaged groups most of these projects targeted middle and upper-middle classes and advertised as 'Prestigious Projects' including those undertaken by central government. These projects are criticised for mainly aiming at demographic as well as physical upgrading rather than to improve the living conditions of the existing inhabitants of the area, thus the process results in property transfer and displacement and damages the social fabric of the settlement since neighbourhood relations and mutual support mechanisms are lost. (Akpınar, 2008; Kuyucu and Ünsal (2010). Mostly some vulnerable groups such as those living in poverty and tenants may suffer from the lack of complementary policies for relocation or dislocation.

The fourth and last group of concerns is ethical problems and take primarily two different forms, although which might seem to be contradictory to each other;

- the argument which claims that housing right of the poor are being grasped by evictions and relocations.
- the argument which claims informal and illegal ways of behaviour are rewarded by rent transfers from those who cannot own a house, instead of punishment for invading land.

The first one emphasises immoral implications of seeking rental income for some sections of the society (i.e. developers, middle class) at the expense of the housing rights of vulnerable or underrepresented groups (i.e. poor, ethnic minorities, less educated). While the transformation projects are introduced as tools for increasing the quality of life of the residents, the process may end up by decreasing the quality of life of reaching to a point of being disposed for some residents.

The latter ethical debate on the other hand, is related with the construction privileges given to squatter owners and emphasises that the squatter residents who become better off by transformation especially by redevelopment plans are able to enjoy high selling price and rental incomes for their properties. In various cases, the squatter residents may end up with owning more than one dwelling after transformation; which creates them an extra rental income as well as creating a convenient housing to live. In her study, Taşan (1996) shows the impossibility of 'homeownership' for a family in rented accommodation in the formal housing stock compared to squatter residents in the same period. This brings out a discontent in the sections of the society other than the advantageous squatter housing residents, criticizing that illegal behaviour is rewarded, but legal behaviour is not.

A number of factors make it crucial to develop better practices in urban redevelopment. First, the pressure of rising land prices makes it irrational to keep those kind of settlements at low levels of capital investment, secondly the pressure of global economy leads that slum and squatter areas could not be a feature of competitive cities and thirdly, the idea to transform these once-poorly-built

structures into more qualified settlements compatible with the new capacity of the society make urban transformation of squatter neighbourhoods the first activity on the agenda of Turkey's urban policy and practice. Therefore, currently, lots of urban transformation projects are being implemented employing various organisational, financial and participation models. The case study will examine one of those projects in terms of whether or not the project could facilitate urban redevelopment while avoiding unintended outcomes such as the problems outlined.

Case study; Şentepe Squatter Neighbourhood

The case study Şentepe is a squatter neighbourhood approximately 12 km away from the city centre located within the District of Yenimahalle in the northern parts of the city of Ankara. The first comers who were mostly from villages of the nearby cities of Ankara coming to find employment and new opportunities, moved to the neighbourhood in the second half of 1950s building squatter housing for themselves. While the neighbourhood was neglected to a large extent during the first decades, in 1984, a 1/5000 scale Master Plan named "Master Plan for Şentepe Squatter Zone" was prepared and consequent improvement and redevelopment plans of 11 phases have been put into practice according to the Law numbered 2981 between 1984-1989. However, only 10-15% of the building stock has been transformed according to these plans and the rest remained as squatter housing according to the established figures of the Municipality of Yenimahalle. Then in 2004, by considering the reasons of the inefficacy of the former improvement plans and also considering the recent changes in the spatial and economic structures and the property market in both local and national levels, the municipality proposed a new project. The municipality announced the project as "Şentepe Urban Transformation and Rehabilitation Project" and put into practice by 2005 to be completed in six phases.

The first strategy of the municipality was to announce the plan as a 'Transformation Project' which for the house-builders has a connotation with higher profits relative to 'transformation by redevelopment plans' model. The municipality has also made some institutional changes in order to ease the procedures for house-builders. The municipality not only increased the amount of social and technical infrastructure in Şentepe Transformation Project compared to the previous plans, but also announced that the project will involve some flagship investments which will be all financed and carried out by the municipality such as a large urban park which might create a positive externality effect for house-builders investing in the area by upgrading the image of the neighbourhood. Since the too small plot sizes were an obstacle for redevelopment in the previous plans; ŞTP rearranged the road network and building block pattern so as to provide larger plots enabling larger size of dwelling units to be produced. Increased development rights enabling more than four storey construction which was not possible in redevelopment plans further increased the profitability of the area and enabled the house-builders and squatter housing owners to agree on contracts more easily since the owners could be offered more units. The plan brought up an incentive for constructions to be carried out on the building block level, by

giving additional development rights in case all owners could agree with the same house-builder on a single project. This has created a more willingness among owners for reaching consensus. Moreover, although not adopting a fully participative model, the municipality carried out meetings with residents to inform as well as to ask opinions or easing or mediating issues of households with house-builders.

Şentepe Transformation Project is chosen as a case for a number of reasons, mainly;

- In the history of Şentepe, the municipality has attempted to transform neighbourhood by two different models of transformation (by redevelopment plans in 1980s and by transformation projects in 2000s) which enable to discuss both of these models.
- While the first of these attempts was not successful to trigger transformation, the second attempt has been more effective, and studying the reasons of this could be useful to develop tools for other underinvested areas of unauthorized housing
- urban transformation according to the project has started by 2005 and still ongoing, thus it is possible to study different household categories altogether; the squatter households whose dwellings are about to be transformed, households who do not like to transform as well as households in the transformed stock and later- purchasers in the area.

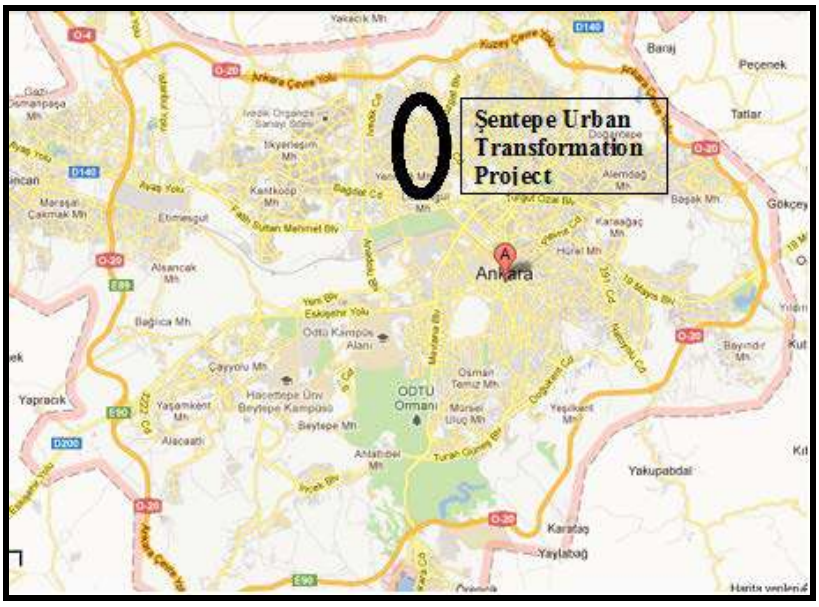

Figure 1. Location of Case Study Şentepe in Ankara

The project area consists of 11 quarters of Şentepe Neighbourhood (Figure 24) and has approximately 425 ha of land with a planned population of 160.000 (current population is 87.000 according to SIS, 2000). According to the plan, 14.000 squatter dwellings are supposed to be demolished and 35.000 new dwellings are supposed to be constructed. Although it is called as a transformation project, it is in fact a development plan in terms of its legal basis and relies on the same principals as transformation by improvement and redevelopment plan model. In Şentepe, transformation has been started and currently in practice. Therefore currently both squatters and transformed apartment blocks coexist even on the same street or on the same building blocks.

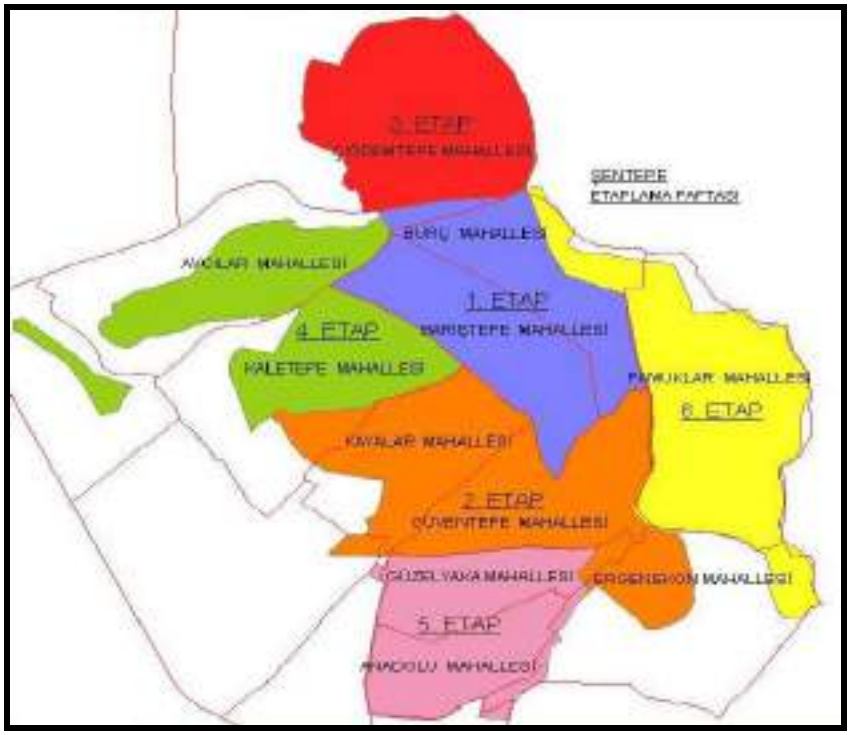

Figure 2. Boundaries and Stages of Şentepe Transformation Project

Methodology of Case Study:

The main pivots of the case study rely on household surveys in Şentepe. The surveys were carried out between 25th and 30th December 2007. The number of households which housing questionnaires have been applied is 160. Based on a sample plan (Table 14), the questionnaire surveys have been undertaken both in unauthorized stock and transformed authorized apartment blocks. Moreover, as seen from the table, households living in apartments fall into two categories, first, the households who obtained their dwellings through transformation (who were formerly squatter owners in the site) which will be referred as 'initial homeowners of flats' in the rest of the analysis; and secondly, the households who have purchased their dwellings in the site after transformation, which will be referred as 'later-purchasers'. Both tenant and owner-occupier households in squatter as well as apartment stock have been

interviewed. By 2007, in Şentepe there were approximately 25 apartment buildings and 800 flats, that households have moved. A total of 80 questionnaires were undertaken in the apartment stock corresponding to a 1/100 sample size. Considering the total population of Şentepe (pop= 87.093, Household size= 4.1, number of Households= 21.242) 160 questionnaires in total represent 7/1000 sample size). Additionally, semi-structured interviews with house-builders and non-structured interviews with municipality officials, mukhtars, real estate agents and housing estate managers were also been carried out.

Table 1. Sample Plan of the Questionnaire Survey in Şentepe

Household Categories	**Freq.**	**%**
Home-owners in squatter housing	30	18,8
Tenants in squatter housing	10	6,3
Home owners in flats constructed before 2005 gaining the flat from being a right-holder	40	25,0
Home owners in flats constructed before 2005 by purchasing the flat after transformation	10	6,3
Tenants in flats constructed before 2005	10	6,3
Home owners in flats constructed after 2005 gaining the flat from being a right-holder	40	25,0
Home owners in flats constructed after 2005 by purchasing the flat after transformation	10	6,3
Tenants in flats constructed after 2005	10	6,3
Total	**160**	**100,0**

Results of Empirical Study; What has been achieved, what has been avoided

The results of the empirical study will be demonstrated according to the set of four problems outlined previously. Therefore, it would be possible to evaluate whether or not the Şentepe Transformation Project (ŞTP) was able to overcome these problems.

> Problem 1: Many informal settlements remain untransformed since they are unattractive for developers and thus disinvested or underinvested although they are envisioned to be transformed by development plans.

Since 2005 when the new project was put into practice, the area seems to be transformed in a high pace which is even recognizable with a first glance. Therefore the implementation of the project seems to solve at least one of the four problems explained. Thus, studying this case would give us clues for other areas and other projects suffering from the disinvestment problem. A total of 403 building licenses (construction permits) (8659 dwellings) have been given between 2006- 2010 according to the figures of Municipality of Yenimahalle.

In the survey different questions were asked to different household categories. For instance, households living in squatter housing were asked whether or not they want their dwellings to be transformed into legal apartment blocks or not. Households living in squatter housing in Şentepe; 86.67% of the squatter owner Households have declared that they would prefer their dwellings would have been transformed into authorized flats.

The squatter owner households were asked why they did not transform their dwellings yet. According to the results of the survey, among the first three reasons households for not transforming the dwellings according to the improvement plans or the transformation projects, first comes "we couldn't afford costs" by 58,7%, then "we couldn't agree with the developer in appropriate conditions" by 13% and "the developers were not interested since our land was small" by 10.9% (the interviewees could chose more than one option in that question).

Table 2. Reasons for Not Transforming Their Squatters by ŞTP (squatter housing owners survey)

Reasons for Not Transforming (squatter housing owners survey)	**Count**	**Pct of Responses**	**Pct of Cases**
Would not afford the costs	27	58,7	90,0
Would be in financial lost if their squatter housing were demolished	3	6,5	10,0
Multiple families in one plot would not get enough number of dwellings after transf.	1	2,2	3,3
we couldn't agree with the developer in appropriate conditions	6	13,0	20,0
the developers were not interested since our land was small	5	10,9	16,7
Disputes with other right holders in the same plot	1	2,2	3,3
Would prefer to live in a detached house within gardens	2	4,3	6,7
The municipality expropriated to make green area	1	2,2	3,3
Total responses	46	100,0	153,3
130 missing cases; 30 valid cases			

The initial homeowners of flats (which were previously squatter homeowners and gained a flat after transformation by ŞTP) were asked for why did they prefer to transform their squatters. The most common reason of initial homeowners of flats for preferring to transform their squatter dwellings is 'higher building quality of flats' (78,8%). Then comes 'more regular housing environs' (51,3%) and then 'opportunity to gain more than one dwelling'(28,8).

Table 3. Reasons for Transforming Their Squatter Housing (Initial Flat homeowners survey)

Why did you prefer to live in an auth. flat by transforming your dwelling (More than one answer is possible) (Initial Flat homeowners Survey)	Freq.	%
For higher building quality of flats	63	78,8
For a more regular housing environs	41	51,3
For the chance to own more than one dwelling	23	28,8
Neighbours in the same/ adjacent plot convinced me to do so	13	16,3
Afraid of loosing their dwellings with an obligatory demolition in the future	10	12,5
Total	**80**	**100,0**
Average Number of Responses: 150 / 80 = 1.9		

Initial homeowners who gained their dwellings by ŞTP were asked why they did not transform their dwellings (according to the improvement plans) before this project. Again in the first place "we couldn't afford costs" by 25,3%, "we would be in financial lost" by 22,7% and 21,3% "we couldn't agree with the developer in appropriate conditions" were mentioned (Table 58). Among all responses of squatter owners, for reasons for not getting their dwellings transformed; the share of disputes with other right-holders in neighbouring plots is only 2,2 % which is one of the least common answer. However, among initial flat owners, among the reasons for not transforming according to improvement plans before Şentepe Transformation Project, disputes with other right-holders constitutes 9,3%. The fall in disputes might be read as Şentepe Transformation is more accredited and trusted by the Şentepe population or some of the planning decisions such as more development rights or larger dwelling sizes in the project decreased the possibility of objections to and thus disagreements in transformation.

Table 4. Reasons for Not Transforming Their Squatter Housing Before ŞTP

Reasons for Not Transforming Their dwelling before (initial homeowners survey)	Code	Count	Pct of Responses	Pct of Cases
Would not afford the costs	1	19	25,3	32,2
Would be in financial lost if their dwellings were demolished	2	17	22,7	28,8
we couldn't agree with the developer in appropriate conditions	3	16	21,3	27,1
Developers were not interested	4	3	4,0	5,1
Disputes with other right holders in the same plot	5	7	9,3	11,9
The plot was not suitable to make an apartment building	6	1	1,3	1,7
Did not know we had such a right/ opportunity	7	5	6,7	8,5
Would prefer to live in a detached house within gardens	8	7	9,3	11,9

Total responses		75	100,0	127,1
Şentepe, 101 missing cases; 59 valid cases				

The need for making an additional payment to the developers might discourage squatter owners from transformation. On the other hand, 92.5% of ex- squatter dwellers in Şentepe indicated that they did not need to pay any additional money to the developer (Table 65). The amount of additional payment varies between 5000 to 200000TL (Average= 49000TL). The time span for demolishing and construction would bring additional monetary and emotional costs for a household. Demolishing of squatter housing and rebuilding of apartment buildings lasted for 9 to 36 months (mean=19.16) and 98,75% did not take any rental assistance. 61.3% of Households in squatter housing lived in rental housing during demolishing and rebuilding of their dwellings, 30% of them lived in a relative's house without paying rent.

Figure 3: Untransformed squatter housing in Şentepe

Figure 4: A Street composed of transformed buildings in Şentepe

Figure 5. Large scale construction facilities of transformation in Şentepe (Çiğdemtepe Quarter)

Problem 2: In most transformed neighbourhoods, the built environment still lacks sufficient physical quality and standards.

Compared to the figures of improvement plans, ŞTP increases the quantity of green and socio-cultural facilities according to the intended amounts of infrastructure to be realized by the municipality according to the plan. According to the household survey, after transformation in Şentepe, the most appreciated factors in housing and neighbourhood condition appear to be the 'inner arrangement of the dwelling' (91,3%) 'Size of the dwelling' (90% answered as it gets better), and the regularization of buildings (73,8%). The answer as getting worse off only appears in neighbour relations with a ratio of 41.3%. (Table 80).

Currently, a number of factors decreases the physical quality of the neighbourhood related with redevelopment efforts. One of them is the coexistence of transformed and untransformed dwelling which creates noise and pollution and the neighbourhood still looks like a squatter settlement or a construction site even if the residents of transformed units are living within a new upgraded dwelling. Another problem in Şentepe is that parks, sports areas and recreational facilities are not completed either by the municipalities or the house-builders (some of the small parks within the gated housing estates are supposed to be provided by the house-builders). That's why it is possible to see children in the transformed stock to be playing on streets just like the squatter neighbourhoods. Absence of some services also decreases the aesthetic quality of housing environs. Although most of the rehabilitation and widening of roads have been completed increasing the quality, the neighbourhood's main connection is only by the roads at its southern part, which causes traffic congestion problem, the transportation system of the neighbourhood is not compatible with the new load of proposed 160.000 population. Moreover 17,6% of households do not pay any monthly fees for management and maintenance of their building blocks. therefore in these buildings, maintenance of the buildings depend on solely voluntary efforts and sensibilities and in the long run this might lead to a decrease in the physical quality of housing environs as well.

Problem 3: In most transformed neighbourhoods, unintended changes might be observed in social composition; such as dislocation and gentrification.

The results of the survey exhibit differences to a certain extent between existing population and new comers in terms of education and income. Table 5 represents the education level (last school graduated) of the household heads (HhH) according to the type of housing and housing tenure status categories in Şentepe. As seen from Table 5, in Şentepe, only 3.25 per cent of the household heads are graduates of a university and all of the university graduates live in apartments. Highest average year of education is 9,2 years in later-purchasers.

Table 5. Level of Education of Household Heads According to Household Categories in Şentepe

Level of Education of HhHs of Şentepe	Squatter homeowner		Squatter tenant		Initial flat owner		Later purchaser flat		Flat tenant		Total	
	freq.	%	freq.	%	freq.	%	freq.	%	freq.	%	freq.	%
No school and no literacy	1	3,57									1	0,65
No school but literate					1	1,32					1	0,65
Primary School	8	28,57	3	30,00	23	30,26	4	20,00	6	30,00	44	28,57
Secondary School	13	46,43	4	40,00	25	32,89	8	40,00	7	35,00	57	37,01
High school	6	21,43	3	30,00	26	34,21	5	25,00	6	30,00	46	29,87
University					1	1,32	3	15,00	1	5,00	5	3,25
Total	28	100	10	100	76	100	20	100	20	100	154	100

Table 6. Average Year of Education of Household Heads according to Household Categories in Şentepe

Hh Categories	Average year of education		
	Mean	N	Std. Deviation
squatter homeowner	7,5	28	2,603417
squatter tenant	8	10	2,44949
Initial flat owner	8,105263	76	2,715776
later purchaser flat owner	9,2	20	3,237933
apt tenant	8,35	20	2,852054
Total	8,162338	154	2,775878

In terms of differences in income between the initial population and the newcomers, there is a 10% increase in favour of the latter. The minimum figure of monthly total income in Şentepe is of squatter housing tenants category (Table 7). In terms of education and income the new comers and initial households are not very sharply differentiated in Şentepe although new comers represent a relatively higher profile.

Table 7. Average Monthly Total Household Income in Şentepe

Hh Categories	Monthly Total Hh Income in Şentepe		
	Mean	N	Std. Dev.
Squatter housing homeowner	868,33	30,00	442,66
Squatter housing tenant	720,00	10,00	193,22
Initial homeowner of a flat	1112,03	79,00	738,29
Later purchaser of a flat	1222,50	20,00	464,10
Tenant of flat	862,50	20,00	480,37
Total	1023,90	159,00	619,23

Households who have purchased their flats after the transformation were asked why they choose to live there. In Şentepe, 35.3% of the responses are for its affordable purchasing prices, and then comes closeness to relatives and friends by 29.4%; 23.5% have answered as they were living in the same neighbourhood before and they got used to living there. Since the availability of relatives and friends is the second most chosen answer in Şentepe, it is possible to conclude that new comers are not only from a similar socio-economic group, but also they are bounded with family and friendship ties to the initial owners.

In Şentepe, 50% of these 'later-purchasers' have stated that the dwelling they lived before coming to their current dwelling was an authorized apartment flat, the rest 50% is some form of squatter or other unauthorized housing types. These figures also indicate a similarity between the new and initial population in Şentepe. These later purchasers are observed to live in Şentepe by 55% before coming to their current dwellings; and 45% lived in other districts or neighbourhoods of Ankara. None of them were living in another city or in rural areas.

Another category of newcomers is the tenants of apartment stock. In Şentepe, 50% of the tenant Households indicated that the reason to choose to live there was the appropriate rents; 45% of them indicated closeness to relatives and friends as another reason, and 45% of the Households stated that they were used to live there before. In Şentepe, 80% of the tenant Households were again tenants in their previous habitation. 85% of tenants were living in Şentepe before moving to current dwelling, and 15% were living in other neighbourhoods/ districts of Ankara. None of them were living in other cities or rural areas. The previous dwellings of flat tenants of

Şentepe live were 25% authorized apartment flats, and the rest 75% were squatters or other unauthorised housing.

Another dimension of social problems is the problems between newcomers and initial owners due to different socio-cultural status, habits and practices. This problem has been highlighted by both types of residents in the area on casual visits to the neighbourhood. The complaints of newcomers are usually depicted through the habits and lifestyles of initial owners described as uncoordinated to the urban life. One of them is explained as shoes and slippers placed and stored just at the corridor before the entrance doors of the dwellings which are common areas of the apartment blocks. This is mentioned as a common practice among initial homeowners. This habit creates an unpleasant smell and unaesthetic image in the building. Another complaint is about hanged out laundry in balconies which again creates a bad image of the streets. On the other hand, it is observed that these initial owners put effort on cleaning of the stairs of their apartment blocks or watering the plants in the garden voluntarily.

> Problem 4. The socio-economic implications of transformation give rise to ethical debates and social discontent within various sections/ classes of the society.

The fourth problem category is the most difficult category to be tested since ethical debates can be more subjective and are not easy to be tested. However, since they are grounded mostly by the social problems themselves; it can be argued that creating less social problems means creating less ethical problems. For instance initial observations during the survey exhibited hardly any sign of gentrification since original residents and newcomers do not present a sharply differentiated profile. This means less social and economical adaptation problems for the original residents while enjoying an improvement in their quality of urban life. Therefore, the original residents do not face with involuntary moves to other parts of the city, which might create social, psychological and economical costs for them.

On the other hand, the survey results indicated that many households gained more than one apartments (of all the initial flat owners; 59,49% gained one dwelling and 40.51% of the Households have gained more than 1 dwelling as compensation of their squatter lands) in the transformation process. These additional dwellings provide an additional rental gain for the households.). Among the Households who gained more than 1 dwelling 39% of them give these dwellings for rental, 31.7% have sold these dwellings, 19,5% of these additional flats are given to the ownership of their married children for residing, 9,8% are given to friends and relatives without rent. Since these households started their housing career with an illegal occupation and end up with a relatively good position compared to those who manage to get a homeownership through legal channels, Şentepe Transformation Project can be criticized in terms of this ethical dimension. In other words, transformation does not only serve to meet housing needs of households, but instead provided lucrative gains for some of them.

Conclusion and Evaluation:

Urban redevelopment by improvement and redevelopment plan model introduced in mid-1980s aimed at simultaneous upgrading of all squatter settlements in the country, rather than of particular project areas. As the model proposed a single template of transformation; (i.e. 4 storey apartment-blocks, with no urban design schemes and with no consideration of the unique locational characteristics of particular squatter housing areas varying in different cultural, social and environmental contexts), only some of the squatter housing areas were managed to be redeveloped. The low investment attractivity in locationally disadvantaged areas and ownership problems (multiple owners, multiple inheritors, hesitant owners) blocked the ways for redevelopment in many areas. On the other hand redevelopment through 'transformation projects' model managed to overcome some of these blockages and enabled redevelopment albeit for the expense of social goals creating consequences of dislocated residents directly or indirectly forced to live elsewhere or bring two groups differing in lifestyles, income and preferences together who would not prefer to live together. Şentepe Urban Transformation Project, attempted to gather the strengths of both models, trying to develop a model in between two models.

The following strategies of the municipality increased the attractiveness of investment of the neighbourhood for house-builders and attractiveness for transforming their dwellings for squatter housing owners;

- announcing the plan as a 'Transformation Project'
- institutional changes in order to ease the procedures for house-builders
- flagship investments which will be all financed and carried out by the municipality such as a large urban park which might create a positive externality effect
- increased the amount of social and technical infrastructure
- rearranged the road network and building block pattern so as to provide larger plots enabling larger size of dwelling units
- increased development rights enabling more than four storey construction
- additional development rights in case all owners could agree with the same house-builder on a single project.
- meetings with residents to inform as well as to ask opinions or easing or mediating issues of households with house-builders

Moreover, it was observed that the project could avoid most of the unintended outcomes of redevelopment to a large extent. Since the project relies on plot by plot renewal by private sector although it is called a ‘transformation project’, there is a gradual transformation where all the squatter housing are not demolished once at a time. Thus the households can adapt themselves to the process more easily and they would be relatively more flexible in their decisions on when to transform and move from their dwellings. Thus, there are no involuntary evictions or time limits for transformation. the project resulted in less ‘radically changed’ housing environs than

those transformed by other transformation projects. So, Şentepe Transformation Project might be evaluated as successful in terms of overcoming the ethical problem of creating dislocated or getting worse-off households. On the other hand, the project could not provide enough satisfaction on households, such as transportation network and delays in the completition of parks and recreational areas. The most referred disinterest in redeveloping their dwellings among squatter housing owners stresses financial issues. Policy Implications of this result designate for the need of further analysis of availability of special groups in terms of financial need and assistance and need for developing appropriate policies for these groups. Developers disinterest in very small and difficult to manage plots also appears as a problem to be solved by institutions such as planning and other regulations to be developed by authorities.

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The squares of Athens: The past and the new planning challenges

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Abstract

The squares of Athens have gone through a very special trajectory, in parallel with the equally special trajectory of the city's history.

From the initial concept of symbolic building I order to express the new role of the city, passed to the utility design coupled with a certain perplexity, and then to the mature modern era of architectural competitions and optimism. The pursuance of green followed as a reflection of the early sustainability challenges. Today we are in a peculiar post-modern phase of diverse legitimation and frequently pointless interventions. In an era where the city beautiful concept is challenged, such interventions of debatable architectural and urban design quality forms are the last elements required at the moment when a wave of contemporary urban outcasts has appeared and is conquering public space.

This paper attempts to examine the design of the Greek capital, through time, and take a stance in today's challenges facing the problems of the planning of the city per se part of which are the squares with whatever these might mean today.

1. The Greek Independence and the founding of the State - 19th century

After the founding of the Greek state in 1833 and the arrival of King Otto and Queen Amalia from Germany, Athens became the capital of the Nation (a village of 4,000 inhabitants), mainly for historical reasons, since other cities as Nafplio, Patra, Tripoli, Ermoupoli Aegina, etc., were socially and economically much more significant and developed.

This choice signaled the beginning of efforts for the development of Athens into a European capital. The most important of these efforts was the construction of one city under a new plan.

This new plan apparently comprised buildings and public places, and aspired to obey a certain style of urban design.

To achieve this, the first plan was conducted by St. Kleanthes and E. Schaubert whose main idea was the triangular structure of the central part of the new city composed of the three squares, Omonia Sq. (then king Otto Sq. –center) Klafthmonos Sq. (the same as today's Klafthmonos Sq.) and Kerameikos Sq. (near the Conservatory-Kerameikos), while plans were made for a fourth round square in the area of today's Syntagma Square (Biris K., 1966, published 1999: 26-39, Travlos, 1993). Due to reactions raised by land owners, and to economic hardship it was not possible to implement this plan and an

amendment of it elaborated by Leo von Klenze was realized (Biris K., 1966, ed 1999: 34).

In these urban plans German Romanticism and Neoclassicism urban morphological structures that generally characterized urban planning in Europe in the 19th century were evident.

According to Philippidis, "various projects developed in the 19th century by Greek or foreign engineers would rely more on the tradition of classicism having the city avenues planted as boulevards, showing calculated positions and uniform buildings, like the first draft of Athens (1833) of Kleanthis-Schaubert" (Philippidis, 1984:24), while the logic of design is that of G.Haussmann in Paris who according to Philippidis is a representative of the prescribed intervention in the city fabric aiming its very survival"(Philippidis, 1984:23).

Concerning the squares and parks-groves, the form of the proposed and realized squares follow the standard of their European likes showing plans based on the type of a royal park. The smaller parks and squares follow a "romantic" morphology of the English garden style. According to Travlos, "the tree planting of main streets and squares under Queen Amalia's auspices and the creation of Athens National Garden softened the bad impression of the capital during the early years after Liberation" (Travlos, 1993: 250).

European Romanticism - Neoclassicism (and later eclecticism) finds its natural place in Athens functionally and morphologically. The public space and square design regardless of its enthusiasm and magnitude was a combination of the new state power symbolism with the encountered significant obstacles in the realization process such as their acceptance by the local people.For example, there were controversies about the extension of the Constitution Square, prohibited for the fourth time in 1849 by residents while the residents themselves demanded a private land division of other city areas (Kapnikarea area).

The Liberty Square underwent the very first alteration after the public Nursery was built on it (Biris M., 1987, published 2003: 20), while the third square, never materialized as such. The People's Garden of Kleanthis and Schaubert was built after repeated interventions took place and finally became replaced by the building of the Municipal Theatre (Biris M., 1987, published 2003: 26). Other green areas were lost in order to create space for new constructions such as the Municipal Theatre (Biris K., 1966, published 1999: 85-86).

The 1860 plan, by the committee of Vouros, Petmezas, Kalkos, Scoufos, Boulanger, etc. included a proposed unification of archaeological sites (Roman & Ancient Greek Market), and of the Canning, Kolonaki, Monastiraki and Abyssinia Squares, while public buildings on squares were planned to be built. (Biris K., 1966, published 1999: 108-110).This idea was doomed to never be realized as a nonviable plan. The needs of the city led to continuous revisions of plans "for consolidation" which sometimes envisioned the opening of streets, but rarely created squares and green spaces as components of the urban fabric. Until 1900, "no serious care was taken by town planners to ensure spaces for public use. In the municipality of Kallithea only one square was planned in early seventies. Very few squares were designed and built. Green areas were almost totally ignored" (Biris K., 1966, ed 1999: 275).

According to Philippidis, "Haussmann's intervention became widespread in Europe in the last third of the [19th] century. The famous opening of Korais Street in Athens, for which lots of ink was spilled in the past, belongs to this consolidation plans by foreign and local planners" (Philippidis, 1984: 23).

The symbolic value of the design goals was self-evident in the naming and changing of names of squares. In 1862 (year of 'eviction' of King Otto), the "Square Otto" became Omonia Square, Ludwig Square became Liberty Square, and after a while Koumoundourou Square (Biris K., 1966, published 1999: 111). Omonia Square took the form of a 'neoclassical ensemble during the last two decades of the 19th century. Until then it was simply a dump square (Biris M., 1987, published 2003: 24 and note 32: 220).

Similarly, only during the last two decades of the 19th century the three sides of the Constitution square received an architectural finish including few hotels and homes of wealthy citizens (Biris M., 1987, published 2003: 29).

2. The period of the first half of the 20th century (early modernism)

The first half of the twentieth century was marked by wars that resulted in the expansion of the country, as well as in the 'Minor Asia disaster' of 1922. Attempts were made to solve problems of public space and some practical solutions were found, though not in a very inspired way. Nevertheless, especially the inter-war period was a particularly productive period in terms of ideas and projects. Simultaneously, this period was marked by a large expansion of all kinds of infrastructure networks which had already started in financially developed countries in the last third of the 19th century.

As for town planning, dozens of plans and proposals are recorded e.g. the basic literature (mainly K.Biris and D.Philippidis) mentions several projects by P.Bakas (1896), A.Georgiadis (1904 & 1908), L.Hoffmann (1908), Th.Mawson (1914-18) A.Balanos (1917) and E.Hebrard P.Kalligas (1919), St.Leloudas (1918) influenced by Geddes [1915] and Garnier [1917]. Philippidis regards most of the examples as an expression of aesthetic landscaping and Hausmann-like pragmatism in search of normality as a perfect solution for a European city (Philippidis, 1984: 121).

After the 'Asia Minor disaster' (1922) the housing need for more than a million refugees changed the priority setting, but the basic rationale of the proposals remained intact. The Kalligas plan (1922) proposed public buildings, squares, openings and new centers, but was cancelled by the dictatorship of Pangalos in 1926 (Biris K., 1966, published 1999: 284-286). During the same period the first drafts for garden cities were prepared, the conception of which however was closer to English suburbs than to garden cities.

Thus, plans by Sp.Agapitos for Ekali (1922), by A.Nikoloudis for Pschiko (1923), by A.Valvis for Heliopolis (~1925), and by I.Isigonis and Kremezis for Filothei (1931) were delivered. An exception to the endless street proposals were the interventions of the Mayor Spyros Patsis City Design Committee (1925-1929) which proposed the creation of highways (e.g. Acharnon) and the creation or the enlargement of neighborhood squares.

Leloudas in 1929 criticized the timidity of the state, despite the widespread claims of the public authorities for a real reform plan of Athens. His proposals ended up in the final plan in 1938 for the Athens Highway & Skaramangas Highway. An extension plan of the City of Athens (1934) was already at hand when City major was Sp Trikoupis. This plan was confirmed by a series of royal decrees during 1934-1939, in 1934-35 manifesting the "Technical Program of the City of Athens" (Biris K., 1966, published 1999: 297-324 and Philippidis, 1984: 202). According to Philippidis, however, the lack of funding for major interventions, finally limited the program to the embellishment of squares and open spaces (green areas in front of the Evangelismos Hospital, the Dexameni Square, the Cathedral Square and the Fokionos Negri Square).

During this period, the city plan and design did not follow a conscious choice as in the 19th century (when the new state embraced symbolic means of architectural expression), but extended the chaos and the arbitrariness in design as had started immediately after the proclamation of Athens as capital. There was a little and late efficacy of interventions, while some sort of competition between the Ministry of Communications (the Town Planning Office being subject to it) and the Municipality of Athens.

The latter managed to rescue two parks in the Alexandras Avenue from interventions of the Ministry (to convert to building space), while other parks and squares were lost due to Law interventions (Biris K., 1966, published 1999: 298 & 322). One may regard as relatively positive interventions the construction of the underground subway station in Omonia (which functioned as a bus terminal) from 1925 to 1930, the 1929-1930 construction of the monument of the Unknown Soldier and of the square in front of the Old Palace (which changed its use), the creation of the Pedion Areos as a park of Athens, in 1934, as well as the 1939 creation of the Field Infantry barracks park (on the foot of the Petraki Monastery) (Biris K., 1966, 1999 Edition: 302 - 21).

Such developments were certainly not irrelevant to the great social upheavals brought by refugee populations who flocked to Athens and established a territorial mobility. According to M.Biris, during the decade 1910-1920 Amerikis Square was a new venue for wealthy bourgeois who built their mansions around it.

“Neighborhoods - such as around the National Archaeological Museum, Vathis, or the axis of Piraeus Street (Omonia Square – Koumoundourou square) - which during the period 1880-1920 hosted upper and middle class layers, degenerated after years of dramatic changes in the central and western sector (trade, manufacturing heavy traffic, etc.) into a functional mixture that ultimately led to their final degradation. The same happened with private mansions of Patision Street, or cottages in the area of the Angelopoulos area and the Amerikis Square, etc. when new population masses flooded the entire area north of the capital during the inter-war period and after"(Biris M., 1987, published 2003: 26-31).

According to K.Biris after the ‘Minor Asia disaster’, "areas next to the Municipal Theatre and the Town Hall, the Varvakeion Demorateriou and Monastiraki Squares, of the crossing Aiolou and Plouton Streets were filled by wooden shops and stalls - in which everything was sold as food, utensils and clothing house tools, etc.,- small restaurants, cafes and bars". To address the need, the Athens City council created special shelters at the Varvakeion and Demopraterion Squares (Biris K., 1966, published 1999: 291-292).

The prewar period and the period of the war ended during the last years of the '30s, with the extensive debates about the Europeanisation or the Originality of Style (K.Laskaris, K.Biris, etc) (Philippidis, 1984: 202-3), under which the unfortunate demolition of the Municipal Theatre happened (in its present position Kotzia Square Post Office) in 1940-41, and while mainly squares and public spaces were demolished by the Ministry of Transport without any reaction from the Athens City Council (Biris K., 1966, ed . 1999: 291-292: 355). The modern movement became slowly accepted in public architecture and therefore in the public space and squares.

3. The post-war period (1950-90)

The period immediately after WW2 was a period rehabilitation and of reconstruction of the heavily damaged building stock. Yet, it was also a lost opportunity for the planning and redesign of Athens.

According to Philippidis, the Team X in the late '50s, [Smithson, van Eyck, Josic, Woods, de Carlo, Kandylis] worked largely in the urban scale, emphasizing the identity of architecture and urbanism, on an attempt to address the problems of urban space. "The philosophy of this new kind of urban interventions was to respect the existing, to carefully intervene to a limited extent, to revive the fabric of the city, to abandon the earlier technocratic town planning, and to promote advocacy planning that tended to avoid arbitrary interventions" (Philippidis, 1984: 42).

On Greek State level, the design of the capital initially was expressed by the (regulatory) "Reconstruction of the Plan of the capital [Athens]" (City Plan City of Athens [Kostas Biris]) (1945-1946) which foresaw, among others, a new satellite city of Athens named Megarida, and the Ancient Athens Grove (as a wider version of the later project "Unification of Archaeological Sites").

There was care for urban improvement but green areas and squares were not included in the plans made by Biris (see pp. 345-9). The project explicitly included the proposal of Panagiotis Aristofron for the Ancient Academy of Plato and the Ancient Public Cemetery. (Biris K., 1966, ed 1999: 345-9). The only thing that materialized were galleries (Philippidis, 1984: 265), while the plans for the Academy of Plato and thoughts for the Public Cemetery are still ongoing (2012).

A timid town planning practice and the choice of cheap and quick solutions immediately after the war did not enable any important interventions in public space or the creation of new spaces such as squares. The main concern was the opening and widening of roads.

K.Biris mentions that the plan envisioned a capital center free of vehicles not serving its own needs, thus not allowing the passage of cars connecting the Northern parts of town with the South. This kind of connection would be enabled by a ring surrounding the city in areas not yet developed" (Biris K., 1966, ed 1999: 406-8 & 407).

In the above, we can see large-scale design efforts using always as a tool axial connections. The design, of public space was realized by the creation of entertainment

centers in parks and squares (at Pedion Areos and at the National Garden), and by the redevelopment of squares such as the Omonia square (symbol of postwar Athens), the Syntagma Square, the Klafthmonos Square (Philippidis, 1984: 268), and finally of New Smyrni Square.

In the 80's, paved areas of squares served the political parties meetings. The underground surfaces started getting used as large parking lots (K Biris, 1966, published 1999: 410-13).

Adverse developments of the urbanization of the capital demanded new planning efforts. Thus, the Doxiadis Office in 1972 was entrusted with the Town Planning of Athens which resulted in the Athens 2000 Master Plan by the Ministry for Urbanism Housing and Environment, a final agreement plan, reconciling 5 different proposals (Philippidis, 1984: 330). While in the rest of the world the transformation of architecture through the application of the principles of modernism influenced urban design, the Athens Chart became inactive in the case of Athens and Greece as a whole region remained unaware of the very development of the relevant modern trends of thought. Architectural and planning thought stagnated between a generalized sociological criticism in the 70s and a certain list of non-realizable project (Philippidis, 1984: 44).
In fact, throughout 1960-80 there was still no comprehensive planning. Showcase projects in public spaces made their appearance instead, such as pedestrian zones and public playgrounds (Philippidis, 1984: 330).

4. The post-1990 period: Europe and the Olympic Games. The quest of sustainability

The 80s were marked by the recommendations of the Athens Master Plan (minister Tritsis Plan) in 1985 and by the interventions to save the Plaka area (minister S.Manos). Many problems were identified during that period but were not sufficiently faced because of lack of resources. The "reconstruction planning business" was considered more important at national than at local level. Resources from the European Union towards the end of the decade and the beginning of the 90s enabled new attempts (e.g. unification of archaeological sites) and delivered very interesting results.

At the same time, a combination of resources from the Community Support Framework and the Programme for the Olympic Games (both of the proposals for 1996 and later in 2004) especially after the Greek Olympics assignment, triggered a series of projects in the wider Athens transportation network (metro, tramways, railway renovation, Attiki Odos urban motorway, New airport). These works, necessary for the operation of the city, came late and were overriding previous plans (1985 Master Plan).

Some smaller projects were realized, since new Metro stations gave the opportunity to create some free public spaces and places on their surface, such as Kerameikos Square / Metro Station built in 2000, as Kleanthis imagined it as a third pole/square of the city. Instead of making large and substantial interventions (e.g. new public spaces - squares) the remaking of existing squares with unclear architectural - urban planning objectives

(e.g. New Psychico), was considered as an easy way to "absorb EU resources". Another initiative, as a result of the rapidly growing eco-environmental consciousness, sought to find and exploit new free public spaces for green. In this direction, small local initiatives were initiated to save space (and buildings) (the Fix plant at Patission str. and premises of the park at Drakopoulou str. in Ano Patissia, the old municipal market of Kypseli, etc).

The latest intervention set in the city had to do with a series of architectural competitions directly related to the Kerameikos Square (1990) and the Acropolis Museum in 1989 which were related to the award of the 1996 Olympics, and some smaller contests such as those for the squares of Koumoundourou, Omonia, Monastiraki, and Syntagma 1998-99. These competitions allowed individual architects to surface, since the corporate architecture took care of the big assignments. These competitions resulted into ambiguity and weak implementation of the winners design, a fact that reveals significant of the country in terms of administrational culture

In the case at Monastiraki Square, the solution was practically "non- architectural" because that square with the Ancient, Byzantine, Ottoman and Modern surrounding buildings functions like a courtyard and a summary of the history of these buildings. The case of the Omonia square is a typical case of a jury misled by trendy 3D graphic solutions as shown by the images of the international architectural journals. Naive symbolisms and fake semantics copying American or other European examples try to convince the modern Greek citizen how the new European urban landscape looks like. The overall results show that these interventions were undoubtedly useful but were once more insufficient attempts to solve the problem of public space in Athens.

5. Today: The post-Olympics era

The inability to use the accumulated organizational experience during the Olympics, the dissolution of intervention and creativity mechanisms with expertise, as well as the ongoing financial crisis after 2009 paralyzed any practical moves for the implementation of planning and design interventions in public space, which became occupied by social outcasts, the "marginal elements".

In order to ‘re-plan’ Athens two major attempts were made:

a) the Master Plan of minister Souflias (2009) and

b) the Master Plan "ORSA-2021" (ORSA, 2012),

Some other proposals come from the Ministry of Environment, Planning and Climate Change, such as Athens 4x4 and the reshaping of Squares St.Nicholas, St.Panteleimon, Attiki and connecting walkways, the creation of a green axis from the Pedion Areos park to Plato's Academy, and the Panepistimiou ave. pedestrianization project. The City Council of Athens in 2010 appeared being more active in initiatives where European Community founding was highly possible, such as the redesign of squares to become bioclimatic, as well as to the recall of interventions at Plato's Academy and at the 1st Cemetery.
Of course, there are still pending interventions such as the public spaces in the greater Athens area (the Panathinaikos Stadium, the Elaionas urban region, the metropolitan park

of Goudi, and other small-scale housing interventions at Alexandras Ave and Panormou Street.

The new Master Plan of Athens (ORSA, 2012) correctly stays at the level of general guidelines and principles and does not foresee any specific free spaces within the urban fabric, but still its guidelines do not mandate planning for the creation of new public space.

The inability of planning, the lack of resources, political timidity, and financial speculations did not lead to genuinely free spaces for public use (and creation of new squares), but attempted the exploitation of existing sites through conversion. Nowadays, the economy crisis as expressed in Athens, has led to the decline of economic activity, while the flight of large portions of the population and professionals from the city center has led to massive degradation of the city and to its 'occupation' by legal and illegal immigrants and marginal groups. During the years 2010-2012 numerous projects by government agencies and private consultants have been presented with zero results though, while the Ministry of Environment, Planning and Climate Change has long insisted on design type approaches, culminating in the "pedestrianization of the Panepistimiou avenue". In contrast to the above, the City Council of Athens has already made a first and important attempt to develop a more comprehensive plan for addressing the crisis of the city which will however require a significant level of funding. This program contains elements of urban design as parts of a wider range of urban, social and economic interventions.

Conclusion

The public space in Athens today, hence the squares are parts of the crisis of space. The desperate search for identity through the European neoclassicism of the 19th century divides the former Ottoman Greek-Christian. The image of the urban area for the modern Greek citizen is pretty much a fantasy of the European philhellene to come into direct conflict with the Ottoman and Byzantine past.

The naming and the sculptural decoration refer to the ancient glory (Kondylis, P., 2007: 32). We have squares with ancient symbols and names. The modern movement in urban planning of the city does not come until after WW2. This modern movement has probably never been accepted apart from a small class of intellectuals and artists. The error is repeated with the contests by imposing images of globalization (electronic Monitors and abstract solutions, fashionable modern architectural sceneries, etc). In short, the squares of the Modern Greek capital reflect efforts of Hellenization in terms of modern imported trends.

The central government and municipalities lack the resources for effective qualitative interventions in the city, and the squares have become places of immigrants (illegal and non-) (see Victoria Square), or urban mega-recreation areas (Kerameikos).

The efforts for a new bioclimatic "landscaping" cannot answer the key issues in the public space that now escape from urban planning and assume a major social character. What is needed now is to understand that modern complexity cannot wait for the solution

of problems through urban design, or rely on it, but that urban design is merely one of the tools (as important as it might be) of comprehensive planning.

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TRYING TO BE "SUSTAINABLE" AND "GLOBAL": AHMEDABAD AND THE SABARMATI RIVER FRONT DEVELOPMENT PROJECT

Gloria Pessina [1]

Abstract

The recent celebrations for the 600th anniversary of the foundations of the city of Ahmedabad in 2011 represented a crucial moment during which a reflection on the past of the city was combined with a strong push towards future changes. While the city centre was proposed for the nomination as a UNESCO heritage site, new large development projects started to appear both at the core and in the outskirts of the largest city of Gujarat. The Sabarmati River Front Development Project represents one of the most important investment sites for both public institutions and privates, as well as a translation on the ground of the city vision to become both "global" and "sustainable". Combining a large body of interviews with current debates about globalisation, politics of scale and political ecology, the paper aims at highlighting different narratives and their role in shaping the future Ahmedabad. The paper pays particular attention to the importance of the State in the creation of "new state spaces" (Brenner, 2004), thus contesting its loss of relevance in the age of globalisation and in the "space of flows" (Castells, 1996).

1. Ahmedabad, an aspiring global city

In its 600 years of existence the city of Ahmedabad in Gujarat (Western India) has faced any sort of challenge and changed its role in India and at the international level, but some elements have remained incredibly stable through time. One of the main features is represented by the strategic position that the city has always had through history: as a matter of fact it has represented the crossing point between the Silk Route and the Spice Route, as well as one of the gateways of India (Yagnik, Sheth, 2011), as it still is thanks to its international airport. The relevance of the geographical location has been playing a significant role also in promoting a sort of "mercantile ethos" (*ibidem*) within large part of the population, not only of Ahmedabad, but of Gujarat in general. It should not surprise then the dynamism of the economy in that part of India, which has always been considered one of the richest: still today Ahmedabad is the seventh Indian city in terms of GDP[2]. A further element that has proved to be constantly relevant throughout history is the relation between the city of Ahmedabad and its river, the Sabarmati. As it is described by the fifteen-century poet Hulvi Shazi, the myth of the foundation of the city by Sultan Ahmed Shah is strongly bound to the river: "The Shah, while on a gracious walk,/ stopped at the bank of the river Sabarmati/ The ground was clean and charming,/ the water pleasant, the air pure./ On seeing these attractions, by the grace of Allah,/ he

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[2] www.rediff.com accessed on 20 March 2012.

dreamt of a wondrous city" (Yagnik, Sheth, 2011). Along the river several institutional as well as educational and religious buildings or open spaces rose, the most famous of which are probably the *ashram* created by Gandhi in 1915 or the Mill Owners' Association building realised by Le Corbusier in 1955. It is therefore not surprising that also nowadays the future of the city is both reflected in and promoted by the developments occurring within and along the Sabarmati.
The Sabarmati River Front Development Project initiated in 1997 by the Ahmedabad Municipal Corporation (AMC) through the newly created Sabarmati River Front Development Corporation Limited (SRFDCL), is actually listed among the main projects to achieve the municipal vision of a "Vibrant Ahmedabad – Vibrant Gujarat" or of a "Greater Ahmedabad" (fig. 1)[3].

Figure 1. One of the visualisations of the future of the Sabarmati presented to the public by HCP in December 2011 (Pessina, 2012)

Further major projects are the sixty-meter-wide and seventy-six kilometres long Sardar Patel Ring Road, the Bus Rapid Transit System (BRTS), the Gujarat International Finance Tec-City (GIFT) between Ahmedabad and Gandhinagar, as well as the opening of the Tata Nano plants in the southern outskirts of the city. Despite the difference in terms of uses and nature of the different projects, they are all characterised by bigness, both in spatial as well as in economic terms and tend to be aligned with (and hence funded by) the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) which is mainly promoting large infrastructural projects. The issue of bigness is once again stated in the vision for a "Greater Ahmedabad" also in terms of population: the AMC in facts foresees a consistent

[3] Ahmedabad Municipal Corporation and Ahmedabad Urban Development Authority with Technical Support from CEPT University, 2005, City Development Plan 2006-2012, Ahmedabad.

growth of population by 2030, rising from the current 4 million inhabitants to more than 10 million.
All those projects pose questions of globalisation in large cities of the South, as well as of scales and distribution of powers among actors, but the case of the Sabarmati River Front Development Project differs from the others because of the presence and relevance of the issue of “sustainability” in its implementation.

2. The Sabarmati River Front Development Project: facts and figures

The idea to develop the natural banks of the river inside the city of Ahmedabad has a longer history than the ongoing project: the first proposal was formulated in 1961 by the French architect Bernard Kohn which suggested to reclaim 30 ha of land on both the banks of the river in order to develop a mix of commercial, recreational and residential activities in some points of the river, mainly close to the major bridges. The feasibility of such proposal was studied and confirmed in 1966 by a commission appointed by the government of Gujarat and a further proposal was done in 1976 by a group of local professionals including Ahmedabad Study Action Group, the architect Hasmukh C Patel and K B Mehta Builders. The group agreed on the reclamation of land and proposed the strengthening of the Pirana Sewage Treatment Plant in the south of Ahmedabad and the construction of retaining walls to protect the city from floods and to give space for development. The need to improve the sewerage system was confirmed also in the National River Conservation Plan of 1992 for the interception and diversion works, the construction of trunk sewers, the desilting of storm water drains and the provision of sanitation infrastructure in the river bank slums.
A last proposal was formulated by the CEPT University of Ahmedabad just one year before the currently implemented project was submitted: it envisaged to add to the 30 ha to be reclaimed 20 more meters along the west bank and 10 along the east bank to develop publicly accessible open spaces and recreational areas connected by walkways and promenades.
Although several projects have already been proposed since the Sixties only in 1997 the Ahmedabad Municipal Corporation decided to finally implement a plan and therefore created a specific public body, the Sabarmati River Front Development Corporation Limited (SRFDCL Ltd.), for the supervision of the process.
The proposal was commissioned to the Environmental Planning Collaborative (EPC), which in 2002 merged with the HCP Design and Project Management Pvt. Ltd., responsible for the urban design of the project. The works started in 2005 and are still ongoing.
The project regards a stretch of 9 km of the river comprised between the Subhash Bridge and the Vasna Barrage within the city of Ahmedabad and its main features are the following:

- the reduction of the riverbed from a variable width of 600-300 m to a fix width of 275 m, thus reclaiming 185 ha of land;

- the construction of RCC diaphragm walls (10-20 m depth) and anchor slabs (10 m) to prevent the riverbanks from erosion. After the finishing the anchor slab is turned in the so-called lower promenade;
- the construction of interceptor sewers on both the riverbanks able to prevent the waste water to flow directly into the river and diverting it to the two sewage treatment plants of Vasna and Pirana;
- the construction of RCC retaining walls (2.5 - 9 m) to protect the city from flooding. The height of the walls is determined by the 100-year flood level. An upper promenade is created on top of the retaining walls (figure 2 and 3);
- the dredging of the river bed in order to provide soil for the filling of the space behind the RCC retaining walls. At least 67.500 cubic meters are required for the filling;
- the relocation of slum dwellers and the provision of better living conditions to them. The amount of families initially considered was 8000 but the number was increased to 15000 after further surveys in 2002. The first proposal was to relocate them in three sites along the riverbanks, but the plan has changed afterwards and the relocation sites are now far from the river.
- the use of the reclaimed land for private residential and commercial developments with a view on water to be sold to finance the project (the percentage has decreased from 20 to 15% because of the high increase of the land value), two major roads, one on each riverbank (30%), gardens (26%), promenades (6%), informal market (3,6%) and the rest for other public facilities.

The main declared goals for the implementation of such actions are:
- the elimination of the danger of floods in the current context of climate change;
- the establishment of better hygienic conditions through a new sewerage system;
- the ground water recharge through the storage of water within the river bed;
- the improvement of the living conditions of the slum dwellers.

The expected cost of the project is 15 billion indian rupee and it will be covered by the sell of parts of the riverfront (15%) to private investors, as well as by funding from the JNNURM programme.

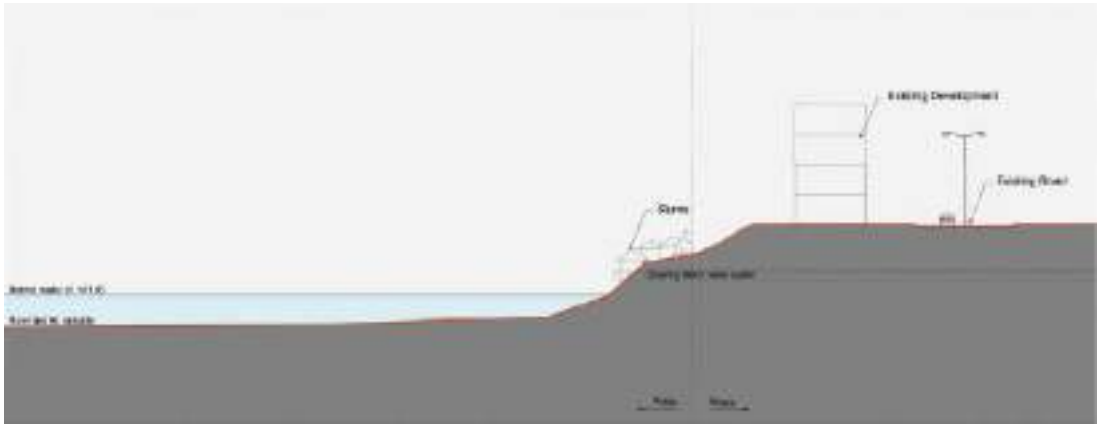

Figure 2. the riverbanks of the Sabarmati before the project (SRFDCL and HCP, 2008).

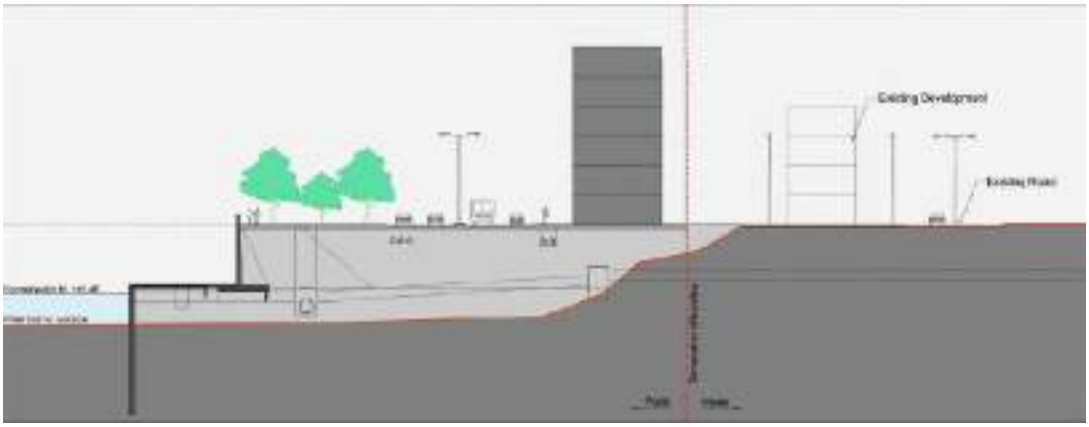

Figure 3. the riverbanks of the Sabarmati after the project (SRFDCL and HCP, 2008).

3. Narratives around sustainability

Looking at different descriptions of the project, one issue is quite recurrent, that is to say the importance of the environmental concerns. Among the different possible sources a couple of them are quite noteworthy given their capacity to reach wide audiences: one is the case of an international landscape architecture journal, while the other are public speeches by the politicians who mainly promote such project.
In an article published in 2009 on the TOPOS journal the project was described in this way: “though implementation will be challenging, the city hopes that this integrated environmental project will be a model for the nation” (Fenk, Schaffer, 2009), particularly stressing the capacity of the urban designers to deal with flood protection, sanitation as well as development.
Interestingly, the project is also mentioned several times in official speeches by the Chief Minister of Gujarat as an example on the ground of the current state policy of “climate justice”, meant as a “convenient action” against the “unconvenient truth” of climate change (Pessina, 2011).
Both examples relate in different ways to recent developments in the debate about sustainability started in the early Seventies. Moving from a definition of sustainability as a challenge to standard growth models (Daly in: Scoones et al., 2007) to “the ability of systems to bounce back from shocks and stresses and adopt stable states” (Holling in: Scoones et al., 2007), more recent debates focus on issues of risk management, as emerged in the United Nations Conference on Climate Change held in Copenhagen in 2009. In the water domain, the issue of risk is often identified with floods due to climate change, as it is in the case of the descriptions of the Sabarmati River Front Development Project given its political supporters. Among the tools for risk (and especially flood protection) as well as for an achievement of sustainability in general in the water domain, the Integrated Water Resources Management promoted in the Nineties by the Global Water Partnership seems to be still one of the most popular, as the words used by the TOPOS journalists seem to confirm.

While in theory the narratives of risk protection and integrated resources management (and integrated design) seem to work very well, looking at the specific case of the Sabarmati river some issues seem to be overlooked.
As a matter of fact, none of the official studies nor the wide spread articles seem to stress the dynamic nature of the Sabarmati, a non-perennial river, fed by the uneven and infrequent rain occurring during the monsoon between July and October and is therefore dry for large part of the year. The Sabarmati basin has traditionally been known as a good agricultural production area where cultivation was carried out being very careful towards water. A pattern of villages were developed along the course of the river with respect to the floodplain and paying attention to leave the silting areas for agriculture. After the heavy floods that occurred in 1973, the Dharoi Dam was created in 1974 at the feet of the Aravalli chain in northern Gujarat in order to regulate the Sabarmati and to provide water to the city of Ahmedabad. Downstream of Ahmedabad the water started to be retained through the Vasna Barrage. Since large amount of the water is diverted for agriculture directly from the Dharoi dam itself, the dry condition of the Sabarmati for most of the months became even more evident and the floods decreased in their intensity and frequency.
The legitimacy of the project, aiming officially at reducing the flood risk, is thus significantly reduced, as pointed out by an hydrologist based in Ahmedabad “Floods are unlikely to happen but in case they will take place the covering of the riverbanks with concrete will affect the capacity of large part of the city to absorb water and let it percolate in the soil. Moreover the channelizing of the river for such a long stretch will affect negatively the areas both upstream and downstream of Ahmedabad where the flood will be more violent. Ultimately such sort of canal will act as a funnel” (Pessina, 2011).
It seems clear therefore that the use of words is not neutral and large part of the environmental policies put in place in recent times are the result of specific discourses strongly bound to different forms of knowledge. Some consolidated and often institutionalised discourses can become “environmental orthodoxies” (Leach and Mearns in: Forsyth, 1993) that are hard to be contested. In the case of water the debate seems to be shaped mainly by major global players such as the World Bank, the Global Water Partnership, the World Water Council etc. (Forsyth, 2003; Mehta et al., 2007; Karpouzoglou and Zimmer in: Nicol et al. 2012;). As in one of the latest contributions on political ecology it is stated “it is not science as a specific and useful form of knowledge production that is questioned [...]. Instead, it is the way specific forms of ecological knowledge are selected and validated [...], what assumptions and practices become normal and internalized for people” (Peet et al., 2011). Political ecology represents for some scholars an attempt “to establish the political forces behind different accounts of ecology as a representation of biophysical reality” (Forsyth, 2003). In acknowledging the political nature of environmental policies and projects some recent contributions define therefore Sustainability (differently than sustainability) as a “contested, discoursive resource – a boundary object – that facilitates arguments about the diverse pathways to different futures” (Scoones et al., 2007). The idea of sustainability in the case of the Sabarmati seems to be highly contested not only in terms of narratives around flood control and protection from

risks as a declared aim, but also on a large number of other issues raised by several actors.
(1) One of the main features of the project, its high level of engineering (Khavthekar in: Pessina, 2011), represents also one of the main concerns of academics, practitioners and local dwellers: the use of concrete for the embankments of a long stretch of the river, in fact, strongly affects the environment and seems to have counter-effects to the expected protection from floods, especially downstream (Vasavada, Chayya, Choudhuri in: Pessina, 2011). (2) Hydrologists and representatives of environmental movements point out that the dredging of the riverbed to get sand for the earth filling on one hand represents an attempt to reduce distances to bring materials for the construction works on site, but on the other hand is dramatically affecting the nature of the river, thus increasing the speed of the water, promoting the erosion and endangering the stability of the bridges (Vasavada in: Pessina, 2011) (3) Slum dwellers organisations, NGOs as well as some academics active in the fields of sociology and urban planning are suspicious also towards the declared “economic sustainability” of the project, meant as sale of part of the land. Many of them are actually afraid that the effective public use of most of the project area could then be restricted just to part of the population through the introduction of fences and of entry fees as it happened in other cases in the city of Ahmedabad as Kankaria Lake (Pathan, Patel in: Pessina, 2011) (4) Economists and academics point out that as a result of the start of the Sabarmati River Front Development works, the prices of the land have already increased dramatically, thus endangering the affordability of the city (Chayya in: Pessina, 2011). (5) Slum dwellers organisations, human right protection organisations, advocates and activists have also pointed out that one of the most controversial points is represented by the relocation of slum dwellers. While the need for better housing conditions cannot be questioned, both the relocation sites and the housing typologies seem to affect the possibility of the slum dwellers to carry on with their usual activities. Looking at the former uses of the river, it is evident that many of the seasonal activities that used to take place within the dry river bed and that are still present upstream and downstream of Ahmedabad have disappeared now within the city, thus depriving many people of their source of livelihood and their possibility to sustain themselves (Pathan, Patel in: Pessina, 2011).

4. The politics of scale

Questioning one of the core issues of the Sabarmati River Front Development Project - the origin of water - a whole range of new issues come into the picture. As already pointed out in the previous paragraph, the nature of the Sabarmati river is that of a non-perennial one, dry for most of the year. Quite surprisingly after the creation of the embankments in 2006, water became a constant feature of the river.
Such interesting and apparently strange phenomenon becomes clearer when looking at aerial views of the city (fig.4): the water is actually present only in the stretch of the river within the city of Ahmedabad, interestingly appearing just a few hundred meters southern than a canal.

In the relation between the river and the canal the relevance of the scale issue becomes evident: as a matter of fact, a connection has been created between the Narmada Canal, stretching from the eastern to the western border of Gujarat, that is to say, between the Sardar Sarovar Dam (or Narmada Dam) to the arid region of Kutch, at the border with Pakistan.

Figure 4. Aerial view of the city of Ahmedabad (source: Google Maps, 2011).

Again, the legitimacy of this action is questioned by lawyers: “Now they want to beautify the Sabarmati, therefore they want to take water from the Narmada. Legally speaking they cannot use Narmada water for Sabarmati [...].There was a longstanding dispute between Maharashtra, Madya Pradesh and Gujarat about this Narmada water and about the Narmada Dam. So ultimately there was a tribunal for deciding the distribution of water and the height of the dam and that dispute went on for a number of years, from 1960 to 1980s. So that Tribunal has allotted a certain amount of water to Gujarat, but it is mainly meant for agriculture [...]. In the map that has been prepared by the Tribunal Ahmedabad is not in the picture. Because Ahmedabad will get the water from the Dharoi Dam. So this Narmada water was not meant to Ahmedabad” (Patel, G: in Pessina, 2011).
A part from the question around legitimacy, the issue of water clearly shows the interconnectedness of different territorial scales (fig.5), which are not mentioned and apparently not taken into account in the Sabarmati River Front Development Project.
The different scales does not seem to be connected only through flows of water, but also and probably more significantly by “flows of power” (Worster, 1985).
The case of the Sabarmati river shows therefore the “politics of scale” (Smith, 1984) around which a large debate has risen in the last two decades.

Figure 5. The city, the river basin, the Narmada canal (authors elaboration on Google Maps, 2011).

While introducing such concept, Smith actually redefined scales as socially constructed, historically contingent, politically contested rather than related to fixed boundaries. One of the most engaged authors who tried to summarise the debate about scales (and the 'politics of scale') is certainly Neil Brenner (1998; 2004) whose works mainly aim at questioning the mainstream literature about globalisation and at investigating the transformation of various scales (especially the scale of the state) under contemporary capitalism. Even though large part of the literature about globalisation and world cities tends to depict the State as a weak actor that is retrenching and ultimately losing its power in a growing "space of flows" (Castells in: Brenner, 2004), Brenner argues that the State is actually just changing its (spaces of) actions, as suggested by Lefebvre already in *The production of space*: "Each new form of state, each new form of political power, introduces its own particular way of partitioning space, its own particular administrative classification of discourses about space and about things and people in space". Such process is thus defined *rescaling* (Brenner, 2004; Swyngedouw, 1999; 2004).
As Swyngedouw wrote (1999), "the preminence of the 'global' in much of the literature and political rhetoric obfuscates, marginalises and silences an intense and ongoing sociospatial struggle in which the reconfiguration of spatial scales of governance takes a central position". According to Brenner (2004), such globalisation rhetoric masks "the national state's own crucial role as a site and agent of global restructuring processes".

Referring mainly to Western Europe and to the United Kingdom, Brenner acknowledges the rise of new actors mainly operating at different scales than the one of the state mainly after the 1970s crisis: on one side global corporations, international organisations and cross-border institutions play a decisive role, while on the other side more powers are decentralised to the local level. Nevertheless he stresses the re-scaling of the state as "a key accumulation strategy" (Jessop in: Brenner, 1998) through which "cities throughout the world economy are being promoted by their host states as locational nodes for transnational capital investment" (Brenner, 1998).
It is evident that the role of the state, and its space of action, has significantly changed from the time in which it represented the main producer of welfare and the main mediator of spatial inequalities, nevertheless, the production of a "spatial fix" (Harvey in: Brenner, 2004) seems to be still needed, or maybe even more, in the age of globalisation.
Among the "new state spaces" Brenner lists "science parks, conference centres, waterfront development schemes and enterprise zones" that differ from the infrastructure that Keynesian states used to build after World War II in terms of aims and shapes: while in the past the State was mainly aiming at promoting an equal spatial development of national territories, nowadays such infrastructures – usually implemented by private investors but still requested by state authorities - are often "splintered" (Graham and Marvin in: Brenner, 2004), aiming at enhancing the global competitiveness of just some areas within national territories. A clear example of this trend is represented by the Thatcher policies to promote the primacy of London (and the South East of England) as a main financial centre through the (re)development of areas such as King's Cross, the Isle of Dogs, Canary Warf and Thames Gateway, while other parts of the country were becoming poorer.
Against the literature that sees the retrenchment of the state as a necessary outcome of globalisation, Brenner quotes Swyngedouw (2000) in order to highlight the growing role of various newly created state controlled agencies in planning and managing these local mega-projects as it is the case – particularly diffused in the Thatcherite policies – of the Urban Development Corporations or think tanks such as London Forum and London First. As a matter of fact, through the process of state re-scaling, not only exceptional spaces but also exceptional actors – that are not elected, nor responsible towards the citizens - enter into the arena. As Swyngedouw writes in 2005, "in fact, it is the state that plays a pivotal and often autocratic role in transferring competencies (and consequently in instantiating the resulting changing power geometries) and in arranging these new networked forms of governance" in which "the internal power choreography is customarily led by coalitions of economic, socio-cultural or political élites".

The case of the Sabarmati River Front Development Project seems to clearly support the theories that show the centrality of the state even (or maybe, especially) in a context of globalisation. As a matter of fact, the State of Gujarat represents one of the main promoters of the Sabarmati project and considers it one of the strategic actions on water in Gujarat, alongside with the construction of canals and dams. Moreover, the river front represents an "exceptional space" (Brenner, 2004) within

the city in terms of design, foreseen uses and scale and as it happened mainly in the context of UK an “exceptional agency” (ibidem) - the Sabarmati River Front Development Corporation Limited (SRFDCL) - has been created by the AMC under the request of the State of Gujarat and is therefore strongly bound to the state.
Looking at the state at a broader level, the National Government of India is contributing to the project through the JNNURM programme, while multinational companies are attracted by the real estate opportunities on the riverbanks, thus creating a not clearly accountable “governance-beyond-the-state” (Swyngedouw, 2005)

5. Conclusions

The case of the Sabarmati River Front Development Project in Ahmedabad shows the power of narratives around sustainability and ecology (Mehta, 2005; Scoones et al., 2007; Swyngedouw, 2010) in the promotion of the aspirations towards development and globalisation. Exceptional spaces such as the Sabarmati River Front Development Project, mainly managed by newly appointed institutions, seem to represent the new necessary “spatial fix” (Harvey, 1985) for the production of capital and power at multiple scales, not excluding the State one, often neglected in the literature about globalisation (Brenner, 2004).
Such case shows also the contested nature of sustainability (Scoones et. al., 2007), through some of the voices of dwellers, practitioners, academics and in general persons affected in different ways by the project.
These elements would not be enough to justify the interest of the case and the will of the author to go back to Ahmedabad in order to further explore the issues so far emerged, if it was not considered a replicable example throughout India: “Whatever the outcome, the project is a leitmotif in the context of river and waterfront redevelopment projects now popping up in Indian cities like Mumbai, Delhi, Calcutta and Lucknow. Ahmedabad is breaking new ground, both literally and figuratively, in the redevelopment of Indian cities” (Fenk, Scheffer, 2009).

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THE SPATIAL DIMENSION OF ENERGIES: URBAN PATTERNS AND ECO-STRATEGIES

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Abstract

The outcomes of an experimental urban design studio named "Energy and urban Planning" offered to graduate students enrolled in the Urban Planning and Policy Design master programme are presented in this paper. The goal was to recognize the importance of the role that the urban planner can play in assessing both the suitable energy scenarios and the spatial dimension of energies on the territory by introducing a set of disciplinary references and a toolkit for action. A number of tools for the analysis and the design of energy-conscious urban master-plans were offered to students with limited competences on environmental and energy topics.
The case-study area chosen for the design was the metropolitan region of Milan, Italy, characterized by a temperate climate and a variety of morphological configurations, for simplicity grouped in three main categories, namely what we call the Compact City, the Edge-City and the Diffused City. In particular, seven samples of that territory were selected, investigated by seven teams of students, and proposed solutions were given.
Outcomes of the studio show that the contribution of the urban planning discipline can be relevant in assessing alternative energy scenarios, both in terms of quantification and evaluation of design solutions. For instance, taking into account energy and environmental aspects from the beginning of the design process, highly impacts on the concept solutions and the final physical layout of the built environment (in terms of land use and morphology). Hence, energy-conscious urban planning might lead to significant energy savings. Moreover, the scale of action, i.e. the small town or the district level, reveals to be a proper dimension in order to apply urban ecology principles.

1. Introduction: objectives of the studio

It is evident that different urban configurations present different energy consumption implications. Which is the contribution of the urban planning and design discipline in addressing sustainable future scenarios for the city is a crucial question. We believe that urban planners' expertise can inform the debate on energy in three ways as

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follows: firstly, in assessing the spatial dimension of energies within the urban landscape, thus acknowledging the physical layout as a key component of environmental sustainability. Secondly, in measuring and quantifying urban sustainability indicators, according to the increasing demand for evaluation and monitoring of urban policies; thirdly, in proposing innovative design solutions for the built environment (both the fabric and the open areas), which optimize the use of energy and mitigate environmental depletion. This latter aspect should be intended as a long term research perspective aiming at informing the debate on new urban design and planning theories.

The objective of the studio is twofold: first, to provide a basic knowledge on the topic of sustainability at the urban scale (policies and design) and second, to explore possible future scenarios through a design project that intentionally considers the implications of the different urban forms for the construction of site-related strategies and actions (eco-zoning). In particular, we explored two main ways to achieve more sustainable urban environments: one is related to the policies that the city can adopt in order to promote more environmental-friendly practices; the second one is related to the physical design of the urban environment and how this can influence sustainability.

2. Research context

During the class we referred both to the scientific literature and to international policies and standards. In particular, scientific literature gives a global picture of innovative approaches and the rhetoric of different disciplines, whereas policies enable to frame the political context and the targets of our actions for the next decades.

Punctual scientific references on energy come from several areas and the urban planning discipline should extract those relevant clues that have a direct feedback on the practice. One area of interest can be named “urban energy transition” according to the book edited by Peter Droege (2008), and refers to a series of studies focused on energy planning and metabolism towards a renewable, carbon-neutral city. In this sense, the type of investigation is related to the assessment of available and future clean technologies and the policies and strategies of diffusion (Mega, 2010) with a scarce feedback on the physical dimension of the territory.

A second set of references can be grouped under the umbrella of “urban ecology”, which originated from ecology studies (Odum, 1963; Odum, 2001). In particular, the introduction of the Ecological Footprint concept by Mathis Wackernagel and William Rees (1996) was a first attempt to relate ecology to the spatial dimension of human impacts. The more recent debate on sustainability strengthened the issue of the limited natural resources on Earth. However, the concept of sustainable development appears to be contradictory to some authors (Latouche, 2006), who reject the argument of growth in a finite world and support the paradigms of scarcity and self-sufficiency. According to this latter vision, the first aim of the design studio

was to reduce human impact on the territory through energy savings and efficiency, and only in a second step to produce clean energy on site.

Finally, "energy-conscious spatial planning" and "sustainable urban design" represent the most pertinent research contributions for the design studio, because they argue the importance of the urban planning discipline in sustainability issues. A critical approach to recent sustainable urban design contributions was required to students, and the use of tools derived by that research stream were proposed and applied during the studio.

Energy-conscious planning originated from urban ecology considerations, and proposes a physical declination of energy scenarios in relation to the type of territory and the possible synergies and dependencies among different patterns, whereby the built and un-built territories are intended as components of an eco-system that should work – and survive – with closed cycles, stressing off-grid solutions and the reduction of the ecological footprint of urbanized areas. The "Second Law thinking" reminds us that during each transformation, a certain amount of useful energy (i.e. exergy) is transformed to a less useful energy (i.e. entropy), thus we have to save high quality forms of energy (Stremke & Koh, 2010; Van den Dobbelsteen, et al., 2011).

The second discipline is rooted in the New Urbanism and Smart Growth movements (English Partnership with the Housing Corporation, 2000; Farr, 2007; Duany, et al., 2010; Haas, 2012) and reached a large audience and success due to the capacity of structuring a series of sustainability principles related to the physical design of the urban environment, and delivering simple guidelines, rules and certification systems for professionals (U.S. Green Building Council, 2009).

Reference for this work are EU policies promoting effective tools and programmes to achieve sustainability and energy self-sufficiency, in particular the 20-20-20 targets and the recent Roadmap 2050 for a low-carbon Europe. The Covenant of Mayors with the introduction of the Sustainable Energy Action Plans (SEAP) represents a useful framework for addressing objectives, strategies and actions at the urban scale (The Covenant of Mayors Office, 2008). Significant Action Plans delivered by big European cities were consulted and compared in terms of proposed actions and sectors of investment. Nevertheless, we noticed that most of the plans were conceived as guidelines with a lack of urban design solutions and scarce reference to the spatial dimension of the territory in general.

3. Case-Study areas

The metropolitan city represents a mosaic of fragmented urban environments, each of which shows different opportunities in terms of environmental and energy scenarios. In particular, an urban transect crossing three main typologies of settlements was recognized as the object of investigation at the studio. Hence, we distinguished among three types of urban environments: firstly, the Compact City,

i.e. the urban cores characterized by a significant mix of uses; secondly, the so called Edge City, i.e. the in-between places that host relevant services for the management of the entire city and were built without a coherent vision; thirdly, the Diffused City, which represents the flourishing low-density, car dependent sprawl, where land consumption has already exceeded acceptable limits in terms of environmental preservation. Seven teams were asked to work on seven samples of the territory considering the different critical issues and opportunities they have.

For the Compact City, two areas with totally different character were chosen. The first site, the Ortomercato (the wholesale vegetable market for the city) represents the occasion of the conversion of the current function into a new neighbourhood on the east side of the city; the second area, on the other hand, is the re-appropriation of a large surface currently occupied by the freight railroads in the centre of the city, thus primarily reconsidering the reconnection and the renewal of the existing fabric.

The three sample areas selected to describe the Edge-City conditions are not enough to cover the variety of the typologies we can encounter. For sure that is the transect which offers more occasions of transformability, because of its recent history with low value interventions and scarse coherence with the surrounding. The first site is the city waste management headquarter at the east periphery of Milan, a typical troublesome function relegated close to the boundaries of other municipalities. Nevertheless, this portion of the city is still facing an agricultural land, which might represent an opportunity to work with in terms of urban ecology. The second sample is the Baggio district, an old historical nucleus in the west periphery of the city. Dealing with the already established urban fabric with few occasions of redevelopment, forces us to conceive new ideas to achieve sustainability. The last area is a free agricultural site in the municipality of Rozzano, south of the city, where the new city plan expects to build a new high density and mixed uses neighbourhood, with serious problems of connectivity to the existing street network, due to the presence of a canal and two highways on the boundaries.

Finally, the Diffused City was well represented by two areas that show different characteristics. The first area, i.e. the town of Lainate, is the typical urban agglomeration that can be found in the northern part of the metropolitan region. In fact, Lainate is the result of the grouping of different small communities which go without solution of continuity on the territory. Housing and production are mixed; islands of residential neighbourhoods are interspersed with heavy transport infrastructures. The second town, Melzo, on the contrary, is a compact settlement located in the eastern part of the region characterized by a strong agricultural land use.

4. Methodology and design process

4.1. Research by design

The goal of the studio is to come up with a design project at the district or urban scale that envisions possible future scenarios for a number of different cityscapes.

Students are asked to work in groups of three people; each team should be composed by students with different backgrounds, in order to integrate their skills.

Encouraging ‘research by design’ is part of the methodology of the studio. This will be investigated through the introduction of tools for the analysis and the design of future conditions. Students are asked to explore at the same time urban re-composition strategies and the introduction of eco-strategies and actions suitable for each different urban environment.

The series of lectures is offered to the students and has the goal to introduce the topic of sustainability applied to the urban planning and design discipline. The lectures aim at covering the two main topics, namely one is related to the policies that the city can adopt in order to promote more environmental-friendly practices; the second one is related to the physical design of the urban environment and how this can influence sustainability. The first series of lectures is called "Energy, climate change and local action to reduce greenhouse gases (GHG) emissions"; the second one, deals with the topic "Energy, environment and the city form". In particular, the first series introduces the policies (mitigation and adaptation) towards carbon neutral cities and analyses issues related to energy sources and the market to figure out possible scenarios; the second series of lectures investigates how urban designers and planners can work on the physical layout of the urban form in order to improve the overall sustainability of cities and reduce the environmental footprint of ecological cycles, by improving the efficiency of mobility and energy management (savings and production based on a short energy chain).

For simplicity and due to evident organizational reasons of a one-semester long studio, the design process was structured in three phases: the analysis, the concept-plan with the identification of general eco-strategies and the master-plan with the localized eco-strategies. Of course, we recognize that the process can never be linear, but the given path represented a helpful framework to organize and deliver the different tasks during the studio.

Four themes directed our observations on site and were used as lenses during the whole design process: energy (energy efficiency and renewable energies), environment (environmental quality and comfort, water, waste, permeability), accessibility (sustainable mobility, smart linkage of places, way-finding) and people (place-making, sustainable lifestyle and policies for sustainability). The proposed themes were deliberately broad to encourage an interdisciplinary approach, were interrelated, could overlap and be understood as an opportunity to focus on specific actions that can inform design. In order to guide the exploration and to inform the students about the variety of actions they can implement, the delivery of a “glossary of common terms” was assigned. For instance, each team had to give the definition to a number of terms (actions) and provide a synthetic sheet with description, pictures and references. The glossary was structured according to the four themes introduced above. Once finalized, the glossary was shared among the students and used as a checklist to identify suitable design strategies.

4.2. The analysis

In the first step, a deep analysis of existing urban patterns, available cartography, plans and programs (also environmental and energy plans, if any) were investigated to achieve a baseline for the design. In particular, we referred to available cartography and plans from public datasets[5] with the following targets: firstly, to get a comprehensive picture of the programmatic context above the city level in order to verify the compliance of planning options; secondly, to investigate the energy and environmental guidelines established at the regional level, which are necessary for the planning of territorial development policies; thirdly, to manage datasets and spatial information, useful for the territorial understanding of the study areas; finally, the investigation of the environmental framework.

A series of samples extracted from the map were analysed and described, focusing in particular on the shape of the urban fabric and the street network. For instance, a series of clues derived from the shape of those places defined the strengths or weaknesses of the urban tissues and represented the design elements for rethinking more sustainable future scenarios.

A series of maps describing the current situation and conceived as a support for the following design phases was assigned to students as listed below.

- Map 1, Superimposing the case-study area over the centre of the city.
- Map 2, Recognizing patterns (both urban and rural). An interpretation of land use patterns recurring on the territory was asked. Categories had to be provided by identifying morphologies and approximate year of foundation (Figure 1).
- Map 3, The "hard" and the "soft" patterns (Figure 2). The chart gives back an interpretation of those parts of the physical context that can be considered as unchangeable and those parts that might be transformed in the near future. A range of degrees of transformability in between hard and soft can be introduced.
- Map 4, Main land use and soil permeability (Figure 3). This is a map where the three main land uses are indicated: covered areas (buildings) in black, paved open spaces (streets, squares and infrastructures) in grey, and permeable surfaces (green areas, water, non-urbanized areas in general) in white.
- Map 5, Densities on site. Urban morphologies are identified and a qualitative density to macro-areas is assigned, considering groups of blocks.
- Map 6, Street network hierarchy and mobility routes. The existing street network is highlighted and the hierarchy of streets identified. The network of public mobility (train, buses, subways, etc.) is included on the map.

[5] Main sources used: Piano stralcio per l'Assetto Idrogeologico (PAI); Rapporto sullo stato dell'ambiente in Lombardia 2009-2010; ARPA Lombardia; Rete Ecologica Regionale (approved with DGR n. 8/10962 on 30 December 2009); maps and geo-referenced data from the GEOportale di Regione Lombardia; Piano Territoriale di Coordinamento della Provincia di Milano together with the Valutazione Ambientale Strategica; Piano Territoriale Regionale (PTR) with the Piano Paesaggistico (PPR); Piano Energetico Regionale.

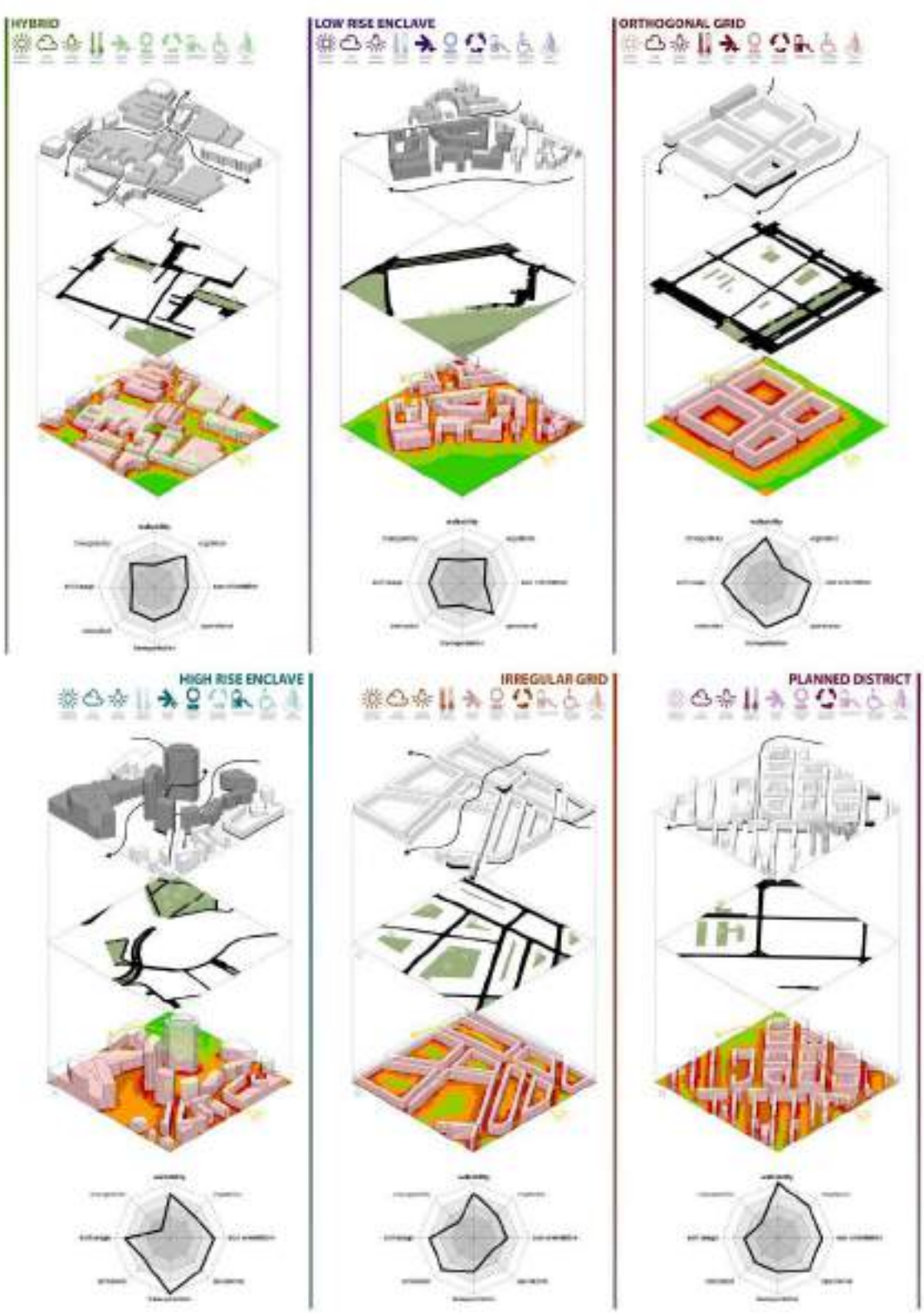

Figure 1. Recognizing urban patterns and investigating urban environmental quality aspects related to the urban form.

Figure 2. The “hard” and the “soft” patterns: the east periphery of Milan where isolated districts coexist with open agricultural land and infrastructures.

Figure 3. Land use permeability samples showing different conditions through the transect from the city centre to the periphery.

- Map 7, The natural green structure. Public and private green areas are defined and urban parks, pocket parks, ecological corridors, big regional parks and similar are identified. Moreover, forests and areas with a high vegetation density, rivers and bodies of water, if any, have to be mapped.
- Map 8, Existing urban services and facilities, both public and private, are identified according to a given set of categories. The main areas and axes of commerce and retail should emerge on this chart.

4.3. The concept-plan with the eco-strategies

The concept-plan is intended as a preliminary design that includes observations at a higher level in order to understand the role of the urban district in its larger context (hierarchies among districts, specific characteristics that define the identity of places) (Figure 4). The four themes (lenses) introduced above supported students in structuring possible strategies and finalized actions to define design solutions. In particular, we focused on those sustainable technological and infrastructural solutions that have a direct feedback on the design of the urban form, both at the building scale and at the territorial scale (

Figure 5). This phase was informed by the previous work on the glossary of common terms.

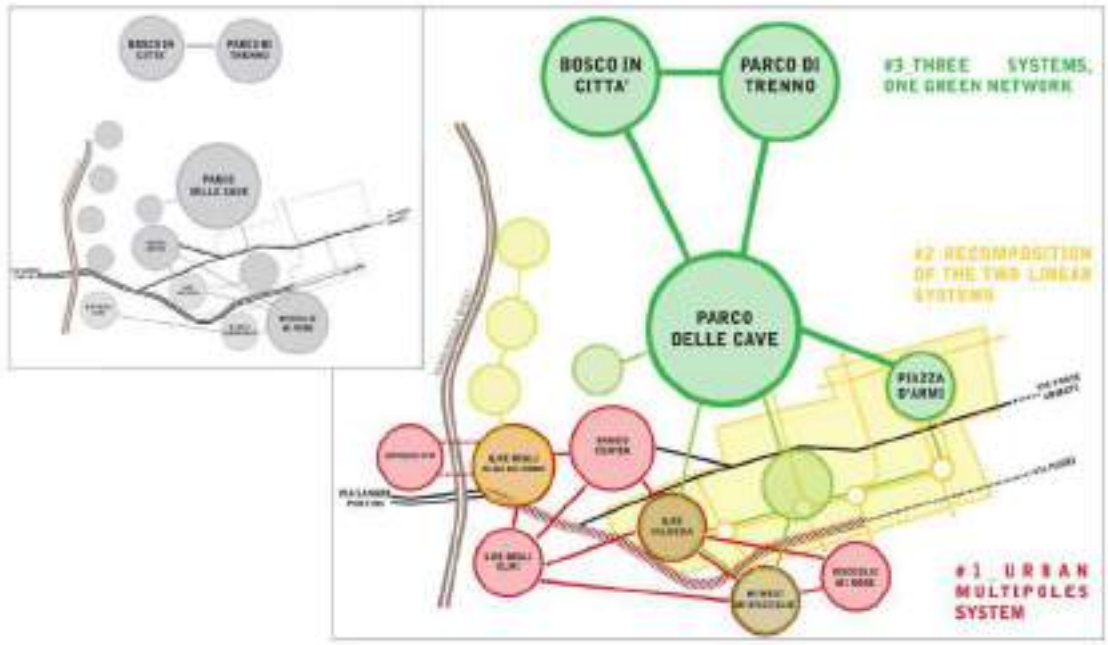

Figure 4. The re-composition of the urban districts in the west periphery of the city: the establishment of new hierarchies and connections among the neighborhoods, the streets and the big urban parks are considered together.

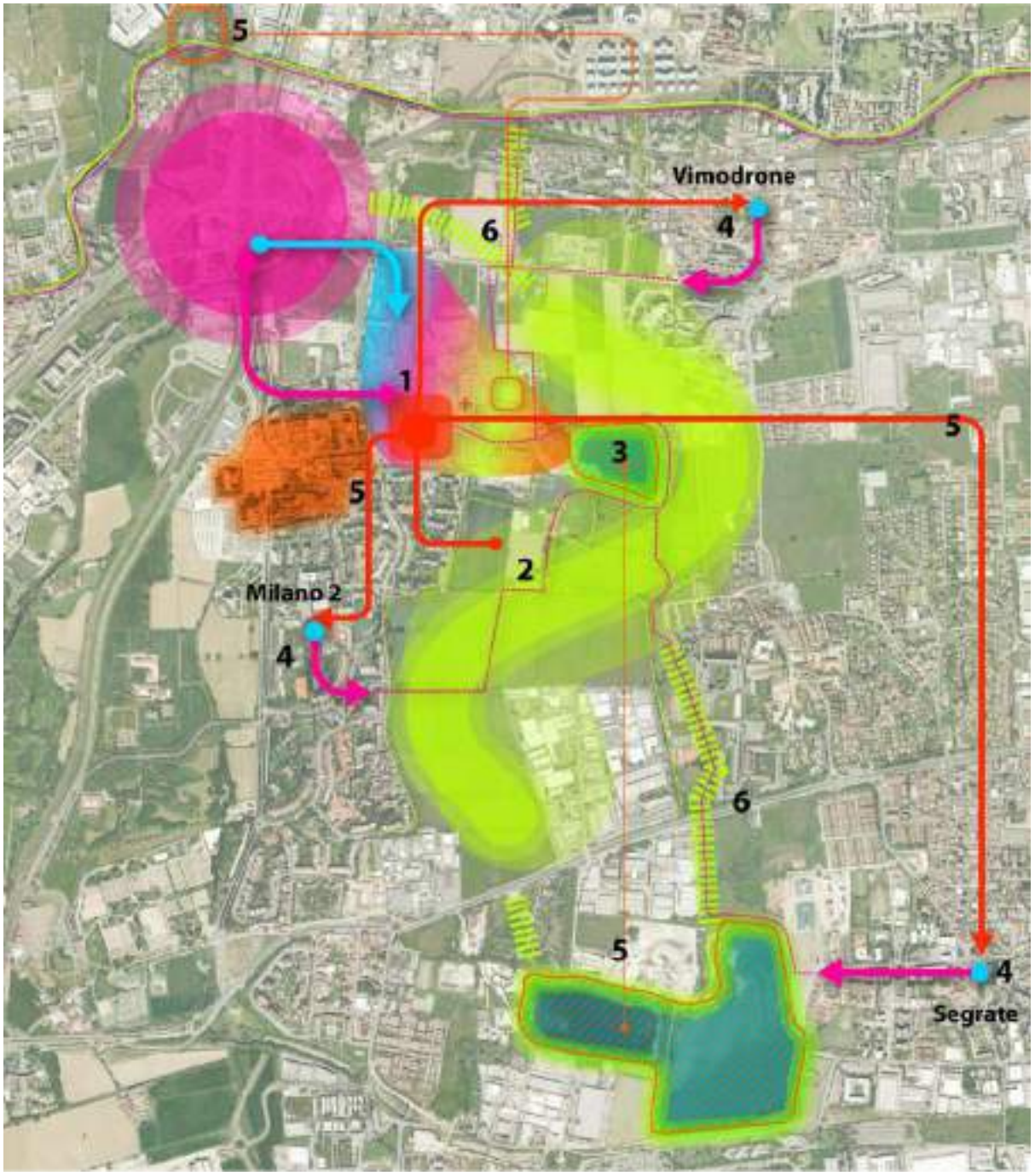

Figure 5. The energy concept-design for the Energy Park in the eastern periphery of Milan: (1) The new energy-oriented centrality; (2) The "Golfo Agricolo", a green connective tissue with a suburban forest; (3) Quarries, a geothermal source of heat; (4) The existing city with district heating; (5) The improvement of the energy network between the hospital and the other mono-functional districts; (6) Establishment of new green connections.

Moreover, we worked on the implementation and application of simple tools for modelling urban environmental quality (UEQ) and energy indicators in urban planning and design (solar accessibility, connectivity and accessibility, soil permeability). These tools enable to evaluate between alternative scenarios, to verify design schemes and to establish rules for mitigation and compensation. In particular, indicators and maps were used as comparative studies, to assess the changes introduced with the design schemes (before and after intervention). In fact, UEQ indicators are helpful if used as a design tool to evaluate among alternative solutions (Figure 6). For example, the study of the solar accessibility of different urban blocks was used as the basis for the re-invention of a suitable urban block with a higher performance that combines passive architecture needs (solar access on facades) and active architecture requirements (solar access on the roofs for the production of solar energy).

Figure 6. Connectivity analysis of the urban texture: left, the current situation; right, the proposed design scheme improves the overall connectivity by introducing a new central district and reducing the number of cul-de-sacs.

4.4. The master-plan with the eco-actions

The final step was the delivery of the masterplan, which in this case gave back a vision of a possible future for each specific case-study area. In this last insight, the actions related to the four themes (energy, environment, people, accessibility) have been made visible through a spatial localization and sizing, and some clues that an answer to more sustainable urban futures is possible emerged. The vision was supported by the theories and readings, and by the previous phases of the design.

The masterplan consists in a plan (1:2.000 or 1:5.000) on which a meta-design of the built volumes and the street design is clearly visible (Figure 7). For instance, the level of detail goes down to the scale of urban design: the layout of the street with traffic calming solutions, the size and depth of buildings (blocks and plots included).

On that map, the location of the eco-actions is reported and some insights on the proposed solutions attached.

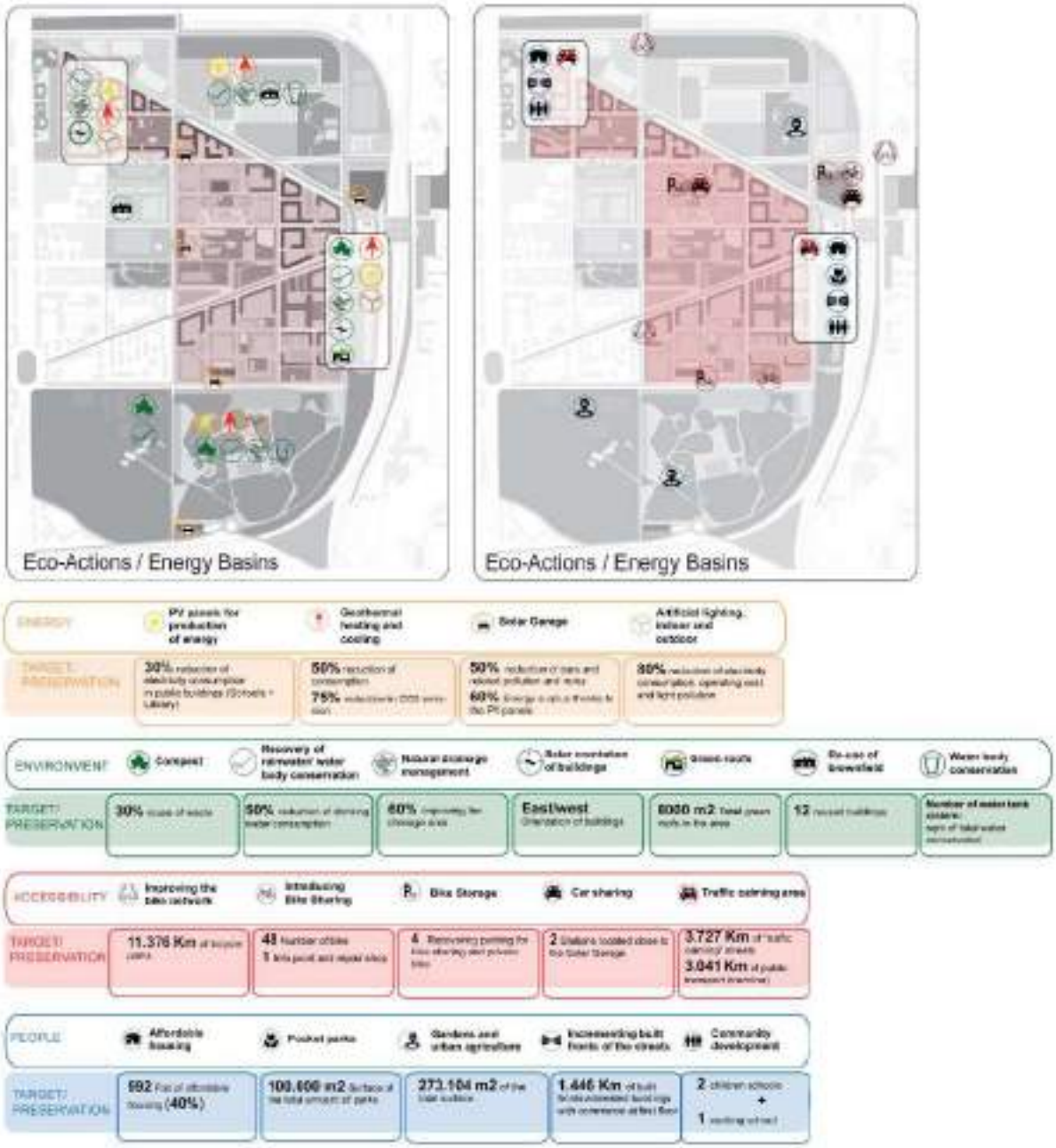

Figure 7. The eco-actions distributed over the masterplan according to the four themes, namely energy, environment, accessibility, people.

5. Outcomes

Different samples of the territory show different potentialities in terms of energy savings and clean energy production. The proposed design schemes try to combine urban planning strategies and energy aspects. Beyond the scale of the building where

green technologies are widely used, urban master-planning offers the possibility to scale up energy efficiency if properly taken into account from the initial concept design. A series of design solutions are presented below and analysed through the four themes of the studio (energy, environment, accessibility, people).

5.1. The Compact City

Concerning energy issues, we faced two main areas of investigation for the Compact City: retrofitting the existing urban fabric (buildings) and layout (street network) and proposing new neighbourhoods with carbon-neutral solutions. The idea is to introduce site specific rules and incentives at the scale of the district or even the block. Depending on the age of the buildings, for instance, different policies can be applied. The large stock of buildings from the ‘50ies and ‘60ies requires heavier intervention (from insulation of the walls and the replacement of windows, to the redesign of the urban street fronts which is often missing), as opposed to older or more recent buildings. Only after the retrofitting of the building envelope, the remaining energy needs can be satisfied through the installation of solar energy technologies (photovoltaic and solar thermal as in Figure 8) and geothermal solutions. A small cogeneration plant might be an option in the presence of a critical mass of users. District heating is also a solution and already provided in some parts of the city. Hence, the choice of the most suitable technology to achieve the energy self-sufficiency of the built environment depends on the cityscape (in terms of density and shape) and the quantification of different productions is a crucial aspect.

A relevant aspect of the compact city is permeability of the soil and wastewater. The presence of large paved surfaces and roofs was clearly highlighted from the permeability analysis. The existing urban fabric does not have many possibilities to improve the situation, but new neighbourhoods and urban parks are the occasion to adopt the proper infrastructure to separate wastewater on site and reduce the load of the sewerage system. The master-planning phase has to take into account the location and the sizing for street design solutions with innovative drainage solutions.

In both cases, the inner city of a metropolitan area offers a unique occasion for implementing an efficient sustainable mobility. For instance, public transport and bike lanes represent the basic solution to achieve energy savings in transport; further strategies like car-free neighbourhoods, car-sharing and policies for the introduction of private electric vehicles (dedicated parking areas and solar garages) were proposed. Again, all the mobility strategies have to establish a strong link to the physical design of spaces: in fact, without a proper design of both the street network (in terms of hierarchies of paths) and the built form (distribution of densities and land use along transportation nodes), mobility strategies might fail. Moreover, the proposed analysis on accessibility had the aim of improving pedestrian movements on the territory by providing more paths and hence a larger catchment area (the so called ped-shed). Creating pedestrian friendly environments is not just a matter of quantity but also quality: traffic calming solutions, attractive fronts and the presence of services are key factors for successful streets. All the buildings have to be

reachable within a five minutes' walk in order to avoid the use of private vehicles and enable the introduction of car-free districts.

The city is the best place to trigger behavioural change and to gather people with common interests. A dedicated program for a solar community that shares the diffused renewable energy produced on site, the introduction of a series of initiatives for improving a sustainable lifestyle (bio-market, sharing of facilities and co-housing), mixed uses and diversification of population are only few samples. In fact, the paradigm of mixité has also energy implications: the coexistence of different typologies of citizens and urban functions means different lifestyles and energy peaks in time. A smart mix of energy uses can lead to site-specific policies aimed at smoothing peaks.

Figure 8. The analysis of the solar potential on new roofs: above, the quantification of available roofs, and below, the suitable areas to be connected in a closed network.

5.2. The Edge City

The periphery of the city offers the most diversified catalogue of land- and cityscapes. The presence of large areas susceptible to transformation, the balanced mix of built spaces and natural environments (mostly residual green areas) represent the most intriguing challenges for future city scenarios. In that physical context, the application of urban ecology strategies is possible and desirable. For instance, the presence of a pond obtained from a quarry is the occasion to exploit the temperature of the water body to produce energy through heat pumps that can be activated through electric energy generated from photovoltaic modules installed on roofs (Figure 9). In another case-study area the rich agriculture and farm production close to the city can provide biogas and biomass for a small local plant (Figure 10).

Large natural areas can be converted into parks or preserve the agricultural function, if any. Those parks can represent the showcase to implement sustainable agriculture

or biomass plantations (short rotation forestry). Sustainable strategies for water management can be implemented as well.

Concerning accessibility issues the edge city is the place where interchange of transport systems happens. Investigating new solutions for the design or interchange nodes will improve sustainable mobility. Innovative solar garages for commuters with dedicated solutions to encourage the use (and ownership) of electric vehicles in the city and car sharing programs can drive a significant change in the urban mobility. From an urban planning perspective, the edge city was mostly built as a juxtaposition of segregated functions with little interconnections among each other. In fact, the proposed concept-plans aim at establishing new hierarchies and legibility among closed districts.

In terms of social strategies, the general aim on the sprawl city is to provide a stronger urban character to places, thus reducing the need to move to the city and creating a stronger sense of belonging: mixed use, mixed densities, social mix, environmental diversity, access to abundant natural areas, transit oriented districts are the key actions to be implemented.

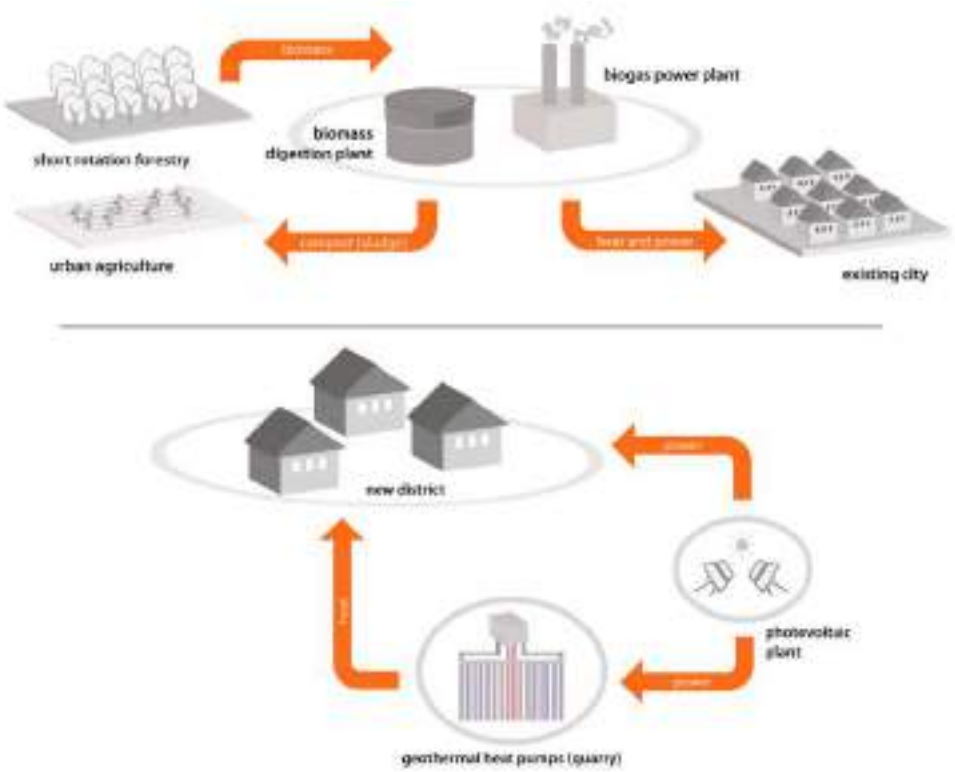

Figure 9. Energy cycles on site: above, the introduction of a biomass cycle with a short rotation forestry plantation in the park and the installation of a biomass digestion plant to produce compost for urban agriculture, plus a biogas power plant to provide heat and power to the existing urban fabric. For the new district (below) geothermal heat pumps work with the water of the flooded quarry. PV panels on roofs provide the power for the pumps that generate heat and cool for the buildings.

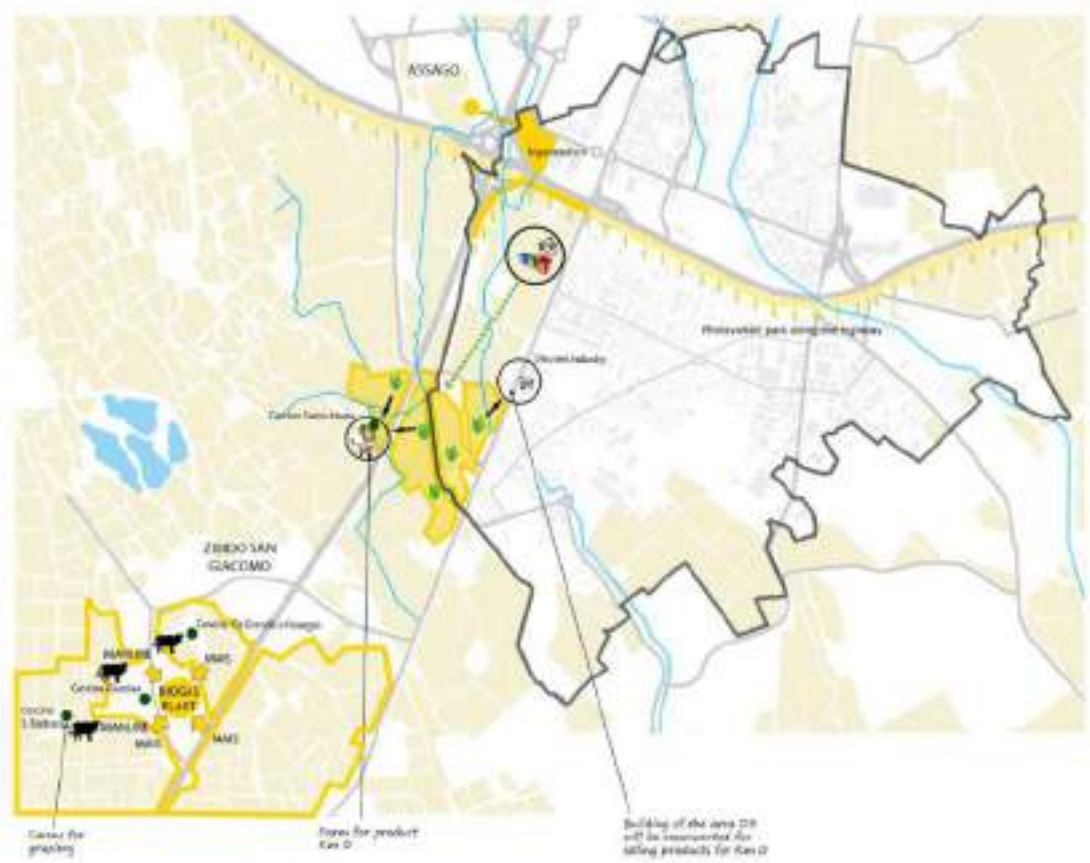

Figure 10. The renewable energy framework aims at reaching a self-sufficient production for the new development. For instance, agriculture and farm production provide useful material for a small biogas plant to be installed on site and serve existing neighbourhoods. The energy for the new district will be provided by a trigeneration plant and the installation of a linear PV park along the highway.

5.3. The Diffused City

A low-density city form encourages to look for energy solutions at the small scale. For instance, the carbon neutral building equipped with eco-technologies is the easiest strategy to pursue in the absence of more effective urban planning solutions, like urban infilling (densification of the urban form as proposed in Figure 11). In the northern part of the metropolitan region, the diffusion of industry represents an occasion for the replacement of part of the production with more sustainable retrofitting strategies (using roofs for solar energy production or green roof technologies for drainage and thermal mitigation of the urban environment). For instance, the role of industry should be converted from energy consumer to energy producer. In particular, the deep interrelation between household and industry on this territory can be intended as a resource in terms of mixité, thus it might be convenient not replacing industry with residential areas but with other forms of production (clean energy) and workplaces (services and tertiary). Another key-element on the territory is the presence of large transport infrastructures that cross and divide places.

Railways and motorways together with the residual spaces they create could be reinvented as energy conducts, thus having a positive feedback on the territory (Thün & Velikov, 2009).

Environmental actions aim at improving and increasing the open space and green structure by insisting on ecological connections and wooded areas (re-composition of natural patterns). This supports the maintenance of a high degree of permeability of the soil to be complemented by the development of a system for the rainwater management, which requires a strong link to the physical master-planning of places. Moreover, weak residual agricultural areas could be converted for local production by introducing dedicated policies.

Accessibility remains the big issue of the sprawl city. Promoting the polycentric city with transit oriented developments matches the most popular urban design approach. Nevertheless, that strategy had scarce success in the recent past, if we consider the vast use of the private car and the economic costs to sustain an efficient public transport in these low-density territories. The diffusion of electric private vehicles could be a solution if scaled up and supported by clean energy. For sure, a crucial option is to work on the improvement of the street connectivity and design, therefore ensuring a better access for pedestrians.

The actions related to people comprise the creation of areas in which promoting social practices. For instance, the reuse of industrial areas for new activities (also directly related to energy production) and the creation of new centralities (district centres with services and mixed uses) in order to improve the identity of places (place making strategy) are the principal solutions to be explored.

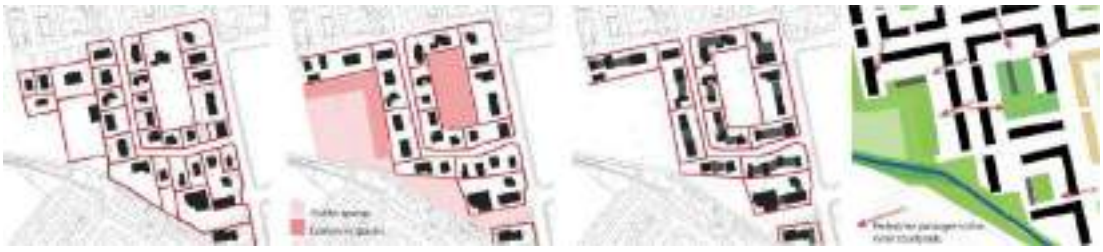

Figure 11. A long term strategy: from the current block fragmentation (1), through a process of property matching and increase of public and common spaces (2) and consequent densification (3), to the reconstruction of urban courtyards (4).

6. Conclusion and future work

Outcomes of the studio show that the contribution of urban planners to sustainability implications of the territory can be relevant. In fact, anticipating energy strategies during the master-planning phase is crucial, because the physical layout of both the urban fabric and the street network have an unquestionable importance in assessing energy consumption. The results of the studio show that not only technology can give an answer to sustainability, but also the configuration of the physical space, in particular the relation between land use, urban density distribution and street

hierarchies. Promoting proximity through a proper urban design with high quality is the first action in order to achieve reduced energy cycles on the territory.

Moreover, the scale of action, i.e. the small town or the neighbourhood reveals to be a proper dimension in order to apply simple strategies of urban ecology. Action-plans promoted by numerous European cities represent a general framework of strategies, but do not have a strong link to the different urban configurations (and hence to the different energy potentials). On the contrary, we focused on the implications of the built environment in assessing sustainable actions.

The relevance of the work to planning education will be enquired, in particular how considerations on energy and environmental quality can affect the design process and the physical layout of the final scheme.

For the second edition of the studio, a series of improvements are under investigation, also according to students' feedback. Of course, the limited time-budget of the studio (one semester-long class, which means about 14 full days of workshops) is an issue: for instance, introducing new activities will happen at the expense of others.

For sure, the quantification of energy savings will be explored with a deeper insight during the class, because students have shown to be interested in getting more validations and quantifications about their design schemes and energy scenarios. For instance, assessing the reduction of CO_2 emissions with easy calculation methods in order to compare alternative design solutions is fundamental, in order to offer a draft measurement and evaluation of concept design solutions. The SEAP experience with the Baseline Emission Inventory (The Covenant of Mayors Office, 2008) might represent a good starting point.

Moreover, we would like to improve the quality and quantity of the data to be used for the guiding the design and building the energy scenarios. Data acquisition was always a big hurdle, even if students in urban planning are quite trained in searching for data and cartography, especially from public geo-portals. Nevertheless, the aim of the studio was not to spend too much time in collecting and organizing detailed data, but rather to work on hypotheses based on the estimation of energy demands and energy production on the territory, even with limited data and resources.

Finally, beside the delivery of theoretical knowledge through lectures and readings and the glossary of common terms prepared by the students, a systemized investigation of best practices will be explored. For instance, the application of innovative clean technologies at the large scale or the introduction of successful policies can be collected and shared among the students as a reference for their design projects.

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Title: Translating disaster resilience into spatial planning practice in South Africa: challenges and champions

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Abstract
Well-run cities can be among the safest places in the world from the impact of disasters, but in reality many cities in the world are the most dangerous places on earth. It is highly likely that hazards and extreme climatic events will in future occur more frequently and will become more severe, increasing the vulnerability and risk of millions of poor urbanites in cities in developing countries. Poor households that are concentrated in increasingly unsafe spaces bear the brunt of the disaster losses as they find themselves on the wrong side of the growing risk divide. Disaster resilience aims to reduce disaster losses by equipping a city to withstand, absorb, adapt to or recover from external shocks. In South Africa issues of development take precedence over issues of sustainability, environmental management and disaster reduction. This is illustrated by the priority given to 'servicing' spaces compared to the opportunities offered by 'transforming' spaces through post-apartheid spatial planning. The City of Durban's quest in adapting to climate change hypothetically demonstrates that if disaster resilience were to be presented as an issue separate from what planners are already doing, then planners may become more aware of it, but would see it as insignificant compared to addressing the many developmental backlogs and challenges. If however disaster resilience is regarded as a means to secure a city's development path while simultaneously addressing sustainability and resilience, then it is more likely to be translated in spatial planning practices in South Africa.

Key words: disaster resilience, spatial planning, developmental challenges, South Africa, Durban

1. Introduction

Well-run cities can be among the safest places in the world from the impact of disasters, but in reality many cities in the world are the most dangerous places on earth. 'The signs of our vulnerability to urban risk are everywhere' (IFRC, 2010 p.

8): earthquakes bringing critical urban infrastructure and assets down with tragic consequences (for example the earthquakes in Haiti and Chile in 2010, and Japan in 2011); volcanic eruptions throwing city airports across the world into chaos (for example the volcanic eruptions in Iceland in 2010 and Chile in 2011); the drug trade turning inner cities into war zones; epidemics turning into pandemics in the developing world; and streets turning into open sewers during seasonal flooding in the slums of developing cities.

Over the past 40 years, 80 000 people have been killed on average each year and 200 million people have been affected by natural disasters (UNISDR, 2010b; World Bank & United Nations, 2010 p. 23). Of greater concern than the current trends, is the increasingly clear prognosis from the United Nations International Strategy for Disaster Reduction (UNISDR) and the Intergovernmental Panel on Climate Change (IPCC) that hazards and extreme climatic events will in future occur more frequently and will become more severe (UNISDR, 2010a; IPCC, 2007). Many international development organisations (IFRC, 2010; ALNAP & ProVention, 2009; IPCC, 2007; UN-Habitat, 2010; UNISDR, 2010a; World Bank, 2008) and several researchers (Wisner, et al., 2009; Puppim de Oliveira, 2009; Pelling, 2003) warn us that as urbanisation and other global processes continue, a 'strange new urban world' (IFRC, 2010 p. 8) is developing – one that is increasingly at risk of experiencing natural, social and/or industrial disasters beyond many urban authorities' experience and ability to manage and control (ICLEI, 2010). The consequence are bigger losses more often, but also shifts in environmental conditions that are bound to have long-term implications for human settlements – settlements, particularly in the developing world, that are already challenged by a range of socio-economic development stresses (Parnell, et al., 2007 p. 359).

'An emphasis on resilience, rather than just disaster response and recovery has become a mainstream idea in disaster reduction' (Collins, 2009 p. 103). Whereas disaster reduction seeks to identify and reduce vulnerabilities and risks, resilience is also partly defensive, but more creative in implying coping and adaptation. Planning for resilient cities involves more than being occupied with minimum standards or widely-accepted spatial designs, and involves robustness, resourcefulness and pro-activeness (Collins, 2009 p. 104).

This paper questions whether disaster resilience is likely to be translated into spatial planning practice in South Africa given its developmental priorities and challenges. The paper starts by considering what risk, vulnerability and resilience means conceptually; then discusses the planning context and spatial planning practices in post-apartheid South Africa; and concludes with a case study on the City of Durban to demonstrate how a 'new' policy paradigm has recently been mainstreamed into local planning practices in spite of the developmental and intergovernmental challenges.

2. Conceptual framework

2.1 Definitions

A ***disaster*** is when a progressive or sudden hazard or event occurs that causes injury or disease; damage to property, infrastructure or the environment; or loss of lives and livelihood that is beyond the capacity and/or resources of the community to cope with (RSA, 2002; UNISDR, 2009). Disasters are caused by the combination of a hazard and vulnerability (Oliver-Smith, 2002).

'The ***risk*** (R) of disaster is a compound function of the hazard (H) and the number of people, characterised by their varying degrees of vulnerability (V) to that specific hazard, who occupy the space and time of exposure to the hazard event: R = H x V' (Wisner, et al., 2004 p. 49). Risk is thus the anticipation of a catastrophe (Beck, 1986 p. 33).

The United Nations International Strategy for Disaster Reduction (UNISDR), which is the strategic framework for reducing disaster risks as adopted by the United Nations Member States in 2000, defines ***vulnerability*** as the combination of socio-economic, political, physical, and environmental conditions people find themselves in that make them susceptible to the impact of a hazard (UNISDR, 2009). Not everyone suffers equally in a disaster due to their vulnerability: the conditions of inequality and subordination in a society rather than the geophysical features of a place explain why this is so (Oliver-Smith, 2002 p. 27).

The UNISDR defines ***resilience*** as 'the ability of a system, community or society exposed to hazards to resist, absorb, accommodate and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions' (UNISDR, 2009). Urban resilience indicates the inherent capacity of a city to maintain core functions in the face of hazards, threats and the impacts of disasters, and to rebuild itself when necessary (UN-Habitat, 2011 p. 18).

Spatial development planning is 'a process by which a national/central [or local] government seeks to consciously plan for the spatial development of the territory of a country [or city] by using the location, timing, nature and scale of infrastructure investment and development spending to stimulate, support, strengthen and discourage growth and development in specific spaces/places' (Oranje, 2010 p. 55).

2.2 Urban disaster risk and vulnerability

The vulnerability of people to disasters is progressively increasing, and, if left unchecked, will augment the local disaster risk burden of the world's urban poor (Laukkonen, et al., 2009). An urban risk divide is developing in cities as they become increasingly unjust, polarised, divided and fragmented: the well-connected elite barricade themselves in well-serviced and regulated high-security villages (Watson, 2005 p. 286; Todes, 2011 p. 116), while some communities struggle to

survive along the fault lines of urban risk (IFRC, 2010 p. 8). The poor are largely priced out of safe areas and are concentrated in severely vulnerable and unsafe spaces – most often in informal settlements that are low-lying or steeply-sloping, flood-prone, close to pollution sources, often at highest risk of fire and disease, cauldrons of social tension and crime, with inadequate or non-existent services, and lack of protection from extreme climatic events. Hazards interact with each other to produce compound hybrid hazards, and as everyday disaster risk grows, it undermines the coping capacities of communities (ALNAP & ProVention, 2009 p. 4; Laukkonen, et al., 2009 p. 287; Pelling, et al., 2009 p. 4; World Bank, 2003; Freeman, et al., 2002 p. 5; Parnell, et al., 2007 pp. 357, 361). As everyday risk becomes an acceptable part of life, it lowers people's coping threshold and makes people less willing to prepare for catastrophes. Each succeeding event erodes the resources of a household to cope with and recover in time for the next shock, resulting in a 'ratchet effect' of vulnerability (Pelling, 2003 p. 16; Oelofse, 2002 p. 43; Faling, 2012).

Addressing urban disaster risk and vulnerability is critical in protecting the lives and livelihoods of people, as well as the infrastructure and development gain. Resilience offers a perspective on reducing disasters and everyday risks, as well as making people and places more robust and adaptable to changes and shocks.

2.3 Resilient cities

'Cities are among humankind's most durable artefacts' (Vale, et al., 2005a p. 5). Resilience is perhaps a new metaphor to many disciplines to describe and frame a counter-response to threat, but resilience has always preoccupied the inhabitants of cities as they sought to defend and secure their interests. The rise of resilience is ascribed to a growth in political action against a number of perceived threats and events such as climate change related events, disease pandemics and global terrorism (Coaffee, et al., 2009 p. 1; Todes, 2011 p. 118).

C.S. Hollings introduced the term resilience for the first time in 1973 to the analysis of ecosystems. It emerged as a concept in ecosystems theory to explain how ecological systems cope with external shocks, or how to interpret its stability (Coaffee, 2009 p. 85; Ernstson, 2008 p. 17). Ecological resilience was defined as: 'the amount of disturbance that an ecosystem could withstand without changing self-organized processes and structures' (Coaffee, et al., 2009 p. 112). The range of application of the term resilience has since then broadened in theory and research. In recent years resilience has become a trans-disciplinary concept that integrates socio-political and physical aspects (Coaffee, 2009 p. 87) and is becoming a common frame for the policy goals of socio-ecological systems such as cities (Hamin, et al., 2009 p. 239; Coaffee, et al., 2009 p. 114).

Resilience is popularly understood as the capacity to accommodate, absorb, bounce back from, or adapt to some kind of perturbation (Vale, et al., 2005b p. 335; World Bank, 2008 p. 32; Hamin, et al., 2009 p. 239). If resilient, a system has a degree of

elasticity to withstand a shock and reorganise itself when necessary (World Bank, 2008 p. 32) and is thus forgiving of external shocks (Hamin, et al., 2009 p. 239). Resilience is indicated by the continuation of particular functions at an acceptable level (Pelling, 2011 p. 42). Moreover, it includes the ability to learn by continuously adapting to the constantly changing risks and vulnerabilities (Collins, 2009 p. 106; Hamin, et al., 2009 p. 239).

The goals of a resilient city need to be built into the everyday practices of urban planners (Godschalk in Coaffee, 2009 p. 87). However, urban planning has so far played a limited role in consciously reducing vulnerability to disasters or everyday risks; and resilience is little understood (Biesbroek, et al., 2009). The International Council for Local Environmental Initiatives (ICLEI) sums up the reason for the lack of action: 'while the changing nature of disaster risk is well analyzed and increasingly addressed at international and national levels of debate and decision-making, efforts to provide direct and practical guidance to local government policy-makers and planners on how to reduce exposure and increase resilience to disasters have been few' (ICLEI, 2010 p. 1). Because resilience is not made practical, planning practices are often unsustainable – in fact, our everyday decisions could even increase people's exposure to risks and hazards, as opposed to building resilience (Pelling, 2003).

Most planners would agree that building resilient cities is of great consequence, but many countries have major development challenges – compared to which the pursuit of resilience seems like a 'nice to have'. The next section considers if, given its challenging planning context, resilience is likely to be translated into spatial planning practice in South Africa.

3. Contextual framework

3.1 The South African planning context

Apartheid had purposefully and systematically restricted black South Africans from meaningful participation in the economy. The assets of the majority of people were directly and indirectly destroyed and access to skills and self-employment was racially restricted (The Presidency, 2009). Despite solid and consistent economic growth for most of the past 18 years, and numerous policy and legislation changes, the resilience of urban settlements in South Africa is endangered by spatial inequalities, fragmentation, urban sprawl, inequalities between rich and poor that is deepening, the overload on basic infrastructure and services, congestion on roads, social exclusion, increased crime, and pressure on ecosystem services. Despite having one of the largest public housing projects in the world, decent shelter near employment opportunities remains elusive for most people, for many do not have access to housing or security of tenure, quality social services, public facilities and amenities, economic opportunities and livelihoods, and basic services. The South African space economy is thus characterised by the coexistence of formal and informal economic activities, housing and transportation systems, and a dualism in

quality of life, levels of incomes, education, skills, accessibility, density and access to service delivery (Biermann, 2011 pp. 14, 16; Oranje, 2010 p. 59; World Bank Institute, 2012). The stark inequalities in the country threaten the fragile social cohesion, and have given rise to an increasing number of violent service delivery protests and xenophobic attacks. There are furthermore huge territorial disparities between rural and urban areas (Van Huyssteen, et al., 2010 pp. 24-25, 35).

3.2 Planning in South Africa

With the rise of democracy in South Africa, expectations of the eradication of socio-economic imbalances, including equitable development and access to basic services, were high (Carmin, et al., 2012 p. 21). A new path of reconstruction and development was cut out for a post-apartheid South Africa in the form of numerous green and white policy papers, acts and regulations. Simultaneously a new intergovernmental system was established with a strong focus on the process of inclusive planning rather than planning products. Nevertheless, after many decades of comprehensive blue-print planning during which 'planners were perceived as having been instrumental in designing and maintaining the apartheid space economy' (Biermann, 2011 p. 15), spatial planning was regarded with suspicion and thus neglected – if not abandoned. This adversely affected planners' ability to perform spatial planning. Furthermore, many planning positions in government were filled with people who were not qualified planners, causing a loss in skills and institutional knowledge (Biermann, 2011 p. 15; Oranje, et al., 2011 p. 8).

Integrated Development Plans (IDPs) that promote the developmental government paradigm became the dominant planning instrument in post-apartheid South Africa. These plans focus on stakeholder processes and institutional coordination but neglect the notion of using space to restructure settlements. Watson calls this the 'marginalization of the spatial' (in Biermann, 2011 p. 12), while Oranje, et al (2011 pp. 6-7) describes post 1994 development planning in South Africa as characterised by a conflict in intent, action and outcome between service delivery and transformation. 'Servicing' is ensuring a rapid response to a lack of housing and basic services. As such, it has a 'very near-future perspective', concerned with the number of houses completed and services delivered in areas where people live 'now' and often with future re-election of politicians in mind. Oranje, et al (2011 p. 6) argue that the outcome has not necessarily transformed the post-apartheid space economy, but only addressed the symptoms. 'Transformation' on the other hand is concerned with the restructuring of the entire space economy 'through the pursuit of shared, sustainable, equitable and inclusive growth'. However, much more emphasis has been placed on servicing, which means that many communities may have houses and basic services, but the expansion of the economy into these 'serviced' areas has been minimal and people remain far from economic nodes with their accompanying jobs, social amenities and economic wealth.

Spatial planning re-emerged as an important component of planning with the publication of the National Spatial Development Perspective (NSDP) in 2003.

However, local spatial development frameworks are often driven by widely accepted concepts such as nodes, corridors and urban edges, without much insight into how spatial planning ought to respond to movement patterns, long-term economic prospects, the property market, or how space is used. It is often assumed by planners and politicians that it is possible through state intervention in the economy – notably though infrastructure investment – to change the spatial pattern of economic growth and development. The result is a disjuncture between conceptual spatial planning and quantitative infrastructure planning that contributes to misaligned service delivery. The absence of credible data on changing demographic and economic patterns, municipal governance and urban sustainability further impedes sound decision making (Biermann, 2011 pp. 12-14; Oranje, 2010 pp. 57-60).

Municipalities furthermore face a number of challenges in overcoming the apartheid spatial legacy: lack of funds; lack of technical, managerial, financial and planning skills and capacity to take up the developmental role; institutional transformation issues because of the amalgamation of municipalities; economic woes inherited from apartheid; huge service delivery backlogs; and intergovernmental misalignment and complexity (Van Huyssteen, et al., 2010 p. 27; Oranje, et al., 2011 p. 8).

3.3 Translating disaster resilience into spatial planning practice in South Africa

Before 1994, environmental management, disaster reduction and sustainability among other concerns, received very little attention in South African policy. This changed after 1994 as the process of democratisation resulted in a revised development agenda (Roberts, 2008 p. 521). But the simultaneous, parallel development of many policies resulted in duplicated development application processes, competing bureaucracies, interests and agendas, and differences in training, discourse and practice (Todes, 2011 p. 123). There was also a growing tension between the need to expedite development to address inequalities, and the need to introduce sustainability concerns such as environmental management and disaster reduction into planning. As described above, development won out as the priority, so that long-term issues were of less immediate concern. This tension has still not been resolved, and has, in many cases, intensified due to the range of immediate and severe development challenges (Roberts, 2008 p. 523). For this reason Faling, et al (2012) have found that planning for everyday disaster resilience is not a priority among planners in South Africa. It is not even deemed part of the planning process, but part of what the ‘environmental people do’.

What follows is a case study of the City of Durban in South Africa – a metropolitan city facing typing development challenges – and how they have started to mainstream climate change adaptation into their everyday planning. This serves to hypothetically demonstrate that the mainstreaming of disaster resilience in spatial planning can be accomplished if approached in a way that it is seen as part of the planning agenda and integrated into existing planning strategies.

4. Case study: Climate change adaptation in Durban

Durban is a coastal city with the largest port on the east coast of Africa. The eThekwini Municipality manages the 2 300 square kilometre municipal area that hosts a population of 3.5 million people and that is South Africa's third biggest urban economy (Carmin, et al., 2012 p. 20; Roberts, 2008 p. 521; SACN, 2012 p. 37).

The City of Durban faces typical post-apartheid challenges as described above. It also experiences severe weather events such as flooding, storms, droughts and tornadoes. To this extent, a report commissioned by the Municipality on climate change suggests that over time Durban would experience minimum and maximum temperature increases; and rainfall would become more infrequent, but more severe – causing flooding and high tide levels. The report also indicates that the sea level is rising by 2.7cm per decade. These changes in the climate and sea level will affect numerous sectors in the city such as food security, health, infrastructure, water security, biodiversity and the economy, and many people will become more vulnerable to disaster risks (Carmin, et al., 2012 pp. 18-21; Roberts, 2008 p. 528). At that time few strategies in eThekwini engaged proactively with each other to reduce the risk for disasters due to extreme weather events. Moreover, the disaster management sector was mostly responsive to emergencies, not focussing on proactively planning to minimise exposure and susceptibility, relocating people and infrastructure away from high risk areas, or on developing early warning systems.

As severe weather events started to cause more damage to the city during the last decade – notably the 2007 severe flooding and coastal erosion that caused significant damage to the coastline around Durban – the Municipality started to wake up to the consequences of these events, and realised that many of the post-apartheid development gains are already being undermined or lost, and will be further exacerbated by climate change. Climate change adaptation or resilience-focused interventions, started to achieve prominence in Durban for the potential it offers for 'development-linked co-benefits that are responsive to a context of poverty and underdevelopment' (Roberts, 2010 pp. 398-399; Roberts, 2008 p. 532; Carmin, et al., 2012 p. 23).

It still took some time and trial and error for Durban to be recognised today as one of the leaders in climate change adaptation. First, the Environmental Management Department commissioned the development of an adaptation strategy, published in 2006, which summarised general adaptation actions that could be taken by sector departments. It was an important document to further the debate on climate change in the city, but it did not act as a catalyst for action – in part because it did not specify goals and actions for specific departments, and partly because many departments were dealing with work backlogs and overloads, as well as a lack of funding and capacity. In 2008 the Environmental Management Department, whose name changed to the Environmental Planning and Climate Protection Department (EPCPD) – to indicate the priority given to climate change in the city – realised that to gain widespread support for an adaptation plan, they have to shift the emphasis from the

threats climate change present to presenting adaptation as a means to realise development priorities. Work was started on individual plans for specific sector departments by embedding adaptation planning into existing business plans and development objectives. These plans formulated measures and protocols to maintain or improve the functioning of municipal systems, services and infrastructure given the projected impacts of climate change. 'Essentially, the goal was to build increased resilience one adaptation intervention at a time' (Roberts, 2010 p. 401). Climate change consideration were also factored into the overall long-term plans and budgets of the municipality (Carmin, et al., 2012 pp. 21-23; Roberts, 2008 p. 533; Roberts, 2010 p. 401).

Three endogenous factors seem to have driven the adaptation initiatives in Durban. One is the efforts by a champion who pushed the adaptation agenda and creatively navigated the minefield that is local government. Two, the city came under the impression of the gravity of climate change impacts and the danger their residents were in if it became more severe. Three, the municipality realised that climate change adaptation was a means to secure the city's development path while simultaneously addressing sustainability and resilience (Carmin, et al., 2012 p. 28). eThekwini found ways to link adaptation to existing policies and plans to 'demonstrate that this is not an unfamiliar or inconsequential issue but one that was already part of current citywide priorities and initiatives' (Carmin, et al., 2012 p. 29). Adaptation came to be seen as integral to the on-going work of municipal departments.

Roberts (2008 p. 527) identified four markers that indicate the successful integration of climate change in the day-to-day operations, planning and decision making of the Municipality. These are:

- The emergence of a champion(s);
- The appearance of climate change as a significant issue in municipal plans;
- The allocation of dedicated human and financial resources to climate change issues; and
- The incorporation of climate change considerations into political and administrative decision making.

If the City of Durban could manage to integrate climate change consideration into their various sector plans, then surely other South African cities can attempt to mainstream disaster resilience into their spatial planning practices?

5. Conclusion

It is very likely that losses to lives, livelihoods, assets and infrastructure will increase in future as more people migrate to cities and as the effects of global process such as climate change increase communities' vulnerability and disaster risk. Many of the implications will be beyond the capacity and experience of local governments to address, wiping out development gain and diverting scarce funds towards relief and

reconstruction. Developing countries will suffer most from these impacts, increasing the risk divide within and between nations.

Disaster resilience attempts to reduce these losses by mainstreaming physical, social, economic and environmental measures into planning practices to allow urban systems to accommodate, absorb, adapt to or bounce back from shocks to the urban system. Spatial planning is critical in building this resilience. By managing growth and change in cities, spatial planning can promote liveability, sustainability and inclusion (Todes, 2011 p. 128). By mainstreaming disaster resilience into spatial planning practices, these development endeavours can be protected from future losses.

Post-apartheid spatial planning has had 'far more of a life on paper than in practice' due to various fears and concerns and inabilities concerning implementation (Oranje, 2010 p. 66). Planning in South Africa is burdened with addressing housing and service backlogs; fragmented and sprawled spatial patterns and inefficient transportation systems that result in unequal access to urban functions and the economy; challenges of intergovernmental coordination; and so forth. To add another burden – that of building resilient cities – would be met with contempt or despair. The Durban experience shows how planners and officials can be entrepreneurial and innovative in seeking to promote an emerging policy domain. By presenting disaster resilience as a means to realise a city's development priorities whilst protecting the development gain, it is more likely that resilience would be translated into spatial planning practice in South Africa, than if it were presented as a policy paradigm inconsequential from what planners are already doing.

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The role of *models for reality* in the transition period of communities especially in the aftermath of crises: The Kurdish experience in Northern Iraq

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Abstract

The formerly deported people in Kurdistan in Northern Iraq were turning back to their devastated villages after the Kuwait crisis in 1991 and began to reconstruct their villages. Their former socio-cultural life-world (Habermas 1992) had been fully destroyed between 1975 and 1988. Before repatriation the deportees were forced to construct a new life-world in the alien environment of collected villages or exile, in which they were forced to live. After repatriation the returnees were under the strong influence of their newly established modern life in collected villages and/or exile; nevertheless traditions of their former village life were still determining their behaviour and minds as a model of reality (Geertz 1973).

The political environment in 1991 was fully uncertain; in the aftermath of crisis state failure caused a vacuum of power. No rules and no regulations – total freedom? The non-existent sphere of power (Weber 1998) was a source of uncertainty and chaotic development. It could not contribute to future orientation in the sense of creating a new and appropriate model for reality (Geertz 1973). Without having future oriented policies and social and financial resources (Weber 1998), reconstruction of the new villages was not future oriented, and the new villages did not become an integrated and dynamic part of the settlement system. The food distribution policy of the UN agencies further aggravated the difficulties of shaping a new model for reality because it seemed no longer reasonable for the new villagers to engage in farming activities. As a response to missing services such as schools and health care, the returnees in the newly reconstructed villages began to emigrate back to larger settlements like former collected villages and the three large cities of Dohuk, Erbil and Sulaimaniya.

The returnees were composed of different subgroups with the younger ones interested in modern life (electricity, roads, water, schools – but also radio and television) and the elderly dreaming of their former village idyll. Lack of organisation was hindering the returnees to articulate their interests; communicative action (Habermas 1992) through interaction of different actors was not possible. In this general frame of anomy (Gerhardt

2002) the international actors were not interested in the establishment of a new order and new political powers, while the local actors were not able to develop policies for future orientation.

The transition period after crisis is a period with strong impulses for social change which can be defined as a period of liminality (Turner 2008). The challenges of this period are huge but they include also chances and opportunities as the experience in Northern Iraq illustrates.

Keywords: Crisis, state failure, social change, reconstruction, regional development

Background

In the aftermath of the war against Iraq in 1991 the political situation in the region changed dramatically. The focus of development was no longer the liberation of Kuwait but the very political future of Iraq after its army had been forced out of Kuwait. The change in US politics towards the Saddam regime and the use of military helicopters against Shiites and Kurds caused a humanitarian catastrophe at the borders of Iraq with Iran and Turkey. Hundreds of thousands of people from Iraq fled to the neighbouring countries. Almost one and a half million Kurds were trying to seek security in Iran and Turkey, turning major cities into ghost towns. From Dohuk's 100 000 inhabitants at the time, only 400 people had remained while all the others were fleeing through the mountains towards Turkey.

After the intervention by the UN in 1991 in Northern Iraq once more a safe haven had been defined in order to protect the Kurdish population and to try to convince them to turn back home. Back home? Rather an odyssey! One should go back to the seventies and eighties and have a closer look at the developments in Iraq.

Socio-political development in Iraq in the seventies and eighties

The dispute between the Kurds and the central powers of Iraq dates back to the times of the British mandate after World War I. As Iraq was constituted in 1932 the Kurds were seen as a part of the Arab Kingdom of Iraq (Sluglett 2001, 23ff) and all attempts of the Kurds to obtain autonomy were in vain. General Qasim was the first to attempt to solve the dispute in 1958 after the proclamation of the new Republic of Iraq. The representative of the Kurds, Molla Mustafa Barzani, was called from his Soviet exile. 'The Kurds should obtain autonomy' was the proclaimed aim. However, the Kurds did not obtain autonomy and the struggle between the Kurds and central government continued. In 1970 there was a new attempt to solve the conflict. An agreement between the ruling Ba'th party and the Kurdistan Democratic Party (KDP) regulated the new approach for getting autonomy for the Kurdish people. In this agreement

„The [Iraqi] government promised Kurds full recognition of their nationality and autonomy within four years. The Kurdish language was made the primary language in the Kurdish areas, and also an official language which would be taught in addition to Arabic throughout Iraq" (Jawad 1982: 50).

And as Sluglett points out that

"(...) the new (provisional) Iraqi constitution of July 1970, stating explicitly for the first time that 'The people of Iraq is formed of two principal nationalities, the Arab nationality and the Kurdish nationality'." (Sluglett 2001, p. 142).

This was encouraging and a set of measures were foreseen to be implemented in that new political sense.

As the aim of the agreement had not been realised after four years, the Kurdish side started a rebellion. Interestingly, the Kurdish rebellion was supported by the USA through the Shah regime in Iran. Probably their aim was to weaken Iraq because of its alliance with the former Soviet Union. This support strengthened the Kurds so that they could withstand the Iraqi forces. The situation changed when Iran signed an agreement with Iraq in Algeria in 1975. The agreement stipulated that Iran stops its support for the Kurds and, in return, was given half of the Shatt-el-Arab, an important premise for its oil exports. After losing the support of Iran, the Kurdish rebellion was defeated and Iraq regained control over the Kurdish regions, especially in the border area to Turkey and Iran.

The political force and destruction of the rural settlements in the Kurdish region: impacts on the socio-economic life of the rural population

Iraq began in 1975 to reshape its politics towards the Kurds. The core of this policy was to obtain full control over Kurdish regions and to obstruct assumed support of the Kurdish villages in the mountainous areas of the North and Northeast to the Kurdish rebellion. As Farouk-Sluglett and Sluglett point out, "(...) the entire populations of villages situated close to the frontiers with Iran and Turkey, where the regime set up a *cordon sanitaire* between itself and its neighbours in order to 'prevent infiltration'" (Sluglett 2001, 188) were removed and the inhabitants deported. The deportation policy began in autumn 1975 in the Barzan area. It was continuously implemented until the end of the war against Iran. The peak of the repressions was the so called *al-Anfal campaign* against Kurds, during which up to 200.000 of Kurdish people were killed also by chemical weapons (Meiselas 2008: p 308; Sluglett 2001, pp. 269-270). At the end of 1988 most of the Kurdish villages had been destroyed (Table 1).

There are no statistics about how many inhabitants have been deported. The author estimated that the deported rural population must be about 720 thousand inhabitants (Sinemillioglu 2011, 25). The deportees have later been resettled in so called collected towns comprising the population of up to 20 villages strongly controlled by the security forces. The deportees were dispossessed and not able to continue their former agricultural life. In the words of Farouk-Sluglett and Sluglett "(...), those who were made to live in them [collected towns] could no longer continue with their traditional

agricultural or pastoral way of life" (Sluglett 2001, 188). The collected towns were strongly controlled settlements, which did not allow for any economic activity. The destruction of the rural regions and accompanying deportations was nothing else than the destruction of the social and economic structure of this society.

Table 1: Settlements in Northern Iraq, March 1996

Governorate	Cities / towns	Collective towns	Total Villages	Destroyed villages	Resettled villages
Dohuk	14	35	1,200	867 (72%)	600 (69%)
Erbil	22	28	1,238	1,025 (83%)	868 (85%)
Suleimaniyah	41	15	2,021	1,994 (99%)	1,004 (50%)
Total	77	78	4,459	3,886 (87%)	2,472 (64%)

Source: UN–Department of Humanitarian Affairs, IRCU – NI (from: Sinemillioglu, 2011, pp. 267-268)

The crisis of 1990 and the war of 1991: reversal of deportations, returnees in the destroyed rural regions

The invasion of Kuwait in August 1990 by the Iraqi army caused a heavy crisis in the Middle East. The UN Security Council responded immediately with the Resolution No. 660 (SR660) of August 2, 1990. With the SR661 of August 6, 1990, Iraq was put under international sanctions. After negotiations remained without any results, the UN mandated international force troops intervened in January 1991 and the Iraqi troops were forced out of Kuwait. The aftermath of the War, known as Gulf War I, was dramatic. By the end of March 1991 almost one and half million Kurds and approximately one million Shiites from the southern Iraq fled to Turkey and Iran. The UN reacted by deciding to form a "safe haven" in Northern Iraq so that refugees could return to their homes (RS688 of April 5 1991). From now on it was possible for the international community, for the UN Organisations and for humanitarian NGOs, to enter into the crisis region.

Some of the returnees who had been deported from their villages went directly to their former villages, especially those who had been living in Turkish or Iranian exile for many years, i.e. those who fled in 1975 and in 1988 from Iraq. They returned to Iraq as homeless people – roughly about 600,000 returnees (Sinemillioglu 2011). These former refugees started to rebuild their destroyed villages under extremely difficult conditions

and without any assistance; the only capital they had was their enthusiasm and their will to reconstruct their former homes (Sinemillioglu 2011).

Picture 1: Returnees coming from Iranian exile in November 1991 in the village of Bile, which was destroyed in 1975.

Source: Sinemillioglu 1991

The vacuum of political power in parts of Iraq and international response: the policy of *do nothing*

The UN resolution SR688 had created a completely new state of affairs: In Northern Iraq central government had completely lost power. The loss of their *sphere of power* (the expression is from Weber 1998) allowed the opposition to take over power immediately after the UN resolution. This was not fully recognised by the international community, but not fully denied either. The newly emerged Kurdish opposition proclaimed to install a democratic administration. The democratic orientation in one part of the state of Iraq was contradicting central power, possible through the policy of *do*

nothing at the side of the allies and the United Nations (Sinemillioglu, 2011, pp. 125-128).
The main actor during the aftermath of the crisis surely was the UN managing the humanitarian disaster and organising humanitarian help. Doing this the UN was bound by obligatory agreements with the Iraqi central government because the UN can be active in a member state only if the concerned country accepts this. According to the Memoranda of Understanding (MOUs) between the central government of Iraq and the UN the main goal of UN interventions was defined as humanitarian intervention, and for its actions the UN had to take into account the "sovereignty of Iraq and the national unity of its population." (MOU, 20 May 1996, from: Sinemillioglu, 2011, p. 101).

Interestingly, the UN Organisations continued their humanitarian work as though nothing new had happened in 'the three northern Governorates', as the Kurdish region used to be addressed in UN jargon. The UN agencies even negotiated officially with the new Kurdish administration, but the political orientation of the Kurds was fully neglected.

The obvious result of this policy was that also the allies accepted the situation in the North of the country but did not have any policy to control, to prevent or to influence the developments in these three Governorates. The following statement of the American Colonel R.M. Naab shows that the allies did not recognise and/or were not interested in the political processes in Iraq regarding the political development in the Kurdish region:

"In May 1992, Iraq was having an election. I said, „What is this going to solve?" And in fact, while Kurds participated in it very actively, the U.S. gave very little help officially. It didn't make the problem of the rivalry between two major parties go away. I mean Jalal and Massoud are still at it. It still goes hot and then cold for a while. It gives people in the West the opportunity to say, "Well, there they go again. They're all tribal. They can't manage their own affairs. They're killing each other." That's too bad for the Kurdish people" (Meiselas, 2008, p. 342).

The result of this policy was that the UN was allowed to bring back the returnees without organising any assistance beyond humanitarian help. The returnees were free to do what they wanted: Return to their destroyed villages and try to create a new *life world*.

Crises accelerate social change

Social change in general is a part of the transformation of societies (Zapf, 1996). In traditional societies this transformation occurs under the conditions of political and cultural pressure, i.e. inputs from 'outside' (Parsons, 1961). Political pressure can also

be identified in the process of state and nation building (Rokkan, 1969, p. 233-234). In the case of Iraq the process of state and nation building indeed created continuous political pressure accompanied by crises almost through the whole history of the country (Sluglett, 1991). The continuous struggle between Kurds and central government in this process caused the almost complete destruction of the rural space in Kurdish regions. This was done 'in the name of modernization' (Sluglett, 1991; Rohde, 2010).

In the literature there is a vast amount of publications about crises, nevertheless post-conflict situations are not deeply considered, as Herrero points out:

"Despite common elements, postconflict situations differ significantly from one another. Most of the existing literature does not address the immediate aftermath of the conflict – the emergency phase. (...) The security, political, and administrative vacuum resulting from conflict, as important as it is, is often neglected." (Herrero 2005, 43).

The "shattered society" (HRW, 1993) of the Kurds in Iraq in the aftermath of the GW I is a good proof for this observation. The very unique situation in Iraq shows that the unexpected change in the social and political environment, especially the change in state affairs, challenges the international community because the affected people obviously are not able to manage their own affairs.

Development after crises and the model of reality versus the model for reality

The will of returnees to reconstruct their former villages was not an easy task. In the aftermath of the crisis of 1991 the situation of the returnees was almost the same as it has been after the deportations, this time in the opposite direction. Arriving in their former and now devastated villages the returnees were confronted and challenged with a new environment fully different from their newly created life world under the conditions of collected villages or exile. They still carried elements of their rural life world in their minds, and as they started reconstruction of the villages the driving force was this cultural background. In the words of the renowned anthropologist Clifford Geertz *cultural patterns* or *models* out of their former life.

Geertz distinguishes two main concepts: models of reality versus models for reality (Geertz, 1973, pp. 93-94). Models of reality describe the forms, behaviours and traditions of the existing life world. For future orientation and plans models for reality are of importance. Most development can be in general described as a pendulum between these two models with a latent or open competition existing between the two.

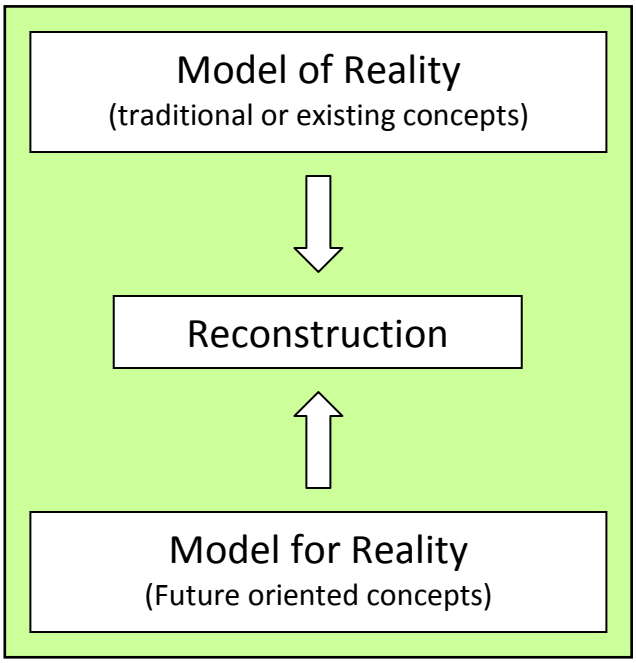

Figure 1. Concepts influencing future action: the field of reconstruction
Source: Sinemillioglu, 2011, p. 65. Translation by the author

Applying this approach to the reconstruction activities of the returnees, it is obvious that returnees were driven mostly by the existing models of reality. These were derived from their former village life, but to some extent mixed with new elements of their recent life world, i.e. life in collected villages including modern social amenities like schools and health services, technical infrastructure like flowing water and electricity in the houses, modern communication and transportation systems etc. Sinemillioglu describes five groups, especially the group of youngsters who want modern services in the villages, and the group of elderly people who strongly adhere to former rural life (Sinemillioglu, 2011, pp. 143-144). Traded values in the minds of elderly people like resistance to change and glorification of the past are strong hindrances especially if there is no future oriented assistance such as concepts and institutions and the missing "material, i.e. the social and financial, resources" (Max Weber).

Reconstruction? Is it possible to reverse the destruction and have a beginning at the point of destruction? The rapid change in social life of rural groups caused by the full destruction of their life world is a complex issue and it is nearly unmanageable. This is a potential risk in the development process.

Rapid social change and the demand for future policies: The role of external actors

The developments in Kosovo (Herrero, 2005; Sinemillioglu, 2011), and in Timor-Leste (Sinemillioglu, 2011) after the crisis describes the international aid for institution building, without which overcoming the critical phase would not possible.

The same should have been done in Kurdistan. The reasons, why this was not the case are manifold. The most important reason is the ambiguity of the approach "keeping Iraq together, otherwise all the Kurds in the region will want to have the same" (Sinemillioglu 2011). Out of many other reasons the international assistance was delimited with the humanitarian aid.

The main issues raised after the crisis of 1991 in Kurdish Iraq especially until the second Gulf war in 2003 were concentrated on two main fields: the reconstruction of the rural villages and the establishment of a new Kurdish Administration. The reconstruction of the villages could not be approached appropriately due to the lack of administration capacities since there were no governmental politics for reconstruction policies. The re-establishment of the rural regions, therefore, was merely understood as the construction of houses, better shelters, for homeless people. The reconstruction of the villages was not included as such in the programmes of the UN agencies or other international humanitarian agencies. And the policies of the Kurdish politics were not going far beyond the wish of *the reconstruction* of villages. Especially the ownership of land was not clarified. The confiscation of land by the Iraqi central government was de facto no more accepted, but there were no new regulations in that regard.

Under these preconditions the reconstruction of the villages was a chaotic process, which was not allowing a future oriented sustainable re-establishment of the rural regions. Especially the economic activities of the newly emerging settlements and the provision of the main public services were fully neglected.

In the sphere of the economic activities two main hindrances were determining the developments. One was the lack of material resources. Especially the lack of financial resources didn't allow establishing the farming activities. The savaged agricultural land, the lack of equipment and live stock, destroyed irrigation systems needed to be rearranged. Also the necessary social resources like skills for agricultural work were missing, not to mention the non-existent marketing structures.

The other hindrance was the international sanctions and the related food distribution. The sanctions were fully applied also to the Kurdish regions, which hindered the import of necessary machines, equipments and spare parts. The food distribution did additional difficulties, because the farming products could not be sold in the market – the wheat flour for example was imported from Australia.

In the field of social services the demand was tremendous. Every settlement was in need of schools, health services, and technical infrastructure like streets, communication means and electrification. The water supply and sanitation were non-existent, posing a considerable danger to people's health, especially to that of the children and elderly. Missing financial means were not the only reason for this situation. Especially the small scaled construction of the villages constituted a major problem since an effective support and sufficient organisation of the services was very difficult. Some villages were inhabited by just a few families, which simply couldn't be supplied. Many villages without far beyond road access emerged near main roads far away from their original locations. However, families in these locations had difficulties reaching their farming lands and couldn't start farming activities.

Furthermore not all of the returnees were able to start their life in their old villages. Many hundreds of thousands returnees had to resettle in different locations; in the former collected towns or in the cities, especially in Dohuk, Erbil and Sulaimaniya. As an example the population of the former collected town Shela Dize, 40 km east of the historical town and district centre of Amadiya, has been grown from 6,000 in 1991 to 22,000 in 2009 (Sinemillioglu, 2011, pp. 137-139). Repatriates from Turkish or Iranian exile had caused this rapid growth. These returnees were not able to reconstruct their former villages because of many different reasons. One of them was the missing transportation infrastructure; the other one was the ongoing conflict between Kurdish rebellion and Turkish army at the Iraqi borders with Turkey, scaring off the returnees to resettle in their former villages located in these areas.

The example of the region of Welati Jeri

DhK (Dortmunder helfen in Kooperation e.V. / Citizens of Dortmund help in Cooperation, registered association), a humanitarian organisation from Dortmund, Germany, supported the returnees in their villages in many different ways. The focus of the work of DhK was establishing the farming activities and supplying the returnees with social services, especially with schools and health care. Doing this DhK paid attention to participatory planning in the region. For the reconstruction activities the villages were not handled as separate units but groups of villages were bundled and considered as a small region. The work in the region of Welati Jeri (WJ) is a relevant example for the integrated and participatory bottom up approach of DhK.

The work of DhK in WJ started in spring 1992 and ended in 1995. The region is located in the North of the mountains Ciyaye Shirin and is cut off from access to the road by the river Reshin, a side arm of the Greater Zap. Facing this obstacle the nine villages in the region were obliged to act concertedly. This was the basis for DhK to negotiate with the

representatives of the nine villages. Very soon after the first contacts the negotiations ended with an organised *communicative action* between DhK and the representatives of the villages, which very soon turned into a *regional development committee (RDC)*. After clarifying the responsibilities between both sides, the communication was smoothly functioning. It was no more necessary to talk to single families; instead, it was now possible to consider the whole region as an entity. The needs of the separate villages were adapted to the needs of the region. The RDC and DhK organised regular meetings in each village with the men and women – even if these meetings were held separately. It was seen as normal that the decisions were made only by the men, especially by the elderly. Nevertheless, DhK was able to organise meetings with the women as well and discuss the needs from their perspectives.

Together the RDC and DhK defined the most important measures for the region. Access from the road to the villages, i.e. the construction of a foot bridge over the Reshin River, was defined as the most important measure since the missing access roads in the region made it impossible to transport the necessary goods for construction activities. Therefore, as a second measure, mules were bought for the transportation of goods. After these two measures were taken the reconstruction activities increased rapidly. More and more families from the Iranian exile and from the collected town of Qotchtepe returned to the region. In the following months and years the joint activities of the RDC and DhK included one health centre, five schools, two water mills, agricultural tools, seeds and seedlings and the distribution of oxen and sheep. The region began to grow; the agricultural work had been extended and the RDC became an important institution for the development of the region.

RDC was consisting out of the Muxtars, the mayors, of the nine villages. The muxtars traditionally are the elder authority in the village. Getting them together in a committee responsible for the whole region was an important milestone for the self-organisation and community development in WJ. This new organisational element combined the traditional function of the muxtar with the new institutional set up. In that way it was possible to combine and adapt the interests of the villages with the development of the whole region.

The example of Shela Dize

Despite this encouraging example of WJ the whole process shows strong deficits of policies especially in the sphere of spatial structure. Missing policies and financial resources didn't allow the sustainable reconstruction of the villages. The question of the settlement structure combined with the role of regional centres, which could have been market places for the agricultural activities in the catchment area, was not answered. The former collected town of Shela Dize is a typical example for this unbalanced

development. Shela Dize is a former collected town including the deportees from about 20 villages of the Rekan tribe. The town rapidly grew after the GW I. Before the war n 1991 the town had a population of about 6,000 inhabitants. After the war Shela Dize grew continuously; in 2009 its population reached 22,000 inhabitants. As map 1 shows the town has reached more than four times of its original size (Sinemillioglu, 2011).

Map 1: the former collected village of Shela Dize, 2009
Source: The municipality of Shela Dize, 2009, in Sinemillioglu, 2011, p. 138

Shela Dize is a residential neighbourhood; apart from small retail shops and school services there are no major economic activities. There are different reasons for this development. Besides the lack of financial resources many returnees couldn't return to their villages because of the crisis at the border to Turkey. The insecurity across the border hindered the reconstruction of many villages in the region. Another reason simply was the missing public services in the newly reconstructed villages. Especially the lack of schools and health services forced many families to partly leave the villages. These families had been divided into two parts; one part established a new household in the towns or cities while the other remained in the village.

Conclusion

The policy of "do nothing" left the state affairs in Iraq to its own dynamics. The politics in the north of Iraq were not able to define the necessary policies for a sustainable reestablishment of the rural regions; the political power in that region, on the other hand, had no necessary means and capacity. The political uncertainty determined the development until the war in 2003.

The policies of the UN agencies like food distribution and constructing only the shelters without support for the necessary economic development, the missing infrastructure for the agricultural activities and the failure of marketing mechanisms didn't support the agricultural activities of the returnees in the villages. The cities and towns and the former collected villages were covering the housing for the returnees and internally displaced persons without disposing of economic activities. Nevertheless, these locations had been the target of emigration from the reconstructed villages for years.

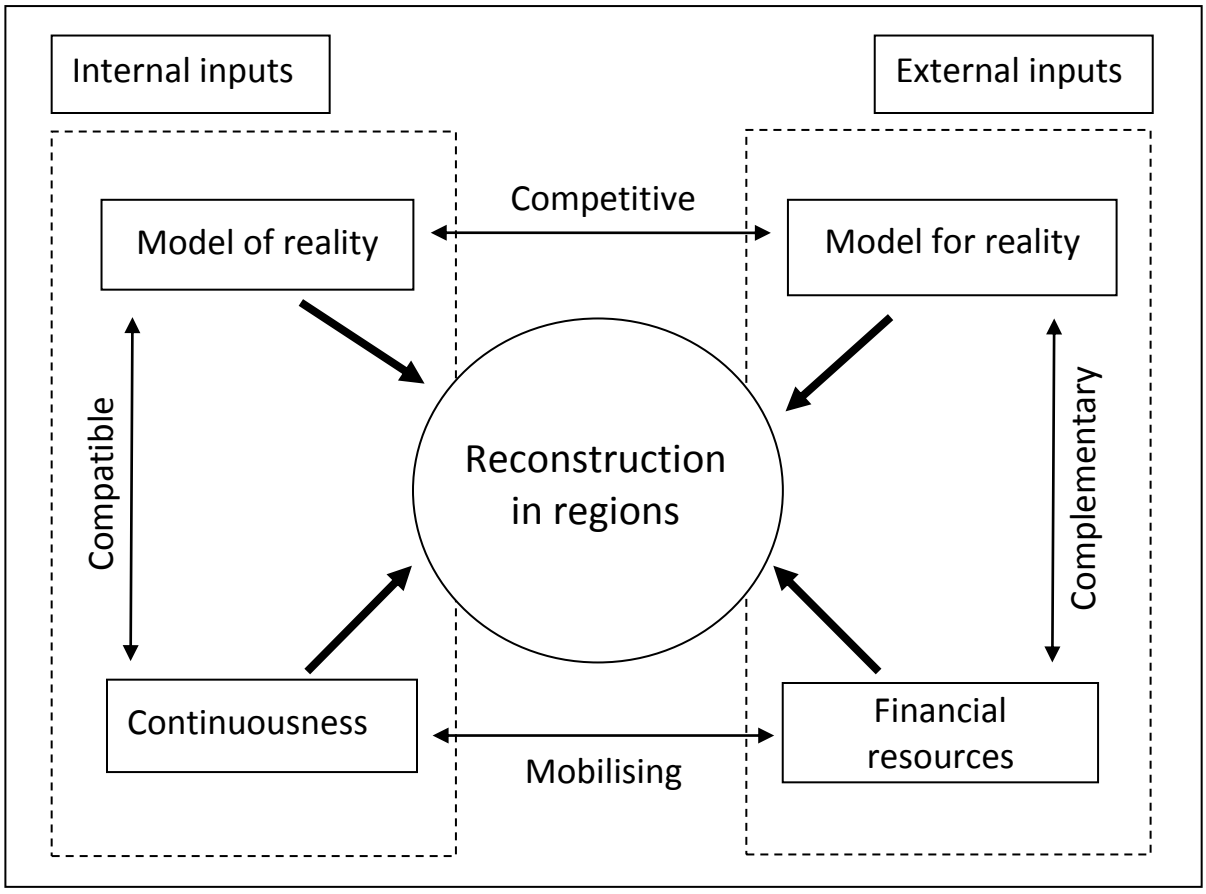

Figure 2: External and internal factors influencing the field of reconstruction
Source: Authors own construction

The development in the Kurdish regions of Iraq shows that the state failure challenges the future orientation in different ways. The spatial development after the crisis needs clear policies in different fields. Especially the missing institutional set up doesn't allow

developing future oriented policies; if there is no state and no functioning administration there are two options only. The first one could be observed in the Kurdish regions between 1991 and 2003. In that case all the chaotic developments do not allow people to create a sustainable future oriented environment.

The second one can be seen as an organised assistance by external actors as it was the case in Kosovo or in Timor-Leste. Figure 2 demonstrates this assistance for the reconstruction activities. Especially the relations between the models of reality and the model for reality are crucial to the external assistance. Obviously after the crisis the lack of financial resources is an important hindrance for the reconstruction process. The necessary inputs and a good management can mobilise the persons affected. This would support the communicative dialog between the external actors and the affected target groups, which is of great importance for the participatory planning activities.

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CONSERVATION OF RELIGIOUS FACILITIES AND SURROUNDINGS: CONTRASTS BETWEEN BUDDHIST, ISLAMIC AND CATHOLIC COMMUNITIES IN BANGKOK, THAILAND

Pornsan Vichienpradit[1]

Abstract

In Asian countries, religious facilities are important urban cultural heritages, as we can recognize temples, mosques and churches as cities' landmarks. Bangkok is a city where visitors often perceive strong urban images from those appearances of religious facilities in downtown area. To protect these facilities, government takes a big role in conservation of religious buildings, especially if they are declared as monuments. Religious organizations themselves are also crucial authorities in term of managing and providing financial support to maintain facilities, even some differences between religions could be seen. And at last, communities always serve traditionally full support, since residents are believers and common users of those religious facilities.

But in administrative conservation system, there is no standing point for communities. By the law, cultural heritages protection is claimed to be duty of Fine Arts Department and each owner of properties, which means religious organizations in case of religious places. This can be interpreted that people cannot protect their local cultural heritages themselves even if their religious places are threatened, nor they have rights to report any destructive actions to the police. It is quite curious that people are excluded away from the mechanism of current conservation system, even communities have been supporting religious facilities for very long time.

Religious community is a traditional urban community formed together with religious place. We can find many of them in downtown Bangkok. Temple, mosque or church is the most important element for this kind of community, because it is taken as community's center. Even nowadays, lives of residents in these communities are still connected deeply with religious facilities, not only by the ritual but in everyday life. Systematically participation in conservation of these communities might be a good way to improve process of protection, and to prevent further heritages destruction; which sometimes found expanding as social conflict.

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This study will clarify the potential of each religious community in conservation term. Buddhist, Islamic and Catholic communities have different mechanism to manage and control their facilities. This study is based on interview information gathered from residents from several communities in the same neighborhood area of Thonburi and Bangkok-Yai district; the west side of Bangkok. Settlements in this area are well-known for traditional religious communities that still remain effective today.

The analysis will be made with case studies on points of “How the religious facility is managed”, “How the properties (land, buildings etc) are controlled”, “How the religious community role has changed”, and then “How much the community can participate in conservation process”. The results of this analysis should be compared between cases of different religious communities to figure out some hints to complement administrative mechanism, which communities have not yet been considered to play any role in conservation of their heritages.

1. Introduction

Bangkok was established to be the capital of Siam[i] in 1782. It has grown up as a multi-racial and multi-religious city where people from nations of Southeast Asia, China, India, Middle East, Western Countries and anywhere else live together. Since there were many ethnic communities, some of important urban heritages which remain today are religious facilities. Most of them are Buddhist temples, but there are also amounts of Islamic mosques and Christian churches locate here and there. In downtown Bangkok, visitors can find that memorable skylines of the city are mainly created with these religious facilities' buildings. (Figure 1)

Figure 1. Skyline of Bangkok is composed with sihouette of religious facilities.

How many religious facilities are there in Bangkok? According to Bangkok Metropolitan Administration (BMA) data[ii] in 2007, there were totally 755. The number can be broken down to 449 Buddhist temples, 169 Islamic mosques, 59 Christian churches (Catholic and Protestantism), and 78 other religious places. (Figure 2) From the ratio of nation-wide Thai people's belief of 95:4:1 for Buddhism, Islam and Christianity, we can say that diversity of religious beliefs in Bangkok is quite more outstanding than the rest of the country.

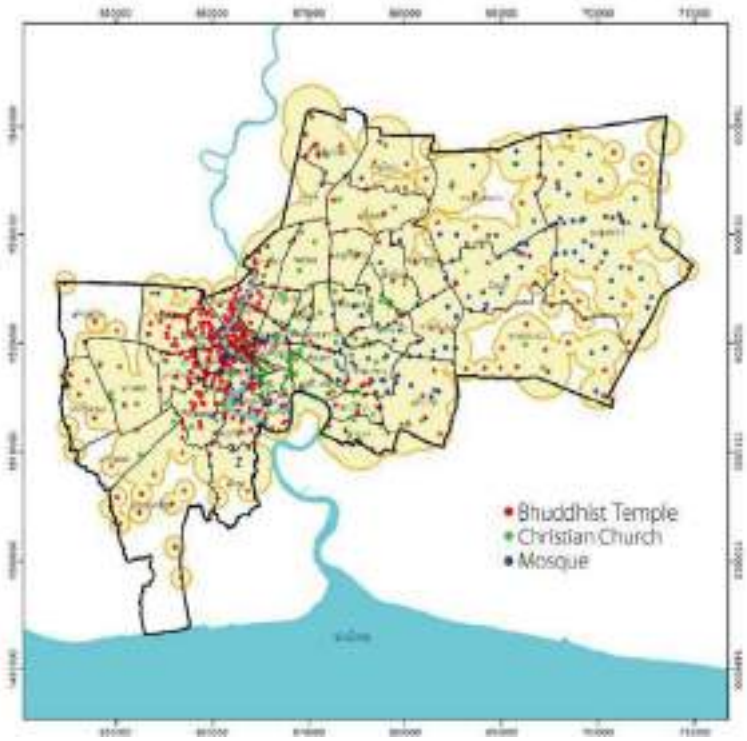

Figure 2. Distribution of religious facilities in Bangkok (Chulalongkorn Univ.:2010)

By the way, how do Thai people and government consider these religious facilities as their cultural heritages? According to the declared monuments list of Fine Arts Department (FAD), the governmental authority[iii] which has a very duty of cultural heritages protection, there are 191 places of monuments[iv] have been declared in BMA area until the year of 2009, and the number of religious places is 84[v]. This high percentage shows that religious facilities/buildings are really important parts of urban heritages in Bangkok that should be well protected and handed over to coming generations.

In fact, religious places are quite different from other monuments. If a declared monument is public, the responsibility of management and maintenance would be at public authority that the property belongs to. If it is a private property, it is the owner's responsibility to take care of the monument under administrative control of FAD. How about a religious one, which is not completely taken public or private?

The crucial partner is of course the religious organization itself. But Thai government also has some financial support to religious facilities maintenance, especially for Buddhist temples even they are not declared as monuments. And citizens might be the other important partners of the issue, as they are common users and supporters of those facilities.

Figure 3. Local people go to temple in a religious festival.

Traditional urban communities in Bangkok are always religious-facility-centered. We can find this kind of communities quite easily in downtown of the city even nowadays. For example, around a Buddhist temple, there is a Buddhist community that related to that temple. Community members always use temple's facilities in their religious ceremonies and also in any events of their lives. (Figure 3) Spaces in the temple are used as public open spaces for community. The land that the community locates usually belongs to the temple, and people have to pay their rental fees actually. Temple's management expenses are regularly from assets utilization like above, and also from donations of believers and the community. Mosque and church have similar system in order to get budgets for their facilities operation too.

By the way, the conservation system today seems to make light of community's importance. System is created to deal only with religious organizations, who are often legally owners of the properties. In historical context, community can be considered as important as religious place itself, so that should be included in some processes of this kind of conservation. This study will find out how people can now participate in current conservation system from laws and regulations review and interviews with key-persons of each religious community. Then possibilities of community participation in processes would be clarified for better religious facilities and surroundings protection, as they are important urban cultural heritages.

2. Scope of Study

2.1 Study Questions

Questions which this study tries to answer are as follow.

(1) What is the mechanism of religious facilities conservation in urban area now?
(2) How does community participate in religious facilities management process?
(3) Are there any differences in process/mechanism between religions?
(4) How can we apply existing potentials of communities in order to protect our urban religious heritages?

2.2 Study Targets and Methods

This study focused on downtown area of Bangkok, where traditional communities with religious facilities still exist. The Thonburi side (West Bank) of Chaopraya River was selected as the target because existing land use is still mainly residential even it is considered as a part of downtown area, so it is appropriate to see functional urban communities in this neighborhood. Precisely 3 communities of the districts[vi] of Thonburi and Bangkok-Yai were chosen to be study cases, since they are in the same neighborhood, and given conditions and circumstances are similar. Wat Kanlaya Community is the sample for Buddhist, Masjid Tonson Community is the one for Islamic, and Kudeechin Community is decided to be Catholic case-study community for the study. (Figure 4 and Table 1)

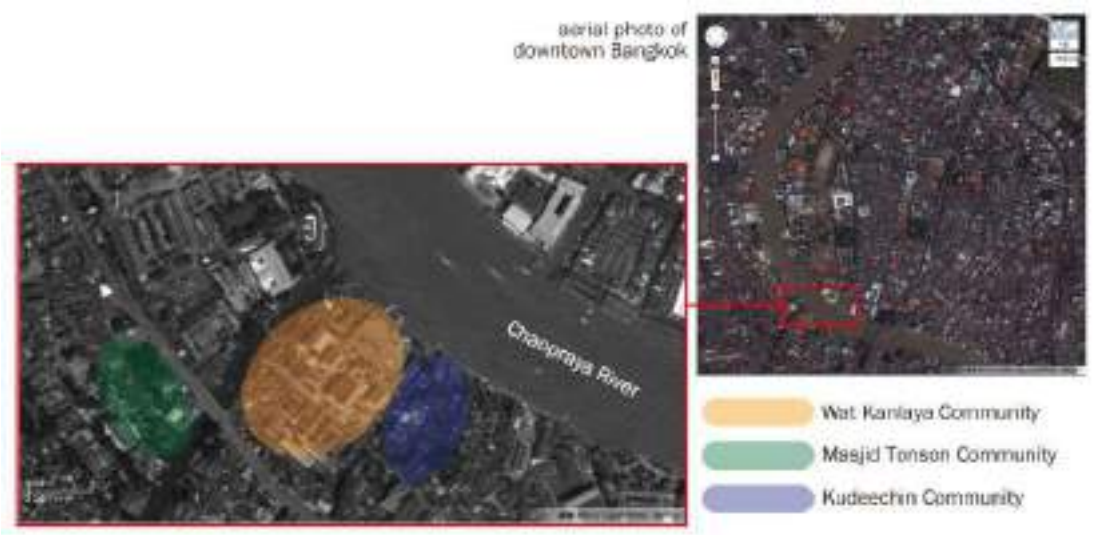

Figure 4. Location of Study Cases

The study started with review of literatures, laws and regulations which related to conservation of religious facilities. Then, Interviews of key informants[vii] are held in order to understand each study case situation. Collected information and data were reorganized to explain how different between each community and its mechanism. The conclusions would come at last that what should be done with communities to strengthen the conservation system in Thailand, as the results of discussion from case studies.

Table 1. Abstracts of Study Cases

	Appearance of Community	Religious Facility	Brief History of Facility
Wat Kanlaya Community		Wat Kanlaya	- Built in 1925 by a high officer and given to the King later. - Located by the bank of Chaopraya River - 2nd class royal temple. - Famous for its Great Buddha.
Masjid Tonson Community		Tonson Mosque	- Originally formed in Ayutthaya Period. - Historical evidences of community settlement can be back to Thonburi Period. - Former mosque was built of bricks. - Current mosque was completed in 1954.
Kudeechin Community		Santa Cruz Church	- Established in 1769 on given land by the King of Thonburi. - Once rebuilt in 1836. - Rebuilt again in 1916 and still in use until now.

2.3 Literatures Review

There are several researches related to this topic. Some of them are about religious facilities in Bangkok[viii], usually focusing on Buddhist temples, and suggesting how to protect them in good environments. But they scarcely explain roles of communities in existing mechanism of conservation. This study would be a fundamental research to clarify the real state of community participation in religious heritage management, and find possibility to involve it into the conservation system in the future.

About religious organizations in Thailand, there are also some researches in fields of religious studies and cultural anthropology[ix]. Some Japanese researchers mention about "State Buddhism[x]" in Thailand that affects the country's governance system. This should be considered in term of heritages protection administration too. By the way, some studies on Islamic societies and communities[xi] are also found, but there is no current study on Catholic communities in order to refer.

3. Existing Systems of Religious Facilities Conservation

3.1 Cultural Heritages Protection

Nationally valuable objects, buildings or places are fundamentally protected by "Ancient Sites, Ancient Articles, Art Articles and National Museum Act 1961" hereinafter "Monument Act". Section 7-13 in this Act mention on Ancient Sites (Monuments), which are divided into "Declared Monuments" and "Undeclared Monuments". Both are targets of preservation in this law, but differences are levels of penalties when there is a problem such as a destruction of monuments.

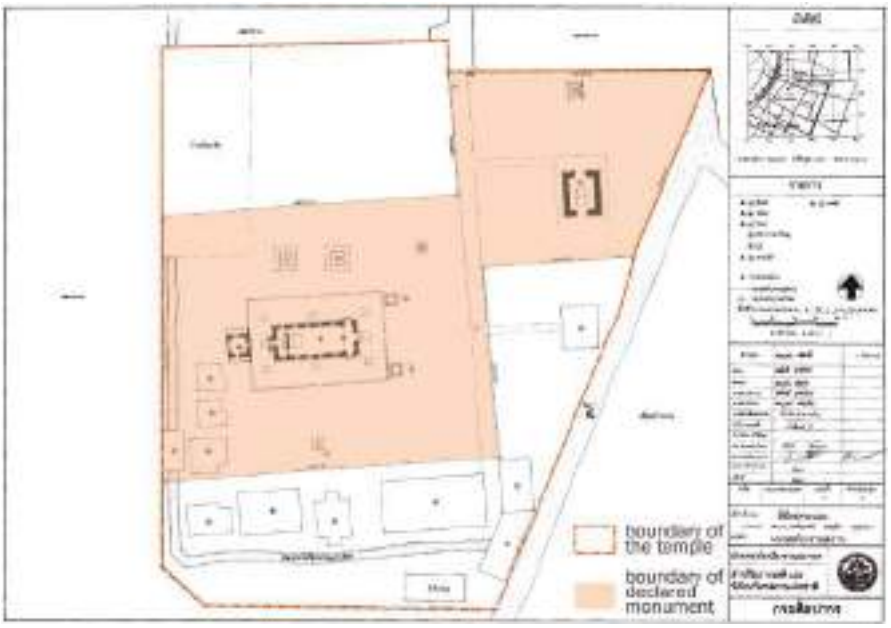

Figure 5. An example of monument declaration map

Once a monument is declared, the proprietor has to report and get permits from the Fine Arts Department (FAD), governmental authority which legally has a duty to take care of monuments, before having maintenance or any other kind of constructions that may change its values, structure or appearance. This is the only step added to the procedure for proprietor to proceed before taking any actions, but many people still misunderstand this point. They consider that their properties will belong to FAD after declarations, which is not true. FAD is just an organizing authority that helps protecting national properties by the law. Therefore private properties are comparatively declared in small number as we can observe from the list of monuments in Bangkok.

3.2 Religious Organization Control

In Thailand, there is no national religion cited in the constitution. People have full freedom of religion. Department of Religion Affairs (DRA) have approved 5 of them; Buddhism, Islam, Christianity, Brahman-Hinduism and Sikhism as religions most believed by Thai people[xii]. In fact, around 95% of population is Buddhist, and Theravada Buddhism[xiii] is practically taken for grant to be nearly national religion.

There are 2 laws mentioning about religious organization. One is for Buddhism, and another is for Islam. "Sangha Act 1962" stipulates the structure of national Sangha organization that has a hierarchy of management power. Anyway, every Buddhist temple is independent, and exists as a juristic person itself. The abbot of each temple is a representative by this law, and has full power over temple's properties. If the temple is declared as a monument, the abbot has to act like the proprietor and proceeds procedure in order to have physical change to the monument.

On the other hand, "Islamic Organizations Management Act 1997" is created to organize religious power structure of Muslims. According to this law, each registered mosque is also a juristic person, and independent. There must be a group of people called "Committee of Islamic Mosque" to operate mosque's activities, and this committee is the representative. Members of committee have to be chosen by registered members[xiv] of the mosque. There is no one act like the proprietor of mosque. Actions have to followed agreements of the committee indeed.

3.3 Urban Planning Regulation

Religious facilities are considered as public buildings as same as ones of governmental authorities, so that they can get exceptions of some building controls[xv] according to "Building Control Act 1979".

In local government level, Bangkok Metropolitan Administration (BMA) has regulations to protect and control environments around selected religious facilities. For examples, one is made for the pagoda of Wat Arun, a famous temple nearby

Chaopraya River. Height-control zones are created as a concentric circle around the pagoda (Figure 6 - left). Another example is a regulation made to be forced in high-density commercial area outer fringe of downtown Bangkok. Buildings within 50 meters from the borders of religious facilities in this area must be constructed under 16-metre height control (Figure 6 - right).

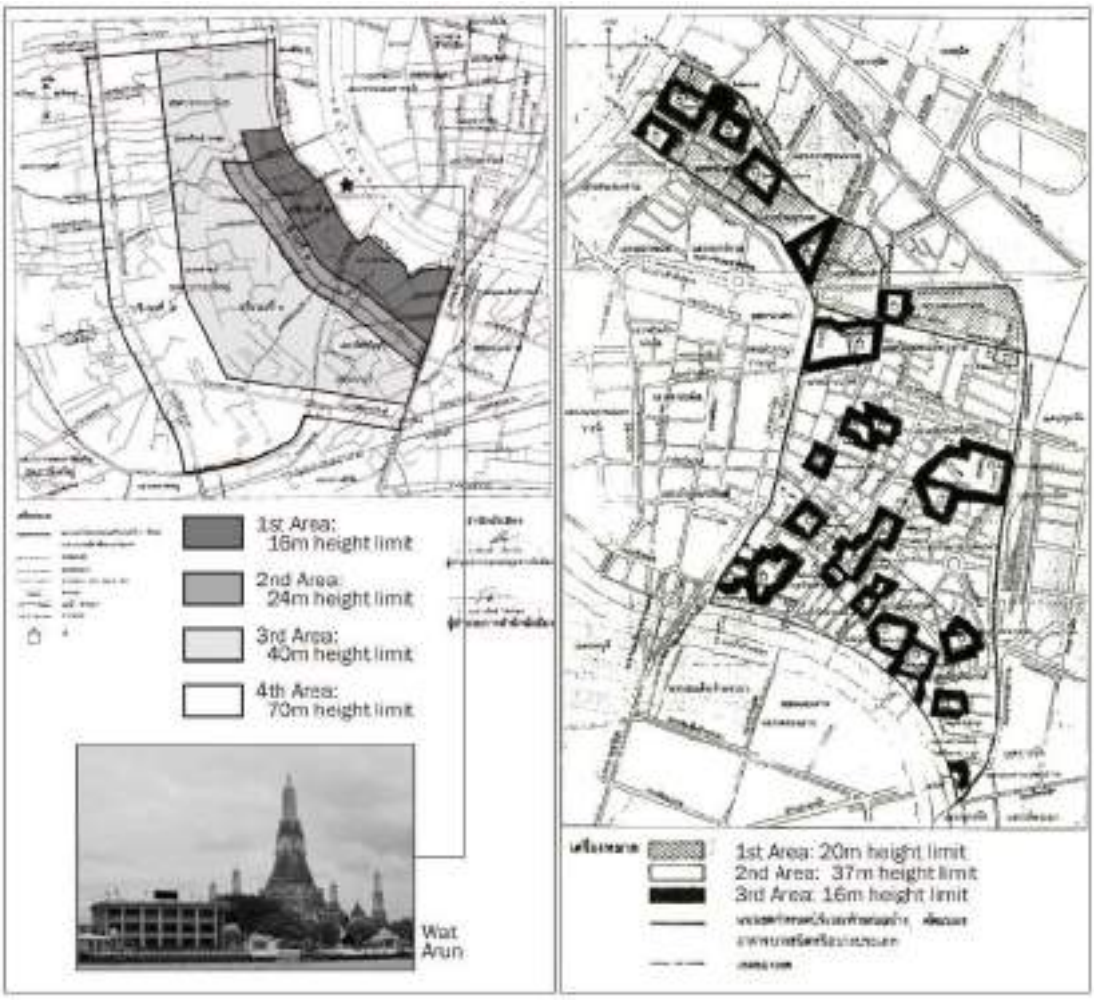

Figure 6. Description maps of BMA regulations related to religious facilities
Left: Height-control Zone around Wat Arun (1996)
Right: Height-control Zone in Outer Fringe of Downtown Bangkok (1999)

We might say that these existing regulations of BMA is considered to control and protect only vista or view of religious places, and they might be not enough to keep these kinds of urban cultural heritages in good environments.

4. Interview Results

Key informants interviews of 3 religious communities enabled us to understand better how responsibilities and powers actually exist in religious facilities. Relations between each communities and religious places are also clarified. This information should be really useful in further thinking of conservation process improvement, which is a main subject of this study.

4.1 Structures of Religious Community

Fundamental structure of each traditional community is composed with area of residences and the religious facility. Educational institute is often added if the community size is large enough. It is common to have an elementary school in Buddhist temple's site. Catholic missionary traditionally operates private schools nearby churches. But in Islamic community, it turns to be a religious school, which teaches the doctrinal contents of Islam to children who live in neighborhood.

One element that is unique for Islamic community is the grave. Muslims have to bury the corpse within 24 hours after someone's death, so it is necessary to have kind of facility in their community. We can also see places for funerals in Buddhist and Catholic communities too, but it is not an integrant element at all.

4.2 Origins of Religious Community

Urban Buddhist communities commonly emerged after temples had been constructed or renovated. Commonly, when temples were once completed, citizens moved to live around because traditional lifestyles needed to have temples nearby. Temples can be separated into 2 types, royal temples which are built of modified by Kings, noblemen or high officers, and private temples which are constructed purely by citizens. However ordinary people can normally use facilities of temples even they are royal ones. In the past, there was also a system of temple's slavery that government could dispatch slaves to Buddhist temples, but it was abolished in the reign of King Rama V. Therefore as places of liveliness, residential communities were naturally formed around temples.

Formations of Islamic and Catholic communities are different from above. Both religions were considered to be foreign beliefs even they had been propagated in Thailand for hundreds years. Residential areas for foreigners were separated from local residents since the Kingdom of Ayutthaya, and also had been carried on after establishment of Bangkok. The areas were always given by Kings, and the ethnicities can have their residences around there. When they founded communities, religious facilities were actually needed, and they had constructed themselves. The Tonson Mosque (of Masjid Tonson Community), and Santa Cruz Church (of Kudeechin Community) are also settled by local believers through this process.

4.3 Users of Religious Facility

There is no strict condition to use any religious facilities, if users are believers of the religion. Wat Kanlaya is traditionally used by local community people, but it is also nationally famous for the great Buddha's divine favor[xvi]. (Figure 7) Visitors from all over the country and also many foreigners visit the temple every day.

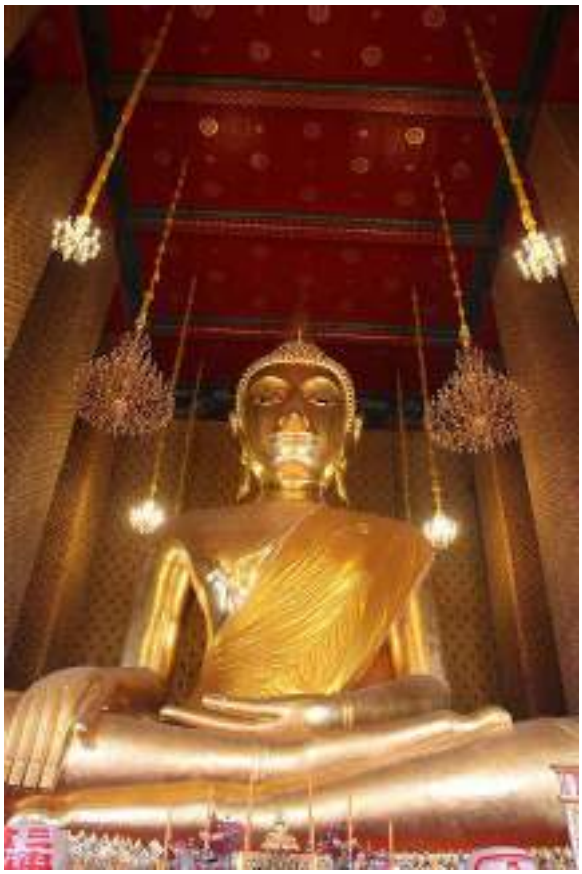

Figure 7. The Great Buddha of Wat Kanlaya

Mosque has a system of registration. By Islamic Organizations Management Act, Muslims have to be registered to a mosque, and in a place like community of Masjid Tonson, community members are always registered to the mosque. By practice, it is not necessary to go to the registered mosque, but most of people do. By the way, mosques have ceremony of worship every Fridays, and Muslims have duties to attend.

For Catholic community, there is no system of registration. Christians can attend Mass of any churches as they want. But as a result of interviews, it is said that people living nearby Kudeechin community, most of them are actually in the community, use Santa Cruz Church for their religious ceremonies.

4.4 Organization Structures of Religious Facility Management

From laws review, it is clear that Buddhist temples and Islamic mosques are considered as juristic persons, and have complete rights on their assets. How about Catholic churches? All Catholic churches in the city is under control of the Roman Catholic Archdiocese of Bangkok, and not completely independent. Any constructions, except little maintenances, of churches have to be approved by the committee of Archdiocese in principle.

In term of representative, abbot is the one who has full power over a temple. And "Committee of Islamic Mosque" will be the representative for any other mosque. Both have full responsibilities in managing religious assets and taking care of circumstances of the facilities. The difference is how decisions are made. In Buddhist temple, the abbot is the only one to make any decisions, but in Islamic mosque it should be the decisions of believers' group, since the committee is from registered members.

4.5 Tops of Religious Facility

Linked to organization structures, how tops of each facility are selected is also an important aspect to understand religious facility management. The abbot of Buddhist temple comes from monks' selection in case of private temple, and is sent from Sangha central organization[xvii] if the place is a royal temple. There is no restricted term for abbots, so they can be in the positions until the end of their lives.

Islamic mosque has no top in management. There is a committee in responsibility as explained. The committee also has head position for "Imam" who is a worship leader settles in each mosque, but power in decisions is at the committee, 6-to-12-people group, which is selected from the mosque's registered believers who are always in the community.

Top of a Catholic church and its community is the priest. The Catholic organization is hierarchical, and the priest of each church has to be dispatched from central. The term for a priest is 5 years, and he has to move to the other communities, or the other Catholic operated facilities such as schools after the expiration of duties comes.

4.6 Incomes and Budgets of Religious Facility Management

All religious facilities in this survey have incomes from donations and their assets leasing. The amount and ratio between sources of incomes is vary from place to place, and often unavailable to public. Actually, in case of a famous religious place with a great number of visitors, amount of donations is so much that is not comparable to anything else.

Santa Cruz Church also gets incomes from operation of a private school too. In contrast to this point, elementary schools in Buddhist temple's sites always belong to BMA, and do not make any direct income to the temples. Similarly, Religious schools in Islamic communities are also operated without any commercial consideration.

There are some budgets for religious places provided by Department of Religious Affairs (DRA) in order to maintain decrepit facilities. Fine Arts Department (FAD) has some for them too, if they are declared as monuments.

4.7 Assets Possession

According to Sangha Act, it is said that there are 3 types of land belongs to temples. One is land in use of religious facilities and monks' residences[xviii]. The other is called "Thorani Song" which is a part of land directly belongs to temples but it is leased for financial profit, in order to use those benefits in religious activities. In some cases, temples build buildings on Thorani Song and lease them instead of land. The last type is called "Kalapana" which is private properties of believers promised to give profits of land to temples. The concept of Assets Possession of Buddhist temples emerged around 100 years ago, when the country turned to be a modern state, and supports of the King and royal institutes got weaker[xix]. Temples had to have their assets management to survive in modern society.

Islamic and Catholic communities also have similar land leased to people which profits given to religious facilities. Sometimes the leasing land does not locate around mosque or church, but it is in downtown commercial area where can get very high profits[xx]. Anyway, there is also an example of mosque[xxi] that lease land to community without any charge too.

4.8 Land and Properties Tenancy

Contracts of leasing are regularly for 1 year in every study cases. It is set to be convenient for religious facilities to get their land or properties back if they want them to be in new usage of religions. By the way, communities borrowing them are usually traditional ones and have been exist there for long times as traditions, so problems always occur when religious facilities try to get them back to have further developments.

In Catholic Kudeechin community, there is a selection mechanism for new residents who are coming to live in management area of the church. Church committee, leaded with the priest, has duty to select new comers to live in the community, and the priority is given to those who are Christians.

4.9 Leaseholds Management

Post-leasing management system is only found in Catholic community case. The church committee, formed with church, school and residents representatives, plays the role of this process. Renovations or reconstructions of buildings in large scale within the community area have to be discussed in the committee in order to give permits to residents who want to have those projects. This mechanism is considered to help community to be kept in good condition of environment.

Table 2. Summary of Differences between Religious Communities

Communities	Buddhist Community	Islamic Community	Catholic Community
Structure of Religious Community	Residences + Temple + School	Residences + Mosque + Grave (+ Religious School)	Residences + Church (+ School)
Origins of Religious Community	Settlement comes after establishing of temple	Mosque construction comes after community settlement	Church construction comes after community settlement
Users of Religious Community	Local residents Visitors	Fundamentally registered members	Fundamentally local residents
Organization Structures of Religious Facility Management	Temple is a juristic person with the abbot as the representative.	Mosque is a juristic person with Committee of Islamic Mosque as the representative	Church is under control of the Roman Catholic Archdiocese of Bangkok.
Tops of Religious Facility	Abbot: Selected by monks (private temple), Sent from Sangha Central Organization (royal temple)	Committee of Islamic Mosque: Selected from mosque's registered members	Priest: Dispatched from the Roman Catholic Archdiocese of Bangkok
Incomes and Budgets of Religious Facility Management	Donation Assets leasing	Donation Assets leasing	Donation Assets leasing Operation of school
Assets Possession	Leasing land	Leasing land	Leasing land
Land and Properties Tenancy	1 year contract	1 year contract	1 year contract New comers selection process
Leaseholds Management	none	none	Church Committee: Post-leasing management

5. Conclusions

We can see similar and different points between communities in term of religious facility managements from this study. It can be said that to keep religious facilities and surroundings in good conditions is not only the duty of government or religious organizations, but it also has parts to deal with communities that are users and supporters of each religious place. What more is the area where communities exist is again the surrounding which can increase or decrease worth of these kinds of urban cultural heritages, so it is important to consider roles of communities when we think of conservation of religious facilities.

One of similar points for all religion is that assets management can be found in order to take incomes to operate religious activities, and to maintain their facilities. The system is created to have religious facilities be self sufficient, and get less helps from the government or central religious organizations. Communities get merits from this as they can have places to stay, and have facilities nearby to complete their rituals and ceremonies. Temples, mosques and churches can get rental fees from people in communities, and additionally some money from donations, to use for religious activities and facility maintenances. The balance collapses when donations become the main incomes of religious facility when it gets very popular that amount of rental fees collected from community means nothing. Or in the other case that occurs when the facility exists in the downtown area, the pressure of urban development around affects religious organization to utilize their assets in commercial use instead of use for community. These facts often cause conflicts between religious facilities and surrounding communities when new developments happen to occur. (Figure 8)

Figure 8. A development perspective image of Wat Yannawa, which was in conflict

To conclude the study, merits and demerits of each religion's current system should be summarized. First of all, in a Buddhist temple the whole power is at the abbot who is a representative of temple juristic person. A good point is that the right of any decisions is completely at one person so operation of assets management should be held smoothly. But on the other hand, how could people be sure that the abbot's decisions are always correct? There are some cases show conflicts on new developments, both inside and outside of the temple, between communities and abbots. Furthermore, the data shows that many royal temples have been declared as monuments, and by rules of Sangha, abbots of these temples have to be sent from central organization of Thai Buddhist monks. These abbots might have had high Buddhism education, but it is not mean they understand local culture of each temple. Gaps between senses of traditional value would occur between temples and communities, and appear to be serious conflicts if developments are still continued without agreement of community.

In an Islamic religious place, the power is at "Committee of Islamic Mosque" which is formed with representative believers of it. The decisions are not made by any single person, but they have to be results of committee discussions. This system seems to be quite democratic, and in a traditional community where most of people are registered with the mosque, decisions of the committee would be equal with decisions of the community. The merit is what people wish can easily take action. But in fact, there is no declared monument which is a mosque in Bangkok even many of them have enough value to be declared. And there seems to be lack of people's interest to have their religious facility to be a declared monument too.

At last, in a community with the Catholic church, the power to decide big issues is not there, but exists in upper level organization; the Archdiocese Committee. The priest's role is like a manager of church and community to report things upward, and has limited right in decisions. Anyway, there is a church committee which has duty of newly coming resident selection and post-leasing assets management, and this is very helpful to keep surroundings of the religious facility in good environment. This after care system is unique from other religious communities that should be adopted widely.

However, if we compare numbers of Buddhist temples and other religious facilities in the declared monuments list, "State Buddhism" seems to have some effects in the field of conservation too. Government should pay more attention to these other religious facilities because they are also important elements that show history of multi-culture, which is the identity of Bangkok.

By the way, we can see different degrees in potentials of communities in conservation of religious facilities and surroundings. Islamic community takes a big part in operating mosque and managing its assets. Catholic community is together with representative from church and school in the church committee screening new comers and taking care of changes in environment of the facility and around.

Participation of Buddhist community is the least because there is no place for its members in facility and assets management system. If we consider these religious facilities as living urban cultural heritages, communities should be the most important partners as well as supporters that are really helpful in management, protection and conservation, since they are users who get the most merits if the facilities are kept in good conditions. People in communities are ones who suppose to have consciousness of possession and protection awareness in religious facilities in order to handle them to coming generations.

Anyway, Constitution of the Kingdom of Thailand (2007) has a section mentioned about Community Rights. The sentence[xxii] is as below.

Section 66: *Persons assembling as to be a community, local community or traditional local community shall have the right to conserve or restore their customs, local wisdom, arts or good culture of their community and of the nation and participate in the management, maintenance and exploitation of natural resources, the environment and biological diversity in a balanced and sustainable fashion.*

It means community has actually right to protect what its members consider to have value representing their customs and culture. We can see religious facilities as urban heritages, and at the same time they are appearances of tradition and wisdom of local communities. But the system now doesn't let communities take much role in the process of protection and conservation of these heritages. We should consider how to apply potentials of current mechanism of each religious facility in order to make conservation system better and to conform to community rights clarified in the constitution. For example, Buddhist community and temple should set a committee to control or harmonize any development that may occur in both temple or community area, and work together with FAD to protect cultural properties and surroundings if there is any monument existing there. As well as, after-leasing care mechanism should be applied in Buddhist and Islamic communities, because it seems to be helpful in keeping the quality of community and protecting conflict that might occur, as we can observe in Catholic community nowadays. However, related government authority such as FAD should realize importance of communities that may help heritages protection in long term.

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[i] Siam is the old name of the state, and became official name of the country since the reign of King Rama V. It was changed to Thailand in 24 June 1939.

[ii] This data is referred from (Faculty of Architecture, Chulalongkorn University: 2010).

[iii] FAD is an authority under the Ministry of Culture. The duty of cultural properties protection is claimed to be at Office of Archaeology, which is one of the sub-organizations under FAD.

[iv] This data is get from the website of Office of Archaeology, FAD. <www.archae.go.th> [Access 25 February 2012]

[v] This aggregate result is original made by the author.

[vi] There are 50 districts of administration inside BMA.

[vii] Interviews were held with the community leader in case of Wat Kanlaya Community, the local scholar in case of Masjid Tonson Community, and the priest of Santa Cruz Church in case of Kudeechin Community.

[viii] (Nakavachara et al: 1980), (Nakavachara et al: 1982), (Ratanapunt: 1995) and (Tantinipankul: 2009)

[ix] (Ishii: 1991) and (Yano: 2010) are examples.

[x] "State Buddhism" is Buddhism that has been led by the state and provided places and opportunities to have widely religious activities. According to (Yano: 2010), State Buddhism can be observed in Thailand.

[xi] One of those is (Citmuat: 2009).

[xii] The last authorization of religions by DRA was made in 1983.

[xiii] Theravada Buddhism is relatively conservative Buddhism. It is predominant religion of Sri Lanka and most of continental Southeast Asia.

[xiv] It was mentioned in Section 4 of the Act that Muslim has to be register with a mosque.

[xv] The exception has to be made by the command of Minister of the Ministry of Interior, as it is cited in Section 7 of the Act.

[xvi] People visit the temple to pay respect at the great Buddha as well as to ask blessings. This great Buddha of Wat Kanlaya is especially famous among overseas Chinese.

[xvii] It is called in Thai "Maha Thera Samakhom", which is the national committee of Buddhist monks.

[xviii] Land in use of facilities is called "Buddhavas", and land in use of monks' residences is called "Sanghavas". We can always find both types of land in each temple.

[xix] Detailed explanation is in (Tantinipankul: 2009).

[xx] Tonson Mosque is one of the examples.

[xxi] Bangluang Mosque, which its community locates next to Wat Kanlaya, is an example.

[xxii] Unofficial translation by Foreign Law Bureau, Office of the Council of State <www.krisdika.go.th> [Access 25 February 2012]

People's-based organisations in Düzce, Turkey: moving from disaster recovery to building resilience

Cassidy Johnson [1], Julia Strutz [2]

Abstract

There is a growing body of literature from the fields of development studies and also from disaster studies that highlight the roles of people's-based organisations and civil society in building resilience to natural hazards and climate change (IFRC 2010; Dodman and Mitlin, 2011); a potential that is also recognised with the Hyogo Framework (UN-ISDR, 2005). Local residents hold contextual knowledge about the place and about risk and that social capital can be potentially powerful catalysts in bringing about the type of transformation that can reduce risk to natural hazards and build resilience (Scolobig, Castán Broto and Zabala, 2008; Pelling, 2010). It has also been shown that risk reduction is most effective when the state can provide an enabling environment to support people's-based or civil society action (Maskrey, 1989; Satterthwaite, 2011). However, in practice, many civil society organisations operate outside of local government support, and must act in opposition to the government in order to achieve their goals (Johnson, 2011).

This paper explores how people's-based and civil society groups are engaging in resilience-building activities in Düzce, Turkey, a small urban centre that was devastated by massive earthquakes in 1999. Some of the groups, which formed in the wake of the earthquake, are still active, in some situations still engaged in disaster recovery that has taken many years to achieve, and in others they have become engaged in a wider range of development activities, or resistances to proposed developments that threaten the resilience of the built and natural environments. This paper also explores these group's relations with the local and central government and the potentials and problems around support and partnership.

The research is based on a cross-case analysis of three civil society organizations that were active in Düzce. The study is based on a qualitative methodology that uses in depth interviews and participant-observation both of the organisations' leaders and people within it, as well as with local government in Düzce. The researcher's findings are being reported back to the organisations and their leaders who have had a chance to comment on them and to provoke more discussion of the issues.

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Initial findings show that while the community-based initiatives working in this area have built up the capacity of groups to demand change and support from the government, the lack of government support has meant that these groups have not been able to effectively act in partnership or cooperation with the government, which has impacted on their ability to scale up.

The work is particularly relevant to planning on two issues: 1) is to give voice to the inclusion of people's based activities and perspectives into the debate about resilience and risk mitigation planning and 2) to provide evidence of the practices in Turkey (based on Düzce case-study) of relations between people's-based groups and local government.

1. Introduction

The two earthquakes that devastated the Marmara and Bolu regions of Turkey in the latter half of 1999 offered a window of opportunity for civil society to take a greater role in shaping development of the region. The earthquakes and the destruction they caused exposed the deficiencies of the government in protecting its people from harm and being able to help them in their moment of need. Most of the almost 18,000 deaths and more than 50,000 serious injuries resulting from the two earthquakes were attributed to improperly built mid-rise construction, the quality of which should have been ensured by the government. This, coupled with the government's inability to effectively respond to people's immediate needs in the weeks following the earthquakes, necessitated that civil society, in all of its different forms, step in to take immediate action to rescue people and assist in meeting basic needs for shelter, medical attention, food and livelihoods. The government did eventually take control of the situation and exerted its power over the organizations, effectively curtailing their roles in many cases.

As the earthquake recovery progressed, there emerged a continued need for civil society initiatives that could address areas of the recovery where the government was lacking. The government's approach to reconstruction was to focus on large-scale infrastructure projects and mass housing targeted at homeowners. But there was a need also for social programmes that supported people's livelihoods and also for support to tenants and people who lived in dwellings without clear legal tenure and who were thus left out of state programmes.

Following the earthquakes, scholars drew attention to the fact that they opened up a place for civil society initiatives in development, and there was a lot of discussion about whether or not civil society's place at the table would be sustained over the long term (Özerdem and Jacoby, 2006; Jalali, 2002) It has been 11 years now since the earthquakes, and there have been many changes and fluctuations in Turkish politics and the economy at the macro level, including a change of government to the mildly-Islamic Justice and Development Party (AKP) in 2002, many legal reforms to meet EU accession demands, both in terms of human rights and government procedures, the economic crisis in 2000, and then steady and sustained economic growth over the

decade.

This paper looks specifically at three of the civil society initiatives in Düzce, one of the towns that were impacted by both the 17 August and 12 November 1999 earthquakes. The purpose is to draw out what these groups have been able to achieve in the 11 years since the earthquakes and, specifically, to consider their challenges in working with the government and how this has affected the scaling up of these activities. This paper argues that, while there are kernels of civil society activity related to resilience that have been sustained since the earthquakes, the scaling up of collective processes at grassroots level into something that could meaningfully contribute to building resilience in the region is stifled by a lack of local government support.

How states and civil society respond to disasters provides insights into the political nature of their relationship. A disaster event brings about an opportunity to change the structure of society–government relations and, in some instances, these new relations can bring about more effective forms of community governance. For example, Cuny (1983), notes that:

> "…a disaster traumatically brings into focus all the basic problems in a society. It reduces all issues to their fundamental level and strips away the ancillary issues that obscure or confuse the fundamental questions that must be faced […] For the society, disasters often bring changes in the structure of community leadership. New organizations may be born out of the necessity to deal with the disaster and remain to continue work of bringing economic change to the community. New leaders often emerge […] to replace those who have proved ineffective or unable to cope with the aftermath of a disaster." (11-13).

Disaster recovery and risk reduction are most effective where the state supports and complements community action through devolution of power and resources to the local level (Maskrey, 1989; Pelling, 2003; Dodman, Mitlin and Rayos Co, 2009; Wamsler, 2007). However, in order for this to happen, civil society requires an enabling environment from the state and from local government that is strong enough to support communities' visions and involvement in resilience building (Twigg, 2009). A wider engagement of civil society with the political and institutional structures of the city opens up important political space for community level groups to make changes (Pelling, 2003).

In order to address the needs of all people, it is necessary that state–civil society relations are both **collaborative and adversarial** (Jalali, 2002). Mechanisms need to be in place that allow organizations to have partnerships and collaborations with the state. Also, civil society needs to have the space to confront the state and check state power where it is necessary to ensure that the needs of all people are met.

Understanding the traditional power relationships and how they are being challenged

and permanently altered through civil society action is key to understanding how civil society is contributing to resilience.[3] Power manifests itself in different observable and obscure ways (Gaventa, 2006). Thinking about aspects related to power, the following questions can be posed. Did civil society involvement really open up spaces where a multiplicity of civil society groups could have an influence in shaping recovery and risk reduction? And have these contributions simply re-legitimized the status quo or is it really contributing to transforming patterns of exclusion and social injustice and to challenging power relationships?

2. Methods

This research starts by looking at civil society groups that were involved in the earthquake recovery in one town, Düzce, which is where the author has been involved in research and work since 2000 (Johnson, 2007; Arslan and Johnson, 2010). The three groups selected here are ones generally well-known to be active in Düzce, and were chosen because they have been active not only in one aspect related to recovery, i.e. housing or livelihoods, but have expanded their activities toward building resilience in all of its different facets. The length of time since the earthquakes allows for a long-term perspective on recovery, a viewpoint from which very little has been published, especially in English and related to Turkish cases. Two of the groups are grassroots organizations, initiated and led by the people. The other group is an Istanbul-based NGO that initiates and advises locally based groups, which then become autonomous organizations.

The research included seven in-depth interviews conducted between August 2010 and February 2011 with group leaders and group members. The interviews were open-ended, yet based on a standard set of questions about the groups' activities, relationships with the state and other actors, politics and internal functioning. The information derived from the interviews was supplemented by published material based on other empirical research on the same groups. The case studies presented here are a reconstitution of the interviews coupled with data from these other publications (as referenced). The method is not comparative in nature across the cases but, rather, compiles the cases to develop a general narrative about the landscape of civil society involvement in resilience. The discussion draws together the findings across the cases and also brings in findings from other published case studies on Turkey and civil society, providing analytical insights into civil society–state relationships, cooperation and plurality among civil society and the importance of information and transparency. The conclusions make links back to the general literature, reflecting on the sustained changes in power relations and the capacity of the state to encourage and enable community action.

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[3] The word "resilience" is used because it puts emphasis on the overall capacity of all the systems to cope with any type of event, including emphasizing what communities can do for themselves, in addition to and in cooperation with the capacities of the state.

3. Case Studies

3a. Case 1: DepDer Düzce[4]

DepDer Düzce is one of seven disaster-affected people's associations (DepDer in Turkish) founded in the months after the earthquakes. Like other DepDers, which were founded in the surrounding towns of Kocaeli, Gölcük, Adapazarı, Değirmendere, Halıdere, Yalova and Avcılar, DepDer Düzce is a civil organization struggling for housing rights of people affected by the earthquakes. It was formed in response to a situation where people felt that the state was unable to solve their problems. DepDer Düzce currently has about 1,000 members, about 100 of whom are regularly active and are the driving force in the association. The central focus of DepDer Düzce has changed over the years, and those who are now left are people wanting to be part of the association for political reasons, or those without property, or those who lost someone in the earthquakes.

Many of the first members of DepDer Düzce were property owners before the earthquakes, and the initial work of the association was to ensure that the proper legal procedures were being followed and also to help people gain access to the new government-provided housing. However, two years after the earthquakes, there were still many families living in prefabricated houses or tents. These were people who used to be tenants before the earthquakes, or who had lived in informal settlements and therefore did not qualify for the government-provided post-disaster housing. In 2001, when the municipality began demolishing the prefabricated houses without solving the housing problems of their inhabitants, the role of DepDer Düzce shifted to defending the housing rights of those who were not owners. Together with DepDer Kocaeli, they questioned the government's policies, which only considered those with housing assets or property to be "victims" of the earthquakes, while renters and those from informal housing were sidelined in the government-aided recovery process. These people, whom the associations call *evsiz* (without house), held a mass demonstration in Ankara in 2001. One of the solutions proposed was to work together to get cheap land and also loans from the government, and to build cooperative housing. They founded the Disaster-affected Homeless People's Cooperative (Evsiz Depremzederler Kooperatifi), and members of the association stayed in Ankara for 75 days to meet the necessary politicians and responsible people, a process which ended with the detention of some of the members. During this time period (2001-2002) three other cooperatives were granted large plots of well-located land on which to build houses for non-owners. At one point, the municipality promised the *evsiz* a piece of land that had been given to the

[4] The information for this case study is based on interviews with Ayşegül Şenol , lawyer and member of DepDer Düzce, and Şener Sıddıka from the Steering Committee of the Disaster-affected Homeless People's Cooperative (Evsiz Depremzederler Kooperatifi). Both interviews were conducted by Julia Strutz in August 2010.

municipality by the Ministry of Housing. However, it ended up being turned over to the Mass Housing Administration (generally referred to by acronym TOKI).

Thus in September 2003, the cooperative began a lawsuit contesting the fact that other associations had better access to land and that the distribution of these resources was not equal. In early 2011, after a long struggle, a positive verdict was delivered – they had won their lawsuit, and are to be awarded by TOKI a piece of land with infrastructure, enough for 570 houses. The positive evaluation of their lawsuit was not only the first time non-homeowners were granted the right for disaster compensation in the history of the country, but it also opened a legal opportunity to form a housing cooperative that owns the land collectively. Indeed, the members of the cooperative commit themselves to work one day a week in the building process and are "productive" in this sense as a cooperative. In the years before the verdict, activities were generally quite slow and sometimes it was difficult to maintain members' interest in the cooperative. Most members suffer from economic hardship and live as tenants or in villages far away, and thus it was difficult to keep up regular meetings. Since the negotiations have led to more concrete outcomes in the last months and there is finally a plot of land they may own collectively however, the organisational capacity of the *evsizler* cooperative shows its strength again. Almost all the initial members of the cooperative founded 12 years ago join meetings again and prove verbally and non-verbally their belief in the project. Without any further support from the government – they even have to pay for a state certificate that proves the state-allocated plot to be earthquake secure – the self-building process of the houses, will depend solely on their capacity to act together and allocate funds to start the building process.

Besides these activities for the *evsiz*, DepDer Düzce is also engaged in local disaster risk reduction initiatives. For example, they are working to shape the current land use plans prepared by the municipality, with the aim of improving the city's resilience. The association is active in collecting information about their neighbourhoods and they organize meetings in the neighbourhoods to discuss the fact that the interests of property owners and the need for a resilient city are not always compatible. The municipality now comes and observes these meetings. The association also stands against on-going practices that they oppose, for example TOKI's construction of five-storey houses on land that is deemed to be unsafe. The aim of DepDer Düzce is for the city to have a central information centre on disaster risks and building, which they foresee could be managed either by the municipality or by Düzce University (the university in Izmit is involved in a similar project).

DepDer Düzce has good partnerships with other civil society organizations. They regularly work with the DepDers in Kocaeli and Gölcük and also with the Chamber of Architects and the Chamber of Civil Engineers. However, the relationship between DepDer Düzce and the municipality has not been an easy one. Generally, they feel that the municipality has tried to suppress the association (and in general people who wanted to do something about earthquake risk), by not listening and by

ignoring them for a long time. The municipality's reluctance around discussion of the earthquakes had to do with illegalities in the distribution of the money and also with inadequate disaster management prior to the earthquakes. However, with the new municipal government (elected in 2008), this has changed; the government in power doesn't feel responsible for what happened after the earthquakes and there is no longer any interest in money. This opens a window to begin discussing prevention and risk management once again. However, generally the organizations feel that the municipality is too slow and lacks the necessary staff to properly manage safe development. (In part this is related to the fact that Düzce only became a province after the earthquakes). In 2009, with a directive from the central government, the municipality founded a Disaster Directorate (Il Afet Acil Durum Müdürlügü) and a Civil Defence Unit (Sivil Savunma). With this new municipal government and dedicated staff, the association can now obtain information more easily, for instance about progress on a GIS that is being developed for the city.

3b. Case 2: Solidarity (IMECE)[5]

IMECE was formed after the earthquakes as a grassroots rebuilding initiative for three villages (Aksu, Çayköy, Hacisüleymanbey) in the Düzce region. In total, 57 houses were built between 2002 and 2005 in "solidarity" style (*imece* in Turkish) – meaning a collective process of villagers working together and with people from outside the villages. The process was much more straightforward than the work of the cooperative described above, because the land on which the houses were built belonged to the villagers prior to the earthquakes. The construction of each house cost Turkish Lira (TL) 3,000 (US$ 8,500) and was financed by a government subsidy of TL 6,000 (US$ 3,500) per house with additional funding from international sources secured by IMECE.

The driving forces behind the construction of IMECE houses are both external and local. There were external volunteers, from Istanbul, who came to assist, and one in particular who acted as a champion for the project. There were also international volunteers who came to the village to help with construction. Local women played an important role in the process – they attended meetings, took part in the decisions and also helped to build the houses. The villagers decided collectively who was going to have an IMECE house (one voice per household) and also worked together on the design of the houses.

The houses were finished and the infrastructure rebuilt by 2005, so the project's aims were achieved. However, this did not offer a sustainable solution to livelihoods. Many of the villages' young people finished university just after the earthquakes, yet remained unemployed for a long time due to the ensuing economic crisis in 2000.

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[5] The information for this case study is based on interviews conducted by Julia Strutz with the *muhtar* (village headman) of Çayköy and with Erbay Yücak (one of the active members of the association), and informal interviews with the villagers during one of their meetings in August 2010.

Now they are leaving the village, as there is little chance of earning a living through hazelnut farming. Basically, the public institutions provided tents, food and credits after the earthquakes, but did not support any local initiative for recovery and strengthening of livelihoods. Thus there are some unfinished projects that IMECE sees as integral to the recovery process, yet they continually run up against various barriers, especially related to government support, which prevent these projects from being realized.

For example, to help the recovery process after the earthquakes, one of IMECE's ideas was to strengthen the local economy, which is largely based on hazelnut farming. The price for one kilo of hazelnuts prior to the earthquakes was about 6.50 Lira; this dropped to 2.50 Lira in 2004 (a state company bought the hazelnuts prior to 2004, but it was privatized) and now hazelnuts are sold at about 3–4.50 Lira a kilo. The idea was to develop direct links to European markets and to produce organic hazelnuts. For example, one hazelnut producer had made attempts to sell them to the Netherlands directly, but a lack of state support meant that this idea has not yet been realized.

Another project is the social centre that IMECE constructed, which was to house a hospital, a library, a guesthouse and a meeting room to do work with children and women. When asked why the building was standing empty, the local leader (*muhtar*) explained that they did not manage to get it through the bureaucratic process for political reasons. Even though the building has been built, the local government did not support the project so the necessary permissions for use have never been granted.

Generally, members of IMECE are frustrated with having to deal with the state to obtain permissions (for the hospital–social centre) and generally they are not interested in working with public institutions anymore. They say that even for the housing project it would have been better neither to have used state funds nor worked together with the state at all. Perhaps what also contributes to this perception of the state is that many of the villagers belong to an ethnic minority from the Georgian Republic and Abkhazia, which came to the region after the Crimean War; they feel that significant barriers are constantly being raised against them, and they experience racist behaviour.

Although IMECE is no longer an active organization, it did create an informal space for engagement. Many of the people who participated in IMECE are now active in other organizations, either trying to get proper housing for *evsiz* people or mobilizing against the hydroelectric plants planned for the valley where all the villages are located.

Currently, there is a plan for five hydroelectric power plants to be built in the valley where the earthquakes took place, with one of the plants actually being built on the fault line of the 1999 earthquakes. Resistance to the project now dominates discussions in the villages. It will take away 90 per cent of the water that flows through the valley, which is both drinking water and water for agriculture. It will also

create deforestation, leading to erosion and flood risk; in fact, increased flooding has already occurred in the areas that have been cleared. Villagers also believe this will eventually lead to their displacement, because the villages' livelihoods (agriculture and small-scale forestry) will become impossible.

The links established between the villagers are strong; the community is still undertaking a lot of activities together and many people have a very positive memory of the IMECE construction process. Since the earthquakes, the political power of the villagers has been awakened; they are going to meetings, discussing their common needs, working together in solidarity, meeting and linking with people from abroad. This interest and experience is visible in the action against the plans for the hydroelectric power plants – and meetings on these are clearly dominated by the three villages and by people who know each other from the "earthquake time".

Although they are not interested in working with the government, they do have partnerships with other organizations. Recently, the group has formed a positive partnership with Düzce University – whose scientists did an analysis for them of the impacts of the hydroelectric power plants project. Düzce University will probably also move into the unused IMECE social centre.

3c. Case 3: Foundation for the Support of Women's Work (Kadin Emegini Degerlendirme Vakfi – KEDV)[(6)]

The Foundation for the Support of Women's Work (Kadin Emegini Degerlendirme Vakfi – KEDV) was established in 1986 as a civil society organization with the mission to provide "…*support to poor women so that they could organize to respond to basic needs and to develop the capacities to improve their own lives and communities*" (Yönder, Akçar and Gopalan, 2005, p. 21). Prior to the earthquakes the organization had experience in operating child care centres in several low-income neighbourhoods, with support from the Social Services and Child Protection Administration (SHÇEK) and also from the Bernard Van Leer Foundation in the Netherlands. Immediately after the earthquakes, KEDV emerged as an organization that was capable of helping the women to organize and assist in the response. Sengül Akçar, Executive Director of KEDV claimed that the earthquakes increased the visibility of the organization and also its networks: "*Our approach was acknowledged and we had the opportunity to try out our strategies*."

In the days and months following the earthquakes, KEDV set up centres, first of all in the tent cities and then in the temporary settlements, where women could have a place to come together to share information and offer mutual support. As KEDV had

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[6] Information for this case study is based on interviews conducted by the author and Julia Strutz with Sengül Akçar and Berrin Tenice, leaders of KEDV, in January and February 2011; also Yönder, Ayşe, Sengül Akçar and Prema Goplan (2005), "Women's participation in disaster relief and recovery", *SEEDS* pamphlet series No 22, Population Council, New York, 37 pages.

an ongoing partnership with SHÇEK and also because they had in the past signed a protocol with the regional administration, KEDV had a high degree of legitimacy already, which helped speed up the bureaucratic procedures for obtaining access to space. The idea was that these centres could help women to play a role as key agents in the relief and recovery process. The women used the centres as living rooms, workspaces, to receive guests and to run support groups. It quickly became clear that generating income was their main concern in the weeks following the earthquakes, as many needed to earn money to support their families. They became involved in the centres in many very practical activities, especially around income generation. For example, they organized teams to sell collectively made products to local merchants; they secured downtown stores from municipalities, and obtained stalls in two national chain department stores. They set up woodworking shops where they made wooden toys, and also screens and windows for doors, which were in high demand in the settlements. In response to the need for repairs and services, the centres trained women to become plumbers and electricians, to service the temporary housing settlements.

During the reconstruction women became concerned about the earthquake safety of the new permanent housing and also about the lack of inclusiveness in the way the government-run projects were being carried out. Following a visit from a women's NGO from India (Swayam Shikshan Prayog–SSP), the women systematically started mapping information about the people in their settlements, about the housing subsidies they were receiving, about people's livelihood concerns and other settlement-related problems. Collecting and owning this information, which the government did not have, provided the women with an asset they could use in negotiations. At one centre they discovered construction errors in some of the new permanent housing blocks in their district. This contributed to their concern that some of the new housing developers were the same ones who had built the buildings that had collapsed during the earthquakes, calling into question how the government was selecting contractors.

In time, each of the women's centres established its own formal identity as an autonomous women's group, so they could continue negotiations with authorities and access resources on their own without relying on KEDV. By early 2003, six of the eight women's centres were consolidated as autonomous service production cooperatives and four of these cooperatives are still active today. The situation after the earthquakes was extraordinary and full of movement; many things were possible and there was a clear gap to be filled by the women. Now, things are more or less back to normal but the cooperatives that still exist are important sources of livelihoods for the women involved. While the cooperatives are autonomous, they do keep in contact with the main KEDV office, which supports them in things such as writing funding proposals.

Sustained leadership has been a problem for the continued viability of the cooperatives. Once the women had moved into permanent housing they were less compelled take part in the cooperatives' activities; also, once the temporary housing

had been dismantled, the women who were renting moved into the city centre in search of housing, making the cooperatives, which were located on the periphery, too far for them to reach easily.

Change in government leadership since the earthquakes has also limited the cooperatives' activities. After the earthquakes, the central state was responsible for the recovery, not the local government. Post-recovery, when responsibility for development was back with the local government, the support structures, networks and contacts changed completely. This weakened civil society organizations such as KEDV, which had been strongly allied with the central government, as they were no longer supported in the same way by the local government. Today, the cooperatives are struggling because some of the municipalities want to take back the land and prefabricated buildings that they had allocated to the cooperatives' centres, because it has become valuable for redevelopment. In Düzce, and other towns, the municipalities want to redevelop the sites for other uses and are not recognizing the importance and value of the buildings' social function.

Furthermore, by 2003 women from the KEDV autonomous service production cooperatives had also established four separate cooperatives for housing in three of the disaster-affected provinces. As with the other housing cooperative discussed in Case 1 (the Disaster-affected Homeless People's Cooperative - Evsiz Depremzederler Kooperatifi) the idea was to build housing for tenants who were not included in the government's housing programme. These cooperatives had to be very pro-active and vigilant to obtain land and funding for the housing, however, they had several advantages over the organizations described earlier in this paper:

> "For example, during their visits to public agencies, the women learned that the Ministry of Public Works and Housing was considering auctioning off land in temporary housing settlements to cooperatives that had been set up by tenant groups for building apartments. Even though site selection would be based on each settlement's tenure composition, the women had already gathered this information and could supply it to the ministry. One outcome of this process was a promise from the regional coordinator of the Ministry of Public Works to give the women's cooperatives priority in land allocation" (Yönder, Akçar and Gopalan, 2005, p.26).

KEDV has also recently become active in disaster risk reduction activities, particularly in two Istanbul districts (Kartal and Kağıthane) where there were already active women's groups associated with KEDV. One of the women's activities in the neighbourhoods is to undertake a community needs assessment, which all the women's groups in all the neighbourhoods do when they first come together. What has been added to this process in Kartal and Kağıthane is mapping the environmental risks and the livelihoods at risk in the neighbourhoods. Once the risks have been mapped, the idea is to take this information to the planning stage, working with municipalities. In Kartal district, the women's groups were already managing green spaces and parks, and so had already established a good relationship with the mayor.

The mayor supports their interests in working together on planning for resilience and risk reduction, although they are at the very early stages of cooperation. KEDV is also cooperating with Istanbul Technical University to prepare a manual about risk assessment and community needs assessment that all the groups can follow, which will reduce the training time needed for each of the women's groups.

The idea is to develop mechanisms for community-based resilience as an alternative or complement to the technocratic disaster planning currently being carried out by municipalities. KEDV points out that household level preparedness has been prioritized over collective initiatives; for example, the Istanbul Seismic Mitigation and Emergency Preparedness Project has piloted a project for disseminating information to the community about preparing your household for disaster. What is absent, however, is information about the risks that need to be addressed by the collective. For example, the greatest risks identified by the community have been: petrol stations close to housing areas; lack of space to gather in case of evacuation; knowledge about safe construction techniques; and small businesses at risk. Most of the risks are related to preparing for earthquakes, but people are also thinking about chemical explosions and, more recently, about flooding, as this is becoming an increasingly greater risk in Istanbul.

Although they are in the initial stages of this process of integrating risk reduction into their work, KEDV foresees that the greatest challenge for scaling up will be that the municipalities will fail to see the connections between this approach of community-based resilience and the more traditional approach to disaster management centred around response strategies, such as fire brigades and search and rescue. Despite taking part in training sessions offered by Istanbul Technical University, municipalities either do not recognize the legitimacy of community-based resilience or are not equipped to integrate it into their institutional processes:

> "Local, community-based initiatives, such as those by autonomous women's groups, do not get any support from disaster agencies. Disaster mitigation is still considered to be an area of technical expertise and a matter of training individual 'heroes', rather than community organizing and development" (Yönder and Turkoğlu, 2010)

When asked about how they could improve this situation, Sengül Akçar of KEDV explained:

> "First of all, we think the partnership with the university may be helpful, as it is more likely that the municipality will listen if it is the university talking; secondly, there is a need to have good examples to show how this approach can work, pilot projects, which is what we are trying to achieve now. Third is the need to have a presence to legitimize our approach. We have 30,000 women in Turkey as members of the cooperatives, so this lends some power."

4. Discussion

4a. Relationships with the state

Özerdem and Jacoby briefly characterize the relations between civil society and the state in Turkey as follows:

> (The state) is not a Leviathan that harasses society, historically the image of the Turkish state has been that of a distant and omnipotent system that ordinary citizens would do well to avoid at most times. Simultaneously, though, it is also assumed to have infinite means and resources to distribute through benign largesse giving it an overall ambivalence revealed in the paternalism of the commonplace term *Devlet Baba* (Father State). The result is, for many commentators, a 'passive–exclusive' state whose internal contradictions and weaknesses in regulatory and distributive capacities combine to form an administration which 'neither combats nor promotes civil society' (Kalaycıoğlu, 2001). In other words, *Devlet Baba* thus signifies both distance and authority through which the patrimonial attitude of the public sector has continued the centrist and elitist mentality of the Ottoman pashas thereby posing a considerable obstacle in the development of a *civil* society. Özerdem and Jacoby, 2006 p. 54).

The case studies presented here, and also supported by other published case studies about the 1999 earthquakes recovery in Turkey (Demirel, 2005; Ganapati, 2009; Yarar, 2005; Kubicek; 2002; Jalali, 2002), show that there are kernels of community-based and civil society movements, including initiatives for disaster recovery and risk reduction, which are challenging the mainstream actions of the strong central government in Turkey. However, the scaling up of collective processes at grassroots level is stifled by a lack of government support at the local level. While this lack of support may in some ways be related to political interests or the validation of the needs and rights of the groups, it is also related to local government capacity to effectively respond to civil society initiatives and demands.

The case studies illustrate that for the most part, neither the state nor the local government is providing an enabling environment in which civil society groups and community-based organizations can scale up their activities or act in partnership with the government. Associations and networks were formed after the earthquakes not because of an enabling state but, rather, as a reaction to the top-down recovery institutions and the approaches to recovery by state actors, which did not meet the needs of the people. Jalali argues that in this context, civil society acted mostly as adversarial to the state (Jalali, 2002).

At the same time, many initiatives, like KEDV, did successfully cooperate with the state, or at least worked within the state system to complete their projects. For example, when it came to access to land, either for the women's centres in the camps or for the cooperative housing projects, the organizations needed to work within the state system. If they were not able to do this to get access to what they needed, they acted in an adversarial way, targeting the central government, for example by staging protests in Ankara and with lawsuits. We note that some limited success has been achieved through this adversarial approach, while it has also proved important in building solidarity among people.

These case studies also make it clear that there are organizations that are **in favour** with the state and others that are **out of favour**. In fact, several other published case studies make reference to the many privileges enjoyed by civil society groups with strong connections to the state (Ganapati, 2009; Kubicek, 2002; Yarar, 2005). Özerdem and Jacoby explain that, in legal terms, there are two types of civil society organization: professional organizations and private associations (*dernekler*), with trade unions representing an intermediate typology. However, in practical terms, they explain, there is a different dichotomy. On the one hand, there are organizations that are based on Kemalist and pro-western visions, or that have a neo-liberal vision, and are promoted via considerable state patronage and ties with government, some even acting as semi-official state institutions. Then there are those that maintain minority identities (such as Alevi, Kurdish or Roma) or have strong Islamist identities or leftist political perspectives, and thus are outside this system of state patronage and have considerable difficulty in carrying out activities. Ganapati (2009), in a case study of civil society groups in Gölcük, (another affected town in the region) observed that municipalities did offer logistical support to associations but favoured some networks over others due to ideological preferences. From the case studies presented here, there is a marked difference between what KEDV has been able to achieve and what the other two groups have been able to achieve. KEDV, through close ties to state officials and using existing networks within the state, was able to create the women's centres and crèches and carry out many programmes, with support from the state, regional governments and also international organizations. The other two groups (IMECE and DepDer Düzce) have been limited in their capacity to act by being outside the system of state patronage and thus have only been able to act in confrontation with the government.

Recently, since the last municipal elections in 2009, there appears to be some shift in this system of state patronage. For example, in Istanbul, several of the district municipalities have elected mayors from the Republican People's Party, based on a populist platform of support for the minority groups living in informal settlements (*gecekondu* in Turkish). In Sariyer municipality of Istanbul for example, a union of neighbourhood organizations has been formed, which represents 17 *gecekondu* neighbourhoods within the district. The union meets regularly with the municipality to promote the needs of the neighbourhood associations directly with the district mayor. In Kartal district, on the Asian side of Istanbul, the central government has planned to replace several of the informal settlements with projects developed by the

Mass Housing Administration (TOKI), which will displace the existing residents. The district municipality of Kartal (the same one that is working with KEDV on community-based resilience) has joined with the neighbourhood associations to resist and to negotiate with the central government regarding the upgrading of informal settlements. In April 2010, the municipality also granted legal tenure to 150 households located on lands under municipal ownership.

In addition to the system of state patronage, the case studies suggest that **pre-disaster networks** and contacts, or established links with the state, influenced what groups were able to do after the earthquakes. KEDV was able to achieve a lot in a short period of time because of established links with the regional and national governments before the earthquakes. Local grassroots leaders built on their pre-disaster civic and political experience to help people mobilize for collective action after the earthquakes. Pre-earthquake networks or political parties helped IMECE to find international and domestic donors to support their activities. Thus, for IMECE, and also the DepDers, despite the lack of enabling state institutions and policies, the fact that they were already familiar with procedures and practices of civil life helped them in their efforts to establish post-disaster initiatives. Ganapati's (2009) case studies in Gölcük also back up this finding, showing that people who had previously been involved in civic networks (such as sports clubs, civil defence organizations or labour unions) or political organizations/parties were the ones who came forward as leaders after the disaster.

Patronage systems with the local or district level municipalities, biased as they are, will change direction if the new draft Law on the Transformation of Areas under the Risk of Disaster (Afet Riski Altındaki Alanların Dönüştürülmesi Hakkında Kanun) will come into operation. This new law transfers all state-owned land to the authority of the Ministry of Environment and Urban Planning (Çevre ve Şehircilik Bakanlığı) and rules out all lower strata of the local or district municipalities and their responsibility for risk reduction. If an area is declared as risky in terms of location or housing stock by the Ministry of Environment and Urban Planning, the whole area will be demolished and re-built by the Ministry's executive TOKI (and probably subcontractors). The legal owner only has three options: 1) sell the housing for market prices and leave, 2) acquire an apartment of similar size in the new project and pay the difference in value to the Ministry or 3) acquire an apartment of much smaller size in the new project. In all cases, the Ministry is not bound to built the new project in the same or a close-by location; the owner will have to pay for the demolition of the risky property and hand over the ground plot. A drop-out from negotiations is liable to prosecution, tenants and inhabitants of informal settlements are excluded from the process anyways. Only in Istanbul, an estimate of 2 Million housing units will be demolished.[7]

[7] Kentsel dönüşümde tuzağa düşmeyin (Don't fall into the trap in urban transformation), April 21st, 2012, http://www.ntvmsnbc.com/id/25342196.

Seen in the light of the practice of urban transformation in Turkey today, this draft law is discussed as a legal armament of the central state to force homeowners to sell their property and gather bigger plots for the urban renewal project of TOKI and its subcontractors. Communities will have to negotiate directly with the Ministry of Environment and Urban Planning and will be dispersed in most cases. Whether this operation will contribute to safer housing conditions with all the harm done to social structures and livelihoods, probably depends on the future actors involved: as it is the case already today, the Ministry and TOKI will not shoulder the amount of demolitions and construction works alone, but will be supplemented by a variety of subcontractors. Their quality standards, site selections and the will to control them will determine whether the newly constructed houses will be inhabitable and safe – especially in 30 years time.

4b. Cooperation and plurality among civil society

All the groups consider cooperation with other groups to be an important element in enabling their activities and building the strength of the movement. DepDer Düzce was strongly aligned with the other DepDer organizations in the region and used this linkage to share information. Both IMECE and DepDer Düzce have linkages with Düzce University, which has been supporting their activities with technical expertise. KEDV formed a network of women's centres and these centres have acted together closely, sharing information, experience and strategies when needed. The groups have also cooperated with external organizations, which has been helpful for funding and also for building solidarity; however, it is cooperation with local organizations that has been important for building the capacity of the groups.

It appears that the associations and organizations choose to cooperate with somewhat selective groups. They were more likely to cooperate with groups that had similar political outlooks, or that are aligned across ethnic or gender lines. Kubicek (2002) points out that civil society in Turkey is very pluralistic and deeply divided along political and ethnic lines; for instance, there are liberals and conservatives, secularists and Islamists, nationalists and Kurdish activists. This pluralism means that civil society is fragmented in terms of its aims; groups do not have a collective ideology about what they are fighting for and thus civil society does not stand as one mass of people against the state. This hampers the ability to push for broad social and political change. Furthermore, the lack of a singular focus means that the state can play favourites and collaborate with non-threatening groups.

Yarar (2005) comments that DepDer Düzce was the most controversial and challenging movement in Düzce after the earthquakes and was thus criticized by main power groups and homeowners who did not believe tenants and others should have rights to housing in the earthquake recovery. This echoes similar debates in Istanbul, where state and private housing developments are displacing informal *gecekondu* settlements based on a rhetoric that denies informal settlers any occupancy rights (Gündogdu and Gough, 2008).

4c. Information and transparency

One of the main issues for an enabling environment for risk reduction is the availability of information about planning and development, and mechanisms to share this information across state and civil society groups. In Turkey, there appears to be a need for better access to information and greater transparency in government processes. The lack of access to information about planning and building and about disaster risk was highlighted by all of the groups. The main goal of many of the DepDers was access to information and education of the public. They wanted to represent the poor, disabled, women and renters and to act as pressure groups on the local governments. KEDV became involved in developing and sharing its own information among its members (and sometimes the state). Transparency was also an issue after the earthquakes, and continues to be an issue. The allocation of land to cooperatives was not transparent. Information about the hydroelectric power plants project in Düzce and about plans for urban development in the region are not made public. Relevant to this concern is the DepDer's intention to develop a central point for information about earthquake risks, planning and building that would be available to the public.

Information available at the local level and two-way communication about planning was further hampered by the fact that the local government was not responsible for the recovery. Normally, local and provincial governments are mandated to prepare local level settlement plans within their jurisdictions. However, Article 8 of the Development Law No 3194 allows the ministry to intervene in the preparation and revision of plans that relate to disasters. Within days of the earthquake, the ministry invoked the authority granted by this article, announcing that it would prepare local level plans as well as plans for permanent housing areas in the earthquake zone. This meant that local government officials and civil society groups and community-based organizations who were nearest to the disaster location and who knew the local conditions the best, were divorced from the planning processes.

5. Final reflections: unpacking the limitations to scaling up

The initiatives described in this paper, although they have been very important for the people involved in them in terms of building solidarity, networks and capacity to act, remain quite small in scale. It seems necessary to reflect on three points introduced earlier in the paper in order to understand what limits the capacity to scale up. First, Twigg raised the issue that in order for the (local) government to provide an enabling environment for community participation in resilience, the government needs to be sensitive to the perspectives, needs and rights of the people concerned.This is one of the crucial issues here because it appears that the government is failing to legitimize or validate the perspective of the groups, sometimes because they are too controversial. For example, the demand for housing for renters, as put forward by the DepDer, is contradictory to the basic principles of the housing market in Turkey. As Yarar (2005) points out: "*For them, if the state begins to distribute houses to the tenants and poor, this becomes a starting point for*

everyone living in Turkey to make the same claim from it" (p.17) The women's groups that are active in Istanbul with KEDV also have difficulties having their perspectives validated by the local governments.

The second point is that for the state to engage meaningfully with civil society, it needs the institutional systems and capacity to do so. The new laws regarding citizen councils is a positive step, but still, government needs capacity to really address this in a meaningful way. It seems that municipalities in smaller urban centres, such as Düzce, generally lack the capacity to interact with community-based organizations or to develop better forms of communication that would enable more participation in the development process. However, to be sure of this, more research needs to be done in Turkey, focusing on the local government capacities to engage with civil society, especially around the areas of urban planning and risk reduction.

The third point is around power. Certainly, in terms of challenging the power relations, these groups are adept at acting in an adversarial way to demand change. But has this transformed the patterns of exclusion and social injustice? It appears that while there have been some small steps, this has not yet happened in a meaningful way. Have the groups opened up spaces where they can influence recovery and risk reduction? There have certainly been attempts by all of the groups to do so, whether through demands for sharing information or attendance at meetings. However, generally, the groups still lack open and influential forums where they can engage with the government in decision-making.

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The development management project: implementing change in England

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ABSTRACT

In England over the last decade a new approach to planning has been pursued, referred to as spatial planning. Despite being broadly accepted as the country's progressive theoretical and professional currency, the terminology has become politicised following a change of national government and as a result has fallen from prominence. An often overlooked component of the spatial planning approach is the decision making and implementation function, development management; and yet this concept is potentially very relevant to the challenges facing planning in England today. This paper will consider the current relevance of the development management approach; its impact to date, and the potential for it to support the current government's agenda, which is based around a concept of 'localism' whereby communities and neighbourhoods take on new planning functions.

The development management concept, in contrast to the reactive process orientated DC approach of the past, is based around operating a multi-faceted end-to-end delivery and implementation orientated process utilising implementation tools/mechanisms, organisational approaches, front loading, monitoring and feedback with an emphasis upon skills and culture change within the profession.

Development management is intended to focus upon *outcomes* (i.e. meeting needs) rather than *outputs* (the implications of permitting/refusing development through the determination of a planning application - normatively related to the regulatory development control ("DC") function.

The paper reflects upon the evolution of the development management approach and its theoretical underpinnings. We question the reality of development management, critique its impact in practice, and consider the value of the concept to planning today. The paper will also explore the approach's significance in the context of proposed neighbourhood planning and participation methods currently being introduced in England.

1. Introduction

The spatial planning approach was introduced in England in 2004 by the Planning and Compulsory Purchase Act. It made *"substantial reforms"* to the English planning system and has provided for a *"widened scope"* of interest (Nadin, 2007:43). Notwithstanding this extended remit, the national guidance of the time, Planning Policy Statement 1 (PPS1) 'Delivering Sustainable Development' (ODPM, 2005, paragraph 31), stated that *"development plan documents form the framework for taking decisions on applications for planning permission"*. This reinforced the retention of the plan led approach which has historically underpinned the English system, including the discretionary methodology for decisions on individual planning applications. Since 2004 questions have been levied at the concept of spatial planning and its application in practice. This paper will specifically critique the impact of the attempts to reform the decision making process for new development proposals (the 'Development Management' (DM) process) and will consider the current relevance of the development management approach, its impact to date, and its potential for the future.

2. Controlling development

The English planning system is plan-led. Development plans set out policies and land allocations to which decisions on individual planning applications/proposals should conform. Development control (DC) is the process whereby proposals to carry out development (including engineering operations and changes of use of buildings or land) are assessed by local planning authorities (LPA) to determine their suitability in a given location. When considering a proposal decision should be made in accordance with the development plan, unless material considerations indicate otherwise, an important factor which underpins the discretionary approach utilised in England. DC is fundamentally therefore a regulatory function that reacts to the submission and content of applications for planning permission. The requirement to apply for planning permission in this manner was introduced by the 1947 Town and Country Planning Act and the system today remains based upon these foundations.

The origins of the British planning system can arguably be found in the Assize Courts and the Assize of Nuisance from 1275. Historically control such as this over the use of land sought to prevent nuisance between neighbours, rather than pursuing a "*vision of public interest*" (Booth, 2003, p.9). Public benefit was largely related to practical issues such as preventing fire, safeguarding public health and ensuring

appropriate width of carriageways. The modern (post 1947) planning system, conversely, operates to safeguard public interests of acknowledged importance as opposed to providing a mechanism for protecting private concerns – although the distinction between the two is notoriously ambiguous and the impacts of one neighbour onto another can constitute a wider public interest issue, with value-laden phraseology such as 'protecting amenity' being used to justify decisions.

Post war redevelopment gave planning an *"elevated status… reflecting its ideological status as part of modernity and social reform"* (Tewdwr-Jones, 2008, pg.673). However, by the 1950s planning was already being seen as a restrictive activity by the incoming Conservative Government. The spread of urban areas during the 1950s led to a battle between town and country, which was further exacerbated by increased mobility through rising car ownership (and with it the new road-building programme). In response, the green belts circular (1955) sought to halt outwards urban expansion.

Since the 1970's the focus of DC has been on speed of determination: resolving delay in the system to the detriment of all else (Booth, 2003). However, what constituted 'delay' was not defined (the eight week deadline originating in 1933 failed to take account of how the function had since changed). DC was seen in the context of managerialist efficiency i.e. problems arose through administrative failures rather than any elemental weaknesses in the design of the system. The mechanics of the systems were the focus, not the *nature* of the system.

Planning in the 1980s was characterised by the theme of removing barriers to economic development. Development control was seen as a reactive, administrative and bureaucratic process that was a barrier to economic growth and new development, a criticism that was also levelled at the planning system as a whole in some regards. However, Cullingworth & Nadin (2006) argue that in the prioritisation of economic development and the relaxation of planning controls to achieve this was in many cases largely rhetoric, with politicians' actions not matching their words. Indeed, by the late 1980s the Conservatives' paternalist intentions to the environment were heralded which would result in a greater amount of restriction placed on development that affected 'green' interests and subsequently those relating to built heritage. Development control, despite some minor alteration, ultimately emerged from this period effectively unchanged and unchallenged.

During the labour administration of the late 1990s an increased role for regional government attempted to give planning a more strategic overview, particularly in terms of housing land allocation, whilst at the same time seeking to increase community involvement. This was compounded during the first decade of the 2000s by the addition of a regional tier to the development planning system. The intended consequence of gaining greater strategic control across local authority boundaries was not matched in ambition by the resources made available to the regions for such an important role and the wider limitations of this top-down approach was frequently exposed, particularly in the context of housing. Significantly however, during this

period the development control approach was given greater scrutiny than it had arguably witnessed previously. This was as part of what was presented as a step-change in the manner in which the planning system operates:

'We want a system that is capable of reaching decisions that command public confidence and which is seen to be open and fair. A system that underpins our desire to improve productivity by being capable of reaching a proper balance between our desire for economic development and for thriving communities. A system that is clear and comprehensible, that comes to robust decisions in sensible time frames... It is time for fundamental change'
(DTLR green paper, 'Planning: delivering a fundamental change', 2001, paragraph 1.8)

This was to become known as the spatial planning approach and the associated 2004 Act was the key driver for change at this time. Although the focus arguably remained elsewhere, this Act did also effectively underpin the emergence of the development management approach. It was significant that when the Labour government introduced spatial planning into England and Wales in 2004, they also sought a culture change in the way planning delivered its 'product'. The regulatory framework has evolved rather than been comprehensively redesigned since its introduction, with the fundamental workings of the decision making process broadly unchanged from those introduced in 1947. It was noted at this time that the development control function was too reactive, based on regulatory function, and do not actively seek to engage with those outside of the 'silo'. Development management was the solution to this issue.

It would be wrong to solely associated the last Labour administration with a top-down approach to governance, indeed much was achieved in increasing community participation and empowerment in this period, and yet in some respects this has been lost in the politics of the last election and the emergence of the 'localism' agenda under the Coalition Government. Spatial planning, as a term at least, has become politicalised and although the principles of this approach remain in most cases, the terminology has fallen out of favour alongside Core Strategies and other matters that emerged out of the 2004 Act. Where, then, does this leave development management?

3. Development management in a new world order: Decision making in a world of spatial planning

Prior to the 2004 Act there was, perhaps, a prioritisation given to plan preparation without explicit consideration of the implementation tool. Given that the planning system is 'plan-led' this is appropriate. However, a plan won't, in itself, make anything happen: *"Development control isn't a second order activity - it's what makes things happen. Actual forward planning and LDFs don't make anything happen"* Andrew Whitaker, head of planning, Home Builders' Federation). Delivering on the plan, implementing it, is clearly key. This implementation is

achieved, in part, through the delivery of new development, supported and approved through the development control/management process. It is therefore the necessary mechanism through which sustainable development, economic growth, environmental protection and sustainable communities are delivered.

The former Labour government's agenda to join-up services, to link 'outcomes' and to apply the spatial planning approach can be seen as central to the emergence of development management as opposed to a system based on control. Writing about the emergence of the spatial planning approach Nadin (2007:43) reflected on the goals of planning reform*, "to put planning at the centre of the spatial development process… as a proactive and strategic coordinator of all policy and actions".* The interrelationship between policy areas is an important facet of spatial planning. Nadin neatly sums up the difficulty of policy integration stating that making *"broad policy statements is one thing, application of these principles is another"* (2007:53). The intention was for DM, as a part of the post-2004 spatial planning approach, to empower the spatial planning approach to be enabled throughout the process of development, embracing the application decision making process and the associated elements occurring prior and post decision.

The central government department for Communities and Local Government (CLG) defined DM as, *"…end-to-end management of the delivery chain for sustainable development"*. The Planning Officers' Society provide a little more clarity in their definition, *"…an integral part of the spatial planning process; it puts spatial plans into action and seeks to achieve good design and sustainable development",* but again this requires a fair bit of explanation. Put simply DM is the delivery mechanism for putting 'wish-lists' into practice.

In the context of making planning decisions upon individual development proposals, the development management concept was intended, in contrast to the arguably reactive process orientated DC approach of the past, to be based around the operation of a multi-faceted end-to-end delivery and implementation orientated process utilising implementation tools/mechanisms, organisational approaches, front loading, monitoring and feedback with an emphasis upon skills and culture change within the profession. Development management was intended to focus upon *outcomes* (i.e. meeting needs) rather than *outputs* (the implications of permitting/refusing development through the determination of a planning application - normatively related to the regulatory DC function.

Development control, in its simplest form, consisted of the following:

Figure 1. Development Control

By contrast development management is presented as involving a range of other functions. It is something more; something bigger. The CLG (December 2009) consultation paper on Development Management sets out seven key elements that a DM service should involve:

1. Convening role - Proactive discussions with landowners, agents, developers, community groups, parish/town councils to provide the foundations for partnership and constructive relationships
2. Links matters which can be considered in the determination of planning proposals more closely to the community's vision for the area – look to see if additional benefits can be gained from the proposal that meet the dev plan vision
3. Pre-applications – communication, consultation, negotiation, advice to derive community benefits and timeliness in decision making
4. Proportionate approach – effectively manage limited resources within planning authorities
5. Engagement - wider liaison and partnership working with parties to achieve holistic solutions. Link to convening role of local authorities
6. Proactive delivery - focus upon delivery, not process and targets – greater use of masterplans and site briefs and a more cautious or restrained approach to the use of conditions, particularly pre-commencement conditions.
7. Monitoring implementation to continually develop best practice and ensure delivery of desired outcomes. Enforcement, to reinforce the legitimacy of the system and instil public confidence

The set this against the former development control approach it can been seen that development embraces a broader remit:

Figure 2: Development management

The additional aspects, often outside of the DC team and often their department, introduced by the development management approach are presented as sitting around the core regulatory 'DC' element.

Critiques however might argue that development management actually just represents best practice in development associated regulatory control activities and it is of note that the current government continue to see issues with the planning system and again, as in 2011 as in 2001, *fundamental reform* is being spoken of:

"Instead of planning being seen as the forum and the discipline whereby people can shape the places where they live for the better, it has become a crucible for controversy and acrimony…This Government is proposing fundamental reform… we have proposals which go back to first principles - not just tinkering with processes, but rebooting the way we think about planning altogether." (Greg Clark MP Minister for Decentralisation and Cities – Speech 2/2/11).

With further reforms being promoted now is a pertinent time to consider where we have come from. What was the reality of the development management approach?

4. Development management in practice

The introduction of the development management approach was largely given to the Planning Advisory Service[1] (PAS) to champion. It was emphasised that development management was not just a new name for development management; it was something new, something bigger, something significant. The previously mentioned concept of 'end-to-end' delivery suggested that development management would break down the silos within local authorities and move to an arrangement where the regulatory process is a mechanism, not the core driver, within the approach. Despite this, the fundamental regulatory framework remained relatively unchanged. As such it can be argued that this was further evolution, despite the rhetoric of fundamental change. This is effectively acknowledged in the PAS approach deployed with evolution rather than revolution sought through a transition from *controlling* development to *managing* it. This was seen as a matter of embracing 'soft' (culture) change rather than instigating 'hard' (regulatory) measures. The clearest evidence of the development management approach can therefore be found where new approach and techniques are utilised, but working within the extant legislation.

4.1 Flexibility

Local Development Orders (LDO) allow for discretionary local variation in permitted development rights. Wycombe District Council prepared an LDO (July 2010) to encourage economic regeneration in an historic area of High Wycombe that was experiencing high shop vacancy rates. The LDO, which covers a 0.7 hectare area of the town's historic centre, allows for material changes of use of ground floor premises without requiring planning permission. The area has been suffering from high vacancy rates and the order, which has a three year life span, allows businesses to change between retail, professional and financial services, café, bar, restaurant, office and institutional/public uses without the need to secure formal approval from the planning authority as would normally be required. The intention is to provide a more flexible approach within the defined area, allowing the market to lead on the future proportion and distribution of occupancy types. It has received strong support from Members. Although twelve months later all changes in use have involved retail uses, which would have been permitted anyway, it is suggested that this system sends a strong message to businesses of the Council's willingness to adopt a proactive approach to utilising tools to increase flexibility where appropriate. There are clear parallels between this approach and the current government's proposed Neighbourhood Development Orders which are envisaged to be deployed in a similar manner, but would be instigated by the Parish Council, rather than introduced by the higher level local authority.

[1] The Planning Advisory Service is a government programme funded by the Department for Communities and Local Government.

4.2 Community involvement and responsibility

As well as simply changing permitted development rights in a given area, an LDO can also be used as a tool to support community engagement and empowerment. Using the existing LDO mechanism, Cornwall Council led a pilot scheme with Feock Parish Council to enable the parish to direct minor development within a defined geographical ward (Carnon Downs). The LDO extends residential permitted development rights for proposals that comply with the requirements of a published design guide, produced in partnership by the two councils and the local community. The LDO came into effect in June 2011 with officers initially supporting the Parish committee in determining proposals, although in the longer term it is envisaged that officer time will be freed up to work on other planning matters. This approach has had the added benefits of: increasing transparency in decision-making through real community involvement in the planning process; increasing community confidence to meaningfully engage in pre-application discussions based on their design guide; and forging excellent working relationships between the councils with all parties learning from each other.

4.3 Project management

A key element of the cultural change is in the way in which proposals are managed, including through the formal planning application process.

Planning Performance Agreements (PPA) are effectively project management tools designed to facilitate the effective coordination of all aspects of the development proposal relevant to the planning process. They are designed to bring together all the key actors with an interest in the scheme together around the table, including in some instances appropriate community representatives, to manage the implementation process in accordance with an agreed timescale with marked significant milestones. Examples have already been seen in Bristol, Lancaster and Westminster, and the potential exists for more widespread use. The main hurdle to the acceptance of this approach for major developments is perhaps the issue of probity and transparency in decision making, as well as managing expectations. The agreement of a PPA does not, of course, imply an approval at the end of the process. However, what a PPA can do is support the effective management of the decision making process.

Seeing a planning application as a ‘project’ and a case officer as a project manager, combined with project management tools for the planning relevant elements of the process of development, can be argued to represent a significant shift in culture and approach.

4.4 Democratic accountability

Redcar & Cleveland Council have been working to ensure councillors can engage effectively at the pre-application stage. The issue of bias and pre-determination

makes involvement problematic, but the value of Councillor insight and input can be extremely valuable to the decision making process. A protocol for elected members has been produced to provide a framework to work within. Training was then provided for the relevant committee members – not all members are invited to avoid any risk of pre-determination, and the presentations are in addition to, rather than instead of, any of their wider pre-application consultation carried out by the developer. Presentations on proposals are managed by officers and are designed to allow member engagement with major development projects at the pre-application stage. for the. The protocol is clear that any subsequent discussions on each presentation is for issue identification only, rather than allowing any expression of views on the proposal. A similar approach is being operated by Chorley Council. Such an approach gives Councillors' confidence to engage in pre-application discussions without prejudicing themselves, thus improving democratic accountability in informed decision making.

4.5 Training, skills and organisational approaches

The emphasis upon cultural change carries with it a requirement to undertake wide-ranging organisational reforms and reskilling. At a fundamental level the transition from a land-use planning system to the spatial planning approach laid the foundation for this transition, providing a context that supported, perhaps even demanded, a parallel shift in the decision making and implementation functions of planning. Supporting this, organisation change, such as the merging of the national Housing Corporation and English Partnerships to form the Homes and Communities Agency provided for a coherent and coordinated organisational structure to support the wider change taking place. At the local level reorganisation and restructuring has occurred within a number of authorities creating major projects teams, delivery teams and/or undertaking internal reorganisation to integrate previously separate sections within their planning services, such as policy, development control, economic development etc.

A key further element that has been pursued is training and knowledge transfers. Led by PAS, training has been delivered for staff across not only local authorities, but also other public, private and third sector organisations who engage with them.

4.6 System changes

Although the core legislation that underpins development control/management has not been changed significantly, some key alterations have been made to bring about change. A significant area of focus this this respect is the introduction of a uniform system of application forms and submission arrangements. Previously, each local authority produced its own applications; now, a single form is used across England, unifying basic requirements. In parallel with this, e-planning initiatives have enabled electronic submissions of applications and consultation with stakeholders via emails and cloud systems.

Key mechanisms have also been revised, most significantly perhaps the parameters and approach associated with permitted development rights; those matters that are pre-determined and require only compliance, rather than needing a formal planning approval from a local planning authority following the submission of a formal application. The intention here has been to ensure that the system is proportionate, efficient and impact driven. An example of proportionality can be seen in the practices of the Planning Inspectorate, who have introduced a 'fast-track' planning appeals system for householder application appeals, streamlining the process associated with these minor cases and allowing resources to be focused where they are more required. There is an associated service improvement for those using the system through this strategy in addition to the internal benefits.

5. Impact

Although the previous section of this paper identifies good examples of best practice that have seen real benefit, it is argued that there are limitations which question the success of the DM 'project'. It is suggested that these can broadly be grouped as systems failures and failures in the profession:

Figure 3: Development management limitations

5.1 System failures

The value of Local Development Orders has been questioned for a number of reasons. In the first instance they have resource implications to establish. After being introduced there are on-going administration resource implications. To offset

there must therefore be clear benefit from their introduction, but is this the case? Where an LDO is introduced it is in circumstances where the flexibility offered is inherently acceptable. On this basis, any application that was to be submitted in the absence of an LDO would likely secure support and benefit from a relatively untroubled passage through the application process. Is certainty and flexibility therefore being formalised where it tacitly existed previously? For the local planning authority, the real cost is financial, each application now no longer required equates to a planning fee lost. There is therefore a financial cost for local authorities who can ill-afford the loss of revenue. Furthermore, the nature of an LDO is such that it will either be restrictive, or it will be flexible to an extent that is can only be deployed in a less sensitive area, such as an industrial estate or business park. Clive Dutton, who is executive director for regeneration, planning and property at the London Borough of Newham, has said on this: "I'm a little agnostic about LDOs because it's crucial to have integrity of design in the built environment, rather than letting any development of a particular use go through" (Townsend, S 2011). Potential benefits do therefore exist, but the financial model and potential environmental impacts will limit the application and value of this tool.

Planning Performance Agreements are also slightly troublesome in some respects. Although the concept of project managing a development proposal has significant merit, the use of a PPA is limited by the nature of the system within which it is required to operate. The inherent flexibility that exists within the British planning system means no certainty of a positive outcome is assured at any point during the process, arguably limited the attractiveness of the system to developer, whilst the perception of the agreement may still be unpalatable to other stakeholders. It is perhaps the approach that is at fault here, the introduction of a formalised process which sits above and beyond the standard processes and practices. Instead, greater benefit may have been found in a more flexible, less formal but universal employment of project management principles across all forms of application, with a scaled approach relevant to the application type. The key therefore being the culture change, not the introduction of a formalised process for certain types and scales of development.

The changes to legislation that have been undertaken, and in particular the revisions to the permitted development rights, have been a mixed success at best. Poor drafting, an absence of definitions, and a complex series of parameters with loopholes has unfortunately been the case, particularly for the householders permitted development review. These flaws have undermined what was a well-intentioned attempt to address a system with real issues. Unfortunately, the replacement system has been found to contain more issues than the original format. The suggestion that the transition was necessary because it took the system towards a 'impact based' approach is equally flawed; what was previous system based upon if not impact?

Finally, the dark shadow of resources limitations is cast over everything. With local authority budgets reduced and resources stretched ever further, the actual ability of

local authorities to actually bring about change is unfortunately limited, further compromising the potential impact, and indeed ability to introduce in some instances, the changes that can lead to the culture change required. Too often change continues to be driven by cost, not impact. Many have acknowledged how complex and divergent the new system could become and how few resources exist to enable it to be delivered. Rydin (2011a:32) considers that communities are likely to 'require considerable support' if they are to effectively use the localism powers that seem to be heading their way and, with the untimely cut to Planning Aid funding, it is likely that this task will fall to local authority planners. All of this has an associated cost implication, in terms of both time and resources, and there remains an unanswered paradox between the stated ambitions of the Coalition Government and the perverse spending cuts being passed onto local government, compromising their ability to support the new agenda (Hambleton, R. 2011).

5.2 Failure in the profession?

It is hard to escape the fact that issues may also exist in relation to the willingness, or the ability, of the profession to bring about change. Development Control departments remain in some instances in both name and operation, many developers continue to approach the process in the same manner, and a perception of rhetoric is attached to the development management approach.

The development management approach that appeared following the 2004 Act can be seen both as a response to criticisms about the perceived delay in determining planning applications with a positive outcome and also as a way of implementing a more proactive, community engaged spatial planning approach. PAS stressed that development management is not a new name for DC. This however clearly depends upon what is understood by these terms. Those seeking to explain the difference often emphasize DC's mechanistic and administrative functions in order to provide contrast with the theoretically more proactive and dynamic DM approach. The reality though is that the previous DC functions remain within DM, and many of the approaches promoted through the DM approach were previously possible, if not always employed, under the former development control regime and associated legislation. Many practitioners would argue that development management actually just represents best practice in development associated regulatory control activities (Croft and Sheppard, 2011). The profession has therefore arguably not responded to the introduction of development management, but conversely what were they actually responding to? And, having regard to the comments concerning resources noted above, did they have the ability to respond?

5.3 Approach and change management

As has already been highlighted, PAS were very clear that DM was not just another word for DC. This was a *fundamental change*. A new way of approaching the planning application process. But in most instances is it not DC best practice laced with government rhetoric? It would be understandable and reasonable for this

conclusion to be reached when one considers that in 1980 the following statement was published: “Development control must avoid placing unjustified obstacles in the way of any development…it is, and should be seen to be…part of the process of making things happen in the right place at the right time. Local planning authorities are asked therefore to pay greater regard to time and efficiency; to adopt a more positive attitude to planning applications; to facilitate development…” (Circular 22/80 (development control - policy and practice).

PAS noted that development management is the term that has been coined to include the range of activities and interactions that together transform the 'control of development and the use of land' into a more positive and proactive process that fits better with the ethos of spatial planning and better supports local authorities in their role as place shapers. The presentation of development management is therefore problematic because to a certain extent it is damned by association with development control. The suggestion that it could *replace* development control within planning is to associate it with the silo within which development control lived. Development management was therefore itself placed in a silo which compromised entirely its ability to be something more. By associating it with the implementation of policy removed its ability to embrace visioning, policy formulation and strategy, thus compromising the ‘end-to-end’ concept and effectively limiting it to matters associated with planning *applications* and thus development control. Promoting best practice within development control would have been one thing, to attempt to promote something more whilst constraining its ability to do so is quite another.

The approach to change failed to deconstruct the wider structures that existed, forcing development management to fit into an extant construct which prevented development management from being all that it could be.

6. Wither development management?

It is important to remember that despite the suggestion of a wider shift, the determining of planning applications remains an important aspect of the planning service and one that is set to continue for the foreseeable future. Consequently, any definition of development management needs to acknowledge this inherent regulatory function and the pressures (speed of determination, conflicting views, community interest etc.) associated with it. This, it is argued, is equally a limiting factor to the perceived impact and shape of development management. There still remains a legal requirement to process and determine valid planning applications. Consequently the regulatory function it fulfils should not be viewed as redundant and still requires appropriate resourcing.

One perspective is to see development management as development control best practice, and this has merit having regard to the benefits that can undoubtedly be seen when the system is used to its full extent and the process of development is

approached in a positive and proactive manner. But this is also to perhaps overlook the potential that the development management approach has.

The most important step is to uncouple development management from development control and instead to see the approaches and functions. It is suggested that if development management is seen as the operational implementation of the process of development within the spatial planning approach, transcending planning functions and genuinely representing an end-to-end methodology:

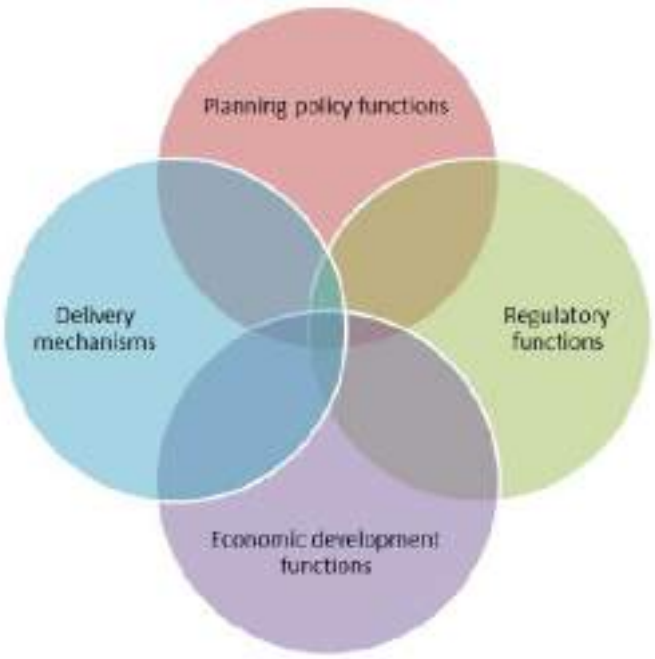

Figure 4. The development management *approach*

It is therefore suggested that whilst development management has clear limitations in the manner in which it was actually introduced, as an actual approach there is clear potential which has been somewhat lost as a result of the packaging, execution and resourcing. The development management approach requires a coherent strategy concerning the formulation of policy, the management of each proposal as a project, the coordination of activities, meditation between communities and other parties, and ensuring that the best outcome is realised.

In the context of the current localism agenda it will be necessary for many planners to further redefine their roles and work ever more closely with communities but the development management approach offers much in the emerging landscape and the best practice already seen should be championed. The development management *approach*, and the compatibility of the method with localism, should be further

explored and the true potential explored within a genuinely deconstructed approach to planning.

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WHAT TO EXPECT IN 2030: THE IMPACTS OF FUEL PRICE AND FUEL ECONOMY ON LAND USE AND TRANSPORTATION

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Abstract

The significant role of the transportation sector on land use, socioeconomic development and environment has led to new policies and regulations in the United States (US) that require planning agencies to integrate these additional aspects to be included in their transportation planning processes. This led to integration of macroeconomic, land use and environmental development models with long range transportation planning models. Integrating land use and transportation models in particular receive increased attention due to the significant relation between land use patterns and transportation. The cost of travel, which depends highly on fuel prices, can have a significant impact on the allocation of land uses, the amount of travel, the modes chosen for travel and the routes drivers select in a region. With the volatility of energy prices over the past several decades, the growing instability of energy supply both domestic and foreign, and ever growing demand, it is difficult to predict what fuel prices will be in the future. Reducing demand for fuel through advanced vehicle and fuel technologies by increasing energy efficiency and fuel economy have been one of the strategies to tackle with this problem. However, the market penetration of such advanced technologies in the future remains uncertain. To begin to grapple with such uncertainty, planners must understand the potential future impacts of energy prices. With knowledge of these impacts, better planning can be achieved to accommodate the likely outcomes. This paper investigates the impacts of increased fuel prices on future transportation system performance as well as travel behavior utilizing an integrated land use and transportation model. The developed scenarios build on national macro-economic forecasts of changes in household and employment allocations with future transportation network improvements and modeled in a multi-state integrated land use and transportation model for year 2030 in the Capital Megaregion area. The scenarios are conducted to measure the impacts of different fuel price levels on land use and travel patterns. As past research

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suggests, high fuel prices yield increases in fuel economy. Therefore, the scenarios are designed such that both the impacts of fuel prices and resulting vehicle fuel economy (or vehicle mileage) on land use and travel behavior are captured. These scenarios can aid in understanding the issues regarding the rebound effect of increased fuel economy on travel. The analysis is conducted utilizing a modeling system that couples a four-step travel demand model exogenously with a land use model. The model results are analyzed compared to a baseline scenario considering various systemwide measures such as vehicle miles traveled, congested lane miles and emissions. The results show that increased fuel prices and fuel economy have a significant impact on land use and travel patterns. Increased fuel prices lead to a denser land use pattern and a reduction in automobile mode share and vehicle miles traveled even though fuel economy increases. However, the reduction is less pronounced if fuel economy increases significantly.

1. Introduction

Fossil fuel continues to be the main source of transportation energy in the US. In fact, 97% of US transportation energy comes from petroleum-based fuels (US DOT, 2010). Policies and regulations are in place in the US and elsewhere to reduce dependency on fossil fuels for various reasons such as volatile prices, dependency on foreign oil and related security issues and environmental concerns (e.g. Clean Air Act (CAA), 1970; the Energy Policy Act (EPAct), 1992, 2005; Executive Order (EO) 13423 and the Energy Independence and Security Act (EISA), 2007). Despite all efforts, fossil fuel is likely to remain the major energy source for the transportation sector for years to come. Research and development on alternative fuel and vehicle technology still requires much more time to develop and adopt. These technologies in practice will have many challenges as they become available. Thus, the unpredictable price of increasingly scarce fossil fuels will continue to impact the transportation sector and in turn land use patterns.

Early studies regarding the impact of energy prices on transportation and land use in the US primarily stem from the energy crisis of the 1970s and 1980s. Most of these studies focused on the impacts of fuel prices on either the transportation sector or on land use. Few studies considered the interrelation between transport and land use. Many of these early studies employed econometric methods to explain changes in travel demand with respect to various factors, including fuel prices (the primary concern of this paper). The relationship found between fuel price and travel demand was analyzed with an economics framework; using the term elasticity to describe the relation between the two phenomena. Many of these studies found that transportation demand is highly inelastic with respect to fuel prices in short-term, varying from -0.10 to -0.3 (Goodwin, 1992; Dahl, 1995; Espey, 1998). On the other hand, long-term price elasticity tends to be higher, varying from -0.3 to -1.06 (e.g. Dahl and Sterner, 1991a and 1991b; Graham and Glaister, 2002, 2004; Goodwin, 1992; Goodwin et al., 2004; Brand, 2009).

An increase in fuel price corresponds with an increase in transportation cost, which in turn leads to a series of travel behavior changes. A shift in travel mode, travel time or route is a short-to-medium term change. The common short-term response to increased prices is less personal vehicle travel. Eltony (1993) found that 75% of households' response to higher prices was driving fewer miles. Similarly, Bomberg and Kockelman (2011) analyzed the change in travel behavior in response to a gas price spike in 2005 and found that the respondents reduced overall driving and tended to chain together their activities. They also found that urban form plays a key role in individual responses, more than demographics. Hughes et al. (2006) compared short-term price elasticity of US gasoline demand between 1975 to 1980 and 2001 to 2006 and found that the elasticity is significantly more inelastic today than in previous decades. The significance of this result is that it reflects a structural change in the US market for transportation fuel which may be explained by changes in land use, socioeconomics or vehicle characteristics.

As the higher elasticity suggests, the response to a price increase in the long-term is more significant. Long term-responses include changing vehicle type (e.g. to energy efficient or alternative fuel powered vehicles), shifting to energy efficient modes (e.g. transit, ridesharing, non-motorized), reducing number of trips, lowering car ownership, and altering destination and location choices (e.g., Lutsey and Sperling, 2005; Litman, 2009, 2012). Another response found to be significant in the literature is a move towards increasing fuel economy (see for example Small and Van Dender, 2007; Johansson and Schipper, 1997; Brons et al., 2008). Similarly, residential and employment location choice can be influenced by increased fuel prices due to the change in travel cost. However, the literature suggests that the choice of employment location is not significantly impacted by changes in fuel cost for various reasons. Such explanations include the complexity and the transaction costs associated with a move which typically outweigh the small proportion of fuel prices in the total expenditures of many companies (Fisher and Mitchelson, 1981). Although the literature is limited in regard to the impacts of high fuel prices on land use, studies suggest that higher travel costs could lead to more compact and multi-centered (or decentralized) development (e.g. Romanos, 1978; Waymire and Waymire, 1980; Fisher and Mitchelson, 1981). Most past work has focused on fuel consumption in relation to city structure rather than looking into changes in travel patterns and land use (e.g. Mogridge, 1985; Newman and Kenworthy, 1989).

The interrelation between transportation and land use has been studied widely in the literature (e.g. Abraham et al., 1998; Rodier et al., 2002; Handy, 2005; Johnston et al., 2005; Pendalaya et al., 2012; Zhao et al., 2012,). This interest partially stems from largely accepted propositions about land use-transportation interaction including e.g. building highways will increase sprawl, building more roads will increase driving, transit oriented development will increase density and reduce automobile use and the like. Despite a large volume of research, it is not clear how this interaction works due to the complex endogenous relationship between the two and the numerous exogenous factors such as socioeconomic characteristics and political forces. Finding empirical data presents another difficulty in establishing this

relationship due to the long-term nature of land use changes. Therefore, coupling travel forecasting models with various land use models (e.g. Lowry (Lowry, 1964); MEPLAN, (Hunt and Echenique, 1993); UrbanSim, (Waddell, 2002)) has been the typical approach in the research arena.

Adding the influence of energy prices into an already complex interrelated system of transportation and land use has not received much attention. A limited number of studies have considered the potential impacts of energy prices on land use and transportation simultaneously. Mishra et al., (2011) and Ducca et al. (2012) investigated impacts of high-energy prices on the state of Maryland and the Chesapeake Bay Megaregion respectively. Although these studies reflected an increase in energy price differently (the former considered increases in crude oil price, agricultural commodity prices, federal defense spending, and employment in professional service while the latter considered only sudden increase in auto operating cost (AOC) in the target year of 2030), both utilized a national econometric model to estimate future land use given the change in transportation impedances. This paper builds on their work but investigates the sensitivity of land use changes with respect to different fuel price and fuel economy combinations instead of using the national economic model. This approach is selected to examine propositions inferred from the literature such as (1) an increase in fuel price causes small to moderate location changes, (2) the likely response to high fuel prices is increasing fuel economy rather than location changes, (3) the assumption of high fuel prices leading to more concentrated land use patterns may not hold if improvements in fuel economy and fuel efficiency are significant.

2. Analysis Framework

2.1 Model Framework

The modeling structure involves three main components that are loosely coupled: econometric, land use and transportation (Figure 1). The economic model uses national and regional economic trends for a variety of sectors to project household and employment growth and allocates it throughout the state (details of the economic model can be found in Inforum, 2011). The land use forecast is informed either by local zoning plans, which do not involve modeling, or by employing macro-level economic modelling data which comes from Inforum (2011).

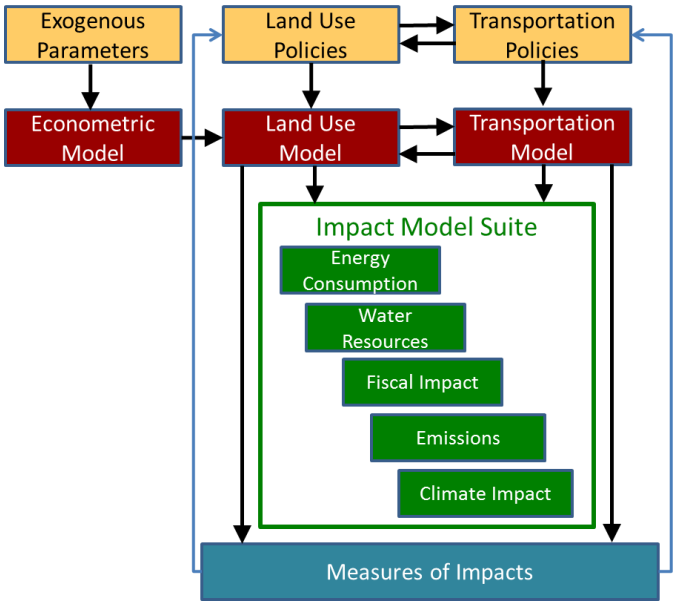

Figure 1. The integrated transportation and land use modelling system

The schematic of land use model that utilizes econometric modelling techniques to forecast future household and employment growth is depicted in Figure 2 (see NCSGRE, 2012 for details).

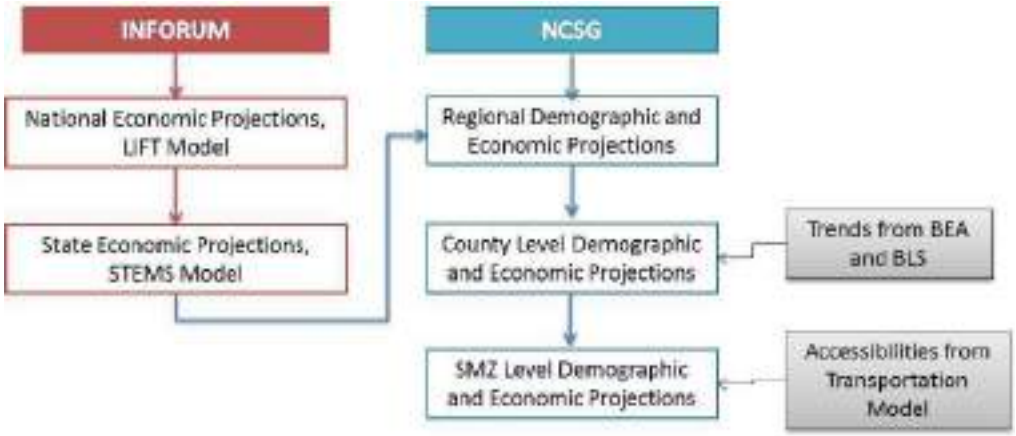

Figure 2. Land use model schematic

The land use model is integrated exogenously with the transportation model. The transportation model takes the socio-economic data from the land use model output and forecasts travel demand and the travel patterns for various future scenarios. The model is a three-level (national, regional and Metropolitan Planning Organization (MPO)) model that covers the entire 'Capital Mega-region', an area that encompasses the states of Maryland, Delaware, Virginia, Washington DC and parts of Pennsylvania and West Virginia (see Figure 3). The model also covers the remainder of the United States (primarily for freight, transit and tourism) but at a lower level of fidelity.

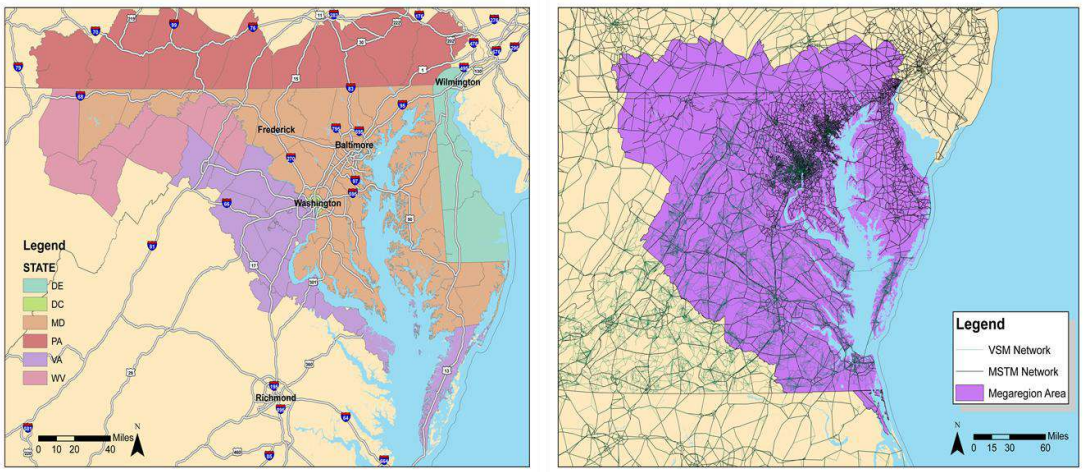

Figure 3. Capital Mega-region study area

2.2 Transportation Demand Model Formulation

The formulation employed in this study is based on the equilibrium analysis of transportation systems where an analyst tries to find traffic flows on a network at an equilibrium state given travel demand (represented by the trip matrix, or matrices) and supply (transportation network and services). The process is also called traffic assignment. The fundamental aim of traffic assignment process is to reproduce on the transportation system, the pattern of vehicular trips/personal trips which would be observed when the travel demand is assigned to the network by employing behavioral models. The traffic assignment model is based on the Wardrop equilibrium conditions (Wardrop, 1952). This principle is based on the fact that individuals choose a route in order to minimize his/her travel time or travel cost and such a behavior on the individual level creates equilibrium at the system (or network) level over a long period of time (Sheffi, 1984). Simply, for each origin-destination (O-D) demand pair, the travel-cost/travel-time on all used routes of the road network should be equal. Equilibrium, called User Equilibrium (UE), is reached when no traveler can decrease travel cost/time by shifting to a new path.

$$Minimize \sum_{a} \int_{0}^{x_a} (t_a(x_a)) \tag{1}$$

Subject to:

$$\sum_{r} f_{ij}^{r} = q_{ij} \quad ,\forall i,j \tag{2}$$

$$x_a = \sum_{i} \sum_{j} \sum_{r} f_{ij}^{r}\, \delta_{a,ij}^{r} \quad ,\forall a \tag{3}$$

$$f_{ij}^{r}, q_{ij}^{r} \geq 0 \quad ,\forall i,j,r \tag{4}$$

Equation (1) represents the objective function which minimizes the sum of the integrals of the link performance functions The term, t_a, is the travel time for link a, which is a function of link flow x_a. Equation (2) is a flow conservation constraint to ensure that sum of flow on all paths *r*, connecting each Origin-Destination (O-D) pair (*i-j*) is equal to the corresponding (O-D) demand. In other words, all O-D trips must be assigned to the network. Equation (3) represents the definitional relationship of link flow from path flows. Equation (4) is a non-negativity constraint for flow and demand. The travel time function $t_a(.)$ is specific to a given link 'a' and the most widely used model is the Bureau of Public Roads (BPR) function given by

$$t_a(x_a) = t_o\left(1 + \alpha_a \left(\frac{x_a}{C_a}\right)\right)^{\beta_a} \quad (5)$$

where $t_o(.)$ is free flow travel time on link 'a', and α_a and β_a are constants (and vary by facility type). C_a is the capacity for link a.

2.3 Model with Fuel Price Change

A change in the price of fuel results in a change in cost for highway travel. The effect of fuel price on user behavior can be represented as follows:

$$u_a(x_a, p_a) = t_a(x_a) + \frac{pl_a}{VOT.\vartheta} \quad (6)$$

where, p is the fuel price in miles per gallon, l_a is the link length in miles, *VOT* is the value of time in dollars per hour, and ϑ is the automobile gasoline efficiency in miles per gallon. Auto Operating Cost (AOC) is another component which is considered in the mode choice model in the next section (please see equation 9). A higher fuel price will result in a higher AOC and therefore will make auto travel more expensive.

2.4 Choice of Destination and Mode

The baseline scenario and all models also work on the choice of destination and mode depending on the respective cost functions. Because of varying cost functions, the destination and mode selected for different scenarios will change. This section explains how destination and mode choice are incorporated in the model, utilizing a random utility approach.

The destination choice model provides O-D demand for all trip purposes. The utility (U_{ijn}) of choosing a trip attraction/destination *j* for a trip *n* produced in zone *i* is given by:

$$U_{ijn} = S_j + \alpha L_{ij} + \sum \beta^k D_{ij}^k + \sum \beta^k D_{ij}^k N_n^k + \sum \beta^k Z_j^k + C_{jn} \quad (7)$$

Where, S_j is the size variable for destination zone *j*, L_{ij} is the mode choice logsum between zone pair *i-j*, D_{ij}^k represents the various distance terms (linear, log, squared, cubed and square root), N_n^k represents person, household or production zone characteristics for trip *n* and is used for creating interaction variables with distance terms, Z_j^k represents attraction zone characteristics (other than the size term), and C_{jn} is a correction term to compensate for the sampling error in the model estimation (i.e., it represents the difference between the sampling probability and final estimated probability for each alternative). The size variable may consist of several different terms; up to four categories of employment in addition to households were used. Weights (β^k) for each term in the size variable were estimated along with all other model parameters as follows, where E_j^k is employment of type *k* in zone *j*:

$$S_j = log\left(\sum \beta^k E_j^k\right) \tag{8}$$

A nested logit structure is used for the mode choice model, which is based on generalized utility functions for auto and transit travel. Separate utilities were developed to represent mode choice by trip purpose. The mode choice utility function is represented as follows:

$$\begin{aligned} U_m^p = \pi_m^p &+ \beta_{1_m}^p IVTT_m^p + \beta_{2_m}^p TET_m^p + \beta_{3_m}^p \times AOC_m^p + \beta_{4_m}^p PC_m^p \\ &+ \beta_{5_m}^p \tau_m^p + \beta_{6_m}^p WT_m^p + \beta_{7_m}^p IWTa1_m^p + \beta_{7_m}^p IWTb_m^p \\ &+ \beta_{8_m}^p NOT_m^p + \beta_{9_m}^p TF_m^p + \beta_{10_m}^p DA_m^p \end{aligned} \tag{9}$$

Where π_m^p is a mode specific constant for mode *m*, and purpose *p*; β in each term is the mode and attribute specific coefficient; $IVTT$ is the in-vehicle travel time, TET is the terminal time, AOC is the auto operating cost, PC is the parking cost; τ is the toll value, WT is the waiting time, $IWTa$ is the initial waiting time less than 7.5 minutes; $IWTb$ initial waiting time greater than 7.5 minutes; NOT is the number of transfers, TF is the transit fare; and DA is the drive access time. The mode choice model results in splitting O-D trip matrices into 11 travel modes (3 auto modes, and 8 transit modes). Three auto modes refer to Single Occupant Vehicles (SOV), High Occupant Vehicles with two occupants (HOV-2), and High Occupant Vehicles with three or more occupants (HOV-3+). Eight transit modes are combinations of walk and drive to bus, express bus, rail, and commuter rail.

3. Scenario Design

In this paper we measure two parallel phenomena related to fuel prices. The first is the elasticity of location decisions in relation to fuel prices. The second is the elasticity of travel decisions that result from fuel prices changes as well as the change in travel that occurs in response to changes in location decisions. The result is a complex series of behavioural responses that affect the nature of travel in the study area. Four scenarios were developed to model the effect of the possible changes in gas prices and technology on land-use and travel behaviour.

In the first scenario, we specify a baseline where gas prices are low but have steadily increased over time. In this case, gas is $3.88 ($US) per gallon before tax, resulting in an auto operating cost of $0.18 per mile. Land use response to this moderate travel cost change is assumed to be steadily growing from 2007 to 2030.

In the second scenario, we envision a case where prices for fuel have remained steady as in the baseline scenario, but due to policy requirements, specifically the 'Corporate Average Fuel Economy' (CAFE) standards for 2030 set out by the U.S. Environmental Protection Agency (EPA); average fuel economy has doubled from 27 to 54 MPG (miles per gallon). The result of the increase in fuel economy, with steady fuel prices on the auto operating cost per mile is a reduction to $0.09. This makes travel significantly less expensive. In response to the significant reduction in travel cost, the land use is less constrained and trends towards a slightly more diffuse urban pattern between 2007 and 2030.

The third scenario sets fuel economy back to the 2007 level, as if no improvement in technology was made and no policies were enacted to force increases in fuel economy. At the same time, we predict the price of fuel follows more historic world trends, absent policy intervention, the price of fuel is allowed to rise at the market rate resulting in a price per gallon of $15.52. At this price, the auto operating cost increases to $0.72 per mile. Land use patterns respond to the significant increase in price and future development patterns gradually move to a more concentrated urban form.

In the final scenario, policy intervention is again absent as it relates to fuel prices, allowing the cost per gallon to increase to $15.52. However, policy intervention and technology do adjust to this rise in prices. With the refined CAFE standards, average fuel economy increases to 54 MPG and the cost of operating a vehicle under these conditions reduces to $0.36 per gallon. Land use responds by moving towards a slightly more concentrated urban pattern than in the baseline scenario, where there was no policy intervention or technological improvements in vehicle fuel economy.

4. Results

This section contains the transportation demand model results from the baseline and three scenario models. Figure 4(a) illustrates the density of land use in the baseline (scenario one) for counties in the Baltimore Washington Metropolitan area. In this scenario, the region grows as usual with a standard rise in fuel prices. In the second scenario, where the fuel economy improves while the prices of fuel remains steady, making the relative cost of transport cheaper, the average density in each county decreases compared to the baseline scenario (Figure 4(b)). Figure 4(c) shows the relative change in land use density in the third scenario, when the price of fuel increases substantially and fuel economy does not keep up. In this case, land uses in the central cities and along main transportation corridors become denser. Figure 4(d) shows the land use density change under scenario four, where there is only a

moderate change in travel cost, resulting in some densification over the baseline scenario.

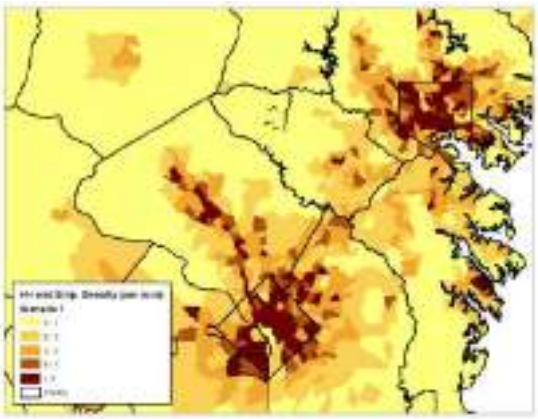

Figure 4(a). Baseline Land Use Density (Scn-1)

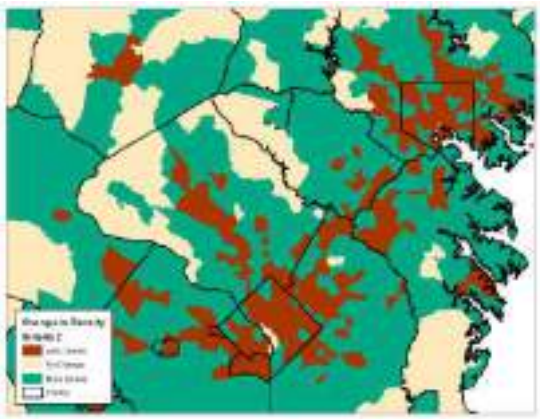

Figure 4(b). Change in Land Use Density (Scn-2)

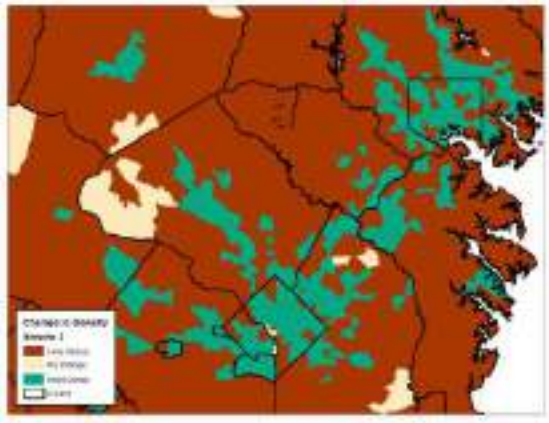

Figure 4(c). Change in Land Use Density (Scn-3)

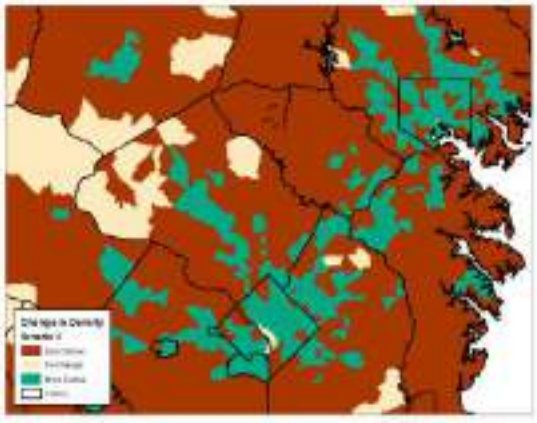

Figure 4(d). Change in Land Use Density (Scn-4)

Table 1 shows the effect each scenario has on mode share in the study area. In the baseline scenario, drive alone trips are over 70% of the person trips. When carpool trips are added, 91.61% of trips are by personal vehicle, the remaining trips are split between bus and rail modes. When the auto operating cost decreases by 50%, there is a 17.5% increase in private auto use over transit.

Table 1. Mode Choice

	Auto Trips		Transit Trips		Auto Share		Transit Share		Percent Change			
	Drive Alone	Carpool	Bus	Rail	Drive Alone	Carpool	Bus	Rail	Auto	Carpool	Bus	Rail
Scenario-1	807,778	240,858	34,363	61,672	70.57%	21.04%	3.00%	5.39%				
Scenario-2	1,002,293	230,510	29,454	53,005	76.20%	17.53%	2.24%	4.03%	24.08%	-4.30%	-14.29%	-14.05%
Scenario-3	601,560	489,526	66,235	104,845	47.66%	38.78%	5.25%	8.31%	-25.53%	103.24%	92.75%	70.01%
Scenario-4	788,537	373,489	46,315	80,232	61.19%	28.98%	3.59%	6.23%	-2.38%	55.07%	34.78%	30.09%

This indicates that there is an elasticy of the mode share with auto operating cost of about 0.35. When the price of transport increases over the base case by about 50%, there is a signficant increase in the non-drive alone trips. The share of drive alone trips decreases by over 25%, lending to a 103% increase in carpooling, a 92%

increase in bus and a 70% in rail share. In the final scenario, with a moderate operating cost increase, drive alone auto use declines just 2%, but results in a 55% increase in carpooling and over 30% increase in both rail and bus trips.

Highway assignment results for the baseline and three scenario models are presented in Table 2. Each model output is further categorized by major highway facility types for detailed analysis. The third column in Table 2 provides the vehicle miles travelled (VMT), followed by congested lane miles (lengths of road with a volume to capacity ratio of over 0.75, an aggregate statistic typically used for measuring the level of congestion), and the average speed on each facility type.

Table 2. Highway Assignment Results

Model (1)	Facility Type (2)	VMT (3)	Emissions (Tonnes) (4)	Congested Lane Miles (5)	Average Speed (MPH) (6)	Percent Change VMT (7)	Percent Change Emissions (8)	Percent Change Congested Lane Miles (9)
Scenario-1	Freeways	210,828,019	671,604	3,041	48.16			
	Major Arterials	139,623,717	355,900	2,849	27.86			
	Minor Arterials	89,848,377	158,779	1,295	26.69			
	Other	122,825,001	274,347	1,899	23.73			
	TOTAL	***563,125,115***	***1,460,630***	***9,085***	***32***			
Scenario-2	Freeways	227,287,509	356,626	3,761	46.89	7.81%	-46.90%	23.67%
	Major Arterials	162,658,837	202,501	3,894	27.23	16.50%	-43.10%	36.70%
	Minor Arterials	107,473,293	94,202	1,797	26.36	19.62%	-40.67%	38.73%
	Other	148,299,931	162,526	2,565	23.47	20.74%	-40.76%	35.04%
	TOTAL	***645,719,571***	***815,856***	***12,018***	***31***	***14.67%***	***-44.14%***	***32.28%***
Scenario-3	Freeways	177,869,296	552,279	1,567	50.79	-15.63%	-17.77%	-48.47%
	Major Arterials	108,366,275	269,661	1,240	28.76	-22.39%	-24.23%	-56.47%
	Minor Arterials	67,265,704	117,178	613	27.09	-25.13%	-26.20%	-52.68%
	Other	101,654,213	225,558	1,099	24.02	-17.24%	-17.78%	-42.12%
	TOTAL	***455,155,488***	***1,164,676***	***4,520***	***33***	***-19.17%***	***-20.26%***	***-50.25%***
Scenario-4	Freeways	200,252,866	312,962	2,589	49.16	-5.02%	-53.40%	-14.87%
	Major Arterials	131,214,078	164,297	2,327	28.20	-6.02%	-53.84%	-18.31%
	Minor Arterials	83,712,465	73,359	1,041	26.81	-6.83%	-53.80%	-19.64%
	Other	121,704,833	133,130	1,618	23.82	-0.91%	-51.47%	-14.84%
	TOTAL	***536,884,242***	***683,748***	***7,575***	***32***	***-4.66%***	***-53.19%***	***-16.62%***

The results show the impacts of the change in travel behavior that occur as a result of changes in fuel price and economy on the highway usage measures. In general, the results coincide with intuition. For example, when the price of fuel remains low, and fuel economy standards increase, more travel occurs. While this is in part due to the more scattered nature of land use in the study region, it is also a result of the ability to make longer trips at a lower cost. For example, the 14.67% increase in VMT that occurs in Scenario-2, induced by the decrease in travel cost, leads to a 32% increase in congested lane miles and 2 miles per hour decrease in average speed along freeways. The significant increase in auto operating cost that occurs in Scenario-3 combined with improved fuel economy and the denser land use, results in a 19% decrease in VMT and a 50% reduction in congested lane miles. These results indicate that the fuel price has a significant impact on travel behavior. Despite the improved fuel economy, VMT and CLM decline significantly compared to the baseline.

Scenario-4 has a smaller impact on travel behavior relative to the previous two scenarios, with only a 4% decrease in VMT and a 16% reduction in congested lane miles. This indicates that if significant improvements are achieved in vehicle technology that increases fuel economy considerably (doubled in this study), the impacts of high fuel prices may not be as pronounced.

The combined effect of changes in fuel economy and price has a significant impact on total emissions. In Scenario-2 where fuel economy significantly increases and travel cost decreases, total emissions are reduced by 44%, despite the higher VMT. In Scenario-3 fuel efficiency is reduced and the cost of travel increases. As a result, emissions are only reduced by 22%. Scenario-3 sees the highest emissions reductions with a 53% decrease. This is the result of a combination of higher fuel economy and fuel price.

To test for convergence, the gap between assignment iterations in between the baseline and Scenarios -1 through -4, was measured. Gap is a function of change in assigned link volumes and cost between iterations. Therefore, as gap decreases the assignment gets closer to convergence, which indicates that a change in travel cost for a link does not produce a significant change in the entire network. For this study, the convergence criteria was set at a gap of 0.002 for the iterative assignment and 0.005 for the variable demand iteration. Figure 5 shows the iteration results in terms of the gap for fifty model iterations. In all cases the models reached the convergence criteria in less than 26 iterations.

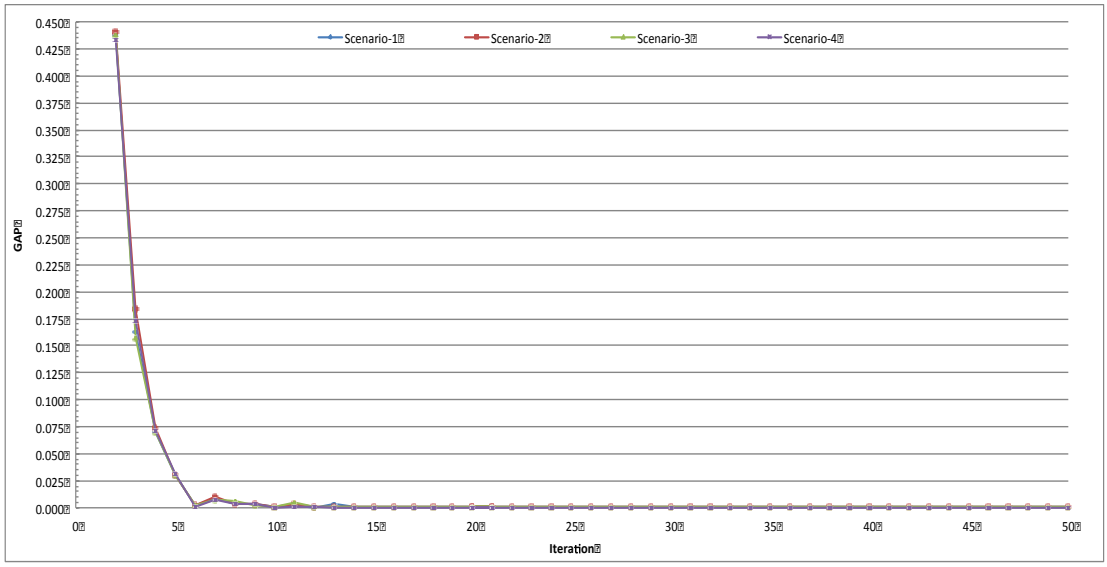

Figure 5. Convergence Results for Scenarios 1 through 4

5. Conclusions

The analysis conducted in this study sheds some new light on probable changes in land use and travel behavior in response to future changes in fuel prices and improvements in vehicle technologies. The analysis focused on two parallel phenomena related to fuel prices: the elasticity of location decisions and the elasticity of travel decisions that result from fuel price changes as well as the change in travel that occurs in response to changes in location decisions. A state-of-the art integrated land use and transportation model system, essential for such analysis, is utilized to analyze these complex series of behavioural responses that affect the nature of travel in the Capital Megaregion study area.

The results show that increased fuel prices and fuel economy have a significant impact on land use and travel patterns. The improved fuel economy causes a scattered land use change when the fuel prices remain steady. A substantial increase in fuel price can reverse this scattered distribution of land use with moderate improvements in fuel economy. However, if fuel economy increases significantly, the concentration of land use towards city centers and main transportation corridors occurs less. The results also indicate that the elasticity of location decisions is highly sensitive to changes in fuel prices and that improved fuel economy reduces this sensitivity. When technological advances lead to very high fuel economy in the future, it may be necessary for policy intervention to increase travel cost to meet planning goals that aim to prevent sprawl.

The impacts of changes in fuel price and economy on travel behavior and traffic measures are also remarkable. The results indicate that the elasticy of the mode share with auto operating cost is about 0.35. When the cost of transport increases, a significant increase in carpool and transit trips are observed. Similar to the land use response, when fuel economy increases significantly, a decline in the share of drive alone trips is not as pronounced. However, the increase in carpool and transit mode share is still significant. Highway usage measures also show similar behavior. For example, increasing fuel prices reduces VMT while increasing fuel economy standards and causes more travel. The results indicate that the fuel price has a significant impact on travel behavior: despite the improved fuel economy, VMT and CLM decline significantly. Emissions are also significantly impacted by gas price and fuel economy. Result show that increased fuel economy leads to higher emission reduction. The highest reduction in emissions is obtained when higher fuel economy and fuel price are applied in combination.

The approach followed in this study can be used to analyze alternative future scenarios and develop strategic policies. Despite the volatile nature of fuel prices and uncertain phase of technological developments, the knowledge of how the land use and transportation system will respond under different scenarios will help develop better informed policies and strategies. The results point to future research on different pricing strategies that would impact cost of travel in addition to fuel prices

so that the changes in land use and transportation can be guided towards a more desirable pattern.

Acknowledgements

The authors are thankful to the Maryland State Highway Administration (SHA) for their continued support in the development of models used in this study. The tremendous effort by the staff at Parsons Brinkerhoff in the data collection and model development is also greatly acknowledged. The evolution of integrated land use and transportation modeling system is a result of continued research for the last four years at the National Center for Smart Growth Research and Education at the University of Maryland. The opinions and viewpoints expressed are entirely those of the authors, and do not necessarily represent policies and programs of any agency.

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ANTICIPATING THE IMPACTS OF URBAN DESIGN PROJECTS STARTING FROM THE PEDESTRIANS' EXPERIENCE

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Abstract

The paper presents a four years study, developed by a university research laboratory, that deals with the anticipation of outputs of urban transformations. The main aim of the conducted investigation was to explore the ability of different tools to anticipate specific impacts of urban design projects in an interdisciplinary way. In particular, the general themes investigated concerned visual appearance (composition) and environmental conditions, i.e. shadowing condition, using simulations. In addition a specific point of view was used: how is it possible to anticipate the outputs of a design project from a perceptual point of view?
The research was conducted both in theoretical and experimental terms. For this reason a specific case study was analyzed. The required characteristic for the choice were: dimension and complexity (big urban project), importance for the city (centrality), implementation in a short time (project under construction). Besides studying the performance of the urban design project as a whole, we simulated it in order to clarify its output from an experiential point of view. To depict the perceptual impacts we used different typologies of simulations and we compared the possibilities and effectiveness of each one. Since this specific point of view was one of our main interests, a great attention was devoted to the tools that allow a dynamic description of the urban environment. Moreover, we were not focusing our attention on the functionality of the architectural projects alone, but on their cumulative effects on the urban environment. For this reason, we studied the output of the project starting from its local physical context (walking towards the project) and at the urban level (looking from a distance: changes in the skyline).
The use of a great number of different kind of simulations were experimented on the case study according to their proper characteristics. Since each one has its own limits and vantages, a combined use has been shown to be preferable for a more comprehensive understanding. In order to check the effective usefulness of the tools in a definitive way, we present a survey that allows to compare the real output of the urban project, which is almost completed, and the simulated one. The comparison gives an important feedback about the real capacity of the tool, helps to improve the entire approach and contributes to complete the theoretical framework. This will be the basis for future work on simulation, but it will also be an occasion to demonstrate the potentiality of this approach in depicting some relevant outputs. This could

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improve the process of negotiation between public and private stakeholders, collaborating to the delivery of better public spaces.

1. Laboratorio di Simulazione urbana 'Fausto Curti' framework

This paper illustrates the results of the main researches activities developed by the *Laboratorio di Simulazione Urbana 'Fausto Curti'* (LabSimUrb) of the *Politecnico di Milano*. The research laboratory was founded at the beginning of 2007 by prof. *Fausto Curti* and prof. *Peter Bosselmann* with a threefold mission: to innovate, to experiment and to communicate. Using innovative methods of investigation and simulation to be integrated to more traditional methods of analysis, design and evaluation. Verifying through experimentation the outcomes of design alternatives in order to facilitate the understanding and to show the consequences of planning decisions. Effectively communicating the results of urban changes in order to facilitate the confrontation between planners, policy makers, developers and citizens (Laboratorio di Simulazione Urbana "Fausto Curti", 2011).

The research about Urban Design themes is conducted through the use of different kinds of simulations in order to predict some relevant outcomes, especially about perceptual and environmental impacts of new constructions. The first four years of the laboratory activities were devoted to set up the research methodology and to verify the proposed approach. In order to do this, we focused on a specific case-study area, the *Garibaldi-Repubblica* redevelopment project in Milan. The urban planning framework of the case study, and the first stage of the work, was presented at the ACSP/AESOP Joint Congress in 2007 (Arcidiacono et al., 2007), and in other several papers.

All the research works have been elaborated in collaboration with students from Architecture and Urban Planning, and part of the outputs presented here, are indebted to the theses that were developed at the laboratory on the ongoing research themes..

2. Perceptual and Environmental Simulation

The laboratory works both with conceptual (abstract) and perceptual (lifelike) simulations. The main interest is directed to the anticipation and the understanding, thorough simulation, of urban transformations and their effects on the experience of the city users. This is intended as a result of the correlation between the physical city structure with the generated dynamic conditions (visuals, shadowing, temperature and so on). In this sense, simulations are used as a basis for depicting in a realistic way the foreseen urban condition, and as a stimulus to which every user can react subjectively. From a perceptual point of view this means that we deal with photorealistic simulations that can guarantee an analogous interaction between the user and the simulation itself. As reported in the doctoral thesis of Barbara Piga (2010), each typology of simulation can address a different kind of interaction that can replicate, with a variable degree of equivalence, the actual one. From this point of view a tool that is able to describe the urban condition in a dynamic way, and that

can guarantee a certain degree of freedom of navigation and sense of immersion is the one that can better fit the real fruition of the environment; indeed, the urban experience takes place in time and space and our physical involvement gives us the sense of place. Despite this, each medium can help focusing on specific aspects of the described context, so that in our opinion it would be inappropriate to claim that one type is better than another. A video can well represent a walk in a street, while a panoramic image forces us to stop and focus on a specific point of view, exactly as we do when we live a city going from one place to another or we stop for looking around. Nevertheless, in both cases we are looking through the authors' eyes; this can be a benefit, because it allows to consider some important aspects of the urban projects, but at the same time it can be a relevant limit because the user cannot personally choose where to look at, and sometimes can even consider this as a lack of transparency: there is always the possibility that something is voluntarily hided. The same medium used in an interactive navigation can solve this problem, but cannot assure that all the representative points of view of the project are caught. Another modality of interaction can instead give the possibility to navigate the same place in different conditions, e.g. seasons or daytimes, or comparing project alternatives, and this can significantly enhance the comprehension. As it was shortly shown, it is important to understand what each tool can tell us. To better understand the proper ability of different mediums we tested different typologies of simulation on the same case study and we compared their potentialities and limits in depicting the urban condition from a perceptual point of view . In general, and if possible, a combined approach is preferable, and can increase the possibility that different (and related) ranges of implications are grasped.

Since the final goal is to enhance and to support the urban design process in all its phases, from the creative process to the evaluation one passing through public participation, it is important to understand in which way this approach can be a valuable framework and which are the more appropriate tools for the different needs. For this reason we tested the approach on the different design phases. In the first period of the laboratory activities we worked on the Garibaldi-Repubblica project in Milan; in this case the study was directed to analyze the use of perceptual simulation as a support for evaluation. After this phase we moved on, and we tested the same approach for developing guidelines to guide urban transformations. This experimentation was carried forward with the collaboration of students who developed their master design theses on the topic (Bulgheroni et al 2012) . The experimentation on some case studies helped us to focus on specific needs and always lead us to develop scientific methods to answer to specific purposes or demands.

This year we started to apply the approach for the design phase. In fact, a new master class linked to our laboratory activities started this March. For instance, students are asked to develop their design ideas starting from the perceptual point of view and with the support of different typologies of simulation, especially those that encourage them to think about the environmental and the urban experience as a coherent dynamic system. Another research branch at the laboratory deals with the theme of information and public participation. In this direction we started to develop a tool, the 'Tavolo Luminoso' with two colleagues, Laura Cibien and Francesco Secchi, and

its theoretical applicability on the topic of public participation became Laura Cibien's MSc thesis.

The work of the laboratory is now focusing on the previous mentioned different topics, as well as the research of new simulation tools that can support the improvement of the final outputs of urban design projects, both from the side of the designers and the decision-makers involved in the process.

3. Building an approach for urban simulation

The Garibaldi-Repubblica case study was chosen because of the following aspects: its strategic location for the city, indeed one of the last vacant and very accessible areas, close to the city center; the large amount of volumes involved in the urban transformation, because the total buildable floor area is over 330,000 sqm and the land utilization ratio is approximately 1sqm/sqm; the number of different stakeholders involved, such as several architecture offices, real estate developers, the public administration and the citizens, especially those already living in the area and who have reacted against the intervention. As it was already presented in other occasions (see the references above and the bibliography), we used different typologies of simulation in combination, in order to reach a more effective comprehension of the design outcomes. We started with traditional analysis, such as historical analysis, morphology, land use, infrastructure and green structure and then we move to perceptual and environmental studies. As a matter of fact one of the aims of the laboratory is to develop an integrated approach that can lead to consider how different aspects of the environment act together and which is their mutual influence. Sometimes the best solution is a compromise between several factors, that is the one that enables a positive balance between all the issues. For this reason we tend to work at least with environmental and perceptual impacts of projects, especially vision and hearing.

We started using simple tools, e.g. photomontage on single images, and then we moved on to more elaborated solutions that can better depict the design project effects in dynamic terms. To do that we used photomontages in sequences, renders, videos, Virtual and Augmented Reality. Having a photorealistic scale model at hand, the quickest solution for a first navigation in the transformed urban environment is to guide a micro-camera (Figure 1) within the model and look at the transformation from a subjective point of view (Figure 2). With a micro-car, developed by BetaNit for and in collaboration with our laboratory (Prati et al 2009), the area was explored and some representative point of views were individuated. The tool is really useful because it enables to travel through a large area in a relative short time, correlating the urban physical structure to the specific vistas of a pedestrian. At the same time it presents some limits, i.e. the height of the point view is fixed and proportional to the dimension of the camera and the scale of the model; in our case the model was in 1:500 scale, and this implicated that the point of view was six meters high, which produces a distortion compared to the 1,70 m assumed as the average height of a person. Nevertheless, the tool was appropriate to study the area in a quick way, and it

favored the collaboration and discussion on the projects among the colleagues. To study the individuated paths we used at first a sequence of photomontages, which was quite effective in depicting the future condition. Having a digital model of the area (Figure 3) it is not so complicated or time-spending to elaborate accurate images where the urban project is overlapped to the existing condition (Figure 4). Compared to the video from the scale model this solution enables to describe the vitality and the detailed richness of the area, even if it is related to the existing condition in a simple sequence of still events. To overcome this limit we decided to study, with a bachelor of science thesis (Secchi 2009), the applicability of movies techniques for urban design purposes. The output (Figure 5) of the superimposition of a video render of the project on the video of the actual condition, shows great potential of communication. The immediacy of reading the effects on the current situation and its strong recall of the real experience makes it a useful tool, not only for the evaluation phase, but also in the process of public information or participation, where the actors involved often do not have the technical skills to read and translate correctly what is represented in a map into the real outcomes that affect the daily life of the urban environment. The video produced was also presented in the Corriere della Sera, one of our major national newspapers, and this is emblematic of the communicative capability of this kind of approach.

Anyway, this kind of medium allows a fruition that is limited to a pre-selection of vistas. To overcome this limitation we decided to do a step further and to start to use simulation that could allow an interactive navigation. We started using pannable vrlm (Virtual Reality Modeling Language) panoramic images and then we moved on using game engine software for urban design purposes. Starting from the digital model we had, we created a virtual interactive simulation of the Garibaldi-Repubblica project and its surrounding.

In parallel to that step we started studying some environmental impacts on the area. The first step in this direction was the shadows analysis, that was approach as a laboratory research activity, and then was deepened with the MSc thesis of the author (Signorelli 2009). In this case too, we tested different typologies of simulation tool, both analogical and digital. We worked in combination with conceptual and perceptual simulations to figure out their effectiveness for the evaluation of urban comfort and energy efficiency, highlighting the potential and critical issues in relation to different stages of the processes of urban transformation. We worked with both a 1:1,000 scale model and a 1:500 scale model to study the shadow path generated by the intervention on the public space and on the facades of the building context; we did the same with the digital model and other simulation software. The results obtained were compared to evaluate the accuracy of the different tools used.
Vrlm permits to visualize interactively a panoramic image, developing a path composed by a series of these images. Nevertheless these types of simulations do not take in account the dynamic aspects of the urban environment and the interactivity is not so enhanced, if compared to the previous simulation tools presented. For this reason we decided to move on and use a game engine software. These products, commonly used for developing videogames, are increasingly used also in various

disciplines not closely related to a playful attitude (e.g. simulations in a hazardous situation that cannot be reproduced in a real environment without risk for users, such as in nuclear power plants or for virtual fire evacuation drills, improve the sightseeing of archeology sites and to develop virtual museums, and military simulators to recruitment and training). This has been made possible for different reasons: the increase of ease of use, the more realistic renders of the graphics engines, the improved interoperability among the software, the possibility to customize their components, and the affordability of the products.

Game engine are complex software systems characterized by different features. The most common components are a render engine for 2-D or 3-D graphics, a physical engine, a collision calculator and some frameworks (libraries) used for sound, animation and artificial intelligence. The level of detail reached by these products is extremely high, both in visual and physical simulations. Thanks to this software it is possible to provide a virtual environment, in which the user can roam freely, enriched with various dynamic elements and other components that give the possibility to the user to interact in real time with the simulation. By way of summary, the Game Engine permits not only to provide a static visual simulation of the urban environment but, acting on its components, it allows to include in the virtual environment the dynamic aspects of the urban fabric (e.g. simulating the alternation between night and day, and seasons, visualize the traffic flow and insert the various sound events etc.).

Nowadays there are manifold products, each one with specific characteristics, strengths and weaknesses. We choose to use Unity3D because it presents a user-interface similar to many commonly used software for tridimensional modeling; it allows us to import sound and readymade digital models, complete with textures, materials and animations in various formats; it includes an internal tool for recreating vegetation. Furthermore, it allows us to manage and change the point of view of the camera and finally permits a high customization, thanks to the ability to use different types of programming languages (C #, boo, javascript).

After we have inserted the digital model of the Garibaldi-Repubblica project and its surrounding in the game engine, we enriched the simulation adding the vegetation, using a software that permits to change dynamically the model of the tree used, according to the seasons and to the growing period; the animation of the public and private transport that will be refined using a multi-agent software to provide a more realistic simulation; some sound sources recorded in the real urban environment (but we have to point out that to date the game engine does not provide a physical based simulation of the acoustic environment); the various project proposals provided by stakeholders; and finally the sun, which can be moved in real time to see the shadows' impact of new urban projects on themselves and on the existing context.
As we said, the software permits to the users to walk interactively into a dynamic virtual environment, changing in real time the project proposals to understand their impact on the existent urban environment. For this reason we started to use this software also in a course held by our research group in order to compare the various

projects proposed by the students. This approach allow them to verify the perceptual outcome of their design process and it encourage them to think at the urban transformation in dynamics terms.

The capabilities of these instruments need more insights. The possibility to provide quantitative and qualitative information layers, in a virtual interactive environment is worthy of being investigated. Despite this, the product still has a weak user interface, which was developed for videogames and constitutes a hindrance in the usability of the product for a large part of users.

The game engine chosen was also used to develop the 'Tavolo Luminoso' tool (Figure 5), which was intended as an occasion to merge different topics and mediums together. The tool uses a physical scale model in combination with digital interactive simulation. In fact, on the base of the table an interactive visualization of the ground is projected in real-time. Using Augmented Reality it is possible to link the physical volumes to their relative digital ones, and it is possible to project on the table surface a simulation of the base with a simulation on it, i.e. the projected building shadows or other environmental conditions such as the wind condition (represented as particles that flow in the area).

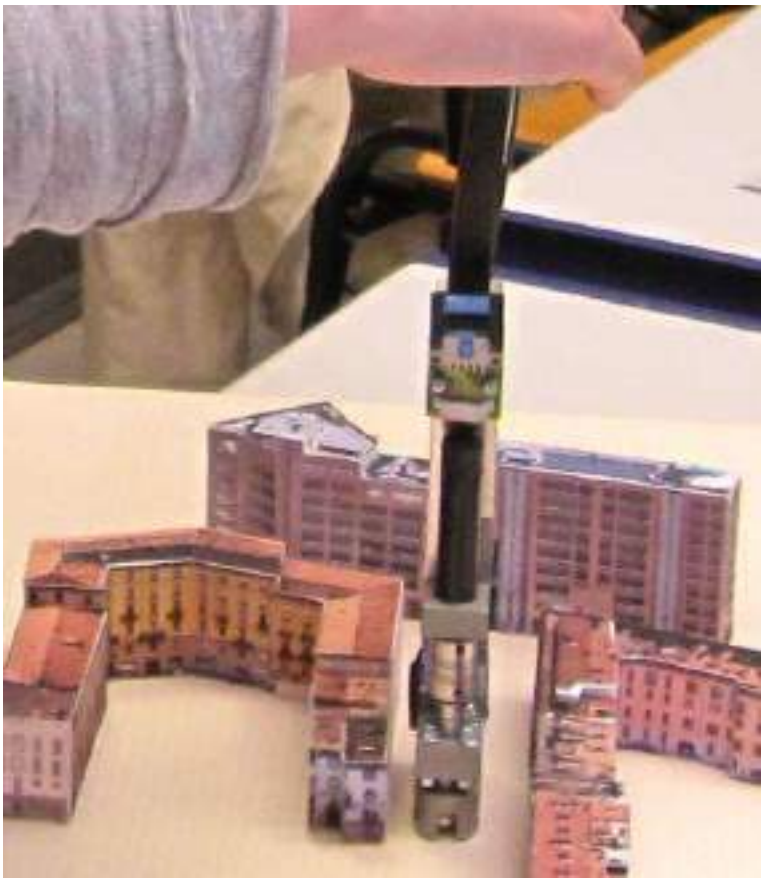

Figure 1. Micro-car

Figure 2. Micro-car and subjective view

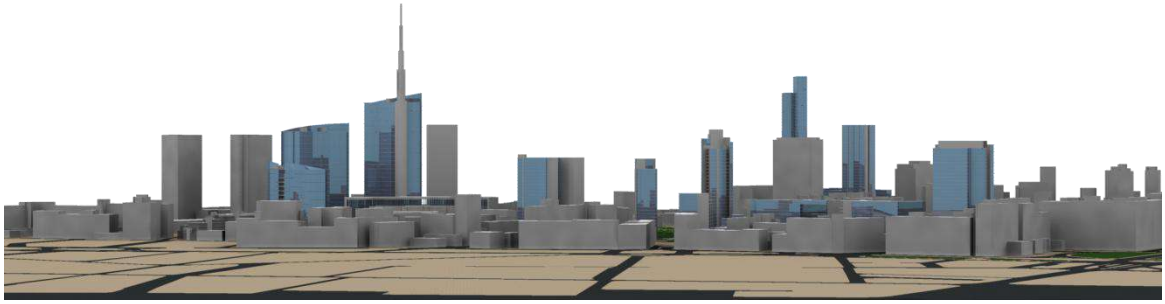

Figure 3. Digital Model

Figure 4. Photo-montage (via della Liberazione)

Figure 5. Frames from the video-montage

Figure 5. Tavolo Luminoso

4. Conclusion

A comparison between the simulation (photo and video montages) we produced and the real output of construction is now under development. Nowadays, the Garibaldi-Repubblica transformation is almost completed, and some considerations about the validity of the work done is possible. The first phase of comparison (Figure 6), demonstrates the general validity of the approach and also allows to highlight some limitations. Part of the gap between the simulated environment and the real condition is due to the fact that the projects have changed from the first (approved) hypothesis we have modeled. Especially, few buildings are in reality higher than it was defined with the first project approval. In general, the last solution is taller than the previous one. In some cases also the shape of the project has changed. This should lead to consider if, with a complex project like this one is, the planning tools and the required documents are enough for the municipality to direct the overall urban transformation and to verify the cumulative changes that occur during the process. In this respect, it is also particularly interesting to notice that it is quite common that the visualizations presented by the developers represent the project itself rather than the project in relation to its local or urban surrounding, while it emerges quite clearly that this kind of transformation, with high-rise buildings, has an impact on the entire city. As a matter of fact, considering as an example just the visual aspects, it is

immediately evident that the transformation will change the skyline of Milan (Figure 7) and some views from the street level.

Even if the simulated project and the built one are not exactly the same, it is quite evident from the comparison that the simulated views depict in an efficient way the urban condition. Moreover, the best comparison is the onsite one. Even if the building site is not completely concluded it is already possible to say that the general impression we had from simulation is comparable to the real one. Nevertheless, a further examination, especially after the conclusion of the building site, is necessary to completely evaluate strengths and weaknesses of the method. This review will also drive the development of our research on the topic. The quality of the render we superimposed to the photo of the actual condition is not that high, we just modeled simplified volumes and we treated their textures merely featuring solid and transparent materials: is this enough or this will imply a distortion that will be misleading for the evaluation process? Another aspect to be considered regards the vitality of the area. Obviously in photo e video montages we grab the situation of the existing condition. Even if it is quite difficult to anticipate correctly this aspect, which is due to many factors, it is anyway important to study which is the rate of bias introduced by this. Also other elements, such as the importance of the soundscape, will be investigated. This ongoing research will help to better figure out the limits of the approach and to identify which of these can be overcome.

Parallel to this, we are developing another study that analyzes the simulation of completed urban projects, produced by the developers, in comparison with photos of the realization taken from the same point of view. This research will give not only the possibility to highlight the gap between simulation and reality, but also to identify a trend in the professional production of this kind of products. Having this analysis at hand the final goal is to quantify the typology and magnitude of an eventual distortion. This will give the opportunity to reflect on the role that this kind of mediums, widely used, have on decision-making processes.

Figure 6. Comparison between simulation and realization

Figure 7. Existing and simulated condition

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RECYCLING THE PAST: THE CASE OF THE INTENSIVE TRAINING PROGRAMME IN URBANISM "RADI RIGU!" (CREATE RIGA!)

Helena Gutmane [1], Jan Schreurs [2]

Abstract

This paper traces the etymology of the case in continuing professional education (CPE), restoring its historical societal roots, and discusses advantages which an integrative approach offers to planning education, to the urban planning practice and urban development in general. The narrative is drawn from the initiative of a multidisciplinary team of practitioners and scholars in the fields of planning, architecture, landscape architecture and transport engineering. The project RADI RIGU! – a number of innovative workshops undertaken in 2011/2012 - actualized the role of urban public spaces in social revitalization processes, the communicative and procedural character of the urban project. It made an effort to place the idea of spatial strategic planning in post-Soviet mindset as well as to elaborate new, more communicative tools and an "emotionally rich language for planning" (Sandercock, 2001). Finally, it introduced an integrated three-dimensional format of continuing professional education, amalgamating lifelong learning, urban action and implementation-aimed outcome. The methodology of the programme is inspired by a series of workshops on public space on the Belgian coast (Schreurs, 2007). It is also based on the reconstruction of the "*talka*" methodology, the popular form of volunteer work in the USSR.
The paper introduces the notion of social heritage and declares its ultimate place in the "ecology of planning" (Schreurs, 2012).

1. **Introduction:** three perspectives

> Olden times are settled for us in a perspective, where a lot of circumstances are shaded, direct lines dominate, and we are disposed to take them for conclusions, for the simplest contours of evolution. And partly we are right: historical memory passes by the insignificant facts, holding only those that are fraught with a further development. However, historical memory can be mistaken, in these cases the new that has to be observed, is a gauge for the old, lived over out of our experience (Veselovskij, 1989)

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Being placed in the centre of urban triangle "real world"– professional practice – professional education, we observe three (evidently) interrelated perspectives.
The first - "real world" – is at the moment in the process of crossing the "post-bridge" from not yet fathomed past into a difficult, unfathomable future. Like in post-colonial or post-dictatorial environments, post-Soviet space is revising its own "social" past: right now an overwhelming revelation of the "historic facts", as well as their reconsideration and interpretation, is taking place. Society is waking up after a twenty-year long "shock therapy" of wild capitalism. Confused collective memory is trying to allocate itself in unknown surroundings, looking for help and answers in the past. All realms of life – art, economics, politics, social life, education – are going through external and internal revision of processes: both "in the wild" (Hutchins, 1995), and within their own fields. Cinematography shapes the form of „historical memory"[3], endowing "with a poetic value that which does not yet possess it" (Aragon, 1918, Hammond, 1978, pp.28-31) in order to transfer into present public images of feelings (Geertz, 1973).
Searching for new forms of relationship with society, politicians brandishing poetical images of Harmony[4] and Integration are undertaking attempts to restore and apply some tools to collective work used effectively in Soviet time.

Secondly, mirroring the processes "in the wild", the academic world related to the realm of human settlements nowadays is searching for new, more integrated and interdisciplinary, forms of education. These forms strive to reflect the needs of different overarching fields, growing demand for all kinds of participation, interdisciplinary and interdepartmental collaboration and international co-operation. It is possible to trace similar tendencies in Latvia as well. However, intellectual and structural damages in the system of education, especially high education and research, practically paralyzed this field for two decades, and the recovery probably will require much time and financial resources. Combined with a wild and chaotic urban development caused by the spreading of private ownership, the heavily bleeding education and research in architecture have been laying in a coma. City planning as a discipline had died.

Thirdly, unlike the professional education, last years' professional practice evidently reacts to the chaos created by financial capital based on a dogma of holy real estate (Redbergs, 2012) by alerting people both in everyday city making and professional education about the existing "dead ends". Young professionals in architecture,

[3] Popular Russian series „Александровский сад" [Alexander's Garden] recreates the last days of Lavrentiy Beria, the most influential of Stalin's secret police chiefs in the film "Охота на Берию» [Hunting Beria] (2008) http://www.domkino.tv/announce/6545 , *rus*. [Accessed 5 May 2012].
[4] "Saskaņas centrs" [Harmony Centre] is the name of the popular Latvian political party, which has declared overcoming ethnical and social conflicts their main goal.

planning, geography and sociology are successfully experimenting with new creative initiatives, promoting social revival in different ways. Challenging the prevalent black-and-white picture of the Soviet past (Rozenvalds, 2010) in the 1990s, when the terms "social" and "collective" were coloured dark black, they create "Socmap"[5], "*Ideju talka*"[6], "*Pagalmu talka*"[7], SPP[8], involving inhabitants, children, students, city departments, real estate developers and politicians in debates and action.

Urbanism as an approach is frequently on the agenda of city makers, but urban activism becomes a form of implementation of urban innovations. New NGOs which promote urbanism are appearing in the Baltic States - *Linnalabor*[9] in Estonia and Urban Institute Riga (2011) in Latvia. There are two significant features which characterize public urban action today. First, it obviously functions on a regional level, building tight and creative cross-border cooperation (e.g. Est-Lat urbanist days 2011 in Kabli, participation of *Linnalabo*r in RADI RIGU! Forum and others). Secondly, it declares and exercises a shift from protest-based action to trust-building action. In this respect the comprehensive RADI RIGU! programme delivers convincing results.

2.1. Planning status quo: pre-Soviet, Soviet and present-day Latvia

When trying to understand today we turn to yesterday and consequently to the day before yesterday. This "day before" draws some surprising parallels with today. Geopolitical cataclysms throughout the centuries as well as national renaissance shape the "seismic landscape" of the country which at that moment did not yet have own statehood and was a part of the Empire of Russia. Mental environment of nascent national consciousness sensitively responds to the processes in European cultural life and especially to the rise of modernism. We can read this today in the built environment of Riga. At the turn of the 20th century Riga created its own unique ensemble of Art Nouveau, which nowadays has become a spectacular part of the

[5] Recently (2009) built and pending approbation virtual interactive platform for inhabitants for active participation in improvement of their own environment http://socmap.com/ [Accessed 18 May 2012].
[6] Ideju Talka (The Talka of ideas), translated as Do Talk, is using the homonymy of the Talka (volunteer work, *latv*.) and talk (act of speech, *eng*.). The DoTalk co-creation event technology was developed in mid-2009 in Latvia based on belief that we can organize ourselves in a way that everyone's ideas, motivation and contribution work in synergy with contributions of others towards making ideas happen, reaching common goals and overcoming the crisis. http://idejutalka.lv/pages/en [Accessed 18 May 2012].
[7] Pagalmu Talka (Courtyard Talka) is a kind of volunteer work aimed at improvement of own environment. http://www.talkas.lv/?page=621&lng=en, [Accessed 18 May 2012].
[8] Skolnieks, pētnieks, pilsētnieks (SPP) means Pupil, Explorer, City-dweller. It is an initiative (2009) of young architects for educating children in architecture and planning, using a creative game-based workshop method. http://www.skolniekspetniekspilsetnieks.lv/ [Accessed 18 May 2012].
[9] Linnalabor (Urban Laboratory) is in 2006 founded Estonian NGO that exercises urban activism. http://www.linnalabor.ee/en/?lk=0 [Accessed 18 May 2012].

national heritage. The garden city idea made Riga one of the nicest and earliest (1901) examples of this movement in Europe (Dāvidsone, 1988)

One may argue that at the end of the 19th and the beginning of the 20th century Latvia was in the avant-garde of modern planning and architecture developments, following other European cities like Berlin, Munich, Copenhagen or Saint-Petersburg. Some milestones of professional history mark rapid development of and about architecture, synchronized with the building of Latvian national identity in that period. Among them are the opening of the Polytechnic School in Riga in 1862 akin to those of Karlsruhe (1825) and Zurich (1855), creation of the building department in 1869. There is a remarkable difference between the activities nowadays and those of the first generation of Latvian civil engineers and architects in politics, cultural life and education: a civil engineer A. Anderson became Lord Mayor of Riga (1921-28), professors of architecture founded the new Faculty of Architecture in the University of Latvia (1919) and the Union of Latvian Architects (1924). (Le Bourhis, 2010, p.47)

The fight for independence following the First World War resulted in the first years of independence in the history of Latvia: in 1918 The Latvian Republic was proclaimed. It was a time of building national identity. After gaining the status of capital city in 1918, Riga started to develop the features of monumental character in architecture, monuments, memorials and also in planning (Redbergs, 2012)

The reflection on the city favoured the introduction of international knowhow. Urbanism (elaborated by *pilsētu būvniecība*, a copy of the German *Städtebau*), being a discipline taught in Riga since 1917, kept the tradition of the beginning of the century of the cultural exchange between cities. After 1920, the city of Riga, strong in having a heroic and sensible part in European debates on the city, did not renounce urban growth. Riga, convinced of having a national and international exemplary mission, tried to form a „Great Riga", promoted by Latvian architect-urbanist Arnold Lamze (Le Bourhis, 2010, p.47)

World War II ended for Latvia with annexation to USSR in 1945. That was also a start of intensive economic, industrial and building development as well as a rapid increase in population due to immigrants coming from all Soviet republics. Soviet Latvia was presented as a "model Soviet republic" to the Western world, and the geographic position of Riga determined its position as a "borderland avant-garde", administrative centre of the Baltic region (Redbergs, 2012) Three planning events crucial for the present situation were carried out: nationalization of land, followed by organized deletion of the notion of "private property" and the system of centralized planning adapted to the "one landlord".

After the collapse of the Soviet Union in the 1990s Latvia regained sovereignty and established a free market. The effect of an "avalanche-like" transition from a rigid system of central planning to a free market economy in its wildest, uncontrolled form on

social as well as emotional and mental environments can be compared to an effect of a military intervention: a significant part of society was not able to adapt to the new unknown, obscure and, more importantly, alien order of rigid capitalism. Not for the first time and not only with us, history "played a bad joke": striving for independence and departing from the "prison" of Soviet Union with an extreme enthusiasm, we found ourselves in the middle of storming water[10] without an appropriate boat or necessary skills. Used to free services and rights guaranteed by the state – work, education, recreation, healthcare and housing - we were not able to understand the new meaning of "my private property" concerning own living place.

The inhabitants' small concerns about their own and common physical environment, low social activity and participation in urban development, explicit apolitical behaviour, inability to act in the urban space, absence of understanding and culture of communication in the new economic conditions were the side effects of the gained "freedom". These were the general feelings of the common people in the 1990s, and it was no different for professionals of urbanism. Knowledge about these aspects of "life of feelings" (Geertz, 1973) at that time is crucial for understanding the processes in city development today.
Booming real estate, becoming a major force for urban development, required quick solutions for the conflict zones. Shortly after 1991[11] an elaboration of the Riga development plan for 1995-2005 started. Its author A. Roze called this time a „time of metamorphoses" which completely changed the art of social life of the last 50 years Riga had to transit from the industrial type of social city to the post-industrial model of spreading agglomeration which consequently led to structural changes.(Redbergs, 2011)

Professional society met this "time of metamorphoses" without the necessary skills and education in planning. There are two reasons for this. First, the system of centralized planning was destroyed and together with it the Soviet system of planning institutions became obsolete. Second, the few planners who had been active in Soviet times, had started their professional careers after the Second World War, and in the 1990s had reached the age of retirement. (Le Bourhis, 2012) Culturally and professionally attached to the Soviet period they were neither skilled for the planning of a free market environment nor able to communicate with a new type of political leaders. Furthermore, the "volume architects" could not rescue the situation because of their concentration on the aesthetic dimension of architecture.

[10] Interesting embodiment of the 'water" metaphor appied to the first post-Soviet decennia is presented in the documentary about the former owner of Yukos Oil Mikhail Khodorkovsky. Film "Hodorkovsky" "tells the drama of Khodorkovsky's Odyssey, all the way from socialist believer to perfect capitalist and subsequently becomes the most known Russian prisoner...." http://www.khodorkovsky-movie.com/ [Accessed 1 May 2012].
[11] The year when was internationally accepted the state status of Baltic countries.

As a result, the "workshop-kind" and "spot-kind" planning and design became very popular. The well-known (Gehl, Kolhaas, Forster, Meinhard von Gerkan etc.) foreign specialists were invited to consult and to create representative architecture. However, unlike the post-social cities of Central Europe like Berlin, Budapest, Prague or Warsaw, Riga implemented only a few of their projects. A significant number of international workshops, seminars, contests and *plain-airs* were organized to develop large-scale real estates and to provide expertise in urban development.

Despite these activities, their actual impact on the built environment of the city remained insignificant. The weakness of the planning structure, absence of comprehensive approach to city development and political interest in public space, land-use based urban development regulations are the main reasons for the inefficiency of the existing system. The Riga Spatial Plan 2006-2018 is in fact a transition between the Spatial Structure Plan and a land-use-based planning document (Geldof, De Vriendt, Gutmane, 2009), but strategic approach to public spaces is not present in any form and in any kind of planning documents (Gutmane, 2010).

However, two more reasons of organisational character should be mentioned. One is undeveloped expertise and extreme shortage of good professionals in project management as well as a lack of understanding of it importance. In the last 20 years Riga has not realized any remarkable public space projects, and all of the few ongoing projects are struggling with the designing process as well as communication within different departments and with inhabitants.

The second is negative attitude towards any form of participation within city administration and politicians, based on insufficient knowledge about this trust-building instrument. Existing regulations for public discussion provide a legal platform for participation. However, because of the dominating mistrust and fears of negative reaction among politicians and city officials, these regulations usually are fulfilled very formally. Participation and involvement of all relevant actors is not deemed either necessary or very effective for the outcome of the project. Therefore these actors are not integrated into the planning and designing process on a regular basis.

The idea of integration as a two-way process is often stressed as the idea of cooperation and the necessity for both sides to overcome mutual mistrust and a feeling of being threatened.(Kunda, 2010, p.61)

2.2. Education: historical "conceptual gross section"

Although implementing modern planning ideas in practice from the beginning of the 20th century until the Second World War, in the realm of education professional society in Latvia remains focused on the aesthetics of built environment and does not develop its own school in planning. This tendency became a tradition which one could call a

"school" or "volume architecture" oriented look on urban environment in Riga. A comprehensive approach to city development, which requires serious research in the fields related to built environment, is also absent due to the repeatedly mentioned influence of the fall of the Soviet system.
In the Soviet Union the functions of education and research were delegated to different institutions, however, they were not separated. The dense and multilayered (and also well-financed) network of the Научно-Исследовательский Институт (NII, scientific research institute) ensured development of scientific research in different spheres related both to theory and practice. The realm of architecture and planning had and still has its own scientific organizational body – Российская академия архитектуры и строительных наук (the Russian Academy of Architecture and Built Sciences) A significant amount of work in scientific research was elaborated in high schools. The post-graduate researchers (doctoral candidates), whose research was attributed to the high schools, were the "binding layer" between universities, the NII and the practice. Russia to a large extent has kept this system nowadays, adapting it to the current economic situation (Сабитов [Sabitov],, 2002).
The situation in Latvia after the fall of the system built in the Soviet times was antipodal. After the demolition of industry, the system of field-specific scientific research and following academic layer of scientific education that had functioned so well before was completely destroyed: research institutions were closed, post-graduate education was left without financing, and demand for scientific research decreased considerably.

All aforementioned phenomena – transition to a free market economy, collapse of the Soviet planning and education system and traditionally aesthetics-based school in professional education, determined the current status quo in planning education. Despite the fact that the Faculty of Architecture and Planning in Riga Technical University includes the word "planning", systematic knowledge in planning has not been provided.
However, the evident changes of socio-economic situation all over the world, rising awareness of urgent necessity of integrated approach to urban practice and education do not leave much space for pure aesthetic issues. Growing quality of education in landscape architecture in Latvian University of Agriculture, on a regular basis provides comprehensive to planning and design of open spaces, opening of the alternative programmes in architecture, urban design and planning and active interaction between the students from different universities influences the interests of the new generation. Good illustration of this was the recently (February 2012) organized exhibition of the diploma projects of the Riga Technical University alumni, "40 jauno arhitektu stāsti" (Stories told by 40 young architects). The majority of the projects deal with public and open space issues rather than with pure architectural subjects.

Thus the professional environment in today's Latvia, especially in Riga, seeks to obtain skills, knowledge and professionals with a comprehensive mindset appropriate to the rapidly changing environment. The education field does not provide enough possibilities either for young people or for practitioners. The latter, having more urgent need of urban knowledge, are especially "deprived" - in Latvia there is not one possibility of lifelong learning in urban planning which would give chance to gain information and skills without leaving one's own practice.

2.3. "Subbotnik"– a sustainable form of social co-operation?

> Participation in networks is an important form of social capital. In times of need it can be activated, and under certain circumstances it can be transformed into economic capital.(Rajevska, 2010)

Riga's rich cultural heritage[12] forms the basis of the qualitatively built and successfully functioning system of built heritage protection. However, there remains an equally rich social heritage which is currently underestimated, unexplored and therefore not used in urban practice. The history of Latvian society provides us with unique examples of collaborative creation of the built environment already in the beginning of the 20th century. We compare two historical social events in Latvia - one from the times of the Russian Empire in the beginning of the 20th century and another from the Soviet social practices.

The first took place in the area of Riga's garden city *Keiserwald* (germ., old), today's Mežaparks (latv., Wood Park) in 1913 as an initiative on laying out a new public park. The action was organized by the recently founded public organization *Latvijas Izglītības Biedrība* (Latvian Association for Education) which was indented to promote and develop Latvian schools, kindergartens, libraries and reading rooms. The process of building *Saulesdārzs* (Garden of Sun, latv.) was organized as a common action, with the participation of Latvian businessmen, intelligentsia, inhabitants and city officials. The private property was bought with donated money; the design and implementation were created in a participative way (Neimane, 2012, p.9) Today *Saulesdārzs* has kept its public function in a reduced form (albeit an attempt of its privatisation was undertaken) as well as its historical composition. However, its most important quality, which nowadays is discussed as element of sustainable urban development – its significant role as a facilitator of social activity, national identity, collaborative design and economic activity - is completely lost.
A different phenomenon, appearing in recent urban practices, is *Subbotnik* (from *суббота* – Saturday, rus.), the form of volunteer work developed during the Soviet time. This contemporary legend was drawn from Lenin's articles "*О героизме рабочих в тылу. По поводу «коммунистических субботников*", (1919, About

[12] Historical centre of Riga is protected by UNESCO

heroism of the workers in the rear: the case of communist *subbotniks*) and "*Великий почин*", (The Great Initiative, 1920), and based on the real event of volunteer work on Moscow's railway in spring 1919. The success of the first event and its enormous positive impact on the mood of the people determined the following systematic development and popularisation of the initiative during the whole Soviet period. Although the form of the event has changed, shifting from the industrial sphere in the beginning of the USSR to the works on public space towards the end, the mental and (one may argue) also emotional positive image of *Subbotnik* has remained deeply rooted in the mentality of the Soviet people.

Under circumstances of general instability and bewilderment in the years of financial crisis Latvia has restored (2008) the initiative of *talka* (Latvian equivalent for *subbotnik*) in its later form – as an "*Lielā talka*" or Big clean-up day (one might draw the parallel with Lenin's "Great initiative" in 1919) of outdoor space. Officially *Lielā talka* was initiated by the President of Latvia at that time V. Zatlers with an overarching aim of "making nature garbage-free, allowing it to recover and urging people to take care of their environment." (www.talkas.lv, 2012) In 2010 the new dimension - of upgrading public spaces – was added as an initiative of social workers and landscape architects. This new form, gaining more and more popularity by inhabitants as well as by professionals, this year gathered professionals and students of architecture, landscape architecture and art and had huge success as socialization act with visible results of improved living environment. The format of *Pagalmu talka* (Courtyards' talka) includes workshop based student competition, competition based selection of the courtyards and principles of public private partnership in implementation.

2.4. CPD as an instrument for urban development

By the year 2010 an international group of professional planners and landscape architects working in Latvia started to explore the possibility to apply the principles of Talka to urban planning and design. A scope of several factors worked as the driving impulse: the aforementioned lack of political interest regarding public spaces, insufficient professional knowledge and experience in urban planning and design, passive societal attitude, growing mistrust, aggression and segregation between all social groups – politicians, professionals, inhabitants, city departments and businessmen. A year later an intensive training program *RADI RĪGU!* (Create Riga! 2011-2012) for practitioners in city planning, architecture, landscape architecture and road engineering was launched. The subheading and main subject was "public space as lever for social revival". The broader aim was to bring to the "round table" as many stakeholders and shareholders of Riga's development as possible, in order to activate discussions about an integrated approach to city development and to create trust among professionals, politicians and inhabitants. This defined the heterotopian nature of the programme.

2.4.1. Professional training + urban action + implementation

"RADI RĪGU!" had a 3D aspiration – as a professional training programme in urbanism, as an urban action and as an at implementation aimed research by design. All three dimensions of the programme were interwoven with a strongly expressed socially interactive and communicative character.

2.4.2. Professional training

The training programme RADI RĪGU! had the intention to provide experience in all stages of planning and design, from project definition to project management, for a multidisciplinary team of practitioners: architects, landscape architects, city planners and road engineers. Despite objective and subjective difficulties – a rather high price for training in a time of economic crisis, the large amount of time required, a very vague idea about the issue of spatial planning, project management, participation and involvement – 25 professionals working in Riga's architectural bureaus, among them in Latvia well-known professionals, responded to the call. A multidisciplinary, multi-aged and international group started training in April 2011 and worked together in nine workshops during one year.

High-level professional expertise was guaranteed by the international team of coaches from University of Leuven (prof. J. Schreurs and prof. Jef Van den Broeck), Free University of Brussels (prof. Marc Martens), Belgium and experts from Copenhagen (Tina Saaby, city architect), Barcelona (Jordi Farrando, architect) and Moscow (Anna Schtetinina, architect, leader of "Arhistojanije") were invited to participate in different phases of the work.

The workshops were organized in three phases, each aimed at a different stage of project processing.

Phase 1	**Phase 2**	**Phase 3**
• Project preparation	• Concepts	• Strategies
• Project definition	• Sketches	• Management

In order to provide exercises in the beginning stage of urban project participants were invited to select cases – spaces in Riga's neighbourhoods. Before the start of the programme the participants decided to work on city neighbourhoods rather than the city centre. They were motivated by the necessity to pay professional attention to the periphery of the city, left out of professional interest for the last 20 years.

From twelve spaces offered for selection they had to choose five according to the following criteria, given by the coaches:

1. Strategic character of the neighbourhood
2. Large involvement of inhabitants
3. Ownership
4. In favour of local authorities
5. Complexity
6. Shining example

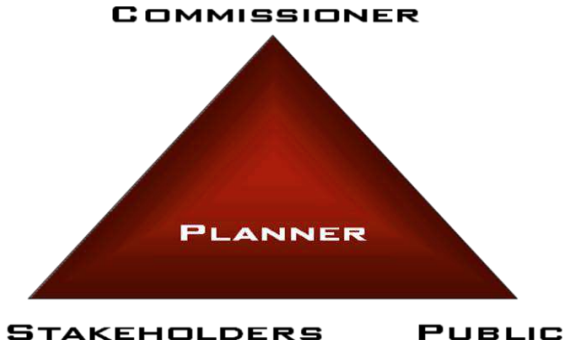
Selections were made in an interactive role-based way. One of the stages of selection included voting. The interesting fact is that by voting the chosen cases were re-evaluated guided by emotional attitude, which was influenced by feeling of social justice or, in other words, social sympathy: mono-social and identity-lacking neighbourhoods built in late Soviet time were preferred instead of spatially and socially more diverse ones which was more interesting for planning and design.

Instruments like mental mapping, analysis of different scales ("from space to place" method), visits of the sites, cross-evaluation and diversity games, combined with theoretical information given in the lectures by coaches, helped to receive and to adapt significant amount of new information as well as to apply the principle of integrated approach in the workshops and own everyday practice.

2.4.3. Urban action

RADI RĪGU! has made an attempt to build the trust by bringing public space users and policy makers closer to each other in co-operation. The call "City makers are on the street!" was the non-written slogan of *RADI RĪGU!*

The ultimate task of the intensive programme, disclosed in its title "CREATE Riga", is to make participants assume the role of mediators between decision-makers, stakeholders and the public.



The traditional soft PR campaign tools were used: a website (www.radirigu.lv), information in public media and open lectures given by the external experts. Two public conferences were organized during the programme: a mid-review of the results during the second phase and a two-day closing conference in the City Hall, which brought

together most of the important actors: politicians, decision makers, inhabitants, professionals, foreign experts and urban activists.

An effective tool for getting closer to users and city administration was "moving workshops". Started in the House of Architects, participants worked in all selected neighbourhoods, in the schools or district administrations, involving the local people. It created a platform for effective communication with inhabitants and local authorities.

Between the seminars participants did their "homework" on participative design, organizing workshops for children and involving different departments, real estate developers, NGOs, police and port authorities.

The integrative approach, applied as a methodology to all levels of the programme - aim, structure of the workshops, preparation of the process, selection of the cases, branding and implementation of the results, doubtlessly served as a strong communicative platform.
The integrative approach also determined multiple, layered aims of the project, which can be articulated in eight flows:

DISCOVER LEARN REALISE COOPERATE INVOLVE MARKETING LINK CREATE - RIGA!

1	2	3	4
DISCOVER	**LEARN**	**REALISE**	**COOPERATE**
the world of planning	**about a design process** from order to project definition from project definition to concept from concept to design from design to project	**real projects:** - on short term -relatively cheap -substantial -eye catching examples -pilot projects -best practices	all stakeholders and actors in all stages of the process: - decision-makers city administrations (national level) -district officials -external actors - NGOs
the importance of public spaces in all stages of the process	**project and process management** from idea to project from project to realisation from realisation to governance **to cooperate with:** stakeholders, actors, inhabitants **to preserve** spatial qualities during the whole process	-projects that improve daily living conditions in own neighbourhood	

5	6	7	8
INVOLVE	**MARKET**	**LINK**	**CREATE RIGA**
inhabitants in all stages of the process, including realisation and governance	integrate several stages of the process into public events: -happenings -exhibitions -design contests for children	link the project and its process to parallel events and programmes: - RIGA 2014 - Talka - Apkaimes	hand over a set of tools to the City of Riga in order to develop a real Public Space Policy: - methodologies, guidelines - motivated staff - skilled professionals - enthusiastic people

As an example one can mention communication with city officers at the early stage of the programme, which was organized not as passive information, but as active involvement. They were also invited to evaluate the variants of the programme‘s logo, which added an informal note to the communication process.
This preliminary friendly communication helped to create interest, understanding and personal engagement of the city officials invited to the discussions. Indeed, during the process they changed their positions from “observers” to “participants”. Initially discussions were not aimed at gaining permission or “financial support” (the project is partly financed by the ESF programme and participants themselves) but sharing opinions about questions such as “Is it necessary for Riga?”, “What do we need to make Riga better?” and “Which are the tools to achieve it?”.
All these activities definitely placed *RADI RĪGU!* on the public stage of the city. However, it must be admitted that the PR programme planned by the organizers was not entirely successful due to financial and time shortage. The biggest contribution to the successful “RR-story” concerning “best practice” public image was made by the well-organized and broadly popularized last conference in the City Hall as well as the FORUM –format of this event.

2.4.4. Implementation

Despite the great number of different workshops organized in Riga in the last two decennia, there was a lack of practical results: very few ideas found their path to realization. Therefore *RADI RĪGU!* and the city administration agreed (by signing a contract with the city development department) about possible implementation of the programme’s results.

It is worth mentioning that this agreement was an encouraging step and a sign of trust from the side of the city administration and politicians, because of a rather vaguely defined outcome and unknown result of the whole event. Moreover, the agreement was closed with a programme which was just an urban action, without any legal status. One

can argue that *RADI RĪGU!* is a unique example of (positive) collaboration between city authorities and urban activists, built on mutual trust.

3. Results? Results!

Before articulating the outcome of this heterotopian one-year-long urban action/training programme, it is worth briefly describing the initial emotional landscape of the story. Rereading the negative comments on the article announcing the start of *RADI RĪGU!* in the archive of the interactive architecture platform A4D (www.a4d.lv), remembering scepticism and mistrust, even resistance from the side of politicians as well as professionals, one would wonder if there ever was hope for (positive) results. There was, however, a shared space of enthusiasm, eagerness for new knowledge, love for one's own city and a rare air of creativity mixed with friendship. It was exactly this mixture that delivered results which were officially and publically approved on the *RADI RIGU!* Forum in March 2012.
The first and most important result is the fulfilment of the main goal, namely, to raise awareness of the need for a comprehensive approach to city development. During the year *RADI RĪGU!* activities – communication with inhabitants, public lectures, discussions with city officials – attracted enthusiastic people who joined the groups and worked on the projects together with the participants.
Due to its 3D character the training programme turned into a common event. Students and professors of three Latvian universities, civil servants, district authorities, Ministry of Environment, police, schools and inhabitants were all involved in the action.

The "homework" in communication and participative design resulted in the foundation of NGOs in two of the five programme's neighbourhoods.

The most mistrusted and (even among the coaches critically discussed) intention, to deliver practical results for the City in order to implement them, is in the stage of possible realization at that moment. Decision-makers publically announced their willingness to further develop the programme for neighbourhoods and particular projects created by *RADI RIGU!* The city development department has officially started to work on the proposals.

As a continuing professional development this programme fulfilled its task most successfully: all practitioners and students who participated in the training programme emphasized the high importance of the gained knowledge and skills for their further professional careers and understanding of the processes in the city.

The *RADI RIGU!* initiative has also gained international interest. Recently there have been discussions about possible collaboration with Umea within the cultural capital programme in 2014 and launching a set of parallel workshops on resilience, urban policies and community building in Latvia and Flanders.

However, the most important outcome of the programme, which was meant as a positive and constructive action of the professionals, may be that it is a demonstration "for" rather than "against". It is the first step in building trust and mutual understanding between participants of the urban project in its broader sense.

4. Conclusions

Searching for the more effective methods of professional education, the social aspect of learning appears not less important as the methodology. In this concern historical perspective of social life comes forward with forms of co-creation rooted in local culture. Together with material cultural heritage and not-material ones like song festivals, carnivals or religious rituals, the social heritage as ritual of spatial co-production has a capacity of being transformed into new forms of urban planning practice and education. The case of *Talka*, its shift from industrial production to spatial co-production provides us with valuable information and methodologies.

Contemporary urban development more and more turns into mass creativity and mass innovation, but urban co-production requires interaction of all actors. Learning in architecture and planning, having creativity at the bottom (Schreurs, 1986), has to become a platform for urban development as open source and co-creation ("yes, you can use my ideas"). As much as urban project "in the wild", the "laboratory" of urban education as mayor task has to provide professional training in co-existence, non-aggressiveness, tolerance. The programme *RADI RĪGU!* with its evolution from shared mistrust and resistance to shared enthusiasm and willingness to co-operate, offers a convincing methodology for creative learning.

RADI RIGU! has a heterotopian character and combines learning, urban action and the aspect of implementation. As such it was like heterotopias often are (Dehaene, M., De Cauter, L. 2008), a "reaction on crisis". It complies with a planning cycle which analyzes an existing situation, develops a vision about a better future, implies transformations and evaluates these in the light of a next cycle (Schreurs, J., Moulaert, F. 2012) and marks a shift from ecological approach to planning education.

5831 words

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Planning for Natural Gas Fracking in the Barnett Shale, Texas: The Legal and Regulatory Framework And the Role for Local Governments

Rachael ***Rawlins***

Hydraulic Fracturing for natural gas is booming in Texas. According to the State's regulatory agency, of the 15, 466 new drilling permits issued in 2010, approximately 85% of those wells were hydraulically fractured. [1] Rigs are literally pulling up in neighborhoods. Faced with minimal state and federal regulation, Texas cities are on the front line in the effort to figure out how best to balance industry, land use and environmental concerns. Serious concerns include chemical toxicity, air and water quality impacts, and correlation to earthquakes, visual blight, traffic and infrastructure concerns, and the adequacy of water in this drought stricken state.

The focus of this study is the Barnett Shale Formation which underlies 5,000 square miles of the Dallas/Fort Worth area of Texas to depths of 6,500 to 8,500 feet.[2] The Barnett Shale in the Fort Worth basin of North Central Texas is by far the most active shale gas play in the United States,[3] and one of the largest drilling programs ever undertaken in an urban area. [4] Although, the effort is not without considerable controversy, the public in the area have been identified by some Texas attorneys as "the most accepting and accommodating of any urban or suburban population concerning drilling," likely due to the fact that many of the citizens own the mineral rights beneath their land. [5] Historically, this area produced oil and gas from conventional reservoirs, but there are now over 8,000 wells producing gas from the Barnett formation. [6] Gas production increased over 3,000% from 1998 to 2007, from 94 million cubic feet per day to over 3 billion cubic feet per day.[7]

Fracturing employs high-pressure jets of water and a mix of chemicals, including carcinogens and endocrine disrupters, to fracture rock and release natural gas. [8] Additives are used to reduce

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[1]

[2] Unconventional Gas Shales: Development, Technology, and Policy Issues, Congressional Research Service Report for Congress, 7-5700, R40894 at 4.

[3] Schlumberger, Incl, Shale Gas: When Your Gas Reservoir is Unconventional, So is Our Solution, http://www.pe.tamu.edu/wattenbarger/public_html/Selected_papers/--Shale%20Gas/shale_gas-%20schlumberger.pdf .

[4] Thomas Kurth et al., Shaking Up Established Case Law and Regulation: The Impacts of Hydraulic Fracturing, the Advocate, Winter 2011 at p. 25.

[5] Id.

[6] Id. at 5.

[7] Id. at 7.

[8] The Endocrine Disruption Exchange, http://www.endocrinedisruption.com/chemicals.introduction.php

friction (as the fluid is injected), to prevent bacterial growth (biocide), to prevent mineral precipitation (scale inhibition), to prevent corrosion, to prevent swelling of expandable clay minerals (clay stabilization), as gelling agents to support proppants, as surfactants to promote fracturing, and as cleaners.[9]

Depending on the properties of the formation, the fracking fluids may be water-based, oil-based or acid-based, and sometimes also include nitrogen and carbon dioxide to help foaming.[10] First, a hydrochloric acid solution is pumped down the well to clean up residue left from cementing the well casing. [11] In the deeper, high-pressure shales, operators then pump slick water (a law-viscosity water-based fluid) and proppant. Nitrogen-foamed fracturing fluids are commonly pumped on shallower shales and shales with low reservoir pressures. [12] The fracturing fluid both opens the fracture and to transports the "propping" agent. [13] The fluid is pumped under pressures up to 8,000 psi, enough to crack shale as much as 3,000 ft. in each direction from the wellbore. Several treatments may be used to produce multiple fractures at different depths, or further out into the formation in the case of horizontal wells. [14]

Fracking fluid chemicals and wastewater can leak or spill from injection wells, flow lines, trucks, tanks and holding pits. Most of the injected fluids, 60-80%, are returned to the surface as "flowback" water which typically contains proppant, chemicals, and trace amounts of naturally occurring radioactive elements from the geologic formation.[15] Concerns include the possibility that chemicals injected, naturally occurring substances disrupted, or toxins spilled at the surface may make their way into drinking water supplies. The USGS estimates about 15,000 gallons of chemical additives of waste in a three million gallon frac job.[16] Storage and transport are both a concern.

One issue of particular concern in the Barnett Shale is the adequacy of water supplies. Increasing water use due to growing population, drought, and Barnett Shale development has heightened concerns about water availability in North-Central Texas.[17] Hydraulic fracturing well can use 1.2 or up to 3.5 million gallons of water for a horizontal well. [18] One fracture treatment can use more than 500,000 gallons of water, almost as much as an Olympic size swimming pool (660,000

[9] http://energy.utexas.edu/images/ei_shale_gas_regulation120215.pdf at 16.
[10] Id.
[11] Unconventional Gas Shales: Development, Technology, and Policy Issues, Congressional Research Service Report for Congress, 7-5700, R40894 at 24.
[12] Schlumberger, Incl, Shale Gas: When Your Gas Reservoir is Unconventional, So is Our Solution, http://www.pe.tamu.edu/wattenbarger/public_html/Selected_papers/--Shale%20Gas/shale_gas-%20schlumberger.pdf .

[13] Unconventional Gas Shales: Development, Technology, and Policy Issues, Congressional Research Service Report for Congress, 7-5700, R40894 at 23.
[14] Id. at 24.
[15] Id. at 33.
[16] Id. at 34, citing USCS Fact Sheet at 4.
[17] Water Use in the Barnett Shale, Railroad Commission of Texas; http://www.rrc.state.tx.us/barnettshale/wateruse_barnettshale.php
[18] Id. at 33, citing Railroad Commission of Texas, Water Use in the Barnett Shale, July 30, 2008

gallons).[19] Sixty percent of the water used in hydraulic fracking comes from groundwater in the Trinity and Woodbine aquifers. [20] In the Barnette Shale, flowback water is primarily disposed of in underground injection wells.[21] Water is thus removed from the hydraulic cycle. Many rural communities rely on groundwater from the Trinity Aquifer as the sole water source. [22] In 1990, the Texas Natural Resource Conservation Commission designated the Trinity region to be a Priority Groundwater Management Area (PGMA), defined as an area where a critical water shortage is occurring or can be expected to occur in the next 25 years.[23]

Another concern is controlling air quality during both during drilling and fracturing . Emission include nitrogen oxides and volatile organic compounds (VOCs) from wellheads (natural gas leaks), flared gas (gas that escapes from the well during drilling and fracturing and is burned), equipment used for drilling, fracturing, and dehydrating gas (equipment exhaust), pipelines (natural gas leaks), flowback water tanks and pits (evaporating volatile organic compounds), and compressor stations (when natural gas leaves a well, it is sent to a gathering station and the gas is then compressed by an internal combustion engines and conveyed to a processing facility via pipeline).[24]

Drawing lessons for planning practice, this interdisciplinary law and planning paper reviews the status of both the science and the law related to hydraulic fracturing in Texas. Given trends in environmental law, the demand for energy and the importance of oil and gas industries in this state, the regulatory balance is unlikely to favor precautionary measures. This paper will consider the extent to which the risk is known, and whether the law requires industry to internalize the risk and the cost of this vast experiment. This paper will research the common law and regulatory framework at the federal, state and local level governing hydraulic fracturing in order to explore opportunities and constraints for local government.

I. Federal and State Regulations: Water

There is no state or federal regulation, nor any requirements for disclosure or testing of the chemicals that can be injected during hydraulic fracturing. Clearing up any confusion on this issue, the U.S, Energy Policy Act of 2005 included a specific amendment to the definition of "underground injection" under the Safe Drinking Water act to exclude "the underground injection of fluids or propping agent (other than diesel fuels) pursuant to hydraulic fracturing operations. [25] The EPA does retain some authority under the Safe Drinking Water Act to order

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[19] Id. at 24.
[20] Id.
[21] Id. at 40.
[22] Id. at 8.
[23] The Edward Aquifer website, The Trinity Aquifer, http://www.edwardsaquifer.net/trinity.html (Inclusion in a PGMA gives county officials some authority to regulate development over the Aquifer by requiring that developers prove there is water available before platting new construction. It can also aid in the formation of a groundwater conservation district, which would have taxing and regulatory power and could regulate water well spacing and production.)
[24] http://energy.utexas.edu/images/ei_shale_gas_regulation120215.pdf at 65, citing Governor's Marcellus Shale Advisory Commission, *supra* note125, at § 7.3.2
[25] 42 U.S.C. 300h(d)(1)(B)(ii).

remediation. However, as discussed below, there are legal questions concerning EPA's burden of proof that may prove problematic in the context of hydraulic fracturing.

Following intense lobbying from the oil and gas industry,[26] the federal government also exempted wastes from oil and gas exploration and production operations from the Resource Conservation and Recovery Act (RCRA), our "cradle to grave" hazard waste regulatory system which regulations the generation, transportation and disposal of hazardous wastes. [27] The exemption covers all wastes "intrinsic to and uniquely associated with primary E & P operations,"[28] which means all waste that has been brought to the surface during oil and gas exploration and production operations or waste that has "otherwise been generated by contact with the oil and gas production stream during the removal of produced waster or other contaminants from the product." [29]

In the Barnette Shale, flowback water is primarily disposed of in underground injection wells[30] where standards are set by the federal government. [31] The Railroad Commission of Texas operates a federally delegated program to permit underground injection wells which is reviewed by the Environmental Protection Agency every two years.[32] There are also some minimal federal standards that require best management practices to control stormwater during site construction for a well pad and access road that is one acre or greater.[33] The primary responsibility for water resources related to site operations site otherwise falls to the Texas Railroad Commission and local government.[34] However, other than limited disclosure regulations, discussed below, there no regulations established by the Texas Railroad Commission (RRC) that apply uniquely to hydraulic fracturing. [35] There are permit requirements for all oil and gas operations. [36] The RRC also has set standards for casing, cementing, drilling and completion.[37] However, unlike some

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[26] James R. Cox, *Revisiting RCRA's Oilfield Waste Exemption as to Certain Hazardous Oilfield Exploration and Production Wastes*, 14 Vill. Envtl. L. J. 1, 3 (2003).

[27] 42 U.S.C. 6921(b)(2)(A); see also Clarification of the Regulatory Determination for Wastes from the Exploration, Development and Production of Crude Oil, Natural Gas and Geothermal Energy. 58 Fed. Reg. 15, 284 (Mar. 22, 1993). The exception was initially a temporary exemption set by Congress in 1980 followed by an EPA study that concluded that regulation of oil and gas wastes under RCRA was not advisable

[28] Clarification of the Regulatory Determination for Wastes from the Exploration, Development and Production of Crude Oil, Natural Gas and Geothermal Energy, 58 Fed. Reg. 15, 284, 15, 284 (Mar. 22, 1993).

[29] Id. at 15, 285, see also James R. Cox, *Revisiting RCRA's Oilfield Waste Exemption as to Certain Hazardous Oilfield Exploration and Production Wastes*, 14 Vill. Envtl. L. J. 1, 7 (2003).

[30] Id. at 40.

[31] 42 U.S. C. 300(a)(1)(providing that "the Administrator shall publish proposed regulations for State underground injection control programs"); 42 U.S.C . 300h(b)(1)(providing that "regulations under subection (a) of this section for State underground injection programs shall contain minimum requirements for effective programs to prevent underground injection which endangers drinking water sources.")

[32] Sunset Advisory Commission Staff Report, at 12, November 2010, http://images.bimedia.net/documents/rct_sr.pdf

[33] Fact Based Regulation for Environmental Protection in Shale Gas Development, Energy Institute, University of Texas at Austin, February 2012, http://energy.utexas.edu/images/ei_shale_gas_regulation120215.pdf at 35-36.

[34] Thomas Kurth et al., Shaking Up Established Case Law and Regulation: The Impacts of Hydraulic Fracturing, The Advocate, Winter 2011 at 34.

[35] Id.

[36] Id.

[37] Id.

other states, Texas has no restrictions on the proximity of drilling to sensitive receptors, and no lining requirements that pits (apparently including flowback water impoundments). [38]
In so far as water supply is concerned, the Texas legislature has recently adopted legislation that requires the RRC to promulgate rules to require fracking operators to provide information on the total amount of water used in the operations.[39] Signs offering oil field water for sale can be seen on the highway and on internet sites that cater to the shale industry. [40]

Surface waters in Texas are governed by a permitting process based on upon a showing that it is not subject to prior appropriation, and it will not impair existing water users or become a detriment to the state or public welfare. [41] Groundwater use, however, remains unrestricted for hydraulic fracturing. The general rule for the use of groundwater resources in Texas is the rule of capture. [42]This rule can be modified through the creation of local groundwater districts with authority to limit groundwater production. However, the Texas legislature has also created an exemption for temporary water supply wells that service oil rigs from any regulation by groundwater districts.[43] The term "rig" is interpreted broadly so as to include workover rigs and other implement of well completion, which includes those related to hydraulic facturing. [44]

II. Texas Railroad Commission: State Law, such as it is, May not be Enforced

The RRC claims that the state rules for well construction have prevented even a single documented case of groundwater contamination from injected fluids.[45] However, according to a 2010 review by the Sunset Commission Advisory Commission, a legislative body that reviews state agencies to identify and eliminate waste, duplication, and inefficiency in government agencies,[46] the RRC has a particularly poor enforcement record and limited enforcement capacity.[47]

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[38] Hannah Wiseman, Regulatory Adaptation in Fractured Apalachia, 21 Vill. Envtl. L. J. 229, 271, 289 (2010).
[39] Tex. Natural Resource Code 91.851.
[40]Thomas Kurth et. Al., *Shaking Up Established Case Law and Regulation: The Impacts of Hydraulic Fracturing,* the Advocate, Winter 2011, at 21 (citing Texas Water Code 36.101).
[41]Thomas Kurth et. Al., *Shaking Up Established Case Law and Regulation: The Impacts of Hydraulic Fracturing,* the Advocate, Winter 2011, at 18 (citing Texas Water Code 36.101).
[42] Id. at 19.
[43]Id. at 20 (citing Texas Water Code 36.101).
[44] Id.,(citing "Water Use in Association with Oil and Gas Activities regulated by the Railroad Commission of Texas," http://www.rrc.state.tx.us/barnettshale/wateruse.php).
[45] Id.,(citing email from Ramona Nye, Media Relations Director, Railroad Commission of Texas to J. Austin Frost, Associate, Haynes and Boon, LLP (April 13, 2010).
[46] In 1977, the Texas Legislature created the Sunset Advisory Commission to identify and eliminate waste, duplication, and inefficiency in government agencies. The 12-member Commission is a legislative body that reviews the policies and programs of more than 130 government agencies every 12 years. Sunset Advisory Commission Staff Report, November 2010, http://images.bimedia.net/documents/rct_sr.pdf

[47] Id.

More than 60,000 wells were drilled from 2003 to 2008, representing an increase in production of 75%, however, inspectors and inspections rose only 6%. [48] Of the more than 80,000 oil and natural gas production-related violations found in fiscal year 2009, field staff forwarded less than 4 percent to the agency's central office for enforcement action.[49] There were 18,000 reports of water related violations, but the RRC took enforcement action on less than 1 percent of these violations. [50] Moreover, according to the Sunset Advisory Commission, the RRC was unable to say with certainty that there were no serious violations in the roughly 17,900 water pollution violations that did not go to enforcement. The RRC relies solely on the discretion of each district office to determine which violations should be forwarded for enforcement action,[51] and it fails to track data on operator violations in a way that would reveal the effectiveness of its enforcement efforts.[52] The Sunset Advisory Commission concluded that the Commission's enforcement process is not structured to deter repeat violations.[53]

According to the Sunset Advisory Commission, the RRC has not formally adopted any penalty schedule, and lacks any process to gather public input on what penalty levels should be for violations. [54] Moreover, the Railroad Commission conducts all of its enforcement hearings with in-house staff where the majority of participants (the administrative law judge, the attorneys who bring the charges, and the staff who investigate the violations) are all Commission employees. [55] The relationship between the judges, attorneys, and staff provides the opportunity for inadvertent ex-parte communication and may allow the Commission's staff (a party) to exert an unfair amount of influence over the administrative law judge's decisions.[56] The agency is also arguable compromised by its structure that includes a full time three member elected board (an anomaly in Texas) that relies on campaign contributions from the regulated industry. [57]

III. The Real Job Falls to Local Governments

Given the state of affairs at the federal and state level, most of the work is left up to the local governments. In Texas, concurrent state and municipal oil and gas regulations are widespread and have been recognized by Texas courts since the 1930's. [58] There are two categories of cities in Texas - home rule and general law.[59] General law cities are smaller cities whose powers are limited to those specifically authorized by state statute.[60] The Texas Constitution allows cities

[48] Thomas Kurth et al., Shaking Up Established Case Law and Regulation: The Impacts of Hydraulic Fracturing, The Advocate, Winter 2011 at 34(citing Pro-Publica Analysis based on Texas Railroad Commission Statistics).
[49] Id. at 33.
[50] Id. 33-34
[51] Id. at 34.
[52] Id.
[53] Id. at 1.
[54] Id. at 35.
[55] Id. at 36-37.
[56] Id. at 36-37.
[57] Id. at 1-2 (most state agencies in Texas have part-time appointed boards).
[58] Perry Pearce, *The Spectrum of Choices: Formulation and Implementation of Regulatory Land Use Decisions affecting Mineral Development*, in 3 Mineral Development and Land Use (1995).
[59] Id.
[60] Id.

with populations of more than 5,000 to adopt their own charters and become "home rule cities."[61] Home rule cities look to the state law only to determine specific limitations on their power.[62] The larger cities over the Barnett Shale have already taken the initiative to regulate many issues related to hydraulic fracturing, including addressing setbacks, well locations, green completions, closed loop systems, compressor locations, pipelines, waste disposal, truck traffic and noise regulation.[63] This paper seeks to identify some specific areas of concern where local governments could fill in the critical issues in the area of on-site water quality and air quality concerns that may be falling through the gaps at the federal level.

IV. Water Well Contamination, Hard to Prove

Allegations of water well contamination due to hydraulic fracking have been among the most prominent . Nationwide, there have been at least 36, and, in Texas, there have been at least seven, most in the Barnett Shale.[64] Most claims involve methane, chemical constituents (iron, manganese, etc.) and physical properties such as color, turbidity, and odor.[65] Proving causation, however, is difficult. The industry stridently denies any problem. According to one shale gas proponent, a university professor, speaking to a Congressional Committee: "the hydraulic fracturing process is safe, already well regulated by the various States" and that "the hysterical outcry over this process is completely unjustified."[66]

According to a University of Texas Energy Institute Report, some of the properties and constituents found in water wells may have been present before shale gas development began, but often there is insufficient baseline (pre-drilling) sampling or monitoring to establish the impacts of drilling, fracturing, and other operations.[67]Iron and manganese are common naturally-occurring constituents in groundwater, and, particularly in areas underlain by gas-producing shales, methane migrates out of the shales under natural conditions and moves upward through overlying formations, including water-bearing strata (aquifers).[68] It is also possible that water quality changes may be due to vibrations and pressure pulses disturbing constituents that were already present in the casing wall and bottom of the well the rather than by hydraulic fracturing fluids or leakage from the well casing.[69]

Another possible explanation, at least for contamination in the Barnett Shale, is that the water wells were drilled into the gas formation (as opposed to gas wells leaking into the water bearing formation). The theory is that the gas in the water wells naturally exists in the shallow Strawn Sand, beneath and intertwined with the Paluxy Sand aquifer in the far South Parker County area. This gas purportedly exists in discontinuous zones or puddles. Some older gas wells purportedly

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[61] Texas Constitution Article XI, Section 5.
[62] Id.
[63] State and Federal Legislation and Regulation of Hydraulic Fracturing, the Advocate, Winter 2011, 31, at 34.
[64] http://switchboard.nrdc.org/blogs/amall/incidents_where_hydraulic_frac.html
[65] http://energy.utexas.edu/images/ei_shale_gas_regulation120215.pdf at
[66] http://energy.utexas.edu/images/ei_shale_gas_regulation120215.pdf at8.
[67] Id. at 19.
[68] Id.
[69] Id. at 19.

produced natural gas from relatively shallow depths of 216 to 214 feet before hydraulic fracking begain.[70]

V. Trade Secret Protection Dominates Disclosure Rules

According to a University of Texas Energy Institute Report, "None of the water well claims involve hydraulic fracturing fluid additives, and none of these constituents has been found by chemical testing of water wells."[71] The Report specifically dismisses the "finding of acrylonitrile in a water well in West Virginia," noting "no evidence has been found that this compound has ever been used in fracturing fluid additives."[72] In that case, a resident of rural Wetzel County, W. Va., claimed that the water from her wells smelled like "industrial-strength cleaning solvent" and pointed to nearby hydraulic fracturing in the Marcellus Shale.[73] Tests by the state Department of Environmental Protection identified leaked gasoline as the source of the contamination, not process of drilling the gas wells. However, upon commissioning unofficial tests, she found high concentrations of acrylonitrile, in addition to benzene, and styrene. The local gas company denies that it used acrylonitrile, but has never fully disclosed what chemicals are in its fracking fluid.[74] Another drilling company, Haliburton, has listed as acrylonitrile or a compound including it on two U.S. patents for frack additives.[75]

Some statues, including Texas, have now started requiring some disclosure of fracking fluids. At the end of last year, the Railroad Commission of Texas adopted a limited disclosure rule that applies to fracking treatments of wells in Texas for which the Railroad Commission has issued an initial drilling permit on or after February 1, 2012.[76] The rule generally requires the supplier (the entity who provides additives for use in fracking treatments) or the service company (the entity that performs fracking treatments) to provide the well operator (the person responsible for the physical operation and control of a well) with the identity, the CAS number,[77] and actual or maximum concentration of each chemical ingredient intentionally added to the fracking fluid within 15 days of **c**ompleting fracking treatments.[78]

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[70] Mark McPherson, *Water Use and Water Law in Texas, from an Oil and Gas Perspective*, State Bar of Texas, Environmental Impact of Oil and Gas Production, January 13, 3012, Houston, at 17.

[71] Id. at 19

[72] Id.

[73] Charles Corra, Could Fracking Be the Culprit of Poisoned Water Wells in W.Va.?, http://news.change.org/stories/could-fracking-be-the-culprit-of-poisoned-water-wells-in-w-va

[74] Id.

[75] http://switchboard.nrdc.org/blogs/amall/epa_subpoenas_halliburton_and.html

[76] 16 TAC 3.29 (b), at http://www.rrc.state.tx.us/rules/signed-adopt-3-29-Dec13-2011.PDF.

[77] The unique identification number assigned by the Chemical Abstracts Service, the division of the Americal Chemical Society that is the globally recognized authority for information on chemical substances. Id. at (a)(5), (6).

[78] Id. at 3.29(c).

On or before the date a well completion report is submitted to the Railroad Commission, the operator must then complete a Chemical Disclosure Registry form and upload it on the Chemical Disclosure Registry, known as FracFocus, a publicly accessible national fracking chemical registry website.[79] This form requires information on each additive that includes the trade name, supplier and intended use, as well as each chemical ingredient, the CAS number, and the maximum concentration of each chemical used in the hydraulic fracturing treatments that has a Material Safety Data Sheet (MSDS, pursuant to federal regulatory requirements), but only a simple list of chemicals that do not have a MSDS.[80] However, there are four categories of chemicals for which disclosure is not required, chemicals:

(1) not disclosed to the supplier, service company or operator; (2) not intentionally added to the fracking treatment; (3) that occur incidentally or are otherwise unintentionally present; and (4) eligible for trade secret protection.[81]

The trade secret exception is particularly problematic. A supplier, service company or operator can simply elect to claim trade secret and will not be required to publicly disclose detailed information on the fracking chemicals unless their claim is challenged and the Texas Attorney General or a court determines that the information is not entitled to protection.[82] If an entity withholds information about a chemical ingredient, it is only required to disclose limited information to the Commission on the chemical family and the properties and effects of the chemical. Only landowners on or adjacent to the property where the wellhead is located, or a department or agency of the state[83] may challenge a claim of trade secret protection. In commenting on the draft rule, the City of Dallas unsuccessfully requested changes that would also allow municipalities to appeal a claim of trade secrets.[84] The City did note, however, that municipalities may generally fall under the category of "adjacent land owner" in light of adjoining public rights of way.[85]

There is a limited exception requiring the disclosure of trade secrets to health professional or emergency responder (specifically defined as someone who needs information in order to provide medical or other health services to a person exposed to a chemical ingredient)[86], who must then keep the information confidential, with limited exceptions for diagnostic or treatment purposes.[87] As explained by the City of Dallas, this provision does not include any exceptions for

[79] Id. at 329(2)
[80] Id. at (c)(2)(x).
[81] Id. at 4(d).
[82] Id.
[83] (with jurisdiction over a mater to which the claimed trade secret information is relevant). Id. at 4(f).
[84] Letter dated October 10, 2011from Jill Jordan, Assistant City Manager to the Rules Coordinator)
[85] Id.
[86] Id. at (15).
[87] Id. at (c)(4).

incidents where hydraulic fracturing chemicals are spilled on property. [88] The City of Dallas also raised concerns about the timing of the disclosures, noting that providing notice only after the hydraulic fracturing process has been completed is not an effective tool for dealing with incidents that occur during the hydraulic fracturing process. [89]

Not only does the rule severely circumscribe the possible challengers to claims of trade secret, but any challenge is subject only to consideration of industry concerns, with no weighing of the public interest. "Trade secret" is defined as any "formula, pattern, device, or compilation of information that is used in a person's business, and that gives the person an opportunity to obtain an advantage over competitors who do not know or use it."[90] The following six factors are to be considered in determining whether information qualifies as "trade secret:"

(A) The extent to which the information is known outside the company,
(B) The extent to which it is known by employees and others involved in the company's business;
(C) The extent of measures taken by the company to guard the secrecy of the information;
(D) The value of the information to the company and its competitors;
(E) The amount of effort or money expended by the company in developing the information, and
(F) The ease or difficulty with which the information could be properly acquired or duplicated by others.

VI. Local Government Act Could Assist EPA, Shore-up Common Law, and Expand Disclosure Requirements

EPA Administrative Orders, Range Resources

In the Barnett Shale, there has been one loud and particularly fierce debate, including a tussle between the state and federal government, over cause of methane and other contaminants found in drinking water near hydraulic fracking by Range Resources (the company). In late 2010, homeowners who lived near drilling complained that their tap water was bubbling and even flammable.[91] EPA specifically noted that the well (drilled in 2005) did not begin to show signs of natural gas contamination until after the conclusion of drilling and hydraulic fracturing activities.[92] EPA was also aware of at least one instance in which a private water well drilled into the Trinity Aquifer produced some gas during or shortly following drilling operations.

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[88] Letter dated October 10, 2011from Jill Jordan, Assistant City Manager to the Rules Coordinator)
[89] Id.
[90] Id. at (26).
[91] EPA website, Resources Imminent and Substantial Endangerment Order, Parker County, TX homeowners. http://www.epa.gov/region6/region-6/tx/tx005.html

[92]United States' Memorandum in Opposition to Defendants' Motion to Dismiss, at 3, http://www.epa.gov/region6/6xa/pdf/2011-05-09_range_plaintiffs_memorandum_%20in_opposition.pdf

Later, EPA also learned of elevated levels of methane, ethane, and propane in another nearby residential water supply well and earlier signs of effervescence in the water.[93] Initial water samples showed elevated levels of benzene, toluene, ethane, and a high level of methane, measured initially at that time at 7,810 μg/L, and later at even higher levels, 20,100 μg/L. EPA also sampled the production gas from the gas well, and performed compositional and isotopic fingerprinting analyses. [94] Isotopic fingerprinting is a method for determining the ratio of different isotopes of a particular element in a material such as gas.[95] Based on the results of the investigation, EPA determined that the presence of gas in the well is likely to be due to impacts from gas development and production activities in the area." [96]

Concluding that "methane in the levels found by EPA are potentially explosive or flammable, and benzene if ingested or inhaled could cause cancer, anemia, neurological impairment and other adverse health impacts," and that the contaminants "may present an imminent and substantial endangerment to the health of persons," EPA issued an Emergency Order on December 7, 2010[97] to the company to:

> (i) to notify EPA whether it intended to comply, (ii) to provide potable water to two residences, (iii) to install explosivity meters in two residences, (iv) to conduct a survey and limited sampling of water supply wells in the area, (v) to submit plans for additional soil gas surveys and indoor air concentration analyses of two residences, and (vi) to submit plans to identify gas flow pathways, plans to eliminate gas flow if possible, and plans to remediate impacted areas. [98]

The company denied culpability and the very next day, the Railroad Commission of Texas scheduled a hearing to evaluate whether the operations were causing or contributing to the contamination of the wells. Range maintains that their activities did not cause the contamination in the affected wells because they were drilling to depths of five thousand feet and the wells terminate about two hundred feet below the ground. [99] On January 19-20, 2011, the Railroad Commission of Texas (RRC) held hearings (during which EPA and the well owners refused to participate) and issued a final order on March 22, 2011 concluding that the hydraulic fracking operations had not and were not causing or contributing to contamination of any domestic water wells. [100]

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[93] Id.
[94] Id.
[95] Id. at 4.
[96] Id.
[97] Id. at 3-4.
[98] Id. at 15.
[99] Thomas Kurth et al., Shaking Up Established Case Law and Regulation: The Impacts of Hydraulic Fracturing, the Advocate, Winter 2011 at p. 25.
[100] Brenda Clayton, *The Future of Regulation in Hydraulic Fracturing*, 7th Annual Texas Energy Symposium, February 10, 2012, at p.11.

EPA's position was that it may exercise special emergency authority upon receipt of information that a contaminant "may present an imminent and substantial endangerment,"[101] and that there was no requirement that EPA demonstrate that a respondent caused or contributed to the endangerment as a prerequisite to issuing an Emergency Order.[102] EPA took the position that it did not have to prove causation to the same extent as would be required in a common law action. EPA relied on its emergency powers under Section 1431 of the Safe Drinking Water Act, 42 U.S.C. §§ 300f – 300j-26 (the "Act") and argued that the claim is complete without any assertion of violation of some statutory or regulatory provision or ongoing harm to a particular individual. EPA explained that this authority allows EPA to issue orders to "any other person whose action or inaction requires prompt regulation to protect the public health," id., and is intended to reach beyond those who violated the particular statute or who failed to comply with a regulation.[103]

In response the company's claims of a violation of procedural due process, EPA explained that the company was not without recourse. It may seek immediate federal judicial review by filing a petition under the arbitrary and capricious stand for review in the United States Court of Appeals.[104] However, the arbitrary and capricious standard of a review is a "highly deferential" standard of review, and EPA may need only to plead "a rational nexus" between the company's conduct and the potential endangerment in this case,[105] not actual causation.

Following an unfavorable, but not directly related, Supreme Court decision concerning a challenge to an EPA compliance order issued under a different federal statute, the Clean Water Act,[106] in March 2012, the EPA decided to drop it's case against Range Resources. In exchange, the company agreed to monitor groundwater. [107] Politically, the case was further complicated by antics on the part of the a landowner who created a deceptive video for the news media and the EPA where he hooked a water hose up to a gas vent (not a water line) and lit it on fire. [108]

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[101] United States' Memorandum in Opposition to Defendants' Motion to Dismiss, at 6 (http://www.epa.gov/region6/6xa/pdf/2011-05-09_range_plaintiffs_memorandum_%20in_opposition.pdf

[102] Id. at 6 (except as a narrow limitation in those situations in which an order requires the provisionof alternative water supplies).

[103] Id. at 8, citing See Hooker Chem., 749 F.2d at 988

[104] Id. at 8, citing 42 U.S.C. § 300j-7(a)(2); Trinity Am., 150 F.3d at 394.

[105] Id. at p.23, fn 15.

[106] *Sackett v. EPA,* (concluding that a civil action may be brought under the Administrative Procedure Act, 5 U. S. C. §500 *et seq.*, to challenge, on a jurisdictional basis, an EPA administrative compliance order under §309 of the Clean Water Act, 33 U. S. C. §1319)

[107] EPA Drops Pollution Case Against Range Resources, Dallas Morning News, March 30, 2012, http://www.dallasnews.com/news/local-news/20120330-epa-drops-pollution-case-against-range-resources.ece

[108] Cause No. CV11-0798, Order Denying Plaintiff's Section 27 Anti-Slapp Motion to Dismiss Range's Counter Claims, February 15, 2012.

VII. In Depth Study, still mired in Politics and Uncertainty

Pavillion, Wyoming

The U.S. Environmental Protection Agency's (EPA) first report firmly linking hydraulic fracking to drinking water contamination was filed in December 2011[109], but only in "draft form," for public comment and submission to an independent scientific panel. The research was prepared in response to a request residents in Pavillion, Wyoming. EPA detected synthetic chemicals, like gylcols and alcohols consistent with gas production and hydraulic fracturing fluids, benzene concentrations well above Safe Drinking Water Act standards and high methane levels in deep monitoring wells. EPA also re-tested private and public drinking water wells in the community which it generally found to meet established health and safety standards. However, given the area's complex geology and the proximity of drinking water wells to ground water contamination, EPA expressed concern about the movement of contaminants within the aquifer and the safety of drinking water wells over time.

EPA cautiously noted that the chemicals in the water wells and that the conditions may be unique in that the fracturing is taking place "in close proximity to drinking water wells," and that production conditions are different than in many other areas. Nevertheless, the results are hotly contested with industry arguing that EPA's study did not "adequately distinguish between potential natural impacts and those from gas drilling activities."[110] Obviously wary of political ramification, in March of 2012, the EPA committed to additional investigation together "with a group of stakeholders." [111]

Although largely ignored in the public controversy, also identified were contaminants in the shallow portions of the aquifer, including benzene, xylenes, gasoline-range organics (GROs), and diesel-range organics (DROs). The report identifies at least 33 surface pits as likely sources for the contaminants detected in shallow groundwater. The pits were used for disposal of drilling cuttings, hydraulic fracturing flowback, and water produced from the formation.[112]

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[109] http://www.npr.org/blogs/thetwo-way/2011/12/08/143381365/epa-report-links-fracking-to-water-pollution

[110] http://trib.com/news/state-and-regional/studies-present-differing-views-on-epa-fracking-report/article_eb1d9e24-eec2-5c49-a63b-67307789a2a1.html

[111] http://yosemite.epa.gov/opa/admpress.nsf/d0cf6618525a9efb85257359003fb69d/17640d44f5be4cef852579bb006432de!OpenDocument ("Together with the Tribes, the EPA and the State will convene a group of stakeholders and experts to develop and carry out a plan for further investigation of the Pavillion gas field to identify potential risks to drinking water, including possible sources and pathways for the migration of contaminants.")

[112] The EPA Draft Report of Groundwater Contamination Near Pavillion, Wyoming: Main Findings and Stakeholder Responses, January 25, 2012, CRS 7-5700, R42327, http://wyofile.com/wp-content/uploads/2012/01/R42327-2.pdf at 4-5.

VIII. Common Law, and the Burden of Proof

In Texas, there are multiple lawsuits arising from fracking operations in the Barnett Shale involving alleged contamination of water wells. [113] Potential difficulties in relying on the common law in the context of hydraulic fracking include the ability to track chemicals to the source, and standards of care that incorporate forseeability. Claims typically include nuisance, trespass, negligence, and sometimes strict liablity. [114]

Texas courts have defined a nuisance as "a condition which substantially interferes with the use and enjoyment of land by causing unreasonable discomfort or annoyance to persons of ordinary sensibilities attempting to use and enjoy it." [115] Three types of conduct may be considered a nuisance: 1) intentional invasion of another's interests; 2) negligent invasion of another's interests; or 3) other conduct, culpable because abnormal and out of place in its surroundings, that invades another's interests. [116]

Where the tort is "intentional," the defendant will only be charged with responsibility for the "substantially certain" consequences of any actions that the defendant intended to take (even if the defendant did not desire that those actions would result in harmful consequences).[117] A trespass is also usually regarded as an intentional tort in the sense that it involves an intent to commit an act which violates a property right, or would be practically certain to have that effect, although the actor may not know that the act he intends to commit is such a violation. [118] The obvious difficultly for plaintiffs bringing intentional tort claims for damages associated with drinking water contamination is that defendants will be able to argue that hydraulic fracturing is not (yet anyway) known to cause drinking water contamination. Negligence is no easier. A person can be liable for negligence if he causes harm to another by failing to exercise the care of

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[113] Holly A. Vandrovec, The Fight over Fracking: Recent Hydraulic Fracturing Litigation in Texas, Texas Bar Journal, May 2011, http://www.texasbar.com/AM/Template.cfm?Section=Texas_Bar_Journal&Template=/CM/ContentDisplay.cfm&ContentID=13928

[114] Id.

[115] *Watson v. Brazos Electric Power Cooperative, Inc*., 918 S.W. 2d 639 (Waco 1996), citing *Village of Euclid, Ohio v. Ambler Realty Co.*, 272 U.S. 365, 388, 47 S. Ct. 114, 118, 71 L. Ed. 303 (1926) (citations omitted).

[116] Id.

[117] Plater et. al, Environmental Law and Policy, Nature, Law and Society, 4th Edition, 2010, page 71.

[118] *Malouf v. Dallas Athletic Country Club*, 837 S.W.2d 674, 675 (Tex. App.--Dallas 1992, writ dism'd w.o.j.).

a reasonable person. [119]Again if the risk is unknown to the "reasonable person," the defendant can hide behind the current state of knowledge. Other claims, such as for the storage and disposal of drilling wastes, noise or air pollution should not prove as difficult. [120]

Strict liability is more promising, but it is unlikely to be available in Texas. The common law has historically recognized a theory of strict liability for defendants who engage in "ultrahazardous" or "abnormally dangerous" activities. The doctrine can be traced back to Rylands v. Fletcher, 3 H.L. 330 (1868), an English case where the defendants were mill owners who had constructed a large reservoir in which they stored water on their land. The water broke through material used to poly an abandoned mine shaft and flooded the plaintiff's coal mine. The House of Lords ruled that the plaintiffs did not have to prove negligence and held that the defendant can be held strictly liable for an abnormal and inappropriate use of his property. However, the Texas Supreme Court refused to follow the doctrine and required proof of negligence in a case where an oil company had constructed large, artificial earthen ponds to store polluted salt water generated by oil wells. The water escaped the ponds and flowed about six miles onto the landowners' property and into the water sources the landowners used to water their livestock. The court reasoned:

> [I]n England there are no oil wells, no necessity for using surface storage facilities for impounding and evaporating salt waters therefore. In Texas the situation is different. Texas has many great oil fields, tens of thousands of wells in almost every part of the State. Producing oil is one of our major industries. One of the by-products of oil production is salt water. Which must be disposed of without injury to property or the pollution of streams. The construction of basins or pounds to hold this salt water is a necessary part of the oil business. In Texas much of our land was granted without mineral reservation to the State . . . the right to mine in the usual and appropriate way, as for example, by the construction and maintenance of salt water pools . . . incident to the production of oil, were contemplated by the State and all of its grantees and mineral lessees, that being a use of the surface incident and necessary to the right to produce oil.

Despite this case, and its progeny,[121] however, the Texas Supreme Court has never ruled on whether hydraulic fracturing could be considered an abnormally dangerous activity, and there are plaintiffs are pushing forward with this theory in ongoing cases. [122] According to the modern abnormally dangerous activity doctrine, as "restated" in § 520 and of the Restatement (Second) of Torts, in determining whether an activity is abnormally dangerous, the following factors are to be considered:

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[119] See Restatement (Second) Torts §283.

[120] Plater et. al, Environmental Law and Policy, Nature, Law and Society, 4th Edition, 2010, page97..

[121] Doddy v. Oxy USA, Inc. 101 F. 3d 448, 461 – 462 (5th Cir. 1996)(allagedmigration of toxic chemicals from oil and gas well); see also Hall v. Amoco Oil Co., 671 F. Supp. 111, 112 -113 (S.D. Tex. 1984) (operation of oil refineries).

[122] Barclay Nicholson and Kadian Blanson, Tracting Fracking Case Law: Hydraulic Fracturing Litigation, Natural Resources & Environment volume 26, Number 2, Fall 2011, citing Harris v. Devon Energy Prod. Co., L.P., No. 3:10-cv-02554 (E.D. Tex., December 22, 2010); Holly Vandrovec, The Fight over Fracking: Recent Hydraulic Fracturing Litigation in Texas, Texas Bar Journal – May 2011, citing also Mitchell v. Encana Oil & Gas (USA), Inc., Parr v. Aruba Petroleum, Inc., et al.

(a) existence of a high degree of risk of some harm to the person, land or chattels of others;

(b) likelihood that the harm that results from it will be great;

(c) inability to eliminate the risk by the exercise of reasonable care;

(d) extent to which the activity is not a matter of common usage;

(e) inappropriateness of the activity to the place where it is carried; and

(f) extent to which its value to the community is outweighed by its dangerous attributes.

In Doddy v. Oxy USA, Inc., a concerning alleged health problems of landowners who lived near an oil well, the 5th Circuit Court of Appeals, reasoned that it is "somewhat unclear whether *Turner* can be read broadly to reject strict liability for abnormally dangerous activities. For one thing, *Turner* relied heavily on an earlier case, *Gulf, C. & S.F. Ry. Co. v. Oakes,* 94 Tex. 155, 58 S.W. 999 (1900), which involved the spread of the defendant's Bermuda grass to the plaintiff's land. It is doubtful that the escape of (apparently oil-contaminated) saltwater or the spread of Bermuda grass are "abnormally dangerous," at least as contemplated by the classic formulation in § 520 of the second Restatement of Torts." Doddy v. Oxy USA, Inc., 101 F. 3d 448, 462 (5th Cir. 1996). The Court further explained that it had previously interpreted *Fletcher v. Rylands* as a repudiation of strict liability in "cases where substances that are harmless and unobnoxious within themselves are stored or impounded upon one's land;" [123]and a repudiation of the "doctrine of strict liability for damages from impounded waters."[124] However, after examining other Texas Supreme Court Opinions, the 5th Circuit ultimately concluded that the Texas Court *has* rejected the abnormally dangerous strict liability tort.[125] The 5th Circuit also noted that the lower state courts have consistently refused to create strict liability for abnormally dangerous activities.[126]

Even if Texas were to apply the doctrine of strict liability for abnormally dangerous activities to hydraulic fracturing, liability may still be somewhat complicated by forseeability as strict liability is limited to the kind of harm, the risk of which makes the activity abnormally

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[123] Id. at fn. 12, citing *King v. Columbian Carbon Co.,* 152 F.2d 636, 639-40 (5th Cir.1945) (emphasis added).
[124] Id., citing *Ford Motor Co. v. Dallas Power & Light Co.*, 499 F.2d 400, 408 (5th Cir. 1974).
[125] Id., citing *Galveston, H. & S.A. Ry. Co. v. Currie,* 100 Tex. 136, 96 S.W. 1073 (1906)(a case involving the introduction of compressed air into a railroad roundhouse where the court noted that while "some of the older cases in England seem to assert the absolute liability of an insurer, … it is settled in this state that the question is one of negligence."); and *Kelly v. McKay,* 149 Tex. 343, 233 S.W.2d 121, 122 (1950) (applying negligence principles in the context of the use of explosives); and *Elliff v. Texon Drilling Co.,* 146 Tex. 575, 210 S.W.2d 558, 584 (1948)(suggesting that with regard to "the nature of oil and gas and the risks involved in their production [such as the possibility of an oil well "blowout"]," "in the conduct of one's business or in the use and exploitation of one's property, the law imposes upon all persons the duty to exercise ordinary care to avoid injury or damage to the property of others.")
[126] Id., citing *Barras v. Monsanto Co.,* 831 S.W.2d 859, 865 (Tex.App.1992); *Robertson v. Grogan Investment Co.,* 710 S.W.2d 678, 679-80 (Tex.App.1986); *Day & Zimmermann v. Strickland,* 483 S.W.2d 541, 548 (Tex.Civ.App.1972); *Roskey v. Gulf Oil Corp.,* 387 S.W.2d 915, 919 (Tex.Civ.App.1965); *Klostermann v. Houston Geophysical Co.,* 315 S.W.2d 664, 665 (Tex.Civ.App.); *Dellinger v. Skelly Oil Co.,* 236 S.W.2d 675, 677 (Tex.Civ.App.1951); *Stanolind Oil & Gas Co. v. Lambert,* 222 S.W.2d 125, 126 (Tex.Civ.App.1949)

dangerous. [127] The industry may still argue that water well contamination from hydraulic fracturing activity was not foreseeable at the time of the claim. A more viable option may be negligence per se, a concept in which a legislatively imposed standard is adopted by the civil courts as defining the conduct of a reasonable and prudent person.[128] An administrative rule or regulation can also be used to create the standard for negligence where the purpose of the rule is to afford protection to the class of person to which the injured party belongs from the hazard involved in a particular case. [129]

IX. Needed are Local, Site-Specific Regulations for Water

One proposal to deal with the difficult burden of proof is to require a "pre-permit" application process that involves an in-depth analysis of site specific conditions including sampling and chemical analysis of area wells both before and after a fracturing operation.[130] Home rule cities in Texas could follow Pennsylvania's lead. Pennsylvania reverses the burden of proof by establishing liability for water contamination by creating a rebuttable presumption that the well operator caused the contamination within 1,000 feet of the well and requires the operator to replace water supplies.[131] The operators must ensure that the new supply is as "reliable" and "permanent" as the previous water supply, and that it not require "excessive maintenance."[132] Also requires are "pluming, conveyance, pumping or auxillary equipment and facilities necessary for the surface landowner or water purveyor to utilize the water supply." [133]

Other regulatory measures in effect in other states include time limits on how long flowback water may remain on the site, specific limitations on the disposal of flow-back water, reuse and recycling, distance requirements from sensitive receptors, waste disposal plans, restrictions on roadspreading or landspreading, and design, maintenance and pit lining requirements. [134]
Some cities overlying the Barnett Shale have already adopted some regulations to deal with surface contamination. Fort Worth requires a "closed-loop" system wherein wastes from drilling and fracturing are stored within tanks, although it allows earthen lined pits for operations that are on open space of at least 25 acres and not within 1,000 feet of a "protected use." [135]Arlington requires a similar closed loop system with above-ground steel tanks for waste for gas drilling operations unless the Texas Railroad Commission provides a different directive.[136] Further

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[127] Restatement 2d of Torts, Chapter 21, §519.
[128] Carter v. Wiliam Sommerville & Son, Inc., 584S.W. 2d 274, 278 (Tex. 1979).
[129] Cont'l Oil Co. v. Simpson, 604 S.W. 2d 530, 534 (Tex. Civ. App. – Amarillo 1980, writ ref's n.r.e.).
[130] UT Energy Institute, http://energy.utexas.edu/images/ei_shale_gas_regulation120215.pdf, citing, Ubinger J. W., Walliser J. J., Hall C., and Oltmans R., 2010, *Developing Marcellus Shale: Environmental Policy and Planning Recommendations for the Development of the Marcellus Shale Play in Pennsylvania.* Harrisburg: Pennsylvania Environmental Council. http://marcellus.pecpa.org/wp-content/uploads/2011/06/Developing-the-Marcellus-Shale.pdf

[131]58 P.S. 601 208 (2011).
[132] 25 Pa. Code 78.51.
[133] Id.
[134] Hannah Wiseman, Regulatory Adaptation in Fractured Apalachia, 21 Vill. Envtl. L. J. 229 (2010).
[135] Id. at 289
[136] Id.

analysis is necessary to evaluate the adequacy of these regulations. Enforcement is, of course, also a concern.

Local government should also expand the disclosure requirements to minimize uncertain as to the source of any chemical contamination. Local governments could ask for more but must be wary of property rights arguments (this issue warrants further discussion and analysis, but is currently beyond the scope of this paper). Local governments could also engage in water supply planning and consider any limitations as may be necessary.

X. Air Quality, Federal and State Regulation

When an oil or gas operator drills and fractures a well, air pollutants, including nitrogen oxides and volatile organic compounds (VOCs), may arise from the following sources:

- wellhead (natural gas leaks)
- flared gas (gas that escapes from the well during drilling and fracturing and is burned)
- equipment used for drilling, fracturing, and dehydrating gas (equipment exhaust)
- pipelines (natural gas leaks);
- flowback water tanks and pits (evaporating volatile organic compounds); and
- compressor stations ("When natural gas leaves a well, it is sent to a gathering station and the gas is then compressed by an internal combustion . . . engine(s) and conveyed to a processing facility via pipeline."[137]

Pursuant to a 2010 Court entered consent degree, following a lawsuit filed by Wildearth and San Juan Citizens, [138] EPA recently adopted new standards for operators of new fractured and re-fractured natural gas wells that will require that they use technology capable of meeting the emission standards. The standards include both "new source performance standards" for criteria pollutants (a few common pollutants), and national emissions standards for hazardous air pollutants.[139] Under the Clean Air Act, oil and gas, like other industries, may also be subject to regulation through State Implementation Plans, as the discretion of the state, as may be necessary to meet health based National Ambient Air Quality standards established by the federal EPA.

Heath Based National Ambient Air Quality Standards are established only for a few common "criteria" pollutants - particle pollution (often referred to as particulate matter), ground-level ozone, carbon monoxide, sulfur oxides, nitrogen oxides, and lead - these are monitored on an area-wide basis.[140] The Fort Worth area in the Barnett shale has been designated "non-attainment" for ozone under the CAA, which means that the National Ambient Air Quality

[137] UT Energy Institute Report at 193.

[138] Proposed Rules Vol. 76 Federal Register 52738, 52743, Tuesday, August 23, 2011

[139] EPA final rule, published on 4/17/2012, http://www.epa.gov/airquality/oilandgas/pdfs/20120417finalrule.pdf

[140] EPA website, http://www.epa.gov/air/urbanair/

standard is not met for concentration in the atmosphere. The role of VOCs in forming smog and their contribution to the elevated levels of ozone one the reason for the focus on VOC emissions from shale gas activities.[141]

Oil and gas production facilities can also release more than 50 toxic air pollutants from a variety of sources, including "venting, dehydration, gas processing, compression, leaks from equipment (fugitive emissions), open-pit waste ponds, and land application of volatile wastes."[142] EPA originally tried to regulate "hazardous air pollutants," pollutants that are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental effects through health based standards, [143] but the experience was a failure. EPA explains that the health effects of hazardous air pollutants are potentially very serious:

> People exposed to toxic air pollutants at sufficient concentrations and durations may have an increased chance of getting cancer or experiencing other serious health effects. These health effects can include damage to the immune system, as well as neurological, reproductive (e.g., reduced fertility), developmental, respiratory and other health problems. In addition to exposure from breathing air toxics, some toxic air pollutants such as mercury can deposit onto soils or surface waters, where they are taken up by plants and ingested by animals and are eventually magnified up through the food chain. Like humans, animals may experience health problems if exposed to sufficient quantities of air toxics over time.[144]

In its original attempt to promulgate health based standards for these pollutants, EPA managed to develop standards for only seven hazardous air pollutants. Difficulties in standard setting were complicated by the fact that these pollutants threaten to cause very grave health effects at minimal exposure levels.[145] Many are considered to be "nonthresold" pollutants, meaning that no human exposure to them is safe, and there is limited data and high uncertainty in determining a "safe" exposure. [146] Moreover, some ambient standards must be so stringent that the controls may be exceedingly expensive, and, in some cases, not yet known. [147]In 1990, Congress largely abandoned the harm-based approach to HAP's and substituted a technology-based approach that called for the employment of MACT. The legislation identified some 180 substances to be regulated by that method.[148]

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[141] UT Energy Institute Report

[142] Colorado Department of Public Health and Environment (CDPHE), Air Pollution Control Division, "Hazardous Air Pollutants from Oil and Gas Exploration and Production" (October 2006), http://www.cdphe.state.co.us/ap/uat/atoilgas.pdf

[143]EPA website, About Air Toxics, http://www.epa.gov/oar/toxicair/newtoxics.html

[144] Id.

[145] Plater et al., Environmental Law, Natural, Law and Society, 3rd edition 2004, at p. 575.

[146] Id.

[147] Id.

[148] Id.

Under section 112 of the Clean Air Act, EPA publishes emission standards for hazardous air pollutants (NESHAPS) for "major sources," that is sources that emit or have the potential to emit 10 tons per year or more of a single HAP or 25 tons per year of more or any combination of these HAP. For major sources,[149] these technology-based standards must reflect the maximum degree of emission reductions of HAP achievable (after considering cost, energy requirements and nonair quality health and environmental impacts) and are commonly referred to as maximum achievable control technology (MACT) standards. [150] MACT standards are to reflect application of measures, processes, methods, systems or techniques, including, but not limited to, measures which, (1) reduce the volume of or eliminate pollutants through process changes, substitution of materials or other modifications, (2) enclose systems or processes to eliminate emissions, (3) capture or treat pollutants when released from a process, stack, storage or fugitive emissions point, (4) are design, equipment, work practice or operational standards (including requirements for operator training or certification) or (5) are a combination of the above.[151] CAA section 112(d)(2)(A)–(E). For new sources, the MACT floor cannot be less stringent than the emission control that is achieved in practice by the bestcontrolled similar source. [152]
The MACT floors for existing sources can be less stringent than floors for new sources,
but they cannot be less stringent than the average emission limitation achieved by the best-performing 12 percent of existing sources in the category or subcategory (or the bestperforming five sources for categories or subcategories with fewer than 30 sources). [153]

Especially given that the federal standards for hazardous air pollutants are not based on any determination of "safe" levels of pollutants, and that they can be affected by cost considerations, cities should think carefully about distance limitations between these hydraulic fracturing operations and housing, schools, daycares and other sensitive receptors. Some municipalities have established setback requirements, others, like Fort Worth, have also imposed air quality requirements on gas wells and their associated facilities, such as pits and tanks.

XI. Conclusion

If local governments are to protect their citizens, they must adopt regulatory measures. When it comes to protecting public health both federal and state standards fall short. There is no state or federal regulation, that regulates the chemicals that can be injected during hydraulic fracturing. Texas has adopted chemical disclosure requirements, but unless trade secret claims are challenged by a landowner, they are largely optional. Texas does have some regulations that govern oil and gas drilling, but given the dismal enforcement record of the state agency in charge, they cannot be relied upon to protect the citizens of Texas. Since there is generally no testing to establish baseline conditions, it is very difficult to hold the industry responsible for

[149] A major source includes "any group of stationary sources located within a contiguous area and under common control" that emits a certain number of tons of regulated pollutant annually
[150] Proposed Rules Vol. 76 Federal Register 52738, 52741 Tuesday, August 23, 2011, http://www.epa.gov/ttn/atw/oilgas/fr23au11.pdf

[151] Id.
[152] Citing section 112(d)(3),
[153] Citing section 112(d)(3),

contamination. Unless local governments establish testing standards, their citizens will likely bear the cost of any contamination. Given that Texas courts are unlikely to classify hydraulic fracturing as an abnormally dangerous activity subject to strict liability, it may also be particularly useful for local governments to adopt standards of care that can be used to establish negligence per se. Given uncertainties in the state of the science, it will nevertheless be very difficult for citizens to win a legal action under the common law. If local governments want to ensure that hydraulic fracturing does not suck them dry, it will also be up to them to establish water use restrictions. Finally, given that federal air quality regulations for the most hazardous of pollutants are not determined on the basis of safety to protect public health, local governments should establish as much distance as possible between hydraulic fracturing and the place people live work and play.

AN INQUIRY ON THE EVOLUTION OF URBAN PLANNING IN TURKEY

Serap Kayasu[1]

Abstract

The aim of this paper is to present an inquiry on the evolution of urban planning based on economic, political and social changes that have taken place at different periods in Turkey. Legal and institutional reforms with regard to urban administration and planning reflect main characteristics of economic, political and social background of different transformation periods. The spatial pattern of urbanization have evolved throughout these reforms.

1.Introduction

When the evolution of urban planning in Turkey is overviewed, we can observe its impact on the built environment and spatial planning. The institution of urban planning has been neither effective in policy outcomes nor successfully implemented. We have to face the fact that urbanization processes have not always been administered appropriately in Turkey.

In order to comprehend the processes of urbanization and accompanying planning efforts, approaches to spatial planning in Turkey are reviewed in five different periods. The first period is from the establishment of Turkish Republic to aftermath of the Second World War (1923-1945); whereas the second period refers to the transition period from the Second WorldWar to the beginning of the economically and sectorally planned period of Turkey (1945-1960). The third period can be considered as the planned period (1960-1980); while the fourth period involves the implementation of neo-liberal economic policies, namely Structural Adjustment Policies of Turkey after 1980. Finally the period after 2000 can also be regarded as a transition period to Strategic Spatial Planning, following a wide range of legal and administrative restructuring processes.

Problems related to urbanization processes had occurred in Ottoman cities as early as the mid-19th century. Some preventative measures had been taken with regard to the provision of public services particularly in Istanbul. In the early 1930s, however, all urban administrative procedures and reconstruction laws dating from the Ottoman period were changed. A number of international planners had been invited to participate the competitions designed to plan the cities of newly formed Republic. The period between 1930 and 1950 can be indicated as a significant period in terms of city development. After the 1950s, however, due to the mechanization of

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agricultural production, rapid urbanization stemming from rural to urban migration brought the urban problems to the forefront at an unprecedented level. Beginning of the planned period in 1960 marked the significance of planning; however, was accompanied by deepening economic and spatial problems ranging from housing and transportation to the provision of public services.

2.From the Establishment of Republic to Aftermath of the Second World War (1923-1945)

The prevailing aim of this particular period was to create a new nation state within the framework of modernization project. The selection of new capital city, i.e. Ankara; the distribution of industrial areas to different parts of the country; the connection of different areas to each other through newly formed networks were among the priorities of that period in terms of spatial planning.

The problems of a new and growing capital city have given impetus for the concept of city planning from the 1920s onward. Preparing a development plan for Ankara was necessary. The law no. 1351, The Establishment and Responsibilities of Ankara Reconstruction Directorate , was enacted in 1928. According to this, Ankara Reconstruction Directorate had been created for the tasks given by the Ministry Council. The Directorate was to prepare an existing landuse and a reconstruction plan of Ankara. *Sehremaneti*, i.e. a municipal institution, was established in 1924 with the aim of implementing related legislations. Two local reconstruction plans were prepared in this period, i.e. one was Izmir Development Plan by French planner Rene Danger; the other was for Ankara by Heussler. Carl Lörcher also prepared a plan for Istanbul during this period.

Previous urban administrative procedures and construction laws dating from the Ottoman period were changed by the Republic during this period. The Law no. 1580 of Municipalities was issued on April 3, 1930. Municipalities were also to prepare landuse plans for five years according to the rules of The Law of Buildings and Roads no. 2290. However, with the enactment of Law no.1580, *Sehremaneti* in Istanbul has been abolished and municipalities have been established in cities. This was the emergence of provincial administration along with the establishment of municipality in Istanbul. One of the basic features of the law was the fact that a large number of functions and responsibilities has been given to municipalities including the provision of the public services. The allocation of responsibilities was coupled with the national policy of buying out foreign companies, including those that had provided public services in Istanbul. As a result responsibilities were transferred either to the municipality itself, or to joint venture companies within which the municipality had a share (Tekeli,1994).

Municipalities were preparing landuse plans for five years according to the Law of Buildings and Roads no. 2290. Plans were prepared with a vision of 50 years, and approved by Ankara Reconstruction Directorship between 1930-1933. Due to the fact that 50 years was a very long time for projections and predictions, most of the

plans which were prepared during this period could not be implemented (Yavuz,1952).

The Ebniye Law which had been in effect for the previous 50 years had already been abolished. On the other hand, new legislation was very detailed and consisted of the means that are meant to force municipalities to conform with a contemporary image of city. In addition to the preparation of city plans, projecting future population and setting certain landuse standards were among the contents of the Law of Buildings and Roads. Public decisions would be made by the Council and the population projections would be made for 50 years (Duyguluer,1989). According to this law, ownership of those areas designed for public services was in the jurisdiction of local authorities and the Treasury. Moreover foundations could be transferred to municipalities by a decision of the Council of Ministers. During reconstruction operations in a city, compulsory replotting (Addikes Rule-Hamur Kurali) could be applied. According to this, municipalities were able to take up to 15 percent of land free of charge (Aksoylu, 2003). During the 1930s, when those laws that were expanding the authority of municipalities were passing, the need for a separate legislation to generate income for municipalities that was consistent with their new functions became quite obvious. In this context the Bank of Municipalities was established in 1933.

The municipality of Istanbul and then the Municipality of Ankara organized international competitions among well-known international city planners. Herman Elgötz who was a German planner and planner of Essen, French planner Alfred Agache who designed Dunkerque, Rio de Janeiro and Brazil, Jack H. Lambert and Henry Prost have been invited to enter the competition for Istanbul Development Plan, and the first prize was granted to Elgötz. Although Elgötz won the competition, his plan was not implemented. Subsequently, German planner Wagner was invited to prepare a plan for Istanbul. He carried out his studies in 1936 and 1937, and prepared the landuse plans of the historical peninsula of Istanbul as well as Beyoglu district. Immediately afterwards, master plans for other districts in Istanbul were also prepared.

An international competition for the plan of Ankara was designed in 1928 and German planner Prof. Hermann Jansen won this competition. He completed the Reconstruction Plan of Ankara in 1932. Prof. Jansen prepared the Development Plans of Mersin, Adana, Ceyhan, Gaziantep and Izmit between 1930-1939. Furthermore French planner Lambert prepared a reconstruction plan for the new settlement areas of Erzurum during this period. These plans were prepared solely for municipal boundaries without considering the regional context. They were mainly oriented towards beautifying the cities without socio-economic research, data and map.

3.The transition period from the Second WorldWar to beginning of planned period (1945-1960)

The most significant aim of this particular period was to control the transformation process from the World War II conditions to planned development. With the help of Marshall Plan mechanization in agriculture was initiated, and as a result the need for labor in agricultural production decreased. Therefore rural to urban migration accelerated, and in large cities squatter housing problem become an important issue. The early indications of rapid urbanization could be observed after 1945 and throughout the 1950s in Turkey. The increase in the construction of squatter settlements was noteworthy during the 1950s in large cities such as Istanbul, Ankara and Izmir. Governments have enacted amnesty laws for squatter settlements due to populist politics. In addition municipalities focussed their efforts in infrastructure and started to bring some of basic services. As squatter areas within municipal boundaries expanded, they started to gain legal status due to amnesty laws, and municipal departments were established in each of them. However, existing capacity of the country in terms of recently established institutions proved to be inadequate in the face of emerging problems.

Throughout the transformation period, confronting squatter housing problem and developing a new set of legal and institutional regulations emerged as a necessary task. First, the Bank of Municipalities was converted into the Bank of Provinces, i.e.Iller Bankasi, in 1945 by Law no. 4759. This helped to extend the limits of public borrowing by the municipalities. In addition a strong technical assistance board, which would support planning efforts and the design of infrastructure systems of municipalities, was created. The Bank of Provinces has been assigned to carry out reconstruction plans as well as developing existing landuse maps.

Municipal Income Law no. 5237 passed in 1948. By way of this law, municipal revenues were increased for the first time in the sense that while the revenue of the big cities has increased once, that of smaller cities increased three times as much (Tekeli,1981). However, due to the increasing rate of urbanization, such interventions could not be sufficient.

Rapid post war urbanization coupled with the fact that the supply of housing almost came to a halt during the war, which resulted in the development of squatter housing neighbourhoods.
In this context the area of jurisdiction of Law no. 5218 passed in 1948 for the city of Ankara was extended to cover all of Turkey by Law no. 5431 issued in 1949. With this law licence was to be given for existing constructions, with a charge four times as the usual, in case of a violation of the existing building codes. Licences would be issued for those constructions that did not conform the land use plan and technical regulations only upon the fulfilment of legal requirements (Aksoylu, 2003).

The Law for the Encouragement of Construction (1948) gave the responsibility for providing building plots to municipalities so as to enable them in controlling the

physical development of the city. According to this law, the municipalities could buy treasury land at a price calculated on the basis of its land tax value which would be paid back in ten years in equal installments. These plots would then be transferred to those who do not own a house, without seeking fulfilment of the requirements of the Tendering Law (Arttirma-Eksiltme ve Ihale Kanunu). Those who received land had to complete the construction of a house within two years. The building would then be exempted from tax for ten years and the owners could obtain credit from the Real Estate and Credit Bank which would cover up to 75% of the cost of construction with 5% interest (Tekeli, 1981).

Failures in the implementation of reconstruction plans that had been prepared according to the Law no. 2290 and changing conditions of the cities have resulted in the enactment of new Reconstruction Law no. 6785 in 1956 (Artukmaç,1975). Modification of the Law of Buildings and Roads no. 2290 had been on the agenda ever since the First Building Congress held in 1948. The most important characteristics of the Law no. 6785 were giving the responsibility of planning and development in adjacent areas to municipalities so as to control the speculative developments in these areas and constitution of the transition from city scale planning to regional planning; classifying the cities into two groups such as population greater than 5000 and less than 5000, and differentiating the types of plans that municipalities will prepare as master plan and implementation plan; abolishing the obligation of long planning and projection periods. A Regional Planning unit has been actually established within the Technical Board of Urban Planning within the Ministry of Public Works in the same year. This facilitated transformation from a rigid approach of the city planning to a more flexible and positive policy which can be adapted to the scientific and technological developments (Aksoylu, 2003).

According to the Expropration Law no. 6850 (1956) expropration decisions of the municipality could be made by the Municipal Council; approved by sub-prefects in the districts and by governors in the provinces. Expropration could be conducted through the granting of easement rights if this was appropriate from the point of the current objectives.

The evaluation of expropration operations by the Prime Minister as a major political activity of the government led to the establishment of the Ministry of Construction and Settlement by the Law no. 7116 issued on 14 May 1958 (Tekeli,1981). Urban , rural and country planning, housing policy, building materials, research and analyses for regional planning with the participation of other organizations, construction of houses for rural migrants, to take precautions before and after the natural disasters were the duties of this Ministry. The Ministry of Construction and Settlement had been established to carry out research and planning functions rather than act as an executor or investor.

4.The Planned Period (1960-1980)

Due to the economic and spatial ramifications of rapid urbanization during the transformation period, policies regarding to economic development and industrialization proved to be inadequate. Unbalanced population growth in large cities constituted the main characteristics of urbanization despite the fact that there were limited opportunities for formal employment and housing. The definition of metropolitan planning was being discussed, in the face of the emergence of metropolitan areas. In addition to development planning approaches to economic and sectoral development, regional structure analyses and socio-economic development indices were being developed. The need for a 'National Physical Plan' was being discussed in academic and professional circles. The main mission of this period was to place emphasis on development plan making processes and the establishment of State Planning Organization.

One of the most important legal and institutional regulations in this period include the establishment of State Planning Organization in 1960. This institution introduced the First (1963-1967), the Second (1968-1972) and the Third (1973-1977) Development Plans and regional planning agenda during this period. In addition to the Antalya Project (1959), Doğu Marmara Planning Project (1960-1964) and Çukurova Regional Project (1962-1963), DPT also made developmental programs for eight areas identified as a result of analytical studies at the national scale in 1960-1970. There were no obligatory rules for preparing regional plans at the time in Turkey. This is one of the reasons for the fact that the number of regional plans has been quite limited.

Taking planning practice under the umbrella of Ministry of Construction and Settlement and giving responsibility about that to other central administrative institutions is the most important change in the organizational structure from the 1970s to 1984 (ODTÜ, 2000).
The establishment of Master Plan Offices in 1965, with the decree that was prepared according to The National Security Council's decision number 86 the master plans for Istanbul, Ankara and Izmir have to prepared by the offices under the Ministry of Construction and Settlement, and for this purpose in Istanbul, Izmir and Ankara Master Plan Offices were established (Tekeli,2001). Another important change in this period, according to municipal bill of the 1970s, municipalities were classified by their size and municipalities have more than 100000 population were called 'Greater Municipality'.

The Squatter Law no. 775 was enacted in 1966. At the beginning of the planned period, squatters were considered as being a physical problem. In 1966, well known 'Squatter Law', which was the first legislation specifically concerning squatters was enacted for the first time. By the way of enacting this particular law dual structure of the housing stock was accepted, i.e. the planned and modern housing areas as opposed to the squatter areas. On the other hand the Law No.775 used the concept of 'Gecekondu '(squatter) in its title and implied the acceptance of this as a social

phenomenon. In addition to these regulations municipalities would define the provision of services, upgrading and cleaning areas of squatters, and prepare the maps and plans of reconstruction and improvement along with the Ministry of Construction and Settlement that had the authority to control them (Uzel, 1987). In order to implement these decisions management guidelines in the areas of municipal administration were also necessary. The Squatter Law and other regulations did not comply together regarding these arrangements and, thus, none of them was realized at that time except for the title deeds that were given to the squatter householders. This signified the first time that squatter houses gained legal status.

Sixteen years of implementation of the Reconstruction Law no. 6785 revealed certain shortcomings in planning practice especially in large cities. A new law dated 11 July 1972, number 1605 was enacted. This law changed several articles of the Law number 6785. One of the most important changes, in relation to metropolitan cities was the granting of the authority to the Ministry of Construction and Settlement to prepare metropolitan master plans without requiring the approval of the municipalities (Law no. 6785/1605). With this decision, a new terminology on 'metropolitan master plan' was introduced into development and reconstruction legislation in Turkey for the first time. Another important change was related to adjacent areas (mücavir saha). These areas would be defined and designated in accordance with the proposals of municipalities by decision of the provincial administration board and the approval of Ministry of Construction and Settlement. By way of this change, areas which were included under the jurisdiction of Reconstruction legislation expanded (Aksoylu, 2003). This law also introduced the concept of territorial conservation instead of conservation on the basis of single buildings. If an area outside the adjacent areas was considered important from the regional planning, touristic and industrial development, transportation network perspectives, they could be taken into the sphere of the provincial supervision upon a proposal by the Ministry of Construction and Settlement and with the approval of the Council of Ministers (Tekeli, 1994).

The Third development plan covering the period between 1973 and 1977 aimed to determine the natural resources and human capital of the settlements in order to trigger the development and to solve the problem of uneven development in regions. Within this context, the State
Planning Organization specified the constraints, problems, opportunities and infrastructure utilities of particular cities. In the first two development plans the main approach was regional planning for underdeveloped regions. However the Third plan put emphasize on development priority zones (Keleş, 1993). Regional development approach maintained its significance until the second half of the1970s and urbanization was seen as a phenomenon that needs to be supported by economic and social development. In regional development plans physical and spatial dimensions were highligted more than social aspects.

5.The Period of Neoliberal Policies (1980-)

The 1980s were a distinct period in the planning history of Turkey. Tekeli (2009) indicates that the capital and population were redistributed in urban space in a different way as a result of rural to urban migration, urbanization andindustrialization after the1980s. The policies of this period. The concern for economic integration of Turkey to international economy and being a part of worldwide cyberspace telecommunication infrastructure was rapidly developed, new institutions such as free capital market and free zones were developed through a series of structural reforms. All these reforms resulted in the change of settlement patterns. Istanbul became even more powerful in economy; its population increased to 9 million and the industry decentralized in the Marmara region.

The effects of globalization on new production processes and spatial patterns could be observed in global cities. The relations between local and global along with an emphasis on local authorities and governance were among the main features of this period. The Greater Municipality Law no. 3030 (1984) defined metropolitan areas as Greater Cities and in the country's administrative system they were considered in a distinct category. In order to be defined as Greater city, cities had to have more than one district within the boundaries of municipality**.**

The Amnesty Law no. 2805 (1983) has been issued by the commission of the Consultant Assembly and National Security Council. This law pertaining to procedures related to unlicensed buildings brought about a general building amnesty. With this law the regularization process of unlicensed buildings in areas for which master plans existed was simplified whereas in areas without master plans, elaboration of Construction Improvement Plans (Imar Islah Plani) was required. With this law new planning terminology on Construction Improvement Plans and Upgrading Plans has been introduced in Turkey. The law regularized all of the squatters constructed before the National Security Council declaration of 2 June 1981, and prohibited further squatter construction (Aksoylu, 2003). Construction Improvement Plans were required to regularize constructions on shared plots of land. If plots on which squatters were located belonged to the Treasury of the State or to the provincial administration, and was within municipal boundaries or adjacent areas (mücavir alanlar) then their ownership could be transferred to the municipality. If they were outside municipal boundaries, in that case ownership would pass on to the provincial administration.

The New Building Amnesty Law no. 2981 specified the ways to legalize unauthorized buildings, including not only squatters but also those in the planned areas. As an important differentiation from the previous law, this law aimed to speed up the process of legalization of unauthorized buildings (Aksoylu, 1994). Existing buildings would be conserved as much as possible, but the density could be increased 2-3 times by increasing the existing storeys of houses from single storey to 3-4 in the upgrading plans. The ways in which upgrading would take place in terms of financial, institutional and technical aspects were not defined in the law.

The Construction Law no. 3194 (1985) indicated that Development Plans, of which structure and content are defined in planning legislation, are the main planning control tools. This is the main law directly related to the production of urban built environment. The Construction Law defines two kinds of plans in the planning system, i.e. Regional Plans and Development Plans. Regional plans are prepared by the State Planning Organization in case of a need to determine socio-economic trends, development potential of settlements, the targets of sectors and distribution of regional infrastructure. Development plans are prepared in accordance with regional plans to make decisions regarding the settlements and land use such as housing, industry, tourism and transportation. In practice, however, urban development is generally regulated by the developmental planning approach at municipal level, generally without any strategic frame defined by upper scale plans at regional or provincial level.
With this law authority and supervision were to be left to the jurisdiction of local governments. According to this law preparing plans for those cities that have a population greater than 10.000 was compulsory and the municipalities will prepare , approve and implement the plans within the boundaries of municipality and adjacent areas. This law increased the rate of transferred land to 35 percent, which will be taken free of charge by the municipalities during the compulsory replotting (Çeçener, 2000).

The Tourism Encouragement Law no. 2634 (1982) induced many private and public entrepreneurs to undertake large amounts of fixed investment in tourism by building hotels, yacht ports, swimming pools and so on through a wide range of fiscal and monetary incentives. It also allocated State-owned land plots for tourism development; reduced bureaucratic formalities for tourism investors; relaxed restrictions on the employment of foreigners in the tourism sector; introduced vocational education and training development projects, and gave precedence in communication services. These incentives were given to tourism investments that took place in tourism zones and tourism centers that were specified by the central government with a special legislation, even though clashes could occur between the central and local governments' long term vision for a particular area.

6.The Transition Period of Strategical Spatial Planning (2000-)

The 2000s have been the years when comprehensive changes have taken place in terms of public administration and planning in Turkey. Legal and institutional transformations realized in the last decade have strongly modified the contents of public administration and planning in the country, and have revealed new expectations. At this point, both urban planners and local governments have started to review their point of views about planning. Today, the fundamental actors of urban planning in Turkey query themselves and the legislators as to whether the concept of strategic planning can be accomodated in the planning system of Turkey.
Since the economic crisis at the beginning of 2000s Turkey's economy has exhibited growth tendencies. A large scale institutional reform has been accompanying the

economic dynamics. Even though the current global recession has been slowing Turkey's export sectors, the emphasis on institutional reorganizations has been strong so much as The Ministry of Construction and Settlement and The Ministry of Environment were combined towards the recent establishment of The Ministry of Urbanism. Three significant laws were issued in 2004 regarding urban administration and planning in the context of a Local Administration Reform Package.

In the case of The Law of the Greater Municipalities no. 5216 the latest form of this law has been approved in 2004 with several revisions in the responsibilities and powers of the authority of greater municipalities. Since it is approved, greater municipalities are obliged to prepare Strategic Plans, which are essentially socio-economic in nature as opposed to physical development plans that had been prepared for many years. Other prerogatives given to these authorities include the preparation of both Environmental Plans between the scales of
1/50000 and 1/25000 and Master Plans between the scales of 1/25000 and 1/5000. Furthermore they have the right to approve Detailed Plans in the scale of 1/1000 prepared by district municipalities. They are also responsible for the preparation of plans concerning disasters, designation of locations of premises used for the processing and storage of explosive and incendiary materials. Other than those, greater municipalities are entitled to provide preservation, maintenance and restoration of cultural and natural assets and historical values.

Planning and urban development had been detrimental in general for greater cities. However, redefinition of the territories of greater municipalities by the last law has eliminated the privileged status of sub-district municipalities and collected the management and control of all district and subdistrict municipalities within one hand. With this law territorial authority of metropolitan municipalities are enlarged, and at the same time metropolitan municipalities are given authorization for the preparation of large scale plans. By this law greater municipalities have also chance to establish stock corporations within the realm of their authority. In addition they can accept grants for their expenses.

The Municipalities Law no. 5393 had been revised twice in 2004, and has taken its latest form in 2005. Those municipalities including the district and sub-district municipalities in metropolitan areas are first responsible for plan preparation for their areas. In addition to the task of plan preparation, they are also responsible for the protection of natural, historical and
cultural assets. Municipalities are also entitled for land development and housing provision. They can exercise compulsory purchase for the purpose of land development with infrastructure or for the purpose of housing provision (production, selling and renting); and institute firms, borrow capital; issue shares and paper assets. By this law, municipalities have also chance to establish stock corporations within the realm of their authority. They also can accept grants for their expenses.

Further from above statements, the most important addition of the latest revisions made in the Municipalities Law is that those municipalities of districts with a

population of 50.000 and above has obtained the power to delineate areas which are deteriorated within the current urban context and designate those areas for the preparation of 'urban regeneration and development projects' and for the purposes of risk reduction as well. These projects may be prepared for redevelopment purposes or rehabilitation of specific old and historical quarters of the city or prepared particularly in areas subject to high earthquake risks. However, in many cases, municipalities used the authority given by this law for the preparation of urban regeneration, rehabilitation and redevelopment projects in a way to gaining rent from land. By increasing the construction rights they can transfer the potential profit.

The Law of Special Provincial Administration no. 5302 is also empowered to carry out several responsibilities including to cover costs of infrastructure, construction, maintenance, and to cooperate with other local authorities and bodies in regeneration projects. It also gives Special Provincial Administration the power to make necessary expropriation in accordance with the annual tasks program. Special Provincial Administrations have the opportunity to create unions with other local administrations. Especially in Istanbul and Kocaeli, where the borders of greater municipalities overlaps with that of provincial administrations, creation of such unions will contribute to the implementation of urban regeneration projects simultaneously with the Environmental Plan of the city.

By the legal arrangements, local government's authorization areas have expanded in terms of planning and related services. This situation can be considered as being improvement for governance, participation and transparency. However, the wide range authorization of municipalities by the latest legal and institutional reforms may have certain pitfalls. Clearly a new set of regulations should be developed towards cooperation among municipalities and the Ministry of Urbanism, given that all of these institutions and their administrators are equipped with unprecedented power schemes.

The new legal arrangements adopted strategic planning as a main goal. Although the concept of strategic planning started to be discussed in the Turkish planning environments during the 1980s, the definition of the strategic plan concept was included for the first time in the Bill of Basic Codes for Public Administration in 2004. This bill has not been legally issued as yet; however, the Local Administration Reform Package have been prepared in conformity with the principles of this draft bill. In the bill a Strategic Plan is defined as being a medium that enables public institutions and enterprises to reach their basic principles and policies, goals and priorities as well as performance criteria through a set of methods to be adopted. The definition of the concept involved in the bill is an institutional strategic plan. The Law of Metropolitan Municipalities, the Law of Municipalities and the Law of Private Provincial Administrative Authorities, which came into effect inaccordance with the principles and approval of this law, emphasize, however, spatial strategic plans. For instance, according to the Law of Metropolitan Municipalities, preparation of strategic plans of the metropolitan municipality along with the preparation and implementation of master zoning plans of all scales ranging between 1/5.000 and

1/25.000 on the condition that they conform to the higher scale plans that are also among the duties and authorities of metropolitan municipalities. The Law of Municipalities refers to a strategic plan and a performance program. According to this law, the municipalities and local governments are responsible for preparing a development plan and a program as well as a strategic plan in conformity with the regional plan if there is any, within six months after the general elections and also for preparing an annual performance program before the beginning of each year. It is indicated that the strategic plan shall be prepared by also taking into consideration the opinions of universities, vocational chambers and related nongovernmental organizations. The preparation of strategic plans is not mandatory for municipalities with populations of less than 50,000. The Law of Private Provincial Authorities on the other hand, mentions the necessity of a discussion on a strategic plan, and adopting a decision about it is considered as being among the duties and responsibilities of Provincial General Assemblies. According to this law, the Provincial Environmental Plan prepared under the coordination of the governor, together with the metropolitan municipalities in metropolises, provincial municipalities and Private Provincial Administrative Authorities in other provinces as a large scale plan, in which spatial goals are specified. In this context studies for the preparation of strategic plans will be organized by the Head of the Research and Planning Coordination Department of metropolitan municipalities.

The Istanbul Metropolitan Municipality, included among the Municipalities within the framework of this study, started its strategic planning activities as the largest planning office along with the Istanbul Urban Design and Metropolitan Area Planning Office that it established within its structure with a team of 500 people. A number of academicians, planners and architects officiated in the three Urban and Regional Planning Departments located in Istanbul. In the case of Izmir Metropolitan Municipality, the Master Zoning Plan Office for the whole of Izmir started its activities right after Istanbul. Strategic plans are conducted in this city in the Master Zoning Plan Office, which is the planning department within the structure of the metropolitan municipality. Kayseri Metropolitan Municipality also started strategic plan activities recently. A strategic planning team comprising of 20 people was established with the cooperation of Strategic Planning Coordination Office and Strategic Planning Management within the structure of the Municipality. Joint studies are conducted with the State Planning Organization. Strategic planning activities have commenced very recently in Samsun Metropolitan Municipality as well.. Its activities are conducted through the Municipality Company SABEG. In a number of other metropolitan municipalities, including Erzurum and Gaziantep for example, preparation for a strategic plans is in progress.

7.Conclusion

Central governments have placed considerable significance on urban administration and planning in Turkey. In this sense economic, political and social background of different transformation periods have been reflected in legal and institutional reforms of that particular period. The spatial pattern of urbanization have evolved throughout

these reforms in such a way unbalanced growth and uncontrolled urban expansion constitutes one of the main characteristics of Turkish cities. The reasons for the unsuccessful implementation of planning processes and ineffective policy outcomes should be searched partly in an understanding that view urban planning as being more of a physical process as opposed to a spatial process intertwined with economic and social contents.

The plans are are prepared either for an already existing built up area or for developing areas sometimes with unsufficient consideration for their impact on the totality of the urban area. Elaboration of larger scale plans is not obligatory. Plans offer short term solutions and because of this the problems are accumulated in the long run and they become bottle-necks blocking development at the city wide level. Rapid urbanization processes could not adopt to a rational land policy. Neither could it control this process through the proposals of planners whose urban images and aspirations were quite inconsistent with the economic situation. As a result Turkey fell into an uncontrolled urbanization process and public services could not be realized due to the high rate of expropration cost of the land. This led to the emergence of a dual structure, consisting of both legal and illegal housing stock in the city. Lack of regular and sufficient funds to develop urban infrastructure, land speculation, populist tendencies in the allocation of capital resources and the development of the cities, restricted capacity of the administration are the factors affecting the failure of the urban planning.

Defining the integration principles of country, regional, urban and rural plans, incorporation of urban planning concern into economic development planning and budgeting, strengthening existing capabilities and income generating activities of municipalities, initiating effective land policy and programmes, co-ordination and corporation of the different organizations are necessary for the planned development of the cities in Turkey.

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From rapid growth to sustainability: predicting China's future urban spatial growth policies by comparing with United Kingdom's

Abstract: Research of urban growth management started in western countries, and aimed to set up policies and reduce the negative effects of urban sprawl. It was introduced to China in the late 1990s. Empirically, the planned sizes of most future Chinese cities, especially small cities, are much larger than moderate scale they would need, while without explicit growth management strategies. That would lead to a waste of resources, and inequitable development between urban and rural.

With rapid urbanization, resource-conserving and environment-friendly society strategies in China, single-sided pattern of urban spatial growth is being transformed into an exterior-expand/interior-renewal mode. Therefore, new policy instruments, leading to sustainable development in transitional China, are required to meet the requirements of Urban Spatial Growth Management (USGM). According to present studies in China (Chen et al, 2009; Liu and Zhang, 2007; Wei and Wang, 2008), it is widely accepted that most developing Chinese cities need spatial growth management. However, since the technique of USGM has not been formulated in China, such research merely concerned with qualitative not quantitative analysis. Thus, the issue of USGM in China needs to be tackled from the perspectives of institutions, policies and techniques.

This paper answers the following research questions: a) what USGM policy tools are needed in China; b) what kind of USGM policy in the UK could be used for reference; c) how these tools are utilized. By reviewing researches of urban growth management in both China and the UK, the author recommends China's USGM research being proceeded by two main aspects: a) to set up environment-oriented system of USGM accompanied by Chinese characteristics, and b) to utilize modern techniques to examine the effectiveness of USGM.

Key words: urban spatial growth management; policy tool; sustainability

1 Introduction

According to the worldwide recession from 2007, Chinese government recognized the significance of urbanization development for driving the domestic economic growth. In 2010, the level of China's urbanization has already amounted to 46% with 1% of the annual average growth since the reform and opening-up policy (Zhang, 2009). However, with the increased level of urbanization, the rapid expansion of the urban construction land space results in substantial decline of agriculture area. In order to ensure the quantity of cultivated land, China's government has carried out strict land control policy.

At the mean time, the Chinese economics and social developments gradually became more resource-conserving and environment-friendly . Moreover, the current Chinese urbanization combines the extensive expansion and interior regeneration to bi-directional growth. Therefore, the urban spatial growth management (USGM) must adapt the economics growth for urban expansion. On the other hand, the need of economics structure adjustment for urban regeneration must be satisfied. In addition, the transformation of national strategy, for instance, the resource-conserving and environment-friendly society strategy, has a special requirements for USGM. It has been agreed by most researchers that USGM is the process guidance for controlling urban space（Chen, 2009）. Moreover, various political tools must be used to control and guide the urban spatial growth, in order to create an environment-oriented system of USGM.

This paper discusses the USGM in contrast to urban growth management (UGM) in China. It does not create a new concept but focuses more on spatial management， since the UGM's substance is to manage urban spatial growth and to maintain the sustainable development of the urban economy, community and environment, of which ultimate objective could be achieved by urban space. Furthermore, UGM was proposed to cope with urban sprawl, which is an issue of urban space. Thus, UGM could be better combined with urban planning with aspect of urban space. In this paper, the system of UGSM in the China is firstly summarized . Then, the problem of the current system and its causes are analyzed with respect to sustainable development. By studying the experiences of British growth containment system, this paper proposes some novel concepts of reconstructing the sustainable USGM system in China.

2 Literature Review

The original research on USGM was to deal with a series of problems of the economy, environment and the society in United States. After World War II, housing options in the United States increased considerably along the significant economics growth, elevated consumption, as well as the stimulus provided by the federal mortgage loan acts and the rise of the automobile. As the result, the rapid development of suburbs and the continual decline of downtown areas drove more and more people to the suburbs. This situation brought problems of traffic, infrastructure provision, public

services, conservation of natural resources, and damages to farmlands and forests. Consequently, these issues seriously impeded the planned developments in cities. Therefore, it is a major concern to adopt varied measures to respond to economic growth and environmental protection policies, and to accelerate the sustainable developments of cities for both State and local governments.

In the US, the current debates on UGM focus on several aspects, including the definitions, policy instruments, efficiency of policy instruments. UGM is generally defined as the management of urban developing capacities, circumstances, locations and characteristics. However, there has been no agreement on itsdefinition (John M. Levy, 2002). Benjamin (1990) indicated that growth management is not a simplex growth control. In his opinion, it is designed to maintain the dynamic balances between development & protection, development & supporting infrastructure, growth-generated public service demands & financial supply, and progress & fairness.

Bengston et al. (2004) deems that UGM policy tools can be classified into three categories: public acquisition of land, regulatory approaches, and incentive-based approaches. In addition, some researchers indicate that the government structure and electoral rules have a crucial impact on the selection of approaches, such as establishing service boundaries, incentive zoning, the transfer of development rights and so on (Feiock, et al, 2004).

From the technology index and policy rules, Nelson (1999) analyzed different states with or without UGM. He found that the states with employing UGM principles exhibited more reasonable development under certain conditions such as controlling urban sprawl, preserving farmland, providing more accessibility by car and other forms of transit, less energy consuming, and minimizing tax increases. Carruthers (2002) considered that only the states with mandatory and consistent requirements and strict operation mechanisms were successful in preventing urban sprawl. Otherwise, the sprawl might have become severe.

Comparing to the US, in 1970s, the agricultural area declined slightly as well as the urban area growth in the UK. Moreover, there seemed no urban sprawl problem in the UK, as the policy worked well by using brown land and improving density of occupancy (Bibby,2009). Although urban expansion does exist in British cities, the current situation shows that urban expansion could be managed to improve efficiency of city land-use by strict policy of UGM, which inhibits local development on the other hand(While et al, 2004). For instance, the growth crisis of Cambridge subregion growth, it caused by State’s reluctance to manage or redistribute in South East. Moreover, the growth crisis leads to localized pressures on housing markets, the land-use planning system, infrastructure, and the environment, intensifying struggles between progrowth and antigrowth in certain places. Overall, it has long been thought that the green belt is the key to manage the UGM (RTPI, 2002).

UGM was introduced to China in late 1990s. From available search indexes, the information indicates that some researchers focus on reviewing western UGM and mainly recommend its concepts and practice (Liu, 2005; Jiang, 2007; Lu, 2005; Zhang,

2002; Fang, 1999). In addition, other scholars have extended their perspective to integrate UGM with the unique conditions in China (Wei, 1998; Zhuang, 2005; Li, 2005; Zhu, 2006; Chen, 2006; Liu, 2007; Feng, 2008). They proposed that UGM in China should be concerned with the system of property rights, the system of land management, the legislation of UGM, and so on.

Chinese researchers suggested that UGM could be applied in China. Nevertheless, most researchers pointed out that UGM would be an essential measure to guide sustainable urban development or participate in regional competition.

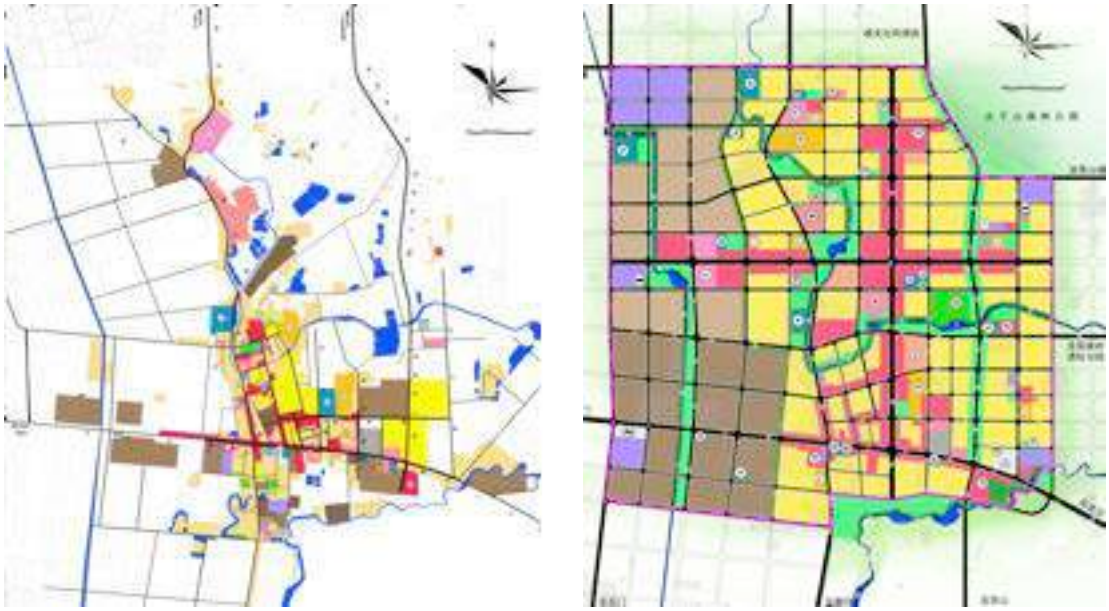
3 Recent China’s USGM System

Due to the unique regime, current Chinese USGM has to rely on local planning system to achieve USGM. More specifically, this system consists of a group of related departments, such as Development and Reform Commission (DRC), Land and Resources Bureau (LRB), and Urban Planning Bureau (UPB). In terms of structure, the planning system is formed by the State Economic Development Plan, the Land Use Plan, and the Urban Plan, which are drawn by DRC, LRB, and UPB respectively. Initially, the national target of social and economics developments are decided by the State Economic Development Plan. The Land Use Plan regulates sizes and ranges of land-use in agricultural developments and urban constructions. Additionally, the plan provides suggestions for expansion of urban construction while guaranteeing the agricultural lands are not affected. The Urban Plan organizes the urban construction with the other two Plans' functions. For Chinese USGM, the Land Use Plan and the Urban Plan could be used straightly because of direct relationship with urban space. From reform and opening-up in China, especially in the 1990s，the function of the Chinese USGM system was only to set the economic growth as the first purpose under rapid urban development. However, the problem seems to be exposed with the USGM system under the double pressures of social and economic transformation.

4 Disadvantages of China’s USGM and Experience in UK

Wang and Zhang (2010) presented that most of the Chinese large and medium scale cities were facing problems of urban sprawl by evaluations of thirty-five cities. Comparing to large and medium scale cities, the issues in small cities and towns were more critical. Empirically, the land-use scales of these cities, decided by planning, are consistently much larger than the moderate scales they would need. Particularly, a small city planning practice, in middle part of China, could be studied as an example for Chinese urban planning. According to the statistical results in 2010, the city’s population were 24461, and the occupied urban development lands were 3.42 square kilometers. However, according to the planning, by 2030, the population will increase to 120,000, and the scale of urban development land will become 13.20 square

kilometers (Figure 1). This analysis indicates that there is still space to improve. On the contrary, problems of the Chinese USGM do exist according to the data.



(a) (b)

Figure 1: (a) Current scale of urban used land, and (b) urban development land in 2030.

As previously mentioned, the Chinese USGM mostly relies on the Land Use Plan and the Urban Plan. Many researchers studied these two plans' problems, which are the inharmonious of law's foundation and executive methods, and conflicts of interest among the departments (Wei, 2011, Cao and Xu, 2004, Wang and Du, 2004).In conclusion, there are two main problems existing from the vision of building sustainable system of USGM.

Firstly, absurd land-use model, like examples above, connive low efficient usage of land resources due to lack of control measurements. Based on the system of the Chinese USGM, scale of the urban construction lands should be controlled by the Land Use Plan to maintain the size of agricultural land. Meanwhile, the Urban Plan should have coordinated with the Land Use Plan according to the City Planning Law of the Peoples Republic of China (2008). Moreover, due to the Chinese financial policies, local governments usually obtain development funds by selling land leases therefore extends the scales of urban development lands managed by the Urban Plan (Construction Plan). Therefore, size of urban construction lands is always out of the local government' control.

On the other hand, environment issue has already been ignored through the process of system's establishment from China's USGM. Furthermore, the Land Use Plan is to the primary control of the scale of urban developments. However its purpose is to control scopes of urban development spaces and protect the agricultural land exclusively. Therefore, it is necessary to build an appropriate mechanism for China's USGM to protect the environment entirely.

China’s USGM could not copy the UK’s totally due to differentiation of policy system and period of social development. However, sustainable concept and measurement of green belt in UK could be learned by China. As mentioned before, USGM appeared with urban sprawl in US. However, compared with US, there is no serious suburbanization existing in UK. Therefore, green belt is the core point of UK’s urban containment policy. Although the green belt policy is argued in reality, it does control the urban problem and protects environment, even leads to sustainable society(Hanley and Knight, 1992, Amati and Yokohari, 2006, Susannah, 2007, Thomas and Littlewood, 2010). Besides, planning policy statement 1 (1970), from process of UK’s established urban plan policy, expressed the intention of planning. In detail, Planning determines the places where people live and work and the country we live in and it conducts a main role in supporting the Government’s wider social, environmental and economic objectives and for sustainable communities. Moreover, concept of sustainable development and foundation of law would be introduced and understood well under the system. In comparison, China’s USGM and urban planning have not focus on sustainable development deeply while they pays more attention on economic development. Therefore, the ignorance of sustainable development in legislation and operational process brought the unsustainable act like former examples.

5 Recommendations on restructuring China’s USGM System

The basis of restructuring China’s USGM system is socialist public ownership of land under socialist market economy. Because of sustainable development’s problem, China’s USGM system has to be restricted with experience of UK’s urban control policy. Moreover, the reform should include four parts, which are fundamentals of law, organization structuring, control measures and supervised mechanism.

Fundamentals of law have to be improved firstly. The law needs to be legislated to protect the legal status of USGM in restructuring system. In addition, the concept of sustainable development must penetrate entire management system. With legal protection, USGM should be shown the nature of public policy mainly. This system should not have timing limitation and can be used for government, corporations and public, and even be the foundation of planning practice.

Secondly, related USGM departments’ function seems to coordinate mutually. Particularly, improving related functional organization could enhance the guide function of local governments. For local government, the functional combination of LRB and UPB ensure the efficiency of land use and planning management through concentrating land management and planning management. For related departments, financial tools, like taxation, would lead and coordinate local planning practice to promote the local departments’ own function and corporation. Nevertheless, departments’ decisions must be foreseeable, judgment and practicable on finance.

For control measures, containment policy, like green belt, should be introduced and conducted. In detail, green belt can be planned and controlled to improve the environmental sensitivity area protection under the foundation of protected agricultural land and eco-environmental protection. Overall, urban development model focused on creating compact and economize city by control measures.

Finally, it seems to be necessary to enhance inspection mechanism of special growth management with improving the strength of public participation, which is core part of implementation process. Moreover, all of parties' suggestion has to be considered for establishing each USGM's measures to avoid that the system is on behalf of single party's interest. Meanwhile, it is non-substitutable that all different parities and non-governmental organization supervise the results and correct unreasonable requirement during the implementation process of USGM system. Therefore, public participation is one of the most important forces to achieve the USGM.

6 Conclusion

In summary, China's USGM has individual methods, problems and measures, due to China's political system is different with western countries. In reality, urban sprawl has already appeared in Chinese cities, thus Chinese urban development needs USGM to guide the procedure (Wang and Zhang, 2010). However, there is a series of non-negligible problems, like absence of special management measures and eco-environmental concept, existing in current China's USGM system. In addition, these problems exist not only on operational level, but also bring furthering reflection. Particularly, capital shortage would affect urban development because of China's financial policy and government's examining standards always ignore the environmental notion.

According to experience from UK containment policy, China's restructuring USGM system should focus on sustainable development as a premise. At first, urban development activities should follow the USGM system through improving related legal system. Regarding the organization structuring, procedure of spatial planning management should be simplified. Moreover, duplicate administration could be avoided through combination of LRB and UPB. Subsequently, urban constructional land should be used efficiently by means of green belt. Specifically, green belt can be border of urban expansion forcibly to avoid urban sprawl. Finally, in aspect of supervised mechanism, environment impact assessment and public participation both should be used frequently to examine the USGM system and add concept of sustainable development to USGM. In the future, USGM research would pay more attention to supervised mechanism and local financial policy to distribute the financial power fundamentally.

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URBAN PLANNING IN THE SERVICE OF THE QUALITY OF LIFE OF CITIZENS

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Abstract

With deep roots in the ancient Greek philosophy, the issue of well-being and quality of life (qol) has been steadily in the focal point of the modern philosophical thought since the 18th century. The improvement of qol, regardless the definition of the term, is considered to be a natural tendency of humankind, and a standard pursuit for human beings. Thus, what finally defines the level of the qol in a society is the adequacy of the living conditions. In this view, urban planning plays a critical role in the configuration of the collective level of the qol, since it interferes in the very core of the living conditions of people, which it actually targets with its actions. In fact, cities constitute the scene of everyday life for the 75% of the global population, shaping the environment for living. Thus, the effect of the city in the living conditions of citizens is something obvious. The form, the structure and the complex functions of the city determine significantly human functions as well: they determine the space and time of citizens with direct impacts on labor, health, rhythms of urban life (fast or slow), 'discretionary' time, leisure and interpersonal relations of citizens. For all the previous reasons, the improvement of the quality of urban life (qoul) can always be found among the targets or objectives of most urban planning projects, regardless the scale. From mega projects, which are considered to contribute to the competitiveness of cities, to minor regeneration projects, the amelioration of the qoul is always present as a causative factor. However, urban planning interventions often fail to succeed in this objective and sometimes even undermine (involuntary) the qoul. This 'heretic' induction is reflected on the environmental, socio-economic and structural problems of modern cities which (especially in Greece) usually tend to be attributed to the inadequacy, or even lack, of urban planning. However, they are often derived from wrong, or out of date, planning decisions endangering the sustainability of cities. This happens partly because the qol in general, and the qoul in particular, remain undefined terms – in spite of their continuous invocation – and the relation of the urban parameters to the qoul determinants is still confusing. And yet, qoul can only be defined on the basis of its determining factors, while referring to the living standards of all people, including the less favored citizens. In this paper, the main determinants of the qoul will be analysed, highlighting those factors which can be affected – or even configured – by urban planning. The empowerment, or the undermining, of the qoul determinants through time by urban planning initiatives will be discussed, with an emphasis on the contemporary era. Finally, urban policies contributing to the improvement of the qol of citizens will be proposed.

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1. Introduction

Urbanisation, either emerging as a result of social transformations, or as a consequence of productive restructuring, creates an unforeseen concentration of people in a limited urban space. The urgent demand for housing, which inevitably arises, and the attempt for maximum exploitation of the space available can lead to malfunctions and failures. These issues have come to be the focal point of urban planning over time, notably since the end of the 19th century (Bartetzky and Schalenberg, 2009a).

Focusing on contemporary cities, recent trends in urban planning and management, along with new urban policies, cause a realignment of people's perceptions and attitudes towards the city, when considered as a field of social activation and interaction. Current urban issues, such as environmental degradation, the amplification of social inequalities and their reflection on urban space, the depreciation and privatisation of public space, raise critical questions about the quality of life (qol) of the residents, which mainly concern the objectives and practices of urban planning.

The environment in general, and in this case the socio-economic environment defined by the city, although external to the individual, forms the context in which each person is placed and can organise his/her life, and in which groups of people act, interact and function collectively. On the basis of this theory, the individual characteristics of urban residents which can define their qol, are of great interpretative importance for urban function, while, on the other hand, information concerning the urban function directly influences people's everyday lives. In other words, the individuals in the city constitute dynamic entities that continuously interact with the urban environment (Maggino, 2006).

Under the previous perspective, the factors which determine people's satisfaction with their everyday life, their neighborhood and/or their city, are in direct relation with the determining factors for a person's subjective well-being and come under the wider objectives set by the quality of urban life (qoul) research.

In fact, satisfaction with home, neighbourhood and city partly depend on a number of variables, which are sometimes recorded by official procedures and are organised in systematic information resources, e.g. during the population census. They also depend to a significant extent on less-studied factors: factors which are usually ignored by urban policies. Such factors include home ownership, security, urban public transportation, quality of public space (with the condition of streets and pavements included) and the accessibility to green spaces (IDB, 2010).

The comprehension of the previous factors and the relationship between these factors and urban policies are of crucial importance in order for urban planning to remain focused. And the focal point of urban planning should be nothing more than the

amelioration of the living conditions for the city's residents and users. The complicated relationship between the qoul - in terms of its determining factors - and urban planning constitute the subject of the current paper.

2. Quality of one's life and quality of urban life

The most challenging issue when dealing with the qol evaluation concerns the specification of the determining factors. Although this issue has been the subject of theoretical research for many years and many different approaches can be found in the literature, the factors taken into account are far from being standard. The efforts to reach a commonly accepted set of determining factors are hindered by the underlying subjectivity of the concept, which also makes difficult to define the term.

A basic distinction to be made concerns the level of examination: the individual or the collective level. Qol in a community or a city cannot be considered as the average qol level of the residents. For example, even if the residents of a city evaluate their own qol as high, this finding does not imply directly that the city is characterised by a high qoul level. There are many factors which can determine a person's qol without spatial reflection (e.g. state of health or marital status). There are also spatial factors which play an important role for the qoul, which are not usually considered when evaluating subjective well-being (e.g the weather conditions). However, when examining the qol in cities we have to start from the subjective well-being of the citizens.

Although defining the qol determinants is a difficult task, many scholars from various disciplines have undertaken it, either by asking people directly about their perceptions (as in European reports about the qol of European citizens), or by setting them in advance in an objective and quantifiable way (e.g. the WHO studies), in order to confront directly the issues of subjectivity.

From the first attempt to record and measure qol on a large scale that took place in Scandinavia during the 70's (Comparative Welfare for Scandinavia, 1972), various researchers have dealt with the qol determinants. Cummins (1996), Diener and Lucas (2000), Frey and Stutzer (2000), Verlet and Devos (2009) are among those who have proposed different sets of factors for evaluating qol at the personal level.

The recent findings of the 'Second European QOL Survey', which evaluates subjective well-being in all European countries, are of special interest, as it is a collective work based on a large-scale project. This research has used the overall satisfaction with life as the basic index for evaluating the qol, while recording important personal characteristics and different aspects of everyday life of the interviewees, in order to highlight those which play an important role (European Foundation for the Improvement of Living and Working Conditions, 2010). Findings of this research are presented in Table 1.

Table 1. Factors which influence an individual's QOL

Order of significance	*Life Domain*	*Relative Facets*
1	Financial status	Income Material well-being/lifestyle deprivation Employment
2	Health	Age Health status/disability Social support
3	Employment status	Employment Unemployment Retirement
4	Education	Education Level
5	Marital status	Marriage Divorce Widowhood
6	Practical/moral support	Family Friends Institutions
7	Public Services	Quality of services Accessibility

Source: 'Second European Quality of Life Survey', 2010 (own elaboration)

After concentrating and organising the different variables which emerge in the literature as qol determining factors, in order to decide in the qoul determinants, Psatha et al have proposed the qol determining factors which are presented in Table 2.

Table 2. QOL Determinants

s/n	*Main QOL Determinig Factors*	*Facets incorporated in the main factors*
1	Physical health	Energy, absence of pain
2	Mental health and psychology	Positive feelings, trust in myself
3	Happiness, self-esteem, self-actualisation	Emotional well-being, spiritual well-being, challenges, prestige
4	Family environment and personal relationships	Marital status, giving and earning love and tenderness, understanding and solidarity
5	Social relationships and friendship	Friends, being needed, interpersonal relationships, understanding and solidarity
6	Income	Material well-being, financial sources
7	Employment	Productivity, unemployment, Satisfaction with one's job
8	Education and lifelong learning	Level of education, personal development
9	Distinctive time and Leisure	Recreation, humour, relaxation, leisure opportunities
10	Security and tranquility	
11	Freedom and variety of options	Challenges, capabilities
12	Social Inclusion	Position in the community or society, social participation
13	Factors concerning the wider environment	Satisfaction with the neighbourhood, housing, natural environment, political situation, public services, etc.

Source: Psatha et al, 2011

When it comes to a city's residents, the factors classified in row 13 concern mainly the neighbourhood and the wider urban environment. These factors are the focus of the next chapters.

3. Determining factors for the qoul

Qoul has to do with the capabilities and chances offered to the city residents in order to obtain a good personal qol. Thus, those cities which cultivate the factors in Table 2 are the most probable to be characterised by a high qol level. The level of achievement of these factors in the city level largely depends on infrastructures and urban planning (Psatha et al, 2011).

An individual's qol determinants can lead to the most important qoul determining factors. These include health services, urban green spaces and recreation areas, quality of urban environment, employment opportunities, social networks, education opportunities, leisure resources, urban crime and socio-economic structure (Psatha et al, 2011).

There are also further issues which influence the qoul. These include circulation conditions, the level of efficiency of public services (which was highlighted by the 'Second European Quality of Life Survey'), the quality of public space (which is

mentioned by many scholars and researchers as a critical factor for the QOUL) and less obvious issues such as the weather, the accessibility of public spaces particularly for disabled people, and the social infrastructures for vulnerable groups.

One of the most important issues concerns urban green spaces, whose role vis-a-vis the qoul has extensively been proved by many researchers. There is a plethora of references for the documentation of the positive relationship between green spaces and the qol in cities. Most of them originate from health sciences (Morris, 2003; Pretty et al., 2005) but references from urban economics (e.g Mansfield et al., 2005; Arvanitidis et al 2009), urban planning (e.g. Swanwick et al., 2003; Lake et al., 2010) and environmental disciplines (Bird, 2007) can also be found.

Circulation conditions and accessibility of urban facilities can have an equally important impact on the qoul, since they formulate the number of alternatives and capabilities a city can offer to its residents concerning housing, employment and leisure. They can change the time balance and everyday life of citizens in many ways (Cramer et al., 2004; Nuvollati, 2009).

After having projected the qol determinants from the personal level onto the city level, Psatha et al evaluated and incorporated the significant factors that can be found in the literature, proposing a set of 12 categories that constitute qoul determinants suitable for European cities. See Table 3.

Table 3. General categories of QOUL determinants for European cities

Economic Environment Employment opportunities, employment structure, average income and income distribution, living costs, etc.	*Social Environment* Crime, social inequalities, social exclusion, networks and infrastructures
Natural Environment Air quality, water resources, waste management, suburban natural environment, accessibility to areas of natural beauty, weather and climate	*Built environment* Building density, housing conditions, public monumental buildings, building stock, neighbourhoods, etc.
Urban and suburban green spaces Total area and rate per resident, condition, allocation, accessibility, usage, etc.	*Public spaces –Public buildings* Area, quality, condition and maintenance, accessibility, visiting rates, etc.
Culture - Leisure Cultural resources, tourism infrastructures, recreation areas, leisure activities, entertainment capabilities, cultural life, available choices	*Demographic data* Marital and family status of adults, age rates, level of education
Education Education units, quality and maintenance, attendance per education level, private schools, etc.	*Health care* Health services, accessibility, social welfare for the disadvantaged, etc.
Democratic Institutions Democratic regime, election of local government, voting rates, etc.	*Traffic and transportation* Traffic conditions, parking spaces, efficiency of public transportation and level of transportation services, accessibility of districts

Source: Psatha et al, 2011

4. Quality of urban space and quality of urban life

As previously mentioned, probably the most highlighted issue of urban space relating to the qoul concerns urban green and open spaces. From this central premise, other side issues arise, concerning the adequacy, the accessibility, the quality and the condition of green spaces and also of the urban public space in general. These issues also emerge in the literature as qoul determinants (Beck, 2009; Minton, 2009; United Nations - HSP, 2011). The importance of the quality of the urban space extends to the economic function of the city. It seems that well designed and well maintained public spaces of high quality can attract business and touristic activities, enhancing the competitive profile of a city (Rogerson, 1999; Florida, 2002; Psatha and Deffner, 2012). In addition, well maintained public spaces assign a positive value in the hosting cities, from a social, economic and environmental aspect. According to CABE Space (a U.K. consulting organisation on public space issues), public spaces

of high quality generate positive economic values in the long term. They are actually considered to be a unique case of public infrastructure, offering many benefits to the city (Beck, 2009).

On the contrary, abandoned or inadequately maintained public spaces have a strong negative impact on their neighbourhoods, as they provoke antisocial behavior, further vandalism and delinquency. This kind of public space disperses the impression of a decadent urban area, which repulses potential residents and investors (CABE Space, 2005a). When public spaces are characterised by a low quality level, they are used by neighbours only out of necessity, for the necessary activities (e.g walking in the street under sufferance in order to go to the bus stop but never going for a walk), leading to deteriorating social isolation. On the contrary, well tended public spaces cause several social activities, giving the impetus for more sophisticated and fruitful social interaction (Gehl, 2008). Thus, the presence of the appropriate public spaces contributes to the generation of powerful and long-lasting local communities in the city (CABE Space, 2005b).

Despite the importance of public spaces in the qoul, their neglect is a common occurrence in European cities. However, the regeneration, amelioration and adequacy of public space are also a matter of equity. It is usually the less privileged communities that suffer from a low quality public space (Beck, 2009).

In general, the aesthetics of a city has been proven to affect the residents' satisfaction of the urban area and the economic performance of the city. The aesthetics of urban space in combination with economic and social factors form a strong impact on the qoul, while it also acts individually as a determinant for the satisfaction of the neighbourhood (Widgery, 1982; Florida et al, 2011).

For all these reasons, European Ministers responsible for urban development consider the creation and good maintenance of urban public spaces as a critical factor for the enhancement of the attractiveness of the European cities (European Commission, 2009):

> Public spaces play an important role in the living environment of urban populations and can attract industry, businesses, tourism and workforces. Being a mix of architecture, infrastructure planning and urban planning, high-quality public spaces should be understood as 'the sum of all the cultural, economic, technological, social and ecological aspects influencing the quality and process of planning and construction.

Focusing on the spatial level of the neighbourhood, it has been found that the latter plays a critical role in the satisfaction with life level for urban residents, participating by 10% in the formulation of the relevant perceptions. The spatial characteristics of the neighbourhood play the most prominent role in the levels of the overall satisfaction, compared with the neighbours or the relationships with them (Verlet and Devos, 2009). This finding is compatible with the conclusions of previous research, according to which satisfaction with the neighborhood correlates strongly with the

overall quality of one's life, regardless of personal factors (e.g marital status, age or education level).

Satisfaction with the neighbourhood and its impact on the qol, passes through the social networking and the fear of urban crime (Adams, 1992; Rojas, 2010). Additionally, when residents are well integrated into their neighbourhood community, they have a better perception of their neighbourhood and they enjoy a higher qol (Baldassare, 1982).

The extent to which urban planning interferes with the satisfaction about the neighborhood, has been a subject of research for many years. Wirth was the first to propose a model according to which neighbourhoods with high density and population levels suffer from isolation and social unrest which undermine directly the qoul, in contradiction with the old and homogeneous communities on a smaller scale (Wirth 1938, as referred by Baldassare, 1982; Adams, 1992; Parkes et al, 2002). This old hypothesis has also been proven, more recently (Adams, 1992), and is usually referred as: the 'Wirthian approach'.

According to other researchers, however, satisfaction with the neighbourhood depends less on the urban characteristics and more in the social inclusion of the individual. Relatives, friends and the opportunity for social interaction are the main determinants. Under this perspective, people who live in urban areas with high population density are not inferior to satisfaction with their neighbourhood, under the condition that they have obtained an adequate social networking (Kasarda and Janowitz, 1974 as referred by Parkes et al, 2002).

In conclusion, despite the acknowledgment of the importance that satisfaction with the neighbourhood has for the qol, there isn't yet a commonly accepted theoretical background as far as the determining factors for this satisfaction is concerned. The most important difficulty lies on the existing correlation between the neighbourhood characteristics and the socio-economic ones. The underlying social segregation that exists in different extents in most cities causes the characterisation of urban residential areas, according to the social or income profile of the average resident.

The question relating to the factors that can determine the urban residents' satisfaction with neighbourhood and urban life, although critical for planning and policymaking, is not adequately answered by existing research, because of the large number of and differences between the factors that are taken into account and between the population samples used. There are, however, some common findings. The fear of crime, for example, is always the most prominent factor for the satisfaction with the neighbourhood (Adams, 1992; Rojas, 2010; Parkes et al, 2002).

5. The role of urban policies and urban planning to the qoul

5.1 New urban policies vs the qoul

Public open spaces have always been considered as a medium for the improvement of the living conditions in cities. The availability of public spaces helps inter-personal relationships to develop, enhancing the social capital of urban areas. Thus, their provision had been a target point for local governments for many decades. Cities used to 'proudly' promote the use of public spaces and urban residents used to incorporate this use in their daily routine, converting public space into a field for social participation and interaction. However, recently cities tend to pursue the privatisation of public spaces (Muehlman, 2005).

Recreation places are increasingly considered as commodities that can be exploited on the basis of their economic potential, rather than facilities which can enhance the qol at large (Lloyd and Auld, 2011).Pursuing economic development, however, cannot always guarantee the maximisation of qol for all residents. The increasing commercialisation and privatisation of urban public spaces led to the attraction of those people who can afford– and are willing to pay– to visit them and for obtaining the leisure experiences offered, while for many residents the access remains problematic or even impossible (Crane, 2000 as referred by Lloyd and Auld, 2011).

Security against crime along with cleanliness are usually the rationale for 'developing' extensive urban areas, mainly in former industrial or degraded entities. Malls and residential complexes emerging in those cases display cleanliness and safety as their major benefits in their attempt to attract the potential buyers and users of the new places (Minton, 2009). Private common spaces, however, can contribute to the degradation of the public character of open spaces, through the limitation of social interaction, the restrictions on free access and the exclusion of certain groups of residents (Nemeth and Schmidt, 2011).

Another issue related to the previous urban policies, concerns the competence of urban governments. In many cities, especially in the U.K. and the U.S.A., the 'traditional' responsibilities of local governments (e.g cleaning services and the maintenance of public spaces) have been transferred to the private sector, raising serious issues concerning the quality of services and the function of democratic institutions. The new urban policies include the concession of local tax management on private companies which undertake regeneration projects in the city centres in order to enhance commercialism. The relevant policies are often criticised for the kind of the public spaces they generate, as the only citizens to be acceptable are the potential clients, while the other residents are eventually excluded (Minton, 2009).

Picture 1. Homeless shelter in San Diego[3].

Source: http://www.kpbs.org/news. Photo by Ana Tintocalis.

Although regeneration projects beautify the degraded areas and can bring them back to the scene of economic urban activity, their contribution to the qoul is not straightforward. In regenerated urban areas, homeless people are undesirable and they are usually kept away by several policies, including regulations for specific areas, which prohibit begging and sleeping or loitering in public places (U.S National Coalition for the Homeless, 2012). There are references to the fact that in New York, after the regeneration of the central but degraded areas of the 90's, 100,000 homeless people had to move to other areas, away from the centre. This phenomenon was repeated in other U.S. cities, such as San Diego, where a specialised camp was created on the city's outskirts (Smith, 1999).

5.2 The role of urban planning

Many scholars have examined and documented how urban planning affects the ways in which people use public spaces. Different urban forms can play different roles in the structure of the public-private relations within the cities. This is predictable, because public spaces from their origination and design are composed by factors which act as limits between functions, directly affecting their own use and social exploitation.

[3] The homeless population in the area has reached 9,800 individuals in 2011, according to The Regional Task Force on the Homeless (http://www.utsandiego.com/)

Whyte has discerned some design characteristics which encourage the concentration of people in the public spaces. The qualities related to the natural environment (sun, water and vegetation) come first, as they can beautify and soften the built environment. Important factors for the attraction of people are food sites, sitting facilities and resting areas. Art of various types (e.g. sculptures, or street artists) can also be important. Other factors are those characteristics which affect the attraction of people to the surrounding area, including parking facilities, commercial or business activities and public services (Whyte, 1980).

The planning and design of public spaces plays an important role in the social interaction in cities, as public spaces shape the capabilities for audiovisual contact and meeting together, providing a motivation for social communication (Gehl, 2008). Meeting a neighbour, a colleague or even a stranger in a public space (street, park or square), contributes to closer social relationships and intensifies the social bonds, while it offers the chance for motivations and inspiration (Lloyd and Auld, 2011). The simplest form of social interaction, just seeing and listening to other people seems to remain the most important attraction of public spaces for all (Gehl, 2008).

The attraction of people to the public space, however, relates directly to the matter of safety. As Jacobs has pointed out, vivid and crowded streets seem to be, and actually are, safer than over-guarded streets. On the contrary, in places where order is obtained through the police instead of people's presence, this order is fragile (Jacobs, 1961).

These fifty-year-old remarks remain timely and can still be applied in cases of city centres like in Athens. Having followed a concentrating model of urban development, Athens has faced a city centre on the saturation line, during the 80s. The problems of congestion and air pollution were in part assigned to the over-concentration of activities and public services in the city centre (Prevelakis, 2002). The issue of decentralising ministries and public services to other city areas is coming to the scene from time to time. Nowadays, however, although the relative proposals have only been applied in part (e.g the Ministry of Education and several university buildings were relocated), there is a serious skepticism concerning the purposefulness of these policies. The population mixture and land uses have dramatically changed since the 80s, so keeping public services and ministries in town is often countered as a measure against the degradation of urban areas which used to be vivid, although it can contribute to the coveted presence of citizens in the streets only during the working hours (White Paper for Governance, 2012; www.cityofathens.gr; http://www.tovima.gr).

The current phenomenon of gated communities also is also linked with the issue of safety. Behind the development and promotion of this trend lies the depreciation of public space and the prevalence of fear in the urban domain, as urban residents pursue to 'hide' behind walls in order to feel safe (Atkinson & Flint, 2004).

Picture 2: Omonoia Square[4]

Source: http://athensville.blogspot.com

Although gated communities are supposed to enhance the feeling of security, which is important to subjective well-being and the quality of one's life, in fact, their very existence discloses the feelings of fear which dominate urban life in many cities, something that acts as a degrading factor for the qoul. In addition, those communities could worsen urban crime, because they enhance and highlight the existing social inequalities and the rivalry between the social classes in the city (Gadecki and Smigiel, 2009). The recent case (February, 2012) of the American teenager who was shot dead by a gated community's guard, shaking the U.S. population's perceptions

[4] Omonoia Square and the streets around remain unfrequented in the evening, despite the recent enlightenment projects. The most centralised square of Athens used to be crowded all day long in previous years.

concerning the purposefulness of this residential arrangement, has tragically confirmed the relevant skepticism.

Picture 3: The entrance of a typical gated community in a U.S City.

Source: http://massurban.tumblr.com. Photo by Mark Winfrey

6. Conclusions

Recent trends in urban planning and urban policies redefine the function of the city as a dynamic complex of constant social interaction, while the relations between urban residents and the city are reconsidered. But as cities form the scenery for the everyday life of billions of people worldwide, both current urban issues and the attempts of planning to confront them have a major impact on the citizens' qol. Issues such as the quality of the urban environment, the available green spaces, public spaces, crime and circulation conditions along with the corresponding urban policies, do not simply affect qol of a city's residents, they can actually define it.

Regarding qol, one the most challenging issues for the relevant research concerns the specification and the definition of the term. This procedure mainly depends on the selection of the most appropriate determining factors. Although there have been many notable attempts to scientifically define and systematically study qol, including the suggestion of various sets of determining factors, there isn't yet one commonly

accepted composite index. This indeterminacy is reflected at the city level, concerning also the qoul, for which the determinants are not standard either. On the other hand, there are also many urban parameters which by common consent influence the qoul, undoubtedly forming the major relevant determining factors. These include the socio-economic characteristics, the quality of the urban environment, urban green spaces, recreation resources, public spaces and crime.

Among the previous factors, one of the most important but on the same time often neglected ones, concerns the quality of the urban environment and more specifically the quality and accessibility of public spaces. Current urban practices and the relevant types of urban space have controversial impacts on the qoul. Either because social transformations are some times faster than policymaking and the application of policies, or because the applied policies often target specific groups of the population, neglecting others, there are cases where planning interventions undermine, instead of advancing, the qoul. New policies for town centres, management policies for public spaces and the phenomenon of residential development through gated communities, are among such cases.

Better comprehension of the issues related to the qoul and unequivocally establishing the determining factors of the latter can be the key to avoid biased or ill-targeted interventions and possible urban policy failures, in order for urban planning to remain well-focused on the constant amelioration of living conditions in the city for all residents.

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THE ROLE OF HERITAGE IN RURAL REGENERATION: THE CHALLENGE AND POTENTIAL FOR RURAL HERITAGE TOURISM DEVELOPMENT IN THE COUNTRYSIDE AROUND SUZHOU, CHINA

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Abstract

Rural areas have served as a vast reservoir of cultural heritage as rich as that in urban areas. Man-made structures in the countryside, together with their adjacent cultivated land and natural surroundings, have been the long-lasting receptacle of agricultural practice that chronicles the history of mankind. Similarly, heritage tourism has long been associated with urban heritage. Beyond urban areas, however, rural heritage can also be a main source of cultural tourism and bring added socio-economic values to local communities. Particularly, in the last two decades, rural tourism has been seen as a remedy for rural communities to combat the declining agrarian economy and diversify the multi-functional roles of agricultural land. In this trend toward agri-tourism, places of historical interests begin to take an increasingly prominent role in rural regeneration.

This paper aims to identify the issues of rural heritage management in China and explore its potential for rural heritage tourism development. Due to the country's relentless pursuit of economic growth, rural heritage in China is under threat of incremental destruction and gradual dilapidation. The perceived threats toward rural heritage are mainly posed by peri-urbanization expansion, the decline of population and, above all perhaps, the government's recent initiative on rural development, 'Building a New Countryside', due to which traditional countryside houses are either demolished or modernized at the cost of original morphological and architectural character. This research takes a form of a case study on the countryside around Suzhou City in Jiangsu Province. While the city has often been dubbed 'Venice of the East', its rural areas are also characterized by canal-scape and features clusters of vernacular buildings and agricultural structures. The paper examines how rapid urbanization and the government's initiative encroach on arable farming land and threaten the continued existence of rural heritage. Drawn from empirical materials from field survey and interviews, it further illustrates the desertion of tangible heritage assets in the countryside.

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The paper argues that the truly rural 'heritage' is the everyday life setting in the countryside that provides local communities with a stage to development eco-tourism in the countryside.

1. Introduction

The diversification of the functional uses of agricultural land has grown in importance since the concept of sustainable development became a matter of concern all over the world. Multi-functionality of agricultural land often refers to the production of other goods, services or values in addition to crop and livestock, such as food security, leisure activities, recreational opportunities and cultural tourism (Daugstad *et al.*, 2006). Arguably, rural tourism has been considered as one of the most effective tool to diversify economic activities and generate additional income for the rural community. It has played an important role in regenerating the declining economy of the countryside as a result of intensive global food trading (Sharpley & Vass, 2006). Certainly, the term rural tourism has been perceived and interpreted in various ways, ranging from generally leisure activities to hands-on farming practice. It is, however, the role of 'cultural heritage' in the current trend of rural regeneration in general and tourism development in particular that this paper seeks to examine.

Whereas the focus of rural development initiatives in the 1990s appears to be on agricultural reform and economic growth, the first decade of the 21st century has witnessed a growing interest in the heritage values of rural landscape and the employment of heritage tourism as a key strategy for rural regeneration. The idea of 'heritage-led rural regeneration' has received a rising popularity in Western Europe and North America in the recent years (English Heritage, 2008; Lincoln *et al.*, 2010; Mayes *et al.*, 2010). While heritage-led rural regeneration appears to be a new trend and attracts more and more attention in practice, appreciation for the heritage value of agricultural landscape hardly can be seen in China and the recognition of its tourism potential is yet to be developed.

As a result of the country's relentless pursuit of economy growth, agricultural lands on the urban fringe often bear the brunt of rapid urbanization and are quickly disappearing. Original tranquil rural landscape is under threat of destructive development and irreversible transformation. Part of the aim of this paper is to unlock the heritage value of existing agricultural villages and their characteristic landscape on the fringe of Suzhou. Certainly, the evolution of discourse on rural regeneration in relation to heritage tourism and the recent pioneering initiatives undertaken in the developed countries may afford remedies for the problems of tourism development in China (Y.W. Wang & Verdini, 2011). The examination of the rural planning policies and the current socio-cultural and economic circumstance of deprived rural areas in Suzhou, however, are indispensable for identifying the range of issues before promoting heritage-based approaches towards rural regeneration.

It may be worth noting that the term 'rural heritage' employed in this paper refers to the tangible agricultural structures and their surrounding open spaces and, also, the

intangible traditional skills and cultural expressions historically associated with agricultural practice. The tangible built heritage that this research focuses on is the unassuming, low-visibility heritage that is modest in appearance, mundane in function and often, though not always, made up of relics of the relatively recent past and not statutorily protected. A basic position taken by this research is that places like these are of lesser significance so have a greater flexibility in making changes to their physical structures to meet contemporary needs, hence a greater potential to stimulate local economies and promote sustainable tourism with the involvement of local communities. Another assumption of this research is that, compared to impressive architectural monuments and archaeological sites, unassuming agricultural structures and vernacular buildings can better reflect the lives of ordinary people in the past and, therefore, better communicate with people at the present time and facilitate their understanding of the past.

2. External Threats to Rural Heritage in Suzhou

The major threat to rural heritage in Suzhou is mainly posed by the rapid peri-urbanization expansion and the government initiative launched in recent years – Building the New Countryside,

2.1 Urbanisation of Agricultural Land

The main driving forces of peri-urbanization – i.e. the inward migration of low-income labours or the gradual encroachment of green-field development on urban fringe – are essentially situational. Yet this phenomenon has become rather typical of cities in China considering that nearly half of the country's growth in the next quarter century will be in peri-urban areas. This continuing expansion of built up areas consequently results in the incorporation of former rural villages and agricultural land into 'cities'. Whereas the urbanization of agricultural land is clearly observed everywhere in China, it can be argued that it has brought about a catastrophic effect on the existence of rural heritage, particularly, in the regions of Pearl River and Yangtze River Delta.

The two regions currently experience the highest rate of economic growth but, historically, they flourished because of the fertile arable land in the region that had rich natural resource and produced abundant crop. This means that there is a relative wealth of cultural heritage that is closely associated with agricultural practice as well as the unique inland waterway in the regions. The research conducted by Bosselmann *et al* (2010) exemplifies the threat of urbanization towards the cultural landscape of the water villages surrounding Foshan City in the Pearl River Delta. A similar episode of 'countryside urbanization' can now be observed in the Yangtze River Delta, which experienced economic reform about half a decade late than the Pearl River Delta (Figure 1).

Figure 1. Yangtze River Delta generally refers to Shanghai, southern Jiangsu province and northern Zhejiang province of China.

The irreversible transformation of rural landscape brought about by rapid urbanization and industrialization of the countryside in Southern Jiangsu Province, has caused concerns. The depletion of arable land, the disruption of ecological balance and the loss of rural heritage and character too are of great concerns to many scholars (Liu *et al.*, 2010; Verdini & Wang, 2011; Yang & Huang, 2011).

2.2 Rural Policy: Building New Countryside

Another insidious threat to the continued existence of rural heritage is posed by a series of rural planning policies and initiatives that are proposed to accelerate the modernization and development in rural areas. This is best exemplified by the government's recent campaign – Building a New Countryside. The idea of building a "new" countryside is a derivative idea of the overarching and highlighted theme of planning policy – the integration of urban and rural development. The campaign was launched against the backdrop of the widen gap in income and livelihood between the urban and rural population. Long *et al* (2010: 459) summarize the salient features of the government's 'new countryside' campaign into five aspects: 'advanced production, improved livelihood, clean and tidy villages, a civilized social atmosphere and efficient management'.

One point particularly relevant to this research is 'advanced production' which is concerned with the optimization of production and circulation of agricultural produce. To optimize the farming system, land consolidation becomes the primary means to resolve rural land-use issues. Many rural villages rent the farming land to contractor if the community committee agrees so. The new problem emerges, however. The employment of land-loss farmers becomes the burning issue.

The other relevant point is to break the traditional stereotype of countryside as poor and dirty and to transform it into ‘clean and untidy villages’. While this brings a substantial amount of financial incentives and supports to regenerate rural villages, it also has destructive impacts on the character of rural landscape. The problem stems from, on the one hand, the mistaken belief that rural areas should be ‘developed’, instead of ‘regenerated’, into something similar with those in urban areas in order to provide local residents with a reasonable standard of modern amenities.

On the other hand, the problem has to do with the approaches adopted to implement the initiative. Modernization of the countryside is often associated with re-cladding or rebuilding the existing houses (Figure 2). Admittedly, upgrading domestic comfort of existing dwellings should be essential to the initiative. Way too often, however, rural villages and agricultural structures are modernized at the cost of losing the original morphological and architectural character. Instead of adopting modest refurbishment or conservation approaches, radical transformation and destruction of historical structures has become the norm for the ‘new’ countryside.

Figure 2. Recently refurbished houses and new build in the Suzhou countryside

3. Internal Deterioration of the Suzhou Countryside

Another perceived threat to rural heritage in Suzhou is the demographic decline in the countryside that has directly or indirectly resulted in the dereliction and dilapidation of tangible heritage in rural areas. Despite the fact that the official census is conducted periodically, it is difficult to ascertain the actual number of rural residents and unoccupied houses in any given rural areas. This is mainly because the rigid household registration system set up to prevent unauthorized rural-to-urban migration in the 1960s, has nowadays adversely resulted in an enormous number of ‘floating population’ – migrants from rural areas living in cities where they are not entitled to enjoy any social welfare but can earn more money to sent back home.

While the actual figure for rural population loss is unclear, it is certain that there is a significant increase in aging population in China's countryside as many other countries in the world. This means that, while a substantial number of historical houses and agricultural structures are left abandoned, a large group of elder people, some of who may master traditional skills and handicrafts, are also left behind in the countryside.

To better understand the current physical and socio-economic conditions of the Suzhou countryside, several field trips, face-to-face questionnaires and semi-structured interviews were conducted during the period from July 2011 to March 2012 for the research project supported by the Suzhou Social Science Programme 2011 (11-B-08) and as part of the undergraduate teaching programme of Xi'an Jiaotong-Liverpool University in Suzhou. With its focus on rural heritage and its tourism development potential, this paper mainly reports some findings on the physical environment of rural villages in Suzhou and addresses partly the social-economic conditions. A more detailed report on the social-economic transformation and its relation with rural land-use conversion is presented in a parallel track of the conference.

During the period between July and October 2011, the research group went on four field surveys across the urban-rural fringe of Suzhou and eight study cases were selected and analyzed (Figure 3). The routes of the fieldtrips mainly crossed the southern part of the prefecture Suzhou, including Suzhou Industrial Park, Suzhou New District, Xiancheng and Wuzhong District and the Kunshan and Wujiang counties (Figure 4). The southern part of Suzhou is relatively less urbanized and industrialized as it is farther away from Shanghai. In addition, this part has a greater natural resource for tourism development because of its close proximity to Tai Lake. For the above reasons, Southern Suzhou was considered strategically important to this research.

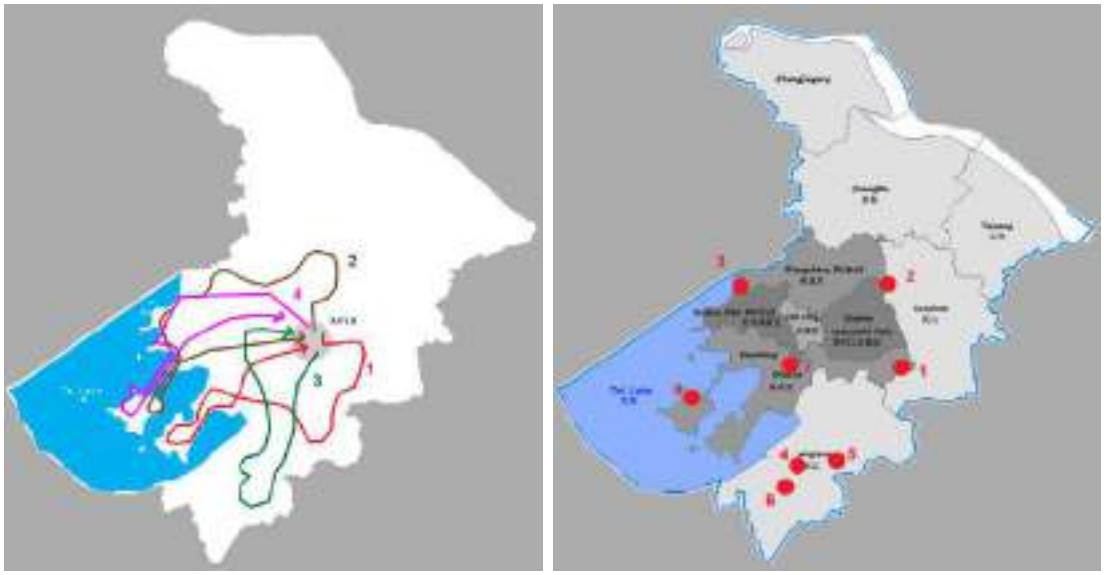

Figure 3. The routes of four field surveys and the locations of eight study cases.

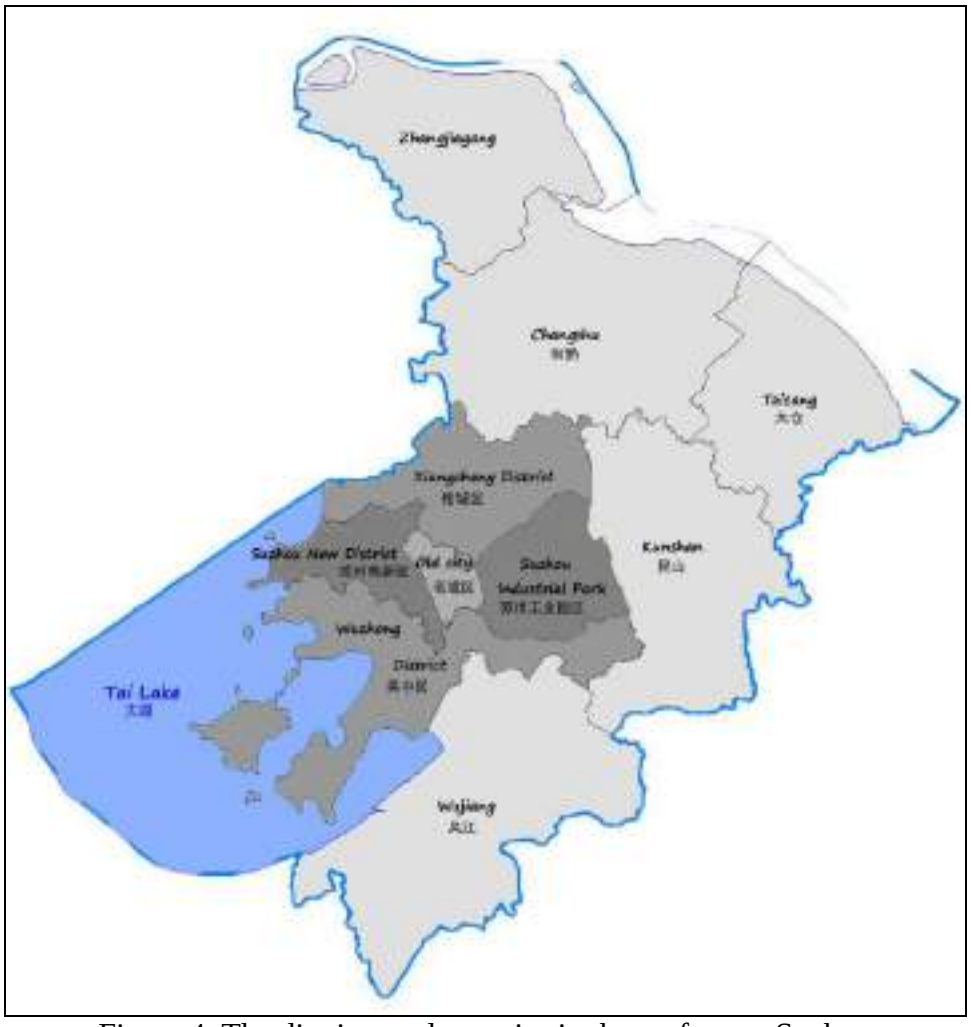

Figure 4. The districts and counties in the prefecture Suzhou

3.1 Desertion of Built Heritage

Many industrial developments were allocated in a disorderly, anarchic fashion in the survey areas. This problem mainly stems from the development of township and village enterprises that the government has promoted and supported since the 1980s. Modern factories were built, sometimes, adjacent to or mixed up with residential buildings and, sometimes, in the middle of farming land or nearby rural villages. In part, because of the phenomenal growth of rural enterprises, yet also because of the decline of agricultural economy and the rise of secondary industry, many old houses in former agricultural villages are abandoned and become derelict.

The survey on the Study Case 3, Jinshi Villages, revealed the degree of abandonment and dereliction in the water villages in Suzhou. Jiinshi Village is a linear settlement

located to the east bank of Tai Lake. The village consists of many clusters of commercial and residential buildings erected in different period of time and lying along a canal connecting to the Lake. The centre of the village features a continuous row of shop houses built in the 19th century (Figure 5). Not having undergone sweeping redevelopment, the village retains much of its original typo-morphological features as well as townscape character.

Currently, there are about 500 households and 1700 people living in the village. Around 35 houses are located in the historical high-street area, one third of which are unoccupied and only one of which retains its original commercial use – as a retail shop selling snacks, processed foods and daily products. Regardless of whether they are occupied or not, most of the houses are in a state of dilapidation, and some are practically inhabitable (Figure 6 & 7). The village did not undergo redevelopment as the residents have been dissatisfied with the compensation policy and refused to sign the agreement. The historic structures in the high-street area are left largely intact mainly because the residents hold the view that the government will resolve the disagreement in compensation costs at some time in the future and developers will bulldoze the area and develop it into a holiday resort or an upscale neighbourhood.

Figure 5. Aerial photo of the historical high street of the Study Case 3, Jinshi Village

Figure 6. Unoccupied shop-houses in the high street (left) and detached house (right).

Figure 7. Dilapidated and abandoned houses in the Jinshi village.

Whereas most of the historical buildings in Jinshi Village cluster together in the centre, the old houses in the Study Case 5, Nankun Village, scatter over the settlement. The Nankun Village is located in the Wujiang County which has been the major production centre of silk industry. The county appears to be extensively industrialized since silk production is a highly profitable enterprise and most of former rural households have turned themselves into entrepreneurs embarking on the new venture. Nankun Village is one of few villages in the county that retain much of the original rural morphology and character because of their remote locations.

Figure 8. Aerial photo of Study Case 5, Nankun Village

Houses in the village sit across the bay and form a crescent shape (Figure 8). With different heights, sizes, styles and locations, the residential structures erected in different periods of time reveal the track of historical development in the village. Short rows of houses form a right angle with the crescent-shape bay. Standing in between the 19th-century houses are the 20th-century structures that, in most cases, were built in the open space of existing old houses to accommodate new members of the extended family. As the new two-storey structures are higher than the one-storey old ones, the view toward the bay is dominated by the new (Figure 9). Although the old houses are being sandwiched by the new and not really noticeable in the bay view, they have a fairly strong presence in people's spatial perception when walking on the access road. All the old houses, however, appear to be unoccupied and used as shed to storage crops or tack firewood (Figure 10). They are left derelict simply because the cost for modernization and refurbishment is high and there is no growing pressure for space as before. Due to the decline of agricultural industry, the younger generations tend to leave the countryside to seek better employment.

Figure 9. View towards the bay (left) and the interlocking arrangement between the old and new houses in the area (right)

Figure 10. Dilapidated and abandoned houses in the Nankun Village.

4. A Possible Stimulus to Rural Economy: Rural Tourism Development

Although the Suzhou countryside is under the renewed threat externally from urbanization and rural policy and, internally, of the economic decline, demographic change and physical deterioration of agricultural villages, the rural Suzhou, with some external stimuli, still holds great potential to rejuvenate itself. It has been argued that one of most effective means of regenerating the countryside is the promotion of rural tourism.

4.1 Rural Tourism Development in China

While the rural farmers still constitute about three quarters of the country's total population, China remains to be the largest agricultural society in the world. It is not surprising that it began to venture into rural tourism development fairly late if compared with other economically advanced countries. However, also due to its

large number of rural population, the country's modernization programme has largely depended on the socio-economic aspects of regeneration (Su, 2011). The highlighted need to alleviate poverty in the countryside has been often linked to the diversification of farming activities as well as the promotion of tourism industry (Zeng & Ryan, 2012). Similarly, on the more ideological level, the connection between rural tourism development and the "Building a new countryside" policy is also accentuated (S. Chen, 2006; Peng & Li, 2008).

Since the early 1990s, the role of rural tourism has taken on an increasingly important role in the social-economic regeneration of China's countryside. Beginning from 1998, the China National Tourism Admiration launched a series of initiatives to promote the rural tourism development and assist the 359 exemplary tourist resorts and sites in the countryside nationwide. This shows that the China government, by now, was perfectly aware of the enormous range of cultural and natural resource in its vast countryside and began to direct its focus of attention to exploit these (Su, 2011).

Currently, the international and domestic tourism industries are booming in the three major regions: Pearl River Delta, Yangtze River Delta and Beijing Capital Region. It is suggested that the rapid development of tourism in the three regions has to do with their high economic growth rate and the clustering effect of historic cities in these regions (Zhang *et al.*, 2011). Certainly the tourism boom in the regions is mainly fuelled by the rich cultural heritage in the historic urban cores of these cities. However, for the Pearl River and Yangtze River Delta, it can be argued that the rich cultural heritage in the rural areas is easily comparable to that in the urban areas. Historically, the two regions thrived because of fertile farming land and rich agricultural production. On the account, man-made structures, cultivated land and natural surroundings in the two regions have been the long-lasting receptacle of agricultural practice that chronicles the history of mankind.

4.2 Rural Tourism Resource in Suzhou

Situated in the Yangtze River Delta that enjoys overwhelming superiority in developing rural tourism (J. Chen, 2006; Guoqing Wu, 2008), Suzhou is one of the historic cities that have long-lasting link with traditional agricultural practice. There is a substantial body of literature addressing rural tourism in Capital Beijing and Chendu City in Sichuan Province, but relatively little on Suzhou. (Guo *et al.*, 2008; W. Wang *et al.*, 2009; Su, 2011).

Generally speaking, rural tourism activities in China can be classified into three broad themes: agriculture, folk culture, natural resource and holiday resort (Guo *et al.*, 2008; Peng & Li, 2008). Among the four, agricultural tourism is the most popular one, and it is often known as "*Nong Jia Le*", meaning 'Joy of Farmer Home'. As Su (2011) and Guo *et al* (2008) note, the joy-of-farmer-home tourism originated in the 1980s when individual farmers tried to generate additional income by providing

authentic countryside cuisine and overnight accommodation in the farmer's home or a place to camp in the farm. In a sense, it was a type of full broad and lodging that targeted at customers who were often individual urban residents coming from the cities nearby and liked to spend a weekend away from the hustle and bustle of city life. In other words, the early form of rural tourism in China was an embodiment of 'green' or 'eco' tourism that is completely opposite to mass, one-off, theme-park-like tourism that is currently dominant in the domestic tourism industry. The profit that these individual economic activities could generate was quite modest. It is not surprising that, two decades later, it has turned into a tourism product that is capable of providing lodging and service to masses of tourists at the same time – typically in Labour Day, National Day and Spring Festival holiday. To attract repeat visits and also visitors from other regions and even foreigners, it has also evolved into a comprehensive holiday package encompassing all sorts of leisure activities or hand-on experiences, such as hiking, rowing, fruit-picking, fishing, cooking, knitting, pottering etc. A wide variety of hand-made products or traditional craft works are sold in the theme-park-like farms.

What role does 'heritage' play in the 'joy of farmer home' or, generally, rural tourism? The wide range of activities taking place in the joy-of-farmer-home tourism have involved both natural and cultural heritage. For the latter, it also includes both tangible historical settlements and houses and intangible folk customs and skills. Specifically about the built heritage, they can be the scenery or the scene for the leisure activities in the country side. While the statutory protected 'Heritage' like ancient water towns often serves as the scenery for rural tourism, it is usually the non-statutory protected 'heritage' like framer's houses or barns provides authentic rural scenes for leisure activities to take place. It is this 'heritage' – in lower case – that has the potential to promote and turn to eco-tourism in the Suzhou countryside, and to stage the 'joy-of-farmer-home' tourism in an authentic rural setting.

5. The Cultural Heritage Assets and Community Involvement

A question has to be asked is whether the existing cultural heritage assets, and the local communities too, can support and sustain responsive rural tourism.

5.1 Cultural Heritage Assets

Mundane and unassuming maybe, farm houses, animal shelters and storage sheds, together with rice paddies, fish ponds, vegetable patches, fruit orchards and canals characterize the rural landscape of Suzhou. As a result of abundant natural resource and fertile fields in the region, Suzhou has an exceptionally rich agricultural heritage that spreads across its rural areas. The mundane rural 'heritage' and agricultural landscape of Suzhou provides picturesque and tranquil settings that are as idyllic as the renowned water towns in the region (Ruan *et al.*, 2002; Zhou & Ma, 2007; Ruan & Yuan, 2011). Rural villages in Suzhou often exhibits a well thought out spatial arrangement, in which man-made built environment seamlessly blends into its

natural surroundings. They can provide places and host events for the 'joy-of-farmer-home' tourism in a more authentic fashion (Figure 11 & 12).

Figure 11. View of Study Case 1, Xitang Village

Figure 12. View of Study Case 3, Jinshi Village

The Study Case 2, Chuodunshan Village is an illustrative example that mundane rural 'heritage' is capable of staging eco-tourism. Instead of allocating the money from the 'Building a New Countryside' project to individual households to renovate private houses, the community committee used the government subsidy to improve the public spaces in the village. The local government consequently chose the village to be the site to pilot an environmentally-friendly water purification system. The overall quality of the public realm was significantly improved, although the spatial

configuration of the village was slightly altered to enhance accessibility and convenience (Figure 13, 14 & 15).

Figure 13. Aerial photos of Study Case 2, Chuodunshan Village, taken before and after the improvement of public realm. The outer service road and the footpath on the south bank of the east-west canal were added.

Figure 14. The public spaces in Chuodunshan Village

Most of the buildings in the villages were rebuilt in the 1980s. Some of them are in fact quite contemporary. In other words, no buildings in the village are of heritage value or 'historical' interest. Despite lacking backing from historic buildings, the local restaurant owners make the most of rural setting in the village and run their business in an ingenious way. The restaurant draws customers at some tourist sites or bus stations and attracts them by offering a free cruise along the waterway by motor yacht (Figure 16). Customers do some sightseeing within and around the village when the restaurant is preparing meals. Most of the ingredients used are sourced locally. There is a large tract of land to the southeast of the village, and many small patches in front of houses too, where the local residents grow various kinds of seasonal vegetables or breed livestock. The amount of local produce has not only proved sufficient for the consumption of local residents' consumption but has also provided the restaurant local ingredients. The restaurant seems to do good business in

the area as many customers also come to the restaurant by private car. The restaurant gives a fascinating example of how to use the picturesque settings and agricultural landscape of rural villages to brand its countryside cuisine.

Figure 15. Canals and footpaths. Many daily activities of local resident, such as cleaning and chopping vegetables and washing up are taking place along the canal.

Figure 16. The restaurant (middle) provides customers a free cruise along the canal and arrive the village by motor yacht. It also sources most of its ingredients locally.

5.2 Community Involvement in Rural Tourism

To promote eco-tourism in the countryside, it is essential to have the rural communities to support and sustain. The policy of ‘Building a New Countryside is a double-edged sword for rural communities. Under the policy, the implementation of land consolidation optimizes agricultural production but many farmers were, in a sense, made redundant. Also under this policy, China’s countryside has gradually transformed from an agriculture-based society into one with a mix of different industries. The promotion of rural tourism is beneficial to a smooth transition from primary industry to the tertiary. Loss-land farmers can take part in the development of rural tourism. Certainly, the existing theme-park-like tourism models also help resolve the he surplus of rural labours. However, as Su (2011) points out, if rural tourism industry is intended to expand its market and move toward high-quality,

personalized services, the government and competent authorities should provide training, finance and marketing support to rural communities. It is also noted that some younger generations of formal rural residents begin to move back to the countryside and start up small-scaled enterprise related to rural tourism development.

On the other hand, the older generations also have an important role to play. Traditional crafts, customs, cuisines and farming techniques, for instance, are the intangible assets that suffer from decline. Much of the traditional handicraft products in Suzhou, such as embroidery and bamboo weaving are produced in rural areas as home-based enterprises. Whereas the term 'rural heritage' denotes an attractive combination of natural and cultural heritage, the term 'cultural heritage' also encompasses both tangible and intangible assets. The importance of intangible rural heritage should be equal to the tangible (Zheng & Zhong, 2004).

6. Conclusion

The paper has examined the external threats to rural heritage posed by the rapid peri-urbanization expansion and the government's 'Building a New Countryside' policy. It also explained the internal factors that caused the desertion of tangible heritage. The current development of rural tourism industries in China was also reviewed to understand the potential of Suzhou for promoting such economic activities. The paper argued that the truly rural heritage that Suzhou has is the everyday life setting in the countryside that provides local communities with a stage to develop responsive and eco-tourism in the countryside. It is this 'heritage' in lower case that better reflects the lives in the past and communicates the present generation. It also has a greater flexibility in making changes and a greater potential to stimulate local economies and promote sustainable tourism with the involvement of local communities.

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Implementing A Regional Sustainability Plan With Scenario Based Planning

Robert Paterson, Elizabeth Mueller Michael Oden, Barbara Wilson and Ming Zhang,

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Abstract

A great many regions and communities in the US and Europe have invested heavily in the development of regional plans to promote more sustainable community development. The transition from plans to plan implementation is often difficult as buy-in among regional stakeholders is not always uniform nor always positive. In recognition of such problems, the US Department of Housing and Urban Development initiated a Sustainable Communities Grant program which allowed regions of the US to compete for funds to undertake collaborative plan implementation processes.

The Central Texas region was a recent recipient of one of those US HUD Sustainable Communities Grants engaging a broad spectrum of regional stakeholders in the development of scenario planning software to explore the creation of sustainable activity centers in the next 30 years in urban, suburban and rural settings. This paper describes efforts to create a second generation scenario based planning software system that better enables communities to make informed choices about the creation of more sustainable land use patterns. The great promise of scenario based planning is that it provides an immediate feedback loop to participants on "what if" land use scenarios so that inappropriate or incompatible development can be avoid or minimized. The new software program also strives to be educational in that it provides design solutions and choices when adverse effects arise in its indicator report system. The paper describes the current regional collaboration and network of partners that are developing the software suite. It details the sustainability indictors being developed for the analytic software suite. The paper concludes with a discussion of long term objectives for the software on an open source platform with internet browser accessibility.

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Background

In June 2009, the Secretary of the US Department of Housing Urban Development, Shaun Donovan, announced the Sustainable Communities Planning initiative coordinated within the Federal government's Interagency Partnership for Sustainable Communities. The Obama Administration is seeking to transform the way federal grants and programs facilitate sustainable development practices in US metropolitan regions by creating better interagency coordination and cooperation, and providing planning and implementation grants to regions that propose to collaborate and define a shared vision of sustainability through regional planning. That initiative led to the creation of a new *Office of Sustainable Housing and Communities* within HUD to coordinate the initial $100 million grant program. Three federal agencies--the US Department of Transportation, the US Environmental Protection Agency and US HUD--have committed to focusing their grant and infrastructure investment efforts to help advance six overarching Livability Principles to help American families gain better access to affordable housing, more transportation options and lower transportation costs, while protecting the environment and reducing energy dependence on fossil fuels. In 2011, HUD expanded the initial planning grant program to include a second category of grant recipients--*Detailed Execution Plans and Programs* for those regions that already had completed and adopted a regional sustainability plan.[1] An additional $67 million in grant funds became available for the second year of the program. Seventy four regions were recipients of the Sustainable Community grants (see figure

1 below), however the Interagency Partnership for Sustainable Communities boasts $3.5 billion in directed support to metropolitan regions in the US.[2]

Figure 1: Sustainable Communities Regional Planning Grantees (2012)

The overall objectives of the 2011 round of grants are to: (1) support metropolitan areas and multijurisdictional partnerships to adopt integrated plans, strategies, and management tools; (2) create strong alliances of residents and regional interest groups able to maintain a long-term regional vision and simultaneously support incremental sustainable development practices; (3) build greater transparency into planning efforts and assess progress toward national goals by identifying best practices and performance; (4) expedite implementation of the Livability Principles through changes in local zoning and land use that remove barriers to sustainable development; (5) assist regions that have shown a long-term commitment to sustainability to prepare for implementation and demonstrate on-the-ground results; and (6) identify how Federal agencies can better support local and regional planning and reduce redundant and conflicting Federal requirements.

A consortium of Central Texas governments, NGOs and interest groups received one of the 2011 Sustainable Communities Partnership implementation grants. The Consortium proposed to build off the region's successful regional planning venture and develop a next generation scenario based planning software suit to help the region's 20+ cities and five counties to implement their preferred regional vision adopted through the Envision Central Texas process. This paper describes the Central Texas regional collaboration and network of partners that formed and are developing the software suite which will be completed by the end of 2013. The software suite will be public domain and freely available to regions through the US and world. The paper describes the sustainability indictors being developed for the analytic software suite as well as additional software capabilities. The paper concludes with a discussion of long term objectives for the software on an open source platform with internet browser accessibility.

The Capital Area Texas Sustainability (CATS) Consortium and Partners

The Capital Area Texas Sustainability (CATS) Consortium is a broad-based collaboration of public, private, academic and nonprofit stakeholders in the Central Texas region (Austin-Round Rock MSA) that seeks to build on the region's previous sustainability efforts and to implement the region's plan and vision for sustainable development. At the start of the project the core members and partners of the consortium included:

- Capital Area Council of Governments (Lead agency)
- Capital Area Metropolitan Planning Organization (CAMPO) (the regional transportation authority)
- Envision Central Texas (ECT) (a 501(3)(c) nonprofit organization for regional planning and implementation)
- City of Austin, including its planning, housing, transportation and economic development departments
- City of Round Rock
- City of San Marcos

- University of Texas at Austin, The Center for Sustainable Development (lead), The Texas Advanced Computing Center, and the Center for Transportation Research, the University of Utah, Metropolitan Institute
- IBM, through its Smarter Cities program (IBM later dropped from the team due to licensing concerns)
- Fregonese and Associates, HDR Associates and Criterion Planners (replacement firms for the IBM role)

The foundation of the CATS Consortium sustainability implementation effort is the regional vision and preferred growth scenario developed between 2002-2004 by Envision Central Texas (ECT), a broad-based regional nonprofit with extensive community participation by more than 12,000 Central Texans (see figure 2 below).[3] The physical plan reflects efforts to concentrate substantially more growth in largely existing community centers and to move regional transportation infrastructure investments toward more multimodal choices include transit, biking and pedestrian systems.

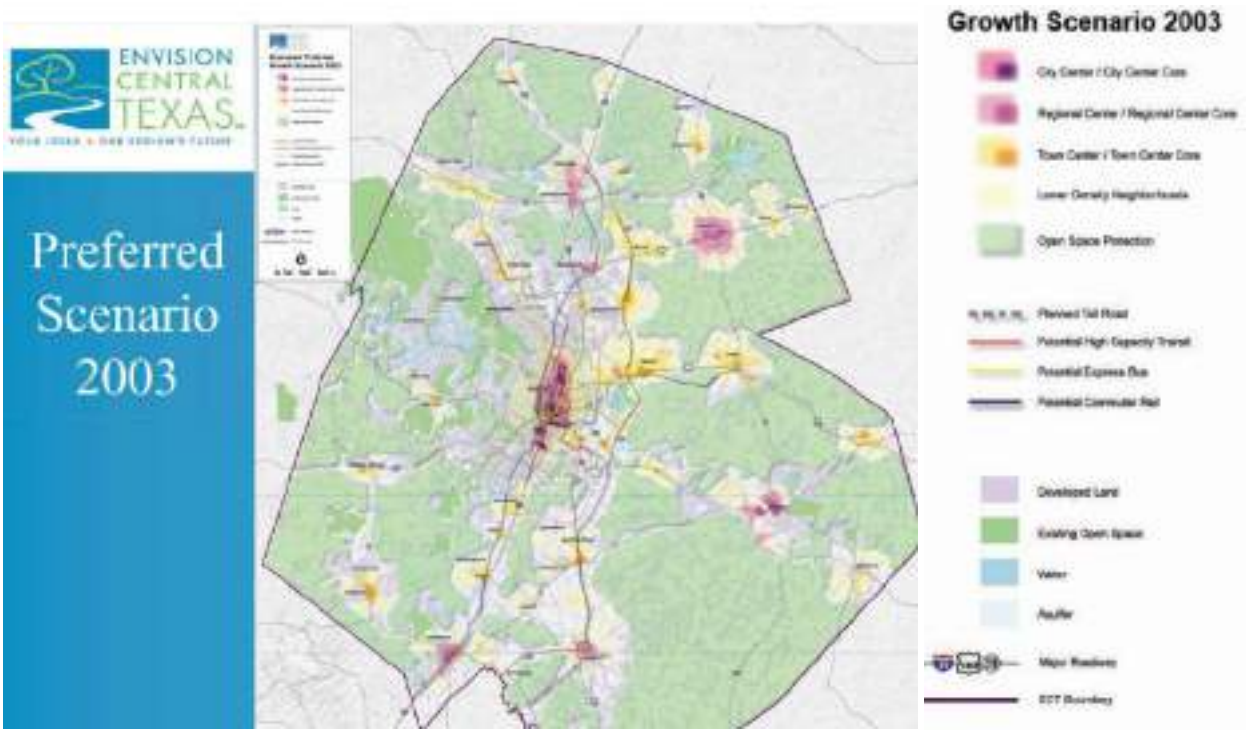

Figure 2: The Envision Central Texas Preferred Growth Scenario (2005)

Source: Accessed at:
http://envisioncentraltexas.org/resources/resources_74_Preferred_Scenario_2003_illustration.pdf

The core elements of the regional vision include:

> ***An effective transportation system that improves mobility throughout the region, increases transportation choices, including roads, rail, trails and bikeways, and is coordinated with land use planning.***
>
> ***Protection of our environment and natural resources so we will have the open space, parks and trails that people cherish, preserve our ecologically sensitive land and ensure sustainable clean water and air for future generations.***
>
> ***A diverse and thriving economy with a robust base of businesses and quality job opportunities for citizens and a distribution of jobs throughout the region.***
>
> ***A variety of housing choices, affordable for everyone in the region and offering a mix of styles, such as neighborhoods with pedestrian-friendly streets or housing that is within walking distance to transit and stores.***
>
> ***Preservation of our region's unique character by protecting and enhancing or neighborhoods, towns, rural areas, historic sites, and special sense of place.***
>
> ***An understanding that social equity and racial harmony are core values that strengthen us and actions that foster respect, civility, and opportunities for all.***
>
> ***A region -wide understanding that our fortunes are tied together requiring planning, participation and collaboration by stakeholders throughout our region to ensure a successful and livable future for Central***

In 2008, ECT undertook a progress assessment on regional efforts to implement the adopted plan and vision, and concluded that while there remained strong support for the regional vision and the need for coordinated land use and infrastructure planning, a major barrier to implementation was that many localities lacked the resources to plan and implement plans in their own jurisdictions.[4] Many localities lacked the staffing and technical support to craft activity center plans, CIP programming and land development code modifications to implement the preferred scenario in their own jurisdictions. However, despite these limitations in terms of local efforts to

advance the vision, two important accomplishments were completed in the years immediately following the ECT plan that added both credibility and stronger coordination of regional planning efforts: those were the ***Central Texas Greenprint*** and the ***CAMPO 2035 Long Range Transportation Plan***. [5]

Between 2006 and 2009, the Trust for Public Lands, CAPCOG, The University of Texas, and City and County governments in the Central Texas region undertook a Greenprinting process (i.e., open space and preservation lands suitability mapping) taking into account lands necessary to protect water quality (especially riparian zones) and quantity (i.e., karst recharge areas); ecologically sensitive areas such as endangered species habitat; prime farmlands and ranches; important recreational resource lands; cultural and historic sites, and scenic corridors to assist localities in defining priority lands for protection from land development. The project created an interactive GIS map system that enables state and local governments to query land development and infrastructure development proposals against the regional open space maps to prioritize protection programs and measures; to avoid water, sewer and transport infrastructure decisions that would conflict with the green infrastructure plan, and to enable acquisition of the highest priority lands as development in the region proceeds. [6]

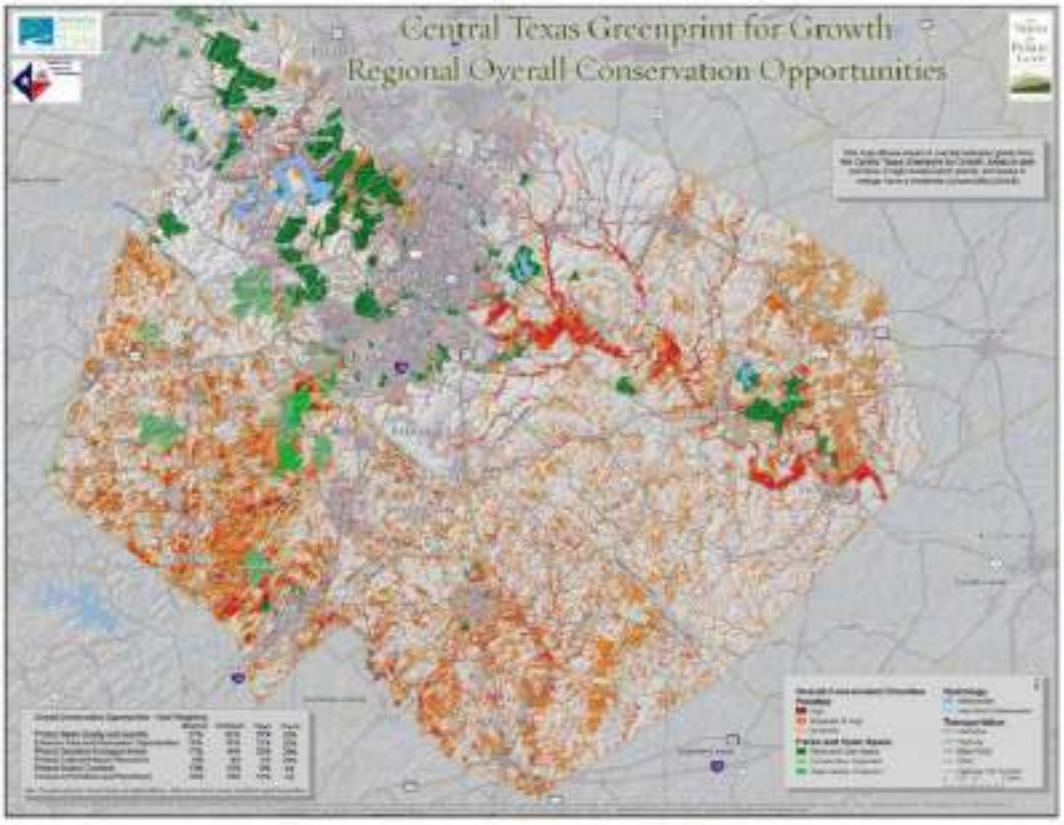

Figure 3: The Central Texas Greenprint

The ECT vision and preferred growth scenario and Greenprint in turn informed the creation of CAMPO's 2035 Long-Range Transportation Plan, which envisions future regional growth being accommodated in a network of 37 mixed-use, mixed-income, walkable, connected and transit-supportive Activity Centers that provide a balanced mix of jobs, housing and services, primarily within the context of existing communities (see figure 4). The Activity Centers concept is designed to improve the region’s livability outcomes in such areas as transportation system performance, air and water quality, and social equity and opportunities for revitalization.

Under the Centers Concept, funding is targeted to expand the region’s public transit system (including buses and rail), to implement a network of high capacity roadway lanes, and to build new arterials serving the mixed use centers. CAMPO intends to create a specialized program that

sets aside 50 percent of future Surface Transportation Program Metropolitan Mobility funding for projects that support the activity centers shown on the Centers Concept map. Those funds would be available to a wide range of projects to enhance transportation and livability in Activity Centers, including bicycle and pedestrian improvements, travel demand management projects, transit projects, and planning studies. Project selection is expected to be based on the extent to which the transportation project would leverage local planning and investment resources to create a successful mixed use activity center over time.

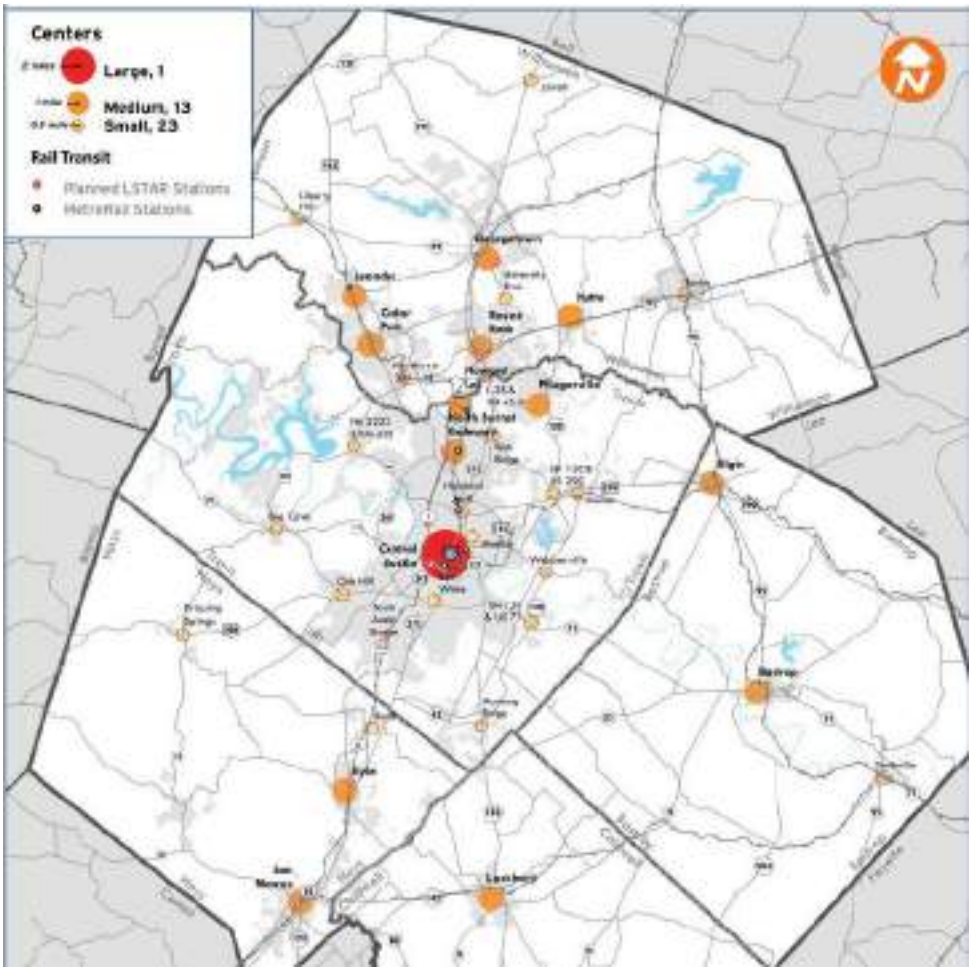

Figure 4: The CAMPO 2035 Long Range Transportation Plan Growth Concept Map (2010)

The HUD Regional Sustainability Planning Grant has enabled the CATS Consortium to focus on innovative and practical strategies that will help bring the Activity Centers concept to fruition within the context of Central Texas, where the power to make the key planning and investment decisions necessary to implement the concept belongs almost exclusively to local communities. The strategies include:

1. Development of a **Sustainable Places Analytic Tool** in partnership with the University of Texas partners and contractors that allows for scenario based planning at multiple levels with sustainability metrics that are responsive to local values and concerns within the host localities and their Activity centers.

2. **Demonstration Projects** (applying, testing and refining the analytic tool) at selected Activity Center sites to implement best practices for and overcome obstacles to compact, mixed-use, mixed-income development with balanced jobs and housing linked to the local and regional multimodal transportation network.

3. Broad-based **community engagement** (along with focused engagement around Activity Center demonstration sites) to build awareness and consensus around the Livability Principles and sustainability strategies.

4. Development of, and ratification of a **regional Compact** between cities and other jurisdictions committing to the adoption of common planning elements and supporting the coordination and integration of local comprehensive plans.

The remainder of the paper focuses on the analytic scenario software system that will be beta tested at the demonstration site communities.

The Sustainable Places Project Analytic Tool Suite

One of the more important developments in US physical planning over the last 15 years has been the increased use of scenario-based planning approaches at regional and local levels where land use and transportation decision making and their interrelated impacts on community

sustainability issues can be iteratively explored with indicators that provide the all important feedback loop on decision making. According to Bartholomew and Ewing (2010) the birthplace of this emergent area of planning practice can be traced back to two projects in the late 1980s and 1990s that looked at land use planning and transportation investment choices in a systemic manner: Montgomery County's Comprehensive Growth policy Study and the 1000 Friends of Oregon's LUTRAQ project. Both projects led to better consideration of the impacts of alternative land use and transportation development scenarios.[7] Since that time Bartholomew and Ewing (2010) have documented 74 regional scenario planning projects in the US. Often times these scenario planning efforts fall under the rubric of Blueprinting or Regional Visioning projects.

Some of the more notable success stories that have used scenario planning to inform public opinion and garner support for more sustainable land use and transportation investments include: the Portland Metro 2040 Vision; the Sacramento Blueprint, Envision Utah, and the Wasatch Choices 2040 plan.[8] The Envision Central Texas vision and preferred growth plan also built on that tradition, working with the planning consulting firm Fregonese and Associates using ARC GIS based scenario planning tools in development of the regional plan. The scenario planning process and software enabled the region's citizens and public to more realistically evaluate future land use patterns and their potential impacts on the region’s transportation system, land fragmentation, housing supply, farm and working lands, jobs-housing proximity and balance, as well as environment and natural resources impacts (among other measures).

As a result of the persuasive effect that scenario planning had on the Central Texas regional planning efforts, the CATS Consortium believed that one of the most important ways to help Central Texas localities realize plans to design and create more livable activity centers would be through the creation of the next generation scenario planning software. As defined by the

Consortium, the next generation of scenario planning software would need to meet several pressing needs, including: (1) minimizing the GIS data collection import and cleaning operations that would be needed to use the software, (2) allow for creation of land use scenarios that are based on market realities and not just land use class distinctions, and that can operate at a district or neighborhood scale, (3) enable scenarios that offer a host of metric and indicators that can be matched to local interests and value as opposed to what a technical planner might say is most important, (4) scenario software that serves more of a learning and solutions function than the current generation of software offers, (5) software that serves both the planner/ consultant works but also that some accessibility for officials and the public, and (6) software that links alternate development scenarios to visualization and on-line preference ranking to expand public dialogue away from the charrette or planning workshop.

To that end, the Consortium and its partners assembled a team of planning academics and consulting firms to accomplish those tasks to create the next generation of scenario planning software. The remainder of this section highlights each of the core components of the software project development and partner contributions.

A. The Sustainable Place Project Data Schema and Wizard

During focus groups with the Central Texas region's local planning directors, we learned that one of the more significant barriers to the use of scenario planning software at the local level are the substantial transaction costs associated with getting ARC GIS data layers needed to do the analysis, ready for use and imported in a compatible format with the software. Although a great deal of land use, economic, social , demographic, environmental, and infrastructure data is readily available in ARC GIS compatible formats, a number of issues can arise and require data

cleaning and other forms of manipulation (e.g., differing coordinate and projection systems) to be compatible enough with the ARC GIS software to be accurate and usable for scenario planning purposes. The CATS Consortium has contracted with Criterion Planners Inc., who are the creators of scenario planning software package known as INDEX, to create a standardized data schema and data quality wizard to (1) reduce time loss due to uncertainty about GIS data formats and fields, and (2) to provide automated routines to correct common data cleaning problems such as removing bad geometries (e.g., null, self-intersecting, irregular polygon slices, etc), street-centerlines-to-parcel-rights-of-way alignment checks, multi-part demographic parcels split issues, proper boundary-to-land-use topology and technical design coordination to ensure the software can be ported to an open source platform as those GIS options become more viable in the coming years. Data schema and wizard is designed to reduce uncertainty, increase transparency and ease of use for the new software system.

B. The Sustainable Places Project: Envision Tomorrow Plus Software

The CATS Consortium considered a variety of alternative software products that we could work with that were already considering going open source so they could meet the terms of the HUD grant. After meeting and discussing the project with multiple software vendors the CATS team selected the Envision Tomorrow (ET) software package created by Fregonese and Associates because it came the closet to meeting many of the CATS consortium objectives. First, as a result of an existing collaboration with the University of Utah Metropolitan Institute, the ET software was already undergoing changes in terms of modeling land use scenarios from a building typology instead of a land use or place based typology. By basing land use planning scenarios on a building library, it becomes possible to create development pro formas for each building type to ensure that market feasibility is built into the model from the beginning. Typically a

library of 30-40 buildings with a pro forma for each building type is created as back ground work to scenario development with a series of focus groups with area developers. Once that step is completed land use classes or place types can be constructed from a cross section of building types, reflecting variations in land use densities and intensities for urban, suburban and rural market conditions. This called the *Return on Investment Analysis System* which is an interconnected group of excel spreadsheets that are linked to the ARC GIS attribute tables.

A second major advantage of the ET software was the interplay between excel building information and sustainability indicator formulas. Thus, once a design workshop begins and alternative land use and transportation alternatives are being painted in ARC GIS, the results are being dynamically relayed to the spreadsheets enabling on the fly calculations if sustainable community metrics that can be viewed in parallel format with the scenario development. This enables real time learning of the consequences of multiple land use choices through an interactive display. The University of Texas at Austin, the University of Utah and other partners are creating a new suite of sustainability analytic tools and indicators that can be selected by localities to explore the consequences of alternative development schemes depending on communities values and interests. It expected that somewhere on the order of 40-45 sustainability indicators can be toggled on or off by the user. A major enhancement over existing software packages is the addition of pop-up windows for each sustainability indicator that explains the theory behind each indicator, the connections between the indicator and livability concerns, and links to design solutions via hypertext links to online sources and a bibliography.

Additionally, several special analytic capabilities are also being created that required considerable local or regional calibration to be useful in other regions such as a fiscal impact

model that accounts for variation in land uses and development densities on infrastructure costs and local operating and capital budgets. A 7D transportation travel estimation application that provides instant feedback on a variety of transportation related indicators during the scenario creation process. The tool will estimate travel behavior (auto, transit, walk/bike) from land use scenarios.. A housing and transportation costs estimator will allow analysis of the interplay between the two elements, and estimate the combined housing and transportation costs from different scenarios. An air quality and green house gas estimator will be created based on changes in VMTs and mode shifting from alternative land development scenarios. A public health estimator will build off the 7D estimator building on a meta-analysis to predict public health implications from the travel behaviors and recreational opportunities that derive from alternative land use scenarios. Rates of obesity and associated health outcomes (coronary heart disease and Type 2 diabetes) may also be estimated based on research findings. Other estimators are under development with the idea being that the software will ultimately function like an apple iphone where with open source code access additional analytics can be add like "apps" on an iphone.

C. The Sustainable Places Project Browser and Participatory Engagement Template System

Once a community has completed a design workshop process and created 2-4 alternate development scenarios for its downtown or other focal area, the question is how does a community get by-in from its public to that envisioned future, and engage the public in a dialogue on those planning results in a meaningful way. To address this issue, the CATS consortium contracted with the Texas Advanced Computing Center to create an on-line public engagement software system where products from charrettes can be easily ported to a web template for on-line public participation. A second objective is to take the ET software in a more

limited fashion into a web based browser environment so citizens can explore "what if" scenarios themselves for their city. It is hoped that eventually the project will be able to engage with ESRI city engine modeling system to enable high quality 3D visualization as well. However, this is a long term hope that is not included in the project's current grant scope.

D. The Sustainable Places Project Into The Future

Perhaps the most important part of this project from the CATS Consortium perspective is the shared interest in growing the software system well beyond the end of the HUD grant period in 2013. It is hoped that the system will continue to evolve and grow eventually into the open source GIS environment. There is strong interest among the Consortium members to seek out additional grant funds to refine and improve this evolving software system.

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[5] The Central Texas Greenprint can be accessed at: http://envisioncentraltexas.org/resources/CenTexReport.pdf and the CAMPO RTP for 2035 can be accessed at:

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[8] For further information on these plans and projects see --Envision Utah: http://envisionutah.org/historyenvisonutahv5p1.pdf; Sacramento Blueprint: http://www.sacregionblueprint.org/sacregionblueprint/the_project/Blueprintspecialreport.pdf; Portland Metro 2040: http://www.oregonmetro.gov/index.cfm/go/by.web/id=29882; the Wasatch Choices 2040: http://www.wasatchchoice2040.com/

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WHAT MAKES THE OLD CITY STICKY? RETHINKING THE ECONOMIC GEOGRAPHY OF ISTANBUL'S JEWELLERY SECTOR

Yiğit Evren[1]

Abstract

This paper examines the structure of Istanbul's jewellery industry and its locational dynamics. It focuses on the old city jewellery cluster which is one of the oldest and the largest urban industrial districts in the city. This cluster is characterized by large number of small scale artisanal producers relying on outworkers for almost all stages of production. The paper illustrates the vital role of place in jewellery making by examining the extent to which agglomeration within the old city contributes to this sector's creativity, competitiveness and sustainability. The paper also provides some policy implications within the context of various threats and opportunities in the jewellery sector.

1. Introduction

Jewellery industry has frequently been regarded in economic geography as a noteworthy exemplar of the complex relations between spatial clustering and economic performance. A classic study of the jewellery quarter in Birmingham provides substantial support for the significance of local linkages between firms and the specialized urban-industrial concentrations (Wise, 1949). Most of Wise's observations were echoed in a series of more recent works. A group of researchers led by Lisa De Propris in Europe, for instance, have investigated the structure of the jewellery industry under the umbrella of the debate on the link between the governance of local production systems and the development of localities (Propris and Wei, 2007; Propris and Lazzeretti, 2007; Propris and Lazzeretti, 2009). Across the Atlantic, we have been witnessing that this sector has been discussed in the context of the social bases of industrial agglomeration (Scott, 2000). Since the re-discovery of clusters as a competitive advantage in the mid 1990s and as an inevitable response to the so-called cultural turn in economic geography in the early 2000s, the jewellery industry has received considerable interest from various disciplines (Carnevali, 2003; Pollard, 2004a; Pollard, 2004b; Wood et.al., 2004; Bagwell, 2008).

The common message from the vast writings in economic geography literature on jewellery industry seems to be that this sector has a craft-based and labour-intensive

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character and as in the cases of Birmingham, London, Los Angeles and Bangkok, the production occurs in dense networks of interfirm linkages underpinned by social and cultural settings (Scott, 2000). Furthermore, producers tend to locate in geographic space in the form of localized urban-industrial districts and these industrial districts are in or close to the centre of most cities.

Nevertheless, there is no single deterministic relationship between particular forms of organization of production and their geographies as Hudson (2000) rightly contends. In this context, more empirical evidence from relatively less explored localities will improve the present structure of jewellery making. Bearing these issues in mind, this paper examines the structure of Istanbul's jewellery industry and its locational dynamics[2]. The paper is structured as follows. Part 2 sets out the theoretical concern of the paper. It provides a review of the literature on the spatial organization of jewellery making. Particular emphasis, here, is placed on clustering. The following part provides a background to the empirical study by focusing on the significance of the jewellery industry to Istanbul's local economy and its changing structure. Part 3 discusses the role of place in jewellery making. It examines the extent to which agglomeration within the old city contributes to this sector's creativity, competitiveness and sustainability. The paper concludes with the main discussion point of this research and provides some policy implications within the context of various threats and opportunities in Istanbul's jewellery sector.

2. Spatial organization of jewellery making: lessons from the clustering literature

Why do jewellery producers cluster in cities and why they do so in inner city areas? This has been, not just in the context of jewellery making of course, perhaps one of the most popular debates in the economic geography literature. Let us begin with the conventional view of agglomeration, which is based on the concept of external economies of scale or scope that flow from firms locating in the same area. This is originally Alfred Marshall's (1890) view of agglomeration and it indicates that by co-location firms reduce their costs with respect to the accessing of specialist skills, supporting industries and knowledge spillovers. Furthermore, firms overcome the limitations of short term contracts by developing personal relations and engaging in active cooperation.

According to Dicken, the subsequent growth and cumulative development of a localized economic cluster tends to be based upon two sets of agglomerative forces, namely traded interdependencies and untraded interdependencies (Dicken, 1998: 11). The former represents the desire of firms performing different but linked functions in

[2] Part of this paper draws on the sectoral analysis report (Evren, 2010) which I submitted to the Istanbul 2010 European Capital of Culture Agency as part of the "Istanbul Inventory of Cultural Heritage and Cultural Economy Compendium" Project funded by the Agency and the Turkish Academy of Sciences (TÜBA).

a production chain to reduce their transaction costs by locating close to each other. The latter represents the less tangible and mainly socio-cultural benefits derived from geographical clustering. These are face-to-face contact, social and cultural interaction and the enhancement of knowledge and innovation. This is the socio-cultural basis of agglomeration as Dicken puts it, enabling firms to maintain trust, establish partnerships, develop rules of behaviour, track innovations and thus provide rapid responses to changes in demand patterns.

Maskell and Lorenzen (2004), however, conceptualise clusters as market organizations, arguing that geographical proximity is derived from firms' efforts to achieve resource efficiency, especially under the conditions of uncertainty. According to this view, if markets, or more precisely customers, suppliers and products are unstable, firms tend to form clusters by engaging in two main types of interaction with each other, both of which can also be considered as distinctive agglomerative forces. The first one is, as Maskell and Lorenzen name it, project relations and it arises if ambiguity in industry prevails and firms regularly need to redefine the specifications of their products. The second one is flexible relations established by firms which frequently need to expand or reduce their output or adjust their product range to provide variety due to high levels of industrial uncertainty (Maskell and Lorenzen, 2004: 995). In both cases geographical proximity between firms sharing the same value chain is a prerequisite for their survival.

Indubitably, the above-said explanations in clustering literature provides a useful theoretical stepping stone for understanding the locational dynamics of jewellery producers. Nevertheless the importance of urban dimension in clustering, more precisely the role of inner city areas, deserves a closer look since geographical concentration of this sector in urban industrial districts is the norm not the exception. In this respect, Porter (1995) identified four key advantages of the inner city. These are strategic location, local market demand, integration with regional clusters and human resources, all of which make the city centre attractive for various economic activities. According to him, inner city areas are surrounded by central business activities, an entertainment zone and well-established logistical infrastructure. These areas are the places in which close linkages are shared between different businesses, the local market can hardly be saturated and residents eager to work for relatively low wages.

Lorenzen and Frederiksen (2008), on the other hand, refer to the concept of urbanization economies to explain the tendency of creative sectors to locate in cities. 'Urbanization economies' denotes the gains acquired by firms from being located in a city. These positive externalities, as Lorenzen and Frederiksen argue, arise from the regional diversity in cities. First of all, cities are the places in which co-ordination between unrelated knowledge bases can take place. In other words, by locating in cities firms producing different products can get the opportunity to establish temporary collaborations and create novel products. Secondly, urban areas are the places of overlapping labour markets. These rich skill pools underlie innovation and competitiveness. Finally, cities accommodate a wide palette of institutions and

infrastructures both of which serve as pipelines to global markets and knowledge networks.

3. Jewellery industry in Istanbul: an overview

For over 500 years Istanbul has been one of the most important centres of Turkish jewellery production. The key trigger to sectoral development in the city was the granting by Byzantine Emperors of tax exemptions to jewellery makers (Akın, 2008). However, it is argued that the placement of Armenian manufacturing jewellers in the Istanbul's old city and the establishment of the Grand Bazaar by Fatih Sultan Mehmed II in the mid 15th century were the two most important milestones in the history of jewellery making in Istanbul. Thanks to palace demand for jewellery products and the interest shown by several Ottoman Sultans (e.g. Yavuz Selim and Süleyman the Magnificent) in jewellery making, the sector grew continuously in this period. This laid the foundations for Istanbul, the historical peninsula in particular, to become the primary centre of jewellery production in Anatolia.

At present, the Istanbul sector comprises 79% of manufacturing firms and 85% of all employment in the Turkish jewellery sector. It has been estimated that more than 18,000 people are employed in approximately 5,000 workplaces in Istanbul. Furthermore, the local jewellery sector in Istanbul generates 96% of national jewellery value-added (Köroğlu et.al. 2010). In 2009 the total value of exports realised by 733 Istanbul-based jewellery producers was 931 million dollars, which is around 95% of all jewellery exports in Turkey in that year. It is clear from these figures that Istanbul has indubitably played a key role in the Turkish jewellery sector becoming, in 2008, the world's third largest global producer after India and China, with 183 tons of jewellery made.

Over the past two decades Istanbul's jewellery sector has experienced a structural transformation from small-scale artisan production to mass production (Evren, 2010). The changing conditions of the Turkish jewellery market and intensified competition in the global jewellery sector have encouraged some local producers to standardise their products and use vertical integration strategies in order to realise economies of scale. We have also witnessed the internationalisation of the local jewellery sector; several large scale producers have set up their own retail stores abroad or established liaison offices and offshore production facilities in order to penetrate various international markets such as China, Russia and the United States (Gereffi, 2007).

These developments have led to some important changes in the traditional jewellery value chain. On the one hand, small workshops, which are unable to adapt to changing conditions and therefore cannot compete against large-scale producers, have been severely affected. At present, craftsmen doing relief-work, engraving or enamelling appear to be experiencing the greatest struggle for survival in the market. Hence the number of artisan producers as such has fallen substantially. Conversely, jewellery design, which was predominantly an in-house activity of small workshops, has become a creative profession pursued by specialist designers rather than

craftsmen. The author's previous investigations indicate that there are at least six types of jewellery designer in Istanbul who differ from each other according to the size of production and power of their brands (Evren, 2011).

In some circles within the sector there is growing optimism about the possibility of Istanbul to becoming a world leader in jewellery production. Nonetheless, as far as the overall industry is concerned, the sector still fails to set new global trends and is associated with the production of relatively low value-added designs and products.

4. Unpacking the old city jewellery cluster

In Istanbul, the jewellery industry is clustered in three different localities within the metropolitan area. One of these clusters is Kuyumcukent, a recently finished complex just outside the Atatürk Airport at the western end of the city. Kuyumcukent is the largest goldsmith complex in Turkey, consisting of more than 650 small and medium-sized jewellery manufacturing workshops as well as several wholesale stores, factory-type workshops and retail stores. The other cluster is in a vast urban area stretched alongside the E-5 Highway on the European part of Istanbul between Kuyumcukent and the old city. There are about 100 large jewellery factories in this cluster, many of which utilise contemporary production technology.

Yet, the sector is predominantly located in the old city. Today the Grand Bazaar, in which the sector was first established and locally clustered, houses around 400 traditional jewellery producers (Köroğlu et.al., 2009; Eceral et.al., 2009). Taking other artisanal producers located within the immediate environment of the bazaar and the *District of Hans* into consideration, the total number of producers comes to around 2100. Such a figure indicates the significant clustering of small-scale jewellery production in the old city of Istanbul. Istanbul's old city is also the home to a number of jewellery-related institutions, notably İKO (Istanbul Chamber of Jewellery) and a School of Jewellery. These institutions, together with a wide palette of producers operating in different segments of the highly disintegrated value chain, and a great number of supporting cast including importers, wholesalers, retailers, designers and machinery and tool manufacturers comprise a place-specific economic diversification which lead to industrial synergies in Istanbul and a unique manufacturing culture in the old city.

In light of these comments, now we can turn our attention to the logic of agglomeration. What makes the Istanbul's old city sticky for different actors of traditional jewellery making? I will try to answer this question by providing three different views on agglomeration. In doing so, I will draw up-on over 70 in-depth interviews which I have conducted with various goldsmiths and silversmiths, designer-makers, gemstone and bullion dealers and other jewellery-related traders in Istanbul since 2009. Here I quote only three of them.

The first view belongs to a goldsmith who has been working in one of the workshops located just outside the Grand Bazaar since the early 1980s. According to him the

"glue" of the old city is its unique business ecology which allows firms producing similar products to compete and collaborate. On the one hand, co-location provides the opportunity for jewellery producers to watch their competitors closely, and thereby compare their own performances. On the other hand, the old city represents a dynamic market with full of unexpected opportunities:

> "About a moth ago, a talkative friend [also a competitor] popped in my workshop. During our chat, he saw one of my latest earrings and wanted to borrow a sample. I was very busy at that time and wanted to get rid of him. So I gave him a pair to leave me alone. Two weeks later he came back and told me that he had signed a fat juicy contract that will make us both rich! Since then I have been working to meet that order day and night. You see? There is trade in downtown's air. In every corner you run into a friend and you never know when an ordinary greeting can lead to new business opportunities."

The second view is from a retailer who sells affordable gold-pieces for low-volume markets in the Grand Bazaar. During the interview, he talked about the advantages of locating with the same cluster with small-scale producers which are able to meet their highly fluctuating demands. In this context, the old city jewellery cluster facilitates easier and faster access to specialised inputs making it preferable to other localities in the city.

> "Foreign tourists are our main customers. Normally this type of customer has limited time for shopping. This means that you have to be ready to make any kind of modification [changing the size etc.] on your products in accordance with our customers' preferences. This requires most of us to work in close collaboration with a goldsmith nearby. In cases as such, my assistant takes the product to the goldsmith's workshop, have it modified within minutes and brings it back. Meanwhile, my mission is to keep my customer in the store as long as possible."

The third view comes from a charge hand who works for a polishing house. This interview illustrates how production and exchange within the sector are supported by complex and place-specific social settings. Behavioural patterns, norms, accepted rules, conventions and other institutional arrangements constitute the institutional dimension of the old city jewellery cluster. One of the pillars of the social bases of agglomeration is the master-apprentice relationship which requires mutual trust and dedication.

> "I was ten years old when I started working in this sector. The Grand Bazaar is a kind of a school you know and we name it the University of Grand Bazaar. Your master does not only teach you the basic skills required in jewellery making but also show you a certain way of life and even how to make practical jokes… I cannot forget my first week. One day my master told me that he would teach a secret technique in polishing and asked me to bring him some minaret shadow! Some minaret shadow? He looked very serious and I was too young to believe this. After all, he was my master, you know, you have to do what he says without questioning. Anyway I walked around the Grand Bazaar for about an hour, even went to the Nuruosmaniye Mosque. I couldn't ask to anyone of course [laughs]."

These different views indicate territorialization is a significant component in the organization of jewellery making in Istanbul. However, in 1995 the local planning authority took a decision to move the small scale workshops from the city centre to its peripheries (Evren 2012). The main reason for this decision was to reduce the so-called negative environmental effects caused by jewellery producers. Nevertheless, this decision has never been officially implemented partly because of the on-going negotiations between the local planning authority and those traditional manufacturing jewellers who are keen to continue their businesses in the old city. According to my in-depth interviews with these jewellers, the municipality's attitude to the sector's locational preferences is problematic. A silversmith commented:

> "The municipality has always put the same argument on the table: jewellery makers pollute the environment! How can this be true? There is silver in our waste and we don't throw it away, we refine it in an environmentally friendly way…Look, we may be small in scale, but we are in great number. Therefore, it is not that easy to clear the old city from jewellery manufacturers. That's why the municipality always wants to show us they keep the whip hand. That's why they don't re-issue our licences… A long time ago, I received a letter from the municipality saying I have to stop production within two weeks. I did nothing about it. Two weeks later we found a seal on our main door. This was a kind of a message you know, because they sealed the door knob, not the lock! Therefore we entered our premises without breaking the seal. Look, after all those years it is still there."

Undoubtedly, these intimidating tactics have created severe uncertainty whether the jewellery production will continue to cluster in the old city of Istanbul. Most of the producers feel the pressure of decentralization. This situation prevents them to expand their businesses in the cluster. Furthermore, the overall physical quality of the premises allocated for jewellery production is quite low and the buildings are poorly maintained.

5. Some conclusive remarks on the policy implications nexus

The jewellery production in Istanbul is agglomerated in three different urban industrial districts. The old city cluster is the oldest and the largest one which is characterized by large number of small firms, employing fewer than 10 people. Most of these producers rely on outworkers (gem setters, casters, engravers, polishers etc.) for almost all stages of production.

The case of the old city jewellery cluster indicates a wide palette of agglomerative forces on various actors of jewellery production have been at work. In other words every actor, be it a producer or a retailer, has a unique reason to locate within the old city. Producers, for instance, highlight the importance of a unique business climate in the old city, in which firms operating in the jewellery sector learn from and compete with each other. Retailers, however, emphasize the role of information flow, face-to-face relations and trust in the survival of small scale jewellery business. From this point of view, the information and communication ecology in the old city, where

firms are automatically exposed to news and recommendations, play a vital role in the sector's existence.

With respect to the conflict between the local authority and the manufacturers, we must acknowledge small scale jewellery production in the old city is an asset for Istanbul. Traditional jewellery making is a very important part of the old city's industrial and cultural heritage. The sector does not only contribute to the local economy of Istanbul, but also improves the image of the city and more importantly helps make the city centre more attractive. Furthermore, the sector nurtures a creative and innovative environment in the city. The international success of a small number of entrepreneurial jewellery designers is an example to a younger generation of up-and-coming designers, and encourages them to set up their own businesses. In this context, the old city's future in jewellery production lies in preserving the artisanal manufacturers in their own habitats, improving their working conditions and creating channels through which these small scale producers can access wider markets.

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SIGNIFICANCE OF ECOSYSTEM SERVICES MAPPING FOR THE INTEGRATION OF SPATIAL PLANNING AND CLIMATE ADAPTATION*

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Abstract

Recent global concerns are focusing on biodiversity loss (species and ecosystems) and global climate change especially in regard to sustainable urban development. Global warming, rapid urbanization and environmental degradation are closely related to the challenges of present urban settlements and mainly these are affecting the well-being of ecosystems and their services (Millennium Ecosystem Assessment-MEA, 2005). The need for better understanding of urban development and its impacts on ecosystems where these developments occur should be carefully assessed for the sustainability of the functions provided by natural systems. Meanwhile, the existing spatial information is concentrated on land cover and land use information. On the other hand, ecosystem services (ESs) may provide better understanding and more efficient spatial development in the process of spatial planning design and policy development (Daily 1997). Recent transnational organizations and EU institutions are also focused on the integration of ESs into spatial planning (EEA 2010).

As a result of the complexity of urban systems and ecosystem functions together with the limitations on the consistency of spatial information, the key ESs can be used to identify ecologically sensitive areas. In this approach, it is aimed that relevant mapping of ESs will be a key step to lead rational spatial development policies. Therefore, mapping of ESs and the socio-ecological drivers of space can be a relevant tool to achieve more sustainable development strategies by integrating ESs and urban socio-economic dynamics to the spatial decision making process. This

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approach can be a rational tool to implement climate change adaptive policy development as well.

This paper aims to integrate ecosystems and their services into spatial planning through relevant mapping of ESs to be utilized for climate adaptive spatial policy development process in the Istanbul case. Istanbul is an exceptional geography for the biological diversity with its location when compared with other settlements in the region. On the other hand, the urban development dynamics of the metropolitan area have a significant role for the well-being of ecological units, biological diversity in other words its life support systems such as drinking water sources, forests, coastal and riparian corridors, wetlands and heathlands which are the representatives of the major habitats of Istanbul Metropolitan Area (Ozhatay et.al. 2005, Tezer 2005, Tezer 2008).

1. Introduction: Climate Change and impact on cities

Global GHG emissions due to human activities have grown since pre-industrial times with an increase of 70% between 1970 and 2004 (IPCC, 2007). A projection of current trends as represented by a number of different scenarios, gives global surface temperature increases of about 1.8° to 4° C by the year 2100. Sea level is expected to rise between 18 and 59 centimeters. Climate change foreseen impacts are ocean warming, rise in sea level, increase in continental-average temperatures, extreme weather events like cyclones, tornados, change in precipitation, heat waves, natural threats such as drought, flood, spread of diseases (IPCC, 2007). Cities especially the developed ones, are major contributors to climate change by producing greenhouse gas emissions, mainly through energy generation, vehicles and industry (Pimm and Raven, 2000).

Climate change and urban dynamics-based impacts are expected to cause vulnerabilities in urban areas by decreasing accessibility to urban services and natural resources like water and food. Existing urban dynamics-based problems can be triggered by climate change impacts as well. The vulnerabilities of settlements with the results of these impacts should be re-assessed by mitigation and adaptation tools and strategies to achieve more resilient and sustainable urban areas. Defining vulnerabilities is a complex and uncertain issue as both urban dynamics and climate change and their future impacts are uncertain and based on projections and foresights. It is important to be able to foresee future climate change risks and identify main drivers of urban vulnerabilities (Hallegatte et al., 2011).

The dependency of vegetation on variations of rainfall and temperature are studied in many studies. Rise in temperature and change in precipitation are expected to change also the land cover especially the green cover (c). Thus key ESscan be also affected by these impacts. Desertification can be a good explanation for defining the land degradation in arid, semiarid, and dry sub-humid areas resulting from climatic variations and human activities. Change in main ESs components like forests, agricultural areas, pastures, scrubs, water bodies etc. can cause loss in their qualities. Existing species may be replaced by other species that have less economic importance and also this may cause a loss in the productive, regulative and

supportive capacity of the earth (UN, 94). Millennium Ecosystem Assessment (MEA, 2005) claims that especially deforestation may cause a decrease in precipitation. As forest existence depends on precipitation level, its change can cause a change in forest cover as well.

Pollution (land, air and water) due to the impacts of urbanization increases greenhouse effect and accelerates climate change. Insufficient capacity of infrastructure and heat island effect of built up areas are also considerable outcomes of urbanization. As Cadenasso et al. (2007) indicates; land cover, density, used materials and the morphology of urban landscapes cause differences in local air temperatures. Climate change based vulnerabilities like change in temperature, precipitation, hydrological cycle, food chain and land cover/use (forest, agriculture etc.) are expected to have more severe impacts in urban areas as a result of their dynamics and needs. Therefore climate change impacts, unexpected natural risks may cause insufficiency in infrastructure, problems in food and water accessibilities. These impacts may threaten quality of life as well as environmental quality and future prosperity.

Millennium Ecosystem Assessment (MEA, 2005) put forward that climate change will have very sudden impacts on ESs in the following 50-100 years. According to the report, climate change is a direct driver that affects ESs and human well-being. But, at the same time it can complicate the management and assessment of ESs to be more complex in all scales. Beside that, as a result of human activities and climate change, the degradation on ESs cause a contribution to greenhouse gas emissions which has effects not only in local but also in global level.

2. Spatial Planning and Integration of Ecosystem Services (ESs)

Planning and urban design professionals have been always related with questioning and establishing better “nature” and “development” interactions since far back to post-industrialism with the severe and sudden impacts of rapid industrialization and urbanization. The first reaction of urban settlements to early problems of industrialization has been widely researched and well documented. “The City Beautiful Movement” and “The Garden City Movement” at the beginning of 1900’s were related movements of urban planning and nature interaction (Platt 2004). Later, Ian Mc Harg (1969) had significant influence of ecology and urban design interaction with his prominent work of “Design with Nature”. They were the relevant stepping stones of ecologically sensitive spatial planning practices in the last century. Ultimately, today, the need for having better interactions of urbanization, nature and community is beyond beautification efforts, but is an urgent necessity especially with the growing concern of climate change impacts.

The Millennium Ecosystem Assessment (MEA, 2005) brought new approaches to nature and human relations and the issue of ecosystem services (ESs) accelerated the efforts for the integration of planning processes. From 1990 to 2010 more than 2,000 scientific articles were published on this subject. The majority of these publications were related to ecology, environmental sciences and studies, economics and biological diversity conservation. In these publications, the integration of spatial

planning with ESs is not very common and has a small figure with 47 counts (Tezer et al, 2011).

Although the ESs issue has become an increasingly important subject in scientific literature and at the global level policy making processes, the lack of inventory regarding to the services leads to disconnection between planning and policy-making domains. In addition, existing planning models for policy development are oriented by land use and sectoral information (Willemen et al., 2008). In this context, to be able to integrate the ecosystem approach to planning, the principles of ESs based planning approach will be relevant to review its content and characteristics. These features can be summarized under five main headings:

- ESs-based planning approach is holistic and interdisciplinary
- ESs-based planning approaches focus on relationships and processes of the ecosystems and society.
- ESs-based planning approaches include the appropriate purposes related to spatial and temporal scales.
- ESs-based planning approaches aim for the equitable sharing of benefits and resources for every segment of the society in order to foster participation in the planning process.
- ESs-based planning approaches use adaptive management activities.

On the other hand, the identification of relevant planning tools and the clarification of commonalities of the two approaches' principles will be beneficial for identifying a framework to integrate ESs into spatial planning process. In this context, the conceptual framework of MEA (2005) clarifies the links between ESs and human well-being while then again it presents a draft framework to be applied to the planning process from global to local level scales with an analytical approach. The key tasks are defined in this analytical process, such as (MEA, 2005):

- Definition of ecosystems and categorization of the services provided by them,
- Identification of ESs and the links with society,
- Identification of direct and indirect factors changing ESs,
- Identification of the indicators of factors changing ecosystems' services, structures and human well-being,
- Assessing past trends of ESs,
- Uncertainty analysis, projection of changes on ESs and human well-being under specific scenario analyses, and
- Definition of basic outcomes and development of future policies after comprehensive assessment process.

Conversely, the strategic spatial planning can be a relevant tool for sustainable planning of ESs with its multi-dimensional and multi-stakeholder nature. This approach may provide the development of land use decisions under resource protection, action-based multi-dimensional governance, sustainable investment decisions, coordinated and long-term spatial development policies (Gedikli, 2010).

ESs-based spatial planning can be developed in four phases (Albayrak, 2012). First phase is the definition stage where existing ecological, socio-economic and administrative characteristics are put forward. In this stage, ecosystems and their services, sensitive habitats, direct and indirect factors changing ecosystems are defined with local ecological knowledge. Additionally, existing planning policies and tools are identified in this stage with the support of ownership patterns, socio-cultural characteristics, public and private stakeholders who may have role in the planning process of ESs. Second stage, entitled as identification, is where key ESs and their trends are identified. The key ESs are the ones which have significance on the planning decisions. In this stage, their sustainability indicators and status are assessed together with previous trends to direct planning decisions. The third phase measuring, assessing and mapping is the stage where spatial, socio-cultural and economic analyses put forward; and scenarios analyzed under past/present trend analyses. The final phase is the decision making and modeling stage where spatial, institutional and legal frameworks of planning process is set under the outcomes of previous stages (Figure 1).

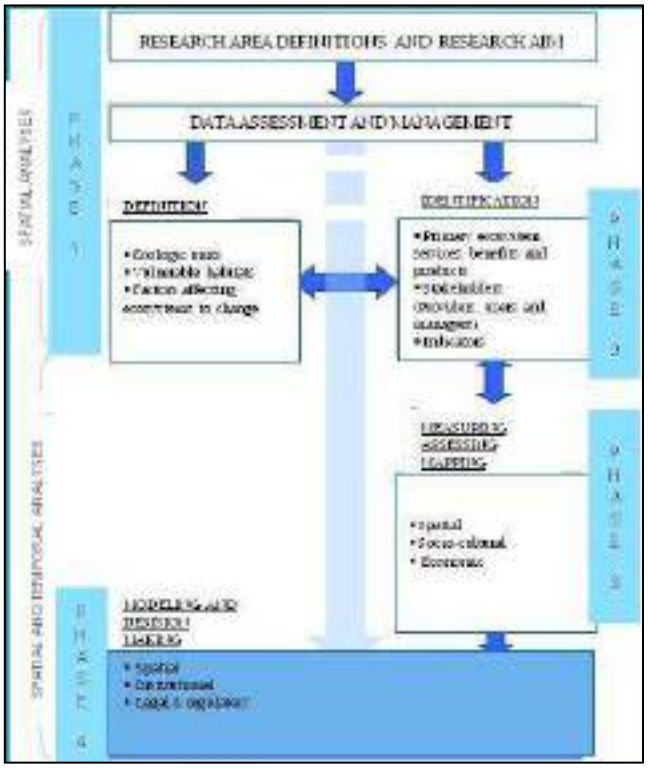

Figure 1. Stages of ESs integration with spatial planning (Albayrak, 2012)

2.1.Mapping of ESs

Geographically referenced data of GIS have to be defined at a selected common coordinate system for using the GIS capabilities effectively. On the other hand, maps, which are used for communication of the information obtained as a result of the analyses executed with decision makers and end users in GIS, add another

dimension to this technology for being so popular (Ulugtekin et al., 2009). Because of the above mentioned characteristics, GIS is often used by several disciplines to find solutions to global problems through a systematic approach. Therefore, it is considered as a multi-disciplinary tool and is used for different variety of applications, such as transportation, disaster management, navigation, medicine, city planning, agriculture, and etc. In this research, GIS was effectively used to organize, manipulate, retrieve and present the spatially referenced data obtained from different sources related to ESs and land cover/use data. In this context, the vector data obtained, produced or derived from existing maps, remotely sensed images and GPS surveys were firstly imported into a GIS database as layers and then all vector data were reorganized by identifying them at a common coordinate system that is Universal Transverse Mercator (UTM) Projection. Additionally, European Datum 1950 (ED50) was also considered as the defined datum of the system in this case. A GIS database on which spatial analysis can be executed properly were obtained by the definition of the vector data at common coordinate system. As the following step of the study; relations between non-geometric and geometric data were provided based on the relational database principles. As a result GIS database is prepared for executing queries and analyses and also for mapping their results thematically. Positional, thematic, temporal analyses were used in the analyzing process of ESs of Istanbul case. In this context:

- Positional analyses were executed by comparing different parts of the study area at the same scale to introduce general characteristics of the study area.
- Thematic analyses were executed for investigating different themes in the same area at the same scale comparatively.
- Temporal analyses were executed for comparing the data of the same area collected at different dates of the study area were determined based on temporal analyses.

Finally, results of these analyses were visualized as thematic maps indicating the several characteristics of ESs in Istanbul.

3. Evaluation of the main ESs integrated with climate change in Istanbul

Istanbul, covering 5344 km^2 area with 12.915.158 people and the urbanization ratio of 90%, is located on a unique ecosystem location by combining two continents and the climatic regions of both Mediterranean and Black Sea climates with diverse flora and fauna characteristics. Bosporus and the Marmara Sea have also very significant role in the natural structure of the city. The existing pressure of increasing urbanization, growing population and rapidly emerging economical activities are expected to increase in the future. Unplanned urbanization, residential areas of the internal immigrants with infrastructure deficiencies, location choices and plans conflicting with the natural characteristics interfere sustainable urban development of Istanbul.

The pressure on this vulnerable natural environment is expected to continue by the impacts of climate change (Figure 2). Addressing the impacts of climate change on

ESs and urban area, determining the vulnerable areas and developing strategies to increase the resiliency can be a relevant policy development tool to achieve sustainability in Istanbul. Therefore in this research, terrestrial and climatic features of Istanbul are mapped to produce ESs based spatial knowledge for future spatial policy development.

Evaluating actual land cover and land use with projected changes in primary climate parameters (e.g., temperature and precipitation) can help understanding the vulnerabilities on urban functions and ESs. Other climate parameters such as evapotranspiration, runoff and wind should be also integrated to understand the possible impacts on ESs.

3.2. Mapping of ESs in Istanbul

In this research Istanbul Metropolitan Area Boarders' land cover and land use data is studied at regional scale. Main land cover and land use data are determined as artificial surfaces, urban green areas, urban unused areas, forest areas, agricultural areas, scrub and herbaceous vegetation. Beside these, beaches, dunes and rocks, wetlands as marshlands, water bodies and main transportation axes (TEM, E5 and railway) are included in the assessment of existing ecologic and built up area characteristics.

According to the Millenium Ecosystem Assessment (MEA) 2005 Report; ESs are classified as supporting (nutrient cycling, soil formation, primary production), provisioning (food, fresh water, wood and fiber, fuel), regulating (climate regulation, flood regulation, disease regulation, water purification) and cultural services (aesthetic, spritul, educational, recreational). In this study, ESs of Istanbul are intended to be classified according to MEA, 2005 classification as shown in Figure 3.

These services can be developed more in details especially to address the socio cultural characteristics of Istanbul.

3.3. Evaluation of the ESs in Istanbul

In this research, ESs addressed for Istanbul Metropolitan Area are tried to be evaluated for integrating with climate change scenarios. Increase in temperature and change in precipitation are expected to have impacts on existing ESs in Istanbul. In order to increase resilience of Istanbul and develop appropriate spatial planning policies and strategies; these impacts should be addressed. Above some of the estimated impacts of climate change are mentioned. Additionally the impacts of CC on the ESs should be clarified. Hence further assessments have to be evaluated with the integration of the two.

Soil Formation: Increase in precipitation should be taken into consideration especially for low drainage soil formations like hydromorphic and vertisol soils. The high quality soil can be protected and avoid from urbanization.

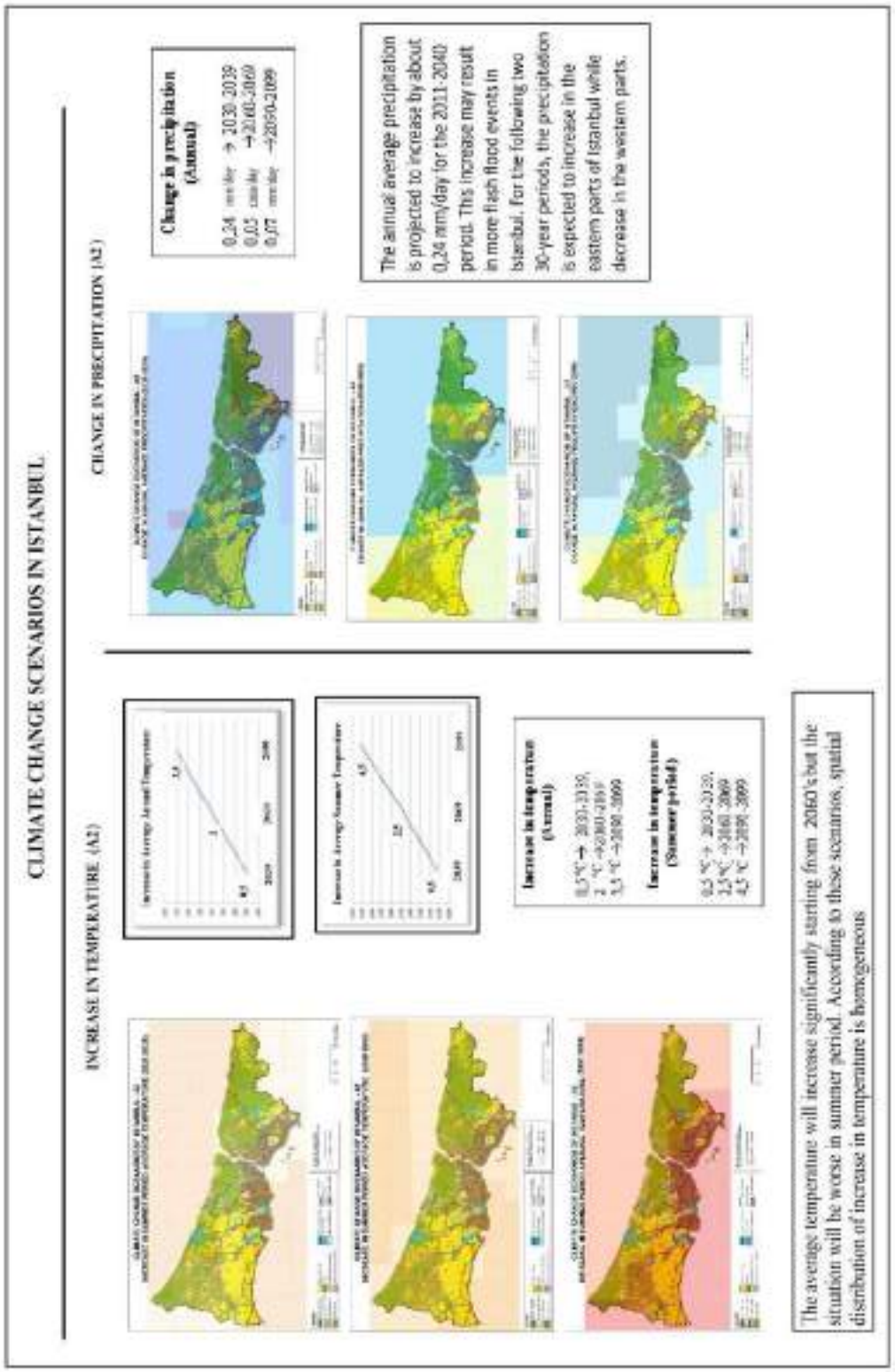

Figure 2. Projected changes in climate parameters in Istanbul (based on A2 scenario simulation of ECHAM5 Global Circulation Model)

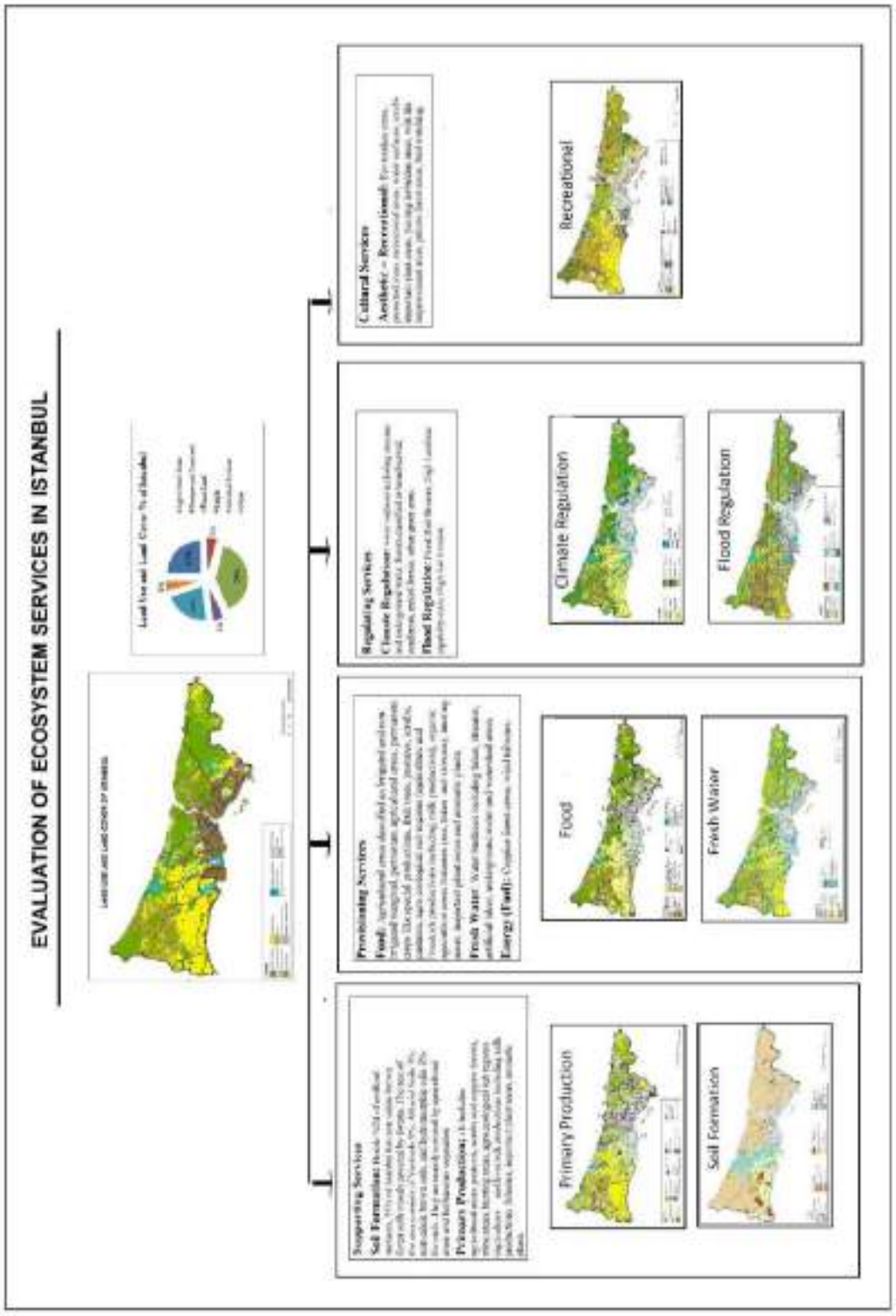

Figure 3. Evaluation of Ecosystem Services (ESs) in Istanbul

Primary Production and Food: Temperature rise can affect all agricultural areas, forests, agro ecological sub regions and their products, all plants, fisheries etc. Beside that decrease in precipitation in the west part of Istanbul after 2060's, drought can be seen and primary productions like agriculture, forest, livestock etc. may be replaced with other land uses and land covers like from forest areas to agriculture areas, from permanent agricultural areas to marginal agricultural areas or built up areas etc. These changes may cause significant losses in ESs and on the economy which is strictly related to these ESs.

Fresh Water: One of the most affected services is expected to be fresh water services. It depends on atmospheric changes like precipitation and evaporation. Actually, the water demand of Istanbul urban areas is higher than the local water supply and there are new projects for supplying water demand from other locations. According to climate change scenarios, this situation can be worse especially in the European part.

Fuel: Coppice forest areas can be destroyed as a result of rising temperature and decrease in precipitation especially in the west part. Wind turbines can be good solution for decreasing the greenhouse gas effect and dependency on external energy sources like natural gas.

Climate Regulation: As a result of damages on forests, green areas and water surfaces, this service which is also very important for climate change mitigation may function very slow and inefficiently.

Flood Regulation: Flood risk can be very high especially in the east part and both urban areas and primary productions can be under risk. Due to previous experiences in Istanbul, this may cause an enormous pressure on economy and human well being.

Aesthetic – Recreational: Increasing temperatures and decreasing precipitation will enhance the stress on the flora and fauna in the recreational areas, and may result in the adoption of more resilient species

These impacts and more should be well addressed in order to determine the vulnerabilities. Most vulnerable services are determined as fresh water services, primary production and food services, climate regulation, flood regulation, aesthetic services and fuel services respectively. Strategies among these services in order to increase the resilience for economical growth and human well-being should be integrated with spatial planning tools.

4. Conclusion

This study tries to develop a new methodology for the integration of climate change and ESs. This approach may help to figure out with the uncertainties related to climate change and urbanization dynamics. For sustainable cities and ESs not only the existing situation but also the future vulnerabilities should be addressed. Therefore this study will be developed more in details and further research and analyses will be done. In this study only the main ESs are intended to be evaluated.

At the following stages, beside taking ESs into consideration, urban built areas' physical, socio-economical issues will also be evaluated. Scenario analysis is the tool preferred here to develop and to lead future urban development policies (Figure 4).

In order to achieve this, the land use scenarios should also be generated and integrated with climate change scenarios. Land use scenarios are necessary to be able to understand the change in land cover, the impact of land cover change on ESs, how the ESs will change due to land cover change. Then, integrating with climate change scenarios, climate change impacts on actual ESs and future ESs can be evaluated.

As it is shown in Figure 4, in the first stage of the research; main ESs are intended to be identified by mapping of the spatial distribution of these services. In second stage; climate change scenarios based on temperature and precipitation are developed and the spatial differentiation of these scenarios are indicated. As a result of these stages; climate vulnerable ESs are identified. These vulnerabilities may clarify the actual vulnerabilities under the view of climate change scenarios. As climate change scenarios are made for future, beside actual situation also future ESs should be addressed by developing land use scenarios. With this perspective; the future vulnerabilities of ESs can be determined and spatial planning decision making process can be supported according to these scenarios. As a result; in order to create climate resilient cities in the future, appropriate spatial planning strategies and policies can be created and main actors and their roles can be identified. Increasing the resilience of ESs can be the most feasible and rational mitigation tool for combating climate change.

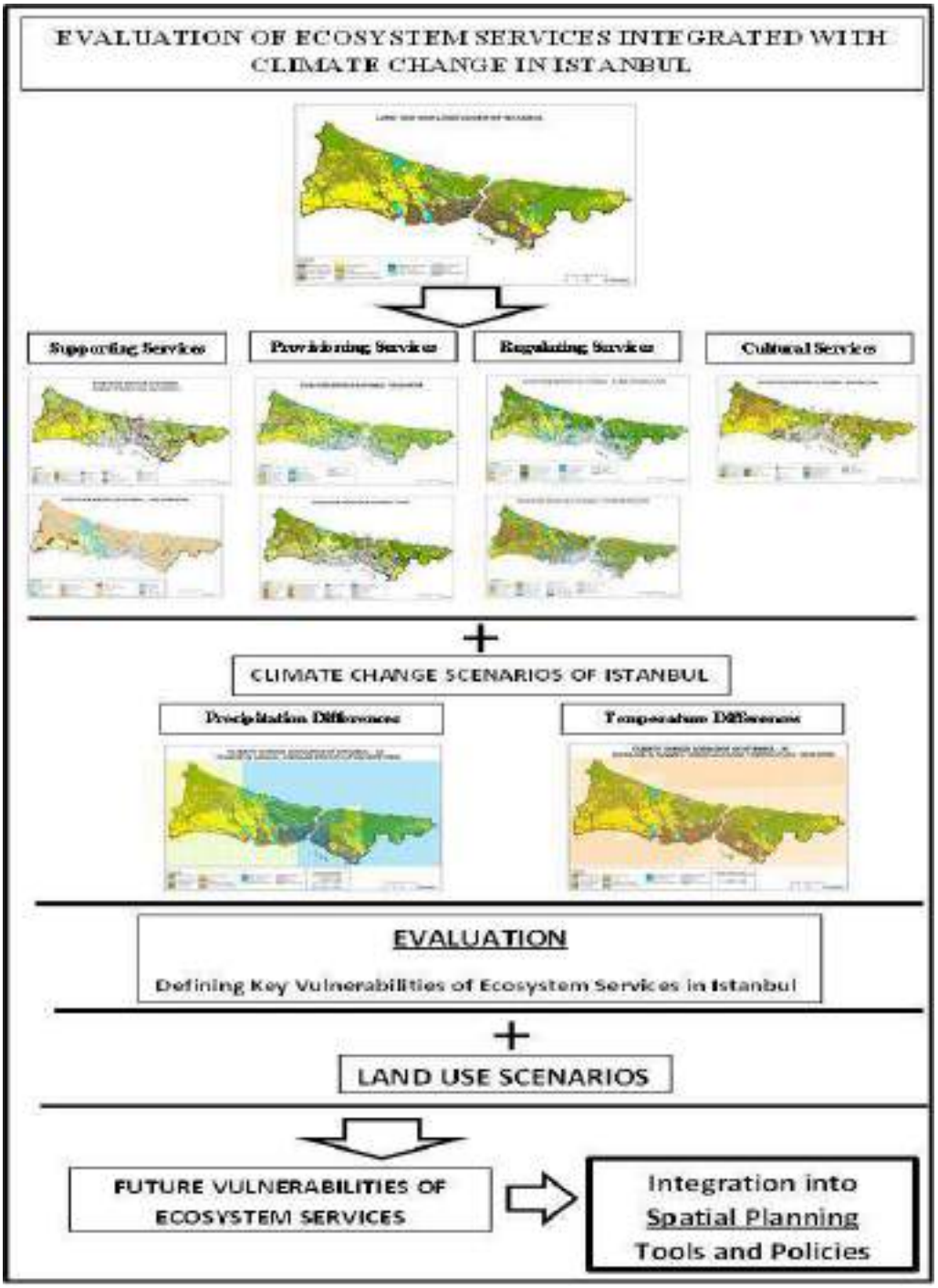

Figure 4. Evaluation Methodology of ESs Integrated with Climate Change in Istanbul

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Can youth participate in the city even if adults don't?

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Abstrat

Is a participative environment a prerequisite for having young people to participate and have an influence on the territory? Or, if seeing it from a different angle, can youth participation be the key to open community to a more collaborative context? Inspired by and using some of the tools and techniques from the general field of youth participation, an experiment was carried in Proença-a-Nova, a village of 5000 inhabitants, located in inland Portugal. The aim of the project was to test a number of active tools and techniques that municipalities could use in the context of the current planning framework, not only to engage young people but, potentially, to gather meaningful input from other segments of the population. At the same time, it was expected that relevant suggestions could be collected from the young people involved and, through that, raise their profile in the context of the community.

Key words: youth participation, education, citizenship, collaboration

Obrigado por nos ouvir[1]
by one of the participants

1. Introduction

1.1. The background

The possibilities open by the participation of children and young people in the life of the city has been addressed since the 70's when Kevin Lynch, Roger Hart and others, started exploring the relation between young people and the city environment, and their potential participation in shaping it.

Since then, many experiences have been held and a historical overview of the evolution of children's participation in planning can be seen in the analysis done by Francis and Lorenzo (2002). This analysis highlights the different backgrounds and motivations for bringing young people into the discussion of urban issues that might affect them, directly or indirectly. From the *romantic* approach of having children as planners, through the *advocacy* phase and the *needs-based* one, followed by the view of *children as learners*, the always present *rights-based* field, and ending with the *Institutionalization* realm and the *Proactive* one ("planning with children").

[1] Thank you for listening to us

During these 40 years, two particular international initiatives/movements have enhanced the debate and raised the awareness about the possibilities and benefits of involving young people in city issues. These were the *Growing up in Cities* initiative (sponsored by UNESCO) and the *Child-friendly Cities* movement (by UNICEF).

The emphasis given, in the recent years, to communicative planning has opened a new window of opportunity by raising the "hope that regional and urban planning will no longer remain the exclusive domain of experts and the government, but will become a playground for all – even for young people" (Horelli, 1997).

Currently, one may ask *"Why should we make any effort to have young people participating?"* The number of reasons has been growing as the result of those different experiments and the associated discussions. It's not only because of the size of this particular group of population (for example, adolescents 10-19 represented 18% of the total world population in 2010). It's also the fact that any decision taken now, in terms of planning, most likely will have far-reaching implications for the following generations (Frank, 2006). This touches the very essence of the concept of sustainable development (Chawla, 2002).

But other benefits can also be identified, for the young people themselves, for planners and policy-makers, and the community at large. These include a better knowledge of the community and the democratic processes, acquisition of new skills and fresh views, development of wider citizenship spirit and a stronger sense of community, better informed decisions, more inclusive mindsets, etc (Driskell, 2002). Tonucci and Risotto (2001) even mention young people as being "sensitive environmental indicators" meaning that if we take their opinions and wishes in consideration, we'll be meeting the entire community's needs as well. Weston (2010) argues that young people should be the citizen for whom cities are designed because the area of the brain related to spatial perception and analysis is still developing in them. However, despite all the benefits that are recognized, there is still a great need for studies that document the long term effects of children's participation (Knowles-Yánez, 2005)

Actually, the understanding of young people as citizens today (and not only in the future) is of crucial importance to make that effort of bringing them to the table when planning or improving the spaces. As Simpson (1997) refers, the manner in which young people are viewed has historically hampered their inclusion in the process of planning and urban design. Seeing them as competent citizens who can create community change (Checkoway & al, 2003) is still an unusual starting point and challenges the predominant views of children as "adults-to-be" (Torres, 2009).

Changes are needed not only in terms of mindset but also in terms of processes and structures. In what relates to planning and the inclusion of youth concerns, processes and methods continue to be legalistic, reactionary and dominated by economic

interests (Knowles-Yánez, 2002, cited by Frank, 2006); certainly not very youth-friendly.

It is encouraging to see the growing numbers of governments and international institutions advocating for a greater involvement of children and young people in community life; institutions like the United Nations, UNICEF or the Council of Europe (with its Charter on the Participation of Young People in Local and Regional Life). However, there are still challenges to be overcome in terms of planning practice: on the decision-making processes, on the procedures for engagement, on the recommended settings, and on the duration and age-appropriateness of activities (Knowles-Yánez, 2005), to mention a few.

The inclusion of young people within this communicative turn requires new methodological "tools" which can enable young people to take part in varying arenas of urban planning and the use of different enabling methods which are not usually included in the traditional sphere of "science" (Horelli, 1997). The exploration and implementation of some of these "tools" and methods were at the centre of the action-research project carried in Proença-a-Nova (Portugal) which is presented in this communication.

1.2. The context

In Portugal, hard rationality is still the background for planning and the participation in the planning processes is generally very institutional and passive. When developing a plan, the public participation is concentrated mainly in two periods: when the process starts (the "preventive participation") and after having a "final draft" of the plan (the "successive participation").

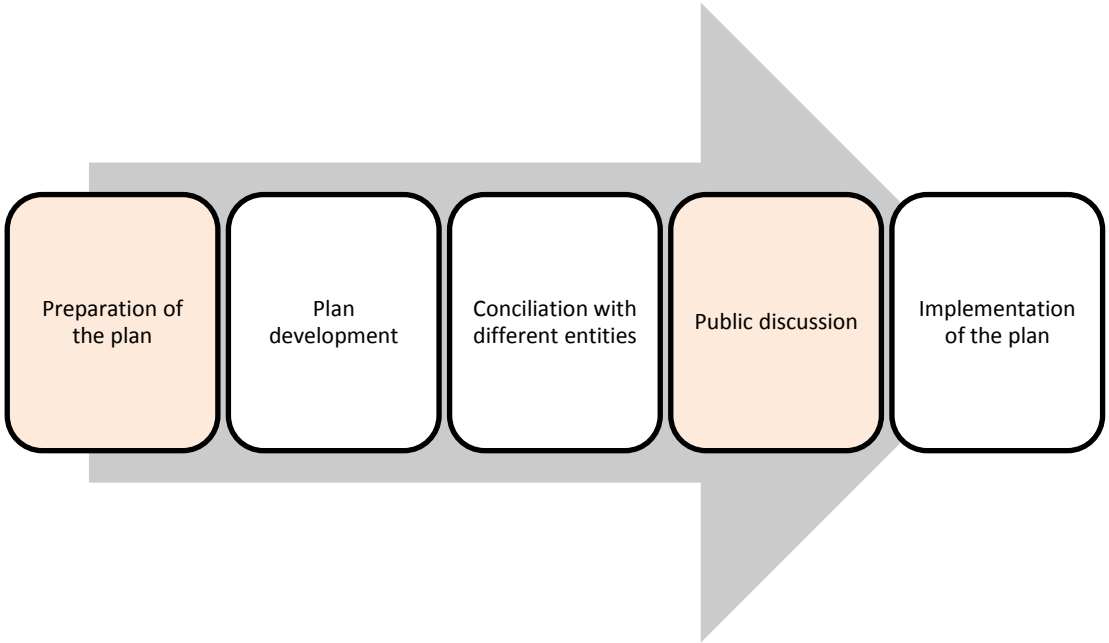

Figure 1. The planning process in Portugal and the public participation opportunities

The approaches rely mainly on spontaneous inputs from citizens or public hearings. These are not very well attended, and often the focus shifts towards very specific and personal problems raised by those who dare to stand and speak. The good examples of participative experiences in a few municipalities aren't enough to hide a weak culture of collaboration and constructive participation, but also a general lack of creativity when it comes to select the best tools and techniques to engage citizens.

In this unfavorable context, to bring young people to the debate on public participation may seem misplaced and risky. However, the issue can be seen from another angle: can youth participation be the key to open to a more collaborative practice? And what could be the reaction of decision-makers and the community to the proposal of hearing what young people have to say? More importantly: would young people be able to provide information and suggestions that could be relevant to municipal authorities on planning and managing the town?

2. Analysis (methods & materials)

2.1. Approach

In order to test the possibilities of involving youth in urban issues (namely planning processes) in Portugal, a project was developed in Proença-a-Nova, a small town of 5000 inhabitants, located inland (Figure 2). The project, which was called *Cidadãos 2.0*[2] lasted from September 2011 to May 2012 (including 4 initial months of preparation).

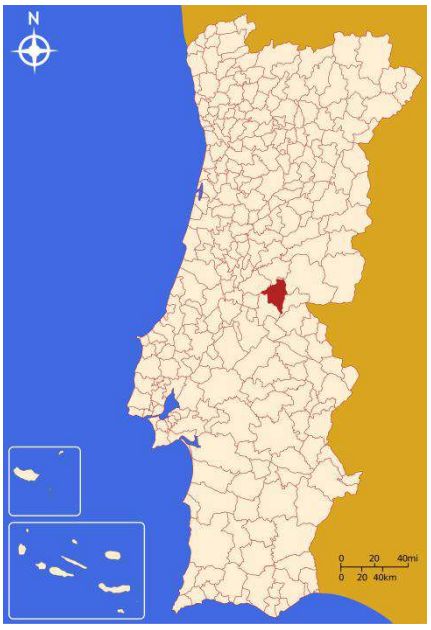

Figure 2. Municipalities in Portugal and the position of Proença-a-Nova

This town was chosen not only because it belongs to a particular sub-region which has been experiencing a decrease on youth population in the past decades (which could constitute an extra challenge), but also because of its size, which could enable a stronger sense of "community" (more difficult in bigger settlements) and, therefore, a stronger link between youth and the territory.

The starting point of the project was the existing planning framework and the opportunities for public participation which are currently provisioned (mentioned above). The aim was to test different techniques which could be used,

[2] Citizens 2.0

with young people, in the context of the "preventive participation" phase. Therefore, a strong emphasis would be given to youth participation in community evaluation (Checkoway & Richards-Schuster, 2003)

The target group was young people in the adolescent age range, and there were a number of reasons for that option. First of all, it was felt that, at that age, young people have already a degree of maturity that enables an interesting critical view of the urban environment, but they still possess the capacity to think "out of the box", in a creative way. This was to be balanced with the capacity to absorb the learnings from the experience, and maximize its impact in terms of citizenship education. Another powerful reason was the fact that in the international literature is less common to find experiences with this segment of the population (Passon & al, 2008); in particular, in Portugal, the experiences of involving adolescents in urban issues are very rare or non-existent.

Besides the two mentioned major options, there were other decisions that shaped the entire experiment, such as:

a) It should be a project to be run during a number of sessions in order to enable a deeper analysis and a better connection between facilitator and participants;
b) The study area should be limited in scope and normally "used" by young people. This would enable a better evaluation from them, based on their own personal experiences;
c) In order to ensure a truly collaborative approach, the process needed to be open and flexible enough to adapt to local conditions and to accommodate inputs from participants or key partners;
d) The participation should be done on a voluntary basis (basic requirement of true participation);
e) The local high school needed to be a key partner because the "recruitment" needed to be done there, where young people are and spend significant part of their daily time. This option had, naturally, pros and cons which were well taken into account;
f) The project needed to go beyond the mere test of a number of approaches and techniques; it should be meaningful and useful for each participant and also the key stakeholders involved (in particular the municipality and the local high school)

Based on the mentioned premises, a basic "Road Map" was designed, incorporating a number of major phases which included Introduction, Preparation, Promotion, Implementation, Presentation and Evaluation (Figure 3)

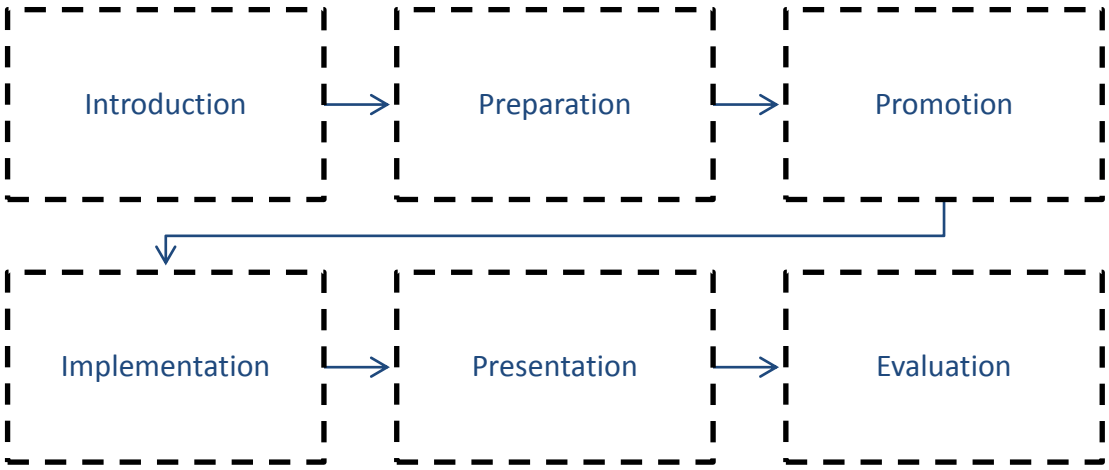

Figure 3. The Road Map of the *Cidadãos 2.0* project

2.2. "Introduction" phase

Since no previous links or contacts existed in the municipality, specially with those considered as the key stakeholders (municipal council and local high school), the first phase consisted in presenting the idea, raise the awareness on the topic, collect feedback and relevant information (namely on existing opportunities), and the assessment of the existing local conditions which could enable such a project to be feasible. This was done through a number of meetings with decision-makers of both key stakeholders and implied the production, beforehand, of a number of communication materials such as letters, a summary brief and leaflets.

One important aspect when approaching these 2 stakeholders was to indicate exactly what was expected from each of them. In particular, for the municipal council, one essential requirement for the project to be possible was the availability to, at the end, to receive the young people and consider their proposals.

2.3. "Preparation" phase

Once the realization of the project was agreed in principle, it was time to prepare it, by increasing the level of detail and incorporating the specificities of the particular context in which the project was to be developed. This phase included three major steps (Table 1)

Table 1. The "Preparation" phase

Step	Objectives	With whom	Means & techniques
Analysis of the context	_ To understand the municipality in terms of	_ Municipal council contact person _ High school contact	_ Interviews _ Data collection and analysis

	demography, youth habits, etc _To adjust the project proposal to be submitted to partners	person _Relevant individuals _Representatives of relevant associations	
Negotiation	_To agree on the project outline (including time reference)	_Decision-makers in key stakeholders	_Meetings
Resource mobilization & preparation	_To collect relevant images and documents _To prepare presentations and promotional materials _To train potential volunteers to support implementation _To prepare the sessions (to be run with youth) and materials	_Contact persons	_Capture of photos _Documents' reading _Working sessions

Among the number of meetings and other contacts that were held, it should be mentioned the ones done with the planning officials of the municipality. Besides the information about the different plans in place, it was confirmed that quality public participation was not common practice and certainly not when it comes to young people. The only experience in this domain was a small survey done to 22 young people (10-15 years old) on the occasion of planning a new park, asking them which kind of "playing facilities" they would like to have. The participation of citizens in contributing for the formal spatial plans had been very limited; however, when interventions were planned in public spaces, meetings were organized, prior to the construction phase, to inform about the changes to be.

Also the "negotiation" with the high school principal was of great importance. Due to the large number of classes (throughout the different grades) in the high school, there was the need to select a few to do a targeted presentation to. The selection was done together with the principal, who provided useful information about the commitments and projects already existing for the different grades, as well as opinions on to which grades this kind of project could be more useful. That led to select the three classes of the 8^{th} grade and one of the 11^{th} grade (which had a specific interest in geography issues and specifically in urban ones).

2.4. “Promotion” phase

The promotion aimed, in one hand, to inform different stakeholders (and the public in general) about the project but, more importantly, to attract young people’s interest in order to encourage them to volunteer to be one of the active participants. Being such an unusual practice (the participation of young people), such a phase was particularly important. Besides, since there were different publics and different levels of involvement, the key messages, the materials and the techniques had to be diversified and adapted (Table 2)

Table 2. The “Promotion” phase

Step	Objectives	With whom	Means & techniques
Presentation to relevant stakeholders	_To present the project, in general _To promote the project in the target group environment (creating momentum) _To collect reactions and feedback _To involve potential contributors	_Formal or informal youth groups _Students’ association _Parents’ association _Teachers	_Meetings with presentations _Announcements in every class _Flyers & posters in the high school _Posters in the offices of formal youth groups
External communication	_To promote the project _To increase credibility of the project by making it more visible	_General public	_Articles in local press and on the municipality website _Local TV
Targeted presentation	_To present the project, in detail _To have a youth view on local practice in terms of participation _To make potential participants to experience what the project may be _To encourage enrolment _To identify potential collaborators (amongst youth)	_Students in the age range	_Presentation session in class (45m) using active methods and educational activities

The presentation sessions in class turned out to be crucial in the entire process of promoting and "recruiting" participants. In these sessions there was a special focus on what was the purpose of the entire project and special attention was given on linking to local reality (places and situations they knew or used regularly). That was an important approach to try to establish a sort of "emotional link" between the young people and the project. This could only be done in this kind of face-to-face opportunity, in which empathy could be explored.

The above mentioned approach turned out to be very effective since that, despite the general promotion that has been done in the entire school and among formal and informal youth groups, all the members of the final group of participants belonged to one of the classes in which a "live" presentation was done.

Besides the two key stakeholders (municipality and school) who had an enthusiastic reaction from the beginning, the feedback from other stakeholders was diversified: some of them showed interest and expressed willingness to contribute and others were just happy to be informed.

2.5. "Implementation" phase

This phase was important, not only from the point of view of observing young people's reaction to the proposed activities (therefore testing the possibility to use them in a formal planning exercise), but also because there was this aim of producing concrete results that could be relevant to the partners (therefore proving the benefits of adopting such an approach in the future). So, attention had to be given not only to the process and methods but also to the content. Regular checking was done on the results to confirm how relevant they could be in terms of the normal content of urban plans. Therefore, during the entire process, there was the need to manage this double role as a scientist and as an agent (Horelli, 1997).

When planning this phase, the steps were kept as simple as possible, also with the aim of having the process easily perceived by the participants (Table 3).

Table 3. The "Implementation" phase

Step	Objectives	With whom	Means & techniques
Participants' mobilization	_To have young people enrolling and involved	_Student's association (receiving forms)	_Online and paper forms _Facebook group
Situation assessment	_To map the current situation from the young people's point of view	_Young participants in the project (max. 20)	_One "face-to-face" session using different activities _Questionnaire

Analysis of results	To analyze the information gathered and synthesize the main trends		One "face-to-face" session using different activities
Proposals	To gather a number of concrete proposals to be presented to local officials		One "face-to-face" session using different activities

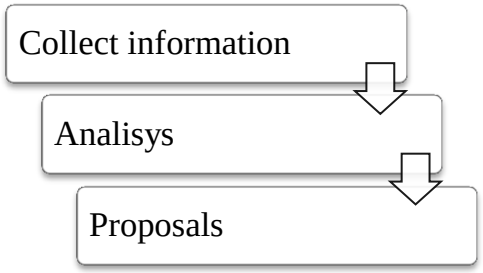

Figure 4. The work model

The model proposed to the participants was a very simple one (Figure 4) and it was planned to be based on three "face-to-face" working sessions with the duration of 3 hours, ideally during a free afternoon. The reality showed that this was not possible and adjustments had to be made. Actually, from very soon, it was understood that flexibility needed to be one of the key words to have in mind when planning sessions, timing, etc. And that makes sense in a participatory approach: there is always need to have some room for young people to incorporate their own inputs and find the best conditions for things to work. This is part of using youthful styles of working (Frank, 2006)

The implementation started with the enrolment of participants and their involvement. This was done mainly electronically by filling an online form (hard copies were also available at school) and/or joining a dedicated Facebook group. The target number for the number of participants was 20 and there were 18 registrations. After the first session and during the implementation phase the group became stable with 15 members. It's important to note that the enrolment was totally done on a volunteer basis, which was a key requirement from the beginning.

One of the main challenges of the entire project was to find available time from participants to run the sessions. Since they were coming from different classes (and different grades), their school timetables didn't match and it wasn't possible to find a slot of time, during week days, in which all of them were available at the same time. In the first scheduled session (planned for 3 hours) there were young people attending the initial sections and then needing to leave, while others were just arriving (after finishing other school commitments). This led to plan the following sessions in a more flexible way and adapting to this new reality by using some "walk-in" style of activities. Afterwards, following the suggestion from participants, sessions started to be run at weekends (Saturdays).

On the other hand, it became clear that it would be very difficult to keep the three sessions only. Instead, the focus shifted to the results; the sessions would continue until the 3 stages were completed (Assessment, Analysis and Proposals). So, at the

end, there were 7 working sessions (the first two being in a walk-in/walk-out system), representing, in average, 14 hours of work per each of the 15 participants.

The activities used in the sessions were very diversified and adapted to the stages of development of the process itself (Table 4).

Table 4. Participative techniques used

Stage	Techniques	Source
Setting the scene (general techniques)	• Ice- breakers • Ground rule-setting • Personal mapping (What expectations and personal qualities do I bring?) • Daily activity schedules	Several Save the Children, 2005 Sustainable cities International, 2009 Driskell, 2002
Situation assessment	• Where we live: Like & dislike • Pictures in time • Community mapping, focusing on 4 main issues: safety, mobility, shopping, leisure) • Focus group • Interviews • Questionnaire • Urban photo safari	Save the Children, 2005 Save the Children, 2005 Sustainable cities International, 2009; Wridt, 2009 Driskell, 2002 Driskell, 2002 Driskell, 2002; Canadian Institute of Planners, 2000 Driskell, 2002; Save the Children, 2005; Cook, 2006
Analysis	• De-coding themes (PAR_) • Creating a focus • Prioritizing the Issues • Guided tours • Public space assessment	HeartWood Centre, 2004 Save the Children, 2005 Save the Children, 2005 Driskell, 2002 PPS, (…)
Proposals	• Manual crafts (My right to information) • Video interviews • Create your own Community Charter • World Caffe • 10 ideas for Proença-a-Nova	Save the Children, 2005 Driskell, 2002 Canadian Institute of Planners, 2000 Save the Children, 2005

Regarding the questionnaire, it was designed by the group and submitted to 90 colleagues from different grades, in the high school. The content was based on some aspects that had been dealt in the sessions and the intention was to validate the opinions that had been expressed there.

During the sessions, attention was given to build capacity of the participants in terms of participation (different levels for different situations, as stated by Hart, 1992) and planning (instruments, process, and municipal structures). Again, this was done mainly through active methods.

Figure 5. Activities in the implementation phase

2.6. "Presentation" phase

For the sake of results to be presented, the local stakeholders were more interested on the content (the opinions expressed by the young people) and not necessarily on the process and how the different techniques have been used or if they were successful or not.

In terms of presentation of these results, there was again an "internal audience" (all those more directly involved) and an "external" one (the wider public). Therefore, the key messages and the media had to be adapted to each of these audiences (Table 5)

Table 5. The "Presentation" phase

Step	Objectives	With whom	Means & techniques
Preparation session	_To organize the results to be presented and prepare materials _To develop participants' presentation skills	_Young participants in the project	_Workshop _Role play _Visit to the town hall
Presentation	_To present the results of the project _To exchange views on some of the conclusions	_Political decision makers _Key decision makers in the high school (principal) _Youth groups _Other people involved	_Session in the town hall (with ppt presentations, videos, posters, etc)
External presentation	_To inform about the results of the project _To enhance credibility of young people's contribution _To provide an example of a participatory process	_Wider public	_Press release _Local TV
Technical presentation	_To present the results from a technical point of view	_Municipal officials from the planning departement	_Meeting

The high point on presenting the results was the session with the mayor and other members of the municipal council, run in the town hall, to which other stakeholders and key partners have been invited. The idea of running the session in the town hall came from the Mayor, the rational being that he wanted to give importance to the project and to the opinions of the young people. In any case this idea was not accepted until the participants agreed with it.

Special care was given to participants' preparation in order to make them feel as "at ease" as possible. A rehearsal was done one week before the presentation and a visit to the hall where the session would take place was carried.

After that more "political" presentation, a meeting was held with the municipal planning officials for a more "technical" one. The main focus this time was to "translate" the results from youth language into a more technical/institutional one.

2.7. “Evalution” phase

Evaluation was present in several sessions and not only at the end. In fact, for a number of sessions evaluation activities were carried to assess the level of satisfaction of the participants but also to understand some of the learnings that the project was providing.

In any case, the evaluation is still ongoing because, besides the immediate one, a medium term evaluation is planned to happen later in the year.

The immediate one will be conducted in another session with the 15 participants and will focus on the process, the personal learnings and also the proposals in terms of initiatives which will be able to ensure that the youth voice is heard when the urban environment is to be changed.

The medium term evaluation will have an emphasis on the key partners, specially the municipality. In this case, the focus will be on the ideas that have been adopted and the changes that have happened or are planned to happen.

3. Results

Despite the fact that the total impact of the project is still to be evaluated in detail, there are some results which can be pointed as significant outcomes of this experience:

a) The voluntary involvement, for a number of months, of a group of adolescents in thinking and discussing the issues of their community, especially on those that directly affect their daily use of urban space and environment;
b) The confirmation that active methods enable, also in the Portuguese context, deep involvement and meaningful participation, especially if we’re dealing with young people;
c) The young people involved increased their awareness regarding the state of the urban space in their community as well as the processes, structures and bodies that plan and manage that space;
d) Such process enabled the collection of significant amount of relevant information about the reality, the needs and wishes of youth, their use of urban space, and their view on how it should improve or evolve;
e) Along the process, it was clear the growing interest that the project raised amongst different stakeholders: individual persons (teachers, municipal councilors, other students, parents…), local business companies or youth organizations. This enhanced the credibility of youth and their input and the one of the project;
f) The project provided the opportunity to bring together the young people, the decision-makers in the municipality and the public officials. Youth were able

to make their voices heard in a structured way and to get the commitment, from the municipal council, that some of the suggestions made would be implemented

These preliminary results reflect what was mentioned before about having different stakeholders and different interests. For the sake of the research, the aim was to test the methods and understand the possibilities and impact of such an experience. For the young persons more directly involved, the interest was on make their voices heard and, ideally, to make some real improvements happen. From the municipal council, there was a genuine interest in hear how young people feel by living in the town and what were their needs, wishes and ideas.

One of the practical outcomes of the project was a list called "10 ideas for Proença-a-Nova" which included: a proposal of building a pool and a bike lane (including a byke rental system); ideas to improve two particular public spaces (previously identified as problematic); the suggestion for programs and workshops for young people in rehabilitation and community issues; recommendations for retail shops and services; among others.

4. Conclusions

Young people are users of the city and, as such, they live their own daily experiences that shape opinions about how things work there. They are a particular group of citizens with particular views of the city, different from the one from adults (Torres, 2009) and this was something that this project confirmed.

To face this particular group of people as "persons" before seeing them as "young people" is probably one important starting point for processes that intend to hear them or to involve them more deeply.

Young people have things to say about the city and have particular ways to say it.
If, when targeting adults, a passive approach for participation (waiting for people to participate spontaneously) does not bring many results, when it comes to young people, the active methods are even more essential. Wanting to have young people's inputs requires to "go and meet them" in their own "territory". This goes both in the sense of the spaces they use frequently (school, clubs, public spaces…) and in the sense of the ways they prefer to act or interact (activities, games, debates, images…).

Besides the absolute need of active methods, there is another important reflection coming out of this project: the importance of school and the school system itself (Davidovitch-Marton, R, 2007). In Portugal, schools play an important role not only in transferring knowledge but in offering different types of other activities (sports, clubs, projects, etc). This implies that an extraordinary amount of young people's time is spent at school and, therefore, the "use of the city" (namely public spaces) is becoming limited. Especially for those that also have to do some daily commuting

(because they live far from where the school is based). This school commuting is becoming particularly strong in Portugal because a student centralization (Torres, 2009) policy is under way, closing small schools and building/developing big "educational centers" in the more important urban centers.

The mentioned trends related to school reduce young people's attachment to their neighborhoods (Torres, 2009) and their personal free time (also to engage in projects as the one that has been described).

Another remark should be made regarding effective communication which is one key feature of this kind of projects and essential to collaboration (Torres, 2009). Communication is at the background of any participative process but it is even more important when the people to involve are young people (and adolescents in particular). The need to attract participants (on a voluntary basis) and, afterwards, to keep the group together, demands that specific communication skills and techniques are developed and used. In particular, the use of social media was the one more effective in the current project.

Also, the communication between the different stakeholders involved (young people, officials, politicians, teachers, etc) is of great importance. There is a need to constantly "translate" the language that each group uses to ensure that the message goes through. In particular, in the different sessions held with young people, instead of using the "planning jargon", the starting point was the concrete experiences that young people had and that constituted their comfort zone. Then, from the information collected in the sessions, there was a need to try to fit it into the political and technical framework in which politicians and officials operate.

The final important reflection relates to flexibility. As mentioned before, when undertaking such kind of projects of active consultation of young people it is important that the process itself and the facilitator are flexible enough to adapt to local conditions or to unexpected events: less people attending, bad weather conditions, activities that last less (or more) than expected, suggestions made by the participants, etc. This demands constant adjustments to the project planning but also the knowledge about different techniques and to have the necessary materials (as "plan B" resource).

In conclusion, and referring to the initial question, this project showed that, even in the case that the participation culture is not so much developed, it is possible, with the right approaches, to bring young people to give their contribution to the development of their community and to translate that (if necessary) to the instruments that are provisioned in the planning framework. On the other hand, undertaking such a project with young people raises the interest in adults (being parents, teachers, officials, politicians…) and may trigger other broader participative initiatives. Also in this case, the idea begun to permeate both the school and municipal officials (Davidovitch-Marton, R, 2007). And even if the process is costly (mostly in terms of time), the immediate outcomes tend to add value to the urban

space and, on the long term, may bring a positive impact in terms of the participation culture. The challenge remains in adapting our planning practice, which also requires an evolution in the form of local governance.

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From Industrial Zone to Housing: Which Consequences for Social Memory and Industrial Heritage? Project PAV in Geneva.

Dr. Nadia Capuzzo Derkovic

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Abstract:

My paper will focus on the current Project Praille-Acacias-Vernet (PAV) in Geneva (Switzerland). PAV is a project of urban reconversion of an industrial site in many aspects symptomatic and whose stakes exceed those of a simple project of urbanization of the outlying areas of the city of Geneva.

The industrial zone Acacias-Praille was developed in the 60s to accommodate businesses, private companies, machine shops and warehouses. At that time, the site was located on the outskirts of the city (Praille and Acacias). Nowadays, these businesses are mostly still operating. Therefore, the PAV zone is not a brownfield site. Urban reconversion of a site even though it is still active will be analyzed through its impact on the changing image of the city and its industrial heritage.

Issues related to the displacement of these companies in other industrial sites, such as densification of existing industrial sites, will also be discussed. Indeed, the primary objective of PAV is to reorganize the existing fabric to make way for housing. Gentrification of these three districts is already visible in housing design. Inevitably, the move will not concern only the land and real estate, but also the economic fabric of three quarters, as the Cantonal authorities included in this project the nearby district Vernets. Industrial activities will consequently be fragmented – being relocated on other sites - and the fabric of social and economic relations will be profoundly changed.

What is at stake is to concentrate, to gather, to stack up companies which practice intensive use of space and generate nuisances under control... Some will see an analogy to Lego blocks and the infinite array of possible arrangements. Others will question the feasibility of such a project in the timeframe of 2030. What interests us, is the attention paid to the industrial heritage, its treatment and the place accorded to it in this project. Finally, an industrial area, active or not, is not just a field with walls, rails and railway tanks. It is mainly a place where a company and its workers have developed know-how, techniques, where trade union struggles have developed. These traces are those of the industrial memory of Geneva, the memory of workers. How important is this social memory today in this project?

1. Introduction

A new center for Geneva[1], *At the outskirts, and yet in the center*[2], *A new heart connected to the city centers of Geneva, Carouge and Lancy*[3]: it's in these terms that the big urban reconversion and development project of sector Praille-Acacias-Vernets (PAV) is described. To address the severe housing crisis that swept through Geneva for a little over a decade and to attract new business segments, Cantonal authorities are investing great hopes at the extent of the PAV area. Evoked in the inaugural address of the Cantonal government in 2005, the first architectural competition on the sector was opened in September 2011 at a place called *La Marbrerie*[4]; following the zoning status reclassification of the first 130 hectares from the 230 of the sector in June 2011[5]. The objective here is clear: to transfer an industrial site, hosting small businesses still in operation, from the secondary and tertiary sector, into a residential and multifunctional area.

Unlike other reconversion projects of industrial sites, the one of Praille is not a brownfield site but a site of approximately 230 hectares hosting on its area 1,800 companies. The aim of this paper will not to highlight the existing upgrading politics of this industrial heritage site, or not, nor to present reconversion initiatives contained or not in the agenda of this big project, but to reveal social questions raised by such a project. The specifics of the project and site features will be presented before addressing the notion of centrality highlighted in promotional materials, published by the Department of Construction and Information Technology (DCTI) of the Canton of Geneva, and its impact on the process of appropriation of urban space in the neighborhood (De Certeau, Giard & Mayol, 1994, p.9). Finally, beyond the politics of conservation of buildings reflecting the industrial development of Geneva in the 1950s and 1960s, this paper will question what makes memory: stones or uses of the place?, and what anchor territorially the identity. In this projective context, the lines of inquiry raised in this article are based not on observations made during or after completion of such a project but upstream.

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[2] Huber W. and Froidevaux H., Editorial, « Genève bouge. Une grande ville bâtie sur un petit espace », Wüest & Partner, Supplément de Hochparterre n°11/2011

[3] Brochure, *Le PAV c'est…* , DCTI, mis à disposition le 25 novembre 2010 lors de la séance d'information publique sur l'état d'avancement du projet, Bâtiment des Forces motrices, Genève

[4] PAV Marbrerie Carouge, Construction de logements et d'activités mixtes, entité adjudicatrice : Etat de Genève /DCTI, entité organisatrice : FPLC : Fondation pour la promotion du logement bon marché et de l'habitat coopératif, <https://www.simap.ch/shabforms/COMMON/search/projectDetail.jsf> and <http://www.ge.ch/dcti/presse/2011-09-26_com.pdf> [Accessed 7 February 2012].

[5] FAI (Fédération des associations d'architectes et d'ingénieurs de Genève), *Interface. Le plan directeur cantonal. Discuter, dessiner, décider : à la recherche d'un récit commun*, n°15, février 2012, p. 30.

Figure 1. Aerial photo of Geneva with the perimeter of PAV in yellow,
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2. Analysis

2.2. The site:

Along the Arve, adjoining the Plainpalais district and the municipalities of Carouge and Grand-Lancy, the sector Praille-Acacias-Vernets enjoys today a strategic position at the heart of Geneva, close to the historic center and the shores of Lake Leman. Historically, the industrial area of Praille was developed in the 1960s to house companies on land located at that time on the outskirts of the city. It is the transfer of slaughterhouses at Praille in 1943 and the completion of rail connection with the construction of a freight railway station in 1945 with the creation of an industrial area (Marti, 2007-2008, p. 5) that will mark the beginning of the site development (Brulhart & Deuber-Pauli in Barblan, 1984, p. 18). A brief review of the industrial history of Geneva shows that the displacement from the center to areas outside the city is not new but goes back to 1840s.

> "Even before the law of demolition of the fortifications (1849), the creation of the new town on the cleared terrain and the construction of the bridge of Coulouvrenière (1856-1857), the territory of Plainpalais was chosen to move out cheaply from the harbor and the historic city the industrial base at the time of technological change. (...) The transformations are accompanied by speculation of major projects related to urbanization of the area."
>
> "The urban growth is provided after the National Exhibition in 1896 in Plainpalais, confining in factory zone workers housing estate. (...) In the interwar period, the situation has stabilized and improved by the creation of banks of the Arve and the transfer of slaughterhouses at Praille in 1943, while construction of the viaduct Junction in 1943-1945 moves the rail link

Cornavin-Praille downstream from the neighborhood. Urbanization from 1960-1970 completes to make denser the habitat in Plainpalais to meet the urgent need for low cost housing. Once Plainpalais fully integrated into the urban center, the real estate and administrative influence is growing and putting pressure on industries (...). "[6]

Figure 2. Acacias street, low-rise worker buildings on the path Ternier, close-up: av. Eugene-Marziano. © Nadia Capuzzo Derkovic, February 2012

By the end of World War II and into the 1970s, a combination of factors explains the urban changes that will profoundly change the city. Installation of international organizations, in the wake of the implementation of the UN European headquarters, banking sector development and implementation of foreign companies (Marti, 2007-2008, p. 4-10) are at the heart of Geneva's growth. In parallel with this economic growth, population growth is spectacular. In thirty years, the population rose from 185,000 to 336'000 inhabitants (Marti, 2007-2008, p.5). Faced with this growth, several successive development plans localized on various sectors of the canton tried to meet the strong demand for housing.

Today, the PAV sector concerns three districts located in three communes of the

[6] Brulhart A. et Deuber-Pauli Erica, *op. cit.*, p.18. Author translation: « Avant même la loi de démolition des fortifications (1849), la création de la ville nouvelle sur les terrains dégagés et la construction du pont de la Coulouvrenière (1856-1857), le territoire de Plainpalais a été choisi pour déplacer à moindre frais hors de la rade et de la ville historique l'appareil industriel au moment de sa mutation technologique. (…) Les transformations s'accompagnent d'un mouvement spéculatif de grande envergure en relation avec les projets d'urbanisation de la zone. »
« L'essor urbain est assuré après l'Exposition Nationale de 1896 à Plainpalais, confinant dans la zone des usines les lotissements ouvriers. (…) Dans l'entre-deux guerres, la situation est stabilisée et améliorée par la création des quais de l'Arve et le transfert des abattoirs à la Praille en 1943, tandis que la construction du viaduc de la Jonction en 1943-1945 déplace en aval du quartier de la liaison ferroviaire Cornavin-la Praille. L'urbanisation des années 1960-1970 achève de densifier l'habitat à Plainpalais pour répondre au besoin urgent de logement à bon marché. Une fois Plainpalais complètement intégré au centre urbain, l'emprise immobilière et administrative s'accentue et fait pression sur les industries (…). »

district: the city of Geneva, Carouge and the Grand-Lancy. While Acacias host mainly housing, the Vernets, located on the other side of the Acacias street, mostly provides a base for sports facilities, including swimming pool and ice rink eponymous, office buildings (including Rolex SA) as well as service companies and wholesalers. Built in 1958, the barracks Vernets occupies an area of 48'190 m2 (parade, four buildings and parking) between Acacias street and sports complex Vernets. By 2016, the 5 acres now occupied by the barracks will be transformed into habitable zone. The Hans Wilsdorf Foundation, Rolex SA owner, has already unveiled and out of a feasibility study proposing the construction of six towers for thousand homes and a university center. In parallel, the Association for the conversion of ARV-Vernets, founded in 2008 in response to the disappearance of so-called alternative cultural venues[7], finalizes its draft KaZern[8]. This development project intends to propose a mixt project including the creation of a cultural center, public spaces, housing and activities on the perimeter of Vernets. It is therefore Praille industrial and craft activities that will be moved outside the city to make way for new urban center.

2.2. The project:

Situated right outside the historic center of Geneva, the neighborhoods of Praille, Acacias and Vernets, quickly became an area where urban densification can be developed in response to the housing pressure, with the movement of industrial and craft activities, which are there. Ace of agglomeration project France-Vaud-Geneva[9], CEVA[10] stops, the new stadium, all these factors make the proposed redevelopment of the area attractive. In this context, the Geneva Branch of the Federation of Swiss Architects (FAS) introduced the international competition “Geneva 2020” in 2005, the same year that the new government takes office in Geneva. The FAS call met a great success and plans submitted proposed innovative ideas of urban renewal, but the cantonal authorities did not follow them. In parallel, the authorities instruct studies from eight architectural firms for the production of a master plan. The office finally selected for its realization is the office Niklaus Fausch Ernst Architekten (ENF) form Zürich.

[7] < http://www.arv-ge.ch> [Accessed 18 April 2012]

[8] < http://www.arv-ge.ch/content/larv-propose-le-projet-kazern-pour-les-vernets> [Accessed 18 April 2012]

[9] <www.projet-agglo.org> [Accessed 18 April 2012]

[10] Rail link Cornavin-Eaux-Vives-Annemasse, <www.ceva.ch> [Accessed 18 April 2012]

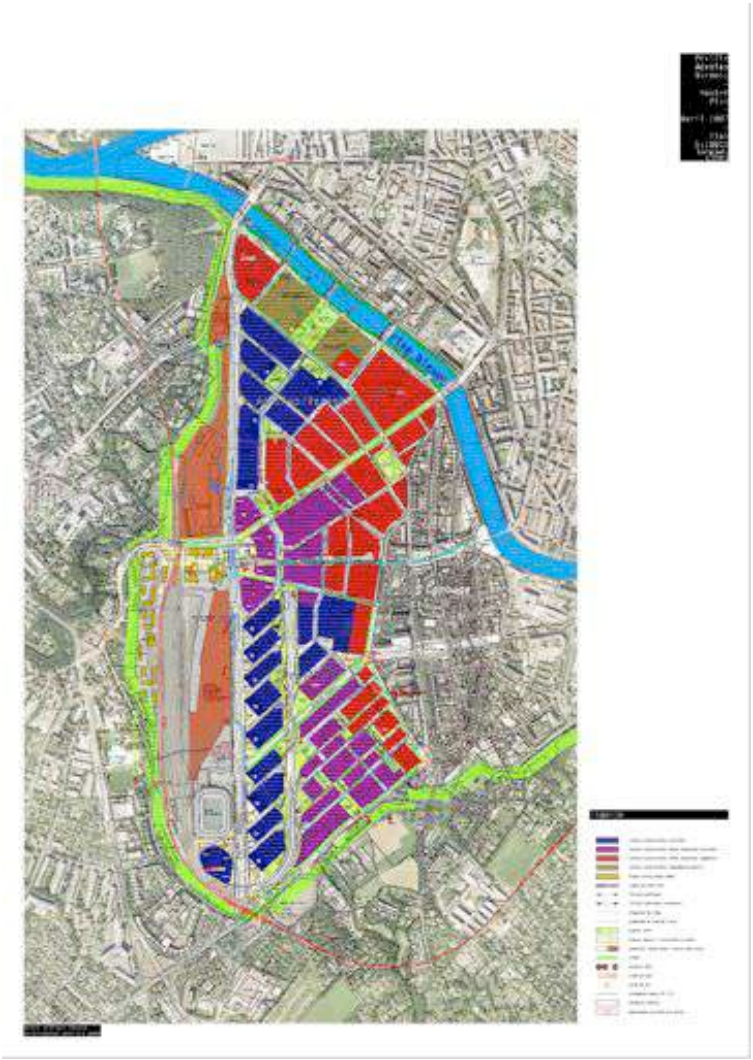

Figure 3. Praille-Acacias-Vernets Master plan, © Niklaus Fausch Ernst Architekten ETH / SIA gmbh, April 2007

The objectives of the master plan, as formulated by authorities, are indicative of the desired mutations in this sector. But these changes will not be without consequences on the spatiality experienced by residents, the composition of the social fabric and identity of the area and neighborhoods. Before discussing these consequences, here are the objectives of PAV, as set out in the master plan of Zürich architects.

"Increase the density of perimeter Praille, contained in an urbanized environment, close to downtown center, give it a new identity better valued.
Consider the vast multimodal accessibility of the site (existing and proposed) by promoting the formation of jobs, thereby contributing to urban sprawl and transportation policy environment friendly.
Develop the capacities of the site and enhance its attractiveness.
Improve the landscape quality of the environment, quality of life and green space planning, setting environmental objectives. "[11]

[11] Ernst Niklaus Fausch Architekten eth/sia gmbh, *Masterplan*, FTI, 2007, p.4. Author translation : « Densifier le périmètre de la Praille, enserré dans un contexte urbanisé, à proximité du centre centre, le doter d'une identité nouvelle, mieux valorisée. Prendre en compte la grande accessibilité multimodale du site (existante et projet) en y favorisant l'implantation d'emplois, contribuant ainsi à la maîtrise de

Important point, this is a concept master plan development that meets the request of authorities. In this sense, it merely provides a development project from existing structures while allowing opportunities for development, to allow "action at the various levels (political, economic, technical or environmental."[12]

This project is organized around six themes which include mobility issues, and logistics networks, the need to strike a balance between new housing, the maintenance and creation of new professional activities and development of public facilities, the creation of public spaces and their networking, and the mutation of an active industrial area into an urban center.

Figure 4. Model Master plan Praille-Acacias-Vernets, © Niklaus Fausch Ernst Architekten ETH / SIA gmbh, April 2007

If the first five themes are part of the urban development sector, the last, namely the transformation of an industrial area, will have repercussions in the peri-urban belt, even the rural area. The challenge is important because much of the 1,800 firms still in operation will leave the area if they are not compatible with neighborhood life (noise, traffic and pollution). From the perspective of land, forced the move will not pose major problem since 82% of land is owned by public authorities. However, the relocation of these activities will be exploded on several small-sized industrial zones outside the city and several towns. On a temporal scale, the movement of these activities will depend on the opportunities in terms of provision of land required. At the political level, "a constructive dialogue (should) be set up with actors land, the

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l'étalement urbain et à une politique des transports favorable à l'environnement. Développer les capacités d'accueil du site et renforcer son attractivité. Améliorer la qualité paysagère de l'environnement, la qualité de vie et planifier des espaces verts, fixer des objectifs environnementaux. »

[12] Ernst Niklaus Fausch Architekten eth/sia gmbh, *Masterplan*, FTI, 2007, p.5

foundation for industrial land in Geneva (FTI) and the cantonal and communal services, in order to identify durable solutions internal and outside of PAV, which ensure a balance between activities of secondary and tertiary sectors. "[13]

Figure 5. View of the Praille from the municipality of Grand-Lancy, © Nadia Capuzzo Derkovic, February 2012

2.3. New central / new identity:

Beyond the political, the socio-economic and cultural development of PAV on Geneva urban development, whose construction is now planned for 2030, will be measured in terms of readability and centrality. Mutation and densification that will result from the implementation of the PAV will profoundly transform the image of the city. In terms of sense of belonging, spatiality experienced by residents and users will undergo profound changes. Located near downtown, that is to say in the urban belt, affected neighborhoods will gradually be in the downtown core if one believes the objectives and themes of the master plan. And reorganizing the space and offering a new urban composition, centrality will be redefined by breaking with the concept of concentric circles. This shift involves symbolic, thereby changing cultural uses of space. When discussing the concept of downtown, it is commonly referred to the historic heart, the original site from which grew the city. However, in this case, the notion of centrality is used to describe the desired changes in the Praille-Acacias-Vernets, which is not without consequences for current urban identity of the city of Geneva. In terms of readability and visibility, the spatial reference points that define the image of the city and the sense of belonging to both individual and collective level, will either be deleted or be integrated into a new architectural environment. It is important to note that the significance of these landmarks space is not necessarily

[13] PAV, « Foncier », *Projet Praille Acacias Vernets ou comment préparer la Genève de demain,* Le PAV s'expose, n°1, janvier 2011, p. 8. Author translation : « Un dialogue constructif (devra) être mis en place avec les acteurs fonciers, la Fondation pour les terrains industriels de Genève (FTI) et les services cantonaux et communaux, afin de dégager des solutions pérennes à l'intérieur et à l'extérieur du PAV, qui garantissent un équilibre entre activités des secteurs secondaires et tertiaires ».

defined by the function, aesthetics or heritage value of a building. Even insignificant, these spatial signs are all markers, constitutive referents of the sense of belonging.

> "Many places have meaning for individuals and groups of individuals have a reduced visual importance. They are known viscerally, so to speak, and not by the eye or critical thinking. " (Tuan Yi-Fu, 2006, p.164)

In this sense, the word from area users revealed by the vox pops conducted by BazarUrbain in March 2010 at the request of government, is indicative of the existence of a memory guaranteeing the historical continuity of the place. Indeed, the passages dealing with the word of the industrial world and people in the area reveals the identity of the industrial sector and the memory of the place.

> "The industrial part is less known, but the memory of the place is recalled by some residents of Acacias that evoke the location of certain activities and building missing in this sector, such as slaughterhouse and former warehouses of the Migros. "[14]

> "Fear of the disappearance of certain activities by relocating or fear of mono-functionality. For example, in the historically industrial area of Acacias, residents and users would rather like to see the settlement all sorts of diverse and complementary activities. Or fear of exclusion of population already settled thus favoring a gentrification and loss of the spirit of the place, especially the Acacias district noted for its multiculturalism, its popular atmosphere and the abundance of life it supports. The Acacias district returns for its clients and its people, just like a real life of a neighborhood feel as authentic and without "frills". "[15]

> "The craft and industrial world is not stated as an identity element, even if the nostalgia of another time is sometimes noticeable. Is the demise of this world revealing a modern reality or the working world does not built anymore as entities with their own rites and their solidarity and ultimately with the feeling of belonging to a family? "[16]

The impact of the erasure of industrial traces on the sense of belonging to place is

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[14] BazarUrbain, *op cit.* p. 115. Author translation : "The industrial part is less known, but the memory of the place is recalled by some residents of Acacias that evoke the location of certain activities and building missing in this sector, such as slaughterhouse and former warehouses of the Migros. "

[15] BazarUrbain, *ibid*, p.122. Author translation : «Peur de la disparition de certaines activités par délocalisation ou peur de la mono-fonctionnalité. Par exemple, dans la zone historiquement industrielle des Acacias, les habitants et les usagers souhaiteraient plutôt voir s'implanter toutes sortes d'activités diverses et complémentaires.
Ou encore, peur de l'exclusion de populations déjà présentes favorisant ainsi une gentrification et une déperdition de l'âme des lieux, notamment pour le quartier des Acacias apprécié pour sa multiculturalité, son ambiance populaire et le foisonnement de vie qu'il abrite. Le quartier des Acacias renvoie, pour ses usagers et ses habitants, à l'image d'une vraie vie, d'un quartier ressenti comme authentique et sans « chichis » »

[16] BazarUrbain, *ibid*, p. 99. Author translation : « Le monde artisanal et industriel n'est pas énoncé comme un élément identitaire et moteur du lieu, même si la nostalgie d'un autre temps est parfois perceptible. Est-ce la disparition de monde-là est-elle le révélateur d'une réalité moderne ou le monde ouvrier et artisanal ne se construisent plus comme des entités avec leurs rites propres et leurs solidarités et au final avec le sentiment d'appartenance à une famille ? »

obvious reading these vox pops. In planning the movement of crafts and small industry, the urban fabric and the identification of the sector will be completely changed.

3. Conclusion: Clear or permanent traces industrial? :

To cope the danger of disappearing of industrial heritage, and thus the industrial history of Geneva, it is the need of night cultural sites that appears to save, at least temporarily, the most significant buildings. Like the Usine, old factory of gold roughing (UGDO, 1880) which became a self-managed cultural center since 1989, of the Bâtiment des Forces motrices (1886), historical monument since 1988 and hosting today as BFM cultural events and festivals, of Kugler factory (former Factory Gardy, bought in 1930 by Kugler) whose current assignment is the home of artist residencies and cultural projects on time, it is the factory Sicli which has just been converted into a cultural and festive venue, after being bought by the state. The conversion of the area's industrial heritage Praille-Acacias-Vernets seems to follow the same path as that present in the neighborhood of Junction in the previous movement of industries from the city center to the periphery.

Figure 6. Factory Sicli, designed by architects Constantin Hilberer and Heinz Isler, 1968, © Nadia Capuzzo Derkovic, February 2012

Constituting a special land reserve to boost real estate development (Veschambre, 2008, p. 161), it is the upgrading and densification of the existent that is privileged in the PAV. Here, the conversion, affecting an extended urban area, is a conversion of the functionality of the site from a mono-functional to a multifunctional area, breaking urban planning developed up to then.

> "What is at stake is to concentrate, to gather, to stack up companies which practice intensive use of space and generate nuisances under control (...), to

create voids in which group in turn to other companies and create housing. "[17]

Some will see an analogy with Lego cubes and the infinite array of possible arrangements. Others will question the feasibility of such a project in the timeframe of 2030. What interests us, is the attention paid to the industrial heritage, its treatment and the place accorded to it in this project. Finally, an industrial area, active or not, is not just a field with walls, rails and railway tanks. It is mainly a place where a company and its workers have developed know-how, techniques, where trade union struggles have developed. These traces are those of the industrial memory of Geneva, the memory of workers. How important is this social memory today in this project?

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[17] PAV, « Foncier », *op cit.*, p. 8. Author translation : « Il s'agira de concentrer, regrouper, superposer les entreprises qui pratiquent un usage intensif de l'espace et qui génèrent des nuisances maîtrisées (...), pour créer des vides dans lesquels regrouper à leur tour d'autres entreprises et créer du logement. »

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THE COMPETITIVENESS COMPULSION

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Key words: competitiveness, urban policy and plans, local government, Denmark

Abstract

'Competitive' is something many cities strive to be today, and for many policy-makers this seems to be a 'natural' priority. A compulsion to compete seems to have been created by an industry of benchmarking, ranking and 'best practices' which surrounds urban governance today, and this influences policy-makers in cities in ways which are often diffuse and indirect. It is often assumed that wider trends, external influences and other levels of governance are pushing a neoliberal competitive discourse upon cities, and whilst this may partly be the case, this paper investigates the mechanisms within local government itself which contribute to reproducing the focus on being competitive. Through a case study of a small city in Denmark, this paper discusses the discourse of competitiveness, the lack of reflection on this discourse which exists amongst policy-makers, and the practices which promote a focus on competitiveness within the local government. In this case, these practices include comparisons and rankings of the city alongside other places in the local region, study tours for inspiration from projects in (often larger) cities, a focus on particular modes of urban development which prioritise 'creative' people and the development of 'experiences', and a general focus within the local government on striving to 'be the best' in a variety of areas. Through a combination of interviews with local policy-makers and document analysis of recent policies and plans, it will be investigated how these practices and more create a diffuse and indirect compulsion to compete, resulting in the institutionalisation of the vision of the 'competitive city'.

Introduction

In this paper I would like to examine the idea that local governments, particularly in small cities, are 'compelled' to act in a competitive manner through their policies and plans. The aim of this paper is to investigate how this 'compulsion' operates within a city.

Much previous literature on competition has focused on the wider creation of a competitiveness discourse, for example at international and national level, with little focus on how cities themselves are contributing to creating this discourse. This is where literature on neoliberalism, policy mobility and planning is of interest, as this is an area of literature which has put planning and policy-making within the city at centre stage. The contribution of this paper is its focus on neoliberal competition and how it operates within a city, placing focus on the role of local government in promoting competitiveness.

Through this literature, and specifically through a focus on disciplinary practices, such as benchmarking, and the creation of subjectivities through planning, I endeavour to investigate the 'competitive compulsion' within Vejle Municipality. This will illuminate the way in which local actors may be playing a part in the 'compulsion to compete' that is experienced in local government. Through the example of a local government in a small city in Denmark, I will seek to illustrate how this apparent 'competitiveness compulsion' is in part created in the city, rather than simply being imposed from outside.

This paper is structured as follows. Firstly I will present a theoretical framework through different perspectives on how competitiveness is propagated, including specific mechanisms such as benchmarking and the creation of subjectivities in planning. With a point of departure in this theoretical focus, I will draw on several examples from a case study of Vejle Municipality, Denmark, showing ways in the local government of a small city can play a role in creating a competitiveness compulsion in planning and policy-making. This will lead to a conclusion on the importance of the role of local actors in terms of their complicity in creating a neoliberal compulsion to compete, with this not simply imposed on cities by external forces. Even in the case of a small city it is evident how local actors play a role in an unreflective adoption of competitive perspectives in urban policy and planning.

Neoliberalism, Competition and the City

Inter-urban competitiveness is often mentioned in the context of neoliberal urban development, with competitiveness viewed as a "primary virtue" (Harvey, 2005, p.65) of neoliberalism. Within the critical analyses of Harvey and others, the "coercive laws of competition force individual or collective agents (capitalist firms, financial institutions, cities) into certain configurations of activities which are themselves constitutive of the capitalist dynamic" (Harvey, 1989:15). In a more recent analysis of neoliberal urbanism, Peck & Tickell (2002) refer back Harvey's ideas about the "powerful disciplinary effects of interurban competition" (2002, p.393), discussing the ways in which they conceptualise neoliberalism as reinforcing and normalising inter-urban competition. These include: promotion of a 'growth-first' perspective on urban development; naturalisation of market logics; neoliberal 'lock-in' in terms of an austere public sector and growth-oriented economic development; a narrow range of potential policies; funding provision to cities on the basis of economic potential rather than social need; cities at the forefront of both neoliberal governance and contestation of neoliberalism (Peck & Tickell, 2002, p.47-48). Therefore in these analyses of neoliberal competition, it is an overwhelming external effect, operating through a variety of mechanisms which force cities to make plans and policies in certain ways.

These political economy analyses focus on competition as a 'force', in particular in a neoliberal capitalist system, which both leads to and is constitutive of a wider system of entrepreneurial urbanism. The danger with this analysis can be its overarching nature. Larner (2003), for example, has expressed some concern that the term 'neoliberalism' is problematic in this respect, providing little explanatory power due to its all-encompassing manner. This type of critique has led to more recent focus on local forms, hybrids and peculiarities of neoliberalism at different sites and scales, as

a supplement to more overall analyses (e.g. Brenner & Theodore, 2002; Peck & Tickell, 2002; Peck, 2004). As Robinson states, urban policies are "highly contingent, dependent on local circumstances, and that their specific form is the result of the range of influences and connections at work in any given instance" (Robinson, 2011, p.29).

Robinson carries on this critique by pointing out that with the "broad academic consensus that there has been a neoliberal turn in urban policy internationally comes a temptation to assess localized urban policy developments as conforming to international trends" (2011, p.28), which can bring with it assumptions about power in terms of the weakness of local governments in the face of "external and more powerful actors" (Robinson, 2011, p.28). Therefore although these wide analyses of a global neoliberal system have their uses, it is important not to view the city exclusively in the light of these homogenising ideas. By examining the city more closely, it is possible both to focus on contextual specificities of neoliberalism, as well as view local actors in a more productive manner, instead of as powerless actors responding to powerful external forces and actors.

The Discipline of Benchmarking and Best Practices

A more detailed analysis of some of the mechanisms which reinforce neoliberal urban governance is evident in terms of discussions about 'best practices' and ranking and benchmarking. Sum (2009) has examined competitiveness as a "hegemonic 'knowledge brand'" (Sum, 2009, p.184), and in particular has investigated how "knowledge apparatuses" (Sum, 2009, p.185) such as benchmarking and indicators functions in the spread of the competitiveness discourse. Through examination of international benchmarking reports such as the *World Competitiveness Report* produced by the Institute for Management Development, Sum (2009) discusses how comparisons of different indicators and 'best practices' form a type of disciplinary power over countries, for example, the ranking of countries "operates as a disciplinary tool (or paper panopticon) with surveillance capacities over them" (Sum, 2009, p.193), with annual revisions of these rankings institutionalising a "continuous gaze through numbers" (Sum, 2009, p.194). Therefore in Sum's analysis, these forms of benchmarking and ranking are an important mechanism in the "treadmill of competitiveness" (Sum, 2009, p.194), and they are often used by various actors to support arguments, to express the need for certain projects, and to create fear over lost possibilities.

This is an idea which is also resonant at the city scale, and some of the recent policy mobility literature discusses similar concerns, whilst highlighting the importance of local government as an actor. McCann (2004) has underlined the importance of mass media in propagating the idea of 'best places', through his study of a number of cities and rankings in selected US mass media publications. These rankings, which he refers to as a "persuasive, widely accepted and powerful simplification of the world" (McCann, 2004, p.1914), create a great interest amongst policy-makers and local politicians. McCann investigates how these rankings inspire cities to focus on certain practices in order to move up this apparently desirable hierarchy, which he describes as being tied up with the "hegemonic, normative discourse of interurban competition that sustains and encourages relative ideological conformity over large

parts of the developed world" (McCann, 2004, p.1912). More recent discussions have placed focus on the manner in which various 'models' of urban development move between cities, highlighting the similarities between urban development in different cities under neoliberalism.

Robinson (2011), whose interests lie particularly on the relationships between so-called 'developing world' cities and 'developed world' cities, raises an interesting point in terms of assumptions of "creativity and mimicry as the preserve of wealthier contexts" (Robinson, 2011, p.22). This highlights the importance of assumed power relations in these debates, with the idea that some cities or actors are more 'powerful' to implement certain policies than others. Robinson (2011) instead calls for greater focus on the local actors in these seemingly global circuits of knowledge, highlighting the "potential for local agency to appropriate and creatively use (even mandate) opportunities for citywide strategic planning", which has "arguably been understated, especially in discussing the circulation of neoliberal policy" (Robinson, 2011, p.35). This harks back to the wider point being made about neoliberalism, that is, the importance of examining contextual hybrids, rather than focusing on a homogeneous model of neoliberal urban development.

These areas of research, into mechanisms which promote competitiveness at a global scale, as well as the processes by which models of neoliberal urban development are transferred between cities, and the role of practices such as benchmarking and best practices, all demonstrate the potential of investigating neoliberal urban governance within the city. Although there is undoubtedly a wider system within which these practices are perpetuated, there is a growing research focus on the specificities of particular places, rather than a constant focus on a universal nature of urban neoliberalism. This focus on the local and the individual city is one which is particularly resonant and evident in planning research, where case studies of particular cities and regions add some further perspectives to this conceptualisation of competitiveness as a locally-specific discourse, promoted through a variety of mechanisms.

Creating Subjectivities through Planning

Recent work on planning and neoliberalism has placed focus on the contradictions between these two 'objects', the most fundamental being the neoliberal ideological desire for less state control, but the simultaneous need for planning to regulate land use (Tasan-Kok, 2011). This 'contradiction' is mirrored in broader discussions of neoliberalism, which have recently distinguished between 'actually-existing neoliberalism' (Brenner & Theodore, 2002) as being distinct from 'pure' neoliberal ideology. Despite these apparent fundamental contradictions, the neoliberalisation of planning seems to be a reality. Baeten highlights how urban citizens have "become self-governing atomised entrepreneurs who have the obligation to pursue their own betterment and fulfillment […] in the city of endless choice and resource" (Baeten, 2011, p.207), a very particular kind of subject. This is a discourse which is difficult to contest, and creates an "impeccable logic of urban neoliberal subjectivity" within which it is "perfectly normal that cities in the first place dress up to seduce wandering neoliberal minds seeking that flawless urban landscape where they can capitalise best on their talents" (Baeten, 2011, p.207).

Peck (2010) discusses similar tendencies, placing more explicit focus on the 'creative class' thesis of Richard Florida (2002), which in recent years has been "hugely seductive" (Peck, 2010, p.192) for local policy-makers and politicians in many parts of the world. Peck (2010) highlights how the creativity trend in urban policy creates a "new generation of entrepreneurializing subjects" (Peck, 2010, p.223), with particular ideas about these subjects' work, free time, and perhaps above all, patterns of consumption.

Both Baeten (2011) and Peck (2010) underline the creation of specific kinds of neoliberal 'subjects' in cities today. Jensen & Richardson (2007), in a slightly different context, have discussed this issue in greater detail, investigating the "imagined mobile subjects" (Jensen & Richardson, 2007, p.137) created in a project around a trans-national corridor. This study adds a more detailed perspective to the general idea of the creative, entrepreneurial subject in the neoliberal city, in that it highlights the specific role of planning and policy-making in creating 'imagined' subjects, and in turn how these subjects are used "to make thinkable, and normal, proposed interventions such as new high-speed transport or communication infrastructures" (Jensen & Richardson, 2007, p.140). Therefore particular subjectivities, such as those Baeten (2011) and Peck (2010) are critical of, have consequences for what is normalised in planning and policy-making, that is, "when particular subjects are imagined in particular ways, this will play a more or less visible part in the formation of policies and plans" (Jensen & Richardson, 2007, p.140).

In this paper I will bring together these seemingly disparate areas of literature. Through examples from Vejle Municipality, I will show how systems of ranking and particular subjectivities are created within planning and policy-making. This contributes to the institutionalisation of competitiveness, and a lack of reflection from local government actors, as these mechanisms then make not just possible, but logical and necessary, certain types of urban development which are reflected in the materialities of the city.

The Case of Vejle Municipality, Denmark

Vejle Municipality is located in the east of the Jutland peninsula, west of Copenhagen and south of Aarhus, Denmark's second city. In the 20th century the city developed a number of industries, including textiles, metals, timber, paper and foodstuffs, also related to its harbour on Vejle Fjord. The majority of these industries have declined since the 1970s, and in recent years new industries, such as IT, service businesses and administration, including the headquarters of Region Southern Denmark, have taken their place (Becker-Christensen *et al*, 1996). Since a nationwide municipal reform in 2007 which increased the size and administrative duties of Danish municipalities, Vejle Municipality has been composed of the city of Vejle itself, and a number of smaller towns, villages and rural areas. Today the municipality has around 107000 inhabitants, with the city of Vejle itself having around 51000 people (Danmarks Statistik, 2012). There has long been an interest in urban development in Vejle Municipality, as seen for example in the creation of an architecture policy and annual architecture prize in the 1970s, and the

implementation of a permanent pedestrian area in the city centre in the 1980s (Brønfeld *et al*, 1998). In this article, the examples of some contemporary planning and policy-making practices in Vejle Municipality are intended to illustrate the local face of a 'competitiveness compulsion'. The practices are not viewed as unusual, at least in the Danish context today, and in that way Vejle serves mainly as a real-life example of a more widespread tendency for local governments to play a role in creating a competitiveness compulsion. The evidence used in this paper is taken from a wider case study of planning, policy-making and the competitiveness discourse in Vejle Municipality. This paper specifically draws on a number of interviews with civil servants and politicians, as well as a document study of municipal publications. Further more comprehensive research into these mechanisms is expected.

Best Practices and Rankings

Within Vejle, as in many cities large and small, there are various local practices which feed into the global trend for 'best practices', ranking and benchmarking. Local government officials and politicians in Vejle take regular 'study tours' to other cities and to see particular projects, both within Europe and further afield. The 'Technical Committee' in Vejle Municipality is the political committee most directly engaged with planning and architecture, and they usually take an annual tour to a larger European City. In recent years, these cities have included Barcelona and Valencia (2008), Oslo (2009) and Milan (2010). These tours are viewed as important in providing inspiration for developments in Vejle, and it is stated by a civil servant in the municipality that they have an important function in terms of showing politicians the possibilities there are in urban development. These tours are however not just about looking outward, or tapping into best practice in well-known cities, they are also about bringing projects and ideas back to Vejle. A politician on the Technical Committee refers to these tours as inspiring, but that there is also a need for Vejle itself to create such inspiring projects - "one has to get out and see what others have done to get some ideas to take further oneself" (interview, politician, 2010). This underlines the way in which the city is seen as a place which can potentially participate in these practices proactively, rather than simply being a 'receiver' of best practice or big city ideas. This is more generally evident in the focus there throughout the municipality on Vejle being 'known', both in Denmark and further afield, for its projects and practices.

More explicit measurements of city 'success' are also of interest with regard to Vejle. There is a great attention to various rankings with the municipality, although this is rather diffuse, with a variety of different indicators seen as important, from national to regional, and in terms of many different sectors, including retail, tourism, and quality of life. Yet as with the idea of being 'known' in terms of urban development, there is also a locally-created expression of the mechanism of benchmarking, illustrating how competitiveness is institutionalised within Vejle, rather than simply being monitored as something occurring 'outside' the city. The 'Growth Barometer' (*Vækstbarometer*) is a short quarterly report which compares Vejle to other cities in the local region in terms of a small number of indicators. These reports, collated in this form since February 2007, bring together data (mostly from Statistics Denmark) in the following areas: population; the local tax base; house prices; building projects; harbour

development; workplaces; business development; unemployment; new firms created; and hotel stays (Vækstbarometer, 2012). The initial reports loosely compared Vejle with nearby cities of Kolding, Fredericia and Horsens, whereas since 2008, a comparison with Aarhus has also been included (Vækstbarometer, 2008). These reports are also quite explicit in their presentation of tables comparing the performance of the five places in terms of the different indicators. Vejle Municipality is here defining certain ways in which it can measure itself through this local interpretation of a worldwide fetish for 'benchmarking', thereby contributing to their own apparent need to compete.

Imagined Future Residents

The other aspect of the 'compulsion' to compete which I introduced in the beginning of this article was the creation of particular subjectivities, which could then serve as legitimating factors for certain policies and plans. Within Vejle, a focus on 'creative', 'innovative' and often young people is evident in policies and plans from across the municipality. This is particularly in terms of their status as desirable 'future residents', people that need to be attracted to live and work in Vejle. As one interviewee states, this 'attraction' of new residents and businesses is quite important, being "something we very much focus on in Vejle, that is to be attractive, we focus basically on the more people we can get to live and invest here, put money into Vejle" (interview, civil servant, 2009). Yet at this overall level, the aim remains fairly unspecific, and the question of exactly what groups they are trying to attract in Vejle is an interesting one.

It is here that the 'creative class' is quite evident, for example in a publication from the Business Development section of the municipality, this group is referred to as "the ultimate resource for economic growth", and their presence should apparently create "great demand for culture and consumer opportunities and contributes to a series of positive effects in the local area - increase retailing, more restaurant visits and higher property prices" (Vejle Erhvervsudvikling, 2008, p.23). The general interest in Florida's thesis is also more widely evident in Vejle Municipality, including the fact that he himself was invited to speak in the municipality in 2006. This also resonates with a slightly more general focus on well-educated young people as a key group to attract to the municipality. This is mainly in terms of encouraging young people to 'return' after they have completed a higher education elsewhere, as there are limited opportunities for this in Vejle Municipality itself. For two of the interviewees engaged with the field of culture, this is where they conceptualise a focus on youth culture as important, in that giving children and young people a good experience in Vejle Municipality early in their lives would hopefully draw them back later (interview, politician, 2010; interview, civil servant, 2010). Again in a publication from the business development section of the municipality, there is a view that there is already a positive development in the city with regard to this group: "partly because businesses to a greater extent have attracted highly educated people, and partly because a focused effort has made Vejle Municipality especially an attractive place for highly-educated people to live and work" (Vejle Erhvervsudvikling, 2009, p.12).

Specific projects within the municipality are also framed in terms of these subjects, illustrating the connection between these desired future citizens and the materialities of the city. The redevelopment of an old Spinning Mill in the city centre to a mixture of office space for small businesses, space for sports clubs and culture, a museum, a cafe, and other facilities, is one such project, catering to both the work and leisure of the entrepreneurial and innovative creative people whom the municipality would like to attract. A civil servant working with this project states that the general focus on creativity and projects such as this one in particular would hopefully mean that "the business community will be able to attract some knowledge workers, who would not have chosen Vejle, because there was not an environment they could be a part of" (interview, civil servant, 2009). This illustrates the connection which is made in planning and policy-making between the desirable future residents and the types of projects which are then implemented in the city. A certain kind of ideal future citizen is imagined who is out there, waiting to be 'attracted', and it is then logical and necessary to create a certain type of city which is attractive to these citizens.

The Competitiveness Compulsion in Vejle

The short examples in this paper show the way in which a competitiveness compulsion can be created within a single small city. Although the practices which I have presented here are by no means unfamiliar from other cities, they also show something of the workings of competitiveness within a city. Rather than 'submitting' to overwhelming outside forces, in the form of powerful regulations, actors or the like, Vejle Municipality has been actively creating these forces within the city as well. Study tours are an important annual event, but they serve also as inspiration to how Vejle itself can become such a 'model' and create their own 'best practices' by which they will be known. Benchmarking and externally produced indicators are of interest, yet the municipality also creates their own indicators, willingly measuring their 'performance' against their neighbours and thereby subjecting themselves to their own form of competitiveness treadmill. Imagined future residents are created, in the somewhat predictable form of creative, entrepreneurial, well-educated and mainly young people, and the creation of these imagined future residents leads to an imperative for planning and implementing projects and forming the kind of city which they are expected to want.

Therefore the small city in particular should not be dismissed as a powerless actor in a competitiveness game which is occurring in at the international and national levels, or even in just larger cities. As the Vejle example shows, the local government and actors in a small city can form their own mechanisms which then promote local competitiveness.

In Vejle Municipality, I have looked at two ways in which a compulsion to compete is created within the municipality. Firstly there is the compulsion related to disciplinary mechanisms such as 'benchmarking', where the price of property, the tax base of the residents, and other elements are prioritised as ways of 'measuring' the municipality's success. Secondly there is a compulsion related to the creation of a particular type of 'future citizen' whom policies and plans are directed towards. These two elements of compelling the municipality to compete contribute to a process of the local government creating its own self-reinforcing 'compulsion to compete', in terms of the disciplinary practices they place upon themselves and the

subjects they create to serve in their policies and plans. These practices are highly institutionalised in the municipality, which is particularly evident in terms of the lack of reflection there is on these practices. It is generally seen by actors in the local government as a 'natural' priority to work in this way, and this is part of the self-reinforcing power of the mechanisms I have discussed in this paper. In this case, local government in a relatively small city is by no means a powerless actor in the face of a monolithic 'competitiveness' discourse, being imposed through external mechanisms. They are complicit in creating a compulsion to compete in their own city.

In the examples used, there is evidence of the "disciplinary tool" (Sum, 2009, p.193) of comparing various indicators between cities, as well as a focus on 'best places' (McCann, 2004). Although, as Robinson (2011) has highlighted, the examples also show the importance of not ignoring local agency when investigating such mechanisms. This is what the Vejle example shows most clearly - that although these practices are not unique or created in a vacuum, they are practices which are occurring within Vejle Municipality, showing the power of the local actors in contributing to creating their own "treadmill of competitiveness" (Sum, 2009, p.194).

The local creation of neoliberal subjectivities (Baeten, 2011; Peck, 2010) is also apparent, in terms of the creative, entrepreneurial and young imagined future citizens. As Baeten (2011) indicates, this mode of neoliberal and competitiveness-oriented governance more generally creates an ideal citizen who should be attracted to a city, where they unleash their entrepreneurial potentials and enjoy the consumption-oriented lifestyle expected of them. Following Jensen & Richardson (2007), this creates a logic whereby plans and policies are made "thinkable, and normal" (Jensen & Richardson, 2007, p.141) in terms of the necessity to attract these imagined future citizens. Together, the use of comparative indicators and the imagined future citizens contribute to a self-reinforcing 'necessity' to compete in Vejle. The two examples are also intertwined, in that a focus on particular indicators such as house prices and the new businesses in Vejle are supported by the imagined future citizens whom the municipality would like to attract.

The case of Vejle Municipality shows that local agency can play a role in creating a compulsion to compete for a city, rather than this being something which comes exclusively from external trends and forces. This is particularly interesting in terms of the small size and relative anonymity of Vejle, a type of place which might be assumed to lack this kind of local power. Yet it also shows the problematic nature of this situation, as the self-reinforcing and circular nature of the disciplinary mechanisms and the creation of particular subjectivities does not inspire reflection on these processes, rather they are institutionalised within the municipality. For local actors, their part in creating this compulsion is rather opaque, and the institutionalisation of these practices means that planning and policy-making in this way is viewed as a natural and logical course. Further work on the competitiveness compulsion at the local scale, in terms of more comprehensive study of the internal mechanisms which are at work, as well as greater focus on smaller cities, is necessary.

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THE TERRITORY OF BELIEVE IN BANGKOK OLD TOWN: CONSERVATIVE NATIONALISM THAT INSTALLED TO CULTURE

SIRIPORN DANSAKUN[1]

Abstract

Town planning was created for many purpose of the reigning. Bangkok old town itself has 4 layers of town planning overlapped in 2011. All the layers has symbol of believe itself, and the development relate to how they definite "Thainess" as be loyal to "Country-Religious-the King." But if we look inside to the much more small scale, the town are full decorated with soft "ephemeral ornaments" by people. The hypothesis is this ornaments can tell us how success of the symbolization that the reigning had been dedicated. And in the same time it shown some missed believes that were ignored in the big viewpoint, small but priceless for users. The research focuses on the ephemeral decorated space. Collecting data from public places that have high dense of usage and full of people circulation. The evaluation of this community place is markets in the Bangkok old town, that inherited from generation to generation. From those markets we scope to the town zoning that is fulfilled with hard elements of town landscape that is a symbolic of believe. The purpose is to find the relation ship between permanent symbolic ornaments and ephemeral symbolic ornament, and the meaning of decoration to users. The methodology is snapping Bangkok town activities in the period of 2011-2012. Collecting data of decorated space. Categorize how to decorate. Clearify the structure of believe territory. Matching each category to each area in percentage. Interview about sense of value and users cognitive. Analyze people daily life interaction with spirits and force through decorated ornament. Though this study we find out that Bangkok permanent town symbolic clearly related to the political policy of each period, creating multicore philosophy that is mixed of Nation-Religion –The king. And if we

figured on percentage of decorating area the Nationalism believe “Thainess” created from the trial of “National Unification” cover area of decoration the most. The distribution of Nationlism believe and folk believe can separated into each level of public and private space. And in if we focus on the different view point of sustainable of meaning for decoration the folk clearly have much more value for the user in the long run. Its use very small area but effects to user daily life, being tools for interact with spirits and forces, and the small things itself created one more layer of town invisible town structure where force and spirits lives and having circulation in the users mind.

1. Introduction

Bangkok have 1568.737 square meters, with 6,784,529 population in 2008. 99% of citizen have Thai Nationality. 94.5% is Budhistsm, 4.1% is Islamic, 1.0% is Christian. 35.34% graduated primary school 30.39% graduated from high school and 26.39% graduated from university. The population in eduation generation 6-29 years old is 1,321,800 people.

1.1 The 5 layers of town planning overlapped on Bangkok Old Town.

Related to The study of Town mapping in Bangkok old town,Rattanakosin area,we can find four layers of town planning created in each era. Before Bangkok turn to be Main Capital of Thailand the map show only temple random around the area. And their suggest that people who live here was chinese and local people living nearby each temple. When the Rama 1st take Bangkok as the Capital their has two planning conceeptep used for first planning period, The Naga Theory and The diagram of Cosmos Theory. Then in Rama 5th the facilities linkage and zoning was adapped into cosmos theory to put the new function architecture into the old town. And the town ins spreading in line by economic growth.

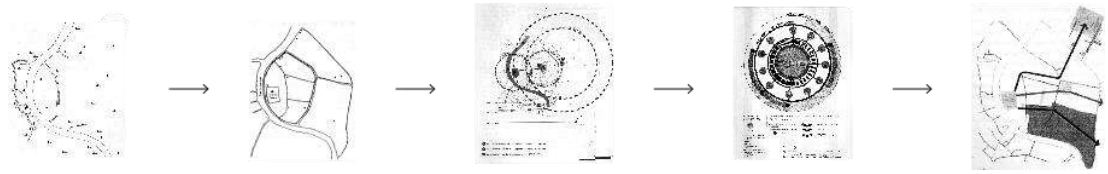


fig1.1.1 5 layers in the bangkok old town.

fig1.1.2 Bangkok old town and total area of Bangkok city.

1.2 Symbol of Believe in each Town Planning Time line.

All the layers concept can compared to the changing in flag design, Plitical issue, Cultural and lifestyle management , town symbolic elements, and ephemeral decoration ornaments controled by government. In Rama 1st the flag began to use royal monarchy sign. The building and custom was allowed to be well prepared only for Royalfamily and Nobleman. In that period Town planning have the spot only the relation ship between Palace River and Temple. In Rama 5th the Flag turn from Royal sign to be white elephant that means to the prosperity of King and Kingdom. People have custom in cross culture the facilities turn to be much more various kind. Almost was trying to make the unity of Thailand together,by bringing some craft from all over Thailand to mix and adapt to each other to make every one feel as in the same nation. Town decoration is crossed culture and using European way to pay respect to adapt for people to express their feeling of paying respect to Thai king. That time town planning concept still have cosmos linkage but input many facility that link people to government into the loop.

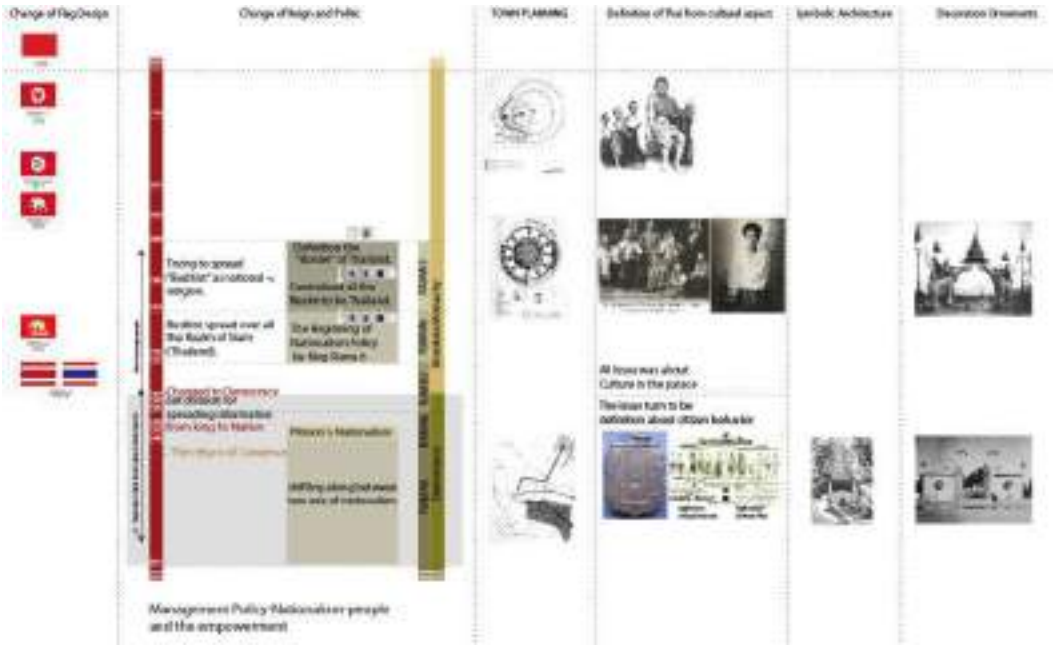


fig1.2.1 comparison timeline of flags design , Political issue , Town planning concept, Cultural written by the reign, Town Symbolic and ephemeral decoration by the reign.

1.3 The relation between Symbol of Believe and Thainess.

1.3.1 Definition of Thainess as Folk believe and Thai Nationalism.

This research separate Ornament that express believe into Folk believe that created by common people in their life and cross culture. And the Nationalism ornaments That country tried to install into town scape and the same purpose issue that is installated by people.

1.3.2 Town Symbolic as Folk believe and Thai Nationalism.

Town Symbolic as folk believe usually appear in spirits house, The holy Tree and House of God in Hindu Religious. The other symbolic in Nationalism is almost facilities and monuments that can separate to Royalist+Racist Nationalism and Liberate Nationalism. This expressing way also decorated in the ornaments statue, interior painting and ephemeral decoration densed in Bangkok old town.

If we see in the planning concept in each5 layers we also can find symbol of believe setting in each area too.

1.4 The Ephemeral decoration space.

To find how the political decoration turn to be believe ornaments, This research focus onto the ornaments decorated by citizen themselves. Specify into ephemeral things that they can take it off or set it to space anytime they want to. So we can measure the supply of decoration that support demand easily in town.

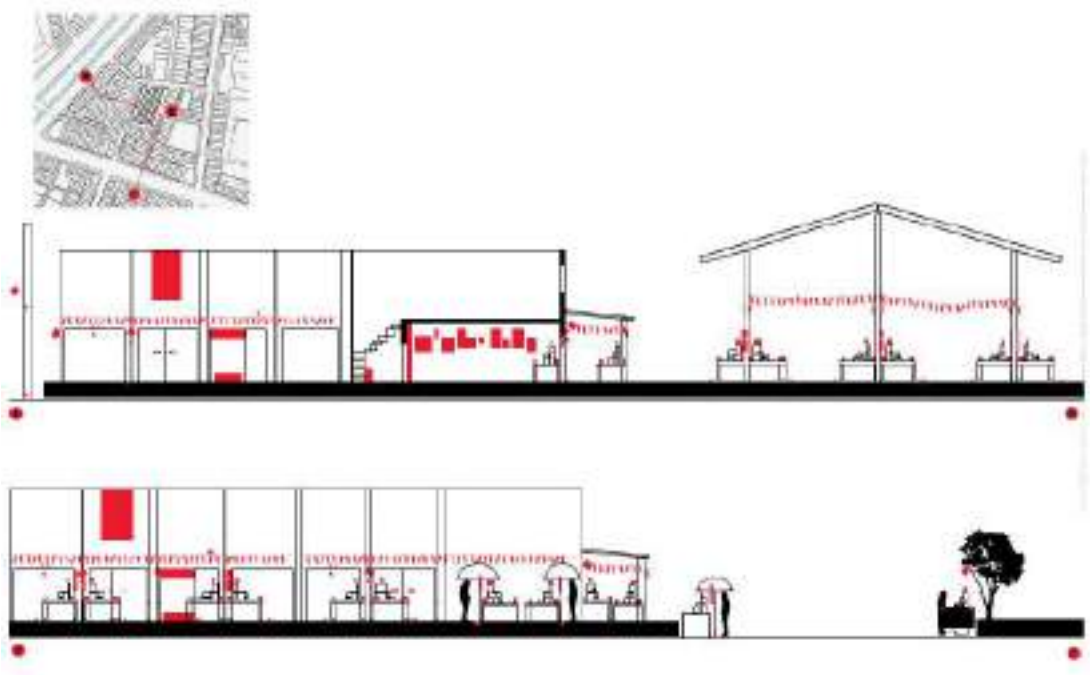


fig1.3.2 Kaset market's ephimeral ornaments decoration.

1. Scope of Study

1.1 Study Questions

Questions which this study tries to answer are as follow.
How Nationalism take roll as one kind of believe, among mixed culture.
How Nationalism absorb to everyday life.
How it spread into town.
How people take important about Nationalism as believe.

1.2 Study Targets and Methods

This study focused on market area of Bangkok Old town, The methodology is snapping Bangkok town activities in the period of 2011-2012. Collecting data of decorated spaces.Categorize how to decorate.Clearify the structure of believe territory. Matching each category to each area in percentage. Interview about sense of value and users cognitive. Analyze people daily life interaction

with spirits and force through decorated ornament.

1.3 **Literatures Review**

After research about Nationalism, Space decoration and folk believe, there are some of research that searching about Ghost Space, Ornaments of Believe in Temple and House Design. Nationalism and New Definition of Thainess. Thainess in Political and Management policy.

2. Site Selection

From background study this research focus in the Bangkok old town that have 5 layers of town symbolic and still have common life living from generation to generation. We focus onto the semi public place as market. The place that people can dominate their own territory but sharing it together in the same time. The place that open to all people to visit. The place that have densed circulation almost everyday trough the year.

2.1 Market in Old Town

The site selection begin with mapping all market that stay alive for a long run generation to generation. Then select the dense town symbolic zone. And pick up the well circulation place in the symbolic zone for case study.

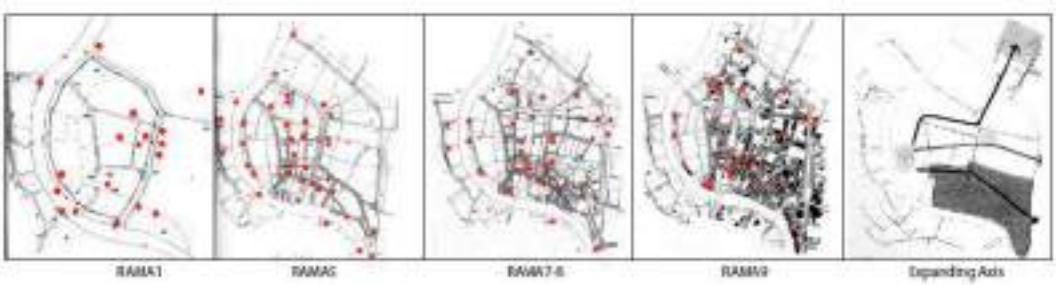


fig2.1 market formed in each era.

2.2 The physical Factors

Almost the market located in riversite spreading onto the pedestrian way of the maind road. Most are rental from owner. Someplace ownd by The Crown Property Bureau. Some own by one owner and sometimes change to new owner with some renovation and renewal zoning program.

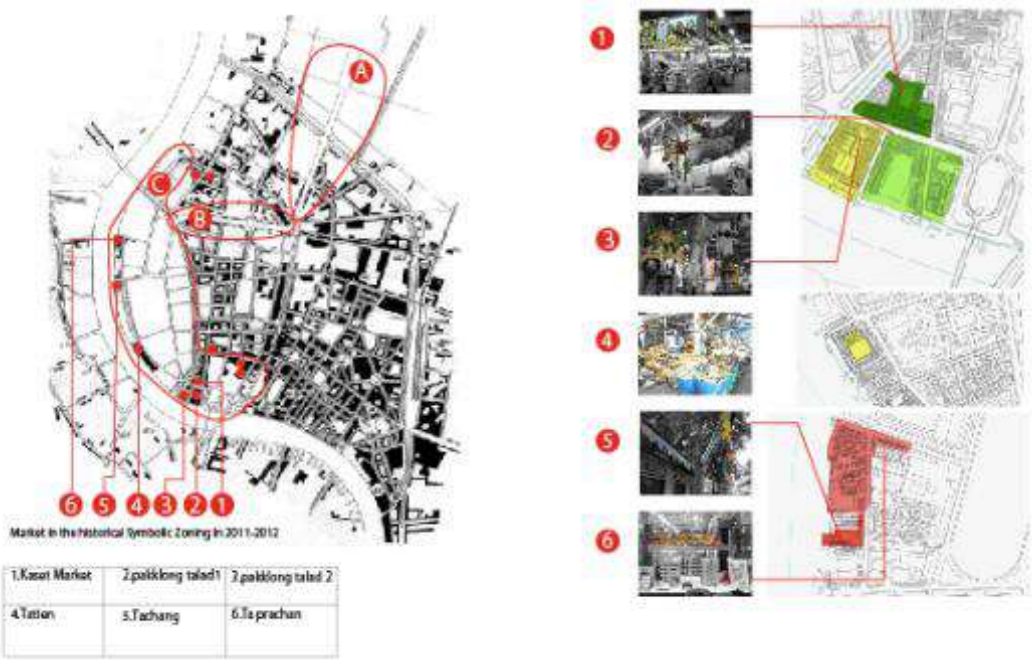


Fig2.2.1 old markets in the symbolic axes of Bangkok old town.

Fig2.2.2 Case study No.1 Kaset Market.

3. Definition of Ornaments

3.1 Ornaments in each Scale of Community

from liturature review field study research and interview result, The density of ornament on each scale of community will have different percentage. The sharing style and territory creating also happen easier inside the facility. And the way

relate to host is also depend to the shape of place. What is host definited in each scale and how tenant interact with the host, the space the place the land and their customer.

3.2 Typical of ornaments separated by purpose of believe.

From interview result we separate the ornaments into Thai Conservatinve Nationalism. Democratic Nationalism(messeage.) and Folk believe that appear as the figure below.

fig.3.2 believe ornaments separated for this research.

3.3 Town mapping of decoration.

According to town snapping. The ornaments can be separated in many ways as,

3.3.1 Hard Scape Symbolic

The hard scape symbolic created by town planning concept. History of people relate to that place. And the cultural issue.

3.3.2 Ornaments in Town Landscape scale

Almost town landscape ephemeral decoration is about the royal family espacilaly the king. Some is stand alone setting. Some is making as sign in the vista. Some is use for sirsle. Some is decorate as a bridge. And many road sign elements and some turn tobe façade of each building especially the builing of government, bank facilities and the building in each corner or the town.

fig3.3.2 ephimeral street ornaments.

3.3.3 Ornaments in Community Area Scale

3.3.3.1 Ornaments in total view of Market Facililty

ephemeral total view of market facility is some stand alone ornaments. Façade decoration flags and flags set that cover the pathway and arcade as a membrain.

3.3.3.1 Ornaments in pedestrian way

in the pedestrian way usually be the private decoration by people, sometimes sharing toether. Sometime is using as private. In the private ornaments they have lots interaction meaning in each position.

4.Structure of where to set ornaments.

4.1 defferents of spreading

among all kind of ornaments, there are the decoration of their believe that is their beloved. And the place they set placed for someone they respect have covered more than 70% of the displaying space in the market.

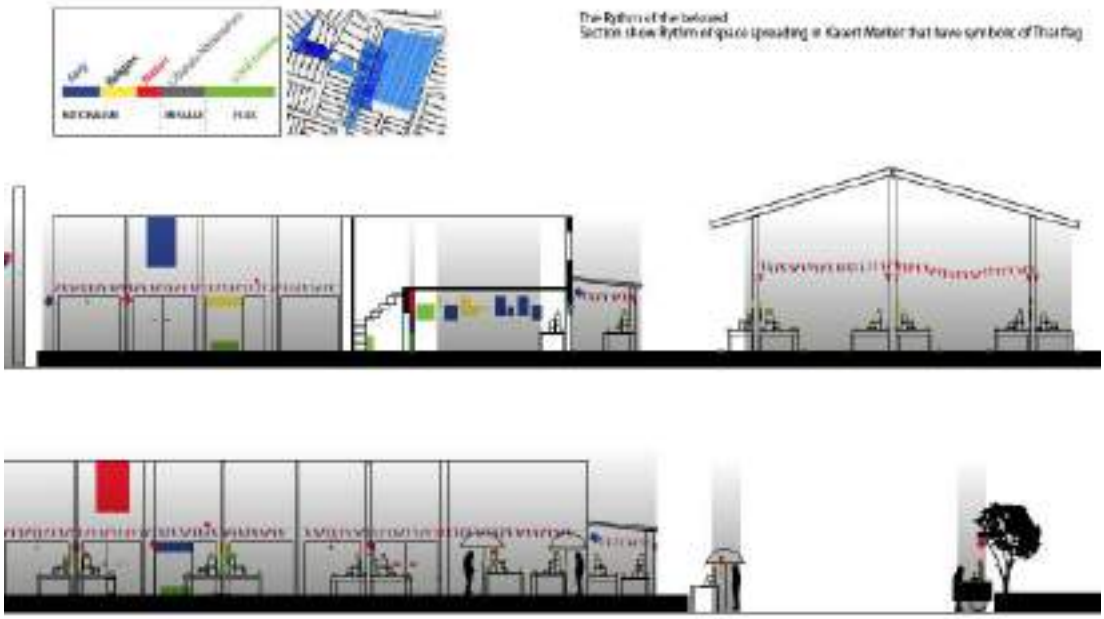


fig 4.1 The rhythm of the believe ornaments that express to someone they respect.

4.2 frequence of changes

The interaction folk believe somekind is changing daily and have the interaction with the tenant user more than twice a day. Not much ornament changed or interact monthly. The religious folk and nationalism all have much of ornaments that will be turn to the new one annually. For anniversary using usually be for the Nationalism ornaments. The fix use keeping along generation usually be for the folk ornaments that sometime they keep the ornament move together and ask the spirits to move to the new place with thwm and the moving believe ornaments. (This kind of ornaments sometime being in the case of stolen. But the most ornament stoled is religious statue. That turn to be one kind of rotation happen case by case.)

4.3 Zoning and the spreading of ornaments

The spreading of Nationalism ornaments can be spread easily because the shape is

easy for amature decorator to adapting to any design much more than religious and folk believe. But from the designer view folk believe also have many potential to adapt to design in veryinteresting way. And for the decoration for respect it is upper than 80 cm from floor and will be spread cover wider area, sometimes the ornaments itself got bigger when its going high.

fig 4.3 the zoning and spreading of element expressing repect.

5 Category of how to decorate

5.1 Territory creation

from measure and activities snapping, can find many way ornaments effects to meaning of territory.

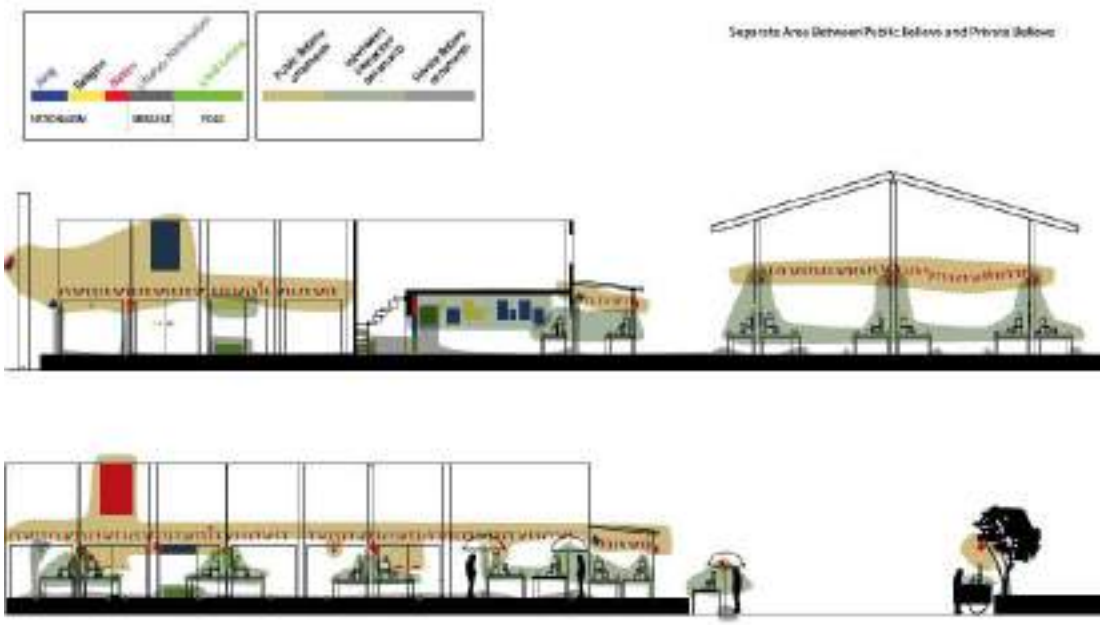
- wrapping volume.
- double layer effect.
- Unity of sharing space.
- Edge emphasis
- extension space
- sharing pattern (sharing belive)
- connect to host

6 Territory and perceive trough ornaments

from interview results and activities mapping

6.1 Public and Private volume or territory created by ornaments

The zoning of private and public ornaments are interesting in section plan. The more private the more linked to ground. The more public or want to express,the more they set it high.



6.2 The Connection to Spiritual Space.

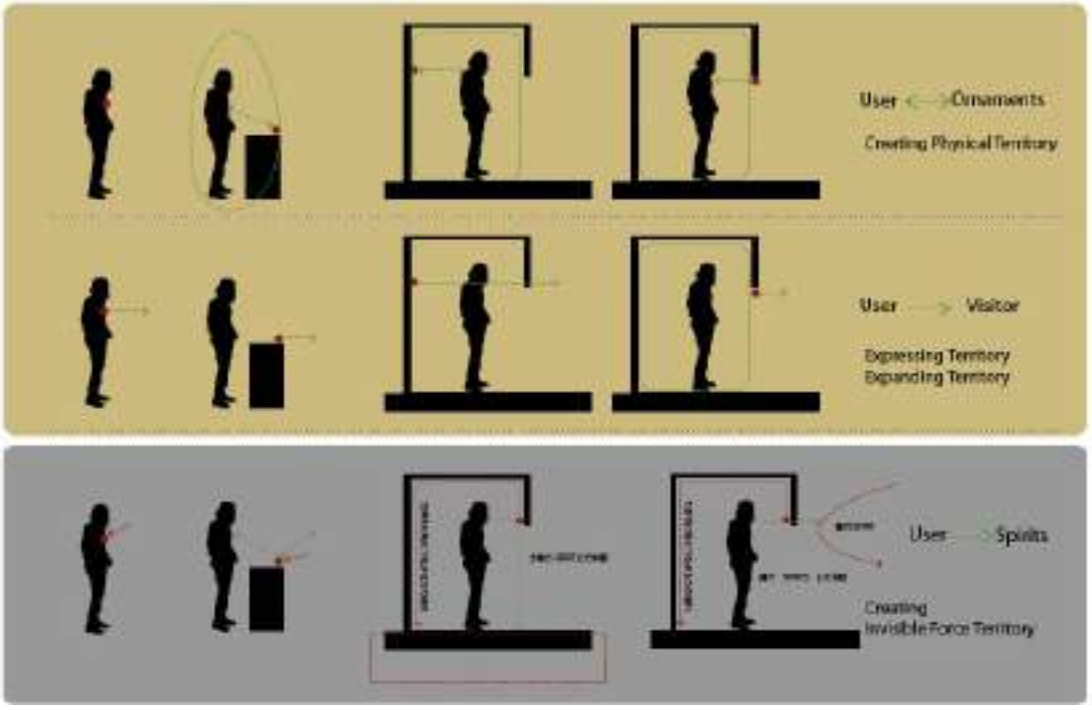
They are many kind of spiritual ornaments. Some connect to the total area. Some cover only the door way. Some linked the house to the tenant. Some link the street vender to the ground or the big tree. Some interact with the spirits keeping circulate trough the town. And the user pecieve each kind of spirits movements and the space the movesd in 3D.

6.3 Percieved space created by territory

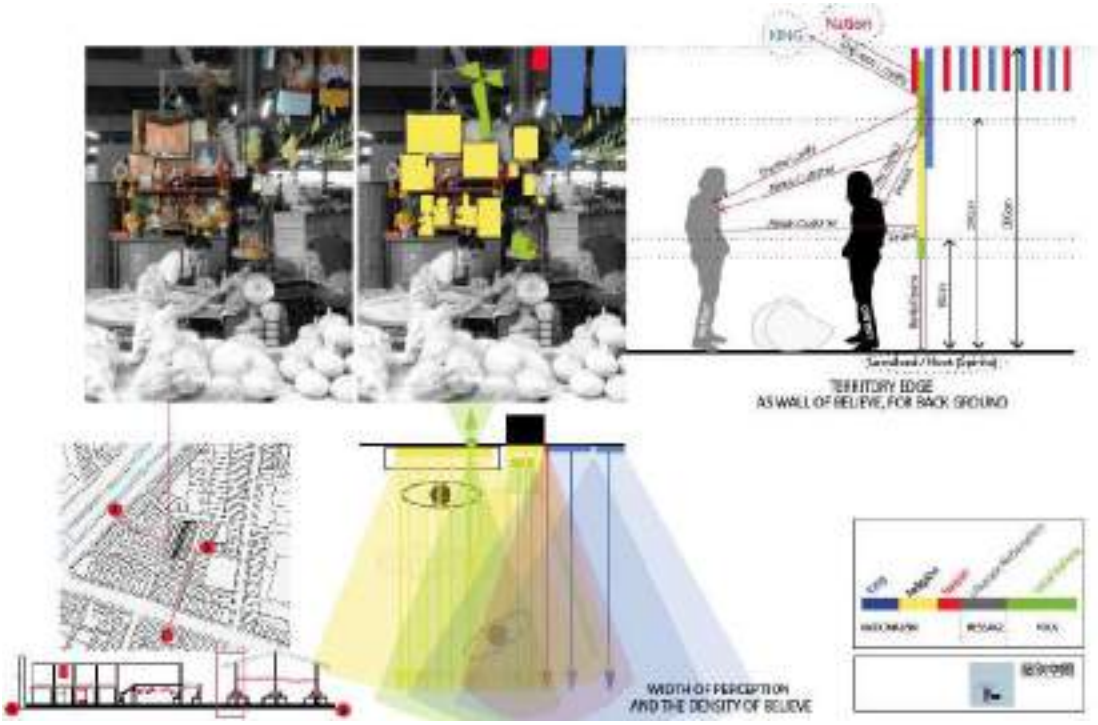
many space created by the territory itself. At the edge or the land mark of each territory they will put some connection ornaments and will perceive some space that can expand their territory or blur it more.

7. Ornaments'Interact

The ornament sometimes interact to the owner itself.



8. Adaptable to Design



9. Percieve of Value

9.1 as believe

9.2 factor of decorative selection(cultural activity, sense of place ,

9.3 Memorable

10.Conclusion

10.1 Nationalism is input to ornaments of believe.

Nationalism is input to ornaments of believe decoration by local people. It has a shape to let decorator pin up many idea of use but it still keep it own state in it s area that the other ornaments can not approach better. It keep it s position while turing position to the believe memorial and some kind of folk believe in some case. And in the same time the way of decorating input into people to make them feel as this territory crating style is the old way that feel nostalgic to the culture itself, also.

10.2 The Adaptation of ornaments itself

Folk and religious sometimes have interesting locating way. But its never change to design as easy as nationalism. But in the believe meaning nationalism still have no much potential to stick with user to every place as in the modern design. While folk believe can input into the very modern and contemporary interior space much more as the important elements that connect to spirits and spiritual space that user still perceive and want to get connected.

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Creative Industries in City Spaces: the case of art in public places

Solmaz Khoshkholghi, Katharina Borsi

Abstract

Purpose: to survey the creative cultural industries impact in urban spaces and their quality in particular art in public realm in cities

Methodology: The article reveals the preliminary findings of the study of art in urban spaces and artists contribution in forming and transforming public realm of cities

Key Words: creative city; cultural industry; public spaces; quality of space; public art

Introduction

Cities are manifestation of the culture and traditions of a people, a historical period, a region, an environment and a climate. Therefore city, its architecture and features had an unbroken relationship with the culture of a society and people's lives and Changes in it often accompany changes in life style, views and art.

With the rapid scientific, technological and economic development, cities grew faster and unbalanced and unplanned development lead to design strategies affected from the paradigms such as mass production and standardization.

The consequences of modernist planning were responsible for homogenous urban fabric rather than heterogeneous urban texture, zoned land use instead of mixed land use, indirect communication rather than direct communication, space rather than place and most importantly segregation rather than integration. In other words, as some critics like Natrasony emphasize, modernist approaches and internationalist style caused placeless urban environments.

It is a well established argument now that Good architecture and environmental planning not only respects the natural environment, but also pays attention to the continuity of culture, highlights the local features and stresses the order of space organization. Every city should have its own character in which elements of politics, society, economy, history and culture directly affect the overall layout, image, structure and facilities of the city. Only when the city's unique features are defined can an excellent urban image be created.

Considering the impact of the quality of city spaces and public realm of cities on all the people of the city and moreover the fact that visitors of a city first see and are influenced by the city's look make the environment and public spaces' design of even greater importance. Paying enough attention to the design of the city environment and urban landscape helps to improve the socio-cultural fabric, the tourism industry and the national image overall, the main and most important influence however is on the quality of life of the residence of the city.

In this regard it is important to revise public realm concept, the importance of liveable successful in between spaces and its complication as well as the path urbanists have been through and theories experienced in order to achieve that immensely vital concept.

Public Space

In urban life the in-between space, public space, has an important role in terms of social interaction and behaviour. They are the vital parts of cities where social life, integration and communication between residents and strangers take place. Organization of this space embodies social interactions or vice versa. Sometimes a composed social phenomenology can shape this space.

Public space has a broad concern and defined by various authors as places accessible to all, used by all, activity nodes and gathering points, places where common or different beliefs are shared, where people meet each other or come into contact with total strangers. Madanipour (2003) defines public space as "a site for display and performance", "an arena of recognition", "an exploration of difference and identity", "the in-between space that facilitates co-presence and regulates interpersonal relationships" (Madanipour, 2003, p. 235). It is the place of common world, shared experience and where tolerance grows between citizens. It is a tool for managing pedestrian movement and it has a function for various purposes (Madanipour, 2003).

There are three aspects of the public realm which are considered by researchers to be spatial, managerial, and temporal. Firstly as a spatial aspect, spaces between places, left over spaces that are disregarded by policy and design supply amazing opportunities for social uses and the street life. Secondly as a managerial aspect, between public and private institutions; there is an overlap of different spatial control and access. Hence there should be negotiation among the users. Lastly as a temporal aspect, between tenancies; this implies the change of urban space in terms of its character and use when it is in the period between the occupations of different occupants. Hence urban design should reconsider the uncertainty and challenging opportunity of this in-between space (Stevens, 2008).

The concept of public spaces has a crucial impact on community. Successful public spaces are the tools for place making. Their design and form also have an impact on the coherence and continuum of the whole region. Vivid and usable public spaces are important for the healthy society and environments. It makes these urban components important in planning process and urban regeneration and to investigate the basic element that gives character to cities and its public spaces and tools that have been used during years to form these spaces. Morris (1994) says that it is the outcome of a process that is formed under the determining forces and classifies these forces under two; firstly geographical factors such as climate, topography, and local construction materials. Secondly, man-made determinants like socio-political and economical powers, culture, and religion. Creative class always known as the society's expressive engine and cultural industries as tools to express, form and transform the second group into spatial dimensions and more tangible features of cities and form the characteristics and identity of space through artistic expression. Acknowledgment of the creativity and creative city theories and attempt to understand the role of cultural industries in place making is the first step of a broader understanding of city spaces, public realm in particular, and how to achieve successful, livable public places.

Creativity theories and creative industries

The creativity discourse and creative city is not a new idea and different cities in the world been famous and flourished through being art and culture centres during the history, from Athens to Florence, Paris and Vienna (Hall, 2000). During last decades the new economy formed due to 'the shifts in technology, structures of production, labour markets and dynamics in locational agglomeration' (Scott, 2006)-so called 'creative economy'- changed the social, cultural and spatial aspects of urban development process through restructuring modern cities. Experts believe for successful cities art and creativity plays an important role in this restruction and they emphasize on the importance of investment on creativity, locality and cultural heritage (Sassen,2001; Sharp,2005; Montgomery, 2007).

Creativity

If creativity is 'any act, idea or product that changes an existing domain or transform it into a new one' it is possible to indicate the link between creativity and cities as 'a creative milieu is a place that contains the necessary preconditions in terms of hard and soft infrastructure to generate a flow of ideas and inventions' (Landry, 2000). This link becomes more important considering the strong correlation pointed out between creative places and economic growth and the link between creative industries and the development of creative urban regions become popular research topic (Durmaz, 2009). The concept of 'Creative city' developed by Landry by conceptualization of this link: 'a creative city is an entity that could only be

developed through well designed creative strategies (policy); with a strong presence of creative industries (economy); and by a creative community (society) (Durmaz, 2008).

Cultural and creative industries

Adorno and Horkheimer first used the term 'cultural industry' in critisizing commercial mass production of art and culture and lack of its independency from economic and political conjuncture (Adorno and Horkheimer, 1947). But it was a surprise that when governmental institutions started to use the term in 1980s as a policy circles vehicle, they used it to adress the whole range of cultural products and services people consume (Durmaz, 2009), in the way Adorno and Horkheimer critiqued. For adorno the contraditction of art and culture and economic activities was crucial whereas in this new conceptualization 'cultural industries' tiesd them together. In 1990s 'cultural industry' was the short way of 'defining various sectors with art-related outputs' (Montgomery, 1990).

The 'cultural industries' concept led to 'creative industries' by arriving of 'creativity' theories and 'creative city' notion and these industries include key sectors such as: 'advertising, architecture, the art and antiques market, crafts, design, fashion, film, crafts, performing arts, publishing, television and radio' (DCMS, 1998). This report though distinguishes cultural industries as artist centred from creative industries as technological reproduction and wide accessibility.

Creative industries are important part of creative cities, generating economic activity to the city. Landry reports that attention to creative industries increased between urban planners, policy makers and developers in recent years (Landry, 2000) and theories of creativity provided base for many cities' spatial and economic growth (Landry, 2000; Florida, 2002). Landry believes that creative industries also create positive images of cities, help social cohesion, attract talent and investment while contributing the liveability and quality of place and life of residents (Landry, 2000) and promote sustainable urban development and tourism (Richards and Wilson, 2007).

On the other hand Oakley express that the role of cultural and creative industries in economic growth of cities is exagerated (Oakley, 2004).
Roodhouse writes 'creative industries are wider definition of culture to encourage cohesion, participation and ownership' (Roodhouse, 2006) and Evans et al. indicates the importance of creative industries in enhancing place quality and formation of urban identity. And this is the link which makes creative industries, culture a and its

manifestation forms important in urban planning and place making. In order to be able to discuss the importance of these tools in urban related disciplines the understanding of the quality of place and its indicators is vital. And understanding of their mutual impact.

Place quality

In urban related literature the 'quality of place' refers to the assets that make a successful urban space where people prefer to live, work and play. Understanding the characteristics of such places and what makes a place successful and the destination to live, work and visit has been the focal point of urban research and forms an important part of it.

Montgomery argues that cultural industries and creativity should be an important part of planning strategies, particularly in providing infrastructure for qualitative improvement in the quality of life of residents and enhancing the experience of visitors. He believes in approaching higher quality of everyday life by cultural planning strategies using intangible values and characteristics of urban space such as diversity, choice, flow, safety, sense of place, identity, aesthetic quality and legibility as base to improve the quality of the place (Montgomery, 1990).

Landry indicates conditions for a place that it can be judged on: economical, social, environmental and cultural characteristics of the place. Florida introduces new dimension to the quality of place by using the creative city theories in definition and stressing that certain qualities of place which is defined as 'place quality' fosters creativity and attracts creative people and creative industries: big ticket amenities, easy access to outdoor activities, night life experiences, healthy environment, participated activities, social events, lifestyle activities, accessibility, active young people and the environment that they can fit in (Florida, 2005). Another approach to place quality is from urban design principles and management strategies aspect. This approach believes that there is three main ways to achieve place quality: planning, development and people (Parfect and power, 1997).

Considering different approaches to place quality in different disciplines and literature, it is possible to sum it up that the quality of place related to tangible and intangible assets that space offers and it is possible to present these assets in three different categories: built, social, and environmental assets. This categorization gives us a framework to assess and study different places and how cultural industries involve in this assessment.

The point that almost all literature agrees on is the fact that creating high quality places is crucial both to generate economic activity and providing spatial, aesthetic, cultural needs and well being of people.

As mentioned before one of the manifestation forms of the intangible assets of the space and the society is through cultural industries in particular art in city spaces.

Art in public realm

Art as a form of creative industry during urban history has been used as a tool to improve aesthetic of urban landscape and provide character and uniqueness to a place. Art in urban spaces have become increasingly central to the definition and experiences of the post-modern city, In particular, because it is such a powerful tool to address timely issues. Hence, it is time that art in public realm along with the importance of cultural industries role in creative cities become subject to such critical interrogations.

Public Art

During last few decades, traditional distinctions between sculpture, painting, drawing, photography and installation have blurred. Conceptual catholicity, openness, and flexible categorization have provided the base for the galvanization of a new art: the complex world of public art.

The term public art refers to works of art in any media that has been sited or staged in the public domain, accessible to all, often outside but also includes any art exhibited in publicly accessible buildings. It is possible to say different aspects of the built environment are seen as nominees as location for public art, including, street furniture, lighting and graffiti. Public art is not confined to physical objects; dance, procession, street theatre even poetry have proponents that specialize in public art. Architectural sculpture and even architecture itself in urban fabric is widespread form that fulfils the definition of public art.

In traditional urban fabric introducing art into everyday life has been seen as an inherently good thing and art has been placed in public spaces to enhance aesthetic, memorialisation and so on. The last few decades have seen a ‘renaissance’ of public art particularly in the cities of Europe and the USA.

Public art has been included in different urban regeneration programs and it has been advocated as contributing to the alleviation of a range of environmental, social and economic problems locating within the urban design process and the integration of artists into the urban regeneration. Goodey writes “Since the 1980s public art has been increasingly implicated in processes such as the rejuvenation of decaying urban

spaces, the development of flagship projects of urban regeneration, the stimulation of central economies and the enhancement or transformation of urban images" (Goodey, 1994).

It is possible to say nowadays mostly there are art works in major city centre regeneration programs that endorse 'official' views of the city, for example local authorities, which celebrate and enhance the spaces produced by these interests.
Critical writing on public art and its integration in urban regeneration process has derived from a number of perspectives: of artists, arts advocates, cultural theorists, and urban and cultural geographers. As Jones indicates artists and art advocates have been mainly concerned with examining the process of public art production (Jones, 1992). These works shows the concern of writers for quality in the production of public art works. Whereas critical writing from a cultural studies or cultural geography perspective mostly seeks to situate the specific iconographies of public art works in the multiple contexts of their production and reception and generally these critics have been critical of the involvement of public art in projects of urban regeneration (Miles, 1997). In their point of view public art is a part of broader processes of uneven urban development. They see public art within the politics of urban transformation, criticize how this on-going process has an uneven impact on the different social groups of social spectrum's lives and even call the culture and public art in this development process as a 'carnival mask' which is presenting selective versions of history, or myths of harmony, offering another layer in the composition of elite images of the regenerated city (Hall, 2003).

Reviewing the critical literatures on public art shows that the voices of the public are largely absent and writing on public art has focused on the meanings inherent in public art works and the influence of the contexts within which this art is produced but, they ignore the meaning derived from the incorporation of art into the experiences of the public's everyday lives.

Loretta Lees says: "this (semiotic) interpretation strips the built environment of the meanings it is given by the people who live in it and of the transformations, however modest, that they make. ... Contemporary architecture architectural geographies do not emphasize enough the fact that 'urban meaning is not immanent to architectural form and space, but changes according to the social interaction of city dwellers'". She argues that architecture (and urban design and regeneration in my point of view) is about more than just representation. Both as a practice and a product, it is performative, in the sense that it involves ongoing social practices through which space is continually shaped and inhabited.

Background

Many believe that the term 'Public Art' born in 1960s as a paradigm to reunion segregated modern art with urban spaces, It is possible to say public domain became more attractive for artists during 1970s, under-explored and even abandoned public spaces provided artists from different disciplines a pure, untouched stage to present their new works. They were experiencing new forms and media, their work moving out of galleries and museums into the public realm. So since the late 1970s interest in public art and the scale of local, regional and national commitments to it have grown considerably and contemporary public art started to have an increasingly visible presence throughout different countries in particular, Britain.

During this time expansive claims are made for public art. It is claimed to be a cultural investment, vital to the economic recovery of many cities; contribute to local distinctiveness; attract companies and investment; feature in cultural tourism; add to land values; create employment; increase the use of open spaces; reduce wear and tear on buildings and lower levels of vandalism. 'Conceivably as a response to preoccupations with architecture and the environment it is supposed to humanise and otherwise improve the environment; bring about safer areas and encourage greater care of areas by residents whose pride in their locality has increased' (Public Art Consultancy Team 1990:25). In 1988 the Cabinet Office endorsed its contribution to urban regeneration (Cabinet Office 1988:25) and officially public art became a tool in improving urban fabric in regeneration schemes.

Considering the lack of evidence about the impact of public art in Britain, it appears that many organisations in the public and private sectors promote public art and commit resources to it largely on the basis of traditional, social conventions.
However by the end of the 1980s some of the constituencies involved in funding and promoting public art were beginning to consider whether they should adopt a more critical approach to public art and at the same time local authorities were beginning to question their own promotion of public art, and started to develop 'new understanding of the true scope and function of public art and the link between cultural and economic regeneration' (Roberts and Salter 1992:8).

Walker (1989) and Dormer (1992) have asked what good public art does and in 1984, a Professor of Government examined the public funding of the visual arts, including art in public places, from the standpoint of its benefits to individuals and the public interest (Banfield, 1984). In 1987 Stalker and Glymour proposed that 'public contemporary sculpture does little or nothing to enhance the quality of life generally...

Whatever legitimacy there is to government support of such displays derives from the tradition of serving the special interests of a very limited group of citizens. But this justification is overwhelmed by the fact that publicly displayed contemporary sculpture causes significant offence and harm, and does so in a way that intrudes repeatedly into peoples' normal living routines' (Stalker and Glymour, 1987).

The 1841 House of Commons' Select Committee appointed 'to enquire into the state of the National Monuments and Works of Art in … Public Edifices', these should contribute to 'moral and intellectual improvement for the People'. 'Similar aspirations informed the funding of other cultural amenities in the public realm, such as the new museums, libraries and parks' (Conway, 1991). Galleries echoed 'civic aspirations, regional prosperity' and parks were built with statues, buildings, drinking fountains and sundials which celebrated 'royal visits and the achievements of local heroes and promoted local and national pride' (Selwood, 1995).

More than a century later, public art is not anymore consist of memorials and monuments to people, events and common aspirations and when it is, it often is inevitably imbued with ironies. Robert Melville believes that 'the significant statuary of our time' is unlike that of our Victorian predecessors, in that it 'serves no sacred, commemorative or symbolic purpose and has practically no validity as architectural decoration' (Melville, 1954). Art in our time is regarded as playing a part in urban improvement, If not as an integral part of it at least as a tool to planning process (Sudjic, 1993) and it is been assumed to have economic benefits, although several writers have declared doubts about the rhetoric of the economic impact of cultural approaches on urban regeneration where public art projects usually reveal (Booth and Bloye, 1993).

Gordon Hughes writes in his critique of John Myerscough's report on *The Economic Importance of the Arts in Britain* (PSI 1988) that Myerscough's attempt to 'measure the arts in terms of their success in the market are flawed both methodologically and intellectually, and their results exaggerated' (Hughes, 1989). He also challenged the 'value of measuring the economic value of the arts *per se.'* And writes: 'both odd and unconvincing if the strongest argument for public spending on the arts relied upon its employment impact', rather than its other, 'less tangible', benefits. He then introduces three ways to assess 'non-market value of the arts'. First, the arts' option values, 'people place a value on the opportunity to enjoy artistic activities, even if they choose not to take advantage of that option at given times'. Second, 'the benefits of the arts could be considered in respect to the externalities or spillover benefits which they generate' and the third, 'art as comprising merit goods - goods or services

whose consumption is thought to be desirable for the community as a whole' (Hughes, 1989).

Conclusion

There is a war going on between people who don't like Modern art pieces popping up in public spaces of our cities and people who accuse them of being culturally deprived. As mentioned before although the use of art and so called cultural industries was a common practice during the urban history taking part in providing, identity and character for the city in which elements of politics, society, economy, history and culture manifested through the overall layout and image of the city, with arrival of theories seeking to find a link between cultural and economic regeneration and development of new understanding of the scope and function of public art which led to its presence in most of the major regeneration projects particularly in current economic circumstances, the question of the priority in public expenditure fired up the ongoing debate in related urban disciplines.

Despite being a popular debate lack of research in the field and evaluation of projects after completion is evident and therefore a comprehensive understanding of the polemical paradigm of public art and the perceived social, cultural and Political benefits of its practice is not possible.

Reviewing the critical literature on public art shows that the voices of the public are largely absent and writing on public art has focused on the meanings of the public art works and the influence of the contexts within which this art is produced but they ignore the meaning derived from the inclusion of art into the experiences of the people's everyday lives. According to some critics it is reasonable that the origins of an objective critical approach to examine questions of meanings of public art, its roles and functions in the context of fashioning new cities might focus on the audience as a site of meaning and how they engage with it, rather than the contexts of production and the works themselves. (Hall, 2003; Miles, 1997; Burgess, 1988).
On the other hand, the strongest argument for public spending on the arts relied upon its employment impact and attracting investment which could led to economic recovery of cities. Whereas as Hughes argues 'it is both odd and unconvincing … measuring the economic value of the arts *per se*', rather than its other, 'less tangible', benefits (Hughes, 1989).

In the attempt to enliven dull and empty public spaces of modern cities, the reunion of segregated modern art with urban spaces could play a positive role but along with other factors contributing in successful place making. Relying on putting art

installations without considering context and the harmony of the environment or the spatial and semiotic function of the piece won't facilitate the liveable public space. After all, it is the author's personal opinion that public art's mission is rooted in a broad movement: to foster artistic experimentation, enrich public space and the everyday experience, and forefront artists as key contributors to democratic society and for an objective study of this complex world investigation of semiotics, socio-cultural meanings, professionals and audiences view is required.

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Regulatory frameworks for reducing disaster risk through planning and building

Cassidy Johnson [1],

Abstract

Regulatory frameworks for building and planning should be one of the key tools for reducing disaster risk in the built environment. Indeed, in most high-income nations, good regulations, which define design loads, specify construction details and provide hazard zoning have been shown to minimise damage and save lives. However, thus far, in low and middle-income nations, regulations have been less successful in reducing risk. Drawing on case studies from four countries (Turkey, Iran, Namibia, Argentina) as well as wide range of literature, this research looks at how regulations for land, planning and building can provide an enabling environment for disaster risk reduction in low and middle-income nations. The research finds that many countries are developing good regulatory frameworks, however the difficulties lie in implementation. Local governments lack budgets, expertise and general capacity to do planning that is based on sound risk information, and competing priorities for development mean that development decisions do not always place hazard risks at the top of the agenda. Furthermore, building regulations are ineffective in informal building and many local governments lack the capacity to properly check plans and construction quality. The research finds that making safe land available for development and also enabling a 'compliance culture' in building are key elements to reducing risk in the built environment.

1. Introduction

In what ways can government action and regulation help reduce future losses from natural hazards? In answering this question, this study seeks to draw out evidence of how regulatory frameworks for planning, land-use management and building can provide an enabling environment for disaster risk reduction in low and middle income countries. The focus of the study is on which governance mechanisms are effective for the design and implementation of plans, codes and regulations in both formal and informal settlements, with reference to the political economy conditions that contribute to this.

Urban populations will continue to increase in coming decades, especially in low elevation coastal zones and in seismically active urban areas in low- and middle-income nations (McGranahan et al., 2007; Satterthwaite, 2007; Nicholls, 2008). Given that urban areas will be growing an expanding, it is vital now to

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institutionalise good planning and building practices that take into account disaster risks. Past experience has shown us that once land is settled on, it is very difficult to move people and nearly impossible to undertake large-scale retrofitting. Thus, action is needed now to avoid disasters in the future.
In addressing vulnerability in the built environment, there are two major approaches: the first is the location approach, which is to use planning to limit the amount of development in areas that are deemed to be at risk for hazards, which is usually done though some form of land use planning. The second is the design approach, which is to make development in hazardous areas safer by altering the way buildings and infrastructure are built, usually though the implementation of building codes (Burby, 1998).

Priority Action 1 of the Hyogo Framework for Action (HFA) outlines legislative frameworks as a key basis for integrating disaster risk reduction into development policies and planning: "Countries that develop policy, legislative and institutional frameworks for disaster risk reduction and that are able to develop and track progress through specific and measurable indicators have greater capacity to manage risks and to achieve widespread consensus for, engagement in and compliance with disaster risk reduction measures across all sectors of society' (ISDR, 2005, p 6). In relation to land management and urban planning this statement of the HFA means that legislation needs to specify that disaster risks be considered in land and development planning. This includes a multi-stage approach, first of all knowing what the multi-hazard risks are through risk and vulnerability mapping; using this knowledge as the basis for developing plans and policies for land management; ensuring that the local institutions, especially local and in some cases regional governments, are sufficiently capable to implement the plans and policies.

Under Priority Action 4, the Hyogo Framework for Action also specifies: 'Land use planning and building codes', stating: 'Encourage the revision of existing or the development of new building codes, standards, rehabilitation and reconstruction practices at the national or local levels, as appropriate, with the aim of making them more applicable in the local context, particularly in informal and marginal human settlements, and reinforce the capacity to implement, monitor and enforce such codes, through a fostering disaster-resistant structures.' Furthermore the 2010-2011 ISDR Resilient Cities campaign, which offers a ten-point checklist for reducing risk in cities includes building regulations as key component stating, 'Apply and enforce realistic, risk compliant building regulations and land-use planning principles.' (ISDR, 2010)

2. Methods

An earlier version of this paper was written for the 2011 Global Assessment Report for the United Nations International Strategy for Disaster Reduction, and synthesised the findings from five commissioned case studies and one expert meeting. The case studies commissioned as part of this study focus specifically

on the design and application of regulatory frameworks for planning and/or building in particular countries, cities and communities, including Turkey, Argentina, Namibia and Iran.The case studies, accompanied by other literature, are used to draw out the main issues and considerations of how planning and building regulations are contributing to disaster risk reduction. The excerpts from the commissioned case studies and other published works are used throughout the paper to present evidence of the findings. The paper has been published in Spanish in *Medio Ambiente y Urbanización, vol 75, no1, Dec 2011.*

The study is divided into two main parts, the first part is concerned largely with planning and land management and the second part looks at regulations for buildings and disaster resistant construction.

3. Planning and Land Management

The findings from the case studies indicate a number of common regulatory and governance issues with regard to urban planning and land management, including the importance of regional level coordination for disaster risk reduction, having multiple stakeholders involved in developing regulations and the differences between reactionary laws and strategic laws. The case studies also show that the effective implementation of regulations remains a major challenge for local governments and that the most important thing municipalities and governments can do in growing cities is to make safe land available for building.

3.1 Need for regional-level coordination

A level of regional coordination in planning is effective for enabling risk reduction, and in large urban centres this may entail the coordination of planning across metropolitan areas. This regional planning jurisdiction also aids in the preparation of uniform disaster risk mapping for earthquakes and in prioritising high-risk areas for intervention. For example as detailed in the Istanbul case study, enlarging of the municipal boundaries to match the provincial boundaries has enabled the municipality to plan for the larger region and to better coordinate its activities with the provincial-level administration. A United Nations University (UNU) study, which looked at social geography of urban disaster vulnerability found that out of the four megacities included in the study, Tokyo, Los Angeles, Manila and Mexico City, the municipalities with legally established, strong and well-financed metropolitan government structures, those being Manila and Tokyo, allowed for more inter-sectoral and intercity coordination for disaster mitigation planning (Wisner and Uitto, 2009).

For risk reduction, the acknowledgement of the region of the physical geography of risk is important, i.e. management of a flood plain in its entirety (Burby, 1998). The case study from northern Namibia offers the example of how a lack of regional level planning can result in the transfer of risk from one place to another. As it details, the

towns of Ondangwa and Oshakati each have their own plans for dealing with the flooding, but the plans for both towns are isolated, designed solely for the purpose of dealing with floodwaters in the locality of their respective areas. For example, the channel that is proposed to manage the floodwater in Ondangwa drains directly into a village south of the town, exacerbating the flooding there (Gold, 2010).

Multiple Stakeholders in planning

Methods for integrating risk reduction into planning outline the importance of combining local knowledge of individuals and communities at risk with scientific information and also highlight the importance of equality in participation in decision-making across genders, religious and ethnic groups (for example, Wamsler, 2008 or Maskrey, 1989). One of the common methods for gaining broad-based representation in planning for disaster risk reduction is having an advisory committee of the major stakeholders that can advise on legislation and policies at the national level and at the regional, local and district level may assist the governing body on developing and implementing land use plans or formulating projects related to disaster risk reduction (Burby, 1998; Pearce, 2003). An advisory committee would normally include representatives from government departments, representatives of community-based organisations and civil society, experts, and those representing private interests.

The case studies show that legislation and regulation regarding the participation of multiple-stakeholders in planning and development is becoming more commonplace. In practice, however, the preparation of plans and projects related to risk reduction still tends to be technical and is in most cases handled solely by government agencies. Although there are many positive examples, the inclusion of multiple stakeholders, such as advisory committees or community-based initiatives, is either limited or these perspectives are not yet implemented in the majority of urban areas.

For example, as documented in the Namibia case, in the Oshana region, a Regional Disaster Risk Management Committee was established from 2008, to co-ordinate the management of the flooding as well as supply of emergency services. This committee is centred on the ministries, regional and local government and it did not include the broader spectrum of stakeholders, such as representation by the informal settlements affected by the floods (Gold, 2010). Similarly in Turkey, a new legislation at the municipal-level regarding mandated citizen participation in urban development objectives through Citizen Councils (Kent Konseyleri) in district municipalities. However, in most cases, Kent Konseyleri is still only existing only on paper, or advertised on websites (Yönder and Türkoğlu, 2010).

Reactionary laws on land use vs. strategic guidelines for achieving risk reduction

Often, legislation that prohibits certain land uses in areas determined to be at risk have been reactionary, coming as amendments to existing laws in reaction to a recent disaster event that has exposed the risk in that area. For example, as detailed in the case study on Argentina, in 1957 following severe flooding in the region, the Province of Buenos Aires enacted a provincial law that established minimum distances and heights from water bodies for all developments. This was accompanied in 1977 by another law which created strict regulations for minimum plot sizes and

infrastructure. After these laws, the costs of purchasing the plots increased to such an extent that that large sections of the lower-income population could no longer afford to purchase plots (Almansi, 2010).

These reactionary laws enacted after a disaster are positive in that they recognize the risks as a land use problem and enact preventative zoning to regulate the development in high risk zones. However, these laws can have adverse effect on the poor, making it unaffordable for the poor to obtain legal land, because regulating land through zoning laws (which detail specific distances, sizes and heights, etc.) are very in-flexible in terms of accounting for other realities of development. These types of prescriptive laws do not account for increasing land costs or people's abilities to pay. Nor do they account for environmental variations in the possible levels of flooding or the possibility that it may be feasible to make some land habitable through other mitigation measures, i.e. drainage, pumping, embankments. Ideally, legislative frameworks that are more flexible in their application may be better for managing risk if they can be applied diligently.

More recent legislations regarding risk reduction and land-use, such as those described in the case study of Turkey, are less specific in terms of prescribing exact zoning regulations and thus have the possibility to offer more flexibility in terms of how legislation is implemented. Yönder and Türkoğlu (2010) outline how, in Turkey, the law requires that geological studies be prepared by the Ministry of Public Works and Settlements prior to plan preparations in order to help identify areas where no development is allowed. In municipalities over one million people, environmental plans must be superimposed on micro-zone risk maps.

This may have more positive impacts in terms of tailoring development to local needs and priorities as they change over time. However, this legislative approach requires a more sophisticated decision-making mechanism at the project or plan approval stage, and decision-making can become politically motivated. For example in Turkey it has been found that municipal council decisions may still allow development in unsafe areas or at higher densities than allowed in the plans. Such decisions have also in some cases been supported by the Central Government's Disaster and Emergency Management Authority –AFAD. For example, in 2010, a decision by the AFAD reduced the 150-meter wide no-construction buffer zone along the local fault line in Sakarya-Akyazı to 20 meters. Furthermore, in March 2010, the municipal council in Burdur rejected a development plan revision that incorporated the local fault line and the no development buffer zone into the plan (Yönder and Türkoğlu 2010).

3.2 Implementation of plans and regulations

Even though legal frameworks and plans that provide an enabling environment for risk reduction may be in place, it becomes the responsibility of the local/municipal government to implement the measures. From a multi-year study looking at land-use planning and hazards in the United States context, Burby (1998) comes to the

conclusion that the critical barriers to local government implementation of land use planning for risk reduction is based on two distinct, yet inter-related factors, those being commitment and capacity. Most local governments may lack commitment to disaster risk reduction because in their context other concerns such as basic infrastructure, unemployment, housing and education are much more critical. Local government are more willing to advocate measures if their constituencies suffer chronic losses from disasters. Most local governments struggle with having the capacity to implement measures, which is usually due both to a lack of expertise and lack adequate staff to undertake reviews and inspections.

In the past, there has been an operational and professional separation between urban and regional planning and disaster management. Although bridges across these disciplines are being made, a divide is still prevalent in most governments. Disaster management has been the domain of government civil protection units and has generally been focussed on contingency planning to respond to disasters. In the past, urban and regional planning has engaged little with aspects of disaster risk, except in the aftermath of a disaster. While government initiatives to mainstream activities for reducing disaster risk into urban and regional development is becoming more commonplace, there are still traditional divides between the ways the government departments are organised and also in the background and the training of the staff (Pearce, 2003). For example in Turkey, preparation of disaster risk maps is now conducted under the AFAD, but the Ministry of Public Works and Settlement oversees land use planning, development and building controls carried out by municipalities. Thus, in Turkey, as in many other countries, there are essentially two different Ministries carrying out the activities related to land use planning and to disaster risk reduction.

Another aspect illustrated by the case studies, follows on from the point made by Burby (1998) about capacity – that local governments are responsible for approving development projects and building plans and they are the front-line of risk reduction in planning and building. However many local governments, especially in smaller towns or poor districts, do not have adequate staff with the adequate technical capacity. Hardoy & Pandiella (2009) in a study looking at urban poverty and vulnerability to climate change in Latin America conclude that disaster risk is shaped by, “the long-evident incapacity of governments to address risk and to integrate development with the reduction of vulnerability. Meanwhile, within local governments, there is generally an institutional incapacity to address this issue or to control pollution and protect natural resources " (p.204). A study looking at flooding in African cities concludes, "local authorities are best placed to cope with flooding from small streams whose catchment areas lie almost entirely within the built-up area. They administer the regulations and by-laws concerned with land use planning and should be involved in local disaster management. However, most African local authorities lack the human resources and financial power to carry out such responsibilities effectively. They may be able to form partnerships with NGOs but they should be supported by national governments and regional agencies to map

flood risk areas, maintain urban stream channels, control building in flood channels and on floodplains and provide emergency assistance" (Douglas et al., 2008, p. 203)

In some localities, the need to satisfy short-term concerns for profits or for other development needs underwrites the decisions of municipalities to uphold disaster risk reduction measures, especially in localities where there are not frequent disaster events. In a study looking at earthquakes and urban planning in Turkey, Sengezer and Koç (2005) provide an interesting account of planning processes in seismically active cities of Erzincan, Adapazari and Avcilar (latter is now a district of Istanbul). In each of the areas, the earthquake risks where well-understood and urban plans accounted for risk reduction either by limiting building heights, types and densities or encouraging development in areas with more stable soil conditions. However in each of the cases, the pressures to offer higher densities as the populations expended, made it so that subsequent planning decisions allowed for relaxation of these regulations, even though the areas were at high risk (see Box 1).

Box 1: Tracing the development decisions that lead to risk in urban areas: case of Adapazari, Turkey

In another example in Adapazari, a city in the north-western Marmara region of Turkey, has suffered earthquakes in 1943, 1967 and in 1999. After the 1943 earthquake, the 'Adapazari City Development Commission Report' recommended that the city be expanded to the terrace areas to the south-west of the city, which it was observed had undergone less damage in the earthquake and delimited areas which should not develop due to unstable soil and high ground-water conditions, especially along the rivers. A plan produced in 1957 complied with these recommendations. In 1957 the population of the city was 65,000 and the density was 100 persons per hectare. After the earthquake of 1967, it was suggested that the height of buildings should be limited to three storeys, as it was the higher buildings that proved to be more vulnerable in the earthquake. By 1985 the population of Adapazari had reached 200,000. The development plan of 1985 called for development towards the riversides, violating the principles of the 1957 plan, which had prohibited construction in this area due to geological concerns for earthquake risks. In the 1990s, growth of industry in the city increased, including the opening of the Toyota automobile plant, and most of the industrial parks were located in the alluvial agricultural areas. By 1997, the population had reached 300,000 and the density was 350 persons per hectare (up to 600 persons per hectare in the city centre). In the 1990s, 'numerous modifications to plans, some of which where limited to an avenue, a street, or even a building lot, were made in order to increase building densities regardless of ground conditions and the risk of an earthquake' (Sengezer and Koç, 2005, p. 178).

3.3 Security of tenure, evictions and risk reduction

Security of tenure in informal settlements generally enables investment in infrastructure and in better housing quality, thus reduces risk to flooding, fires and other hazards. For example, the PROMEBA programme in Argentina, which

facilitates upgrading of informal settlements has been able to reduce risk in informal settlements through upgrading that enables legalisation of land tenure (Almansi, 2010).

However findings from the case studies indicate that regulatory frameworks may, in some situations, negatively impact on the security of tenure of informal settlements. In the cases presented here, there are examples of regulations that aim to prohibit development in hazardous areas (location approach), or seek to replace informal settlements by higher income uses in which the designs and new construction can be made to a hazard-resilient standard (design approach). In both of these situations, legal tenure cannot be granted to settlements already located in these areas and in some situations former tenure arrangements may even be revoked in an effort to reduce risk, meaning that those settlements cannot upgrade, or are removed or both. In most situations, given the choice, people would choose to remain where they are. Relocation often means that people are living in areas further from livelihood opportunities and do not receive just compensation for what they have had to leave behind (Cabannes, Yafai and Johnson, 2010).

The case study in Namibia explains that in Oshakati, subsequent to the master plan developed for the city by external consultants, the town council has prohibited permanent construction in Oshoopala settlement, as this settlement will be re-developed into middle and high-income housing. It is likely that the current informal settlement in Oshoopala will be resettled in another area (Gold, 2010). In Buenos Aires a similar situation is true. Legal restrictions for land use, building and hydrology make it so that informal settlements formed in areas in which development is restricted because of flood risk have not been able to achieve security of tenure (Almansi, 2010).

In Istanbul, Turkey, the earthquake mitigation strategy is to improve the resilience of the largely informally built housing stock through the demolition of these settlements and the construction of new buildings in their place. This is done under a newly established legal framework on urban transformation, which gives municipalities the power to rehabilitate urban areas based on disaster risk. However, under these urban transformation projects the new houses are unaffordable for the original occupants of that land, who are generally relocated to the periphery areas of the city. Even then many people cannot afford the price for the new houses that they are relocated to (Cabannes, Hasan and Baysal, 2008).

Work of the Philippines Homeless People's Federation illustrates that it is possible that people will voluntarily resettle to other lands if there current areas are at high risk and if they can negotiate or find good conditions for resettlement onto safe lands. Having a strong community-based organisation enables this kind of articulation of needs and negotiation. In Iloilo, Philippines after Typhoon Frank inundated many coastal settlements in June 2008, the Philippines Homeless People's Federation were able to negotiate with the municipality to relocate almost 2000 families to safer lands in San Isidro (Dodman, Miltin and Rayos Co, 2010).

3.4 Safe Land

Once people have settled on land, resettlement is often not possible because of social pressures for people to stay on the land that they have occupied for many years. Thus, as urban areas continue to grow, people need land to settle on that is safe from disasters. In many cities, the provision of safe land is the most vital aspect that local governments can undertake for controlling disaster risk in urbanising areas going forward. This entails developing the regulatory mechanisms that enable the urban poor access to land that is not in high-risk areas and regulations that allow them to have tenure security, both for business and housing, in an affordable manner.
In Windhoek, the capital city of Namibia, with a population of 223,000, a network of urban poor groups, Shack Dwellers International, has been working with the local government as well as NGO professionals to develop progressive regulations for land and housing policies, which is enabling people to access safe land in an affordable manner. In Windhoek, 26 percent of people are living in informal settlements and thus the policy revision came about in part because of the recognition that former housing policies were not working for the very poor and were making health conditions worse for them. Under the new policy, the municipality recognizes the different levels of affordability that households have and makes propositions for types of tenure based on affordability. Changes to the tenure laws allow the very poor to access land by making it possible to have more than one family sharing ownership of a plot. Plots sizes have also been reduced so people can hold titles to smaller plots, depending on what is affordable. One aspect that makes this policy possible is that there is no value placed on the land, and the municipality is only interested in cost recovery of the services it installs (Mitlin and Muller, 2004).

4. BUILDINGS AND CONSTRUCTION

In US, UK, Japan and Australia good regulations, which define design loads, specify construction details, provide hazard zoning have been shown to minimise damage and save lives (Spence, 2004). However benefits of regulations are less clear when concepts and prescription of advanced codes are transferred to countries less able to apply them rigorously. Another problem with the application of codes in many low and middle income countries is that attaining standards increase costs of building beyond what poor can afford.

In informal settlements for example, people prefer upgrading rather than construction on a new piece of land partly because they are then less constrained by building codes & planning regulations. In a new site, they must meet all these standards, but in incremental buildings these are not necessary, thus it is much cheaper to build there. In some instances, people are able to adapt their building methods in informal settlements to reduce risk for more frequent disasters (i.e. annual flooding in Dhaka, Bangladesh) (Jabeen, Johnson and Allen, 2010).

4.1 Appropriate codes and standards

While most countries do have building codes of some kind, the challenge is to develop codes that are appropriate for the local economic and environmental conditions and that respond to current building practices and technology.

Findings from a multi-country study by Practical Action, looking at the design and application of building codes in low-and middle-income nations concludes that codes need to be locally developed and related to the local system of design and building so that they match the capability of the local professionals or those who will be applying the code (Yahya et al., 2001). In many countries, codes have been directly transferred from the colonising country and few revisions have been made; building to the standards of the codes is not affordable by half the population. Very often they do not allow incremental development, going for a uniform solution that is trying to suit everybody. In other countries, each time there is a disaster event, new aspects of the code are added, and codes have become increasingly sophisticated requiring specialists to decipher them. In some cases, simple 'deemed to satisfy rules' whose application is obvious (e.g. limiting storey heights, prescribing positioning and size of openings) might be more appropriate than more complex performance specifications. It is generally easier to modify rules than to train and employ a cadre of professionals to apply and police codes that are unrealistic.

An example from Bangladesh shows how codes are in direct contradiction to what people actually live and build. The Bangladesh National Building Code (BNBC) identifies only government bodies or public agencies to be responsible for planning minimum standard housing development for the low-income people in urban areas. It defines the minimum standard housing to have a density of 75 units/hectare with average 5 persons/dwelling. The minimum plot size varies between 30 sq. m to 25 sq. m in dense metropolitan areas. Minimum width of walkways is to be 3 m while the requirement for infrastructure follows the regular development requirements. Individual plot can have maximum of 75% land coverage with 1.5 m open space at the front. Minimum size of the 1st habitable room is 9 sq. m and the 2nd, 6 sq. m making of 15 sq. m in total. There is no option of incremental development to improve living environment while still living in self built construction. Also there are no considerations about addressing risk varying in different locations (Jabeen and Mallick, 2009).

The photograph below shows an example of how people can realistically afford to live in an informal settlement in Mohammedpur, Dhaka. In these rental units, families averaging six to eight people in size are living in a 9 sq. m one-room dwellings cantilevered over the water (thus there is actually even no plot of land). The walkways are 1.5 metres and there is no outside space.

Figure 4: Informal settlement in Mohammedpur, Dhaka does not conform to Bangladesh National Building Code (source: Huraera Jabeen)

In Gujurat, two municipalities, Bhuj and Anjar, which were the worst affected in the 2001 earthquake, decided to simplify the rules for reconstruction, prohibiting all construction higher than two stories. The rational was that they were more accessible for people and could be simplified in terms of procedures (Spence, 2004). In the long term, this kind of standard may not be realistic given required urban densities, however it does illustrate the point that simple and achievable standards may be better at achieving risk reduction than those that are too sophisticated to be implemented properly.

4.2 Application and enforcement of building standards

The damage from many large-scale disasters, especially for earthquakes can be partly attributed to the lack of application of building codes-- the failure to enforce codes and to verify the quality of construction during the building period. Building supervision and site inspections of the building process can be marred by lack of capacity to do checks or sometimes corruption. This appears to be especially important when reinforced concrete is being adopted as a new building technology in urban areas, as we have witnessed from most of the intensive earthquake disasters in the last ten years.

In Turkey after the earthquake in 1999 in the Marmara region caused the collapse or severe damage of one hundred thousand buildings, it became apparent that a new regulatory system was required to ensure that buildings would be built safely. In the previous system, building plans are submitted to the municipal authorities with the signature of a design engineer who is responsible for code compliance. In practice however, municipal engineers were not able to check thoroughly all of the design calculations and workmanship because of their heavy workload or lack of professional qualifications. Under the new system it was proposed that a private firm charged with building construction supervision would assume the functions of the municipality in checking both the design calculations and the actual construction activity at the building site. In that regard the firm served as a public agent ensuring that materials, workmanship and detailing requirements were fulfilled. The firm needed to have a ten-year duration liability insurance coverage for each job that had been tasked to it. Even though there was a lot of momentum behind developing a accountable system in the wake of the destruction from the earthquake, interestingly, the new system ultimately failed to be passed into law, due to lack of support by some interest groups and the fact that such far reaching changes to the system also required changes to civil law, commercial law and insurance laws (Gülkan 2010). Thus even though there may be a strong commitment to making the necessary regulations for enforcement of codes, and ultimately for risk reduction, the political and economic realities of getting laws passed and implemented can sometimes cloud the good intensions.

Several case studies make the point that the process of obtaining building and planning permissions is extremely complicated, time-consuming and therefore expensive. The end result of these lengthily procedures are that builders prefer to construct outside of the official processes, and thus buildings do not conform to codes or standards. Of all the regulatory constraints, it seems that onerous administrative procedures are invariably one of the greatest barriers to conformity of building codes. In Peru, for example, in the historical centre of Lima, it was identified that to obtain an Automatic Building License requires an average of 222 working days (311 calendar days) under optimum conditions. Standards are so high and regulations so rigid that owners prefer to let buildings collapse (Payne, 2010).
A study about the experiences of the Philippines Homeless People's Federation in community-driven response to five disasters which impacted on low income groups in the Philippines (the Payatas trash-slide in Manila; the landslide in barangay Guinsaugon; the Mount Mayon mudflow and floods: the fire that devastated the Lower Tipolo Homeowner Association land in Cebu; and the flashflood in Iloilo) identifies that regulations are one of the limitations inhibiting community-based response. Stringent land use subdivision and conversion regulations inhibit local governments being able to make land available for people to settle on for temporary and permanent housing. Delays and difficulties in processing land and housing permits, obtaining clearances for developing relocation sites identified and acquired by communities, and getting agreement and official permission for needed actions that often require the agreement of many different bodies were some one of the difficulties that the Federation faced in the different disaster situations. The study

recommends that one of the important things it can do to help communities recover is to change government policies to streamline these processes into a one-step process to make it simple and faster for people to build (Rayos Co, 2010).

4.3 Advocating a 'compliance culture'

There is a general paradigm shift away from policing of building codes to developing a basis of awareness and education about safe building methods. The cultivation of a 'compliance culture' is being advocated by several international groups which have been working on the application of building codes in low and middle-income countries, including the Global Task Force on Building Codes (GTFBC) (de la Pomerai, 2010), Practical Action's work on Building codes in Africa, and by the Royal Institute of Chartered Surveyors (RICS) in the UK (Kataria 2010), the latter which has been doing work on codes in Haiti since before the earthquake. The case study from Iran also mentions these the need for a trained and skilled labour force as one of the major challenges for implementing the earthquake standard (BHRC, 2010). The major impetus behind this shift is that in order to 'police codes' it requires that buildings are built through formal means, obtaining the required permits, and that the institutional basis at the local government required for checking designs and construction is enough to cope with the demands of the on-going construction. As has been shown in this paper, all of these aspects are problematic due to the fact that local governments do not have the capacity to meet the demands of policing codes and regulating all building. Furthermore, a substantial amount of construction is informal and thus outside of any regulatory controls.

5. CONCLUSIONS AND RECOMMENDATIONS ARISING FROM THE STUDY

Some recommendations regarding the use of regulatory frameworks for achieving disaster risk reduction are clearly highlighted by this study:

Enabling access to safe land. Making safe land available for development so that people can build in areas that are less exposed to hazards. In the context of urban growth in hazard prone areas, the simplest solution is to make safe land available in the beginning, so that expensive structural measures (or resettlement programmes) are not required later on.

Adopting regulations that require less oversight from government. Municipalities and local governments have limited resources and competing priorities for development. Instituting regulations, which require less government control to supervise, yet result in risk reduction is a better alternative to complicated regulations, which cannot be feasibly followed up or implemented by local governments. Examples of regulations which require minimum oversight include: making access to safe land (if people are building on land that is already safe than building controls become less important), simple building codes and planning regulations, i.e. 'deemed to satisfy' standards,

and developing a culture of compliance to building standards through education about safe building practices for builders and for general public. Investments in stricter planning and building controls can then be instituted only for larger engineered structures, for public buildings and larger infrastructure works.

Need for investments in the capacity of local governments to plan for and encourage safe development. It is the local governments that are at the front line of decision-making and implementation for planning and building regulations, however, as the case studies have shown, regulations require technical expertise to develop and manpower to implement. In most municipalities in low- and middle-income countries, municipalities are lacking the capacity to plan, implement plans and encourage safe development. Laws and policies are required at the national level that enable local governments to take responsibility for planning and building and include budgets and resources that assist local governments do this.

More specifically, this study has highlighted a few areas where investments in capacity at the local level are necessary for disaster risk reduction in planning and building:

- Multi-stakeholder development of plans and codes: urban and regional plans and building codes or standards which respond to the needs of multiple stakeholders will be more likely to be adopted and result in overall risk reduction. This kind of planning or revision of codes requires sometimes a change of approach at the local level, a technical capacity to integrate the multiple perspectives and also requires time and budgets to undertake the activities.
- Supervision of building process for engineered structures: implementing set of regulations that enable accountability for the design and building of engineered structures. If this is local government, ensuring that local government has the technical and staff capacity to undertakes these checks.
- Safe building practices for non-engineered structures: increase the capacity of local government to raise awareness about safe building practices. This includes using media and pamphlets for raising awareness of safe building methods, investing in training at community-level and training of building professionals and across government departments. This kind of approach can also be implemented by non-governmental groups and supported by other levels of government
- Streamlining of permits and land development processes: The process of getting permits for building or land in many municipalities is time-consuming. The end result can be increased risk as more buildings are built outside the formal system with little application of building standards. Local governments need to look at this system and where possible revise the system to make it easier for people or for developers to obtain clearances for building.

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ENVIRONMENTAL CONFLICTS AND INTEGRATION OF URBAN RIVERINE SYSTEMS

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Abstract

Together with a dominant demographic trend and an important component of global land transformations, the world's population has been concentrating in urban areas (United Nations, 1993). On the other hand, in addition to its global reach, growing populations, changing consumption patterns, expansion of urban areas and current unqualified lifestyles of urban context are seen as unsustainable in the long term (Karr, 1999) with a number of documented effects on natural systems. Within the urbanization process, humans became dominant on urban ecology and caused several alterations especially on riverine systems and their hydro-morphological and ecological structure. Therefore, presently it is more crucial to integrate urban natural systems and their functioning into urban development dynamics through social, economic and environmental dimensions.

From this point of view, in addition to functions and importance of riverine systems, the paper focuses on the problems and changes of urban riverine systems which collectively termed as 'Urban Stream Syndrome (USS)' and characterized by geomorphic and hydrologic alterations of a stream (Walsh et al., 2005). In this context, the importance of 'river health' requires special thinking of a riverine system as an ecological unit, not merely a channel that conveys water from the origin to the lowlands. The term of 'Healthy Rivers' constitutes the basis for re-naturalization of degraded riverine systems and directs the paper to investigate the criteria of healthy river characteristics not only for its functioning but also to demonstrate resilience in the face of environmental changes, including climate change, resource exploitation or other kinds of impacts resulted by human activities in urban areas. Therefore, the paper looks at urban stream syndrome from spatial planning perspective and put forward the method of 'Stream

Daylighting' as a tool for reclamation of buried and culverted riverine systems in urban areas and to better understand and integrate its functioning in to urbanization dynamics.

As is known, studies of ecology in cities have exposed environmental stresses, threats, and constraints that affect urban biota. From this point of view, the paper will focus on the significance of healthy rivers in urban ecology and their ongoing threats and challenges from urbanization dynamics together with human activities all will be discussed for better integration into spatial, social and economic development of urban settlements.

Key words: Urban riverine systems, urban stream syndrome, healthy rivers, re-naturalization, stream daylighting.

1. Introduction

Water has always played a central role in human societies (Biswas, 2008). However, according to the United Nations 2009 Revision of World Urbanization Prospects, 50.5% (3.5 billion) of the population on Earth is living in cities in 2010. Consequently, the ecological impacts of this population growth and its distribution are profound especially on water resources. With the acceleration of urbanization, as one of the essential components of natural processes, urban rivers are exposed the crisis of ecological deterioration.

In this context, "urban riverine systems" refer to those that originate from or flow through city proper, including some artificial canals and canal systems which have had the characteristics of natural rivers through the evolution of so many years (Lei and Guanghe, 2008). Riverine systems in urban areas occur at the land-water junction alongside the natural waterways and they form unique ecosystems that act as 'buffer zones' between uplands and downstreams (Lowrance, 1998). However, as a result of increasing anthropogenic activities, the functions of urban rivers are gradually weakened, the river channels are polluted, buried and the riverine characteristics have been lost. Urban rivers which were one of the zones where human activities and natural processes have had mutual benefits during the process of urbanization, have been profoundly affected through this process (Lei and Guanghe, 2008). Their functioning, structure and components were changed, degraded or lost.

From this point of view, re-naturalization and integration of buried or degraded riverine systems has become an important issue with a focus on providing mutual benefits and supporting the sustainability and integrity of riverine urban systems. Therefore, the paper analyses the current situation and problems of urban riverine systems within 'Urban Stream Syndrome' framework and proposes 're-naturalization' of these systems in order to develop their lost natural characteristics and functioning both from ecological and socio-economic perspectives.

2. Riverine Systems in Urban Areas

Throughout the civilization process, the lands around riverine systems have always been a suitable and preferred place for human beings. As can be seen from the early civilizations such as the Egyptian Civilization, Indus Valley Civilization and Mesopotamian Civilization developed near major perennial rivers (Biswas, 2008). These civilizations were all founded on their access to water by canal systems which provided the key not only to supplying freshwater, but also to agriculture, trade, transport and defense.

Although riverine systems make up 2% of all freshwater on Earth, they have an important role for the continuity of natural processes as part of the 'Water (hydrological) Cycle' which is essential for existence of freshwater resources on the land surface. Riverine systems serve as roads to carry water, organisms, important gases and nutrients to many areas. They also help drain rainwater and such dynamic systems provide a wide range of ecological niches supporting a diverse flora and fauna with providing travel routes and recreation opportunities for people in connection with nature (White and Keith, 2005).

Riverine systems also have an important role as part of the urban ecology. These systems in urban areas not only provide important source of water and material but also have an ecological importance with the riparian areas which are the hotspots of interactions among plants, soil, water, microbes and people (Lowrance, 1998).Therefore, if the integrity of each system is succeed then the urban ecology can be a better linkage among the three components of sustainable development (social, economic, environmental) (UN, 1987). Herein the integration of such principles in to practice has some challenges and requires scientific & pragmatic tools. One such pragmatic approach to apply this principle in to practice is that of 'ecosystem services', which describes the multiple benefits provided to people, both directly and indirectly by ecosystems and biodiversity (Daily 1997). These services were defined and grouped by the UN Millennium Ecosystem Assessment (MEA) (2005) into four categories: 'provisioning services' (extractable resources), 'regulatory services' (processes that regulate the natural environment), 'cultural services' (culturally- valued benefits) and 'supporting services' (processes essential to maintenance of the integrity, resilience and functioning of ecosystems). In this context, watershed areas including headwater streams provide important ecosystem services such as clean drinking water, habitat for aquatic life, and rapid processing and uptake of nutrients which can reduce delivery of nitrogen and phosphorus to downstream coastal waters. According to Elmore and Kaushal (2008), riverine systems in urban areas, as another component of this system, also serve as a variety of functions: urban drainage and flood management, public and community amenity (including linkages to open space), and can include special cultural and community significance (Table 1). In addition to the importance of their ecological functions, they also can integrate the history with modern city features and provide a

social cohesion among generations. Hence, riparian zones are foci for human-nature interactions and can serve as catalysts for ecological and socio-economic revitalization in urban systems (Groffman et al., 2003).

Table 1: Ecosystem services of riverine systems in urban areas

Ecosystem Services of Riverine Systems in Urban Areas	
Provisionary	Freshwater, Food, Fibre, Aquatic Habitats, Energy Production
Regulatory	Flood Management, Disease control, Water & Air Pollution Control, Urban Drainage
Cultural	Public & Community Amenity , Recreation, Aesthetic Value, Ecotourism
Supporting	Soil Fertility, Water Cycle, Material Carrying (Water & Sediments Carrying), Mass & Energy Exchange

However, even it has been recognized that water is an essential requirement for humans and ecosystems' survival; the ecological researches of terrestrial urban systems include many contrasts among economic development, social wellbeing and ecological conservation in urban areas. Hence, as the human population steadily increased over time and the range of the human activities also expanded, especially after the Industrial Revolution, and urban ecological systems are largely exposed to several pressures caused by anthropogenic impacts. Due to the growing demands of population especially for water resources, in terms of both quantity and quality of riverine systems started to come under increasing stress in many parts of the world than ever before (Biswas, 2008). Over time, many streams and river basins in urban areas were altered hydraulically, chemically, and biologically through navigation and flood control projects, wetland dredge-and-fill activities, industrial activities and waste discharge. According to Bernhardt and Palmer (2007), the most obvious and immediate consequences of urbanization are an increase in impervious surfaces resulted as the increased runoff to receiving streams, higher peak discharges, greater water export and higher sediment loads. As a result of increasing impervious cover in developing catchments, evapotranspiration and soil infiltration are reduced, peak discharges and flashier stream flows increased. The changes in channel morphology disconnect the stream from its flood-plain, decrease meandering, and homogenize stream profiles that increase flood risk and degradation of aquatic habitats and biodiversity. Therefore, an

altered hydrography with high peak flows and reduced base flows is the most obvious and consistent effect of catchment urbanization on stream hydrology (Walsh et al., 2005).

All these negative effects of urban areas on riverine systems emerged the term of 'Urban Stream Syndrome (USS)' (Walsh et al., 2005) which describes the consistently observed ecological degradation of streams draining urban land. It is also used to describe a consistent pattern of hydrological, physical, and biological conditions seen in aquatic ecosystems downstream of urban inputs. Although, urban-impacted riverine ecosystems are degraded due to the complex and multiple factors of the major anthropogenic impacts which can be ascribed in few large-scale groups including urban storm water runoff, land use, deforestation and pollution (Table 2). In this context, symptoms of the urban stream syndrome include elevated concentrations of nutrients and contaminants, altered channel morphology, and reduced biotic richness, with increased dominance of tolerant species, which result ecological, hydrological and morphological alterations and degradations on riverine systems (Walsh et al., 2005).

Table 2: Impacts of urbanization on riverine systems within (USS) framework

Drivers ……▸	**Symptoms** ……▸	**Results**
• Urban storm-water runoff • Land use • Deforestation (for riparian vegetation) • Polluters	• Water Quality (Nutrients & toxics increase) • Temperature (Temperature increase) • Hydrology (Altered channel morphology) • Physical Habitat (Biotic richness decrease & tolerant species increase)	• Ecological, Hydrological and Physical Degradation on Riverine Systems

3. Re-naturalization of Riverine Systems in Urban Areas by Stream Daylighting

Over the last couple of decades, river restoration has emerged as an important intervention to overcome the long-term deterioration effects of human manipulation on rivers (CRSSR, 2012). The earliest river restoration projects were launched in Europe. The US started the activities around mid 1970's, and later some examples took place in China. In Europe, the US, Japan and many other countries, there have been many restoration practices for small river ecosystems with mature restoration technology

(Zhao et al., 2007). Up to date, however, these practices have focused solely on stream channel design and mechanics with focusing on a specific area (site-by-site solutions) with a narrow scope. Such that, the main purpose of river restoration is to eliminate constraints to river's natural patterns or biodiversity, which caused by human activities (Ebersole, 1997), but not necessarily to rehabilitate certain natural structures and conditions of river ecosystems or keeping a state of ecological balance and the original status of the ecosystem. Therefore, a holistic approach for the restoration of riverine systems including groundwater exchange, geochemical cycling, establishment of appropriate ecological processes and systems including integration with urban systems (ecological and socio-economical systems) is required. According to Zhao et al., (2007), urban river restoration planning should be the trade-off of a consideration in river ecology, applied restoration technology measures and socio-economical supporting conditions.

Therefore, especially for the recent years, there is a growing concern on the upgrading of riverine systems' ecological status. Also, it is realized that the successful stream rehabilitation requires a shift from narrow analysis and management to an integrated concept of the interconnectedness of human actions and river health (Booth et al., 2004). Herein, the approach of 're-naturalization' constitutes a complementary role to reach beyond the 'good-status' to original ecosystem. In other words, the measures that help a system to go back to natural status in a naturalistic way are usually referred as re-naturalization with an aim which has evolved towards the concept of bringing watercourses 'close to a natural state' rather than creating a truly natural state (Table 3). This also can be explained by 'connectivity' approach which is an ecological term that describes the 'natural habitat continuum throughout the landscape as being the antithesis of the fragmentation'. Therefore, rivers and riparian corridors are connecting elements (or landscape corridors) between patches and serve as paths along which animals can move and plants can spread (Harrison, 1996).

Table 3: The shift from rehabilitation/restoration approach to re-naturalization

From Rehabilitation and Restoration ..... ▸ **To Re-naturalization**	
• Solely focuses on stream morphology or channel design • Considers precautions for flood damages • Causes changes & relocation of river bed morphology. • Aesthetic concerns are mainly prioritised • Lack of historical data usage (original situation & original status of the river)	• Holistic approach • Includes a broad framework of integration between ecological, social, economic systems • Considers connectivity between aquatic variables within ecosystem structure and functions • Aims to be 'Close to nature' in urban, semi-urban, rural, natural landscapes

The approach of re-naturalization indicates the importance of system health and is based on the 'healthy river concept' which refers a system whose social and natural functions can be balanced or compromised in terms of the socio-economic, ecological and environmental values associated with the river. According to Karr (1999), healthy rivers approach demonstrates good health by being resilient in the face of environmental changes, including climate, resource exploitation or other impacts of human activities. Also, it implies a long-term balance whereby the integrity of the natural system is preserved while meeting human needs and providing a system whose social and natural functions can be balanced or compromised in terms of the ecological, socio-cultural, and economic values associated with ecosystem services generated by the riverine systems (Table 4).

Table 4: Ecosystem services generated by healthy riverine systems in terms of ecological, socio-cultural and economic systems

Socio-cultural	Ecological	Economic
• Water supply • Clean potable water • Flood control • Recreation	• Riverbed (Favorable riverbed & energy exchange and transportation) • Water quality (Acceptable water quality) • River Ecosystem (Purifying water and nourishing river ecosystem) • Flow regime / Run off (Compatible runoff)	• Flood control • Land use patterns • Infrastructure • Navigation

In this context, the river health criterion should reflect the river's natural function status, which includes the riverbed, water quality, river ecosystem and runoff. However, the variety and quantity would be different for different rivers depending on different natural features and social background (Changming and Xiaoyan, 2009). According to Platt (2006), for a healthy riverine system, natural functions show the life signs of the system and ultimately determine the sustainability of human societies.

On the other hand, the riverine systems which are exposed to several impacts by human activities lose their natural functioning and structure mainly by channelization or culverting activities in urban areas. These increasing anthropogenic interventions mostly caused chain alterations on their ecological and hydro-morphological features and

resulted with a system failure including damaged & fragmented aquatic ecosystems. According to Buchholz and Younos (2007), in European and American cities prior to the mid-1800's, small neighborhood grids allowed for the management of water with a localized supply and treatment approach that included collecting rainwater in cisterns and designing useful channels in narrow roads and alleys. However, when the industrial revolution came to full force and it was no longer possible to manage city water flow using pre-industrial methods. Therefore, many riverine systems are culverted in to pipes, buried and covered with concrete or asphalt covers and so the development of cities continued over these forgotten underground ecosystems. Communities and decision makers mistakenly believed that they took the control of these natural systems to mitigate for future threats such as pollution, spreading diseases and floods.

According to Paul and Meyer (2001), the process known as stream burial (where streams are directed into culverts, pipes, concrete-lined ditches, or simply paved over) is probably the most extreme impact of urbanization on streams. It results in the destruction of the natural stream channels and contributes to downstream habitat degradation, aquatic habitat fragmentation, enhanced transport of polluted water and toxic contaminants, and reduction of ecosystem services such as nutrient and sediment retention (Walsh et al., 2005). Because they constitute the largest fraction of stream length and are the most economically feasible to bury, the smallest streams are among those most affected by urbanization (Elmore and Kaushal, 2008). However, with the beginning of the twenty-first century, a turning point is precipitated by the deterioration of industrial-era pipes that were built to capture storm water runoff and led to think and ultimately build a more holistic future for American cities. This situation brought awareness of the problem reflected by the development of a policy to prevent culverting or to promote the removal of these structures and to restore urban rivers back to a more natural condition.

Herein, the 'daylighting' activity has steadily increased especially across the United States, and it is even more widespread in parts of Europe. According to Pinkham (2000), Daylighting" as a new phenomenon, became perhaps the most radical expression of this change in intervention and implementation to surface waters. The term describes projects that deliberately expose some or all of the flow of a previously covered river, creek, or storm water drainage. In short, daylighting projects usually remove a stream from an underground pipe and restore the waterway to open air. In this context, removing culverts and daylighting projects has a high potential to improve aquatic and marginal habitats. Deculverting also could therefore significantly improve fish passage by removing migration barriers (Wild et al., 2010). In addition, it could provide aesthetic values with recreational opportunities and a new open public space for city dwellers and educational opportunities as an outdoor laboratory for students. Also, it provides to give a place a sense of identity. In general sense, the benefits of these removal & improvement projects in terms of socio-economic perspective is reported in several cases which were located in areas suffering from crime and a 'near-silent, pedestrian and

cycling environment is provided after daylighting riverine corridors. Other reported economic benefits include rising nearby property values and leveraging private investments (Pinkham 2000) or attracting new business nearby.

4. Assessment of Implemented Stream Daylighting Projects

The newly emerging socio-economic/ecologic intervention of urban stream daylighting is a distinctly valuable and viable tool for the integration of buried riverine systems in to urban ecosystems with the second chance it provides to be 'natural' again. Over time, many implementations are completed all over the world and miles and miles of riverine systems are turned back to their natural status (the closest status to river's original ecosystem functioning). In order to understand the 'daylighting' concept in depth and assess the implementations from different national backgrounds, ten case studies are selected and compiled according to their general features and characteristics.

These cases are selected from four different geographical regions (US, Canada, Europe-Switzerland and Korea) including different social, economic, legal and environmental backgrounds with various circumstances and results they face off. Six of the projects are selected from USA where this approach is emerged and one from other countries. The selected case implementations are indicated below (Table 5).

Table 5: Selected 10 case studies from implemented daylighting projects

Location	**Name of the Riverine System**
USA	1.Napa Creek- San Francisco Bay 2. Strawberry Creek- Berkeley 3. Jolly Giant Creek- California 4. Arcadia Creek- Michigan 5. Dunes Creek- Indiana 6. Castro Valley Creek- California 7. Thornton Creek- Seattle
Switzerland	8. Zurich Daylighting Programme
Canada	9. Taddle Creek- Toronto
Korea	10. Cheonggyecheon River- Seoul

The general assessment of the implemented projects consist of 6 main and 12 sub-issues including; the general info about each project, technical details, economic, social, legal,

institutional backgrounds and the results of the implementations. Also in detail the sub-issues are determined as: Project location, date, primary objective(s), length of daylightened corridor, implementation type, total cost & funding, land characteristics, legal support, stakeholders, challenges and benefits. Assessment of the general characteristics of the implementations provides an overview for the approach in each sub-issue to generalize and to bring out summarizing findings for future implementations. Therefore, the general assessment of different practices from different countries and backgrounds will provide a broad spectrum of implemented daylighting experiences including different contexts and backgrounds. It will also help to understand the details and general features of each implementation process including their positive and negative aspects which can guide the future practices both in rural or urban areas. This task is handled in the conclusion sub-title (Table 6).

5. Conclusion

The areas including riverine systems have always been important sites for human beings to settle and live with the utilities provided by water sources such as transportation, defense, irrigation or recreational amenities. As can be seen from many cities both from ancient times and present, the urban rivers have been always the foundation for settlements' existence, containing city's rich history and culture and embodying modern city's peculiar features and picturesque scenes. Riverine systems in urban areas have continued their role of to be the interaction zones between human and nature over the centuries. However, the modern era has not been kind to urban streams and riverine systems especially in urban areas where they are exposed to several anthropogenic impacts causing a chain of alterations on the whole system's functioning.

As a result of case study assessment, the results of implementations are determined with in a broad framework including urban infrastructure benefits (cost of sever system repairs), increase property values, in neighborhoods, creating an outdoor laboratory for students, improved air & water quality, temperature reduction, increased biological biodiversity, recreational opportunities, flood protection and increase public awareness & participation. In addition to these positive effects, each project indicates a number of situations that should be considered during the project process such as old infrastructure problems, combined sewer systems, challenges of densely urbanized areas, difficulty of establishing the channel geometry and consensus & collaboration between stakeholders. A variety of stream daylighting implementations are given in Table 6 where the main challenges, drivers of implementation, participation and legal backgrounds within different scopes and major results are presented including the most important results under each theme in grey background. The assessment demonstrates that the requirement of daylighting implementation for a degraded or forgotten riverine system

originates from similar conditions and problems in different places. Such that, many projects are taken into consideration according to the increased flood problems, ecological deterioration, decrease on water quality and aquatic species, pollution & sanitation problems and economic issues related with increasing amounts of water needed treatment. On the other hand, although the main goal of each implementation may differ from each other with its priority among generalized riverine corridor problems but they are dealt with a common perspective of 'ecological restoration and re-naturalization'. Many projects were supported by public authorities and local organizations with significant public involvement which was the key component for the success of each project. On the other hand, legal support for daylighting projects were inadequate as a result of its newly emerged but in two cases it was seen that, the efforts of daylighting could shape the policy tools (Jolly Giant Creek-New Drainage Master Plan) or the current water-related policies could support a city-wide daylighting project (Switzerland-Zurich Daylighting and Sewage Separation Program under 1991 Swiss Law). Although, it is a new concept which needs a multidisciplinary approach and support, the daylighting implementations are mostly resulted with a number of positive impacts in terms of social, economic and ecological aspects including improvement of aquatic habitats, water & air quality, social cohesion and increase of land property values.

In the context of this paper, it is clarified that the improvement and re-naturalization of degraded, buried or culverted riverine systems is feasible with the 'stream daylighting' method even in highly urbanized areas. The assessment of ten cases leads to generate an assessment of the projects under specific titles. In addition to general assessment, the implemented projects can also be analyzed and discussed with different themes. This assessment compiles the cases according to eight key themes which are determined according to the highlights and crucial points of each project and constitutes a route for understanding the key components of daylighting practices. Under each theme, the projects can be assessed with the features related to their scope & goals, drivers, feasibility, public participation, stakeholders, funding, legal background, positive impacts and results which will be anticipated as the major issues of future urban stream daylighting assessments and feasibility applications.

As a conclusion, the necessity, feasibility and the importance of 'daylighting' for damaged or lost riverine systems especially in highly urbanized areas are clarified by the assessment of cases from different backgrounds. The assessment demonstrates the applicability of the method including its positive impacts and beneficial results in each case. Moreover, through the analysis of implemented projects, it is seen that the daylighting method provides degraded riverine systems to reach the closest stage of their original status by 're-naturalization' approach which is based on the health of the ecosystem and requires to be supported by relevant legal tools, governmental and local authorities as well as by public involvement to be adopted and become widespread.

Table 6: Assessment table of implemented daylighting projects under key themes.

Implement -ation Year	1970's	1984	1988	1995	1997	1998	2005	2006-2009	2007	2009
Case Studies / Key Themes	**Napa Creek, San Francisco Bay Area**	**Strawberry Creek, Berkeley**	**Zurich, Switzerland**	**Arcadia Creek, Michigan**	**Jolly Giant Creek, Arcata**	**Taddle Creek, Toronto, Canada**	**Cheong Gye Cheon River, Seoul**	**Dunes Creek, Indiana**	**Castro Valley Creek, California, US**	**Thornton Creek, Seattle, Washington, US**
Primary Goals & Scope	'Re-exposion of a previously hidden stream ' (only cover removal without re-naturalization concerns)	Creek ecological restoration (archetype of daylighting projects)	'Sewer Separation' program on citywide	'Re-develop-ment of an unhealthy core area' (business centre) in Kalamazo city and reduce flooding	'Creating an outdoor ecology laboratory'	'To give new life to the hidden creek at the heart of the city'	'Preserv ing the unique identity of the natural environ ment and historic resource s of Seoul'	'Opening the entire Dunes Creek system to Lake Michigan and reduce the urban impact to the surrounding natural area'	'To increase the creek's capacity to carry a 100-year flood and restoring essential habitat for wildlife species'	Improving water quality and flood Protection also create public amenity
Drivers	Uncovering the waterway as a part of ongoing urban renewal project, Prominent landscape architects and urban planners envisioned protection of riparian corridors in Bay area	Creek is a heavily impacted bu urbanisation (erosion loss of fish species, flooding, decreasing of water quality, sediment contamina-tion)	Flow of stream waters in to sewer system and limited wastewater treatment plant capacity, need for natural environment in the city	Part of a major downtown re-development project, a national design competition for re-development zone of the city brought the idea of daylighting	Biology teacher in a high school proposed daylighting for biology courses (to create an outdoor laboratory for students)	Increased pollution levels, (complaints from residents) create concerns about public health	Sanitation and Safety Problems (traffic load, air pollution, aging road structures, unwholeso me-some environ-ment)	Enclosure of Dunes Creek, a tributary to Lake Michigan had been contributing to the presence of E. coli in the lake effects the beaches	The District saw opportunity to restore and enhance the library and improve the environment	Homeowners downstream of the Northgate mall began to note the deteriorating conditions of creek and marked increase in flooding incidents.

Feasibility	All projects in bay area was in densely developed areas has similar challenges (old infra-structure etc.)	As an first implemen-tation, the biggest challenge 'fear' is removed, lack of modern tools	Combined sewer systems in densely urbanized area+ large impervious surfaces	The Arcadia Creek watershed is mostly urban and a densely populated area	The biggest challenge was establishing the channel geometry in a floodplain and major effort is needed to remove concrete slabs (costly)	A very polluted creek in a highly built-up part of the city. Also creek run combined with sewer made daylighting difficult	Physical (resolv--ng inconve nience) and environ mental (rainy seasons) constrai ns.	Creek is heavily-modified also collapse of the the parking lot over creek due to the heavy rain, need to repair	The site's steep gradient presented challenges.	One of the most abused creeks in the city due to the intensive development of the watershed
Public Participa---tion	Local firms and groups supported the activity, designers have pushed hard for significant public involvement	High school students from low income families worked for maintaining tasks(paid)	The initiative of the neighbourhoo d was very important and helped to raise the money for the project.	Public involvement in planning, and preliminary engineering, campaigns	Many students have been involved in restoration and maintenance process	University o Toronto developed proposals fo daylighting project + community support	Intensiv e public involve ment program s were operated (Wall of Hope Program)	A live camera uploaded images on internet to alleviate public concerns and questions	Collaborati on with local agencies during the process	Citizen groups worked actively in the project
Stake-holders & Funding	For the following daylighting projects in the bay area, cooperation between government, business, non-profits and citizen groups play an important role	The entire park project was completed from city funds (City of Berkeley). Cooperation with Berkeley Youth Alternatives and University of California	Zurich City Council has a key role with the supports of all the relevant city departments , politicians, and the population	Downtown Development Authority funded and coordinated the project including engineering studies with its consultants, 'STS Consultants Ltd.'	-Humboldt State University, -Community groups - Government Arcata High School - Natural Resources Services Division of the Redwood Community Action Agency (RCAA)	- The Taddle Creek Watershed Initiative, - University of Toronto, - City of Toronto - Business, - Local envi-ronmental groups worked together	Operated by Seoul Metro-politan Govern-ment, recommend -dations given by KSCE, Funded by Federal Emergency Manage-ment	-The Indiana Department o Natural Resources, -Save Dunes Conservation -JFNew partnered and Funded by NOAA, (ARRA of 2009) and FEMA	-The Alameda County Flood Control and Water Conservation District, -Alameda County General Services Agency, the - City of Union City,	Thornton Creek Alliance Citizens for a Liveable Northgate Thornton Creek Legal Defence Fund

Legal Back-ground			1991 Swiss Law- 'Removal of clean water inputs to combined sewer system'		The efforts shaped the city policy 'New Drainage Master Plan' is prepared					
Positive Impacts	Offers urban infrastructure benefits (expensive repairs),Several daylighting projects followed in bay area, increase storm flow capacity	Property values in neighbourhood have increased, and an old place with high crimes turned to a family oriented area, and won many awards	Excellent example of citywide daylighting program 'Creek Concept' encouraged by city policies	An unhealthy (crimes, flood risk) area transformed to an attractive business centre (increased investments)	Increased pedestrian traffic by students and accessibility to the outdoor laboratory. Also a new natural public space is created.	Unfortunately the project could not realized because of the challenges which are difficult to overcome	Improved Air quality & Temperature reduction, Increased Biological Diversity and land property, Recreation &Restoring Historical Centre	Natural connection between large watershed and Lake Michigan and Improve water quality & aquatic habitat, flood protection, recreation	Water quality improvement, enhanced wildlife habitat, and public awareness and enjoyment (amphitheatre) playground, recreation park are built	The majority of water flows through the underground pipe but small amount is routed through channel to provide a constant flow of water
Results & Lessons Learned	Removing the cover did not fix the problems, a damaging flood occurred in 1986	Successfully implemented first project, inspired many other projects, and shows importance of public participation and reuse of materials	City policies can encourage creek daylighting projects	Daylighting used in very dense urban area, decrease crime and increase land properties, book published for children	Daylighting projects can help to shape city policies. Also an outdoor laboratory for the school and valued natural area for the community is created.	The project show that there is a multitude of options even for the same creek.	Daylighting projects c have positive impacts both economically, environ-mentally, physically and socially. & Importance of local communi-ties	A live camera that uploads images to the Internet every 15 minutes at NOAA.gov, project won many Awards	Second phase is completed in fall 2010. Increase public awareness The project highlights the possibilities for restoring streams in urban areas.	Community process led to large scale water quality project and major private redevelop-ment.

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Dutch spatial planning laws and public private partnerships: increasing or reducing democracy?

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Abstract

The Dutch spatial planning laws and the structures of decision making in the Dutch planning undergo changes and innovations. The transformations in the spatial planning laws is to increase the implementation of projects (getting things done), to avoid administrative clutter and to mitigate the nuisance power of civil society to protest and appeal procedures which slow down the realization of regional development and urbanism. Besides changes in the Dutch planning regulations the spatial planning in the Netherlands is also characterized by displacement of politics to public-private partnerships. The public private partnerships have to realize regional development by urbanism.

According to Metzger (2011) is spatial planning in neocorporatist governance structures reduced to little else than pseudodemocratic window dressing of dominant corporatist interests. According to Healy (2010) is spatial planning not only a set of expert skills, but also calling for justice. Spatial planning has to offer processes and mechanisms that open up potentially controversial issues of spatial development for democratic debate and transparency (Healy, 1997). Healy pleads for designing court institutions within planning processes, not necessarily formal legal courts but also public hearing procedures.

In any democratic system have actors an option to go public with their grievances: through the media, internet-opinion-raising activities or direct action or civil disobedience (Metzger, 2011).

The central questions in this paper are:

How do the changes in the traditional planning instruments of the Dutch spatial planning acts and the public-private partnerships affect spatial planning practices in the Netherlands? Do they make the Dutch planning practice more efficient and effective and for whom? Do they make the Dutch planning practice more democratic, more open and more responsive for the Dutch society? Accomplish developments of

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spatial administrative centralization and decentralization in planning policy independently of each other, do they reinforce each other or are they at odds?

For answering these questions the background is showed behind the choices to change the Dutch spatial planning acts and the choice to introduce public private partnerships (section 1). Then a theoretical framework is offered where I first will look for the consequences for political and social democracy in terms of inclusion or exclusion of actors and issues. Then is explained that the Netherlands is a decentralized unitary state and after that three laws are introduced which have different assumes about interactions between governments (section 2). After that three case studies in the Netherlands are presented where a new planning instrument of law is combined with a public private construction, so we can see how this combination influences spatial planning practices in terms of democratic improvements or democratic deficits (section 3 till 5). At least conclusions are given and a reflection is made on the three laws and their application in the cases (section 6). The public-private partnerships and the changes in Dutch spatial planning laws in the case studies have the characteristics of democratically problematic neocorporatist governance structures and mechanisms, legitimated through sometimes quite shady consensus-building planning efforts (Healy, 1997).

1. Introduction

Discussions about the relationship between centralization and decentralization in spatial planning law and spatial planning policy are still going on in political-administrative and scientific arenas (De Gier, 2011). Spatial planning in the Netherlands can be characterized as public partnerships: national governments have to meet local governments when they prepare their spatial planning decisions, make spatial planning decisions and want to implement these. The history of Dutch spatial planning is strongly determined by the municipal role and responsibility (De Gier, 2011). In 1965, the Spatial Planning Act (WRO) enters into force in which zoning schemes of municipalities are introduced. The zoning scheme is the only plan that citizens can bind. The powers of the higher authorities were only in the sphere of supervision. Till 1985 the Spatial Planning Act (WRO) was one of the most decentralized law in spatial planning laws. In 1985, the WRO is revised because the government and the provinces want to ensure the indirect impact of their plans in the zoning schemes of municipalities. Municipalities need provincial approval for their zoning. Further ministerial appointment powers are introduced. In 1994, the Nimby-act (not in my back yard) is introduced so that the Minister of Housing, Spatial Planning and the Environment and provincial authorities get the power to enforce in projects of supra-municipal interest in municipalities, in extreme cases the national

and provincial governments can take the place of the local authority, without a planning-legal foundation based on a key planning decision or a regional plan. In 1994, the Infrastructure Planning Law came into force for the construction of major infrastructure (motorways, railways, waterways). Where previously the zoning schemes of municipalities could stop the infrastructure plans of the national government, the national government did now has the authority to ask to a municipality to change a zoning scheme. In 2000 the law was updated and a trace destination project was seen as a decision where no zoning change was needed. An administrative agency, the Ministry of Transport, could now devote about infrastructure themselves without interference plans of municipalities.

Since 1 July 2008 the new Spatial planning act (Wro) makes it possible for government, provinces and municipalities to fulfill a role as developer by their own. According to Witsen (2011) the new Spatial planning act makes a sharp distinction between legal interests which governments at various levels stand for: "In principle every government only makes plans and rules for their own interests. So they do not operate at each site and so is created an important prerequisite for a smooth decision-making. That's the theory" (Witsen, 2011). Discussions are still going on about the real effect of the new Spatial planning act: does it really mean actual acceleration and actual decentralization?

The new Spatial Planning Act (Wro, which took effect in June 2008, provides national government and provinces the possibility to use a Central government-imposed land-use plan (Nationaal inpassingsplan) or a Province-imposed land-use plan (Provinciaal inpassingsplan) excluding the municipal council in cases where national or provincial interests are concerned. The first experiences with the new Spatial Planning Act are moderately positive (PBL, 2010). There had until then been little tension between provinces and municipalities, the formal decision-procedure was shortened and the informal consultation was not noticeably longer.

According to the next Dutch cabinets it still does not go fast enough: the Crisis- and Recovery Act (Crisis- en Herstelwet; Chw) entries at 31 March 2010 into force and the Environmental Licensing Bill (Wabo) was into force from 1 October 2010. After the economic crisis a so-called Crisis and Recovery Act (Chw) was introduced, aimed at the acceleration of projects to the economic crisis and to combat its consequences. The Act includes temporary and permanent measures. Among the temporary measures the Act includes the restriction of the rights of local governments. Chw also makes it possible to take a project implementation decision that replaces licenses, exemptions and other decisions normally required. The Environmental Licensing Bill (Wabo) was introduced on 1 October 2010. Purpose of the Environmental Licensing Bill is a simpler and faster licensing and to offer better

public services. The Ministry of Infrastructure and Environment is currently working on a new Environmental Management Act, which should align plans and procedures with each other, leading to faster and better decision-making (Elverding Commission, 2008) and more space should be for local managers to make decisions.

The above sketch shows that throughout time the legislature (the government and the First and Second Chamber) have chosen for progressive centralizing developments in spatial planning laws (De Gier, 2011).

Since 2000, the Dutch cabinets also plead for decentralization of spatial planning policy (i.e. Position paper Letter from Camp, 2002; National Spatial Strategy 2004, 2006). The motto was: 'decentralization where possible, centralization where necessary'. When the report about Spatial Development Politics (WRR,1998) appears, the central government sought to recast the relationship between public actors and with other private actors. The Ministry of Housing, Spatial Planning and the Environment introduces concepts such as development spatial planning and regional development to encourage public-private partnership structures in regions. In the last Cabinet Coalition (VVD and CDA, 2010) is chosen for decentralization of spatial planning to the provinces and for decentralization of regional economic policy, the policy landscape and nature policy to provinces. Decentralization is therefore motto and trend in contemporary spatial planning policy and spatial planning policy in the recent past (last decade). The old Ministry of Housing, Spatial Planning and the Environment (VROM) and Transport and Water Management (V & W) have merged into the Ministry of Infrastructure and Environment, where the term 'spatial planning' has fallen away in the naming of the Ministry, which the Ministry stressed that the decision to decentralize the spatial planning policy is serious.

So where the Dutch spatial planning laws are in a continuing trend of centralization (De Gier, 2011), the central governments are promoting further decentralization of spatial planning policy to achieve a more effective spatial planning.

2. Theoretical framework

According to Metzger (2011: p 191) spatial planning can be seen as a displacement and delegation of politics into other realms of societies than the formal spaces of politics: "*This displacement in turn generates a need for a radical reconstitution of our ideas regarding the democratic legitimacy and accountability of planning work – and, further, the democratic- ethical responsibilities of the contemporary spatial planner in a situation where planning practice is all the more seldom guided by formal statues, guidelines or frameworks for democratic accountability, transparency and legitimacy. It is a matter of debate whether planning has ever been*

truly confortable with the idea of more direct involvement, control and steering." Healy (1997) has showed that traditional, regulatory planning systems lacked adequate spaces for nonadversarial dialogue. The only way for may interests was to contest technocratic domination through pursuing obstructive and confrontational tactics that generated unnecessary and unfruitful confrontations (Metzger, 2011).

Networks often have a very limited degree of transparency and democratic accountability (Allmendinger and Haughton, 2010; Swyngedouw, 2005). The building of such semiformal or informal networks as a form of decentralization of spatial policy and the centralization in spatial planning laws are brought as methods to avoid administrative clutter and getting things done (Allmendinger and Haughton, 2010). According to Marres (2005) political controversies in spatial planning are not failures of governance or of the political system but are 'occasions of democracy'. From this point of view another perspective arise about conflict, strife and opposition within the policy process: they are democratic important (i.e. see also Hillier, 2002 and Pløger, 2004). Healy (1997: pp. 224-228) has warned that "*overcosy informal relationships between key public and private stakeholders in spatial planning processes often will have a tendency to degenerate into the building of democratically problematic corporatist alliances, legitimated through sometimes quite shady consensus-building planning efforts*."

The Netherlands is a decentralized unitary state. The sovereignty rests with the central government, but which has certain powers under laws passed to lower organs (Deth & Vis, 2006). The Dutch Constitution has no provisions for the establishment of restrictive laws by the States General and Government together and can make any rules about which they agree. The Dutch Constitution obliges the legislature the establishment and administration of provinces, municipalities, public bodies to settle "by law" This means that the central government can also limit or eliminate power of other authorities by changing the law. Even the elimination of existing and establishment of new provinces or municipalities is only a matter of central government. (Deth & Vis, 2006: 94-95).

A decentralized unitary state is the form in which territorial units within a unitary state have independent powers. The highest lier is the Central government. The central government provides the unit by legislation and supervision. There are also territorial authorities which own tasks, responsibilities and powers. Local authorities are required to implement greater regulation of the Central government. This is also called co-administration. Decentralization refers to it that the central government has a number of tasks transferred to the provincial and municipal governments. State unit means that the emphasis is on the central government and that the power of provinces and municipalities is subordinate. Provinces and municipalities must

comply with national policy and can only make its own policy when it comes to matters that only relate to provinces or municipalities. Provinces and municipalities do have the power to (often set by the government limits) rule their own affairs: autonomy.
Terms such as unitary state, federation or confederation link according to Van Deth & Vis (2006) not to distinct types, but to countries on a continuum. This also applies to centralized or decentralized. France, for example, is a centralized unitary state: the national authority has a large degree of control in regions and cities.

Thorbecke, the Dutch founding father of the decentralized unity state, saw as the founder of the decentralized unitary state great dangers in the imposition of regulations by the central government to other organs and society (Toonen, 1989, 1990). Thorbecke did not want to create unity through national state authority, but by agreement between the constituent parts in order to achieve legitimacy and state authority (Toonen, 1989, 1990). This idea of an organic state led to the explicit recognition of their own powers of local authorities. Everything to the household of their own bodies is that they can rule by their self. This concept was called the Triple ring or autonomy doctrine, used to indicate that each level is competent in a particular area without interference. In Dutch practice, the separation between the three tiers of government is difficult: a complex system of contracts and cooperation between administrations is created (Van Deth & Vis, 2006).

In Dutch spatial planning there is no often autonomy of local governments or municipalities, but there is co-administration between the different tiers (De Gier, 2011). De Gier (2011) indicates however that decentralization is also co-government: it is the free space that a higher authority allows to a local government. To emphasize the equivalence between the various tiers or levels of government municipalities prefer that is spoken in political-administrative correct terms about *other* governments instead of talking about "*higher*" (central government and provinces) and '*lower*' (municipalities) governments, but from the powers, duties and responsibilities reviewed it is preferred here to use the terms higher and lower authorities.

In this paper, we considered three laws, which are all focused on interactions between governments. However, all these laws apply another assumption when it deals about the interaction between governments:

- The Crisis and Recovery Act assumes public-public opposition and gives no vocational law to municipalities;

- The Intermunicipal Statutory Regulations Act supposes public-public cooperation

and offers municipalities the opportunity to inter-municipal cooperation and collaboration with the province and the Water Board and extension of local government;
- The Spatial Planning Act presupposes a level of public autonomy, with each tier of government has its own roles, responsibilities and privileges. Above municipal interests (provincial interests or central government interests) provide provinces and central government opportunities to achieve their own interests, for example through a Province-imposed land-use plan or a Central government-imposed land-use plan.

One similarity is that all three laws want to decrease (or even an elimination) of local autonomy or jurisdiction of a municipality:

- a Province-imposed land-use plan or a Central government-imposed land-use plan makes it possible for national or provincial authorities to act (= override, take the place of) and to exclude the powers of the municipality (from original tier of government);
- Intermunicipal Statutory Regulations Act: mandate or delegation of powers (= transfer of powers to a public entity or perform on behalf of a municipality);
- Crisis and Recovery Act: government provides power to municipalities in order to relax environmental quality standards in exchange for no vocational law.

Yet this perception is too black and white:

- There is also talk of public-public cooperation in Crisis and Recovery Act: municipalities and provinces can bring by themselves projects they would like as development areas under the Crisis and Recovery Act. Relaxation of environmental quality standards and acceleration of procedures can be local reasons for municipalities to log in a project to the Crisis and Recovery Act. The Association of Dutch Municipalities expects that municipalities, provinces and central government through the Crisis and Recovery Act can more operate as a team in the development of complex projects.

- The application of the Spatial Planning Act involve both public-public cooperation and public-public opposition. In other words, there is less talk of autonomy for each level of governance than in the assumptions behind the Planning Act was provided.
- At the Intermunicipal Statutory Regulations Act (Wgr) is supposed public cooperation. In practice it may also occur opposition between authorities within the Wgr or they may have problems with the control and monitoring capabilities of the steering bodies in the Wgr.

The following sections describe the assumptions behind the three acts and show their application in three cases.

3. Province-imposed land-use plan and application in the case of Wieringerrandmeer

Under the old WRO opportunities for proactive development by provinces were limited. The role of the provincial council was especially judging: the province saw to it that the provincial policy of the regional plans were translated into binding municipal zoning schemes. The province did not have powers to adopt land use plans with a direct binding effect. It could happen in the past that provincial or municipal authorities could delay central governmental policy by not including it in local zoning. Government and the provinces were depended of the impact tot the smallest scale.

With the introduction of the new Spatial Planning Act changed this situation. A Province-imposed land-use plan or a Central imposed land-use plan in the Dutch Spatial planning act (Wro) is a zoning made by a provincial council or Central government, which can be legally recorded the destination of a particular area. This possibility exists since the entry into force since 1 July 2008. A Province-imposed land-use plan overrules a provincial municipal zoning scheme. It is one of the legal instruments by which interests by higher authorities still may be conducted even if this policy interests of a local government crossed.

Policy from a Province-imposed land-use plan should be implemented in a municipal zoning scheme. Municipalities are excluded for this part of making their own policy. A province can only make a Province-imposed land-use plan if there is a provincial interest. What this exactly means is not defined by the Wro, but is determined by the province itself. When a part of a plan is in conflict between a lower and higher authority about the legal status of interests it may be submitted to the Council of State.

The Province-imposed land-use plan makes it possible to a provincial council to develop and implement projects by themselves. That was not possible under the old law (WRO). In that situation the provincial council was only supervisor.

The motto behind the new Spatial Planning Act is: you go about it or not. Each layer has to realize its own public interest and a public interest of a higher authority justifies that this tier deals about it. Questions should be addressed at the level or scale on which they play (subsidiarity). There is thus a strong belief in clear roles, clear responsibilities and clear powers. If anyone is able to realize its own affairs it is

not necessary to cooperate with other tiers.

Application in the case of Wieringerrandmeer

Since 2004, the province works together with the municipalities Wieringen and Wieringermeer Wirense Lago and the private partner Lago Wierense in the spatial planning of the Wieringerrandmeer. In the mid-nineties there was aninitiative of the municipality of Wieringen to make an island again of Wieringen by creating a border lake. Around the lake more houses, businesses and recreational facilities and nature were planned. At the present land area, 30 farmers were established. Market Consortium Lago Wirense, Wieringermeer municipality and the province of North Holland want to continue with the development of plans for the Wieringerrandmeer. The municipality of Wieringen is not accepted. Reason for the municipality not to accept the plan is that no car bridge over the lake is designed in the plan. Despite several attempts at mediation from the province the municipality persists in its position. For the province reason to ask the provincial states to agree with a decision to prepare a Province-imposed land-use plan, so that the province can take over the initiative of the municipality.

A political party voted a year ago against the border lake plan and a spokesman announced on substantive grounds the value is still not visible. There is now still in the dropping of Wieringen. "*What has the provincial council to win to work with a reluctant partner together for thirty years.* " He warned: "*Especially since we save the path of an open end transit system which threatens the province to pay for all costs*." Hooijmaijers, a provincial governor, refuted the latter. "*Financial, nothing changes. Where the municipality is protected in the cooperation, it is now the province. Making the Province-imposed plan, we take over the role of the municipality*." During the debate especially Bruijstens (Elderly political Party) bothered to the fact that developer Lago Wirense the municipality has sent a letter which threatened to damage claims. "*The letter states that the municipality may be liable for millions if it persists in its view. I deeply regret that Lago Wirense use pressure in this unacceptable way on the decision by the municipality*." Bruins Slot (CDA political party) was not with him. "*It's a normal course of business as the company as a co-signer of the cooperation agreement is warned that this step will cost the municipality money?* " Hooijmaijers, a provincial governor, had the same opinion, especially since the company just has a legal duty to do this in time. An interesting detail was that the provincial council has received a letter from the lawyer of Wieringen and rejects all legal liability.

The financial interests and to ensure progress are reasons for the province to make a Province-imposed land-use plan. The Provincial Council decided in April 2009 for the area to establish a Province-imposed land-use plan.

4. Crisis and Recovery Act and application in the case of the former airport Soesterberg

Due to the economic crisis and occurring stagnation of economic growth and rising unemployment as a result, the Cabinet Balkenende provides to give incentives to the economy in 2009 by investments. Besides extra investment the government wants to reduce complexity and sluggishness of decision making, especially for large spatial and infrastructure projects that the growth of the economy could support.

The government charts which projects with a great effect on employment or the economy before 1 January 2014 could start if there are legal possibilities for these projects faster to run. The Central government also loos for the legal barriers threaten these projects. The Crisis and Recovery Act (Chw) now contains a number of temporary and permanent measures making procedures faster and easier to run, so projects can be implemented. Since 31 March 2010, the Chw entered in force. The act ends on 1 January 2014. Proposals have been made to make the Crisis and Recovery Act permanent. Fewer and faster procedures are possible by temporary adjustments of the General Administrative Law Act. Provinces or municipalities can contact the Ministry of I & M and request to bring an area under the Crisis and Recovery Act.

In spatial planning, it is not uncommon for local governments to challenge decisions of higher authorities by making use of vocational law. The Balkenende IV considers it undesirable that local governments against each other decide to appeal. Because in the past there was public-public opposition in the Chw is chosen to give municipalities no vocational law, what should give no delay. The Council of State has criticized this. The assumption that governing bodies are equivalent and that local authorities should be able to legally defend their legitimate interests is with the Chw affected. The government, despite the opposition of the State Council, has included no vocational law in the Chw. The Council of State is therefore invariably to the conclusion that neither a municipality may appeal against decisions. They are not the central government and are not to be regarded as the addressee of such a decision.

Spatial development and environmental regulation can be at odds with each other. The Chw offers opportunities for creative here to deal with. There is possibility to

redistribute environmental space to temporarily deviate from environmental quality standards (more flexible), such long-term hindrance companies are moving and adjacent housing can be realized. At the end of the plan period (up to ten years), again with the standards have to be met.

Application in the case of former airport Soesterberg

The former airport Soesterberg is transformed from hermetically sealed military area to an accessible area where nature and cultural history can be enjoyed. To afford this 440 homes will be built. Soesterberg North has the status of development area within the Chw. The municipality of Soest has asked and received that status with a clear goal. From a work-housing land to a housing-work area seems not so complicated. But if you want less business and more housing (such as for Soesterberg North) then it becomes more difficult. Companies have an environmental circle for noice and air quality, which under the existing rules may occur no housing. The relocation of North Soesterberg to another location will be phased to take place, and that phasing is not synchronized with the plans for the construction of new homes. By the status of development there may be homes built in the environmental circle (s) of companies, with the condition that the land after 10 years meets the environmental quality standards. This offers opportunities to build homes now and not have to wait until business moved. There are companies in Soesterberg North with a circular environment (noise or smells), in which no homes can be built. The municipality will ask these companies to cooperate to move their business, or to make the environmental circle of their business smaller. The latter may for example, by a higher chimney, a different place for supply, an additional valve or acoustic shields. If companies do not want to cooperate, then the company will be obliged to cooperate by the Chw.

Another reason for fastening the building of houses in Soesterberg is that the project of Soesterberg is a part of a program of 25 projects in the so called Hart of the Heuvelrug. The revenues of building the houses are used for a swap to other projects and to realize the development of nature.

5. Intermunicipal Statutory Regulations Act (Wgr) and application in the case of Oude Rijnzone

The Intermunicipal Statutory Regulations Act (Wgr) is a Dutch law which regulates partnerships between public entities such as provinces, water boards and municipalities. The current law dates from December 20, 1984. In 1950 the predecessor was already in operation. This law was especially critical because of the

limited democratic content of an association. Decisions are taken by a body, which was not directly elected. It operates as a fourth layer of administration. It took a long time till sounds to create new provinces disappears, but with the Memorandum Governmental Organization in 1983 was chosen for the renewal of local government and not for a fourth tier of government. Municipalities get in different ways influence on the Wgr.

Application in the case of Old Rhine zone

In the Old Rhine area public and private parties work together on regional development of the zone along the river the Old Rhine. In the area, new residential and commercial areas developed, restructured existing business areas and the water and nature qualities will be strengthened. Another aim is to improve accessibility.

In 2008, all municipalities, the provincial councile and the water board joint a Cooperation Agreement. One of the restraints of the Cooperation Agreement was to prepare a Business Case Oude Rijn Zone through the region and a decision by the Government on allocation of resources under the National Spatial budget. In May 2009 a Business Case Oude Rijn zone established in the steering committee. In June 2009 the government decided to release 30 million euro's grant to the Old Rhine Zone.

The granting of Spatial budget by the state was to the condition that the regional cooperation is in a more binding form in the implementation phase, more binding than in the existing Cooperation Agreement. The government has advised thereby further forms of cooperation and informed choice for Intermunicipal Statutory Regulations (Wgr).

The Old Rhine Zone Steering Committee prefers the Wgr over a private form of cooperation. The latter are well as a possibility in view of the implementation in clusters. In a private form, that brings everything in the implementation phase in contracts, the adjustment possibilities of the public parties are limited. This form is less appropriate for a complex program as the Old Rhine Zone. In the opinion of the steering committee than there is too little justice to the local responsibilities and interests within the practice in the Old Rhine Zone. In any public administrative theory is a public form preferable to a private form of cooperation, because in that situation, administrative transparency, democratic control and influence are greater possibilities. Wgr offers municipalities the opportunity to participate and they can always ask for information. Five municipalities are working together with the province in Wgr Old Rhine Zone. The city of Leiden, the Water Board and the Ministry of Infrastructure & Environmental are consultants in Wgr Old Rhine Zone.

6. Conclusion and reflection

When we compare the choose for the deployment of three acts in three cases, it is striking that in all cases public-private partnership structures indirectly or directly influence the choice of the three acts as a policy instrument.

At the deployment of the Chw at the airport of Soesterberg pressure from the public-private partnership structure plays a role because it allows the target of the red for green approach to the project of airport Soesterberg and also the financial deficit of the Program Hart of the Heuvelrug can be taken away. The motto behind the Chw is: regulations simplify and accelerate. The central government has this in advance necessary obstacles to the market removed, but that's no guarantee that the market actually boarding. The market decides, not the government, so the law will mainly be used when the market rebounds. Another option is that the government itself will behave as a market party and for example builds the houses themselves. By dealing with more flexible environmental standards for noise and any odors from businesses to homes, governments put no more heavily in their evaluative role, but their developing role. Thus, the reduced duties for promoters, but what does the more flexible standards mean for the rights of residents? Is carefully dealt with quality standards?

In Wieringerrandmeer is primarily pressure from the province and the companies of the public-private partnership construction. The province has a financial interest because it has a lot of land purchased in the area. when delay is a result the private parties threaten to come forward with claims. For the province this are reasons to apply the instrument of the Wro: the Province-imposed land-use plan.

In the Old Rhine Zone both the government and the authorities of the public-private partnership construction pressure to opt for a stronger form of cooperation between governments. The authorities prefer the Wgr over Public-private partnterships contracts because they estimate as to retain more influence. The government forces in exchange for money (30 million) so that the authorities increased cooperation issues through the Wgr. That the choice of the Wgr is not established only bottom-up by municipalities themselves illustrates the Old Rhine Zone. The Central government seduces a province and municipalities money to opt for application of the Wgr and obtains also affect the substantive planning. The government could in the Old Rhine zone also use a Province-imposed land-use plan, but did not. Now other governments and private parties willing to co-invest with the government. When applying the Province-imposed land-use plan the money under the PPP arrangement can fall away.

It can therefore be said that public and private parties can benefit from a continued centralization in planning law as reflected in the laws. Decentralization of the spatial planning completed as public-private partnership arrangements could be strengthened by continuing centralization in the spatial planning laws.

From a broader or different perspective be reflected, namely the perspective of parties who are not part of a public-private partnership structure or parties who left the public-private partnership structure, the centralization of spatial planning laws are in tension with decentralization of planning policy.

Finally, can be reflected on the centralization of spatial planning laws and the decentralization of planning policy from a still broader perspective. The discussions in the political-administrative and scientific arenas on spatial planning in the Netherlands seem narrowed to discussions about the planning law and planning policy, but the spatial planning in the Netherlands includes more. Apart from government decentralization can also be talked of citizens' initiative and entrepreneurial initiative of civil society. In short, besides decentralization of policy is also talk of socialization and commodification of spatial planning. The attention in the planning law and planning policy is strongly focused on interactions between governments. From this perspective, both spatial planning laws and spatial planning policy can be improved. Healy (1997) pleads for designing court institutions within formal planning processes, not necessarily formal legal courts but also public hearing procedures. According to Metzer (2011) this is not enough. In any democratic system have actors an option to go public with their grievances: through the media, internet-opinion-raising activities or direct action or civil disobedience (Metzger, 2011). Metzger plead for new methods to accommodate fruitfully dissensus already in an earlier stage within the planning process. According to Metzger (2011) it possibly could also entail "*a renewed interest in a rediscovery and reworking of advocacy planning theory to put it more in tune with the demands of contemporary society and the present challenge of confronting neocorporatist governance structures in which spatial planning is reduced to little else than pseudodemocratic window dressing of dominant corporatist interests*" (Metzger, 2011: p. 195).

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Energy Transformation and Planning Conflicts: How to achieve the Transformation towards Renewable Energies in a Conflicting Environment?

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Abstract

Against the background of climate change many countries, regions and communities have set up ambitious agendas regarding a shift from fossil fuels to renewable energies. In this transformation process several questions and challenges have shown up touching land use and spatial planning. Large-scale renewable energy projects like wind parks, solar fields or power lines cause complex land use conflicts that are difficult to handle with existing planning routines. Against the background of the ambitious goals of climate policies and corresponding European and national infrastructure programs regarding renewable energies these conflicts are even expected to further increase in the future.

In consequence achieving the climate mitigation agendas could be threatened if there are – besides existing formal procedures of coordination – no additional and innovative ways of conflict resolution. How could those solutions look like? How to solve multi-level conflict settings where different rationalities of the involved levels seem to be antagonistic? How to handle local or individual concernment versus abstract societal necessities? How to deal with complex planning processes? How to justify severe interventions into landscape or resident population's quality of life against the background of the uncertainty of climate change data? Which new ways of organizing planning processes might be possible? How do they fit into the legal setting of planning law? And how can they meet people's rising skepticism against big infrastructure projects that can be found in many countries?

From a German point of view the paper describes the problem, structures the conflict setting and deduces applicable conflict resolution strategies against different theoretical backgrounds. The topic is tackled regarding earlier findings on environmental conflict

resolution and aims at identifying specific characteristics of current conflicts due to energy transformation. The paper discusses formal as well as informal aspects of adjusting planning processes, including elements of communicative planning in formal and informal planning processes on the regional and local level.

The methodological basis of the paper is a literature review and experts interviews. Furthermore, the author is involved in different expert panels addressing the topic in research as well as in policy advice.

Keywords:
climate change, transformation, renewable energies, land use conflicts, conflict resolution

1. Problem and Background

Following the German federal government's Energy Concept of 2010 the share of renewable energy regarding the gross energy consumption is intended to increase to 30 % in 2030 and 60% in 2050, the portion of generation of electricity of the gross energy consumption shall rise to 50% by 2030 and 65% by 2050 (Bundesregierung 2010: 4f.). Comparable goals exist on the European level. The EU-directive on renewable energy sets binding targets for all EU-Member States, such that the EU will reach a 20% share of energy from renewable sources by 2020 and a 10% share of renewable energy specifically in the transport sector (EU Commission 2009).

Against the background of these political goals it becomes apparent that the extension of renewable energies will cause an increasing range of land use conflicts (Pfeil, Töpfer 2011). On the one hand there are conflicts around punctual energy infrastructure like wind energy plants, wind-farms, large scale solar fields or extensive biogas plants. On the other hands linear infrastructures like power lines are of interest including an even more complex conflict setting because of their far reaching spacious extension. In particular on the European level the question of linear infrastructures arises to connect water energy resources in Scandinavia or solar potentials in the southern EU Member States with the other energy consuming member states. The EU commission has underlined this challenge with its current multi-annual budget for 2014-2020 including infrastructure investments for Trans-European Networks (TEN), amongst others energy: "The energy sector can look forward to €9.1 billion being invested in trans-European infrastructure, helping to meet the EU 2020 energy and climate objectives. (…) The internal market for energy will be further developed through better interconnections, leading to security of supply and the possibility to transport renewable energy in a cost effective manner across the EU. (…) The money from Connecting Europe will act as a leverage for more funding from other private and public investors" (EU 2011).

The pressure of successfully implementing the energy turnaround leads to requests from politics and administration to connect the ambitious aims with more efficient planning processes. In particular they wish a speeding up of the implementation and fear that pro-

tests could become a severe restriction. For example, EU-commissioner Oettinger claimed that three years should be enough for planning and permitting a project whereas it can take up to 15 years nowadays. This claim for acceleration stands in contrast to latest public protests against big infrastructure projects that have been manifold regarding transportation, e.g. the enlargement of airports or the building of new rail-tracks, but also energy infrastructure. In Germany the notion of the "Wutbürger" has become the "word of the year 2011", describing angry or furious citizens whose protest against infrastructure projects is decidedly and well organized. How realistic can claims for acceleration be if they are counteracted by a new public self-confidence of opposing top down decisions?

2. Conflict Structure in Large-scale Renewable Energy Projects

What are specific characteristics of conflicts regarding energy infrastructure that are different from familiar land use conflicts? (vgl. Glasl 2010, Schiller 2009) On the one hand conflicts about energy infrastructure are comparable to other land use topics that deal with change or intervention into existing structures. They are mainly interest conflicts concerning a change for the worse from the point of view of affected communities, land-owners, citizens or institutions. In the case of the energy grid there is another conflict layer questioning if those projects are necessary at all and if they could be substituted by intelligent energy grids operating on a decentralized basis.

On the local level there are multiple critical arguments with regard to energy projects. For example, concerning high voltage transmission lines power health impacts of electro-magnetic fields or the impact on landscape and nature or forests are questioned. In this respect the possibility of under-grounding cables is discussed, but this solution can increase the costs massively. Quite often those aspects are criticized as NIMBY behavior (Not in My Backyard), meaning that affected individuals refuse to accept any change.

In Germany for some decades energy infrastructure has been a main political battlefield because of the severe conflict about nuclear energy. Environmentalists have been opponents of nuclear energy and claimed for alternative solutions. Now, the energy turnaround towards renewable energies sometimes leads to a complex conflict constellation. Whereas on the federal level environmental NGOs plead for the extension of renewable energies they can become opponents against infrastructure projects on the local level. This make the conflict structure quite complicated, accustomed constellations have to be reconsidered.

Furthermore, the economic side of renewable energies leads to new actors. Whereas energy provision for a long time has been a field of monopolistic resp. oligarchic semi-public business structures renewable energies have opened up new business fields for small scale energy producers or providers. In consequence, these new actors show up in the conflict pushing the installation of energy infrastructure. If they are integrated in the community or region, e.g. as citizen-energy plant or local provider, this might allow other compromises than in the case of anonymous investors coming from outside.

The whole discussion about the extension of renewable energies is overlaid by the basic dispute about the necessity of the energy turnaround and skepticism resp. uncertainty of the evidence of climate change. If local politicians or citizens are not convinced that climate change really happens or will affect them they will hardly be willing to accept disadvantages for their property or quality of life. A bit similar is the affect of the time-dimension of climate change. If the risks of climate change might show up not earlier than in 50, 70 or 100 vears many affected actors do not see the need for a compromise. Politicians fear to lose coming elections, and local people are afraid of suffering the loss of quality of life.

In the field of energy infrastructures another aspect can become important for conflict resolution. Energy planning is traditionally a technically oriented domain characterized by an engineering rationality. Involved experts are mostly socialized professionally in an engineering community that is used to identify the best solution from a technical point of view. From this respect, citizen protest appears to be disturbing and obstructing to select the preferred solution. This specific self-understanding of energy planning can restrict achieving a compromise between different conflict actors.

3. Conflict resolution strategies

Conflict resolution in the field of energy infrastructures includes approaches regarding existing formal regulations as well as additional informal procedures and instruments. In the following in particular informal approaches and their linkage to formal procedures are tackled.

The EU Commission's goal of shortening the processes of planning and permitting energy infrastructure, in particular the construction of the European network of power lines correlates with many actors' aims of successfully proceeding with the energy turnaround. But how can this ambitious goal be reached? – Concerning planning processes and administrative routines the past decades have been characterized by a "communicative turn in planning" (Fischer, Forester 1993, Healey 1992, 1996) underlining that hierarchical steering modes have to be reconsidered to include citizens' expectation of been able to participate and influence decision-making processes (critical Tewdwr-Jones, Allemendinger 1998)

In recent years in the field of large scale infrastructure projects attempts of including communicative elements of conflict resolution have indicated potentials and restrictions of such approaches. In particular in airport-projects, e.g. in Berlin and Frankfurt, mediators have been hired to moderate between conflicting parties in addition to the formal planning process. In some respects these efforts have shown good results as they have brought together many different actors and their interests. But they failed in reaching a binding compromise because in Frankfurt the political decision making process did not fully take over the results of the mediation and in Berlin later changes of the project annoyed the affected citizens. Nevertheless, both projects have proven that mediation has the potential to contribute positively to the planning process. If the politicians would respect the results more consequently mediation could function more positively.

Another prominent attempt of communicative conflict resolution has been the "Schlichtung" in the case "Stuttgart 21", the rebuilding of the Stuttgart railway station. Here, similar to a familiar procedure of conflict resolution in tariff conflicts, a mediator was involved as well. His competency was to work out a sort of dictum after having heard all arguments. Although the procedure that was even shown in TV offered a high degree of transparency and included a lot of conflicting parties the results did not lead to a real appeasement. On the one hand the project executing organization, here the railway company German Railway DB, did not really accept the dictum, on the other hand some of the citizen groups had left the process before its end. Nevertheless, Stuttgart 21 initiated a lot of discussion of new forms of conflict resolution besides the existing formal regulations in planning law (Böhm 2011; Selle 2011, Wulfhorst 2011).

Concerning energy infrastructure there have been similar attempts of conflict resolution by negotiation resp. mediation in the U.S.A. (Raab, Susskind 2009). Here, against a different formal background compared to German law allowing the closure of a mediation process with a binding agreement of all participating actors, mediation has already been discussed for cases of large-scale energy infrastructure. Like in Europe the spatial connection of energy production and energy consumption by building new power lines has been the initial cause: "The best solar energy resources in the U.S. are similarly located in the less populated Southwestern states. In the Northeast, there is also extensive debate about whether to build new transmission lines to bring renewable energy from Eastern Canada and Northern New England to population centers in Southern New England and New York City" (Raab, Susskind 2009: 1).

In the U.S. routines of conflict resolution have been evolved in different fields of large scale infrastructure. For example, the U.S. Federal Energy Regulatory Commission's (FERC) has implemented an ambitious integrative stakeholder involvement model. This procedure has originally been developed for certifying natural gas pipelines. A main element of the so called Integrated Licensing Process (ILP) is a "pre-filing environmental review process" which is intended to "facilitate maximum participation from all interested entities and individuals and to assist an applicant in compiling the information needed to file a complete application". In addition, each applicant has to file a "Participation Plan" for the further process (FERC 2006). In some cases the conflict parties can already reach an agreement on their own which is then checked by FERC whether it can be accepted or not. For more conflictual cases FERC offers another procedure, the so called Alternative License Process (ALP). This approach was developed against the background of conflicts in hydropower projects including FERC staff directly participating in the conflict resolution process (Raab, Susskind 2009: 6f.).

Nevertheless, these attempts have also been criticized as being not sufficient enough. Grounded on scientific and practical experiences, Raab and Susskind (2009: 9) propose principles for planning and implementing large-scale energy infrastructure projects addressing the procedural and communicative dimension (see table 1).

Table 1: Six Principles for Using Consensus Building to Improve the Licensing and Siting of Large-Scale Energy Infrastructure (source: Raab, Susskind 2009: 9)

	Six Principles for Using Consensus Building to Improve the Licensing and Siting of Large-Scale Energy Infrastructure
1.	Initiate stakeholder involvement process as early as possible and set realistic but firm timetables
2.	Include broad representation of legitimate stakeholder groups (including government agencies, and – for site-specific projects – citizen groups)
3.	Seek consensus, and consider using professional neutrals to facilitate collaborative decision-making
4.	Do not exclude contentious issues, instead seek ways to address negative aspects of any proposal (including compensation, contingent agreements)
5.	Consider incorporating alternative siting processes (such as voluntary processes, pre-approval, competitive solicitations)
6.	Structure stakeholder involvement processes to supplement but not supplant formal back-stop process, while modifying formal processes to better accommodate consensus building opportunities.

The principles underline the importance of early and broad participation, the inclusion of external neutrals as facilitators, consensus orientation and thus collaborative decision making as well as the necessary nexus of informal and formal processes (see also MacCallum 2009).

Ideas from the U.S. had been impulses for the German discussion earlier before, when forms of communicative conflict resolution and mediation in particular were discussed in the 1990s. The Harvard Negotiation Program was a prominent brain-pool for innovative approaches. After a period of optimism the implementation in Germany stagnated because of different formal regulations. Most notably the problem that mediation agreements cannot be binding but have always to be qualified by the responsible parliament hindered a successful implementation of mediation in planning cases. Nevertheless there are several fields of local and regional planning as well as project development where communicative forms of conflict moderation have been introduced (e.g. Siegel 2002, Battis 2011, Pitschas 2011).

4. Future Research

Considering the challenges of the energy transformation on the one hand and the restrictions of formal procedures of planning and implementing the necessary energy infrastructure on the other hand it becomes obvious that additional approaches of organizing the relevant processes could get decisive importance for coming discussions. Nevertheless, the description of latest references from Germany and the U.S. has shown that implementing communicative forms of conflict resolution poses a lot of questions in detail. Future research might be able to contribute to those questions.

One aspect of communicative conflict resolution is the point of time when to start with a specific form of participation or negotiation. Raab and Susskind claim to start as early as possible, but what does this mean in the formal process. Is it sufficient to start when the applicant for a project informs the administration or should he even start before this when he considers a new project internally? This might sound unrealistic but at the time an application is submitted to the administration main decisions have already been taken by the institution running the project. This problem is underlined by the saying "that participation always comes too late".

Who are the actors of a conflict resolution process? - Raab and Susskind propose to include stakeholders as broad as possible, sometimes the range is limited to the affected actors. What are the advantages and disadvantaged of those alternatives? Does a broad inclusion restrict the effectiveness of the procedure or are there instruments available that make it possible to handle a big group of actors in a communicative negotiation process? Is a restricted participation critical because of a lack of legitimization of the final agreement?

Another research topic is the nexus between informal and formal instruments. Serious participation makes sense only if its results have a chance to be included into the formal decision making process. How this can be achieved in a most productive way?

Some specific questions arise from climate change as the framing topic of the energy turnaround. Because of the far reaching time-horizon of climate change and its impacts on local stakeholders the NIMBY-phenomenon might be more relevant than in other planning conflicts. The conflict resolution needs to give answers how to tackle this problem. Another point is the uncertainty about climate change. This can make it even more difficult to convince opponents of the necessity of a project.

Another aspect has already been mentioned above but should be explored in more detail, the self-understanding of technical oriented energy planning and its comparability with social processes like conflict-resolution. This aspect addresses the social-ecological dimension of energy transformation which has hardly been discussed to date. The construction of power lines, wind-farms or solar-fields is still mainly seen as a technical and economical question. For the transportation sector "Stuttgart 21" has shown what results such ignorance can have, for the energy turnaround towards renewable energies it would be desirable to prevent this escalation.

Finally, this paper has discussed the challenges of energy transformation mainly against the background of the German political discussion and its administrative structures. Looking at Europe it will be necessary to differentiate and include the specific planning cultures of the EU Member States (Knieling, Othengrafen 2009). Such a discussion makes the research even more promising because it allows conceptualizing different models of conflict-resolution each depending on the respective national specifics.

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TOWARDS RESILIENT REGIONS: SOME CONSEPTUAL AND POLICY ISSUES

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Abstract

In recent years resilience has somehow been rediscovered and introduced into the discussion on development and planning while it has its roots in environmental sciences. Ecosystem ecology once again constitutes the origin of this newly introduced concept, as it did with the concept of sustainable development. In its primary meaning, resilience of ecosystems is perceived as their ability to adjust to changing environmental conditions and survive. Lately, the concept of resilience is metaphorically used as a term which characterizes countries, regions, and cities as well as the various subsystems operating within them. The pursuit of resilience tends to take the place of the pursuit of sustainable development and competitiveness, which prevailed during the 1990s and 2000s respectively. Thus the question arises as to what resilience means if transferred to the context of spatial development. More particularly, from the viewpoint of spatial development policies and spatial planning a twofold question arises: first, what the specific content and relative importance is of this concept in view of the current economic crisis and the other challenges regions face; and second, what its implications for spatial planning are, especially in areas most exposed to current threats. This paper draws evidence from current experience in Greek metropolitan areas which are going through a process of updating of their strategic planning documents, and aims to consider the above-mentioned conceptual and policy issues.

1. Introduction

As contemporary societies face the challenges of globalization, climate change, and economic crisis, previous certainties about spatial development and spatial planning in terms of both theory and policy are being tested or even questioned. The role of factors pertaining to environmental threats seems to be crucial in this respect, first and foremost regarding their impacts on ecosystems, the economy and society. It is worth noting that despite the fact that these phenomena and their impacts are of a global nature, they have indispensable territorial dimensions thus leading to a transformation of spatial policies, namely spatial development policy and spatial planning, primarily in the context of supranational organizations such as the EU. Even in the UN context, which in principal addresses both climate change and developmental problems on a global basis, a strong territorial

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approach has been developed. The UN has initiated the 'Down to Earth: Territorial Approach to Climate Change (TACC)' Programme with the aim to promote collaboration among UNDP, UNEP and eight associations of regions, and more particularly, to assist regional and local governments in developing countries with formulating integrated strategies and action plans, integrating climate change into sustainable development planning, enhancing the relevant institutional capacity of local governments and so on (UNDP 2011).

Growing consciousness about climate change and an acknowledgment of the need to address the problem of greenhouse gas emissions from various sources as well as to prepare communities and territories for coping with its results that is to promote mitigation and adaptation measures respectively, has brought the issue of resilience to the fore. According to the UN Intergovernmental Pannell on Climate Change (IPCC 2007) resilience is "the ability of a social or ecological system to absorb disturbances while retaining the same basic structure and ways of functioning, the capacity for self-organization, and the capacity to adapt to stress and change". It is within the UN context that the World Conference on Disaster Reduction (WCDR), in 2005, adopted the 'Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters' with the aim to "promote a strategic and systematic approach to reducing vulnerabilities and risks to hazards" (UNISDR 2005, 1). In practice, hazardous events with severe territorial impacts such as hurricanes, tsunamis, earthquakes, floods, volcanic eruptions, and wars have led the UN to launch a strategy towards precaution and recovery from such phenomena. For instance, tools on "good recovery practice" were drafted in the context of the International Recovery Platform which was conceived at the WCDR as a key pillar for the above 'Framework for Action'. These tools offer guidance on recovery on the following themes: Shelter, Livelihood, Environment, Gender, Public Infrastructure, Governance, Health, Psycho-social, and Climate Change (IRP 2011).

2. Conceptual issues

The concept of resilience goes in tandem with a variety of other concepts, all of which fall under the heading of 'planning for risk prevention'. In this context, concepts such as vulnerable and vulnerability as well as resilience and resilient, which are interrelated with the concepts of risk and hazard, have been introduced in the study of the impacts of the dramatic changes which have been caused or are expected to emerge from the above hazardous phenomena. On the basis of the assumptions and definitions adopted by the ESPON Hazards Project (Schmidt-Thomé 2006) these concepts and their relationships can be schematically described as follows:

> Risk is "a combination of the probability (or frequency) of occurrence of a natural hazard and the extend of the consequences of the impacts. ... Risk = hazard potential x Vulnerability...
> Vulnerability is the degree of fragility of a (natural or socio-economic) community or a (natural or socio-economic) system towards natural hazards. It is a set of

> conditions and processes resulting from physical, social, economical and environmental factors, which increase the susceptibility of the impact and the consequences of natural hazards ... Vulnerability = Damage potential + Coping capacity" (Schmidt-Thomé 2006, 11).
>
> Coping capacity "refers to the manner in which people and organizations use existing resources to achieve various beneficial ends during unusual, abnormal, and adverse conditions of a disaster event or process. The strengthening of coping capacities usually builds resilience to withstand the effects of natural and other hazards" (GTK 2003, 17).

It is obvious that coping capacity to a great extent is of institutional nature, in the sense that it represents the level of readiness of local institutions. This is also the case with resilience as it is closely related with coping capacity.

As current threats to the economy, society and the environment grow, resilience along with vulnerability are metaphorically used as terms which characterize countries, regions, and cities as well as the various subsystems operating within them. In addition, these notions have been introduced in studies on the various effects of dramatic economic and social changes pertaining to the global economic crisis on territorial systems. In searching for the way out of crisis-related problems, the notion of regional resilience is accentuated since it represents the ability of regions and territorial systems in general to adjust to changing circumstances and remain stable (Hudson 2010, CJRES 2010). Therefore, resilience is highlighted in the field of spatial development and tends to supplement and even replace widely established concepts such as sustainable development and spatial competitiveness. Thus the question arises as to what resilience means if transferred to the context of the economy and society and more particularly, what its implications for spatial policies are, especially in areas most exposed to current threats.

Several definitions of the term can be referred with their roots being in the environmental and ecosystem approach (Davies 2011), as resilience is linked to sustainable development (Ahern 2011). According to Walker and Salt (2006, cited in Ahern 2011) it is defined as "the capacity of system to respond to change or disturbance without changing its basic state". Dos Santos and Partidario (2011) describe resilient systems as being "more adaptable to change, ... more able to learn and … less vulnerable to disturbance and external shocks (e.g. natural phenomena, economic crises or political shifts)".

Of course, the concept of resilience should not be overestimated. Like other concepts of this type, it could arguably fall into the category of what Raco (2009) has called 'pseudo-concepts'. As with other notions related to territorial development (flexibility, sustainability, and globalization) it could be characterized as a 'fuzzy' concept according to Markousen (1999) and this could in part explain its success. Under specific circumstances the 'metaphor of resilience' could serve to shed light on regional changes and facilitate the

elaboration and implementation of various policies (Pentall et al 2010). It could lead to the rethinking of the core assumptions which have prevailed in the last decades and to the emergence of "alternative, less growth-oriented agendas" (Raco 2009).

In order to exploit this approach beyond merely environmental concerns, of particular importance is to identify the whole system of reference (e.g. a city), the type and source of hazards (e.g. economic crisis-related problems), the characteristics of the risk, and of course the "damage potential and coping capacity as the two main sides of regional vulnerability" (Schmidt-Thomé 2006). The very operation of resilience is crucial, as it can have different characteristics, with different focuses. Martin (2012, 5) identifies the following interpretations/types of resilience with different focus for each:

> " 'Engineering' resilience: Ability of a system to return to, or resume, its assumed stable equilibrium state or configuration following a shock or disturbance. Focus is on resistance to shocks and stability near equilibrium.
> 'Ecological' resilience: The scale of shock or disturbance a system can absorb before it is de-stabilized and moved to another stable state or configuration. Focus is on 'far from equilibrium' behaviour of system.
> 'Adaptive' resilience: The ability of a system to undergo anticipatory or reactionary reorganization of form and/or function so as to minimize impact of a destabilizing shock. Focus is on adaptive capability of system".

According to Foster (2010), when it comes to policy issues, time and space, among others are of particular importance. Questions arise as to the different recovery times that correspond to different variables and to the time "we give a region to demonstrate resilience" (ibid.).

Finally, among the issues raised by the regional resilience concept the following question can be argued to be relevant to the fundamental work on Political Economy, 'the Wealth of Nations' by Adam Smith (1776/2000), in which the main question is: what are the key parameters behind the ability of some regions or countries to succeed and prosper while others are not able to withstand external shocks and return to their previous state. From this point of view, there are no easy or timeless answers to questions about resilience, as the parameters of time and space are of decisive importance (Foutakis 2012).

In addition, among other problems inherent in the use of the concept of resilience beyond merely environmental issues, it is important to note that resilience-related priorities as set in relation to environmental risks differ from those pertaining to economic development, above all the pursuit of spatial competitiveness. Combating climate change and a transition to an economy free of fossil fuels requires a shift towards greater self-sufficiency of regions (Green New Deal Group 2008). The need for a re-localization of many economic activities, such as energy production, along with the pursuit of securing self-sufficiency by means of exploitation of renewable energy sources at the local level seems to be

inconsistent with several aspects of contemporary policies that aim to strengthen regional competitiveness. For instance, there is on the one side the need to put emphasis on the production of local goods that pertains to environmental resilience, and on the other the effort to strengthen international flows that goes in tandem with the pursuit of regional competitiveness and consequently of the resilience of regional economy. There is thus a tension between the policy priorities arising from the two different options of the concept of regional resilience, namely environmental and socio-economic resilience. In this respect it can be argued that the territorial level of reference is appropriate for addressing questions raised in relation to the concept of resilience.

3. Resilience and spatial policies

In the last few years the situation in several regions and metropolitan areas has been characterized by dramatic changes. In addition to the impacts of environmental threats, since the outbreak of the economic crisis in 2008 a number of parallel crises have come to light or worsened adding new challenges for regions and metropolitan areas. Yet it seems that the pursuit of resilience has lately taken the place of the pursuit of sustainable development and spatial competitiveness, which prevailed during the 1990s and 2000s respectively. Thus the question arises as to what resilience means if transferred to spatial policies. As with sustainable development, planning for resilience seems to be dependent not only on the content but also on the process of planning. In their elaboration of a particular planning model aimed at ensuring resilience, Dos Santos and Partidario (2011, 1529) argue that "Planning for resilience … is neither about creating new formal plans nor about introducing new orientations, but it is instead about how to raise awareness in relation to a more open-mind-to-change perspective, which is critical to deal under uncertain realities, even in more traditional planning contexts".

From this point of view, resilience-related planning principles are very close to those of established new strategic spatial planning practices (Albrechts 2011) in a twofold way: first their focus is on planning procedure, given that "resilience is a more strategic than normative concept" (Ahern 2011, 342) and, second, they are thematically structured instead of following an analytical sectoral approach. A third argument could be that as the new strategic spatial planning builds much on the upgrading and exploitation of territorial governance, it can enhance the institutional capacity of territorial systems, which means building territorial resilience. As already mentioned, coping capacity is of institutional nature, in the sense that it represents the degree of readiness of local institutions among which participation in the planning process is important. Some of its benefits are described as follows: "stronger commitment to jointly agreed planning measures, the horizontal and vertical integration of a community (building social capital and concrete response networks), and better public awareness of hazards" (Burby et al 2000, cited in GTK 2003, 96). Irrespective of any criticism of strategic spatial planning, the 'resilience metaphor' can provide it with updated planning concepts (Pendall et al 2010).

The above shifts are heavily dependent on the specificities of each individual country and region. In the metropolitan areas of the US, for instance, a new type of degradation of the built environment - and consequently the everyday life of citizens - has emerged, culminating in the 'foreclosure' phenomenon (Swanstrom et al 2009). As a response, specialized planning agendas have been set up, with the objective to promote regions' resilience capacity and to "build and sustain strong metro regions" (ibid).

Regional impacts vary and depend on the specificities of each country, the institutional and policy framework as well as the fiscal context (Davies, 2011, 1). As far as the individual EU regions are concerned, the situation differs from country to country in proportion to the extent that each country's overall system is exposed to the impact of the crisis. Even before the outbreak of the crisis, four key challenges were identified for European regions, namely globalization, demography, climate change, and energy, which determine the vulnerability of each region (CEC 2008). In the context of the preparation of the next programming period of cohesion policy, regional vulnerability to climate change has been given a key role, which is in accordance with the 'Europe 2020' strategy. This is expected to reinforce a shift towards resilience based regional development strategies in the Operational Programmes of the period 2014-2020 (Hjerp et al 2011).

The growing interest in climate change related measures in the context of cohesion policy and consequently on their territorial dimension has accentuated the role of regional spatial planning, which, however, is not in the competence of the EU. The reason is that regional spatial planning is closely related with territorial specificities of individual regions and henceforth to climate vulnerability of regions. The Directive on Strategic Environmental Assessment (SEA) (Official Journal 2001) was the first to influence regional spatial planning towards combating climate change, albeit with no direct reference to the latter.

4. Evidence from Greece

Evidence from spatial policies in Greece can serve to explore the potential of a resilient-based approach to spatial planning especially in metropolitan areas which are the most vulnerable to contemporary challenges. It is worth noting that both regional development policy and regional spatial planning in Greece are influenced by the EU policy and funding context, albeit to different degrees. Regional development policy has a relatively rigid character as it closely follows EU guidelines. Regional spatial planning, which is not in the competence of the EU, is influenced by developments in Europe and is likely to adopt up-to-date planning tools. When it comes to strategic planning for metropolitan areas this is the case with the 'Regulatory Plans' of the greater areas of Athens and Thessaloniki ('Rythmistiko Schedio' that is city-region plan) (EC 1997). As noted above, planning for resilience is of strategic character and is also closely related to the participatory process. Hence the potential of these two Plans towards a resilience-based approach can be roughly examined in terms of these two parameters. Evidence can also be drawn from the

way the issue of vulnerability is addressed in the relevant documents, which will be based on the case of Thessaloniki.

First, the strategic role of the two 'Regulatory Plans' had not been identified as such since their launch in 1985, as there was undoubtedly a desire for a regulatory role of spatial planning at that initial stage. Nevertheless, these Plans were the only then-existing strategic spatial planning instruments in the country (EC 1997). A renewed interest in strategic spatial planning emerged in the late 1990s that was associated with a similar tendency in Europe. From 2003 onwards the urgent necessity for an up-to-date strategic planning tool for the metropolitan areas found expression through the process of updating the two 'Regulatory Plans'. The relevant studies have been completed and put under public consultation and are expected to be given legal form. The strategic role of the new 'Regulatory Plans' of Athens and Thessaloniki is explicitly spelled out in the relevant texts and confirmed by their content, which includes a preliminary projection of strategic goals. Their strategic role is also evident in that they introduce new ideas and also in that they link process with outcome. More particularly, of the ideas they introduce the adoption of sustainable spatial development can be considered innovatory. As regards the linkage between process and outcome, this is evident in that the draft new Plans provide for an action plan.

Second, regarding the involvement in these two Plans of forms of participation that are considered a prerequisite of resilience-oriented planning, the importance of such an approach is acknowledged at several points in both planning documents. The draft new 'Regulatory Plan' of Athens cites "improvement of the system of spatial planning and governance" as its "number one priority axis", mentioning it along with ten selected thematic axes. In practice the elaboration of the Plans has proceeded in a rather formalistic manner with participation based mainly on public consultation and public debate with socio-economic partners and local and regional self-government. This has to do with the organization of the planning system in the country and especially its centralized character. In this respect it should be mentioned that a new balance between the newly-established institutions of local and regional self-government and the pre-existing central state mechanisms is currently under formation in the context of the 'Kallikratis' administrative reform.

Although not expressed as such, the notion of vulnerability of metropolitan areas in Greece is partly evident in strategic spatial planning, particularly with reference to: (a) civil protection and (b) environmental protection. The first one is addressed by a specific nationwide institutional framework which makes provision for competences of local and regional self-government and of metropolitan administrative structures (Dandoulaki 2011). The second one, namely environmental protection of the greater areas of Athens and Thessaloniki respectively, is evident primarily in that the official Plans which were ratified by Laws 1561 and 1515 of the year 1985 respectively have the title 'Regulatory Plan and the Environmental Protection Programme of the Greater Athens [Thessaloniki] Area'. Recently, the need to comply with the EU directive on SEA accentuated the environmental dimension of the draft new Plans.

Besides, according to the EU priorities, specific provision is made in these Plans for climate change-related measures, especially for mitigation purposes. The draft new 'Regulatory Plan' of Thessaloniki among others aims to "Contribute to climate change combating through reducing energy consumption … and preparing to address its impacts". It specifically provides for "Dealing with natural and technological hazards and disasters" by means of: (a) cooperation among agencies which have the responsibility of planning for civil protection and civil security, (b) planning and management of specialized studies and actions concerning civil protection and civil security and (c) utilizing environmental and spatial planning tools to promote additional mitigation and adaptation measures. Specific provision is made for measures aiming to prevent earthquakes, floods, industrial accidents and fires. In addition, in the 'Environmental Protection Programme', which is incorporated in the draft Plan, there is an entire subject area dedicated to climate change mitigation and adaptation measures with special reference to the relevant 'National Action Plan' (OR.TH. n.d.). However, despite the fact that the Plan's contribution to "sustainable and environmentally compatible development and reconstruction of the economy of the area" is identified as one of its key objectives, no reference is made to vulnerability pertaining to hazards of a socio-economic nature (OR.TH. n.d., Thoidou 2012).

It is evident from the above that the resilience-oriented approach to strategic planning of metropolitan areas in Greece focuses on the protection of the environment and the combat of climate change-related phenomena. This is more important if we consider that from 2008 onwards Greece has been under pressure from the economic crisis it is passing through, and the overall situation in the country's metropolitan areas has seriously changed. There has evidently been a contraction of the public sector's role in promoting metropolitan development through large-scale infrastructure projects. In addition, the competitive city/region strategy that prevailed in the 2000s should now be reconsidered, since it can be argued that "undermines any attempt at welfare planning" (Hadjimichalis 2011, 267-268). These proceed in tandem with the deepening of socio-spatial inequalities and tensions within metropolitan areas – Athens in particular – which in turn necessitates new ways of dealing with problems. Hence it seems reasonable that the whole endeavor of updating the Plans should take into account the new socio-spatial circumstances under the crisis conditions in Greek metropolitan areas.

5. Concluding remarks

As is the case with several concepts in the planning domain, regional resilience draws from an ecosystem approach and thus involves the risk of underestimating socio-economic parameters and complex processes that might cause regional vulnerability. However, its incorporation in the policy agendas of supranational organizations such as the UN and the EU and its further elaboration should not be ignored nor its expansion to regional and local levels, especially in the context of spatial planning. Planning for resilience is gradually being necessitated under current crisis conditions and gains ground as a tool capable of preventing areas from hazards

of various types. Furthermore, strategic spatial planning is considered to be a key parameter towards resilience building, through strengthening the institutional capacity of territorial systems in the sense of their ability to cope with contemporary challenges.

As in the scientific domain the issue of spatial planning in the crisis era seems to gain ground, it is worth considering whether it can be specified in practical terms through its incorporation in the planning documents and processes. The case of metropolitan areas in Greece reveals that the potential for such an approach depends on the characteristics of the plans and the related planning process. Arguably, under specific conditions, the strategic approach to spatial planning has the potential to secure both an adaptable structure of the plans and a genuinely participatory planning procedure that is suitable to serve as a tool of planning for regional/metropolitan resilience. Furthermore, the supranational context can be utilized as a reference basis for policy measures, planning tools and good practices which should be selectively adjusted to each particular territorial area. The sustainable development concept could serve so as to justify an approach to not only environmental but also socio-economic resilience. Above all, the effort towards building territorial resilience can highlight new ways of dealing with problems, new ways of utilizing policy instruments and more generally a rethinking of what has hitherto been taken for granted.

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Age-based Neighbourhood Development – Challenges for Sustainable Cities

Heidi Sinning[1]

Abstract
In recent years modified demands on housing and community development have emerged because of different reasons. Especially aging and diversification of society due to the demographic change have become important issues for urban planning. The people in Germany who are 65 years and older are expected to increase from 20% in 2008 to 33% in 2050. Especially the very old people (80plus) will increase strongly. Similar situations exist in several European countries.

Elderly people are not a consistent group, but the group of seniors has very different lifestyles and demands. In order to be competitive in an aging market building companies as well as all other kinds of businesses and communities will have to adapt and react to changing demands. How can the aged population be systematized and classified? Which are the main specificities of the different groups?

In the context of the research project „WASta - Housing of Elderly People in the Context of Urban Development" results of surveys in the German cities of Leipzig and Gera and theoretical investigations have been used to find answers. One result is that the state of health and the financial situation of elderly people are basic factors for differentiation.

Based on these results, on preceding findings and a systematization of the aged population, requirements for housing companies as well as for communities are derived how sustainable cities can focus on the very specific demands of elderly people. A key answer is an integrated perspective on neighbourhood development. An age-based neighbourhood development needs to be oriented on the people's needs. It involves the planning and equipment of the dwellings, the buildings (incl. entrances, halls, stairs, corridors etc.), the environment of buildings (e.g. greens, gardens, footpaths, benches), open spaces, parks, social and technical infrastructures in a neighbourhood.

An assessment framework „Age-based neighbourhood development" has been worked out, which shall help to evaluate the current quality of a neighbourhood and to prioritize actions from the perspective of housing companies, urban development and elderly people. Examples illustrate the assessment framework and show how age-based neighbourhood development can be implemented.

Keywords:

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Age-based neighbouhood development, demographical change, housing, community development

1. Introduction – current trends and challenges

Demographic and social changes result in modified demands on housing economy. With their rising share in the overall population elderly people become increasingly important enquirers on the rental market. In shrinking or stagnating city regions the rental market that used to focus on supply has been replaced by a demand market. Housing companies have to avoid enduring long-term vacancies of a bigger extent and respond to the needs of the elderly as an increasingly important target group in order to operate economically sustainable. Challenges for housing companies do not only exist in the overall increasing share of elderly people as enquirers but in their modified and diverse demands for their dwelling, its surrounding area and accompanying services. Housing in this sense refers to the flat, the building, the surrounding area, infrastructure, services and social networks.

However elderly people do not form a homogeneous target group. Therefore this article outlines the proceeding diversification of this group. In this context main questions are: What kind of approaches of systematization exist? Which aspects are especially interesting for the differentiation of elderly people? Which requirements have different groups of elderly people and which qualities do they expect? And last but not least, which strategic approaches for age-based development are of interest for cities and communities?

Looking at the significant trends the following aspects can be highlighted (see also illustrations 1-3; Statistisches Bundesamt 2009 und 2011):

- Increase of the elderly: The part of people in Germany being 65 years and older will increase from 20% in 2008 to 33% in 2050.
- Greatly increasing share of the generation 65plus and the oldest old (being over 80 or even over 85 years old): The share of people being over 65 years old will rise from 21% (2009) to 34% (2060). The share to the oldest old (85plus) will increase from 2% (2009) to 9% (2060) of the overall population in Germany.
- Parallel to a higher life expectancy more and more people experience a longer healthy life time. Health of elderly people is very differently pronounced. Studies have shown that a difficult health status and financial situation (increasing poverty among the elderly) lead to less outdoor activity and to a reduction of social networks.
- Especially elderly women often live alone. Between the age of 60 and 85 the share of women living alone rises significantly according to statistical data of 2009.
- The importance of social networks beyond family bonds increases whereas the significance of the classical family bonds decreases.
- Last but not least, elderly predominantly wish to live at their home place as long as possible.

Illustration 1: Trend: Increasing share of elderly people in the overall population (2010 and 2060) (Source: Statistisches Bundesamt 2009)

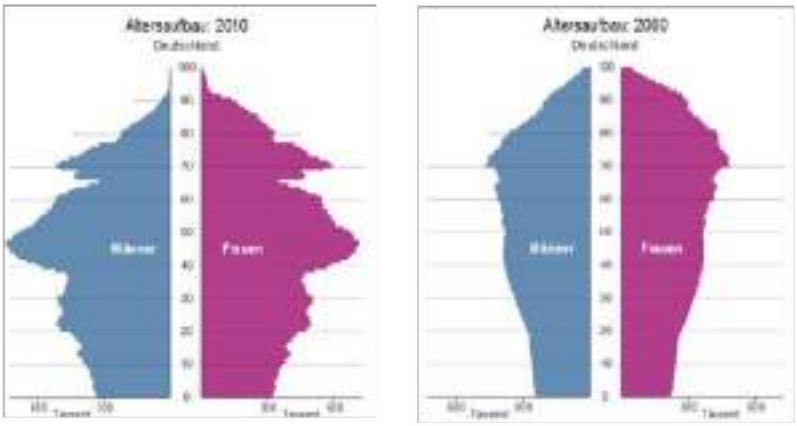


Illustration 2: Trend: Highly increasing share of the generation 65plus and the oldest old (over 80 or even over 85 years of age)
(Source: Statistisches Bundesamt 2011: 11)

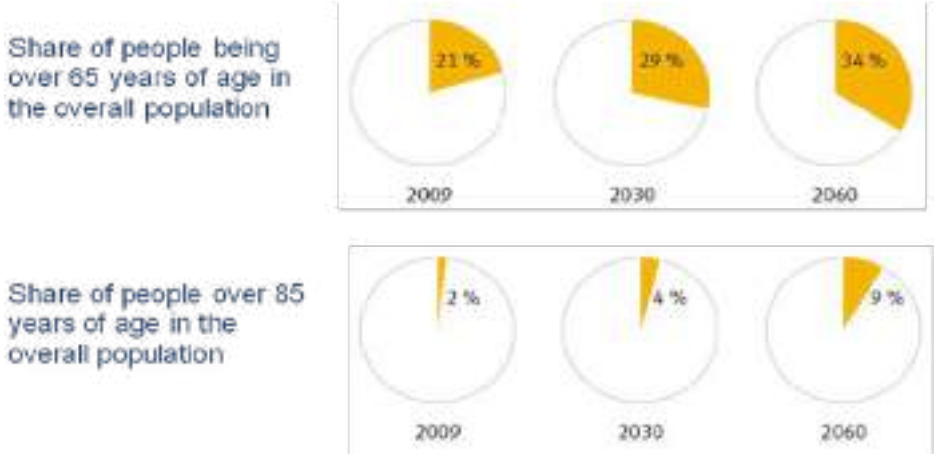
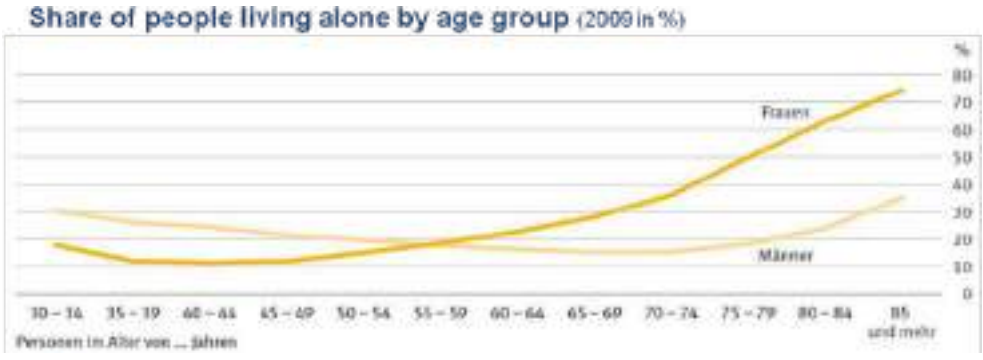


Illustration 3: Trend: Especially women often live alone
(Source: Statistisches Bundesamt 2011: 20)



Scientific Background

In the context of the research project „WASta – Housing of Elderly People in the Context of Urban Development“ trends and challenges outlined above were reassessed. The project has been funded by the German Federal Ministry of Education and Research (BMBF) and aims to describe the diversification of the target group generation 50plus, develop a classification to distinguish different demander groups among the elderly, and identify their specific housing needs. The project focuses on specifying the group 50plus with their differentiated housing aspirations and needs as a target group for housing companies. Furthermore recommendations are to be developed within the project to enable the application of the new aspects of classification and to meet concrete requirements on the implementation of an age-based neighbourhood (Gädker, Sinning, Thalheim 2012).

2. Systemizing the group of elderly people

For housing economy and urban development to adequately react to differentiated housing needs and demands of the target group of elderly people a small scale view and detailed knowledge of the target group are prerequisites. Against the background of theoretical approaches regarding aging, e.g. disengagement- and activities-theories, there are different approaches to systemize elderly people. Existing classification approaches are:

- chronologic age/calendrical age (e.g. „young old“ 50 to 65 years of age, seniors 65 to 80 years of age and „oldest old“ above 80 years of age);
- cohorts (by life experience, e.g. world economic crisis/ post-war period /economic miracle in Western Germany; see inter alia Kreuzer 2006);
- phases of life model (different approaches with two to eight phases; see inter alia Höpflinger 2008):
- life style approach (opinions, values, social position, educational status, financial means etc.; see inter alia. Schneider, Spellerberg 1999);
- Sinus-Milieus® approach (milieus are e.g. hedonists, performer, tradionals, konservatives; aspects of differenciation are spatial, cultural and social condition etc.; see inter alia.Sinus 2010);
- Social milieus (Federal association for Housing and Urban Development (vhw) together with Sinus-Sociovision): three types of elderly people, based on a “body & mind typology”: Best Ager, Old Ager und Old Kids (see amongst others Podding 2006, Borgstedt 2010).

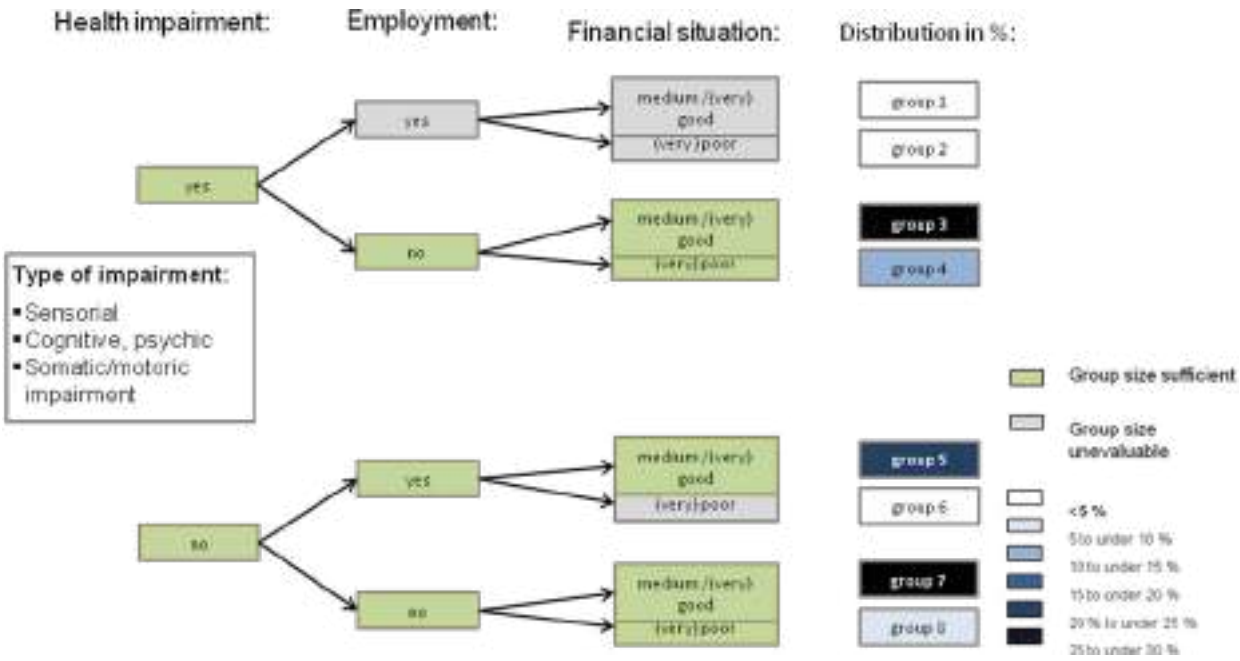
These approaches however rarely relate to housing. Due to insufficient data previous approaches are not easily applicable in the practice of housing economy or they are too general to allow specific conclusions regarding housing. Therefore, within the research project “WASta – Housing of elderly people in the context of urban development” the aim has been to work on an applicable classification of people being over 50 years of age.

For this classification of the elderly the heath status and the financial situation were taken as leading criteria next to recreational activities (life styles). So far these criteria have hardly ever been taken into account by housing economy and urban development. The classification approach is based on empirical findings from a written household survey of 3000 residents in the cities of Leipzig and Gera as well as from an expert workshop and literature research. In

the survey individual health impairments, e.g. in the fields of hearing, watching, walking, could not be included. But for deeper analysis it would be necessary to further differenciate.

As illustration 4 shows the groups 3 (group with health impairments, not employed, average to very good financial situation, about 25-30%), 5 (group without health impairments, employed, average to very good financial situation, about 15-20%) and 7 (group without health impairments, not employed, average to very good financial situation, about 25-30%) of elderly people in the cities of Leipzig and Gera are dominant. This means that in particular for group 3 there is a need for meeting their requirements on the housing market. Group 4 (group with health impairments, not employed, bad to very bad financial situation) is expected to increase in the future ("elderly poverty").

Illustration 4: Classification approach of elderly people by health status and financial situation (source: own scheme)



3. Requirements for neighbourhood development and housing economy

Against the background of the systematization approaches and health status and financial situation as main criteria of differentiation housing companies and urban development are challenged to develop and modify neighbourhoods and the housing stock according to the needs of their residents and in adequate quantity and quality. In this context the following challenges are important:

- Elderly people do not form a homogeneous but a more and more heterogeneous group. Accordingly a greater diversification becomes necessary oriented above all to health status, financial situation and recreational behaviour respectively life styles as distinguishing features.
- An age-based city and neighbourhood development, pursuing the goal of supporting the residents to as long as possible live their lives self-reliantly and self-determinedly, requires an integrated and neighbourhood-oriented approach of housing and urban development. Of particular importance is integration of housing stock, its surrounding area and neighbour-

hood infrastructure. Furthermore social networks and neighbourhoods ought to be taken into account.
- As the area surrounding the dwelling gains in importance with an increasing age a neighbourhood perspective is essential planning and developing concrete improvements to the quality of life.
- Quality of housing is a major „hard“ locational factor for cities and municipalities. For their residents the quality of housing has an important impact on their quality of life. Especially due to the great increase of the elderly and the share of old aged modifications to the quality of housing are promising activities for cities and municipalities to improve their position in a target group oriented competition for residents.

Assessment framework „Age-based Neighbourhood Development“

The differenciation of elderly people helps to understand their specific needs. A possibility to enhance the quality of life of elderly people is to measure this quality in detail. Therefore, an assessment on “Age-based Neighbourhood Development” has been developed aiming at the needs of local residents and at screening the quality of flats and buildings, the surrounding area, services and infrastructures in the neighbourhood.

The criteria “requirement-based/age-based” aim to improve the quality of life of different target groups. Age-based neighbourhood development includes constructional, social, financial and nursing aspects. Requirement-based expresses that adaptations to the neighbourhood are to be oriented on the actual requirements of different residential groups. This includes flexibility for adaptations to the dwellings for example or that services are oriented to actual requirements (pick-up and delivery services, care services etc.). The model of neighbourhood development is based on an understanding of the different needs of generations in a cross-generational neighbourhood. (cf. Kreuzer 2006: 156).

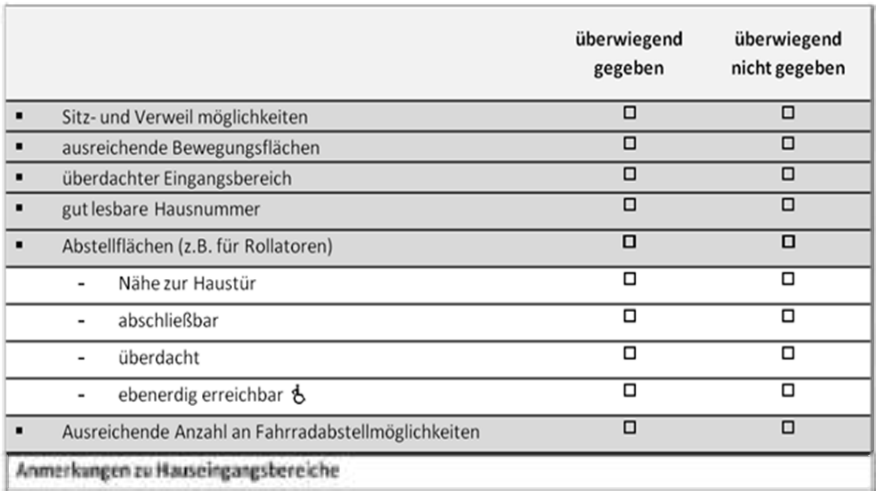
The assessment framework focuses on the demands of elderly people. Most items being of advantage to elderly people (no doorsteps, platforms etc.) are also of advantage to other population groups such as parents with prams, bicyclists etc.

The assessment supports screening the following aspects regarding their current condition and their contribution to the neighbourhood development:

- building / flat
  - entrance situation
  - front door
  - stairway / corridor
  - lift
  - door of flat
  - bell
  - floors
  - furniture
  - management utilities etc.
- area surrounding the flat
  - entrance area
  - parking sites
  - footpaths

  - street and traffic area
  - public transport
  - open space
  - infrastructure and services
  - recreational activities
  - supporting neighbourhood relationships
- planning and implementation process
  - participation
  - co-operation
  - communication
  - structural neighbourhood development

Illustration 5: Extract from the assessment framework, example “door entrance” (Source: Institute for Urban Research, Planning and Communication - ISP 2012)



	überwiegend gegeben	überwiegend nicht gegeben
▪ Sitz- und Verweil möglichkeiten	☐	☐
▪ ausreichende Bewegungsflächen	☐	☐
▪ überdachter Eingangsbereich	☐	☐
▪ gut lesbare Hausnummer	☐	☐
▪ Abstellflächen (z.B. für Rollatoren)	☐	☐
- Nähe zur Haustür	☐	☐
- abschließbar	☐	☐
- überdacht	☐	☐
- ebenerdig erreichbar ♿	☐	☐
▪ Ausreichende Anzahl an Fahrradabstellmöglichkeiten	☐	☐
Anmerkungen zu Hauseingangsbereiche		

As the assessment of a neighbourhood is always subjective it ought to be applied by persons of different personal backgrounds. (e. g. stakeholders of housing economy, urban development, senior representatives, residents’ representatives with different health status). To apply the assessment it is recommended to develop a common interpretation of the assessment results as gathered by different persons. Besides others the following aspects ought to be assessed:

- Which aspects have not been put into practice / were regarded to have a negative impact?
- Which areas call for action?
- Which items of the assessment are assessed differently by different stakeholders?

From the results of the assessment of the current condition the need for action can be deduced regarding as well the community and the local development as well as the housing companies and their housing stock.

4. Conclusion

As the contribution shows it is of great importance to pursue an integrated strategy to meet the current adaptation requirements in urban planning and development in the course of an ageing population and a more significant generation of elderly people. Especially on the level of neighbourhood development stakeholders can contribute to the implementation of measures to meet the current and future requirements of age-based planning and equipment.

The challenge is not about developing "ghettos of elderly people" but to design mixed neighbourhoods for young and old inhabitants. All generations benefit from an age- and requirement-based equipment although the orientation towards health impairment and an increasing demand for local supply of social, transport, recreational infrastructure and services particularly corresponds in particular to the needs of elderly people.

There are specific demands and target group specific requirements of elderly people on housing and its surrounding area. To integrate health status and financial situation as distinguishing features in the classification of the elderly first of all necessitates the investigation of adequate data, e.g. in a local household survey. The availability of those data enables cities and housing companies to address specific housing requirements.

In order to design age- and requirement-based neighbourhoods, stakeholder groups, such as housing economy, city development, residents, representatives of residents like senior committees, will have to enter into a dialogue, commonly assess strengths and weaknesses of the neighbourhood development and deduce measures and priorities. Furthermore, age-based neighbourhood development requires interdisciplinary co-operation including different stakeholder and departments.

The assessment framework "Age-based Neighbourhood Development" has the potential to support this process. Existing assessments on age-based planning and design are often aligned only to singular topics, for example the flat or footpaths. The assessment framework which is described here is based on an integrated approach including all topics of importance for the quality of life of elderly people. Only a holistic view and co-action of several measures as well as the collaboration of different stakeholders in a neighbourhood can achieve a sustainable improvement of elderly residents' quality of life.

Finally it seems necessary to underline that a specific challenge for future urban development that ought to be taken into account at the implementation of an age-based neighbourhood development is poverty among the elderly and the related question how affordable housing and quality of life respectively housing can be maintained or newly achieved for low income households. This topic as well as the earlier explanations of this contribution show that age-based neighbourhood development will become an increasingly important challenge for the development of sustainable cities and especially for urban planning in the coming decades.

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Landscape and urbanisation processes in Ave's Valley Region (Portugal): Inner-orders as expression of territorial resilience and new instruments of planning

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Abstract:

The paper addresses the urbanisation processes in Ave's Valley Region, in the North of Portugal, over the last 60 years as a way to explain the look of a landscape that is hard to visually grasp or coherently describe. As in so many contemporary urban areas that withstood considerable expansion of its urbanisation over the last decades of the 20th century, especially the ones that grew in-between the traditional cities, the outcome is an almost chaotic (dis)organisation, visually marked by the difficult legibility of the logic between buildings and activities settlements, built and non-built spaces, scales of the built objects that stand side by side or the way they (do not) meet.

Traditionally, Ave is a region that is identified with the dispersed urbanisation within the countryside, but from the 1850s industrial era, the distinction between the countryside and the cities started to blur into a globally urbanised territory. Grounded in the rural parcelling system and served by pathways, and more recently also by roads, the diffused location of housing and industry within the territory derives from closely articulated economic processes and socio-cultural features. The textile industry is the head sector of this "industrial district" and the study of its evolution through time when adequately crossed with the urbanisation models is one of the prime instruments to understand the place we focus on.

The framework of analysis follows a dual-approach: the image of the landscape is analysed through its morphological components, as the comprehension of physical form constitutes the main trigger for this paper, but at the same time by a socio-economic perspective that reveals the importance of the facts that really provide an explanation for what we see. The mixing of housing, industry and agriculture inside the same private lot; the multi-activity setting of the inhabitants, or the empiric vs. academic knowledge of the industrial working force are some of the particular aspects that gave form to a very special landscape and that a focus based solely on the aspects of physical form fails to apprehend.

The sum up of the different urbanisation models – as expression of an identity deeply rooted in space – configures a palimpsest that is mainly the outcome of spontaneous processes. More recently, though, this has had to come to terms with an effective planning practice as well as with new economic inputs on territorial organisation. Global vs. local is the jargon that since the late eighties started to establish other «orders» in the territory and its effects added to the visual confusion and lack of legibility. Dealing with it, as we seek for «new» instruments of planning, meant

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founding and revealing a possible inner-order that is hidden but is already there; and this may be a valid extendable principle to other critical aspects of territorial life.

Key words: urbanisation processes, resilience, planning instruments

1. Landscape and urbanisation processes in Ave's Valley Region (Portugal): Inner-orders as expression of territorial resilience and new instruments of planning.

The existence of urban areas that have grown beyond traditional city boundaries, holding these within and gathering them into relational systems – from which the continuous urbanisation is one of the most evident outcomes – is not definitely new in urban planning. Today it is globally consensual that the exception presented by P. Geddes in 1915, or J. Gottmann in the 1960's is now a common fact. However, the physical expressions through which they become real are quite different and their geographic place in the world and its background seems to be one of the explaining aspects of that difference (Dematteis, 1998; Gandelsonas, 1999).

This paper focus its study on the North of Portugal, on what some academics call the "diffuse city of the Portuguese NW" (CE-FAUP, 2002), an «object» that in so many ways mirrors an image one got used to recognise as characteristic of the Mediterranean countries of South Europe (Dematteis, 1998; Font, 2004). It is not, nonetheless, the whole *diffuse city* that it is going to be analysed here, as that city covers a maritime strip of about 120km length and 50km width in national ground, but which could extend until La Coruña, in the North of Spain (due to the features both territories share and that allow them to be understood as a bigger system, indifferent to national borders).

The study addresses one of the urban subsystems that constitute the "diffuse city of the Portuguese NW" – the Ave's Valley Region, distinguished for the specificity of its socio-economic and morphologic landscape and where the strength of the inner-orders that the analysis of its evolution through time brings to light as a resilient feature. It is this resilience that allows this case study to feed a part of the debate around which this track sustains itself, showing both the "*need to revisit the arguments regarding physical form and urban design*" and to question "*the applicability of compact city measures in existing urban areas*" that were not born as (part of) cities. To think about and intervene in this area (as in so many others of the Mediterranean contemporary urban systems) demands the compromising effort between the critical but distant analysis, (thus, more objective) and the understanding of local forces acting in place, such as the geographical, economic and socio-cultural ones.

The first approach to this understanding leans on comparative cartographic evolution since the 1950s until 2003[2] – the period when true spatial mutation happened –, observing the distribution of buildings and paths/roads within the territory, the changing of its density and the (il)logic patterns thus configured. However, if significant visual changes happen later in the landscape, the explaining arguments for this transformation date back to the second half of the 19th century (and even before), when Ave's Valley starts becoming the national leading textile industrial area. The presence of Ave's river and a dense network of water courses made it the ideal place for the delocalisation of

[2] In terms of population the reference period limit will be 2001, as it corresponds to the year of national population census.

industry from Porto (the main industrial northern hub), as well as for the settlement of brand new units; water was not, nonetheless, the only factor that weighted on the decision – the characteristics of the working force was also determinant to the spontaneous design of what much later would be called an "industrial district" (Domingues, 1999).

Ave[3] is an area located in the North of Portugal, NW from both Oporto city and the urban subsystem – the central subsystem of the "diffuse city" – for which that city constitutes the main reference. The *Non-Metropolitan Conurbation of Ave's Valley* – the second most important subsystem in terms of population had, in 2001 (one of the boundaries of the time period studied), 384,158 inhabitants and "*Occupies an area of 433 km2 and extends over 22km in the North/South direction and for about 30 km in the East/West*"[4] (CE-FAUP, 2002, pp.74). Geographically, the Ave's subsystem kind of settles within slopes, where population rarely colonizes the territory above the 350m height (Sá, 2009). Under this height, buildings and inhabitants disperse throughout the valley in a pattern that has long been recognized as one of its main and more distinguishable features. Some academics (Sá, 1986) mention it already for the late medieval period, though (being certainly different the meaning of «dispersion» back then and nowadays) what one should grasp are the characteristics that allowed and justified that organization: on one hand, the peaceful climate that did not force the agglomeration due to defensive reasons; on the other hand, the geographic features – the easy topography, the abundant water sources and the fertile soil, characteristics that favoured multi crops. Adding to these, the small dimension of the properties and a dense network of pathways designing their limits were two other aspects that also encouraged dispersion.

The conditions above provided the linen production that until the end of the 18th century made the farmers also artisans (Gonçalves, 1993, pp.3). Since then, this previously marginal task starts to organise into an «activity» and by the end of the 19th century the environment that turns out industry, namely the textile industry, the prime economic sector of Ave's Valley is settled[5]. However, this fact coexists with the preservation of a close interdependence with the farming fields, a relation that is somehow kept over the years, throughout the 20th century: "*Despite the strong industrialisation of the area one did not observe the abandoning of the fields (which is characteristic in identical situations of great industrialisation) in exchange for an employment in the industrial factory*" (Magalhães, 1984, pp.132).

Apart from the pre-industrial settling of population (that will not be considered here), the general evolution of *modern* Ave´s Valley allows the recognition of two development «models», which result from the interaction between the local economy development and the dominant socio-cultural paradigms, each one being characterised by specific settlement features/principles: (1) the *traditional settlement model*, to which correspond a first type of dispersion of the urbanisation; and (2) the *contemporary settlement model*, which is identified by two simultaneous movements – a second type of dispersion of the urbanisation and an interstitial concentration in specific parts of more dense agglomeration (Sucena-Garcia, 2011).

[3] According to the study previously referred: "The diffuse city of the Portuguese NW" (CE-FAUP, 2002).
[4] All quotations in the paper are a free translation from the author.
[5] Amaral (cit in Ferrão, 1987) places the pre-historical period of Portuguese industry between the 1st World War and 1940, just then starting the *modern age* of national industrialization.

Generally speaking, the *traditional settlement model* takes place from the mid 19th century until the 1980's, and has its «dispersion» grounded in a strong interrelation between industry, agriculture and housing, normally led by the former and driven by local features (geographical, economic, socio-cultural), which are endogenous to the physical outcome. The *contemporary settlement model*, though embracing the previous one, departs from the preceding model by some specific aspects that start to take place in the 1980's, and is still ongoing. In this sense, the kind of opposite dynamics of «dispersion» (different from the earlier one) and «concentration» that identify it are, in fact, «dispersion *plus* concentration», two sides of the same coin, that show the effects of globalisation and mobility – the new supra-local and supra-national key-words –, but also of planning; local territorial features still showing their strength, even if they have less interference with the recent settling preferences.

2. Socio-economic paradigms and urbanisation models

2.1. The *traditional settlement model*

The *traditional settlement model*, as mentioned above, grows from a close relation with the local productive system. A brief account of its evolution is noted here to better understand its development: when matching some of its stages with their «spatialisation», 4 main periods[6] stand out (Sucena-Garcia, 2011):

- A 1st period where the proto-industrial activity does not interfere with the organisation of urbanisation, which is primarily related to subsistence agriculture. Commercial concerns do not interfere as the linen production emerges from being a raw-material that is naturally available and is simply used to "*dress the body*" (Alves, 1999, pp.1). The dispersion of population and buildings is justified in agriculture practices and its «requirements», as well as in the size of the fields – a dominant micron-fragmentation of landscape – that is supported by the abundance of water and the easy topography.

- A 2nd period, between the mid 19th century until the late 1950s/early sixties, where the organisation of space – the space «order» – reflects the growing importance of industry, operating at two scales of buildings:

    - The setting of industry as an organised economic activity that develops in their own space generates new typologies, big buildings that settle in close dependence on the energy forces and the specific moments of the manufactured goods production and begin to spread within the territory. At first it is the space closer to the (main) water lines that starts to be colonised by those factories, but when other energetic resources became available – gas run motors, the steam, the electricity – they also start spreading throughout the "*inner farmlands*" (Alves, 2002, pp.375). By then, the concentration of population – and the potential amount of the labour force offer – is deemed as an important decision factor and industry moves into the boundary places between these small agglomerations and

[6] Sucena-Garcia (2011:132-145) synthesises various phases of the productive system according to the views of several authors; however, when one considers how they impact on space – their «territorialisation» – only 4 periods have significant meaning.

the countryside. Gradually, the national road network and the ease of access will be another decision factor (though far from the importance it will have later on); and industrial buildings spot along the road margins.

- Still characterising this period, at a smaller scale, the production of goods or the development of certain phases of that process happens inside micro-sized units, at home or in workshops. Though not exactly a new circumstance, it has became a more *institutionalised* dependence in relation to the big factory. As Marques (1988, pp.58) states, the move from the linen industry to the cotton industry (a much more interesting raw-material for large scale production) benefited from the specialised weaving know-how, and this was, as previously noted, a skill that was "*non-dissociable from the farmers' settlement'* (Alves, 1999, pp.2) being as such very spread out in the countryside. In this sense, the industrial production kept and somehow reinforced this original highly disseminated "*location pattern*" (Marques, 1988, pp.58).

- A 3rd period, between the early 1960's and 1974[7], that did not however display changes in territorial organisation, namely because the ones registered in terms of industrial production were not yet strong enough to cause it. Nevertheless, for the strength it will have in the following stage, it is important to highlight the emergence of the textile and *clothing industries*, side-by-side with the cotton industry, which will be more significant from the late 1960's onwards (Gonçalves, 1993, pp.7). This branch of the textile industry that is highly «mobile» in comparison with the more traditional one, both because of its raw material and its goods, is easily compatible with small sized spaces and thus quite indifferent to geographical constraints. During this period, the road network's attractiveness comes out reinforced as a settling reference to some industrial buildings.

- A 4th period, between 1974 until the early 90's, that is distinct from the previous ones not by an essentially new way of organising space, but by the reinforcement of dispersion in close association with the growth of the Textile and Clothing Industries (that reaches its peak during the 1980's).The post-1974 *status quo* gave birth to an exceptional dynamic in terms of the opening and closing of industrial companies (Mendes *et al*, 2001; Marques, 1988), but their small size and the possibility of sharing the same space with housing – inside the house or occupying a part of the lot –, or standing in its close neighbourhood, made it possible for this activity to spread throughout very extensive areas somehow «fading» into the countryside, substantiating a process that discloses a certain (and significant) marginality/informality of the activity and the lack of control over it, namely in visual terms. Anyway, the statement that in Ave's Valley "*what is already being designated as «diffuse industry» (...) starts to assume great expression elsewhere and not only within the textile industry*" (Portugal, 1988, pp.24) ascertains the recognition of its existence and importance as a *typical* phenomenon. In parallel to this settling logic, another one took place – a "*kind of «concentrated dispersion», mainly fed by relatively big scale companies of the textile sector*" (Quaternaire, 1992, pp.141).

[7] 1974 was the year of the revolution that changed the dictatorial regime (1933-1974) into a democracy (25th April 1974).

In short, one the most intrinsic aspects of the *traditional settlement model* in Ave's Valley is the "*subsistence triangle*" (Sá, 1986) – housing, agriculture and industry – which interdependence is fundamental for the survival of both the local productive economic system and the majority of the population – the families – that directly or indirectly depend on/from it. In fact, agriculture, albeit in a gradually weakened state, is the activity that essentially sustains the local economy as it grants the family a relative independence from job insecurity, freeing it from market swings and low salaries and guaranteeing a minimum stability that allows it to cope with moments of industrial crisis; on the other hand, it feeds the productive system that can increase or decrease resources if extra labour is needed or if there is a drop in production, granting it the flexibility that has allowed it to remain in play without having to take on permanent costs it would be unable to bear.

Regarding the physical aspects, the *traditional settlement model* in Ave's Valley match with the dispersion of population across the Valley, a «dispersion», however, that "*is not homogeneous*" in its territorial distribution, "*occurring with higher intensity in certain areas*" (Sá, 1986); neither is it random, finding its different causes over time in correspondence with the changes of the industrial productive system. In fact, the items above support that Ave's landscape show "*a proper logic in the location of activities, despite its noticeable «disorder»*" (Quaternaire, 1995, pp.38) being "*the industrial employment (...) what most directly relates to the image of dispersion*" (Portugal, 1988, pp.291).

2.2. The *contemporary settlement model*

The extensive and diffused model growth of urbanisation that is, traditionally, a characteristic of Ave's Valley shows itself less clearly nowadays. Especially during the 1990's new logics of urbanisation added to the former pattern – new logics for the distribution of activities in space, new logics for the organisation between built and non-built «pieces», new typologies – and whilst they blurred the clarity of the first model, they also made it part of another (and new) one. The *contemporary settlement model* is, thus, an expression that wants to signify the coexistence of different «rules» of territorial settling embedded by essentially distinct socio-economic features. It stands up for a sum of territorial events (more or less reconciled) that time has put side-by-side and which sometimes have in that physical presence the only tying link. It stands up, finally, for a new paradigm that keeps the evidence of the previous one – since it is hard to make *tabula rasa* for territorial facts – and brings both together as the emergence of a new model.

In the early 90's, the development model fed by the expansion of industrial units in space in which Ave's Valley economic production basically sustained – with particular focus during 1985-1992 – was exhausted and rupture was inevitable (Quaternaire, 1995). The effects of a more stable and consolidated democracy as well as the entrance of Portugal in the Economic European Community (EEC), in 1986, established the 80's as a kind of transitional decade where new socio-economic challenges started being designed, clearly affecting the changing of physical territory. In Ave's Valley, industry and agriculture – as tied together activities that sustained local economy and that for over a century had been complimentary, balancing and counterweighing in times of crisis (and resilience) – faced the need for restructuring: on the one hand, the

competitiveness of industry is challenged by qualitative demands that set to question the prior productive system, fundamentally based on quantitative and low-qualified criteria, leading it into a (one more) crisis' period and to the rise of unemployment; on the other hand, legal statistics account for agriculture losing farmers, namely the young ones (Marques, 2004); in both cases it is the growing tertiary sector of the economy that absorbs some of those out of work, offering them more diverse employment opportunities, namely in white-collar and commercial activities[8].

Still, as happened with the preceding *settlement model*, the economic aspects come as an important justification for the transformation of «spatialisation». In a very simplified description, the economy tertiary sector mentioned above reached unknown dynamics and levels of development due to new consumption habits as well as to new demand for facilities, both aspects supported not only by the general improvement of post-democracy standards of quality of life, but also by political self-imposed goals under a state-providence design. In terms of territorial changes, one of the immediate consequences was the reinforcement of agglomeration through public investment on community facilities – schools, hospitals and health care local units, administration and local government representation, etc. – mostly directed to central urban areas or to their immediate periphery. Retail, as well, tend to follow the same guidelines as they also depend on proximity relations with inhabitants, but it goes further and expands to secondary agglomerations as well or, depending on the goods it sells, establishes further afield following the human colonisation of the Valley[9].

This procedure, in fact, relates already with the reinforcement of the «opposite» settling dynamic – the dispersion pattern – that has in the trivialisation of the car ownership/use its main triggering aspect, soon followed by the ordinary use of telecommunication devices – mobile phones and the internet. In Portugal, the 80's witnessed the strength of the physical mobility with the increasing of private transportation ownership; the 90's saw it grow stronger as a consequence of the highway road network, favoured and largely supported by EEC funding in basic transport infrastructure, at the same time as it behold the emergence of virtual mobility, that became an ordinary fact during the 2000's. Dispersion as an urbanisation pattern kept, therefore, its presence in Ave's Valley, but its underlying motives were no longer the "*productive triangle of activities*" (Portas *et al*, 1990). New ways of perceiving and occupying territory are now driven by more globalised trends related to the seizing of new mobility conditions and corresponding socio-cultural patterns concerning the organisation of everyday life. Nonetheless, this pattern does not find any longer its main reasons in an intrinsic relation with territorial features: people choose to live in a specific place for a number of reasons, and though in certain cases there may still be some emotive ones behind/driving the choices, these are mostly the compromising effect between family needs (employment, school), financial arguments and opportunities.

Beyond «agglomeration» and «dispersion», these globalised aspects gave birth to a new territorial settlement typology, even if, again, it shapes like a kind of «concentrated

[8] Regarding the increase of employment in tertiary activities in this area, one has to be aware of the relative fragility of this statement as part of it was supported by low level qualifications' employees, who were the great majority of ex-farmers and industrial workers that got a job in it; nonetheless, this is also the economic sector that most benefits from the post-1974 investment on education (Mendes *et al*, 2001).

[9] Though this is not exactly an original aspect for this settling model, it comes out strengthened by the new circumstances.

dispersion» pattern, previously registered regarding the close settling of some medium/big scale textile industries. Nowadays, it preferentially occurs around highway nodes, sometimes extending to some of the main roads of the national road network, and joins together large scale commercial, industrial and/or logistic related buildings surrounded by large parking space areas. Large industrial areas and technological parks are also different topics for this «concentrated dispersion», for which easy access to the main highways is determinant, even if they do not always locate around those nodes (Portas *et al*, 2003; Portas *et al*, 2011).

Adding to the aforementioned present-day facts, one must have in mind that the contemporary settlement model of Ave's Valley keeps within the previous one, thus being the outcome of a cumulative process where the pre-existences from an obsolete past, the ones from a traditional but still dynamic past, and the emergent facts ruled by recent socio-economic paradigms share the same place; the result is the sum up of different and concurrent situations taking place side-by-side – of regression, stabilised situations, in mutation, embryonic situations –, a *palimpsest* that is not easily understood in terms of its physical effects, an apparently chaotic landscape that needs to reason within the arguments for its visual control and legibilility. Nonetheless, what seems to be clear at this point of the study is that Ave's Valley has grown into an urban system over time, mostly sustained by spontaneous processes, holding inside both *rural* and *urban* aspects, in truth the essence of its landscape. In this sense, rather than seeing them like a controversial and opposed duality – as traditionally they would be considered – one needs to face "*rural* and *urban*" as the basis of a «different» reality, the specific and «new» feature of Ave's Valley (and of so many other contemporary urban systems worldwide) to which Planning has to address and, find adequate responsive instruments.

3. Territory's inner-orders and Planning

Planning, as an instrument of territorial control, is recent in Portugal. The first master plans –*Municipal Master Plans* – came to light in the early 90's, packed with the uncertainties, good will and mistakes usual of the first and still inexperienced steps. Ave's Valley[10], even if within the same general framework, embraced however an exceptional procedure. A group of professionals, which included architects, engineers, geographers, some of them academics, who had dedicated part of their learning experience to the understanding of this specific territory as a «territorial unit», despite it being encroached into different municipal administrative limits, were set to lead some of the technical planning teams engaged in this initial planning process, that took place in the late 80's. This experience was in fact an opportunity to question some ordinary planning instruments in the light of the specificities of urbanisation patterns in the area, like zoning, dispersion vs. agglomeration, or the meaning of transferable planning models to the municipal border areas. However, what really made it special was the search for both an effective inter-municipal articulation (grounded on the *characterisation of* and the *reasoning about* that territory as a whole) and analogous development premises for the distinct (municipal) planning units.

Aside from the individual pathways and layouts of each municipal planning, the Ave's Valley vocation for both dispersion and the mix of activities were consensually

[10] At that time, in the early 90's, the three main municipalities of Ave's Valley: Vila Nova de Famalicão, Santo Tirso and Guimarães.

recognised as the two main idiosyncrasies of the area, which plans' regulations should have to address in specific ways: the first one – the dispersion pattern – was to be controlled under certain guidelines and some limits' definition; but the later – the mixing of activities – would be encouraged (if compatible), refusing the ordinary trend to mono-functional zoning, under the argument that it grounds a diversity that contributes to territorial balance. The evaluation of the results of that "*first generation of plans*" made by the municipal planning teams, that took place since the mid 2000's when those were set under their mandatory revision process, shows the general control of the urbanisation, as intended, and validates the consequences of the mixing of activities (CMST, 2008). However, master plans failed to restrain the general visual image of chaos that still embodies Ave's Valley and to imprint some ordering elements into the landscape, thus disclosing the inadequacy of the municipal level of planning to manage some important contents for the discipline of the urban territorial system. In fact, to deal with the various dimensions and the inherent complexity of the extensive and «continuous» urbanised areas, an operative intermediate level of decision-making is required, besides a wide understanding of the territorial interactions that goes way beyond the pre-established administrative borders.

In Portugal, however, «regions» have not a legal recognition and thus the lack of a valid jurisdictional entity capable of leading the supra-municipal processes, articulating them, whenever necessary, with the national, though sectorial, programmes of intervention, (regarding, for instance, decision about the main road network, hospitals, etc.) prevents a regional strategy being laid out for referential elements. Concerning Ave's Valley, the road network is precisely one of the most pertinent potential ordering aspects, as the area is characterised by an extremely dense set of roads, streets and pathways inter-playing, that despite their distinct physical features assume similar, and thus frequently inadequate, roles. The lack of clarity and discipline of potential structuring elements and their interrelation is, therefore, one of the main causes for the Ave's Valley chaotic image, one that demands different and simultaneous scales of intervention. Taking this item as an example for the reasoning about the "*need to revisit the arguments regarding physical form and urban design*" and "*the applicability of compact city measures in existing urban areas*" one could say that some of the general key-words and key-strategies commonly accepted to plan the traditional/compact city keep their meaning in this changing scenario, but its different scale demands a whole new set of operational instruments yet to be discovered.

Road network, for instance, would still need a certain level of hierarchy, eventually embodied with distinguishing and specific design principles, in order to guide the inhabitant within the actual dispersed and fragmented urban areas. The system, however, would have to reconcile macro and micro dimensions, being aware that the defining guidelines would have to take into account the new measuring units that build and operate the new urban areas. The car related distances replaced the pedestrian references and public space cannot be designed any longer under the previous guidelines as it does not support the former uses. Something as essential to the compact city public space design as the *sidewalk*, for example, is generally unnecessary for the urban areas that grew in-between those compact cities. In this sense, this understanding gives place to a paradox: on one hand, public space is one of the main landscape unifying elements, able to provide certain peacefulness for the uncontrollable post-modern diversity of the built environment; on the other hand, the arguments to qualify it are mostly unknown.

Reasoning was made about road network, but a similar one could be made about the hierarchy of «central places», another precious argument to the compact city planning: again in a very different scale, the need for a polycentric environment to be linked and organised inside hierarchical principles according to the distribution, for one side, of basic facilities, and for another, of more exceptional ones, would globally provide a desirable isometric territorial balance; but the "*interesting distances*" (Solà-Morales, 2009) between the constituent «pieces» of the various hierarchical levels, taking into account the recent mobility criteria, always more individual, is also yet to be found. In both cases, the knowledge about the real uses of local territory – of its *inner-orders*, the most persistent and intrinsic interactions between territorial facts and inhabitants – will provide the answers. As long as preconceived ideas, perceptions and theories are left aside and, instead, it emerges an opening attitude that starts by understanding *heritage* as an active and fruitful planning instrument – a matter for further research.

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Aliens are citizens: the local dimension of inclusion policies

Nadia Nur

Abstract

This paper concerns essentially how local policies deal with inclusion of immigrants in Italian cities, with a focus on housing issue.

Despite the nation state is considered the main integration policy subject by European institutions, the once taken for granted correspondence between citizenship and nationality has been called into question as new forms of transnational and sub-national belonging are shaping up within the city due to global migration. This disjuncture between the conventional forms and spaces of citizenship and being a citizen in daily life has led to a political devolution of citizenship claims-making from national to urban space. Perhaps the crucial challenge in order to address the social and spatial inclusion for immigrants is to reimagine citizenship in the context of the globalisation and denationalization of urban space.

Since the transnational character of global migration flows and cultural networks have dramatically changed the narratives and practices of citizenship, “inhabitance” has become a status allowing participation in policy-making.

Immigration impacts mainly on social, spatial and political structures in cities, thus the response to such a global issue is mainly local. The steps of the policy making are now going from global to local. And this is self-evident especially in Italy where the State structure is turning into a federalist form.

Local activities on integrating migrants and setting up dialogue structure at the subnational level, and collaboration between various government levels and between local bodies and non-governmental organizations are essential to spread inclusion-driven policies.

Despite the numerous changes in the Italian institutional and legislative framework, the role of local administration in supporting immigrants integration and access to urban advantage, based on principles of freedom, equity, and social justice, remains crucial. An increasing number of Municipalities have recently set up immigrant consultative committees or special councillors representing foreigners, drawing special attention to political participation and migrants involvement into the policy-making process. Despite the great relevance of political participation, housing issues are even more crucial for an effective inclusion policy. While the gap between demand and supply for public housing is wider, the opportunities of private rental for moderate or low-income people are decreasing.

While some cities are taking forward inclusion-driven policies, some municipalities reject the multicultural idea denying basic rights to foreign citizens and seeking spatial segregation.

Both groups point out that national policies are no longer adequate to cope with migration issue.

1. Citizenship beyond nationality

The institutional configuration of citizenship based on nation state doesn't fit anymore to the reality of citizenship. This concept of nationality-based citizenship and the sovereignty of nation state are challenged by the migratory process and the claim of aliens inclusion. Boundaries traditionally separate the ones "inside" from the ones who are outside the territory of the state, who is to be considered a citizen from who is a non-citizen. Juridically, citizenship is a nation state matter, even if we consider supranational level (e.g. The European Union). However, if we take into account social citizenship, the matter turns immediately to a local level.

The idea of citizenship as a matter of belonging to a state has always been ambiguous. It assures inclusion and equality through the legislative system but at the same time it is an instrument of exclusion and closure.

The migration phenomenon is producing a radical change in the traditional concept of citizenship and is questioning a new definition of citizenship rights. Referring to the Italian case, the character assumed by local citizens is to be analysed through the lens of immigrants policies established by local governments. However we have to consider that the Italian territory is highly fragmented and heterogenic, both in cultural and political levels. Municipalities, regions and provinces show a significant differentiation in assuring rights access, both for aliens and national citizens.

Many regions have approved several provisions that promote the rights of participation to non-national citizens. Case study Regions could be Emilia Romagna, Tuscany and Campania, which are fostering the participation of non-national citizens and extending the right to vote to immigrants. The recognition of the right to political participation to non-national citizens is thus independent from nationality and it is based only on the residence in the Region. Those considered aliens or non-citizens by the national law system, thus acquire a sort of citizenship at local level, through the recognition of political rights. Aliens are citizens de facto. However, it is a long way to go to get the full recognition of equal rights of citizenship based not on nationality but on inhabitance.

2. Migration *vs* immigrant policies: from national to local level

At national level the first immigration laws – namely Law No. 943/1986 and Law No. 30/1990 – didn't mention any integration policy and didn't consider territorial

differentiation in access to citizenship rights and provision of services. Resources provided to the Regions were given only for first accommodation centres.

Only in 1998, with the Turco-Napolitano Law (40/1998), a comprehensive policy framework for immigrant integration began to be drawn and financial resources were established at regional level to implement integration programmes. With the establishment of the National Fund for migration policies (Article 45 of Law No. 40/1998) Regions have become a major player in the management of immigrant policies. However Regions had to sign agreements with Municipalities, which managed relations and cooperation with the third sector organisations such as charities, unions etc. for the provision of basic service at city level.

The main outcome of Law No. 40/98 is the recognition of the pivotal role played by local administration in providing assistance to unaccompanied minors, people under humanitarian protection and victims of trafficking.

In 2002, this law has been partially modified by the Law No. 189/2002 (Bossi-Fini) through a reform that made the relationship between work and residence permit more binding, reduced funding for integration policies, and made illegal immigration more difficult.

The Bossi-Fini Law increased the role of the Municipalities regarding asylum seekers issue. However, due to budget cuts, in 2003, the National Integration Fund became a more general part of the Social Fund given to the Regions for welfare interventions. In this way Regions alone are responsible for using this fund for general welfare services or even for immigrants inclusion policies.

At the moment in almost all Italian Regions there is a regional law for the integration of immigrants, rather than other regulatory measures. There is a Regional council (and sometimes even a Provincial one), a three-year program of interventions in different areas and an annual program in some regions, namely Piedmont, Veneto, Umbria, Marche, Puglia, Calabria, Sardinia. Monitoring migration, collecting and processing data in order to estimate the labour need is quite common praxis: now there are regional observatories on migration and a Register of Associations of migrants.

Despite the numerous changes in the Italian institutional and legislative framework, the role of the Municipalities in supporting immigrant integration and access to urban advantage, based on principles of freedom, equity, and social justice, remains crucial. An increasing number of Municipalities have recently set up immigrant consultative committees or special councillors representing non-national residents in the Municipal Councils (Fieri-Asgi, 2005).

The steps of the policy-making are now going from global to local. And this is self-evident especially in Italy where the State structure is turning into a federalist form.

3. State reform and new tasks for local governments

"Italy can be regarded as a case of a regionalised state structure in transition towards a quasi-federalist form" (Caponio, 2010, p166). In fact in the last twenty years a devolution process has undergone and local administrations acquired more authority.

The 2001 reform of Title V of the Italian Constitution changed dramatically the structure of the State, turning it into federalism and thus assigning more legislative power to the Regions, while Municipalities have administrative functions.

The reform provides that immigration issues remain yet under the exclusive jurisdiction of the state, while policies towards immigrants – including social services, health care, educational assistance, vocational training, and public housing – are under exclusive responsibility of the Regions (except for the protection of health care).

However amid this sort of incomplete federalism Regions cannot influence the legislation of the State since at national level there's not any chamber representing regions.

4. Local policies and aliens inclusion

"Social inclusion of international migrants depends largely on the positions they fill in the local economy, the socio-cultural conditions of the host city, the migrant own willingness to be "included" as well as the patterns of settlement and the uses they make of the public urban space. In fact, migrants are not a homogeneous group of people. To be effective, policies must acknowledge that different cultural, religious and educational backgrounds generate different perspectives on the notions of inclusion and citizenship" (Balbo, 2006, p.92)

In Italy the phenomenon of immigration is markedly urban. Thus it is in the urban context, or more generally at local level, that inclusion or exclusion is determined.

However, to understand the dynamics of inclusion urban, both social and spatial, it is important to take into account the territorial differences of the issue, both for the characteristics of the foreign presence and regarding the social context and local policies. Moreover, we have to consider the weakness of welfare policies and integration in Italy.

The Italian case is pretty unique as it is characterized by a fragmented model of integration and inclusion of migrants. Therefore is difficult to draw a clear framework of inclusion local policies: territorial differences and the different strategies adopted has to be added to cultural differences between immigrants communities. Policy differences have been related to the different context or to the different relations between public actors (Ponzo 2006) and between public and private players such as Ngo's, foundations, unions, associations etc.

Different citizenship models show that the "right to the city" for migrants depends essentially on the conditions offered at local level. In this context, policies for migrants inclusion are played on multiple levels of government (Zincone G., Caponio T., 2006). There are several interactions between the various levels of government and civil society organizations. Moreover, grassroots policies are growing as a new "informal" model.

Thus, local administration plays a more crucial role in supporting “right to the city” and providing services to alien citizens. Local activities to support integration, and set up dialogue structures at subnational level, and collaboration between various government levels and between local bodies and non-governmental organizations are essential to spread inclusion policies.

At municipal level, in Italy, early policies aimed at immigrant inclusion and integration have been carried out in the North of the country, in the late 80’s. Yet the third-sector already played an important role to assist first accommodation.

In the 90’s we assisted at a differentiation of inclusion models, which focused for example on housing (Milan), cultural integration, intercultural mediation and equal access to urban services (Bologna).

While in Northern Italy main actions were carried out mainly by municipalities, in the south of the country a crucial role has been played by non-profit organisations and the Catholic web (Zincone, G., Caponio, T., 2006).

“Inclusion has implications for any commitment to “urban citizenship” by both host and migrant communities. However, the emergence of an international migration with limited commitment to the host community, can lead to a decay in civic values. In this perspective, inclusion can be seen as a compact between migrants and host communities whereby they share certain civic values while other factors of diversity are kept untouched” (Balbo, 2006, p.92).

5. Housing Policies as a matter of inclusion

Housing is the most critical urban condition that involves inclusion of immigrants. Despite the great variety of conditions, generally speaking we can notice a massive situation of hardship and housing exclusion. Many immigrants, including the ones who are not to be considered poor, are badly housed. Poor immigrants, even if they are refugees, or under humanitarian protection, are often homeless because they are not provided with any housing right.

Within the real estate and rental market, accommodations offered to immigrants are basically worse or more expensive than those available to local people with same type of income (Makno-Ministero dell’Interno, 2007; Eurispes, 2007). Precarious conditions of inhabitance is a matter of concern also for regular immigrants with regular income.

The extent of discomfort and exclusion of immigrants call into question the issue of policies.

Social housing for immigrants is a recent and very dynamic phenomenon: most of the initiatives have been launched over the past ten years, and have increased rapidly over the past five years.

It should be emphasized that the local actions of social housing are generally influenced by the central government, which has established several funding for housing, but did never adopt a specific legislation aimed at the solution of this problem that is becoming more and more relevant even for the Italian middle class. A recent innovation, though it is part of a financial law and is not specifically oriented to housing r, is that of House Plan (L.133/2008).

Due to the lack of institutionalization of housing policies, social housing in Italy is typically constructed from the interaction between different players and using resources from different areas of policy. Moreover informal and self-managed grassroots solutions are to be taken into account.

Housing policies seem to be characterized by "different speed": the local level responds more quickly to the needs of new citizens, while the central government's response is slower (Ponzo, 2010) This trend follows in part the dynamics of the development of integration policy in Italy (Zincone, 2006; Caponio, 2006). But I argue that is strongly affected by changes in the composition and settlements of the migrant and immigrant population, and trends in the real estate market and the supply of housing, which impact first on local government before becoming sensitive at national level.

Probably what is happening is a kind of polarization (Crosta, P.L., Mariotto, A., Tosi, A., 2000) caused by the improvement in the conditions of immigrants already settled, and growing housing insecurity for those who are at the beginning of the migration experience.

Several factors have contributed to a transformation of housing demand: the stabilization of a large quota of foreign population, the growth of the number of families due to the reunification or the making up of new families, the different composition of new citizens. Regarding the housing offer, we are assisting at the worsening of the housing market, besides the lack of innovation in the institutional framework.

The settlement of families determines obviously an increase in demand for housing, in the sense of stable and adequate housing, not a first assistance shelter. And, the need for housing is basically a need for rental, which in most cases should be a cheap rental.

The gap between supply and demand for public housing is not filled by the increase of opportunities offered by the private housing market, which is no longer accessible to moderate or low-income people. This means that it becomes more difficult for immigrants to improve housing careers.

According to a recent research conducted by Fieri (Ponzo, 2010), which has surveyed the social housing projects for immigrants in Italy, 34% of the projects are carried out at the municipal level, 46% involve the supra-municipal level (province, district, district social-welfare, etc..) and only 18% is conducted on regional basis.

The highest number of housing projects is founded in Emilia Romagna and Tuscany, followed by Lombardy and Veneto. In Southern Italy the interventions are scarce and most of them concern first reception and information desks.

People involved in housing projects reflect the evolution of the foreign presence in Italy, characterized by a high proportion of families, increased as a result of family reunions and marriages.

Generally speaking, different players, public and private, are involved in the development of housing projects for immigrants. Public actors are getting more and more important both as promoters and partners of the project. However, at national level this data is not homogeneous: Fieri survey shows that two-thirds of the projects promoted by public actors are concentrated in Emilia Romagna and Tuscany. Real estate brokerage office and a social management of housing are the main actions that take place.

The role of foundations as promoters, partners and financiers, compensates the scarcity of public resources and lack of innovation. Conversely, the third sector and non-profit organizations play a marginal role.

Aiming to give just an overview on housing policies for immigrants in Italy, I attempt to highlight some positive experiences, where the objective of inclusion through the granting of housing right has been reached, but also negative experiences and innovative projects yet non implemented.

Veneto Region is an symbolic case of the bind between politics, local administration and attitudes towards inclusion or exclusion policies. The municipality of Padua has become famous when the local administration decided in 2006 to build a wall to separate “via Anelli”, the major immigrant settlement, from the rest of the town. Via Anelli was the typical example of an ethnically oriented neighborhood, that most of the times means that immigrants settle in a place after searching for housing in other neighborhoods and confronting with high rental rates, discrimination and often illegal behaviors of the owners. “However most migrants knew before they started their migratory journey that they were going to end up in Via Anelli as safe place where to receive the support of fellow citizens, in terms of working protection in situations of illegality” (Ostanel, 2010).

The community of via Anelli “can visibly use the city and its services but cannot exercise the same grade of citizenship as the natives. The term marginality, in this sense enquires various concepts such as access to housing, public space, services and security linking them to the notion of citizenship” (Ostanel, 2010). Immigrant population settled in Via Anelli can be defined “included with exceptions” ((Mezzadra cited in Ostanel, 2010).

In 2007, after the relocation of the nearly 560 regular inhabitants in public houses within the city and the province of Padua, housing became once again a hot issue for the immigrants that after having benefit of a location contract of 2 or 4 years, couldn’t find other affordable housing solutions.

The 2008/10 project “Oltre il ghetto” (Beyond the ghetto), sponsored by the municipality in cooperation with the Health and Welfare Ministry and other players, supported people (100% foreigners) that were living in Via Anelli in accessing the private housing market, helping them to pay the rent deposit, and facilitating cohabitation for singles. Moreover, the project aimed at the social inclusion of singles and at the mediation of ethnic conflicts. At the end of 2010, 230 people were still living in public houses due to the difficulty in accessing housing in the private sector. Moreover the financial crisis has strengthen the situation of marginality that migrants were living and most of them has become undocumented.

While the public administration looks at “Oltre il ghetto” project as a success, which allowed to recover a great number of public housing housing (Gamba, Ferrandino, Ruggero, 2011)the relocation policies “tried to solve the social and spatial constraints that Via Anelli were materializing, but they did not address the macro-social constraints that are forcing migrants to marginality. What is important to highlight is the relationship between local and national/transnational level of policy because it stresses the role of local government in managing migration: while local governments have a specific responsibility on the community they are governing, macro-social elements that are affecting migrants’ urban inclusion/exclusion are playing at different levels. Local policies become partial and national and transnational constraints are impossible to address” (Ostanel, 2010).

Another example, less emblematic and perhaps more ordinary, is the one of Cesena. The Foundation rental of Cesena, promoted by the Municipality of Cesena in connection with the "Cassa di Risparmio di Cesena" was created (along with religious players, unions and associations of owners of real estate industry) in 1993 to promote access to housing by households. The service was primarily aimed at families, but since 2005 groups of singles usually willing to share accommodation have been admitted. More generally the conditions for accessing the service are: a regular employment, a residence permit (in the case of foreigners) and an annual income of at least 8,000 euros. It is interesting to notice that to access the service is no longer necessary to have a permanent contract, but it is now sufficient to prove to have an income for several months.

At the beginning the foundation activity was addressed mainly to Italian families but today non-national citizens represent almost 70% of the target. The preponderance of immigrant users, however, has not been disputed by Italian ones.

On the contrary, "Vicini di casa", a cooperative-association founded in '93 as part of the parish of St. Dominic of Udine was initially targeting only the immigrant population until 2006. The extension to Italian citizens took place after being fund by Law No. 15/2005 which aimed to address people living in disadvantaged position, regardless nationality. Since then the association started promoting change in the legislation, urging the Immigration Sector to stress in the drafting of the Regional Immigration Law No. 5 of 2005 the issue of equal access to housing both for Italians and foreigners rather than on promoting interventions reserved for immigrants.

The percentage of foreigners users is still very high and varied depending on the service (from 65-70% in social real estate brokerage, to 75% in temporary residential facilities, 90% in real estate management).

The intervention is supported by the municipality and the social welfare sector. The main financial donors to “Vicini di Casa” are the Friuli Venezia Giulia Region and the Province of Udine.

While in Tuscany the “Abitare il mondo” project is financing actions aimed at promoting the inclusion of non-European immigrants through the construction and renovation of housing, in Lombardy the extension to 5 years of continuative residence as a condition to housing access makes this Region a sort of laboratory of exclusion. It is interesting to notice that in Milan, the number of non-Italians owners of houses has increased of 300% over the last ten years (22%). While this could be seen as a positive figure, often the choice of buying a house, in some cases shared between more than one family, reflects the difficulty to access to rental market or to social housing, due to the restrictive requirements or, in the case of private rental, to discriminatory attitudes.

5. Conclusions

The brief reconstruction of housing policies towards immigrants inclusion in several Italian cities highlights the importance of the third sector in supporting the public administration, which is highly fragmented. Different medium or long term migratory patterns, the influence of political attitude pro or anti-immigrants of the ruling political party, and the support of Ngo’s and associations paint an unclear picture of the local policies of inclusion of immigrants.

While public administration is the driver of inclusion policies, especially in the Northern Italy, the immigrant issue is completely undertaken by non-profit associations, charities, Ngo’s and Catholic networks. Local policies show a variety of strategies and conceptions, some oriented to integration, some to first assistance and some to security and control. In the north and sometimes in the center of the

country the attitude is to a sort of "subordinate inclusion" (Crosta, Mariotto, Tosi, 2000), recognizing the immigrants' right to be integrated in the productive sphere but not in the social and political one. In the Southern Italy the role of public administration is weaker and immigrants issue is a matter of concern mostly for the private actors.

As policy-making is played at so different layers it is difficult to underline a unique strategy. What is evident is the shrinking influence of the state and the national law system. Regionalization of housing policies in Italy puts local administrations in front of the concrete task of housing welfare for all citizens, immigrants included. Immigrants' inclusion is more and more a matter of local policy, despite the national legislation.

The ones considered aliens by the national laws, are inhabitants living in urban contest, thus they are de facto citizens, which means they should be provided all citizenship rights within the municipality they live in, especially housing rights.

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Relationships between the built environment, socio-demographic factors and adolescents' access to food establishments

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Abstract

Youths in the U.S. experience health problems due to unhealthy eating behaviors. In terms of physical and social environmental factors, youths encounter problems with accessing healthy food. The purpose of this study was to determine the degree to which the built environment and socio-demographic factors affect teenagers' probability of visiting healthy or unhealthy food establishments.
Participants' frequencies of visiting healthy/unhealthy food establishments were obtained from the Teen Activities and Transportation Enterprise Project (TATE) survey. Food environments location data were collected from the Providence Plan and the Rhode Island Yellow Pages. Sociodemographic data were obtained using the TATE survey and statistics from the Providence Public School Department. Multinomial logistic regression models were used to explore the degree to which youths' frequency of visiting healthy/unhealthy food establishments were linked to availability and youths' socioeconomic status. The models reveal that the availability of healthy food establishments within walking distance from home, the frequency of visits, gender, employment status, and ethnicity significantly affect visitation to unhealthy food environments ($p < 0.05$). The availability of unhealthy food within walking distance, the number of members living in the household, the number of cars in household, birth-nation of the student and the student's father are not significant.

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Introduction

A major public health crisis facing today's youth is the pandemic increase in overweight and obesity[1,2,3,4]. According to the 2007-2008 report, 18.1% of adolescents between the ages of 12-19 are considered obese. Ethnic/racial disparities exist and Black and Hispanic/Latino youth are more likely to be overweight and obese compared to white adolescents[1]. Given the detrimental physical, social, and mental consequences of obesity among youth[5], more research regarding the risk factors related to the development of overweight and obesity are warranted. An area of research which is still somewhat unexplored is the role of the built environment on adolescents' dietary and physical activity behaviors.

The built environment includes a range of physical and social elements that make up the structure of a community[6,7,8]. Examples of the physical food environment include access to eating establishments such as fast food restaurants, and access to grocery stores, convenience stores, etc. Examples of the social environment include the social norms surrounding eating[9]. The built food environment can affect dietary behaviors and obesity rates through creating a climate that can either promote or inhibit energy consumption[10]. A recent review of the built environment and obesity found that 84% of the included studies reported a statistically significant positive association between some aspect of the built environment and obesity[11]. In general, results of the studies found that lower prevalence of overweight and obesity were linked with increased access to supermarkets[12,13,14] and decreased access to fast food restaurants[15,16]. Greater BMI was also associated with higher area-level disadvantage scores of the census tract where participants shopped[17,18]. However, most of these studies were conducted with either adults or young children; none of the studies examining the built food environment were conducted with adolescents.

Although studies have found significant relationships between access to eating establishments and prevalence of overweight and obesity, the cost of food is also an important factor. For example, an increase in the prices of healthful food, i.e. fruits and vegetables, has been show to result in higher BMI for youths. In addition, a lower cost for higher fat foods such as meats also resulted in greater BMI levels[19,20,21].

Because adolescents are typically too young to drive and therefore are more likely to remain within their proximal environment, and they tend to have access to disposable income[22], it is important to examine the relationships between adolescents' access to food retailers and restaurants, specific spatial factors and demographic variables[23]. Thus, the purpose of this study was to determine the degree to which the built environment and socio-demographic factors affect teenagers' probability of frequenting healthy or unhealthy food establishments.

Methods

Study area

The study area is the City of Providence and the areas one kilometer beyond the border of Providence. As this study finds the availability of food establishments around

home and school within a walking distance of one kilometer for youths, areas in other cities adjunct to Providence within one kilometer were considered within the spatial area for analysis. However, buffered areas including natural barriers, such as the river were excluded from the study area. For instance, East Providence areas are adjacent to Providence, but between the cities, there is a river, making it impossible for youth to access a destination across the river.

Study sample

The study's sample consisted of one hundred and twenty-two inner-city, low-income, and primarily first-generation immigrants. Students were in the 9th to 12th grades, from an inner-city school in Providence, Rhode Island. Sixty-three percent were female and 37 percent were male. The largest ethnic group of students was Hispanic (59%), and approximately half reported Spanish as their primary language (54%). The second largest ethnic group was African-Americans (20%). Approximately 57 percent of the students were born in Rhode Island and 14 percent were born in the Dominican Republic. Students primarily described themselves as being a member of an immigrant family; eighty percent of parents were not born in the United States, with most coming from the Caribbean and Latin America. The majority of the students came from a two-headed, married household (49%) and 34 percent came from a household headed by a single female. Using the eligibility for free and reduced lunch statistics from the Providence School Department as a proxy for economic status, this population was mostly low-income, where 71.2 percent of the students received a free lunch and 13.6 percent received a reduced lunch rate.

Data sets

This study was designed to explore what teenagers do during a typical semester. Within a classroom setting, students were instructed to develop a list of at least 15 out-of-home regular or occasional activities, including the location and the mode used to access the activity. All food related activities provided the data for this paper. In this study three main datasets: students' socio-demographic data, their food activity lists, and the location data of local food businesses, were used to explore factors related to the frequency of visiting healthy and unhealthy food establishments.

Socioeconomic Background and Activity Lists

The dependent variable in our model represents the actual number of visits to food establishments of one hundred and twenty-two Feinstein High School students in Providence, RI. Independent variables used to predict eating behavior describe the individual and the individual's household. Socioeconomic and cultural data include ethnicity, gender, age, U.S. citizenship status, birthplace, and employment status. Since students were not directly asked about household income, several variables were used to describe the economic standing of the household including the number of cars in the household, the number of household members and employed members, head of

household type, and the birthplace of the mother and father. Students were also asked if they were employed part-time and if they were eligible for the free or reduced National School Lunch Program. These variables were included in the models to better understand how the individual, the household structure, and the social and cultural status of this student population affect eating patterns outside the home.

Students recorded a total of two thousand and nine activities, approximately 16.5 activities (2009 divided by 122) per student. The record field contains information about each activity pursued by the student, i.e. the students' ID numbers, names of places where students pursued activities, activity types, activity time duration, frequency of the activity, time of day the activity takes place, distance between activities and home locations, modal use, and individuals accompanying the students to the activity. The activity type field reveals that the majority of the activities were related to food visits (n=653, 33%) to fast-food establishments, dining, grocery stores, and convenience stores. All food related activity choices form the dependent variable, including the frequency of visits to specific food establishments, which are weighed against the eating pattern variables.

Food establishments Location Data

The food location dataset was treated as an independent variable. Location data of food establishments were collected from the Providence Plan (PP), a private nonprofit organization that has been working with the State Health Department to improve the health of Providence residents, and the Rhode Island Yellow Pages. The PP provided information on the location of 6,221 local food businesses. The dataset includes business names, addresses, license numbers, license types, and the number of chains. From the Rhode Island Yellow Pages, we captured data from 209 local businesses with names, addresses, and types of businesses based on the North American Industry Classification System (NAICS). The two datasets were combined, cleaned, and overlapping entries were eliminated.

In order to restrict our food environment dataset to businesses related to teenagers' eating behaviors, we used the NAICS code from the Yellow Pages to eliminate liquor stores, pubs, taverns, nightclubs, and cigarette stores, due to limitations on who can enter. In addition non-profit food stores or markets, hospitals, residential care facilities, elderly housing, and nursing homes were removed. Establishments serving food as a supplemental service were also eliminated, i.e. restaurants in hotels, inns, lodging places, and cafeterias in schools or civic clubs. Catering businesses carrying food or cooks to places requiring food services were also excluded. According to NAICS, a caterer is an industry comprising establishments primarily engaged in providing single-based food services, so that these businesses generally have equipment and vehicles to transport meals to events or prepare food onsite. Graduation parties, wedding parties, retirement parties, and trade shows are examples. However, caterers serving food in established places were considered general restaurants. If the business license type was "caterer or commissary" and the NAICS code was "caterer," the business was eliminated. On the

other hand, if the license type was "caterer or commissary" and the NAICS code was "full service restaurants" or "limited service restaurants," the business was included in the analysis. Finally, businesses having no address, business type or NAICS code were eliminated. After editing the dataset based on these criteria, 3,250 records entered our analysis.

Categories of food environments

Prior to categorizing food stores or restaurants as an healthy, intermediate healthy, or unhealthy food resource, it was important to develop an understanding of the types of food these places provide. Some food stores or markets deal with a single type of food, such as healthy food (e.g. fruits, vegetables, and other organic food) or unhealthy food (e.g. burgers, fried chicken, or pizza). These classifications are clear-cut. However, in the case of food stores providing both unhealthy and healthy food, such as general family restaurants, classification is more complex. The straightforward way to classify this type of food store or restaurant is to survey all items sold at the location. However, the time and cost of surveying all the food sold in a store would be great.

An easier way to classify food stores is to refer to government industry codes. Many governmental statistical bodies have tried to collect and summarize economic information in order to set economic policy, and this business information then functions as major indices of economic policies. In the U.S., there are two main industrial indexes, the Standard Industrial Classification (SIC) and the North American Industry Classification System (NAICS) established by the federal government. The industrial codes classify business establishments in terms of their types of healthy or services, size of establishment and types of services. Some scholars define food stores based on these industry code systems. Morland et al. (2002) defined types of food stores and food service places with 1997 NAICS codes. According to the codes, they classified food stores into supermarkets, grocery stores, convenience stores, convenience stores with gas stations, specialty food stores, full-service restaurants, fast-food restaurants, carryout specialty items, and bars and taverns[18].

Rundle et al (2009) defined food stores as three types of food environments: healthy, intermediate, and unhealthy[24]. Within these definitions, vegetable stores, supermarkets or grocery stores, and natural/health food stores are classified as healthy food stores. Other non-fast-food restaurants, medium-sized grocery stores, fish markets, and specialty food stores are categorized as intermediate food stores. Fast-food stores, pizza restaurants, convenience stores, bodegas, bakeries, candy and nut stores and meat markets are unhealthy food stores. Referring to Rundle's definition of the supermarket, NAICS codes regarding food stores are classified into the three types of food stores as shown in Table 1.

Distance to Food Establishments (Cumulative Approach)

The cumulative approach model was used to measure the availability of food establishments for each youth. Although the cumulative method is an old approach and has the disadvantage of tending to omit complex factors, the method is useful if researchers have limitations in getting detailed information, and the theory can simplify reality. For these reasons, many scholars still employ the method. The availability of food establishments was measured by counting the number of food establishments around students' homes and the school within a walking distance of one kilometer, using ArcGIS, a geographic information systems program[25,26]. After the buffer analysis, the "Intersect" tool in ArcCatalog was used to obtain the number of food establishments for each student. This number represents the availability of food establishments.

Analysis Methods

Multinomial logistic regression models determined the relationship between the probability of visiting healthy/unhealthy food establishments and the availability of healthy/unhealthy food establishments and socio-demographic factors. The multinomial logistic regression is "a form of regression which is used when the dependent variable is dichotomous and the independent variables are of any type."[27]. The food type information of visited food establishments can be healthy, intermediate, or unhealthy. However, the three categories were transformed into binary forms, such as healthy or not (intermediate or unhealthy) and unhealthy or not (healthy or intermediate) to estimate the models and interpret the information easily. Thus, two regression models were established—a model about the probability of visiting healthy food environments and a model about visiting unhealthy food. If a student visits one healthy, one intermediate, and one unhealthy food resource, then the model for estimating the probability of visiting healthy food environments becomes 1, 0, and 0, respectively. In the case of estimating the probability of visiting unhealthy food environments, the food types of these stores would be represented as 0, 0, and 1, respectively.

If the number of explanatory variables to affect the occurrence of an event, E, is n, the equation to explain the probability of the event occurring becomes

$$p(E) = \frac{1}{1 + \exp(-z)}$$
$$z = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \cdots + \beta_n x_n$$

, where p(E) indicates the probability of the event, E, occurring, and z is a linear combination of the explanatory variables, x. The parameter of each explanatory indicates β . Generally, we obtain the parameters by maximum likelihood methods. Logistic regression models are expressed by odds ratio (OR), so that OR can be

$$OR = \frac{P(E)}{1 - P(E)} = \exp(z)$$

Transforming the equation, using the logarithm form, the equation, explained by z, becomes a linear combination of independent variables.

$$\log\left(\frac{P(E)}{1-P(E)}\right) = z = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \cdots + \beta_n x_n$$

If a parameter, β_n of an independent variable, x_n, has a negative value, the odds ratio is less than 1, which means the probability of the event occurring decreases by an increase in the independent variable. Three models are used to explain the probability of accessing healthy food, unhealthy food, and intermediate food. This paper employs the logistic model to two cases, healthy and unhealthy food.

Results and Discussion

Cross table analysis

In terms of gender, female students tended to visit healthy food establishments more frequently than male students, and male students visited unhealthy food stores or restaurants more often than female students (Table 2). Twenty-one percent of food sources visited by females were healthy, while sixteen percent of food establishments visited by boys were healthy. Compared to other ethnic groups, Hispanic/Latino students visited more healthy food stores or restaurants (21%). Students who qualified for free or reduced lunch frequented unhealthy food establishments more often, compared to those who did not qualify.

Results from logistic regression models

The multinomial logistic model shows that the number of healthy food establishments within walking distance from home, frequency of visit to food establishments, gender, employment status, and ethnicity significantly affect visits to unhealthy food environments ($p < 0.05$) (Table 3). When the number of healthy food establishments increase, the probability to visiting unhealthy food environments significantly decreases ($p = 0.0469$). Students who live in areas with a significant number of unhealthy food establishments are slightly more likely to visit unhealthy food establishments ($OR = 1.05$). Males are two times more likely to visit unhealthy food environments ($OR = 2.10$). African Americans are three times more likely to visit unhealthy food stores or restaurants than other ethnicities ($p = 0.0144$, $OR = 2.89$). Students living with married parents visit fewer unhealthy food sources ($p = 0.0395$). Students not living with married parents are two times more likely to visit unhealthy food establishments than other students ($OR = 1.69$). Students who are not employed are two times more likely to visit unhealthy food environments than students who work ($p = 0.0187$, $OR = 2.01$).

There are fewer factors that affect visits to healthy food establishments (Table 4). Only two variables are significant; the availability of healthy food and gender. The more healthy food environments around the home location, significantly increase the frequency adolescents visit healthy food establishments ($p = 0.0393$). Students, who live in areas having more healthy food resources, are slightly more likely to visit healthy food establishments ($OR = 1.06$). Females are two times more likely to visit healthy food establishments than males ($p = 0.0267$, $OR = 1.90$). The model that predicts visits to healthy food is not sensitive to the number of unhealthy food locations within walking distance from the home location.

Conclusion

Eating is essential to sustaining our bodies and lives. Sustaining a human body heavily depends on which foods are eaten, as well as how frequently foods are consumed. Due to revolutionary changes in the food industry and the growth of wealth, most people in developed countries, especially the U.S., do not need to be concerned about the infrequency with which they are able to consume food. Unfortunately, these changes have not guaranteed that all people obtain high-quality food. Despite the fact that starvation is not a major threat in the U.S., many people suffer from diseases caused by consuming unhealthy food. Furthermore, food access differs by socioeconomic status. Many studies have proven that socially and economically disadvantaged groups are less likely to access healthy food for two main reasons: low accessibility due to incomes that are not sufficient to buy healthy food, and low accessibility to healthy food environments due to spatial segregation by race or income.

Findings

This paper is an empirical study investigating which factors influence youths' visits to food establishments and the extent of their influence. A main assumption is that the availability of food environments around youths' homes and their socioeconomic backgrounds affect their eating behaviors. In terms of the availability of food environments, more healthy food environments surrounding youths' homes encourage them to visit more healthy food establishments, whereas the existence of more unhealthy food around youths' homes encourages them to visit more unhealthy food establishments. Because children have fewer options in modal choice than adults, their eating places are often within walking distance of school and home. In terms of socioeconomic background, race, family status, income level, and cultural background, such as parents' origins, affect youths' choices of food establishments. Before testing these assumptions, the overall socioeconomic status of Providence, RI was reviewed, and the accessibility level of food sources by communities or neighborhoods in the city were calculated. After looking at the demographic and economic situations of the city, examining the accessibility levels of food environments in the city, and testing assumptions about youths' eating behaviors and several factors, this study made several important findings.

A multinomial logistic regression model was used to understand the probability of visiting unhealthy food environments. Independent factors included the availability of healthy food environments, gender, race, working status, and family status. The results revealed that the more unhealthy food stores around students' homes, increased the probability of visiting unhealthy food stores or restaurants for young people. Students, having a greater availability of unhealthy food establishments around the home location, are slightly more likely to access unhealthy food. Based on the results, the hypothesis about the availability of food environments was proven acceptable.

In addition, assumptions about the relationship between visiting food establishments and socioeconomic background can be accepted based on the results of the model. In terms of gender, male students are two times more likely to visit unhealthy food environments than female students ($OR = 2.10$, $p = 0.0031$). This suggests that females tend to be more concerned about the quality of food. In terms of race, if a student is African American, the student is three times more likely to be at risk of visiting unhealthy food establishments ($OR = 2.89$, $p = 0.0144$). The effects of being African American warrant further research. This may be linked to being socioeconomically disadvantaged compared to other races, or more likely to live with one parent families. Students living with unmarried or single parents are two times more likely to access unhealthy food environments than those who live with married parents ($OR = 1.69$, $p = 0.0395$). Students who do not work are two times more likely to access unhealthy food than those working ($OR = 2.01$, $p = 0.0187$). Employed students may be using their financial resources to support the family. Further research is needed.

Limitations

This paper contributes to defining the factors that affect youths' eating behaviors in terms of physical environment and socioeconomic factors. However, this paper has three limitations in addressing youths' eating behaviors, in terms of dataset and explanatory variables. This study did not collect data on purchasing or actual eating behaviors. The source of data came from a larger activity analysis where students were asked to provide information concerning places where they typical go during a semester; thirty-three percent of these activities were visiting food establishments. Food environments were categorized into healthy, intermediate, and unhealthy, based on NAICS and other business information in the Yellow Pages. Using NAICS is a convenient method of classifying food environments. However, the NAICS system tends to simplify the characteristics of an industry, so that the code system could lose some detailed food information. For instance, even though grocery stores or supermarkets are likely to sell more healthy food than convenience stores, they also provide unhealthy food. Moreover, relatively small grocery stores and supermarkets tend to offer more unhealthy food. It is not easy to capture more detailed nutrition information with NAICS. This challenge can exist in restaurants providing both healthy and unhealthy food, such as family restaurants. Even though the criteria used in previous studies that categorized food stores based on the nutrition compositions of the stores or restaurants was employed, the loss of detailed nutrition information was inevitable. If it is possible to get the number of food items by food type for each food store or restaurant, the proportion of healthy food in the stores can be used, instead of categorizing the food stores as healthy, unhealthy, and intermediate food environments.

In the statistical models used to explain youths' food establishment visitation patterns, this study tried to find socioeconomic factors affecting visits to unhealthy and healthy food establishments, which may be influenced by one's cultural background. The mother's and father's origins were used to represent cultural background. However, these variables had very low explanatory power when analyzing youths' food visitation patterns. This result may be due to the limitations of the collected data. It is difficult to quantify cultural background. In addition, the majority of the respondents were low-income. There is practically no variability in income status. In order to overcome this disadvantage, future studies need to conduct a qualitative survey to address the effects of cultural background on eating behaviors.

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Table 1: Types of food

Food Types	Rundle's Criteria	NAICS index
Healthy	supermarkets	445110 Supermarkets
	fruits and vegetable stores	445110 Grocery stores
	natural/health food stores	445110 Food stores
		445230 Fruit/vegetable
Intermediate	other non-fast-food restaurants	422430 Dairy Product Wholesaler
	medium sized grocery stores	445220 Fish markets
	fish markets	722110 Restaurants, full service
	specialty food stores	722110 Fine dining
		722110 Family restaurants

Unhealthy	fast-food stores	445120 Convenience stores
	pizza restaurants	447110 Gasoline stations with convenience stores
	convenience stores	445210 Meat markets
	bodegas	445291 Baked goods
	bakeries	445292 Confectionery/nut stores
	candy and nut stores	722110 Steak houses
	meat markets	722110 Pizzerias, full service
		722212 Cafeterias
		722211 Limited Service Restaurants
		722211 Fast-food restaurants
		722211 Pizza parlor, limited service
		722211 Pizza delivery shops
		722211 Delicatessens
		722211 Sandwich shops
		722110 Bagel shops, full service
		722213 Beverage bars
		722213 Doughnut shops
		722213 Ice cream parlors
		722213 Pretzel shops
		722330 Mobile Food Service

Table 2: Students' eating behaviors versus socioeconomic background

	Healthy		Intermediate		Unhealthy		Total		$\chi 2$ value
	n	row%	n	row%	n	row%	n	col %	$p < 0.05$
Gender									
Female	83	(21)	48	(12)	258	(66)	389	(60)	7.3009
Male	41	(16)	22	(8)	201	(76)	264	(40)	p = 0.026
RACE									
White	15	(18)	11	(13)	58	(69)	84	(13)	12.9429
Hispanic/Latino	89	(21)	41	(10)	286	(69)	416	(64)	p = 0.044
African American	9	(13)	13	(19)	45	(67)	67	(10)	
Other	10	(12)	5	(6)	66	(81)	81	(13)	
Free lunch									
Free lunch	81	(18)	56	(13)	310	(69)	447	(70)	9.4662
Reduced	18	(22)	1	(1)	64	(77)	83	(13)	p = 0.0504
Paid	21	(20)	12	(11)	73	(69)	106	(17)	
Number of household members									
1 to 2	11	(28)	3	(8)	26	(65)	40	(8)	2.875
3 to 5	46	(17)	28	(10)	197	(73)	271	(53)	p = 0.579
Over 5	35	(17)	19	(9)	148	(73)	202	(39)	
Number of hh members working									
none	1	(8)	4	(33)	7	(58)	12	(2)	8.8841
1 to 2	60	(18)	27	(8)	240	(73)	327	(64)	p = 0.0641
3 to 5	29	(17)	18	(11)	123	(72)	170	(33)	
Number of cars									
none	34	(22)	21	(13)	101	(65)	156	(24)	5.5587
1 car	30	(15)	23	(12)	141	(73)	194	(30)	p = 0.2346
2 or more cars	60	(20)	26	(9)	217	(72)	303	(46)	
Family Types									
Both Parents not married	9	(13)	8	(11)	55	(76)	72	(14)	7.8746
Both Parents marred	55	(21)	27	(10)	183	(69)	265	(52)	p = 0.2474
Single Header Family	25	(17)	10	(7)	114	(77)	149	(29)	
Other	2	(10)	4	(20)	14	(70)	20	(4)	
Citizenship									
No	14	(23)	5	(8)	41	(68)	60	(12)	1.3932
Yes	78	(17)	45	(10)	330	(73)	453	(88)	p = 0.4983
Born in U.S.A									
No	33	(19)	17	(10)	124	(71)	174	(36)	0.2316
Yes	91	(19)	53	(11)	335	(70)	479	(100)	p = 0.8907
mother born in U.S									
No	75	(18)	39	(9)	298	(72)	412	(81)	0.2722
Yes	17	(17)	11	(11)	71	(72)	99	(19)	p = 0.8728
Father born in U.S									
No	73	(17)	40	(10)	305	(73)	418	(85)	1.4764
Yes	13	(18)	10	(14)	48	(68)	71	(15)	p = 0.478
Working									
No	69	(17)	35	(9)	302	(74)	406	(79)	4.6352
Yes	23	(21)	15	(14)	69	(64)	107	(21)	p = 0.0985

Table 3: Factors affecting probability to visit unhealthy food

Variable	DF	Estimate	Std. Error	ChiSq	Pr > ChiSq
Constant	1	0.8886	0.4621	3.6982	0.0545
Availability of Food Environments within Walking Distance (1km) around home					
Availability of healthy food	1	-0.0535	0.0269	3.9483	0.0469
Availability of unhealthy food	1	0.0025	0.0119	0.0436	0.8346
Frequency to visit food environments	1	0.9320	0.3968	5.5183	0.0188
Youths' Socioeconomic Background					
Males	1	0.7432	0.2517	8.7204	0.0031
African American	1	1.0600	0.4332	5.9864	0.0144
Student working	1	-0.7001	0.2978	5.5269	0.0187
Free lunch coupon	1	-0.3199	0.2501	1.6355	0.2009
Live with married parents	1	-0.5218	0.2534	4.2404	0.0395
Number of household members working	1	0.1271	0.1328	0.9159	0.3386
Number of cars in household	1	0.2216	0.1446	2.3484	0.1254
Student born in the U.S.	1	-0.3017	0.2573	1.3752	0.2409
Father born in U.S.	1	-0.3342	0.3501	0.9115	0.3397

Log L = -265.3895
Model Chi-sq. = 37.7313 (p = .0002)
DF = 12

Table 4: Factors affecting probability to visit healthy food

Parameter	DF	Estimate	Std. Error	ChiSq.	Pr > ChiSq.
Constant	1	-0.9713	0.4765	4.1561	0.0415
Availability of Food environments within Walking Distance (1km) around home					
Availability of healthy food	1	0.0606	0.0294	4.2463	0.0393
Availability of unhealthy food	1	-0.0187	0.0143	1.7279	0.1887
Frequency to visit food sources	1	-0.4906	0.4470	1.2048	0.2724
Youths' Socioeconomic Background					
Males	1	-0.6410	0.2893	4.9101	0.0267
African American	1	-0.5660	0.4687	1.4585	0.2272
Student working	1	0.6347	0.3324	3.6450	0.0562
Live with married parents	1	0.5393	0.2977	3.2813	0.0701
Number of household members working	1	-0.1287	0.1563	0.6783	0.4102
Number of cars in household	1	-0.1565	0.1659	0.8905	0.3453
Father born in the U.S.	1	-0.0252	0.3897	0.0042	0.9483

Log L = -213.9345
Model Chi-sq. = 18.4590 (p = .0477)
DF = 10

Planning for Countering Climate Change: Lessons from the Recent Plan of New York City - PlaNYC 2030

Introduction

In recent years, we have become increasingly aware of the environmental degradation and huge risks and uncertainties that climate change poses to our cities and communities (IPCC 2007, 719). Climate change is likely to affect the social, economic, ecological, and physical systems of any given city. It is supposed to bring higher temperatures, more intense rainstorms, droughts and heat waves, increased strains on materials and equipment, higher peak electricity loads and voltage fluctuations, transport disruptions, and increased need for emergency management. Ironically, cities themselves, through their economic production and modes of consumption, are major contributors to the environmental crisis. Apparently, cities and city planning have an important role to play in contending with the future impact of climate change, which, with its many complexities and uncertainties, poses new challenges for the planning profession. For this reason, generating a broad understanding of planning's role in fighting climate change is now emerging as a crucial task for planners, who are still in the preliminary stages of setting agendas and exploring possible directions (Kern and Alber 2008; Priemus and Rietveld 2009; van Leeuwen et al. 2009; Swart et al. 2009). Swart et al. (2009, 152) argue that although spatial planning is considered to be an essential lever of adaptation policy, "the references made to planning instruments widely remains very generic and vague" and "the specific potential of planning tools is, therefore, not yet addressed." Moreover, even though planners and planning have the "ability to think the big, long-term thoughts about the interrelatedness and interdependency" of complex issues such as hazard mitigation and climate change (Schwab 2010, 5), many cities around the world, including the most pioneering among them, still fail to utilize comprehensive and spatial planning in their fight against climate change (Kern and Alber 2008).

A review of recent urban plans aimed at countering climate change highlights three types of planning practices. The first, which has been used by a large number of cities, is the use of *mitigation* policies aimed at GHG emission reduction. The second has been used by a smaller number of cities, and involves the use of *adaptation* policies, in addition to *mitigation* policies, to contend with risks posed by climate change. The third, which has emerged more recently and has been used by only a handful of cities, promotes a more inclusive planning practice based on *mitigation* and *adaptation* policies, in addition to further integration of spatial, social, and economic policies. The ultimate outcome of this third type of practice is the construction of a new emerging approach to planning which I refer to here as *Planning for Countering Climate Change (PCCC).*

This paper explores and characterizes the emerging approach of PCCC and offers a thorough assessment of its advantages. More specifically, it examines the tools and procedures utilized by PCCC, as well as the role of *climate change* in shaping the planning process and its various components, beginning with problem formulation and culminating in its many outcomes.

New York City is one of the few cities in the United States and the world to employ such practices. This paper will analyze and gain new insight from the City's recent plan, *PlaNYC 2030*, which employs a PCCC approach to city planning.

Research Methods

This paper examines the role and influence of *climate change* through an analysis of the main components of the planning process, which include: formulation of the plan's problem statement, vision, and goals; its procedure and planning approach; its scope and the issues it considers; and its final outcomes. By considering questions related to the importance of climate change for each component, this paper provides us with a sound understanding of the role of climate change in city planning and the advantages of PCCC in the effort to counter climate change. The components analyzed and the questions asked are as follows:

1. *Problem Statement*: Overall, the goal of the problem statement is to justify the planning mission and present supporting evidence to convey a basic understanding of the nature and extent of the problems facing the city. What role does climate change play in the main problems addressed by the plan, and how is this role reflected in the problem statement?
2. *Visioning and Goal Setting*: What role does climate change play in the planning vision and goals of the plan?
3. *Procedure*: How was the plan generated? Who participated in the process? What was the nature of public participation?
4. *Approach*: What applied planning approaches (new urbanism, sustainable development, etc.) were utilized during the planning process?
5. *Scope of Issues*: What issues does the plan address? Does it focus only on environmental aspects and GHG emission reeducation, or does it also address relevant social and economic issues?
6. *Outcomes*: What is the nature and scope of the various final products of the planning process? Do these components focus primarily on mitigation and adaptation policies? Do they also incorporate social and economic policies and initiatives?

For the purpose of this study, we reviewed *PlaNYC: A Greener, Greater New York*, and several other related documents published by the city of New York, including: *PlaNYC: Progress Report 2009*; *Climate Change Report* (2009); *Energy Conservation Plan* (2008); *Greenhouse Gas Inventory* (2008); *Municipal Energy Conservation* (2008); *Think Locally, Act Globally: How Curbing Global Warming can Improve Local Public Health (2008)*; *PlaNYC: Inventory of New York City Greenhouse Gas Emission*. (2009); and *NPCC - New York City Panel on Climate Change*: *Climate Risk Information* (2009).

Problems Statement

Climate change played a major role in formulating the problems facing New York City and justifying the urgency of the new plan. A fundamental assumption of PlaNYC, which was launched on Earth Day 2007, is that "climate change poses real and significant risks to New York City" (*PlaNYC: Progress Report 2009*, 39). Both PlaNYC and the NYC Panel on Climate Change (NPCC 2009), a public body

proposed by PlaNYC and convened by the mayor of New York in 2008, portrays New York as a city at risk.

The NPCC holds that "climate change poses a range of hazards to New York City and its infrastructure" and that "these changes suggest a need for the City to rethink the way it operates and adapts to its evolving environment" (NPCC 2009, 3). Climate change is likely to bring warmer temperatures to New York City and the surrounding region, as the mean annual temperatures projected by global climate models are expected to increase by 1.5- 3 degrees (Fahrenheit) by the 2020s, 3-5 degrees by the 2050s, and 4-7.5 degrees by the 2080s (NPCC 2009). The city will also experience more intense rainstorms, while annual precipitation is likely to increase and droughts are likely to become more severe toward the end of 21st century. Heat waves are also expected to become more frequent, intense, and longer in duration, and sea levels are likely to rise, with increase of 2-5 inches by the 2020s, 7-12 inches by the 2050s, and 12-23 inches by the 2080s. In contrast to the period preceding the industrial revolution when sea levels rose at rates of 0.34 to 0.43 inches per decade, current rates of increase around New York City range from 0.86 and 1.5 inches per decade (NPCC 2009, 5-9; Gehrels, et al. 2005; Holgate and Woodworth 2004). As a result, general flooding and storm-related coastal flooding are likely to increase as well (NPCC 2009, 4). New York City has almost 578 miles of coastline and over half a million residents living within the current flood plain, and this poses a particularly dangerous risk to the city. At the current sea level, NPCC holds that New York City already faces the probability of a "hundred year flood" once every 80 years. This could increase to once every 43 years by the 2020s and to once every 19 years by the 2050s. According to one estimate, a Category 2 hurricane would inflict more damage on New York than on any other American city except Miami (NPCC 2009, 8).

As a result, climate change poses particular threats to New York's infrastructure, including: increased summertime strain on materials; higher peak electricity loads in summer and reductions in heating capacity in winter; voltage fluctuations, equipment damage and service interruptions; increased demands on HVAC systems; transportation service disruption; increased street, basement and sewer flooding; reduction of water quality; inundation of low-lying areas and wetlands; increased structural damage and impaired operations; and increased need for emergency management procedures (NPCC 2009, 4-30).

In addition to these threats, the already deteriorating physical condition of the City's infrastructure adds dramatically to the uncertainties surrounding climate change. According to PlaNYC (2007, 7), the City's infrastructure "is the oldest in America." Not only are the subway system and highway networks heavily-used, but about 3,000 miles of roads, bridges, and tunnels are in need of repair, as are many subway stations. To make matters worse, the water infrastructure has not been inspected in more than 70 years, and 52% of the city's tributaries that run adjacent to the shoreline and pass through neighborhoods are unsafe even for boating. Finally, about 7,600 acres throughout the boroughs remain contaminated, and the city suffers from one of the worst asthma rates in the country (PlaNYC, 7). Between the years 2000 and 2005, New York's greenhouse gas emissions increased by almost 5% (PlaNYC, 135), which is of particular significance because New York City emits

nearly 0.25% of the world's total greenhouse gases. As a coastal city, PlaNYC concludes, "we are vulnerable to the most dramatic effects of global warming: rising sea levels and intensifying storms" (PlaNYC, 133).

In this way, climate change and its effects play a decisive role in the manner in which PlaNYC describes the problems currently facing the city, which may lead to a dramatic deterioration of life in the city in the future.

Visioning and Goal Setting

Climate change is central to the visioning of New York City according to PlaNYC. PlaNYC begins by *diagnosing* the local and global climate change crisis as problematic and critical for NYC and the world as a whole. The plan portrays New York as the most sustainable and "one of the most environmentally efficient cities" in the United States (PlaNYC, 135), producing "less than a third of the CO2e generated by the average American." In this way, it explains, "Growing New York is, itself, a climate change strategy." According to the Plan, New York City is a globally responsible, pioneering, modern and innovative city – a city with an "unending sense of possibility" (PlaNYC, 130). Still, PlaNYC acknowledges, "in spite of our inherent efficiency, we can do better. And we must. Instead we are doing worse" (PlaNYC, 135). As one of the world's most spectacular cities, planners hold, New York should seize the opportunity and "define the role of cities in the 21st century and lead the fight against global warming" (PlaNYC, 130). The City "cannot afford to wait until others take the lead" on curbing climate change. "New York has always pioneered answers to some of the most pressing problems of the modern age," the planners argue, and "it is incumbent on us to do so again, and rise to the definitive challenge of the 21st century" (PlaNYC, 9).

PlaNYC's vision generates a sense of local and global *urgency*: "unless the public…appreciate[s] the urgency," it warns, "…we will not meet our goal" (PlaNYC, 110). "Meanwhile, we will face an increasingly precarious environment and the growing danger of climate change that imperils not just our city, but the planet. We have offered a different vision… It is a vision of New York as the first sustainable 21st century city— but it is more than that. It is a plan to get there" (PlaNYC, 141).

PlaNYC promises a *better future*: "The result, we believe, is the most sweeping plan to strengthen New York's urban environment in the city's modern history… we have developed a plan that can become a model for cities in the 21st century" (PlaNYC, 10).

> "It is a vision of providing New Yorkers with the cleanest air of any big city in the nation; of maintaining the purity of our drinking water;…; of producing more energy more cleanly and more reliably, and offering more choices on how to travel quickly and efficiently across our city. It is a vision where contaminated land is reclaimed and restored to communities; where every family lives near a park or playground; where housing is sustainable and available to New Yorkers from every background, reflecting the diversity that has defined our city for centuries" (PlaNYC, 141).

PlaNYC casts "climate change," or "sustainability," as a major concern and central theme of the plan. New York City Mayor Michael Bloomberg describes PlaNYC as "a long-term vision for a sustainable New York City" which "has been acknowledged around the world as one of the most ambitious – and most pragmatic – sustainability plans anywhere" (*PlaNYC: Progress Report 2009*, 4). He also maintains that each of the plan's 127 initiatives "will not only strengthen our economic foundation and improve our quality of life; collectively, they will also form a frontal assault on the biggest challenge of all: global climate change" (*PlaNYC: Progress Report 2009*, 2).

The vision advanced in PlaNYC includes solutions and planning strategies, calls for collective action, and promises that "We can do better. Together, we can create a greener, greater New York" (PlaNYC, 3). In the words of the mayor, "Truly, PlaNYC has become a citywide effort…we are creating a better and more sustainable city – one that will rise above the current economic turmoil and show the world how it is possible to come back stronger than ever… The City is committed to these goals, and together, I know we can build a greener, greater New York" (*PlaNYC: Progress Report 2009, 4).*

The vision of PlaNYC is ambitious: its practical aim is to reduce emissions by 30%, and its physical agenda is to develop NYC as a "greener, greater New York." The vision adequately addresses local and global climate change as a central concern of planning and future development. It aims to inspire and mobilize New Yorkers to collectively adhere to the planning initiatives and to build consensus and legitimacy for its implementation. For this reason, the word '*we*' appears 1,708 times in the 156 pages of PlaNYC, or about 11 times per page. At the same time, however, the vision overlooks the city's rich social and cultural agenda, which stems from its diversity. Strikingly, even though New York is "more diverse than ever; today nearly 60% of New Yorkers are either foreign-born or the children of immigrants" (PlaNYC, 4) - with 174 languages spoken by the city residents - the vision neglects the social and cultural issues that are relevant to this majority of the city's population.

PlaNYC classifies its main goals under six main themes, as shown in Table 1. All of the plan's main themes, and nine of its ten goals, are physically and environmentally oriented, while only one goal, which focuses on housing and affordability, can be considered social in nature. In this way, climate change clearly plays a key role in the vision of the City and maintains a strong implicit and explicit presence within the plan's goals.

Table 1. Goals of PlaNYC

Main Theme	Sub-Theme	Goals
Land	Housing	*"Create homes for almost a million more New Yorkers, while making housing more affordable and sustainable."*
	Open Space	*"Ensure that all New Yorkers live within a 10-minutes walk of a park."*
	Brownfields	*"Clean up all contaminated land in NYC."*
Water	Water Quality	*"Open 90% of our waterways to recreation by preserving natural areas and reducing pollution."*
	Water Network	*"Develop critical backup systems for our aging water network to ensure long-term reliability."*
Transportation	Congestion	*"Improve travel times by adding transit capacity for millions more residents, visitors, and workers."*
	State of Good Repair	*"Reach a full 'state of good repair' on NYC's roads, subways, and rails for the first time in history."*
Energy	Energy	*"Provide cleaner, more reliable power for every New Yorker by upgrading our energy infrastructure."*
Air	Air Quality	*"Achieve the cleanest air quality of any big U.S. city."*
Climate Change	Climate Change	*"Reduce global warming emission by 30%."*

Source: Based on information contained in *PlaNYC*, pp. 15, 51, 73, 99, 117, 131.

Procedure

Despite the significant planning it embodies and the crucial dilemmas it raises, PlaNYC the mechanism and procedures it proposes for facilitating citizen participation in the planning process are wholly inadequate. PlaNYC asks: "What kind of city should we become?" and asserts: "We posed that question to New York" (PlaNYC, 9). However, instead of a systematic procedure for public participation, the planners employed participation methods that were disorganized at best:

> "Over the past three months, we have received thousands of ideas sent by email through our website; we've heard from over a thousand citizens, community leaders and advocates who came to our meetings to express their opinions; we have met with over 100 advocates and community organizations, held 11 Town Hall meetings, and delivered presentations around the city. The input we received suggested new ideas for consideration, shaped our thinking, reordered our priorities" (PlaNYC, 9).

Notwithstanding this process, it is clear that public participation in the process was inadequate and insufficient for meeting the planning challenges stemming from climate change for one of the world's most socially and culturally

diverse cities. PlaNYC poses important urban dilemmas but does little to elicit real community participation. Instead, the planners appear to provide the answers themselves, in the name of New Yorkers: "By moving ahead, we will continue to ensure that the essential character of the city's communities remains intact as we seek out …opportunities for public rezonings" (PlaNYC, 21).

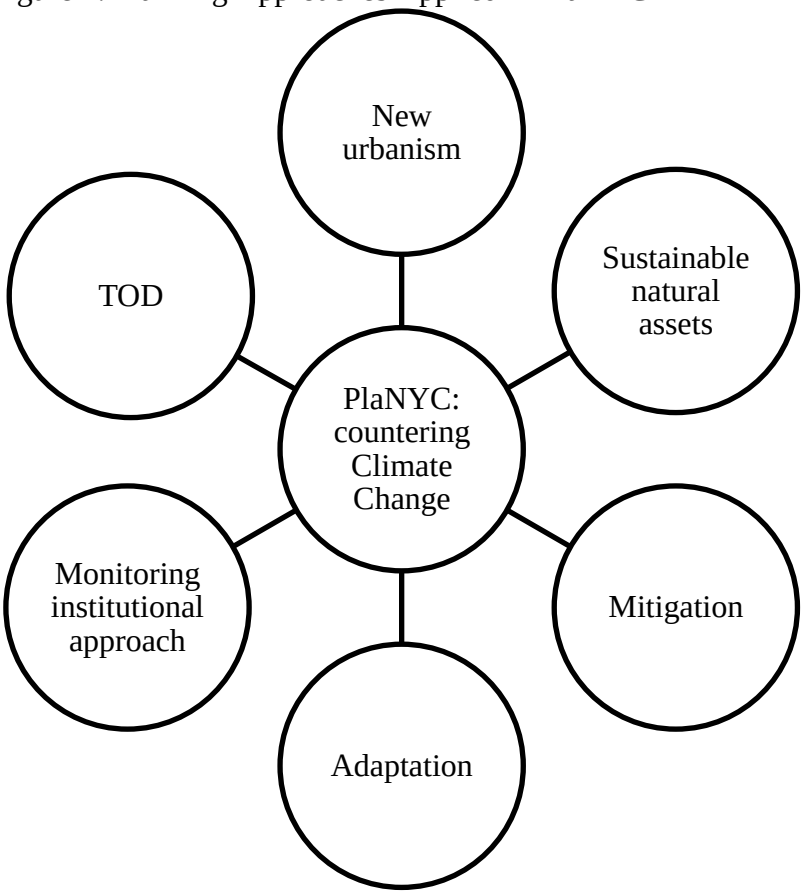
PlaNYC encourages community involvement in significant planning issues *in the future* and reflects little interest in community involvement during the preparation of the plan itself. In this spirit, it suggests *future engagement* in developing adaptation strategies, mainly by working "with vulnerable neighborhoods to develop site-specific strategies," and to "create a community planning process to engage all stakeholders in community-specific climate adaptation strategies" (PlaNYC, 138). PlaNYC also suggests working with communities while exploring potential sites for development in their communities (PlaNYC, 25), and in the rezoning of brownfields (PlaNYC: 44). Tom Angotti (2008) criticizes PlaNYC's community participation and suggests that instead of carrying out a single discussion with each of the 59 Community Boards the plan "could challenge each community to come up with its own priorities for long-term sustainability, affordable housing creation, open space, and transportation. Let the communities speak."

Planning Approach

PlaNYC is an inclusive plan for a big city. Its current population is approximately 8,363,700 (US Census Bureau 2009), and its target population for 2030 will surge past nine million (PlaNYC, 6). By the same year, the work force will grow by 750,000 jobs, there will be a need for 60 million square feet of additional commercial space (PlaNYC, 6), and the number of annual visitors to the city will reach 65 million. These additional jobs, tourists, and residents are expected to "generate an additional $13 billion annually" (PlaNYC, 6).

After careful analysis, this paper concludes that PlaNYC makes advantageous use of various planning approaches, particularly new urbanism, TOD (transit-oriented development), sustainable natural capital, mitigation policies, adaptation policies, and *institutional monitoring* approach. Together, these approaches contribute to current efforts to plan with an eye toward countering climate change in New York City. Their primary thrusts and the roles they played in the planning process can be understood as follows:

Figure 1. Planning Approaches Applied in PlaNYC



1. Sustainable Natural Assets: The concept of maintaining constant natural capital is an important criterion for sustainability. Natural capital should be kept constant over time in order to ensure that future generations will be able to generate wealth and well-being without harming the ecological system (Pearce and Turner 1990). PlaNYC focuses on three aspects of natural capital assets: air, water, and land. Its major strategy is asset restoration . To this end, PlaNYC takes the following measures:

(a) *Air:* The plan promotes initiatives to improve air quality and reduce emissions by 30% (PlaNYC, 116). If no action is taken, New York City's carbon emissions will grow to almost 74 million metric tons by 2030 (PlaNYC, 9).

(b) *Water*: The Plan calls for developing critical backup systems for the City's aging water network to ensure long-term reliability, and proposes ways of maximizing urban water absorption when planting trees (PlaNYC, 12, 59). It also proposes the creation of vegetated ditches (swales) along parkways to store direct rainfall and facilitate the natural cleansing of runoff (PlaNYC, 60).

(c) *Waterfronts and Waterways:* New York City has 578 miles of waterfront, which the Plan regards as "one of the city's greatest opportunities for residential development" and as an important site of other types of projects as well (PlaNYC, 22). PlaNYC also confronts the "legacy of the City's industrial past…" "…which treated New York's waterways as a delivery system" (PlaNYC, 51), and proposes the

opening of 90% of the City's waterways to recreation by preserving natural areas and reducing pollution (PlaNYC, 53).
(d) *Trees:* The plan suggests reforesting approximately 2,000 acres of parkland throughout the city by 2017 (PlaNYC, 128).
(e) *Land:* PlaNYC calls for more efficient use of the City's existing stock of land and for the reclamation of the vast majority of vacant, unutilized, and under-used land for development.
2. New Urbanism: PlaNYC actively promotes some of the main tools of new urbanism, including:
a) *Compactness*: The current overall population density in New York City is 25,383 persons per square mile, and the highest density in the city is 128,600 (New York City 2009). Today, less than 4% of the City's buildings account for roughly 50% of the city's built area (PlaNYC, 102). PlaNYC proposes a number of planning strategies to increase compactness within the City. It suggests *infill* "everywhere it is possible" and development of spaces that "are now lightly used," such as parking lots in public housing areas that were developed in the 1930s (PlaNYC, 23). It also calls for developing underutilized areas throughout the city that are well-served by public transportation and other infrastructure; for capturing the potential of transportation infrastructure investments; and for decking over rail yards, rail lines, and highways (PlaNYC, 19-25). Through *rezoning*, PlaNYC aims to continue directing growth toward areas with strong transit access; reclaiming underused or inaccessible areas of waterfront; and exploring opportunities to spur growth through the addition of mass transit (PlaNYC, 21). PlaNYC fosters rezoning and redevelopment of brownfields, which according to the Plan represent one of the City's greatest opportunities and cover some 7,600 acres throughout the five boroughs (PlaNYC, 41).
b) *Mixed Land Use*: PlaNYC encourages mixed land use in future development, mainly by mixing transportation use with residential areas and open spaces. It encourages co-location of the 43,000 acres of city-owned land with other uses. Most of this land is slated to be developed for government operations, "but significant opportunities exist for housing to co-exist with the current use—from libraries to schools to parking lots" (PlaNYC, 22).
c) *Renewal and Utilization*: PlaNYC proposes adapting unused schools, hospitals, and other outdated municipal sites for productive use as new housing (PlaNYC, 23). It also calls for cleaning and utilizing up to 7,600 acres of contaminated brownfields across the city and suggests strategies to "make existing brownfield programs faster and more efficient; to create remediation guidelines for New York City cleanups; and to establish a City office to promote brownfield planning and redevelopment" (PlaNYC, 41-44).
d) *Greening*: In NYC today, the average area of park area per thousand residents is 1.5 acres, and there is an average of one playground for every 1,250 children. Furthermore, in 97 out of the City's 188 neighbourhoods, the number of children per playground is even higher (PlaNYC, 30). In this context, PlaNYC adopts greening as a major strategy and proposes three primary ways to ensure that by 2030, nearly every New Yorker will live no more than a 10-minute walk from a park: 1) by upgrading land already designated as play space or parkland and making it available to new populations; 2) by expanding usable hours at current, high-quality sites; and

3) by re-conceptualizing streets and sidewalks as public spaces. The combined impact of these policies will be the creation of over 800 acres of upgraded parkland and open space across the city (PlaNYC, 31). PlaNYC also calls for beautifying the public realm and undertaking "an aggressive campaign to plant trees wherever possible, in order to fully capitalize on tree opportunities across the city" (PlaNYC, 38). In addition, it proposes the expansion of "Greenstreets" and the transformation of thousands of acres of unused road space into green space. It also suggests offering incentives for green roofs, which can reduce runoff volume and aid other natural process by absorbing and/or storing water (PlaNYC, 60). Since the launch of PlaNYC, 200,000 trees have been planted across the five boroughs (*PlaNYC: Progress Report 2009*, 3).

3. Transit-Oriented Development (TOD): PlaNYC pursues TOD and uses rezoning to direct growth toward areas with strong transit access (PlaNYC, 21). As a result of these policies, New Yorkers will experience more comfortable travel, reduced travel times, and greater reliability, thus achieving a new standard of mobility (PlaNYC, 97). Nonetheless, the city's transportation systems are currently in poor condition. More than half of the city's subway stations are in need of repairs, and the city is more than $15 billion short of what it would cost to get the transit and road networks back into good shape. Trains are crowded, half of the City's subway routes experience congestion, and a large number of New Yorkers have no access to mass transit (PlaNYC, 76). PlaNYC proposes a "sweeping transportation plan" to enable the city to meet its needs through 2030 and beyond. The plan suggests improvement and expansion of the transit network; improvement of bus service; expansion of the ferry system; completion of a master bike plan; reduction of the gridlock on the roads which has become an increasing problem, through better road management and congestion pricing.

4. Institutional Monitoring approach: PlaNYC addresses the future uncertainties of climate change on a general level and proposes primarily institutional measures - the establishment of the NPCC and the Climate Change Advisory Board – to address them. PlaNYC advances an ambitious agenda of measures to "create a sustainable New York City" that "will require tremendous effort: on the part of City officials and State legislators; by community leaders and our delegation in Washington; from the State government and from every New Yorker" (PlaNYC, 140). Nonetheless, planners acknowledge that "the existing organizations, programs, and processes are inadequate to implement these policies" and "no organization is currently empowered to develop a broad vision for energy planning in the city that considers supply and demand together as part of an integrated strategy" (PlaNYC, 104). On this basis, the plan concludes that "there is a clear need for a more comprehensive, coordinated, and aggressive planning effort, focused on the specific needs of New York City," and calls for the establishment of the New York City Energy Planning Board (PlaNYC, 105). It also calls for "changes at the City, State, and Federal levels - for transportation funding, for energy reform, for a national or state greenhouse gas policy" (PlaNYC, 11), and for "creating a new regional financing entity, the SMART Financing Authority, that will rely on three funding streams: the revenues from

congestion pricing and an unprecedented commitment from New York City that we will ask New York State to match" (PlaNYC, 13). In addition, it suggests establishing a City office to promote brownfield planning and redevelopment (PlaNYC, 45). In the ways mentioned above, PlaNYC promotes an integrative approach to the issue of climate change on the formal institutional level. Nevertheless, it fails to effectively integrate civil society and grassroots organizations, such as the 59 Community Districts and the Boards of New York City, into the effort.

5. Adaptation Policies: PlaNYC assumes that "there is no silver bullet to deal with climate change," and that "as a result, our strategy to help stem climate change is the sum of all the initiatives in this plan" (PlaNYC, 135). The Plan's main thrust for climate change adaptation appears to lie in the creation of "an intergovernmental Task Force to protect our city's vital infrastructure" and "to work with vulnerable neighborhoods to develop site-specific strategies" (PlaNYC, 136). In addition, PlaNYC proposes the establishment of a New York City Climate Change Advisory Board and a citywide strategic planning process "to determine the impacts of climate change to public health and other elements of the City and begin identifying viable adaptation strategies" (*PlaNYC: Progress Report 2009*, 39). Proposed adaptation policies also include measures to fortify the city's critical infrastructure, to be implemented through close cooperation among city, state, and federal agencies and authorities; updating the flood plain maps to better protect areas that are most vulnerable to flooding; and working with at-risk neighborhoods across the city to develop site specific plans. "In addition to these targeted initiatives," the Plan reads, "we must also embrace a broader perspective, tracking the emerging data on climate change and its potential impacts on our city" (PlaNYC, 136).

6. Mitigation of GHG Emission: PlaNYC promotes initiatives to improve air quality and reduce emission by 30% by 2030 (PlaNYC, 116). Moreover in order to maximize energy efficiency, PlaNYC calls for focusing this effort on buildings, the city's largest energy consumers (PlaNYC: 107). Over two thirds of the city's energy is consumed within buildings, compared to a national average of less than one third. According to the Plan, "the City has 5.2 billion square feet of space parceled into almost one million buildings" (PlaNYC, 107-108). By 2030, at least 85% of the city's energy will be used by buildings that already exist today. In this way, energy saving measures in existing buildings will result in a seven million ton reduction in global warming emissions. This is significant, for without the measures outlined in the Plan, emissions would rise to almost 80 million metric tons by 2030 (*PlaNYC: Progress Report 2009*, 39). In addition, the plan proposes an extensive education and training campaign in the realm of energy awareness (PlaNYC, 110). The most effective strategy, the Plan asserts, is to reduce the number of vehicles on the road and to simultaneously expand the city transit system and implement congestion pricing (PlaNYC, 136). According to planners, approximately 50% of reductions in CO2 emissions will come from increased energy efficiency in buildings, while 32% will result from improved power generation and 18% from changes in transportation. Planners explain their decision to not rely on "the widespread *use of solar energy in this* plan because its costs today are too high for general use" (PlaNYC, 136). PlaNYC suggests "greening" the Building Code of New York, and proposes focusing

on the reduction of the amount of cement used in concrete, as cement production is an energy-intensive process that releases one ton of C02 for every ton of cement produced (PlaNYC, 106-7).

Scope and Issues

Overall, PlaNYC focuses primarily on physical planning dimensions and less on socio-cultural issues. The vision, goals, strategies, and outcomes of PlaNYC are organized around six physical and environmental themes: land, water, transportation, energy, air, and climate change, none of which are socially or culturally oriented. Practically none of the major thrusts of the plan deal directly with issues of equity and justice, such as diversity, the future of communities and neighborhoods, the cultural diversity of the city and its immigrants, and poverty--a term which appears only once in the entire plan.

Energy in general and *ecological economy* in particular is a central theme of PlaNYC toward the achievement of its climate change objectives. According to the plan, improving the city's energy infrastructure and lowering demand will reduce energy costs by billions of dollars over the next decade; watershed protection will make multi-billion-dollar investments in new water filtration plants unnecessary; and improving public transportation and reducing congestion will reduce the economy's annual $13 billion loss due to traffic delays **(**PlaNYC, 133). By managing demand, increasing the energy supply, and saving energy in existing buildings, the city's overall power and heating bill will plunge by $2-4 billion, resulting in an estimated annual savings of approximately $230 for the average household by 2015. Congestion pricing is projected to generate net revenues of $380 million in the first year of operation, increasing to over $900 million by 2030 (PlaNYC, 96). To this end, PlaNYC proposes an amendment to the City Charter requiring that New York City invest an amount equal to 10% of its energy expenses in energy-saving measures each year. Planners also note that the measures required to execute these initiatives "will create thousands of well-paying jobs" **(**PlaNYC, 133), and that this will mean that the city will have "not only a healthier environment, but also a stronger economy" (PlaNYC, 13). In these ways, PlaNYC provides a number of economic engines to promote climate change objectives and a cleaner environment. Its well based conclusion is that "adapting to climate change and investing in mitigation not only ensures the city's long-term economic vitality, but it will encourage public and private investments in the city's infrastructure, support green jobs, and improve the quality of life and level of service enjoyed by New Yorkers today." (*PlaNYC: Progress Report 2009*, 38).

Affordable housing appears to be one of the only social themes that PlaNYC seeks to address. "The most pressing issue we face today is affordability," planners write. "Between 2002 and 2005 the number of apartments affordable to low-and moderate-income New Yorkers shrank by 205,000 units" (PlaNYC, 18). The Plan assumes that "if supply is not created as fast as people arrive, affordability could suffer further" (PlaNYC, 18). On this basis, it calls for expanding the housing "supply potential by 300,000 to 500,000 units to drive down the price of land" and for pairing "these actions with targeted affordability strategies like creative financing, expanding the use of inclusionary zoning, and developing homeownership

programs for low-income New Yorkers." This, planners hold, will "ensure that new housing production matches our vision of New York as a city of opportunity for all" (PlaNYC, 12). However, in practice, PlaNYC proposes the provision of 500,000 housing units without advancing effective policies for ensuring affordable housing and regaining the more than 200,000 units that have already been lost.

Although PlaNYC notes the existence of *environmental injustice* in the city, it fails to address the issue in a serious manner and takes no practical measures to mitigate the phenomenon. For example, planners acknowledge that most brownfields are concentrated in low-income communities, resulting in a case of severe environmental injustice (PlaNYC, 41). The owners of such land "often find that their financial interests dictate development plans that minimize cleanup requirements" and "may choose new uses for the land" that "do not reflect community needs or desires" (PlaNYC, 42-42). Moreover, "in some communities, the impacts of exposure to local air emissions have likely contributed to higher asthma rates and other diseases" (PlaNYC: 119). These clear cases of environmental injustices also go unaddressed by the plan.

Moreover, NYC is a diverse city with 5 boroughs, 59 community districts and hundreds of neighborhoods. PlaNYC acknowledges that shifting climate patterns will have a wide range of affects on these communities, taking lives and posing "major public health dangers," and impacting the property and livelihood of many (PlaNYC, 138). All five NYC boroughs "have vulnerable coastline." Moreover, the massive growth proposed by PlaNYC will certainly affect these communities, and may even "erase the character of communities across the city" (PlaNYC, 18). In considering the spatial impact of implementing the plan, planners raise a crucial dilemma for the future of New York City and its communities:

> "We cannot simply create as much capacity as possible; we must carefully consider the kind of city we want to become. We must ask which neighborhoods would suffer from the additional density and which ones would mature with an infusion of people, jobs, stores and transit. We must weigh the consequences of carbon emissions, air quality, and energy efficiency when we decide the patterns that will shape our city over the coming decades" (PlaNYC, 18).

Moreover, PlaNYC fails to address the climate change vulnerability, i.e., how climate change could affect each neighborhood, with an emphasis on the specific environmental risks that exist in each neighborhood and that each neighborhood is likely to face in the future.

On a practical level, PlaNYC neglects issues of *socioeconomic* and *cultural diversity*, including crucial socio-spatial issues such as segregation. It also fails to promote a wider variety of housing types. At the same time, however, PlaNYC recognizes that "the mixture of residents will determine, more than anything else, the kind of city we become," and that "by expanding supply possibilities to create healthier market conditions, we can continue ensuring that new housing production matches our vision of New York as a city of opportunity for all." "If New York loses its socioeconomic diversity," planners warn, "its greatest asset will be lost. We can—and must—do better" (PlaNYC, 27).

Outcome

The major planning outcomes are 127 new initiatives that aim, according to PlaNYC, to strengthen the economy, public health, and the quality of life in the city. Collectively, they will form the broadest attack on climate change ever undertaken by an American city. In addition, "most of *PlaNYC's* 127 separate initiatives contribute *directly to achieving the ci*ty's GHG reduction goals: to reduce citywide GHG emissions by 30 percent by 2030 and to reduce City government GHG emissions by 30 percent by 2017" (*PlaNYC: Inventory of New York City Greenhouse Gas Emission, 2009*). Each initiative is meant to achieve multiple goals and at the same time to contribute to the global fight against climate change. Their goals can be classified according to six themes: land, water, transportation, energy, air, and climate change (PlaNYC, 142-145).

In addition to these initiatives, the Plan proposes the establishment of new Planning and Monitoring Boards in order to achieve a more comprehensive, coordinated, and aggressive planning effort, focused on the specific needs of New York City (PlaNYC, 105). It also calls for "changes at the City, State, and Federal levels - for transportation funding, for energy reform, for a national or state greenhouse gas policy" (PlaNYC, 11), and for "creating a new regional financing entity, the SMART Financing Authority, that will rely on three funding streams: the revenues from congestion pricing and an unprecedented commitment from New York City that we will ask New York State to match" (PlaNYC, 13). In addition, it suggests establishing a City office to promote brownfield planning and redevelopment (PlaNYC, 45).

Lessons from *PlaNYC*

Characterizing PlaNYC:

1. PlaNYC is a comprehensive plan that aims to counter climate change.
2. The Plan integrates *climate change* into its planning components. Climate change played a central role in formulating the plan's problem, justification, and visioning and objective settings. The Plan's outcomes were also climate change directed.
3. PlaNYC is physically oriented. It promotes greater compactness and density, enhanced mixed land use, sustainable transportation, greening, and renewal and utilization.
4. PlaNYC applies an integrated planning approach, making use of the advantages of new urbanism, TOD, sustainable development, mitigation, adaptation, and monitoring institutional policies.
5. PlaNYC addresses future uncertainties related to climate change with institutional measures, and enhances the City's urban adaptive planning capacity. It recommends efficient ways of using the city's natural capital assets and pays special attention to strategies for providing New York with cleaner and more reliable power. It creates a number of mechanisms to promote its climate change goals and to create a cleaner environment for economic investment.

6. PlaNYC inadequately address social planning issues - such as social and environmental justice, diversity, poverty, economic development, and spatial segregation - that are crucial to NYC, the most diverse city in the world. It also fails to address the issues facing vulnerable communities due to climate change. New York City is "socially differentiated" in terms of the capacity of communities to meet climate change uncertainties, physical and economic impacts, and environmental hazards. PlaNYC calls for an integrative approach to climate change on the institutional level, but it fails to effectively integrate civil society, communities, and grassroots organizations into the process. The lack of a systematic procedure for public participation throughout the city's neighborhoods and among different social groupings and other stakeholders is a critical shortcoming, particularly during the current age of climate change uncertainty.
7. PlaNYC's focuses on GHG emissions reduction and lacks a proper adaptation strategy, or a strategy of preparing the city and its physical infrastructure for potential disasters caused by climate change shifting. PlaNYC did not make the desired shift toward planning for climate change and adaptation. It therefore seems clear that the planners of PlaNYC have not learned the lessons of Hurricane Katrina as well as they should have.

Advice to Planners for Planning to Counter Climate Change

1. *Planning to Counter Climate Change (PCCC)* is comprehensive and holistic in scope and in the issues it covers. It is integrative and multidisciplinary in its approach to the uncertainties and the complex and multidisciplinary phenomenon of climate change. PCCC integrates climate change into its major planning components. Climate change played a central role in formulating the problem, visioning and goal setting, and the outcomes.
2. *Planning to Counter Climate Change* integrates various planning approaches that aim to achieve its comprehensive objectives, and it is therefore able to utilize the advantages of new urbanism, TOD, sustainable development, mitigation, adaptation, evaluation, and monitoring policies.
3. *Planning to Counter Climate Change* must apply an inclusive, appropriate, and wide-scale approach to public participation.
4. *Planning to Counter Climate Change* must address the current and predicted needs of vulnerable communities. In addition to adaptation policies, hazard mitigation is a crucial aspect of this approach.
5. For their "ability to think the big, long-term thoughts about the interrelatedness and interdependency" (Schwab, 2010: 5) of climate change, planners are indispensible to efforts to counter climate change. They should therefore take on a leadership role and assume more control in fighting climate change on the city level.

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Improving the integration between Rural Development Programs and spatial planning tools.

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Introduction

Rural Development is one a major policy in the European Union aimed to promote competitiveness, sustainable management of natural resources, and a balanced development of rural areas (European Commission, 2010). It represents one of the two pillars of the Common Agricultural Policy (CAP), the other one being support to production. Currently, the CAP alone accounts for 34% of the total EU budget, with an annual expense of about 55 billion, of which 85% is allocated to the first pillar and 15% to the second one. Rural Development Programmes (RDP) are the instruments that Member States have to elaborate to target funding from the European Rural Development Fund to farmers.

RDP are structured into 4 main axis:

- Axis 1: Improving the competitiveness of the agricultural and forestry sectors
- Axis 2: Improving the environment and countryside
- Axis 3: Rural quality of life and diversification of the rural economy
- Axis 4: LEADER approach

Actions financed under Axis 1 are embrace a wide array of possibilities: purchasing of new machinery or substitution of old ones, building of new facilities, introduction and commercialization of new products or processes, education and training, support to young farmers, production of energy from biomasses or solar panels. Many of these actions have also a positive repercussion on the environment for example by reducing consumes of energy or water.

Axis 2 finances the so called Agri-environment schemes (AES): actions implemented voluntarily by farmers who receive financial support in return for adopting environmentally friendly farming practices and/or for delivering ecosystem services. Actions include: organic farming, integrated production, fertilisers reduction, pesticides reduction, crop rotation, maintenance of set-aside areas biodiversity conservation and enhancement actions, upkeep of the landscape including conservation of historical features on agricultural land.

Axis 3 promote the diversification of rural economies; financed actions include the establishment of touristic activities (agritourisms), support to the start up of new small enterprises, as well as development of services and facilities in marginal rural areas.

Axis 4 promote integrated actions by local communities through the elaboration of local development programs aimed at promoting and fostering the endogenous development of marginal rural areas. These programs are elaborated and managed by Local Actions Groups, partnerships made up of representatives from local authorities (municipalities), local companies and enterprises, other local agencies, farmers associations, and other relevant stakeholders representative of the local community.

This brief overview shows that rural development programs act on many different aspects with potential interferences or synergies with other planning and programming tools elaborated for other sectors, including spatial planning tools.

In this paper we draw from the case of the Rural Development Program of Piedmont Region (north-west Italy) to investigate its possible interaction with spatial planning tools, with the aim of fostering integration between these two dimensions of territorial governance. In section 2 we further elaborate on the integration issue, with a focus on the Italian context; in section 3 we present the results of an analysis of the content of two main spatial planning tools recently adopted by the Piedmont Regional government and by the Province of Turin, highlighting possible synergies with rural development policies. In section 4 we discuss the findings and point to some relevant emerging aspects for possible further researches.

2. Rural development policies and spatial planning: the need for integration

In the Italian context, the aspect of integration, coordination and harmonization of rural development policies and other territorial governance tools is particularly relevant at the regional level, as regional authorities have many government responsibilities on a number of issues including spatial planning, health, energy, the management of protected areas and transportation.

The RDP is therefore part of a variegated, complex and dynamic framework made up of many different laws, regulations and plans/programs. Furthermore, regions are in charge of elaborating and implementing the programs which are co-financed by the structural funds of the EU, such as the RDP itself and transnational cooperation programs (in the case of Piedmont, France and Switzerland).

Over the last decade, the regional system of territorial governance has undergone a significant shift from a hierarchical, command and control-based model toward a more cooperative one based on the principle of subsidiarity. The Piedmont regional government initiated a process of harmonization and integration of its plans and programs in order to overcome the traditional fragmentation and sectorialization of

the administrative action. To this end, the region elaborated the so-called Framework of Territorial Governance (FTG), gathering together the three main regional plans concerning spatial planning: the Regional Strategic Document, the Regional Territorial Plan and the Regional Landscape Plan, which all contain directives and guidelines for spatial planning, urban development and landscape/environment preservation for other sectors of the regional government (e.g., waste management, water or energy) and lower-tier institutions (provinces and municipalities).

in the Italian context, agricultural policies and spatial plans have traditionally been developed separately: agriculture related policies were designed considering mainly the economic aspects and only to a minor extent in relation to its territorial dimension. Furthermore, farmers' associations have traditionally been influential in steering the design and implementation of rural development policies and support to production.

However, also urban/spatial planning has traditionally paid relatively little attention to rural areas, which have been traditionally considered as "white areas", "not yet urbanized" underestimating their potential both as productive areas, or as biodiversity sinks and providers of ecosystem services. This separation in policies, plans and program-making has been amplified by an administrative separation within regional structures, whereby the rural department is separated both from the spatial planning department and from the environment department.

In pursuing greater integration between rural development policies and spatial planning, a number of key factors have to be considered: the RDP is a programmatic instrument which allocates economic resources among a plurality of stakeholders (mainly farmers), while spatial plans are regulatory instruments establishing rules and constraints for the transformation and/or preservation of the territory, and are not associated with a budget. This has important implications for how these instruments are elaborated and on their subsequent implementation: the allocation of economic resources and the establishment of regulations (which in the Italian context is the main difference between "programs" and "plans") may follow different rationales.

More recently, however, the need of a deeper integration between these two policy field has emerged also among policy-makers at the regional level: on the one hand, at the EU level the CAP increasingly emphasizes the multifunctional nature of agriculture and, therefore, the necessity of pursuing integration and synergies with other sectors; on the other hand, the newest generations of spatial plans are ever more recognizing the intrinsic value of agricultural areas and their importance from an ecological and socio-economic perspective.

In this frame, the Piedmont Region offers a particularly interesting field of research as new spatial plans have been recently elaborated and approved at the regional and

provincial level. In the next section we explore the interactions between rural development policies and spatial planning tools by examining three key planning documents, two of which were elaborated and adopted by the Regional Authority and one by the Province of Turin, namely:

- The Regional Territorial Plan;
- The Provincial Territorial Plan of the Province of Turin

3. Results

The new Regional Territorial Plan (RTP) entered into force in July 2011; it sets the main strategies and rules for spatial and territorial development at the regional level, pursuing the following main objectives:

1. Landscape preservation

2. Environmental sustainability and energy efficiency

3. Territorial integration of the infrastructures of mobility, transportation and logistic

4. research, innovation and productive transaction

5. Valorising human resources and institutional capacities

The RTP also establishes guidelines and rules for the elaboration of plans and programs at lower tiers of government, i.e. provincial and municipal. For the aim of this articles, the contents of the RTP relating to agriculture areas were scrutinized and relevant directives, guidelines or binding norms were identified and sorted out. The results of this exercise are summarized in the following table, in which the first column indicate the reference to the norms of the plans and specify the normative nature of the norm: (guideline/directive of binding prescription)

art. 20 - urban areas outside historic centre (Directive)	local plans shall preserve and valorize agriculture areas at the fringe of the urban fabric as important connection elements of the local ecological network; new developments should be primarily identified within the urban fabric and not in agricultural areas
art. 23 touristic network	Provincial plans should identify potential touristic sites near lakes and rivers and pursue synergies between agriculture and tourism (agritourism). in the territory of hills, traditional agriculture production shall be

	supported, and the stock of traditional rural buildings shall be preserved
art. 24: agriculture areas	Main objectives: to valorize the role of agriculture as a productive activity compatible with the preservation of biodiversity, habitats and the cultural historic assets
24.4 (directive)	Provincial plans shall identify within the rural territory the following areas: • Agriculture areas with particular environmental and landscape features • Highly productive agriculture areas • Peri-urban agriculture areas
art 25 Agriculture areas with particular environmental and landscape features (guidelines)	the main objective for these areas is preservation of their environmental/landscape features. To this end, provincial and municipal plans shall identify existing buildings with a negative visual impact and pursue the re-localization of existing activities in other areas. Allowed developments shall be realized with traditional materials and styles of the context; new facilities can be built only if strictly necessary and they cannot be used for other purposes than agriculture or related ones (agriturism, selling of agriculture products)
art. 26 Highly productive agriculture areas	These areas correspond to the ones classified in classes I or II of land use capabilities, according to the classification introduced y the USDA and based on soil characteristics and morphology. In these areas no limitations to agriculture production exists. In these areas the objectives are to support productions, integrate the income of agriculture and enhance productivity. To this end local plans shall avoid land take in these areas, support production, allow multifunctional uses (such as agriturisms) with the aim of creating new jobs
art. 27 peri-urban rural areas	in these areas located at the fringe of the urban fabric, provincial and local plans shall avoid further fragmentation and soil sealing and support multifunctional activities as source of integrating income for farmers. Plans shall also pursue improvements in the ecological equipments of these areas through tree plantations, installation of hedgerows and foster urban design aimed at demarcating more strongly rural areas from urban ones.
art. 28 Hilly areas	In Piedmont these areas have a strong tradition of vineyards cultivation and wine production. Provincial and local plans shall incentivize and preserve this production, while allowing for multifunctionality of farms oriented to the eno-gastronomic tourism
art. 29 Mountain	these areas the main objective is to contrast marginalization and

territories	abandonment of territories. To this end, their natural and landscape features shall be preserved, and form of income integration for farmers shall be pursued through eco-tourism and preservation of typical cultivations and pastures
art. 31: limitation of land take and soil sealing	Provincial plans shall establish specific rules to limit land take, soil sealing and urban sprawl, promoting the realization of new development in brownfield areas where possible. Municipalities cannot increase their urbanized areas more than 3% over a five year-period

The Provincial Territorial Plan (PTP) of the Province of Turin was elaborated in parallel with the RTP and approved in the same period. It is thus the first provincial plan approved after the entrance into force of the new RTP and shall implement its directives at the provincial scale.

Overall, the PTP pursues a strong policy of limitations of soil sealing and land take and requires that municipal plans subdivide their territory in three types of areas:

- *Dense urban areas* - where the urban fabric is consolidated and long established, and where the main urban services and facilities are located;
- *Transition Areas* - localized at the margins of dense urban areas and characterized by a less dense urban fabric;
- *Free Areas* - where agriculture or natural assets are the predominant land uses.

Following this classification, the PTP require that no new urban developments are planned in free areas: to meet the local demand of housing and other development, municipalities shall use the already existing stock of buildings or infill transition areas.

This undoubtedly represent a strong stand by the provincial government to counter current trends of land take and urbanization, which increased at an average annual rate of more that 2% in the provincial territory in the period 1990-2006. This policy is of course relevant also for rural areas, which, beyond natural and seminatural habitats, constitute the majority of the *free areas* as defined by the plan.

The PTP also introduces the concept of ecological compensation of new developments when they affect free areas or determine negative impacts on natural assets.

The PTP, following the directives of the RTP, also provides for specific policies and rules for agricultural areas, which are summarized in the following table.

art. 17, 21, 25, 27	I and II class soils according to their land use capabilities shall be preserved. No new developments (either residential or productive) are allowed on these areas unless strictly necessary and no other

	alternative are feasible. On these areas municipal plans shall encourage the permanence of agriculture activities and farms, and foster mutifunctionality of agriculture.
art. 26 agriforest sector	the PTP pursues the following objectives: • enhance the natural value and ecological functions of rural areas; • decrease the factor of environmental pressures determined by agriculture activity • increase the carbon sink capacity of agriculture areas new buildings in rural areas shall be realized according to traditional local architectural features and materials.
28 specialised cultivations	Specialised cultivations (DOC or IGP products) shall be preserved and no other land use a part agriculture is allowed on these areas, unless this is strongly motivated by external conditions.
31 peri urban areas	These are agricultural areas located at the fringe of urban areas, often fragmented, and at risk of being urbanized. In these territories local plans shall: incentivize the permanence of agriculture land use; enhance their ecological value by improving their vegetal equipment; improve their visual attractiveness by clearly demarcated the urban-rural edge, promote multifunctional uses according to the principles of the CAP and encouraging farmers to pursue synergies with the regional Rural Development Program

In addition to the directives outlined above, the PTP also designs the Provincial Ecological Network, which is articulated in the following types of areas:

- *Core areas*: comprise protected areas and natura 2000 sites
- *Main corridors:* comprise rivers and main creeks with a buffer
- *Buffer zones:* other areas with significant environmental and landscape features identified by the PTP; woods and wet areas if they are not comprised in core areas or corridors

In the following figure, the provincial ecological network as established by the PTP is depicted.

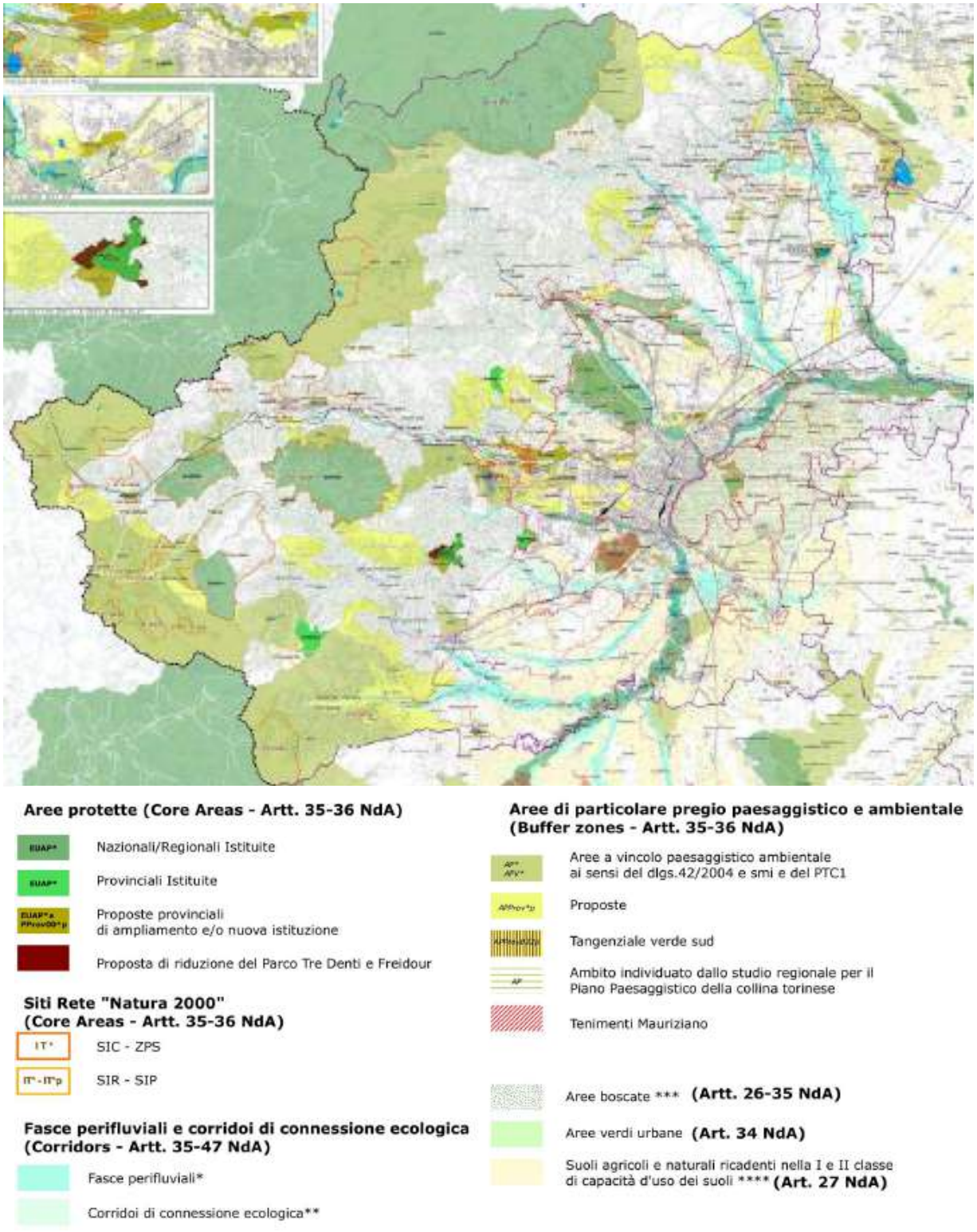

Figure 1: the ecological network of the Province of Turin

4. Discussion and concluding remarks

The analysis of two key planning tools carried out and reported in the previous section, has showed the deep interlinks between agriculture-related policies and spatial planning. It has also pointed to the fact that, at least from the spatial planning perspective, these interplays have now been fully recognized and recent plans now play much attention to the role and potential of rural areas.

As regards the PTP in particular, the relevance of its provisions concerning rural territories is twofold: on the one hand, as the previous table demonstrates, the PTP attaches great importance to agricultural areas not only in terms of spaces that shall be preserved by potential urbanization, but also in relation to their function as socio-economic drivers and providers of environmental assets and ecological services. This undoubtedly represents, in the Italian context, a significant innovation, especially considering that, although the provincial plan as a relatively weak prescription power, the majority of its norms being directive or guidelines, the province has a voice in the approval procedures of municipal plans, the only ones which can establish specific land uses and establish property rights. In particular the Province can impede the approval of the municipal plan if this is not compliant with the PTP.

In addition, the PTP explicitly refers to the CAP and the Rural development programs, and identifies in Agri-environment scheme a key tool to achieve its environmental objectives related to rural areas. Although the province has, overall, a limited role in the implementation of AES, this again represent a relevant step forward towards integration of planning policies and agriculture ones.

In this frame, the design of the ecological network is another key element, with potential strong interplays with rural development policies. In fact, as explained in the introduction section, poor spatial targeting represents one of the main weaknesses of current implementation of AESs in the regional territory. The identification of the different elements of the ecological network now provides a detailed reference to identify agriculture areas to which target AESs; the PTP itself identify the different elements of the ecological networks as the areas where compensation and enhancement measures shall be realized with priority and also states that the most suitable areas where to implement compensation measures are agriculture areas where the ecologic value can be significant increased. Whilst AESs as designed in the current RDP already provide for spatial priorities, the identification of the ecological network in the province of Turin represent a more detailed reference and would allow for a better spatial targeting of AESs.

The other side of the coin, that is the pursuing of stronger integration with spatial planning by agriculture-related policies and programs is instead less demonstrable. Previous analysis of the ongoing RDP of Piedmont Region aimed at assessing the coherence of the RDP with other regional plans and programs (Spaziante et al., 2012)

found that, although no incoherencies could be detected, deeper strategic integration between the different instruments were lacking in many cases. The design of the objectives and actions of the RDP is indeed based on a detailed analysis of the regional context, which covers not only agricultural aspects, but broader environmental and socio-economic ones as well. However, its implementation follows a sectoral rationale, meaning that its integration with other regional instruments has not been fully developed. Improvements in this sense shall thus be pursued for the next programming period (2014-2020). In 2013 the new RDP will be elaborated, and it is hoped that the lessons learnt from the current one will be taken into account.

We want to conclude by highlighting a further possible development along the lines outlined above, concerning the monitoring of both, spatial plans and RDP. Monitoring in fact represent a key activity in steering plan's implementation, and the new RTP and PTP attaches a great importance to this phase. As mentioned earlier, monitoring of RDP is regulated by the EU level, but the current Common Monitoring and Evaluation Framework is not adequate to assess environmental effects properly, nor to evaluate the level of integration with spatial planning tools. In this perspective, a further research development could be to analyse monitoring schemes of spatial plans, identify the indicators directly or indirectly related to agriculture and identify, as for the RDP, the actions that can produce changes in those indicators. A deeper harmonization of different monitoring systems would thus represent a very straightforward and concrete way of pursuing spatial planning/agriculture policy integration.

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INSTITUTIONAL CAPACITY AS A KEY FACTOR IN TERRITORIAL DEVELOPMENT POLICIES: A CASE STUDY ANALYSIS IN THREE EU COUNTRIES

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Abstract

The aim of the paper is to present and discuss the results from a cross European empirical study aimed at exploring the relationship between capacity building policies, institutional capacity and territorial development policies, in the framework of territorial cohesion, and to reflect upon the relevance of capacity in this field.

In particular, the main focus of the SMART-IST project, funded under the ESPON programme and led by Politecnico di Milano[2], has been to investigate to which extent institutional capacity is a crucial variable in contributing to the design of effective territorial development policies, and which types of capacity building programmes and policies seem more appropriate, in the different contexts, to enhance, improve and strengthen institutional capacity.

From a methodological point of view, the project has analysed nine case studies in eight regions (Puglia, Sicilia and Toscana in Italy; Aquitaine, Alsace and Rhône Alpes in France and Dolnoslaskie and Lubelskie in Poland), focused on different types of territorial development policies across different policy areas (territorial integrated projects, decentralisation of competences in the management of Operational Programmes, integrated river and landscape management, waste and water policies) and in two different programming periods (2000-06; 2007-13).

In this paper we will focus in particular on institutional capacity, trying to understand how this relatively broad and fuzzy concept can be operationalized using empirical research, with the obvious limits of a very limited empirical basis, and which lessons can be learned in a policy perspective, looking at the design and implementation of the next EU funds programming period 2014-20.

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[2] The project group was formed by DiAP Politecnico di Milano, Milan, Italy; DITer Politecnico di Torino and Università di Torino, Turin, Italy; IGOP Universitat Autónoma de Barcelona, Barcelona, Spain; Istituto per la Ricerca Sociale), Milan, Italy; Sciences Po, Université de Lyon, Lyon, France; the project stakeholders were the Department for Development and Economic Cohesion of the Italian Ministry of Economic Development (Lead Stakeholder) and the Interministerial Delegation for the Development and Competitiveness of Territories (DATAR) of the French Government.

Introduction

Connecting the effectiveness and the impacts of institutional capacity (and of related capacity building policies and programmes) with the quality of regional development policies, and with structural variables from the contexts is a question of direct interest for the definition, development and implementation of EU Cohesion Policy, in particular as far as the debate on the new programming period is concerned (university of Strathclyde, 2010). In fact, preparatory debates about the 2014-20 programming period highlighted the increasing importance of this dimension, seen as the ability of public administration to deliver sound and effective policy. In particular, the improvement of the capacity to design, implement and evaluate policies seems to be one relevant focus (European Union, 2010; European Union - ESF, 2011).

Moving from this background, the SMART-IST project framework proposed to investigate the connection between structural variables, capacity building policies and institutional capacity at regional level, with the aim to finally connect any intervention on these dimensions with the quality of policy design in the cohesion policy field, as illustrated in Figure 1.

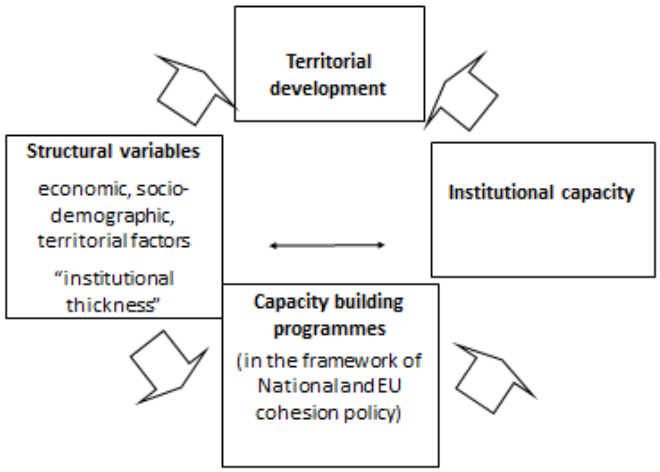

Figure 1. The SMART-IST Framework

As we will see, during the course of the project this interpretative scheme has been modified, according to the first results of the empirical work and extensive interpretative discussions.
In order to fully introduce this framework, the paper will propose in this section a brief presentation and discussion of each section of it, with a specific accent on the institutional capacity concept, which is the main focus of the paper.

In the first place, *structural variables* are those variables related to the socio-economic features of the different regional contexts, which are at the same time the starting point of regional development policies, but also the objective of policies themselves. Data bases at regional level are very detailed, both within and outside of the ESPON databases: the main objective of our research has been therefore not so much to improve such basic data, but try and find meaningful connections with the other variables in the interpretative framework.
It is important to note that the regions selected for the analysis are in quite different positions as far as development trajectories are concerned, which is confirmed by all the basic indicators: in particular, Alsace, Aquitaine, Rhône Alpes and Toscana are quite developed contexts, in which indicators as GDP are around or above the EU average, while Puglia, Sicilia, Lubelskie and Dolnoslaskie are in a very different situation, with GDPs which are well below the EU average (between 60 and 70% of the EU average, apart from the case of Lubelskie, which is around 40% of the EU average); in turn, the GDP in all regions (except Lubelskie) has been declining since 2005.
It is possible to detect a significant difference between the two Italian regions, which were part of the EU policies since many years, and the Polish Regions, which are part of a new accession country.

The second significant variable which was taken into account is capacity building policies: they refer to actions aimed at strengthening the capability of government officials to manage their programmes, to provide services to their constituents, or to manage their overall jurisdictional or inter-jurisdictional responsibilities. Capacity building refers, therefore, on the one hand to improving managerial practices (along New Public Management theories), such as management, strategic and operational planning, or evaluation; and on the other, to transforming power and institutional relations (in a governance perspective) and producing learning and innovative governing arrangements.

As far as *institutional capacity* (IC) itself is concerned, this has been the key variable in our study and its ability to contribute to the explanation of the quality of territorial development policies, in connection with capacity building policies and in the context of the structural features of different territories has been the main object of study. It is therefore worth considering it in detail. Since the concept of institutional capacity includes a broad variety of themes, we started our research summarising different approaches derived both from literature and from policy, able to propose convincing and workable definitions of IC, within the framework of EU policies and beyond, with the awareness that in the literature it developed first as a normative and operational concept rather than as an analytical notion (IMF 2002; UNDP 2011; for the analytical perspective Gualini and Salet, 2007).

If we focus our attention on the EU, the concept of capacity implies to pay attention to the development of strategies and competences to maximize the opportunities for

policy implementation, in particular as far as programming, selection and evaluation, implementation and monitoring are concerned.

Looking at the EU Cohesion Policy field, the role of institutional factors and capacity building has been considered since long as an important prerequisite in promoting territorial development. As the Barca Report puts it: "It is widely agreed that both formal and informal institutions are a prerequisite for a place to make full use of its potential". Starting from this assumption, in discussing the rationale for exogenous intervention in a place-based approach, the Report mentions institutional capacity among the most relevant concepts, that is "the capacity of public and private local institutions to govern and coordinate collective decision-making". As it happens with the agency of individuals, social capital, trust and democratic participation in decision making, the Report highlights that "all these institutional conditions tend to stimulate development by encouraging the involvement and cooperation of people, creating an incentive for them to pool knowledge and to develop collective projects" (Barca, 2009, p.22). In this definition there is the acknowledgement of the complex governance framework which is necessary to successfully design and implement regional development policies, which has also been at the basis of the SMART-IST analysis.

Analysis

In order to plausibly connect the different project variables, the project concentrated on nine case studies in eight EU regions.
Three cases were analysed in France:

- the decentralization of the management of the Operational Programme to the Regional Authority in Alsace;
- the policy interventions in the field of innovation and solutions for an effective cooperation between the Managing Authorities of the Operational Programme and the Regional Authority in this field in Aquitaine;
- the programming and implementation of a multi-regional programme, in particular in the field of management of river basins in Rhône Alpes).

Four cases in Italy:

- the setting up of the Regional Evaluation Unit in Puglia;
- policy interventions able to build up territorial integrated development programmes (TIPs) in Sicilia
- integrated development projects in particular in the field of urban development in Toscana;
- technical assistance measures employed by the Central government to support regional governments in the implementation of reform processes and sectoral planning in the field of water and waste management in Puglia.

Two cases concerned a CEE country, in this case Poland:

- the implementation of the Regional Development Strategy 2020 in the Dolnoslaskie region

- the decentralization of structural funds management in the period 2007-2013 in the Lubelskie region.

The researchers engaged in field research worked with a comprehensive template, aimed at describing at the same time the basic socio-economic structures in each region, together with more specific reconstruction of the policy course, explicitly aimed at capacity building (like the set-up of the Regional Evaluation Unit in one Puglia case) or in which the capacity building dimension has played a significant role.

Chapter 1: **Research problem**
description of the main research problem to be explored.
Chapter 2: **Context related features**
2.1 *Socio – economic development*
2.2 *Institutional and political characteristics*
general focus on structural variables and institutional thickness
analyze the departure point and changes in the main contextual factors – social, economic, and political- that shape institutional capacity in the analyzed regions over time (before, during and after the implementation of the interventions);
analyze the main challenges to social and economic territorial development in the region.
Chapter 3: **Outcomes of analyzed interventions**
analyzes the success of the intervention or its failure
Chapter 4: **Telling the story of the intervention**
retraces the story of the analyzed intervention with respect to the research problem.
Chapter 5: **Actors involved**
identifies the main actors involved in the analyzed intervention and their role in its programming, implementation, monitoring and evaluation.
Chapter 6: **Analyzing institutional capacity**
focuses on characterizing institutional capacity and its (eventual) evolution over time
Chapter 7: **Capacity building policies**
focuses on capacity building policies put into place and their effectiveness in increasing institutional capacity
Chapter 8: What works

focuses on the mechanisms explaining how institutional capacity brought about better interventions.

Table 1. Template for case study analysis

Results

As a first result of the analysis, the research identified three different declinations of the concept of institutional capacity, as emerging from the nine case studies. Our hypotheses are strictly linked with the policy area examined in the study and it would be necessary to test them in other policy areas and across a larger number of different regional contexts, in order to extend their analytical use. Nevertheless, they are probably worth mentioning and discussing as a first reference.

Even if they are partly overlapping at the empirical level, the three declinations can be distinguished from an analytical point of view, and can thus be very useful in a policy development perspective:

- the first one has to do with the *ability to come to terms with rules and procedures*, that is to say the complexity of the management dimension of EU funds, and the ability to combine them with the national and/or regional rules and procedures;
- the second one is the capacity to use EU funds and procedures to *bring forth and implement complex territorial projects and strategies*, which local actors already had in mind, or which they develop on purpose;
- finally, a third possible declination is the capacity to use the competences built through the use of EU funding in order to *improve the overall quality of administrative action*, i.e. the increase in quality of intervention due to the diffusion and mainstreaming of the partnership principle, the sustainability framework, the use of monitoring and evaluation, the emphasis on multilevel governance, etc.

As far as the first declination is concerned, we find evidence of such type one IC across all SMART-IST cases, even if in different modes and with different time dynamics, depending on the initial level of capacity present in the region, but also on the length of the period in which regions have been involved in EU funded policies: here, differences between regions managing European Structural Funds since long and newcomers can be significant.

In this sense, it seems that the Italian cases can be contrasted with the French and the Polish ones, but also that there are considerable differences between regions with a strong initial level of institutional capacity and weaker ones. If we look at the Italian regions, we can certainly say that the long experience in managing EU Structural Funds has meant an overall capacity to come to terms with such procedures, even if, since in most cases the administrative structures of the target regions were considerably weak and characterised by low levels of administrative and institutional capacity, the results have not been the expected ones. In such regions, quite

frequently technical assistance policies from the central government level have substituted local actors, without properly contributing to an overall increase in capacity. This has been for instance the case for the management of waste and water policies in the Puglia case.
On the other hand, in Sicilia, a Region with a long experience in managing Structural Funds, the huge amount of local development programmes promoted through Territorial Integrated Projects (TIPs) overloaded the regional bureaucracy and increased the level of conflict between centre and periphery, with a resulting low degree of effectiveness of the local development policy.
In the French cases, on the contrary, there is a widespread capacity of managing complex territorial development processes, and the only gap to be filled in is the one between the French national system of rules and procedures and the EU one. In this sense, the case of decentralization of competences in Alsace, for instance, shows that together with the transfer of specialised staff from the State administration, there has been a significant investment in human resources after the decentralization started. Similarly, the Aquitaine case shows a growing institutional capacity of this first type, and this brings forth the general acknowledgement that the Region is the right actor to deal with this process.
In the two Polish cases, introducing Cohesion Policy for the first time implied a significant effort in coming to terms and complying with new systems of rules and procedures, both at the national and local level: in this respect, the choice made by the National Government to proceed through a sort of 'delayed decentralisation' strategy, even if it overloaded regional actors with very complex procedures, proved effective to a certain extent. Probably the on-the-ground training implemented through pre-accession procedures and the 2004-06 programming period had not been able to build the institutional and administrative capacity which was in fact needed for the 2006-13 programmes. Thus, the complex institutional arrangements put in place between the Voivodship and the Marshal Office both in Dolnoslaskie and Lubelskie may be considered part of this institutional and administrative capacity building process.
In particular, despite its very recent institution, the Dolnoslaskievoivodship presented a good level of institutional capacity at the outset of the analyzed intervention, in terms of good quality, highly educated civil servants, organizational characteristics and interdepartmental relations, even if the high degree of personnel turnover has put some strain on the effectiveness of the administrative units involved. As for the Lubelskievoivodship, despite the overall structural socio-economic conditions, the analysis showed how the level of institutional capacity seems to have been growing throughout the time schedule of the observed phenomena (with a significant role played by the skills and competences of the administrative personnel, both those gained before entering the regional offices, and those gained afterwards).

The second declination is the capacity to use EU funds and procedures to bring forth and implement projects and strategies. While very frequently the availability of EU funding triggers opportunistic behaviour on the part of local or regional actors, in some cases actors have shown their ability to use funding in order to implement strategic and coherent projects or programmes which they already deemed necessary.

In other words, local actors show the capacity of implementing integrated policies, which means that they are able to integrate different sectorial policy issues by pooling different tools and different funding streams (public and private, regional, national, EU from different Structural Funds). This capacity to integrate thematic areas, implementation tools and devices and funding sources towards a strategic objective is to be found, within our cases, especially in the French cases and in Toscana, because this typology of institutional capacity does not specifically depend on the experience in managing EU rules and procedures, but is strictly linked with the initial maturity of administrative and institutional contexts, and it is possibly the least diffused of the three typologies.

We can find for instance this capacity in the Rhône-Alpes case, where a complex multi-regional regeneration programme used EU funding along with national and regional funding, through the reconfiguration of the original scope, from a quite sectoral to a more comprehensive and strategic one: the Plan Rhône is in fact interesting because it is representative of a habit of French actors involved in regional policies to expand the scope and resources of existing partnerships and inter-institutional cooperation devices through structural funds. From another point of view, in the Aquitaine case the ability to show competence both at content and at process level played in favour of the legitimation of the role of the Regional Government for the design and management of the programme on innovation. At the process level, the long acquaintance with experiences of contractualisation among actors, be they internal or external to the administrative structure, played a significant role, while from a content point of view, the experience in promoting, designing and managing policies towards innovation has significantly contributed to the overall capacity of this second type.
Probably the most interesting case in which such type two IC is found is the case of Toscana. Here Integrated Sustainable Urban Development Projects (ISUDP), the delivery mechanism of the policies defined in Axis 5 of the ROP 2007-2013, focuses on cities, as a fundamental part of a development strategy. ISUDP is a coordinated and systematic set of public and private actions aimed at enhancing sustainability and combining a better urban and environmental quality with a higher economic competitiveness, that has been implemented through a competitive mechanism and with a significant role played by the strengthening of partnerships at different levels. The opportunity of using Cohesion Policy funds on Axis 5 was matched with the emerging need of innovating the strategies and tools for urban regeneration at the local level. The regional structures showed here a significant capacity of matching the needs and attention towards urban regeneration with a more general policy perspective, which recognises urban contexts as significant hubs for territorial development in Toscana, and with the appropriate funding sources.

The third declination is the capacity to use the competences built through the use of EU funding in order to improve the overall quality of administrative action. In this declination, institutional capacity is a goal in itself and it can influence the final results in terms of territorial development, because its effects can improve the quality of administrative action beyond the Cohesion Policy interventions. More precisely,

the principles deriving from the diffusion of EU policies can be summarised in four main elements:

- the partnership principle, i.e. the ability to understand in which occasions it is appropriate or necessary to strengthen public/private or public/public cooperation and densify networks in a governance perspective;
- the ability to internalise the environmental sustainability dimension (through the introduction of tools such as SEA)
- the introduction of evaluation procedures in different phases of the policy cycle, along with the NPM framework and again in a governance perspective;
- the equal opportunities approach (in particular in the ESF funded policies and projects).

In the SMART-IST cases, we find evidence concerning mainly the diffusion of the partnership principle and of evaluation procedures, even if for instance in the Puglia waste, water and soil case, there is some evidence that the environmental competences built for the specific project may have had positive impacts on the regional structures more in general.

The Puglia Evaluation Unit case is very clear from this point of view: the Evaluation Unit has been a tool for the improvement of the capacity to plan, select and evaluate projects, especially but not only in the framework of the ROP: in terms of improving planning capacities, the Evaluation Unit had not a relevant impact in the 2000-2006 programming period as it was not involved in the programming phase, while its involvement in the elaboration of the 2007-2013 ROP contributed to the adoption of a different programming vision based on the use of specific methodologies, greater policy integration, the enhancement of participation. This means that the set-up of the Evaluation Unit, which can be considered to a certain extent a capacity building policy in itself, has promoted the mainstreaming and diffusion of evaluation across all the policy areas controlled by the Region, starting from the EU funded ones to encompass the others.

Toscana is another interesting case, because the implementation of the ISUDP policy enhanced networking and partnerships both along the vertical axis (multilevel governance) and along the horizontal one (different cases of inter-municipal cooperation). In this case, the increase in capacity has been one of the objectives of the regional actor, which enhanced its diffusion from the regional to the local level, in particular with the adoption of the competitive mechanism.

Also in the Aquitaine case, which focused on the process of establishment of an effective collaboration between the Managing authority of the Operational Program, the Préfet de Région, and the Regional Authority with particular attention to innovation, the analysis shows that collaboration is particularly relevant since it concerns the field of innovation and research, where the regional authority holds a strong leadership and technical capabilities. The new partnership sets real challenges both at regional and state level, with regard to two main aspects: the establishment of new patterns of collaboration and the integration of the new European guidelines and in particular of the innovation issue.

From the review so far, it seems that different types of capacity are present in different combinations: while in the French cases we find evidence of type two IC

and some elements of type three IC, while the first type is also intervening; Toscana offers a good example of type one and type three; in both Puglia cases again the emerging dimensions seem to be the first and the third one; in the Polish cases the first dimension appears paramount, and the same happens for very different reasons in Sicilia. As we noted at the beginning of this paragraph, a more comprehensive review of case studies across EU regions would be necessary to further test and refine this interpretative framework.

Conclusions and questions for further research

We can draw some preliminary conclusions from the SMART-IST research, as far as the institutional capacity dimension is concerned, knowing that in any case it is strictly linked with the other project variables, which cannot be discussed in detail in this paper.

Institutional capacity has been the object of increasing interest in the EU debate in the last years. Within the regulation document of the ESF, for instance, as we have seen in the Introduction, the concept of capacity is linked to the attention to be given to the development of strategies and competences to maximise the opportunities for policy implementation, a perspective within which the SMART-IST project moved from the beginning. In fact, regulations for both ESF and ERDF and prospective new regulation proposals for the 2014-20 programming period contain provisions for the strengthening of institutional and administrative capacity as a key element.

As far as the different typologies of IC are concerned, even if it is somewhat natural that in the European Commission (EC) policies particular attention is paid to the ability of the different Managing Authorities to efficiently manage Cohesion Policy, it would be a limitation to identify effectiveness only with financial management. In fact, the real test of effective implementation is the fact that the goals of the Lisbon strategy are attained and in order to do so the integration between European cohesion policy and domestic policies is actually working: type two IC is therefore very important and this has to do with the ability to avoid the risk of a strong separation between the public bodies in charge of the Structural Funds and the Cohesion Fund and the rest of Public Administration, as it sometimes can be seen in the case studies analysed.

Secondly, what emerges from the SMART-IST analysis is that in designing the strategy for enhancing IC the Member States and the EC should take into consideration a broader definition of administrative capacity than the simple ability to manage European funds. What seems necessary is therefore the ability to find some common indicators at the strategic planning level, in order to define not only the actions to be taken, but also the targets to attain in the different areas of IC.

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THE SPATIAL TRENDS AND THE IMPORTANCE OF SPACE FOR FASHION DESIGN SECTOR IN ISTANBUL

Senem Kozaman [1]

Abstract

Researches that examined process of cultural production and creative sectors refer especially the importance of space. According to Scott, creative industries tend to agglomerate in areas where the easy access to specialized labor force, supply companies and support services are concentrated (Scott, 2000). Fashion design sector is also indicated the same trend as a sub sector in cultural industries. Furthermore with the structural change in global economy enhance the importance bestowed upon the sectors constituting the culture industries in the spatial, economical and physical development of cities. The sector of fashion design is amongst these sectors acquiring importance and generating economical gain through the creative capacity.

During these developments in the World, there are significant moves taking place in the field of fashion design in Istanbul. To put it in another way, Istanbul is among the prime cities with a potential for the development of this sector in Turkey. There is a vast accumulation of knowledge resulting from a history in production in the city with the biggest portion in exports in the clothing and textiles field in Turkey. On the other hand, due to its central position in commercial and economical activities and its global disposition Istanbul is also characterised as a centre of Turkish fashion where creative activities are located, various related fairs, activities and fashion shows take place, where the initial steps for organising the sector are taken and where institutions of education concentrate. The statements uttered by various actors of the sector in interviews, that there is no other city which contains so many key factors necessary for the development of fashion design prove that design is not considering to relocate.

Within this context, in the scope of the research the aim is determined as to reveal the importance of space over the development of design, spatial proximity and inter-relationship between production and design, and the geographic characteristics of fashion design in Istanbul as well as the contributions of interviews with fashion designers and some other stakeholders[2].

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[2] This paper is a part of the research which is formed by the European Capital of Culture 2010, Cultural Inventory Project
Kozaman S., 2011. Istanbul Fashion Sector: From Manufacturing to Design. Creative Istanbul, ed: Z. Enlil, Y. Evren, Istanbul Bilgi University Publications, Istanbul, Turkey

1. Introduction

In the literature, it is claimed that as a creative industry fashion design is a sector which tends to cluster and share a socio-economic environment. At the same time, in the sector many fashion companies in these places carries out cooperation with other local actors (Rantisi, 2004; Hauge, Malmberg & Power, 2009). Indeed, the trend in the world also proved the creative and production processes prefer places that provide appropriate necessary conditions. In fact, with the globalization, low-cost production in developing countries based on growth policies has led to a fragmented structure in the geographic distribution of fashion design, garment and textile sectors. Accordingly, the production takes place mostly in developing countries, design and marketing phase finds its place in global cities of developed countries (Bair & Gereffi, 2003:149; Hassler 2003:523).

However, it is emphasized that the importance of local conditions should be taken into account in questioning the relationship between fashion design and the space localization. There is a world-wide distribution of the value chain, but on the other hand in the creation of value the role of the local potentials are also important (Hauge, Malmberg & Power, 2009). In other words, the geographical location has an important role on the innovation and learning process. The innovation and learning ability can be produced conveniently where the resources, knowledge and other inputs and facilities aggloromated in the specific environments rather than a single individual attempts. The spatial agglomeration of firms within the same industry, related services, education, research and development activities that allows face to face relationships, share and facilitate the flow of information by creating scale economies (Asheim, 2007). Today, even though more recent developments in communication technologies created an incredibly long distances interaction, some of the knowledge and skills transfer takes place by means of face to face relationships (Malmberg & Maskell, 1999).

Beside, when the geographical features of fashion design industry analyzed, according to the global trends manufacturing and design activities are in different locations from each other, yet many fashion centers had a history of production. With this context when Istanbul is examined the presence of textile and clothing manufacturing has an important contribution to the development of the fashion design in Istanbul. Of course, this trend is not only shaped by the location selection of the industry but also the presence of an accumulation of the other creative industries, central structure of Istanbul in commercial and economic terms, fashion-related exhibitions, events and fashion shows take place in Istanbul and fashion design departments of universities and private institutions providing education in fashion design, even historic identity , considered to be important factors in the specification of Istanbul as the center of Turkish fashion.

Kozaman, S. , 2011. Fashion Design In Istanbul: Structural Features, Threats, Opportunities and Policy Implications. İstanbul 2010 European Capital of Culture Project, Inventory of Cultural Heritage and Cultural Economies in Istanbul.
<http://www.istanbulkulturenvanteri.gov.tr/files/yayinlar/ISTANBULDA_MODA_TASARIM.pdf >

Taking all of these developments into account the aim of the research is determined as to reveal the importance of space over the development of design, spatial proximity and inter-relationship between production and design, and the geographic characteristics of fashion design in Istanbul with the contributions of interviews with fashion designers and some other stakeholders.

2. Fashion Design Sector in Istanbul

Textile and apparel sectors, create important opportunities for economic development, especially in 19th century in England and in the 20th century in other countries the industrialization led to the development of exports by providing the accumulation of capital. Today, it's observed that due to the presence of cheap workforce in developing countries, especially in order to ensure the capital stock, the production of textile and apparel sectors take similar roles in economic development (Dal and Gülpınar,2010).

Indeed, the cheap cost of production-based growth policies in developing countries, along with the globalization, has led to the emergence of a fragmented structure in the geographic distribution of fashion design, garment and textile industries. Production takes place mostly in developing countries, design and marketing phase mostly located in developed countries and global cities. In other words, the geographical distribution of the production of apparel and the industry reveals widespread structure, yet the accumulation of value-creating activities such as branding, design and marketing in certain areas caused the flow of value into specific areas (Bair and Gereffi, 2003). In particular, Paris, Milan, New York, London must be considered as pioneers in global cities not only as the places of trend designators in fashion, but also stand out as the places of consuming fashion.

Textile and clothing sector in Turkey has a history based on Ottoman Period. To briefly summarize the status of sectors, during 1923-1970 government policies and development plans attributed to the importance of textile sector investments to increase production capacity in this direction. After 1980s, with the liberalization process in Turkey, foreign capital and goods started to enter with imports and also Turkey opened to foreign markets at the same rate. With the start of world brands taking place in local apparel retail market, the demand for consumption of fashion products has increased.

In 80's foreign trade relations based on textile and in 90's, apparel exports gained importance. During this period of structural change in the Turkish economy cheap workforce, minimum capital requirement and the existence of necessary raw materials in local industry (cotton etc.) has provided a rapid development in apparel and textile sectors. In addition, the number of large-scale enterprises in clothing sector has increased with the development of foreign trade relations.

Yet in 1990's the firms in Turkey and also in Istanbul had a market approach based on contract manufacturing. After the structural change in apparel and textile industries in the world this has turned into brand-building efforts. In order to manufacture products with high added value, companies tried to include design in the

production process. Especially in Istanbul after 2000s, a process was taken in the development of fashion design industry. In this context government and private initiatives has started to make significant investments in education, R&D operations. And also clothing, textile and fashion design professional associations were established. With the efforts of some actors in the sector and the public support major projects have been developed. In 2006 Fashion Designers Association were established and from August 2009 Istanbul Fashion Week was started with international participation. Although the latency of developments, these and similar steps contributed to the growth potential of the sector.

In Istanbul, due to the presence of capital in proportion of industrial location preferences textile and clothing sector has also started to concentrate in the city. When we examined the exports in garments and textile products, it's observed that most of the exports are carried out from Istanbul. In 2009, the share of Istanbul in Turkey is %78 in garment and %52 in textile products. From 2002 to 2009 export rates are increased from 3 to 5 billion $ in textile. In parallel to this improvement the export in garment products are also increased from 5 to 7.5 billion $.But from 2007 there is a decline trend in the export rates of sectors in Turkey and also in Istanbul (Turkish Statistical Institute, Foreign Trade Statistics,2002-2009).

According to 2009 data of Istanbul Chamber of Commerce (ICC), in the "personal or household goods such as textiles, clothing, shoes, jewelry, furniture and other interior decoration and other fashion goods related to fashion design activities" category there are 155 companies. This number is minor than the firms recorded under manufacturing or retailing classifications in garment and textile sectors.

Taking all these statistics into consideration, for fashion design, textile and clothing sectors Istanbul is the central location for trade and the large number of firms were concentrated in the city. Yet the number of fashion design companies registered to ICC is lower than the textile and clothing firms. In general, the results obtained from the review reports and data indicate that the export of Turkey in these sectors are in a declining trend. In parallel, the share in exports of İstanbul also shrinks.

It is clear that the approach that endorse cheap labor and production based manufacturing caused a redundant competition with Far East countries. In this aspect it's not rational to compete in cheap manufacturing category on a global scale. The sectoral acquisition will pursue to decline unless Turkey kept pace to the structural changes in the competitive environment. In this manner, the importance of innovative practices in design, branding developments has also been reported as dominant factors for the sectoral improvement in interviews with stakeholders.

> *"I've been working for an apparel firm as fashion design department director and also I have my own brand. In this geography, 10 years ago, there are no examples of designers who also work as a consultant for apparel firms. With this partnership the firm increases the rates of its turnover almost %50 in every season."*
>
> *Arzu Kaprol, Fashion Designer*

Today although fashion and manufacturing phases are prone to locate in different places according to global trends, many fashion centers of today had a history of manufacturing. Indeed, as mentioned previously, the presence of textile and apparel manufacturing in Istanbul made a valuable contribution to the development of fashion design in the city. Of course, this trend has been shaped not only within the framework of location preferences of the industry but also the presence of the accumulation of other creative industries, fashion-related exhibitions, events and fashion shows, fashion design education institutions even the historic identity of city effects the clustering potential in Istanbul as important factors. In addition, interviews with fashion designers mentioned that there is no other city in Turkey that has so much potential together for the development of the sector.

3. Location Choice of Fashion Design in Istanbul

With globalization as a result of competition to attract capital, urban areas which had become valuable for manufacturing have turned to be the preferable places for finance, commerce, creative and cultural sectors. In Istanbul this decentralization process is reinforced by strategic plans and policies. In this context, with the interviews, effects of decentralization process of textile and apparel manufacturing to fashion design sector are investigated. Interpretations of designers are differentiated from each other about the spatial relationship between production and design. There are some views emphasizing the importance and advantages of clustering or close spatial relationships between manufacturer and designers to ensure the existence of cooperation between them. Besides there are some opposing views that support the independency of design activities from mass production and possibility of cooperation without proximity and the development potential of textile and clothing industry (manufacturing) in other cities.

The current location preferences of the sector is also an evident for the consideration of the city as the most suitable geography for development of fashion design sector. The maximum agglomeration is seen in the Şişli District. %16.8 of total companies are located in this district. After Şişli, Beşiktaş (%8.4), Bakırköy (%7.1), Kadikoy (%6.5), Beyoglu, Kagithane and Umraniye (5.8% each one) are the locations that take over (Figure 1).

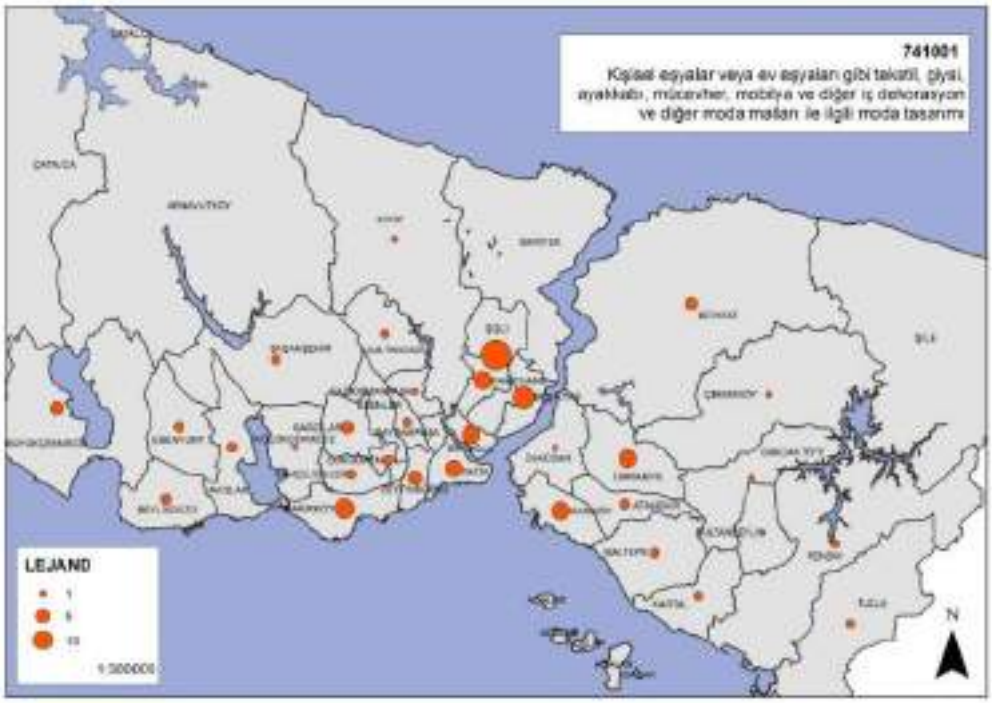

Figure 1. The distribution of fashion design firms according to districts (ICC member records)

In addition to this, there are 92 members registered to Fashion Designers Association. Members are classified as fashion designers, young fashion designers, fabric designers and future fashion designers (who are still students in universities). Two categories (fashion designers and young fashion designers) are considered to understand the location choices. The spatial distribution of 76 members in these categories show similar tendencies with the locations observed in ICC members. Sisli (%38), and Beyoğlu (%13) are districts with high agglomerations.

In summary, the fashion design activities have chosen to locate in the center of the city in places that has history and identity. Yet Şişli is a place not only with prestigious commercial streets but also from 1970's small garment workshops had located in the district. Fashion design sector tend to concentrate in space and this trend creates opportunities for market sharing and also can be considered in the context of a capacity to transform space. In Beyoğlu, Galata region is an evidence for this transformation.

> *"As my point of view, artists are the main leading stakeholders who can change and transform the space. Galata is one of the oldest and historical part of Istanbul. In its history, artists and radical people also lived in this old neighborhood. Strictly, there could be no other place for me better than Galata. I made an investment in here for my office and showroom. With this acceleration, creative people, like artists, designers, gallerists, architects began to come and rent shops, showrooms in here."*
>
> *Bahar Korçan, Fashion Designer*

4. Conclusion

As a result, clusters that have been shaped by the prestigious location preferences of the fashion design sector lead to create a network between space and fashion. And some places are associated with fashion directly like Nişantaşı which is a neighborhood of Şişli or as mentioned before Galata.

The interview below denotes an important clue about the location trend of a large-scale apparel company. However, in some interviews the importance and exigency for spatial proximity is mentioned between small-scale workshops and fashion designers as a result of contract manufacturing. When the production capacity is exceeded in a fashion designer firm, they prefer to work with small scale manufacturers in the city. And also some of the designers prefer to supply raw materials from the commercial units in these places.

> *"Our apparel company decided to carry manufacturing part to Çerkezköy in Tekirdağ Province. There are several reasons for this, but the main cause is based on some certain factors. The current place of the factory in Istanbul is closed to the transportation nodes like airport etc. So the area became much more valuable and in addition to this the labor force is much more expensive in Istanbul rather than other closed cities as a result of high income needs to maintain standards of living. Furthermore, the congestion and density in transportation effects the logistic operations badly. So it becomes a necessity to move to a place without these difficulties."*
>
> *General manager of Altınyıldız Apparel Factory*

There are several ascriptions that refer to the importance of cultural industries in policies for development of Istanbul. Some of views appraise Istanbul as "overvalued" for manufacturing activities in terms of labor and land prices. However, the proximity of designers and producers also seems to be an important issue. In this context, taking all these spatial relationships into account comprehensive studies have to be realized to provide and strengthen the development of cultural industries with spatial sectoral policies.

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BUILDING RESILIENCE FOR SUSTAINABLE FRESH WATER USE IN THE NETHERLANDS

Johan Woltjer, Jannes Willems, Piet Pellenbarg[1]

-FIRST DRAFT-

Abstract

This paper makes a series of suggestions for strengthening our understanding of dealing, through spatial planning, with increasingly challenging fresh water capacities. Based on a literature review and a detailed case study on the Netherlands, the paper explores current capacities and the resilience of the users of fresh water resources at a national level.

More theoretical issues of adaptive capacity and resilience are central to framing the case. Accordingly, the paper offers a framework for planning practice featuring these issues as evaluative indicators. The suggestions are intended to reveal the resilience among fresh water users like industry, energy producers, drinking water suppliers, nature and agriculture, and contribute to the quality of spatial planning work in this field.

The paper reveals that, currently, these users suffer in varying degrees from lacking capacities for efficiency, productivity and substitution. There is also a need for a longer term commitment to innovation. Important emerging practices include efforts to strengthen accessibility and reliance at specific places, efforts to establish water as a factor of choice and certainty of location, and institution building for policy integration between water, urban and economic development.

It is suggested that vulnerability strategies express themselves through interventions at two notions of place. *On-site* vulnerability implies levels of capacity at current locations and contexts, typically featuring strategies like productivity innovation, efficiency and thrift. *Beyond-site* vulnerability implies the potential capacity for locational change and adjustment, typically involving integration and substitution.

1. Introduction

This paper discusses current issues on adaptive capacity among large users of fresh water in the Netherlands. The notion of 'large users' refers more specifically to

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activities and choices in five prevailing sectors: industry, energy, water supply, agriculture and nature. These activities typically require relatively large amounts of fresh water for their existence and continuation. A leading question for the paper is to identify the major vulnerabilities these water users may face, given water availability issues from climate change, and to identify what capacities may be associated with these vulnerabilities.

Fresh water is an indispensable resource for many human activities. At the same time, it is distributed unevenly over space. It also suffers from inconsistent availability and variable accessibility. This is true on a global scale. Asia, for example, represents 60% of the world's population, but about 36% of global fresh water resources. Overall only 15% of the world's population lives in areas with abundant fresh water resources (United Nations, 2003, Revenga et al, 2000). But a similar uneven distribution occurs within continents, within individual countries, and at regional and local scale. One third of European citizens reside in countries with water stress, in particular around the vulnerable Mediterranean Sea (EEA, 2007). But also countries like Germany and Belgium deal with water stress.

For the Netherlands, vulnerabilities to water in general (like flooding), and fresh water shortages in particular, are on the increase. The European Water Exploitation Index (WEI) has been shown growing vulnerability (EEA, 2008). The Netherlands is also vulnerable due to its down-stream location for large European rivers like the Rhine, Meuse, Scheldt and Ems. Specifically, the country is vulnerable because of its high urban densities and the vast associated values on land, especially at places with serious potentials for water shortages and nuisance.

Overall, the problem here is one of changes in fresh water availability, specifically episodes of drought and intruding saline water from sea, due to climate change. The general situation is perceived as a situation with enough fresh water over the whole year, but, at the same time, increasing occurrences of insufficient quantities at the right place, insufficient quantities at the right time, and insufficient quantities of the right quality (Klijn et al, 2011; RWS, 2010).

Consequently, during the last decade there is growing uncertainty about locally continuous availability, and hence concerns about practices of securing adequate fresh water (e.g., RWS 2011). Climate changes in the Netherlands are producing higher sea levels, irregularities in rainfall intensity, limiting groundwater replenishment and unstable river flows, leading to land-use changes like 'space for water' and 'water sensitive' spatial planning in the Netherlands (e.g., Woltjer and Al, 2007). Climate change and resulting impact on water quality and availability have had important implications for the activities of water users. The vulnerability of their life and production is at stake (Nicholls et al, 2007). Vulnerability here refers to the degree to which an activity is sensitive to, and is able to anticipate the adverse effects of climate change, including variability and extremes in freshwater availability. The vulnerability of water users to climate change may be alleviated if their efforts and

the efforts of planners and policy makers seek resourceful ways to deal with water or establish substitution possibilities like alternative sources.

Clearly, therefore, the issue of fresh water usage is not only related to the availability of water itself, but specifically also the capacities among users to handle issues like water shortage and improve efficiency and substitution.

2. Analysis

The analysis here assumes the hydrological system of fresh water in the Netherlands and its related institutional arrangements to represent an adaptive system with abilities to change or adapt in response to stresses and strains. We see resilience as a dynamic attribute, as it changes over time (e.g., Holling, 1994; Pendall et. al (2010). We follow a definition on adaptive capacity from the IPCC: "the ability or potential of a system to respond successfully to climate variability and change, and includes adjustments in both behaviour and in resources and technologies" (IPCC, 2007). The paper focuses, therefore, on current capacities and strategies of dealing with fresh water and the changes in its availability in terms of location. Obviously, notions of adaptive water management are related to our thinking (e.g., Pahl-Wostl, 2007; Gleick, 2003), as are notions of water-sensitive spatial planning (e.g., White, 2010).

Location is a key aspect for water use. The international literature on freshwater consumption points to two types of location considerations (e.g., Gleick, 2003; Mitchell, 2005). First the analysis considers the potential capacity to anticipate a changing freshwater availability *on-site*, at current locations and contexts. Secondly, there is the potential capacity in the corresponding sector *beyond-site*, or for altered vulnerability, in other words, involving locational change and adjustment. The paper, therefore, considers a variety of contextual factors affecting potentially the adaptive capacities of a sector (such as transportation, proximity, quality and location). It will be clear, incidentally, that both types of location considerations are closely linked to planning and policy making.

Another key aspect from the literature is the policy or management strategy used for fresh water management. These strategies, as explained earlier, may involve a focus on:
- Efficiency (using as little water as possible for the same production) or
- Productivity (higher returns from the same amount of water);
- Thrift (to use less water per se);
- Substitution (the use of alternative sources or other qualities of fresh water).

The extent to which users are able to influence these aspects is reflected by their capacity to innovate, invest and adapt. An investment to adjust production processes for drinking water to switch from local ground water sources to local surface water sources, for example, would suggest adaptive capacities *on-site* related to a substitution strategy. A widespread emphasis in the international literature, but also

in national policies is on an efficient and sustainable use of land and resources. A central idea is that users are located at collectively the most effective place allowing for sustainable production. Within river basins, for instance, intensive users of water would be located downstream rather than upstream, thereby generating fewer effects on other users.

The paper will now focus on the capacities per sector for both possibilities at current places and opportunities elsewhere. Efficiency, productivity, economy, substitution and, overall, resilience are our central concepts. The paper attempts, theoretically, to refine the idea of resilience specifically to questions of place and strategy, and, empirically, to understand the capacities of fresh water users in the Netherlands.

3. Results

Dutch fresh water use involves both ground water extraction practices and surface water intake. Groundwater extraction is an activity common to the paper sector, the food and beverage industry, the chemical industry, and in agriculture and livestock, but above all in the drinking water sector (more than three quarters of the total). The general trend is that the extraction of groundwater by industry and water companies has decreased slightly in recent decades (PBL, 2011; Vewin, 2002, CBS, 2010).

Figure 1 shows that both industry and the drinking water sector nowadays obtain less groundwater than in the seventies, both in absolute terms and in terms of substitution with surface water. Considerations about drought and low groundwater levels are partly behind this (limited) shift. Extractions by water companies primarily involve tap water for households and industry (see Table 1). In the industrial sector, groundwater is used both as a raw material in manufacturing and as process water for cooling. For industry and energy companies, however, surface waters are an important source. It is striking that by far most surface water consumption (90%) involves use as a coolant (CBS, 2010). In particular, electricity companies are a bulk user (approximately 70% of the total), and represent risks in terms of quality of their effluent waters (e.g., oxygen balance). The largest plants are located around major rivers and the immediate coastal zone. There has been a slight downward trend in cooling water use.

Finally, it is striking that the total consumption has been relatively stable in recent decades (PBL, 2011): every year about 1 billion cubic meters of groundwater (found mainly in higher eastern and southern regions of the Netherlands) and around 13 billion cubic meters of surface water. In the same period, consumption and economic growth have been considerable.

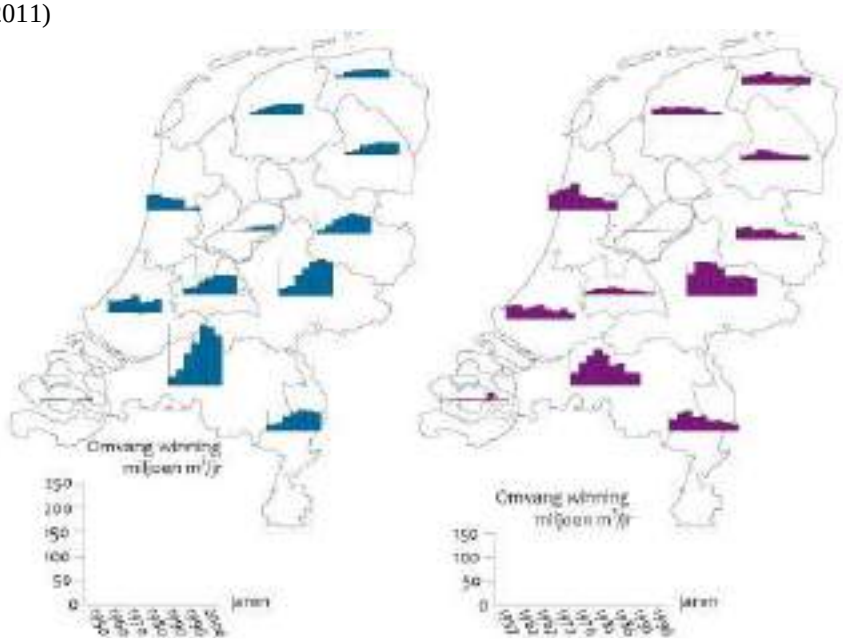
Table 1. Water extraction and use in the Netherlands per sector (2008, mln m^3/year)

	Total	**Ground water**	**Surface water**	**Piped water**
Extraction water supply agencies	1 252	762	490	-
Usage agriculture	119	47	24	47

Usage industry	3 643	155	3 308	181
Usage electricity plants	9 050	2	9 044	3
Usage other companies and households	1 329	1	431	905

Source: CBS, 2010.

Figure 1. Ground water extraction (in mln m^3/year) for water supply (left) and industry (right) (PBL, 2011)



3.1 Water use per sector

This section discusses consecutively possible capacities for 'water problems' in the sectors central to the paper: industry, energy companies, water companies, agriculture, industry and nature. The review here is based on recent (2000-2012) policy and strategy documents utilized by stakeholders from these sectors. In addition, the authors have held interviews with senior officials from organizations representing them, including the Association for Energy, Environment and Water (VEMW), Netherlands Energy Organisation (EN), the Netherlands Waterworks Association (Vewin), the Dutch Agricultural and Horticultural Organisation (LTO) and the Nature Society (VN).

Industry

Industrial products like steel, petroleum, chemicals and paper involve a number of heat-intensive processes. Typically, excess heat is transferred into cooling water, sometimes through large cooling towers. The industrial use of fresh water may also include the production of food or the generation of steam for temperature control or sterilization. Until recently, these industries have regarded fresh water as a relatively

ubiquitous and rather cheap good. This perception of abundance, however, is gradually changing. There is a trend to invest more in capacities aimed at:

- efficiency and reducing freshwater use;
- measuring and monitoring water consumption (in view of the cost);
- the deployment of technologies for further efficiency and adaptive capacity.

A strong point for the industrial sector involves the relatively large adaptability of some larger users. A more economical and efficient use of groundwater is apparent, although the use of sustainable technology and also possible substitutions with surface water have experienced a slow start. An emerging practice involves alternative management arrangements, featuring area-oriented options for clustering of industry and water companies. Shared infrastructure (e.g., pipelines) and the collaborative management of freshwater reservoirs are among recent initiatives. Companies have also advocated for improved, public-private management of water purification plants.

Overall, our findings for industrial water users suggest that they adjust gradually, for example through more sustainable production processes (efficiency). There are limited short-term vulnerabilities. The sector already anticipates towards more restricted future water availability. At the same time, the pace of anticipation is somewhat slow. There is some considerable attention to new regulatory arrangements for area-management and innovation.

Energy plants

Electricity plants generally use water in two ways. The first way entails cooling water, which is obtained from the sea, rivers, lakes or canals. This water can both be saline and fresh, depending on the installation. The second way involves internal water, or process water, which flows through closed circuits. Cooling water in particular is typically used in large quantities and is therefore of key interest. The amount of cooling water used has been fairly stable in recent years. Cooling capacity is one of the factors taken into account to find a suitable location for any energy plant. The current vulnerability of the sector is significant. These plants can usually absorb a few days of interruption in the availability of cooling water, but repeated interruption is clearly problematic.

Energy companies, therefore, experience significant vulnerabilities to freshwater availability (cooling water for large plants). On the other hand, adaptivity and substitution are also significant: energy companies now select profitable locations at sea, using salt water as a coolant. There is also a clear intention to invest in renewable energy, thereby reducing dependence on cooling conceivably further.

Overall, our findings indicate that the energy production sector is vulnerable but no major problems will be found, at this time and in the near future. The greater part of Dutch power in the future will increasingly be produced at the coast, where enough (saline) cooling water is available. Shares of renewable energy are growing, but lagging behind internationally. A final aspect is that energy producers tend to release

heat more efficiently at their plants, thereby increasing productivity.

Figure 2. Large-scale energy production units in 2011 (Energie-Nederland, 2011)

Water supply

Water supply agencies must ensure that they have sufficient supplies available to meet current and future demand. A resilient provision requires companies to develop the following capabilities (e.g., Wuijts et al, 2011; Gleick, 2003):

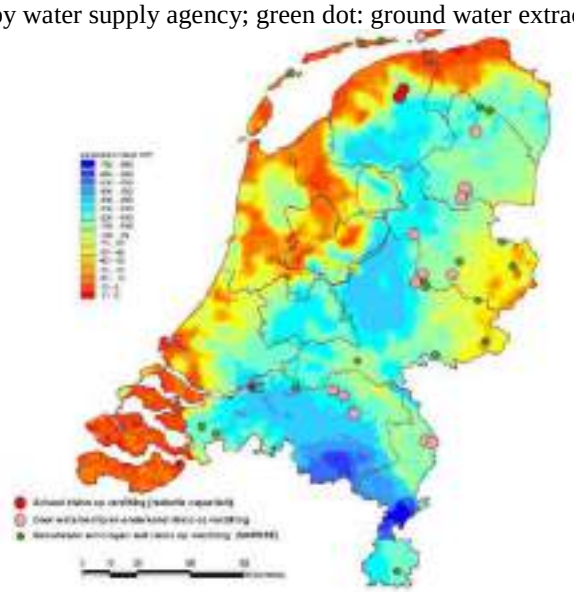
- Monitoring of local changes in rainfall and water supply and groundwater stocks, both short and long term;
- Possibility to store water or retain water volumes within their own areas;
- Programs aimed at reducing water consumption by large users (e.g., through price incentives, regulatory support and market mechanisms);
- Attention to diversify from different sources (surface and ground water, or from adjacent basins), and from available infrastructure;
- Promote water conservation through technological innovation and logistics.

Water companies get their water mainly from groundwater sources (approximately 55%) and surface waters (45% including 5% through dune infiltration). The extraction of groundwater occurs through some 220 extraction points, out of which 33 are vulnerable to salinization (Klijn et al 2011). There is a slight increase in the utilization of surface water (Geudens, 2010), which is consistent with policies to reduce groundwater depletion and diminish desiccation for agriculture and nature. Since groundwater in the western Netherlands is generally too brackish, these regions principally use surface water as a source for drinking water.

The dependency among water supply agencies from ground water represents an important bottleneck. Ground water volumes are gradually compromised by intruding brackish water. Salinity occurs along the coast or by ascending deep groundwater (Figure 3). This dependence is waning, however: the sector is seeking to build resilient through establishing a diversification of sources, particularly through substitution with surface water. On the other hand, this attention to alternative sources is also sparse. A similar finding applies to the utilisation of new techniques and innovations aimed at water conservation and efficiency. The sector, therefore, displays some considerable vulnerability to climate-induced changes in freshwater availability. Capacity-building may be required for safeguarding groundwater supplies, building surface water reservoirs and seeking possibilities for substitution.

A promising initiative among some water supply agencies has been to work together more strongly with industry, to produce industrial water. The focus is on establishing sustainable, integrated areas with coordinated infrastructure (i.e. water pipes), re-use of effluent waters, water reservoirs and differentiation for water quality demand.

Figure 3. Salinization risks for drinking water supply in the Netherlands (Klijn et al., 2011).
(red dot: current risk for salinization, reduction of capacity; pink dot: salinization risk acknowledged by water supply agency; green dot: ground water extraction with salinization risk)



Agriculture

The dependence of agricultural activities from fresh water is land-based. These activities depend on the existence of sufficient soil water, controlled ground water levels, and irrigation (LTO, 2010). The agricultural sector is prominent to the Netherlands as they are by far the largest land user in the Netherlands (about 60% of all available land). Irrigation is the main form of water use. The capacities needed to alleviate water dependency for agriculture focus, among other things, on:

- Efficient irrigation systems;

- Shift to crops that require less water in areas where groundwater levels fall, as precipitation decreases (higher sandy regions);
- Efforts to gradually concentrate, cluster or move (further) sensitive agriculture such as fruit and flower bulbs;
- Attention to potential economies of scale and technological innovation;
- Establishing robust management approaches to surface and ground water, focusing more on either extremely wet or dry episodes.

Our findings for agriculture reveal a diverse picture showing a varied dependency on groundwater and surface water, but also strong contextual dependencies related to socio-economic conditions. The vulnerability of the sector represents itself in two ways. First, there are quantitative difficulties, in terms of irregular water supply and episodes of drought. A second category of vulnerability is more qualitative: soil salinization. Both categories represent serious vulnerabilities. At the same time, however, we see substantial capacity-building efforts, particularly with regard to knowledge development on strengthening crop tolerance (against drought, salt), establishing new techniques, and increase productivity (Stuyt, 2006).

The Dutch agricultural sector is clearly not shying away from implications from climate change and hence water availability. The sector invests considerably in innovations (including pilot projects), thereby pursuing more efficient uses of water. There also is a focus on strengthening redundancies in terms of water sources and its infrastructure, and create the conditions for internationally high level of water certainty with the aim to improve European competitiveness to agricultural production.

Nature

For nature and ecological land uses, capacities to protect and regulate hydrological systems and understand consequences from climate change is essential. These capacity express themselves, for example, in:

- Attention both temperatures, the timing and volume of water flows in relation to ecosystem aspects like habitat, migration, survival, and food;
- Estimates of the adaptation of species to hydrological variability;
- The construction of water reservoirs and areas for buffers and natural variability;
- Anticipating natural, ecological and biodiversity change.

Nature protection and management is a sector working on complex interrelations between nature and the qualitative and quantitative characteristics of surface water and groundwater (Paulissen et. al, 2011). Issues such as habitat, reproduction, migration, survival, and food potentially pose high levels of vulnerability. Adaptation possibilities for animals and plant species to hydrological variability are essentially challenging. Our findings suggest ample adaptive capacity, however. At the regional level buffer zones offer good opportunities to battle drought and create more self-sufficient nature. There is also capacity to actively develop nature in a different,

adaptive direction, through adjustment of types of nature (more brackish habitats, with fresh-salt gradients).

3.2 Capacities per sector

Table 2 provides a general overview of all location factors, current capabilities and policy options broken down by sector. The overview shows relatively high capacities to deal with climate change impacts on fresh water at existing locations and places. Nevertheless, for three sectors a lack of situational capacities may require changes in location. At the short term relocation plays a role for energy production plants, who are increasingly taking coastal locations, near the sea, and thus would use less cooling water along major rivers and canals. In the longer term, locational change manifests itself as a reality to those water companies facing salinization, and for whom substitution possibilities with surface waters are limited. The proximity of infrastructure (pipelines) will be highly important to create redundancies towards water sources. It may also be possible that a gradual replacement of highly water-sensitive types of agriculture such as fruit and flower bulbs will be emerging. But these users also have many capacities on-site, including rich local regulatory arrangements and water management options like water buffers and reservoirs.

Table 2. Overview of place, capacity and strategies per sector

Sector	***Place***	***Capacity***	***Further strategies***
Industry	- proximity to surface waters key - specific activities rely on ground water - limited amount of large users do most consumption - smaller industries rely on drinking water	- substantial adaptive capacity, particularly for cooling water - recent efficient use of ground water - gradual application of sustainable technology (production, re-use) - limitations to innovation due to regulations and tax arrangements - capacities from attention to new 'water economy'	- technologies for efficiency, restraints and adaptive capacity - clustering of industry and water companies (e.g. separate water supply infra) - private of (semi-)public water management (e.g., for purification) - new fresh water reservoirs
Water supply	- proximity of clients and infrastructure essential - varying types and qualities of sources - by far largest user of ground water	- resilience through decreasing dependence on ground water (substitution with surface waters) - vulnerable due to uncertainties in demand, limited anticipation on increasing water demand - necessities and capacities for change of location (e.g., due to brackish water) - some, yet limited attention to alternative sources and technology	- attention to ground water supply and reservoirs - attention to curbing use through price incentives and innovation - attention to diversification towards sources (surface, ground, adjacent water sheds)
Energy pro-	- strongly linked to proximity of surface	- vulnerable due to need for consistent availability of cooling	- attention to risk management for

duction	waters - large users - mostly electricity companies (cooling water for large plants)	water - strongly decreasing vulnerability given viable locations at sea (saline cooling water) - growing (but varying) investment capacity in sustainable energy, decreasing dependence from cooling water	diminished water supply for plants - verification of optimism about sustainable energy, and the volumes of water use with new energy technologies
Agri-culture	- multiple dependence from ground- and surface waters - strong interrelation with socio-economic conditions - largest water user, heterogeneous composition	- vulnerable both in a quantitative (supply, drought) and qualitative sense (salinity) - changing fresh water patterns potentially cause serious changes in soil conditions - substantial attention to knowledge development and policy proposals - strong attention to adaptation strategies (e.g., tolerance of crops, new techniques, productivity enhancement)	- attention to efficient systems for irrigation - consequences of shift towards water-efficient crops - (further) concentrate, cluster of relocate highly water-sensitive agriculture like fruit and flower bulbs - more vigorous water management aimed at excessive wetness and drought
Nature	- complex coherencies between temperature, timing and volumes of water, and ecosystem characteristics like reproduction, migration, survival, and food	- focus on desiccation and 'natural' water level management - attention to buffer zones, self-sufficiency and nature as 'water supplier' - vulnerable from decreasing public funds - adaptive capacity from adjustment to 'target nature' (more brackish, saline-fresh)	- assessment of hydrological adaptability among species and plants - attention to anticipating ecological change

4. Conclusions

This paper has explored major capacity bottlenecks among major water users. The focus has been on location considerations, and also the capabilities and potential adjustments for five sectors, namely industrial companies, energy companies, water companies, agriculture and nature. Based on this study, a series of three general empirical conclusions may be drawn:

- The situation in which sectors, parts of sectors or individual companies are dependent singularly on locally available reserves or supply to such an extent that they will need to terminate production or relocate in the short term (next decade), is unlikely;
- There are no activities for which improvements in efficiency, economy, productivity, or substitution are all greatly reduced at the same time. Overall, there is sufficient capacity in all sectors *on-site*, to establish situationally specific adjustments and redundancies to commit to climate change.

- There is a varying awareness or recognition in the sectors of changes in future fresh water availability, and their own vulnerabilities. Further investment in innovation and capacity building in the longer term (more than ten years) will be necessary.

For spatial planning, the implications are to strengthen practices of building resilience at existing sites (including the establishment of integrations between water sources and infrastructure for water accessibility and delivery) and to strengthen efficiency through further integration of functions and more area-specific (water) management. But there are also other requirements for achieving more water-sensitive spatial planning. Various institutional designs should be examined, including those oriented towards accessibility and availability due to rules and regulations regarding ownership, rights, transport and access. It is also important to estimate the role of spatial planning in the short term (through the strengthening of site conditions) and to place and location in the long term (through other land use arrangements and geographies).

Industrial companies are mainly focused on spatial planning arrangements for renewal, and clustering, privatized water purification, and new freshwater reservoirs. Spatial planning for energy companies implies a focus on the use and conditions for sustainable technology. Spatial planning practices for water supply would concentrate on the protection of groundwater sources, preserving less salinity-sensitive ground water extraction sites, and making available more accessible alternative sources (through institutional arrangements and infrastructure). Area-oriented policies may be required to include buffers and reservoirs for nature and water sensitive agriculture like fruit and flower bulbs. For agriculture, and industries based on agricultural products, there is also the opportunity to play out, through spatial planning, the issue of internationally relatively secure fresh-water availability as an element of attractive economic location.

Overall, the paper has shown a need for further development of capacities against diminishing fresh water. Capacity represents an ability to adapt and innovate in the face of changing climate. Current initiatives in the Dutch case on fresh water have shown a prevailing practice in particular on vulnerabilities among large water users to on-site strategies. Important emerging practices include efforts to strengthen accessibility and reliance at specific places, efforts to establish water as a factor of choice and certainty of location, and institution building for policy integration between water, urban and economic development. The findings also suggest the need to further understand the resilience per sector, in particular related to episodes of reduced freshwater availability.

The notion of vulnerability for this case has also suggested a distinction between two notions of place. On-site vulnerability implies levels of capacity at current locations and contexts, typically featuring strategies like productivity innovation, efficiency and thrift. On-site planning practices seem to be particularly well-developed and rich, particularly for private actors and their activities (the focus is on establishing redundancies and efficiency). Public agencies tend to take a more facilitating role

(the focus is on area-oriented management and integration). Practices beyond-site are also emerging, but are considerably longer-term. Beyond-site (focusing on altered vulnerability) interventions imply capacities for locational change and adjustment, typically involving substitution between sources, and imply substantial public intervention.

For both levels of intervention (on-site or beyond) and in particular for the substitution strategy, establishing resilience turns out to be an issue of setting up alternative options of choice. Choosing between varying sources of water, between a variety of water networks, or between varying levels of production: more generic notions of vulnerability involve issues of available choice. Opportunity and capability theory, therefore, could potentially help to strengthen our theoretical understanding of these kinds of cases, and their overwhelming focus on on-site strategies, even further.

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Power and politics in the planning system: a political economy approach using evidence from Ireland.

Linda Fox-Rogers[1]

Abstract

The urban planning system and property development sector have come under increased scrutiny in recent years as people begin to critically reflect on the conditions that contributed to a series of property crashes in countries such as the U.S, the U.K, Ireland and Spain. Much of the criticism has been levelled at the emergence of urban governance structures that foster close relationships between actors in the economic and political spheres. Mounting evidence and speculation surrounding the interactions of politicians, officials and property developers in the urban development process has cast doubt surrounding the democratic nature of the planning system as it seems that the interests of private capital increasingly preside over the common good. Although this phenomenon has been widely critiqued by academics, this paper argues that accommodating relations between the economic and political spheres is an intrinsic feature of the planning process and should in fact be expected when one considers the structural relations that govern the distribution of power in advanced capitalist societies. By adopting a theoretical framework that draws upon Marxist political economy approaches of the state and Chomskyan notions of power, this paper positions planning as an activity of the capitalist state and thereby seeks to demonstrate the inherent links that exist between the economic and political spheres in the planning system. The methodology consists of a series stakeholder interviews with urban planners operating within the Irish planning system. Empirical findings are offered to elucidate the manner in which power navigates the planning system by focusing on how power relations arise between competing stakeholders, the mechanisms by which power is exerted in the planning process, and the extent to which power relations become reflected as outcomes in the built environment. In doing so, the paper seeks to demonstrate how the realities of the planning system can be aligned to the theoretical framework employed.

Keywords: Urban planning, political economy, urban governance, Ireland.

1.0 Introduction

As commentators continue to critically reflect on the contributing factors to the global economic crisis, attention has turned to urban planning and its role in the creation of a series of property market crashes around the world (Lovering, 2010;

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Melia and Hogan, 2010; Kitchen et al., forthcoming). In particular, the extent to which the 'neoliberal turn' has been "reflected in, and in turn encouraged by, the reinvention of planning as a service to special interests, especially property owners and boosterist politicians" has been raised (Lovering, 2010: p. 227).

Although critically reflecting on the role of planning has a renewed significance in light of the current property crises being experienced, the emergence of increasingly entrepreneurial or neo-liberal approaches to urban planning have long been critiqued by a wide range of academics for their inherent focus on private-sector development activity and market forces[2] (see Brindley et al., 1989; Squires, 1996; Drudy & Punch, 2000; MacLaran and Williams, 2003; Kitchen et al., forthcoming). The emergence of neo-liberal planning policies has been broadly associated with the 'creeping enfeeblement' of local government (Peck and Tickell, 1994) and emergence of public private partnerships, appointed quangos, private sector alliances and entrepreneurial initiatives dominated by property-led regeneration (McGuirk and MacLaran, 2001).

Looking towards the Irish experience as a case in point, McGuirk (1995) elucidates the powerful position of developers within the Irish planning system and the significant barriers that hinder effective public participation, whilst recent changes to Irish planning legislation also appear to have exacerbated the privileged position of private capital over the common good (Fox-Rogers et al., 2010). Mounting criticism and speculation surrounding the interactions of politicians, officials and property developers in the urban development process has also been exacerbated by the recent publication of the final report emanating from a tribunal of enquiry[3] which was set up to investigate planning corruption in Ireland. The central findings of the tribunal (which lasted 917 days) broadly demonstrated the ability of development interests to exert power over politicians and the planning process in a manner that disproportionally serves their own vested interests at the expense of the population at large.

Central to all of these wide-ranging critiques is a concern with the extent to which urban planning deviates from its normative foundations which are rooted in the assumption that planning is an apolitical, value-free, technocratic process that serves the public interest. The reinvigoration of these debates in light of the current economic downturn have cast further doubts surrounding the democratic nature of the planning system as it seems that development interests increasingly win out over those of the general public. Although such concerns are indeed warranted, this paper argues that the facilitative nature of the planning process and the links that exist between the economic and political spheres are *inherent* and should therefore be *expected* if one situates urban planning as an activity of the capitalist state and critically reflects on the manner in which power operates in society.

[2] For an excellent and comprehensive review of planning related neo-liberal policies see Sager (2011).
[3] The Tribunal of Inquiry into Certain Planning Matters and Payments.

As part of a piece of on-going research that seeks to shed light on the manner in which power navigates the urban planning system, this paper offers some insights from the perspectives of Irish urban planners based on their own experiences[4]. The paper begins by setting out a theoretical framework based on Marxist political economy perceptions of planning and Chomskyan notions of power before outlining the methodological approach employed. Preliminary results are offered which seek to elucidate the manner in which power relations arise, are exerted and manifest themselves in the planning process and the extent to which such findings support the theoretical framework are explored in the concluding discussion.

2.0 Capitalism, power and politics in planning

As planning is an activity of the state, our understanding of the state is central to our perception of the role of urban planning. Marxist political economy perspectives of the state and urban planning differ significantly from more conventional pluralist perceptions as they are much more cognisant of the structural relations that govern how power is distributed in society.

While pluralist perceptions of the state and urban planning assume that individuals have equal power to assert their stake regardless of their resource levels, Marxist political economy perceptions question the ability of the state (and thus planning as a state activity) to act as a politically neutral institution given its historical origins. Rather than viewing the state as a neutral arbitrator between competing interests, the Marxist approach views the state as "…the instrument by which the organisation of society becomes the means of preserving intact the material interests of the dominant classes" (Paul, 1917: p. 95).

> "*Nominally it administers in the name of society, but in reality it only seeks to preserve the domination of the master class of any period."* (*Ibid*: p.95, emphasis original).

Central to this theoretical position from a planning perspective is that planning, as an activity of the capitalist state, is not an autonomous activity. Rather planning must be functional to capitalism and planners are thus seen as state agents that favour capital interests rather than the common good (MacLaran and McGuirk, 2003).

Although Marxist theory does not explicitly theorise about power per se, it implicitly elucidates the power relations which emerge between the capitalist and the worker under capitalism given the former's control over the means of production. Marx's (1976) concern with the threat posed to human liberty by the capitalist mode of production and its alienating effects can be aligned to classical liberal assumptions about the innate "human need for liberty, diversity and free association" (Chomsky, 2005: p. 123) unbound by external force or coercion. Given that the state serves the

[4] The full research project will involve interviewing three additional stakeholder groups namely, developers, councillors and community interest groups. As such, this paper relates to the first stage (of four) in the overall research project.

ruling class of any period, under capitalism its role is to preserve the basic power structure inherent in capitalist society by facilitating the continuation of the capitalist mode of production and assuaging class conflicts. From a Marxist perspective, the planning system is thus considered as one of the many state instruments that functions in a manner that reflects dominant interests in capitalist society.

It was not only Marx that was concerned with the power relations arising out of the ownership of private property. More recently, Noam Chomsky (2003) has argued that under capitalism real power lies in the private economy rather than the political system as political decisions made in the 'national interest' are "articulated by those who control the central economic and political institutions" (*Ibid*: p.147). Also drawing upon classical liberal ideas, the central tenant underpinning Chomsky's understanding of power is the assumption that any structure of domination is illegitimate unless it can be justified. The burden of proof rests with those in positions of authority to substantiate and legitimise their position; if cannot be justified, they should be challenged and ultimately dismantled[5].

However, both Marxist political economy perceptions of the state and Chomskyan notions of power recognise the self-preserving nature of power and the need for those in power to acquire the "consent of the majority of the governed" (Harvey, 2001: p.277) in order to survive. For Chomsky (2002: p.11), the standard way that such power relations are protected is to place a "cloak of mystery around power". This can be done in a variety of ways via a "complex system of filters" (*Ibid*: p.27) in the media and education, as well as the "terms of political discourse [which] are designed to prevent thought" (*Ibid:* p.41). Ideologically-laden terminologies such as the 'common good' and 'national interest' are examples Chomsky uses to demonstrate the manner in which language can be used as a means of 'containment'. Flyvbjerg's (1998: p.228) landmark study of power and planning in Aalborg similarly demonstrates that rationalisation (presented as rationality) is a "principle strategy in the exercise of power which can be difficult to identify and thus requires deconstruction". Marx and Engels (1970 as cited in Harvey, 2001) also identify similar strategies to gain the allegiances of the subordinate class. The first is to represent dominant interests as the 'illusory general interest' by universalising ruling class ideas as the only universally valid ones' (*Ibid*: p.71). The second is to give the appearance of neutrality in state operations by providing certain social goods such as social housing, education and transport. The fact that such goods are prerequisites to facilitate the continuation of the capitalist mode of production, but lie beyond the logic of individual capitalists to provide, is not made explicit (Sandercock, 1998: Harvey 2001; MacLaran and McGuirk, 2003). Strategies such as these are essentially employed to avoid class conflict and prevent challenges being brought to bear on the power structure governing capitalist society. As explained by Chomsky (2003: p.149) "power will work for its own purposes, whatever the rhetoric to disguise or legitimate it".

[5] See Anarchism 101 with Noam Chomsky. Accessed at: http://www.sciencestage.com/v/1038/anarchism -101-with-noam-chomsky.html. Last accessed 20th April 2011.

Analogous sentiments can be traced back to the work of Bertrand Russell (2004) in the 1930's, who similarly highlighted the importance of challenging structures of power and domination. Russell (2004) argued that to make 'naked' the 'traditional' and disguised form of power that is exerted by the capitalist state and the illegitimacy of the power relations it creates, a period of "free thought and vigorous criticism" is required (*Ibid*: p.75). He argues that "in every democracy, individuals and organisations which are intended to have certain well-defined executive functions are likely, if unchecked, to acquire a very desirable independent power" (*Ibid*: p.232). In order to overcome such issues there is a need "to bring swift criticism to bear upon officials, police, magistrates, and judges who exceed their powers" (*Ibid*: pp.231-232). Increased political awareness and public contestation is thus required in order to place more stringent check and balances on those with the power to administer decisions in the interests of the 'common good'.

Whilst it is acknowledged that placing checks and balances on those in power in advanced capitalist societies will do little to change the structural drivers of power that are inherent in the capitalist system, it is argued here that such challenges can assist in working towards a more equitable redistribution of economic and political power *within* that system, thus making tangible differences to those who are ill-placed and relatively powerless at present. To quote Chomsky:

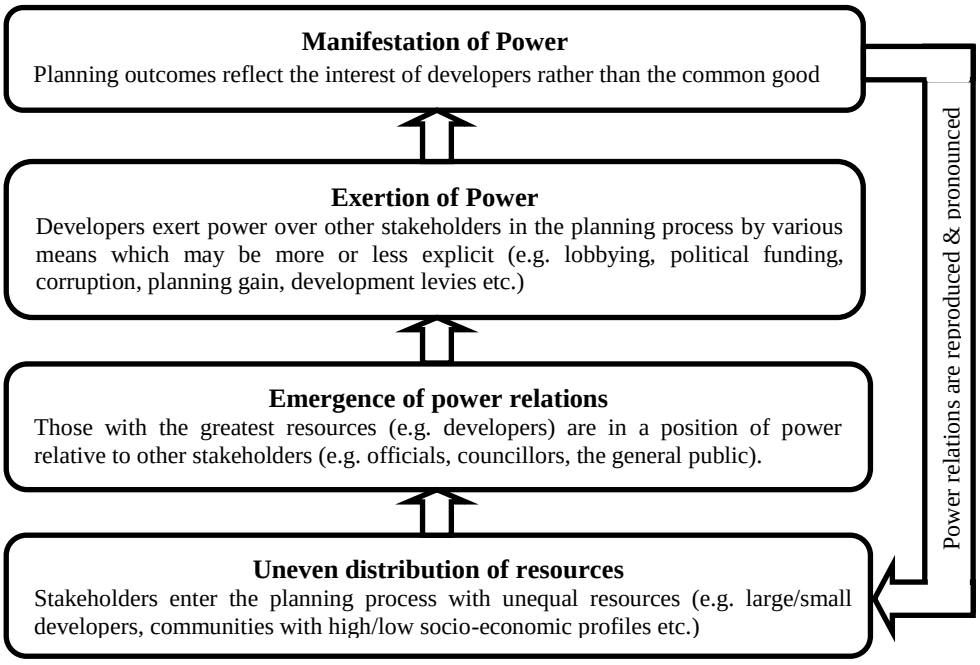
> *"I think it's completely realistic and rational to work within structures to which you are opposed, because by doing so you can help to move to a situation where then you can challenge those structures."*
>
> (Chomsky, 2002: p.345)

Based on the theoretical framework outlined above, it is assumed that power relations arise out of the ownership of private property or the means of production which confers power upon groups or individuals (see Figure 1). An unequal distribution of resources leads to leverage in the political sphere and political economic interactions work to serve the interests of the economically powerful by creating the conditions necessary for further capital accumulation and the consolidation of systems of private power. The outcomes arrived reflect the interests of private capital and thus serve to reproduce and reinforce existing imbalances of power in the system. However, checks and balances can be placed on those with decision making power to bring about somewhat more democratic outcomes than would otherwise occur.

By applying this theoretical lens to the sphere of urban planning, it is hypothesised that stakeholders enter the planning process with unequal resources and those with the most economic resources (e.g. property developers) are able to exert power in the political sphere and influence planning decisions in a manner that serves their own interests at the expense of other stakeholders (i.e. the general public). Given that planning is an activity of the capitalist state, public participation in planning and the politicisation of planning is needed to place greater checks and balances on those with decision-making power in order to generate more equitable planning outcomes.

The physical and social impacts experienced by receptive communities depends not only on the level of participation achieved, but also tends to reflect the socio-economic profile of the community as those with greater resources (e.g. education, money, skills) tend to be better placed to challenge the status quo.

Figure 1: Conceptualisation of the theoretical framework



3.0 Methodology

Qualitative semi-structured interviews were carried out to attain data from respondents from a selection of four local authorities within the Greater Dublin Area (GDA)[6]. The local authorities were selected on the basis that they together provide a wide range of planning contexts, development pressures, socioeconomic profiles and geographic locations[7].

Semi-structured interviews were used because many of the in-depth questions being asked did not lend themselves to quantitative approaches. Qualitative methods are also considered suited to the theory verification approach being employed, with

[6] The GDA was selected as the study area on the basis that is has experienced the highest levels of residential and commercial development pressure over the past decade nationally and also consists of a diverse mixture of urban, suburban and more rural local authorities. The GDA's economic dominance nationally, coupled with it being the centre of national decision-making and political power also makes it an ideal study area from which to analyse political economic interactions in the planning system.

[7] These criteria draw upon earlier bodies of research that link varying levels of active citizenship and participation in the planning sphere to an area's level of growth (Scott et al., 2011) or its socio-economic profile (Ellis, 2001; Lowndes et al., 2006).

Silverman (1993) outlining that pre-specified theories are increasingly being tested with qualitative data despite the traditional dominance of theory generation approaches in qualitative studies. An interview schedule was drawn up which focussed on core themes specifically relating to the objectives of the research. The questions were theoretically guided, exploring broad issues of power and politics in planning. Respondents were also invited to draw upon specific planning cases/controversies to help illustrate their responses and provide some specific contexts from which to understand these broader processes at work. A preliminary scoping exercise[8] of significant planning decisions and planning issues in each of the four local authorities over the past decade was thus carried out so that more detailed discussions could be facilitated where such cases arose during the course of the interviews. The interview guide was piloted successfully and no significant changes to the guide were considered necessary.

Respondents were selected on the basis of three core criteria: (1) their local authority; (2) their professional grade and (3) on the basis of whether they worked in development management or forward planning. In terms of (1), a quota of 5 planners was sought from each of the four local authorities, thus equating to 20 respondents in total. For (2), variations in the employment grade (i.e. assistant, executive, senior executive and senior) was sought to ensure that responses were not skewed in any particular direction on the basis of their level of experience or position. For (3), a mix between planners working within the development management (DM) and forward planning (FP) sections of their respective local authorities was also sought[9]. This was to ensure that appropriate information could be gathered from the various stages in the planning process. Table 1 provides a breakdown of the respondents based on the foregoing criteria.

Table 1. Breakdown of respondents by local authority, grade and expertise.

Local Authority 1	**Local Authority 2**	**Local Authority 3**	**Local Authority 4**
P1- Executive (DM & FP)	P6- Senior (DM)	P11- Senior (FP)	P16- Assistant Executive (FP)
P2- Senior (DM)	P7- Senior (FP & DM)	P12- Senior Executive (DM & FP)	P17- Executive (DM)
P3- Assistant Executive (FP)	P8- Executive (FP &DM)	P13- Assistant Executive (DM)	P18- Senior (FP)
P4- Senior (FP)	P9- Executive (DM)	P14- Executive (DM)	P19- Executive (FP)
P5- Executive (DM)	P10- Executive (FP & DM)	P15- Executive (FP)	P20- Senior (FP)

[8] The scoping exercise involved exploring some prominent planning cases, drawing upon an array of planning sources such as newspaper archives, individual planning authority's on-line planning systems, urban planning forums, An Bord Pleanála (appeals authority) inspector's reports etc.

[9] In some instances, planners had relatively equal levels of experience working within development management and forward planning.

Non-probability or 'snowball' sampling methods were adopted to generate respondents based on the criteria outlined above. The 'snowball' approach began by making initial contact with a small group of suitable respondents to establish further contacts with others. Many of the planners who agreed to participate did so upon initial contact, with some requiring follow-up e-mails and telephone calls. The interviews were anonymous to encourage the respondents to be as open and transparent about the realities of the planning system as possible and also to improve the participation rates of those contacted[10]. The interviews ranged from 48 to 73 minutes in duration, with the average interview taking 62 minutes to complete. All of the interviews were fully transcribed verbatim.

3.1 Analytical framework

In seeking to trace the manner in which power navigates the planning system, a series of hypothetical indicators of power were developed as a methodological tool to help identify instances where issues regarding the operation of power emerged from the data. These indicators were developed by applying the theoretical framework to the planning domain in order to postulate how one might expect power to operate in the urban planning system. Each of the interview transcripts were carefully analysed and instances where any of the 'indicators' emerged in the data were recorded and documented for each of the respondents. This facilitated the identification of the most commonly cited indicators and also illustrated the degree to which the realities of the planning system could be aligned to the hypothesised indicators and by extension, the theoretical framework. The following section outlines the most common indicators emerging from the interviews[11].

4.0 Results

4.1 The emergence of power relations

As outlined previously, it is hypothesised that stakeholders enter the planning process with unequal resources and those with the most economic resources are in a more powerful position to exert leverage in the political sphere and influence planning decisions. The two most common indictors relating to the emergence of power relations in the planning system are presented below.

4.1.2 Power emerging (1)

Having regard to the manner in which power relations arise in the planning system, the relative lack of local government resources and the subsequent reliance of local

[10] Out of the 30 planners contacted, 22 agreed to participate, 7 failed to reply and 1 declined to participate.

[11] Given the constraints on this paper, the results will be limited to the two most common 'indicators' in each category namely, power arising, power exerted and power manifested.

authorities on the private development sector to generate income streams[12] was the most commonly raised issue by the respondents. Indeed 80% of the 20 planners interviewed made reference to this issue highlighting that it places developers in a powerful position in the planning process. The level of consideration that is afforded to generating income streams from private development activity by planning officials was clearly outlined by an executive planner:

> *"…as a planner, we are not supposed to be considering the financial aspects of it* [an application] *but it's an impossibility not to and you have to realistically"* (P1: 11)

The relatively powerful position that this places developers in during the planning process was explained by the same respondent:

> *"…in a plan process, we also have to set it out or word it in such a manner that it will say 'yeah come, come here and it will be great. Yeah we do things better here. We'll give you another couple of floors on it or whatever it is. You know if you're going to build down town here, you're going to get- generally, not always, you're generally going to get a bigger development than if you're building in Sandyford industrial estate, but not always you know.'"* (P1: 11)

The current economic climate appears to have exacerbated the power of developers relative to the executive in this regard and was highlighted by an assistant planner reflecting on the ability of local authorities to provide public goods since the downturn:

> *"We're completely reliant on them* [developers] *now anyway- it's the only way anything is going to get built in the future."* (P13:14).

Another executive planner highlighted that the reliance on the private development sector to fund local government through building activity may be even greater in smaller local authorities that experience lower levels of central government funding:

> *"I suppose the smaller ones* [local authorities] *have a lot more to lose…because of a lack of budgets and a lack of resources, they won't get X amount of money into the county if they are not kind of seen to bend the rules you know?"* (P12: 12)

[12] The means by which local government in Ireland is structured has resulted in limited opportunities for local authorities to raise income independently of central government. Two of the principal means of raising income within the control of local authorities (and hence planning authorities) are commercial rates (payable to the local authority annually) and development contributions (payable to the planning authority as a condition to a grant of permission).

The forgoing suggests that the reliance of local authorities on income streams from development levies, commercial rates etc. to supplement central government funding places developers in a powerful position over the executive.

4.1.3 Power emerging (2)

Having regard to the democratic nature of the planning system and the power of communities to affectively engage in the process, the importance of resources appears to be of paramount importance. Of the 20 planners interviewed, 80% highlighted that the relative power of communities to assert their stake in the planning process was closely linked to their respective socio-economic profiles with stronger levels of opposition reported in more affluent neighbourhoods. As one senior planner outlines:

> *"There's a very poor relationship between the middle class people and the city council and Dublin in general, but by God do they come out when you see the likes of the Sean Dunne development* [a controversial high rise proposal] *then you have the 'A list' of barristers and the resources in Ballsbridge* [an affluent city centre neighbourhood]*..."* (P2:10)

The availability of resources appears to determine the power that communities have in planning process with those with higher socio-economic profiles being in a more powerful positions than those with lower resource levels. As explained by one executive planner:

> *"They* [a relatively affluent community] *just seem to have that real focus, a real drive, the know-how, the knowledge, able to get out there and get so and so's attention and interest in the project quicker. So I'm definitely thinking like the other group then* [a less privileged community]*, it's a newer area, there's been no investment out there in the last number of years because they didn't push for things. They* [a relatively affluent community] *seem to demand, they seem to know this is what we want, this is what we expect you know?"* (P10:10)

In a similar vein, the impact that this has on respective communities in terms of the planning outcomes arrived at is succinctly put by one senior planner:

> *"I suppose the evolution of the city would show that stuff gets put beside those who argue least…"* (P4:6)

The forgoing suggests that those communities with higher socio-economic profiles or resource levels are better placed to challenge dominant interests and prospective developments in their area, raising serious concerns for those communities who lack such resources.

4.2 The exertion of power

The following section outlines the most commonly cited mechanisms by which power is exerted in the planning process based on the experiences of the planners interviewed. Based on the theoretical framework employed it is assumed that those with the most economic resources (i.e. property developers) are best placed to exert power in the political sphere and influence planning decisions in a manner that serves their own interests at the expense of other stakeholders (i.e. the general public).

4.2.1 Power exerted (1)

Of the 20 planners interviewed, 85% highlighted that developers exert considerable leverage over councillors during the development plan making stage by lobbying them for favourable land zonings[13] in return for political funding. One planner succinctly explained the manner in which political funding plays a role in exerting power in the forward planning process:

> *"I'm* [a developer] *giving you* [a councillor] *a hefty donation knowing that the zoning is going to come up in two or three years' time. Now you know don't forget me."* (P6:6)

Another planner highlighted that political donations enable donors to exert influence over councillors in the development plan making stage or during the subsequent submission of a planning application:

> *"…now some people are quite happy I suppose to give money over* [to councillors] *because they are affiliated with such and such a party but some people have an agenda and there's no doubt about that. They're giving money knowing that they know they might need a hand down the road for whatever reason whether it's a planning permission coming in and they'll get the councillor to see can they you know, sway the decision a certain way…"* (P14:6)

The extent to which developers and councillors cooperate in the development plan making process was explained by a senior planner working in forward planning:

> *"...when I was in X* [local authority], *they* [developers] *were definitely lobbying and they were lobbying them* [councillors] *constantly. In fact the gallery was packed and they were texting each other* [developers and councillors] *up and down you know, I mean the scale of involvement. I mean it's no fun going into a council meeting and when they're actually having to*

[13] The Local Government Act 2001 provides the framework for reserved and executive functions that are carried out on behalf of a local authority. Reserved functions are performed by elected members (i.e. councillors) who essentially constitute the policy-making arm of local government. Executive functions are carried out by the local authority's manager or delegated officials (e.g. planners). Granting or refusing planning permission is an executive function, but the adoption of a development plan is a reserved function of the elected members.

elbow through all the developers, lobbyists, farmers and they're all trying to get stuff zoned, all standing in the lobby of the council meeting you know and it's packed…when they're making certain decisions." (P4:10)

The forgoing clearly illustrates the links between the political and economic spheres in the forward planning process and the manner in which the resources available to developers enables them to exert power in this regard.

4.2.2 Power exerted (2)

In contrast to councillors working on behalf of development interests, many planners highlighted that councillors can also be responsive and representative of community needs. The ability of certain communities to exert power over their elected representatives was raised by 75% of the planners interviewed. However, the extent to which councillors represent the interests of their electorate at large appears to depend on the extent to which the community places demands on them by making them accountable during the democratic process. As one senior planner explained:

"I mean they need to get re-elected so maybe if something was so widespread unpopular that they thought it might not stand to them at the next general election or if an opposing party was taking a strong argument against it then that might sway them." (P15:21-22)

An interesting distinction was made by many of the planners between the representativeness of councillors in the rural verses more urban local authorities. Various planners report that Dublin-based councillors rarely lobby on behalf of development interests and instead tend to lobby against developments on behalf of their constituents. This appears to contrast with non-Dublin based authorities when respondents reflected on their experiences of how councillors operate in more rural authorities. However, many planners simply attribute this distinction to the higher demands that are placed on Dublin-based councillors from their electorate rather than any moral obligation.

"Councillors in Dublin would be more sensitive about development and again it's not because they are virtuous, it's because they are responding to their constituents who are against development" (P2: 15).

Another planner reflecting on the differences between urban and rural local authorities in this regard outlines:

"It's to do with the voting public. The difference is, well one- there's the political difference. In Dublin you've a much stronger Labour vote. It's a much more organised population so the urban vote is more left-leaning naturally..." (P4: 15)

The forgoing suggests that communities who place greater checks and balances on their political representatives appear to have more accountable and representative councillors than they otherwise may have. Without these checks and balances being placed, it seems that councillors are more facilitative of private interests rather than their electorate at large. This may have significant implications in terms of planning outcomes arrived at as those elected representatives who are closely monitored by their electorate may be more likely to champion more socially just and equitable planning decisions. However, this raises serious concerns when one considers that many communities fail to engage with their elected representatives or politicise planning related issues.

4.3 The manifestation of power

Having regard to the manner in which the exertion of power becomes manifested in the planning process, it is hypothesised that planning outcomes reflect the interests of developers rather than the common good. The following highlights some of the most commonly cited effects that ensue from the exertion of power in the planning process.

4.3.1 Power manifested (1)

The most common manifestation of power in the planning process which was raised by 80% of respondents was that development plans (or material contraventions to the development plan) which are adopted by councillors tend to reflect the interests of developers rather than the principles of sustainable development or best planning practice. Some planners identified particularly 'crafty' ways that councillors ensure development interests are represented in the adopted plan. As explained by one senior planner working in the forward planning process:

> *"You go through numerous late evenings going on to midnight with the councillors going through the manager's report and then as I say, at the last minute they will submit motions from the floor and the motions are coming through completely left of field you know and you've had no time to prepare for them. They usually involved rezoning submissions or issues that really are not appropriate but they tend to be pushed through on the final night or the last couple of nights of the development plan process you know, which is a wee bit galling to be honest."* (P20:2)

The impact that this has on the quality of development plan was clearly outlined by the same planner:

> "*And usually the manager in the planning authority, to push the local area plan or the development plan over the line usually bargains away things that in the normal course of events they wouldn't."* (P20: 1)

4.3.2 Power manifested (2)

Another key issue emerging from the data with regards the manifestation of power is that the executive is hamstrung to facilitate development on the basis of rate generation and development levies. 75% of the respondents drew attention to this phenomenon during the course of the interviews. In terms of the manner in which authorities 'facilitate development', one planner explains that lower development contributions or less stringent assessments on planning applications may be used to attract development and help to stave off competition from other local authorities for the lucrative rates base.

> *"Yeah like a development contribution scheme, a lower development contribution scheme to reduce the cost of developing within a particular area- that's one way. Not sticking to principles in terms of land, develop wherever they* [developer] *manage to find the land, rather than within zoned land which might be more expensive."* (P 7:10)

The importance of attracting development and investment into counties was highlighted by another planner who outlined the lengths that a manager will go to in order to prevent the loss of prospective investment in the county:

> *"…it can get to the stage where for example a refusal is going out….he* [the manager] *can get on to the developer and suggest that he removes it from the system, that we sit down again and start negotiating about a revised development. I don't know whether from a political or whatever point of view it might appear bad for us to be say, refusing an employment generating proposal at the moment. So rather than it going out as a refusal, it might be withdrawn by the applicant and then they start negotiating to have to sort of a compromise."* (P6: 7)

The forgoing suggests that the needs of developers are catered for to a greater extent than the population at large given their inherent ability to exert power over officials and councillors. As a result, it appears that planning outcomes do not serve the common good but rather reflect the interests of developers given the power they exert in the planning system.

5.0 Conclusions

This paper has attempted to demystify the manner in which power operates in the planning system by clearly identifying some of the most commonly cited mechanisms by which power relations arise, are exerted and manifest themselves in the planning process. The results highlight the importance of resources (i.e. economic power) in the creation of power relationships between various stakeholders in the planning system. In particular, the importance of resources in determining: 1) the powerful position of developers relative to local authority officials; and 2) the ability to effectively engage in the planning system were the most commonly cited indicators. As these relations emerge, it becomes apparent that those in economically

powerful positions are best placed to exert power in the planning process. In this regard, the ability of the property interests to influence councillors to adopt development plans that reflect their vested interests emerged as the most commonly cited mechanism by which power is exerted. Conversely, the respondents also highlighted that certain community groups can exert leverage over their elected representatives through the democratic process to ensure they serve their own interests rather than the interests of property developers or big business. This observation in particular illustrates the importance of placing checks and balances on those in positions of power. In terms of the manifestation of power in the planning system, the most common indicators emerging were: 1) development plans being adopted that reflect the interests of developers; and 2) local authorities being overly facilitative development proposals. The potential impacts that these 'micro' level manifestations can have on a community become even more apparent when one considers the broader planning outcomes that emerge from these smaller manifestations that occur at various stages in the planning process. In this regard 80% of respondents made reference on some level to planning outcomes being arrived at that do not divert significantly from a non-planning scenario.

Although the results offered in this paper are preliminary findings and require further in-depth analysis and investigation, the foregoing indicates a strong degree of correlation between the hypothetical indicators of power developed from the theoretical framework and those emerging from the data. In doing so, these findings support a Marxist political economy approach which views planning as a state activity that facilitates the interests of private capital. By adopting such a position, critical reflections on the facilitative nature of urban planning in the lead up to a series of property crashes in countries such as Ireland, the US and Spain should come as no major surprise. As a result, it is argued here that any further reflections on the role of planning must be more cognisant of the structural relations that govern how power is distributed in society.

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[14] The **Irish Research Council for the Humanities and Social Sciences** (IRCHSS) funds leading-edge research in the Humanities and Social Sciences, including Law and Business Studies. Its primary strategic objective centres on building an expertise-driven research system in order to enhance Ireland's innovation capacity and skills base in a rapidly-changing global environment where knowledge is key to economic, social and cultural development. IRCHSS is further committed to facilitating the integration of Irish researchers in the humanities and social sciences within the European Research Area. For further information, please see www.irchss.ie

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The Political Construction of Urban Development Projects: Comparative Case Studies From Turkish Cities

1. Introduction and Theoretical Framework to Investigate the Politics of Urban Development

The production of urban space is a politically constructed process to reproduce the dynamics of capitalism. In this political process, a hegemonic-ideological power has been constructed over the definition of urban political priorities. Urban development projects (UDPs), in this political process, could be investigated as politically-ideologically constructed hegemonic projects, providing dynamics for the reproduction of capitalist socio-spatial relations.

UDPs have become the dominant mode of producing urban space in capitalist countries over the last three decades. With the formation and implementation of UDPs, new central business districts, waterfront developments, tourism-oriented consumption complexes, gated and luxury residences and shopping malls… etc. have been produced to provide a "competitive" and "attractive" urban space for the sake of capital accumulation.

However, political-economic dynamics behind the formation of UDPs could not only be understood through analyzing the relations between the formation of UDPs and economic structure of capital accumulation. To reveal these dynamics, we should also critically investigate how governmental and non-governmental agents, in the capitalist system, form hegemonic block (a coalition of social forces in Gramscian terms) and organize political-ideological (superstructural) mechanisms with these UDPs to shape the policies of urban development. This paper focuses on such an empirical survey to reveal the political construction of UDPs in Turkish cities.

In the literature of urban development politics, there are different views on the politics of UDPs. Neo-pluralist and neo-Weberian theories including "urban regime" and "growth machine" approaches put emphasis on agent-based aspects, relations and organizations in the political construction of UDPs. Urban regime approach emphasizes formal and informal relations and networks between the agents of government and business (Stone, 1989). Growth machine approach underlines the central role of growth-oriented coalition formations and reveals how such coalitions have been formed by the involvement of land-based business elites, local media, universities and local non-governmental organization (Logan & Molotch, 1987).

These neo-pluralist and neo-Weberian approaches are critically reviewed by neo-Marxian regulation perspective and it is concluded that such agent-oriented approaches neglects to research the economic base of UDPs, they ignore the role of capital accumulation processes, class conflict and hegemony in the political construction of UDPs and fail to reveal how the capitalist state intervenes to this process (Macleod & Goodwin, 1999). These approaches develops an overtly emphasized agent-oriented focus at the expense of losing the structural capitalist

dynamics behind the formation of UDPs. Therefore they propose voluntarist explanations for the investigation of the political construction of UDPs.

On the other hand, there are Marxist geography approaches, focusing on the capitalist economic structure of urban development processes. As the leading Marxist Geographer, Harvey (1989a) argues that there is a structural relation between the production of space and capital accumulation. UDPs, within this approach, reflect entrepreneurial urban policy mechanisms, aiming to provide a good business climate for a better functioning of capitalist market forces under the dominance of coercive laws of inter-urban competition (Harvey, 1989b). Through following Harvey's framework of capitalist urbanization, Smith (2002) points out that UDPs have become global capitalist urban strategies to reduce the rent-gap between actually ground rent realized from the present and highest best use in terms of exchange value.

Marxist geography approaches are criticized since they overtly emphasized the role of structural dynamics and develop an economic determinist/reductionist approach in explaining the political-ideological dynamics behind the formation of UDPs. Marxist geography approaches do not provide a critical theoretical base to investigate the political-ideological superstructural dynamics of UDPs. What role the agents of state and capital play through which hegemonic-ideological discourses and activities in the political construction of UDPs? To answer these questions, neo-Marxian perspectives of urban politics should move beyond both the economic determinist explanations of Marxist geography approaches and voluntarist-agent oriented explanations of neo-Weberian and neo-Pluralist approaches. Paper argues at the theoretical level that this could be provided through adopting the dialectic relation between the structures and agents of capitalist urbanization and revealing how UDPs, as the policy-making mechanisms of urban entrepreneurialism, have been politically-ideologically constructed by a coalition of state and capital actors within the context of capitalist system.

Within this context, in order to formulate a neo-Marxian theoretical perspective to investigate the political-ideological construction of UDPs, Gramsci's (1971) idea of "hegemony" and Lefebvre's (1991) concept of "the production of space" and the relations between these conceptions are critically elaborated and discussed in this part of the paper. Gramsci (1971) defined hegemony as the "political and ideological activities, moral and intellectual leadership with which ruling class becomes capable to take active consent of those over whom it rules". Hegemony plays the central role in constructing a political-ideological power over the definition of political priorities in policy-making processes. However, hegemony is not the only basis through which the political-ideological power of capitalist ruling classes are produced and maintained. Force is also another key and important dimension of political power, therefore it is widely argued by Gramscian Marxist perspectives that hegemony (consent) and force (coercion) force are two underlying, interrelated and articulated dimensions of political power (Forgacs, 2000). In other words, political power of

capitalist ruling classes have been constructed by a differential articulation of hegemony and force.

Hegemony is constructed by the formation, operation and domination of "hegemonic projects". According to Joseph (2002) to reveal how hegemony is constructed it is needed to investigate "different hegemonic projects, the particular social groups and classes involved to these projects, the interest that they represent, the various values and world-views that they hold and the political blocks and alliances that are constructed in these projects".

Gramscian perspective of politics shows that the conditions for capital accumulation are not given but have to be socially secured through political and ideological mechanisms as well as economic ones (Gramsci, 1971; Forgacs, 2000). Hegemonic projects of capitalist ruling classes emerge from such a political-ideological superstructural context of capitalist system. Moreover, hegemonic projects are formed, organized and operationalized through utilizing organizing capacity of the state, which provides institutional frameworks for the implementation of these projects. Therefore, as Jessop (1997) argues, the state and its policy-making mechanisms could be viewed as strategic terrains upon which different social groups compete to implement their hegemonic and counter-hegemonic projects. This is how class struggle has occurred within the contexts of political-ideological superstructures of capitalist system.

With his neo-Gramscian regulation approach, Jessop (1997) also provides critical insights and perspectives to elaborate further the conceptions of hegemony and hegemonic project. According to Jessop (1997) hegemonic projects are very important mechanisms of political power, reflecting a unity of social forces (governmental and business actors, chambers and non-governmental organizations, universities and media institutions) and developed to secure the economic base of capital accumulation processes and relations.

Jessop's (1997, 1999) neo-Gramscian regulation approach has also provided new paths to investigate urban political economy within the context of hegemonic project concept. Since the accumulation of capital entails political, ideological, moral and intellectual leadership, hegemonic projects play a significant role in the formation of this leadership under the dominance of capitalist ruling classes. In other words, to investigate the relation between capital accumulation and hegemonic projects in a particular urban context, we need to investigate how hegemonic projects reflect a unity of diverse social forces and how they mobilize support behind a particular program of action that support long term interests of capitalist ruling classes. Hegemonic projects could be investigated, within this perspective, as the strategically selective sites of urban policy-making, reflecting how the interests of powerful capitalist ruling classes have been prioritized over the interests of powerless working classes.

Besides of the Gramscian perspectives discussed above, Lefebvre (1991) approached the conception of hegemony from a different perspective. As Kipfer (2002) unveiled, Lefebvre viewed hegemony "as a reformulation of the problematic of alienation and reification within the practices of everyday life". According to Lefebvre (1991) hegemony of capitalist system has been constructed through the relations of commodification, alienation and the contradictions of everyday life. Thus, Lefebvrian view of urban politics uncovers that everyday life practices and projects and activities to produce space within these everyday life practices could be investigated as a strategic terrain upon which hegemonic power of capitalist classes aim to acquire the active consent of the large segments of the society (Kipfer, 2002; 2008).

As Lefebvre (1976) revealed, state interventions and capital, the rise of new sectors including tourism and leisure, bureaucratically administrated consumption and rapid urbanization have all given rise to the deepening of capitalism in everyday life. Through observing and critically interpreting such alienating and commodifying socio-spatial relations, Lefebvre revealed that the serialized production of abstract space internalized in the everyday life through the moral principles and consent that provides a hegemonic-ideological power over the definition of political priorities. Thus, Lefebvre's conception of the production of space could be considered as an urbanized conception of hegemony, which gives rise to the commodification, alienation, homogenization and fragmentation of everyday life practices (Kipfer, 2008). From the perspective of Lefebvrian urban politics, it could be argued that Urban Development Projects play the key roles in urbanizing Gramsci's concept of hegemony, since these projects give rise to the alienating and commodifying socio-spatial relations in the contemporary capitalist city.

Through elaborating the concepts of "hegemony", "hegemonic project" and "the production of space", it is formulated a Lefebvrian-inspired neo-Gramscian approach to investigate the political construction of UDPs. Lefebvrian-inspired neo-Gramscian theoretical perspective show that UDPs could be investigated as a strategically selective mechanisms of urban policy-making, reflecting how the interests of powerful capitalist ruling classes have been prioritized over the interests of powerless working classes. The most important contribution of this approach to the field of urban politics is that UDPs could be investigated as politically constructed **"hegemonic projects of the production of space"**, serving not only to the construction of a moral, intellectual and ideological leadership in urban planning efforts but also to the strategy of capital accumulation in particular historical-geographical contexts of capitalism. Moreover, UDPs have also become a mechanism of entrepreneurial urban governance that reflects attempts to build a coalition of social forces at the urban socio-political context. UDPs are politically constructed attempts to acquire public support and consent behind a particular program of action that support long-term interests of capitalist classes.

As a result of this theoretical discussion, a Lefebvrian-inspired neo-Gramscian approach is formulated and within this theoretical perspective, paper puts forward

two initial arguments that give direction to the design of empirical research. These initial arguments are mentioned below.

▪ UDPs (Urban Development Projects) are attempts to form "hegemonic projects of the production of space", therefore UDPs have become the mechanisms of constructing hegemony over the definition of urban political priorities.

▪ UDPs have been politically constructed through the hegemonic arguments, discourses and narratives of key decision-makers and these discursive practices have been used to mobilize public support and consent of different social forces.

2. The Politics of Urban Development Projects in the World

The politics of UDPs are comparatively and critically analyzed through investigating six UDPs from different capitalist countries of the world, including Baltimore Inner Harbor Revitalization Project from US, London Docklands Regeneration Project and Olympic Games Urban Regeneration Project from UK, Potsdamer Platz Redevelopment Project from Germany, Abandoibarra Waterfront Regeneration Project from Spain and Lujiazui Central Finance District Development from Shanghai. The critical and comparative analysis of the politics of these six UDPs indicate that these UDPs have been politically-ideologically constructed by hegemonic discourses, arguments and narratives of key-decision makers from governmental and business actors. "Economic growth", "investment" and "employment" based such hegemonic discourses aim to mobilize public support and consent for the projects. As discursive practices to persuade different segments of civil society, such discourses show how capitalist forces behind the projects aim to redefine urban political priorities on the basis of "economic growth" oriented targets.

The critical analysis of the UDPs also show that not only discursive practices of hegemony construction, but also coercive-legislative mechanism of capitalist state play a very important role in the formation of UDPs. In this respect, through reorganizing urban planning powers and empowering new state institutions in the projects, coercive-legislative mechanisms of capitalist state have been utilized.

The utilization of hegemonic discourses and coercive-legislative mechanisms have differentiated according to different relations and articulations of state, capital and society. For instance, hegemonic discourses and activities to mobilize public support and consent may become very important in particular socio-political contexts of some countries where civil society is powerful. However, in socio-political contexts where state has a high repressive power over the society, there may be no or even less need to use hegemonic discourses and activities. Therefore, as a general interpretation, it could be argued that the role of hegemonic discourses or coercive-legislative mechanism have differentiated according to different contexts of state-civil society relations. In western capitalist countries (like US, UK, Germany and Spain), since the agents of civil society are powerful over the formation of the structure and policies of the state, hegemonic discourses and are frequently produced and disseminated through entrepreneurial urban governance institutions, local

business associations, media institutions, universities and chambers. However the political-ideological superstructure of UDPs have not only been constituted by these hegemonic discourses and activities of powerful capitalist forces. Coercive-legislative mechanism of the state is still important in these countries, since they provide exceptional power to reorganize urban planning authorities and to incorporate business-driven interests into the decision-making processes through the establishment of new entrepreneurial urban governance institutions.

3. The Political Construction of Urban Development Projects in Turkey

The political construction of urban development projects (UDPs) in Turkey are investigated through focusing on four UDPs from three major metropolitan Turkish cities. Haydarpaşa and Northern Ankara urban regeneration projects are critically and comparatively investigated to explore what roles hegemonic-ideological and coercive-legislative mechanisms of capitalist forces play in the political construction of UDPs in Turkey. A more detailed and comprehensive analysis of the political construction of New City Center (NCC) and İnciraltı Tourism Center (İTC) Development Projects from İzmir constitute the main empirical focus of the paper. The political-ideological dynamics, decision-making and opinion-buildings processes of these two projects from İzmir are elaborated and comparatively analyzed and they provided the empirical base to rethink the theories of urban development politics.

3.1 Haydarpaşa and Northern Ankara Urban Regeneration Projects from İstanbul and Ankara

The political dynamics of Haydarpaşa urban regeneration project could be discussed with reference to six main dimensions of the project. Firstly, in the first years of the 2000s, it was observed a struggle between local and central governments over the reproduction of urban space in Haydarpaşa. Both central and local governments intended to acquire the power and the authority of space production through initiating and leading an urban regeneration project in an urban location like Haydarpaşa which has a high level of rent-production potential (Urkun Bowe, 2008). There was a struggle to get the power of space production for an economically valuable urban space. However, towards the end of the 2000s, this struggle turned to a collaboration to implement a rent-oriented development. Central and local governments (Turkish State Railways, Privatization Administration and İstanbul Greater Municipality) have sustained and strengthened a pro-active rent-oriented development approach through agreeing upon the major land-use decisions and development strategies in the production of space in Haydarpaşa.

Secondly, the common point in the activities of local and central government was arranging an urban design competition. Turkish State Railways and İstanbul Greater Municipality intended to initiate urban regeneration process through arranging urban design competitions. In the early 2000s, urban design competitions was arranged before the preparation of development plan and thus, it was intended to gave a direction to the key decisions of the plan. However, in the late 2000s, it is declared that a new urban design competition will be organized after the approval of the new development plan. Preparation of development plans and arrangement of urban

design competitions have become successive events, defining a new organization in urbanism through prioritizing a project-led and profit-driven intervention logic over planning process. The third dimension in the political construction of the project points out the role of hegemonic discourses in mobilizing public support behind the formation of the projects. Central and local governments have proposed the same development logic (profit-driven and rent-oriented development) and they also proposed the same land use decisions including tourism and residential-based activities (like convention centers, shopping centers, luxury residents, culture centers, five star hotels and restaurants). Such a profit-oriented capitalist reproduction of urban space and its concomitant land-use decisions have only been realized through a common social legitimization ground which is provided by similar hegemonic discourses of key decision-makers. In this context, the key decision-makers developed a dominant rhetoric on the basis of "attracting investment and consumption", "providing new employment opportunities" and "national image improvement". Such hegemonic arguments are reflected in the media to mobilize public support behind the formation of the regeneration project. In other words, these hegemonic discourses play a very important role in constructing and sustaining political dynamics behind the regime of capital accumulation.

Fourthly, as Haydarpaşa case highlights, legislative interventions are very important in the political construction of UDPs. Legislative interventions provide exceptional power mechanisms through facilitating the implementation of the project and eliminating counter-decisions and actions (including the decisions of the Court and Regional Conservation Councils) against the formation of the project. Within the urban regeneration efforts in Haydarpaşa, new laws are introduced as a collection of changes in a number of laws and these new laws facilitate urban property transfer and privatization and they also give rise to the consolidation of urban planning powers through empowering central government institutions (like Turkish State Railways and Privatization Administration) and bypassing the decisions of oppositional actors (like Regional Conservation Councils, Districts Municipalities and some Court decisions). The fifth dimension in the political construction of the regeneration project emphasizes the role of the collaboration between the influential actors of the project. After the decisions of the Court and Conservation Council against the formation of the regeneration project, some governmental and non-governmental stakeholders (including Conservation Councils, İstanbul Greater Municipality, Kadıköy Municipality, Üsküdar Municipality, Chamber of Architects, Chamber of City Planners) were invited to the preparation process of conservation plan for Haydarpaşa (Urkun Bowe, 2008). Oppositional actors were invited to the process by neo-liberal central government to construct a common politico-ideological ground for the formation of the project. In other words, through using Gramscian terms, such a state-led collaboration effort could be interpreted as a search for a broader coalition of social forces in the production of urban space in Haydarpaşa. This was an obvious attempt to form a hegemonic block at the urban context through eliminating oppositional claims and contrary arguments of different social forces. However this attempt did not succeeded since the Chambers of Architects and City Planners did not involve to this process owing to their concern to

become a part of the support for the formation and implementation of a rent-oriented development. The sixth and the last political consideration highlights how oppositional groups act and define their criticism and counter-politics against the formation of the project. In fact, oppositional actors have mobilized their struggle on the basis of public interests. On behalf of public interest, such actors bring judiciary action for the cancel and nullity of the plans, laws and all sorts of regulatory frameworks related with the regeneration project. Some influential oppositional actors are Haydarpaşa Solidarity Group (consisting of 86 NGOs), Chambers of Architects and City Planners, and Union of Port Workers (Çavuşoğlu, 2010).

Policy-making efforts, new plans and laws, hegemonic discourses and arguments have not provided the political ground to overcome the opposition of different actors against the formation of the project. However, regeneration efforts never end. In 2011 a new development plan was prepared and approved by the collaboration of central government (Turkish State Railways) and local government (İstanbul Greater Municipality). In the following years, the implementation of this development plan is expected for the regeneration of Haydarpaşa.

There are four major conclusions that could be drawn from a political consideration of Northern Ankara Urban Regeneration Project. Firstly, to implement urban regeneration project, the first location-specific legislative intervention was made with the law no. 5104. This law shows how Greater Municipality of Ankara has been given exceptional power in terms of the preparation and approval of development plans, property transfer and carrying out construction works and infrastructure facilities. Urban regeneration areas, with this law, was released from current urban planning system and development legislation. Law no. 5140 show us again how legislative intervention is important in the political construction of rent-oriented UDPs. Secondly, there is a partnership of local and central government in this regeneration project. As a partnership of local and central governments, TOBAŞ has carried out key functions in managing and coordinating activities within the implementation of the project. Private sector involves to this partnership through the revenue-sharing scheme. Thirdly, although Greater Municipality of Ankara and Housing Development Administrations argued that the priority of this project is "enhancing the quality of life of the people living in the squatters", there was not such an increase in the quality of life of middle and low income groups, living previously in the project area. Contrary to such hegemonic arguments of the state (made to mobilize support behind the formation of the project), the majority of the people living in the project area have tended to move away from the newly constructed residences because they face a high cost of living in these residences. Under such conditions, most of the middle and low income groups (constituting the majority of the people living in the project area) have started to move to out of the regenerated north of the Ankara. For some of the scholars, this displacement of the low and middle income groups shows the first step of gentrification within the regeneration project (Özdemir-Sönmez and Yüksel, 2007; Uzun, 2006). Fourthly, this urban regeneration project unveils how a rent-oriented and project-based approach have become the mainstream urban (re)development policy since the 2000s

within the urban political context of Ankara. For instance, 2023 master plan of Ankara underlines the importance of urban (re)development projects for even a long term consideration of Ankara's urbanization (ABB, 2007). In this sense, it supports project-led initiatives and their roles in the production of attractive urban spaces in terms of attracting investment and employment opportunities and making the capital of Turkey a competitive city within the context of rising global competition between cities (ABB, 2007). Furthermore, the new urban regeneration areas are defined according to some new legislative interventions since the 2000s (like laws no. 5216 and 5140) and these regeneration areas have been subjected to rent-oriented development initiatives, increasing the level of property prices and the displacement of powerless low-income classes and enhancing socio-spatial polarization (TMMOB, 2007; Uzun, 2006). As a result, a critical consideration of Northern Ankara Urban Regeneration Project unveils that behind the political construction of UDPs there is a strong state intervention and this state-led urban regeneration initiatives have given rise to the dominance of a rent-oriented and project-based approach in the making of entrepreneurial urban policies, redefining the priorities of urban (re)development and intending to obscure the class conflict behind such urban processes.

To conclude, the comparative and critical investigation of the politics of UDPs from different capitalist countries of the world and Turkey give rise to the formulation of two further initial arguments. In addition of the two previously stated initial argument, that were formulated within the theoretical framework of thesis, these two initial arguments are mentioned below. These total four initial arguments constitute the starting point in investigating the political construction of New City Center and İnciraltı Tourism Center development Projects from İzmir.

- In the political construction of UDPS; not only discursive practices of hegemony construction, but also coercive-legislative mechanisms of capitalist state (new laws, change in the existing laws, decree laws …etc.) play a key role.
- UDPs have been politically constructed through the complementary relation and differential articulation of the discursive practices of hegemony construction and coercive-legislative mechanisms of the capitalist state

3.2 New City Center and İnciraltı Tourism Center Development Projects from İzmir

New City Center (NCC) and İnciraltı Tourism Center (İTC) development projects from İzmir are critically investigated through employing three methods of qualitative analysis with a complementary manner, which are (1) critical discourse analysis (of plan reports, related documents and media texts), (2) institution and neighborhood questionnaires and (3) semi-structured in-depth interviews. These different sources of empirical evidence are used complementarily to reveal different dynamics of decision-making and opinion-building in the political construction of NCC and İTC projects.

Paper intends to find out to what extend four initial arguments, that are mentioned in the previous parts, are capable to explain the political construction of NCC and İTC

projects. Different empirical research methods including critical discourse analysis, questionnaire and semi-structured in-depth interviews are combined and used together to test the validity of these arguments.

Critical discourses analysis of media texts and key documents reveal that governmental decision-maker and business actors in both of the projects use common economic development oriented words like "investment", "local economic development" and "employment". In addition to them, there are also different words specific to each project. For instance in the formation of NCC project; İGM, investors and local business associations use "urban regeneration" based words and themes extensively. Such actors, on the other hand, use "tourism" and "EXPO" based words and themes in the formation of İTC project. Moreover, there are coalition-based words like "cooperation" and "collaboration" of "different stakeholders". Such hegemonic discourses are ideologically constructed to mobilize and consolidate public support in the formation of the projects.

The findings of critical discourse analysis show that news, articles and advertisements in mass media tools play an important role in disseminating and dominating hegemonic discourses in the formation of both of the projects. It is observed that the declarations of governmental and business actors dominate the formation of news and articles in most the media sources. Hegemonic discourses stated in these declarations play a facilitative role in the dissemination of predominant view in the formation of the projects. However there are also oppositional discourses against the formation of the projects, therefore, discourses could be seen and studied as a political-ideological site of power, struggle and opposition of different social forces in the formation of the projects. Powerful state and capital actors (re)produce and disseminate hegemonic discourses to mobilize public support for the formation of the projects. However, on the other side, oppositional actors confront against these discourses through putting forward their counter/oppositional discourses. There is a struggle at the level of discursive practice in the formation of the projects. This struggle could be observed obviously in the formation of İTC project.

One of the main argument of thesis is that governmental and business actors aim to construct a **"capacity to produce consent" (CPC)** through the domination of hegemonic discourses and the collaboration with key agents of civil society like local business associations, chambers, universities, media institutions. The main target of CPC is to mobilize public support and consent for the project. This politically-ideologically constructed hegemonic capacity focuses on the mobilization of public support and consent in the formation of the projects and plays role in redefining the priorities of urban planning and policy. The construction of each capacities of producing consent (CsPC) for each project may vary according to different actors involved; but the common basis of each CsPC is that they are embodied by the hegemonic discourses of powerful capitalist actors in the formation of the projects.

Which hegemonic discourses have played role in mobilizing public support and consent for the projects? This major research question is answered by the findings of critical discourse analysis and urban field survey. The findings reveal that NCC project is defined and presented to public as "an opportunity attract investment" and "to provide employment". Such hegemonically constructed discourses are also supported with "urban regeneration" based discourses defining the problems of the project site as "urban decline". İTC project, on the other hand, has become a site of "tourism" and "EXPO" based discourses. Most of the governmental and business actors state that with İTC project "an economically unproductive" and "agriculturally declining" area will be transformed to "an attractive space of tourism development". In both of the projects, through (re)producing and dominating "economic growth", "investment" and "employment" based hegemonic discourses, a notion of "abstract space" (with reference to Lefebvre) is politically-ideologically constructed.

The findings of field survey show that the vast majority of the people and institutions, who support to the formation of the projects, adopt hegemonic discourses. Most of the people whatever their class positions state "investment", "economic growth" and "employment" based hegemonic discourses while they are expressing their support to the projects. This widespread tendency shows that hegemonic discourses have become common sense in the formation of the projects and therefore they play a political-ideological superstructural role in dominating and manipulating the formation of public opinion.

Through which mechanisms hegemonic discourses of the projects have been disseminated and dominated as common sense over the formation of public opinion? There are two common and influential mechanism in both of the projects namely (1) mass media tools and (2) the declarations of powerful governmental and business actors in these tools. Besides these common mechanisms, there are project-specific mechanisms. For instance, the advertisements of shopping malls, office towers and luxury residences have become influential in dominating hegemonic discourses, therefore they have played a constitutive role in constructing the CPC of NCC project. The other project specific influential mechanism of disseminating hegemonic discourses is EXPO. As field survey uncovered, the governmental decision-makers and local business leaders intend to mobilize public support for İTC project through forming the project with an EXPO-based strategy. To sum up, the CsPC of the projects have been constructed by the utilization of mass media tools. Particularly in the formation of İTC project, mass media tools have become the platform of political-ideological struggle between the predominant-supporter view (of governmental and business actors) and oppositional-counters view (of chambers affiliated to UCTEA and some other NGOs). However, it could be stated that predominant-supporter views have more advantages in manipulating the shaping of public opinion since they dominate and command most of the mass media institutions.

Although hegemonic discourses target to mobilize the consent of local public of İzmir as a whole, it could be identified particular targets. There are two particularly

targeted actors in the mobilization of consent which are "occupational professions" like city planning and "chambers affiliated to UCTEA". Governmental decision-maker actors intended to strengthen the CsPC of each project through "collaborating-cooperating" with such actors of civil society in the formation of the project. In the formation of NCC project, such efforts to collaborate with key actors of civil society have become successful since İGM, chambers and some academicians from universities have collaborated in the preparation of NCC development plan. However, since the opposition of chambers against İTC project has a political-ideological basis, they do not respond positively any consensus based discourse and reject cooperation-collaboration with the MCT in the preparation of İTC development plans. As a result, the CPC of İTC project has not become powerful owing to the failed attempts of MCT to collaborate with oppositional actors of civil society.

Thesis argues that under the guise of such "collaboration-cooperation" based relations, powerful governmental actors may exert dominance over the role and priorities of urban planning in the formation of the projects. Furthermore this "cooperation-collaboration" discourses and strategies could also be viewed as a hegemonically-constructed strategy to absorb and pacify the oppositional power of counter-oppositional actors. Governmental decision-makers fail to absorb and pacify the opposition of non-governmental social forces and therefore, the CPC of İTC project is restricted by the politically-ideologically motivated activities of chambers, environmentalist NGOs, some universities and political parties. Unlike the governmental actors of İTC project, the key decision-makers in İzmir Greater Municipality has "successfully" cooperated-collaborated with chambers in the formation of NCC project. This "strategically taken consensus based decision" enable them to strengthen the base of the CPC of NCC project, since they mobilize the support and active consent of the chambers with consensus-based relations. As a result, case study provide the empirical evidence to argue that the existence and the mobilization of counter-oppositional views and activities directly influence the construction of CsPC of each projects.

Since governmental decision-makers do not provide collaboration with oppositional non-governmental actors (like chambers, environmentalist NGOs) in the formation of İTC project, they tend to enact a project-based law to impose a coercive and legally legitimate base of power for the formation of İTC project. In other words, the CPC of İTC project is not strength because there is a powerful and ideologically-motivated opposition of chambers and some NGOs whose active consent could not be acquired by the governmental decision-makers. Thesis argues that owing to the weakness of CPC, powerful actors tend to dominate and impose a coercive and legally legitimate mechanism with a project-based law. However, such a project-based law still remain socially illegitimate since it is not a product of a consensus between different actors of İTC project.

Urban field survey also reveled that powerful governmental and investor-business institutions aim to acquire the consent of not only local residents and some non-

governmental organizations, but they also need to mobilize the active consent of their own members/officials/employees. Therefore, the capacity of producing consent (CPC) of the projects is constructed to dominate the views of these insider people who performs particular administrative or occupational duties. The level of intra-institutional consent is related directly and positively with the construction of CPC and high level of intra-institutional consent provided in a particular project means the more powerful CPC in the formation of this project. In other words, high level of intra-institutional consent facilitates the construction of hegemony over the definition of urban political priorities in the formation of the projects. The most important empirical evidence, in this respect, is that NCC project has a higher level of intra-institutional consent when compare with İTC project. Lastly, survey results indicate that the level of intra-institutional consent also changes according to the duties of the people and the political-ideological tendencies of these people in performing their particular occupations.

Institution questionnaire revealed that institutional categories such as "state institutions", "universities", "political parties", "chambers" and "media institutions" do not reflect one single coherent view; rather there are conflictual and contrasting views in these institutional categories concerning the formation of the projects. Such contrasting views are more observable for İTC project since there is a significant level of political-ideological opposition against this project. With reference to theoretical approach of thesis, such institutional categories could be identified as a site of political-ideological struggle upon which "a war of position" (in Gramscian terms) occur amongst the social forces of urban politics. As field survey results unfold, not NCC project but İTC project reflects such a site of political-ideological struggle.

As a general conclusion, it could be argued that governmental and investor-business actors have constructed a powerful CPC succeed to mobilize public support and consent in the formation of NCC project. However, the CPC of İTC project has not become powerful and failed to mobilize the consent of oppositional actors of civil society, therefore it could not have a hegemonic power over the definition of urban political priorities. The CsPC of the projects have also affected the implementation of the projects. Since NCC project is politically-ideologically constructed with a powerful CPC, it is started to be implemented. Unlike NCC project, İTC project is not implemented yet owing to the judiciary actions against İTC development plans, which also reflect the powerlessness of the CPC of İTC project.

4. Conclusion: Overall Summary of Empirical Evidence and Final Remarks on the Political Construction of Urban Development Projects

The critical and comparative analysis of rent-seeking UDPs from different capitalist countries of the world indicated that UDPs have become the mechanisms to secure the economic base of capital accumulation processes and relations. However, the political-economic dynamics behind the formation of UDPS could not be revealed only with reference to capital accumulation processes and relations, paper argues that UDPs are politically constructed "hegemonic projects of the production of space"

and that they reflect a unity of diverse social forces at the urban political context. With these profit-oriented and rent-seeking UDPs, public support and consent of large segments of civil society have been mobilized through producing, disseminating and dominating "economic growth", "investment" and "employment" based hegemonic discourses.

The main argument of the paper is that UDPs play the key roles in urbanizing Gramsci's concept of hegemony. However this hegemony is not something given or taken for granted, but rather it is constructed by consciousness collaborative-cooperative efforts of governmental and non-governmental actors including central and local governments, public-private partnerships, business associations, chambers, universities and media institutions …etc. The unity of these political and social forces, in the formation of the UDPs, could be defined with reference to Gramsci as the "political society + civil society". The key point to reveal is how the hegemonic power of UDPs have been constructed over the definition of urban political priorities through the hegemonic discourses of these governmental and non-governmental actors. UDPs from Turkish cities are critically and comparatively investigated to find out the answers of this question.

The empirical evidence of four UDPs from three Turkish metropolitan cities reveal that UDPs gain a hegemonic character if they are politically-ideologically constructed by the "growth", "regeneration", "investment" and "employment" based hegemonic discourses of powerful governmental and non-governmental actors. In addition to these hegemonic discourses, collaborative-cooperative relations amongst governmental and key non-governmental actors (including business associations, chambers, universities, media institutions …etc) in the formation of the projects also play crucial roles in constructing hegemonic power. Paper argues that hegemonic discourses and activities of these powerful actors aim to construct a "capacity to produce consent" (CPC), which aim to mobilize public support and consent for UDPs. However, it is also uncovered that not only this hegemonically constructed CPC, but also coercive-legislative mechanisms of capitalist state (including news laws, change in the existing laws, decree-laws and all sorts of legislative interventions) play important roles in the political construction of UDPs.

The utilization of hegemonic discourses, activities and coercive-legislative mechanisms have differentiated according to different relations and articulations of state, capital and society. For instance, hegemonic discourses and activities to mobilize public support and consent may become very important in particular socio-political contexts of some countries where the agents of civil society are powerful. However, in socio-political contexts where state has a high repressive power over the society, there may be no or even less need to use hegemonic discourses and activities.

Thus, within the light of the empirical evidence, paper argues that not only discursive practices of hegemony construction, but also coercive-legislative mechanisms of capitalist state (new laws, change in the existing laws, decree laws …etc.) play a key

role in the political construction of UDPs. UDPs have been politically constructed through the complementary relation and differential articulation of the discursive practices of hegemony construction and coercive-legislative mechanisms of the capitalist state, which means a differential articulation of hegemony and force in the political construction of UDPs.

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RISK AND FAIRNESS AS PLANNING FACTORS: CONSOLIDATING THE SHARED AREA OF INVESTIGATION BETWEEN PLANNING THEORY, RISK THEORY AND ETHICAL INQUIRY

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Abstract

The matter of siting technological risks according to considerations of compatibility between hazards and urban areas has only recently been object of rigorous theoretical definitions in planning literature. This contribution is a further effort in this direction. Its aim is to delimit the shared area of investigation among risk theories, planning theories and ethical inquiry by building upon, particularly, Beck's discourse on risk (1996), the Rawlsian theory of distributive justice (1971) and its transposition into planning theory as done by Moroni (1994, 1997). By elaborating on these writings the contribution proposes that the equal distribution of technological risks in society through spatial planning instruments should be become an explicit aim of the planning practice. This is discussed by referring to a recent case of siting of a CO2 underground disposal in The Netherlands, here only narratively discussed at the end of highlighting some paradigmatic aspects of the relevant decisional process. Indications of the research trajectories to be followed for cementing this theoretical framework on the ground of empirical findings are mentioned in the conclusions.

Key-words: risks; fairness; siting of hazardous technologies; land use planning

1. Introduction

Although it is among the most prominent interdisciplinary themes to have emerged in the past two decades, the prevention of site-specific technological risks has only recently been object of rigorous theoretical definitions in spatial planning literature. The latter has given great attention to the ethical implications of the siting of risk-bearing installations, particularly regarding the legitimacy and fairness of decisional processes (Boholm 2004, Hayden-Lesbirel and Shaw 2005). This paper develops these reflections further. In particular it focuses on the role that considerations of "justice as fairness" may have in guiding planning decisions related to the siting of impacting and risky technologies meant to support the transition towards a non-fossil fuel era. An opportunity to reflect upon these emerging technologies is offered by the recent case of proposed siting of a CO2 underground disposal in The Netherlands, here only narratively discussed at the

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end of outlining the main elements of the relevant appraisal that support our arguments.

The contribution builds upon previous writings that started to explore, respectively, the challenge of distributing technological risks fairly through spatial planning instruments (Basta 2012) and the broader horizons of a planning theory based upon individuals' responsibility of supporting fair siting processes by means of active forms of collaboration (Basta 2012). In order to take these reflections further this paper develops, particularly, the discussion initiated in the former of these writings. At this scope the article starts with introducing Beck's discourse on risk (1982: 1996) and the theory of justice of Rawls (1971) as developed in planning theory by Moroni (1997). The main idea put forward is that of *safety as a primary spatial good*, that is, as a good to be equally distributed in society through spatial planning instruments. The following discussion revolves around the matter of its concrete application to the case of hazardous facilities, with special attention given to the emerging technologies meant to support the transition towards a non-fossil energy era. The focal point of the contribution (which, note, is primarily a theoretical contribution) is adding to the debate on the siting of these controversial installations by discussing the operationalization of the notion of *fairness* as a concrete planning factor. The example to which the paper will refer in order to support its arguments is the recent case of rejection of a CO2 underground disposal by the side of the population of Barendrecht, in The Netherlands. By highlighting some arguably paradigmatic aspects of the relevant controversy the paper highlights some distinctive elements of the increasingly relevant problem of balancing considerations of (global) benefits against considerations of (local) justice when selecting the appropriate site for intruding technologies. It is suggested that opting for the "right" site on the ground of costs / benefits considerations only, while exposing localities to immediate impacts and potential risks, may be not justified when considered under a light of both intra- and intergenerational fairness. The paper concentrates, particularly, on the former point and argues that the criterion of fairness in distributing impacting technologies at regional and national scales should inform the notion of "feasible" site together with all other technology-specific, site-specific and environmental-specific criteria. In the conclusions, some indications regarding the empirical research needed to support these preliminary considerations are given.

In the following sections the theoretical background of the contribution is introduced together with a short story-line of the example the article will refer to along its development.

2. Risk and fairness in (planning) theory: some preliminary notes

Rawls' *Theory of Justice* (1971) has been one of the most influential political philosophy theory of the past century. By its side , Beck's discourse on risk (1992) has been one of the most influential sociological theories of the last decades. The essentials of both theories and their relevance to our discussion are shortly recalled in the following.

As known the pillars of the Rawlsian theory are the conception of "primary good" and the two principles of justice. The former refers to the goods each individual would be entitled to following the contract that would regulate individuals' coexistence within a fair society. These goods would be identified by moral judges acting behind the "veil of ignorance"; that is, without knowing what their social, ethnic and religious statuses would be in a real setting. Arguably these moral judges would identify as "primary" the system of liberties and essential means each individual would need in order to develop the own self freely. Such liberties and means are those that can be equally assigned to anybody without violating others' liberties. Freedom of speech, of religious orientation and access to basic education are some examples. The two principles of justice relate to this conception of primary goods by, respectively, stating the obligation of their equal distribution in society (1st principle) and by legitimizing inequalities only when they do benefit the whole up to the most disadvantaged (2nd principle). The distinctive aspect of the Rawlsian conception of justice is therefore aiming, rather than to a restrictive form of social equality, to prime distributive mechanisms that would put all in the same initial condition. In more simple words, the fair society the philosopher had in mind is not a society in which everybody is equal in terms of status and belongings; but rather a society in which everybody has access to the essential means and rights needed to develop the own aspirations. Rather than a radical conception of equality as "leveling differences", the libertarian conception of justice put forward by Rawls is therefore "departing from the same set of essential means". This conception does therefore not exclude differences among social statuses; it does rather exclude the preclusion for some to climb up to higher conditions of education and wealth by guaranteeing to all a common "line of departure".

Beck's discourse on risk (1992) has interesting moments of affinity with this authoritative political philosophy theory. The German sociologist argued that one of the most distinctive developments that took place after World War II has been that of creating yet unknown forms of technological risks, unequally distributed in society next to the historical rooted unequal distribution of wealth. His work *Risk Society* (1992) is a collection of thoughts that revolve around the observation that the current economic development pattern, embraced in late modernity by Western society, is based on a massive introduction of hazardous technologies of unknown risky potentials. These technologies, among which we could cite nuclear, chemical and energy installations, create forms of inequality not only regarding the access to the produced benefits; but also in relation to the exposure to the relevant risks. In this vein Beck argues that current society is a "reflexive society", that is, a society that re-organizes its governing bodies and practices departing from a new awareness of the unwanted consequences that certain choices entail. In this view risks become the inevitable counterparts of the pursue of benefits; and as the former, they are distributed unequally. Note that according to Beck's early writing (1982:1996) the latter are no more tight to the place of origins, as their effects overcome spatial and temporal horizons; however, it is consistent to add that the site-specific among these risks create *de facto* situations of unequal exposure. Thinking of Rawls' idea of

justice, we can hence easily conclude that technological risks are therefore distributed *unfairly*.

The planning literature has been penetrated by both theories substantially, to the point that a thorough referencing of main contributions would constitute a work in its own. In the case of the Beckian discourse on risk the planning literature has given relevance to aspects of the theory other than specifically technological risks, particularly the notion of “reflexive modernity” and the consequent horizons of a reflexive planning discourse (Howe and Langdon 2002). Others instead concentrated on the “ideology of certainty” that kept permeating the planning system until “risky realities” started to be acknowledged as the only possible reality (particularly, Gunder 2008). Rawlsian lines of inquiry, by their side, penetrated the planning literature in, among others, the works of Harper and Stein (1992), Moroni (1997), Stein and Harper (2005) and Fainstein (2010). In light of the scope of this article I will elaborate on these latter lines of investigation more at length.

The planning theorist Moroni (1997) argued in details on the implications of the Rawlsian conception of “primary good” for the spatial planning theory. Replicating the line of reasoning of the moral judges acting behind the veil of ignorance, Moroni argues that decent housing, the access to green areas and to sufficient transport are the "primary" among the spatial goods. Such spatial goods constitute the basic “spatial” condition each individual should depart from in order to pursue the own objectives of self-realization and happiness. As such, they constitute the basic “spatial rights” that should be guaranteed to each member of society up to the most disadvantaged.
A sure point of interest of Moroni’s elaborations is his addition, to the list of primary spatial goods, of a "safe living environment". This entails that, in principle, all members of society are entitled to live in “spatially safe” conditions. Although Moroni doesn’t discuss this point at length, arguably this condition includes living protected from major hazards and being exposed to tolerable levels of risk.
This is in interesting point as it relates to the matter of siting hazardous and risky technologies and planning the surrounding urban areas accordingly. This matter is well known in planning literature, to the point of having given birth to a dedicated literature. Within it, two main lines of investigations can be identified. The first collects contributions revolving around epistemological and normative questions whose primary scope is advancing interpretational instruments for evaluating the implications of the siting of controversial technological installations from the policy and normative perspective (Boholm and Lofstedt 2004, Hayden-Lesbirel and Shaw 2005). Here, identifying the distinctive elements of Not In My Backyard (in the following: NIMBY) vs. non-NIMBY cases in such a way to enable the correct framing of siting controversies is a main point of interest (Boholm 2004, Owens 2004a). Note that several ethicists followed the same lines of investigation (for example Peterson and Hansson 2004; Hermansson 2007), contributing to form an “ethics of siting” literature of fundamental complementary value for the planning scholarly community.

A second mainstream of planning research focused on the more pragmatic problem of advancing analytical instruments that may support a safe allocation of land uses in relation to risks and hazards. Rather than to the debate on the epistemological and normative implications of siting processes, this second literature has rather contributed to establish an interdisciplinary corpus of notions and methods that may support the elaboration of land use plans compatibly with site-specific risks and hazards. Being this literature more focused on the practice than on the theory of siting, the relevant contributions are often based on the analysis of specific cases, hence types of installations together with their geographical implications (Basta et al. 2006; Basta et al. 2008; Schmidt-Thomé 2006, Schmidt-Thomé and Kallio 2006; Menoni and Margottini 2011). Because of its operational emphasis, extra-disciplinary contributions aligned with the scope of this literature are mostly provided by risk analysts (for example Bandini et al. 2006; Christou and Mattarelli 2000).

The scope of this paper is more aligned with the lines of the inquiry of the former literature described and builds, in particular, upon those contributions that investigated what makes a siting process a legitimate and "fair" process (Boholm 2004; Linneroth-Bayer 2005). Nevertheless inputs from the second stream of literature will be recalled when discussing the case-study in section 2.2.

Going back to the notion of primary spatial good as introduced in planning theory by Moroni (1994, 1997), the main theoretical implication is that aim of the planning practice should become distributing spatial safety in society equally up to its most "spatially disadvantaged" members. The main evaluative implication of this position is that there exist a "level" of spatial safety each individual is universally entitled to. Arguably this level has a concrete geographical dimension (for example "distance from", or "emergency routes towards") and its means of distribution are planning instruments: particularly, land use plans.

This is an apparently banal, yet important conclusion. Asserting that spatial safety is a primary good and that there is a level of it that should be equally guaranteed in society entails that safety, and fairness, become concrete planning factors: that is, they are a *dimension* and a *criterion* that should guide planning decisions in relation to risks and hazards. This is not banal especially when thinking that most of siting evaluations, in greatest part taking place under the supervision of institutional actors, are carried out by means of costs/ benefits analyses grounded upon a technical assessment of the risks at issue. Usually such appraisals consider a number of candidate sites and rank them accordingly to a rigorous technical consideration of the economic and social costs, against the benefits, of each alternative. The site chosen as the "appropriate site" is then usually promoted by risk information campaigns meant to enhance a perception of risk consistent with the "technicality" informing its appraisal. The supposed neutrality of the technical appraisal that informs such evaluative processes excludes considerations of subjectivity in risk perception together with distributive considerations, for example in relation to the installation of facilities in areas already exposed to industrial and infrastructural impacts.

This typical story-line replicates in most of documented cases of controversial siting practices referenced in this paper and, as discussed in past literature, stands at the

basis of the arguments that support the NIMBY rhetoric (Hermansson 2007). Here, narrow-minded locals motivated by selfish purposes are seen in contraposition with institutions acting in defense of the general interest. Owens identifies this as the "techno - rational" model of appraisal, consisting in "a process in which scientific advice, grounded in a positivist epistemology, translates straightforwardly into the substance of policy, and a `separation of powers' is deemed to exist between neutral, authoritative experts and the decisionmakers whom they advise" (Owens 2004b, p. 1945). In the specific case of siting of hazardous, risky and stigmatizing installations the advice of the neutral actor (usually a public research or environmental agency) becomes instrumental to the "implicit policy" motivating governmental decisions. Inevitably this creates a form of insolvable epistemological opposition in which two polarized parties have no possibility of dialoguing, being the only "truth" admitted in the arena the one expressed by the third, supposedly neutral, advising actor. Any dialogic solution of the controversy is therefore impossible.
But leaving aside the epistemological implications, this article wants to highlight how this predominant decisional model excludes any distributive consideration. When carried in this way, the inventory of candidate sites and the search for the "feasible" one restricts the assessment to their specific local features, without considering how each site would contribute to the distribution of technological risks at a higher scale; for example the regional or national scale. In other terms, localities already at-risk because of a concentration of industries but offering, precisely for this reason, a pre-existent infrastructure that would facilitate the installation of additional facilities are rarely discarded. Somehow, the possible violation of individuals' primary spatial rights and situations of risk exposure inequality in society keep being excluded from the aspects to be considered prior to legitimize siting decisions.
This will appear particularly evident in the case of CO2 underground disposal in Barendrecht (NL) discussed in the following. After its narrative illustration it will appear clear that whereas the notion of safety as primary spatial good does not solve the inevitable conflict of interests that will continue to animate the debate around controversial siting processes, it may provide those normative fences within which the relevant discussion could be framed. However before this discussion some words of caution that could guide the further reading are provided.

2.2 From theory to practice: some words of caution

In this section I will try to outline the practical implications of the conception of spatial safety as primary good more in details. However I would first clarify some possible deadlocks of my line of reasoning. Note that at the present stage of elaboration this paper does not offer empirically grounded arguments; it only addresses some preliminary considerations around one recent case of siting controversy that are considered paradigmatic in relation to the premises of my discourse. Indications for the further empirical research needed are given in the conclusions.

First of all, the main idea of this paper is that the unequal (technological) risk distribution identified by Beck as a distinctive element of late modernity has to be

approached, in both planning theory and practice, as a problem of inherent ethical nature. It is, in essence, a matter of inequality and of consequent unfairness; something that the planning practice ought to remove. However evidence suggests that this aim is confronted with a number of economic, social and obviously spatial constraints. As documented by Schmidt-Thomé (2006) the concentration of hazardous industries in certain European regions is inherited from the past and mirrors a corresponding concentration of industrial and services productive capacity. The European policy debate around the need to preserve these assets while ensuring a sustainable cohabitation between hazards and nearby population is an equally long-lasting debate. The latter gave birth to regulatory developments of due, yet complex implementation (Basta 2009). The balance between economic, spatial, legislative and ultimately cultural aspects of each national context called to regulate land-uses according to past, present and future risks is still a problematic, when not unsolvable problem (Basta 2011, Basta 2012).

However, underlining the normative deficiencies of the predominant techno-rational evaluative model is a due step forward for developing the relevant debate. This will become clear in the following section, wherein a paradigmatic case of an "unfair" planning practice in relation to a CO2 underground disposal is described.

2.3. The proposed siting of a CO2 underground disposal in a Dutch municipality: NIMBY or unfairness?

The case of the CO2 underground disposal proposed for siting in 2009 in the Dutch city of Barendrecht was discussed, under a different light, in a previous contribution (Basta 2012). The main elements of the story-line of this case will be here shortly recalled so to be discussed in relation with our theoretical premises, particularly in relation to the principle of fair distribution of technological risks through spatial planning instruments.

In the course of 2009 the municipality of Barendrecht, in the southern part of The Netherlands, engaged an open conflict with the Dutch government in relation to the proposed siting of a CO2 underground disposal. The local population opposed the pilot-project, which should have led to the installation of the disposal within the following few years, principally on the ground of its impacts on the local real estate market and the image of the town. Meaningfully, manifests claimed "we do not want to become the national CO2 dumping place" Following the first episodes of local opposition the debate on the technological option of CO2 underground disposals became of national resonance, leading several Dutch municipalities to reject, in advance, the possibility of being candidate sites for future disposals. Somehow, an initially "local" case of opposition to a specific installation became a sort of national movement against the very technology.

By its side, the Dutch government kept defending the project on the ground on the own policy objectives of climate change response. The promoter of the pilot-project was a known (inter)national oil corporation, acting in concert with the government at the end of promoting Carbon and Capture technology as a means for abating carbon dioxide emissions. This technology allows to capture emissions "at source" and

storing them underground into exploited gas fields. In order to assess what the best possible location for the disposal could have been the Dutch government delegated a feasibility study to the Applied Research Institute (in the following: TNO). 12 possible locations, precisely 7 off-shore and 5 inland locations, were considered in the relevant study (Breunese and Remmelts 2009). Among the 12 candidate sites the municipality of Barendrecht was the more densely populated. Nevertheless the geological characteristics of the gas field underneath its surface and some key technological constraints (among which the length of the pipelines connecting the points of emission, specifically the nearby refineries, to the storage), led the research agency to conclude that Barendrecht was the most suitable candidate site for proceeding with the pilot-project. The government defended this choice by recalling the main national interest, specifically alleging that "capture and storage of CO2 is a necessary transition technology to help cut carbon emissions" (Reuters, November 18, 2009).
The story-line of the Barendrecht case recalls the typical "techno-rational" model of appraisal mentioned above (Owens 2004b). The "owner" of the decision making process was the central government who, consistently with an explicit policy objective, delegated the inventory of possible sites to a supposedly neutral advisory body. The latter assessed a number of candidate sites on the basis of several criteria, among which the geological characteristics of available gas fields, the costs of each alternative and the technological requirements to be met (Breunese and Remmelts 2009). Among the candidate sites the area of Barendrecht was the most densely inhabited; nevertheless the main reason for its indication as suitable site seemed to be the criterion of cost-effectiveness, which explicitly related to the distance between CO2 sink and sources. The distance between the exploited gas field of Barendrecht and the source of CO2 emissions was estimated 20 km; all other sites were in the range of 75 up to 210 km. Here, "the fact that the Barendrecht field is located under a built area is not of a (geo)technical nature and therefore impossible to weigh against the other geotechnical factors considered" (Breunese and Remmelts 2009, p. 26).

By looking at the media that broadcasted the controversy the citizens of Barendrecht manifested against the pilot-project on the ground of their concerns regarding, particularly, the feared economic impacts of the installation on real estate market values and on the image of the locality, already "featured" by the massive presence of industries and refineries in the nearby area of Pernis, and the risks of release of CO2 from the underground with all possible environmental and health consequences. In both cases, the reasons for opposing the installation seemed to depict a NIMBY story-line: *not here, not now*.

But a different outlook on the opposition to the installation could be considering the already high concentration of industries in the area and its being inhabited in comparison to the other clear sites that were considered. The point of attention here is whether the fact that the site chosen was the only inhabited site, already dealing with the proximity of major industrial installations, was a factor to be considered prior to achieve the conclusion of its "feasibility" for the proposed project. When reading the technical report of TNO it emerges with clarity that the inventory of

candidate sites did not consider this aspect; being the evaluative criteria solely of geo-technical and economic nature, the study did rather allegedly neglect it. The chosen technical criteria did evidently exclude any other consideration regarding the impacts and risks distribution each site would have created at regional and national scale. In this perspective, more than something to consider in advance the population of Barendrecht seemed rather the problem to solve. When looking at the following rejection of the installation by the side of the local population, questions of ethical relevance do therefore inevitably arise. Is it fair not to consider the exposure of citizens to the impacts of installations among the criteria of appraisal of different candidate sites? Thinking in Rawlsian terms, is the individual right to spatial safety violated when not doing it? Should the facility at issue concretely benefit the whole, and hence social inequality being justified, shouldn't the most disadvantaged being compensated with other forms of primary benefits that could counterbalance their increased exposure to impacts and risks?

As anticipated at the present stage of elaboration the paper does not provide definitive replies to these questions; it only outlined a framework that allows to pose them with a certain rigor. Preliminarily, it is reasonable defending that when among the criteria used to review the 12 sites the criterion of "not exposing inhabitants to impacts and risks" or "not worsening pre-existent conditions of risk exposure" would have compared, the site of Barendrecht *could* have been discarded; or even not being considered at all. On a marginal note, it is important to notice that this could have steered the following national debate on Carbon Capture and Storage technology towards a different direction.

These hypotheses do not intend to promote a firm position regarding the specific case narrated here. However it is suggested that distributive considerations among the criteria to be accounted when evaluating the "right" site for an impacting installation may provide the normative solidity to the appraisal seemed to miss here. This is further discussed in the following, where suggestions for steering the (empirical) research in a direction capable of providing more definitive indications are given.

3. Towards a planning theory of fair risk distribution? Conclusions and ideas for discussion

This paper recalled some main political philosophy, sociological and planning theories at the scope of identifying some possible shared areas of investigation. In particular, the contribution intended to sign some trajectories of research that could provide valuable answers to the problem of justifying decisions related to the siting of hazardous site-specific installations by considering multiple perspectives, and particularly a perspective of fairness. Risks, fairness and siting of hazards are therefore the three key-words that best summarize the ideas that were here taken together.

These research trajectories are surely promising, as they do tackle the emerging problem of balancing global vs. local risks when siting energy facilities meant to support a transition towards a non-fossil energy era. Emerging technologies like CO2 underground disposals and renewable energy facilities are indeed serving the global objective of abating climate change; however they do also create impacts on localities of sometimes controversial pre-assessment. Here, distributive considerations regarding individuals' right to access an equal level of spatial safety may become the normative boundaries within which framing siting decisions, and thereby interpreting possible controversies.

The lack of such considerations in the predominant techno-rational model of appraisal described above was illustrated through the example of a recent case of opposed siting of a CO2 underground installation in a Dutch municipality. This case can be seen under different lenses when considering a more equal distribution of impacts and risks at regional or national scale as a neglected criterion of the evaluative process. Among 12 candidates the Dutch government opted for the only densely inhabited one, known for being already exposed to a massive presence of industries in the nearby area of Pernis. The latter area was indeed the main source of CO2 emissions. Considering the characteristics of the gas field underneath Barendrecht and its vicinity to the source, it resulted both economically and technologically sound to site the sink there. However, the criterion of fair risk distribution in society could have provided a normative perspective on this decision and possibly led to different results. But beyond this hypothesis, it would have at least provided a shared normative ground upon which basing the debate, whose only possible outcome under the present conditions could have been solving the polarization between the government and citizens with either a forced prosecution of works or the sinking of the project.

These are only suggestions that call, of course, for sound empirical research. In particular a needed research effort is keeping documenting the "specifics" of each risk-bearing technology and its set of technological and spatial implications in such a way to identify, with rigor, the consequent ethical implications. This is currently under development in the context of the Network Infrastructures & Mobility course at the Environmental Science Department of Wageningen University. The research conducted in the framework of this area of teaching approaches major infrastructural projects from a threefold perspective. This includes a dimensional, an impacts and risks and the ethical perspective. In the course of 2012 this threefold outlook will lead to elaborate guidelines for performing an integrated Spatial Ethical Technological Assessment (SETA) of infrastructural projects, ranging from individual installations like the one discussed in this article to major energy and transport networks.

The undergoing elaboration of SETA guidelines is obviously not meant to prevent the possible opposition of citizens confronted with the siting of intruding technologies; but only to provide a solid normative ground upon which basing the discussion among involved parties. This paper wished to sign some possible research trajectories that promise to lead to its establishment.

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QUANTIFICATION OF PRIVATE RESPONSE TO PUBLIC RESIDENTIAL LAND DEVELOPMENT: A CASE STUDY OF EASTERN FRINGE, DHAKA CITY

Md. Manjur Morshed [1], Yasushi Asami [2]

Abstract

Dhaka is one of the most densely populated cities in the world. Accommodation of such number has been a great challenge waits to be met because of lack of buildable land. Different studies have suggested the solution in the private sector involvement in land and housing market. The necessary evil- the private sector is given rarely development permits based on the assumption, and also true, that they violate the rules. However, in Dhaka city, all development takes place in direct political influence under heavy corruption, and legality is a secondary issue to be present as an obstacle. Recently, as part of the intra-decentralization of housing, the government is creating a New Town in the Eastern fringe. Tempted by the availability of service facilities, many housing companies are agglomerated surrounding the New Town. None of these companies have legal permission to operate, and they are violating all the rules. The objective of this study is to quantify the private response to the government project in terms of the land conversion area, and to forecast the long-term implications of such development. Followed by an extensive literature review, an investigation is made among the available land developers. The major findings of the study are- i) private response is higher than government; ii) even though illegal, ultimately, the government cannot control such land conversion; iii) private residential land developments are taking place in the low-lying agricultural areas, and therefore, wide spread urban flood will be a common fact in future. Furthermore, due to illegality and complexity in land handling, security of land tenure is in question.

1. Introduction

Management of land and housing is one of the major problems faced in Dhaka city, Bangladesh. Being one of the most densely populated in the world, along with rural-to-urban migration, the city is struggling to cope with the demand for buildable land, and thereby, housing. According to Sivam (2002), land and housing market in developing countries are inseparable wherein the owner occupied housing is a predominant land market. One of the principle targets of land management is to ensure greater good for wider communities which often been breached under extreme competition due to

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population increase, widespread speculation and above all, management failure to foresee the future.

It has been accepted that in most of the developing world, urban planning refers to government control (Mattingly, 1996, p. 115), Bangladesh is not an exception. In addition, land development has been a monopoly for the government institutions, mainly, by the planning authority of Dhaka city- Rajdhani Unnayan Katripakha (RAJUK). It has taken several land development initiatives to accommodate the growing demand for land and housing. Nevertheless, government projects have been biased since it prioritized government and semi-government employees. What so ever, these provisions proved to be scanty and unable to meet the public demand but attracts private residential development in the vicinity due to the service and transportation facilities. Based on the possibility of financial gain, private land and housing developers came in existence. Private land development and housing provision, which are often illegal, remained as the merely affordable but practical solution for the majority of the urban population. As proven to be more efficient, agile, and has the ability to bypass the legal requirements; private land and housing development has created a socially acceptable and swift mechanism. Solely profit orientation of this sector can be regarded as the main driver for urban expansion and local transition of land.

Against this background, this paper presents a case study of government New Town development in the Eastern fringe of Dhaka city, and tries to quantify the private land developers' response in the vicinity. The following section provides a short detail of land and housing demand, and government planning in the past. The subsequent section details the private response to government project. Provision of land and housing by the private sector thought to be the only market solution in current extreme demand. Even after the involvement of the private sector, how can it complicate the physical expansion is described in next following section. Finally, some concluding remarks to this problem are made.

2. Demand for Land and Planning in Dhaka City

Dhaka ranked 11th among the world megacities with an estimated population of 12.4 million in 2006 (UN, 2006), which turned out to be more than 16 million by 2010 according to the United Nations Population Division, and expected to grow up to 20 million by 2015 as projected by the same source. According to some unsupported sources, about 2,100 people migrate to Dhaka city every day, and if the influx continues, it would be the second largest mega city after Tokyo by 2015 (Chowdhury, 2010).

In accordance with the population growth, the increase in land price has also been unprecedented. Compared to the price of 70's, Dhanmondi, the most expensive residential area of the city, experience about 12,000 percent increase compared to 2010. In comparison, the commercial land price hike has been much lower, about 9900 percent

in Motijheel area (The Daily Star, 2010). Bangladesh Institute of Planners (BIP) estimates land price in some prime locations in Dhaka (value per square foot; 1 USD= 71.3 Tk.): Dhanmondi residential area is the most expensive, average roughly Tk. 3,500 or around $60; in Gulshan about Tk. 3,194 and in Baridhara about Tk. 3,000. Even in the least expensive residential areas, land price is about Tk. 1,600, around $27 per sqft which include peripheral areas like Uttara, Pallabi, and Shyamali (WB, 2007, p. 38). In comparison, land prices in most cities of the United States are much lower (in $/square foot): Boston $13.10; Chicago $14.5; Los Angeles $30.4; Miami $11.1; New York $32.3; San Diego $26; San Francisco $64 (Glaeser and Gyorko, 2003; see WB, 2007, p. 38). The escalation in land price restricts middle and low income group from accessing urban land pushing further to the peri-urban areas creating leap-frog, low density and discontinuous pattern of urban development.

The distinct characteristics (interplay of supply, affordability and price/speculation) of low and middle income land and housing market has resulted in private developers housing, sites and servicing as the most lucrative business in Dhaka city. In 1991, Real Estate and Housing Association of Bangladesh (REHAB) established with only 11 members. By 2007, the organization had 260 registered members which turned out to be 1004 by the year 2010. About 9,000-10,000 apartments and 5,000-6,000 plot units were delivered by the REHAB members in 2010. Considering the population growth, at least 50,000 dwelling units are required every year to meet the backlog and present housing demand in Dhaka city (REHAB, 2005, p.16). With the joint efforts from the private developers, individual initiative and government provisions; the current housing situation fall far behind the required, and is being aggravated over time. Government interventions in the land market have distinct effect over the market since it distorts the generic growth.

Apart from the population growth and failure in land management, there is several other factors effect land price. According to Brennan (1993), one of those is extreme level of land speculation in most of the developing countries which often depends on the national economy whether it is expanding and alternatives avenues exit for investment or characterized by stagnation and high inflation acting as a reliable investment against inelastic land for secure revenue generation. Bangladesh is one such example where people are working in foreign countries investing in land and housing market in Dhaka city creating artificial demand and speculation.

3. Multiplicity of the Problem

Government intervention in land and housing market adds complexity to the overall situation. Since government projects enjoys better transportation and service facilities like electricity, gas, garbage disposal etc., there is a tendency among private developers to be adjacent to the government ones. The attraction to the government projects by the

private ones has shaped different parts of the residential areas, and this technique has been applied in numerous cases e.g. Nikunja, Uttara, Gulshan.

Another problem associated to planning in Bangladesh is that government is the protector of the law, and also the violators. Usually, the violations from the government side have been legalized, but considered illegal for private sectors. Even though private sectors are able to bypass the laws, it is always a nagging and acts as continuous threat.

Dhaka Metropolitan Development Plan, 1995-2015 extended the formal boundary of the city to comprise 1528km^2 under the jurisdiction of the development control authority of Dhaka (RAJUK). The third stage of the DMDP, the Detailed Area Plans (DAPs) considered the development of a New Town in the eastern fringe of the boundary. The government land project- Purbachal New Town comprises an area of 6150 acres. From the Map-1, the Detailed Area Plan (DAP) of Dhaka city delineates the area of New Town and the peripheral land use. The plan is successful in producing a land use copied from ideal definition of New Town. The surrounding areas existing and proposed land uses are dominated by agricultural, flood flow zones and rural settlements. According to the Residential Land Development Act, 2004, no private residential land project can take place in agricultural and flood flow zones.

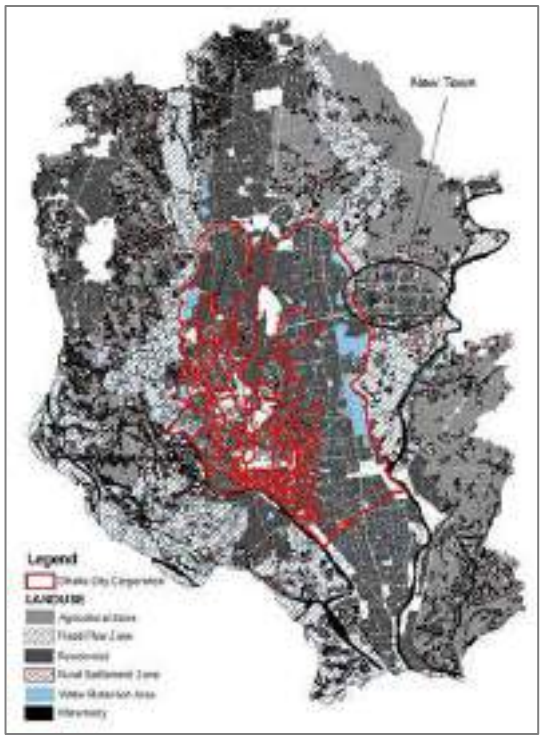

Figure 1: Detailed Area Plan of Dhaka City

The New Town will be connected with major commercial and residential centers of Dhaka city by roads, and major cities like Chittagonj and Sylhet by six lane highways. Furthermore, since it is a government project, crucial services like water, electricity, gas and waste disposal are ensured by the government.

4. Material and Methods

4.1 Study Area

Due to the extreme demand for land and housing, expectedly, urban area will expand horizontally and along the major highways. The proposed New Town is in the periphery of the Detailed Area Plan (DAP). Therefore, the actual impact of the New Town will be out-bound, and so, for the present study, the area considered for quantification of private

response extends towards mainly to the East, North and South. A total of 163.78 km^2 of the DAP area including the New Town has been selected as the study (figure 2). From the proposed land use of the DAP, there is, almost, no provision (0.01 km^2) for residential land development. Most of the areas are designated as agricultural, flood flow zones and rural villages. According to the Residential Land Development Regulation, 2004, land conversion for residential or other uses is prohibited. Recently, the planning agency has banned all private residential land development in the vicinity of the New Town. It must be noted that the New Town itself is a violation of the Residential Land Development Regulation, 2004 since it was developed filling out the low-lying agricultural and flood flow areas.

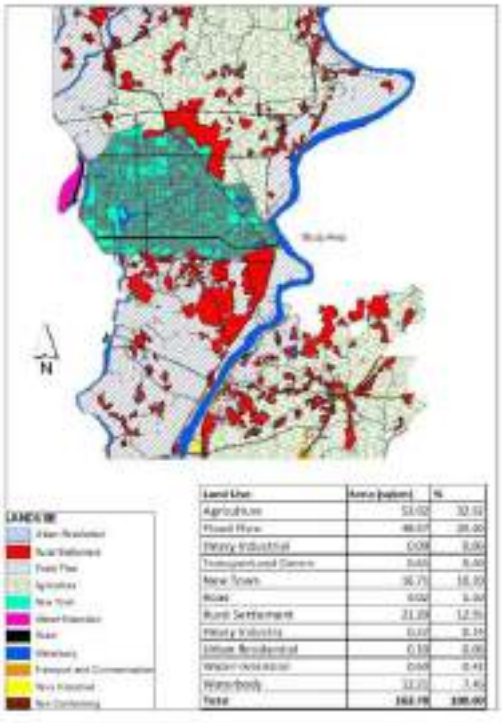

Figure 2: Study Area

4.2 Data Collection

The New Town has attracted many private residential land developers in the vicinity. The most recent newspaper reports indicate the existence of more than 100 companies. However, most of those are leapfrog, meaning, small and unrecognized companies subject to disappear under government pressure. However, more than 60 established companies are operating in the area. In total 30 established companies were randomly selected for the field investigation and data collection.

In depth interviews were conducted with the company representatives. Information was collection about: land area, price, possibility of investment in land and housing, government intervention in the future and distance from the major locational hubs.

Figure 3: Location of the Land Developers

Figure 3 shows the existing location of the 30 land developers. Most of these, if not all, overlap the proposed area. Presumably, this situation becomes worse if all of the companies are considered. Therefore, tenure security for land buyers is the biggest challenge in this informal and illegal land market.

5. Quantification of the Private Response

From the table (1), 12 recognized land developers are operating in surrounding the New Town inside DAP area comprising an area approximately 6269 acres. At the same time, 17 companies situated outside DAP area with about an area of 16312.59 acres. There are two important noticeable facts: first, land area covered by the private residential developers outside the DAP areas is much higher than within (comparison is shown by figure 4), and second, several companies overlap each other's area which is higher inside DAP area than outside (figure 3).

Table 1: Private Response Inside and Outside Detailed Area Plan (DAP)

Inside DAP			**Outside DAP**		
No.	Name	Area (acres)	No.	Name	Area (acres)
1	Lotus Valley	284	13	Purbachal Eastwood City	1523
2	Purbachal Pixel City	247	14	Purbachal HL City	423.9
3	Rose Land City	203	15	Platinum Purbachal City	991.3
4	Gold Man City	978	16	Ananda City	664
5	Purbachal City (Vision 21 Purbachal)	650	17	Purbachal American City	2072
6	Ashalaya	500	18	East American City	995
7	Dhaka Village	1020	19	Purbachal Nobodoy Housing	1283
8	Shikhder Royal City	380	20	Purbachal Bestway City	2991
9	Biswas Purbachal Hill City	257	21	Purbachal Regent RiverView	268.5
10	Purbachal Marine City	500	22	Purbachal Probashi Palli	366.2
11	Asian City- Shitol Saya	968	23	Purbachal Garden City	467.5
12	Vision 21-Park View City	282	24	Purbachal Park Town	427.5
Total		**6269**	25	Eastern Japan City	725
Overlapped Area Inside DAP= 27%			26	Eastern Park City	984.8
Overlapped Area Outside DAP= 6.89%			27	Purbachal Regent Town	1152
			28	Probashi Palli-2	627.7
			29	NRB Homes	350
			Total		**16312.6**

Source: Field Survey, 2010

Table 1 is the list of the selected housing companies in the study area. The overlapped areas among inside DAP (27%) shows scavenging of lands by the housing companies. This trend is less outside DAP (6.89%) due to availability of land. Furthermore, many landowners became self-motivated land developers who have very little idea about private residential land development criteria. Therefore, one conclusion is that most of

these housing companies cannot implement the proposed area, rather, have to compromise among different land owner, developers and rural settlements.

Figure 4 shows that the private response is about 3.67 times higher than the government project. However, this result shows the response from only 30 selected developers. If all the existing companies are considered, this is much higher than 3.67 times. The total area of these companies surpasses the actually available land in the study area referring to the problems of illegality and tenure security.

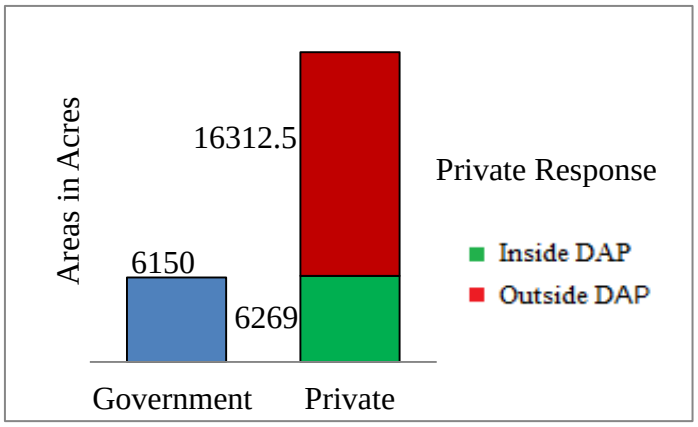

Figure 4: Private Response to Government Project

6. Implication of Present Land Conversion

Demand for land and housing in Dhaka city cannot be met from the government alone. Unless private sectors are enabled and allowed to participate in a strategic way, in foreseeable future it is going to aggravate. Even though the current private residential land development is associated with illegality, ultimately government cannot control the haphazard land conversion in the future. The past trend in the land market ensures the statement. The present trend will trend may leave irreversible impressions on the future of urbanization:

- The peripheral part of the city is characterized mainly by low-lying agricultural land, and acts as water retention area during rainy season. Unless natural drainage and water bodies are protected, which is just the opposite of residential land development; urban flood will be a common phenomenon in coming future. Figure 5 shows the existing land use of many proposed housing.

- Dhaka is one of the most densely populated cities in the world. Oversupply of urban land by private residential companies does not ensure the density rather it is a medium of land speculation. Ultimately, people who need land desperately will be deprived of land due to the price hike.

- As shown in the map 2, the area surrounding the New Town is completely taken over by the land developers. Dominant land use in this area is agricultural and low-lying one-

season agricultural land. Land conversion to residential plot will ultimately lead to destruction of valuable agricultural land.
- Figure 6 shows layout of the proposed housings. These are basically land subdivisions without provision of any urban social and utility facilities.

- The present land development will lead to low-density functional sprawl dominated by residential land use (this term first used by Ewing, 1997). Different studies, for example Camagni et al., 2002 suggest that functional sprawl increase travel distance, private car-ownership and environmental pollution.

Figure 5: Existing Situation

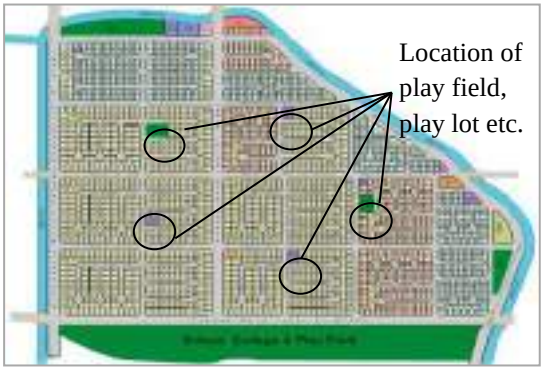

Figure 6: Proposed Layout

7. Findings and Conclusion

Private sectors respond to the government policy decision, and in this case, the private land developers came into existence because of the New Town. The response from the private sector is much higher than the government ones. Restricting the land developments is not a solution to the land and housing problem, and ensuring tenure security is the biggest challenge.

One of the targets of the New Town development was to trickle down urbanization in the surrounding area. However, the DAP land use does not allow any residential land development in the area. This is a double-standard policy of the government. To meet the land and housing demand for the vast majority of the population of Dhaka city, some agricultural area must be sacrificed. There should be a strict guideline for residential land developers to ensure density in this area rather than halting land conversion which would surely be a failure.

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INSTRUCTIONS FOR PREPARATION OF FULL PAPERS

Luca Gaeta [1]

Abstract

The paper aims at tracking the main strategies to survive a world catastrophe in both science fiction novels and films. The underlying idea is that sci-fi mirrors the change of social attitudes, at different time thresholds, towards the threats affecting mankind. The imagined characters of survivors are observed in order to answer two questions: who is more likely to survive a world catastrophe, if any? What circumstances make survival more probable? The survey covers a set of narratives released from 1945 to present times in the US and UK, featuring three types of world catastrophe: nuclear, biologic and environmental. The survey shows how the authors' imagination about what is expedient to survive the world catastrophe has evolved towards individual instead of either governmental or collective patterns of action, and also towards the capacity of facing unexpected events rather than planning ahead.

Key words: science fiction, survival, catastrophe, nuclear, biological, environmental

1. Introduction

This paper lays at the crossroads of two discourses about the future of mankind. On the one hand, the discourse on Risk Society (Beck 1992; 1999) deals with the radical challenges to our Enlightenment-based modernity stemming from the expectation of human-made, technology-driven, world-scale catastrophes. On the other hand, the discourse of post-apocalyptic narratives, a sub-genre of science fiction, deals with the imaginative consequences of the actual outspread of Armageddon (Paik 2010). The sociology of risk presides over the antecedent side of world catastrophes, while post-apocalyptic science fiction covers the aftermath. However, both discourses address, more or less overtly, the issue of societal guidance under circumstances of ultimate emergency. The conditions of social life are taken to the limit where the last resort for salvation is revealed as the fundamental governing principle (Agamben 2005).

This theoretical and fictional thinking does not only conceive of present and future attitudes about government: it mirrors as well the changes occurred over time. The reflections upon preventing and surviving world catastrophes, in different historical periods, are used here to pattern the evolution of strategic attitudes to secure human life and civilization on earth. In order to outline a provisional genealogy of survival, the paper presents a survey of science fiction novels and movies featuring three typologies

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of world catastrophes: nuclear, biologic and environmental. Two additional selection criteria were adopted:

(i) the responsibility borne by humans, particularly scientists and political leaders;
(ii) the release date subsequent to World War II, taken as the conventional beginning of the nuclear arms race and its fear. As a matter of fact, the bulk of the fiction covered was produced in the US and, to a lesser extent, the UK. That choice mainly depends on the greater ease of access to the sources, and by no means on ideological grounds. I gladly admit that a cross-cultural survey would be preferable.

Even though confined to a specific cultural milieu, the survey of science fiction narratives is supposed to test a broader hypothesis. That is that, since 1945, the social consciousness of what is appropriate to survive catastrophic events has evolved towards individual instead of collective (the less governmental) patterns of action. Of course the accounts are largely imaginative. No human has ever survived a world catastrophe hitherto. Such events neither can be tested nor allowed to happen but on imaginative stages. However, the keen social sensibility of sci-fi authors, combined with the talent of pushing hard scientific and technological innovation to its more extreme consequences, provides us with valuable hints to discern the past and present philosophy of survival. Through the looking-glass of science fiction literature we can figure out the relationship between imaginative escapes from the world catastrophe on the one hand, and current ideals of societal guidance on the other.

In the next three sections, the imagined characters of survivors are observed and compared in order to answer the following questions: who is more likely to survive in the event of a world catastrophe, if any? Under what circumstances can survival be achieved with favorable chances? To this end three topics are used to condense the subject-matter, namely the cause behind the catastrophe, its short and long-term consequences and, not least, the survival expedients. Nuclear catastrophes precede biological and environmental ones. Apparently they excited the fervid imagination of science fiction authors in that sequence, not without parallelisms with historically experienced threats.

2. Surviving the nuclear war

The threat can be traced back to the beginning of the nuclear arms race, since the day the Soviet Union conducted its first atomic test on 29 August 1949 (Weart 1988). The end of the United States nuclear monopoly was followed by early preparations to face the consequences of sudden attacks. The booklet *Survival under atomic attack*, released in 1951 by the National Security Resources Board, was complemented with a short homonymous documentary produced by Castle Films. “Let us face without panic the reality of our times: the fact that atom bombs may someday be dropped on our cities” says the speaker in the opening scene. Cities are presented as primary targets. To be prepared is the official survival strategy pursued in the series of short documentaries released by the Federal Civil Defense Administration, often about the testing of atomic bombs and their destructive potential (Jacobs 2010). The production of post-apocalyptic

narratives was intensified after 1949. Prior to WW2 the imagery of global disasters had been either cosmic or natural in origin (Broderick 1993). Then the consequences of the nuclear warfare became an endless source of inspiration. Significantly, narratives do not support the official strategy. With few exceptions, to be prepared is not supposed to increase survival chances. To survey such a multiform set of artworks the focus is put on survivors and their mutual relations. The resulting pattern can be articulated into three main attitudes towards survival, each covering a definite historical period, even though by no means exclusively. The first attitude is confident of the recovery of ordinary life conditions after the nuclear catastrophe. The second is suspicious of governmental and scientific loss of control over abstruse, top-secret defense systems. The third one is resigned to social collapse without redemption, if not to human annihilation.

2.1 Business as usual

Since 1950 until well into the 1960s the aftermaths of the atomic war are imagined as tragedies which nevertheless admit return to ordinary life conditions. *Shadow on the Earth* is the seminal novel published by Judith Merril. It was written in 1950 as a reaction to the arms race. In the same year the plot was adapted as the screenplay of a movie broadcasted in the Motorola TV show. Set in a suburb off New York in the aftermath of an atomic attack, the story depicts a wife with her two daughters facing the unpleasant intrusion of a neighbor serving as emergency squad man. The civil government is replaced by emergency authorities which carry on their own relief plans. The woman desperately tries to keep up appearances.

The partial preservation of the public authority is featured in novels as *The long loud silence* (1952) by Wilson Tucker, where the army sets up a sanitary cordon along the Mississippi river; in *Tomorrow!* (1954) by Philip Wylie; in *Alas, Babylon* (1959) by Pat Frank, where a small town in Florida is ruled by a former reserve officer until the government rescue teams land by helicopter. In *Damnation Alley* (1967), by Roger Zelazny, the United States is replaced by several police states. The movie version of 1977 features a colonel, survived in a military air base, leading a convoy towards the preserved community of Albany. *Malevil*, written by Robert Merle in 1972, tells how a small number of French villagers survive a nuclear blast in a cellar, and are rescued by the army after months.

Common to the latter narratives is the key idea that survival in the short run is not a matter of preparedness. Greater protection is expected from occasional shelters or favorable locations. Early examples of this attitude are found in *Five* (1951), directed by Arch Oboler, where three out of five survivors were casually under metal shelters during the fallout, and one more was on top of the Himalaya. Roger Corman's movie *Day the world ended* (1955) features an old man with his daughter surviving in a valley. The man says he has spent ten years getting ready for the day after. His house is far from large towns and surrounded by cliffs (a topic revived in *Z for Zachariah* (1973) by Robert O'Brien). In both cases no public authority has resisted the attack, as mankind was wiped out. However, the two narratives end up with hope in a new beginning, assigned to young couples in love. The possible recovery of civilization is set in a distant future.

2.2 Underground communities

Between the late 1950s and the mid-1960s a first change occurs in the imagination of nuclear disasters, to cite a seminal essay (Sontag 1967). Large scale preparations are being made by the superpowers up to the point when complexity and risks get out of control, thereby generating anxiety. The so-called mutual assured destruction through massive retaliation leaves little room for survival, at least on the earth's surface. Both the atmosphere and the topsoil would be irremediably contaminated. A number of narratives therefore set their survival scenarios underground.

The forerunner is *Unknown world* (1951), directed by Terry Morse. Dr. Morley is convinced that a nuclear conflict will inevitably occur. He conceives of "a plan to preserve human life on this planet" (min. 4). A team of scientists in an atomic vehicle descends in the bowels of the earth to find out a shelter. However, life underground proves to be impossible. Philip Dick wrote in 1953 his short story *The defenders*, later expanded in a novel. The superpowers survive deep underground while robots are supposed to fight on a devastated land with nuclear weapons. Instead, robots have ceased the war and restored the natural environment.

Early narratives show confidence in the scientific minded capacity, be it human or cybernetic, to redeem the wrongs of political leaders. But this is not how the series goes on. In the novel *Dark universe* (1961), by Daniel Galouye, two tribal groups of survivors live into dark underground galleries, handing down legends of luminous divinities and mortal radiations. The French movie *La jetée* (1962), by Chris Marker, stages a totalitarian government survived in the caves of Paris. Deadly experiments in time travel are made on prisoners to retrieve medical supplies, food and energy from the past. A stubborn policeman is the protagonist of *This is not a test* (1962), written and directed by Frederic Gadette. In the imminence of a nuclear attack he orders a group of civilians to take shelter in a truck container. In the final sequence they all die, whereas the survival of two fugitive young lovers in a nearby silver mine is predicted by the girl's grandfather.

The novel *Red alert* (1958), by Peter George, was satirically brought to the screen by Stanley Kubrick as *Dr. Strangelove, or: how I learned to stop worrying and love the bomb* (1964). This is the quintessential distrust of both governmental and scientific control of nuclear weapons. The US strategic air command is unable to recall the 843rd wing of intercontinental bombers. It was ordered to attack USSR by its insane base commander abusing the Plan R. This is a last resort measure to retaliate under a nuclear attack. If communications are disrupted and no central direction is left, then the Plan R empowers the isolated base commander to act on his own initiative. On the other hand, the Soviets have just activated their ultimate deterrent, a weapon automatically set to poison the atmosphere. The US President is advised to prepare plans for salvation in huge underground shelters.

Significantly, in 1959 Paul Baran joined the RAND corporation in Santa Monica to start his seminal research on a new communication system, a "distributed network that had no vulnerable central point and could rely on redundancy" (Ryan 2010, 14). Once combined

with the interactive computer technology developed by ARPA since 1965, Baran's concept laid down the foundations of the Internet.

2.3 Every man for himself

The novel *On the beach* (1957), written by Nevil Shute, sets the annihilation of life shortly after the nuclear war. A civil government is in charge in Australia only, not targeted by bombs. Its people pretend nothing happened. A submarine, the single remnant of US naval forces, is instructed to explore the northern hemisphere just to discover that lethal radiations are moving southward. By the time everyone becomes ill, blue pills are distributed to die painless. The submarine commander and his lover Moira, the book's main characters, choose to die separately. The man sinks the ship in international waters according to military rules, while she takes a blue pill staring at the scene on a cliff.

The topic of annihilation is paralleled with self-sufficiency. The movie *Panic in year zero!* (1962), directed and interpreted by Ray Milland, is about a family escaping the nuclear destruction of Los Angeles. The husband states his creed in a tense dialogue with his scared wife: "For the next few weeks survival is going to have to be on an individual basis" (min. 14). Later on the man puts it more plainly: "My family must survive!" (min. 25). Accordingly, he is ready to break the law to get what they need: food, gasoline, right of way, security, up until the social order is restored. On the other hand, the wife remains faithful to the traditional customs. The novel *Farnham's freehold* (1964), by Robert Heinlein, is a real cornerstone of survivalism, the radical movement popular in the US since the mid-1960s (Mitchell 2002). Hugh Farnham is a dictatorial person. His family survives in a private fallout shelter under the house. The shelter is transferred by the nuclear blast in a far future, where the environment is not damaged. The small group tries to adapt under Farnham's brutal leadership to the life conditions of pioneers.

The time travel expedient is also found in *Planet of the apes* (1968), directed by Franklin Schaffner. The movie differs from the original novel *La planète des singes* (1963), written by Pierre Boulle, inasmuch the extinction of human civilization on earth is due to nuclear warfare. This is the tragic find of the surviving character: a light-speed spaceship commander. His ship did not crash on a distant planet, but on earth in a distant future, where dumb human savages are hunted by civilized apes. *The Noah* (1975), written and directed by Daniel Bourla, features the sole survivor of a nuclear holocaust. To mitigate his loneliness he creates a whole series of imaginary companions.

In no other period than the 1980s is nuclear extinction so vividly imagined (Dowling 1987). *The day after* (1983), directed by Nicholas Meyer, tells the heroic efforts of a surgeon to keep his hospital operative, only to be overwhelmed by the flow of incurables in despair. No other civil or military authority is left. In *Testament* (1983), directed by Lynne Littman, people survive in a suburb where apparently no damage occurred. However, the radioactive fallout inexorably weakens the local community until the complete end. *Threads* (1984) is a TV movie directed by Mick Jackson. The scenario is about Britain getting involved in nuclear warfare. Careful preparations are made for civil

defense, but command and control links fail after the attack. No return is possible to pre-war conditions. Thirteen years after, survivors are regressed to pure subsistence. *When the wind blows* (1986) is a cartoon movie directed by Jimmy Murakami. An elderly couple in the countryside scrupulously complies with the rules of the official survival booklet. That protects them from the blast. Radioactivity affects the woman first. As the awaited assistance never materializes, the couple quietly succumbs in the sitting-room.

Even when extinction is escaped, no return is supposed to pre-war life conditions. *Doomsday plus twelve* (1984) is a novel written by James Forman. It depicts groups of survivors scattered through an environmentally damaged US twelve years after the war. The same topic is featured in the novels *Warday* (1984) by Whitley Strieber and James Kunetka, and *Children of the dust* (1985) by Louise Lawrence. Limited wars are imagined in the novels *Arc Light* (1994), by Eric Harry, and *Resurrection day* (1999) by Brendan DuBois. Temporary lack of pregnancy is experienced by women in *The last ship* (1988), written by William Brinkley. The crew of two USSR and US naval units wander the oceans in search of a safe place to live. *The postman* (1985), written by David Brin, tells the individual journey of a man delivering letters to small groups of Oregon survivors. Another lone hero travels a devastated country in *The book of Eli* (2010), directed by Albert and Allen Hughes. The man delivers the last Bible to survivors running a printworks and a library in the Alcatraz prison.

3. Surviving the pandemic

The biological threat differs from the nuclear one inasmuch it does not compromise the environment. Humans are infected, livestock may be, but the inanimate world looks the same. It usually keeps the resources to support human life. Therefore total annihilation is not envisaged. On the other hand, pandemics are even more socially disruptive than nuclear warfare. As people get infected, the social collapse is almost inevitable. Quarantine is the obvious governmental measure to halt the spread of the disease. This measure requires abundant confidence in the general interest of society, as the infected are sacrificed for the safety of the healthy population. However, in the set of narratives, survival is more often the result either of natural immunity or self-isolation. In both cases a pattern of distinction from the bulk of society prevails, no matter if it is occult or evident. The surviving individuals are protected by their own diversity.

The survey could be based on the dualism between pandemics contained by enclaves or aroused therein. The first case supports the enforcement of quarantine plans. Any violation of the rules means massive death. On the other hand, biological research undertaken within inaccessible compounds is the source of infection, as lethal viruses always find a way out. Then no containment is possible. Human agglomeration just favors the risk of infection. Indeed, this paper centres on man-made catastrophes (Davis 2002) to reveal the reliance on governmental planning. Therefore the selected narratives stage really often the scenario of pandemics spreading from institutional precincts. A first group of narratives puts some confidence in the remedial power of either scientific research or collective endeavours, while a second more recent group emphasizes survival as a private matter.

3.1 Science-based remedies

The novel *I am legend* (1954), by Richard Matheson, is worth considering here as it has originated three movies in different decades. The novel's protagonist is the sole human to survive a bacterial disease similar to vampirism. His life is devoted to burn corpses, destroy the living deads and find out a vaccine as a self-taught scientist. Meanwhile the infected are attempting to build their own society. The movie *The last man on earth* (1964), directed by Ubaldo Ragona and Sydney Salkow, features the man as a biologist owing his immunity to a bat bite. Lethal to vampires, daylight is the man's only outdoor protection. Day and night are the exclusive domains of each species. In *The omega man* (1971), directed by Boris Sagal, the epidemic is caused by bacteriological warfare. The infected hate the man, a US army scientist carrying a symbolic responsibility for their illness. In *I am legend* (2007), directed by Francis Lawrence, a genetically modified measles virus induces mutations instead of healing cancer. Flashbacks report failing military attempts to quarantine Manhattan. Even though the man is killed by the infected, the vaccine he has isolated is brought by a female character to other survivors in Vermont.

The series of engineered viruses is continued by *The last Canadian* (1974), written by William Heine. The main character takes his wife and sons to northern Québec to survive a deadly airborne epidemic spreading from Colorado. *Survivors* is the title of the television series devised by Terry Nation and broadcast by BBC from 1975 to 1977. Natural immunity preserves small numbers of human beings from the virus accidentally released in a Chinese laboratory. The UK collapses in a very short time. Survivors slowly gather in small rural communities, facing the harshness of a new beginning, and experiencing self-government arrangements. *Plague* (1978), directed by Edward Hunt, features a scientist working to find out a vaccine against the M3 deadly bacterium created in a Canadian laboratory. Another story of dispute between dangerous and beneficial scientific research is staged by *Virus* (1980), directed by Kinji Fukasaku. A biological weapon is developed in a US army laboratory without presidential authorization, then accidentally released. The scientific communities based in the Antarctic circle are preserved because the cold climate inactivate the virus. A peaceful federation is enacted to perpetuate mankind. However reluctantly, women accept to lie with more than one man.

3.2 The selection of the fittest

Increasingly since the late 1970s the reliability of science-based governmental plans deteriorates in science fiction literature. *The stand* (1978), written by Stephen King, is based on the accidental release of a virus in a US military camp. A soldier with his family breaks the quarantine rules to abandon the camp, ignoring they are already infected. Less than 1% of the world population is left alive. Social order is totally disrupted in spite of the martial law enforcement. Two opposing clans of survivors emerge that finally clash to the death.

Scientists gone insane are responsible for biologic catastrophes in the 1980s. In *The quiet earth* (1981), written by Craig Harrison, only a geneticist and a soldier survive in New Zealand a catastrophic event called The Effect. Survival is due to a rare gene. The rest of mankind is simply disappeared. After killing the companion, the scientist gradually recalls his sabotage of a sound-wave equipment for the manipulation of DNA. In *The white plague* (1982), written by Frank Herbert, a molecular biologist is driven insane when his beloved wife and son die under an IRA attack. In revenge he engineers a plague that kills women. The plague in then released in Ireland, England, and Libya. In *Blood music* (1985), written by Greg Bear, a bioengineer invents a computer based on blood cells. To remove the prototype from the laboratory, the man injects it in his own body. The blood cells start multiplying and mutating, until they can assimilate other humans to create a self-conscious meta-organism extended over North America. *12 monkeys* (1995), directed by Terry Gilliam, revives the time travels featured in *La jetée*. A man is sent back in time to investigate on the virus that has contaminated the earth's surface. He dies on the floor of Philadelphia airport while trying to prevent the bioterrorist from boarding with his lethal hand-luggage.

The last decade witnesses the purest individual philosophy of survival. *28 days later* (2002) is a horror movie directed by Danny Boyle. An animalist team steals by night in a laboratory to halt the vivisection of monkeys. The animals are carriers of a rage virus transmissible to humans. The infected are immediately turned into bloodthirsty zombies. 28 days later the protagonist awakes from coma in the hospital. Joining two survivors down the street he cannot figure out what is happened: "What about the government? What did they done? — There is no government — There is always a government. They are in a bunker or a plane" (min. 29). Any attempt to contain the virus failed. The army blockades were overrun. Later on the man is instructed that "plans are pointless" (min. 29) to stay alive. The sequel *28 weeks later* (2007) shows Canary Wharf compounded and recolonized by people from the continent. A woman is found alive whom is a sane carrier of the infection. She is spared because doctors hope to find out a vaccine. Her husband forces the sanitary cordon to visit the woman and gets infected. The virus is back. Trying to protect the sons of the sane carrier, a doctor persuades a helicopter commander to take the boys outside the quarantine zone. This violation spreads the infection across the channel. The moral is not merely that governmental plans have loopholes. It is implied that regards accorded to family ties threaten survival.

Doomsday (2008), directed by Neil Marshall, is exceptional here as the plague is not artificial. It tells the mission of a military squad beyond the wall separating England from Scotland, the source of infection. Survivors have been detected from satellites twenty years after the blockade. Abandoned by the government, they were supposed to be all dead. Perhaps there is a cure for the virus recently found in London. In the highlands a former biologist has become the feudal lord of a community. Questioned about the plague he admits there is no cure. The fittest survived natural selection. Quarantine failure is worsened in *Pandemia* (2006), written by Jonathan Rand and Christopher Knight. Modern transportation systems favour the spread of mutated bird flu from Asia to worldwide scale. The emergency causes the collapse of society.

In *The last man* (2008), a low-budget movie directed by James Arnett, a gang of marauders plunder a Soviet laboratory releasing a strain of small pox. About 98% of the world population is killed. Survivors are affected by various symptoms. Only one man is left immune to fight against cannibals. *Dog eat dog* (2010), written by David Rodger, takes place ten years after a global pandemic. A virus is released by accident in an air cargo crash. Over 70% of the world population is extinct. Apart from a few cities, mankind is preserved on space satellites. Two male characters try to get power and wealth in a world without law and order.

4. Surviving the climate change

The environmental catastrophe brings about either permanent or reversible changes of the natural process supporting human life. Alterations may affect land, water and the atmosphere, namely what humans take for granted. Nature under such conditions is no longer allied to mankind. The lost environmental equilibrium unleashes forces that civilization neither can resist nor control. When civilization bears responsibility for damaging the environment, then reckoning is particularly fierce in the settings of sci-fi literature (Lutz 2001). Unlike nuclear or biologic disasters, the environmental one is more the anonymous by-product of the two-thirds society then of its ruling élites, with the exception of multinational corporations.

The early tendency in the narratives is the already mentioned expectation that return to ordinary life conditions be possible somehow or somewhere. In *Mr Adam* (1946), written by Pat Frank, the world male population becomes sterile after the explosion of a nuclear fission plant in Mississippi. One year after a baby girl is delivered. When the explosion occurred her father — nicknamed Adam — was shielded by lead in the lowest level of a mine. In *The day of Triffids* (1951), written by John Wyndham, two events combine in a world catastrophe. The passage of a comet causes blindness to people staring at it. A species of engineered carnivorous plants, cultivated in order to extract oil, takes advantage of the situation to invade the world. A group of sighted survivors gathers on the Isle of Wight, determined to find a way to destroy the plants. In the 1962 movie version, directed by Steve Sekely and Howard Keel, sea water is lethal for the Triffids. In *The day the Earth caught fire* (1961), directed by Val Guest, simultaneous nuclear bomb tests drive the Earth out of orbit. The climate warming causes water to be severely rationed by governments. Scientists agree on a desperate plan. Several nuclear bombs are detonated in Siberia to bring the planet back to its orbit. In the end scene church bells ring propitiously under clear skies.

The awareness was progressively gained that climate change occurs as a by-product of our development pattern. No accident is required to alter the environment, but the endless consumption of resources (Buell 2003). In *The burning world* (1964), written by James Ballard, water is extremely scarce and valuable. The discharge of industrial waste within the sea resulted in a thin but resilient film formed from a complex of saturated long-chain polymers that prevents evaporation. In *Silent running* (1972), directed by Douglas Trumbull, no vegetable life is left on the earth. The very last specimens are preserved on a spaceship. The resident botanist refuses to obey the destruction order

given by the ship-owner. Having killed his crew mates, the man launches the spared greenhouse beyond the solar system with robots programmed to take care of it. The trade-off between human life and the natural environment is further amplified by extreme political regimes (Yanarella 2011, chapter 2). In *The sheep look up* (1972), written by John Brunner, a corporation-sponsored US government do not take actions to reduce environmental pollution. The urban population health is badly affected. Turmoil and unrest finally break down the social order. In *The bridge* (1973), by Keith Mano, civil war ends up with the coming to power of a radical environmentalist regime. All forms of life are given the same value, including microbes. The council then decrees the extinction of mankind whose breathing destroys innumerable microscopic creatures. In *The handmaid's tale* (1985), written by Margaret Atwood, pollution and chemical waste lead to declining female fertility. A totalitarian theocratic regime replaces the US government. Women are made subservient to men and only concerned with bearing children. In the ironic novel *Fallen angels* (1991), by Larry Niven, Jerry Pournelle and Michael Flynn, a coalition of environmentalist and religious groups takes control of the US, thereby enacting laws against technology to curb global warming. That eventually results in a catastrophic ice age. Another example of political coercion due to environmental reasons is found in *Clade* (2003), written by Mark Budz. When a so-called Ecocaust raises the sea level, civilization is preserved at the expense of freedom. Transnational political corporations rule the world. Humans are engineered at molecular level so as to survive in specific communities, and not elsewhere.

Industrial pollution is the often implicit backcloth of environmental catastrophes. The reduction of the ozone layer, observed since the late 1970s, is brought to its extreme consequences in *Mindwarp* (1992), directed by Steve Barnett. The earth is reduced to contaminated wasteland with the exception of Inworld, a protected biosphere where humans spend their lives being plunged in a virtual reality. In *Encrypt* (2003), the TV movie directed by Oscar Luis Costo, the earth's surface is ravaged by storms caused by the loss of the ozone layer. A storm catastrophe is imagined in *Mother of storms* (1994), written by John Barnes, after the release of clathrate compounds in a nuclear explosion. In *The day after tomorrow* (2004), directed by Roland Emmerich, global warming melts the polar ice caps then triggering huge hurricanes and a new ice age. The protagonist scientist first advises the President to evacuate the southern US, then faces the polar storm to rescue his son sheltering in a library. In *Category 6: day of destruction* (2004), directed by Dick Lowry, a storm hits Chicago which goes beyond any scale previously used. The population is not alerted because the electrical grid is sabotaged by a security manager to warn against the system vulnerability. Again, the male protagonist is first committed to reactivate the grid, then to save his family.

5. Surviving despite plans

The survey provides enough evidence to support a preliminary genealogy of survival, namely the derivation of current ideals of societal guidance. Of course the narrative mirror distorts and magnifies reality. On the other hand, sci-fi authors are "capable of achieving profound and probing insights into the principal dilemmas of political life" (Paik 2010, 1). The imagined last resort for salvation disguises the supreme guiding principle of society. Extreme emergencies are viewed as metaphors of governmental strategies. This is how the present survey was intended. Its results may not be valid outside the US and UK contexts.

So far as the nuclear catastrophe is concerned, doubts on the governmental protection accorded to citizens emerge right after WW2. Survival is not the outcome of defence plans implemented by public authorities. When partially preserved, authorities are slow to recover. Survivors are better protected either by occasional shelters or good locations. Accordingly all sorts of people escape. A miniature-society is preserved as the best promise that life conditions will get back to normal. Since the 1960s sci-fi authors figure out a different pattern. The nuclear war no longer is taken as a factual statement. Command and control systems of perverse complexity and the doctrines of mutual destruction do not reassure people's feelings of insecurity. This can be said to be a transition period towards another social attitude. Survivors are supposed to take underground shelter awaiting for the ecosystem to clean up, but the wait can last longer than expected. The point to be made is that not necessarily the anxiety about catastrophic events was the by-product of technological escalation. Whatever it may be, the emerging social attitude reflected in the narratives is based on the belief that human extinction is a real option. Since then a strategy of infinite diversification and self-sufficiency is supported as the best solution to maximise survival chances. The apparent resignation to social collapse on the day after is nothing but the inevitable, sudden transition to an alternative human ethology. Collapse is indeed adaptation to the nuclear aftermath.

The trend is apparent for biologic catastrophes as well. Early narratives are confident in the remedial power of either scientific or governmental endeavours. However, survival often depends on natural immunity and self-isolation. Survivors are shielded by diversity. By the end of 1970s the reliability of science-based governmental plans deteriorates. Plagues are spread from within top-secret compounds instead of being quarantined. The gap widens between dangerous and beneficial scientific research. In recent years survival ends up by reflecting the purest individualism. Even blood ties are sources of danger. Mutual help is based on extraneousness. That goes far beyond the painful alternative faced by Antigone, the Theban heroine imagined by Sophocles in the 5th century BC. She breaks the law of the city to bury her brother's body, but the defiance of the tyrant's edict to obey her fraternal piety is blessed in heaven. In the present mythology of survival no established social norm is sacred, be it natural or legal. Pandemics break the society into pieces, and that is the only condition of salvation left to the fittest (or luckiest) among humans.

The fictional environmental catastrophe reveals a rather different pattern, as it is the anonymous by-product of the market forces. Initially the origin of man-made natural disasters is the misuse of technology by governments. The return to ordinary life conditions is hoped somehow or somewhere. Sci-fi authors apparently suppose that no single government can alter the earth's climate permanently. Since the mid-1960s climate change occurs as the outcome of the endless consumption of resources. Consumers are to blame for that together with multinational corporations. No major accident is required but the daily waste disposal to alter the climate without remedy. A trade-off then arises in the narratives between human life on the one hand, and the environment on the other. Mankind is weighed against nature. No matter which is given priority, ultra-governmental powers take over control of life. Be it ecotopian or pro-consumption, civilization is preserved at the expense of freedom. This is another, even if paradoxical, way of feeling uneasy with planning as societal guidance. The perception of global risk shakes the foundations of planning as "the application of a scientific and technical intelligence to organized actions" (Friedmann 1973, 19).

The results of the analysis point out a discontinuity in the imaginative consciousness of world catastrophes. That may be dated between the mid-1960s and the late 1970s, according to different types of apocalypse. Sci-fi authors bend to think survival as an individualized and unorganized undertaking. Compliance with plans is no protection on the day after. The innate talent of facing unexpected events is more helpful than planning ahead. However, this is not to be confused with neo-liberalism. The basic rationale is not to favour the individual in itself, but the human race. The catastrophe takes millions of lives without distinction. Diversification does not reward according to individual merit.

The discontinuity in the imagination of survival can likely be derived from a keener perception of global risks. Science-based modernity is challenged from the inside, as many sci-fi authors are well trained in scientific disciplines. But why risk perception has increased so sharply? Beck suggests that, "in the modernization process, hazards and potential threats have been unleashed to an extent previously unknown" (Beck 1992, 19). A temporal correlation can be observed between alerts reported by media and sci-fi narratives. So do sci-fi authors merely perceive risks? In fact they do more, for post-catastrophic imagination disguises the dominant paradigm of government. Thus the increased risk perception is part and parcel with a paradigm according to which progress is risky. The alarming threats of modernity appear in the light of the individualizing society, namely when people are caught in a set of individualizing governmental technologies in the sense of Foucault.

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STILT-HOUSE VILLAGES IN PORTUGAL: PLANNING THE UNPLANNED

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Abstract

The promotion of urban heritage development by accepting, protecting and enhancing its special features as opposed to using a process of homogenization became a challenge in planning domain. The cultural and social diversities of the territories no longer constitute an obstacle to development and have become an opportunity for the promotion of local identity and site authenticity and a prerequisite for social development.

All over the world, several factors still justify the existence of settlements near the rivers. An urban morphology is often inherited from the fluvial landscape. The stilt-house built by the waterside is an ancient typology of vernacular architecture, whose origin and permanency are understood by a journey across the world and time. This legacy resulted in new forms of urban morphology and in new forms of fluvial settlements. Small rural villages by the riverside are characterized by the binomial river-ecological diversity /urban-cultural diversity. They have witnessed the long history of common geographies and the intersection of origins between rivers and urban settlements.

The attractiveness of large cities has tended to leave behind the small village such as the stilt-house villages in Portugal by the Tagus River. These territories with a particular architecture of wooden stilt-houses call for the establishment of planning strategies suited to situations of emergency. These natural spaces are useful and attractive precisely because of the difference that they mark from others. They are old and dysfunctional areas and are a precious legacy of a unique heritage that needs urgent preservation.

The original stilt-house settlements of Tagus River were built by the fishing community arriving from the Atlantic coast. Their urban morphology features are of either one or two parallel rows of houses with variations in terms of dimensions of the settlement and of localization by the river. Access to them is by one or more wooden pontoons which vary in size.

In terms of planning instruments, these stilt-house villages are unplanned places because of several factors:

- They are in flood area, and in a *non aedificandi* area;
- They are not included in urban perimeters, despite the Portuguese planning system which theoretically includes rural settlements;

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- They are in protected land area for agriculture and ecological purposes, where touristic activities, agriculture activities and infrastructures are allowed but not housing;
- The owners of the buildings are not the owners of the land where the buildings are, which technically means that all the buildings in terms of planning law are not legal.

In summary, the existent planning instruments for the stilt-house villages of the Tagus River currently regard these sites as unplanned places, despite their significance as the only urban settlement legacy of the vernacular architecture of fluvial landscape in Europe. This presents a great challenge and need for urgent rethinking. These stilt-house villages could be an endless resource of emotions and unforgettable experiences. In a word the great challenges of Portuguese stilt-house villages, is planning with the river in mind.

1. Introduction: The Origins of Portuguese Stilt Villages

Each territory has its own particular character and landmarks which create a sense of place and identity perceived as being positive perception by the citizens. This identity depends on the continuity between the memory of the past, contemporary enjoyment and future aspirations. It is the result of factors such as citizens' self-esteem, awareness of the distinction based on positive features of territory or the balance between the citizens' needs and capabilities of the territory to provide for this need. It is vital, in order to preserve territorial identity in the face of globalization, a multidisciplinary research to examine the complexity and diversity through partnerships between local, regional and national.

Several factors explain the existence of urban settlements near rivers, with an urban morphology marked by the fluvial landscape. The stilt over the water is one of the oldest types of vernacular architecture, whose origin and permanence is understood through a journey in time and over the world, by reflecting on the common building strategies, materials and methods of construction used.

The Tagus stilt villages in Portugal express a diversity (ecological, cultural and territorial), which results from a history of common geographies among urban settlements and the river, being the only European fluvial stilt heritage of vernacular architecture. These villages were erected by the fishing community of 'Avieiros' coming from the Atlantic coastline, in a migration process dates back to the mid-nineteenth century, part of the phenomenon of human reaction under adverse conditions of survival, demonstrating a strong spirit of perseverance by creating links with the river.

The Tagus is the largest navigable river in the Iberian Peninsula, with the 3rd largest European estuary. This stilt architecture was adapted from the dunes of the Atlantic shores to the Tagus, and proved itself to be an effective response to constant flooding. Gradually, the living conditions required a more stable,

comfortable and durable construction, using local materials which were sustainable and renewable (rods, branches and wood). The stilts are adapted to the daily improvisations of the fisheries that could be transported, if necessary, to another place. They are simply, irregular and small in size, supported by wooden stakes driven into the mud and painted in bright colours. The floor area, elevated over the soil, adapts to the site in an empirical way, responding to the inevitable risk of flooding. Access to the interior is effected by a wooden staircase on the outside, leading to the balcony. As a rule, the interior features four compartments (kitchen, living room and two rooms separated by wooden boards that do not touch the ceiling which is covered with wood thus creating an attic). The urban morphology of these villages consists of one or two parallel rows of houses, with variations in the size of each urban settlement, with a location facing the river and deployment of the building. Access to the village is by a wooden pontoon (one or more) with different sizes.
This article aims to provide information for future actions, legitimate strategies that consider the consolidation and expansion of Tagus stilt villages on the scale of urban design, together with regional measures, idiosyncrasies, complementarities and specificities of each village along the 'Avieiros' way.

2. The Tagus Stilt-Houses: One Case of Vernacular Architecture in Portugal

The stilt-house built by the waterside is one of the most ancient typologies of vernacular architecture connected with the rivers and it reflects a common building strategy, with common materials and methods perfectly matched with nature.
In Portugal, the stilt-houses emerged and became the most common type of housing in the sands of the western sea coast among Douro River and the Beach of Vieira de Leiria, between the end of the 18th century and the 19th century. These constructions, temporary houses of the fishermen during the fishing season, responded efficiently against the movement of the sands, particularly strong in that windy part of the cost (see Figure 1). The wood came from the forest planted in the dunes to prevent its movements.

Figure 1. Stilt-houses in the sand near the Atlantic shore in Portugal (1).

Nowadays, a large proportion of these houses in the sea coast, have disappeared or have been transformed by the emergent materials like concrete and brick. There are rare examples of stilt-houses in wood that have become the exception, isolated among the cluster of the dominant houses of hard materials (see Figure 2).

Figure 2. Stilt-houses in the Portuguese Atlantic shore (2).

However there are examples in Tagus River where these houses continue to be the domain type of house in villages where the population is still having a type of life in straight relation with the river. These examples can be found in the 'Avieiras' stilt-house villages.

The migration and fixation of the fishermen from Vieira de Leiria to the Tagus River led to the emergence of stilt-houses villages, which were implanted on the waterline edge of the river. 'Avieiros', as they were called, led one of the most important seasonal migration movements that happened in Portugal in the early twentieth century (see Figures 3 and 4).

Figure 3. Tagus stilt village family in the boat in the decade of 1950 (3).

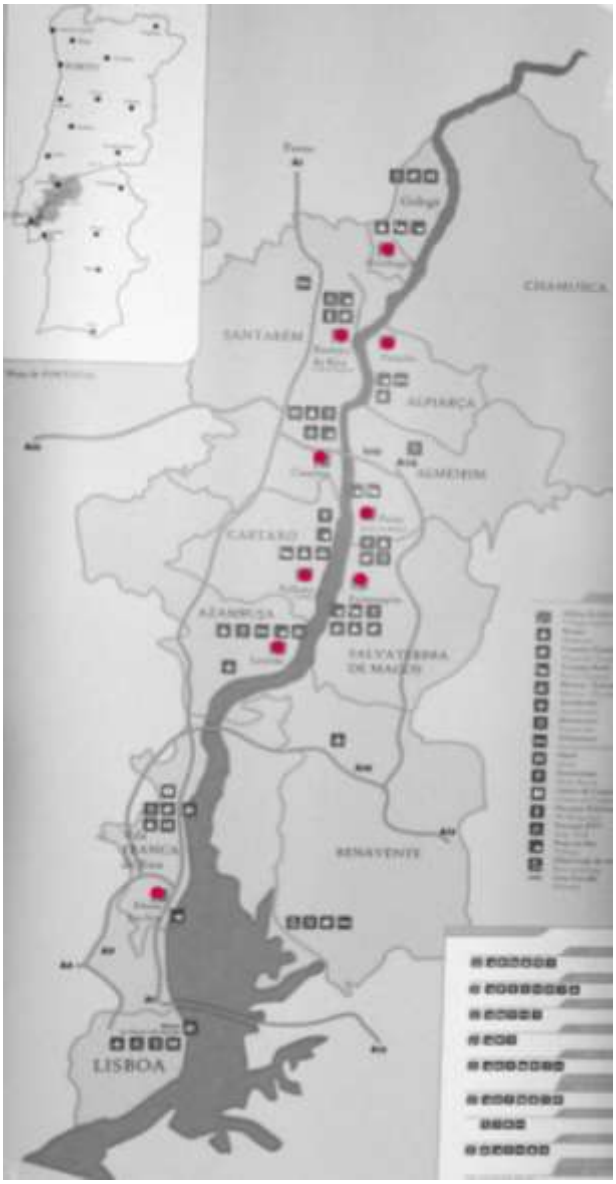

Figure 4. Map of Portugal and localization of stilt villages along the Tagus river (4).

These stilt-houses represent one of the last testimonials of this type of occupation still existing in Western Europe. The essence of this vernacular architecture is in the fact that they were built by their occupants or members of the community in which they operate. These members – fishermen - arrived from Atlantic coast and brought a construction process deeply rooted in tradition. Also, these houses assume a direct correspondence with the natural and cultural environment in which they operate.
The identity of these villages is inseparable from the river. The fishing tradition which marks them out bears witness to their locality, construction methods, the material and the techniques used for the building, the architecture and urban morphology.
Among the uniqueness of these villages are their location in straight relation with Tagus River and the picturesque characteristics of their vernacular architecture which gives them a strong potential for tourism and leisure.

3. State of Conservation of Tagus Stilt-House Villages

Despite all variations from core to core and sometimes within the same urban area, it is possible to define a matrix in the original common architecture of these vernacular stilt-houses (see Figure 5):
- Firstly built on wooden piles or tree trunks lately substituted by concrete pillars;
- Exterior coating in wood boards arranged vertically and painted in bright colours with a predominance of green, red, blue and orange;
- External access balcony leading to the entrance door;
- Interior consisting of four divisions; kitchen, living room and two bedrooms; whose communications are blocked by curtains and the walls are painted or lined with paper coloured patterns;
- Rooms are symmetrical with a tiny window and different colour (blue for boys and pink for girls).

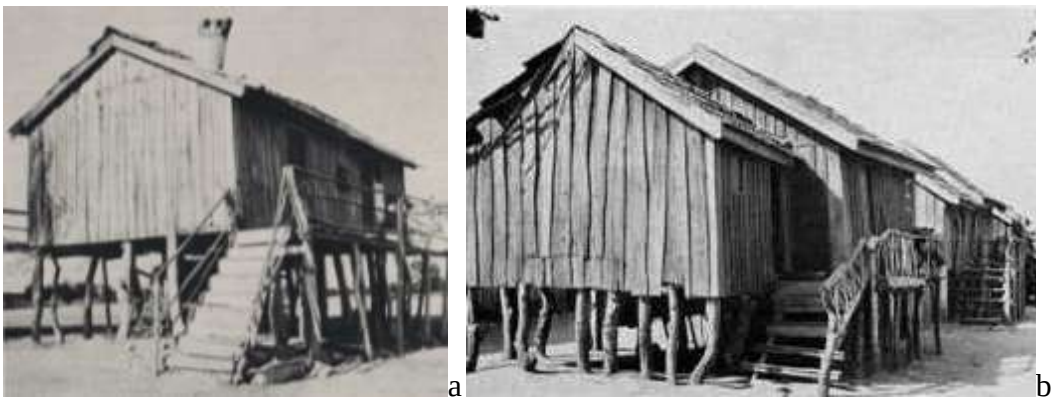
a b

Figure 5. The stilt-houses of Tagus villages in the decade of 1950. a. Tagus stilt village of Quinta do Alqueidão, b. Tagus stilt village of Caneiras (5).

Nowadays, these houses are in very different states of conservation according to the evolution of the Tagus stilt villages.
The inhabited villages are currently the objects of both constructive and destructive effects which demonstrate that identity develops in time and space and is a result of the constant dialogue between the inhabitants and the surrounding landscape.
The abandoned villages are in a very bad state of conservation, but these are the ones closer to the original characteristics of vernacular architecture of 'Avieiras' stilt-houses. In these villages, some houses are better preserved, such as the cases of Palhota and Escaroupim stilt villages (see Figures 6 and 7).

Figure 6. Aerial photo of Escaroupim stilt village of Tagus river (6).

Figure 7. Stilt-houses in Escaroupim Tagus village.

In Palhota stilt village (see Figures 8 and 9) the buildings are implanted along one street parallel to the river. In the Escaroupim and Caneiras stilt villages, the urban mesh has two main roads: one parallel to the river, where the oldest buildings are implanted in a street parallel to the river; and the other perpendicular to the Tagus river where the most recent examples of buildings are implanted, in an expansion area of the urban settlement.

Figure 8. Aerial photo of Palhota stilt village of Tagus river (7).

Figure 9. Stilt-houses in Palhota village.

These villages which lie abandoned and their stilt-houses are consequently in a very bad state of conservation, forgotten and in decline, such as the case of Patacão stilt village (see Figures 10 and 11).

Figure 10. Aerial photo of Patacão, an abandoned Tagus stilt village (8).

Figure 11. Stilt-houses in Patacão village, an abandoned Tagus river settlement.

4. Tagus Stilt Villages: The Experience of Planning the Unplanned

Although reports from the decade 1940 have identified 80 Tagus stilt villages, much of this heritage is unknown or has almost disappeared due to the following aspects:

1) Change of attitude of the inhabitants in their relationship with the river, due to declining fisheries and the progressive exodus to cities in search of work in industry and services;

2) Degradation of stilts due to the aggressive natural environment where they are localized;

3) Loss of architectural identity due to the replacement of traditional building materials (concrete and ceramic being applied as coating for walls and roofs in the search for durability and comfort), leading to the gradual replacement of wooden stakes by concrete or the complete replacement of the house.

In addition to the factors described above, there is another reason that hinders the preservation and development of these villages. This factor is the absence of measures and proposals in the content of the planning instruments in force, highlighting the urban morphology, architecture and landscape of the villages in their close relationship with the river. Some planning instruments are classifying them as being not suited to be built-up and urbanized, denying the existing reality. In this case it is appropriate to say that the planning instruments are dealing with the Tagus stilt villages as unplanned territories.

These factors have made the stilts less adaptable to the territory, further aggravating their weakness against the floods and the villages becoming more forgotten and unable to compete against the attraction for the cities. There is a need of promoting studies about the Tagus stilt villages applying principles and models of spatial organization in order to register this heritage of high landscape value and functional diversity on the multicultural European map.

The 'Avieiras' stilt-house villages express the ecological diversity and the urban culture of the Tagus River. They are the testimony of a long history of common geographies along the river and represent a unique inheritance of vernacular stilt-house architecture of the river in Europe.

This vernacular architecture and this unique territory require an urbanism of exception for special situations like these. Unique vernacular features originated the urban space of 'Avieiras' villages (see Figure 12).

Figure 12. Stilt-houses in Caneiras village.

In the urban space, invocative of the cultural diversity, memory and tradition are forces which, when considered by architects and planners in intervention and rehabilitation plans, enables them to change a place in line with the identity of the

community. The absence of these elements may contribute to the loss of the sense of belonging of its inhabitants. However, since the 'Avieiras' stilt-house villages grow not only in space but also in time, preserving the memory and tradition should not be a too conservative, static and closed principle. In that case, architects and planners run in the risk of nullifying the essence of the cultural forces and create obstacles to the deployment and dissemination of the culture of Tagus stilt-house villages. Instead, memory and tradition should be used as fundamental bases for innovation and create something reflective of local identity, at the same time both original and creative (Warren, Worthington & Taylor, 1998).

6. Conclusions

With regards to the buildings, the Tagus stilt villages meet the requirements inherent to physical inactivity, using local, sustainable and renewable materials. This aspect must be taken in account in the various proposals for rehabilitation that may be targeted. Often, the devaluation of vernacular architecture comes from its association with the past and underdevelopment. However, at present, it appears that we have much to gain from the study of vernacular architecture when we witness the construction of buildings called 'modern' but which are completely dysfunctional from the natural and cultural environment in which they operate. Rather, the vernacular architecture points out in many various ways how to build a passive technology, culturally acceptable and symbolically significant - a built-up environment compatible with the landscape. Therefore, finding ways to integrate the knowledge and experience accumulated in construction by the 'Avieiros' should be one of the main objectives of the stilt-houses of the Tagus village's rehabilitation.

In the river environment, invocative of the ecological diversity, intervention measures for the rehabilitation of 'Avieiras' stilt-house villages should aim to contribute to the achievement of an alive and functional ecosystem and to the adequate and efficient exploitation of the riches of the presence of water (see Figure 13). These measures should always consider the changes to the ways of life and their consequences on the territory.

Figure 13. The presence of water in Tagus stilt villages (Palhota and Lezirão).

Figure 13. The view of the Tagus river in Caneiras stilt village.

It is now necessary to find ways to qualify and quantify the desirable characteristics of each stilt village, which will help to mark each place and its identity on the cultural map of the territory. The marked identity of each urban settlement depends on its nature and the elements that create a striking sense of place and identity depending on the continuity between the past memory, the present and future aspirations. In the case of Tagus stilt villages, their identity is inseparable from the river. The sustainable future of the 'Avieiras' stilt villages lies in addressing both facets, ecological diversity (river environment) and the cultural diversity (urban space), which characterize and influence this community, by measures derived from an interdisciplinary, systematic and comprehensive study.

This is about giving back these pieces of history, the memory, identity and poetics to the contemporary society, alive which are the stilt-house villages of the Tagus water edge. Adding to that, there is the tourism potential associated with the idea that "there is usually attached to the rivers an important sense of the poetic to the identity of the sites and the psychological well-being of people seeking a peaceful state of mind" (COSTA LOBO, 2010) of a "unique value that matters to save and benefit from" (COSTA LOBO, 2010).

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DISCIPLINING DISCOURSES – CONSTRUCTIONS OF THE CITY, THE URBAN AND THE PLANNER IN SWEDISH URBAN PLANNING EDUCATION[1]

Moa Tunström[2]

Abstract

This paper concerns discursive constructions regarding the city, the urban and planning within urban planning education in Sweden. It is the construction of norms that is the centre of attention, based on the hypothesis that education is one arena where this happens. Group interviews with students have been conducted, showing how students relate to urban history and current planning issues. The lack of visions and social perspectives on the urban is discussed. An important conclusion is the importance of a balance between social theory and design training in education, or between critical thinking and visions, or analysing and improving the city.

1. Introduction

> "My argument is that, however insistent this traffic, these buildings, and those inconsiderate bastards may be, my sense of this combination of information and affects as uniquely urban is mediated through a powerful set of political, sociological, and cultural associations. It is these connotations that are condensed in the symbolic space *the city*. You know what I mean about being in the city, not only because your lungs and ears have been assaulted like mine, but because you too operate with the city as a category of thought and experience." (Donald 1997, p.181)

The city as a category of thought, in line with Donald (1997), is a central starting point for the arguments in this paper. The purpose is to discuss ideals regarding the city, the urban and planning that are discursively constructed in Swedish planning education. The students both have to learn to understand and analyze spatial – as well as economic, cultural, social, environmental – situations and processes ("urban studies"), and in addition formulate proposals for change ("urban planning") (Tewdwr-Jones 2011). It is the construction of norms regarding this that is the centre

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of attention here, based on the hypothesis that education is one arena (among others) where this happens, and that urban imaginaries are important in this process (Tewdwr-Jones 2011). The students' discourses and the students' ways of relating to, contributing to or being affected by, urban discourses is considered as an indicator of ongoing urban planning discourses, being open and interested, reacting to ongoing developments in their surroundings, stories in the news etc. as well as easily affected by education and the views and opinions of their teachers.

This paper first discusses the discursive approach in relation to urban and planning research, then how and by what factors "the planner" and "planning" as discipline are being shaped, and thereafter the results of an interview study with urban planning students from four different educational programs in Sweden is presented and discussed.

2. The city and the urban as discourse

> "… discourse theory turns our attention to the complex relations between discourse, power and knowledge." (Richardson 2002, p.353)

In analysing the stories and images of the city, the urban and planning this project uses a discourse oriented approach. Here it is considered as an *approach* more than a specific *method* (Howarth 2007; Torfing 1999). Firstly, language is of critical importance in affecting power structures and thereby also materiality, so considering statements as discursive means considering them as more than "just talk". Instead language and statements is intimately related to a practice and in this case to the shaping of the planner's ideals in the education context (Pinson 2004). Secondly, a discursive approach means looking at how actions are legitimized, naturalized and normalized – how conditions of existence for certain actions are created. This opens up for a discussion on how planning practice is, or could be, done. A discursive approach consequently epistemologically here has to do with how the interviews are considered as empirical material, how they are used and what importance they are given. Ontologically it means that categories such as "the city" or "the urban" are considered as ideological categories.

Urban planning is a discursive practice – policies and plans, as well as their implementations or realizations are discursive (Pløger 2001; Richardson 2002). We are all – students, academic staff, practitioners, citizens – part of this and affected by it. Images and stories of the city and the urban are constantly in the making and constantly changing (Çinar & Bender 2007; Donald 1997; Tewdwr-Jones 2011; Westwood & Williams 1997). In urban planning, imaginaries have high policy importance; they are a method, a tool – the creation of visions, plans, place marketing etc. It is not possible to dismiss them as "only ideas", or "only discourse" but necessary to consider them political, following a certain agenda. How should the city be developed or revitalised? What places should be preserved or altered, what places are safe or unsafe, postcard beautiful or shameful? Who belong in certain

places in the city and who do not? Urban discourses are a strong factor in the answers to these questions. Adding to this the often proposed communicative planning perspective puts more focus on the planner as a listener, mediator etc. and for the planner to invest his or her own personality in the work, instead of striving for the impossible neutral and rational model builder. This accentuates the norms and values of the planner, and raises ethical questions concerning the blurring of the personal with the professional/political.

Several authors have discussed planning and urban design as "potent speech acts", or storytelling (Donald 1997; Forsyth 1999; Throgmorton 1993, Tunström 2009; van Dijk 2011). This is to emphasize that it is not about a presentation of facts or aiming for the optimal solution, but to create stories about the present, past and future in the form of plans, designs or buildings, and that it is about sense-making, persuasion and even manipulation (Throgmorton 1993) – and that students in the field must be trained accordingly.

Van Dijk (2011) emphasises the power in the position as designer (or urban planner) and the power in their images, plans, sketches etc. – not from a perspective of politics but because of the political in planning and design activities and artefacts (a Foucauldian approach). Forsyth (1999) makes a similar point discussing the use of images of the US city Los Angeles in urban planning. Los Angeles is perhaps the most powerful contemporary urban image, often used as illustration for urban sprawl, car dependency and the unsustainable city. It is used to discuss such diverse phenomena as ethnicity in cities, the urban region and air pollution. Forsyth sees the use of images such as Los Angeles as an aspect of the rhetorical nature of planning, that also others have emphasized.

> "The images of urban places that show up in plans are influenced by theories and ideologies about cities and spaces. What urban space is understood to be, and how it is commonly represented, will shape how it is planned for." (Jones 2000, p.380)

According to Jones (2000) "the spatial discursivity" in the plan often neglected. In planning documents etc. an epistemology of space is embedded. Through categorizations such as "uptown" or "downtown", "inner city or "suburb" a spatial discourse is constructed. (See also Tunström 2009.)

3. The undisciplined planning discipline

Planning as a discipline has many guises. Pinson (2004) calls urban planning an undisciplined discipline due to the multidisciplinary character, both in education and practice. Gunder (2004) writes: "… the very nature of the illusiveness of a concise definition of "planning" makes it a prime candidate to be a master signifier and ideological hook or quilting point for its disciples." Planners are also considered "notorious for the difficulties they have in explaining to others – parents, friends,

university administrators – what they do." (Gunder 2004, p.302). It is physical and social, descriptive and normative, analytical and applied, theoretical and practical, multi-, trans-, and interdisciplinary (Pinson 2004).

> "Vital to planning is the illusion that the profession succeeds in providing the necessary solutions for harmony and certainty in our decision making as to what ought to be in the future." (Gunder 2004, p.301)

Planning borders architecture, geography and politics, and its consequences are visible in buildings as well as in the spaces and activities in-between the buildings. On this arena students and teachers, literature and education forms construct the city, the urban and the planner in the way they talk, write and in other ways relate to it. The students learn to talk the talk of planning and urban development, to use concepts and arguments. Gunder claims that:

> "Planners recognize themselves 'through the common use of some jargon-laden expressions whose meaning is not clear to anyone, be it' the public good, sustainability, globalization, smart growth or new urbanism." (Gunder 2004, p.302, quoting Slavoj Zizek)

These master signifiers are important for creating a common identity, an idea of who the planner is and what the task at hand is, and they change over time reflecting and contributing to a changed role of the planner (Gunder 2004). In planning education research there has been discussions regarding whether education prepares planners to "do the job", and whether education should be about producing planners (mainly practitioners) or educate students to become critical urbanists (mainly theorists) (Poxon 2001, p.539; Sandercock 1999). Poxon points to that the role of the planner is:

> "… so ill-defined now that it is difficult to claim that a planning course is providing training for a particular job. Instead, it should be exposing students to the complexity and intricacy of a planner's role, whether in public, private, or voluntary sectors, and equipping them with the knowledge, skills, and attitudes upon which further training can build." (Poxon 2001, p.573)

This opens up for further discussions regarding what issues this can be, more in detail. There is no fixed core to lean on, so this is partly created at the different universities. They tell certain stories of planning history or urban development, and they emphasize certain tools for planners etc. Poxon further states that:

> "Planning courses should […] encourage students to question what is happening in practice and provide them with tools to challenge, criticize, and respond creatively to these circumstances." (Poxon 2001, p.576)

Leonie Sandercock (1999) talks about necessary "literacies" and calls for a more elaborated analysis on contemporary urban development, for more discussion on ethics and for the students to take a stand, for planning to clearer relate to identity politics and also leave the ideal of rationality behind, in favor of empowerment and alternative ways of knowing and planning:

> "We need to replace the old core concepts of rationality, comprehensiveness, and the public interest, with new concepts of empowerment, alternative ways of knowing, and planning for multiple publics." (Sandercock 1999, p.540)

She considers that not only is a new conceptual language needed, but also a new practice. British planning researcher Patsy Healey (1999) is however hesitant to the literacies, stating that "[i]t takes time to become literate, each literacy having its particular bundle of concepts and skills" (Healey 1999, p.547).

In the following some empirical results will be presented and discussed, pointing to how Swedish planning students conceptualize their task and professional role, and touching on the issues of storytelling, multidisciplinarity and the conceptual language of planning that have been discussed so far.

4. Results

4.1 Planning stories are told and retold

In making the interviews the main focus was how the students relate to, contribute to or are affected by urban discourses. First it can be stated that it is clear that they do. They relate to stories, arguments and events in ongoing urban discussion. They have heard histories of planning and urban development that they structure their ideas around, and they express and negotiate their opinions in the debate. They seem to quickly be able to retell, and position themselves in, for example the story of modernist planning in Sweden, the reconstruction of Stockholm city centre in the 1960s or the story of the successful transformation of the city of Malmö from industrial to knowledge economy. The stories of planning of previous times are however often conceived of as stories of *mistakes and problems*. This resembles the so dominant welfare state critique in Swedish planning discourse (Tunström 2009).
They negotiate within and between themselves, constantly switching between own experiences, normative statements, current events, literature and lectures. Images and ideals are constructed through education, media, the discussions on coffee breaks between lectures and more:

> "… this together becomes a total, and you know what you are supposed to do."

The negotiations between own experiences, normative statements, current debate, literature etc. clearly develop over the years. In that sense the education is shaping them as practitioners and giving them a "language of planning" as one of their tools. They learn to relate to and position themselves in the urban development discussion. In the following long quote from one of the group interviews several aspects of storytelling in relation to planning education are illustrated:

> "– I was thinking about the heritage from previous planners, previous generations. This is something we maybe should problematise more. We hear a lot 'this is what they did before and this was bad and this was good'. We get quite fed with what went wrong, what was right, and quite controlled as regards what *we* should do. In some courses it has been like 'this is how it works, so do like this', and 'this is not good, but it is the standard so do the same'.
> – *Can you give an example?*
> – I was thinking about the course, 'Planning for work places', then we talked quite a lot about, or we have talked a lot about roads, that they take up a lot of space, there is very much road and hard surfaces and so, and I know that when we were planning work places we talked about doing it differently, to improve it. But then we had a lecturer that said 'yes, but this is the standard', and when you try to think differently, or someone did a different solution, it was 'yes, that is innovative, but it is better if you do it in the rational way', so I feel we should reflect more over what heritage we bring with us from previous planning, and what we have been taught to do, what is good. Every time has its norm, 'this is the right thing', and then after a few decades you see that it might not have been so good. Perhaps we need to be more aware of what we get from previous times. (…)
> – I feel sometimes that, like X said, that it is just repeated over and over what is good and bad and this becomes some kind of idealized image of what we do, as if that will not happen to us, but what we do will be right, and I am sure it will not. A lot will succeed but a lot will also fail, because we are strongly influenced, just like previous generations, by today.
> – Just look at our presentations and projects and how similar they are and what they need to contain in order to fill the expected demands at the moment. There is a very clear norm that we are influenced by and live in and are being taught.
> – *What do you mean similar projects, that you all do the same thing?*
> – Yes, it is a bit like as if you know that if you in a project presentation include certain aspects, you have not stepped outside of the frame and it will work out, sort of.
> – *What certain aspects?*
> – There is always talk about active ground floors and this is something that is always brought up – urban life and that. And no one really deviates from that since it is what we have been taught.

> – Something I appreciated last spring (…) we had a course called 'Planning theory' where we discussed the role of the planner over time, how a planner should be, from the 1940s and onwards. And that was quite rewarding, to see how they were thinking then, how we are thinking now and that you somehow are aware of that every point in time has …
> –Yes, and that parallel to that we actually went out to the million program areas (…) We have actually not visited that kind of areas until then, we went around in Stockholm, in Bredäng and Fittja et cetera. It is one thing to read about it because then it is always so biased, but to be there and see the qualities, because there are qualities, actually.
> – Yes, I think there is a lot of focus on that what was done in previous times was all bad, that we should be ashamed of the planning that took place in the 1950s, 60s and 70s (…).
> – *Is it like that in the course as well?*
> – A bit (…) We are given an example, for example here out in X, that is the million program area here, and there our job is to improve …
> – That is true, it was not renew, but improve …
> – Yes, and it feels like, OK, let's look at that kind of an area, with its surrounding structures, everything is 'what is wrong here', the focus was not on qualities, somehow (…) I don't know what you thought about that?
> – I can agree, in how that assignment was formulated, that we should 'change' or see if anything needs to be 'improved'. But it can also be more subtle, some comes from the school, some comes from television and some from a discussion over coffee, and somehow all this together results in that you know almost what you *should* do."

The same group of students thinks that a certain history is being told in their education through the planning ideals that they are being taught about – the garden city, the functional/international style, the building up of the welfare state and the post war mass housing schemes. These are not surprising historical categories, but they illustrate the need and use of categories in planning education, in rationalizing actions and constructing a line of development.

> "– It is very black and white sometimes. This is the way it was, it is not problematised very much.
> – You learn to appreciate that which has an explanation, I think. (…) You learn to understand, and suddenly it is something you like, because you can see something more than just how it looks."
> (…)
> – Even though I cannot say exactly what, I have a feeling of what is OK and not OK when I do a project. And the OK is then fully based on what the main teacher is communicating to us, and previous experiences with that teacher.
> (…)
> – X usually says 'this is nice, this is ugly'."

Another group states that they formulate their own problems, as part of their education. They get a site, but not a problem to solve:

> "You always look for a reason, something to support an idea. You are trained to look for reasons to do something."

So in different ways, a clear problem orientation can be seen, regardless of if it comes from the teachers or students. It is not about understanding or analyzing, but about *solving problems*.

A central problem to be solved that was mentioned often in the interviews was how to populate *public space*. Boredom, isolation, young people with nothing to do and a "dead" inner city was referred to. Another obvious node or problem is *sustainability*.

> "… sustainability, sustainable urban development, what have we more … compact city, the kind of words that are being used all the time, no one can really define what they actually mean, and we have seen that also from our discussion here. Everybody uses it but no one can really explain what it means."

In general the interviews show a strong disbelief and almost cynicism in relation to sustainability. They do not believe in the concept, there is no such thing as the sustainable city, and the concept in itself does not mean anything. Or, they might believe in striving for sustainable development, but not in "a sustainable city", or that sustainability strategies leads to a sustainable city:

> "… we know where to start, but no one is doing anything".

The *economic* storyline is another strong node. Consumption, an economic logic and economic development are conceived of as both a problem and a solution, paradoxically. The concept of *segregation*, concerning spatial segregation and physical barriers, densification and sprawl and the relation between city centre and suburb, is of central importance for some of the interviewees. Related to this is the discussion on *how to heal the suburb into becoming a city* (also discussed in Tunström 2009) – a physical and social problem at the same time. The role of the inner city – suburb division in Swedish urban discourse cannot be overstated. It appears and reappears constantly in different forms, also in the student interviews.

4.2 Envisioning the good city

> "I am not sure why but it feels like a very strong word. The entire program is built around visions. (…) It is really a profession of vision. I think the time perspective has a lot to do with it."

> "We talk about the future all the time (…) we want to make something better."

An important concept for many of the interviewees is *vision.* Many want to be visionary planners, involved early in the process, but also seeing it to the end. To be able to walk past a place and say that they made it happen. There are several aspects of the role of visions that are worth highlighting. First, to put it shortly – they like it, many miss it in their education, but at the same time they themselves are not very good at it. It was striking during the interviews that the students were unable, or at least had problems, putting their own vision into words and formulate clear urban ideals. For example, in the interviews they were asked to say something about inspirational images or places. Where do they for example find inspiration to their ideas of a "good city", or a "good place"? Many of the participants had trouble answering this and gave very vague answers. Whether this is because they are not trained in doing this, or too disciplined to allow themselves to dream and envision a "good future", or because this simply does not interest them, in line with a critical approach, is an issue up for discussion. But there are apparently also limits to visions. A student from a design oriented planning program referred to an incident when a fellow student in a project tried to argue for a radical and different kind of vision, but was met with so much questioning from the teachers that he gave up.

In general the interviews show that quite many lack training in social analysis and in conceptualizing the relation between the social and the material. Social aspects of planning, and the social in urban life interests many of the interviewees. It might even be there that their interest began, but the connections they make between the physical or material environment and "the social" are limited or not very reflected. Talking about urban theory, an interviewee tries to explain what she means by that:

> "– I mean, the way you see the city, from the outside … what to say, it is really difficult, not as a physical structure, but more as … the urban life.
> – More a social place than a physical …
> – Yes, exactly."

Several of the students however express that they miss urban theory, urban politics and social perspectives on the urban, at the same time as they in some statements consider this as outside of their own field.

> "There are many conflicts, with democracy and politicians … for example that they are building big external shopping centers that depend on traffic – or cars. This is nothing that we can influence very much, unless you work with planning in the municipality planning office."

Throughout the discussions "reality" and education, how it *is* and how it *is presented*, exist in parallel, in the way the students talk and are aware of the potential gap between the two. Or they express that they miss contact with "reality" – through guest lecturers, internships or similar. They constantly make this separation. There

are representations, images, marketing etc and then there is "the parking lot in Skövde" (representing what they think they actually will be working with, rather than the big visionary urban development projects) or "ending up in the municipality" when it comes to future employment. Also, references to the post war suburban areas as problematic places although they themselves do not – even as inhabitants in such areas – have experiences of the problems, similarly point to the gap between "reality" and images, stories or representations, and it contributes to constructing the rather gloomy image of planning practice as mentioned above. The city is discussed as a place for café and restaurant life, as a place where something always happens. At the same time several of the interviewees bring up the problematic approach in planning that something always has to happen and that it is hard to argue for no or very small projects.

> ".. it can be really good to think freely and big, no directions at all, but it can also be good to get the connections to how it works in reality, when someone actually has an idea of what should be there, to get the connection between reality and our project."

4.3 Critical thinking or cynicism?

The first conducted interview was with students in a quite social science oriented planning program, in the end of their first year of a bachelor. Critical thinking was a theme that came out very strong from their conversation, and this then occurred also in the following group interviews, in different guises and to an extent that was somewhat surprising. This first group appeared and expressed that they were strongly shaped by the stress on critical thinking from their lecturers. In their view their year so far was almost too focused on critique and what they referred to as discourse analysis. Paradoxically perhaps, they were also a group that expressed strong criticism of contemporary urban development and planning. What is possible to designate as *cynicism* characterized the conversation. It is necessary to reflect on the connection between critical thinking and cynicism, and perhaps especially in a planning program. Is a strong emphasis on critical thinking something that inhibits envisioning? They learn to critically analyze and criticize planning projects and urban development, but not to formulate their own visions?

In a design oriented program the students instead miss reflections and a critical discussion, here on their own working process. They feel that none or very little time is spent on discussing choices and alternative ways of working. They also express struggling with the balance between their own personal ideals and the ideals they are supposed to be working for, in line with what their education expresses as regards "the good city" or "good planning". Should I want the same as I think is good for the city, or would that be imposing my own ideals on the city as a whole? So there seems to be either an aesthetic steering or a critical analysis steering, and a need for more ethical discussion.

4.4 A neoliberal economic logic?

The cynicism and disbelief in good urban development among the interviewees is often expressed in economic terms. "The economy" is also recurrent as a major limitation in design projects. A group of design students say they do learn that every project is limited by economy, but they are not trained in estimating costs etc.

In the interviews there are recurrent references to the economy, the market and to different expressions of the privatized city – a growth focused planning, elite projects, commercialization or external shopping centers destroying small scale inner city shopping.

> "The only thing that is being built is identical condominiums that cost several millions."

Several of the interviewees frame this in quite a strong consumption critique. Together with the recurrent idea to reduce car use through planning this is actually where the few but more alternative urban ideals are expressed.

> "Consumption catches better what I am thinking about (…) irrespective of if it concerns things that we buy or if we buy homes – urban development is very consumption driven. How much money can we get out of this project, how much can we sell per square meter, what pays off – these are issues that we rarely discuss in our courses. We almost never hear about it, unless there is something wrong with the consumption patterns, we consume too much, but at the same time, everything is consumption driven. I think this is missing to a high degree, and that it is very interesting.
> – Especially the economics of it, that what you plan and design, it will be reduced by ten (…) And you can get quite depressed by knowing that all is decided upon by the market forces, the market and that all has to be profitable and not the best, that can make you lose faith in yourself a bit, what can I do in order to achieve good living environments and not only economically viable living environments."

In relation to this many voice, like the second statement in the quote above, disbelief in public planning and in their own future professional role. At the same time, the interviewees do in general express quite liberal ideals as regards urban life. People should be able to do what they want and to influence their environment and planning less is good. An organically growing and flexible city is a good city.

> "That there is possibility to do what you want in a city, that it is not limited to 'this is where you shop', 'this is where you skateboard', 'this is where you ride your bike' but that there is a mix and that people are allowed to do what they want in their city, basically, so that the city feels lively, and you do not have to go to different areas to do the different

things, but that the citizens create their own city. It is very important, according to me."

"That you are not limited, that you can do what you want without feeling any fear at all."

"Many big projects, such as many suburbs, have not at all resulted in what was planned. Perhaps we should build allowing for a lot of mistakes but that it is OK. A large framework, but it can develop as it wants. I don't know … just so we do not build anything completely static. What you build must be able to change as well."

4.5 The importance of the locality - the suburb, the small town and the town as planning project

In this section several aspects of *place* in relation to storytelling about the city will be brought up. The division between inner city and suburb plays a central role in Swedish urban discourse and the suburb is a contradictory both place and concept (Tunström 2009). This is clear from the student interviews as well. To refer to the division between inner city and suburb, and to do it in combination with a normative statement, is common. It is clear the students are aware of the suburb as a contested and almost emblematic place, and it engages them in different ways – in confirming or protesting against the image of the suburb as a problem. Also, there are those who live in places that locally are constructed as problematic, and to see for yourself can complicate and nuance the verdict. During the interviews places and concepts are negotiated between the interviewees – is the suburb in general a problematic place or not, is to be critical to be cynical, what are my own and your experiences and how do they match etc? But, the suburb as framed within a discussion on social, economical, environmental, design related and other problems is apparent.

"– An area you watch out for, that you have learned to stay away from, at least me who are from here (…) is X.
– Where all the students live.
– Yes, there are a lot of immigrants, drug addicts and students. (…) I don't know exactly how it is now since I am not usually there.
(…)
– I have only lived there for 2-3 weeks now and I have absolutely not seen everything, or I haven't experienced the crime there (…)
– … have only heard. I find it scary with the prejudice concerning these places. From people who have never been there and perhaps have heard, that is the most frightening, I think."

Secondly, the small town as an important concept for the students was surprisingly strong in many of the interviews – in the sense that they thought of it as an aspect that was lacking in their education. It appears also as the students learn a lot about the city in a period of development with high pressure and growth, but not so much

about a city in decline or stagnation. In relation the polarized discourse this emphasis on the small town among the students adds another dimension: the small town as absent, but also the small town as associated with lack of development.

> "It is like the precondition is always, if you plan a city, that it is growing. New people, new housing, parking spaces, it is always a precondition for all projects that we do. But this is not how it looks in Sweden today. What do you do in places where not much is being built? Don't they plan anything? Should everything just stand still there, and be boring, and nothing should happen?"

Finally**,** another aspect that puts emphasis on the importance of the locality is the location of the university. This of course influences examples, study visits, project areas etc. and a resource, but at the same time somewhat problematic in the sense that the local context heavily influences the stories being told. There is not much outlook to other towns or countries, according to the interviewees.

> "There are examples from here; this is where we look at the city. It is good to have something close by to go and look at, but sometimes it is a bit frustrating, that we do not broaden our horizons."

4.6 A spider in the web or a marionette?

In a discussion about "the good city" in an urban planning context the discussion often touches on planning as practice and the role of the planner. It is clear that many students go into planning because of an interest in architecture and design – the visual, aesthetic and material, and the final result of the planning process – but after a while shifting interest and orienting more towards the planning *process*.

> "– I think it has changed quite a lot. Or it is about what I thought before I came here, but also during the first and second year. Then it was a lot about learning to read a map, a drawing, all the time about creating, and you got the impression that 'yes, I will probably work with creating something that is good', and now it feels more like, OK, if I can manage something from an idea I should be satisfied. The creative has definitely been toned down, for me at least.
> – *And instead, what emerged?*
> – An understanding of the many perspectives there are on things, many priorities."

In spite of showing engagement and interest in urban development and planning, many of the students do have a rather "gloomy" view of planning. Working in a municipality is not the first priority in the beginning:

> "It seems unavoidable. Part of me wants to be in a municipality, but the thought of only doing that doesn't make me feel good, I want something more, somewhere else."

> "… in the beginning I thought 'I do not want to end up in a municipality, so boring and only coffee breaks and slow processes' but now I think it might be good since we do have a municipal planning monopoly, that is where you can see how this is practiced, that is where you learn the basics for that which you have to work with. (…) But at the same time there is some kind of a hierarchy, what is cool and what is boring, the municipality is seen as a bit boring and consultant is a bit cooler, perhaps."

The holistic perspective as central to what planning is, in the sense of multidisciplinarity and a comprehensive view on sustainability, reemerges constantly in the interviews. They are, in their own understanding, broad in their knowledge:

> "… you are a link between several professions, and you have to try to understand them. I think we know a little bit of everything."

But, the other side of the broad knowledge and holistic ambitions from the university is the confusion about what it is they really do know that some students feel, and what position planners have in society. One student refers to the common metaphor of the planner as the spider in the web:

> "– … it was something like that I had the programme described to me, that I should be like a spider in a web and collect all the different threads, but I do not feel that I am trained in leading in the way I think is necessary.
> (…)
> – What you said, about the spider in the web, I have heard that metaphor several times, but if it is true all things should start from the spider, but actually it is the politicians that take the decisions, so in that case we are only a tool of theirs, in a way. And seeing yourself as a tool is not as fancy as seeing yourself as the almighty, the one to put all the pieces of the puzzle together and create a nice final product.
> (…)
> – You didn't feel much like a spider, but more like a marionette doll. Redo and do it right.
> (...)
> – ... if we learn to listen, like we do very much, then we may turn into that [marionettes].
> (...)
> – If we start from that this is what I know, I have been trained, I am the expert, then we do not allow ourselves to be manipulated?
> (…)

> – I mean, if we come here and learn that 'your job is to listen', and then we go there and listen and try to mediate what other people are saying, then we are more or less steered by them."

The marionette/spider contradiction also has influence on the conceptualization of power. As the final statement in the quote indicates, there are expressions of ambivalence to power among the interviewees. They both long for it, fear it, and wonder why *they* should or would be the one having it. They both realize that they have to take responsibility, and fear it. They both think they are experts on something, and have a design idea to try to pull through, and that they are managers of a participatory process that might end up far away from the vision. On the one hand they look forward to making places or cities better, livelier or more beautiful, but they are also aware of the need for public participation and schooled into thinking planning as a participatory process rather than an expert dominated process. Their conception of the citizen is also related to power. The students in the beginning of their education still have a positive view of citizens, and identify with more them than with "the planner". They do not talk about NIMBY-ism and they downplay their own role as powerful actors. The more progressed students have a more problematic relation to their own knowledge and vision and citizen participation.

> "You have to listen to the people that live there, if you are changing an area, see what they want above all, I think (…) I do not think that it will be good if you say 'this is what is happening because I like it', you have to listen to the citizens, they have the last word."

To have the right knowledge, to make strong and convincing arguments as a basis for opinions is clearly important for the students. Knowledge and good arguments seems to be the bridge between the expert and the citizens, and between an opinion and a democratic decision, judging from the interviews.

5. Conclusions

The students' discourse can be characterized as paradoxical in several respects. Social aspects important – but they are not very good at that. Visions are stressed – but they have problems formulating them. They both reproduce a mainstream problem oriented history of the suburb, and question it. They are very ambivalent to power and discipline in planning. The radicalism or heterogeneity that I was hoping to see from the interviews is rather weak. Students in their first year of planning education are not knowledgeable enough to formulate a clear vision, and students in their final year of studies are schooled into conforming with both a critical position to a lot of contemporary urban development, but also into repeating established urban discourse through for example general statements about sustainability. The liberal attitude to the city and urban life – we should be able to do what we want – together with the "gloomy" view of public planning practice, the confusion about what their knowledge and skills actually are, the stressing of holism and the in some cases lack

of urban and social theory – I think points to the need for a deeper discussion regarding planning and power in education.

They are clearly shaped into thinking about the city and the urban as a problem to be solved, and planning as problem solving. This is apparent in how they talk about changing, improving, constructing problems, and learning to look for a reason to "do something". To not do anything seems unacceptable; instead places can always be improved. But there were also examples of not being allowed to be too visionary. This indicates steering, towards "doing something", but not anything. They are shaped by teachers, assignments, each other etc. Perhaps the focus on problems can be explained with the help of Tewdwr-Jones (2011):

> "The biggest challenge is to reconcile an historic desire for spatial fixedness on one hand, with recognition of space as a sphere of multiplicity and flows on the other. Spatial fixedness not only relates to viewing geography and location in a one-dimensional way; it also involves the planner's desire to legitimise and politicize intervention, which, by its very nature, requires space to be conceptualized and pinned down. Here then, is the paradox of planning and space – urban planners may recognise the city of emotion, of desire, of interconnections and of flows, but may not feel they can translate this awareness into a conceptualized and legitimate form without dismantling the very confines of conceptualized space they rely on to work within. Urban planners are caught between order and chaos, the natural desire for ordered spatial patterns, layouts and behavior against the space of movement, flows and interconnectedness." (Tewdwr-Jones 2011, p.25)

This illustrates a central issue that is addressed in different ways in this paper – the conflict or balance between social theory and design training in education, or between critical thinking and "envisioning", between analysing or improving, and perhaps even the different agendas in "urban studies" and planning. And, educating planners means both presenting planning as a private sector development oriented practice and as a practice in support of community development, environmental interests etc. This only emphasizes the balancing act. It is clear that a shift in the role of the planner both has been called for in Sweden and internationally since the 1980-1990s. This is connected to an emphasis on communicative planning that has increased the immediacy of issues of construction of knowledge, values and norms. This shift involves a more personalized, political, or politicized, planner. Planning education has yet to react to this, and also weigh between the procedural/process oriented, visual/design oriented and political/planning ethics. The research presented in this paper illustrates and underlines some of the central practice related dilemmas planning education faces – with some students lacking analytical capacity, and some where their analytical/critical perspective inhibits their ability to formulate urban visions.

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Dealing with Urban Growth in Damascus, Syria: Challenges and Recommendations

Abstract

Damascus has experienced a rapid urbanization in the last decades, caused mostly by high population growth rates and migration. Uncontrolled urban growth has negatively affected the city's development. Increase in informal land development in and around the city, as well as the decline of green spaces as a result of urban sprawl, are the two major challenges, which the paper focuses on.

The paper analyzes aspects of urban governance in Damascus, Syria. It explores the legal and institutional framework, along with the planning system, and their role in exacerbating problems associated with urban growth in the city.

Finally, guidelines for dealing with urban growth on the national, regional and local levels are proposed.

1 Introduction

Damascus, Syria's capital city, has witnessed a haphazard metropolitan growth with a population reaching more than 4 million[1] in its metropolitan area, or about 35% of Syria's urban population (11.3 million according to official statistics (CBS, 2011)). Today, more than 50% of the population lives in urban areas in Syria; this proportion is expected to reach 75% by 2050 (Fernandes, 2008, p. 3; Lavinal, 2008).

The urban growth has led to unsustainable development features, such as informal land development and urban sprawl. These emerging urban phenomena have negatively affected the city's built environment and the quality of life in the city. For example, there has been a strong decline of open space in the city's historically famous surrounding green area Al-Ghouta[2].

Damascus has had problems in dealing with these challenges in the last decades: certain legal measures have exacerbated the problems, instead of solving them; the outdated planning system, ineffective institutions, lack of rule of law, and the absence of participation further hinder effective dealing with Damascus' urban development challenges.

Several national and international efforts have been made in recent years to solve these problems. For example a new master plan has been developed which deals with different growth problems, like informal settlements and transportation issues. The new master plan offers solutions to re-demarcate the borders of the metropolitan area and adapt it to the growth reality; however, the new master plan hasn't been implemented due to delays on the national level. Furthermore, the government has stipulated new laws or amendments of outdated laws to solve the problems of informal settlements in the city. Despite these efforts, the problems are still present and hindering a sustainable development of the city.

An effective legal and institutional framework for planning is a prerequisite to sustainable urban development and improving living conditions in the city. In order to create an environment that promotes a healthy urban life, it is important to make the local government more effective, reduce state control, and involve different actors and civil organizations.

In the first part, this paper describes the urban problems caused by the rapid urban growth of Damascus. After this, the legal and institutional framework is explored. The paper focuses on the current planning system and the role of the civil society and NGOs. In the final part, the paper proposes measures for improving the legal and institutional framework on national, regional and local level.

[1] Calculated based on estimates by (JICA, 2008, p. 11) for 2004 and the growth rates given in (CBS, 2011)
[2] Al-Ghouta is a traditional green area with farmland in the south and east of Damascus.

2 Challenges of Urban Growth in Damascus

The main factors underlying the process of rapid urban growth include natural population growth and regional migration and in-migration. It is worth to mention that over the past forty years Syria has been the destination for a large number of refugees from Palestine and Lebanon and in recent years from Iraq.

Up to 50 % of the urban population in the country's largest cities is living in informal settlements (Fernandes, 2008, p. 7 cited from Wakely, 2008). Informal expansion is an inevitable reality for Damascus.

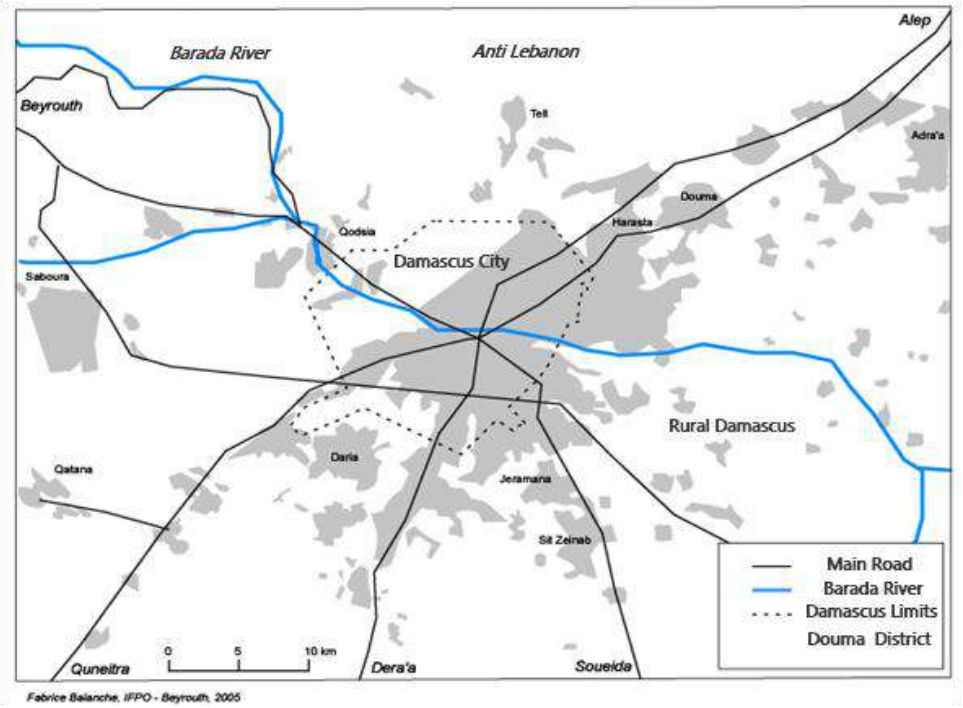

Figure 1. Damascus and Rural Damascus. (Fabrice Balanche, 2005)

According to the national statistics published in 2011, Damascus reached a population of around 3.6 million, with around 1.78 million people living in Damascus and around 1.88 million living in the governorate Rural Damascus ("Rif Dimashq") (CBS, 2011). However, the estimated numbers are around 2,836,000 for Rural Damascus (CBS, 2011).

Although Damascus and Rural Damascus are differentiated in administration and statistic, the plan for the metropolitan area considers the sphere of influence for Damascus City based on population growth within a 30 km radius from the city centre. It includes areas of Damascus City as well as of Rural Damascus, with a total area of approximately 4,700 km². The population of the Damascus metropolitan area (DMA) in 2004 was estimated to be 3.64 million, consisting of 1.55 million in Damascus Governorate and 2.09 million in the parts of Rural Damascus Governorate that are considered part of the DMA (JICA et al., 2008, p. 21).

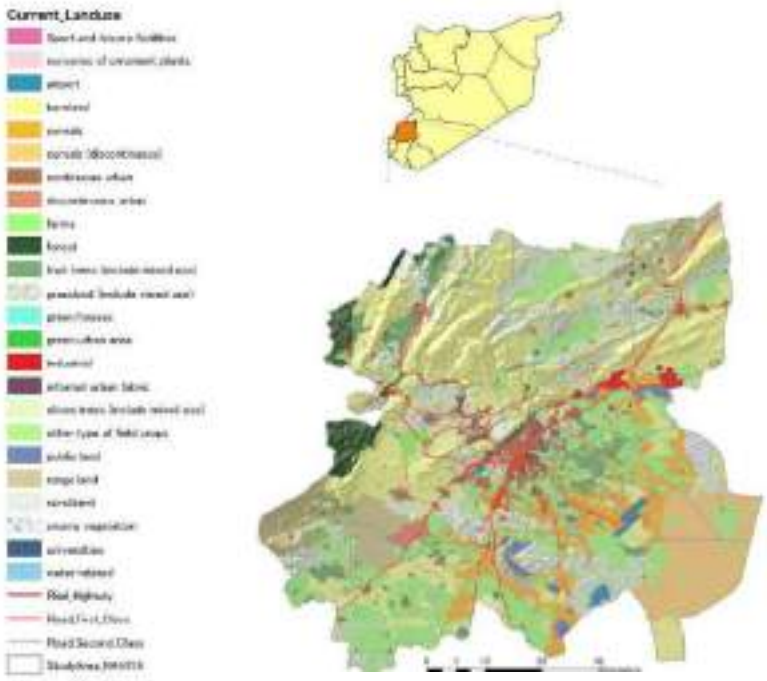

Figure 2. The Current Land Use Plan of DMA (JICA et al., 2008, p. 28)

Uncontrolled population increase and the absence of effective spatial and urban policies allow for informal urban development and encroachment of the green fields and vacant land on the fringe of the city.

In the next sections the informal land development and the effects of urban sprawl on the green spaces around the city will be explored and analyzed.

2.1 Informal Land Development

Migration from rural to urban areas started in the fifties of the last century, and reversed in the eighties onward through the counter migration from the city to peri-urban areas in the governorate "Rural Damascus". This can be seen in the increasing urban population in Rural Damascus and the decreasing growth rates in the city, as the following table illustrates.

Growth Rate in Thousand in Governorate	**1981 - 1994**	**1995 – 2000**	**2000 – 2010**
Damascus	18	14,7	13,3
Rural Damascus	45.9	37.6	34.1
Syria	33	27	24,5

Table 1. Annual Growth Rates (CBS, 2011)

The public sector failed to manage assimilating the increasing urban population by not supplying enough land for housing and eventually could not impede the urban sprawl into open space (SPC, 2006; GCES[3], 2008, pp. 96-99). However, most of these vacant open spaces and green areas were not intended for residential use, neither by the city master plan, nor by building regulations.

The rate of informal development in recent years has been estimated to be between 40% and 50% (Fernandez, 2008, p. 7). The number of people within Damascus' administrative boundaries, who live in informal settlements, is estimated to be 583,200 in 2004; which constitutes about 38% of Damascus' population (GCES, 2008, pp. 96-99). Because the informal settlements typically lack open space, parks or green areas, the population density is usually very high; according to estimates for 2004 between 380 and 800 people per hectare (JICA et al., 2008, p. 7-69) compared to 131.52 people per hectare in residential areas within the city (CBS, 2005).

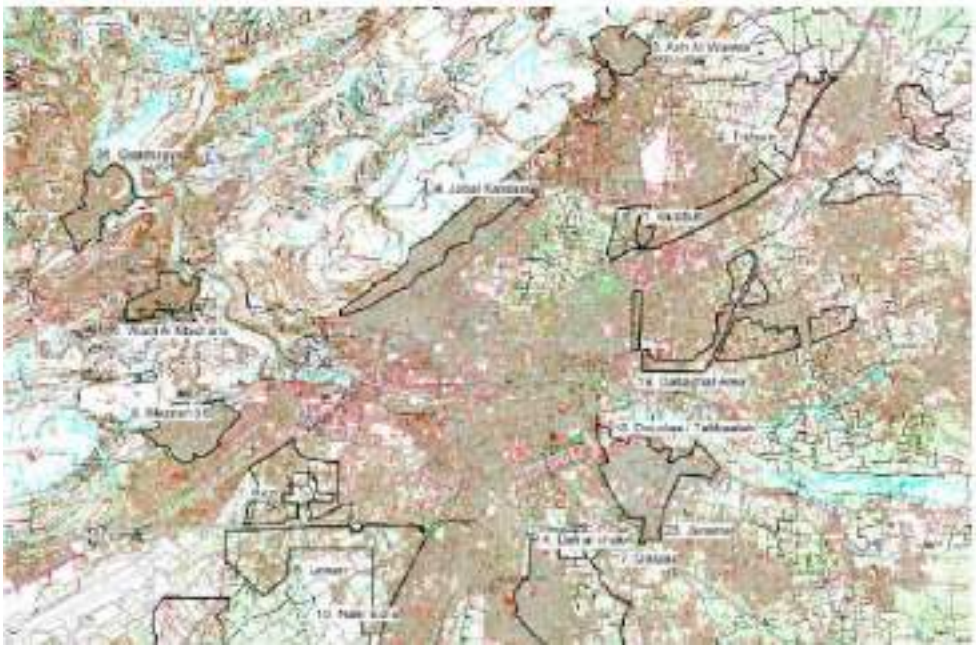

Figure 3. Informal Settlements on the City Fringe (JICA et al., 2007, pp. 1-3)

Legal Framework

With the urban expansion witnessed in the fifties of the last century, the amount of land for housing construction was getting less. That prompted the government to take several legislative measures. For Example:

- The Rent Act of 1952, which allowed rental contracts to be renewed automatically. This act led to the withdrawal of investments from the formal rental market.
- Law No. 3, "Prevention of Land Transaction", of 1976, which restricted the selling of unbuilt land, that is determined by any master plan as land "for building", to public or governmental institutions.

[3] Government-owned company that subcontracts with governmental bodies, mainly on the national level.

- The Urban Expansion Act No. 60 of 1979 which tried to freeze the urban expansion of the city. The law stipulates, that the government will appropriate all developed land outside of the city that is not included in the master plan and that anyone buying the land from the government may not sell it unbuilt. As a result, a lot of land was taken off the land market, leading to high land prices and the housing crisis in the eighties.

These legal measures escalated the problem and made it more difficult to own land or possess or rent a house formally (SPC, 2006; GCES, 2008, pp. 96-99).

With scarcity of formal land within the city boundaries, urban growth headed to the agricultural land surrounding the city. This land was normally of lower cost than the urban land and owned mostly by private owners, making transactions easier. As a result, since the eighties many informal settlements have been developed on the city fringe at the cost of agricultural land.

2.2 Urban Sprawl and Decline of Open Space around the City

The extensive urban sprawl has affected the open space in and around the city of Damascus. One result is the high decline of green and agricultural areas in the Ghouta fields. The Ghouta is known for its fertile land and urban agricultural villages, which surround the city. As mentioned in the previous section, in recent decades the open spaces and agricultural fields of Al-Ghouta have been illegally developed to informal residential areas to satisfy the high demand for land for housing.

The master plan of 1968 tries to direct urbanization toward north-northwest into the Anti-Lebanon Mountains, to protect the Ghouta fields in the east, and south-east. The goal was to maintain the ecological balance and to ameliorate the city's dry hot weather (Governorate of Damascus, 1972, p. 27). Most of the open spaces and green areas of Al-Ghouta are therefore categorized in the master plan of 1968 as open space zones (GCES, 2008, p. 96).

Buildings and industrial constructions encroached a vast area of the Orchards of Damascus, which used to cover over 3,000 hectares; today Al-Ghouta covers a few hundred hectares (MSEA, WB & UNDP, 2003, p. 42; MSEA & UNDP, 2002, p. 104). The arbitrary and unpredictable informal expansion is still continuing, and Al-Ghouta is expected to be completely urbanized by 2020 (Lavinal, 2008). The aerial photos below show the gradual decline of the green space because of the urban sprawl in recent decades.

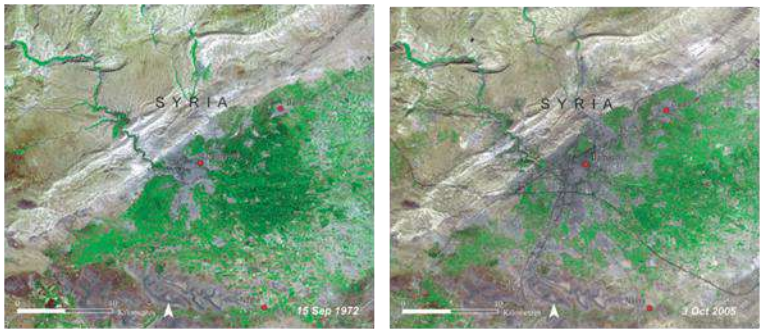

Figure 4. Aerial Photos of Damascus from 1972 (left) and 2005 (right) (UNEP, 2005)

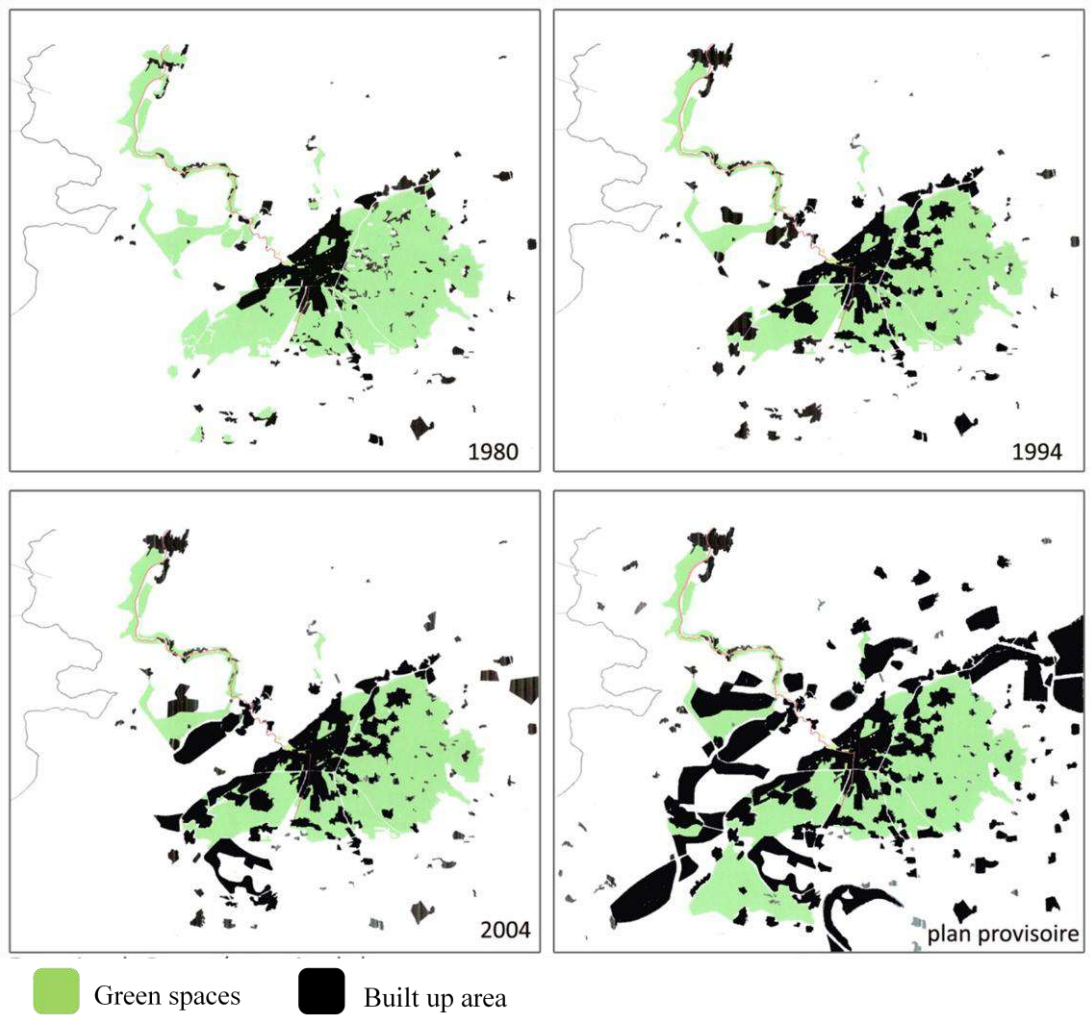

Figure 5. Urban Growth of Damascus 1980-2004 (Ali, 2008, p. 14, based on Balanche, 2006)

The loss of green space around Damascus till 2004 is mainly the result of informal housing which has claimed around 1070 ha. The table below shows a comparison between the planned expansion and the informal expansion.

Area of the master plan in hectares	10625 (within the administrative boundaries)
Area of planned expansion areas (suburbs) in hectares	1450 (suburb Qudsayya expropriated by the Public Housing Foundation) plus 450 (Artoz suburb)
Area of informal housing in Damascus City in hectares (including adjacent areas of Rural	about 1300

Table 2. Suburb and Illegal Housing Area from the Master Plan Area (MLAE, 2005, cited by the source: SPC, 2006, p. 590; JICA et al., 2008, pp. 7-69)

Despite the existence of a legal and planning framework for environmental protection, lack of effectiveness and rule of law led to the loss and degradation of the open space in Al-Ghouta. Some of these environmental measures in this context are: the National Action Plan to Combat Desertification in 2002, the Strategy and National Environmental Action Plan in

2003 to fulfil commitments to the Agenda 21 and sustainability, and the Environment Law No. 50 in 2002 to preserve natural resources and to prevent pollution.

3 Legal and Institutional Factors in the Planning Context

Most sustainable urban development challenges in Damascus result from failed urban governance. This includes: inadequate legal and regulatory frameworks for urban planning, improper enforcement of existing laws, lack of participation and absence of sound institutional structures and technical support; including shortage of qualified staff for urban planning and management (JICA et al., 2007).

The land administration system in Syria dates back to the French mandate times. It is based on the traditional land registry and cadastral maps in paper formats. On the one hand this helps to protect the land property rights from that time, but on the other hand, it is not reliable enough to meet the functional needs for today's development activities.

Another challenge in the legal and institutional system is the lack of coordination and the fragmentation of responsibilities between institutions, which makes land registration and transactions a long and elaborate process. In addition to that, the fragmentation and lack of coordination create an ideal environment for corruption; in the World Bank ranking for control of corruption Syria ranked 167th of 203 countries in 2011 (World Bank, 2011).

The lack of a reliable land management – land use and land administration system – contributes to problems, such as disputes on ownership and access to land, limited land transactions, restrained investments in land and low local economic development (GCES, 2008).

Another major challenge is the legal framework for land acquisition and compensation. The implemented laws regarding land ownership[4], for example, led to a situation where land stays undeveloped and abandoned for years in the city, especially where conflicts on land property rights exist and the legal framework could not provide proper solutions.

Appropriation of land for public interest as stated in Article No. 15 of the constitution always results in conflicts, because of the laws according to which the land is evaluated and the owners are compensated (e.g. the Legislative Decree No. 20 of 1983 for appropriation, along with other legislative measures[5]).

[4] The property rights section in the Syrian constitution (Chapter II economic principles, Article No. 14/3d) underlines the right to own land as a protected right according to the law. Nevertheless, in the same section, the article No. 15 stipulates: "Individual ownership may not be expropriated except for public interest and in return for a just compensation in accordance with the law" (The Syrian Constitution, 1973).

[5] Law No. 9 for cities urbanization/reconstruction from 1974 grants municipalities the authority of forced redistribution of land in order to implement urban projects.

• Act No. 60 of 1979, which froze the expansion of cities, the acquisition of unbuilt land, and distribution of these expropriated lands on the public-and Cooperative sectors at cost price, who showed later low capabilities fulfilling the housing demands in the city.

•Planning decree No. 5 dated 1982 states, that land must be included in the master plans.

3.1 The Planning system

The planning process has traditionally been guided by central planning authorities reinforcing hierarchical procedures for reporting and approval for projects, as indicated in the framework of the Local Administration Law No. 15 of 11/5/1971 (SPC, 2006).

The national government is guiding growth and organizing service delivery at a macro-scale with the Five Years Plan[6] (FYP). Therefore, municipalities are not allowed to decide on a wide range of functions, not to mention that most municipalities lack the capacity to fulfil some of their duties (ESCWA, 2001 cited by the source SPC, 2006). For that reason, any action or decision made by the local authorities or other actors concerning urban development cannot be legalized without the approval of the national government.

Regional planning in Syria has been in discourse on the national level in the past few years. Yet, this hadn't resulted in action plans towards legal and institutional framework for regional planning until 2008. In 2008 a regional planning law was presented to the Council of Ministers[7], followed by founding the regional planning commission, which is responsible for the regional plans on the national level (MAM, 2008). Although this is a first step towards decentralization, regional decisions still have to be legitimized by the central government.

Land use administration and planning in Syria are based on master plans created by a regional committee, in accordance to criteria set by the central government. Delays in creating these plans and failure to enforce existing regulations have led to the emergence of illegal housing, illegal industrial areas and decline of green spaces (MSEA, World Bank & UNDP, 2003; p. 29).

There is no comprehensive and efficient land use planning system implemented for the city of Damascus. But there is a zoning system based on the master plan of 1968.

Preparation of a master plan in Syria is a process that is going through many stages[8]. After the master plan has been approved on governorate and the subordinated levels, the master plan has to be approved on the national level by the Minister of Housing and Utilities. However, governorates play the key role in preparing and adopting plans for each individual municipality regardless of the administrative hierarchy[9]. A lack in technical knowledge, coordination mechanisms, shortage of comprehensive information systems and lack of public participation in all stages add more barriers to the implementation of an urban master plan (Asfour, 2007; SPC, 2006).

In the recent years two major studies have been conducted to develop a new master plan: one by the GCESC and one by JICA, the Japanese International Cooperation Agency.

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[6] The National Five Years Plan (FYP) in Syria sets goals, policies, programs and projects for priority areas in development on social, economic and environmental levels. The current five years plan FYP is the 11th FYP (2011 - 2015).

[7] The council consists of the Higher Council for Regional Planning, the Chairman of the State Planning Commission and the Chairman of the Regional Planning Commission.

[8] Legislative Decree No. 5/1982, for the preparation of general master plans and urban regulations for governorates, is the main regulatory instrument that identifies the procedures of preparing such plans

[9] According to the decree No. 5/1982 the master plans are issued by the Minister of Housing and Utilities depending on the proposal of the Executive Bureau of the governorate's council (MELA, 2004)

The GCESC study, conducted in the nineties, considers the expected growth from 1994-2020. The study had problems dealing with land ownership and the constraints of the cadastral system. Furthermore, it didn't consider water supply and transportation, and the upgrading of informal areas

The second study has been conducted by the JICA (see JICA et al., 2007, 2008). JICA defines a vital surrounding area of 30 km radius from the city centre. This study considers the development until 2025. JICA's strategy is based on the analysis of water availability, the urbanization pattern and potentials for the spatial development of the Damascus Metropolitan Area (DMA).

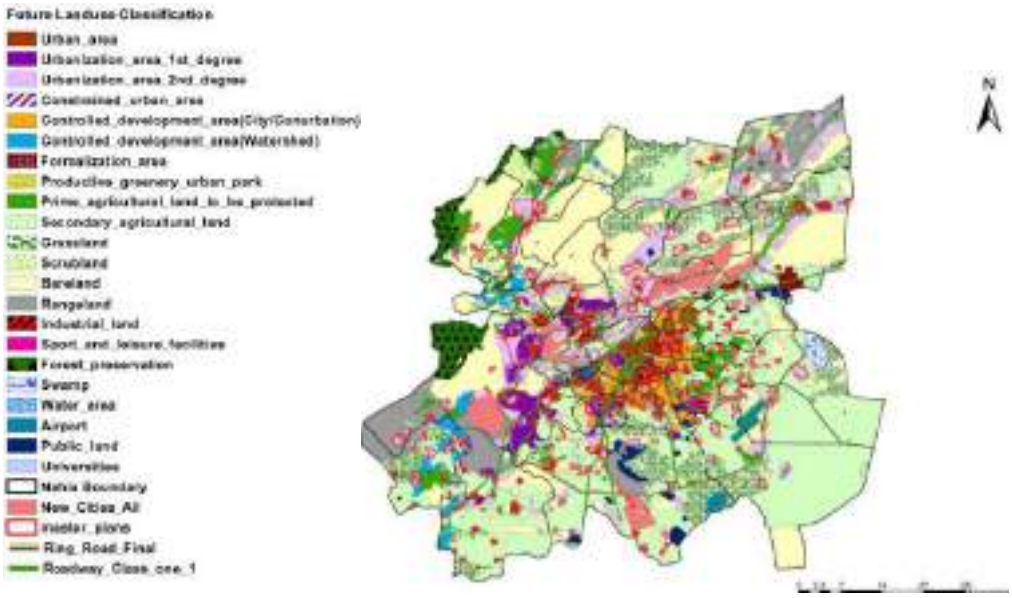

Figure. 6.Directional Land Use Plan for the DMA (JICA et al., 2008, p. 29)

Still, it is not clear when this plan, which is ready since 2008, is going to be implemented, because some legal and administrative issues have still to be discussed on the national level.

With the issuance of the 10th FYP (2006-2010) an improvement of the planning system and the urban governance has been initiated. For example, the following programs and projects have been launched by international development agencies:

- The Study on Urban Planning for Sustainable Development of Damascus Metropolitan Area by the Japan International Cooperation Agency (JICA) together with the government and the governorates of Damascus and Rural Damascus (2006-end of 2007) (see above).
- The MAM (Municipal Administration Modernisation) program by the EU (2007-2010 and 2010-2013): The program aims at developing regional planning and improving the effectiveness of local governance. In addition, pilot projects for urban development and management have been initiated which support the role of NGOs.

However, these projects didn't unfold tangible outcomes. This can be mainly attributed to the short term nature of these endeavours, the limited focus, as well as the lack of implementation of the resulting plans.

Such initiatives have the potential to achieve improvement in urban development but there are risks that institutions get dependent on such initiatives. Moreover, continuity is not assured due to lack of technical and financial support, and, above all, the lack of political support.

3.2 The Role of Civil Society and NGOs

The civil society and NGOs play an important role in creating a channel for communication between the local government and the people. One of the biggest challenges in Damascus is achieving cooperation between the local government and local communities. This is challenging because of the absence of public participation and the restrictions in the legal framework for civil society organizations. As a result initiatives and activities of local communities are not supported, and many people are not motivated to get involved in activities to improve their built environment.

However, the 10th Syrian FYP (2006-2010) states the need to involve the civil society (third sector) and the private sector in the development process. However, the FYP argues based on the definition and terms of a so called "Civil Society Organization". The terms of civil society organizations are defined by the law No. 93 of 1958.

However, Civil society organizations need approval by the General Security Service (article 6) and are subject to many restrictions (e.g., approval has to be requested for cooperation with international organizations (article 21)). Besides, the activities and funding of civil society associations require legal approval and supervision by the Ministry of Labor and Social Affairs (MOLSA, 2012).

Nevertheless, according to statistics of the Ministry of Labor and Social Affairs the number of associations in Syria was 4089 in 1994. This figure includes governmental as well as non-governmental associations; the number of NGOs in Syria was 625 in 1998. Depending on their purposes and activities, five types of NGOs can be differentiated, 240 charitable associations, 127 cultural associations, 26 Health associations, 29 cooperative associations, and 203 social unions (Abu Halawa, 2009).

In the field of sustainable urban development, there is, as of 2010, no organization registered, but there are about 30 registered organizations for environmental preservation and awareness raising (MOLSA, 2012). In addition, there's a number[10] of associations for human development aid registered (Abu Halawa, 2009).

Environmental organizations along with human development aorganizations can play a crucial role in approaching sustainable urban development and management in Damascus. Yet, this role is challenged by the lacking autonomy of these organizations from governmental supervision. In most cases, gaining the trust of the local communities has been difficult, particularly with the poor and marginalized groups, who distrust the local institutions and consider them obsolete and lacking in vision. Another challenge is the lack of technical and financial support due to the legal restrictions mentioned above.

[10] 18% of all organizations in Syria

4 Findings and Recommendations

Urban growth in Damascus led to an increasing number of informal settlements and an extensive decline of open space around the city. Important factors in this development are the lack of a solid legal and institutional framework for land development and environmental protection, and an inadequate planning system. Adequate laws are rendered ineffective because of the lack of enforcement of law.

The institutional framework is further weakened by high centralization with regard to decision making and a lack in capacity and modern technologies.

Other factors are outdated laws which show unfairness in terms of compensation according to the acquisition acts and lead to land use conflicts. In addition, urban governance issues like corruption, unaccountability and ineffectiveness escalate land use conflicts.

Finally, one major factor contributing to the problems dealing with urban growth is the absence of active civil society organizations that can take over responsibilities like the mediation between different stakeholders in urban planning and management processes.

Recommendations

In accordance with the national framework priorities of the 10th FYP, strategies need to be developed on national, regional and local levels to face urban development challenges. In the following, guidelines for these strategies are proposed:

On the national level:

- Ensure commitment of political actors and governmental authorities, especially, to decentralization and public participation.
- Get political support to realize a comprehensive planning system that ensures sustainable uses of scarce resources on the one hand, and economic and social development on the other hand.
- Emphasize implementing and monitoring of the national action plans like the action plan for combating desertification.
- Consider contributions of international organizations for technical assistance, especially with regard to modernization and strategic methodologies.

On the regional level:

- Empower regional institutions and implement regional plans to support rural development and to reduce the demographic pressure on limited resources like water and land of the city of Damascus.

On the local level:

- Build a coherent local institutional system, and ensure its autonomy.
- Improve urban local governance; eradicate corruption, increase accountability and capacity building of municipalities according to the good governance criteria.

- Ensure the implementation of land use plans as a tool for protecting the land function.
- Modernize the land administration system by providing new information systems, new plans and legal instruments instead of the old cadastre and registry system.
- Enhance coordination between different institutions. This action would provide a basis to resolve disputes on vacant land and lead to better use of neglected open spaces.
- Put the modernized master plan into action. The new master plan offers solutions mainly for housing problems and informal settlements.
- Involve local people in the urban management process, on different levels (e.g., city, district, neighbourhood, etc.).

5 Conclusion

The paper explored informal land development and urban sprawl as major challenges of urban growth in Damascus. The paper argued that the lack of a solid legal and institutional framework for land development and environmental protection, as well as the lack of a comprehensive planning system, are major causes of the problems in dealing with the urban growth in Damascus. Although these deficiencies are recognized and addressed (e.g. in the FYP and reform programs), the plans are yet to be implemented.

The next step is to explore ways to improve urban governance in Damascus, in particular by integrating participatory approaches in urban development and management processes.

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Rightsizing Shrinking Cities: A new perspective on urban design for the U.S. city

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Abstract

Urban policymakers have begun to use 'rightsizing' as a term for the mismatch between shrinking city populations, physical plants, and budgets. Built for population often over twice as large as current exists, shrinking cities have increasingly found themselves with an unmanageable quantity of streets, utilities, and housing. 'Rightsizing' describes the yet-unproved process of bringing a city to a 'right' size proportionate to government's contemporary fiscal capacity. Detroit, the United States' largest shrinking city, has wrestled with rightsizing for several years (Economist 2010, Bloomberg 2012). Rightsizing is in reality a difficult proposition for shrinking cities, particularly in the United States where planning is decentralized and market-driven. Nor have scholars nor practitioners given enough thought to questions about rightsizing actually means, such as: What physical form and size should shrinking cities take? How do city officials decide who should live where, and whether relocation is necessary? Who will pay for rightsizing? Is there a long-term rightsizing vision, or will policymakers follow current imperatives? This paper argues that scholars and policymakers should consider urban design as an important part of any rightsizing vision for the shrinking city. Today's population and housing losses present designers and planners with an unparalleled opportunity better shape a built environment that also meets shrinking cities' economic and social needs. As the visual landscape of shrinking cities is, for many, their most disturbing feature (Vergara 2003, Moore and Levine 2010, Marchand and Meffre 2010), urban design seems an obvious means to reshape these cities not only for a post-decline existence, but to explore new neighborhood and even urban design ideals. This paper examines contemporary design ideals applied to the shrinking city, including New Urbanism, landscape urbanism, and everyday urbanism, before discussing a fourth urban design ideal, patchwork urbanism, derived in part from Lynch's (1960) idea of the polycentered net. I conclude by suggesting policy directions that might begin to implement patchwork urbanism in the shrinking city.

Introduction

Recently urban policymakers have made 'rightsizing' a watchword for the perceived mismatch between shrinking city populations, physical and infrastructural plants, and budgets. Built for a population in some cases over twice as large as that currently within the city limits, shrinking cities have found themselves, particularly since 2007's fiscal crisis, with an unmanageably large array of streets, utilities, public buildings, parks and housing. 'Rightsizing' has emerged as a word for the yet-unproved process of somehow bringing cities down to a 'right' size; in other words, to a size proportionate to city government's ability to pay for itself. Even Detroit, America's largest shrinking city, has been discussing rightsizing for several years (*Economist* 2010, *Detroit News* 2010).

On the surface, then, 'rightsizing' has been a difficult if not impossible proposition for shrinking cities in the United States, as citizens unsurprisingly resist compulsory relocation in cities like New Orleans (Campanella 2008, 344-350) and discussions over infrastructure shutdown in cities like Detroit are fraught with conflict as well (Bloomberg 2012). Nor have scholars or practitioners far given much thought as to what rightsizing actually means. What physical form and size should the city take after abandonment? Is there an ultimate vision of the city guiding rightsizing, or will policymakers guide rightsizing by following immediate imperatives?

This paper, part of a larger series of investigations of urban design in shrinking cities (Ryan 2012, Ryan 2013 forthcoming) proposes a dual argument; first, that urban design should be considered as a primary lens through which to view the physical future of the shrinking city. Given that many consider the visual landscape of shrinking cities to be their most striking and disturbing feature (Vergara 2003, Moore and Levine 2010, Marchand and Meffre 2010), urban design seems an obvious means by which planners and designers might reshape these cities for their lives after decline and by extension, explore new forms of the ideal urban neighborhood and, perhaps, the ideal city. Yet in the United States, physical visions for the shrinking city have been shaped as much by indirect strategies (e.g. demolition) as they have been by conscious

formal visions. The paper begins with a brief description of the nature of abandonment in shrinking cities, before discussing an agenda for urban design.

Second, this paper proposes that contemporary, widely circulated urban design ideals for the shrinking city are inadequate, as they fail to confront and accommodate the distinct and peculiar physical realities of these places, and that an additional urban design vision is therefore needed. The paper briefly reviews four contemporary urban design ideals: New Urbanism (e.g. Duany et. al, 2003), landscape urbanism (e.g. Waldheim 2006), and everyday urbanism (e.g. Chase et. al. 2008), before proposing a fourth, patchwork urbanism, derived in part from Lynch's (1960) theory of the polycentered net. The paper concludes with some projections of potential implementation mechanisms for this urban design ideal.

A brief description of abandonment

The built environment of shrinking cities is first and foremost characterized by abandonment. Therefore any urban design strategy for these places will have to contend with abandonment before all else[*]. Abandonment in shrinking cities is problematic at multiple scales. While planners often consider abandonment at the individual scale of a single building or parcel, abandonment also occurs at the scale of the city block, neighborhood, and city as a whole, causing different problems at different scales. This section will consider these different scales before reviewing contemporary city- and neighborhood-scale urban design strategies to resolve the problems of abandonment.

In a shrinking city, abandoned structures and lots are serious problems, and confronting the abandonment of individual structures often demands a substantial amount of policymaker attention directed to shrinking areas. Recent citywide demolition programs such as Philadelphia's Neighborhood Transformation Initiative (Stern 2012) and Buffalo's "5 in 5" program (five thousand units demolished in five years) (Ryan et. al. 2010a) act on a citywide

[*] In this paper, 'abandonment' is considered to mean permanently vacant buildings as well as the vacant land that results from the demolition of such structures.

basis to clear derelict structures but use only individual dwelling criteria (unit condition) as a means of action. American city officials have thus far made larger-scale assessments of abandonment only in a reactive context, such as when a proposal was imminent, or as part of a larger, citywide statistical analysis (e.g. The Reinvestment Fund, 2001).

Shrinking-city abandonment is just as challenging as the policy-directed neighborhood demolition of the 1950s excoriated by Jacobs (1961), Anderson (1964) and other critics of urban renewal. This is because abandonment in shrinking cities occurs more or less on an undirected, piecemeal basis as individuals decide whether or not to remain in their homes. Understanding the piecemeal nature of abandonment in shrinking cities is essential to understanding the nature of urban design problems these places face.

Because decline is episodic and scattered rather than neat and organized, when and if each individual property will become abandoned is difficult to predict. Since the status and condition of properties can shift, adjoining homes are vulnerable as well. On a block where owners are abandoning property piecemeal, block-scale stability is difficult, for as abandonment continues, the collective benefit of more concentrated housing is lost, and each resident's individual incentive to abandon their property would seem to increase. As abandonment progresses, individual parcels are vacated in a generally scattered fashion. Ideally, up to fifty percent of parcels might be vacated without any two adjoining parcels being vacant together. But real abandonment patterns are different; a quick aerial survey of a place such as Flint, Michigan indicates that remaining houses sometimes cluster and sometimes do not. At high (above seventy percent) vacancy rates, remaining houses become islands in a sea of green. This pattern is most apparent at a large scale in places such as Detroit's eastside or the northern half of St. Louis.

Scattered parcel abandonment with interspersed remaining houses persists even at high levels of vacancy. In Buffalo for example, except in blocks purposefully cleared by public action or through demolition of large, single-lot industrial buildings, some housing always persists. At the

block group scale, no cluster of blocks in Buffalo was ever more than 71 percent vacant (Ryan et. al. 2010a). Even in a ninety percent vacant area, one resident wishing to remain in her home will require officials to condemn the property if they wish to make an entire block available for redevelopment.

At the citywide scale, piecemeal, house-by-house abandonment leads to patchiness, where large areas of the city may have high vacancy while other areas have only minimal vacancies. Again, our analysis of Buffalo showed 50 percent of the city's census block groups at least 10 percent vacant, and that about 20 percent of those parcels (about 10 percent of Buffalo's census block groups/total), were over 50 percent vacant (Ryan et. al. 2010a). In Buffalo and doubtless in other shrinking cities as well, vacancy ebbed and flowed across space in a pattern that was never neat, always irregular, always shifting, and always interrupted by remaining structures on a more or less random basis. Over time these piecemeal patches of abandonment tended to grow, spreading from high-vacancy areas into some but not all adjoining lower-vacancy areas (Ryan et. al. 2010a). This patchwork abandonment can be seen in schematic form in Figures 1 and 2 and at a smaller scale in Figures 5 and 6.

An urban design social ideal: reconnecting design to social policy

Any move toward an urban design strategy for rightsizing shrinking cities will not be easy. A principal challenge is the need for such strategies to reconcile differences between socially-oriented planning and urban design that have existed for decades. While many theorists have argued that design must necessarily consider political, economic, and social function (Lynch 1981, Cuthbert 2006), integration has proven problematic. In planning, advocacy advocates like Davidoff (1965) signaled a theoretical shift toward values centered around social justice and economic efficiency. Ultimately, these shifts resulted in a profession divorced almost entirely from design (Dagenhart and Sawicki 1992). Similarly, architecture separated from social concerns (Tschumi 1975) as High Modernism wound down amidst skepticism of design. After

1975, urban redevelopment in the United States shifted from ambitious, modernist-inspired work promoted by the state to modest postmodern-styled projects (Ryan 2012, 8-16).

Yet one may also discern surviving links between innovative urban design and liberal social policies. Beginning in the 1970s community organizing generated the occasional innovative design such as Villa Victoria in Boston's South End that linked partially abstract Modernist architecture with social housing while respecting the urban design of its surroundings (Rowe 1993). In the 1990s Philadelphia's Office of Housing comprehensively redesigned Lower North Philadelphia with moderate-density, low-income housing (Kromer 2001, 2010, Ryan 2012, 147-161). Design was not a signal feature there, but Philadelphia's ambitious planning approach was reminiscent of such signal late Modern accomplishments such as the Yorktown houses constructed from 1960 to 1970 in Philadelphia (OHCD 1996) and the St. Lawrence development of Toronto from the 1970s (Gordon 1989, Klemek 2011).

The threads linking formally ambitious urban design to social action have become thin and frayed since the end of Modernism in the 1970s, but a renewed urban design agenda for rightsizing shrinking cities, if put into practice by committed policymakers, might begin to regenerate these threads. I propose that such an agenda be *interventionist*, *critical*, and *benevolent* in order to improve upon the modest and ineffective urban design strategies that shrinking cities are currently pursuing.

Interventionist urban design is committed to large-scale, comprehensive action across a wide area of space. Such large-scale action by and in the public interest characterized high-quality urban renewal efforts such as Yorktown in Philadelphia, but since the end of urban renewal interventionism in shrinking cities has been limited to occasional projects such as Philadelphia's Poplar Nehemiah. *Critical* urban design questions existing modes of practice, such as the nostalgic bent of neotraditional urbanism, and projects innovative formal and social strategies to address new or emerging social needs, as Boston's Villa Victoria (Rowe 1993) did so well. Critical urban design attempts to move beyond current-day conventional wisdoms to attain

different configurations of spaces, buildings, and activities. Lastly, *benevolent* urban design is committed to acting in the interest of disempowered or under-served city residents ranging from low-income renters to members of the middle class. Benevolent urban design recognizes the needs of the least powerful amidst more powerful urban residents while preventing the egregious stigmatization of the poor and "spatial pathology" of mid-20th century Modernist urban designs (Plunz 1990).

A renewed urban design agenda committed to critical and benevolent interventionism is more radical than it seems. Even Fainstein's (2000) call for a more "just" urban planning saw urban design as only a partial part of her agenda. But providing for society's less privileged should not be an invisible project, and the rebuilding of shrinking cities demands concern for the built environment. This condition therefore suggests that urban policymakers and designers use urban design to provide rebuilding with maximum public visibility. Innovative spatial solutions to these longstanding problems could occupy the foreground of American urbanism and restore the weakened connections between design and social policy.

Contemporary urban design ideals in the shrinking city

Designers will not find a rightsizing vision encapsulated in past ideals of city form such as neatly bounded garden or radiant cities, nor in contemporary ideals such as neotraditionalism, 'smart growth,' or landscape urbanism. These past and present urban ideals have little relationship to the novel and peculiar physical condition of shrinking cities. This section briefly discusses three contemporary ideals: New Urbanism, or neotraditionalism; landscape urbanism; and everyday urbanism, or bottom-up planning, and their relationship to the urban form of shrinking cities.

New Urbanism is perhaps the best known of contemporary urban design ideals in the United States, based as it is in a neohistoricist vision that views the ideal city of today as embodying the "best of" (Calthorpe 2009) historic urban features such as small-scale buildings, pedestrian-oriented urban environments, and familiar architectural features (at least in the US small town)

such as pitched roofs, brick or wooden construction, and small-scale windows "punched" into the building façade. The resulting environments are immediately familiar and have garnered substantial appeal both in suburbia, where endless automobile-oriented environments are both monotonous and uninteresting, and, more surprisingly, in national low-income housing policy, where New Urbanism has provided guiding design principles for the rebuilding of public housing. Yet despite this relationship, new urbanism's relationship to social justice is questionable. The U.S. Department of Housing and Urban Development's HOPE VI program of 1995 onward (Cisneros and Engdahl 2009), dramatically reduced the number of low-income housing units even as it rebuilt problematic complexes. HOPE VI's New Urbanist design did reduce the stigma associated with the highly distinctive High Modernist towers of public housing, but it did so by accepting a substantial reduction in the amount of units provided to house the very poor. At the same time, New Urbanism projects physical futures hardly compatible with the reality of shrinking cities. New Urbanism's favors street networks with relatively high-density housing, but in shrinking cities the restoration of the fabric is only possible in small quantities. The weak real-estate markets of shrinking cities prevent a full-scale reconstruction of the vanished fabric. Full-scale rebuilding along New Urbanist lines is also conceptually illogical as historic fabrics often lacked many contemporary amenities such as public space and diverse housing types.

Landscape urbanism, a recent design movement with very different ideals than New Urbanism (Waldheim 2006), is motivated by the somewhat paradoxical desire to combine natural ecologies, or landscapes, with precise, avant-garde design. This strategy generally operates best in large, discrete parcels of land with few structures. But the vacant areas of shrinking cities are rarely large and discrete; instead they are more often small and scattered, with many parcels, many owners, and many structures remaining. In time landscape urbanism may better confront the property conditions of shrinking cities; in the meantime, landscape urbanism is a very compelling strategy for large deindustrialized areas such as the "monumental wilderness" of abandoned grain elevators along the Buffalo River (Ryan et. al. 2010a) but not for the patchwork of vacant and settled areas that characterize partly abandoned areas. As a citywide

strategy, landscape urbanism has even less traction, for any large-scale open space strategy would doubtless face skepticism from political leaders interested in increasing economic development and fearful of alienating voters with threats of widespread condemnation for open space.

A third urban design ideal, perhaps best encapsulated by the term “everyday urbanism” (Chase et. al. 2008), finds its theoretical basis as well as justification, both in philosophical concepts of the meaning of everyday experience, particularly in cities, and in the libertarian approach to land use and political control of development that characterizes the American city. The combination of the two, in conjunction with the relative lack of design attention paid to most contemporary American urban environments, has given the appreciation of “everyday” activities like informal food and merchandise sales, or low-cost, locally motivated housing or commercial construction, a certain imprimatur of individual character and even cultural distinctiveness amidst the otherwise primarily homogenous American urban landscape. Most notable in sprawling, immigrant-heavy metropolises like Los Angeles where entrepreneurialism is rife and much ‘formal’ development particularly large-scale, auto-oriented, and often inhumane, everyday urbanism has come to stand for the urban, pedestrian, local character that most cities arguably historically possessed, but now lack. Critics deride the ideal for its “anti-design” character (Speaks 2005), but fail to acknowledge the previously mentioned qualities of individualism and informality that the movement appreciates. Everyday urbanism, in fact, can be seen as a reaction to the very forces of homogenization and “bigness” (Koolhaas 1995) that have made cities around the world more similar, less pleasant for the individual to walk in, and visually less interesting.

Toward patchwork urbanism

Photographs of historic industrial cities such as Detroit, Michigan or Buffalo, New York show a surprisingly uniform carpet of nearly identical houses stretching toward the horizon. With the onset of population loss and housing abandonment, the formerly homogenous development

pattern of shrinking cities has become a frayed and tattered urban fabric. Today, the cityscapes of shrinking cities, particularly those with very substantial amounts of abandonment like Detroit or St. Louis, MO might best be characterized as a *patchwork* of intact areas interspersed with declining areas with growing abandonment and with heavily abandoned areas. Current planning policies comprise a parallel patchwork of small-scale nonprofit-driven housing, market-rate housing in higher-income areas, and little or nothing at all in those areas with very high vacancy. In other words, shrinking cities lack a comprehensive urban design strategy to shape either their shrinkage or their growth. This problematic combination of individual building demolition, market avoidance of low-income areas, scattered nonprofit development, and lack of overall spatial planning in shrinking cities was recognized almost twenty years ago by Philadelphia's Office of Housing and Community Development (OHCD 1993).

The patchwork nature of decline with vacant areas of different sizes and housing in various states of habitation frustrates conventional urban design approaches such as new urbanism or landscape urbanism that require large cleared areas of land in which to operate. Such sites are rarely available even in highly deteriorated areas of shrinking cities. Shrinking cities therefore present urban designers and planners with a physical condition that current urban design ideals do not fully confront. Urban design has always projected visions of the city as a complete, idealized entity, from the symmetrical avenues of Baroque cities like Rome to Brasilia's bird-in-flight form (Evenson 1973) right through picturesque New Urbanist villages like Seaside, Florida or Kentlands, Maryland (Krieger and Lennertz 1991).

Precisely the opposite conditions, however, characterize shrinking cities. These places, due to their seemingly uncontrollable population loss and currently scattershot, ineffective rebuilding strategies, possess an incompleteness and imperfection that make the attainment of an ideal urban form a seeming impossibility. Urban designers tend to dislike imperfection and incompleteness, but any urban design theory and approach to the shrinking city ideal will, by necessity, have to value and incorporate these attributes.

Few urban designers have acknowledged and appreciated urban incompleteness as a formal ideal. Among them is Kevin Lynch (1960) who described an ideal metropolitan form that he called "the polycentered net." Such a net would possess both "intensive peaks" of density and "extensive regions of low density" within a "dispersed urban sheet" or urban grid. This grid would consist both of streets and of "belts and tongues of open land." This pattern would not be static, but would "specialize and grow, perhaps in a rhythmically pulsating fashion." Lynch's recommendation captured many of the characteristics that he felt were typical of the modern metropolis; generally low densities resulting from automobile use and a desire for pastoral settings; dynamism resulting in part from rapid technological and lifestyle advances; choice resulting from the increased desire of different types of people for different experiences at different times; and physical differentiation resulting from the presence of both historic and modern structures and urban patterns across any given area.

Lynch's polycentered net was a somewhat odd idea – he did not wholeheartedly explore it again nor has any other urban designer expanded upon it. It certainly has little resemblance to New Urbanism's "transect", which though derived from ecological sections of valley territories, as an urban strategy offers little more than a 1920s vision of a dense central city and low-density suburbs (Duany and Talen 2002). Fifty years later the polycentered net remains an apt ideal for the American city, accepting both suburban sprawl and urban centrality with neither nostalgia nor cynicism. This was precisely Lynch's intention: in a peculiar symmetry to his career, one of his last writings, *Good City Form* (1981, 293-317) described a "place utopia" which more or less realized in greater detail the same ideal of the polycentered net that he had proposed twenty years earlier.

At a smaller scale, the polycentered net is also a helpful spatial concept to apply to shrinking cities. Historically structured around speculative grids developed with a relatively homogenous pattern of housing and other buildings, shrinking cities have in their decline shifted toward a differentiated, if unorganized, pattern of lower and higher (i.e. historic) building densities. The differentiated grid of shrinking cities, with areas that are becoming denser and other, larger

areas with increasing abandonment, is analogous to the dynamic patterns of density and openness of Lynch's concept.

The fluidity and dynamism of Lynch's concepts constituted a sea change from the static urban design ideals of the past. In similar fashion, the shrinking city's housing loss within the historic street network is an inevitable change that any urban design approach in this environment should accommodate rather than reject. Stopping this shrinkage in the future is likely to be as fruitless as in the past, for individual abandonment and demolition of abandoned buildings motivated by safety concerns and neighborhood complaints will continue to generate piecemeal vacancies. Even if building loss in shrinking areas continues to be unplanned, decisions about growth or reconstruction of abandoned areas need not be; location should be as critical for state-driven redevelopment as it is for private developers building in shrinking cities.

We might call a future urban design approach for the shrinking city *patchwork urbanism*, reflecting both the existing patchwork of built and unbuilt areas that exist already, as well as the patchwork approach to design obliged by the shrinking-city condition, where the designer can operate only at intervals, with other areas either outside of control or undesirable for the same. Patchwork urbanism, in other words, both describes the existing shrinking cityscape and provides a framework for a new urban design approach to improve these environments. Another such episodic approach to design, in which architectural interventions collectively shape a form of urbanism, was described by architect Oswalt Ungers in his West Berlin study of the 1970s as an archipelago (Aureli 2011). Neither new urbanism's ideal restored cityscape of historicist homes, nor landscape urbanism's successional landscape of returned nature, nor even the informal and essentially uncontrolled environment of everyday urbanism, the shrinking city is instead a patchwork of differentiated areas containing settlements of different densities and form, interspersed with open areas of various size, program, and levels of use. This patchwork might be thought of as four interrelated scales: a large-scale pattern of interwoven growth and shrinkage, and its three components: areas with extensive shrinkage,

growth in isolation, and growth in connection. The following sections briefly describe each of these principles in detail, and I conclude by representing these principles in a hypothetical city and neighborhood.

At the largest scale, interwoven growth and shrinkage will continue to characterize shrinking cities as city officials demolish structures on a piecemeal basis year by year through demolition programs, and as areas with a stronger market experience episodic construction driven by the private sector. Shrinking, increasingly empty areas will intermingle with remaining, surviving areas of historic building stock and areas with building densities that may even be increasing. This pattern, currently affected on an area-wide level only by episodic, publicly financed demolition, might be shifted through purposeful, coordinated new construction as well. Even if overall shrinkage continues, urban design policy can reverse shrinkage in selected locations by constructing new large-scale, mostly residential neighborhoods that return certain low-density areas to a higher (if not historic) density level.

Government-driven redevelopment could construct these new neighborhoods even as private developers will continue to construct scattered, smaller-scale projects along major corridors in stronger market areas of the city. In other words, the overall city will continue to shrink, but certain areas of the city will grow within this declining fabric. Thus, today's pattern of patchwork shrinkage with concentrated growth in higher-income areas might shift to a more balanced pattern of shrinkage and growth across both high- and low-income areas of the city. This new growth pattern will stabilize parts of the shrinking city fabric, while allowing loss to continue elsewhere in the city. Interwoven growth and shrinkage acknowledges the overall inevitability of population and building stock loss while improving the quality of life in selected areas whose distributed geography offers opportunity for more citizens to benefit from new construction and activity there.

Almost all shrinking cities have areas of extensive vacant land or vacant buildings. The more buildings are demolished through demolition programs such as Philadelphia's Neighborhood

Transformation Initiative, active from 2001 to 2008 (Stern 2012), the more vacant land there will be. The fate of open, vacant areas in shrinking cities makes up much of the dialogue, both positive and problematic, about shrinkage. These open spaces both provoke those who wish for regenerated historic urban fabrics and provide promise to those who long for a fuller expression of nature in cities (Desimini 2012). Open spaces in shrinking cities are growing and evolving and will continue to do so, offering a rich palette for exploration and cultivation of diverse activities. Vacant areas are abundant, and they should be seen by urban policymakers and urban designers as 'open territory' for whatever gestures residents or outsiders wish to make there.

While the most practicable transformations are those such as the annexation of empty parcels by residents who have chosen to remain and who value these parcels as amenities for their own home, this 'strategy' may ultimately decrease as residents of scattered homes continue to leave the city. Ultimately the open areas of shrinking cities will themselves resemble a patchwork, with a mix of carefully maintained small 'blots' (Interboro 2008), larger areas cultivated as urban farms, and designated natural habitat areas, together with badly maintained city- or privately-owned parcels, and larger areas of land simply undesignated for any use whatsoever. New development will likely never occur in most open areas due to the lack of a strong development market. Still, scattered homes are likely to remain. Residents of mostly open areas who wish to remain there, surrounded by memories and a pastoral landscape, should do so. At the same time, minimal service provision standards need to be established to permit removal of city services to isolated, heavily vacant areas. Residents of isolated, sparsely populated open areas will need to come to grips with the reality that living in abandoned areas will require them to assume additional responsibilities. Detroit's recent proposal to extinguish streetlights in heavily abandoned areas (Bloomberg 2012) is only one of many service 'shutdowns' that will need to occur in vacant areas in the future

Given shrinking cities' extensive abandoned areas, some areas of the city can be considered 'isolated', in that they may be relatively far from strong-market, active areas of the city. In cities

like Detroit, abandonment has progressed to the point where some neighborhoods may be a mile or more away from areas with active retailing environments and market-rate housing. In Buffalo, for example, patchwork abandonment in the city's central declining area is almost two miles in diameter (Ryan et. al. 2010a). Isolated areas are poor prospects for conventional, privately-financed housing development. Many isolated areas, built in an era when cities were denser and pedestrian-oriented, are also remote from major arterials, making them inconvenient for automobile access. The result is that isolated areas receive little redevelopment except for the previously mentioned scattered nonprofit housing. For residents, physical isolation means disconnection from everyday amenities found in denser areas, much as "social isolation" (Wilson 1987, 57) isolates residents from socioeconomic role models. Large stretches of the inner cities pictured in Camilo Jose Vergara's photos (1997) feature nary a grocery store or restaurant in sight, a sign of physical isolation's cost. Abandonment in adjoining areas may also grow as abandonment in isolated areas increases and is not reversed. Our work in Buffalo has clearly showed this phenomenon (Ryan et. al. 2010a).

There is thus a strong case to be made for creating new neighborhoods in shrinking cities' most isolated areas. Perhaps the strongest argument in favor of new neighborhood development in such areas is based on equity; in a democracy, all citizens merit a decent living environment with equal access to public facilities, regardless of where they happen to live. The current-day lack of development in isolated areas diminishes rather than enhances equity for residents of these areas. Certain factors that influence private-sector development in shrinking cities, particularly visibility and access from major arterial roads, should also guide selection of new neighborhood sites within isolated areas. Any new neighborhood should adjoin at least a mid-sized arterial street to both enhance auto access, increase the probability of mass transit access, and offer a better market for retail development.

An isolated-area new neighborhood strategy would be a radical one for shrinking cities; recent development including Philadelphia's Poplar Nehemiah has been sited adjacent to active areas in the hope of incentivizing market development and buffering healthy areas from decline. This

strategy is legitimate (see below) but it ignored the arguably stronger equity motive for building in isolated areas. Urban design arguments for new neighborhoods in isolated areas are also strong, for there is little reason to replicate the long-gone pattern of speculative grids developed with monotonous, dense housing. Developers have often provided contemporary spatial amenities in inner cities, largely through the construction of suburban-style housing providing private parking, culs-de-sac, and closure from surrounding streets (Ryan 2012, 120-125), but urban designers have a responsibility to do more than merely imitate suburbs. Instead, they must supply housing that provides expected private amenities, but that also provides some of the activity, security, and visual and experiential interest of urban neighborhoods.

Constructing new neighborhoods will be costly and will demand significant time and capacity from city agencies. In Buffalo, however, reduced federal funding is not the limiting factor in constructing new neighborhoods. Rather, political commitment is lacking. With a ten-year time horizon, ample Federal and state funds were available to construct hundreds of new houses at densities of around 15 units per acre at a cost of up to $200,000 per housing unit (Ryan et. al. 2010c). The construction of new neighborhoods in abandoned areas of shrinking cities would seem feasible, at least on paper. Whether shrinking-city administrations are up to the task is another question.

Far from being composed solely of isolated, abandoned areas with little remaining inhabited housing, every shrinking city has healthy neighborhoods where middle-class residents choose to live and remain. However, abandoned neighborhoods often adjoin these healthy areas. In Buffalo, for example, the shrinking neighborhood of Masten Park, a low-income, African-American neighborhood with approximately 50 percent vacant land, directly adjoins the busy Main Street area (Ryan et. al. 2010b). Other shrinking cities possess many such “connected” shrinking neighborhoods, adjacent to prosperous areas but nevertheless badly deteriorated. New neighborhoods in connected areas offer different benefits both to residents and to the city as a whole. Since these locations are already adjacent to intact and higher-income residential

and retail areas, residents of new neighborhoods enjoy immediate access to these amenities. The success of healthy areas is also reinforced by adjacent new neighborhoods as additional residents are placed within walking or short driving distance of these places, which supports existing activities.

At a larger scale, construction of new neighborhoods at the frontier of decline can check abandonment's apparent spread across deteriorating neighborhoods. New neighborhoods on borderlands between healthy and vacant neighborhoods indicate that 'abandonment stops here'; risk to healthy neighborhoods is reduced, and formerly at-risk shrinking neighborhoods are revived. Constructing new neighborhoods in 'at-risk', connected areas promises to arrest or stabilize decline's spread and to reverse abandonment in areas where it has not yet fully taken hold, even if it offers little promise to areas elsewhere with deeper abandonment problems where a gradual leveraging of private-sector activity may take years or decades to spread. However, connected areas are generally less extensively abandoned than isolated areas, and latitude for major urban design intervention is correspondingly less. At vacancy rates of below 50 percent, street, block, and settlement reconfiguration is difficult barring extensive relocation of existing residents (Ryan et. al. 2010b). Urban design at moderate levels of abandonment is thus limited to small new clusters of homes, closure of occasional streets, and provision of new open spaces or community facilities on scattered sites.

Towards a new shrinking city, and a new perspective on urban design

This chapter has argued that a benevolent, interventionist, critical urban design approach can begin to project a future for shrinking cities that goes beyond the piecemeal abandonment and demolition that currently exists. Such an urban design approach might address each of the different landscapes of the shrinking city- areas with extensive shrinkage, new neighborhoods in isolated areas, and new neighborhoods in connected areas- with strategies that mix new construction in some areas with the acceptance of continued abandonment and decline in other areas. Ideally, the future shrinking city would be a 'patchwork city' of new, old, vanished,

and vanishing neighborhoods, intermingled within the bounds of the historic city. Such cities will not be perfectly preserved historic monuments, but neither will they be ruined wastelands. Ultimately, shrinking cities might become a lively combination of different types of environments, a central-city realization of Kevin Lynch's "polycentered net."

Current urban design ideals have dual shortcomings. Formally, they are ill equipped to confront the peculiar and distinct built environment condition of the shrinking city. New Urbanism is predicated upon restoration of the physical fabric, but such restoration is impossible given the housing loss that has afflicted most shrinking cities. Landscape urbanism, on the other hand, accommodates postindustrial sites ill-suited for habitation, but has little to offer semivacant residential neighborhoods except a sophisticated form of vacant-lot greening, leaving the problems of housing, commerce, and other urban functions unaddressed. Finally, everyday urbanism accentuates individual efforts but can make little allowance for the larger-scale formal issues like the loss of thousands of houses or businesses except to recommend bottom-up, incremental action. But the problems of shrinking cities are too small to leave to individual action alone.

At the same time, the realization of patchwork urbanism will require shifts, if not wholesale revisions, of the current incrementalist, demolition-focused political economy of most shrinking cities. is subject to the same challenges and opportunities as all other urban policies. Political leadership in shrinking cities is not necessarily strong; agencies have lost capacity over years of budget cuts. Federal and state funding is not generous, but it can achieve substantial aims if applied in large quantities to a single site. Constructing concentrated and innovative new neighborhoods, and deciding where those new neighborhoods should be amidst much larger landscapes of decline, will change urban development as usual and place new demands on nonprofit and public agencies accustomed to decentralized action. But the problem of shrinking cities is too large to be left to chance, to the market, or to scattered and ineffective actors. Rightsizing shrinking cities represents an opportunity to explore new frontiers in urban design even as it holds promise for addressing and improving the lives of shrinking-city residents.

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WHEN KNOWLEDGE ECONOMY PLANS THE CITY: IMPROVING FUTURE OR INCREASING INEQUALITIES?

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Abstract

Everyone can read, here and there, that metropolitan areas have to aim for excellence, considering global competition and expected trickle-down effects for the bigger ones. This new context blatantly modifies planning and management of cities. Within this framework, implementation of spatial policies, as for instance, the ones based on knowledge economy, are introduced as innovative ways of planning. Then, reshaping policies which affect urban space disclose social divisions, because the land-revaluing sometimes encourage gentrification of working-class areas (Van Criekingen, 2008). In the same time, in order to keep their unity, local councilors are forced to relate social issue to ecological issue. More and more often, architecture is perceived "as a second nature" able to restructure connections between these two stakes, on a theoretical mode as on an empirical mode, resorting to "a wide range of space appropriation models and to preferences in terms of neighborhood" (Lehman-Frisch, 2009 : 95). We can argue that it justify the subordination of "innovative" city to economic imperatives and its conversion into a tradable object of consumption. Benchmarking studies largely contribute to this phenomenon of "city branding". Their communication discourses use misapplications of notions and concepts, as for example "diversity" and "sociability", or extend new organic metaphor as "revitalization" and "renewal", which sound legitimate facing the rhetoric of "urban shrinkage". Indeed, looking for more spatial justice (Rawls, 1971) will lead to consider spatial inequalities, and more generally environmental inequalities. However, excellence investments bring technology and growth in a tricky issue, which creates recurring inequalities between human beings (Deléage, 2008). Those innovative cluster policies also express unequal nature of urban and facilities planning at the environmental level and regressive nature of environmental policies at the social level (Emelianoff, 2008). They convey the fact that urban space is "where strategies display and contradict each other" (Lefebvre, 1968) and put into light not only the role of knowledge economy in urban area's social organization but also public actor's strategies to plan this one. This paper aims to discuss spatial justice concept from the role of knowledge economy within socio-spatial organization of city. We will focus on how planning tools, land control instruments and finance mechanisms produce urban spaces. To sum up, we will

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illustrate the debate networks/ territories thought a deep presentation of digital mega-projects in two different cities. The first field located within an ancient industrialized country, in the metropolitan area of Lille (Nord-Pas de Calais Region, France). The second field located in an emerging country's tier-two city named Pune (State of Maharashtra). The purpose is absolutely not to compare both, rather than highlight the common and different key issues within planning process of knowledge economy. In fact and maybe more than anywhere else, observed gaps and geographical disparities on environmental level within territories, prompt us to inquire some aspects of collective reality, even if it's strongly linked to resources issue. To what extent urban planning based on knowledge sufficiently consider gentrification phenomenon noticed in our cases studied?

1. Introduction

According to EU Lisbon Treaty (2000), innovation has fuelled post-Fordist economy, which itself is based on differentiation strategies of the territories as part of a globalized economy. These strategies aim to make urban spaces as heads of the networked knowledge economy and drive at the same time, more or less directly to the agglomeration of activities but also to metropolization of those spaces. From the perspective of spatial planning, this process is growing as urban projects for knowledge economy in fast growing business activities like education, research. The coming up of urban redevelopment, almost concurrently in different geographical contexts, and at the same time dedicated to the environment and to amenities in order to make the local economic territory more attractive, is not a coincidence. These speeches inspired by the success of US Silicon Valley's performances and benchmarking strategies for clusters, flooded the debates on competitive city of World Bank, International Monetary Fund, and regional cooperation associations such as European Union or South Asian Association. One can notice that the incentives lead by the public sector as well as the private sector to create "spaces of exception" (Halbert, 2010) within the city, carry new forms of spatial inequalities added to the existing ones, whether in formerly industrialized economies or in emerging markets.

Through the analytical description of selected sites in regional cities of Lille (France) and Pune (India), both chosen for being two metropolitan centers of excellence for multimedia industries and services, internationally oriented and maintaining somehow some technological links, we want to underline that sustainable development is the master piece of any discussion and any action on the territory. Indeed, studies of the Union (Lille, North of France) and Lavasa (Pune, Maharashtra, India), show that it represents the overall framework to register political, planning and economic decisions. So, results a strong "social engineering". However, those two instances also demonstrate the gap between the incantatory speeches on sustainable development and the practices of the city that fail to include the citizen participation in determining the directions and guidance

in land (use) management. The technological innovations expected by these new growth strategies seem to overtake the needs of social innovations.

This paper is organized around the two examples - French and Indian - that are developed to highlight three points of the urban planning for the knowledge economy. This method aims to highlight similar processes and similar strategies in spite of divergent contexts. Since the 80's, the Lille metropolitan area developed an ambitious project of "renewed city" on a wide range of intra-urban land, called "ZAC de l'Union" (73 ha) which became an urban brownfield following the triple crisis of coal, metallurgy and textiles. Later on, this site, scheduled to host the "CETI" and "La Plaine Images", also combined an eco-district, included in the Agenda 21 for Lille Métropole. In India, the take off of the city of Pune and its appearance in the rankings of biggest software cities starts in the mid-2000s, while Bangalore and Mumbai began to experience saturation phenomena. Since then, a number of urban projects, planned on the fringes of the Municipality tried to reconcile support for ICT growth and support to urban development. One of the latest case is "Lavasa Hill City Project", which is not only a private new town in the heart of the Western Ghats, but especially a project of New Urbanism design (NU) looking for a quick profit induced by a continuous and strengthening technopolitan effect, particularly around the Hinjewade InfoTech Park, and despite the economic downturn at the end of the last decade.

2. Case studied

2.1 L'Union, Lille Metropolitan Area, France

The history of the Union site is emblematic of "unsustainable development" and environmental inequalities (Roussel, Schmitt, 2009). The site lies at the crossroads of three cities: Roubaix, Tourcoing and Wattrelos and the characteristics of an industrial site under redevelopment. Historically, the life of this area is organized around factories and the Canal de Roubaix, built from 1827 to 1876, which allows the delivery of coal and raw materials for the wool industry, and provides water and rinse water for steam engines.

Farmland until the mid 19th century, the site was the scene of industrial booming during the 19th century with the building of plants in open fields, quickly surrounded by rows of workers houses. Urbanization develops spontaneously, an "oil spot", in an unplanned way and promotes the creation of a poor urban fringe. From 1970, the area suffered industrial decline, many factories were give up or relocated gradually. The last factory closed in 2004. The habitat, consisting of 50% of workers poor quality houses build before 1949, degraded and devoided of comfort. Many homes were demolished, but the "captive" poorest population is forced to stay in the area. By 1971, a major restructuring of the site was thought by the Chamber of Commerce and Industry (CCI LRT) around the location of a tertiary activities area, which resulted in the construction of the Tour Mercure

supposed to provide "an attractive element they were needed". The site was then left as a brownfiled and in 1992, the Urban Community of Lille (CUDL) identified through the project before the SDAU, the Union area among the five major metropolitan projects selected, but the EURALILLE project focused all energies and funding. The estimated 12,700 inhabitants of the area of the Union (1999) present singularities. It has the following characteristics: a significant proportion of young people and immigrants, low purchasing power, low mobility, low-skilled population, a high unemployment rate, a predominance of rental housing and the social accentuated difficulties. In 2000 this area is composed of many vacant plots resulting from the progressive destruction of homes and factories when it was originally scheduled to become a business district. That's when the site is again identified as a location priority in the new contract of agglomeration of the CUDL and in 2002 "metropolitan economic center of excellence". This is clearly to reassure the politicians of the North East slope by registering a project that balances the territory. While the first phase of the project Euralille ends, the time seems ripe for the Union. In 2004, the Union has been designated to host two clusters: one on the image and the second on textile innovation. At the same time, LMCU realizes that it must substantially increase its land supply to businesses and finding land to build housing. The land scarcity encourages brownfield redevelopment and gives, if necessary, the boost that facilitates implementation of an economic or habitat project.

Since the early 2000s, the Public Land Institution (EPF) has embarked on repurchase procedures for housing development in this regard. However, land management is difficult to acquire. In 2007, LMCU decides that the Union will host an "eco-district pilot" to be the "environmental showcase" of the metropolis since this space enjoys a unique cross-border, a quality service for transportation, including individual and a large area (80 ha), all assets which constitute a real opportunity to accommodate a development of national and European dimension. From there, the site originally scheduled to host a textile center and a multimedia cluster completed by 400 homes got suddenly 600 additional housing units.Thus, more than forty years elapsed between the time it was decided to locate on this declining site and the services center implemented in 2012 and where you can experiment the temporary facilities, including the not -woven test platform set up by one of the central player in the cluster, Up-Tex. But today, the environmental and social challenges associated with industrialization and de-industrialization in L'Union area are still numerous and make this site an interesting field of investigation to carry out a reflection on the co-construction of an urban project. Indeed, the process of inhabited areas reinvestment originally destined for demolition by people and associations including the island Stephenson is a privileged entry to understand what could be a sustainable city and to understand its meaning. A sustainable city is above all "a city where everyone can take ownership of surrounding, to co-construct, to make it a public good, to make his city a place of happiness to which he aspires" (Genin, 2010: 10). Now, it sometimes feels that sustainable development depends on environmental technologies and technical tools applied to urban buildings,

management of water, waste, transport, but as Michel Bonetti (2010) said "all those aspect can't be considered as sustainable urban design" (p. 250). Rather it is to develop both "the potential for social interaction, the landscape potential and the historical potential for identity" (p. 251) for an area. The purpose of this site rose to numerous studies on culture and sport projects, and/or a services center, then a "center of excellence" itself with a variable geometry content on a non-determinated space. This space deemed stricken and without amenity has been constantly thought to receive potential projects planned as part of plan contracts such as GPU, GPV and/or INTERREG II. All this dithering on the site's purpose were based, according to these projects actors, on the political target to change the image of a desolated area by its economic, social and urban transformation (Gaudefroy, Estienne, 2008). But elected politicians of L'Union, despite the fact they come from the same left party, don't share the same projects on what to do for this area. Thus, for the representatives of Tourcoing and Wattrelos, they must focus all for "economy" while Roubaix' representatives want a project focusing on city dwelling. What is surprising, according to us, it is ultimately a form of escheat in the definition of a consistent project for this area. This last argument is reflected by the market definition launched in 2004 by LMCU calling precisely for a site program. So, what we observed in this area is the lack of planning to serve a collective purpose and still the inconsistency and discontinuity of policies over a period of more 40 years. Finally, the "governance" system don't really know where it goes because the site of the Union's vocation may have been not to constraint the town centers affected by the crisis of the concerned and concurrent municipalities (Roubaix Tourcoing, Wattrelos), and not to overlap with the Euralille project that has absorbed much of the Metropolitan Area resources for the only benefit of Lille. Evidenced by the first porting task of the land project (1998) assigned to EPF Nord-Pas-de Calais by LMCU, following a perimeter definition of urban seizure right (DPU). Indeed, the EPF throw itself on a first campaign of buying homes and vacant premises (Vanhoutryve). A second multi-annual program of land intervention extends its action on the Union until 2006. During this period, the EPF has amicably acquired 22 acres under its mission to land recycling. However, it appears that homes purchased by the EPF are dilapidated, the windows are bricked up, the vegetation takes possession of the houses so that fungi make it unhealthy, factories are partially dismantled and empty spaces don't received any projects. It seems that the project justifying this land control was not clearly defined. Yet, legally, the delegation of pre-emption of LMCU to EPF must be substantiated. Worse, the pre-emption area has been redefined after residents (about sixty families) resisted selling their accommodations, formed a residents association ("Don't demolish my neighbourhood") and define an expression strategy for unoccupied spaces. Later on, a second association called "Collectif de l'Union" formed by former employees of companies also decided to invest in the economic future of their area because they perceived, at that time, the working return opportunities thanks to new business locations. Although the site is strongly marked by the demolitions and escheated urban environment, the project owners will have to take into account the fact that some inhabitants do not want to leave despite the pressures

(electric meter closed, maintaining insanitary conditions of the place and so on). February 14th, 2004, "La Voix du Nord" entitled “We won’t demolish their neighborhood!” and the houses will no longer be redeemed. LMCU is finally turning back. Also, what observations can we make? Firstly, if this project had been designed differently from the beginning by integrating the poor of this area, they wouldn’t have been concerned by the pre-emption area and would have take benefits from the amenity related to the new center of excellence. Then maybe, we would have avoided the equivocation on the final purpose of this space. Finally, behind all this, it is hard not to imagine that every actor has played only for himself.

In 2007, the urban development operation is delegated by the Mayors and LMCU to two companies (SEM Renewed City and SAEM Euralille). Actually, it covers a 80ha area dedicated to economic triptych Textile, Distribution and Image, included also the habitat with 80,000 m2 of housing and utilities with 63,000 m2 of facilities. In addition, the project evolved into the creation of an eco-friendly neighbourhood project where stakeholders have to meet the requirement of a participatory approach, register in LMCU Agenda 21. The action of various associations was beneficial because in 2008 a renovation program for the houses of the Stephenson block has been launched, fulfilling the consideration of requests from residents. The social dimension seems to be included to the commercial rehabilitation development of the area since on the 54 homes affected, 24 are still occupied or rented out by their owners (establishment of a self-rehabilitation plan) and 30 are in the renovation step. This mobilization prompted City Renewed SEM to devote homes renovation to Patrick Bouchain, a well-known architect who decided to undertake an innovative approach of "co-production of housing". In 2009, he settled on the site “The Electric Workshop”, a real common house for the site where residents involve for the rehabilitation of their future homes. However people do not show as much enthusiasm as they believe "We should be associated for a long time. Working together, this is not presenting us the forthcoming model". In April 2012, they challenge the traditional tile replacement by red, blue, pink or purple plates in the planned rehabilitation project of L’Union to an eco-friendly area. According to them “These sheets don’t fit the traditional architecture of the neighborhood. “It reminds me the roof of the chicken farm buildings during the sixties” says Lino Sferrazza. “In addition, the chimneys are found lower than the additional floors” notes Marguerite Parent, Chairman of the Association. If the objective was to choose bright colors to brighten up the Stephenson Street’s neighborhood, the fact remains that the dialogue is lacking. To justify the project, the site manager argues that "Architectural innovations improve the welfare of these old houses" since "the energy aspect has to be considered". Here we stress the limits of the technician’s answers. If the technological contribution is certainly significant, the “other factors” must not be overlooked or underestimated. Change cannot happen without “ownership” by the inhabitants, which comes close under the sociocultural register.

Through L'Union area, one can notice that models of economic and urban development must be embedded both in a sustainable development and smart growth contexts to instill sustainable, fair and environmental development of the territories.

2.2 Lavasa City Hill, Pune, India

In Maharashtra, 2nd exporter of software and computer services, urban development support in the knowledge economy has led to the vote of two InfoTech policies (2003 and 2009), and to the application of the Central decrees consolidating Special Economic Zones (2005) and the adoption of a law entitled Township Development Act (2006). This incentive regulatory framework encourages the private sector to invest together in the software activities and in the housing and urban development sectors. Pune is the fourth pillars of the Indian digital factory, in view of turnover now exceed those of Mumbai (Leducq, 2011). However, as its competitors, the city faces lots of problems such as intra-urban mobilities, pollutions, poor waste management, and water supply or electricity discontinuities. These negative externalities induced by an outdated Master Plan (CDP, 2006) and all management barriers induced by a lack of resources exacerbated by recurring corruption cases, tend however to decrease as far as we move away from the historic centre. Thus, if the ICT business and technological parks, such as the Rajiv Gandhi Infotech Park, located at the East of the metropolitan area, between the ward of Aundh and the Village of Hinjewade, are relatively protected, they indirectly suffer pollutions cited above. Meanwhile, a number of developers realized the growing demand for new housing from the more and more numerous "upper middle class", who work in riding high knowledge economy sector. Huge real estate projects mushroom. They are characterised by a poor development plan, embellished by little green spaces and don't take into account soft traffic patterns. Nonetheless, more recently, precepts of the NU, a contemporary architecture thought challenges the principles of zoning uses and urban sprawl (as addressed by the Charter of Athens, CIAM, 1954). The neo-traditional town planning, by creation of new towns (ex-nihilo), is therefore responding to the sustainable development imperatives putting emphasis on high liveable density and short distances between collocated urban services.

Therefore, economic, social and cultural regulatory conditions, were combined to allow Lavasa Corporation, an Indian private fund, to create an "eco-friendly city" meeting all the charters of the American Society of Landscape Architects in Ghats valley, along the Knowledge Corridor identified by Maharashtra as a strategic corridor for post-industrial growth between Mumbai and Pune (MIDC, 2002), thus ensuring profits within short and mid-terms. Conceived in 2003 and launched by 2009, this project was designed by HOK, an architectural and planning company from New York, with the support of biggest software names in GIS Master Plan and for benchmarking this pilot project as a flagship one. Lavasa, with a surface area of 100 sq. km, is built on seven hills around several lakes in one of the most important biodiversity area in India. It is expected to host 300,000

inhabitants by 2020. The first 1,500 apartments located in one of the seventeen districts of Lavasa were sold off-plan, before the excavation start. In addition to the 60,000 apartments for rent or purchase (apartments, villas and bungalows), six hotels, an international conference center, a hospital, schools and shopping centers will be built. Since Dasve area is already built “and furnished”, supplied with technical networks and inhabited, the world famous Indians succeed. They come from politics or entertainment “beau-monde” and, in fact, participate in advertising strategy of Lavasa, such as French hotels group Accor, Lausanne Hospitality Management School (leisure), Oxford University, Symbiosis International College (higher education) and Apollo Hospital Group (health and wellness).

Some would argue that perhaps the term of “palimpsest”, chosen in our sub-title is inappropriate or exaggerated, since no industrial or manufacturing plots were even installed in this location looking back to the loath to human settlement. Nevertheless, we will see later, that reality can’t be as simple as that in a state where population exceed 110 millions people, and while a number of villages were present and thwart the planned "new" town scope Lavasa, built without any consultation of the existing population. Firstly, if technical sustainability is partly met through the use of green technologies in the buildings construction or in their energy supply, one can mention that also there is no plan for wastes treatment either for the project itself either for the construction companies working in the valley. Moreover, from a purely architectural and cultural point of view Swiss village’s chalets or Italian brilliant colours might surprise visitors to Lavasa. The NU would be a ready-to-make kit model to export around the world, whatever are the specifics of vernacular architecture. Secondly, sustainable economic growth is also challenged by the life conditions of workers and employees who work for the proper functioning of the “new Ghats idyllic city”. Despite advertised social diversity announced as one of the sustainable development principles of NU, housing of the non qualified-workforce boils down to bad-ventilated dormitories or rooms for 4 to 6 people without air-conditioned, all-in-all leaving little space for family or personal development. In addition, BHK apartments to be rented to low-income people will be built in the 2nd phase of the project in the “Mugaon village”. Meanwhile, city managers say they want to accommodate computer-software companies or to comfort people to practice telecommuting, but for now the phenomena of firms’ relocation from Mumbai and Pune doesn’t exist except few cases, so software employees continue to go massively to Hinjewade. For now the city look like more to a ghost bedroom community during the day-time - outside the presence of curious and tourist buses who are potential investors - than to a city where integrated functions does not reproduce the failures of functional zoning. Environmental sustainability of Lavasa is also a growing source of questions, from the origin to the practical implementation of the project. Thus, the Ministry of Environment and Forests has first adopted denial behavior (2010) on the future issue of water supply of Pune city, confiscated by the implantation of Lavasa near a strategic dam, and for problems of landslides induced by the repeated explosions of the hill. It was

during the year 2011, which under the combined pressure of environmental NGOs, «looted» rural people and committed journalists associated in State prosecutor, a reversal was made by the Board of Pollution Control of Maharashtra and by the new Indian Minister of Environment, accusing A.G. (HCC) to cause significant environmental damages. In addition, Indian laws protect mountain landscapes located more than 1000 m above sea level by limited building regulations and planning standards. Lavasa, located at 1055 m altitude, but considered below the limit of 1000 m, was not bothered by those sections of the Town Planning Code of India. Finally and more generally, the governance of the project clearly calls into question the entire concept of sustainable urban planning in this project directly related to the information society flourishing in Pune. Upstream, there has been no consultation on the future of Adivasis peasant populations, or even honestly compensation system (employment and housing rather than cash) in return for the destruction of villages that dot the hills. An added complexity stems from the fact that 600 ha of land were subsidized by Maharashtra and therefore benefits, restoring some spatial justice, should have been tripartite: State - owner - operators. In addition, lucrative management of the place by a City Manager - American by the way - chosen by HCC Directorate Board questioned the relevance of this model advocated by national, regional and local officials as "the" solution to the rapid fragmented urbanization and economic growth. Indeed, how to reconcile and satisfy both rights and duties of citizenship and the demands of not more than customers? This management inevitably leads to phenomena of "entre-soi" reinforced by the presence of a security and monitoring service and putting emphasis on safety in Lavasa green city. Therefore, gentrification doesn't operate here by the transformation of an existing urban area, but by creating an "urban fabric" in predominantly rural areas, where new populations, with contradictory aspirations, replace the previous ones. Using example of Lavasa, the knowledge economy is both an origin point of gentrification and latter feeds the hopes of increasing shares of high value-added activities in the metropolitan area's GDP. The last limit to clear governance of this knowledge economic project, the suspicions of nepotism and corruption, like in another major project in multimedia economy in Pune (Amanora Film City, located in West of the city, ward of Hadaspar), revealing names of SP, former Prime Minister of Maharashtra and MP elected to Lok Sabha, his daughter and nephew. They were pursued for abuse of power for personal enrichment purposes in permits issued and active speculation on about 20 % of land sold by 2004 at Lavasa. Instead of strengthening the urban competitiveness and ICT economical bifurcation of Pune (software, images, Bio-InfoTech and Internet), it seems this project reveals additionally the growing contradiction between the project principles displayed by sustainable development and the accomplishment reality that comes at the expense of pre-existing populations, arguing that one's legitimacy overtakes another one.

November 2011's decision, taken by Indian State and State of Maharashtra, to stop construction of Lavasa Hill City Project, in order to make light on outlawed dealings that plague both politicians and businessmen, is less motivated by a new

conviction from the Government's officials that there is a need to regulate projects by real sustainable development principles and than by the political dissidents threat (from environmentalists to Naxalite guerrillas) might oppose all economic development projects (industrial ports, free zones...). However, this decision constitutes a turning point in the way of understanding the public-private partnerships, which until now sacrifice environment to economic growth. This decision is far-reaching for the implementation of post-industrial spaces.

3. Discussion and conclusions

Finally, we conclude with some remarks about the political decision that cannot be conceived as a discretionary act in its purest form. To bring out the sustainable city, the debate can't be reduced to "all for technology" because the city should not be only physically beautiful, but socially integrated. Also, major projects for the city must rely less on technological innovations and more on social mobilization, involving particularly the lower classes and the forces that constitute formal or informal associations. The concept of "governance" encourages any regulation to take place from the analysis of concrete system of agents or actors, from their "configuration", from their logic, from their respective powers, and from their relationships because the geographical and social space is a dynamic construction resulting from an interaction between the different players involving within the territory. Social innovation should combine the use of regulatory instruments as economic disincentives (taxes, fees) or incentives (grants, subsidies), and other instruments such as dialogue, persuasion, awareness, training, etc.

In Lavasa, up to present four main types of actors were involved in the knowledge economy urban projects: real estate developers and builders, the political authorities (regional and municipal) and public managers of technical networks, major ICT companies directly or through their investment subsidiaries, international investors (banks, pension funds, private institutions of higher education ...) that will always be kept under the local stakes. The Lavasa project claims to be representative of the NU, and therefore claims to work for sustainable urban development. Nevertheless, we find that a number of criteria are being challenged by practices that run up against the economic, social and environmental sustainability of the project. Expressing their disagreement with decisions taken in the absence of consultation, the 3,000 inhabitants of the 18 pre-existing villages invited themselves to the table of new urban models, by introducing directly the issues of environmental and social sustainability of knowledge economy urban projects. Lavasa was set up to be a replicable model 400 times in India, combining urban growth and knowledge activities, hosting a branch of the prestigious University of Oxford (UK). In view of the growing controversies on respect for human rights and for the environment, the project has lost confidence of academic UK investors and thereby, its initial target of becoming a new technopolitan area. A bundle of messages, along of a more

sustainable with less wealth ghettoization and spatial gentrification, has been sent to global, regional and local players in the economic planning in India.

In L'Union, the eviction of residents in the definition and initial development of a planning project results from a combination of factors that reflects:

- A negative representation of the history of an industrial site without regard for its inhabitants who could imagine a new project of their site. The inhabitants of the area are simply displaced and land reinvested in an excellence project;

- A classic vision of land use that does not sufficiently take into account the expectations and needs of resident populations and neglects citizen participation;

- A vision that reduces excellence as the first step of an economic project and in a second step, to an area of technological and technical performances;

- A vision of inaccessible and unfair city.

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Biçimlendirilmiş: Sekme durakları: 8,7 cm, Sola + Eskisi 7,62 cm + 15,24 cm

Biçimlendirilmiş: Yazı tipi: 16 nk

AMERICA'S HOUSING CHOICE VOUCHER PROGRAM SHIFTS TO THE SUBURBS, RECLUSTERING OR DISPERSION? A CASE STUDY OF CINCINNATI, OHIO, USA

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Abstract

The purpose of this paper is to update an on-going spatial study of US Department of Housing and Urban Development (HUD) Housing Choice Voucher (HCV) distribution in Hamilton County, Ohio, drawing from previous quantitative studies of 2000 (Wang & Varady, 2005) and 2005 (Varady et al., 2010) voucher holder location data that utilized GIS hot spot analysis to investigate the spatial distribution of HCV households throughout Hamilton County, Ohio in those two time periods. This involves repeating the previous studies' methodology in order to accurately gauge changes in voucher distribution and concentration. In addition to analyzing dispersal on the county level, this paper focuses in on suburban hot spots identified by Varady, et al's 2010 study in the Finnwytown school district and in a contiguous suburban area comprised of parts of the City of Forest Park, Springfield Township, and Colerain Township.

This study finds that voucher holders are generally moving away from fewer locations within Cincinnati to a greater number of locations around the county, but that voucher distribution is characterized for a large part by relatively few, fairly concentrated locations within and outside the city. This conclusion is drawn from density-based spatial analysis as well as comparing the appropriateness of US Census block groups versus tracts in quantifying dispersion.

Introduction

Since 1980, the US Department of Housing and Urban Development (HUD) has shifted its focus from subsidies to building owners to subsidies for tenant assistance, that is, the Housing Choice Voucher (HCV) program. One of the program's primary stated purposes is to provide low income renters with access to better quality housing, safer neighborhoods, and better neighborhood amenities. Academic discourse on the subject has focused in part on how well the HCV program succeeds at deconcentrating poverty and desegregating racial minorities, as well as the real and perceived impacts of voucher holders in local communities, especially suburbs.

The purpose of this study is to analyze the distribution of voucher holders within Hamilton County, Ohio, particularly the suburban community of Finneytown and a contiguous suburban area comprised of parts of the City of Forest Park, Springfield Township, and Colerain Township. For purposes of brevity we refer to the former as "The Finneytown Hot Spot" and the latter as "The Forest Park Hot Spot." These areas were chosen because a previous study (Varady et al, 2010) defined two voucher holder hot spots in those areas.

We seek to answer the following research questions:

1) What trends, if any, appear in the spatial distribution of voucher holders within Hamilton County between 2000 and 2011? In what ways are voucher holders concentrating or deconcentrating?
2) What trends, if any, appear in the spatial distribution of voucher holders within Finneytown, Ohio between 2000 and 2011?
3) What is the nature of the Finneytown and Forest Park hot spots including the style and condition of housing and the demographics of the population?

Voucher holder dispersal is analyzed on the county level and on the community level within two study areas as simple dot distribution as well as density. This GIS-based analysis is complemented by community profiles of both study areas and photographs taken during a windshield survey of both study areas.

The Cincinnati Metropolitan Housing Authority (CMHA) provided a Microsoft Excel spreadsheet of all voucher holder addresses within Hamilton County, which is up-to-date as of December 2011. Geocoding the 2011 dataset created a dot shapefile, of which 10,545 out of 10,630 addresses, or 99.2% of all addresses, were successfully matched or tied. We deleted from the dataset the eighty-nine unmatched addresses and manually matched the tied addresses. We plotted the shapefiles for all three time periods to analyze the spatial distribution of voucher holders as dots in all three time periods. The distribution of voucher holders as dots were quantified spatially using a variety of geographic boundaries, including municipal boundaries, census tracts, and census block groups.

We also analyzed voucher holder densities for all three time periods, repeating the methods outlined in Varady at al's 2010 study in order to preserve methodological consistency throughout the time series. We used the kernel density tool available through ESRI's Spatial Analyst extension for ArcMap 10 to convert the dot shapefiles for all three periods into raster density files. We used a cell size of 500 feet, search radii of

2640 feet (half mile), and an area unit (output) of square kilometers. To define hot spots within the density raster files, we considered any density that was equal to or greater than the highest density in 2000 to be a hot spot. We calculated this density to be 111.443 voucher holders per square kilometer.

In addition to analyzing the county as a whole, this research focuses on two study areas: Finneytown and a contiguous suburban area comprised of parts of the City of Forest Park, Springfield Township, and Colerain Township. Voucher locations were analyzed using dot distribution and voucher holder density in the three time periods. This research also explores the characteristics of various parts of both study areas and how vouchers are distributed within and between them.

The research included community profiles of the two study areas in order to better understand their dynamics and background within suburban Hamilton County. We studied the community's history, demographics, school system, land use patterns, governmental structure, transportation systems, economy, and housing stock.

Finally**,** the study included a windshield survey of both study areas on April 2, 2012. We visited areas in which the spatial analysis indicated clusters of voucher holders, few voucher holders, and no voucher holders. We paid particular attention to housing typology and property maintenance standards in each location. The photographs included in this paper represent the results of that survey.

Spatial analysis of voucher holder distribution: Hamilton County

Spatial analysis of voucher holder distribution throughout Hamilton County in 2000, 2005, and 2011 involved two primary methods: dot distribution and voucher density. We analyzed the distribution of voucher holders as individual locations in terms of city versus suburb locations, census tracts, and census block groups. The density analysis defined a number of hot spots throughout Hamilton County.

The first step in understanding the distribution of voucher holders throughout Hamilton County and how that distribution has changed over time was to plot voucher holder locations as simple dot distributions. For the 2000 and 2005 time periods, we used voucher holder location dot shapefiles produced for an earlier study (Varady et al. 2010). For the 2011 time period, we collected a table of voucher holder locations from CMHA in December of 2011, which we geocoded by address. Plotting voucher holder locations in these three time periods produced Figures 1, 2, and 3.

The most striking change between any of the three dot maps (Figures 1, 2, and 3) may be the increase in the number of vouchers between 2000 and 2005. The number in 2011 increased comparatively marginally. In 2000 there were 5,032 vouchers in Hamilton County, in 2005 there were 10,214, and in 2011 there were 10,545. Based on the dot distribution maps, the overall pattern of voucher distribution appears not to have changed substantially between the three time periods, though those areas where voucher holders lived in 2000 appeared to have densified in 2005 given the county-wide increase in vouchers.

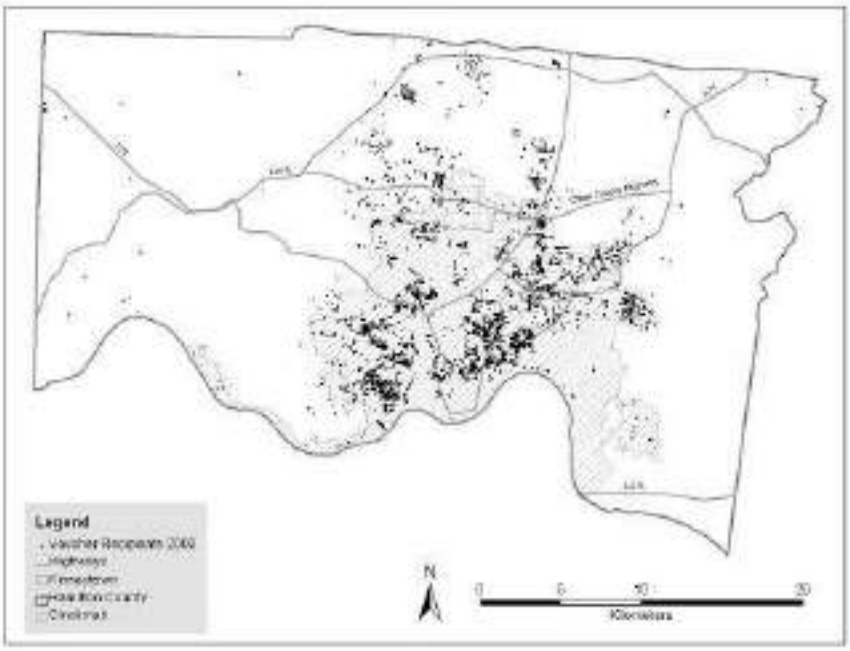

Figure 1. Dot map of 2000 voucher holders

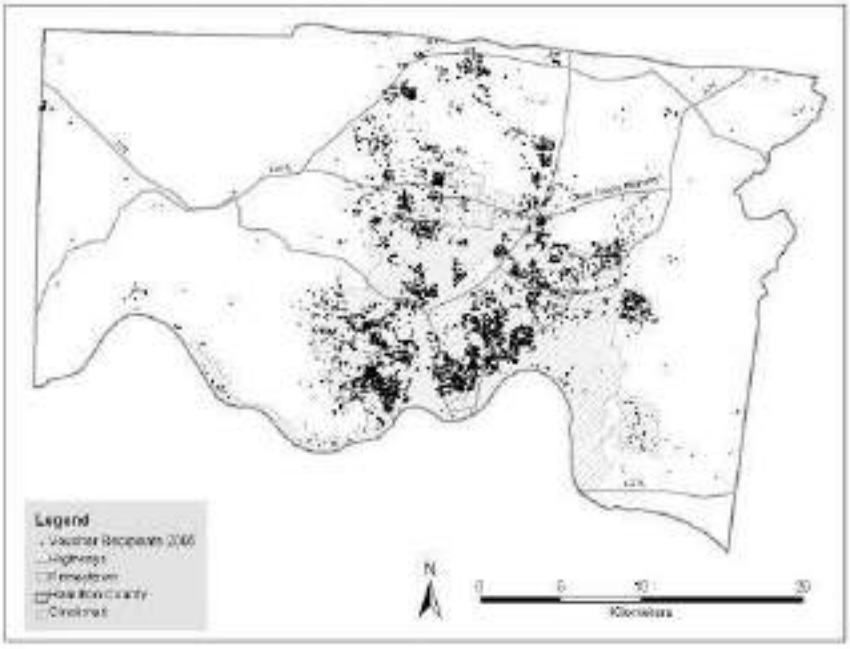

Figure 2. Dot map of 2005 voucher holders

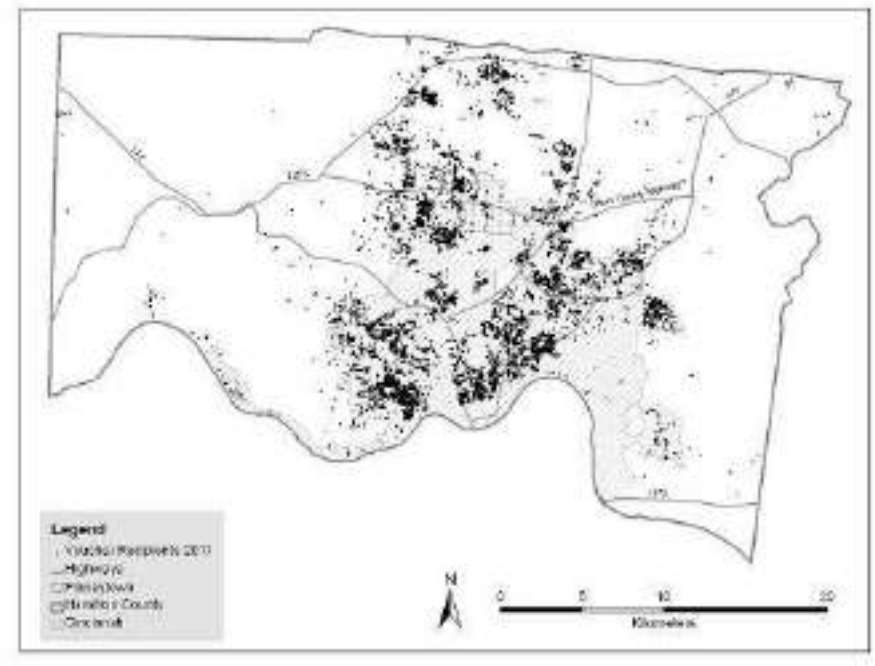

Figure 3. Dot map of 2011 voucher holders

One simple measure of voucher distribution is to compare those within the city and those within the suburbs. Given the complex nature of the Cincinnati metropolitan area, like others in the US, in terms of suburban neighborhoods that have been annexed to the city and urban neighborhoods that lie outside the city boundaries, myriad criteria exist for defining city and suburb. For the purpose of this analysis, we considered the Cincinnati city boundary to be the line between city and suburbs within Hamilton County.

Table 1. HCV distribution within/outside Cincinnati

	2000	2005	2011
Total vouchers in Hamilton County	5,032	10,214	10,545
Vouchers within Cincinnati city limits	3,738	7,303	6,915
% Vouchers within Cincinnati city limits	74%	71%	66%
Vouchers outside Cincinnati city limits	1,294	2,911	3,630
% Vouchers outside Cincinnati city limits	26%	29%	34%

Table 1 shows both the dramatic increase in vouchers between 2000 and 2005 that comparatively leveled off by 2011 as well as the steady movement of voucher holders from Cincinnati to other jurisdictions within Hamilton County over all three time periods.

Census tracts are a basic unit of spatial analysis when considering issues at the neighborhood, county, or metropolitan level. We calculated two measures of voucher dispersal within Hamilton County. The first measure is how many census tracts contained at least one voucher. The second measure is how many tracts contained half of all vouchers in the county.

The second measure was calculated by sorting in ascending order all Hamilton County census tracts according to how many vouchers each tract contains. Selecting from the top of that list and working down, this measure represents the number of census tracts required to surpass half the total number of vouchers in Hamilton County.

Table 2. HCV distribution by census tract*

	2000	2005	2011
Total tracts	230	230	222
Tracts that contain at least one voucher	172	208	198
% Tracts that contain at least one voucher	75%	90%	89%
50% of total vouchers in Hamilton County	2,516	5,107	5,273
Tracts that contain 50% of total vouchers**	26	59	72
Vouchers within the above tracts	2,550	5,128	5,295
% Tracts that contain 50% of total vouchers	11%	26%	32%

*2000 and 2005 figures represent calculations obtained using 2000 census tract boundaries; 2011 figures represent 2010 tract boundaries

**When tracts are sorted in ascending order according to how many vouchers they contain, this figure represents the minimum number of tracts that contain at least half of the total number of vouchers in the county in that time period

Table 2 shows that the increase in total vouchers between 2000 and 2005 also came with an increase of dispersal in terms of how many tracts contained at least one voucher. That measure of dispersal remained steady in 2011. The number of tracts that contain half of all vouchers indicates a steady increase in dispersal throughout Hamilton County between the three time periods. So it appears that while the number of census tracts containing vouchers did not increase between 2005 and 2011, a considerable number of voucher holders moved from tracts with more vouchers to tracts with fewer vouchers. If this trend continues, it seems reasonable to expect that half of the census tracts in Hamilton County will contain half the vouchers within the next decade.

Census block groups are a geographically smaller unit compared to census tracts and thus represent a finer approach to spatial analysis within metropolitan areas. We calculated the same two measures of voucher dispersal within Hamilton County for block groups as we did for tracts. The first measure is how many block groups contained at least one voucher. The second measure is how many block groups contained half of all vouchers in the county.

The second measure was calculated by sorting in ascending order all Hamilton County block groups according to how many vouchers each block group contains. Selecting from the top of that list and working down, this measure represents the number

of block groups required to surpass half the total number of vouchers in Hamilton County.

Table 3. HCV distribution by census block group*

	2000	2005	2011
Total block groups	736	736	697
Block groups that contain at least one voucher	417	528	506
% Block groups that contain at least one voucher	57%	72%	73%
50% of total vouchers in Hamilton County	2,516	5,107	5,273
Block groups that contain 50% of total vouchers**	48	71	74
Vouchers within the above block groups	2,531	5,116	5,304
% Block groups that contain 50% of total vouchers	7%	10%	11%

*2000 and 2005 figures represent calculations obtained using 2000 census block group boundaries; 2011 figures represent 2010 block group boundaries

**When block groups are sorted in ascending order according to how many vouchers they contain, this figure represents the minimum number of block groups that contain at least half of the total number of vouchers in the county in that time period

As was the case for census tracts, Table 3 shows that the increase in total vouchers between 2000 and 2005 also came with an increase of dispersal in terms of how many block groups contained at least one voucher. That measure of dispersal remained steady in 2011, as it did for tracts.

The percentage of block groups that contain half of all vouchers indicate a trend in voucher deconcentration between 2000 and 2011. By this measure, vouchers deconcentrated modestly between 2000 and 2005, when the number of vouchers in Hamilton County doubled. This trend continued marginally between 2005 and 2011.

Almost all measures of voucher dispersal in this section indicated deconcentration between the three time periods and those that showed reversal showed it modestly. Perhaps the most interesting difference comes with comparing tracts and block groups that contained half of all vouchers in each of the three time periods. Deconcentration appears more modest when analyzing block groups, both in terms of quantity and trend. It would appear that there are a number of census tracts in Hamilton County that contained no or few vouchers in 2000, but many more in 2005 and 2011. Within those tracts, it seems that vouchers tended to locate within a relatively limited number of block groups, thus accounting for the comparatively modest indication of dispersal of vouchers amongst block groups vis-à-vis tracts over the three time periods.

Because multiple voucher holders living in the same or neighboring buildings may overlap and cluster in ways difficult or impossible for the eye to perceive when viewing a dot distribution map, we continued analyzing voucher dispersal throughout Hamilton County by calculating voucher densities. Using the ESRI ArcGIS Spatial Analyst Kernel Density tool, we created raster layers that displayed the density of voucher locations using a cell size of 500 feet, search radii of 2640 feet (half mile), and area unit of square miles. These parameters were chosen to replicate those used in an

earlier study of voucher locations in 2000 and 2005 (Varady et al. 2010). The raster layers were symbolized in classified values in terms of vouchers per square kilometer.

In addition to displaying voucher density, we identified hot spots for all three time periods. Borrowing criteria from Varady et al.'s 2010 study, we defined hot spots as areas in which the density of vouchers was equal to or greater than 110 vouchers per square mile. This value is half the greatest density found in the analysis of voucher locations from 2000. Figures 4, 5, and 6 display the voucher densities plus hot spot locations throughout Hamilton County for the three time periods.

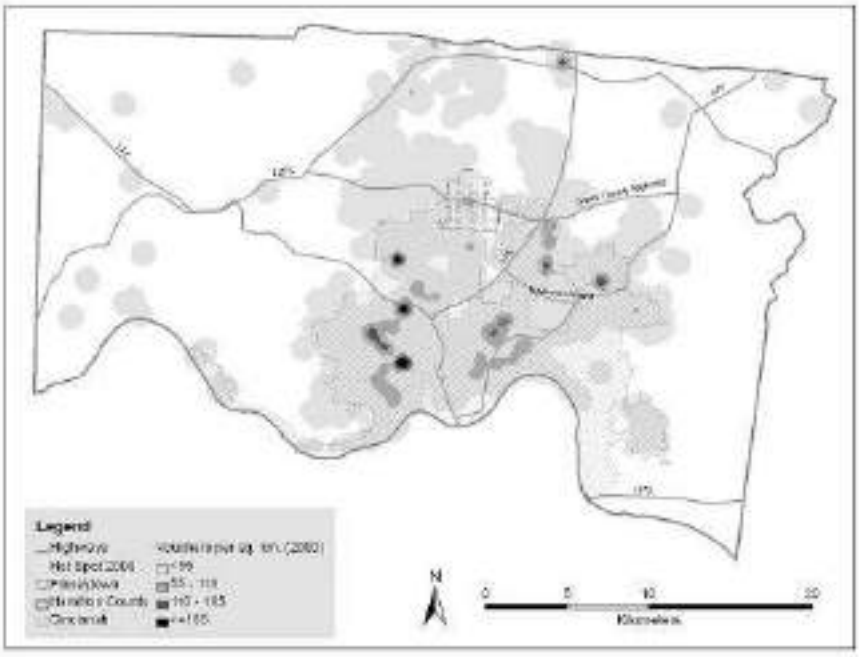

Figure 4. Raster density map of 2000 voucher holders

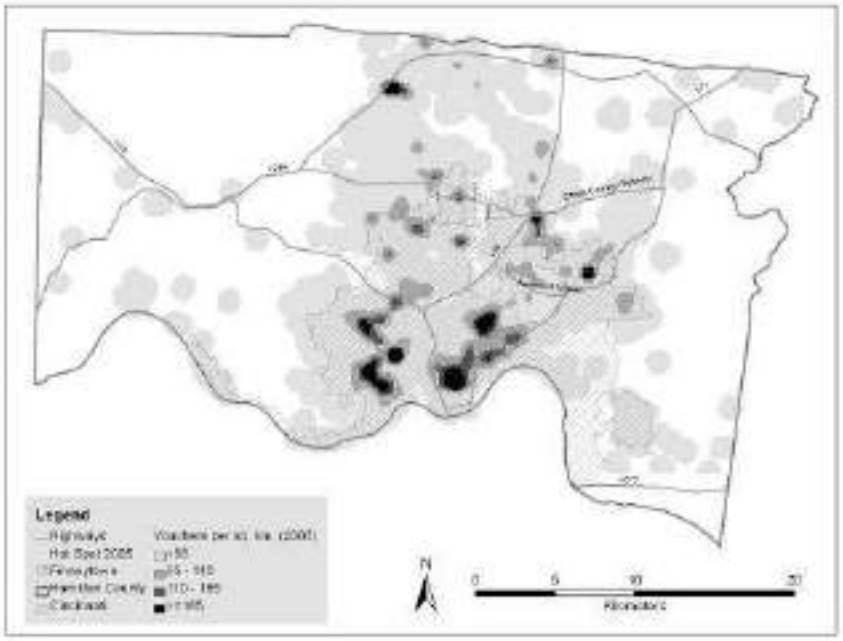

Figure 5. Raster density map of 2005 voucher holders

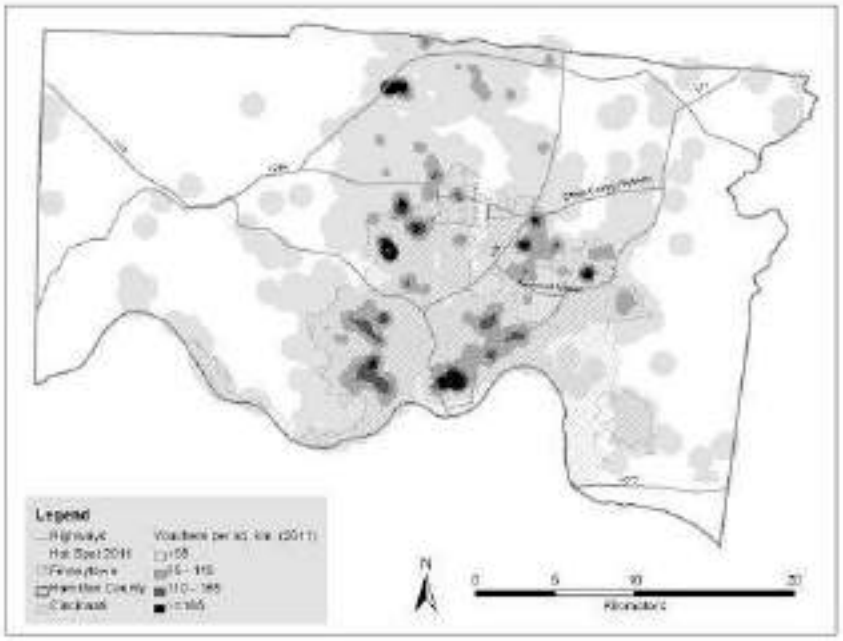

Figure 6. Raster density map of 2011 voucher holders

When the number of vouchers in Hamilton County doubled between 2000 and 2005, new voucher holders appeared to have located largely within the same sections of the county, but most notable increases in density included an area where Forest Park, Springfield Township, and Colerain Township intersect, neighborhoods on Cincinnati's West Side, and the central neighborhoods between Over-the-Rhine, Avondale, and Walnut Hills. In 2011, those hot spots on Cincinnati's West Side and central neighborhoods appear to have decreased some in size and density. At the same time, Cincinnati's northwestern neighborhoods and the intersection of Forest Park, Springfield Township, and Colerain Township all increased in voucher density.

Table 4. Hot spots*

	2000	2005	2011
Hot spots in Hamilton County	9	19	21
Hot spots within Cincinnati**	6	13	14
Hot spots outside Cincinnati	3	6	7
Total hot spot area (sq km)	3.56	19.29	16.60
Area of hot spots within Cincinnati	3.03	16.76	12.78
Area of hot spots outside Cincinnati	0.53	2.53	3.82
Max hot spot density***	223	380	407
Tracts that intersect with a hot spot	19	71	136
Block groups that intersect with a hot spot	29	142	126

*2000 and 2005 figures represent calculations obtained using 2000 census tract boundaries; 2011 figures represent 2010 tract boundaries

**Hot spots that have their centroid within Cincinnati city limits

***Vouchers per square kilometer

The figures in Table 4 suggest a complicated pattern in which voucher holders were dispersed throughout Hamilton County in the three time periods. The number of hot spots has risen, though most of that increase came with the twofold increase in the total number of vouchers between 2000 and 2005. And yet, the total area of hot spots dropped moderately between 2005 and 2011, at the same time that the number of hot spots, as well as the maximum density, was increasing. Hot spots inside and outside the city both increased by one, but the area occupied by city hot spots decreased considerably while the area occupied by hot spots outside the city increased moderately.

As part of this analysis, we counted the number of tracts and block groups that intersected with hot spots in the three time periods. We found that these numbers increased and decreased substantially based on inconsequential changes in the hot spot shapes relative to census boundary borders. As a result, we do not consider the measure of block groups and tracts that intersect with hot spots to be a meaningful calculation. The results are nevertheless included in Table 4.

Dot-based measures of voucher holder dispersal fairly consistently indicated a trend toward deconcentration within Hamilton County, though the comparison of tracts versus block groups that contain half of all vouchers raised an interesting question about

how dispersal was taking shape. The density-based measures offer a more complicated set of indications of both deconcentration as well as deconcentration. It seems reasonable to conclude, when comparing both, that voucher holders throughout the three time periods have tended to move away from fewer locations within Cincinnati to a greater number of locations around the county. However, vouchers holders are not spreading out evenly throughout the county, but rather locating within relatively few, fairly concentrated locations within and outside the city.

Finneytown, Ohio community profile

The purpose of this community profile analysis is to better understand the dynamics and background of Finneytown as a suburban community within Hamilton County. We studied the community's history, demographics, school system, land use patterns, governmental structure, transportation systems, economy, and housing stock.

Finneytown is a neighborhood within Springfield Township, most clearly defined by the Finneytown Local School District. The fact that the neighborhood is spatially defined by its school district reflects a suburban community traditionally characterized by young, middle class families with school-age children.

The US Census Bureau recognizes the Finneytown Census Designated Place, the boundaries of which are close to those of the school district. The census designated place is about four square miles in size.

Finneytown shares a border with the City of Cincinnati, but is about twelve miles from Cincinnati's Central Business District. Winton Road and Ronald Reagan Cross County Highway are the primary transportation facilities connecting the two.

Finneytown's built character reflects its period of primary growth between 1947 and the end of the 1970s. As an older post-war suburb, road and building configurations are auto-oriented, but more compact than newer, more far-flung Cincinnati suburbs such as West Chester in Butler County. The dominant land use is single family residential, with areas of retail along primary thoroughfares. Finneytown is traditionally regarded as a largely white, middle class suburb of primarily Proctor and Gamble and General Electric employees and their families, but recent demographic changes show a decreasing median income and growing proportion of Blacks.

Finneytown gets its name from Ebenezar Ward Finney, a Revolutionary War veteran and New York farmer who was the area's first permanent white settler and proprietor. The land area that became Finneytown was purchased from John Cleves Symmes by Finney's grandfather, from whom it was willed in 1795. Finney and his family moved to the area in 1798, building a farmstead near what would become the intersection of North Bend Road and Winton Road (Bean, N.D.).

What would become Winton Road was established by Native Americans and used by US soldiers traveling between Fort Washington (what would become Cincinnati) and Fort Hamilton (what would become the Hamilton) before Finney's arrival (Finneytown Local School District, 2004). The other early thoroughfare established around this time was North Bend Road. The intersection of these two roads formed the center of town in the early nineteenth century. Winton Road was not paved until 1926 (Bean, N.D.).

Finneytown's first school opened in 1800 in the basement of the New Light Church, but the first school building was not built until 1860. The school district was established in 1910. Shortly thereafter, the school district built the first brick school building, which later became Whitaker Elementary. The original 1915 structure exists, but is surrounded by multiple additions (Bean, N.D.).

The character of Finneytown changed dramatically after World War II from a small, independent town into a suburban community associated with major employers Proctor and Gamble and General Electric, as well as other firms in the Mill Creek Valley. In the first decade after WWII, student population in the school district increased 368%.

The school district responded by building a new high school, which opened in 1958 (Bean, N.D.).

Most of Finneytown's population growth occurred between the end of World War II and the end of the 1970s. Population growth stabilized in the 1980s. Finneytown's character began to change again at the turn of the twenty-first century as median income has begun to decrease and the proportion of black residents increase.

Table 5. Finneytown demographic profile

	2000	2009	Absolute Change	Percent Change
Total Population	13,492	13,687	195	1.4%
Median Age	38.5	38.9	0.4	---
% Enrolled K-12	23.5%	22.6%	---	-1.0%
% White	73.0%	65.4%	---	-7.6%
% Black	23.8%	31.5%	---	7.7%
% Asian	1.1%	1.7%	---	0.6%
% Hispanic	0.8%	0.8%	---	0.0%
Native Born	97.2%	97.0%	---	-0.2%

Sources: US Census Bureau, Census 2000 and American Community Survey, 2005-2009

According to the US Census Bureau, Finneytown's black population is growing and its white population decreasing, as a proportion of the total population, while total population is modestly increasing. Despite this modest increase in population, school enrollment is decreasing modestly.

Table 6. Demographic comparison

	Finneytown	Mason, OH	Hamilton County	United States
Total Population	13,687	29,354	851,867	301,461,533
Median Age	38.9	36.2	36.8	36.5
% Enrolled K-12	22.6%	24.4%	17.6%	17.8%
% White	65.4%	87.3%	71.3%	74.5%
% Black	31.5%	2.8%	24.2%	12.4%
% Asian	1.7%	6.6%	1.8%	4.4%
% Hispanic	0.8%	3.5%	1.9%	15.1%
% Native Born	97.0%	91.0%	96.0%	88.0%

Source: American Community Survey, 2005-2009

Comparing Finneytown's demographics to Mason, Hamilton County, and the US is helpful in understanding what is and is not different about Finneytown. Mason was chosen as a more recently developing middle class suburb to compare to Finneytown as an older suburb. As a suburb traditionally defined by young families and its school district, it is not surprising to see school enrollment is higher than the county and the

nation. Mason, the newer suburb, has higher enrollment, as a proportion of its population. Also indicative of its status as an older suburb, Finneytown's median age is a little older then the comparison areas.

Racial, ethnic, and native born statistics are all interestingly different among the different areas. While Finneytown is less white and more black than Hamilton County, it is considerably less white and vastly more black than Mason. However, Asian and Hispanic population in Mason is much higher, which may correspond with a much lower proportion of native born population.

The Finneytown local school district consists of three schools: Brent Elementary (K-2), Whitaker Elementary (3-6), and Secondary Campus (7-12). According to the representative from the Finneytown Civic Association we interviewed, a little less than half of the parents in Finneytown send their children to Catholic school, which include John Paul II Catholic School (K-8) and St. Xavier High School (9-12).

Single family residential is the most predominant land use and accounts for most of the residential land in Finneytown. Multifamily is largely limited to a few sections, namely Galbraith Pointe, Prince Frederick Townhomes, and a concentration of older apartment buildings on Cottonwood Drive. Suburban style commercial and office land uses are concentrated along Winton Road, most notably near the interchange with Ronald Reagan Cross County Highway and the intersection with North Bend Road. Brentwood Plaza, just north of the highway interchange, is the largest single commercial complex. St. Xavier High School and the Cincinnati College of Mortuary Science also occupy large tracts of land on North Bend Road east of Winton Road.

Finneytown is spatially defined by its school district, but for purposes of governmental administration, Finneytown is a neighborhood within Springfield Township. As a township, Springfield may not collect income taxes from its residents and must rely on property taxes to pay for public services. Since 2004, Springfield Township has administered its own zoning code. Before 2004, the township deferred to Hamilton County for this authority.

Finneytown's roadway pattern reflects the early post-war period in which it was developed. Roadways follow a hierarchical pattern, with semi-disconnected local residential streets leading to collector streets that connect to a limited number of thoroughfares. Ronald Reagan Cross County Highway connects Finneytown to Interstates 71 and 75. Winton Road is the primary north-south thoroughfare, connecting to secondary east-west thoroughfares of Galbraith Road and North Bend Road. Finneytown is also serviced by four bus lines operated by the Southwest Ohio Regional Transit Authority: 20, 41, 16, and 15X.

Table 7. Finneytown economic profile

	2000	2009	Percent Change
% With High School Diploma	24.0%	28.6%	4.6%
% With Bachelor's Degree	24.0%	24.8%	0.8%
% Unemployed	2.7%	4.8%	2.1%
% Families Below Poverty Line	4.3%	6.4%	2.1%
Median Household Income*	$64,416	$59,630	-7.4%

Sources: US Census Bureau, Census 2000 and American Community Survey, 2005-2009
*2000 Income Adjusted to 2009 Dollars

The proportion of Finneytown's population that has attained a high school diploma has increased in recent years, though the proportion of those holding a bachelor's degree has stayed largely the same. This may correlate with the increasing median age, as fewer school age children are living in Finneytown in recent years. Unemployment and families below the poverty line have increased comparatively dramatically, as median income has also decreased. These figures suggest socioeconomic decline in Finneytown.

Table 8. Economic comparison

	Finneytown	Mason, OH	Hamilton County	United States
% With High School Diploma	28.6%	22.1%	29.1%	29.3%
% With Bachelor's Degree	24.8%	31.4%	19.9%	17.4%
% Unemployed	4.8%	3.7%	7.3%	4.7%
% Families Below Poverty Line	6.4%	2.6%	10.4%	9.9%
Median Household Income	$59,630	$103,459	$65,081	$51,425

Source: American Community Survey, 2005-2009

Finneytown is above the county and US average for bachelor's degree attainment, but well below Mason. Finneytown's unemployment is higher, the proportion of its families living below the poverty line higher, and the median income much lower than Mason's. However, most of these statistics reflect better on Finneytown's socioeconomic status when comparing the Hamilton County and the US as a whole.

Nearly seventy-seven percent of Finneytown's housing stock was built between 1940 and 1969; about forty-five percent was built in the 1950s alone. These figures correspond to when Finneytown's population boomed the most. By comparison, less than five percent was built before 1940 and about nineteen percent was built after 1970.

Table 9. Housing stock comparison

	Finneytown	Mason, OH	Hamilton County	United States
% Vacant	4.1%	2.5%	13.1%	11.8%
% Single Family	88.0%	87.0%	62.0%	67.0%
% Multi-Family	12.0%	12.0%	37.0%	26.0%
% Mobile Homes	0.5%	1.0%	1.0%	7.0%
% Built Since 1990	11.0%	67.0%	11.0%	26.0%
% Owner-Occupied	80.5%	87.4%	62.2%	66.9%
% Renter-	19.5%	12.6%	37.8%	33.1%

Occupied				
Median Value	$138,100	$227,500	$146,100	$185,400
Median Rent	$873	$916	$632	$817

Source: American Community Survey, 2005-2009

The proportion of single family housing units in Finneytown is similar to Mason, but greater than Hamilton County and the US, reflecting these two communities' suburban character. The same can be said about Finneytown's and Mason's relatively low proportion of multifamily housing. Finneytown's proportion of rental housing is greater than Mason's, however, indicating that more of Finneytown's single family dwellings are renter-occupied. Nevertheless, Hamilton County and the US have higher proportions of rental housing, given Finneytown's and Mason's traditional suburban character.

Mason and Finneytown differ on the age of their housing stock, the majority of which in Mason was built since 1990, as compared to eleven percent in Finneytown. In this regard, Finneytown is similar to Hamilton County. Also notable is that Finneytown's median home value is the lowest of all four areas and Mason is the highest by far.

Finneytown presents itself as a suburban community like many others that were developed near mid sized and large cities in the early postwar period. That period is when population grew the most, the housing stock was largely built, and many of the roadways laid out. Perhaps coinciding with the growing age of its building stock and infrastructure, Finneytown's demographic characteristics are moving away from those traditionally associated with white, middle class suburbs and are becoming more like those of the city of Cincinnati. The characteristics that once defined Finneytown as a middle class suburb have been shifting to suburbs further from the core, such as Mason in Butler County.

Forest Park Area community profile

A significant suburban hot spot has formed and grown since 2000. It is located in north-central Hamilton County and traverses three different communities' boundaries - the City of Forest Park, Springfield Township and Colerain Township. Forest Park is a community with both single-family detached and multi-family attached housing. In its southwest corner Forest Park housing consists of two drives containing mid-rise apartment complexes. The nearby Ashley Woods Apartments is a multi-building apartment complex with a high percentage of voucher residents. Sevenhills, just to the east of Ashley Woods in Springfield Township, consists of single-family detached homes as well as some attached housing, and contains a high number of voucher residents. The three housing areas feed into Hamilton Avenue and Waycross Road and exist at the periphery of their respective municipalities. In fact, the entrance to the Ashley Woods complex is technically in Springfield Township. Note Figure 7 below which identifies Ashley Woods and Sevenhills in relation to Forest Park, Colerain Township and Springfield Township.

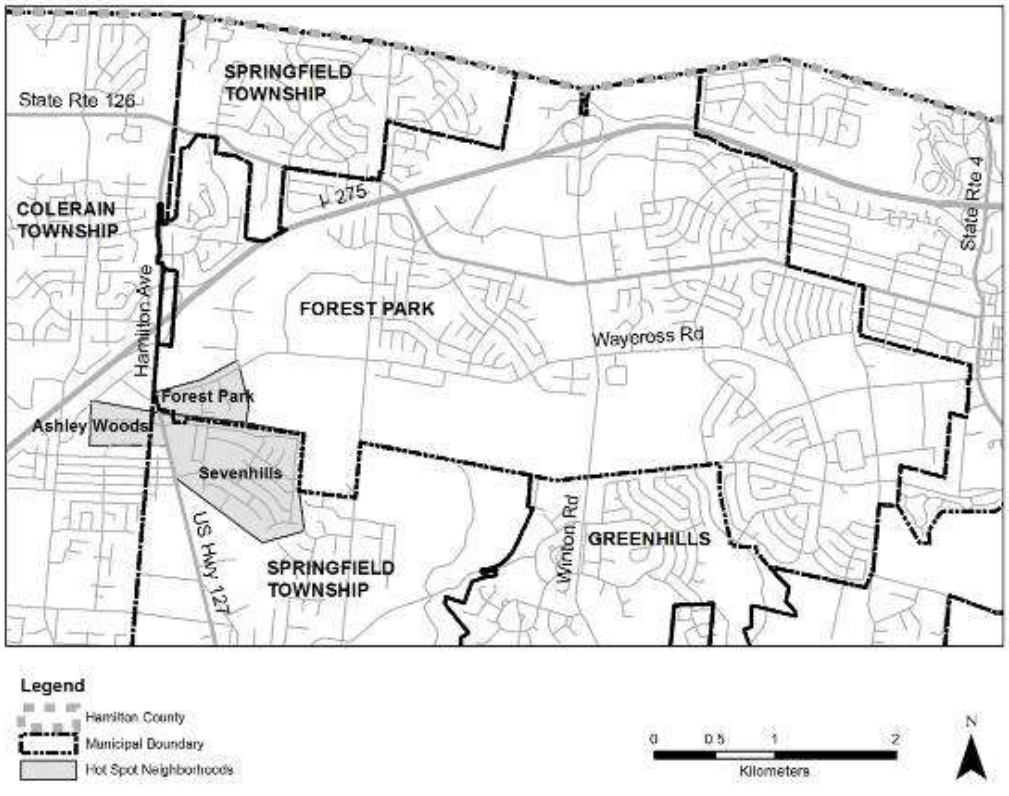

Figure 7. Map of the Forest Park area hot spot sub-neighborhoods

These three communities, and the portion of this hot spot contained within each, contain a variety of different housing types, but are experiencing some of the same demographic and population shifts. The following section first examines in more detail the historical and demographic backgrounds of these sub-communities, with an emphasis on Forest Park. It then continues with a quantitative analysis of Housing Choice Voucher distribution in the area, including changes in the number of voucher households within the hot spot, and a closer look at the progression of the hot spot since the year 2000. This hot spot exemplifies the fact that such clusters do not always respect municipal boundaries, but instead may grow around important commercial corridors or transportation nodes. The quantitative analysis will also go outside the hot spot boundary to examine voucher household numbers and density in the City of Forest Park overall. There are two reasons for an expansion of the study area to include Forest Park. First, it is a city that has experienced a significant increase in voucher households since 2005 on its eastern half, away from the hot spot location. Second, Forest Park offers an interesting history of post-World War II development into a diverse middle-class suburb. Finally, as a city Forest Park likely has greater capacity than either Colerain or Springfield Townships to respond to housing, social and economic issues. Photo images of housing in Forest Park and the area of the hot spot will also be provided throughout this chapter.

The City Forest Park is located about 14 miles north of downtown Cincinnati, connected to the greater metropolitan area by Interstate 275, which encircles Cincinnati. Today the city is governed by a city council and administered by a city manager. It has its own police and fire departments, and has a Community Development department which oversees planning and zoning, among other things. The city is divided between two local school districts - Winton Woods and Northwest (City of Forest Park, 2011).

The land which is now Forest Park was originally designed to be the greenbelt portion of a new Federally-funded greenbelt town, Greenhills, formed to the south on agricultural land (Miller, 1981). After congress passed legislation in 1949 authorizing the sale of Greenhills and other greenbelt towns around the US, the town was sold. Its greenbelt, now called North Greenhills, was bought in 1954 by developer Warner-Kanter. Zoning changes were approved to allow development and the name of the area was changed from North Greenhills to Forest Park (Miller, 1981).

Forest Park was planned by its developer from its inception to be a true community occupied by active residents involved in cohesive leisure and civic activities. The developer's target buyer was an upwardly mobile post-World War II middle class white collar worker. As a comprehensively planned community, Forest Park went through several design iterations in the 1950s and 1960s, navigating the dynamic of sometimes conflicting desires of the developer, the residents, and the civic associations and municipal government. Initially, the development was more concerned with the balance of residential, commercial and industrial than creating a socio-economic or racial balance. Additionally, despite being comprehensively planned, Forest Park was built by subdivision, and each subdivision was fairly homogenous in terms of housing price and age. Forest Park continued to grow and in 1961 was incorporated as a village. Soon after, in 1968, it reached city status (Miller, 1981).

While Forest Park began as a largely white community, between 1960 and 1970 the percentage of residents living in Forest Park who were black rose from 0.5% to 2.8%. In 1973, in response to claims of realtor's "steering" blacks to specific city

neighborhoods and whites to others, city council declared its commitment to fair housing practices. During the 1970s as the black population continued to increase in all Forest Park neighborhoods, issues of uneven integration and fears of blight became prevalent. By 1975 the black population had reached about 12% of total. Residents voiced opposition to multi-family housing and public housing, and support for larger lot sizes to accommodate more expensive homes. Public worries were expressed that blighted areas would lead to a concentrated influx of black residents and the formation of black ghettos. But during this time of change the community also recognized the right of any individual to choose to live where they pleased, and avoided setting quotas or seeking to implicitly segregate incoming populations (Miller, 1981). Figures 8 and 9 present photographs showing Forest Park residences. These are examples of typical single-family housing in central Forest Park.

Figure 8. Typical single family detached housing, along Waycross Road in Forest Park.

Figure 9. Typical single-family attached housing, Waycross Rd. in Forest Park

Forest Park is currently a city of 18,720 people. Prior to the 2010 decennial census, the city was the 3rd-largest city in Hamilton County (City of Forest Park, 2011). Forest Park's population, however, contracted by 3.8% between 2000 and 2010, shifting it from 3rd-largest city in Hamilton County down to 5th-largest. If county townships are included in the comparison, Forest Park is the 9th-largest city or township in Hamilton County, by population (US Census Bureau, 2011). Figures 10 and 11 show a multi-family apartment development in Forest Park, a development containing some voucher residents but not part of a hot spot. Figure 12 is an example of a street containing relatively large single family homes in Forest Park.

Figure 10. Low-rise multi-family apartment complex, Northland Village on Waycross Road

Figure 11. Private back patios and common yard at Northland Village on Waycross Road

Forest Park is a racially changing community. Census results suggest it has in fact become a predominately black community. In 2010 it was 24.9% white and 65% black. Between 2000 and 2010 the black population increased by 8.7%, while the white

population decreased by 11.8%. The Hispanic population increased between 2000 and 2010, from 1.5% of total population to 6.4% of total. Forest Park is also an aging community, with its median age increasing by from 33.9 to 35.8 between 2000 and 2010. Not surprisingly (considering the housing climate nationally and in Ohio) the number of vacant housing units in Forest Park increased by 5.1% between 2000 and 2010, even as the total number of housing units increased 1.4% (US Census Bureau, 2011).

Figure 12. Larger single family detached homes along a Forest Park street

Forest Park is characterized by residential districts, commercial corridors and a greenbelt, but is currently in a period of transition as new business opportunities and developments choose to locate in other places further out from Cincinnati. The community is almost completely built-out, and lacks prime developable land. The City's most recent redevelopment plan calls for a renewed focus on making vacant and underused sites more attractive for redevelopment, and the creation of individualized growth and improvement strategies for distinct districts (City of Forest Park, 2007).

The population changes that Forest Park is undergoing are mirrored in the Sevenhills neighborhood in adjoing Springfield Township. The statistics which follow incorporate not only the portion of Springfield Township within the I-275/Hamilton Avenue hot spot, but all of Springfield Township. It would have been difficult to isolate and analyze only the small portion within the hot spot, and allows for an "apples-to-apples" comparison of data from this jurisdiction with the city-wide Forest Park data already presented. The total population in Springfield Township in 2010 was 36,319, down 3.4% from 2000. The percentage white population also decreased by 11.4% between 2000 and 2010 to 55.7%, while the black population increased by 10% to 39.9%.

The Hispanic population doubled from 0.9% to 1.8%. The vacancy rate doubled as well, from 3.4% of total housing units to 6.9% (US Census Bureau, 2011).

Figure 13. Sevenhills neighborhood in Springfield Township, part of primary HCV hot spot

Springfield Township considers itself a collection of neighborhoods, and according to key informants its residents tend to identify themselves with these neighborhoods more strongly than with the township. Furthermore, Springfield Township is divided between four different school districts – Finneytown, Winton Woods, Mount Healthy and Princeton. Finneytown, an area on the southern edge of the township, is technically a school district. Yet when asked where they are from, its residents would likely claim Finneytown as their neighborhood or place of residence. It is in fact a US Census Designated Place. The Sevenhills neighborhood of Springfield Township is located in the Winton Woods Local School District in the northwest corner of the township, and the problems and issue occupying Sevenhills residents are likely not of concern to Finneytown residents (and vice versa).

The primary land use in Springfield Township is single family residential. Figure 13 shows small brick single family homes typical of the Sevenhills neighborhood. The housing stock in the Sevenhills neighborhood is predominately single family homes on small lots, and the area is seen by key informants as one in transition due to the age of the stock and a lack of investment, both factors leading to affordable housing prices attractive to moderate income families seeking to move from neighborhoods closer to the city center. Additionally, the commercial sector along Hamilton Avenue, marked by vacant and underutilized storefronts, fast food restaurants and small retailers is considered to be "in distress" (see Figure 14). The Township vision for the neighborhood includes revitalization of existing stores and homes, as well as the encouragement of light

industrial and office development in about half of the existing residential neighborhood (Springfield Township, 2011).

Figure 14. Hamilton Avenue Commercial District near Sevenhills neighborhood

Ashley Woods Apartments (Colerain Township)

Now we turn to the third sub-area, Ashley Woods Apartments in Colerain Township. The latter has a higher population than either Springfield Township or Forest Park. While its population declined between 2000 and 2010, the decrease was only 2.7%, less than in the other two communities. It has a higher proportion of white residents as well, although that is changing. Between 2000 and 2010 the proportion of whites in Colerain Township decreased by 8.9% to 78.9%, while the black population increased by 7.3% to 16.7% (US Census Bureau, 2011).

Figure 15: Ashley Woods Apartments

At the eastern edge of Colerain Township and where the southwestern corner of Forest Park meets the northwestern corner of Springfield Township is Ashley Woods Apartments (Figure 15). This gated, 352-unit complex, containing both townhomes and apartment units, provides amenities and is surrounded by woods and natural growth (Varady et al. 2010; Ashley Woods Apartments, 2011). Tthe gate remains open at all times, and there is no monitoring of who comes and goes. This development contains a high proportion of Housing Choice Voucher residents, making it a particularly interesting case of many voucher holders in a clustered area. Although Ashley Woods is under the jurisdiction of the Colerain Township Police Department, and within a primarily Colerain Township school district, its close physical proximity to both Forest Park and Springfield Township make this complex of interest to them.

Spatial analysis of voucher holder distribution: Finneytown area

Within Finneytown, we analyzed voucher holder distribution as dots and density, focusing on the following sub areas: Galbraith Pointe, Cottonwood Drive, North Hill Lane, and Glencoe. Spatial analysis of voucher holder locations within these sub areas is complemented by photographs from the April 2, 2012 windshield survey.

Figures 16, 17, and 18 display voucher holder dot distribution within the Finneytown school district in 2000, 2005, and 2011. For the 2000 and 2005 time periods, we used voucher holder location dot shapefiles produced for an earlier study (Varady et al. 2010). For the 2011 time period, we collected a table of voucher holder locations from CMHA in December of 2011, which we geocoded by address.

In 2000, seventy-seven voucher holders lived within Finneytown. In 2005, that number increased to 130, reflecting the overall increase throughout Hamilton County. In 2011, the number of vouchers increased comparatively modestly, to 153. Galbraith Pointe has accounted for a significant proportion of Finneytown's vouchers throughout all three periods. A considerable number of voucher holders also located in Glencoe, just outside the Finneytown boundary but within Springfield Township, between 2000 and 2005. Those voucher holders do not contribute to the Finneytown total.

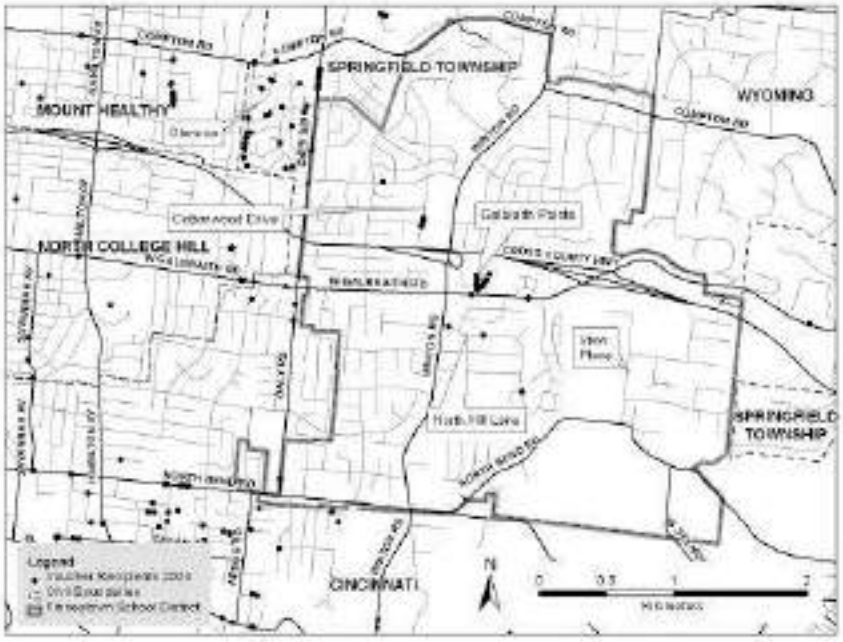

Figure 16. Dot map of 2000 voucher holders within Finneytown

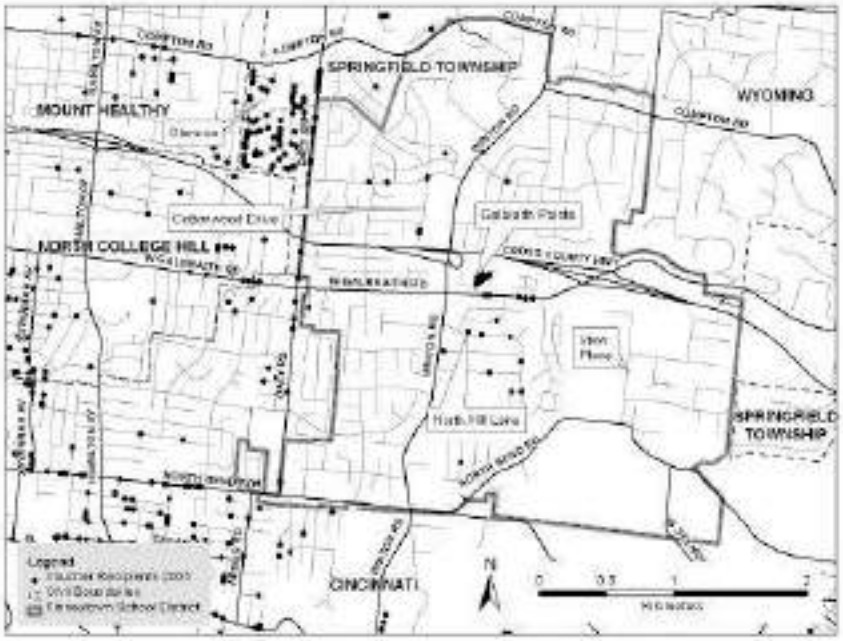

Figure 17. Dot map of 2005 voucher holders within Finneytown

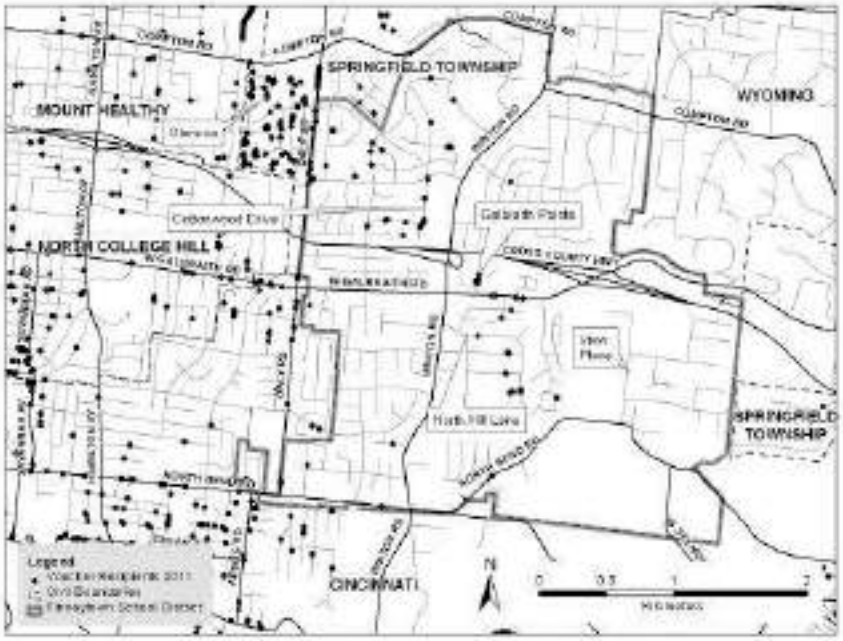

Figure 18. Dot map of 2011 voucher holders within Finneytown

After analyzing the dot distribution of vouchers throughout Finneytown, we displayed the voucher density raster layers created for all three time periods at the county-wide level. Figures 19, 20, and 21 show voucher density within Finneytown.

The voucher density analysis shows Galbraith Pointe at the center of the highest concentration of vouchers in Finneytown for all three time periods. Glencoe, just outside the Finneytown boundary, appeared as a voucher holder concentration in 2005 and 2011. The rest of Finneytown's voucher holders are dispersed enough to remain at the lowest density level.

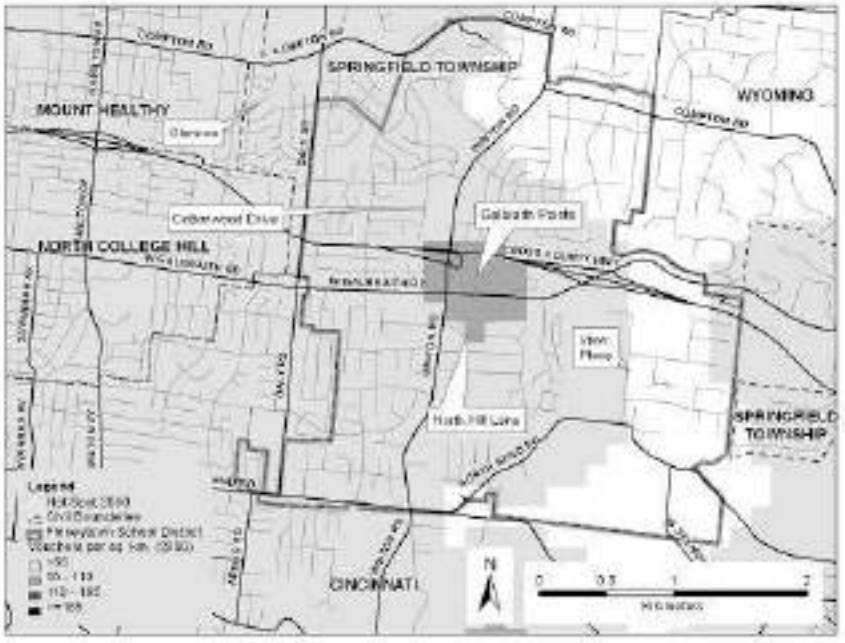

Figure 19. Raster density map of 2000 voucher holders within Finneytown

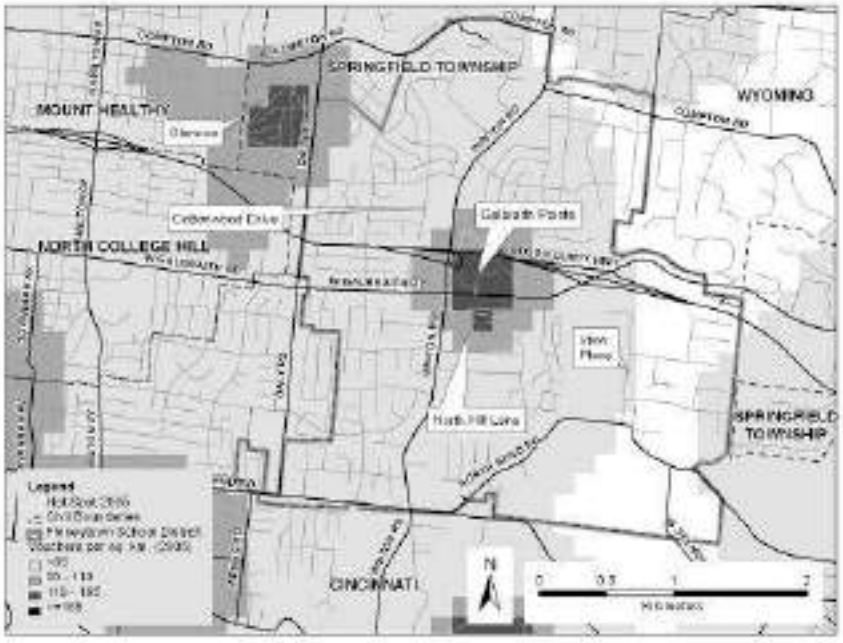

Figure 20. Raster density map of 2005 voucher holders within Finneytown

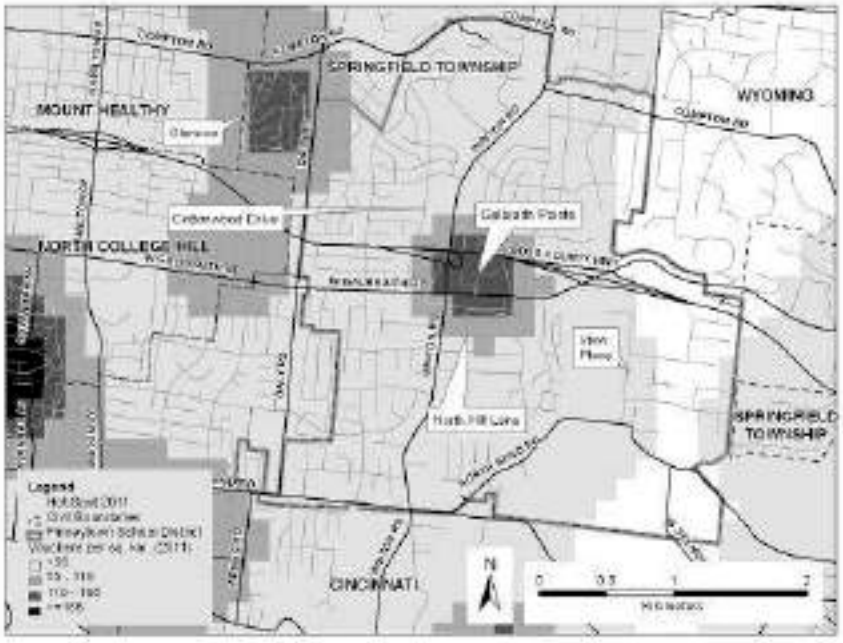

Figure 21. Raster density map of 2011 voucher holders within Finneytown

Galbraith Pointe is an apartment complex built in the mid-1990s and financed by the Low Income Housing Tax Credit. The number of voucher holders at Galbraith Pointe increased dramatically between 2000 and 2005, but decreased marginally between 2005 and 2011. In 2000 there were 55 vouchers; in 2005 there were 91; and in 2012 there were 88. Voucher holders account for the majority of this complex's residents.

In 2000, Galbraith Pointe's highest density was 86 vouchers per square kilometer; in 2005 it was 144, and in 2011, it was 139. In 2005 and 2011, Galbraith Pointe met the criteria of a hot spot.

Figure 22. Galbraith Pointe LIHTC apartment complex

Cottonwood Drive south of Hempstead Drive runs parallel to and exists behind the Brentwood Plaza Shopping Center, which faces Winton Road. The majority of the housing on this street is composed of apartment buildings, though there are a few single family houses. There are 29 apartment buildings and three single family houses that front this leg of Cottonwood Drive. In 2000, there were 8 vouchers; in 2005 there were 7; and in 2011 there were 10. At its highest proportion, in 2011, this accounted for an average of only one voucher for every three apartment buildings.

Vouchers are not evenly distributed along the street, however. In 2000, the vouchers were all located near the intersection with Thunderbird Ave. This pattern persisted in the two latter time periods, though vouchers appeared near the corner of Hempstead Drive in those two latter periods. Nevertheless, the relatively low number of

vouchers seems to belie the stereotype that the area has earned as a voucher neighborhood.

Figure 23. Apartment buildings along Cottonwood Drive near Thunderbird Ave

The North Hill Lane neighborhood stands out as one of a couple Finneytown neighborhoods with some voucher holder residents. This neighborhood includes Congresswood Lane, North Hill Lane, Denier Place, Finney Trail, and the smaller streets that stem from those streets. In 2000 there were 4 vouchers; in 2005 there were 9; and in 2011 there were 11. Locations within the North Hill Lane neighborhood appear to have changed in all three time periods and in no time period do they appear to be clustered within one section of the neighborhood.

Figure 24. Single family rental on North Hill Lane

The Glencoe neighborhood exists just beyond Finneytown's boundary, but within Springfield Township. It is roughly bound by Daly Road to the east, Compton Road to the north, and the Springfield Township boundary to the west and south. It is characterized by smaller single family homes in a suburban setting. In 2000 there were 28 voucher holders in Glencoe, in 2005 there were 82, and in 2011 there were 88. In all three time periods, vouchers were fairly evenly distributed within this neighborhood.

In 2000, Glencoe's highest density was 51 vouchers per square kilometer; in 2005 it was 130, and in 2011 it was 133. In 2005 and 2011, Glencoe met the criteria of a hot spot.

Figure 25. Single family homes in Glencoe

To summarize the results for the Finneytown area, Galbraith Pointe and Glencoe represent the highest concentrations of voucher holders within and directly adjacent to Finneytown; these concentrations increased substantially between 2000 and 2005, which is when the number of vouchers in Hamilton County doubled; and North Hill Lane and Cottonwood Drive represent comparatively low concentrations of voucher holders in all three time periods.

The Forest Park Area Hot Spot

The three dot maps below (Figures 26, 27 and 28) show Housing Choice Voucher household locations within the I-275/Hamilton Avenue hot spot and adjoining areas; that is, the entire City of Forest Park and parts of neighboring townships and municipalities. The maps represent data from the years 2000, 2005 and 2011. The dot maps indicate that the City of Forest Park experienced an overall increase in voucher families between 2000 and 2005. Additionally, a statistically significant hot spot appeared in part of Forest Park between 2000 and 2005 and thus was noted in the Varady *et al.* 2010 article. As previously mentioned, Forest Park forms only a portion of this hot spot, sharing it with the adjacent communities of Colerain Township and Springfield Township.

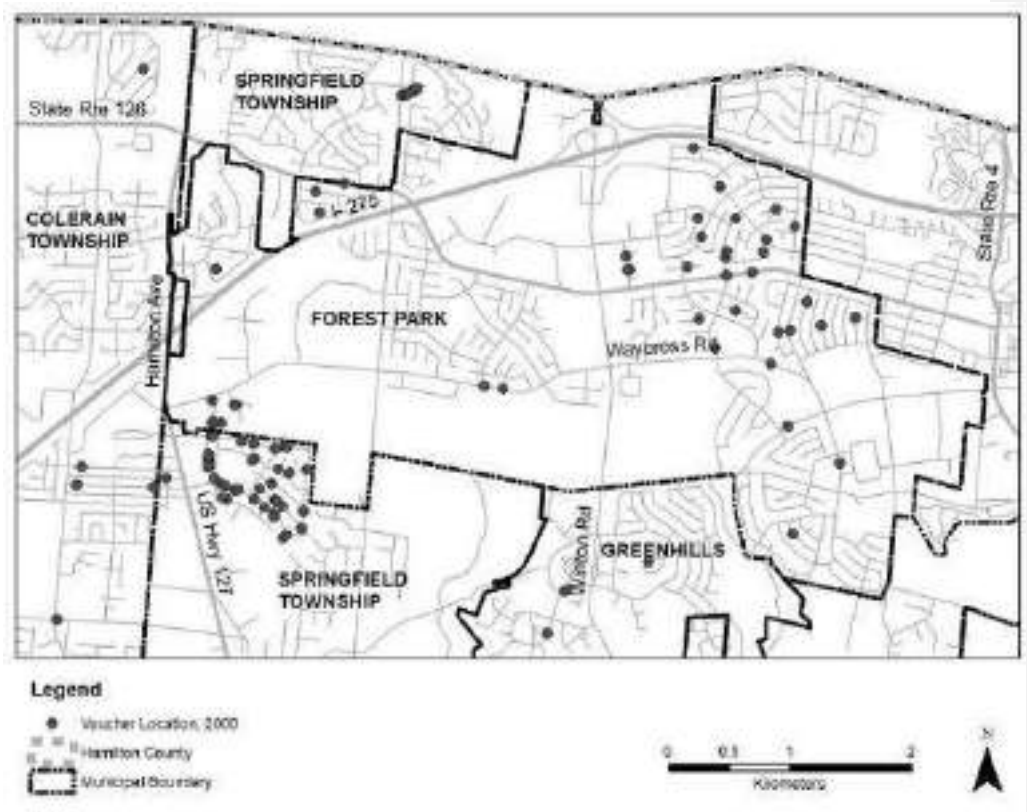

Figure 26. HCV Households in I-275/Hamilton Avenue hot spot and Forest Park, 2000

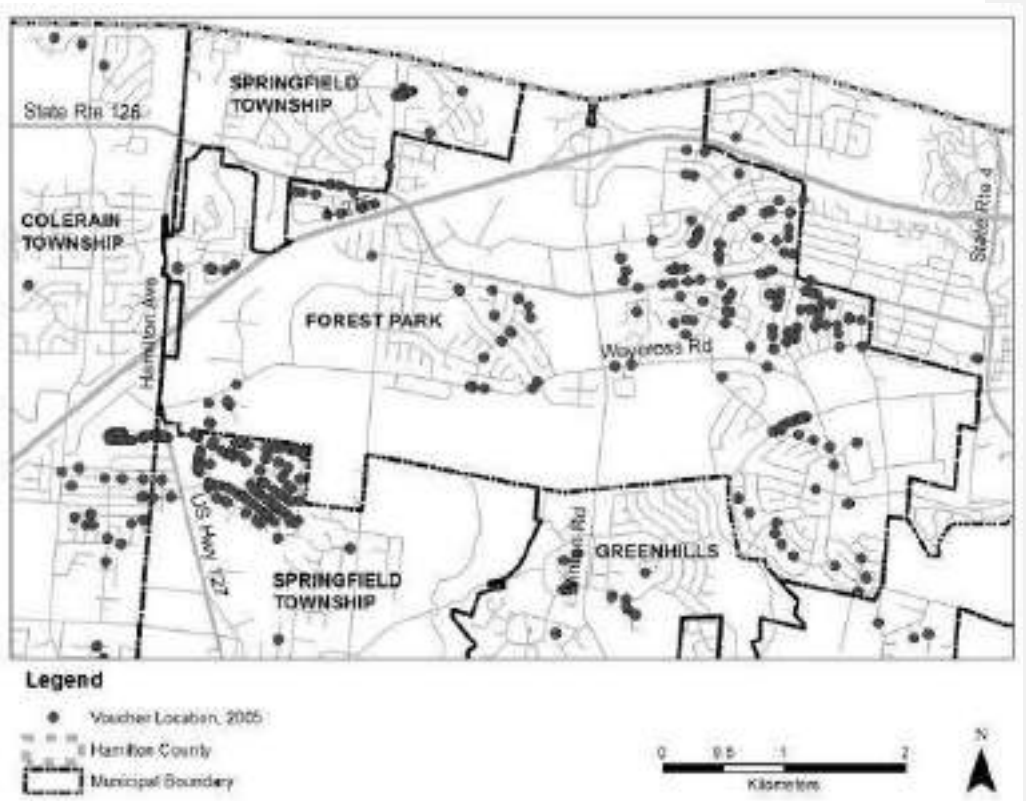

Figure 27. HCV Households in I-275/Hamilton Avenue hot spot and Forest Park, 2005

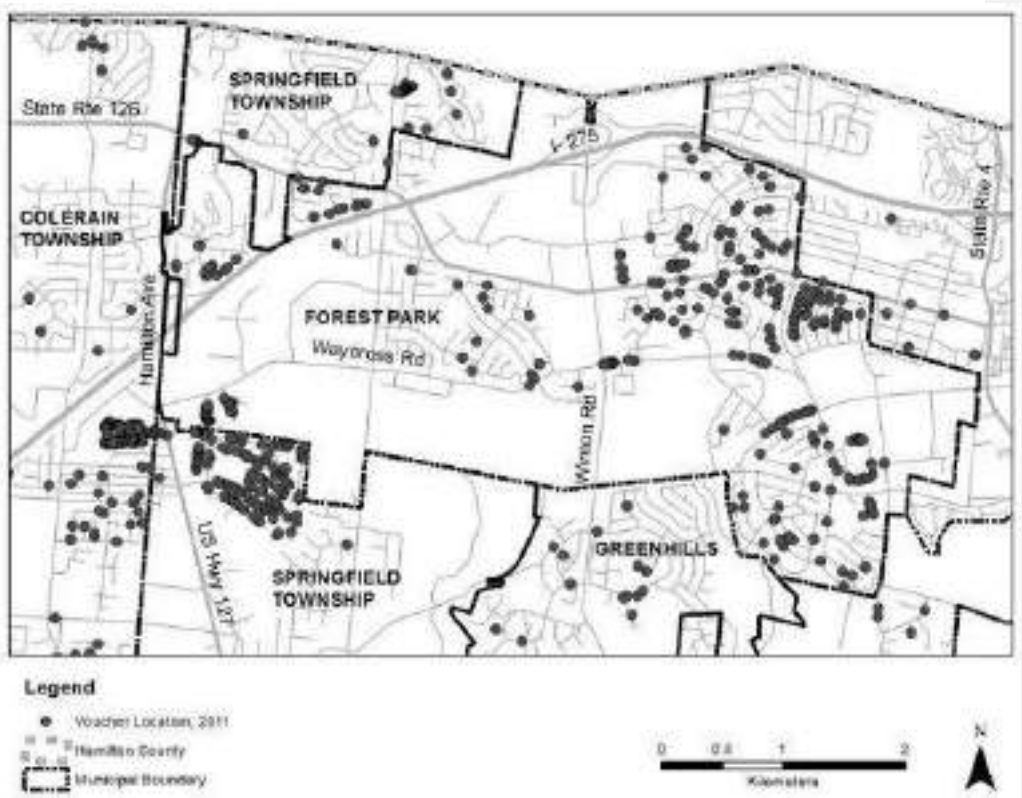

Figure 28: HCV Households in I-275/Hamilton Avenue hot spot and Forest Park, 2011

Figures 26, 27 and 28 show a steady increase in the number of HCV households in specific areas. First, the Ashley Woods development goes from no HCV households in 2000 to what appears to be a concentration of them in 2000 and perhaps an even denser concentration in 2011.

Table 10: Voucher households in study area

	2000	2005	2011	% Change, 2000 to 2005	%Change, 2005 to 2011
HCV Households					
Forest Park (Portion)	19	27	93	42%	244%
Ashley Woods	0	195	215	n/a	10%
Sevenhills	46	122	136	165%	11%
Total Within Hot Spot	65	344	444	429%	29%

Specifically, there were 195 HCV households in the development in 2005 and 215 HCV households in 2011. The Sevenhills neighborhood also shows what appears to be a steady increase between 2000 and 2011. In 2000 there were 46 HCV households, in 2005

there were 122, and in 2011 there were 136 HCV households in the Sevenhills neighborhood. In the southwest corner of Forest Park it is more difficult to see to what degree the number of vouchers has increased, but a count of vouchers in that area reveals a slight increase, from 19 to 27, between 2000 and 2005, followed by a large increase, to 93, between 2005 and 2011. Further study of the type of housing at these locations (single-family vs. multi-family), along with a hot spot analysis, will reveal the level of clustering here.

After a sharp increase in voucher households between 2000 and 2005, it appears that Sevenhills' HCV population has roughly stabilized. Ashley Woods saw a slight increase between 2005 and 2011 as well, and 61% of its units are now occupied with HCV households. Overall in Forest Park, it is apparent that the number of voucher households has increased, especially between 2000 and 2005, and especially in the eastern and south-eastern areas of the city. Between 2000 and 2011 the number of vouchers in total within Forest Park increased more than 600%. The total number of vouchers within the City of Forest Park rose from 57 to 253 between 2000 and 2005. The number rose again to 446 between 2005 and 2011. Forest Park overall saw a 76% increase in voucher households between 2005 and 2011, compared to a 48% increase within the I-275/Hamilton Avenue hot spot neighborhoods.

The previous section used numerical data to track the growth in voucher households of a suburban area of Hamilton County where a statistically significant hot spot was detected in a previous study. A density analysis of that area adds to this study by revealing whether and to what degree the hot spot has changed since 2005, and by showing additional areas in Forest Park that have seen densification. Figures 29, 30 and 31 show HCV household density and hot spot locations for the years 2000, 2005 and 2011. This density analysis was conducted using the same method and parameters as the previous county-wide analysis, and is in fact a result of that larger analysis, simply zoomed in to a larger scale.

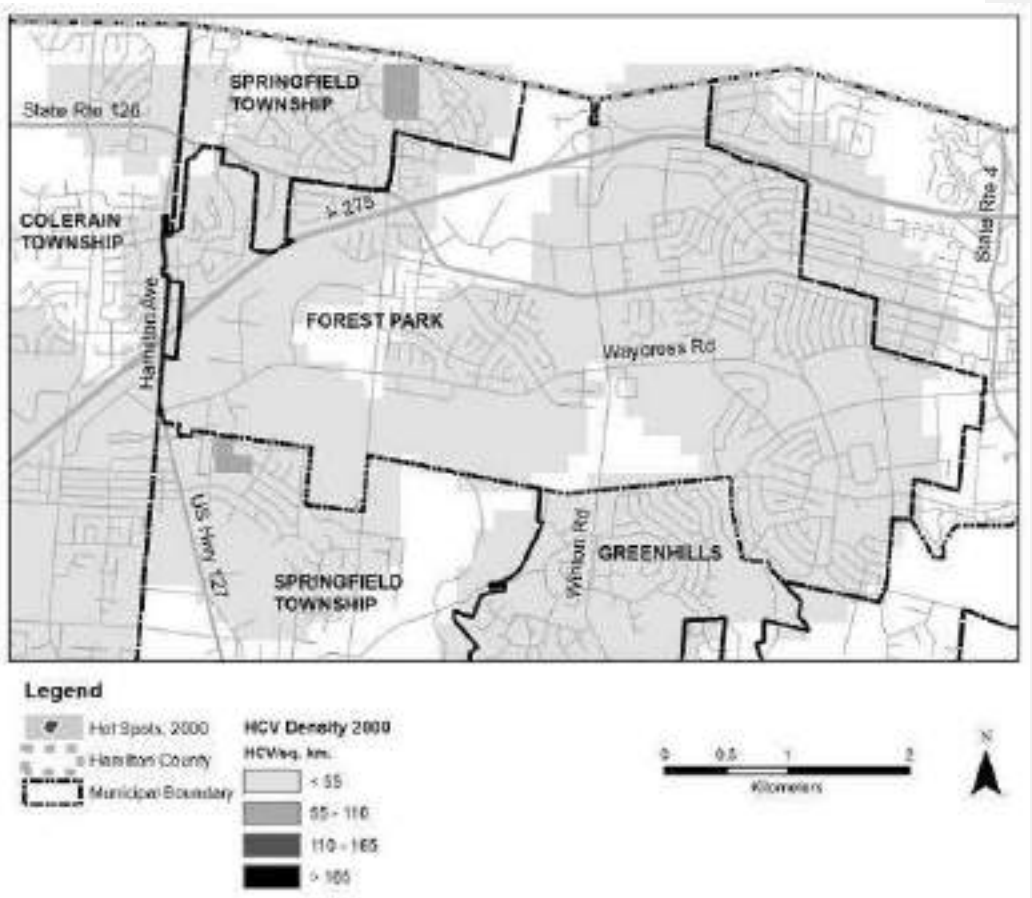

Figure 29. HCV Hot Spots in Forest Park Study Area, 2000

In 2000 much of Forest Park is at a density of less than 55 household units per sq. km. The area which will later become a hot spot shows only a small area with density higher, in the Sevenhills neighborhood. No hot spots are present in the area, but the precursor to a hot spot is visible.

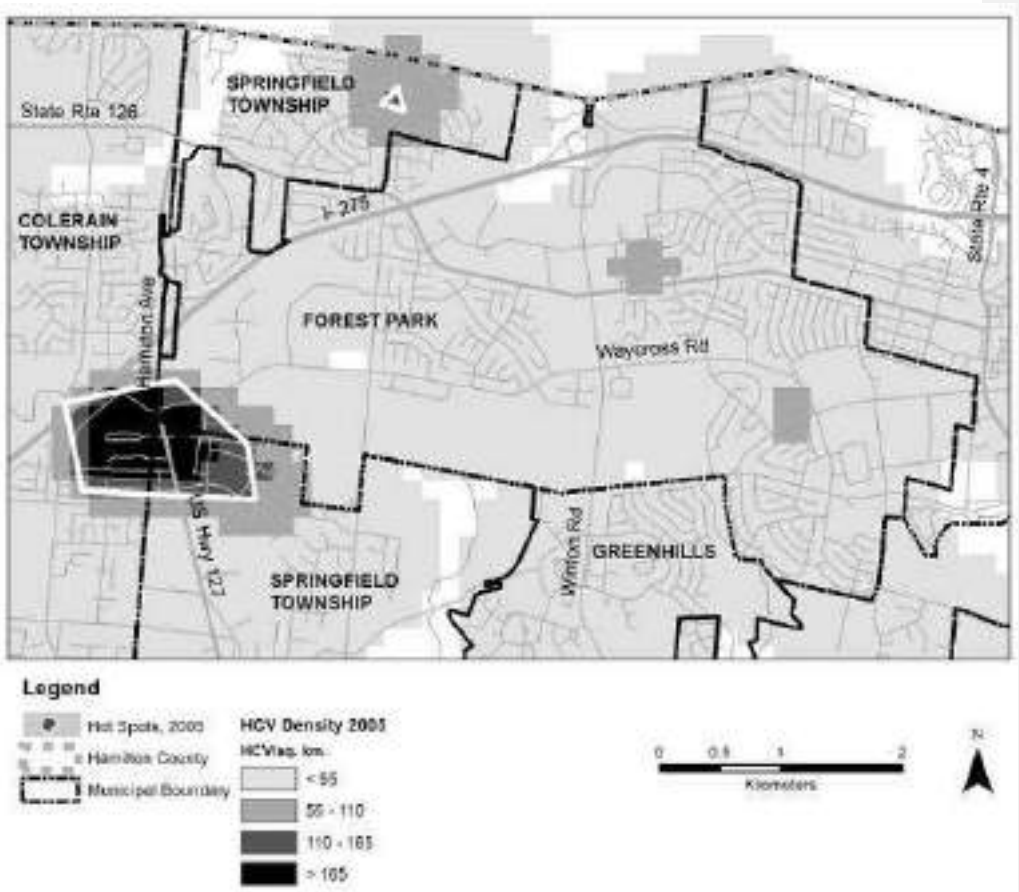

Figure 30. HCV Hot Spots in Forest Park Study Area, 2005

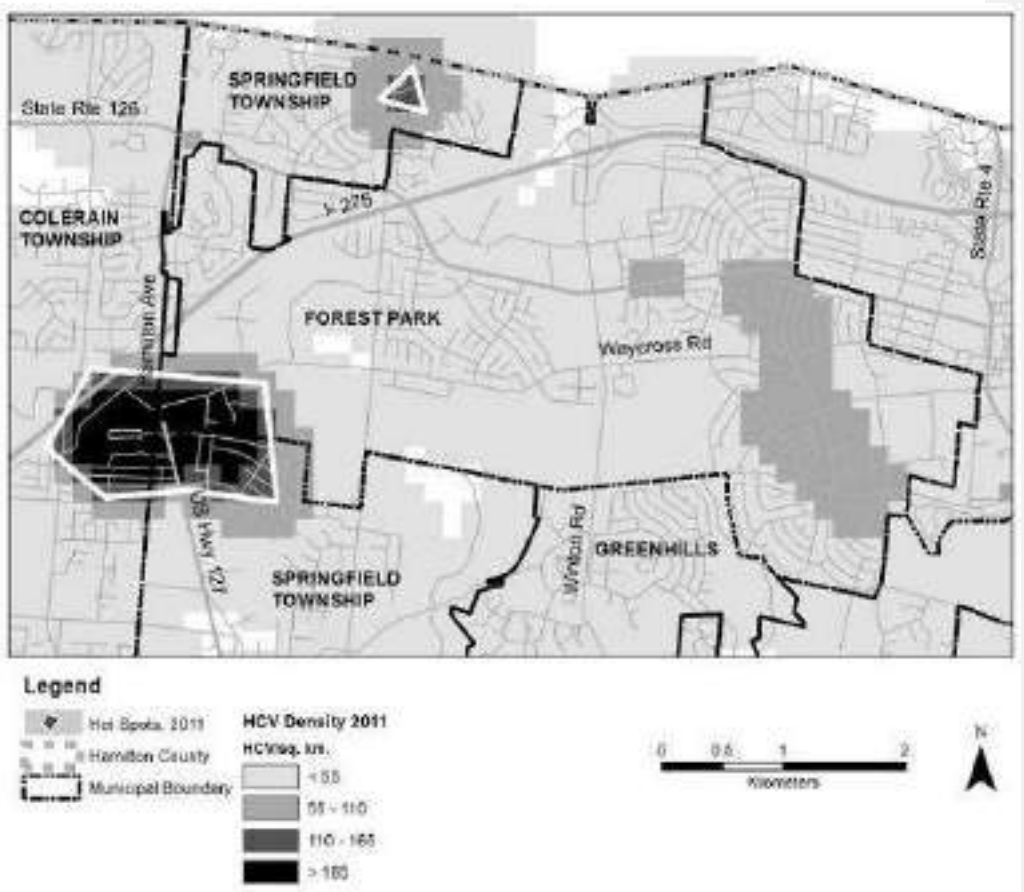

Figure 31. HCV Hot Spots in Forest Park Study Area, 2011

The change between 2000 and 2005 is dramatic. In 2005 there was a large area with a density of more than 165 HCV households per sq. km. This sharp increase came in large part from an increase in voucher households at Ashley Woods Apartments (Colerain Township). The Sevenhills neighborhood also experienced an increase in HCV density in 2005, in an area of the neighborhood of predominately single-family attached housing. An area north of Forest Park has also become a small hot spot zone. This small hot spot is in a small separated section of Springfield Township. It formed in 2005 and increased in size slightly between 2005 and 2011. In addition to a growing concentration in its southwest corner, Forest Park began to see some increasing HCV household density in two locations on its eastern side. Because of the distance between these areas and the hot spot, it is unlikely that the growth of the hot spot has induced the increase in voucher density in eastern Forest Park.

Between 2005 and 2011 the changes in HCV density throughout Forest Park, as well as within the I-275/Hamilton Avenue hot spot, were not as drastic as they were between 2000 and 2005. The hot spot has grown in area, now encompassing more of

Sevenhills, specifically areas of single-family detached housing. It also includes new areas of southwest Forest Park.

The Forest Park portion of the I-275/Hamilton Avenue hot spot consists of low- to mid-rise apartment buildings along two separate streets, shown in Figures 32 and 33 below. Two separate drives, Quailridge and Quailwood, lead off of Waycross Road and provide access to several separate apartment complexes, from one to three stories tall. Quailridge Drive is predominately brick three-story multi-family apartment buildings. At the end of a series of dead-end drives is a low-rise apartment complex with separate unit entrances. All of these structures and the yards surrounding them were in good condition during our windshield survey, reflecting responsible upkeep and maintenance. Quailwood Drive (Figure 33) was comprised of low-rise apartment buildings with common mailbox structures and private patios. The low-rise structures are unusual in the area, but due to time limitations I was unable to further investigate the development history of these complexes. Note in Figure 33 (right) the children's toys and games in the yard outside the private patio, signifying the presence of families here.

Figure32. Apartment buildings on Quailridge Dr. in Forest Park, part of HCV hot spot

Figure 33. Apartment buildings on Quailwood Dr. in Forest Park, part of HCV hot spot

Ashley Woods Apartments are of a similar form, but the complex also includes a centralized recreational and rental office facility. Figure 34 is a view of the gated entrance to Ashley Woods Apartments. There are security measures in place, such as a card scanner console and separate vehicle and pedestrian entrances, but the gate is no longer in operation.

Figure 34. Ashley Woods Apartments, “gated” main entrance

Figure 35. Ashley Woods Apartments, a gated complex and part of the HCV hot spot

Figure 35 shows the type of buildings within the Ashley Woods Apartments complex, part of the hot spot within Colerain Township. Housing types include both apartment-style (upper-right) and townhouse-style (upper-left). Also prevalent in the complex were posted signs governing acceptable behavior. The sign in Figure 35 (lower-left) reads in part "This property is protected and enforced by a curfew of 10:00pm daily for any persons under 18 years of age. This curfew is strictly enforced by law enforcement personnel." Ashley Woods Apartments overall is characterized by multi-family apartment buildings, limited access streets, fairly high quality construction, professional upkeep of the properties and rules in place to govern resident behavior[1]. A single Southwest Ohio Regional Transit Authority (SORTA) bus line, the #17, serves the Ashley Woods and Sevenhills neighborhoods. This route starts in downtown Cincinnati and terminates in a loop through Sevenhills. During weekdays the route runs every 30 to 80 minutes depending on time of day, until about 9pm, and during weekends runs even less frequently. Nevertheless, it is an important link to employment centers in Uptown and Downtown Cincinnati.

[1] It is unclear whether the curfew and rules signage was installed originally or as a response to problems. This is something we would have investigated if we had had additional time.

Figure 36. Sevenhills neighborhood in Springfield Township, part of HCV hot spot

In the Sevenhills neighborhood of Springfield Township, the hot spot encompasses an area of predominately detached single-family homes, along with some attached housing near the main thoroughfare of Hamilton Avenue. Figure 36 displays photos from the Sevenhills neighborhood. The picture at top left is of attached single-family housing in the part of the neighborhood closest to Hamilton Avenue. The other three homes shown in Figure 36, located in Sevenhills further east of Hamilton Avenue, are notable for several reasons. First, landscaping on these homes is minimal, with long grass and no flower beds. Second, these homes exemplifiy the generally small size of the homes in Sevenhills. Third, the driveway and yard of the home shown at top-right are cluttered with lawn chairs, a grill and an infant stroller. Complaints about upkeep conditions such as these were commonly heard during informant interviews. Despite landscaping and maintenance deficiencies, the homes themselves appear to be of solid and lasting masonry construction.

Other areas of Forest Park bear mentioning because, while not defined as hot spots, they do contain increasing concentrations of HCV households, particularly in eastern Forest Park. This area of densification has united two previously observed areas of increased density into a single density “corridor” along Waycross Rd. and Kenn Rd. This corridor is not part of the hot spot. It is possible in the future that this area will become a hot spot of its own.

Figure 37 is representative of housing in the southeast region of Forest Park where the voucher population has gradually densified over the last 10 years. Forest Park Apartments is a fairly well maintained project, with a portion of the land in the area developed and other areas still sitting vacant. Access to the complex is limited to three streets, none of which can be considered a thru-street or useful for non-residents. This apartment complex is similar to those seen on Quailridge Drive in terms of style of housing and limited access. In fact, Forest Park Apartments contained 25 voucher holders in 2011, compared to 68 along Quailridge Drive and 25 along Quailwood Drive. There are several factors which may be preventing Forest Park Apartments from becoming a hot spot, including the lack of dense HCV households surrounding the complex, better management, or higher average rents which allow for a more selective process for choosing tenants. Eastern Forest Park HCV households are generally fairly spread out.

Figure 37. Forest Park Apartments, low-rise complex containing voucher residents

Figure 38 shows the small detached housing in eastern Forest Park, an area that has experienced an increase in voucher residents since the year 2000. As in Sevenhills, all four homes shown are of partial or completely brick construction and of similar size, but two of them appear occupied and well-maintained, while the other two appear vacant and less well-maintained. Note the “For Sale” sign in the yard of the home shown top-left. Also note the open-air car port on the home at lower-right, typical of homes in Forest Park and Sevenhills. This layout is typical of homes built in the 1950s and 1960s that are considered ‘downmarket’ today. The home shown in the upper-right photo likely used to have a car port, but it was converted to living space. The generally good conditions show that neighborhoods from this time period (e.g. with “slab-on-grade” houses) do not necessarily deteriorate simply because the homes do not have the latest amenities.

Figure 38. Small single family detached homes along a Forest Park street with many vouchers

Figure 39. Small single family homes on Ramondi Pl. and Rangoon Ct. in north Forest Park

While the homes shown in Figure 39 may or may not be voucher households, this area in northwestern Forest Park, north of I-275, has experienced an overall increase in HCV residents since 2000, starting with one, then eight in 2005 and 14 in 2011. The neighborhood seems to be better maintained than neighborhoods in eastern Forest Park, even though the housing stock is similar in construction and size. There is no obvious reason why this is the case.

Figure 40. Street with no vouchers in Sevenhills neighborhood in Springfield Township

Figure 40 above shows two homes along a street on the eastern end of Sevenhills which has few vouchers, and these two homes are not occupied by voucher holders. The home on the left is well-maintained and landscaped, with a carport. The home on the right is similar, but note the for-sale sign in the yard. Because of the proximity of this street to other streets with more vouchers, homes along it are likely at higher risk of becoming voucher rental properties. The "for sale" sign signals that this home is undergoing a transition in occupancy, and if a buyer is not found or the buyer is an investor, this home may be converted to rental occupancy.

Conclusion

Forest Park and Springfield Township were once considered desirable and affordable locations for working- and middle-class families as they moved outward from Cincinnati toward more suburban locations. Today, these older suburbs have ceded their most-desirable status to cities and townships located even further north, such as Mason in Warren County and West Chester in Butler County. As upper-income residents move toward more peripheral suburbs or (if they have the means) to affluent and distinctive inner suburbs such as Indian Hill and Wyoming in Hamilton County, property values in the other inner-ring suburbs decrease, making these areas both attractive and attainable to lower-income and minority populations. The changes currently taking place, such as the evolution of Forest Park into a predominantly black, middle-class suburb but one with a growing voucher population, reflect these broader trends.

The number of voucher households in all of Hamilton County has largely leveled off. The increase in HCV residents from 2005 to 2011 was much smaller than that from 2000 to 2005. In Forest Park and the vicinity, however, the increase between 2005 and 2011 remained substantial, albeit not as substantial as the in-migration between 2000 and 2005. The I-275/Hamilton Avenue hot spot expanded further into Sevenhills and Forest Park, and increased in density in Ashley Woods. While no new hot spots formed elsewhere in Forest Park, an area of increasing density is apparent in eastern Forest Park. This area has the potential to continue to attract voucher residents.

The I-275/Hamilton Avenue hot spot represents several different housing types: a gated multi-family apartment complex, non-gated multi-family apartment complexes, and

a neighborhood containing mostly detached single-family homes. In the first type, Ashley Woods Apartments, we see a highly regulated and centrally-run apartment complex, with a single gated (although non-operable) entrance and a curfew for juveniles. The second type, in southwestern Forest Park, includes apartment complexes along one or more streets in a fairly quiet and secluded area. The buildings and property are generally well-maintained and offer several styles of housing, from one- to three-story. Finally, the Sevenhills neighborhood contrasts with both Ashley Woods and southwestern Forest Park in several ways. First, it is comprised of mostly small single-family homes that have been converted to rentals. Second, it exhibits areas of landscaping and structural neglect, varying by the street and individual home. Third, it was areas such as this that seemed to present the most problems for the key informants which we interviewed. Complaints on physical conditions were minimal or non-existent for the larger apartment complexes, but were fairly consistently addressed towards single-family rental home owners and their tenants. Assertions regarding single family rental properties and larger complexes will be elaborated on in the next chapter covering key informant interviews.

Three sets of policy implications may be derived from this study. First, HCV policymakers need to develop improved methods for guiding deconcentration planning efforts by local housing authorities, such as guaranteeing the use of up-to-date census data in defining areas of low poverty concentration. Second, the U.S. Department of the Treasury, which runs the Low Income Housing Tax Credit (LIHTC) program (not HUD) needs to change its regulations so as to encourage mixed income tenancy. Current regulations provide incentives to landlords using the tax incentive to attract as many housing voucher recipients as possible. Finally, the only long term solution to the problem of voucher clustering is to increase the dispersal of rental units throughout the metropolitan area. Achieving this goal will be difficult because of zoning regulations excluding rental housing.

The aim of this paper has been explore time series trends in voucher holder distribution in Hamilton County. A companion paper examines the views of politicians, developers, housing activists and civic leaders concerning negative neighborhood spillovers (e.g. crime, property values). Nevertheless, neither of our papers examines the extent to which housing voucher clustering causes negative spillover effects.(see Galster et al., 1999 for one such study). , it does not consider spatial correlation with presumed spillover effects such as lower property values, higher crime, and lower property maintenance standards. This study also leaves many opportunities for research questions regarding the issue of correlation versus causation between voucher holders and commonly attributed spillover effects. Many studies explore causation, which some extrapolate as causation. This research could also be extended by comparing voucher holder distribution with socio-economic census data throughout Hamilton County. An examination of trends between the 2000 census and 2010 census and how these correlate with voucher distribution trends would be useful.

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The Real Estate crisis and the deregulation of Territorial Planning (Land Use). The Case of the Canary Islands.

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This text is aimed at contrasting two different aspects of the same reality of crisis.

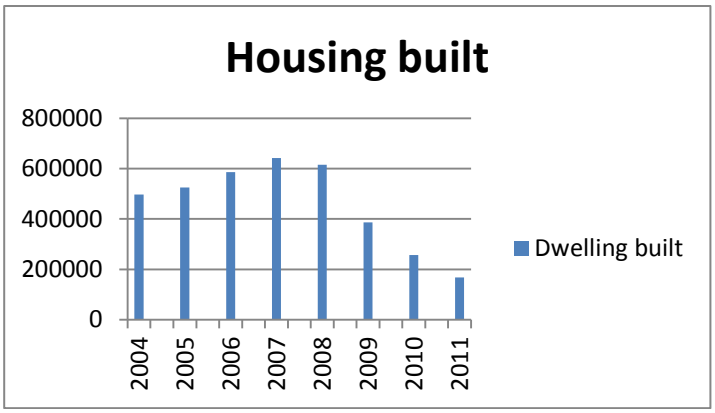
On the one hand, it examines the critical situation of the real estate sector in Spain and, correlatively, in the Canary Islands. Here, the intention is to draw out and underline the most significant indicators of the phenomenon.

On the other hand, we attempt to analyse the response offered by the public sector at the political level, through laws and urban planning regulations of a neo-liberal cut, designed, theoretically, to revitalise the building sector, in spite of the negative results given by the same in the last few years. In the Canary Islands, the justification is the rise in tourism (something which would appear to be purely circumstantial) given as the result of political instability in North Africa (the famous Arab Spring), above all in Tunisia and Egypt, the traditional competition for the Archipelago in tourism terms.

1. The crisis of the real estate sector

The bursting of the real estate bubble in 2008 hit Spain hardest (within the Euro-zone) and has been one of the major reasons for the tremendous impact of the economic crisis on the country.

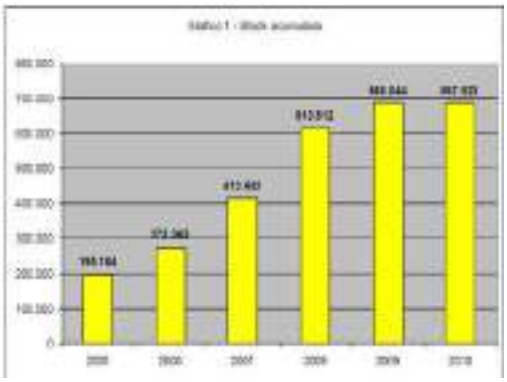
The enormous production of housing, with an annual average of approximately 500,000 units (moving from 496,000 in 2004 to 615,000 in 2008, see graph 1) has fallen off substantially since the crisis. In 2011, the housing production amounted to only 167,914, in other words, a reduction of some 70%.



Graph 1. Housing built by year.

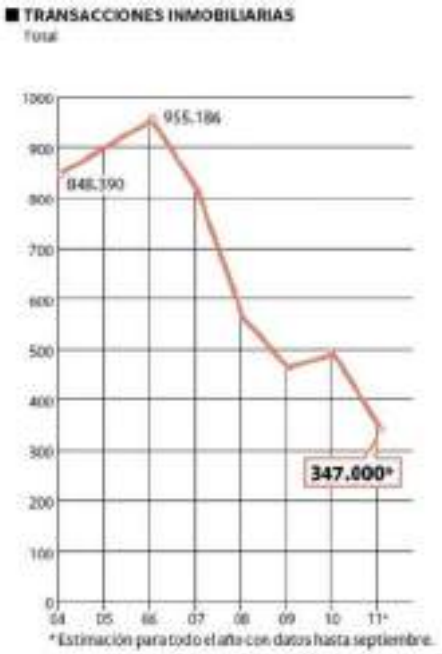
Similarly, and over the same period, unemployment in the building sector has risen from 6.06% in 2005 to 23.49% as it stood at the end of 2010.

As far as demand is concerned, the total lack of consumer potential on the part of the population has led to the economy contracting significantly. The falloff in GGDP has created a stagnated pool of some 720,000 unsold houses, above all in Catalonia, Valencia and Andalusia in percentages that range between 15% and 19% of the total stock of housing in the region. (See graph 2)



Graph 2. Housing pool by years

Logically, real estate transactions fell from 955,000 in 2006 to 347,000 in 2011 whereas land sales dropped from 23,566 in the first term of 2004 to 3,456 in the third term of 2011 (see graph 3).

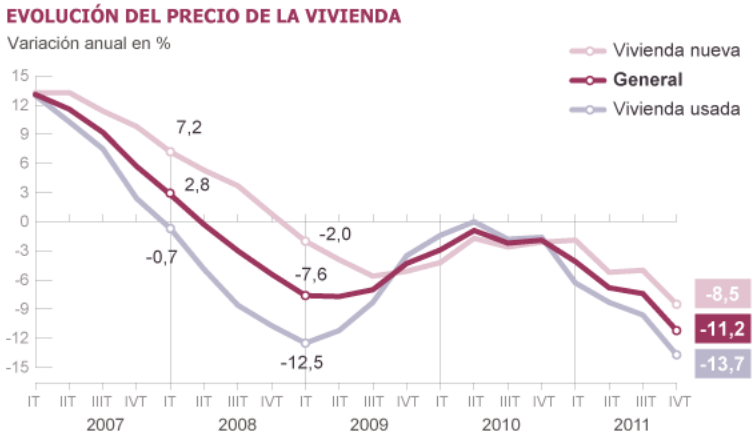


Graph 3. Real estate transactions

With respect to mortgages on houses, the market fell off from its peak of 1,342,171 operations in 2006 to a total sum of 188,339,112 Euros, to 409,337 operations en 2011 amounting to a total of 45,825,188 Euros even although the Euribor (the inter-banking loan

interests that directly impact mortgages and are passed on by the banks to the owners) moved from 5.393 %, in July 2008 to more normal levels, 2.004 % in December, 2011.

However, the price of new housing did not fall so dramatically. After a brief downward turn in 2007 and 2008, with an inter-annual variation of -6%, prices rose again from mid-2009 to the end of 2010. This has not meant, however, that the downward turn has been checked since in 2011, there was an inter-annual variation of - 8,5%. The average price per square metre has fallen from 2,905 Euros in 2007 to 2,376 Euros in 2011, in other words a decrease of 18%.



Graph 4. Evolution in house prices

This last trend is basically financial in nature and has to do with the de-capitalisation of the banking sector. The "Eurogroup" has imposed re-structuring and re-capitalisation of private banks on various States, imposing an iron hand to eliminate all trace of 'trash assets' while attempting, at the same time, to scaffold national deficits. However, these selfsame banks have been fiddling the books by including housing evicted as the result of unpaid mortgages as 'healthy assets'.[1] The banks have no interest in putting these properties on the market at their real market price because they would suffer as a result of the reduction of the value of their assets, making them eager, therefore, to keep prices as high as possible.

The outcome of this financial strategy is the stagnated pool of unsold houses because the prices remain much higher than the consumer power of the potential demand, without even giving further consideration to the part played by the rigorously stringent controls on credits given for house purchases.[2]

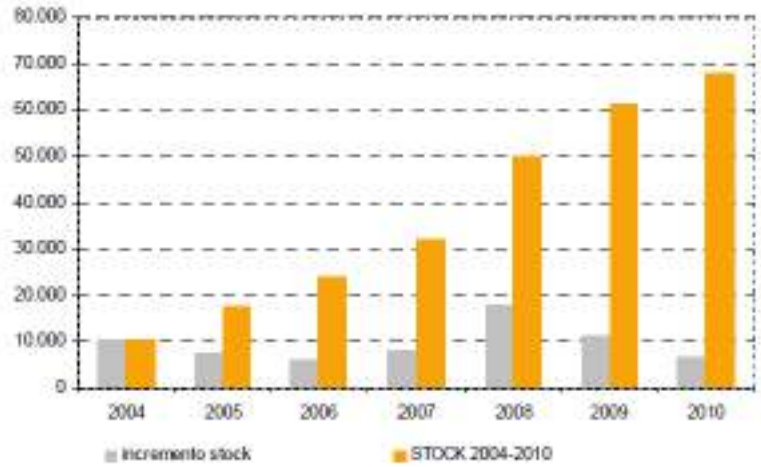
[1] Bear in mind that according to the data offered by the Consejo General del Poder Judicial (CGPJ or General Legal Jurisdiction) as published in 2011, the number of Spaniards implicated in some form of eviction due to failure to pay the mortgage amounted to a historical record 16,464 in the second term of the year, 21.2% more than for the same period the previous year.

[2] The family and company debt with financial entities in Spain went down by 0.3% and 0.2% respectively in November 2009 as compared to the same period in 2008, according to official data

2. The crisis in the Canary Islands

The situation in the Canary Islands is not significantly different from what is the picture at the national level, but rather more concentrated over certain aspects.

Between 2004 – 2010, the number of unsold houses rose progressively to 67,672 units, representing 4.9% of the national total.



Graph 5. Stock of houses in the Canary Islands

In the above graph 5, we can see how, in the period between 2004-2010, the number of finished houses has progressively grown more than the number of houses sold, giving rise, thus, to a large pool of unsold housing.

This is the result of two different trends. First, the purchase of new housing has fallen back more severely in the Canary Islands than in the rest of Spain as of 2006. And, second, the housing sector continued to build on a consolidated basis through to the maximum reached in 2008 in the Archipelago as opposed to 2006 in the rest of Spain.

In any case, and in both examples, the shift with respect to new housing can be seen with greatest clarity in 2009 and 2010.

The data with respect to 2011 confirm this trend. In the Canary Islands, at the end of the first term, there were 60.8% unoccupied houses, less than in the same period the year previous, and 46.9% less house sales.

However where the severity of the crisis was truly confirmed with respect to the economic crisis was the labour market. According to the data relating to the Survey of Active Population (EPA in Spanish) for three years back, the number of people employed in the building sector in the Canary Islands was 113,200 (data from the second term of 2008), a figure that fell in recent times to 48,600 (second term of 2011).

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of the Bank of Spain. Spanish families' debt with the financial entities amounts to 908,272 million euros, situating it at values similar to the levels of June, 2009.

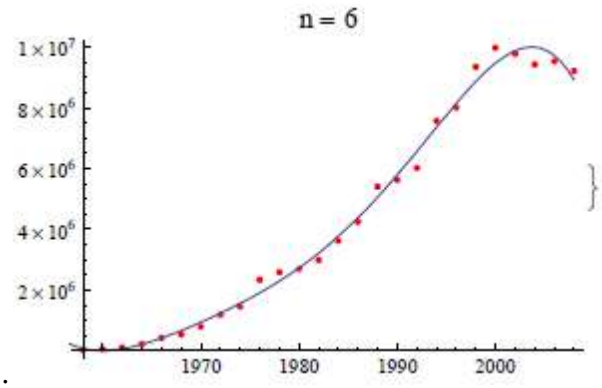
This loss of 64,600 jobs means that the workforce in the building sector has reduced 57% in the last three years, in other words, that three out of every four persons has lost their employment in the building sector.

It is also important, in this sense, to highlight the cutback in demand, also linked to the restriction on credit.

For the first time in many years, in 2010, the rhythm of advance credit given by the deposit entities in the Canary Islands was under the GDP (that is stagnant). And although this trend is barely to be noticed at a national level (with very few regional exceptions), in the Canary Islands, the Canary Islands is where the descent is most to be noted.

3. Conditions in the tourist sector.

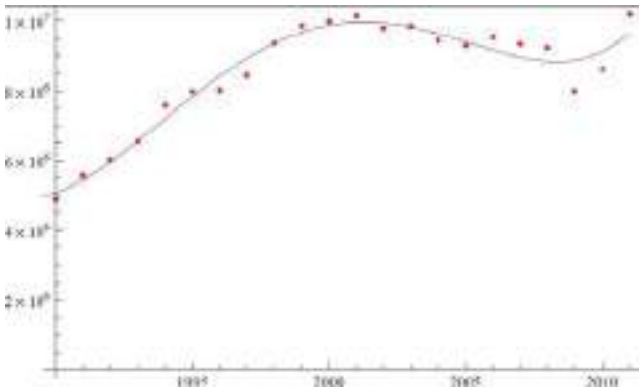
Tourist demand in the Canary Archipelago has undergone exponential growth as of the Sixties in the past century when Three 'S' tourism really took off only to fall significantly at the beginning of the century, partially due to increased consumer demands for personalisation together with changes in attitudes towards contracts (a reduction in package contracts, the impact of low-cost airlines, access to internet and changes in consumer control etc.,) besides a certain obsolescence of the product on offer



. **Graph 6. Evolution of the tourists in the Canary Islands between 1960-2010**

There is the generalised sensation that Butler's Life Cycle is being given in that, after a period of relative stagnation, there has been a notable fall-off. Numerically, the demand has fallen by 21% between 2000 and 2009. (In 2001, the numbers of tourists received were 10,137,202 whereas in 2009, the numbers amounted to 7,982,256)

However, and contrary to expectations, in other words, that there should be a direct correlation between the fall in tourism numbers and the economic crisis, something which began to be patent as of 2008, the last few years have produced an unforeseen renaissance of the tourist demand.

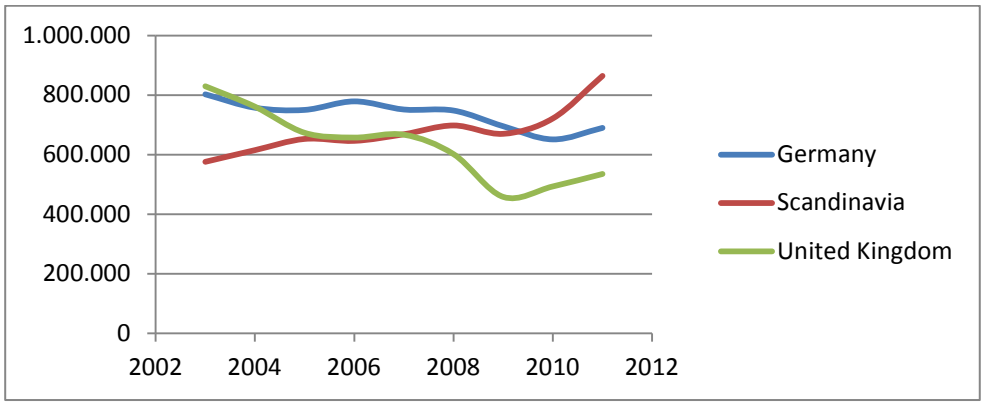


Graph 7. Evolution of tourists in Gran Canaria 1990-2011

Between 2009 and 2011, tourism increased by 27%, climbing back in the last year to a sum total of 10,182,997 tourists in the Canary Archipelago as a whole.

The question is how to analyse the direct causes of this phenomenon.

First and most evident is the re-routing of demand from North Africa (especially Tunisia and Egypt) to alternative destinations. Turkey, one of the main competitors, also received a significant increase in demand in 2011 with respect to 2010, around 9%. Egypt crashed catastrophically: in the first term of 2011, it lost 45% of its tourist numbers, dropping from 3,363,325 tourists to 1,894,044. The same occurred in Tunisia that lost 54% of its tourists in just one year.



Graph 8. Incoming tourists (Gran Canaria) by country

However, the question is much more complicated. If we look at the demand by outgoing tourists (country), we can observe, in the case of Gran Canaria, in particular, the following trends:

The fall in demand of British tourists, around 40.5% between 2003 and 2010, with the most sensitive point between 2008 and 2009 of around 23%, reversed if only slightly, picking up 8%.

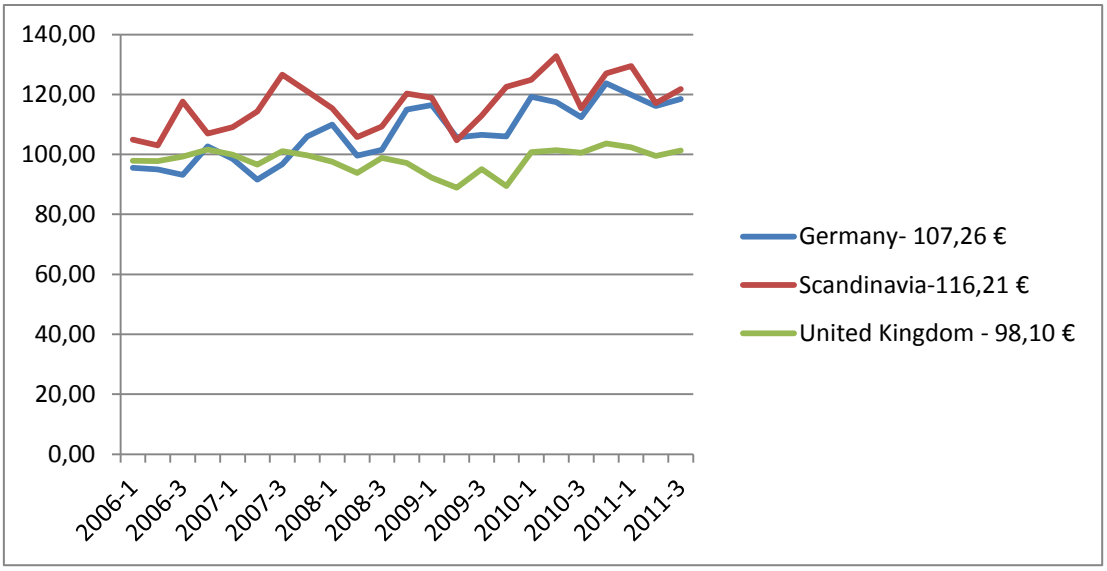
A similar trend occurred in the case of the German demand that first fell between 2003 and 2010 over 18% (five percentage points less than the British demand) only to pick up timidly, advancing 5%.

However, what was most spectacular was how the Scandinavian countries have behaved, increasing constantly to 288,440 from 2003 with over 20% of the increase between 2010 and 2011, outstripping easily the British and the German.

Year	Germany	Scandinavia	United Kingdom
2003	802,403	575,789	829,381
2004	757,347	614,999	760,897
2005	750,032	652,625	673,143
2006	778,681	646,120	657,221
2007	751,364	668,303	666,763
2008	747,869	697,811	601,529
2009	695,246	669,773	457,987
2010	651,021	721,425	493,150
2011	689,642	864,229	534,947

Table 1. Tourist arrivals at Gran Canaria by year and country

Likewise, the average outlay per consumer was highest among the Scandinavian tourists between 2006 and 2011, standing 8.3% ahead of the Germans and 18.4% more than the British.



Graph 9. Average outlay per tourist and country (term) 2006-2011

The last significant piece of data is that the number of foreign tourists who took their holidays in their own holiday homes, or with family and friends, rose between 2001 and 2007 from 9.48 million to 13 million. However, it began to fall in 2008 and, in 2010; there was an accumulated falloff of 4% according to Frontur, as a result of the economic crisis.

4. The legal response

In 2001, the Government of the Canary Islands passed a decree[3] whereby it was forbidden to give licences to build more tourist accommodation for, at least, three years except in specific cases of luxury hotel complexes and rural tourism. Later, in 2003, the **Directrices Generales de ordenación del territorio y del turismo (General Guidelines for Territorial Organisation and Tourism)**[4] were drawn up, designed, as outlined in the preamble to the law, to achieve a more sustainable and lasting model of development of tourism for the Islands, that would be more environmentally friendly and more apt to preserve natural resources, be they cultural or territorial, in search of greater social equity and greater distribution of economic wealth.

However, the pressure of the real estate sector never let up and, taking advantage of legal loopholes, they managed to build up a further 54% between 2000 and 2010, with an increase of 70,000 hotel beds although, as they themselves were frequently heard to say, "there is a bloody freeze on tourism building". This increased accommodation was built despite the fact that over these 10 years, tourism dropped off over 13.5% with average hotel stays down 12%.

[3] Decree 4/2001 (12th January), Autonomous Government of the Canary Islands on Suspension of Planning and Licences in Tourism planning,

[4] Law 19/2003, (14th April) whereby the Guidelines for General Land Planning and Yourism Planning in the Canary Islands were passed

Since the crisis set in with a vengeance in 2008, the government began to talk about the possibility of establishing 'emergency measures' to get round or dismantle the legal obstacles in favour of regulations designed to give "efficient" use to the available land.

These modifications were given weight in 2009 thanks to two laws (passed as emergency measures) that were to reform both the Law of Territorial Organisation ("Ley de medidas urgentes en materia de ordenación territorial para la dinamización sectorial y la ordenación del turismo" The Law of Emergency Measures in the field of Territorial Organisation designed to dynamise the sector and to order tourism- May 2009), together with the Law on Tourism ("Ley de Modificación de la ordenación del turismo en Canarias" The Law of Modification of Territorial Organisation for Tourism in the Canary Islands - April 2009).

The crisis had created, apparently, significant restrictions on real estate investment and, as a result, on employment, blamed by the promoters on the bureaucratic restrictions created by planning laws and regulations.

The surprise factor appeared in 2009 when tourist demand began to pick up notably as we have already said. The Government saw that there was a window for consolidating the reform measures and presented a draft bill for the **Armonización en la Ordenación Territorial y del Turismo (Harmonisation of Territorial Organisation and Tourism)** in 2012.[5]

Apparently, the Draft Bill was an attempt to respond to the extended idea that the complex regulations in the field of territorial organisation of the Islands translated through into grossly slow-moving red tape for the approval of planning documents, above all, urban planning, in the last few years, all of which, together with the difficulties involved in land promotion and investment by the economic agents, made it a requirement to dilapidate the present Law of Territorial Organisation[6].

Logically, the fact that the System of Land Planning in the Canary islands is a complex structure is significant in that it produces a convergence of five different levels of administrative authorities: European, State, Autonomous, Island and municipal, each of which contributes its different laws, norms and regulations to the sector, making it abnormally complicated to manoeuvre.

The hypothetical harmonisation now publicised by the present government is characterised by two main technical differences: some of the matters are regulated directly by the draft bill itself (territorial systems, buildings outside the norms, environmental assessment, biodiversity and organisational guidelines) whereas others were modified by the laws in force.

One of the most significant contradictions of the text of the law hinges on the fact that, despite the reiterated official declaration of the need to move towards socio-economic development without consume of land, therefore prohibiting any re-classification for tourist ends, the law establishes a procedure to do exactly the opposite. It allows for new plots to be classified for tourist activities or for re-classification of existing plots to the same end simply on request to the requisite town council or via an island report or, as a last resort, via a governmental release or parliamentary resolution, with no other caps than the load capacity established under the island plan.

The most important effect is on 'rustic' lands. In other words, all plots considered to be 'rustic' (plots not apt for building on, by it special condition of agricultural land) through "rural" land (likewise, not apt for building upon except by express modification). In the same way the potential rural plots for development (apt for support infrastructure) and plots under development in progress, until such time as the urban development determinant of its classification is completed, may be considered 'urban' (apt for development).

[5] Canary Official Gazette (BOCA) 2012 (16th Mars)

[6] Decree 1/2000 (8th May) of the Rewrite of the Text of the Laws for Territorial Organisation in the Canary Islands and the Natural Areas of the Canaries

Besides, all plots classified as 'consolidated urban plots' (with infrastructure) and 'unconsolidated urban plots' (without infrastructure) were likewise considered to be in a basic situation of development (apt to be built upon).

The general category of 'apt for development' was also extended to 'rustic land in rural settlements' (small villages and hamlets with agricultural land) that could be subject to development plans, in direct contradiction to the rural consideration afforded to all rural land in the preamble to the regulation.

Working along the same lines, the so-called 'territorial environmental systems' were created by way of rustic areas to be assimilated into general urban development systems. The substantial difference is that the owners of the general systems are expropriated and compensated for the loss of their property that then becomes public property to be devoted towards public uses. However, in this case, the owners of the territorial environmental systems maintain their property and only commit to upkeeping traditional systems of agricultural production and to respecting rules of usage and building.

Thus, and due to the land falling within the boundaries of a rural settlement or next to the same, the owners have the right to build 1 m^2 for every 50 to 100 m^2 plot when the land is inside the settlement and every 500 m^2 if outside the same.

This determination introduces a 'law' for building on rustic plots which does not fit inside any State or Autonomous legislation, where the law is limited to specific activities for the agricultural use of the land, in line with its classification and recommends legitimisation for any activity or work outside the same.

This is a concept diverse of the systems of property used in Spain, as in France, that cannot be partially transplanted by an autonomous ruling on territorial organisation that violates their logic and the state ruling on the matter.

However, independent of this attack on the preservation of 'rustic' plots, the government has prepared another law on 'renewing tourism' that eliminates the restrictions on five-star hotels on consolidated urban plots and modifies the incentives, by using the excuse of promoting rehabilitation of obsolete tourism accommodation on offer.

The incentives, moreover, offered by the Autonomous Government to promote rehabilitation of obsolete accommodation, were modified, presumably to move fast forward with the initiative begun in the last few months of 'Tourism energisation'. Among the incentives enumerated, there exists the possibility of increasing building potential while reducing the number of new beds built to substitute obsolete accommodation on offer. There is also an incentive with respect to density, that is, the square metres per bed required in a building to be renewed.

The Executive also covered all the suggestions made by the business sector within tourism such as the possibility of broadening the rural hotel potential and second home systems, in other words, of top quality villas and chalets on tourist plots.

First and foremost, the new law is directed at sustainability in time, without establishing limits to that time, thereby signifying that the Government assumes the responsibility for changing or suppressing the decree o incentives and criteria for building new tourism beds.

5. Conclusions

From all of the foregoing, we can conclude that the political movements are aimed, albeit subliminally, at dismantling progressively and legally all of the basic regulations with respect to organisation and preservation of territory. Beginning with the Guidelines that represent the

basic regulations to be referred to, and continuing with the Law of Territorial Organisation and Tourism Planning because the Canary economy is based on the service sector, predominantly on tourism.

In other words, it is not a matter of modifying the current laws either structurally or conceptually, after a period of serious reflection but rather we are contemplating partial modifications via orders and special clauses that end up perverting and emptying the present laws of all their content and meaning.

Should we admit that in a reduced and fragmented territory such as the Canary Islands, the preservation of rustic territory in general and agricultural land in particular should be one of the basic objectives of sustainable territorial planning, allowing for future generations to enjoy an essential natural resource capable of sustaining a quality lifestyle (an inherent quality to all distant islands such as are the Canary islands), then it becomes obvious that the question takes on a significantly critical profile.

However, the political powers that be continue to advance down the road of devastation of agricultural land, via Projects for Territorial Action that can only be put in place if they have an agricultural end.

The criteria of simplification and harmonisation presumably at the root of the Draft Bill to which we have made allusion are not sufficient to stem the total divorce with the limits on territorial use included in the principle of territorial sustainability and rolled out by the Organisational Guidelines.

The increased incentives for building in the tourism sector, moreover, with the excuse of necessary renovation of the tourist accommodation on offer is a mere cover for the real possibility of increasing building potential and land consumption that can only lead to surplus offer and, thus, obsolescence in the mid-term.

The euphoria produced as the result of the rise in demand produced over the last two years is nothing if not deceptive. This is purely circumstantial, as we have already made manifest. Therefore, support for liberal and unbounded building and occupancy of scarce territorial resources will only reproduce the results of the falloff in demand in 2000.

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THE SOCIAL LIFE OF MOBILITY ENVIRONMENTS

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Abstract

This is a position paper regarding the social dynamics of mobility environments associated with inner-city high-speed rail stations (HSR). This paper aims to complement the place dimensions in previous related studies that consider the stations as node and place, through spatial explorations of their social life. To this end I present briefly two analytical methods regarding people's use of the place and the everyday life rhythms, and propose to collect this type of information in a distributed, collaborative manner, which may include planning experimental courses. Including the provision for social life in decision-making processes for railway stations development is a measurable parameter of spatial quality that can indicate city's potential success in the global marketplace.

1. Introduction

The inner-city railway stations and their immediate proximity represent strategic locations, which typically concentrate development efforts on their attributes as transportation nodes, and as landmarks within the urban fabric. Historically the stations have been important urban "gates" opening to the broader region and leading toward foreign destinations. Recent redevelopment strategies of the areas at the railway station often address the aspirations of globally connected local economies and real estate markets. However, the railway stations need to receive more attention as socially constructed spaces, and because they mobilize large public budgets, among tangible public benefits should be also the improvement of their potential to accommodate public life. The necessity of social exploration becomes more critical for important locations like the surrounding areas of high-speed rail (HSR) stations, due to their national importance, increased accessibility, a particular space-time dimension including Castells' (2005, 2010) space of flows - space of places relation within the globalization process.

In this paper I propose to include the provision for social life in decision-making processes for railway stations development, as a parameter of spatial quality. The paper is part of a European research project (PORTA) that explores the social dynamics associated with inner-city railway stations in three cities along one of Europe's west-east axis stretching from the Atlantic to the Black Sea. Through this project I aim to formulate a synthetic view of the social life in the public spaces of

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trains, and in and around the stations, which are called “mobility environments” (Bertolini and Dijst, 2003). The stations chosen for spatial exploration through field participant observation are the three Parisian stations that are currently destinations of international HSR (i.e. Gare du nord, Gare de l’est and Gare de Lyon), and the central station in Zurich (i.e. Hauptbahnhof) that receives HSR from France (TGV) and Germany (ICE). From the expertise with HSR networks development and stations urban integration in Paris and Zurich I derive lessons for future development of the central station, Gara de nord, in Bucharest.

At urban scale there is documentation of various planning initiatives to integrate railway transport and land use development at station area, either in urban regeneration and redevelopment projects in Europe (Bertolini and Spit 1998, Joseph 1999, Pol 2002, Bruinsma 2008), or in transit oriented developments (TODs) in the USA (Calthorpe 1993, Cervero 1998). In context Bertolini’s node-place model (1999) put forward an analytical framework that may be applied to urban regions, and also at specific stations’ location, in order to provide some insight in the urban dynamics between rail transport and adjacent urban activities and land uses. Along with the facilitation of the redevelopment process, an initial purpose of applying in practice the node-place model is “the realisation of the potential for human interaction at and around public transportation nodes” (Bertolini 1999, p.201).

Why is the spatial quality of rail station areas important? Or even why shall we consider rail stations as urban places at all? First, nowadays the vitality of the inner city is seen as a measure of the city’s potential success in the global marketplace (Castells 2005), and that can be influenced through the location and development of dynamic inter-modal transportation nodes. Second, such nodes like HSR stations are capable to represent the city as an interface between the global and the local scale. This is especially so, if one takes into account the transformations that fast train connections bring into the travel patterns, and into the present conception and future use of HSR stations and their surrounding areas, which is similar to that of the airport districts (e.g. *Gares et connexions*: Rol-Tanguy 2011, Duthilleul 2010, Amar 2010). In this case, the rail station and its adjacent developments may be the only local destination of foreign travelers. So having the potential to represent the city’s image projected to the world, the place qualities of these developments play an important role in shaping the city’s identity. Moreover, if the location is closer to the city core, often the space of the railway station becomes a city’s extension that creates unique opportunities for social exchanges, a place where locals can connect face-to-face with the larger regional and global context brought about by the commuting others (e.g. Zurich Hauptbahnhof).

Due to these symbolic transformations within the urban fabric, and in light of the stations’ importance also as transport nodes within the rail network, in this paper I propose to introduce in the analyses of railway stations as nodes and places, some urban design perspectives that complement their place dimension. In the following sections I present briefly a few possible methods toward such spatial explorations

that require, rather than removed observation and analyses, direct engagement in travel situations. The research findings may complement the node-place model, for instance, by means of participant observations of the spatial practice and associated temporalities. While the knowledge acquired from such analyses has the potential to inform in detail the development process, and also particularize it according to these findings, the main research challenges reside in the scientific formulation of the ambiguities, vulnerabilities, and the ephemera associated with such spatial explorations. Eventually, the PORTA project outcomes may add an important missing link between the spatial quality of railway stations, and infrastructure networks development and spatial planning.

This paper is organized in four parts. First I exemplify a spatial analysis method that helps to identify design choices for shaping "good places", which is based on people's use of space (Whyte 1980). Second, after structuring a place-based perspective, I make a concise overview of the nature of space and place, to advance a temporal perspective on the dynamic places like HSR railway stations. I present the concept of place in parallel with the node-place model (Bertolini 1999), in order to suggest some possible complementarities that stress on an urban design perspective of places. Third, I mention briefly a few characteristics of rhythm-analyses, as the method to be used in deciphering the temporalities of mobility environments. Fourth, I conclude with the perspectives of grass-roots deployment of these types of spatial explorations to generate collective images of the place, which may be further employed in the development processes.

2. The social life of mobility environments

Understanding thoroughly how people use and also would like to use the space of the mobility environments requires empirical research of human behavior in these urban settings. There are a few examples of such comprehensive and cross-disciplinary studies, for instance in the French language, the various related studies of authors in the edited volumes by Isaac Joseph (1996 and 1999). This body of work implied analytical frameworks from anthropology, sociology, political science, or geography, in addition to planning and urban design methods. In the planning processes grounded in the people's use of space, field research should be the starting point of future design and development, as advocated by scholars like Kevin Lynch and William Whyte.

In the classic work on the people's behavior in small urban places Whyte (1980) emphasized also the possibilities for action. Accordingly the social life observed by field participation became the basis for re-thinking the New York City zoning ordinance. By way of analogy, this study may be relevant to the case of mobility environments through evaluations of the main spatial elements observed in the field: 1) access and linkages, 2) uses and activities, 3) comfort and image, and 4) sociability, in the manner that the New York based *Project for Public Spaces*

developed Whyte's initial categories. The first two categories of variables are relatively similar to those considered in Bertolini's node-place model that aims to understand the nature of change between the mobility flows and urban activities. However, the last two categories of variables, which imply more affective, emotional and phenomenological aspects, are strongly related to the social construction of places. From this perspective the framework provided by Whyte's study brings to light some additional aspects that may explain the spatial quality of railway stations.

Besides its interest within the rail networks and at the urban scale, the railway station is for the community also a focal point in the neighborhood. So the place qualities of the station can be analyzed inside its premises as well as in its urban proximity. As a "place in the city" Bertolini and Spit (1998) defined the station as "All the built and open spaces, together with the activities they host, contained within the perimeter designed by a 'walkable radius' centred on the railway station building, as amended to take account of case-specific physical-psychological, functional-historical and development features" (p.13). In this study the authors take into consideration a 'walkable radius' of 700 meters from the main pedestrian entrance of the railway station. They propose four conventional manners to delimit the area around the station (i.e. the walkable radius, functional-historical elements, topographic, a development perimeter), but because none of them seems sufficiently flexible, Bertolini and Spit suggest as best solution the interplay between these four dimensions.

In a more bottom-up fashion and drawing on the experience of space, one may identify the limits of the railway station surrounding area as Lynch defines districts (1960) through the edges, landmarks and paths that have the potential to give hints regarding the spatial organization, and the structural framework that people refer to while navigating the space. After delimitation of the study area, let us return presently to the application of Whyte's analyses to railway stations, by means of four key qualities that make places successful.

2.1 Access and linkages

During this step the information may be gathered through empirical research, and completed from the related literature. Concerning the station accessibility I propose to structure the analyses according to two categories of variables. One category refers to the railway station premises and concerns elements like a) opening hours (e.g. the stations in Paris in Zurich close during the night between 1.00am/1.30am and 3.30am/4am, while the main station in Bucharest is open 24 hours/day), b) street entrances, c) fences (e.g. the opening of Zurich Hauptbahnhof toward the city versus the more enclosed spaces in Paris and Bucharest), d) inclusive access (functioning for everybody including people with special needs), e) signage and paths for navigating the station and f) inter-modality. The analysis of inter-modality in this case is similar to the node-content (or the accessibility of a node) in Bertolini's node-place model (1999, pp.201-203), which takes into account the intensity and diversity

of transport supply, and combines accessibility by various transport modes (i.e. train, bus, tram, underground, car, and bicycle). A special note regarding the Parisian pair stations Gare d'Austerlitz - Gare de Lyon is that the first inter-modal transport node materialized at Gare d'Austerlitz by building a stop of the metro line inside the station main hall (1906, see APUR 2006), and that at Gare de Lyon in December 2011 was inaugurated a station of the shared electric cars (autolib').

The second category of accessibility variables refers to the city and neighborhood linkages, as included in the area of study. Many inner-city historic railway stations benefit from the proximity of a planned neighborhood, which was conceived around the station as the main landmark (e.g. Zurich Hauptbahnhof, Gare de l'est and de Lyon in Paris). As a consequence nowadays the station premises receive a public function for the local community, whose access can be stimulated through other uses than those related to travel (see below the paragraphs on uses and activities). The construction of the railway station brought also the opportunity for opening a representative boulevard, allowing for convenient pedestrian access, in order to link the transportation gate with the inner-city (e.g. Bahnhofstrasse in Zurich, Boulevard de Strasbourg in Paris). But this is not always the case, and a famous example of lacking a representative connection with the city core is Gare du nord in Paris, due to the impossibility to execute the required land expropriations for a boulevard development during the Haussmannian reconstruction of Paris (refer to Bowie 1999, Sauget 2009).

2.2 Uses and activities

The uses and activities of the mobility environments may be recorded through participant observation, from the point of view of the occurring users of the place, and of the type of activities existing in the area of study. Regarding the users presence in the current phase of railway stations evolution, it may be, or not, related to rail travel. Hence a first question to be asked while observing the place is whether people use this public space besides passing through either a transportation node as travelers, or through this node within the urban fabric as passers-by. If there are additional uses to the mobility environments, it is interesting to look for signs of diversity (e.g. range of ages, individuals or group clusters, variety of purposes like walking, eating, relaxing, people watching, reading, playing etc), to identify the parts of the space used, and if there are some noticeable patterns. Note as a difference in comparison with traditional places, there is seldom outset design of stations as "nodes" in Lynch's term (1960) that means a gathering spot, rather the intention being to produce fast pace and optimally fluidized circulations. Hence the pace or tempo relative to people's use of the space is to be analyzed for each case also from a design point of view (i.e. entrances, paths, signage, announcements, noise, lighting, public space furniture etc). As an extreme efficiency example, the number of the train platform is published in the French stations only ten minutes before the train departure, which produces a "controlled" node in front of the traffic displays due to

constraints on traveling crowds' use of space.

The type of activities inside and in the station's proximity are to be listed and evaluated according to their use at different times of the day and week, if they are permanent or temporary events, their accessibility, scheduling, management presence, and the like. In addition to public transportation, currently commercial activities at the station are most common, including weekly or seasonal markets like farmer's or Christmas' markets. However, operators of contemporary railway stations made choices also for non-travel related activities. For example, the main hall of Zurich Hauptbahnhof is used as a city square for all sorts of events and activities that vary in scope and scale (e.g. celebrations, manifestations of political actions, sport events etc), and the forthcoming reconstruction of Gare d'Austerlitz in Paris will provide additional space for neighborhood activities such daycare etc. Moreover, there are unaccounted for activities at the station like people watching, which through the researcher's participant observation may reveal other dimensions of the spatial qualities, shaping the character of the place.

2.3 Comfort and image

To decipher the following two groups of place characteristics, the study may be divided between a) the place's conception by professionals, b) the one-time spatial experience (i.e. first-time visitors), and the lived experience of the place (i.e. the regular user of the railway station). During the observation of mobility environments, surveys and questionnaires need to be employed, as well as interviews with the actors involved in the process of spatial production. To the information gathered from field observation, archival research can add important information regarding the institutional setting: the planning culture, the initial policies, the conflicts and constraints within the development projects, and the like. The recorded findings may be evaluated in comparison, and presented in narrative form.

As for the place's comfort and image, the field survey may be structured according to qualities such as a) visibility / obstruction of the interior-exterior space and of the navigating details, b) ease of movement and legibility (e.g. do I always know where I am and where my destination is?), c) signage and spatial borders as leading or misleading (see Joseph 1996), d) use of lighting, materials, planting and green areas, retail frontage, seating and also if there is a choice of places to sit (e.g. Gare du nord versus Gare de Lyon in Paris) e) continuity and enclosure in terms of safety, and f) stimulated emotions like feeling of arrival, and impressions such as the first impression, observing if people are taking pictures of the place, or if there are people presenting the place to others etc.

2.4 Sociability

To what extent it is interesting to strengthen the place qualities of railway stations in terms of sociability? Shall a high-speed place be conceived more as a passing-by

transitory place, or shall it stimulate conviviality? Does a terminus station have higher potential for sociability than a through station? Is this a place where you would choose to meet your friends or where strangers make eye contact with each other? Are people smiling, and talking with each other?

Of course the answers to these questions about the interactivity, diversity and friendliness of a high-speed place depend on a multitude of factors. Yet the institutional aspects of planning and development processes, and the planning culture in general, play an important role in the achievement of the mobility environments as successful places in the city. As I mentioned in the introductory section of this paper, the railway station is a place of confluence between the others and the local community, and is capable to generally reflect the community at large. Within the railway station conception, there are design elements that can facilitate face-to-face interactions, and ad-hoc social networking, what Whyte called "triangulators". A simple example are the electric heaters placed in the main concourse of the Gare du nord or Gare de l'est in Paris, which create focal points that gather people around them, and also give the opportunity of strangers to face each other. A quality of place's sociability is to make users feel comfortable to interact with strangers.

The design elements related to rail travel like traffic displays, information points or retail kiosks are potential locations for Lynch's nodes, which are "the strategic spots into which the observer can enter, intensive foci, typically either junctions of paths, moments of shift from one structure to another, or concentrations of some characteristic" (1960, p.72). The place's sociability may be improved by developing such nodes and their corresponding amenities that can work toward triangulation.

The events and activities organized on the premises and in the proximity of the railway station create as well a multitude of opportunities for social interactions. Additionally, nowadays the French rail company SNCF develops various possibilities to create opportunities for social exchanges also in the high-speed trains, through designated spaces (IDTGV) and the use of information and communication technology (e.g. SNCF apps) that can transform the quality of the spaces associated with rail travel.

3. Place qualities of railway stations

From this brief overview of the qualitative aspects that participants can observe in the mobility environments, I return to theoretical studies, in order to build a thorough understanding of their spatial nature and as particular places. On the nature of space David Harvey (2006) proposes three views namely absolute, relative and relational space, which coexist and are not mutually exclusive. In his words, the absolute space is space being a "thing in itself" independent of the matter, where time does not play an explicit role in spatial formation (e.g. the spatial view of Descartes or of Newton). The relative space arises from relationships between objects, where the temporal dimension is being fixed like in the case of the modern time of clocks and watches.

While the relational space cannot be conceived in separation from time, it is "regarded in the manner of Leibniz, as being contained in objects in the sense that an object can be said to exist only insofar as it contains and represents within itself relationships to other objects" (Harvey 1973, cited in 2006, p.271). How does the concept of place fit within this spatial framework?

In a comprehensive study for the pedagogy of place, Arefi & Triantafillou (2005) propose as teaching models four ontological constructs of the place concept, which is "less coherent [than space], maybe borderless, and can come into existence for a short period of time by dressing the urban space with a new set of visual attributes (e.g., the new Times Square)" (p.77), and "is at times unpredictable and can be understood through engagement, not through detached observation" (p.76). These four place constructs embody a comprehensive understanding of the term, 1) as a set of visual attributes, which may be identified by exploring the complexity within spatial images and syntax (absolute space), 2) as product decoded from the analyses of spatial morphology, policy making and problem-solving (absolute and relative space), 3) as process, which requires a thorough understanding of the transformative forces over time (relative space), and 4) as meaning (relative and relational space). For deciphering the construct of place as meaning the analyses should imply phenomenological, intuitive, self-reflective takes, due to the ambiguity and complexity associated with the study of values, symbols, or human experiences such as perception, emotion, desire, volition, imagination etc. Note that in shaping the image of a place, these four constructs are kept in dialectical tension while thinking through the interplay among them.

Hence what places' characteristics are we talking about with respect to inner-city railway stations? Previous studies (e.g. Bertolini and Spit 1998, Pol 2002) take into consideration the first three components of the place concept (i.e. image, product and process), and the elements defining the place-content of its area are mainly the intensity and diversity of activities associated with the railway station being. For instance, in the node-place model, Bertolini accounts as variables of the place-index, besides the degree of functional mix, the number of residents in the area, and the number of workers per each of four economic clusters namely retail/hotel and catering, education/health/culture, administration and services, industry and distribution (1999, pp.202-203). Pol chooses spatial quality as a separate element of analysis, but defines it mostly as a physical space quality "of outdoor and indoor public spaces and their integration in the environment" (2002, p.111). While these views pertain to the understanding of place that could be approached from the perspective of absolute space, the inclusion in the analyses of the process (Bertolini and Spit 1998) or only of the actors involved in the redevelopment process (Pol 2002) pertain to the city shaped of space understood in a relative manner. According to a recent analysis (Peek and colleagues 2006), a next step toward improving the node-place model is the inclusion of the synergy between the actors engaged in the (re)development process into the set of variables: "In the end, synergy between node and place features at a station area is created by interactions between the land use and

transportation systems through different spatial markets, for instance the labour market, housing market and the market for mobility" (p. 457).

In understanding places, however, the absolute and relative understandings of space do not bring sufficient explanatory qualitative features in terms of its lived experience. As places are predominantly social constructions (e.g. Lefebvre 1991), inquiries may be pursued also from the perspective of the relational space, where it is "impossible to disentangle space from time" (Harvey 2006, p.273), and where processes define their own spatial frame. In a critique of functional theories Lynch (1981) mentioned the absence of time within, as it does not "deal successfully with continuous change, with incremental actions that lead in some progressive direction" (p.39). In the 1972 study on the evidence of time embodied in the physical world, Lynch suggested the possibility of "learning to enjoy the process of change in itself; the constant reformulation of action and aim, the delight of new revelations and new possibilities" (p.211).

Moreover, in the evolution of the railway stations French sociologist Isaac Joseph proposes three phases (1999), which interestingly could be a parallel to Harvey's classification of the spatial nature (2006). There is an initial view of the station as an artifact, referring to its functional role and characteristics as absolute space (e.g. the 19th century rail stations, for which the term in French is "gare"). In the 20th century, after the development of regional and urban rail networks in conjunction with the long distance and high-speed rail (e.g. during 1970s-1980s, APUR 2007), the railway station becomes an inter-modal node-place that in French is called "pole d'échange". As nowadays these exchange poles host also other city activities, their development corresponds mainly to a relative spatial point of view. As a third phase, Joseph introduces the term "place-movement", in French "lieux - mouvements dans la ville" (1999, p.5) that is investigated from the perspective of the relational nature of space. In these latter instances derived from relative and relational spatial understandings, social space is predominant, and time becomes relevant for the changes and exchanges within social networking.

To reflect these particular qualities of space, I will use henceforth the term "high-speed place" to refer to the spatial instantiation of the railway station that Joseph (1999) calls "place-movement". On the one hand this term describes the dynamic and transitory qualities of the current development of railway stations. The railway station and its surrounding area is a prospective lived place, through its capability to inspire meaning and eventually generate attachment through frequent reiterations and formation of emotional ties, but in a different manner than "slower" places such as a "place of birth" or a "place of residence". It is rather a more hasty place of passage, mobility, and relatively rapid change, hence the name "high-speed place". On the other hand, this denomination makes a parallel with the advanced technology of the HSR, reflecting also a fast pace of change, and the overlay of multiple life rhythms. Like I mentioned in the analysis of sociability, more than a transportation mode, HSRs become mobile work-and-play spaces with high potential for socialization and

ad-hoc networking. These emergent spatial uses shape a particular lifestyle with specific rhythms that get inserted in the local spatial practice of the destination place.

What are the similarities and differences in the quality evaluation between "slower" places and the "high-speed" places? In the case of classic places Lynch put into words: "A good place is one which, in some way appropriate to the person and her culture, makes her aware of her community, her past, the web of life, and the universe of time and space in which those are contained […] sensible, identifiable places are convenient pegs on which to hang personal memories, feelings, and values. Place identity is closely linked to personal identity. "I am here" supports "I am". Intense familiarity will create a sense of place" (1981, p.142 & 132).

Indeed the railway stations' qualities in terms of visual attributes --even only for a limited period of time through the use of public displays-- together with their meaning (Arefi & Triantafillou 2005) establish them as recognizable, memorable, and even prominent locations in the city. This is the case of all the central stations studied in the PORTA project. Then in the stations studied in Paris and in Zurich, more than half of the travelers are frequent commuters. The recurrent use of rail transport turns these environments into habitual locations, where attachment may be formed through actions' reiteration and representations of the everyday life. Hence my interest in a social and temporal perspective in the inquiry of place qualities translates into advancing a relational understanding of the spatial use of inner-city railway stations and their surrounding areas as high-speed places. In the next section I make a first step toward an analytical framework based on rhythm-analyses (Lefebvre 2004) of the everyday life in the mobility environments.

4. Railway stations as vehicles of time: the high-speed places

The temporal dimension is the most important potential and constraint of the people's use of high-speed places. Why would we analyze temporalities? Maybe because of the "struggle around time and the use of time. … There is no time to do everything but every 'doing' has its time". But also because time as a social product "divides and splits itself into use and use-value on the one hand, and exchange and exchange-value on the other. On the one hand it is sold and on the other it is lived" (Lefebvre 2004, p.74). Furthermore, analyses of the temporalities associated with the mobility environments show how the location, design and operation of railway stations are capable to impact the inner city vitality.

Hence comparative analyses should take into account railway stations' changes over time within historic overviews, as well as in ethnographic accounts of the everyday spatial experience of mobility environments. The constraints of practice may not allow the direct use of these narratives, as Bertolini notes in Bruinsma (2008), "The information should be sophisticated enough to be true to the complex reality, but plain enough to be understood by those involved in the strategy development process" (p.37). So while the knowledge derived from these methods of analysis may

not always be sufficiently plain to be used within the process of spatial production, I believe it is theoretically helpful, due to its potential to shape representational spaces that appeal the intuitive and poetic imagination, and through exemplifications may turn useful also in practice (e.g. Bates et al. 1998).

In a more and more globalized world, the railway stations especially the international HSR destinations embody spatial concentrations of the omnipresent overlapping flows: capital, information, technology, vehicles, people, goods etc. In the PORTA project I look at these flows historically in cities like Paris that appear to be focal nodes (Castells 2010), and then follow their distribution and their effects in more distant locations from these centers, for example in Bucharest. There is not a simple way to include the global flows in the analyses, although it is critical to capture their impact on the high-speed places.

As a starting point, because metaphors are a powerful way to represent the complexities of modernity, for mobility environments I suggest here the combination of two metaphorical comparisons inspired from the natural world. One metaphor comes from the ocean waves and tidal rhythms (e.g. Jones 2010), with the potential to describe the fluctuations in the spatial concentrations of flows embodied in a railway station. From this perspective, a station concourse, accesses and proximity may be paralleled with recent representative waterfront developments, as a "travel front" facing the incoming and outgoing variations of embodied flows. (Note that due to the modern rhythms of clocks, this happens mostly at the edge of conscious, as opposite to the ocean symbol of the unconscious). Then the juxtaposition of another metaphor --the heart-- is necessary to imagine the integration of this place within the urban systems. While acting as "urban hearts", currently some of the main stations "pump" daily the equivalent of the city's population. For instance, the same number of travelers as city core residents passes daily through Zurich HB (~380,000), and half of the number of Paris' inhabitants travels every day through the three stations Nord, Est, de Lyon (~1,000,000), and out of these travelers, half are frequent commuters that arrive at and depart daily from the station.

Moreover, due to its dual attributes as transport node and urban place, I note the overlapping qualities of the dynamics within a central railway station and its surrounding area (i.e. transport network, people traffic for various purposes). In other words, there is a certain rhythmic vibration associated with the high-speed places that seems to be part of their dual nature, and that cannot be reproduced in other places only by design. "The everyday is simultaneously the site of, and the theatre for, and what is at stake in a conflict between great indestructible rhythms and the processes imposed by the socio-economic organization of production, consumption, circulation and habitat" (Lefebvre 2004, p.73).

Within this framework, the rhythm-analyses translate spatial theory into design practice through their capability to restore the role of the human body in the spatial production, by reinstating the sensible in modern consciousness (refer to Apostol

2007). But what do we call the sensible? In Lefebvre's words, "It is neither the apparent, nor the phenomenal, but the present. The rhythmanalyst calls on all his senses. … without privileging any one of these sensations … he does not neglect smell, scents, the impressions that are strong in the child and other living beings, which society atrophies, neutralizes in order to arrive at the colorless, the odorless and the insensible" (Lefebvre 2004, p.21).

Rhythm-analyses refers to the understanding of spatial rhythms and their practical consequences, as rhythms could be defined as forms of repetition, or movements and differences within repetition, temporal measures that bring with them "a differentiated time, a qualified duration" (Lefebvre 2004, p.78). In the study of rhythms the relation between repetition and difference is critical. Difference is something new and unforeseen that introduces itself into the repetitive, which is usually what we perceive, for instance, from an announcement through the station speakers, to the renaming of the station public spaces (e.g Gare de Lyon in December 2011), from the construction of the suburban station building at Gare du nord (1990s), to the demolition of the Seine courtyard wing at Gare d'Austerlitz (February 2012), from the murmur of a water fountain, to the noises of the traffic flow interfering with the strolling flow. There are linear rhythms defined by the repetition of the same phenomena that mostly belong to the public realm such as routines, successions, predetermined encounters, a social and civil time (e.g. morning commuting, timetables, time at the café, work time, playtime, opening hours, scheduling, evening commuting). There are cyclical rhythms that have a determined frequency and new beginnings similarly to the cosmic rhythms (e.g. seasonal changes, seasonal markets in and at the station, the succession of day and night, rituals, alternating manifestations of social organization).

Rhythmanalysis was coined first by Gaston Bachelard in *The Psychoanalysis of Fire*, (1964 [1949]) although he borrowed the term from the Brazilian writer Lucio Alberto Pinheiro dos Santos (Lefebvre 2004, p.9), who wrote in Portuguese a work on rhythmanalysis published in 1931 that was lost subsequently. Bachelard used the term as "rhythmo-analysis" in *The Poetics of Space* (1994, p. xxxiv) and developed a chapter on "Rhythmanalysis" in *Dialectic of Duration* (2000 [1950]). Toward the end of his life, Henri Lefebvre made an attempt to develop a theory of rhythms that he exposed in *Writings on Cities* (1996) and *Rhythmanalysis* (2004), in which he aimed at expanding the theory of the spatial production into an applied method. Recent studies tried to advance the rhythm-analyses from the various perspectives of practice (e.g. Edensor 2010). However, research difficulties come from the fact that the rhythmanalyst "must simultaneously catch a rhythm and perceive it within the whole, in the same way as non-analysts, people, perceive it. He must arrive at the 'concrete' through experience" (Lefebvre 2004, p.21), because only the experience of rhythms could give the measure of what is concrete/present. Hence one perceives, analyses and records moods rather than images, picturing an atmosphere rather than reporting on the particular events.

5. Perspectives

Over the last one hundred and fifty years one may observe the transformation of the inner-city railway stations, from the 19th century monumental gates toward exotic worlds or connecting the city with the countryside, into strategic urban locations, concentrating within relatively small scales some of the city's identifiable features. The recent HSR railway stations embody qualities of transportation nodes and complex urban places, which I call here high-speed places.

To build the competency of drawing implications for steering future developments, planning research needs to comprehend the multidimensional spatial practice of these particular places. Empirical research is the only way to evaluate the spatial practice, which is revealed in the association of daily reality (everyday life) and urban reality (urban discourses and practices) within the social life of the mobility environments. The comparative analyses should take into account a "thick description" approach (Geertz 1973), which places the research data in context, and at the same time contextualizes the research findings in order to explain both discourse and practices.

To this end, in this paper I make brief overviews of two methods of analysis. One is Whyte's study of small urban places to evaluate the station's potential as a successful place (1980). The other is the relatively novel method of rhythm-analyses to build an understanding of the everyday life rhythms within the mobility environments. Usually in practice there are not available budgets (i.e. time, money) to perform these comprehensive studies through engagement in observing the people's use of space and its associated rhythms. Therefore, I suggest that only participatory and distributed collaborative processes can provide this data, pointing also at experiential planning course that draw wisdom from social sciences and use the mobility environments as the spatial laboratories.

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China's urban planning legislation system in transition to a resource-saving and environment-friendly development

YING Yin

Abstract:
Recent years, China targets on transiting to a resource-saving and environment-friendly development, the realization of which is largely influenced by the performance of urban planning and building area. This paper proposes to identify the situation of urban planning legislations in terms of sustainable development, and to explore the potential for promoting environmental profile in urban planning legal system. The research methods here are based on literature review, document analysis and also the quantitative and qualitative study. In the beginning, this paper generally reviews the status and structure of current legislations and regulations on urban planning. Then, this paper adopts bottom-up strategy, to exam the legal system from detailed regulations to national laws, based on the principles and standards generated from *the main indicators of low-carbon eco-city development* [1] and *practical indicators of eco-city development*[2]. These generalized baselines are extracted into references for the examination of urban planning regulations in different level. The references include seven perspectives: urban function (land use), green transportation, green building, energy production and saving, ecological environment, waste management, water supply. Finally, it proposes some suggestions on how to strengthen the integration of environmental concerns into urban planning legislation system in China.
Key words: China, environment-friendly development, urban planning system, integration

1. Introduction

The concept of 'Construct an resource-saving and environmental-friendly society' was first specified as a basic national strategy in 'The 11th 5-year plan of the People's republic of China for economic and social development' (called 'the 11th 5-year plan' for short) in 2006, and then strengthened in 'The 12th 5-year plan' 2011. To construct environment-saving and environmental-friendly society is an inevitable choice of China for long-term development. China is a country which has a large number of population but short of main resources per capita, less than a half to one third of world average level. Meanwhile, with the fast increase of per capital income of residents, the transition of consumption level and structure will cause higher pressures on resources. (China's sustainable development strategy report, 2006) Considering these increased restriction of resource and environment, it is necessary to establish an idea of green and low carbon development, build up an resource-saving and environment-friendly pattern of production and consumption, and target for ecological modernization. (The 12th 5-year plan, 2011) The proportion of energy consumption separately in industry, building and transportation is 7:2:1 (China's research council of urban science, 2009), the transition of consumption level and structure will change this distribution in future. According to experience of developed countries, building and transportation will account for a large part of energy

[1] The main indicators of low-carbon eco-city development is developed in the 'China's low carbon eco-city development strategy' as an index of eco-city planning for 2020.
[2] Eco-city in China usually means an urban districts, in which residential area is the main function, is developed or redeveloped within a strong environmental-profile to achieve low-carbon emission and energy-saving targets.

consumption with GDP growth. Thus, to reduce the pollute emission and energy consumption in urban planning and building dimensions is crucial for a successful transition to an environment-friendly development.

Research problems

In last decade, a large number of researches and practices in urban planning were made to achieve sustainable development in China, but the progress goes very slowly partly because a lack of experience, knowledge and also a based foundation of legislation and regulation system. For instance, when implementing eco-cities, the absence of environmental profile in legislations or even contradict to become obstructions in the process. As the legislation and regulation system is considered as a crucial enforce for sustainable implementation in general, it is quite necessary to integrate environmental aspects into the systems. Although, until now, there are many specific studies on legislation and regulation systems in terms of either urban planning or environment protection area, but there is few researches focusing on combining them together. This paper is supposed to fill this gap by examining the integration of sustainable concern in urban planning legislation system.

Research goal and objectives

The goal of this paper is to explore potential possibilities to promote the legislation system of urban planning towards a resource-saving and environment-friendly development. Within the goal, two objectives are proposed: 1) Exam the integration of sustainable development into current legislation system of urban planning and points out its weakness; 2) Provide some suggestions on integrating environmental requirements into the structure and contents in the legislation system.

Research questions

To reach the research objectives, the paper develops a study by answering the following questions: 1) How does the regulation systems of urban planning work now? What is the relationship among different legislations and regulations? 2) What kinds of environmental aspects could be combined in the urban planning regulations? 3) How is the existence and absence of the environmental aspects in the current system? How to improve these combination?

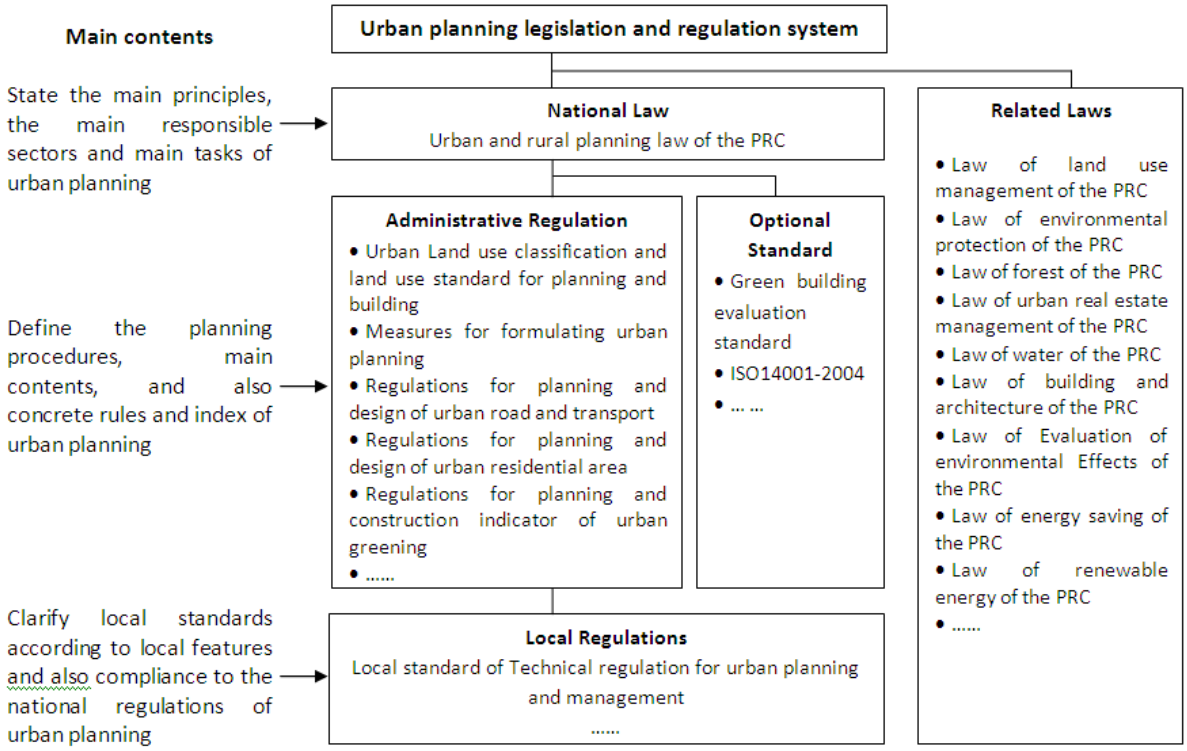
Research strategy and methods

According to two points, this paper uses bottom-up research strategy, which means exam the system from detailed regulations to the national laws according to the potential principles, standards and index, generated from *the main indicators of low-carbon eco-city development* and *practical indicators of eco-city development*. One point is that the regulation system of urban planning, including both vertical and horizontal sub-systems, is so abstract and wide-covered that it is difficult to manage the analysis from top-down. The other one is that the study should closely relate to planning practices to ensure the validity of the results. In recent years building eco-city has became a popular planning practice and important contributions to achieve resource-saving and environment-friendly development from local level. In this paper, the eco-indicator systems in two eco-cities is partly chosen as basic materials generated and extracted into references for the examination of urban planning legislations in different level. Another basic material is *the main indicators of low-carbon eco-city development* developed in the 'China's low carbon eco-city development strategy'. The references include seven perspectives: urban function (land use), green transportation, green building, energy production and saving, ecological environment, waste management, water supply. The research methods used in this paper are based on literature review, document analysis, and also the quantitative and qualitative study.

2. China's legislation and regulation system of urban planning

Urban planning system is usually divided into three parts: urban planning legislation and regulation, urban planning administration, and also the operational urban planning system. This study focuses on legislation and regulation because it works as a foundation for the administrational and operational system. In the vertical system of legislation and regulation, it contains three parts: national laws, administrative regulations and local regulations. （P_1） The main national law 'Urban and Rural Planning Law of the People's Republic of China (PRC)' was

enforced from 2008 in place of Urban Planning Law of the PRC' to state main principles, the main responsible sectors and tasks for urban planning formulation, implementation and management. The administrative regulations, for example, 'Measures for Formulating City Planning' and 'Detailed rules for Formulating City Planning', clarify the planning procedures, contents, and concrete rules and index, which direct the planning formulation, provides important basis for examining and approving urban planning results and implementation. There are also regulations in respective sector to be urban residential areas, transportation and urban green space, which provide concrete items for each dimension, such as 'Code of Urban Residential Areas Planning & Design'. At the bottom, the local regulations, such as 'Technical regulation of urban planning and management', are developed depending on different local conditions and could be stricter than national rules but looser.



Picture 1 The structure of urban planning legislation and regulation system in China

3. What could be integrate into urban planning regulations?

According to the new requirements from environment-friendly and resource-saving development, the following part analyzes what kinds of requests should be involved, how the current integration is, and how the future integration should be in regulation systems of urban planning.

3.1 Main indicators in 'China's Low-carbon eco-city development report'

The main indicators of low-carbon eco-city development were developed by China's urban science council to guide low carbon city development, from 6 perspectives, in which 4 of them are directly related with sustainable urban planning in physic sense and shown in Table 1. They are level of living standard, resource-saving, environment-friendly and environmental culture.

Table 1 Main indicators of low-carbon eco-city development

Types of indicators	Currnet	2020

Level of life standard	Green capacity rate [3]	>1.5	>1.8
	The radio of commute time which is less than an hour（%）	>85	>95
Level of resource saving	Storm water utilization（%）	>10	>30
	Reclaimed water Reuse rate（%）	>20	>50
	Domestic water consumption （L/day/person）	<150	<120
	The ratio of green travel（%）	>70	>90
	The ratio of green building（%）	>10	>30
Level of environmental-friendly	CO2 emission（t/year/person）	<1.8	<1.6
	The ratio of Cleaning energy in total energy(%）	>5	>20
	The ratio of urban domestic sewage treatment（%）	>70	100
	The ratio of in-noxious treatment for urban residential waste（%）	>90	100
	The coverage of urban area of noisy standard（%）	>75	>90
Level of environmental culture	The penetration rate of education and publicity of ecology and environment protection（%）	>80	100

3.2 Eco-indicators in eco-cities planning in China

Eco-indicators, which are the important carrier for implementing ecological strategy, and the crucial management mechanism and evaluating basis for eco-city construction reflect the practical requirements for fulfilling sustainable urban development according to general environmental principles and local conditions. This part chooses indicator systems of two eco-cities in China as part of basic resources for generating the checking references for the whole study. They are Sino-Singapore Eco-city in Tianjin, Sino-Swedish Low-Carbon Eco-City in Wuxi.

3.2.1 Sino-Swedish Low-Carbon Eco-City, Wuxi

Sino-Swedish Low-Carbon Eco-City (2.4 km^2) is located at Taihu new city (150 km^2) which also carries a strong environmental profile. But considering the demonstrative goal of Sino-Swedish Low-Carbon Eco-City, its construction standards are higher than other areas in Taihu new city, in which two sets of indicator systems and implementing guidelines are adopted. The implementation guidelines are supposed to decompose the indicators into details and provide some technical solutions for guiding managers and constructors in implementation.

Eco-indicator system in Taihu new city – a demonstrative district of national low-carbon eco-city （2010-2020）

This system includes 6 dimensions, urban function, green transportation, energy and resource, ecological environment, green building and social harmony，providing a comprehensive and concrete guideline and standards for eco-constructions in Taihu new city. (Table 2)

Table 2 Eco-indicators in Taihu new city

Indicator level	Indicators	Second-level indicators
Urban function	The compact and efficient layout	Comprehensive FAR of construction land
		The ratio of neighborhood with mixed functions
		Coupling of public activities center and public transport hub
		Combined degrees of underground space development and public center
	Public Facilities	The rates of free public facilities in 500m walking distance
	Public transport facilities	Density of bus route network
		Density of slow traffic road network

[3] Green capacity rate is developed for scientifically guiding and controlling green indicator in Master Planning, Regulatory planning, Detailed Planning, Green system planning, Special planning of green space system , urban design.

Green transportation		The proportion of bus stations in 500m walking distance
	Clean energy for public transport	The ratio of clean energy for public transport
	Green Travel	The ratio of green travel
	BRT system	The average speed of bus
Energy and resource	Energy	Energy saving rate of new residential and public building design
		Building energy consumption per unit area
		The proportion of renewable energy
		District cooling and heating coverage
	Water	Water consumption per capita/day
		Water pipeline leakage
		Coverage of water-saving appliances
		Coverage of water-saving irrigation
		Coverage of water sub-metering
		Utilization of non-traditional water sources
		Urban sewage treatment rate
		Compliance rate of industrial wastewater discharge
	Solid Waste	Waste emissions per capita/day
		Construction waste
		Classification rate of garbage collection
		Garbage recycling rate
		In-noxious treatment rate of garbage
Ecological environment	Natural Environment	The number of days of air quality ≥ standards II
		Environmental quality of surface water
		The coverage of urban area of noisy standard
		The ratio of wetlands and water
	Micro-climate	Wind speed in pedestrian area
		Compliance rate of settlements of sunshine standard
		Heat island intensity of outdoor settlements per day
	Landscape environment	Native vegetation index
		Plant species
		Green land rate of completion area
		Green coverage of completion area
		Forestation rate
		Public green space per capita
		Park area of each residential area (3-5 million)
		Shade rate of slow road
		The proportion of permeable ground
Green building	Green Building	The ratio of green building
	Building materials	The ratio of green material
		The ratio of local material
Social harmony	Low-carbon economy	Energy consumption per unit of GDP
		Water consumption per unit of GDP
		Solid waste emissions per unit of GDP
		Carbon emissions per unit of GDP
		The proportion of enterprises with ISO14001 certification
	Livable life	The ratio of green community
		The ratio of green schools (kindergarten, primary and secondary schools)
		Green hospitalx
		The rate of barrier-free facilities
	Social security	The ratio of replacement house
		The balance index of employment and housing
	Public satisfaction	The public satisfaction of environment and social service

The eco-indicator system in Sino-Swedish Low-Carbon Eco-City（2010-2020）

It contains seven perspectives，Urban function, Ecological environment, Energy utilization, Water and sewage, Waste management, Green transportation and Green buildings, with 47 items of indicators. (Table 3)

Table 3 Eco-indicators in Sino-Swedish Low-Carbon Eco-City

Indicator level	Indicators	Second-level indicators
Urban function	The compact and efficient layout	Comprehensive FAR of construction land
		Coupling of public activities center and public transport hub
	Public facilities	The coverage of municipal pipeline network
		The rates of free public facilities in certain walking distance
Ecological environment	Natural environment	Natural landscape
		The quality of surface water
	Green landscape	Average public green space
		Native vegetation index
		Species diversity
		Planting rate of green space
Energy utilization	Energy saving	Building energy consumption per unit area
	Renewable energy	The proportion of renewable energy
Water and sewage	Water resource saving	Water pipeline leakage
		Coverage of water-saving appliances
	Water health and hygiene	The coverage of drinking Water
	Water recycling and reutilization	Storm water utilization
		Urban sewage treatment rate
		The rate of grey water treatment and reclaimed water reuse
Waste management	Garbage collection and management	Classification rate of domestic garbage collection
		Vacuum waste transport system
	Garbage reutilization	The rate of garbage reutilization
Green transportation	Energy use of transportation	The proportion of renewable energy
	Facilities convenience of transportation	Density of bus route network
		Density of slow traffic road network
		The proportion of bus stations in 500m walking distance
Green buildings	Environmental friendly and energy-saving building	Natural environment design
		Energy-saving material utilization

3.2.2 Sino-Singapore Eco-city, Tianjin

In Sino-Singapore Tianjin Eco-city, related to physical planning, the indicator system regulates from national environmental and resources, living styles, municipal facilities and recycling economy. (Table 4)

Table 4 Eco-indicators in Sino-Singapore Eco-city, Tianjin

Indicator Level	2nd level of indicators	Vale and period
Natural and artificial environment	Surface water quality	Standard IV of GB3838 (from now)
	Tap water compliance rate (%)	100 (from now)
	The coverage of urban area of noisy standard（%）	100 (from now)
	CO_2 emission（t-c/ one million dollar）	150 (from now)
	Net lose rate of natural wetlands	0 (from now)
	Green building rate (%)	100 (from now)
	Local plant index	≥ 0.7 (from now)
	Public green space (m2/person)	≥12 (2013)
Life style	Domestic water consumption（L/day. person）	≤ 120 (2013)
	Average waste production (kg/day.person)	≤ 0.8 (2013)
	The ratio of green travel（%）	≥30 (2013); ≥70 (2020)
Municipal facilities	The ratio of urban residential waste reuse（%）	≥60 (2013)
	The rates of residential area within free public facilities in 500m walking distance （%）	100 (2013)
	The ratio of in-noxious treatment for urban residential waste（%）	100 (from now)
	The rate of barrier-free facilities （%）	100 (from now)
	The coverage of municipal facilities	100 (2013)
Recycling economy	The ratio of renewable energy in total energy (%）	≥20 (2020)

	The ratio of untraditional water utilization (%)	≥50 (2020)

4. Examine the integration of environmental improvement in urban planning legislation system

According to those indicator systems above, this paper sums up the crucial principles and indicators, which could be integrated into urban planning legislation system and checks their existence, absence and performance in the current system. According to the relevancy to physically sustainable development, the paper chooses several regulations as checked objects shown in Table 5. And the summarize of those indicators is also categorized as checking contents into three levels in terms of current legislation structure: A. Main seven principles, B. Sub-principles under main principles, C. Concrete standards and indicators. (Table 5) As regulations in different levels should be analyzed from different views, the checking process is made by considering the structured correlation between summarized data and selected regulations. (In following sections the corresponding numbers are used to represent checked objects (regulations as shown in Table 5).

Table 5 Checking box of structured correlation between summarized data and selected regulations

Levels	Selected regulations	Main tasks	Checking contents
National law	① Urban and rural planning law of PRC	State the main principles, the main responsible sectors and main tasks of urban planning	**A**. Seven main principles **B**. Sub-principles under each principle
National administrative regulations	② Measures and detailed rules for formulating city planning	Define the planning procedures, main contents	**A.** **B.**
	③ Code of urban residential areas planning & design ④Code of transport planning on urban road ⑤ Regulation for indicators of urban green planning and construction	Define concrete contents, rules, technical solutions and the value of controlling indexes	**B.** **C.** Concrete standards and indicators
Local regulations	⑥ Technical regulation of urban planning and management of Jiangsu Province	Clarify local standards according to local features and also compliance to the national regulations of urban planning	**B.** **C.**

4.1 Ecological Environment

Ecological environment protection and construction as one of main principles is largely concerned in China for many years, and it is also clearly stated in the urban planning regulations. In terms of the data collected above, the principle of ecological environment protection and construction within the urban planning area could be divided into three sub-principles: natural environment, green capacity, microclimate built. Green capacity as a new concept for improving green spaces has not been used in any regulations, neither of micro-climate built. The compulsory contents stated in the Measures and detailed rules for formulating city planning are mostly the planning of green landscape structure and green land use layout which is more concerning the morphology but from sustainable aspects. From the table, the most frequent concrete standards and indicators in the regulations is about average public green area per person, green land rate and green coverage of completion area. And for these indicators, the focus is more on the quantitative regulating but qualitative guiding, and also the content of indicators are simplex and uniformed for all the areas in China. A number of concrete indicators are absent, or although some indicators like *native vegetation*, *species diversities*, *species diversities* are already mentioned in the regulations, the way to be indicated is quite unclear, especially in 'Code

of urban residential areas planning & design', and 'Regulation for indicators of urban green planning and construction'. (Table 6)

Table 6 The including or excluding of indicators on Ecological Environment in urban planning legislations

Main principle	Included	Sub-principle	Included	Concrete standards and indicators	Included
Protect and construct ecological environment	① ②	Natural environment protection	① ②	The air quality	--
				The quality of surface water	--
				The coverage of urban area of noisy standard	⑥ not clear
		Green capacity construction	--	Public green space per person	③ ⑤ ⑥
				Green land rate of completion area	② ⑤ ⑥
				Green coverage of completion area	⑤ ⑥
				Native vegetation	③ not clear
				Species diversities	⑤ not clear
				Species diversities	⑤ not clear
				Planting rate of green space	⑤ not clear
				The rate of natural wetlands	⑤ not clear
				Shade rate of slow road	--
				The proportion of permeable ground	--
		Micro-climate built	--	Wind speed in pedestrian area	--
				Heat island intensity of outdoor settlements per day	--

4.2 Urban function

Effective and compact urban function is clearly stated in national law and regulations. Following that, compact and efficient layout and effective public facility are also included in national law as sub-principles, but the concrete standards on how to approach these targets are lack in regulations. Although the requirements on *the Far of construction land, combination of underground space development and public center and the coverage of municipal pipeline network* are specified in some codes, more than half of the concrete standards are still absent, such as *the rate of neighborhood with mixed function, Coupling of public activities center and public transport etc.*. (Table 7) Mixed functions of land as an effective way to contribute to efficient land use, less vehicle travel of citizens and also an active neighborhood is still absent in the regulations. In the land use category, there is no category of mixed land use, and on the contrary, the main principle for land layout is clear function separation and centralization.

Table 7 The including or excluding of indicators on Urban Function in urban planning legislations

Main principle	Included	Sub-principle	Included	Concrete standards and indicators	Included
Effective and compact Urban function	① ②	The compact and efficient layout	①	The comprehensive Far of construction land	② ③ ⑥
				The rate of neighborhood with mixed function	--
				Coupling of public activities center and public transport	--
				Combination of underground space development and	⑥

				public center	
		Effective public facility	①	The coverage of free public facilities of residential areas in appropriate walking distance	--
				The coverage of municipal pipeline network	③ ⑥
				The rate of barrier free facilities	--

4.3 Green Transportation

Green transportation includes three perspectives: improve public transport facilities, use clean and renewable energy for transportation, and transit to green travel model, in which only renewable energy is not contained. The public transport facilities is promoted by several standards in 'Code of transport planning on urban road', whereas there are some requests missing. The items indicating travel modes and commute time are existing in the regulations. And at the same time, a number of items target for encouraging private vehicles not restricting them, for example, in 'Code of urban residential areas planning & design', there is an item '8.0.6.1 parking rate of private cars for residents should not be less than 10%' , but no maximum limitation. And although the green travels mode of walking, bicycles and public transport are encouraged in some provisions, they are sometimes hindered unconsciously by other standards. For instance, in 'Code of urban residential areas planning & design' there is item '8.0.1.2 the crossing vehicles should be avoided in the residential neighborhood' which is to ensure the security and good living environment for residents. But as many neighborhoods are in large scale exclusion of the buses in the area and also public feasibilities out of walking distance increase demands of private vehicles which are not sustainable. (*Hai*, *Xiaopan*, *2009)* The absence of standards on density of slow traffic road network indicates that the travel space and facilities for non-motorized vehicle has not been well concerned as vehicle travel. (Table 8)

Table 8 The including or excluding of indicators on Green Transportation in urban planning legislations

Main principle	Included	Sub-principle	Included	Concrete standards and indicators	Included
Green transportation	--	The convenience of public transport facilities	②⑤	Density of bus route network	④
				Density of slow traffic road network	--
				The proportion of bus station in appropriate walking distance	④⑥
				BRT system	④
		Clean and renewable energy use for public transport	--	The ratio of clean and renewable energy use	--
		The ratio of green travel	--	Distribution of travel modes	④
				The ratio of commute time which is less than an hour	④

4.4 **Green Building**

The principles of green building design and green material use are seldom mentioned in current regulations, especially in upper levels (Table 9). Only in 'Code of urban residential areas planning & design', there are several standards talking about utilize sunshine and natural wind to improve micro-climate, but the start point is not to maximize energy efficiency and reduce unit energy consumption of buildings. More controlling and guiding standards from resource-saving of green buildings are needed to be complement. But considering the main focus of urban planning legislation is on larger scale space rather than building design, the indicators on green building should not be too detailed.

Table 9 The including or excluding of indicators on Green Building in urban planning legislations

Main principle	Included	Sub-principle	Included	Concrete standards and indicators	Included
Green building	--	**Green building design**	--	Natural environment/ Micro-climate design, e.g. utilize sunshine, wind etc.	②③⑥
		Green building material	--	The ratio of green material	--
				The ratio of local material	--

4.5 Energy production and saving

As the national strategy of environmental-friendly and resource saving, the target of the energy production and saving is clearly specified in the general principles of national law and regulations, but there are not any concrete items on energy saving and renewable energy utilization. (Table 10) Most items concerning on energy production and saving are quite general and has not integrated in urban planning system.

Table 10 The including or excluding of indicators on Energy production and saving in urban planning legislations

Main principle	Included	Sub-principle	Included	Concrete standards and indicators	Included
Energy production and saving	①②	Energy saving	①	Building energy consumption per unit area	--
				Energy saving rate of new residential & public building design	--
				District cooling and heating coverage	--
		Renewable energy	--	The ratio of renewable energy in total building energy consumption	--

4.6 Water utilization

For the water utilization, there are four aspects related: utilization of non-traditional water resources, water resource saving, sewage treatment, water quality and health, in which non-traditional water resources is a new subject which hasn't been integrated in current regulations. (Table 11) And as the situation of energy production and saving, three sub-principles are stated in upper levels, while most of the standards and indicators are missing, such as the requests on using water-saving appliances, urban domestic sewage treatment.

Table 11 The including or excluding of indicators on Water Utilization in urban planning legislations

Main principle	Included	Sub-principle	Included	Concrete standards and indicators	Included
Water	--	**Utilization of non-traditional**	--	Storm water utilization	--
				Reclaimed water reuse	--

utilization		**water resources**			
		Water resource saving	① ②	Water consumption per capita/day	②
				Water pipeline leakage	--
				Coverage of water-saving appliances	--
				Coverage of water-saving irrigation	--
				Coverage of water sub-metering	--
		Sewage treatment	① ② not clear	Urban domestic sewage treatment	--
				Compliance rate of industrial wastewater discharge	--
				Grey water treatment	--
		Water quality and health	① ②	The coverage of drinking water	-

4.7 Waste management

The principles and indicators on waste management, recently considered as important aspects for resource saving, is only unclearly mentioned in terms of waste collection. The domestic waste production, waste collection and treatment approaches are regulated as the compulsory content in the sector planning of environment and sanitary facilities in master planning, but there are no guidelines to formulation of these planning. As we see from the table, waste management is also a new area which are absent but need to be closely integrated in urban planning regulations. (Table 12)

Table 12 The including or excluding of indicators on Waste management in urban planning legislations

Main principle	Included	Sub-principle	Included	Concrete standards and indicators	Included
Waste treatment and reuse	--	**Reduce waste production**	--	Waste emission	②
				Construction waste production per km^2	--
		In-noxious treatment for urban residential waste		The rate of in-noxious treatment for urban residential waste	--
		Waste collection and reutilization	① ② not clear	Classification of domestic waste collection	②
				Vacuum waste transportation system ????	--
				The rate of domestic waste reuse	--

5. Discussion

Chart 1,2,3 show that more than half related indicators are not included in urban planning legislations, from main principles, sub-principles to concrete indicators and standards. This means the current legislation system is somehow out of date and inconsistent with practical sustainable urban planning requirements. Some strategic principles, like *environmental protection and construction, effective and compact land use, and resource and energy saving and utilization are pointed,* are clearly in the 'Urban and Rural Planning Law of the PRC' and Measures and detailed rules for formulating city planning. The principles on green transportation, green buildings, water utilization, waste treatment and reuse are poor stated in the upper levels. (Chart 1) As shown in Chart 4,5, the integration from perspectives of Green building and Energy production and saving is quite weak, while the concern from urban function principle is relatively strong comparing to other principles. The integration of renewable energy use into green building design, green transportation and waste recycling is an aspect to be promoted with large potentials.

As it has already been stated in section 4, the task of concrete standards and indicators is more on quantitative regulating but qualitative improving. And also the requirements of these indicators are so simplex and uniformed that they can not reach the environmental targets, and at the same

time meet different local requirements. Quantitative indicator is difficult to be a common value for the whole county, so effective standards on qualitative requirements and also the instructs on implementing these indicators are necessary. This problem also indicates a structural weakness of urban planning regulation system, the tasks of legislations and regulations on each level are mixed and ambiguous.

Another issue found in the analysis is the conflicts between sustainable indicators and items in current urban planning legislations, as stated in the checking on principles of Urban function and Green transportation. China is still in a certain condition of fast urbanization and transition, leading to rapid transportation dependent, and emphases on fast and centralized urban expansion, which contracts with the compact and efficient layout and green travel modes. These conflicts, which must result in obstacles when planning and implementing sustainable urban projects, should be figured out in good time in urban planning legislation system.

6. Concluding remark

To popularize sustainable urban planning in China, the revision of the regulation system is essential and imminent towards comprehensive content and clarified hierarchy structure. Based on above analysis and discussion, here there are three main problems need to be solved and improved. Firstly, in the urban planning legislation system, more than half of the principles, standards and indicators concerning on seven aspects stated in the paper are absent, because these regulations, developed in 1990's, are out of the date for the goal of resource-saving and environmental-friendly. The update of urban planning legislations is urgent. Another is there is a gap between national laws (general principles) and planning regulations (detail indicators), lack of operational guides. The structure and content of standards and indicators are quite mixed and ambiguous in the current system, this will lead the incoherence between principles and indicators, because the controls of concrete standards in middle level are absent. As the standards are supposed to be nexus between principles and indicators, this confusion and lack of the middle-level standards in regulations will lead the incoherence of principles which are unable to be implemented, and indicators which are given improper values. What's more, the principles in current urban planning system sometimes are apparently contradictory to some environmental goals, which should be given a balance and mediate during the future legislation formulations.

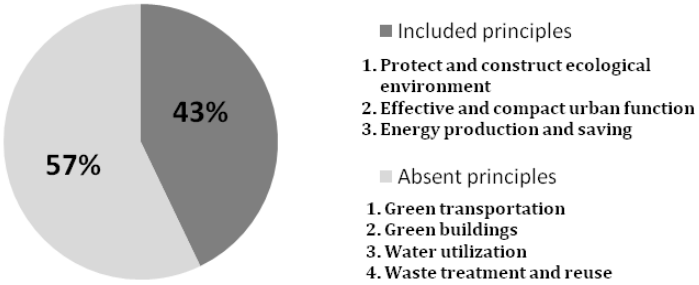


Chart 1 Coverage of main principles in the Regulation ①②

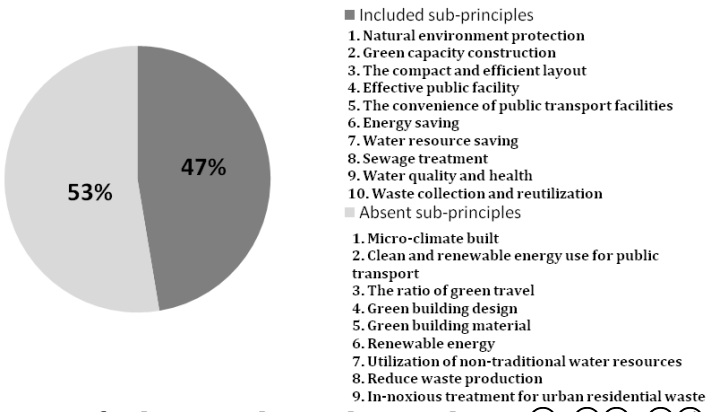


Chart 2 Coverage of sub-principles in the Regulation ① ②③ ④⑤ ⑥

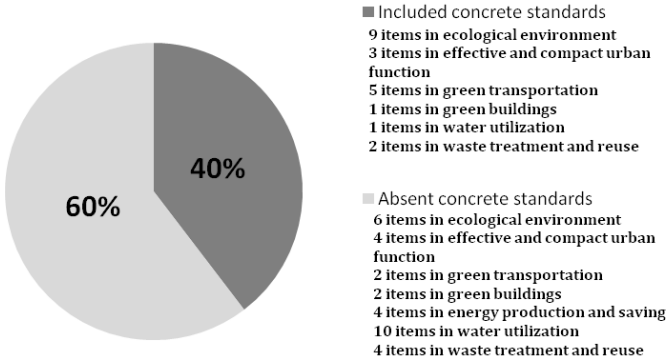


Chart 3 Coverage of concrete standards in the Regulation ③④⑤ ⑥

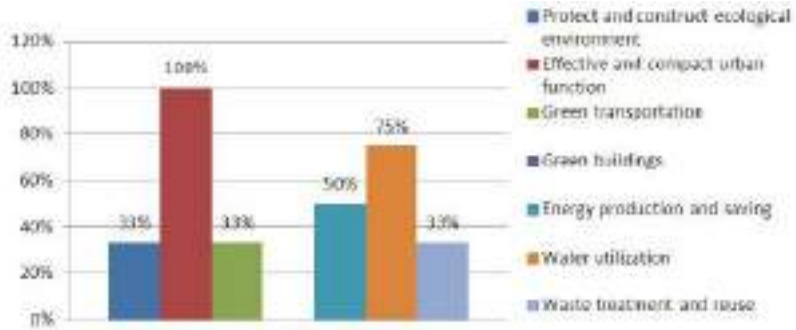


Chart 4 Ratio of included sub-rules of each category in the Regulation ① ②③ ④⑤ ⑥

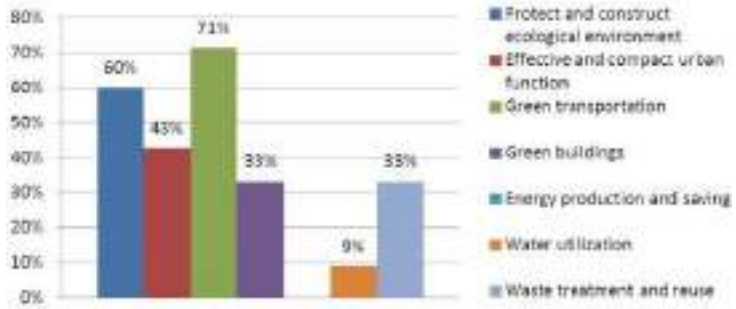


Chart 5 Ratio of included concrete standards of each category in the Regulation ③④ ⑤⑥

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THE ROLE OF INSTITUTIONS, POLITICS, AND POWER RELATIONS IN OLYMPIC TRANSPORTATION PLANNING: THE CASE OF 1996 ATLANTA SUMMER OLYMPIC GAMES

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Abstract

The political situation and institutional structure determines the policy approach that the host city prepares for mega-events. Although each host city uses fixed strategies to plan for the short term event, the outcome of these strategies mostly depends on the host city's political structure and its institutional culture. In other words, the impact of mega-events on host city's long term planning strategy varies on the choice to continue using these strategies in the long term and it is restricted by the host city's planning traditions. In this sense, this research intends to investigate whether the short term focused mega-event planning is expanded to reach long term goals of the host city and whether this short term focus affects the policy, structure, and culture of the transportation planning institutions of the host city.

Most past academic research has focused on the physical capacity of the mega-event host city and the investments made for the events. However, the impact of this temporary situation on host cities' policy making process for the long-term has been mostly neglected. By using 1996 Atlanta Olympic Games as a case, this paper focuses on the role of institutions, politics and power relations on Olympic transportation planning in order to gain a better understanding of the positive and negative impacts of the events on host cities. This research focuses on the policies used by planning institutions in the transportation planning process of 1996 Atlanta Olympic Games, and the change in transportation institutions' strategy and vision throughout the event planning process. Understanding the event organizational agendas and priorities in respect to transport and the decision-making process is important, and this research seeks to fill this gap by focusing more attention on the transportation planning and institutional side of mega-events.

1. Introduction

The Olympic Games are based on the spirit of competition between athletes. This spirit of competition is shared by rival candidate cities. In order to win their bids to host the

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Olympic Games, cities must put their best foot forward. Since 1984 Los Angeles Games, Olympics are growing in many aspects, mainly due to financial success of Los Angeles Games and increasing economic potential of the Games. Thus the event planning process becomes more comprehensive and more challenging. The Olympic Games require years of event planning, also pose one of the biggest global planning challenges. These forces combine to render urban planning an essential part of the Olympic Games.

Olympic Games generate demand not only for the event itself, but also for other related services including transportation. This study focuses on urban planning side of the Olympic Games; specifically transportation planning that can be derived through hosting this events. The transportation concept is one of the technical criteria to evaluate the candidate cities' capacity to host the Olympic Games and it is also one of the mega-events' main legacies. A typical mega-event transportation strategy is to increase the use of public transport during the event, thus quality public transportation is the backbone to passenger movement for all mega-events, and all game areas are designed to be accessible by public transportation.

Most past academic research has focused on the physical capacity of the mega-event host city and the investments made for the events. However, the impact of this temporary situation on host cities' policy making process for the long-term has been mostly neglected. This research focuses on the policies used by planning institutions in the transportation planning process of 1996 Atlanta Olympic Games, and the change in transportation institutions' strategy and vision throughout the event planning process. Understanding the event organizational agendas and priorities in respect to transport and the decision-making process is important, and this research seeks to fill this gap by focusing more attention on the transportation planning and institutional side of mega-events.

2. Transportation Planning for Olympic Games

The selection of the host city for the Olympics is a long process covering a seven-year period and starting with the National Olympic Committees (NOC) within each country. Any city interested in hosting the Olympics should express its interest to the NOC in the country. After the approval of its NOC, the city is considered as an applicant city and submits a candidacy file to the International Olympic Committee (IOC) to be evaluated by the IOC's Commission of Inquiry. This file is a technical document which gives detailed information about the city's condition in 23 categories including transportation and an important reference for the current situation and future implementations. The Commission evaluates each candidate city in terms of their technical, physical, financial, and organizational capacities, and makes an assessment on its potential to stage the Olympics successfully based on a set of technical criteria including legal issues, sports

venues, Olympic villages, environmental conditions and impact, safety and security, finance, and the transportation concept (IOC, 2009).
The transportation concept evaluation is about the main traffic planning objectives and the strategies on organization, ticketing, testing, and training. IOC identifies four different objectives for transportation: 1) *Offer* is about how to meet the demand for the Games by providing data about the current and future infrastructure on air transport, motorways, main roads and parking, main parking areas, and public transportation system; 2) *Demand* indicates the overall personnel and training needs and estimated spectator numbers; 3) *Concept* is about the strategy that will be used during the Games that shows the relationship between offer and demand for the particular candidate city; 4) *Planning and Management* determines the responsibilities of different authorities for different transport activities (IOC, 2006).

The transportation concept is one of the technical criteria to evaluate the candidate cities' capacity to host the Olympic Games and it is also one of the mega-events' main legacies. Quality public transportation is the backbone to passenger movement for all mega-events, and the Olympics provide an exceptional stage to seek long term approaches to transportation planning. All game areas are designed to be accessible by public transportation, and other modes of transportation are linked to public transportation, such as parks, automobile lanes, bike lanes, and sidewalks for pedestrians. The main components of the Olympic Transport Plan can be listed as follows (Bovy, 2003):

- Well-promotion and advertised 100 % public transport usage
- Free use of public transport with event tickets
- Spectator-parking ban in and around the venues along with limited private car accessibility
- Free park and ride spaces supported with shuttle services directly tied to the venues and transit stations

3. Literature Review

Most past academic research has focused on the physical capacity of the mega-event host city and the investments made for the events. Basically, the main focus was limited to the event staging period and how to manage this temporary demand for the events. However, the impact of this temporary situation on host cities' policy making process for the long-term has been mostly neglected.

Mega-events have the potential to be the catalyst for host cities to apply their planning strategies in a more focused environment, and they can result in remarkable changes in infrastructure, urban form, and city image (Essex and Chalkley, 1999; Essex and Chalkley, 2004). According to Essex and Chalkley (1998), the Olympic Games offer

"the justification for related developments to be 'fast-tracked' through accelerated planning, design and construction." (p. 201). Mega-events are "the best stage upon which a city can make the claim to global status" (Short, 2004, p.24). These forces combine to render urban planning, an essential part of the events planning process, and the event itself provides an exceptional stage to seek long-term approaches. The interest of cities for hosting mega-events has been growing mainly due to increasing economic potential of the events. The largest exceptional public events (ECMT, 2002) that are defined as 'mega' includes the Olympic Games, Expos, Soccer World Cups, and Commonwealth Games which attract large number of visitors and justify large-scale infrastructure development (Roche, 2002). Since mega-events have an impact on cities beyond sport, and these non-sport outcomes may be even more important than the sporting outcomes, the events can be analyzed from a policy perspective. The fact that the mega-events are not just about sports, but they give an opportunity to accomplish the plans on their policy agendas has also been realized by city leaders (Hiller, 2006).

Los Angeles Olympic Games in 1984 can be seen as a turning point for staging mega-events, mainly due to its economic success. It was the largest amount of temporary and portable facility implementation and utilization event at the time (Larson and Staley, 1998).After the 1984 Los Angeles Olympics, Atlanta organized the second privately funded Olympics with no direct public funding in 1996. "No new taxes" pledge was in the heart of the Olympic Organization to get and keep public support for the Games and it limited government involvement on major decisions (French and Disher, 1997). The lack of public involvement and public funding also meant that implementing comprehensive and integrated planning was limited. In order to hold the city harmless against in a financial liability, Atlanta took full advantage of existing facilities and adopted them to Olympic sports venues through necessary modification and/or installing temporary equipment and systems in order to avoid the under-use of venues (Larson and Staley, 1998; Smith, 2007).

The shift on the significance of mega-events increased the interest of researchers on the impact of mega-events. Mega-events have been studied from many different perspectives, such as its economic impacts, tourism impacts, or urban regeneration impacts. The early studies by Ritchie (1984), Hall (1992), and Roche (1992) provides the foundation that the Olympics can be seen as a tool for local economic development. For Preuss (2004), the Games globally increase the recognition of the host city and this positive climate attracts business investment to the host city. Olympics also create a positive tourism legacy by strengthening the host city's image as a brand. The involvement of government at different levels has also been investigated.

Most of the studies focus on the potential benefits and positive impacts of mega-events (Gold and Gold, 2007; Short, 2004; Hiller, 2006; Cashman, 2002), while there are few studies that investigate the negative impacts (Lenskyj, 2000). 1992 Barcelona Games left an indelible mark on Barcelona and cited as an exemplary Olympic Games. The Games

showed the positive effects of events on the city by strengthening its image, infrastructure, urban landscape, and culture to compete with global cities (Millet, 1995). "The Games served as a catalyst for urban and economic change in the city, positioning Barcelona internationally and communicating its constructed image to a global audience" (Kenneth and Moragas, 2006). On the other hand, Atlanta and Sydney Games are seen as the examples of negative social impacts of Games on host cities (Lenskyj, 2000).

For mega-events, the power relations between actors also determine the possible outcomes. In Atlanta case, downtown business coalition had the power and they made the critical decisions throughout the Olympic planning process. The three major categories of public policy – distribution, regulation, and redistribution – constitute real arenas of power, and the structure, political process, and relations are developed in each arena (Lowi, 1964). For Lowi (1964), distribute policies are defined as highly individualized decisions that only can be called a policy by accumulation; regulatory policies are also specific and individual and involve a direct choice as to who will be indulged and who deprived in the short run; and redistributive policies differ on impact which is much broader, approaching social classes. In terms of power, the distributive area is pluralistic and only organized interests are operating, the regulatory arena composed of a multiplicity of groups organized around tangential relations and the redistributive arena expresses different generalization.

Greenberg et al. (1977) states "public policy is almost never a single, discrete, unitary phenomenon. Indeed, the appeal of public policy studies as a focus of intellectual endeavor lies precisely in its richness" and illustrates the problems arising from the complexity of using policy as a unit of analysis by Lowi's work. Greenberg et al. (1977) discusses the difficulties they face in order to test public policy hypotheses. They briefly list the reasons why public policy is more complex as a focus of systematic comparative analysis: the policy process takes place over time and this leads to difficulty in explaining "the process" as a simple unit; since the policy proposal itself is complex and has several important aspects, it is very difficult to place it in any single category; the existence of many participants makes the policy making process complicated; and the public policy process cannot be described by simple additive models, because it is complex as a research focus. Greenberg et al. concludes that the researchers must make guesses and assumptions that cannot be just in order to operationalize the basic concepts of Lowi's theory, thus we may never be able to obtain hard knowledge of the policy process. In this sense, it is hard to systematically analyze the policy process for mega-event planning, since it is very complex and includes many participants.

For Olympic Game planning, institutional cultures, structures, and history determine constitutional choices, and constructional choice outcomes effect the operational and collective choice actions. In other words, institutions are path-dependent in one sense and they have limited capacity, power, and flexibility to make decisions than are

extremely different than their "path". The concept of path dependency suggests that future decisions are limited and embedded by the decisions made in the past, and the changed conditions are not always enough for a shift in policy decisions. Path dependency creates a policy situation where the organizations are weak and have limited options that they cannot create their own preferred policy agendas, and responding to changing public preferences becomes difficult when public policies are institutionally embedded (Low and Astle, 2009). The main barrier for this kind of policy change is "the inflexibility of mental models and the rigidity of institutions" (Low et al, 2005). The policy decisions of Olympic host cities are the result of the key policy actors' decisions, and these actors are oriented by "story lines" that present reasons for the taken actions as well as for the future policy directions (Low et al, 2005).

4. Case Study: 1996 Atlanta Summer Olympics

The City of Atlanta, a progressive city in the south, is in the center of the metropolitan region. Having no geographical boundaries allowed Atlanta to grow in a very low density pattern. Atlanta's population settles over a large area, and this lead to an automobile-oriented urban design feature. The Atlanta region's population has grown rapidly in the last few decades. Especially after the Olympics, the region has attracted millions of people and the economy has expanded. Class and racial separation are the two characteristics of the region. Historical class and racial separation became permanent with the edge-city suburban development, exclusionary suburban land-use regulations and weak fair-housing enforcement which created two separate cities: black south and white north (Keating, 2001). Local politics is controlled mostly by the city's downtown business leaders who influence elected officials. This political environment in Atlanta leads to the policy decisions that neglect public interests and undermine regional and social needs because of a narrowly defined private interest (Keating, 2001). Limited vision, class and race segregation along with the lack of attention to the fundamental issues created serious problems that are transferred to the future decision makers of the city.

4.1 Bidding for the Olympics

After President Reagan eliminated several federal aid programs geared toward urban policy in 1984, cities had to look for other funding sources and, for Atlanta, the Olympics provided the perfect economic impetus to focus on the revitalization of downtown area (Burbank et al. 2002). Atlanta's bid for hosting the Olympic Games can be understood as the product of an active growth coalition that already exists in Atlanta. For Atlanta, the vision and the central motivation among growth elites were to show that Atlanta is a "world-class" city that is capable of hosting Olympic Games. In order to justify local development, public policy strategies promoted tourism, and Olympic Games provided that promotional means to reach a broader population (Burbank et al.

2002). For Atlanta, the Olympic bid was not just about hosting a major sporting event, but to transform the city into a world stage player.
Atlanta competed with other cities – Athens, Toronto, Manchester, Melbourne, and Tokyo – for the nomination of 1996 Olympic Games. Since the 1996 Olympics was the centennial anniversary of the Olympiad, Athens was the favorite candidate city mostly because of sentimental reasons; however, IOC did not award Athens for hosting the 1996 Olympic Games, mainly because of the governmental instability at that time, and because of the fact that the city was not ready to be prepared effectively on time for this huge organization (Hutton, 2001). Some of these other candidate cities were engaged in bribes, attempted to buy the votes of IOC members, and acted unprofessionally during the election process. As a result, Atlanta – best of the rest – used technology, an image of enthusiasm along with the strong support from Atlantans, and the organization skills to be selected over Athens by a 51-35 vote to host the Games after five rounds of voting. Atlanta's bid was considered strong in terms of its concepts for transport – especially the air connection to the world with one of the leading airports in the world in terms of capacity and passenger –, existing sport facilities and accommodations, and communication systems; however these concepts created serious problems during the Games (Roche, 2000).

The business elites were the pushing power for Atlanta to bid for Olympics. Atlanta was able to host the 1996 Olympics through Billy Payne's (a real estate attorney and former baseball player) vision and determination along with the support of his friends known as the "Crazy Atlanta Nine" that will form the Atlanta Organizing Committee (AOC) later (Rutheiser, 1996). The members of the AOC preferred an organizational structure where decision making could be closely controlled and operations would be less subject to public oversight. To this end, they incorporated the Atlanta Committee for the Olympic Games (ACOG) as a nonprofit civic organization with a thirty-one-member governing board. The board included the mayor, delegates from the USOC and IOC, holdover members from AOC, and others drawn from Atlanta's civic and business elites (Burbank et al 2001:92).

The goal of the Olympic transportation plan in Atlanta was to confine activities to a constricted area to shorten travel time between venues. Thus, major venues and events were concentrated within the imaginary "Olympic Ring" circle - the 3.1 miles (5 km) in diameter of downtown Atlanta. The Olympic Transportation System (OTS) was created to coordinate all transportation systems to provide sufficient service. ACOG made a policy decision to assume responsibility for spectator transportation, even though IOC only requires Olympic Organization Committees to provide transportation for Olympic Family members. ACOG voluntarily took the responsibility for spectator transportation based on the assumption that Olympic families cannot be moved efficiently, if the public movement is not controlled.

Although transportation was one of the biggest challenges for an auto-oriented city like Atlanta, Atlanta's existing transportation plan, especially the rail system, was a vital part of their proposed transportation plan, which played an important role in Atlanta's winning bid for the Olympics. Atlanta Regional Transit System consists of MARTA, Cobb Community Transit (CCT), Gwinnett County Transit (GCT), Clayton Transit (C-Tran), and XPress Regional Commuter Service; but MARTA is the most-used public transportation system by far (more than 90%) in the region. For ACOG, Atlanta's transportation system prior to the Games was deficient for providing service to millions of people during the Olympics. Based on this argument, MARTA formulated a transport plan on using existing bus and rail systems with the support of a temporary bus system to operate during the Games which consisted of 1475 borrowed buses from more than 65 US transit agencies (ACOG, 1997; MARTA, 1996). Before the Olympics, the MARTA bus system consisted of 750 buses; whereas it utilized 1700 buses and 2000 drivers during the Games period. Including the borrowed buses, MARTA Olympic Bus System became one of the largest bus systems in the US. For the Olympics, three rail stations and 7 miles of additional route were added, and frequency of transit service was scheduled to increase and extended to 24 hours a day (ACOG, 1997). Available public transit services during the Games consisted of regular MARTA services with increased night services, shuttle services, park and ride lots in suburban locations, and special services for Olympic Family members. Overall, the public transit system met the expectations; MARTA system delivered about 14.4 million one-way trips, while the supplemental bus system delivered almost 4 million one-way trips during the Olympics (ACOG, 1997).

4.2 Olympic Legacy of Atlanta

Atlanta's Olympic effort primarily aimed to meet the IOC requirements in a most efficient way from Games organization to architecture with limited infrastructure investment. In other words, Atlanta, as a "pragmatic and bottom-line-oriented city", reflects the characteristic of 1990s – "a decade of stringency and moderated expectations" (Dixon, 1995, p. 52). An Olympic bid was a logical next step for Atlanta to grow and put the city in the world map. The goal of the Atlanta Games was to promote business growth, create a world city image, and attract international business to the city. After staging the Games, several companies relocated to Atlanta, and the Games was one of the important reasons for achieving this.

Although Atlanta put a priority to create a world class city image instead of creating permanent physical legacies, the city itself and its Universities – particularly Georgia Tech and Georgia State University – benefit form some of the physical facilities that are built for the Olympics. New dormitories that will be used by Georgia Tech and Georgia State University after the Games were constructed by $47 million ACOG contribution, a new $24 million natatorium was built on the Georgia Tech campus, and ACOG spend

$1.5 million to renovate Georgia Tech's Alexander Memorial Coliseum, the Olympic Boxing venue (Humphreys and Plummer, 1995). The Olympic Village was located at Georgia Tech and over $150 million in capital facilities had added to Georgia Tech which is the largest expansion in University's history. Among all, most notable legacies from the Games include the Centennial Olympic Park, Olympic Stadium, Georgia Tech Aquatic Center, twelve upgraded pedestrian corridors, and a new international concourse and a central atrium at the Hartsfield International Airport.

On one hand, the Games created opportunities for the construction of new sporting facilities as well as the improvement of the physical environment of the host city generated civic pride, provided an opportunity to generate world recognition and contributed to transforming the image of Atlanta (Malfas et al. 2004); on the other hand the 1996 Atlanta Olympic Games created negative social impacts on low-income residents, intensified social problems and deepen existing divides among residents. For example the Centennial Park construction dislocated many businesses without assistance for relocating. Additionally, the Olympics left a negative legacy among low-income neighborhoods where many people were relocated. The Olympic Stadium construction inflicted further damage on the low-income black neighborhoods in the area, and their limited role in Olympic Planning prevented local governments to take action and protect these people from damage (Keating, 2001). ACOG was a powerful coalition of business leaders and elected public officials who faced a legacy of distrust within the city's low-income African-American neighborhoods (Newman, 1999). This was the result of years of policies such as expressway construction and urban renewal which relocated thousands of low-income African-American families. Focusing and engaging on international business to create a world city image also resulted in losing local identity and neglecting local issues (Keating, 2001).

4.3 Politics and Power Relations

The trend for cities to increase their international connections in the global era and the increasing competition between cities to host Olympic Games has incorporated into economic strategies of cities. The rationale of image creation for a city has results in increase in tourism and business investments, and this change has an ultimate effect on local governance as local budgets become allocated along these lines. (Burbank et al 2001). Given the difficulties that city leader's face within the broader political and economic environment and the changes in federal policy and in the international economy forced American cities to play an entrepreneurial role, and the Olympic Games are seen as a way to achieve local economic goals (Burbank et al., 2001). Regime theory can explain the reasons behind the entrepreneurial growth approach. Regime theory argues that American political economy has two principles: government institutions are controlled by elected officials and the economy is directed by private actors (Burbank et al., 2001). Both government and business has interest in local politics and the urban regime provides an environment in order to make "the informal arrangements by which

public bodies and private interest function together in order to be able to make and carry out governing decisions" (Stone, 1989). The basic idea of regime theory is that the political leaders and businesses establish an "informal agreement" which consists of a network of well-established connections built on trust between business and political leaders (Burbank et al., 2001).

Urban regime theory expects that the business interests dominate the policy decision, although the structure of the regime varies from city to city, because of the different conditions in economics, dynamics, institutional settings, and history of the city. Most of the decisions are made through public-private partnerships. In this sense, for any city "an Olympic bid does not involve all the individuals who may be part of the informal governing structure of a city, but it does illustrate in a concrete fashion how business resources and governmental authority come together to undertake a policy initiative" (Burbank et al., 2001, p. 158). In contemporary American cities, staging the Olympic Games is not simply an international sporting event but a tool for implementing the vision of a world-class city. With their short duration, limited beneficiaries, and need for extensive planning, the process of bidding for and holding an Olympic games provide sufficient opportunity for growth (Burbank et al., 2000).

In Atlanta, the Olympic bid occurred because of the existence of an urban regime to provide a way to overcome the weaknesses of city government and benefit from businesses (Burbank et al., 2001). In the case of United States, the Olympic Organization Committees take the formal responsibilities of preparing and staging the Games. It does not mean that local and state governments are not involved or the Games were run by for-profit companies (Burbank et al., 2001). In Atlanta, the Olympic Committee (ACOG) had the main responsibilities. It was in control of every aspects of the game planning and it established an efficient redevelopment agenda for the city. The projects that met the desires of both public and private entities are undertaken and completed with a coalition (e.g. Olympic Stadium and Centennial Olympic Park).

In Atlanta Region, the relationship between the government entities and business helped to maintain the image of public-private enterprise. The idea of citizenship was replaced with consumers as the central point of urban public life and, the Olympics enabled Atlanta to make significant changes to the downtown infrastructure that were regard as dreams for many local business professionals and politicians for decades (Lowes, 2002). The main goal for business leaders was to create a commercial legacy by attracting private investment through encouraging companies to locate their regional and national headquarters and offices in Atlanta. The commercially orientated perspective of the Games planners resulted in a legacy that favored the redevelopment of commercial downtown districts rather than neighborhood renewals.

4.4 Institutional Cooperation

In the Atlanta region, individual political power bases create a situation where no suburban city, town or county want to combine its problems, its resources, and its effort with those of the city of Atlanta and any kind metro-wide cooperation is seen a threat to this status quo (Padgett and Oxendine, 1996). Additionally, largely divided community, and political and racial lines still exists in the metro area and these facts are other barriers for achieving metro-wide cooperation and coordination.

In order to achieve the most benefits out of Olympics, cooperation and coordination among several authorities is necessary from the beginning to the end of the Olympic planning process. Because of the tight deadlines of the Games, cities can do much work in a short time. Games are the excuse to guarantee to complete the infrastructure on time. Within its unique planning environment, the Olympics help to make the process faster with the positive affect of highest cooperation and coordination among different agencies and authorities. In Atlanta case, the collaboration among several authorities beginning from the bidding phase until the staging phase was the most notable accomplishment of the Olympics in Atlanta. (Padgett and Oxendine, 1996).

For transportation planning, especially for regional transportation planning, one of the biggest challenges is the difficulty of creating convincing harmony between different authorities. Organizational structure and management make the difference on the transportation accomplishment of the Games. Harpt (2002) states that one of the keys for creating a successful Olympic Transportation Plan is establishing coordination and cooperation among agencies. This harmony and cooperation is needed more and has the potential to create successful regional transportation plans. However, creating collaboration is challenging especially in the United States because of the political, cultural, historical, and social boundaries, and it is hard to expect the same motivation and concentration from each authority. Since the emergent problems caused by the Olympics are temporary, it becomes easier to agree on a "potentially controversial strategy" for each agency or authority; but once the games are over, disagreements can easily rise again (Giuliana et. al, 1987). Many of the changes in the way of thinking and operating do not retain after the Games.

The Atlanta Olympics showed that the Olympics may have a limited impact on renovating the host city. Even though the economic and physical benefits of the event were clear, institutional culture did not change significantly because of the lack of a comprehensive planning effort and funding. This experience reminds us that Olympics are not the "magic bullets" for solving cities' persistent problems (French and Disher, 1997). The city focused more on "Olympics-as-sport" side and the needs of communities are disregarded (Andranovich et. al, 2001). The motivation of Atlanta was to create a world-city image, prestige, reputation, and economic development through hosting the Olympic Games with a minimum investment on infrastructure. Atlanta's Olympic experience is an American way of making a justifiable government decision which is different from other countries (Dixon, 1995).

5. Conclusion

The Atlanta region is growing, and the region has attracted millions of people especially after the Olympics. Having no geographical boundaries, race and class segregation resulted in a growth pattern that settles over a large area with a very low density pattern and this lead to an automobile-oriented urban design feature. Local politics is controlled mostly by the city's downtown business leaders and this politic environment leads to a narrowly defined privately concerned policy decisions. The business elites supported the Olympic bid which was privately funded and included a feature of minimum public investment and a maximum private profit. The lack of public involvement and public funding also meant that implementing comprehensive and integrated planning was limited in Atlanta Olympic planning process.

After the 1984 Los Angeles Olympics, Atlanta organized the second privately funded Olympics with no direct public funding in 1996. The lack of public involvement and public funding also meant that implementing comprehensive and integrated planning was limited. In Atlanta, the local politics is controlled mostly by the city's downtown business leaders who influence elected officials, and this politic environment leads to a narrowly defined privately concerned policy decisions. This political environment leads to the policy decisions that neglect public interests and undermine regional and social needs because of a narrowly defined private interest. In Atlanta case, the business elites supported the Olympic bid which was privately funded and included a feature of minimum public investment and a maximum private profit. The lack of public involvement and public funding also meant that implementing comprehensive and integrated planning was limited in Atlanta. Downtown business coalition had the power and they made the critical decisions throughout the Olympic planning process. For mega-event planning, institutional cultures, history, and structures determines constitutional choices, and constructional choice outcomes effect the operational and collective choice actions. In other words, institutions are path-dependent in one sense and they have limited capacity, power, and flexibility to make decisions than are extremely different than their "path".

Atlanta's bid for hosting the Olympic Games can be understood as the product of an active growth coalition that already exists in Atlanta. For Atlanta, the vision and the central motivation among growth elites were to show that Atlanta is a "world-class" city that is capable of hosting Olympic Games. Regime theory can explain the reasons behind this entrepreneurial growth approach. In Atlanta, the Olympic bids occurred because of the existence of an urban regime to provide a way to overcome the weaknesses of city government and benefit from businesses. The main goal for business leaders was to create a commercial legacy by attracting private investment through

encouraging companies to locate their regional and national headquarters and offices in Atlanta. The Olympic bid was not just about hosting a major sporting event, but to transform the city into a world stage player. The Atlanta legacy is largely understood to have been committed to business and commercial aims – building the reputation of the city.

In the Atlanta region, largely divided community and political and racial lines are the barriers for achieving metro-wide cooperation and coordination. In Atlanta, the Olympics help to make the process faster with the positive affect of highest cooperation and coordination among different agencies and authorities, and the collaboration, beginning from the bidding phase until the staging phase, was the most notable accomplishment of the Olympics. This harmony and cooperation is needed more and has the potential to create successful regional transportation plans in the future. The Atlanta Olympics showed that Olympic Games may have a limited impact on renovating the host city. Even though the economic and physical benefits of the event were clear, institutional culture did not change significantly because of the lack of a comprehensive planning effort and funding.

Although Atlanta put a priority to create a world class city image instead of creating permanent physical legacies, the city itself and its Universities benefit from some of the physical facilities that are built for the Olympics. The 1996 Atlanta Olympic Games created permanent physical legacies e.g. the Centennial Olympic Park, Olympic Stadium, Georgia Tech Aquatic Center, 12 Upgraded pedestrian corridors, a new international concourse and a central atrium at Hartsfield International Airport, and the ITS System. The Olympic Games was a logical next step for Atlanta to grow and put the city in the world map and the city generated civic pride, provided an opportunity to generate world recognition and contributed to transforming the image of Atlanta. On the other hand, the 1996 Atlanta Olympic Games created negative social impacts on low-income residents, intensified social problems and deepen existing divides among residents.

The issue about the impact of Olympic Games on politics and power relations has largely remained understudied. This study represents an initial attempt to explore this phenomenon, and further research is needed to better understand this relationship. There are some limitations which must be considered in generalizing the findings of this study. First, this study focused on one type of mega-events; Summer Olympic Games and, investigated one single case, Atlanta. This study did not cover the Paralympics Games and did not examine Winter Olympics. Further, since this study only examines one case, the results may vary in other cities. Each Olympic host city's experience is unique, and this experience is not necessarily transferable for solving current policy problems of the city; however it provides some policy alternatives for the future. Each city is limited by its own conditions to benefit from the same Olympic strategies. Moreover, it might be argued that there has not been enough time to evaluate the real long-term impacts of the

Games in Atlanta, although 16 years have elapsed since the Olympic Games was staged. It might be still premature to totally evaluate the long-term effects which may extend to a few decades or more.

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PLANNING, DEMOCRACY, AND UNIVERSITY ENGAGEMENT. A COMPARATIVE STUDY AND A CRITICAL REFLECTION

Laura Saija[1]

Abstract

Against an idea of University as Ivory Tower disconnected from the 'real' world and unable to deal with social problems, scholars around the world have implemented approaches to research and teaching that imply a direct engagement of faculty and students in real communities with concrete problems. Such approaches have had significant relevance in disciplines like planning whose paradigm is centered on the connection between knowledge, action, and social change. Often the declared aim of the scholarship of engagement is the facilitation of marginalized communities' involvement in public decision-making, within the general goal of furthering the achievement of the western democratic prospect in difficult contexts. Does reality match these expectations? The paper address this questions, in presenting the preliminary results of a comparative study of two long-term partnerships between two university planning research units with community organizations facing controversial issues:

- *the case of the* Graduate Division of City and Regional Planning *at the University of Memphis in partnership with the Vance Avenue Collaborative, in the Vance Avenue Neighborhood, in Memphis TN;*
- *the case of the* Laboratory for the Ecological and Environmental Design of the Territory, *University of Catania in partnership with the Coalition for the Sustainable development of the Simeto Valley, Eastern Sicily, Italy.*

Despite significant geographical and cultural distinctions to be made, the two partnerships share a commitment in addressing the most controversial socio-cultural challenges of their context of work. After discussing the practical and theoretical commonalities and differences of the two cases, the paper discusses structural challenges that might prevent Universities to play a transformative role within their own regional contours.

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> The university, if it is to be truly militant, must […] submit its doctrines to the test, and not only of reasoned criticism but of creative adventure in the practical world. It must put its faith in life, impassioned and purposive. The calm of the speculative life must needs find a place in the university militant; but as that of the seed, whose period of germination is followed in due season by leafage, flower and fruit. (Branford & Geddes, 1917. p. 215.)

1. Introduction

The debate on the role of higher education and research in the shaping of social and political organizations, promoting the Democratic prospect, is one of the oldest in human history, and has always been played in between two opposite images:

- The isolated Ivory Tower, place of production of objective and detached knowledge;
- The Engaged Institution that uses reality as field of laboratory, while helping humanity to solve concrete problems.

From an epistemological perspective, the deep and nonlinear linkage between human knowledge and action – discussed both by philosophers like Dewey and scientist like Piaget – is supposed to have an impact on the way Universities work: since both students and researchers, who are expected to "acquire knowledge" in specific disciplines, can acquire meaningful knowledge only through "thoughtful actions," excellence in both teaching and research can only be promoted by the integration in the official curricula of theoretical and practical activities.

From an ethical perspective, the active involvement of faculty, staff and students in highly controversial social, economic, and environmental issues is a way for Universities to play an active role in the accomplishment of the democratic prospect of their countries: students learn to be active citizens of the future, researcher get out of their "Ivory towers" while Universities have the opportunity to pay back communities that have been negatively impacted by their real estate choices.

Within this perspective, Universities and other research institutes have often been considered key actors in promoting socio-cultural and economic development in contexts where the advancement of the "Democratic prospect" appear to face substantial structural, organizational and socio-cultural obstacles. Whether or not Universities have matched a great deal of expectations in the field of international development, rural development, neighborhood revitalization, and community development – is a controversial terrain. How can Universities really play an active role in the accomplishment of the Democratic prospect in problematic contexts? Addressing the question might require further explorations on what concepts like *university engagement*, *democratic prospect* and *problematic context* can mean in concrete cases.

In the context of this paper, this is done through the comparison of work done by two engaged planning research units – the Laboratory for the Ecological and Environmental Design of the Territory (LabPEAT), at the University of Catania, Sicily, Italy, and the Graduate Division in City and Regional Planning (CRP), at the University of Memphis,

TN, USA[2]. The paper will share some critical reflections on the efficacy of University engagement in these two cases that, despite significant geographical and cultural differences, are similar for the way researchers conceive University engagement and the nature of the issues they face in their context of work.

2. Which democratic prospect in which problematic context?

The Italian South and the US Mid-South are very different contexts of work, in terms of Institutional traditions and planning framework, for planning researchers that try to deal with applied research.

Sicilian planning is strongly rooted in European political traditions attributing to public institutions to role of guarantee citizens' positive rights. Plans are required by national laws, as institutional tools for public administrations to promote the public interest through the provision of public collective services and urban spaces. On the contrary, Planning in the US Mid-South has to be understood within the frame of the US liberal democracy, in which public institutions are required to guarantee citizens' negative rights, mostly the largest possible degree of freedom in the use of private properties. Planning is not a legal requirement but is undertaken as a voluntary act mainly with the purpose of facilitating public-private partnerships and, ultimately, economic growth.

However, in both contexts the full realization of the democratic prospect, whatever ideal of social compact such prospect might be based upon, has been historically highly problematic. In both regions, modern institutional values and arrangements have been originated at the national level and then have been superimposed – not without significant friction – over a very different socio-cultural and economic structure. Before 1861 (the year of Sicilian annexation to the rest of Italy and the beginning of US Civil War), Sicily and the Mississippi Delta were characterized by highly hierarchical socio-economic structures, with small elites in control of resources (especially land) and, therefore, decision-making. In both cases, the system was based upon a significant social divide in the rural setting: *latifunda* owners vs sharecroppers in Sicily; plantation owners Vs African-American slaves in the Delta. This system was reflected in urban settlments whose economy was deeply linked to the commercialization of rural products (mostly cotton in the US and wheat in Sicily). Scholars have intensively discussed cultural and economic roots of underdevelopment both in Sicily (Banfield, 1958; Putnam, 1993) and the Delta (Hyland & Timberlake, 1993; Gnuschke, J. E. et alii, 2009; Rushing, 2009), and most of them recognize how problematic is the inability of these two "southern" societies to fully embracing the ideal of Democracy, i. e. a transparent political system in which "power" is hold by people, no matter what their income or their race is; they all agree in connecting the status of underdevelopment with the ability, at alternate periods,

[2] The paper presents partial results of a 3-years comparative research project titled "The Participatory Action Research Approach to the Test of Southern Inertia. Comparing experiences to broaden Boundaries of Action in the Environmental and Community Planning Field," carried out by the author through his active involvement in both of the presented cases. The project was supported by a *Marie Curie International Outgoing Fellowship* within the 7th European Community Framework Programme.

of ancient structures of power and socio-cultural organizations to dominate, conflict, desist, and then dominate again over "democratic" trends coming from the bottom-up and the bottom-sides. A sort of dialectic relationship between forces of different nature: on the one side there are the "dark forces," such as the Mafia phenomenon in Sicily and the racial segregation in the American South, both functional to the elitist way society is structured as a whole: the political patronage system in Sicily (Caciagli, 1977) or the overarching hegemony of private corporations on local decision making in the US (see, for instance, the role of mining companies in the Appalchian region; Gaventa 1980); on the other side, counteracting social, legal and cultural movements that manifest themselves in different ways in different moments in history, such as the Anti-Mafia Movement in Sicily (Santino, 2000) and the Civil Rights movement in the US (Couto, 1993; Green, 2007).

Today, any type of applied research that aims addressing the issue of promoting democracy in conflicted regions like Sicily or the Mississippi Delta has to face the same dilemma: what new form is taking the old never-ending conflict between formalized democratic institutions and long standing elitist socio-cultural structures? In the following paragraph two very different cases show a common approach to face such a dilemma.

3. What does university engagement mean?

CRP and LabPEAT are two small research and teaching units of two relatively large Public Urban Universities, The University of Memphis (UofM) in Memphis, TN, USA and the University of Catania (Unict) in Catania, Sicily, Italy.

The LabPEAT was established in 1995 as part of the Architecture and Urban Planning Department (DAU) by two faculties inspired by Agenda 21's principle that citizens' active participation was necessary for environmentally sustainable planning and design (Busacca & Gravagno, 2005). CRP, in its current form, was established in 1997 as part of the School of Urban Affairs and Public Policies (SUAPP) with a "focus on urban issues and link the teaching, research, service, and outreach efforts to the unique needs of the Mid-South" (SUAPP 10 years Anniversary Report 2010: 4). Despite many organizational differences, both units share a clear commitment to University engagement, that rejects what can be considered the most common model of planning applied research: the *professional expert model*, in which "the professional researcher is called in by a client organization – or talks his or her way in – to study a situation and a set of problems to determine what the facts are, and to recommend a course of action. In this type, the professional researcher is completely in control of the research progress except to the extent that the client organization limits some of the research options." (Whyte 1991, p. 8, 9) On the contrary, both CRP and LabPEAT are committed to what is called Participatory Action Research (PAR), an approach in which the researcher is an internal actor within a community, sharing control with others, in a process of collective change, in which knowledge and actions have a collaborative nature. There are of course different PAR approaches, in terms of goals and practical tools.

Ecological planning in the Simeto Valley

When it was first established, in 1995, LabPEAT's interest in applied researcher was originally inspired by the growing impact that complexity theory and ecology were having at that time on Italian planning and design theory (Bocchi and Ceruti, 1989). The initial focus of the group, when it was established, was to explore the consequences of those theories on planning paradigms and methods, without a clear understanding of the difference between the professional expert model and genuine PAR. The idea was to engage local institutions and, more rarely, community organizations, deal with Sicilian complex ecological systems. The expert model for applied research had been intensively used, before 1995, by other Unict planning researchers (various authors, 1990; Sanfilippo, 1991; Campo 2004). However, the LabPEAT had the awareness that the professional expert model needed to be modified, and that the only way of modifying it was to "try it out" and critically reflect upon it (Saija, 2007). Since 1995, LabPEAT researchers have progressively moved from the professional expert model to a PAR agenda, mostly inspired by Pizziolo's ecological planning and design theory according to which designers and planners are internal actors within a process of co-evolution of humans, other living species, and the environment (Pizziolo, 1995; Pizziolo & Micarelli, 2003). No matter how much they try, planners are not entirely able to control and plan the future of complex systems in constant evolution like cities and regions. As a consequence, the only thing left for them to do is to become purposeful and skilled agents for change, from the inside of a complex system, but letting things evolve toward directions that no one is entirely able to predict (Mugerauer 2005). Complexity theory, in the 90s, challenged planners' traditional technocratic perception of their social role, making them aware that every part of a complex system plays a role in the evolutionary process, for the good and for the bad. The question is: how can planners stimulate a process of evolution toward a "better" future? How does "better" mean? In Sicily, a process of evolution toward a better future has to deal with the most oppressing local issues such as the Mafia phenomenon.

While scholars were still debating on its very existence and on its real nature, the complexity of the Mafia, as symptom of a complex anti-democratic net of relationships between Sicilian culture, businesses and politics (Sanfilippo 2005), was addressed by the pioneering work of the *Centre for the Full Employment in Western Sicily*, established in 1952 by non-violent educator Danilo Dolci. In more than 13 years of work, the Centre demonstrated how is to pursue legal actions against Mafia's affiliates only within a much broader framework of action: a complex combination between community organizing and popular education aimed at collective cultural change that would help communities to liberate themselves, culturally and practically, from the Mafia's cultural and economic hegemony (Dolci, 1974; Barbera 2011). The same message was at the center of the large Anti-mafia mobilization that followed the violent years of 1992 and 1993: Sicilian organized crime is not an isolated disease to be eliminated with surgery (legal prosecutions) by anti-mafia experts (judiciary, policemen, etc.) or heroes (who then pay a high personal price); it is everybody's responsibility to deal with his/her own, more or less conscious, Mafia-genic cultural features and supportive actions.

LabPEAT researchers, during their work in partnership with community organizations in distressed neighborhoods of Catania, have developed an approach to PAR deeply inspired by Dolci's and contemporary Anti-mafia associations (Saija & Gravagno, 2009; Saija 2012). Such a development is based on the observation that there is strong parallel between a university scholar that understands the impossibility of being an "external" and "objective" researcher and an anti-mafia activist that understands his/her being part of a complex system of bi-directional relationships where it is very hard to trace a clear line between the good and the bad side. In both cases people are asked to undertake a process of collective learning and social change that would allow them to make sense together in the world (What is legal? Why?). The practicality of this general and abstract statement will be further discussed in the case of the work that LabPEAT researchers are doing in partnership with the *Coalition for the sustainable development of the Simeto Valley*.

The Simeto Valley Story[3]

The Simeto Valley, the central portion the 4000-square-km-large Simeto river watershed located South East of the Etna Volcano, in Eastern Sicily, comprises six municipalities with a population of approximately 140,000 permanent residents. The Valley includes the central stretch of the river, and small towns that are all but one built on the left bank, at the edge of the lowest lava shelf of the volcano and separated from the river itself by a fertile band of alluvial soil.

The Valley has historically played, due the richness of the soil and the abundance of natural water springs, the role of the food basket for the Catania metropolitan region, the second largest in Sicily with about 1 mln of inhabitants. However, since the 50s, public policies aimed at pursuing economic growth (i.e. mechanization of agriculture and promotion of industrial activities) have inflicted significant and irreversible damages to local man-made/natural ecosystems. In continuity with these policies, in 2002, the Regional Government decided to build a large incinerator a few km away from the river, as part of a new *Regional Waste Management Plan*. This decision was immediately opposed by community organizations, which in few months established the *Coalition for the Sustainable Development of the Simeto Valley* and started an anti-incinerator campaign. The rationale for the mobilization rational was twofold:

- The incinerator represented a great obstacle to the recent growth of economic activities related to ecotourism; and,
- There was enough evidence that the project of the incinerator was about to significantly favor local enterprises connected to the organized crime.

Thanks to a complex variety of legal, socio-cultural, and political strategies, the *Coalition* was able, at the local level, to temporary block the Cannizzola incinerator,

[3] A more detailed discussion on the Simeto case can be found in Saija (2011), and Saija (submitted on Jan 2012).

while joining a large campaign against the *Regional Waste Management Plan*, which eventually ended with a substantial victory of the anti-incinerators front[4].

However, despite the success of the anti-incinerator campaign, other ongoing institutional planning efforts planning processes, such as the *Strategic Development Plan for the Etna Region*, were at that time discussing controversial option of development of other portions of the Valley. To counteract present and future attacks to the Valley's natural and historic assets, the Coalition established a partnership with LabPEAT in 2008, and undertook a 6-month-long phase of collective training on possible bottom-up approach to community 'sustainable' development. The training was aimed at identifying "the stone able to catch multiple birds," increasing the ability of the Coalition to affect decision-making and the level of residents' and organizations' engagement, while promoting a new alliance between humans and nature.

The "stone" was named the *Simeto Community Mapping Initiative*. The Initiative lasted about 5 months and took place in 10 different locations within the Valley countryside and in 4 small towns along the river, involving 500 individuals and representatives of 22 community organizations, and city officials from 3 out of the 4 towns. All the community mapping activities were carried out by university and community members together.

The first event of the *Initiative* was conceived as an open house where participants were enabled to share their own knowledge and planning inputs through mental mapping, open-ended interviews and interaction with other participants in the location and description of places on a large wall-map of the entire valley (10mx3m). Later in the process, these activities were paired up with public presentations of intermediate results; special sessions of storytelling with seniors associations willing to share their memories and old legends about the valley; long public exposure of the wall-map; thematic mapping activities focusing on the water resource; an internet-based mapping tool; door-to-door recruitment of mappers; and in-depth interviews with local experts. The final event was conceived as a public workshop with experts and public officials to finalize the Initiative's outcomes. An official document was prepared and officially delivered to Regional, Provincial and Local Officials, containing a community map, a collection of stories and legends on the valley, and a more political section identifying:

- the material and non-material features characterizing the Simeto Landscape
- shared ideas on how to promote "sustainable development" in the valley (high quality food production, creation of jobs related to high quality food processing following traditional recipes, promotion of food-related and eco-tourism, support for local craftsmanship using local renewable materials, etc.);
- priority actions to be undertaken by different actors in different sectors (institutional, business, non-profit);
- concrete projects to be carried out even with scarce institutional involvement.

[4] After years-long legal procedures, Sicilian Governor Salvatore Cuffaro was condemned, on January 2011, for aiding and abetting Mafia and he is now convicted. The new President of the Region, Raffaele Lombardo, has officially abandoned the idea of building incinerators in Sicily (Regional Law n°9, 2010) and officially denounced mafia infiltrations in the incinerators' affair (for more details see Saija, submitted on Jan 2012).

The document was intended to affect the contents of the *Strategic Development Plan for the Etna Region* and other official institutional planning efforts. After the official ending of the *Initiative* two important outcomes were achieved:

- two community-led projects of transformation of two controversial areas with the purpose of addressing specific issues raised during the Initiative: two illegal dumping sites along the river are in the process of being transformed into a community riparian garden and an educational park (Raciti, 2012);
- the beginning of a process of institutionalization of a community-based resource management approach, called the *Simeto River Agreement*, following the model of the *Landscape Agreement* implemented for the Panaro river (www.parcopanaro.it, Pizziolo and Micarelli 2011). This process is proceeding, but not without difficulties, without a clear understanding whether or not all the key players will be sitting at the table (for more details see Pappalardo 2011).

Empowerment Planning in Vance

Unlike LabPEAT, whose interest in PAR is the outcome of a relatively slow transition process, CRP's approach to applied research, traditionally based upon the professional expert model, suddenly shifted toward a participatory model in 2008 when Kenneth M. Reardon – a planning scholar well know of his part experiences of University engagement in participatory processes aimed at community development across the US – was hired as new chair. Developed through decades of experience as Community organizer, first, and then University researcher partnering with grassroots organizations all across the US, Reardon's approach called Empowerment Planning integrates "the key principles and methods of participatory action research, direct action organizing, and popular education into a single organizational-capacity and community-building process, and enabled them to undertake increasingly challenging development initiatives" (Reardon, 2005: p. 86).

In particular, university faculty, staff, and students work together with community members and organizations to:

- frame the most oppressing local issues;
- lay-out strategies to address them;
- implement them; and,
- Cyclically re-evaluate priorities and strategies.

The approach is inspired by Alinsky's idea that the implementation of the projects that are in the best interest of the community (often in contrast with private corporations' interests) requires grassroots organizations to held enough power over local public and private decision-making (Alinsky 1971; Rathke in Saija 2011, pp. 14-18). As a consequence, planning aims at not only analyzing issues and setting up strategies, but also *increasing the level of organization* of powerless communities as a way for them to acquire more power. For this purpose, planning is enhanced by a variety of outreach efforts, aimed at increasing the number of engaged residents and enlarging the network of allies. Participatory techniques are then used to *identify urgent*

issues and priorities of action, while an *effective resources and control sharing* takes place between the University and the community partners. Such sharing might require the University to offer training not only to its students by also to the broader community. Inspired by the principle of libertarian pedagogy (Freire, 1968; Horton, 1997) and in particular by experience of Highlander Folk School in West Tennessee (Glen, 1996), the Empowerment approach allows community participants to develop new skills that enable them to carry on planning and action in the present and, eventually autonomously, in the future.

The Empowerment planning approach has been systematically implemented by CRP in strict collaboration with the Anthropology Department and in particular with prof. Katherine Lambert-Pennington, in two of Memphis' most troubled inner-city neighborhoods: the southern portion of South Memphis (Lambert-Pennington & Pfomm, 2010; Lambert-Pennington et alii 2011) and the Vance Ave Neighborhood, closer to downtown. In both cases, CRP has partnered with Andrew AME church and St Patrick Catholic Church respectively, pushing them to form a broader coalition of community organizations (Churches, non-profits, community groups, social services providers, etc.) aimed at promoting participatory community development. The Vance Avenue case will be discussed in more detailed in the following paragraph.

The Vance Avenue Neighborhood Case[5]

Memphis, the second most populated city in the state of Tennessee with its 647,000 residents, more than 60% African-American, has grow throughout the 19th and 20th centuries as commercial hub for King Cotton, thanks to its convenient location on a bluff on the Mississippi river (the old days major "US highway") half way in between New Orleans and St Louis. However, despite the glories of the past, over the past six decades all Memphis' inner city neighborhoods have experienced a significant decline. While urban sprawl and consequent downtowns' crises are very common phenomena among US Cities, in Memphis significant racial conflicts have made out-migration even more evident than in other parts of the country. Conflicts' peak was reached in 1968, when underpaid African-American sanitary workers initiated a long strike against racial discrimination, that then become one of the most tragic events in the American Civil Rights Movement history (Breyfuss, 1990; Honey, 2007): Martin Luther King, who came to the city to support the strikers, was assassinated on the balcony of the Lorraine Motel, few blocks east of the city's largest "negroes" public housing projects, Foote and Cleaborne Homes.

Since late 70s, several policies have been implemented by the City to face the decline. Public officials have mostly focused on Downtown Revitalization (through the establishment in 1977 of a Central Business District) and on the redevelopment of Public Housing Projects surrounding Downtown. Between 1994 and 2005, all but two Projects were redeveloped as "mixed-income" traditional neighborhoods – mostly through the

[5] For more details on the case see Reardon et alii (2011).

use of HOPE VI grants[6] –, and tenant-based Section 8 Vouchers were used to relocate former residents into privately owned units mostly located at a larger distance from Downtown. In 2008, the last two remaining Projects, Foote and Cleaborne Homes, the core of the Vance Ave neighborhood, became the target for redevelopment. In January 2009, the City officially announced that a new Development Plan was underway to tap federal money to develop an area called *Trinagle Noir* (20 city blocks just south-east of Downtown), envisioning an expanded entertainment district, new housing, a luxury hotel and as much as $1.1 billion in public and private investments. A structural element of the plan was the use of HOPE VI Grants to tear down Foote Homes and Cleaborne Homes.

Concerned about the impact that this plan would have had on local residents, local leaders from *St Patrick Roman Catholic Church*, one of the oldest institutions in the neighborhood, asked the University to establish a partnership with the purpose of carrying out a community planning process. The aim was to counteract *Triangle Noir* perceived as a strategy to create a gentrified "entertainment district," avoiding residents' displacement like in all the other Memphis' HOPE VI redevelopments, all of which had had a very low % of returning residents.

During the summer 2009, St Patrick and CRP formed a broader coalition, called the *Vance Avenue Collaborative* (VAC), of Community Organizations sharing their same concerns. The planning activities started in the Fall semester 2009, with a CRP studio class carrying out specific research activities – such as archival research, physical surveys, interviews with local leaders and residents – whose results were continuously presented at a monthly community meeting, and modified according to local residents' active feedback (usually collected through participatory techniques such as community mapping, visioning exercises, etc). For each community meeting students and faculty performed an intense outreach (phone calls, door-knocking, emails, mails, press release, pulpit announcements for parishes), also encouraging community members in actively participating in the research activities. During the spring break, VAC carried out door-to-door interviews with 170 residents, and then, at the end of March, held a neighborhood summit with the goal of:

- presenting the data and the main findings;
- Share a broad development goal for the neighborhood;
- Identify the developmental objectives through which the goal could be implemented;
- Generate, in small groups, as many action items as possible for each developmental objective;
- Prioritize the action items, based upon criteria of importance and/or feasibility.

Not surprisingly, community outcomes, summarized in June 2010 in a Document named *VAC Preliminary Planning Framework*, did not match the ones characterizing

[6] HOPE VI is a US Department of Housing and Urban Development Program established in 1992 after a political debated on how to address the physical and social decay associated with public housing projects all across the US. HOPE VI allows Public Housing Authorities to receive funds to replace "distressed" public housing projects with new development where usually only 1/3 of the units are for low-income residents (mixed-income developments). The replacement is mostly done through the establishment of public-private partnerships between public Agencies and private developers (Popkin et alii 2004).

Triangle Noir: residents did not perceive Housing as a priority in a neighborhood where the only service for citizens was actually housing. The priority was to provide additional neighborhood-based services and amenities (access to fresh food, neighborhood oriented retails, a well maintained park, health-care, a homeless-shelter, and after-school programs) as well as linking more explicitly large Downtown redevelopments, often employing a large amount of public money, to the creation of jobs for low-income residents.

Unfortunately, the very same month the community was presenting its Planning Document, the City was announcing the award of the 5th HOPE VI grant for the redevelopment of Cleaborne Homes. Cleaborne was demolished shortly after, and it is today in the process of being redeveloped.

The plan of redeveloping the very last Memphis Public Housing Project, Foote Homes, is currently under examination, but this time the Collaborative has the occasion to affect decision-making.

In an effort to address the strong criticisms moved against HOPE VI by experts and scholars (see Goez, 2003; Kleit & Manzo, 2006; Bennett et alii, 2006, among many others), HUD, with purpose of embracing an improved holistic approach to Public Housing "redevelopment," has recently lunched *Choice Neighborhood* (CN) Grants requiring applicants not just to deal with housing but also to expand supportive services and educational opportunities for residents. CN also require the minimization of residents' displacement, their direct involvement in the planning process and partnerships with neighborhood institutions. In the winter 2010-11 the City applied to a CN Planning Grant and, due to HUD requirements around community engagement, it asked CRP to be responsible for the participatory activities for the Grant. Other consultants were appointed to be responsible for planning around housing and social services.

Since July 2011, CRP has replicated, in the new role of *City planning consultant*, most of the activities carried out in the first phase, enlarging the number of engaged organizations and residents while enhancing data collection. A community organizer was hired, and several training opportunities on community organizing – one at the highlander Folks school – have been organized as part of the Planning Initiative.

The process is however proceeding with a significant level of internal conflict: the City and other consultants expect the process to lead to the submission of a CN Implementation Grant that would substantially replicate the HOPE VI approach, while participatory activities are expected to help building consensus among residents. CRP faculty and students are, on the contrary, collecting a great amount of data that reinforce the findings from the previous phase, including a strong preference for the rehabilitation instead of redevelopment of most of the Public Housing Units. How the conflict of positions is going to end is not clear yet, but the community values the fact that, at least, this time, VAC was invited at the table. In the meantime the collaborative is working at the implementation of one of the priority projects that were identified in 2010 within the *VAC Preliminary Planning Framework*: a mobile food marked, called *the Green Machine*, able to address the need of accessible and affordable fresh food in a neighborhood where most of the residents do not have access to private transportation.

4. What do they have in common?

Even from these synthetic descriptions, it is possible to identify many differences between the two cases, where PAR is used to deal with problems of a different nature. In Memphis, VAC is trying to affect decision-making for the benefit of the most disadvantaged, led by a social justice ideal, and deeply inspired by the US Civil Rights debate. In Sicily, the Simeto Coalition is working in favor of a new social organization able to establish a new alliance with Mother Nature, led by an environmental sustainability ideal, but also within the context of the local anti-mafia movement. However, even if inspired by different political and planning discourses and ideals, CRP and LabPEAT researchers share the idea that what really distinguishes PAR from other forms of applied research is the fact that it deals with power (see Hall 2005 for a good literature review on the topic).

In both cases researchers establish a partnership with more (*St Patrick Church*) or less (*the Simeto Coalition*) formalized organizations of people sharing concerns about the way planning and decision-making (the Sicilian Region Waste Management Plan, the Strategic Development Plan for the Etna Region, the Triangle Noir Plan, the Vance Choice Neighborhood Transformation Plan) are carried out in the place where they live. One of the main purposes of the partnership is to enhance the powerlessness status of the organizations affecting their ability to shape decision-making for the "better," being the way "better" is defined dependant, of course, on the situation.

In Memphis, the "better" means forcing city elites to reframe their way of dealing with poverty and public housing. VAC is reaction against a way of framing poverty as a plague rooted in the lack of individual skills of self-improvement which can be addressed through social and physical determinism: HOPE VI is based on the idea that self-esteem educational activities and replacement in a social and physical environment reflecting middle- and high- income social values is a good strategy to deal with poverty of public housing residents. On the contrary, Vance residents and leaders are asking public officials to address the structural causes of their scarce quality of life – the unfair distribution of resources and opportunities within the city – claiming the dignity of their being a community, whose painful history cannot be commercialized by private developers.

On the contrary, in Sicily "the better" means forcing local public institutions to make decisions based upon values of transparency and sustainability, abandoning the long-standing local custom of closing deals behind closed doors with Mafia-related businesses; in particular, the Simeto community is asking to face, in a structural way, the reality that the management of resources such as water, energy, waste, etc. is one of the largest source of profits for the organized crime (Legambiente 2007-2011).

In both cases, the Simeto and the Vance partnerships deal with what might be considered the main challenges for the full accomplishment of the democratic prospect in their contexts. They both embrace a controversial project that challenges decision-making (and the stable structures of power behind it), working on each own "giants shoulders," in the shadow of the most meaningful social movements that have historically challenged the status quo: the Anti-Mafia Movement in Sicily, and the Civil Rights movement in the American South. Very much in the shadow of the *Centre for the*

Full Employment in Western Sicily and *Highlander folks school* in Tennesse, CRP and LabPEAT use participatory planning techniques to advance participants' understanding of their status of powerlessness as a first step for social change. This is a very different use of participatory planning techniques, compared to the well-known *consensus-building approach*, inspired by Habermas's Discourse Ethics (Habermas 1983), in which the ultimate goal is the making of a decision that could be shared by groups with contrasting interests (Susskind & Field, 1996; Innes & Booher, 1999). Both Empowerment and Ecological planning go beyond the need of "mediating" between contrasting interests. Echoing Castoriadis' (1997) and Barcellona's (2005) critiques of Habermas' political theory, they operate on a different level: the creation of the collective subject that can eventually affect decision making. The aim is to shape transformative collective experiences that allow people to innovate "for the better" their collective identity, creating the space for "*arenas* where systems of meaning, ways of acting and ways of valuing are […] transformed" (Healey 1997: 58). In both cases, the arenas are places of painful conflict and/or joyful emotional attachment that touch not just rationality but also deep emotional dimensions of cognitive structures (Marris 1974, Pizziolo & Micarelli 2003).

In the Simeto and in the Vance case, the partnerships initiated a participatory planning process that, at first, did not have any institutional legitimacy; the legitimacy is gained along the way, with:

- Real effects on public decision making (the birth of the *River Agreement Initiative* in Sicily and VAC's involvement in the *Vance Choice Neighborhood Planning Initiative* in Memphis)
- The birth of community-led projects of concrete change on the ground (the community gardens in Sicily and *the Green Machine* in Memphis)

Both level of action, the impact on decision-making and the implementation of concrete projects, are crucial for the purpose of shaping a new collective political subject that is able to destabilize old structures of power with new political "instances." Without concrete projects, the never ending struggle at the decision-making level would be exhausting, and probably frustrating. Vice versa, concrete projects without the effort of affecting decision making would not be transformative enough.

5. Is it enough?

Despite the greatness of the inspiring ideals and acknowledging the good outcomes, it is crucial to ask whether or not the ambitious expectations of the type of community-university partnership presented in this paper are then matched by reality. In other words, to what extent CRP's and LabPEAT's work is promoting real social change? Are they producing a permanent modification of existing power structures, decision-making procedures? Are they permanently affecting the way humans interact with other living beings and natural resources?

It is difficult, for an author that has also been deeply involved in both experiences, to say something different then "I hope so." But for the purpose of the paper, It makes

more sense share some critical thoughts trying to go beyond hopes, wondering what kind of contingent or structural dilemmas are related to this type of work.

The Sicilian and the Delta cases, together with many other well-known cases in the literature, demonstrate that PAR is a very promising and fertile ground for planning researchers, whose disciplinary mandate is, intrinsically, action-oriented. If this is true, why do planning research seem to go toward a very different direction (Campbell, 2012)? While some scholars are still debating on PAR's epistemological validity, others stress the level of frustration that can be associated generated by practical and organizational obstacles in dealing with a research method characterized by a high level of uncertainty: PAR relies on the idea that you *modify your road while walking* (Bell et alii, 1990) in the face of rigid academic calendars and funding procedures. Is this the reason why PAR is not more diffused in the academic environment? I personally do not believe this is the real reason behind the scarce diffusion of PAR within the academic environment. I have seen many "traditional" researchers that, after a period of adaptation, have learned to deal with "uncertainty" through the use of flexible research approaches, enjoying the consequent increase of opportunities for innovative thinking.

With a more Foucauldian perspective, I do find myself closer to scholars suggesting that epistemological debates are deeply shaped by existing structures of powers: since the essence of PAR is the redistribution of power (to know, to decide, to act) in favor of the powerless, it is not surprising that such an approach is difficult to "digest" for large institutions whose financial existence rely on the existing power structures.

Both UofM and Unict, together with many other European and American Universities, are increasingly required to depend upon private financial supports. Are they really in a position to genuinely embrace the work of their "engaged" research units, supporting the idea of becoming involved in controversial issues oppressing their communities? Goldsmith suggests that this is not likely to happen, suggesting that instead "universities will continue, quite understandably, to be concerned with their own problems – tighter budgets, increased internal demands, and new pressures from government, alumni, and business" (Goldsmith 1998: 1246).

As a matter of fact, both CRP's and LabPEAT's commitment to PAR and social change does not reflect the broader mission of their Universities. Their work is carried out with a limited amount of resources, and the institutional support is very strong on words, but very limited in practice (money, staff support, etc.). It is legitimate to ask: how permanent are these community-university partnerships and their ability to produce positive outcomes?

The reality is that, in both cases, the work is carried out not by external and resourceful agencies (NGOs or similar) but stable local structures based upon a great deal of voluntary work (from the part of both researchers and community members) and the "creative use" of traditional Grants. Beside personal commitments of university and community individuals, there are not stable organizational and/or financial arrangements that can guarantee the continuity of the work that, despite the good outcomes, is still very much uncertain. After small successes within important conflicts, such as the anti-incinerator campaign, social change can be pursued only through long-term committed time and money both for community members and researchers. Dolci's Centre lasted 13

years, while Highlander, established in 1932, is still a working operation. Both institutions, though, were not part of large and powerful Universities. Was this the secret of their successes? I think this question, if addressed in a open and honest way, might help animate the international debate around the ability of planning research to address a genuine link between knowledge and action and, ultimately "to fortify the ideal of thus transforming Business and Politics -from a sordid struggle for survival into a civic and regional direction of energies to the maintenance and ennoblement of life." (Branford & Geddes, 1917: p. 215.)

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LOCAL DEMOCRACY, PLANNING AND MANAGEMENT: SOME PERSPECTIVES FROM THE KARACHI METROPOLITAN REGION

By

Noman Ahmed, Ph.D

Abstract

In developing countries, urban planning and management has been administered through various institutional approaches. Centralized city government; location wise or functionally fragmented administration, elected municipalities with development authorities, combination of formal and informal institutions and geographically segregated jurisdictions are some of the alternatives that have been tried in different contexts. Karachi has experienced an uneven institutional transformation at the local government level during her post-independence history. As a consequence of experimentations and subsequent outcomes, many changes have evolved in the domains of urban planning and management of the city. This paper documents the changes and analyses the outcomes at respective stages to identify the impacts on the planning and management process till the present times. On the basis of the study, the paper also presents normative recommendations.

Key words: Local democracy, planning, management, Karachi

Urban Politics, Democracy, Governance and Participation

1. Information and Background

After the end of British colonial rule in 1947, Pakistan and India emerged as two major states in South Asia. Despite their large scale of territories and population sizes, each of them was pre-dominantly rural in demographic respect. The drastic political and administrative changes that emerged as a consequence of partition of Indo Pakistan Sub continent caused numerous transformations in the settlement pattern. A very large social dislocation from original places of habitation towards newly carved out states was a visible outcome. The port cities in India and Pakistan were the key recipients of refugees in a very large proportion. The administrative machinery of these cities was soon overwhelmed by almost the overnight increase in population. This transformation caused enormous problems in managing the cities.

The British had left behind a relatively stable mechanism of city administration. For management of towns and cities, municipalities of relevant legal and administrative composition were constituted. In order to deal with extraordinary issues in urban development and management, an exclusive institution with the nomenclature of

Improvement Trust was formulated. Thus Bombay (now Mumbai) City Improvement Trust was founded in 1898 after two years of a deadly plague epidemic. Delhi Improvement Trust was created in 1937, Calcutta (now Kolkata) Improvement Trust was founded in 1912 while Madras (now Chennai) Improvement Trust was constituted in 1945. The objectives behind each of these institutions was to deal with pressing problems of sanitation, road and street development, housing management and other related subjects. It may be noted that all of these cities had a reasonable size and complexity which required the concerted input of an additional institutional and technocratic arm. In contrast, Karachi was a small town of 435,000 inhabitants when Pakistan came into being in 1947 (KMC, 2012).

Before partition, Karachi was a well managed city comprising Hindus, Muslims, Christians, Jews and Zoroastrians, peoples. However the influx of refugees from India changed the composition, population status and urban profile (see Figures 1 – 5). The city rose to the size of 1,050,000 people in 1951. Due to inadequate provision of housing and other amenities, the refugees occupied significant part of the hinterland territories and squatted haphazardly all around the developed areas. While the city had a municipal corporation, it was unable to deal with the grave issues that emerged as a consequence of high in-migration. Learning from the experiences elsewhere in Indian cities, the central government of that time constituted Karachi Improvement Trust (KIT) to deal with planning, development and management issues in the city. Karachi continued to experience a high growth rate ever since and posed new challenges to the various forms and formats of administration.

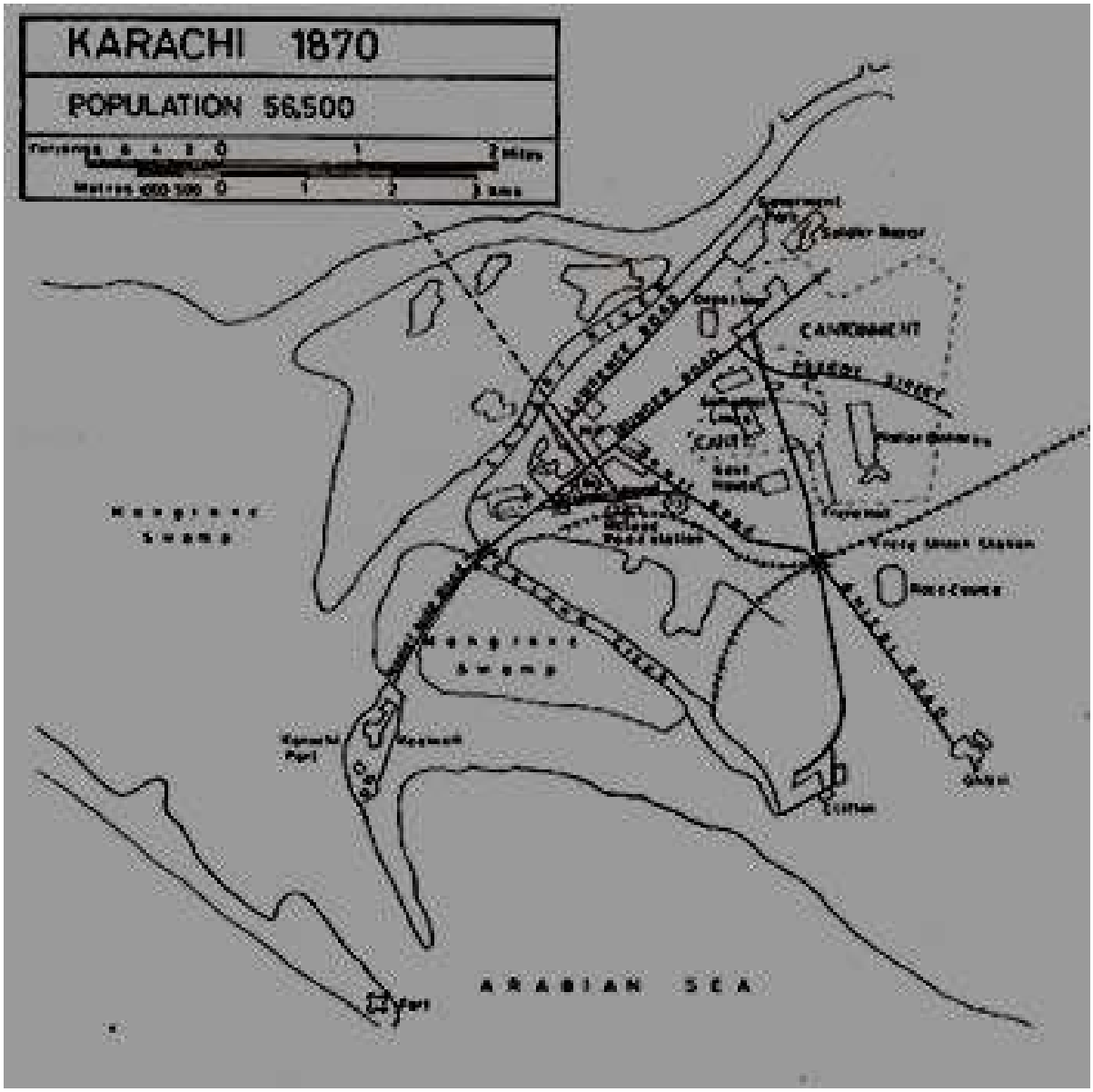


Figure 01: Karachi in 1870
Source: KDA (1974).

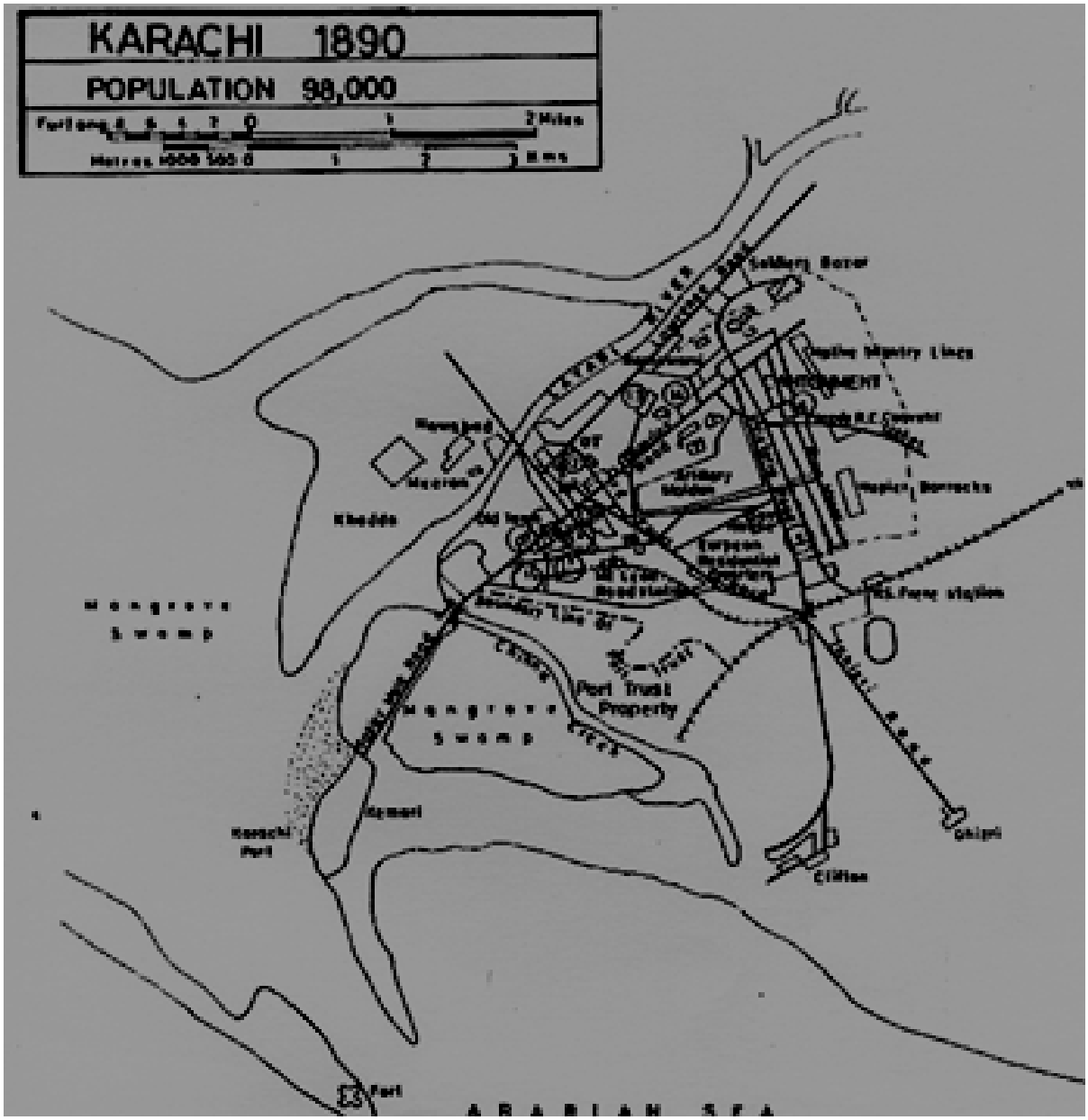


Figure 02: Karachi in 1898
Source: KDA (1974).

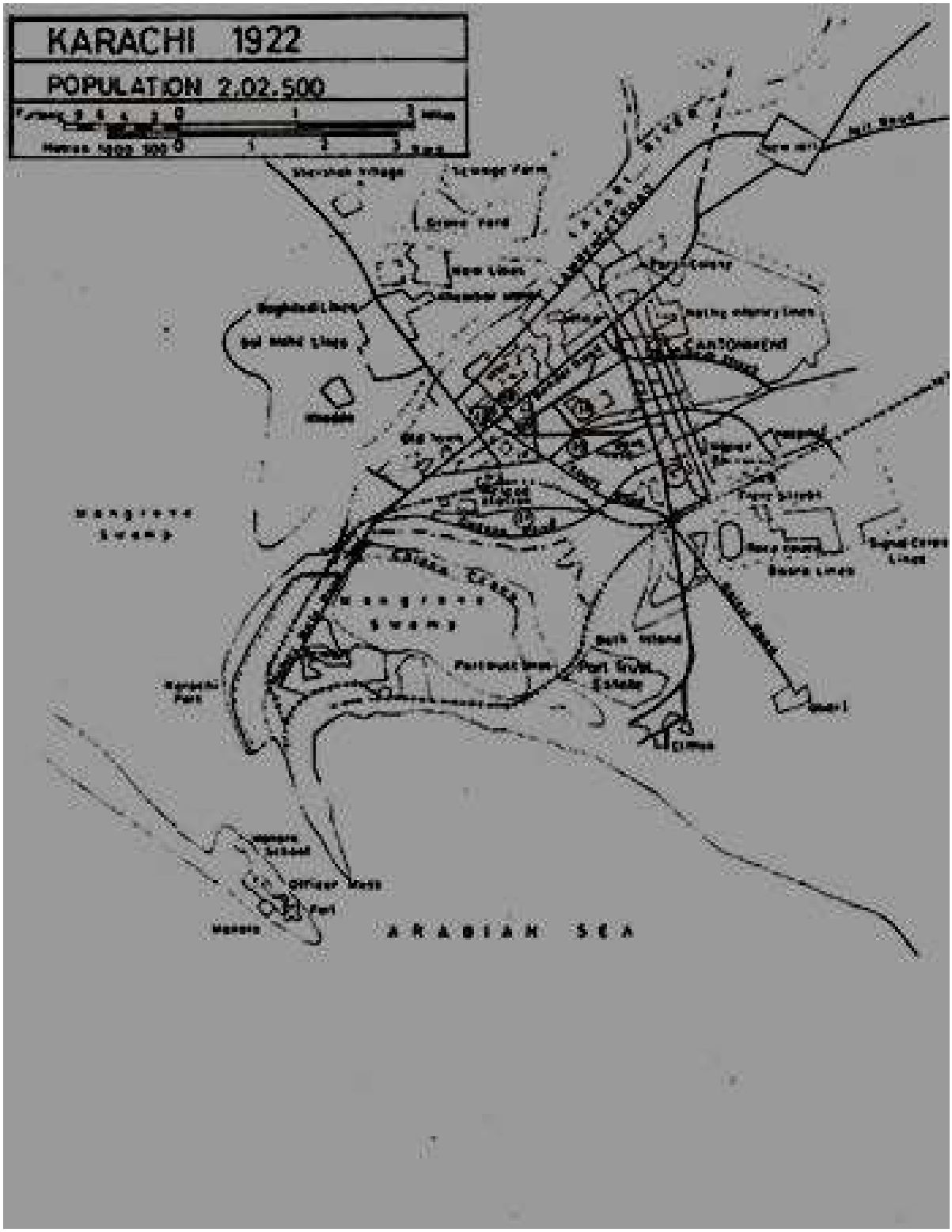


Figure 03: Karachi in 1922
Source: KDA (1974).

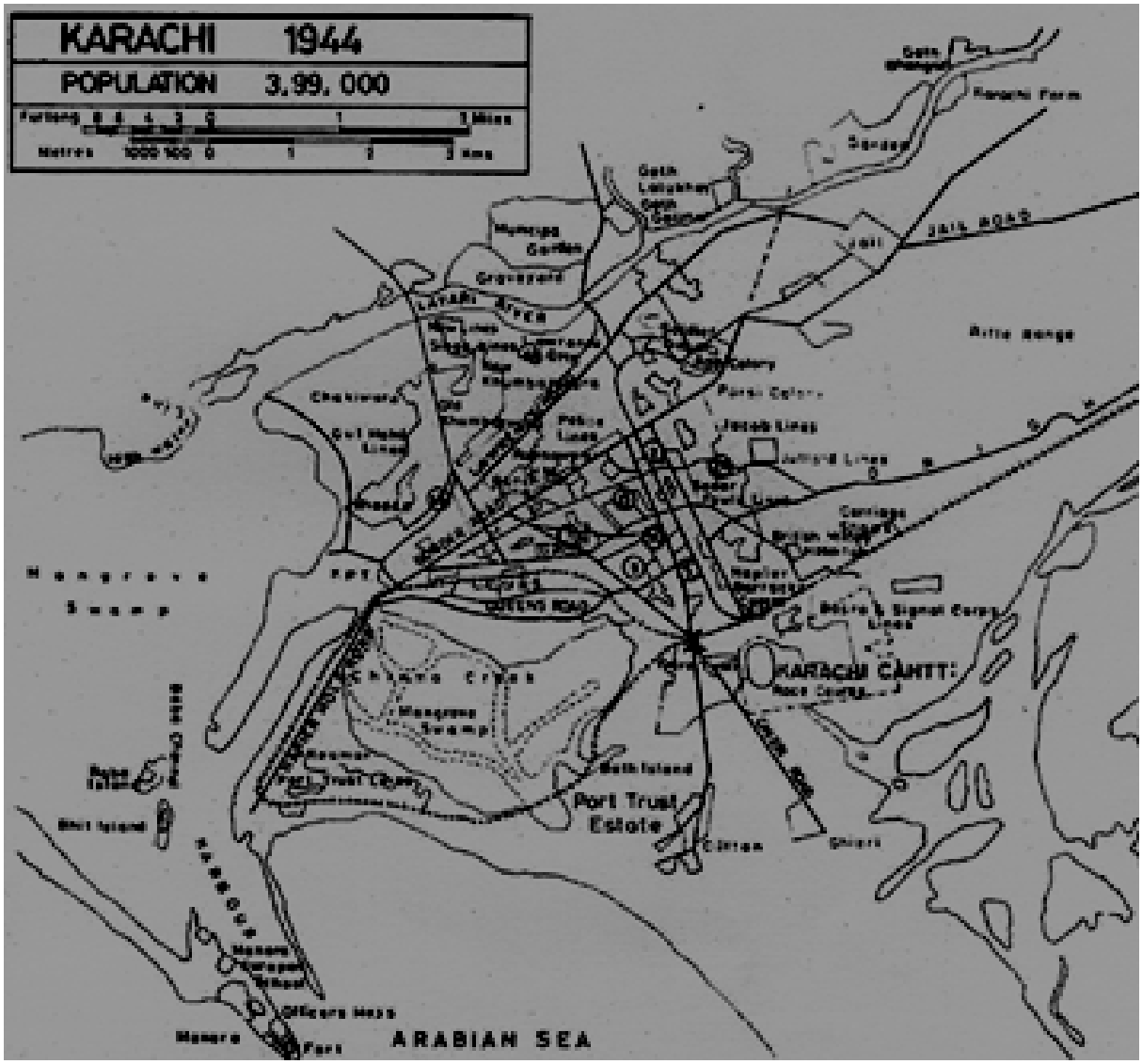


Figure 04: Karachi in 1944
Source: KDA (1974).

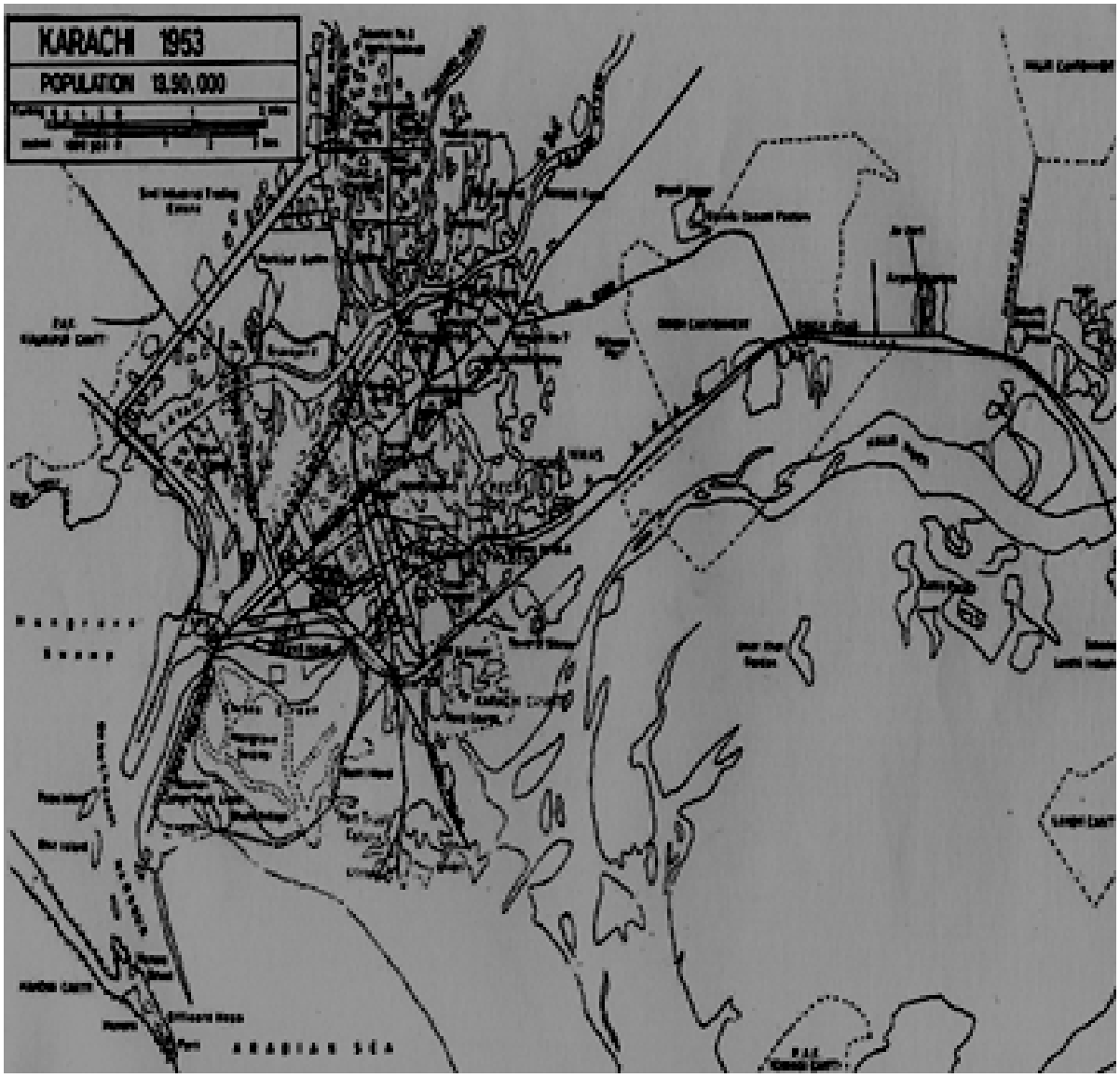


Figure 05: Karachi in 1953
Source: KDA (1974).

2. Karachi in National Context

In 1947, Pakistan comprised both West and East Pakistan (now Bangladesh). The city of Karachi was chosen as the national capital due to the fact that it possessed basic urban facilities and was relatively accessible by sea route for the people of East Pakistan. It soon emerged as the primate city of the country and continues to enjoy this status till today. The city accounts for about 7 percent of total national population and 22 percent of total urban population. It contributes 15 percent of GDP and 25 percent of the national revenue. The city holds 50 percent of the bank deposits while accounts for 72 percent of the total issued capital. The two major sea ports and busiest national airport is also situated in the city (CDGK, 2006). The city is also a major hub of industrial, commercial, banking and cultural activities.

3. Local Democracy, Planning and Management in Karachi: A Review

3.1 Local Democracy

It is important to note that for most of the time period during post independence times, the city has been governed by a combination of technocratic – bureaucratic nexus with very short lived phases of local democracy.

As observed in most of the young post colonial nation states that acquired independence in the twentieth century, Pakistani administration followed a centralist tradition of decision making and governance. Important decisions were taken by the head of the state and implemented by an efficient framework of bureaucracy. Thus key matters related to city planning and development was also settled by the federal government. An example of this fact is the creation of Karachi Development Authority in 1957 through a Presidential Order. The same order stayed valid as a law for the next half a century. The local government institutions, mainly the municipal corporation, were perceived as an urban management agency. It was assigned to deal with rudimentary matters such as maintenance of streets, retail water supply, sanitation, monitoring of public open spaces, maintenance of hygienic conditions in market places, management of abattoirs / slaughter houses and dairy farms, quality control of food and beverage items, preventive sprays on stagnant pools of water etc. as the country soon plunged into a political turmoil leading to military rule in 1950s, the necessary awareness to address policy making for local matters and connected avenues could not be explored. When the local elections were held by military regimes, the councilors and mayors gradually developed political maturity to deal with the pressing issues of the city and beyond. Many of these councilors became politicians of substantial acumen and status and led the various affairs of the country.

It is worth mentioning to note that while the decision making and implementation mechanism was largely centralized during 1950s and 60s, the visible sincerity of purpose of the bureaucracy and technical competence of senior officers in the municipality became the reason for better management and governance of the city. Some matters, which evolved to become grave issues in the future, included the rise in squatter settlements, pressure on water supply and sanitation, exponentially high population growth rate due to in migration, uncontrolled urban sprawl and slow but steady commodification of urban land.

The absence of a powerful and capable metropolitan government during the later part of the institutional history caused many grave consequences. Small and medium scale land management agencies multiplied. Such developments stretched city infrastructure in multiple directions and generated their own dynamics that gravely impacted respective neighbourhoods and the surrounding territories. A concise retrospect of the evolution and status of local democracy in Karachi during the post independence period is illustrated in Figure 06.

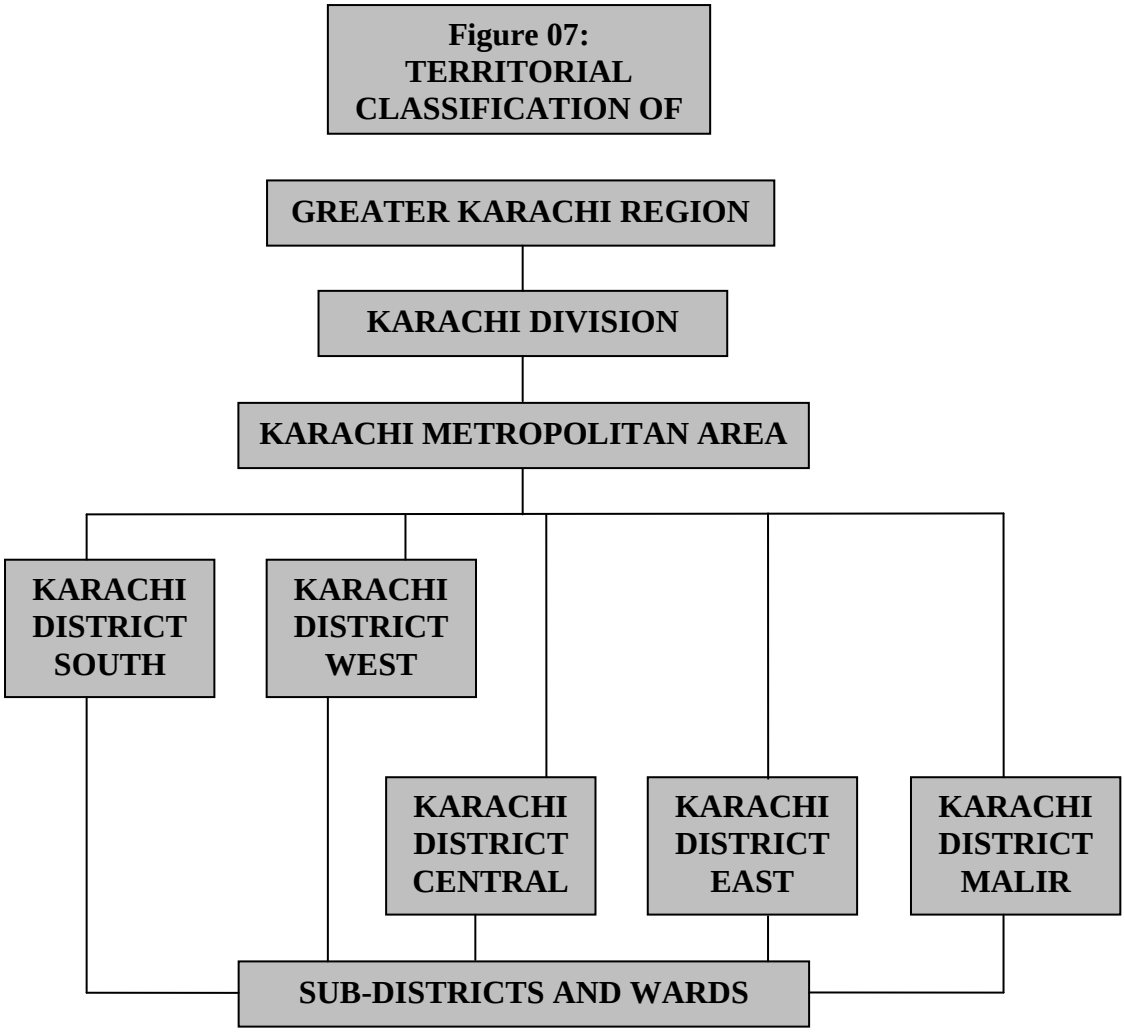
Figure 06: EVOLUTION AND STATUS OF LOCAL DEMOCRACY IN KARACHI SINCE 1947

PHASE	STATUS OF LOCAL GOVERNMENT	REMARKS
Initial developments (1947 – 58)	• Karachi Municipal Corporation functioned as local institution under bureaucratic leadership. • Commissioner of Karachi held most of local administrative powers. • Karachi Development Authority founded in 1957 to focus on and facilitate bulk water supply, sewage and roads / highways development. It also instituted physical planning.	• Negligible participation of citizens in municipal affairs. • City remained in a drastic stage of transition and change. • Being the national capital, Karachi was the centre stage of national political activities. • Infrastructure and housing shortage made the core reason for launching KDA. New housing schemes were developed.
Basic democracies (First and second military regimes) (1958 – 69 and 1969 – 71)	• Military regime introduced Basic Democracy (BD) System in 1959. • Elected municipal councilors in local government.	• BD system introduced to accord legitimacy to military regime. • Very limited autonomy was enjoyed by local government – privilege of decision making and administration remained with Commissioner's office.
Democratic government at provincial and federal level (1972 – 77)	• Elected government at provincial and federal level. • KMC and KDA continued to function as bureaucratic organs – KMC upgraded as Karachi Metropolitan Corporation.	• Despite democracy in upper tiers, elected municipal institutions could not be revived. Potential political impediments from elected local government were found as the core reason.
Third military regime (1977 – 88)	• Elected local government in Karachi and elsewhere in the country revived in 1979 KMC had elected councilors and mayors.	• Though elections were held, KMC had limited powers and privileges – provincial bureaucracy and upper tiers of government controlled majority of affairs.

Democratic interregnum (1988 – 99)	• Elected local governments replaced by appointed administrators.	• Perhaps due to quick changes in federal and provincial governments, the elected local governments could not be revived.
Fourth military regime (1999 – 2008)	• Local government in Karachi and elsewhere revived. • Significant powers and resources were devolved to local government in a completely re-vamped format.	• Wide ranging reforms introduced. • KDA, KMC and DMCs merged to form City District Government Karachi. • Many provincial functions were devolved to the local government.
Current regime (2008 to date)	• Local government's reforms repealed. • Present working of local government partially reverted to the status of 1979.	• Absence of political consensus between political stakeholders led to stagnation of local government affairs.

Source: Author's interpretation of various government records and archives, 2012.

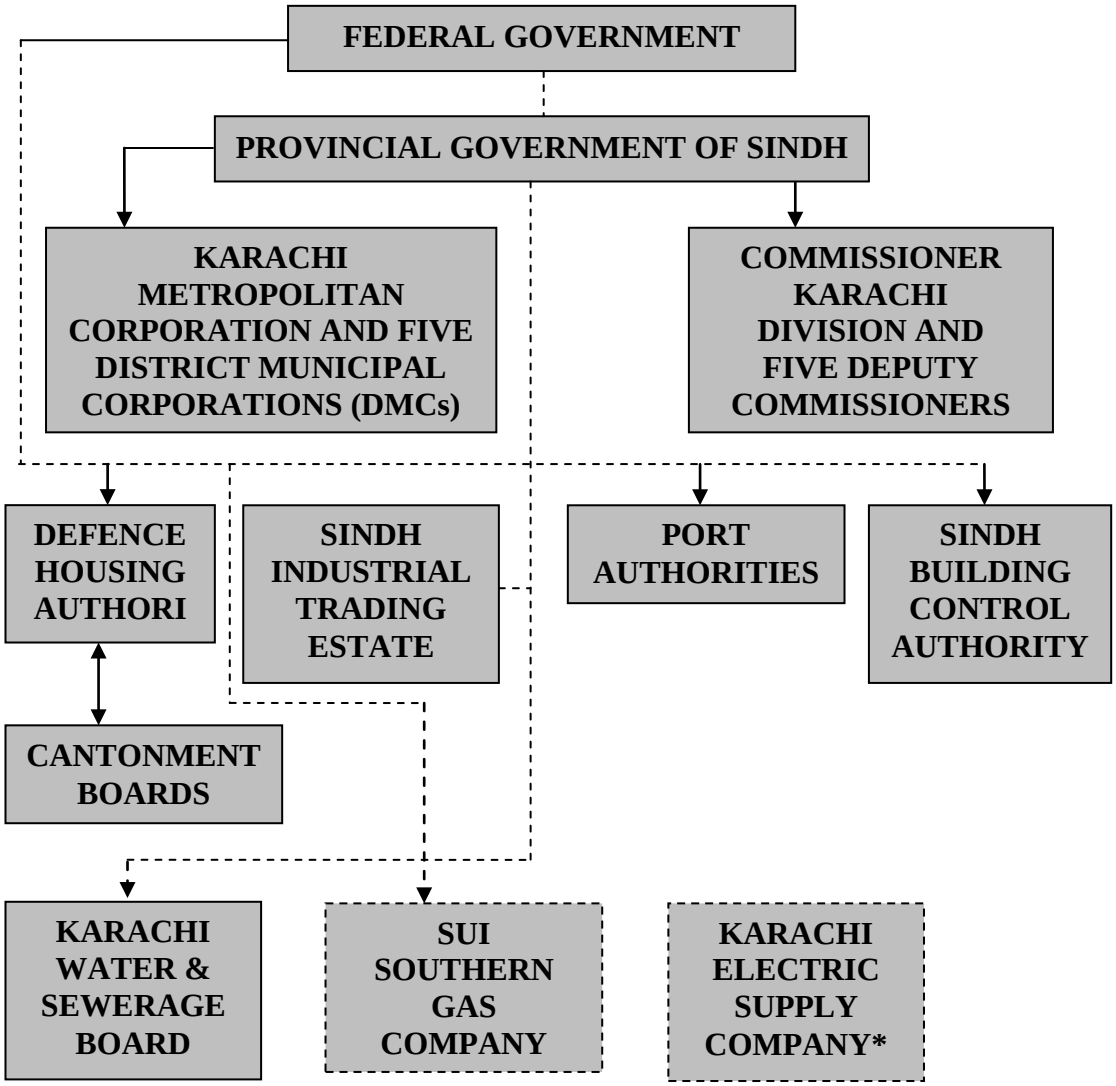
The present status of Karachi is similar to its administrative organization that was prevalent till 1999. The city is spread on a larger region termed as the Greater Karachi Region. However this physical space is valid for planning considerations only. The other details of territorial organization of the city are shown in Figure 07.



Source: KMC Archives, 2012

At present, the status of local government in Karachi and the Sindh province is passing through a stage of transition. The existing structure of institutional framework is presented in Figure 08. The political parties that have representation in the provincial assembly have to devise a new law to evolve a consensus for the future functioning of local government and elsewhere in the province.

Figure 08: LOCAL GOVERNMENT IN KARACHI – A DIAGRAMMATIC REPRESENTATION



Source: Based upon the archival information available in Karachi Metropolitan Corporation and Government of Sindh, 2012.

* Karachi Electric Supply Company is now a private entity. It functions under the regulatory framework laid down by National Electric Power Regulatory Authority (NEPRA).

3.2 Urban and Regional Planning

Despite the burgeoning problems that the city faced during the earlier phases after independence in 1947, Karachi received many planning inputs on a continuous basis. Different institutional arrangements were manifested to channelize these attempts which are concisely illustrated in Figure 09. Whereas none of the plans and planning recommendations was implemented in full, many changes and impacts were caused by them during the entire time frame.

Greater Karachi Plan stabilized the direction of growth of the city towards north east and eastern stretches of the urban peripheries. The plan had also provided an elaborate scheme of a capital complex and allied facilities in the anticipation that the city will continue to function as the national capital. However due to an administrative decision of the government, the capital was eventually located into the newly planned city of Islamabad.

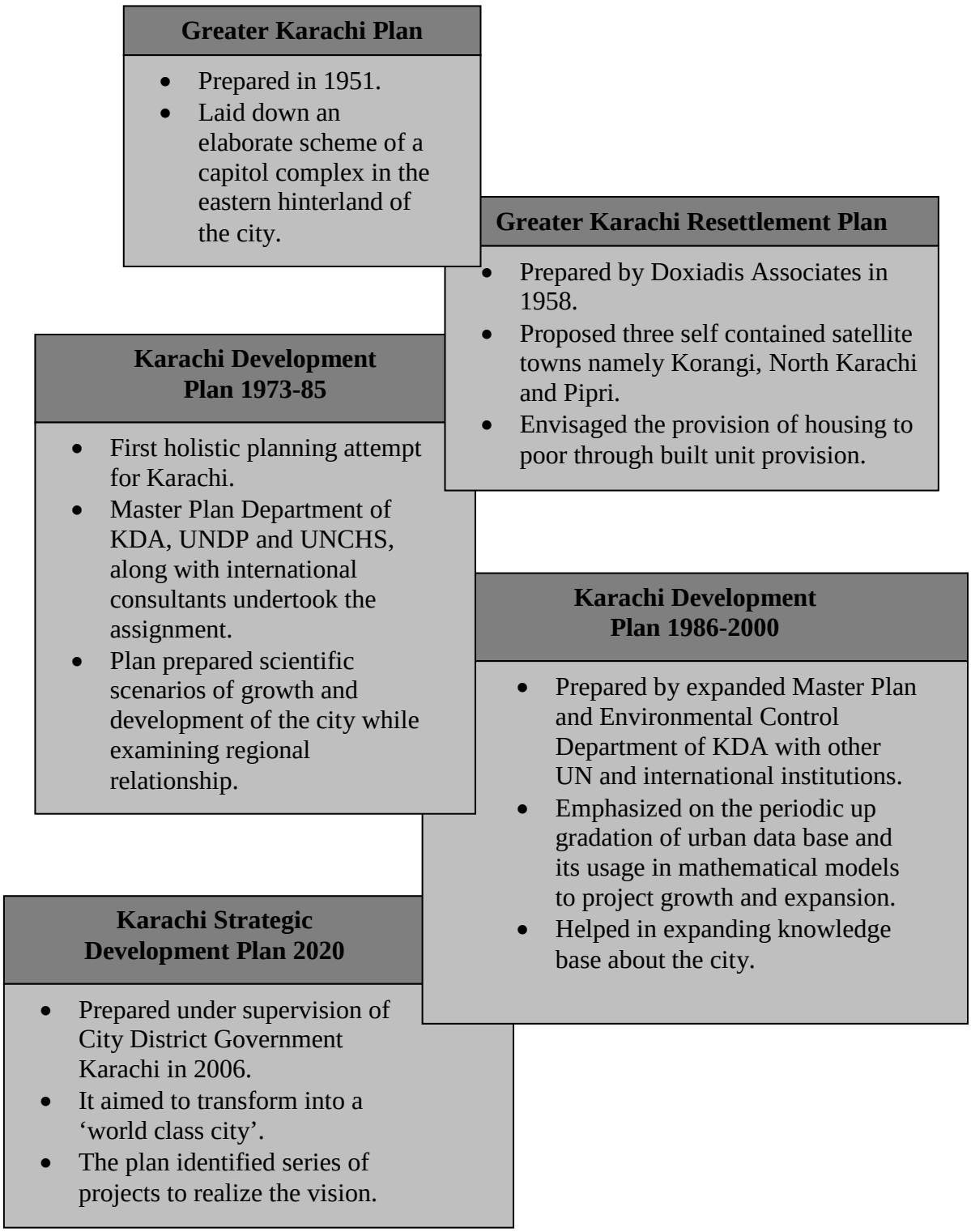
Well known planner C.A Doxiadis was commissioned to plan and develop organized satellite towns at a reasonable distance from the city centre. Articulated schemes were prepared for Korangi and North Karachi areas. The schemes were to ensure self contained and independent sub-urbanization. However due to concentrated location of manufacturing, government offices, small scale enterprises and other magnets of employment towards the south and west of the city, enormous demand for commuting eventually intensified. Many critics were of the view that the poor and low income households moved out from the vicinity of city centre and located at far away distance. After bearing high commuting costs for prolonged period of time, these people continued to struggle to escape from the spiral of poverty. Political factionalization and rise of ethnic politics eventually evolved as a consequence.

A well formulated planning attempt was begun in late 1960s. An exclusive planning unit namely Master Plan Department (MPD) was created. The MPD was an integral part of KDA and undertook extensive surveys, preparation of useful maps and profiles. It also launched sectoral studies to document and analyse the respective situation in a scientific manner. The planners in the team deliberated at length to evolve worthwhile proposals for instant action, medium and long term basis. The Karachi Development Plan of 1973 – 85 proposed a viable framework of growth facilitation and management that guided the city administrators and stakeholders to a reasonable extent. Through the same institutional setup, the Karachi Development Plan 1986 – 2000 was prepared. It aimed at growth management and use of accurate data to project management scenarios through mathematical modeling.

The Karachi Strategic Development Plan 2020 combined the experiences gained during the past exercises. Prepared by a consultant, the plan aimed to support capitalist practices and devised pro-market approaches for real estate development. Some of its prescriptions, such as sub urban developments for consolidated land allocations for education, textile manufacturing and media facilities are being outlined for implementation.

A summary of planning exercises is presented in Figure 09.

Figure 09: PROFILE OF IMPORTANT PLANNING EXERCISES IN KARACHI SINCE

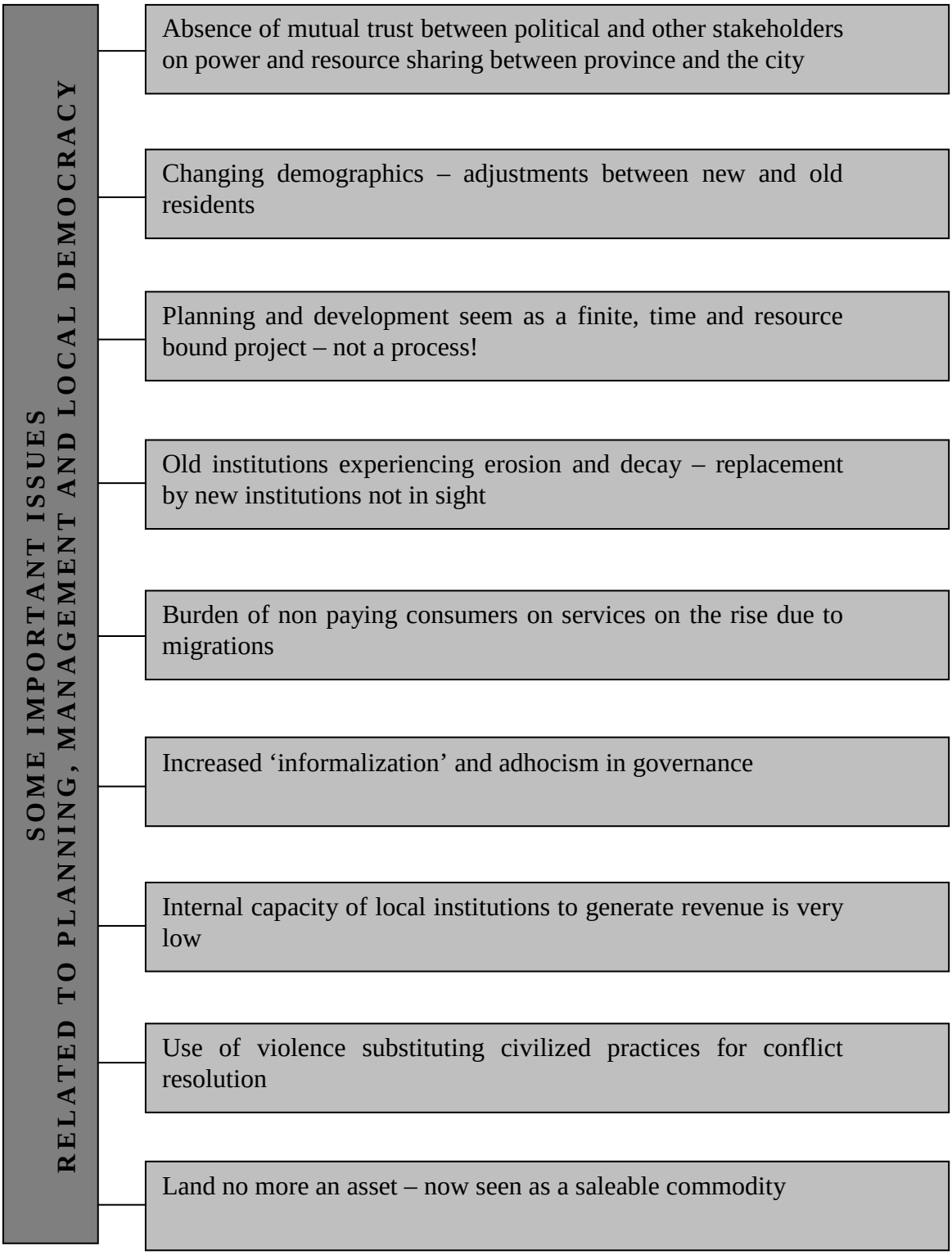


Source: Author's interpretation based on KDA (1974), KDA (1990) and CDGK (2006).

4. Issues

The above account refers to several core issues in respect to local democracy, planning and management that are outlined below in Figure 10. As the city evolved through cyclic migrations and other drastic socio political changes in the region, a political discord and mistrust evolved which was aggravated due to absence of a sustained system of local democracy. The changing stakeholders began competing politically rather than fostering collaboration for mutual benefit and progress. In a turbulent milieu, the process and institution of planning could provide partial relief around long standing developmental problems. With continuous change in the composition of local and even service delivery institutions, the capacity to respond to escalating needs in society became eroded. Socially and internally displaced people utilized urban services and infrastructure without any revenue contribution. In order to address common problems related to governance, informal sector bridged the gap which was created due to decline in administrative ability of local and autonomous institutions. Violence and use of form has now become the means to resolve disputes between factions and groups. Such a non-civilized practice has rendered the law and order machinery helpless. A key reason of dispute is the urge to control land which is perceived and transacted as a commodity. It is no more viewed and managed as a social asset.

Figure 10: LOCAL DEMOCRACY PLANNING AND MANAGEMENT IN KARACHI: A SUMMARY OF SOME OF THE VISIBLE ISSUES



5. Conclusions

This study offers several important conclusions and lessons. Political consensus at the local level is vital to be promoted around the form and format of local democracy. Such a consensus can help transform procedures and practices to manage the city affairs. An institutional system is needed to deal with social and political disputes and help prevent conflicts and violence. The process of planning must attempt to analyse the specific needs, aspirations and requirements of communities and stakeholders while determining the planning outcomes.

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INTRODUCING SOUNDSCAPE

Östen Axelsson [1]

Abstract

Soundscape – the acoustic equivalent of *Landscape* – is a relatively new area to many. It concerns the acoustic environment as perceived, experienced or understood by people, in context. Current development in soundscape research is directed towards urban planning and design in promotion of sustainable development, health, well-being, and quality of life. Above all, soundscape is about what sounds are appropriate to, or belonging to, a place. There is no one ideal soundscape. To determine which soundscapes are good, we must consider which activities the soundscape may enable at a place. Furthermore, soundscape creates a sense of place, and it is an important aspect of our cultural heritage. For instance, what soundscapes will our generation transfer to the next, and how will this affect sustainability and quality of life in the future? To incorporate soundscape into urban planning and design, we must understand the relationship between sound and human activities in the urban environment. What sounds and human activities are compatible, and which are not? For example, what sounds are compatible with urban street-life, or with a young children's playground? What sounds promote or impede social interaction in urban open spaces, or what sounds promote or impede tranquillity? In order to advance soundscape research, a coordinated, cooperative and interdisciplinary effort is needed.

1. Introduction

The present paper is a brief introduction to current soundscape research in Europe, relevant to urban planning and design. It is not exhaustive, but provides an overview of some central research activities and their results.

2. Soundscape

Soundscape is best understood as the acoustic equivalent to *Landscape*. Probably, it was first defined in *Handbook for Acoustic Ecology* (Truax, 1978, 1999):

Soundscape – "An environment of sound (or sonic environment) with emphasis on the way it is perceived and understood by the individual, or by a society."

Since then, many new definitions have occurred, and as of yet there is no consensus on how the term should be defined. Nevertheless, most soundscape researchers seem to agree that *Soundscape* denotes the acoustic environment as perceived, distin-

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guished from the acoustic environment itself. Presently the working group ISO/TC 43/SC 1/WG 54 *Perceptual assessment of soundscape quality* of the *International Organization for Standardization* (ISO) is working on the first part of the first International Standard on soundscape, ISO 12913-1 *Acoustics — Soundscape — Definition and conceptual framework* (Axelsson, 2011a, 2012). The working group aims at international consensus among soundscape researchers and practitioners on a definition. At present (May 2012) the proposed definition reads:

Soundscape – "Acoustic environment as perceived and experienced and understood by people, in context."

This definition was inspired by the European Landscape Convention (Council of Europe, 2000) that defines *Landscape* as "an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors".

3. Some European soundscape research

The Canadian composer Murray Schafer is widely recognised for having made the term *Soundscape* popular through the *World Soundscape Project* in the 1970s (Schafer, 1994). In 1998, Schafer visited Stockholm in Sweden to present his ideas about acoustic ecology at the conference *Stockholm, Hey Listen!* (Karlsson, 1998). The conference inspired some noise-and-health researchers, like Professor Birgitta Berglund from Stockholm University, to adopt the term *Soundscape*. Together with Professor Tor Kihlman at Chalmers University of Technology, Professor Berglund took the initiative and developed the first European soundscape research programme *Soundscape support to health*, 1999–2007 (Gidlöf Gunnarsson, 2008). A similarly large and interdisciplinary research programme, named the *Positive Soundscape Project*, was conducted in United Kingdom 2006–2009 (Davies *et al*., 2009).

Both programmes found that soundscapes may be described by a two-dimensional model of emotional responses: *Pleasantness–Eventfulness* (Axelsson, Nilsson & Berglund, 2010), or *Calmness–Vibrancy* (Cain, 2009). The latter model represents a 45° rotation of the *Pleasantness–Eventfulness* space (Figure 1). Moreover, there is a meaningful relationship between emotional responses and perceived sound sources. Technological sounds (e.g., road traffic) are typically judged unpleasant, natural sounds (e.g., singing birds) pleasant, whereas human sounds (e.g., voices) are eventful, regardless of the sound-pressure levels (Axelsson, Nilsson & Berglund, 2010). This is important to urban planning and design, because it provides us an idea of how to actively design soundscapes. To create a calm soundscape it seems necessary to abate both technological and human sounds, and to promote natural sounds, whereas to create a vibrant soundscape it seems necessary to promote human sounds and to abate technological sounds.

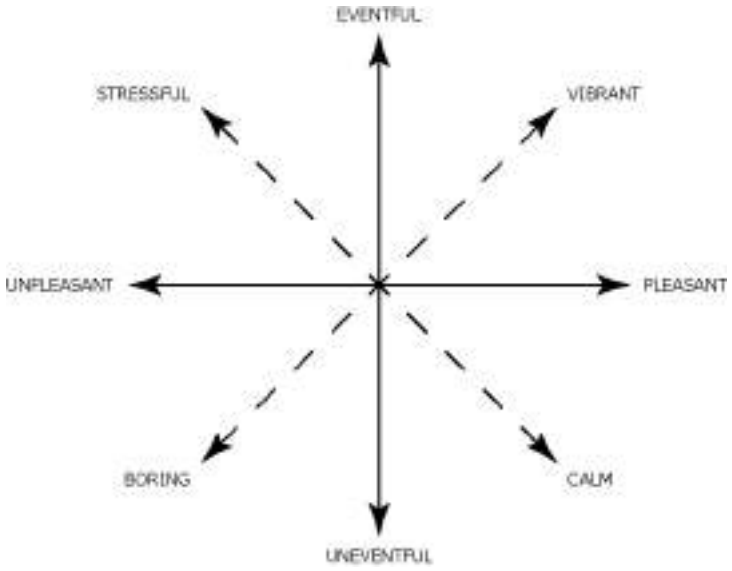

Figure 1. Conceptual model of emotional responses to soundscapes

3.1 Soundscape and water

The environmental planner, Professor Lex Brown, Griffith University in Brisbane, Australia, has proposed a 4-step model for acoustic design of outdoor space (Brown, 2011; Brown & Muhar, 2004), according to which wanted sounds may be used to mask unwanted sounds. In particular Professor Brown has proposed to use water sounds to mask road-traffic noise (Brown & Rutherford, 1994). Inspired by this notion, soundscape researchers have begun to investigate this empirically.

There are several different qualities of water sounds. For example, a purling stream is superior to splashing and hissing sounds from a fountain (e.g., Jang & Kook, 2005; Jeon, Lee, You & Kang, 2010; Rådsten-Ekman, Axelsson & Nilsson, 2012). Unfortunately, it seems that it is easier to use road-traffic noise to mask water sounds than the other way around (Nilsson, Alvarsson, Rådsten-Ekman & Bolin, 2010). In addition, there is a risk that water sounds do not only mask the unwanted sounds, but also wanted sounds, like singing birds (Axelsson, Nilsson, Hellström, & Lundén, 2012). Therefore, it is important to think carefully before erecting a fountain in the urban environment. More research is needed, to find out how fountains must be designed in terms of sound.

3.2 Soundscape auralisation

Another research area that is relevant to urban planning and design is soundscape auralisation (i.e., the rendering of digital virtual reality soundscapes) (e.g., Forssén *et al*., 2009; Maffei *et al*., 2010). It aims at creating tools for architects and urban planners for simulating future soundscapes for design purposes.

3.3 Soundscape mapping

A new, emerging area in soundscape research is soundscape mapping. This means to use Geographic Information Systems (GIS), or similar, for analysing and describing current soundscapes, and to plan future soundscapes (e.g., Hällgren, 2011). However, as of yet, no applicable methods or tools have been presented.

4. ISO and soundscape

The Swedish research programme *Soundscape Support to Health* resulted, among other things, in a method for measuring soundscape quality, known as the *Swedish Soundscape-Quality Protocol* (Axelsson, Nilsson & Berglund, 2009, 2010; see also Berglund & Nilsson, 2006; Nilsson & Berglund, 2006; Axelsson, Berglund & Nilsson, 2010). When the research programme ended in 2008, the research team approached ISO, through the *Swedish Standards Institute* (SIS), to propose a Preliminary Work Item to develop the first International Standard on soundscape.

The scope of the Preliminary Work Item Proposal was to provide specifications for questionnaire studies, as well as minimum reporting requirements in soundscape research. The proposed International Standard was intended for researchers or public users who are interested in measuring soundscape quality. Examples of intended applications are questionnaire studies in residential areas, or among visitors in urban open spaces. Based on the *Swedish Soundscape-Quality Protocol*, the International Standard was proposed to cover questions on sound source identification, overall soundscape quality, and attribute profiling. The latter would be used to measure affective qualities of soundscapes by attributes scales like ‘pleasant’, ‘exciting’, ‘eventful’, and ‘calm’ (cf. Figure 1).

The proposal was well received, and a new working group, ISO/TC 43/SC 1/WG 54 *Perceptual assessment of soundscape quality*, was formed (Axelsson, 2011a, 2012). As mentioned above, the working group is presently developing the first part of the first International Standard on soundscape, ISO 12913-1. Within 2012, the working group intends to begin to develop a second part on the minimum requirements for reporting the results of soundscape studies. The working group consists of 32 experts from 16 countries distributed across four continents: Asia, Australia, Europe, and North America.

5. The COST Action TD0804 on soundscape

The same year as the ISO working group was formed, European soundscape researchers and practitioners joined to form the COST Action TD0804 *Soundscape of European Cities and Landscapes*. It will operate until June 2013, and is funded by the COST programme (European Cooperation in Science and Technology), which is supported by the EU RTD Framework Programme. Out of the 36 COST countries, 24 participate in this Action.

The Action is motivated, because reducing sound levels – the focus of EU environmental noise policy (EC, 2002) – does not necessarily lead to improved quality of life. A new multidisciplinary approach is essential. Soundscape research represents this paradigm shift as it involves not only physical measurements but also the cooperation of human/social sciences (e.g., psychology, sociology, architecture, anthropology, medicine) to account for the diversity of soundscapes across countries and cultures. The soundscape approach considers environmental sounds as a 'resource' rather than a 'waste'.

The main aim of the Action is to provide the underpinning science for soundscape research and make the field go significantly beyond the current state-of-the-art, through coordinated international and interdisciplinary efforts. The Action will promote soundscape into current legislations, policies and practice, aiming at improving/preserving our acoustic environment. The Action does this by workshops, seminars, conferences, short term scientific missions, and summer schools.

6. Soundscape and cultural heritage

Soundscape is also an important, but neglected aspect of cultural heritage. The COST Action drew attention to this at its think tank *Soundscape as a part of Culture Heritage* on Capri, Italy, in October 2011. On the on hand, soundscape is important to cultural heritage sites, as well as to cultural festivals and ceremonies. On the other hand, soundscape is an intangible aspect of the cultural landscape, and an expression of human presence and activity. It is transferred from generation to generation, while society is constantly reshaping the soundscape as a reaction to the contemporary environment. Because the soundscape contributes to our well-being and is central to sustainable development, a central question is: what soundscapes would our generation transfer to the next?

7. Designing Soundscape for Sustainable Urban Development

In September 2010, the year Stockholm was the first European Green Capital, the COST Action organised the international conference *Designing Soundscape for Sustainable Urban Development*, on soundscape and urban planning, in Stockholm. It was organised in cooperation with the City of Stockholm, EUROCITIES' working group on noise policy, Swedish Association of Architects, and the Swedish Society for Town and Country Planning. The purpose of the conference was to assemble practitioners and researchers in architecture, urban planning, acoustics, noise, and related disciplines, to discuss how the soundscape approach may be implemented in urban planning and design in Europe (Axelsson, 2011b).

In the presentations at the conference a number of central themes emerged. The soundscape is an environmental resource that must be creatively planed and designed, not considered in retrospect. It concerns the meaning of sounds, which is fundamental in establishing a sense of place. Soundscape is not a question of how loud sounds are, but what sounds are appropriate to a place. It is an important aspect

of quality of life and may promote or impede psychological restoration, as well as daily activities, like speech, sleep, and recreation. At the same time there is no one ideal soundscape. In order to decide which soundscapes are good, we must consider which activities the soundscape may enable at a place.

The conference highlighted that there is a need for case-study research, where soundscape design measures are evaluated from acoustical, architectural, perceptual, and health points of view. The hitherto low number of large-scale case studies was cited as one reason why soundscape design has not yet reached the urban planners. Architects and urban planners continue to request more concrete cases that inspire and provide a basis for new approaches. Thus far, case studies have been limited to individual residential and recreation areas, as illustrated by the presentations in the conference.

The main conclusion of the conference was that soundscape planning should not be implemented through legislation and directives. Rather, the path to implementation is via applied research in urban planning, in close cooperation with municipalities and other stakeholders, and with the support of basic research and other scientific disciplines such as acoustics, human geography, psychology, and sociology. The strategy is further international and interdisciplinary research collaboration, and exchange of experiences at conferences in urban planning and architecture. Progress will be based on learning from each other by continuing to develop, present and discuss concrete and successful cases of soundscape planning. The special session on soundscape in AESOP 2012 is organised to continue this discussion, and to promote further development.

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WHAT DEFINES SUCCESS OF A VISION?

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Abstract

Visions can be valuable tools for guiding and uniting land use interests in a region with fragmented administration. What determines the strength of a vision and how can it effectively play its role? We tested and summarized hypotheses on the success factors of visions. We chose New Orleans, a city in a rebuilding process because that represents a most intensive and pressing vision process.
We interviewed local policymakers, designers, researchers, and journalists to find out what they would spontaneously cite as a vision's most crucial factors. We also reviewed the subsequent New Orleans recovery plans and compared our findings with hypotheses from visioning literature.
The interviewees' spontaneous answers largely confirmed the key hypotheses about success from the visioning literature. But the most frequently mentioned factors were not in the literature: a vision needs to be propagated by a powerful authority, a favorable larger political climate, and the funds to sustain the implementation process. For a vision to make a difference, it needs to be substantively persuasive but also have a favorable institutional climate to help it along.

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1. Introduction

What does a vision need to be effective? What factors enable people to devise a central idea about future urban form that sets the agenda for future development? Ambitions are cherished, promoted, and pursued by individuals, groups of people, or city councils who all hope that they are able to make a difference. Visions can coordinate the interdependent decisions that result from these ambitions. We chose New Orleans' post-Katrina rebuilding challenge as a specifically telling example of vision-making. This example was used to test and supplement hypotheses about the strength of visions from literature on the success of visions. This article reports our findings on vision performance, based on interviews in New Orleans.

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Our visioning perspective distinguishes our study from other work written about New Orleans and similar post-disaster rebuilding challenges, which typically take the perspective of recovery theory (Olshansky et al., 2008; Olshansky, 2006; Kates et al., 2006; Nelson et al., 2007). Recovery theorists analyze the total recovery process, often with an institutional focus and little emphasis on the contents of the recovery plans. In contrast, we specifically wanted to learn about the catalyzing power of ideas about future urban form. How does the content of a plan guide actions and succeed or fail in uniting stakeholders?

It is complicated to establish the causal link between the dynamics of societal reality (i.e., urban form, social relations, political processes) and the mental constructs (i.e., ambitions for future spatial situations) that partly explain them. First, it is difficult because the mental constructs address various parts of reality, they vary in the degrees to which they are made explicit and the degree of agreement by the wider community. But, foremost, the causal link is difficult to establish because society and vision cannot be separated – they are one, instead of separate entities. They transform simultaneously; it is impossible to divide them and point out a causal link with certainty. There is too much interdependence and too much interference from other factors.

Yet, in their pretense to guide paths of development with appealing ideas, groups in society (i.e., planners, politicians, NGOs) do seek ways to make a difference. We use the word "vision" to address the larger ideas of a city about its future development, such as strategic plans (Healey 2007). Such visions are typically in constant transformation; they are largely implicit but may be made explicit in planning documents. And although planning documents (e.g., zoning plans) will in practice have a more narrow scope than visions because they are partial operational steps designed to contribute to a broader vision, they are the only manifestations of visions that last. The rest of the mental images for the future have evaporated and cannot be reconstructed.

Post-Katrina New Orleans represents a situation where a disaster damaged the city, forcing a city that was not used to making plans to make drastic choices about how to rebuild for the future. After the devastation of 2005, the city suddenly found itself forced to choose what it wanted to look like in the future. People asked for plans that would guide the recovery and reduce uncertainty for them as individual actors. Just like Port-au-Prince, Haiti, Christchurch, New Zealand, and Asian coastal zones damaged by tsunamis (Diefendorf, 2009 even compares the New Orleans situation with war-damaged German cities), New Orleans had to choose in what form it would rise from its ashes.

Our study tests and supplements the critical factors for vision performance. Section 2 reviews the visioning literature with the purpose to extract

hypotheses on success. We describe the challenge of rebuilding New Orleans in Section 3, presenting its geographical structure and the cause and nature of the 2005 devastation. Section 4 presents our research design, aimed at unraveling the competitive struggle among visions and documenting which strengths and weaknesses key players in that process now attribute to the various visions. The results are presented in Section 5. The paper concludes with a discussion of the outcomes.

2 Hypotheses from vision performance literature

Our New Orleans case study is meant to test and supplement theoretical assumptions about vision performance. In the aftermath of Hurricane Katrina in 2005, opportunities for the city's future had to be explored. Given the multitude of interests, perceptions, and opinions, this case provides a unique example of upcoming and conflicting visions.

We reviewed hypotheses about successful visions described in literature – as explained in the introduction, we exclude post-disaster recovery literature because we chose to concentrate on the substantive side of visions. Although, largely speaking, planning literature is extensive, literature that specifically addresses how to devise and implement powerful city or regional visions is limited and fragmented. This may be because it is easier to study incremental steps of improvement, such as plans, than to study processes that address radical, innovative, large-scale, long-term transitions. Nonetheless, several attempts have been made to analyze visioning processes.

Robert Shipley's writing is most explicitly concerned with visioning. He concentrates on cities that pursue radical views to guide land use, and other policies. Many cities in Europe and the U.S. have engaged in visioning processes with varying impacts. From Shipley, we obtained a number of hypotheses about how to design the visioning process in such a way that the eventual performance of the outcome is maximized.

Storytelling literature would also be applicable to implementation of a vision. Because a vision is a compelling reflection of a possible future, the seductive force central to storytelling is of great importance in successfully using the vision to lead the way. Some books about strategic planning also hint at the phenomenon of the vision, but without choosing clear concepts and hypotheses (for instance Healey, 2007).

Hypotheses on critical factors in visioning literature

Visioning literature presents a number of recommendations for factors that are critical to successfully devising visions. The factors we derived in our review of this literature are typical to collaborative processes in general. This is logical,

considering that visioning, like collaborative planning, refers to "processes through which parties who see different aspects of the problem can constructively explore their differences and search for solutions that go beyond their own limited vision of what is possible" (Gray, 1989, p.5). This appears to imply that a powerful vision is, by definition, an image of the future that has support from all the important actors, and that support begins when stakeholders interact while jointly drafting the vision. A powerful vision needs broad representation from stakeholders, active participation, and clarity about the terms of engagement; everybody has to contribute ideas and everybody has to eventually profit from the results.

Shipley's attempts to develop visioning theory provide a number of clues about performance variables. Foremost, a vision has to be specific and challenging (Shipley, 2002, p.13), as "specific and challenging goals lead to better performance than 'do your best' goals." Setting high goals will result in high performance. At the same time, the vision has to include specific goals with specific tasks that are explicitly assigned to actors. This is important because the vision needs to overcome the collective irresponsibility in the region that necessitated the visioning in the first place. The vision has to assign actors to take specific actions (idem, p.15) and tasks articulate the "how question" of visioning (Shipley, 2006) that is both activating and relevant in helping the community judge whether to support the vision. Support for the vision depends on the projected result but also the way it is proposed that leads up to that result.

Furthermore, people should be asked to contribute early in the process before any solution is proposed (Shipley, 2004, p.208). Preconceived solutions smother creativity but genuine participation allows participants to think freely and to later recognize their ideas in the result. Note the difference: not just participation, but participation sufficiently early in the process to affect the result.

Papers presenting case studies on selected visioning processes implicitly confirm these hypotheses to varying degrees. Helling, for instance, stresses the importance of several principles of proper collaborative planning and emphasizes that it is vital to produce sufficiently concrete targets to guide the shorter-term decisions (Helling, 1998, p.344).

Complementary to Shipley's recommendations, Helling's (1998) analysis of the Atlanta VISION 2020 process found the role of experts to be vital, as they can add missing information (idem, p.346) when the process is trapped in discussion about facts. Too much expert-driven process, however, can be a pitfall when attempting to build consensus and wide support among stakeholders. Helling, therefore, suggests that expert views have to be subservient to the people's perceptions and preferences. Otherwise,

stakeholders may experience the process as merely symbolic, believing the experts have no genuine interest in what the people say but only have interest in their preconceived solutions.

Helling also mentions the danger of devising utopias instead of strategies for action, which is also the main message of Peel and Lloyd (2005). This is in line with the specific tasks Shipley (2002) mentions, but she warns against his suggestion to set "challenging goals." Goals must not be set too high.
Helling furthermore considers it crucial for a vision to appeal to a shared sense of urgency (idem, p.345). It is dangerous to treat the collaborative process as a goal in itself, because that will deplete energy. The goal must be to produce a compelling image of the future that effectively guides action.
Margerum's (2005) analysis on visioning in Denver also largely confirms the need to respect the principles of collaborative planning in terms of actively involving population, striving for consensus and joint learning, and managing interdependent interests. Interestingly, he believes that it would work best on the street or neighborhood level because regionally-concerted action is too hard for people to identify with and thus they would not support the result.

Hypotheses on critical factors in vision application

What subsequently defines the performative power of the vision in the phase after its interactive, expert-informed drafting? Visioning literature emphasizes that a vision has to be well-rooted in the region's stakeholder agendas. The storytelling literature talks about how to disseminate the results for maximum effect. Throgmorton (1996), Sandercock (2003), and Myers and Katsuse (2000) stress the rhetorical quality of the story. Is the story consistent, elegant, and clearly positioned in time with a specified direction? Importantly, does it convey a morally compelling message?

Myers and Katsuse (2000) think a story can be successful when the reader (i.e., a stakeholder you want to persuade and activate) recognizes his position, opportunities, and responsibility. This means that stories have to be addressed to target groups to be effective. This concurs with Shipley's emphasis on assigning specific tasks to actors.

However, it would be insufficient to just address stakeholders separately. Connecting multiple interests and separate implicit visions is the power of a good vision, according to Throgmorton (2003). A planner has to accept the stories present in the region while leaving room for newly emerging microstories, but add to that a metastory that connects multiple interests and, thus, joins multiple energies. This shared nature of visions is also the cornerstone of collaborative planning (also see Peel and Lloyd, 2005). That shared nature can emerge either from the vision-making process or from very good analysis by the storyteller.

Conclusion

Critical factors for vision success are not just about content. The literature talks little about what information a vision should contain, but more about whose agendas it must be useful to and how, where and when to present the message. Success for a vision is about the psychological significance of its content. Does it spark stakeholders to act? For that, it has to connect to the stakeholders' perceptions. As Van Dijk (2011) describes it, every new story finds itself in a context of already present stories, leading to either rejection or adoption, but it is always transformed before being used.

Our case study tests the validity and completeness of the literature's success factors. The publications reviewed here explicitly label the following sucess factors: (1) setting high goals that are appealing and consistent; (2) creating a roadmap with steps and assigned tasks to reach those goals and break them down into concrete, realistic projects; (3) building on early participation; (4) including the right amount of expert knowledge; (5) maintaining a sense of urgency; and (6) connecting multiple mutually benefiting interests.

3 Case description

New Orleans is a mid-sized city in the state of Louisiana, sitting between the mouth of the Mississippi River, where it meets the Gulf of Mexico, and Lake Ponchartrain, which forms the northern boundary of the city. The city is located on the Gulf Coast, which is frequently hit by hurricanes that emerge above the gulf and move north. They tend to reach the U.S. mainland somewhere between Houston and Florida, where they usually lose strength rapidly.

The Gulf Coast around New Orleans consists of extensive wetlands through which the farthest downstream section of the Mississippi River has had multiple branches. Some branches disappeared due to natural reroutings of the river; other branches have lost their function because of regulation of the river that was done mostly for navigation purposes. Throughout the delta, numerous towns lie in a complicated pattern of marshes, natural levees, and tidal canals. The city of New Orleans was founded in 1718 on one of the natural levees formed by the river. The levees were the sites with firmer ground, where the Mississippi had deposited coarser sand. Their natural properties made these sites safe to live on (Ford, 2010; Campanella, 2008); floodwaters did not, and still do not, reach the houses built on the natural levees. The high, old part of the city is still the historical tourist district. From the properties at the fringe of the old town, plantations extended into the lower and wetter areas behind the city that were harder to make habitable.

This original pattern of habitation on the natural levees, from which extended a fan of plantations into the marshes north of town (Campanella, 2008, p. 131), stayed in place for 200 years. Then, as Ford (2010, p.17) notes in her account of New Orleans' development, "city leaders, however, longed to make something more of the swamps – to drain them, to recover the land and put it to a more profitable use: sell it, collect taxes. […] in the early 1800s the city of New Orleans sponsored construction of canals meant to drain the swamps […] using Wood's pumps […]. […] after World War II, the previously drained swamplands were finally – and quickly – developed all along the old drainage canals, where man-made levees shored up resident's confidence that the land they were living on was safe […] flooding seemed 'impossible'." (Ford, 2010, p.20) As Campanella (2008, p. 158) writes: "progressive municipal activism and new technology radically rewrote the 'rules' that drove the geography of New Orleans' urban growth."

Ultimately, most of the city's houses lay well below the level that the water in the Mississippi River and Lake Pontchartrain reached on a regular basis (Kates et al, 2006). The houses lie protected by floodwalls, manmade levees, and pumping stations, on soil that subsides because there is no longer any sedimentation and the soft soils have consolidated.

Hurricane Katrina hit the city on August 29, 2005, causing major failure of the protection system at seven or more separate locations. Dams and walls broke and vast neighborhoods were flooded in several hours by up to 3.5 meters of water, killing almost 2,000 people. None of the pre-1900 streets flooded; only the more recent, typically poorer, suburbs. The disaster proved the weakness of the protection system. The apparently insufficient standards applied by the Army Corps of Engineers, who do the civic engineering for flood protection, were criticized for causing massive failure.

After the storm, people wanted to rebuild their homes and lives. For that, they needed clarity about the recovery process. What could they expect from the future? When would services be restored in their streets? Would their streets be allowed to be rebuilt at all? Tens of thousands of city residents had fled to other parts of Louisiana and other U.S. states because their houses were uninhabitable and there was, temporarily, no employment for them. They needed certainty before making the leap back. In addition, they had become aware of the dangers of the neighborhoods they were living in. Ideas emerged about how to rebuild in a more sustainable way.

Much research has been done into the rebuilding process, but mostly from a social geographical point of view, describing developments in community resilience, social capital, place attachment, psychological health, crime rates, migration, and local economy. Initially, interest in the city's planning process was high (notably, Nelson et al., 2007; Burby, 2006; Kates et al., 2006;

Olshansky et al., 2008), however it now seems to have faded away. Our research extends the time span of the reconstruction of the planning process and uses the reconstruction as a case study to help develop theory about successful visions.

4 Research design

The authors visited New Orleans to collect data in early 2011. The objective was to reconstruct New Orleans' process of finding a vision for rebuilding the city, with the purpose to test and supplement hypotheses from literature. Which visions can be pointed out throughout the process? How long did they last? And, most importantly, what explains their decay or persistence?

Because visions do not have a fixed form that allows objective direct observation, we proceeded to make this reconstruction in the following way. We took the overview provided by Ford (2010) as our first point of reference at the start of the field research. She gives a personal and partial account of the New Orleans visioning process.

We then interviewed a broad variety of people that were involved in some or all of the post-Katrina vision-development process, and who are known to have a good overview of the total post-Katrina planning process. We took their names from planning documents that listed their involvement in the process and, upon asking for an appointment, asked them who else we should talk to. We did not tell them exactly beforehand what our questions would be, because we wanted them to directly retrieve the requested information from their personal memories.

We eventually interviewed three influential designers; three researchers from Tulane University; an important civil engineering contractor; four journalists from local news networks and newspapers; and two policymakers. After each day of field research, the researchers from our team exchanged findings and, accordingly, enhanced their foreknowledge for the next interviews. This made the team increasingly more informed about the post-Katrina plans, allowing for better interpretation of answers by interviewees. When interviewees gave permission, digital recordings of the interviews were used for the final analyses when our own notes were unclear.

In all interviews, we asked the interviewees: (1) to give an overview of all subsequent or parallel post-Katrina visions; (2) to indicate in what documents these visions were articulated; (3) to approximate the time of emergence and abolition of visions; and, most importantly, (4) to explain each vision's disappearance or persistence. The answers would enable a final reconstruction of the array of visions and the reasons for their alteration. In practice, however, interviewees did not always allow the conversation to follow the predesigned structure. We also asked the interviewees what, in general, a vision needs in

order to make a difference. We wanted to know what they spontaneously think are the essential factors in creating effective visions.

So we did not project the theory on this case, but rather awaited the factors interviewees would mention spontaneously and compared them to the insights that emerged from literature afterward. This systematic and semi-quantitative way of hypothesis testing distinguishes this study from seemingly similar studies into New Orleans' rebuilding efforts.

We primarily limited our discussion to the visions about the city as a whole. There have also been several visions and plans on the level of the neighborhood or parish (a governmental layer comparable to a county in other U.S. states), as well as visions for the Mississippi delta enveloping New Orleans. The repair and reinforcement of the existing structure of levees and floodwalls around the city by the Army Corps of Engineers is, in a way, based on a vision too. Although these levels of scale are, or at least should be, interrelated (as Nelson et al., 2007, p. 24, emphasize), information about such visions was not included in our study because of their different scale in comparison to that in most of the visioning literature, and the fact that they do not touch on improving urban form.

The remarks of the interviewees, which obviously were worded in all kinds of ways, had to be aggregated into one-liners that represent a variety of exact statements. Because of the potentially distorting effect of this aggregation, it was done as soon as possible after the actual interview by the researchers that held the interview, possibly in interaction with the lead author.

Aside from conducting interviews, we also screened the archives of one of the city's main newspapers, "The Louisiana Weekly." We analyzed articles about visions for the recovery of New Orleans for indications of flaws and strengths of visions. We compared these with the outcomes of the interviews to see if additional factors were mentioned. Information from websites was treated with caution, as their information could be colored by contemporary interpretations of the actual process. We used newspaper archives and websites only for orientation but not for primary data collection.

5 Results

Before presenting the precise data we sought to collect, some unusual features of the New Orleans case must be explained. Every case that is selected to explore the questions we asked would be unique. The interviewees mentioned three important aspects that make New Orleans an uncommon site for visioning: lack of previous planning culture, displaced people ultimately not returning, and the role of the trauma from the hurricane.

Several interviewees indicated that New Orleans did not have an actual planning culture prior to the Katrina disaster. City government and residents were not used to engaging in thinking about the city's future (also see Olshansky, 2008, p. 278). This caused the first plans to encounter an audience that was not used to, or even hostile to, the idea of governmental interference in urban form. This may mean that the first plans had no real chance of succeeding. Timing, therefore, turns out to be an important issue. Plans, in terms of content, form, and level of ambition, are not good or bad, but rather either appropriate or not for the situation at that point in time.

Visioning is further complicated because an estimated 125,000 people still had not returned to the city by 2011. These people fled the city because of their damaged properties or the lack of opportunities to generate an income. It is hard to rebuild a city when these displaced people cannot join the process; this means you have to make decisions about properties whose owners are absent and sometimes cannot even be contacted. It also means the city does not receive their taxes to pay for public services.

And then there is the trauma of the hurricane. The sudden massive devastation, displacement, and the subsequent despair are likely to make people less inclined to think in terms of the bright new futures of a better city. Even though the disaster showed the dangers of the post-Katrina urban form, traumatized people tend to crave a return to "how it used to be" (Kates et al., 2006, p.14656). Visions in that case meet a conservative attitude, which was also said to be the New Orleans culture before Katrina. That does not necessarily mean that no vision is accepted, but rather that visions need to make an explicit connection to local identity and heritage in an effort to further reinforce what is cherished locally, while simultaneously solving important problems.
The answers given in the interviews are summarized in Table 1. The plans were the most practical points of reference during the interviews and it was hard to make the interviewees discern between vision (i.e., the philosophy behind choices) and plans (i.e., the operational translation of visions) that did not necessarily coincide. That caused all interviewees to structure their account of the vision process around the most important plans. However, we concentrated on the content of the ideas.

The table lists the plans in chronological order with the success factors the interviewees indicated. The information we received from the policymakers and the contractor was not systematic enough to include in the results. Although, given the research questions, we did not intend to be quantitative, the table does give numbers for how many interviewees mentioned that factor. It is an indication of the perception of that factor's importance. It also shows which groups of interviewees mentioned a factor and which did not. The last column shows whether that factor is already mentioned in the literature.

	Presented by	Timeframe	Crucial factors for success or failure according to interviewees	Also found in literature (Yes/No and number of hypotheses)
Bring New Orleans Back Plan (BNOB) ("A Strategy for Rebuilding New Orleans" by the Urban Land Institute was enveloped in this plan)	Bring New Orleans Back Commission, commissioned by Mayor Ray Nagin	Start of work: October 2005 Presented: March 2006	Lack of communication, public involvement 1 | 0 | 1 Flawed leadership 1 | 1 | 0 People not being used to planning 0 | 0 | 2 Timing was not right; too soon to design new futures, content did not answer people's direct needs 1 | 0 | 2 No phasing or practical steps for getting from present to future 1 | 0 | 1	Y (3) N Y (5) Y (5) Y (2)
Laissez faire strategy		March 2006-October 2006		
Unified New Orleans Plan (UNOP) (executed through the Blakely Plan, named after the experts' chairman)	Teams of independent planning consultants, commissioned by Mayor Ray Nagin	Start: October 2006 Presented: January 2007	Incoherent, complicated list of projects without much appeal - | 1 | 0 Participation, however without creativity - | 0 | 0 Leadership - | 0 | 0 Missing link to federal government - | 1 | 0 Too big and expensive to be realistic - | 0 | 1	Y (1) Y (3) N N Y (2)
Master Plan		2008-now	Timing: capitalizes	Y (5)

			on people's awareness of need for planning 0 | 0 | 0	
			Uses good ideas from former plans 1 | 2 | 0	N
			Was granted "the force of law" (the eventual actual power of that is questioned) 2 | 2 | 1	N
			Flexible 0 | 0 | 2	N
			Did not propose big changes 2 | 1 | 1	N
			Communicative, involved citizens 1 | 2 | 0	Y (3)
In general	-	-	Ambitious, appealing 2 | 1 | 1	Y (1)
			But the realistic budget makes it believable 2 | 1 | 3	N
			Genuine connection to people 2 | 3 | 2	Y (3)
			Serves multiple interests but avoids favoring some and damaging others 1 | 0 | 2	Y (6)
			Right timing, using the sense of urgency and willingness to allow change to pay for it and to cooperate 3 | 1 | 1	Y (5)
			Connection to government system, aligned political will 2 | 3 | 1	N
			Leadership: clear central actor(s) with power and potential 3 | 3 | 1	N
			Incremental steps	Y (2)

			help make planning tangible 1 | 1 | 1 But, danger of missing the big picture 1 | 0 | 0	N

Table 1. Overview of the results. These factors were mentioned by the interviewees as vital to success. Some were linked to specific plans and some were general. Although this is not intended to be a quantitative study, we indicate in superscripts the number of interviewees that mentioned this factor, given respectively in number from: the researchers (out of 3) | designers (out of 3) | journalists (out of 4). A dash (-) means that the plan was not discussed in sufficient detail by that group.

The Bring New Orleans Back Plan (BNOB) was the first plan to be presented after the havoc wrought by the hurricane. A commission of expert consultants installed by Mayor Ray Nagin drafted the plan. It included ideas from a plan by the Urban Land Institute. The vision of the BNOB plan was to make the city more compact on its higher parts and make lower parts suitable for controlled flooding in case of emergencies. Shrinking the footprint of New Orleans would make the city less vulnerable, less costly to provide services to, and more realistic given the projected population decline.

The public response to BNOB was very negative (also see Ford, 2010, p. 30-33 and 52, and Campanella, 2008, p. 68, 344-350). Our interviewees were, however, unanimous that the plan's vision was not a bad one at all. And it did try to fulfill the prerequisites for collaborative planning with interactive websites, public meetings, and a grand presentation to the public in March 2006.

The plan's main flaw, as indicated by our interviewees, was the bad connection to the needs of the city's people at that moment. Timing was described as a very important factor here. Only six months after the storm, the people were presented an image of a city they did not recognize, and they were not ready to cope with the idea that some of their streets would not be rebuilt at all. The communication about the plan did not address citizens' short-term needs, making them more insecure than they already were. What would this vision mean for them in the short term? When and how would they be rebuilding their lives when their original street was wiped off the map? The plan lacked a vision for getting from the present to the projected future state. In addition to this, two interviewees (in contrast with Ford's [2010] much more intensive criticism) lamented the lack of leadership by the mayor for this plan specifically. That person stated that the mayor did not seem to be on top of it or even care about people's personal futures.

After that, according to Ford (2010, pp. 33-36) and Campanella (2008, p. 353), there was a short period where the mayor pushed a non-vision, meaning that recovery of the city would be left to market forces. This laissez faire vision was not officially documented and most of our interviewees do not recall this as a distinct phase in the process. It did, however, spark neighborhood-level planning attempts.

In late 2006, work started on the Unified New Orleans Plan (UNOP). It was infused by ideas from the community-based Lambert Plans on recovering flooded areas (compiled throughout 2006) and implemented via the Blakely Plans in 2008. The initial idea was to cover the entire city and interactively develop out-of-the-box ideas with citizens, both those still living in the city and those displaced to other cities. This, obviously, was a reaction to the BNOB's failure. The UNOP's vision was not so much to create a specific new urban form but, foremost, to create a set of pragmatic objectives that would be acceptable to citizens and that would attract recovery funds from the federal government. It was successful in generating government funds in early 2007.

The plan evolved into a list of conservative objectives and projects centering around 17 key investment areas with a focus on acquiring funds from governments, developers, and businesses that would be needed for neighborhood recovery. The plan is clearly tuned to restoring the pre-Katrina situation, using words like "repair," "improve," and "revise" in relation to flood walls, infrastructure, and housing. There are no maps and only minor hints at an adapted urban form: for instance, "help encourage and facilitate the redevelopment of higher elevation areas of the City that were underutilized prior to Katrina" (City of New Orleans, 2007, p.74).

The plan's main flaw, as indicated by our interviewees, was its lack of appeal. It was called an uninspiring list of projects that nobody could disagree on, but that did not spark enthusiasm either. It had no story to it at all. Though the plan indicated some priorities, its massive set of goals (Appendix B's table alone covered 78 pages) may have reduced action.

The current Master Plan (officially titled "Plan for the 21st Century: New Orleans 2030"; see www.nolamasterplan.org) was positively assessed by all interviewees. This comprehensive plan is hundreds of pages long and filled with numerous artistic impressions and analytical and visionary maps. It also includes extensive accounts of citizen involvement and has been well received by the citizens. The plan explicitly and convincingly presents a vision for the future that includes livability (mainly history, green space, and health), opportunity (climate for entrepreneurship), and sustainability (resilience, energy, and drinking water). Each objective is elaborated in image, text, maps indicating impacts on urban form, and lists of recommended projects. It mainly reinforces existing qualities rather than proposing radically new structures.

Though we perceive its substantial appeal as stemming from its elegant images of the future, the interviewees mainly attributed its success to the force of law, its flexibility, and the moderate change it proposes. They noted that the low level of intrusiveness would make it more acceptable to the people and they gave it the force of law because the wards can choose to reconsider aspects of the plan when they have difficulties implementing them. Together with the moderate changes it proposes, people tend to accept its authority because the plans accept their autonomy.

When we asked the interviewees for the most important success factors regardless of specific New Orleans visions, several strongly-felt ideas were expressed, most of which were not mentioned when talking about the plans in particular. Authority, political will, and a realistic budget scored very high. That appears to have been a lesson for those involved in the New Orleans visioning experience.

6 Discussion

New Orleans represents an unusual situation, whereby a city was hit by a natural disaster and forced to make radical choices for its future urban form. Extensive flooding caused massive damage to properties but also to faith in the ability of water management technology to counter the risks of living below sea level. It caused a flurry of planning efforts that were hard to research; we found partly contradictory information on dates, objectives, and content.

We sought to supplement existing hypotheses in literature about vision performance. Comparison of the literature with the case interviews shows that five out of six factors derived from the literature in Section 2 were actively mentioned by the interviewees. They are once again validated. Factor 1, setting high goals that are appealing and consistent, was frequently mentioned by all groups of interviewees as a general success factor. The need for a realistic roadmap with steps and assigned tasks to reach those goals (Factor 2) was mentioned as one of the reasons the BNOB plan failed, and mentioned by many interviewees as a crucial factor in general. Factor 3, building on early participation, was mentioned in relation to the BNOB and the Master Plan and was considered to be a crucial factor by almost all interviewees.
Factor 5, the sense of urgency, was mentioned as a general factor, but it also could be related to answers about timing. Because sense of urgency is constantly changing in intensity and focus (for instance, first to extending services to damaged neighborhoods and later to protection against new hurricanes), sense of urgency conflates to the frequently mentioned issue of timing. Sense of urgency, then, is something you need to make use of by proposing the right ideas at the right moment. Factor 6, connecting multiple mutually benefitting interests, was mentioned as a general factor. The one

factor from literature that was not heard in the answers of the interviewees was Factor 4, applying the proper amount of expert knowledge.

New factors the interviewees mentioned that we did not come across in our reviewed literature are: (7) an actor with authority that appropriates and embodies the vision; (8) a supportive political climate for the central idea; and (9) money to fund at least the first steps in realizing the vision. In our New Orleans study, these factors scored very highly in terms of the number of people that mentioned them (respectively, 7 out of 10, 6 out of 10, and 6 out of 10) – also all much higher than all the factors found in the literature. Only the importance of genuinely connecting to people ranked equally high (7 out of 10). This supplementary set of factors helps us to better understand the power of visioning processes.

Shortly after Katrina, the first visions were launched under the supervision of a mayor who was criticized for being too little involved. The appointment of Mayor Landrieu is considered to have been a big help for effective planning and the success of the Master Plan, not least because of his sister, a U.S. senator. This, together with the advent of the Obama administration in Washington, created a very different political climate for rebuilding New Orleans. Interviewees saw this as a vital prerequisite for vision performance. The availability of funds that make a vision viable, to an important extent a result of authority and politics, was also considered essential for effective visioning.

Interestingly, these three interrelated factors are central in the post-disaster recovery literature (summarized in Olshansky, 2008, p. 274) that we chose not to concentrate on because it focuses on process and institutions. In the case of New Orleans, it is obvious that lessons about successful visions should be informed by insights from recovery processes. But we feel that our results are relevant to wider spheres than just post-disaster planning. Leadership, funds, and political climate boost the performance of any vision. We agree with Olshansky (idem, p.279) when he says “post-disaster planning is just a more intense version of normal planning.” We therefore propose to combine the insights from these two fields of literature. Whereas recovery literature may profit from becoming stronger on plan content, visioning literature may improve by including process more strongly. No idea is effective without a good process, and vice versa.

Surprisingly, several factors that were indicated as crucial to plan performance were mentioned as a negative and a positive factor at the same time. For instance, flexibility, in terms of being able to reconsider decisions in case of future changes in insight, was mentioned as an advantage for the Master Plan. It was also mentioned as a danger, as the plan could eventually cease to make a real difference. Integrating multiple interests in the plan was also mentioned as being both an advantage for aligning several sources of power and a

disadvantage for inadvertently excluding some groups from benefitting. This suggests that it is not about having that factor, but about having the right amount of that factor.

So it is partly a matter of degree: a vision needs the proper amount of many factors. And is a matter of combination: several factors are simultaneously indispensible. It is about subtle differences: timing, influence of government and strength of vision. A high score on one does not compensate for a low score on another. In the case of the UNOP, all the community involvement in the world could not make up for its lack of inspiration. It was replaced by the Master Plan, but it did succeed in convincing authorities to extend hundreds of millions of dollars for recovery funding, illustrating a chain reaction between subsequent plans as well.

One thing that emerges from these findings is that the less vision a plan has, the better it will be accepted. This was most explicitly discussed in the interviews with the designers. The first plan for rebuilding New Orleans was very visionary with relevant ideas for how to build a more resilient city. Interviewees say it lacked proper timing, but even were it presented today, we question whether it would be accepted by the residents of New Orleans. Its vision was to make a better city, but the people seem to want the same city. The UNOP and the Master Plan seem less visionary and more in line with the people's urge to turn back time. Therefore, they are accepted and considered more successful. Here, the tension between Shipley's high goal setting and Helling's realism becomes evident.

The question therefore remains how to define "success." A vision may be accepted, adopted, adored, generating action, and granted the force of law; a success in short-term performance in terms of output of the democratic and formal process. Despite that success, its content may fail to address the deeper, long-term issues that were the real cause of the city's problems. A vision with high performance power could be poor or average in terms of its capacity to solve the underlying problems, or vice versa. One interviewee from the group of designers put it this way: "[Many] plans stop where they should start. They were made to please everyone."

This brings us back to the question we started out with. How can an idea make a difference? As it turns out, effective visionary planning is a balancing act: you have to go with the flow, because when you try to stop it you will be ignored. But to what extent can planning bend the trends? Our study shows that the most important factors for bending the trends are connecting to people, authority, a supportive political climate, and sufficient financial resources. A bit of coincidence is needed for all these factors to come together, but a plan that is sufficiently relevant, elegant, and persuasive to help create a favorable

environment for itself. A favorable environment will at least partly be the merit of a persuasive vision too.

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THE POLITICS OF PERI-URBAN PLACE MAKING

Terry van Dijk [1]

Abstract

The paper explores the linkages between planning and place making. These processes are interrelated but that is hardly acknowledged. Land use planning is about intervening in all kinds of land development, obviously with an important political component of combining an array of claims. This is about action and future. Place making is about the personal and community perceptions of what the world around people really encompasses. That is about perception and the present.

The paper provides European examples of how planning can reframe perceptions of place – mostly as an unintended consequence, but always with an unpredictable impact. We argue that when the dynamic but unpredictable nature of place making were acknowledged, cultural geographers and planners would jointly understand more of the social side of geographic change than in isolation.

Then planners and their products may intentionally be employed as co-framers of place, and of action. With geographers monitoring and explaining changes in frames. Not as a top-down tool, but as an attitude for authentic dialogue and social learning about places in the framework of the society of tomorrow. In particular communities in peri-urban areas, that tend to suffer from lack of sense of place, need help to learn what their place is. We review relevant theories to precise and conceptualize this political process of place making.

1. Introduction

Land use planning is about intervening in all kinds of land development. We want to change the world - improve it. This is not an easy task because each site and each objective is surrounded by an array of claims. This is about action and future. Although we are aware that these claims have to be solved in a political way, obviously with an important political component of deliberation and decision-making, perceptions and intentions of people tend to be seen as static. The political decision, then, is an amalgamation of the positions it seeks to integrate. But with these individual positions unchanged, there will always be a misfit for everybody involved.

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In my article "Imaging Future Places" (Van Dijk, 2011a) I contend that people's interests and perceptions are fluid. They change during a decision-making process. In fact, outcomes of planning processes, once shared with the public, immediately change how people see the world around them. Because plans point out problems and propose solutions, the limitations and possibilities are exposed. The result is a changed place.

Place making is mainly a geographical term, about the personal and community perceptions of what the world around people really encompasses. That is about perception and the present, while planning is about action and the future. But place making would be worthwhile to be seen as a planning result, as well as a planning objective.

In this paper, I present some examples to illustrate this point (section 2), showing the unpredictable yet inevitable social effects of plans. I then point out that peri-urban areas, by nature, particularly would benefit from planning as a way to help construct a joint image from a region (section 3). In section 4, relevant theories are reviewed.

2. Examples of plans that primarily changed place-perception

This sections seeks to empirically demonstrate the subtle frame changes that plans bring to bear. And the indirect changes on land use that are the consequence.

2.1 Harbour plans that sparked landscape appreciation [2]

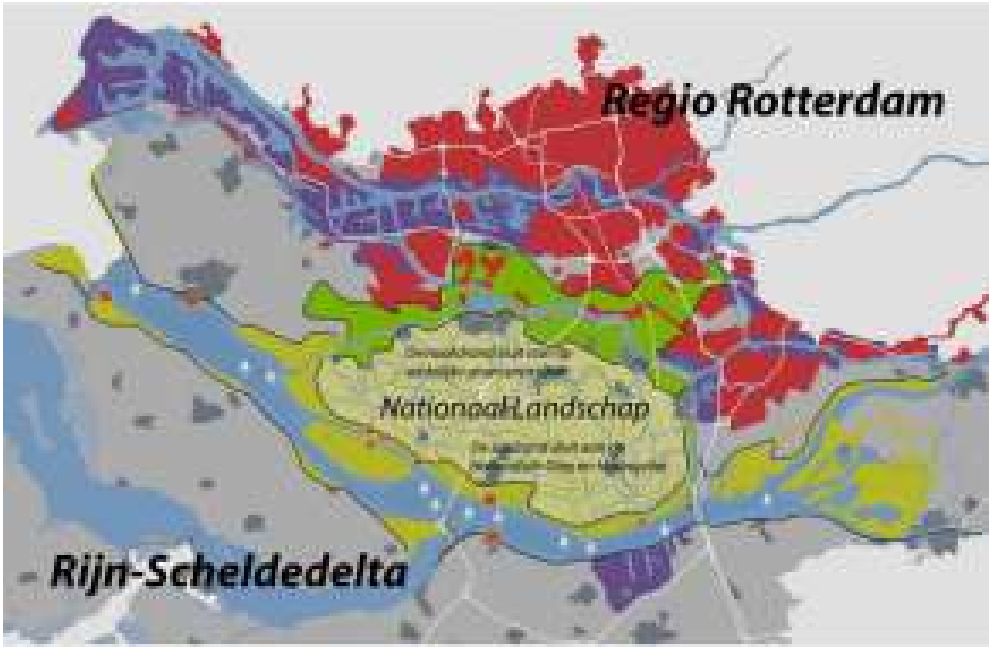
Just south of Rotterdam lies an island surrounded by several river branches just up the river mouths. Given the deficit of space for harbour expansion directly around Rotterdam, this island, called the 'Hoekse Waard' is a good location for building new harbour terminals that complement Rotterdam seaport. Politicians from Rotterdam and the relevant province start preparing plans and a political lobby to put pressure on the 'Hoekse Waard' city councils.

The population on the island does not like the idea. Although the six local governments on the island initially promised to cooperate in designating a preferred harbour site, this joint agreement was challenged by wealthy people living close to its projected site. They started the protest, enabled by dominating the municipal elections at that part of the island.

They try to stop the plan. Initially by using the conventional hearings and appeal procedures, but their efforts are in vain. The threat of the harbours make them

[2] For more details, see:
Van Dijk, Aarts and De Wit (2009) and Van Dijk, Aarts and De Wit (2011)

aware of the landscape on their island. They see the value, because they are about to loose it.



Then they discover that the national government is preparing to designate to several sites the status of National Landscape. This coincidental opportunity locally prompts further study into the cultural-historical values of the site and the locals successfully demonstrate that Hoekse Waard is well worth preserving.

So, the plan for harbour expansion reframed the perception of the area – but in an unexpected opposite way. First among the locals, that successfully change the place perception among the national politicians. The Hoekse Waard island actually becomes a National Landscape and that means the harbour is off.

As the area receives this official designation, also the larger public start to perceive the area differently. The representations of the area, in cycling guides, tourist communications and magazines, give it a new significance.

So, although the harbour was not made, the plan did change the meaning of the area. It even was given a legal status, meaning that certain land use changes are not permitted any longer. The plan has changed the phyical world- in an indirect way.

2.2 Strategic land purchases because of expected gains

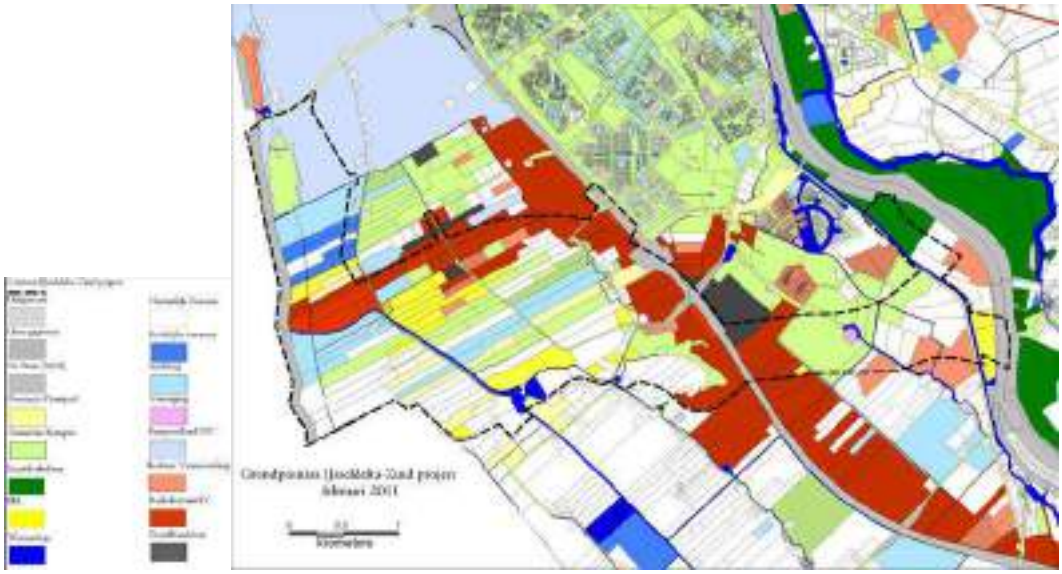
Reframing places may spark anticipatory behaviour in the form of land acquisition. Plans feed expectations of where new land development will occur.

The Portland Urban Growth Boundary (UGB) for example steers land hoarding by developers to go to other sites than in an unregulated situation; it channels expectations. Plans to expand the UGB induce speculation long before the changes come into effect.

And so may plans for a new highway exit, for instance, prompt land purchases by developers. The anticipatory behaviour, by its subsequent land ownership situation, will influence the eventual nature of the land development.

Below is a picture from a major regional project close to the Dutch city of Kampen. It proposes a new river branch and high-end housing sites. During the decision-making, the area was given new meaning. Not the landscape qualities became highlighted as in the first example, but it became a place of possible real estate gains. Land purchases started to occur.

The dreams, rumours and discussions that lead up to formal plans generate anticipatory behaviour. So, the context for plans, that will obviously change compared to the time of drafting the plan, changes partly self-induced. It is a feed forward loop that changes project conditions – either in favour (self-fulfilling) or complicating (self-falsifying; Portugali, 2008).



3. Peri-urban areas in need of alignment of frames[3]

The inherently transformative nature of peri-urban areas, together with their typically fragmented institutional landscape (Mattingly, 1999; Simon, 2008), imply a particularly complex setting for conventional planning efforts. We argue that dealing with transformative zones such as the peri-urban area may require planners to develop a more inspirational role. Planners that are aware of the reframing processes may be valuable for peri-urban planning in particular, as it potentially can mediate stand-offs between actors by uncovering shared values and interests.

If planning actually has to be designed to encourage imagination, spatial visioning goes beyond conventional consensus planning, that Innes and Booher (1999) lament for lacking creativity, instead offering comprehensive concrete and credible images of the future that reframe problems and opportunities (Van Dijk, 2011).
Of vital significance but little discussed in the literature is that the peri-urban characteristics mentioned above (dynamic, diverse, fragmented) have a social impact which complicates peri-urban planning: they cause regional identities to be weak, with much contestation or many conflicts of identity. We believe this to be an inherent property of the peri-urban area. Daniels (1999) also provides an elaborate characterization of the peri-urban area as a zone of collision, emphasizing that the transitional zone between city and country tends to be a place where controversies over land use are most visible and bitter.

Peri-urban residents share one space but live in different places (e.g. Kunstler, 1994). This mental division is the most challenging aspect for planners, causing difficulties for planning, since sustainable spatial developments often rely on common goals and collaborative planning efforts. Such goals are difficult to determine in fragmented and diverse peri-urban areas, where many conceptions of the identity of the space co-exist.

The lack of a common cultural identity, which lies behind peri-urban conflicts over land use, is a direct consequence of peri-urban dynamics, diversity and fragmentation. Because peri-urban areas are located in-between urban and the rural regions, they are home to an array of sub-communities with particular niche interests. For example, some farmers might attempt to continue farming, while others anticipate selling off their land for urban development. Then there are those who are neither farmers nor urbanites, who prefer to live in open

[3] This section draws on parts of an article accepted for publication by Environment and Planning B, with the title 'A design-approach to forge visions that amplify paths of peri-urban development.'

spaces, perhaps keeping horses and enjoying a certain freedom. Moreover, there are the entrepreneurs and the manufacturers, expanding their business districts and office parks into the peri-urban area along the easily accessible regional road network. Furthermore, there are the more wealthy urbanites, who desire new low-density housing and recreation facilities. In sum, a diversity of interests can be found in peri-urban areas.

Deeply distinct perceptions of and demands on land trouble planning in peri-urban areas. This diversity hinders the emergence of a consistent and shared peri-urban identity, making it difficult to make sensible, concerted and sustainable choices about future land use. Due to the fragmentation of peri-urban identities, the political basis for deciding over future land use is also fragmented. For spatial policies to be successful, they need to connect to what the population considers wise, acceptable or desirable. Any normative assessment by the public of any government policy on land use draws on a normative framework – whether a person supports a policy depends on their general world-view as well as their view of the peri-urban area in particular. Do we want new factories, roads and houses here, or would that be harmful to our region as we know it? Identities are such frameworks for the normative assessment of optional policies.

Facing a fragmented pattern of meanings in peri-urban areas, planners have to deal with the diversity of frames that makes it difficult to determine which future developments are acceptable. Planners can help to overcome this complication, uncovering shared values by sharing and discussing images of the future, thereby contributing to a fusion of horizons (Dierkes et al., 1996).

4. Concepts for seeing planners as reframers

Hoch (2007) and Throgmorton (1996) have emphasized the significance of rhetoric in planning (considered in the constructive, storytelling sense), and in my article I pointed out three important implications of the rhetorical perspective which had not been adequately explored, but which are vital for further understanding of planning performance in regional design processes.

My first contribution to existing rhetorical planning thought was the idea that design deserves to be understood as a particularly powerful form of storytelling because it is central to the devising and sharing of credible and appealing stories about regional futures. Indeed, these stories have to be forged. Designers that analyse spatial configurations and propose changes to them, are in essence forgers of such stories.

Secondly, I expanded on the effect of designs in regional communities by drawing on theories of framing and place-making which logically follow from the notion of rhetorical planning, but which are nonetheless still remarkably absent from the discussion. Because designs change people's perceptions, they

are reframers. If we would exploit that capability, change induced by plans would be understood, measured and appreciated in a different way. It is a way out of the post-modern relativity of planning that dismisses rational and instrumental perspectives without offering a constructive alternative.

Thirdly, given the reframing effect of designs, I argued that the relationship between governments and regional communities should be understood as symbiotic and therefore in constant interaction. In this sense, the relationship can be considered as much more diffuse and co-constitutive than is commonly acknowledged by planners and policy scientists. This suggests that regional society itself is the source of regional change, rather than change being the result of regional policy that is exogenously administered to a society by a government. Nevertheless, with respect to planning issues, the values held by the regional population are also fluid and partly influenced by communicative planning processes.

Together, these three claims help us to understand regional planning in a more strategic relational way, where stories constructed within and told through design, play a central role in spatial developments. In this perspective, the formal and governmental are just single aspects of an overall regional web of interrelationships.

Acknowledging the mental side of making and communicating plans prompts an image of two interrelated cycles of change. One is about the mental world, where ideas, dreams, expectations, stories are conceived, shared and transformed. This is a social process, hard to measure, more cultural geographical than planning. The second cycle is the action that people take,

based on people's place construction. As shown in section 2 of this paper, this action ranges from highly spontaneous and individual (on the property market or establishing a business) to formal and collective (giving an area a protected status).

Whatever the nature, as visualised in the diagram, people stand between ideas and physical reality. People are part of dynamics of place construction. And they are part, in all kinds of ways, in the actions that change physical reality. People translate ideas into spaces. And spaces are one source of information for place construction.

An interesting additional theory for the left half of the diagram is visioning. Shipley and Michela argue that it can be defined as "the process of arriving at a consensual vision" (2006, p. 224). It is based on dynamic worldview as its premises is that the best way to plan for the future in a world of constant change is to trace back from a imagined future, build on inventiveness, intuition and reflexivity, instead of extending the present (Gaffinkin and Sterrett, 2006). Moreover, visioning is seen as a collaborative process (Helling, 1998), since the assumption of most proponents of visioning is that 'plans that resonate with citizen's deepest aspirations and values have the best change of being implemented' (Klein et al, 1993, p.10).

Related to this assumption visioning is a process of persuasion. Visioning processes are undertaken with the aim to elicit a contribution of the stakeholders to the development path drawn up with help of visioning (Shipley & Michela 2006). In contrast to designing spatial plans, aimed to decrease perceived contemporary problems, visioning processes are conducted with the explicit purpose to create shared and multidisciplinary ideas of the future and as such offer a common ground for guiding spatial developments.

The left cycle is known to have several effects. According to Hajer and Poorter (2005) they have an orientating, coordinating and motivating function. Considering the first aspect, visioning may provide an overview of principles that are considered desirable for guiding planning activities (Zonneveld, 2005). Subsequently, visioning produces a framework, an leitbild, for process of change that enlights the general, pursued, direction of development and strengthen the capacity to coordinate decisions on future investments (Rotmans et al., 2001; Peel and Loyd, 2005). Finally, visioning is considered to have a motivational effect on stakeholders to invest in line with the end's defined during the visioning process (Ames, 1997).

5. Conclusion

Plans co-constitute what is - they make what people see around them. When the dynamic but unpredictable nature of place making were acknowledged, cultural geographers and planners would jointly understand more of the social side of

geographic change than in isolation. Peri-urban areas, with their fragmented identity being areas of troublesome decision-making, could benefit particularly from planning as place-making. It could unite the disjointed places that the people sharing those spaces live in.

Then planners and their products may intentionally be employed as co-framers of place, and of action. With geographers monitoring and explaining changes in frames. Not as a top-down tool, but as an attitude for authentic dialogue and social learning about places in the framework of the society of tomorrow. In particular communities in peri-urban areas, that tend to suffer from lack of sense of place, need help to learn what their place is.

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Different Approaches to Disaster Resilience of Urban Settlements of Developing and Developed Countries: A Comparative Case Study on Yalova vs Cologne

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Abstract

This paper outlines a disaster resilience model for urban settlements with a comparative analysis of two cities: Yalova/TURKEY vs Cologne/GERMANY. After examining different disaster characteristics of various countries, both developing and developed, some common features and local specifics relevant to disaster mitigation are identified. Such common features and local specifics provide a starting point for designing a model for disaster resilient urban settlements. This model sets out guidelines for disaster mitigation, including standards, criteria, and building codes for disaster-prone settlements. On the basis of such guidelines, proposals are formulated for short-, medium-, and long-term strategies and policies.

The model focuses on the physical resilience of urban settlements rather than on social, political, administrative, etc. structures. Nevertheless, such structures must be taken into account since multi-dimensional functions interact in an urban settlement. The model distinguishes between risk factors of an urban settlement and elements of resilience. The model offers a checklist of possible actions rather than a detailed and comprehensive guidebook. Though based on a standard checklist, the model proposes different approaches for developing and developed countries, respectively. It is designed in a hierarchical structure from macro policies to implementing measures. The variables used in the model and the checklist can conveniently be updated to changing conditions of urban settlements over time. Multi-dimensional features and prospective methods of the discipline of city planning are reflected in the model.

The application of the model is discussed with a view to Yalova and Cologne, respectively. This comparison suggests different priorities for strengthening disaster resilience in developing and developed countries, respectively. Although Turkey is not a developing country, it presents typical features of developing countries due to its rapidly increasing population. Germany is a typical developed country with a shrinking population. Thus, Cologne typically represents the relevant features of developed country settlements while Yalova reflects those of developing country settlement.

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Key words: Disaster resilience, Cologne, Yalova

1. Introduction

Recently, natural disasters with devastating effects on human settlements have proliferated. In light of this fact, this paper will present a disaster resilience model for urban settlements. Since urban settlements are densely populated and constructed habitats of men, they a priori represent high natural disaster risks. Unless new planning strategies integrated with disaster mitigation approaches are applied to the urbanization process, natural disaster risks remain unacceptably high in urban settlements. In the model main principles, policies, strategies, and standards are set out to guide disaster prone urban settlements in the disaster mitigation process. As another notable point, this model sets out two different approaches to lessen the hazardous effects of natural disasters on urban settlements.

2. A Model on Disaster Resilience of Urban Settlements

This model is aimed at maintaining physical resilience of urban settlements rather than strengthening social, political, administrative, etc. structures. However, since an urban settlement is a space in which multi-dimensional functions interact, other relevant issues such as political, administrative, economic, and social are also taken into consideration to support the physical resilience of urban settlements. The disaster resilience model is structured with a view to correlations between disaster mitigation stages and the procedure of spatial planning in various scales.

The model has two main parts, namely risk factors of an urban settlement and elements of resilience. Risk variables are classified as natural disaster variables and urban settlement variables are taken into consideration in drawing the risk profile of an urban settlement. Total disaster response capacity, coping capacity, policies, and instruments of disaster resilience of an urban settlement are assessed in the part of “Elements of Resilience” (see also fig. 1). As “Figure 1” shows, the parts of the model interacts each other to adapt to the dynamic features of the urban settlement concerned or those of the natural disaster threatened the urban settlement.

The model is designed as a checklist of actions rather than as a detailed and comprehensive guidebook. This checklist of actions and recommendations can be easily modified to urban settlements of both developing and developed countries in light of the relevant set of priorities. The model is designed in a hierarchical structure from macro policies to implementation details through the headings set out below:

A-Risk Factors (of a Settlement)

A-1 Potential Impacts

For a certain urban settlement, the characters/features, magnitude and range of the natural disasters as well as the frequency, the occurrence time, the duration of disasters, and the type of disasters should be determined by considering recorded

historical data. Depending on historical damage reports of natural disasters, future potential hazard estimations should be calculated. Natural hazards are parts of potential impacts of natural disasters. Although the proposed model aims at maintaining the physical resilience for urban settlements prone to natural disasters, in this study, the theme of the model is earthquakes. In the case of earthquakes, ground shaking, surface faulting, liquefaction, landslides, tectonic deformation are all features of natural hazards (Melching & Pilon, Eds.2006). In addition to these hazards, the potential impact of earthquakes cover environmental, technological, social, political, and infrastructure risks as well as economic risks (Munich Re Group, 2004). A risk assessment study for an urban settlement prone to earthquakes should be prepared by considering each feature of potential earthquake impacts. Furthermore, such a risk assessment study can be enriched by long-, medium-, and short-term impact analyses. Following a detailed risk assessment study, efficient solutions can be produced for earthquake resilience.

A-2.Vulnerabilities

In light of the aforementioned potential impacts, a vulnerability analysis should be prepared with respect to each feature of an urban settlement namely, the site of the settlement, the ground survey of the settlement, the planning standards and criteria of the settlement, land-use, population density, the population profile and public awareness for disasters, the construction density and quality of the settlement, the quality in urban infrastructure & services, economic profile of the settlement. In order to facilitate a vulnerability analysis for an urban settlement, the vulnerable physical elements of urban settlements are grouped at three scales (macro, meso, micro) in accordance with the scales in spatial planning. At each level, useful questions are recommended to relevant authorities and other responsible bodies for assessing physical vulnerability.

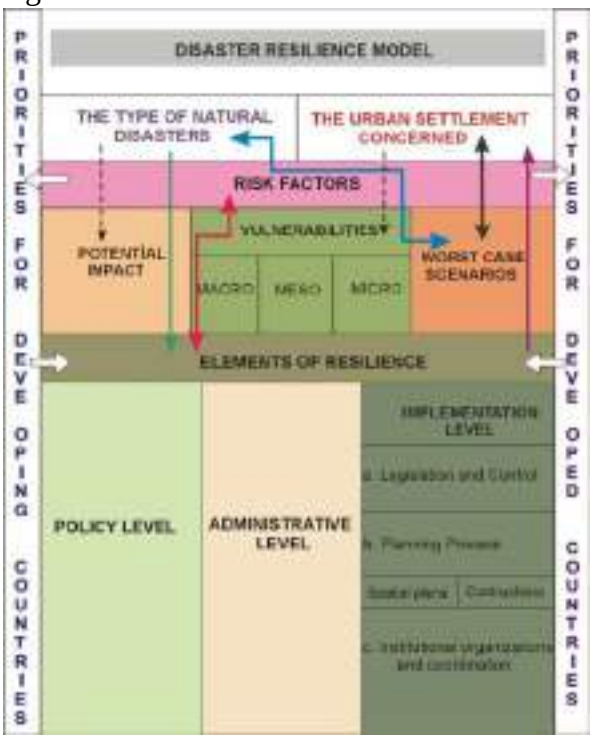
A-3. Worst Case Scenarios

In order to be prepared for the future natural disasters, the administrative body or disaster management authorities of the urban settlement should prepare various alternative disaster management plans and programs based on possible destructive natural disaster scenarios. These scenarios should be designed by the participation of disaster experienced executives, technical experts, academics and members of other scientific institutions, representatives of search and rescue teams and relief organizations, NGOs, other public interest groups, the Media. The worst case scenarios should lead participants (such as disaster experienced executives, technical experts, academics and members of other scientific institutions, representatives of search and rescue teams and relief organizations, NGOs, other public interest groups, the Media) to answer the following questions in the case of materialization of the scenario:

- What are major lessons learned?
- What are priority topics?
- What are challenges in terms of institutional, financial, organizational, administrative, and political capacities and capabilities?

- If possible, what are the results of SWOT Analysis in terms of local coping capacity?
- What short-, medium-, and long-term solutions can be generated?

Figure 1. A Disaster Resilience Model for an Urban Settlement



Source: Own source.

<u>B-Elements of Resilience</u>

<u>B-1.Policy Level</u>

At the policy level, urban policy-makers and governors, mayors, and relevant local administrative officers as well as agents of the central governments who are in charge of local development policies should design an effective disaster mitigation approach with a view to disaster resilience. As already mentioned, unless new planning strategies together with disaster mitigation approaches are applied to the urbanization process, urban settlements will remain exposed to high and probably increasing natural disaster risks. Some main principles, policies, and strategies are proposed to guide disaster prone urban settlements on disaster resilience. The elements of the disaster resilience policies should be analyzed with a view to the question of ***"What makes the urban settlement disaster resilient?"*** The policy instruments available for designing a disaster resilience process should be determined by the guidance of the following questions:

- What particular features of the urban settlement imply risks and challenges for a disaster resilience policy?
- Which elements of the coping capacity of the urban settlement are supportive of a disaster resilience policy?

- What long-, medium- and short-term approaches can be envisaged towards improving disaster resilience of the urban settlement?
- What processes and instruments are available in implementing disaster resilience policies?
- What (potential) side-effects of disaster resilience policies and measures must be taken into account?

However, development trends and policies of countries may create further undesired results on and vulnerabilities of urban settlements. While this model serves to both developing and developed countries, it is useful to emphasize that developing countries should pay more attention on generating policies to reduce environmental degradation. In this context, the vulnerability of urban settlements in developing countries should be evaluated on the basis of interactive relationships of intensity of disasters, environmental degradation, and side-effects of disaster resilience policies & activities. On the other hand, in developed countries, various approaches and methods are available with a view to protect the environment such as policy instruments for sustainable urban settlements and EU Strategic Environmental Impact Assessment Directive (SEA, 2001/42/EC; European Parliament & European Council, 2001). Hence, developed countries should integrate these instruments into disaster resilience programs of urban settlements.

In general, policy designers and decision makers of the urban settlement should pay attention on negative effects of disaster response and mitigation activities as well as general development policies and settlement strategies on urban environment and space. In this respect, the following questions will provide guidance to policy designers and decision makers of the urban settlement:

- What are the possible sources of environmental contamination and damages in the urban settlement during the disaster response activities?
- What types of disaster response activities can give damage to the urban space in terms of disorder and distortion?
- What are the possible sources of environmental contamination and damages in the urban settlement as a result of disaster mitigation activities?
- What types of disaster mitigation activities can give damage to the urban space in terms of disorder and distortion?
- What are the possible sources of environmental contamination and damages in the urban settlement as a result of general development policies and settlement strategies?
- What types of general development policies and settlement strategies can give damage to the urban space in terms of disorder and distortion?

In the light of the above questions, the preparations of some key documents are strongly recommended to build effective disaster resilience policies. These are the macro scale disaster mitigation map, macro scale spatial policy document which outlines national-wide policies and approaches towards mitigating the disasters, local scale disaster mitigation map and spatial policy document including relevant local details should be prepared. An efficient resilient policy should be constituted with the

participation and sharing knowledge of central governmental institutions, local authorities, NGOs and community-based organizations as well as private sector representatives, academic and research institutions, search and rescue teams, disaster assistance organizations, and media (ISDR, 2003).

B-2.Administrative Level

One of the pre-requisites of an effective disaster management is a well-organized administrative structure as well as institutional organization and coordination. In case of problems and inefficiencies in the administrative structure and institutional organization the following questions would be helpful to designate problem areas and to find effective solutions out:

- Is there any conflict or gap among the responsibilities of various institutions in terms of disaster mitigation, preparedness and response? If yes, the following criteria will provide guidance to the reorganization of tasks and responsibilities among institutions:
  - ✓ Historical background of an institution (age and experience)
  - ✓ Field of experience in terms of disaster mitigation (response, preparedness, recovery, mitigation)
  - ✓ Financial and technical capacity and capability
  - ✓ Institutional performance in case of disasters (overall assessment of institutional capacity as well as capability of intercommunication and coordination of relevant institutions and organizations)
- Are responsibilities efficiently shared by relevant institutions? Is there any overloaded or below capacity worked institution? Is there any institution which misfit to its field of work?

B-3. Implementation Level

Implementation level can be divided under three subtitles namely, legislation and control, planning process, and institutional organization & coordination.

B-3.1. Legislation and Control

To sustain disaster resilient urban settlements, relevant spatial planning instruments should be supported by effective legislation, controlling mechanisms and processes as well as dynamics of institutional and public awareness. In terms of effective legislation the following principles are recommended. Unless the existing legislation satisfies the following principles, the new legislation should be design with respect to these principles:

- ✓ A macro scale disaster frame law should be prepared.
- ✓ All disaster related-legislations of the country should be brought in line with this macro scale disaster framework law.
- ✓ Controlling mechanism and processes should be described and clarified through execution of the legislation.
- ✓ Controlling processes and measures towards increasing institutional and public awareness play integral roles in implementing a disaster resilience policy.

- ✓ Public and institutional awareness facilitates to build disaster resilience policies which implement relevant spatial planning standards and methods and foresee adequate disaster preparedness measures.

B-3.2. Planning Process

Spatial plans are important to prepare a base for a disaster resilient urban settlement. For the disaster resilience, using multi-dimensional planning instruments and integrated process of spatial planning into disaster mitigation will be beneficial. Disaster mitigation techniques should be included in the preparation process of a spatial plan; more specifically, the process should include the i) preparation of analysis maps, ii) preparation of a synthesis map by inserting data of analysis maps, iii) preparation of a spatial plan based on a synthesis map. It is possible to insert disaster/earthquake mitigation techniques and approaches into these steps of spatial plan preparation process as follows:

- ✓ Preparation of a land-use map
- ✓ Preparation of various layers of analysis maps
- ✓ Preparation of vulnerability analysis maps of different land-uses with respect to the records of previous disasters/earthquakes
- ✓ Preparation of disaster/earthquakes risks maps (hazard map + analysis map of spatial distribution of vulnerable physical elements)
- ✓ Preparation of spatial plans of the urban settlement in various scales.
- ✓ Preparation of a micro zoning map denoting i.e. safe zones, zones where buildings are permitted subject to adherence to special technical standards, and building prohibited zones.
- ✓ Preparation of a risk mitigation plan including an evacuation plan and an urban transformation action plan in the case of emergency.

As integral parts of spatial planning process, building plans and construction process should also serve to earthquake resilience. The recommended strategies and instruments serving to earthquake resilience of buildings are stipulated as follows:

- ✓ Preparation of existing building stock analysis in terms of quantifying the amount and likelihood of losses that buildings may suffer in future earthquakes.
- ✓ The recommended analysis should be prepared according to different indicators, such as function of the building, construction style and materials of the building, other relevant technical construction details of the building, height of the building, age of the building, soil ground analysis of the building (Meskouris, Kuhlmann, Mistler, 2003). This analysis should also be prepared for other types of construction elements such as storage areas, terminals, bridges, dams, viaducts, etc.
- ✓ Preparation of feasibility analyses of various alternative programs aimed at reducing the possible loss in future earthquakes (FEMA, 2004)
- ✓ Designing earthquake resilience action programs in cooperation with building insurance and building permit authorities and their procedures.

B-3.3. Institutional Organization & Coordination

The effective institutional organization and coordination is a significant issue in terms of implementation of disaster resilience on the urban settlement. All disaster mitigation plans and programs need to be prepared in the pre-disaster period, and they need to be coordinated under one single authority. In this context, the following key questions should be answered to find an effective coordinator institution:

- Is there an institution in charge of coordinating all disaster mitigation activities and programs in the urban settlement?
- If yes, does this institution work effectively?
- If not, what are the shortcomings of the existing coordinating institution?
- Is the existing institution able to overcome such shortcomings or is a new coordinating institution required?

After clarifying the position of coordinating institution, the dynamics of the institutional structure in terms of coordination and organization should be determined. In this study, the main elements of institutional coping capacity are determined as (i) risk perception, (ii) institutional awareness, and (iii) organizational administrative, technical, financial structures and equipments.

As already mentioned, though based on a standard checklist, the model will include the different approaches for developing countries and developed countries, respectively. In this part, these different approaches are clarified in terms of different priorities of developing and developed countries. The following topics are stipulated to provide guidance to developing countries with respect to their priorities in terms of disaster resilience:

- ✓ Survival of citizens
- ✓ Provision of shelter, security, and some basic goods and services for survival of citizens
- ✓ Organizing public campaigns and well-attended public training programs to teach citizens how to apply self-survival techniques
- ✓ Considering the limit of financial resources, strengthening of super- and infrastructure starting from centers of provision of essential services
- ✓ Prevention of environmental degradation and protection of natural resources

For developed countries, the following issues are recommended as priorities:

- ✓ Strengthening of super- and infrastructure
- ✓ Building effective disaster/earthquake insurance system for both buildings and infrastructure
- ✓ Designing the new program and process to provide earthquake/disaster resilience in provision of main services and utilities, such as electricity, telecommunication, energy and drinking water pipelines as well as emergency service units
- ✓ Building and developing the capacity of airway transportation modes and vehicles for disaster response
- ✓ Enhancing civil initiatives and community based organizations with a view to increase public awareness on disasters

The priorities above should always be taken into consideration while each part of model is applied on the concerned urban settlement. However, these priorities will provide more guidance in the part of "Element of Resilience" rather than "Risk Factors" due to the structure of check list in terms of potential impacts and vulnerabilities. In the part of "Element of Resilience", the way of applying policies and other relevant instruments is much more important than types of policies and instruments applied on the urban settlement. In this respect, above priorities will provide guidance to the relevant authorities to reach efficient results.

3. A Comparative Case Study of Yalova/TURKEY and Cologne/GERMANY with Reference to Different Approaches towards Disaster Resilience

3.1. Yalova and Cologne as Typical Examples of Different Priorities

This model sets out two different approaches to lessen the hazardous effects of natural disasters on urban settlements. From the perspective of a city planner, it is possible to distinguish between urbanization processes and urban settlements in developing countries and/or population increasing countries on the one hand and developed countries on the other hand. Such distinction will lead to two different approaches in the disaster mitigation process in different urban settlements. Even the main concerns of these two approaches are different. Thus, the proposed model offers two different sets of priorities with respect to developed and developing countries, respectively, while the main body of the model remains intact. The model should be applied in accordance with the relevant priorities of the concerned urban settlement.

Although Turkey is not a developing country, it has some crucial features similar to those developing countries, such as a rapidly increasing population, agglomerations around urban settlements, and economic difficulties. On the other hand, Turkey has similar features with developed countries in terms of know-how on disaster mitigation. It is very interesting that Turkey has advantages over Germany in terms of more comprehensive disaster legislation, a compulsory earthquake insurance system, and more integration of disaster mitigation issues into the spatial plans. Yet Germany performs well in running relevant processes, such as compliance with spatial planning standards and building codes. Hence, Turkey can build on her success in process planning in terms of disaster resilience as well as planning and construction activities to support disaster mitigation.

In this frame, a comparative case study has been carried out with a focus on Yalova and Cologne. Yalova is one of the cities affected by the 1999 earthquakes in Turkey. Cologne is a city in Germany which has significant earthquake risks due to its seismic background and existing settlement conditions. Since Yalova experienced high intensity earthquakes in 1999[2], the proposed model is updated and detailed in

[2] These particular earthquakes are internationally known as the *1999 Izmit and Duzce, Turkey earthquakes.*

light of local experiences in Yalova. Both cities were analyzed with reference to their seismic backgrounds, existing spatial planning and disaster mitigation activities as well as institutional coping capacity and problems. Subsequent to the analyses of these two cities, the earthquake risk assessments of the cities were performed. It should be noted from the outset that the risk assessment of Yalova will be quite different from that of Cologne in view of the significant experience of the 1999 earthquakes in Turkey. However, this difference creates an opportunity to test the proposed model enriched by the local experiences of Yalova on Cologne which has not yet experienced a devastating earthquake despite of its high seismic risk. Another opportunity through the testing process is to denote different priorities of the aforementioned cities as representatives of developing and developed countries.

3.2. Principle Findings of the Case Studies

Since the proposed model itself focus on the physical resilience of an urban settlement, the whole test results denote physical strengths and weaknesses. These results may pave the way to develop earthquake resilience in Cologne and Yalova.

The model building part mainly relies on lessons learned from the 1999 earthquakes in Turkey while the details are enriched by the case study of Yalova. In light of the model testing as well as personal experience of the author[3], the overall assessment was performed by using the SWOT analysis method (Alarslan, 2009). The 1999 earthquakes gave rise to reviewing the entire disaster mitigation system in Turkey in light of the lessons learned. Many initiatives and ongoing studies on legislation, institution-building, insurance, and quality control look promising for disaster resilient settlements. On the other hand, there are some threats regarding these initiatives due to instable institutional structure, budgetary constraints, lack of public awareness as well as inadequate organization and coordination (The Turkish Ministry of Public Works & Settlement, 2004). With reference to the different approaches set out in the proposed model, it is suggested that Turkey should follow the priorities of developing countries. Although Turkey is not a developing country, it has some crucial features similar to those developing countries, such as a rapidly increasing population, agglomerations around urban settlements, and economic difficulties.

As a result of the model testing, the key findings are formulated to provide guidance building disaster resilience of Yalova. The risk in the settlement of Yalova can be reduced by building awareness of hazards as well as designing and building of all infrastructure and superstructure with a view to decreasing vulnerability (BECT, 2000). For an earthquake, many authorities and citizens are already aware of the hazard of a certain magnitude. However disaster awareness and improvement processes are still complicated in such a country with an increasing population like

[3] The author of this paper worked in Yalova as well as other cities affected from 1999 earthquakes in the disaster mitigation projects of the Turkish Ministry of Public Works & Settlement. She is stil an advisor of the Municipality of Yalova in the UN Campaign of “Resilient Cities”.

Turkey. Because of the multitude of institutional responsibilities for relevant public services such as planning and infrastructure works, the awareness of disasters is not always sufficient to prevent the next disaster hazard. With this shortcoming in mind, measures towards lessening vulnerability can be grouped under three headings, namely “Site and Location of Buildings”, “Construction Quality and Design”, and “Control and Monitoring”.

Figure 2. The City of Yalova

Source: http://www.yalova.gov.tr/yalova_resimler/ana.htm

In sum, Turkey still needs to develop effective institutional organizations and coordination structures, well planned processes of construction control, application of relevant spatial planning standards, a more comprehensive disaster insurance system as well as public awareness. In the light of the relevant priorities recommended by the aforementioned model, Yalova will have an opportunity to be resilient in the next shake of an earthquake.

As a result of testing the model on Cologne, the strengths, weaknesses, opportunities and threats (SWOT) were outlined in terms of risk factors and elements of resilience with a view to priorities of developed countries. The model facilitated to generate useful and effective approaches, methods, and instruments for further earthquake resilience activities. In this respect, the proposed model is an instrument providing guidance to the local authorities as well as to policy- and decision-makers of Cologne by asking them some key questions and proposing some studies in response to their

answers. However, due to time constraints on the study, the confidential nature of some data, and the hesitation of some authorities to give genuine answers to questions on earthquake risks, the proposed model could not be entirely completed on the basis of information received from authorities. Rather, the model was supplemented according to data collected via interviews and questionnaires in Cologne (Alarslan, 2009, pp.334-475).

Figure 3. The city of Cologne

Source: http://www.bezreg-koeln.nrw.de

According to the results of the above SWOT analysis, Cologne is one of the well-planned and properly constructed cities in Germany. In spite of its big potential earthquake impacts, Cologne has not yet experienced any severe earthquake. In this respect, Cologne has the advantage of being able to prepare many worst case scenarios involving earthquakes and generate effective solutions before it faces with a severe earthquake. Many projects and programs leading to earthquake resilience are inevitable for Cologne when the above weaknesses are taken into consideration. In order to enhance the earthquake resilience of Cologne, some studies should be organized at the level of Federal Government and the State of North Rhine-Westphalia, namely a macro scale disaster mitigation map and a macro scale spatial policy document. At the local level, with respect to the aforementioned weaknesses, earthquake hazard and vulnerability analyses should be prepared first. In cooperation with relevant spatial planning and disaster-related authorities, an earthquake micro zoning map and a risk mitigation plan should also be prepared. In terms of building and infrastructure qualities, the existing standards, procedures and potential studies as well as earthquake insurances should be reviewed and synthesized into an integrated process. Another significant issue to be taken into consideration ought to

be building a relevant institutional organization to support all these studies and programs. Institutional capacity and organization should include not only disaster preparedness and response but also disaster mitigation and recovery activities and programs. New institutional restructuring or reorganization should provide opportunities to integrate disaster mitigation techniques into spatial planning methods. The ultimate issue in terms of earthquake resilience of Cologne is institutional and public awareness. Without working to develop effective institutional and public awareness on earthquake risk, the efforts to build up Cologne's earthquake resilience will remain futile until the event of a significant earthquake.

4. Conclusion

The proposed model of disaster resilience can be modified according to the different features of the concerned urban settlement as well as characteristics of the natural disaster which threaten that urban settlement. If applied correctly, the model will provide guidance towards a disaster resilient urban settlement. The success of the model depends on the willingness and openness of the relevant authorities to apply it. In the meantime, the checklist form of the model provides an opportunity for further development. Experience from applying the model to different urban settlements prone to various disasters can add further questions or modify the existing one. To have a potential for dynamic development, the proposed disaster resilience model can provide long-term guidance to urban settlements.

A comparative case study is a useful tool to facilitate the model building. The cities of the comparative case study reflect the typical particularities of developing and developed countries. This provides an opportunity to visualize the priorities recommended for developing and developed countries in the model. While test results of Yalova reflect the threat on buildings and survival of citizens, those of Cologne denote a need for the more comprehensive disaster mitigation method than the existing one.

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ACCESSIBILITY ANALYSIS AND ITS MEASUREMENT FOR REGIONAL ECONOMIC GROWTH

Noordini C.M[1], H.J.P Timmermans[2]

Abstract

In the new global economy, accessibility has become a central issue for transportation and urban regional planning. Accessibility is an important asset of urban areas as it links transportation and land use. Accessibility also acts as a key element in analyzing the efficiency of the transportation system. By undertaking accessibility analysis with the use of GIS tools, this paper will focus on accessibility analysis and its measurement for regional economic growth. It will show how accessibility analysis has been implemented in a GIS environment. It also will support planners in providing better knowledge, thereby improving the decision-making process in the future.

1. Introduction

The dynamics of land use in economic regional development have heightened the need for improving the decision-making process, especially in assessing plans and project development. In this situation, accessibility can be used as one of the relevant elements whereby the concept itself is a key variable in land rents and decisions on density for developing urban areas (Alonso, 1964). The development and improvement of transportation planning and infrastructure seem to be important aspects for balancing economic development in the region (Holl, 2006). Consequently, analysis of accessibility should be implemented.

The concept of accessibility has been used widely in urban regional planning and transportation research, especially in connection with the ability to reach certain locations or target sites, within a particular time window with a certain transportation mode. The ability to reach a target destination needs high accessibility levels whereby land use is strongly connected to the transportation system. Accessibility needs to be measured to evaluate land use and transportation strategy in the development process.

In GIS, accessibility analysis is a common task which could be a very simple analysis or a very advanced analysis. Various studies have used GIS technology for accessibility analysis (Arentze et al., 1994; Liu and Zhu, 2004; Gutiérrez et al., 2010; Zhang et al., 2011; Salze et al., 2011).

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This research will give an account of accessibility analysis and modeling in urban and regional economic growth for the Kuala Lumpur area. This paper is organised as follows. Section 2 describes the accessibility measure used. In section 3 we explain the methodology to select the accessibility measure. In section 4, we describe an application of the accessibility measure in the study area. This paper is concluded in section 5 with a discussion of the implication for transportation and land-use planning policy. Lastly we discuss some related work in progress.

2. Accessibility

A considerable amount of literature has been published on specifications of accessibility measures. According to Halden (2002) in order to integrate spatial planning and transportation planning, some accessibility measure should be used. Accessibility has been measured in a variety of ways. Different specifications emphasize different aspects of accessibility. Therefore, it is important to choose an accessibility measure that best suits the purpose of the research project.

2.1 Accessibility measures

Geurs and Wee (2004) identified four components of accessibility: the land use component, the transportation component, the temporal component and the individual component. The land use component describes the land use system which consists of the amount, quality and spatial distribution of opportunities. The transportation component describes the transportation system which is expressed as the disutility of an individual to cover the distance between an origin and destination using a specific transport mode.

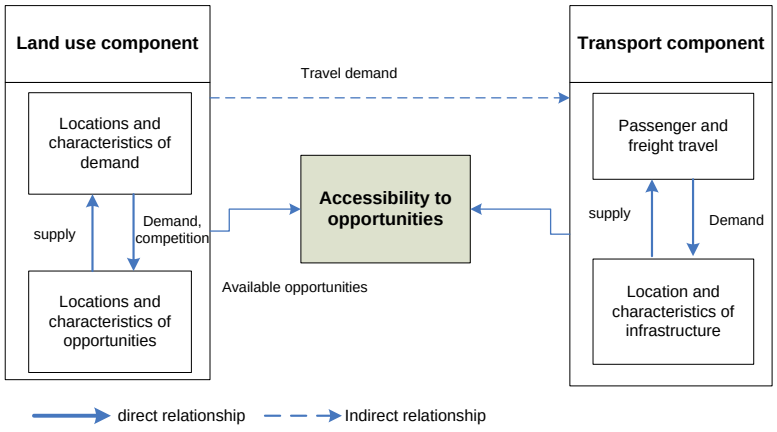


Figure 1: The relationship of accessibility components
Source: Modified from Geurs and Wee, 2004

Based on Figure 1, land use is the most important component in determining travel demand which its link to the transportation component. Each of the components has a direct relationship with the accessibility to the opportunities.

2.2 Accessibility measure

From the literature, we identified that accessibility measures can be classified into four different approaches — 1) Infrastructure-based; 2) location based; 3) person based; and 4) utility based. In the urban planning and transportation domain, these four approaches have been used in various projects related to research on jobs, population, retail services, public services, health services, education, recreation and land use (Geurs & Ritsema, 2001). The infrastructure-based measures consider only the characteristic of the transport network of the area under its consideration such as journey time and congestion. The location-based approach is usually based on location measures such as distance, cumulative opportunity measure, potential, measures based on balancing factors of spatial interaction models, and measure derived from time-space geography (Geurs & Ritsema, 2001). A well-known accessibility measures is Hansen's Accessibility Index (Hansen, 1959), which is shown in equation (1). The general equation for this gravity-type measure, or potential model, can be written as

$$A_i = \sum_j O_j \, f(d_{ij}), \qquad i = 1,2,\ldots,m;\ j = 1,2,\ldots,n, \tag{1}$$

where,
$f(d_{ij})$ is the impedance function,
O_j is opportunity at point j,
m is the number of origins,
n is the number of destinations.

The most frequently used impedance functions are the inverse power function, $d_{ij}^{-\alpha}$, and the negative exponential function, $\exp(-\alpha d_{ij})$. Here, α is a constant representing the effect of distance decay on accessibility.

In this paper, we focus only on one of these measurers-the cumulative opportunity measure. The cumulative opportunity measure (also known as isochoric measure, coverage approach, contour measure, proximity distance and proximity count) is one of the basic and early methods of accessibility measure introduces and discussed by researchers (Al-Geneidy, 2010, Vickerman, 1974, Wach and Kumasai, 1973). This measure can be easily interpreted and is often used by planners in urban planning and geographical studies. In this approach, the number of opportunities that can be reached within a determined cost (travel time or distance) is counted. Although it is a crude measure, it does provide information of the size of the potential market and as such as useful for analysing the location configurations of firms. The measure can be summarised as:

$$A_i = \sum_{j=1}^{J} B_j \, O_j \tag{2}$$

where,
A_i = Accessibility measured at point *i* to potential activity in zone *j*
O_j = Opportunity/destination in zone *j*
B_j = A binary value that equal to 1 if zone *j* is within the determined threshold and 0 if otherwise.

The person-based approach analyses accessibility at an individual level which can be described as activities that any individual can get to involve in the given time frame. Finally, the utility-based approach which El-Geneidy & Levinson (2006) claim is one of the most complex and data intensive measurements. This measure is founded in economic theory. This approach has been used by several researchers in transportation in the context of accessibility to jobs (Koenig, 1980; Handy & Niemeier, 1997) and land use (Miller, 1999). The general equation for log sum as an expression of accessibility can be expressed as follows:

$$A^i_n = \ln \left[\sum_{\forall \in Cn} \exp \left(V_{n(c)} \right) \right] \qquad (3)$$

where,

A^i_n Accessibility measure for individual *n* measure at location *i*
$V_{n(c)}$ Observed temporal and spatial component of indirect utility of choice *c* for person *n*
C_n Choice set of person *n*

3. A methodology of selecting an accessibility measure for analysis

The process involves in selecting an accessibility measure for transportation study can be described as below:

Purpose of accessibility analysis
The first step is to determine the purpose of conducting an accessibility analysis. In this study, the focus of attention is to improve accessibility of firms, recognizing that a variety of transportation modes such as public transit and private automobiles should be designed in the study area to accommodate it.

Compute distance and access
The measure of network distance using GIS-based network analysis with generating multiple network buffers to enclose all network locations varying distance from centre point of three zones in the study area. Each transportation network component such as train station, bus terminal station, highway and major road network will be included as accessibility networks which facilitates the calculation of accessibility.

4. Application

4.1 Study area

Kuala Lumpur is one of the districts in Klang Valley region (Figure 2). As the capital state of Malaysia, it is recognized as a tourist attraction, and a cultural and economic centre for the country. The area was buoyant by the development of commercial, industrial and residential activities which made Kuala Lumpur and its conurbation grow rapidly compared to other states in Malaysia. With a population of 1.6 million people (Department of Statistics Malaysia, 2008) and an area covering up to 244 sq. km., Kuala Lumpur has a comprehensive road and rail network to help workers, residents and tourists commute especially to the city centre. In Figure 3, we can see that most of Kuala Lumpur area is covered by road networks especially the highways and major roads.

Figure 2: Klang Valley region

Figure 3: Kuala Lumpur Transportation Networks.

4.2 Analysis and result

The pattern of accessibility in Kuala Lumpur area

Cumulative Opportunity measure

Accessibility measure in the study area was calculated using the cumulative opportunity measure for distance 500 meter, 1500 meter, 3000 meter, 5000 meter and 10 000 meter for three zones, which are Zone A - City Centre (Central Business District – CBD), Zone B – North and Zone C – South, bounded by Kuala Lumpur district edge. The purpose of this analysis is to demonstrate how many transport facilities reachable within a certain distance. These analyses give an indication of the potential market in the study area which not considering any competition effect. This method is easy to understand and calculated, but only the opportunity in between 10 000 meters away is valuable while those 10 001 meters far are not important and not valuable.

Results

Table 1, Figure 4 and Figure 5 illustrates the results of a number of transportation features located within less than 500 meters and more than 10 000 meters from three zones for the analysis.

Table 1: Results of transportation features located within determined distances in Zone A

Distance / Transportation features	<500m	500-1500m	1500-3000m	3000-5000m	5000-10000m	>10000m
Major road	6	36	71	64	77	12
Highway	0	1	5	14	22	8
Train station	0	17	16	11	18	1
Bus terminal	0	1	3	1	0	0
Airport	0	0	0	1	0	0

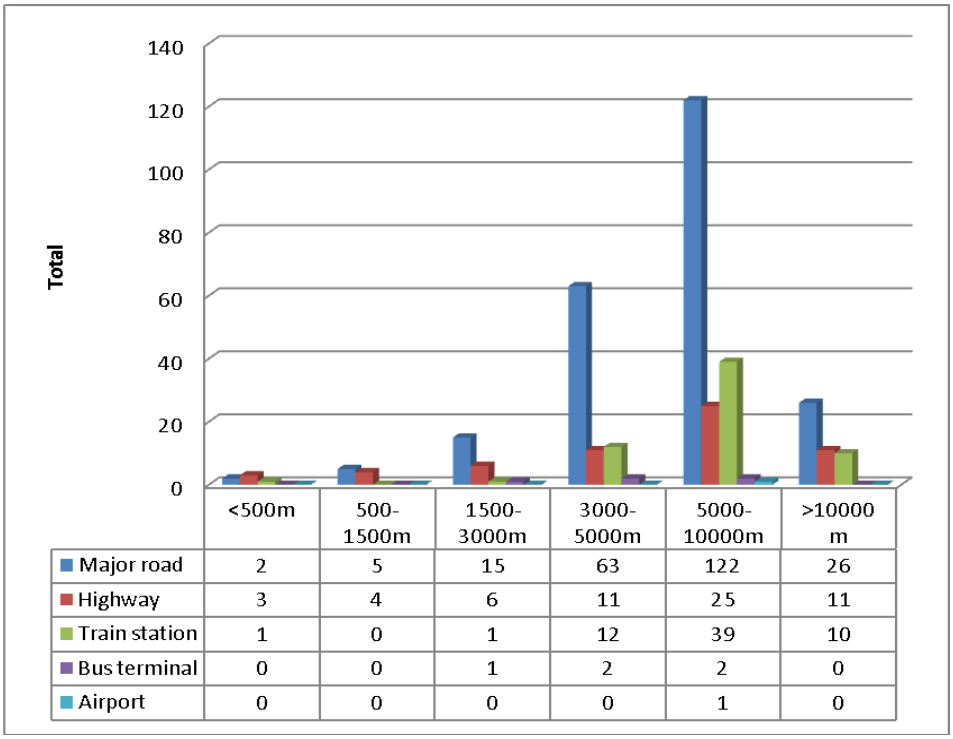
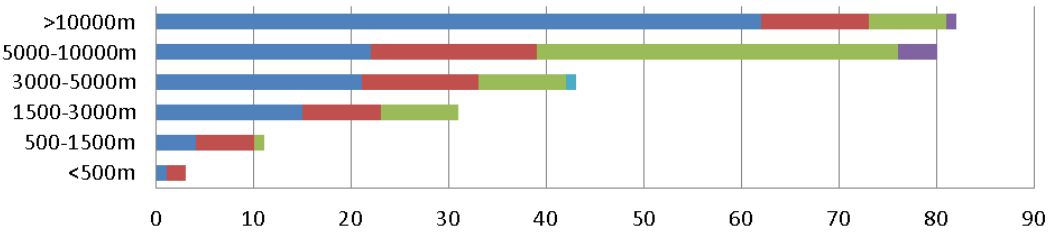


Figure 4: Results of transportation features located within determined distances in Zone B

Because of the density of land use in the City Centre, only six major roads can be accessed within less than 500 meters from the centre and there are no others' transportation features that can be reached within that range. Similar pattern can be seen in Zone B and Zone C accessibility to highway and major road whereby small number of major road network can be access within less than 1 500 meter from the centre. In the three zones, most highways are accessible further away from the centre since that the highway is served as a link to the other sub districts and major city nearby Kuala Lumpur.



	<500m	500-1500m	1500-3000m	3000-5000m	5000-10000m	>10000m
Major road	1	4	15	21	22	62
Highway	2	6	8	12	17	11
Train station	0	1	8	9	37	8
Bus terminal	0	0	0	0	4	1
Airport	0	0	0	1	0	0

Figure 5: Results of transportation features located within determined distances in Zone C

The train networks are the most popular transport mode for Kuala Lumpur commuter due to less travel time. Currently, the public transport network in Kuala Lumpur covers rail with 63 stations. In Zone A, most of the stations are located within 5 000 and 10 000 meters (18), followed by an area within 500 and 1 500 meters (17), 1 500 to 3 000 meters (16), 3 000 to 5 000 meter (11) and less than 500 meters and more than 10 000 meters (1 each) respectively. In Zone B and Zone C, most of the train stations are also located within 5 000 and 10 000 meters (39 and 37 respectively), but only one located less than 1 500 meter in both zones. This show that the concentration of train stations in between the centre and the edge of Kuala Lumpur gives an equal distribution of train services from downtown to other areas.

Generally, the main bus terminals are located in the range 1 500 to 3 000 meters from the centre of Zone A. In Zone B, it is situated between 1 500 to 10 000 meter radius and in Zone C, four of the bus terminal situated within 5 000 and 10 000 meters range. The location of the main terminal is nearby the major road and highway due to the fact that the main terminal serves for long distance journeys all over Peninsular Malaysia. There is one small airport located in the study area which is used by The Military. This airport is located approximate 4 000 meters from the City Centre.

From the analysis, we can summarize that most of the transportation features are located within 500 meters to 10 000 meters from the centre within the three zones. The concentration of the road networks and the rail networks are more towards 3 000 meters away from the centre possibly due to easy access by workers and the location of jobs and residential area.

For more detail overviews, we apply analysis by intersecting the zones. From this analysis, we discover that the intersections cover almost the central part of Kuala Lumpur (Figure 6) which encompasses 91 sq. km. of area (37 per cent from whole

Kuala Lumpur area). The ~~areas~~region incorporate the most transportation networks throughout the study area, especially the train networks (45 stations) and bus terminal (4 terminals). Besides, the connections of highways and major roads are good in this area. Based on firm data available for the study area, we are also able to find out 58 per cent from 55 071 of firms can be found in this area. It proves that better transportation networks, particularly in development of highways and major roads appear to be an important determinant of firm location choice, especially in urban economic research (Maoh et al., 2005).

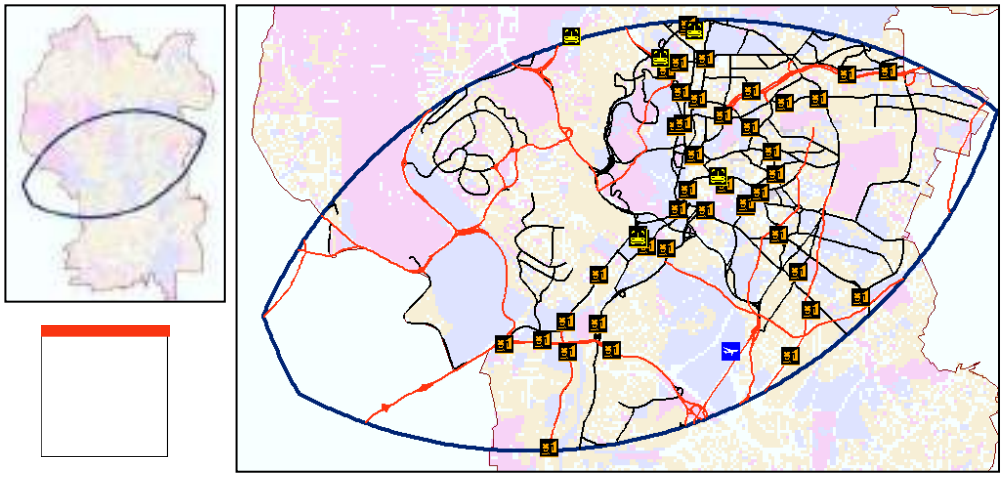


Figure 6: Intersections area of the three zones.

5. Discussion and Conclusion

In this paper, we have presented the results of an accessibility analysis measure on transportation networks with GIS tools for regional economic growth in urban and transportation planning. From the analysis, it shows that for the most part of Kuala Lumpur area can be access through the transportation networks. The central parts of the city appear to have the best accessibility because relatively it was the hub of commercial and business chain. However, in contrast, better transportation network could encourage firms to locate outside of congested urban areas for more opportunities of cheaper land price and labour (Rothenberg, 2011).

Accessibility measure can give an implication for transportation and land-use planning policy. The location model was developed to give planner and decision maker more insight into the location of existing firms and could give an improvement of transportation network in the future. The uses of every type of accessibility measure however, have advantages and disadvantages. For example, the application of cumulative opportunity measure is simple to calculate. It also considers all opportunities are equal because not taking into account the impedance of reaching the origin. This measure also very efficient to determine changes in

accessibility of a location and closely linked to the rational view of transportation system and makes it as a valuable tool for communities (Cerdá, 2009).

The present application of accessibility measure is still in progress. Other related work is a development of potential accessibility index measure for more details levels of accessibility for each sub-district in Kuala Lumpur area. The result from this analysis will be used afterwards for producing analysis for firm location model, which will be applied using econometric approaches.

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MOVING BEYOND THE ROLE OF FANTASY IN CONSTITUTING PLANNING ORGANISATIONS AND THEIR AGENCY

Michael Gunder[1]

Abstract

Planning organisations are generally considered the producers of public policy plans. In this paper, drawing on the planning and organisational theory literature, I wish to consider planning organisations as also producers of fantasies. These are fantasies that organise the collective desires of a polity and construct the visions that guide and shape the agency of the organisation, itself. Further, in contrast to differentiating between fantasy and reality this paper will take a psychoanalytical approach to fantasy where fantasy helps to structure a subject's reality and, in aggregate, that of a subject's society. This is a perspective which acknowledges a constitutively unclear division between these two concepts of a materialised reality produced by our actions and the fantasies that generate this observable materialisation.

Exploring this issue is important, as the paper will argue that this fantasy construction underlies much that constitues planning policy practice and regularly occurs even when planning actors know that these desired fantasised outcomes cannot possibly be achieved within a plan or policy. The paper will describe how a regular reliance on the improbable fulfilment of desired fantasies is why planning itself continues to be socially wanted, even though its plans often fail to achieve their stated objectives. Moreover, the paper will argue that planning needs to acquire a different relationship to fantasy, one in which planning and the human subject is no longer 'in thrall' to fantasy and the improbable desires that planning fantasies often propagate.

1. Introduction

> *the approach to the Real is at best fitful, the retreat from it into this or that form of intellectual comfort perpetual* (Jameson, 2002, p.274)

Planning organisations are generally considered the producers of plans, and related spatially orientated policies, as well as the monitors of their implementation. In this paper I wish to consider planning organisations, be it a government ministry, a local authority planning department, or even a planning consultancy firm, as constructors of not only plans and policies, but in doing so, also as constructors of ideas that are actually desirous fantasies of what might be. These are fantasies that may partially organise both the collective desires of a polity, or society, and these are also fantasies, or visions, that may initially and subsequently guide and shape the agency of the organisation, itself. As Fotaki (2010, p.704) observes 'the role of fantasy as a stimulant of various social and political endevours has not been given its

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due emphasis in political and critical social theory or public policy analyses'. This paper will argue, following Jason Glynos (2011, p.378) that 'fantasies are ineliminable and essential to action, whether these are characterized as progressive or regressive'. Further, the paper will also contend, as well as demonstrate, that 'without the explicit acknowledgement of fantasy, the workings of organizations, culture and ideology cannot be fully understood' (Fotaki et al 2010, p.641).

The paper will commence with a largely Žižekian derived Lacanian explanation of fantasy and its constituents, drawing on both the planning and organisational theory literature. This will include an explanation of the psychoanalytical role of fantasy, ideology, language, *jouissance* (enjoyment) and the inherent human desire for a sovereign good[2]. The two sides of fantasy will then be considered, for every fantasy has two components: what is promised, and of equal importance, the reason why this promise is not being delivered. The paper will then consider the role that cynicism often plays in planning agency, especially when planning actors do not fully engage with a position, vision or fantasy construct being proposed by their organisation, but they somehow have to carry on planning, anyhow. The paper will then consider how fantasy and our, at best, often only cynical decaf resistance to it, tends to maintains the status quo and restrict our range of alternative agency. In response, the paper will then call for a new ethical engagement with planning fantasies, a position where the illusions provided by fantasy no longer bind and restrict our agency in the world. The paper will conclude with a consideration of what this new engagement with planning fantasy might mean for doing planning more effectively.

2. Fantasy, *Jouissance* and the Ideology of Planning

In contrast to differentiating between fantasy and reality, this paper takes a psychoanalytical approach to fantasy, where fantasy helps to structure a subject's reality and in aggregate that of a subject's society. In this regard, fantasy acts as crutial means to simplify the anxiety inducing complexity and often apparent inconsistencies of reality, so that social reality appears as a coherent materalised, yet simplified, whole (Gunder, 2011a). In this psychoanalytical view, 'fantasies are not designed to allow us to flee an unsatisfactory world, but rather to render the world satisfactory by reassuring us that the Other – the social environment within which we struggle to find our bearings – possesses the correct, calming, or consoling answers to our most pressing questions' (Ruti, 2010, p.2). In planning, these might be questions of how to provide the good city and the good life; how our cities can be made more sustainable, liveable, or globally competitive, and the ilk (Gunder and Hillier, 2009).

Fantasy plays an important role in helping to structure 'our reality, often in the least expected scenarios, ordering our emotional investment within a larger narrative of reconciliation and stability… fantasy is what attempts to conceal all fissures… turning our worldly experience into something coherent and appealing' (Bloom and Cererstrom, 2009, p.163). Yet, in doing so, while 'fantasy formations shape the basic orientation of our existence', they also tends to 'curtail our lives by causing us to proceed mechanically exactly at those moments when a degree of self-reflexivity would help us to arrive at a more constructive outcome' (Gunder, 2011b; Ruti, 2010, p.1). Fantasies obscure and make us not look too closely at the conditions of our social reality, especially when fantasies help constitute for the subject a 'clear' sense of identity, worth and direction for action.

[2] That is, 'there is a Good that trumps all others; a supravalue that will allow us to resolve [all problems]' (Catlaw and Jordan, 2009, p.297).

For fantasies help facilitate our ordering of the complex world under simple hazy labels of desirable identification and apparent substance – our sublime objects of ideology (Žižek, 1989), so as to posit 'the symbolic order as a dependable structure that ensures the solidity of meaning and cultural life' (Ruti, 2010, p.2). Further, without this simplification, social reality would simple dissolve into an amorphous and incomprehensible mass (Žižek, 1997). In doing so, fantasy also acts as an ideological mechanism to anchor our emotions within these symbolic labels, so that narratives are allowed 'to provide the co-ordinates for our desires and, by extension, teaches us how to organize and express our emotions' (Žižek, 1989; Bloom and Cederstrom, 2009, p.160). In other words: 'fantasy links a level of meaning with a level of enjoyment, or if you will, connects narrative and affect' (Bloom and Cederstrom, 2009, p.173; Gunder, 2011a).

This is an ideological process, so that 'the ideological significance of fantasy can be understood in the context of its capacity to "grip" the subject, whether as part of a social practice or as part of a political practice'(Glynos, 2011, p.378). In this regard, '[f]antasy not only provides the framework, or affective coordinates, for integrating emotion into narrative but in fact directly structures individual experiences as eternally part of a larger affective story' (Bloom and Cederstrom, 2009, p.164). It essentially binds us in our ideological interpellations, so that 'individuals are constantly being inscribed into larger ideologies through fantasmatic narratives' (Bloom and Cederstrom, 2009, p.164). Further, in doing so, this reflects a 'constitutively blurred boundary' between the two concepts of a materialised reality produced by our actions and the fantasies that help to generate this materialisation (Glynos, 2010, p.22).

For Lacan (1998, p.32), all considerations of social reality, including the fantasies and ideas that help materialise it, relies on language and its signifiers:

> *There is no such thing as as a prediscursive reality. Every reality is founded on a discourse.*

Further, all organisations of government agency, particularly ones which are considered to be bureacratic, such as a planning organisation, have as a central feature 'an emphasis on writing as a foundational and principle practice': that is drafting spatial plans, or alternatively phased, constructing discourses of what spatial reality should become (Styhre, 2008, p.644). Yet for Lacan (2006), language, discourse and the wider symbolic order itself is always 'other', an alien construct which the subject is forced to adapt to when entering society. For the 'symbolic order includes the desires and constructions of internalized others such as parents or institutions and the conventions of language handed down through generations of others', so that '[w]hen we use language… we can only express who we are in the words of others' (Driver, 2008, p. 189). Further, these words tend to always be incomplete, because we must adapt ourselves to them, they never can say exactly what we want. Language and the symbolic are always incomplete and lacking.

Consequently, for Lacan, as well as Freud, the human subject is 'not at home in the world as it is' (Nichols, 2008, p.471). The subject's reality always has a hole in it, it is lacking completeness (Žižek, 2008, p.327). This is a lack of *jouissance*, in the Lacanian lexicon, a lack of enjoyment, but not an enjoyment that may be construed as pleasure. Pleasure is produced by what Lacan calls the 'big Other' which in aggregate constructs the symbolic order constituting culture, society, and our very conception of social reality, itself (Žižek, 1998). *Jouissance* is external to societally sanctioned pleasure, it resides in the subject's unconscious, in what Lacan calls the the registry of the Real (Evans, 1996, p.148). The Real is

a concept which is never clearly defined by Lacan, for it is, at best, 'what resists regimes of representation and what remains residual to any symbolic or linguistic system' (Styhre, 2008, p.647). In this regard, 'Lacan (2006) helps us to comprehend how fantasy bridges our psychic life (the Imaginary) with socially constructed reality (the Symbolic) and prevents us from encountering, what Lacan calls, the Real', that 'which is outside everything that can be (legitimately) symbolized, is literally too terrifying and must be avoided at all costs' (Fotaki, 2010, p.641).

Hence, *jouissance,* arising from the subjects's unconscious, is 'a basic compulsion to enjoy; to achieve consummate satisfaction and therefore heal the gap, or "wound" in the order of being' (Žižek and Daly, 2004, p.3). But this resolution is never possible, what is only created is a fundamental fantasy that this 'wound', or lacking gap, can be resolved, so that we can be a complete and whole subject: a subject finally *at home in the world*. Essentially, this is a fundamental fantasy that 'there is some "sovereign good" that is capable of shielding us from the terror of living' (Ruti, 2008, p.486). Yet this is a fantasy situated in the symbolic actuality of an incomplete language of the Other, where 'subjects are divided between the conscious effort to know identity and fulfill desire and the unconscious disruptions that inevitably make such efforts futile' (Driver, 2009, p.56).

Jouissance is both structured and also 'domesticated (with)in the fundamental fantasy of a harmonius world that can ultimately be constructed [at least for most English speaking first world actors] by means of establising proper liberal democratic and capitalist social relations – our [desired] way of life' (De Cock and Böhm, 2007, p.826). Indeed, it is planning and related design disciplines that gives the subject its literal vision of their desired *home in the world*. This is via the appearances of completeness that these disciplines provide, via the 'material articulation of a logic that lies at the foundation of the city': 'the urban archetype' of the desired city to be, as layed out in the spatial plan (Gunder, 2010; Nichols, 2008, p.471). This is always a plan promising a set of 'stabilizing fantasies, staging a future of happiness, [which] offer the possibility for subjects to acquire an experience of stability and harmony' (Bloom and Cederstrom, 2009, p.165). Consequently:

> *planning is predicated on a fantasy that the discipline successfully provides the solutions necessary in order to provide certainty and harmony for the future of our built and natural environments…. the global spatial planning community… constantly discovers or invents new iconic hooks (or master signifiers) of identification and desire on which to hang problems and deficiencies (lacks) which subtract from the security and certainty of well-being and which also provide their solution, often in terms of scientific narratives or ideas…. these are largely fantasy constructs of, at best, ideological belief, which planning practitioners then deploy locally in their practices.* (Gunder and Hillier, 2009, pp.31-2)

But the writers of plans, the planners, are also lacking, hence they are themselves desiring human subjects. Accordingly, fantasy also plays a part within the function of any planning organisation, itself. Indeed, all organisations, not just planning agencies, 'use narrative to regulate and ideologically interpellate their workforce in accordance with their institutional desires, allowing organizations to create an institutionally friendly "story event" out of an "unpatterned, arbitrary" antenarrative… setting out the shared "purpose being pursued" according to [their institutional] desires' (Bloom and Cederstrom, 2009, p.162). But planning agencies, unlike many other organisations, then externalise these institutional desires, as part of their core function. The guiding internal fantasies of the planning agency are externalised on the polity being planned through the organisation's products: its drafted plans and policies. Often these fantasies are initially generated by a political or other leadership vision of what

ought to be, so as to fill a particular lack of incompleteness and provide harmony; in other cases, through the application of what is considered 'best planning practice' in the name of dominant planning label or signifier such as 'sustainability', 'liveability' or 'globally competitive city' (Davidson, 2010; Gunder, 2010; Gunder and Hillier, 2009). Sometimes these two generators of fantasy are interchangeable and reinforcing of each other. For example, the overarching aim of the newly amalgamated Auckland Council's first Draft Spatial Plan is to make Auckland[3] 'the most livable city in the world' and this planning vision is also echoed by the Mayor's Foreword to the document:

> *It is my privilege as the first Mayor of Auckland to develop a vision for Auckland. When I came into office, I said that my vision is to make Auckland the most liveable city in the world.* (Auckland Council, 2011, p.1)

For Lacan (2006) subjectivity is consituted by 'the concept of the fragmented and split subject defined by the impossibility of ever fulfilling its desire to achieve unity (with the other) and to attain the state of blissful wholesomeness', this is a subject who, therefore, forever desires and seeks an impossible 'object that was never there' (Fotaki, 2010, pp.706-7). Accordingly, 'the fantasy of effective policy, of purposeful organization and of harmonious society' all derive 'from an impossible desire' for this harmony, security and unity (Fotaki, 2010, p.710). In this regard, being 'the most liveable city in the world' acts as a metaphorical call for an aspect of this sovereign good of perfect completeness. This is a vision that is first, so claimed, 'inspired' the mayor and then the planners who drafted the Spatial Plan which the Council then subsequently imposed on the wider Auckland community, for who could possibly oppose being *at home* in the 'most livable city in the world'!

3. The two sides of fantasy

Contemporary spatial planning is 'encouraging the emergence of particular development trajectories' (Healey, 2008, p.8). These are desired future ideas of how we should be, or trajectories of becoming. If realistic and potentially achievable, these are perhaps appropriate aspirations. If they are inprobable states unlikely to be achievable, these desired states are, at best, mere fantasies. Yet by delineatating them in a strategic spatial plan, or similar, these fantasies are given material substance and virtual being as though they already exist (Hillier, 2007, p.100). They help constitute our materialised social reality. But here the frequent failure of desired planning fantasies to be able to deliver also requires another dimension of fantasy construction.

Accordingly, two narratives tend to comprise every fantasy: what the fantasy promises to deliver and also why the fantasy fails in this delivery. Every 'fantasy names a narrative structure involving some reference to an idealised scenario promising an imaginary fullness or wholeness (the beatific side of fantasy) and, by implication, a disaster scenario (the horrific side of fantasy)' (Glynos, 2011, p.376). This is the alternative dimension to fantasy. This is the explanatory fantasy of why the desired harmonious fantasy has not been permitted, or cannot be permitted, to be fulfilled. Importantly, this de-stabilizing fantasy tends to be 'not benign in nature', rather it most often is inclined to 'be perpetrated by malicious forces aiming to destroy what an individual hosts most sacred' (Bloom and Cederstrom, 2009, p.165).

Žižek (1989, 1997) calls one common trope in this ideological process of justification: 'the

[3] The eight local councils of the Auckland region of New Zealand were amalgamated into one metropolitan council in October 2010 (see: Gunder, 2011a, p.334).

theft of our enjoyment'. In this regard, 'the concept of scapegoat plays an important fantasy role in suggesting that our enjoyment might be regained, but only as a state of future potential, if we maintain the prevailing ideology by being resolute against this 'thieving' Other' (Gunder, 2011a, p.334). While the structure of the obstacle to the achievement of the fantasy may vary, it plays a very important role. For the full realisation of a desired fantasy is impossible. This is because a 'subject (as a subject of desire) survives only insofar as its desire remains *un*satisfied[4]' and 'the obstacle, which often comes in the form of a prohibition, or a theatening Other, transforms this impossibility into a "mere difficulty", thus creating the impression that its realization is at least potentially possible' (Glynos, 2011, p.377). Indeed, for Lacan (2006), the very 'concept of desire emphasizes the persistent *absense* of satisfaction, rather than the pursuit of attaining it' (Catlaw and Jordan, 2009, p.292 – emphasis in original). Perhaps this is the reason that the final goals of most spatial and related strategic land use plans are never achieved, indeed most plans are replaced by new ones long before their original plan period duration has been reached, be it originally five, ten, twenty years, or longer (Gunder and Hillier, 2009, p.24).

Another significant facet of many fantasy narrative constructs concerns their transgressive dimension. Here the subject may gain *jouissance* by intentionally transgressing the values, or ideals, that the subject openly professes and are required in the fulfilment of the fantasy narrative. For the fantasy of becoming a 'sustainable city', this might be this might be a planner who intentionally travels by car when publically asserting the 'need'; to only use public transit (see: Gunder and Hillier, 2004), or by cynically arguing for the need to act sustainablely, while actually acting in a non-sustainable manner (Davidson, 2010). So for many fanatsy narratives, 'what gives a narrative a specifically *psychoanalytic* inflection is the fantasmatic logic structuring the subject's desire: it furnishes the subject with an ideal, an impediment to the realization of an ideal, and the enjoyment linked to the transgression of an ideal' (Glynos, 2011, p.377).

4. The decaf cynicism of planners in their workplace

By their very nature, plans and their related visions act 'as a strategic means for implementing specific institutional changes… in this mode of control, individuals [tend to] relate their organizational commitment to their own dreams and longings… they attribute negative feelings to, and view as unstable to these desires, those who seek to "dash their dreams"' by opening challenging the plan or policy (Bloom and Cederstrom, 2009, 172). This even applies in cases where actors know that the proposed vision, or fantasy, that is being presented cannot possibly happen. Yet to show solidarity, they often go along with the 'impossible' fantasy. For example, an economic GDP per capita growth rate of five percent which underlies the forecasts of the Draft Auckland Plan (Auckland Council, 2011, p.71) cannot be maintained in a developed economy year-on-year for decades[5]. Even knowing of this impossibility, Council planners were still able to publically state that this will occur, as a consequence of achieving the Spatial Plan. Further, they could quite cynically maintain that this forcasting illusion was

[4] Perhaps best exemplified by the negative consumer experience that most of us experience after the big purchase. This is the feeling of disappointment, let-down and emptiness that often occurs once the highly desired new consumer item – the car, TV, computer, or whatever – that we have pined after for months is finally ours; and, hence why for most of us, the only resolution of this emptiness is to go out and shop some more (see: Gunder and Hillier, 2009, pp.84-7)!

[5] Particularly, when historical economic growth rates for the Auckland region had averaged only 1.0 percent for the five year period 2005-2009 (Auckland City Council, 2010, p.15), not to mention the impact that this 5% annual economic growth rate would have on other Spatial Plan objectives for liveability, such as those of affordable housing and greater transportation mobility.

possible in public meetings about the plan, even when acknowledging, off the record, that the growth rate underlying the plan was, at best, a politically inspired aspirational goal that was indeed impossible (personal conversation).

Žižek (1989, p.32) refers to this as 'cynical distance'. This applies where 'the material fact [is] that the vast majority of today's subjects continue to act as if they did not know what they say they know' (Sharpe, 2004, p.112). We know the fantasy cannot possibly be true, it is simply an ideological foil to obscure the inconsistencies within society, or to provide an optimistic vision of hope, but we publically pretend to believe in it anyhow (Davidson, 2010, pp.394-5). As Davidson (2010, p.403) observes: this cynicism equates 'to the "real" politics of the city, seeing the rhetoric (or rather ideology) veneer as a mask' obscuring the actual practices being undertaken.

Even when this cynicism is openly manifested, it is often done so only in humour or skepticism. Cynicism 'involves an open acknowledgement that if we give workers and management the chance, some of them will tell us that they are not really buy into the dominant ideology', yet 'even if workers know and profess not to be in the gaze of power, even if they can see very well what is happening and are not duped by corporate visions, mission statements, and rituals and instead actively rearticulate their own sense of self, they nevertheless still submit to it in practice' (Contu, 2008, p.371). In the Zizekian, or Lacanian discourse, these acts of cynicism are a form of resistance or even acts of transgession, but in being so, they 'are akin to a decaf resistance, which changes very little'; rather it 'is resistance without the risk of really changing our ways of life or the subjects who live it' (Contu, 2008, p.367). Decaf resistence is how ideology often works, we know better, consequently we are cynical, but we still do what is expected of us, anyway! Indeed, this 'is the very fantasy sustaining and reproducing our way of life in liberal captalistic workplaces', including that of the planning office (Contu, 2008, p.372).

However, this is not without a significant cost. The 'more subjects are invested in fantasies, the more likely they are to read all aspects of their practice in terms of that fantasmatic narrative, and the less likely they are to "read for difference"', that is, they are less likely to challenge the narratives and logics constructed by that fantasy (Glynos, 2010, p.33). As Gunder (2011b) observes, this tends to reduce innovation, or the acceptance of alternative perspectives, that conflict with the values of the accepted fantasy construct. A dominant exemplar of this is sustainability. If the underlying premise of a plan, no matter how much a fantasmatic vision, is legitimised by assertions that it is consistent with sustainability, it is very difficult for planners to support an alternative course of action, for to do so would seem less 'sustainable'. Yet sustainability, in itself, 'is the clearest expression of the structure of fantasy in the Lacanian sense'; for it is an unquestionable and unchallengeable *statement of motherhood* in its apparent implicit protection of nature, even though it is without any clearly definable meaning in itself (Gunder, 2006; Swyngedouw, 2010, p.310). At least for planning agency, sustainability acts as Žižek's (1989) definitive *sublime object of ideology*. It is an object, or perhaps better stated: *fantasy*, not open to challenge, or question, once deployed.

5. Changing our relationship to planning fantasy

If fantasies largely 'determine the ways in which we relate to the world, and consequently influence the ways in which the world responds to us, the disbanding of fantasies, potentially at least, allows us to begin to imagine alternative ways of living and relating' (Ruti 2010: 1). Accordingly, Glynos (2011, p.378) following Lacan's 'Ethics of the Real', calls for a alternative orientation to fantasy, that is 'not abandoning fantasy or going beyond fantasy, but

rather acquiring a different relationship to fantasy, one in which the subject is less "in thrall" to it'. For the problem with fantasy construction and its affect 'arises when the subject uses fantasy primarily as a way to protect itself from ambiquities, uncertainties and other features that evoke intimations of anxiety', rather an 'ethical use of fantasy would entail a much greater openness to ambiguity and thus possibilities for critical distance and alternative becomings' (Glynos, 2011, p.382).

For Lacan (1992, p.237) the ethical act should not be pathological, nor at the service of any sovereign good. This also implies to not to do just what is expected of us, 'to do the right thing', simply if we wish to be perceived as 'good' by the Other (see: Gunder and Hillier, 2004, pp.229-31). Rather, for Lacan (1992), the true ethical act is to be authentic to some strong inner certainty of what constitutes correct action. This is in contrast to some superficial desire 'to do the right thing' that serves our personal self-interest, perhaps by keeping the 'boss' happy, so as to get a 'well done' pat-on-the-back, or at least the avoid of her displeasure. For Lacan:

> *"The heart of all ethics" is encountering "something that happens to us, surprises us, throws us out of joint", something that causes a "rupture, a break or interruption"—this is the Lacanian Real (Zupancic, 2000, p. 235). It is the examination of this dissonance; such as an expectation that we will do something even though we may think that it is not right or good, and the subsequent adaptation of our actions to ignore, accommodate, or overturn this 'dis-ease', that constitutes the ethical act.* (Gunder and Hillier, 2004, p.231)

Accordingly, an 'Ethics of the Real is an ethics of taking risks and making radical decisions, [by] not compromising a fundamental desire' (De Vries, 2007, p.40). For Žižek (2008, 2009) this is a revolutionary act that risks everything, the agent's status, respect, her very identity, everything that the subject holds dear. Rather than 'the "decaf" co-option of acts of resistance… the only solution seems to be the idealization of another category of real acts of pure resistance, which are impossible to co-opt and neutralize' (Stavrakakis, 2011, p.308). Consequently, at least for Žižek, a 'Real' ethical act is one 'that changes the sociosymbolic network in which we and our way of life makes sense' (Contu, 2008, p.374). This is the radical, or even revolutionary, act that fundamentally changes the symbolic order – the social reality – of the world that we know. Yet, Stavrakakis (2011, p.307) asks, following Johnson: is this standard of Žižek's radical transgression, as to what constitutes a 'Real' ethical act, not too high?

Rather, what Stavrakakis (2011, p.311 – emphasis in original) proposes that 'what is needed is to move in the direction of articulating an alternative conception of the act, one which may link Lacan's insights (operating at both the real and symbolic levels) with a radical democratic project, able to promote the idea of a continuous re-enactment of the act as well as to imagine and construct a (conceptual, affective and material) *space* where such re-enacting becomes possible here and now.' Further, Stavakakis (2011, p.311 – emphasis in original) continues that this 'is today the challenge not only for political theory and practice, but also for planning theory and practice… an act that presupposes a certain *reflexivity*, an awareness of its own limits, of the fact that it will never lead to the full realization of subjectivity'. Phased differently, Stakakakis is calling for a radical challenge to the way we do politics and planning, a challenging that is not just a one off nihilistic act, but rather, a radical challenging that is ongoing and reflexively cognative that any fantasies that our imaginary discourses construct promoting satisfaction and completeness – that is, constituting an utopian promise – are doomed to fail and can never fully deliver. Further, I would suggest that this is an act consistent with the Lacanian clinical goal which is 'concerned with orientating the subject

towards the truth of her being and disentangling the subject's desire from externally imposed demands, values, wants, or ideals not in order that we can get what we really want but to reveal the singular way in which we will never get it' (Catlaw and Jordan, 2009, p.292)!

Hence, perhaps the concept of a trajectory of becoming, which may be subject to frequent change and re-direction, as our collective desires and circumstances change, as proposed by Hillier (2007, 2011) in her Deleuzian predicated multiplanar approach to strategic planning, might be one way to conceive such a radical way to do planning. This might be considered a move away from highly desired end states of transcendental utopian ideals and the impossible fantasies that our traditional planning, or should I say dreaming, tends to promise. The desire to have an undefined but desired principle of trying to create a 'liveable city' for as many residents as possible, might be one such realistic trajectory of becoming, rather than a seeking the impossible aspirational utopian ideal of being 'the most livable city in the world' for all of a city's residents.

Rather, than striving for one impossible absolute end state, which is set in concrete, this approach allows a series of ongoing acts, a trajectory in a general direction of betterment. Further, this is consistent with a Lacanian ethics of the Real because it allows 'an ethics situated beyond the sovereign good' of the existing symbolic order consitituting what we think constitutes our social reality, so that we have 'the possibility of experimenting with new post-fantasmatic types of ordering and space' (Stavrakakis, 2011, p.312). Further, this is a 'disbanding of fantasies' that will enable 'us to better listen to the idiosyncratic particularity of our desire, and in so doing to begin to forge a singular identity apart from the social conventions that seek to determine the parameters of our being' (Ruti, 2008, p.486). This is a move away from allowing our fantasies to 'restrict our movement in the world, holding us captive to the idea that the basic structure of our lives is determined in advance rather than constituted in the process of living' (Ruti, 2008, p.497). Perhaps this type of approach can break the ideological spell of our fantasies. Perhaps it will allow us to engage the world in new and creative ways, ways that can fully engage with our diverse, and evolving desires, in a world of ever changing circumstance.

6. Conclusion

This paper has considered the role of fantasy in planning organisations and as it is imposed by planning practice on wider society. It has examined fantasy from a psychoanalytical perspective drawing on the work of Lacan and Žižek. It considered how fantasy relates to the human subject through the unconsious seeking of *jouissance* and what this implies for ideology. The paper then considered the two sides of fantasy: its promise and its justification for failing to deliver its promise. The 'decaf' cynicism of the 'knowing' planners in their workplace was then explored. The paper then called for a new engagement with fantasy.

The regular reliance on the fulfilment of improbable, but desirous fantasies is why planning itself continues to be popularly desired, even when its plans often fail to achieve their stated objectives. Accordingly, planning largely maintains the status quo of space in our neo-liberal world of globalisation (Gunder 2010, 2011a, 2011b). This paper calls for radical change to the conservative role for planning. It calls for a new engagement with fantasy, one where planning actors are no longer 'in thrall' to fantasy. This is a new dimension to reflexive planning. One that is aware of both the conscious, and also the unconsious dimensions of the human subject, so as to truly take on board Kant's (1990) call for enlightenment: to dare to know for oneself! To do so, at least for planners and the planned, calls for planning to stop giving the illusion of delivering the security of certainty. Rather, this is a call for planning to

move on from its contemporary fantasy creation role and begin to effectively engage with the uncertainty that actually constitutes the world.

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THE SIGNIFICANCE OF EUROPEAN POLICY IN THE CONTEXT OF DECENTRALIZATION OF PLANNING: THE CASE OF THE NETHERLANDS

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Abstract
That EU regulations impact spatial planning systems and practices in member states is a well-known fact. In the Netherlands, both spatial planning policy has been affected as well as the traditional Dutch 'comprehensive integrated' approach to reconciling competing land-use claims. Not all of this 'impact' is a direct result of European rules; the choices made when incorporating directives into national legislation and the structure of the state and civil society also strongly influence the way that EU policy comes to bear on planning systems and planning decisions. In a word: governance matters. This paper will explore the effects of EU policy within a changing governance context: the far-reaching reforms towards decentralization and deregulation. This raises the somewhat paradoxical hypothesis (considering the government's Eurosceptic disposition) that the influence of Europe is due to increase, or at least to become more visible, with the reforms.

1. Introduction

Over the past decade, the key planning concept in Dutch spatial policy at the national level has been that of the main spatial structure or "*ruimtelijke hoofdstructuur*" (RHS) in Dutch. Other than previous concepts such as growth centers, concentrated deconcentration, Randstad/green heart, buffer zones, mainports or the compact city which have a substantive meaning, the RHS[2] is more related to governance: it indicates where national government interests are at stake. In the words of the Spatial Memorandum: "The areas and networks which the government considers to be of national importance from a spatial point of view are reflected in the national main spatial structure" (Ministry of VROM et al., 2006). This philosophy is mirrored in the Memorandum's slogan: "decentralize when possible, centralize when necessary." The recently published follow-up, the National Policy Strategy for Infrastructure and Spatial Planning (SVIR) follows this course with renewed vigor (Ministry of Infrastructure and the Environment, 2012). It drastically reduces the number of national interests by abolishing virtually all urbanization policy measures, and in so doing, has reduced the physical size of the RHS. As the influence of spatially relevant European policies have remained roughly the same, one can posit that an increasing share of the Dutch RHS is of European origin. This might seem rather counterintuitive given the vocal opposition of Dutch politicians towards "meddling from Brussels" over the past decade.

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[2] For sake of consistency, the Dutch acronyms will be used.

If this hypothesis is true, this will have implications for Dutch planning practice, which is traditionally based on integrated comprehensive decision-making (CEC, 1997). As they usually pay no heed to territorial specificities, EU sector policies – especially when rigidly articulated – sometimes come into conflict with a planning practice which attempts to optimize the use of space and fairly balance competing land-use claims. Empirical research on area-development projects in the Netherlands has found that anxiety about potential delays or fines for noncompliance with EU regulations has caused developers and other involved parties to be extremely cautious. As a result, land-use plans are drawn up which seek to be as "Euro-proof" as possible by inserting detailed legal provisions that leave little up to chance. A side effect of this practice is that interests that are covered by EU policy, such as clean air and biodiversity, gain precedence over those which do not, such as the provision of social housing (Zonneveld et al., 2008). Although a Euro-proof plan is legally the safest option, it can produce suboptimal solutions as not all interests are taken equally into consideration. This trend for placing legal security above optimized land use will be intensified by a law that allows the national government to pass on liability for EU policy compliance, including any punitive fines incurred, to lower tiers of government (Eerste Kamer, 2011).

A second consequence of the current reforms are shifts in governance vis-à-vis the European Union. The decentralization and deregulation of spatial policy has been accompanied by cutbacks in funding. On the one hand, this can lead to reduced attention for national interests that have been decentralized (rather than abolished) in absolute terms, which, by corollary, increases the weight of European policy in relative terms. On the other hand, the cutbacks may prompt a search for new sources, including European funds. As these are not given freely, but require an entire system of monitoring, co-financing and cross-compliance with other European policies, this will heighten the influence of the EU on domestic policies at the subnational level. Moreover, as many funds include requirements for international cooperation, some Dutch regions might experience a shift in attention (and potential allegiance) from the national government to, for example, their German or Flemish partners when drawing up spatial policies or carrying out spatial development projects.

In short, the decentralization of national spatial policy instigated by a predominately Eurosceptic government is likely to increase, rather than diminish, the influence of the European Union in the Netherlands.

In order to support this claim, this paper will first sketch out how the EU affects the planning system and spatial development in the Netherlands (Section 2). Next, the paper will describe the changes being made in Dutch planning (Section 3). The final sections reflect on how these changes affect the extent to which European Union policies impact on spatial planning and development in the Netherlands.

2 European policy and Dutch spatial planning

For a long time, the impact of the European Union on spatial developments was not readily visible. On the one hand, EU policy is generally not place-based but generic and policy aims usually do not take into account specific impacts on particular locations. On the other hand, as European policies are often incorporated into national legislation, the impacts are often attributed to domestic, rather than European, regulation. Over the course of the 2000s, the relevance of the EU for planning has become widely accepted in the Netherlands (e.g. Van Ravesteyn & Evers, 2004; Jansen-Janssen et al., 2006; VROM-raad, 2008), especially around mid-decade when a large number of construction plans were suspended by the Dutch courts for being in conflict with EU air quality standards. This section will explore some of the ways in which Dutch planning is affected by the European Union. First, a conceptual framework is presented and the different kinds of impact (i.e. on practice, content and governance) will be discussed. Next, several specific sector policies will be elaborated to illustrate this.

Impact defined and explored

How is Dutch planning being influenced by European policy? When addressing this question, one can first make a distinction between *substantive* and *procedural* impacts. The first type affects the content of planning – land-use or spatial development – while the second category affects the planning process, such as the timing, sequencing and duration of tasks, but also which parties are involved and how they relate to one another. The impact type is not necessarily related to the rationale behind the European policy. Policies designed to address a substantive issue, such as water quality in the Water Framework Directive, can sway institutional relationships, such as those resulting from partnerships at the level of river basins, and therefore practices. Conversely, procedurally oriented policy can have substantive impacts, such as the Strategic Environmental Assessment, which although only inserting an extra task into the planning process, has affected the content of countless plans. The figure below depicts how EU policies can directly affect spatial developments (1) or planning practice (2). Most of the time, however, this impact takes place through the policy system of the member state (3). In addition, many domestic policies (4) which are unrelated to European policies, also affect planning practice and content. The thesis of this paper is that the latter (4) is losing ground in relation to the first three.

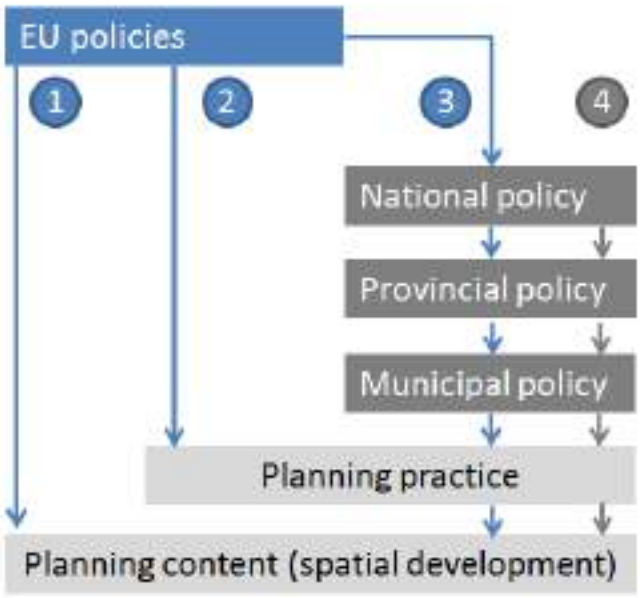
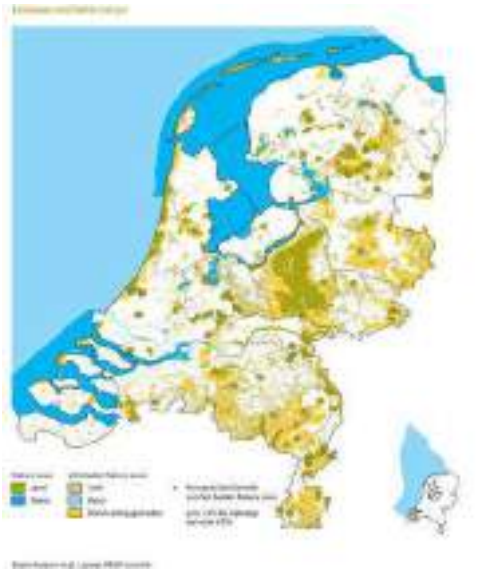


Figure 1: divergent impact routes

European RHS in the Netherlands
Due to the lack of a European spatial vision depicting a European main spatial structure (RHS) such as has existed at the national level since the Spatial Memorandum, this will need to be constructed by compiling and mapping out the spatial effects of various sector policies. As such an effort would entail a research project in itself, and is therefore out of the scope of this paper, only a few policy areas will be discussed in which the effects are known and divergent enough to be interesting (environment, competition and agriculture). A more thorough investigation would have to comprehensively address all areas of European intervention.

Environmental policy
A good starting point for mapping out the European RHS is environmental policy, as its institutional footprint on planning and spatial development is considerable. The most explicitly spatial environmental policy is undoubtedly European nature/biodiversity policy, Natura2000. This policy demands that measures be taken to prevent the quality of designated habitats from deteriorating. It is very difficult to zone urban development in or even near areas which have been designated as special protection zones within the Natura2000 network. Moreover, areas which contain pockets of protected species outside of the protection zones (hotspots) are not exempt from the reach of the directive (Figure 2a). Therefore, the areas designated as Natura2000, the adjacent spillover areas for protected species and hotspots should all be considered as comprising part of the European RHS.

Once designated, changing the status of a protected zone (i.e. downgrading to allow other uses) is no easy task (Backes et al., 2011). It is comparatively easier for areas where the state of preservation is good, but is generally not the case in the Netherlands, especially as regards the habitats directive (see Figure 2b). As these areas are protected by European law, they enjoy a higher level of protection than other nature areas in the Netherlands. It is therefore not inconceivable that an area with a higher societal value (e.g. due to its cultural or historical qualities) would be cleared for development sooner than one falling under the Natura2000 policy.



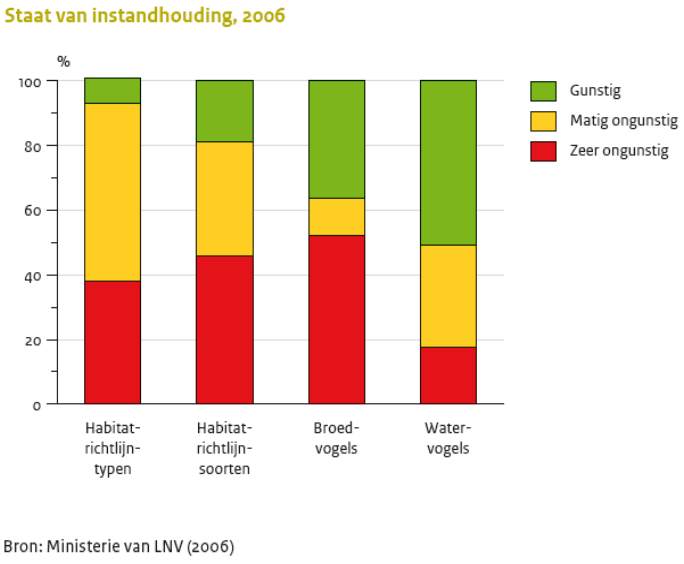


Figure 2a: Kuiper et al., 2011, p. 47 Figure 2b: Backes et al., 2011, p. 19

Another key environmental EU policy, particularly for the Netherlands, is the Water Framework Directive (WFD). This directive requires that plans be drawn up at the level of (transnational) river basins to ensure a minimum level of water quality. The Netherlands has been, euphemistically put, not very successful in achieving its targets (see Figure 3a) and has the worst surface water quality in the EU. The Netherlands has repeatedly requested clemency from the European Commission. As the Netherlands is obligated to taken measures for the areas which do not meet WFD standards, these areas can be considered as part of the RHS.

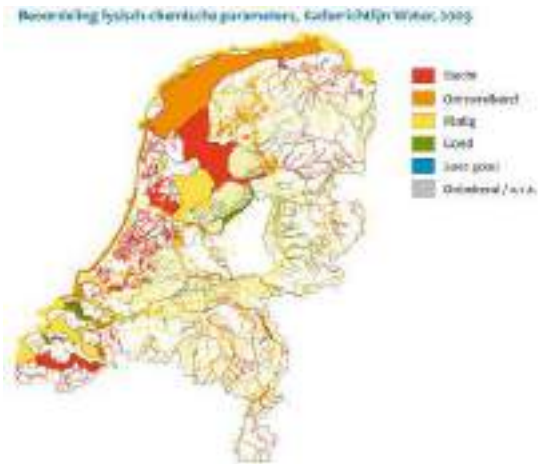


Figure 3a: PBL, compendiumleefomgeving

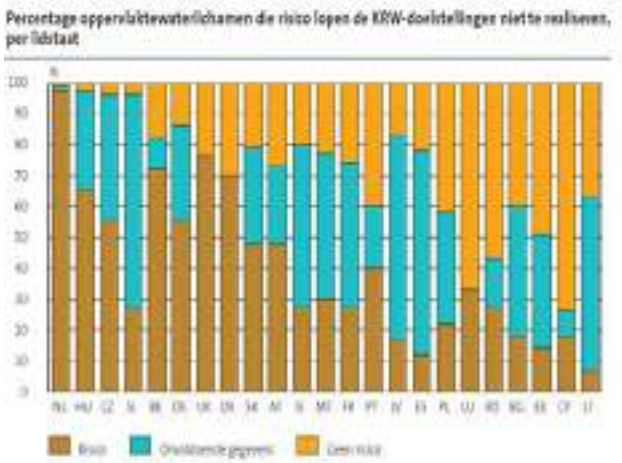


Figure 3b: PBL 2011, p. 82

When implementing the WFD, the Netherlands consciously chose to keep the water plans formulated under the directive legally distinct from the spatial planning system. For this reason, the WFD has much less impact on planning than Natura2000, although the measures taken to improve water quality – e.g. reintroducing meanders in rivers – certainly do have spatial effects. The decision to separate the sectoral concern for water quality from statutory planning has had the advantage of avoiding the problems related to the air quality directive, where developmental projects were suspended by the Council of State, but on the other hand those implementing the water plans do miss a potential ally.

Finally, EU Environmental policy is not only substantively formulated. The Environmental Impact Assessment (EIA) and Strategic Environmental Assessment (SEA) are purely procedural regulations, the timing of which is an important element in the process architecture of spatial development.

Competition policy

As a second policy example, competition policy usually works in quite a different manner than environmental policy. Whereas the latter is typically formulated in terms of substantive aims, competition policy seeks to ensure the functioning of the internal market by setting and enforcing the rules of the game. For this reason, competition policy is generally expressed as general regulations that are directly applicable to all and which seek to create a level playing field.

The rules on state aid, for example, seek to limit the disruptive influence that public subsidies can have on the market. The ban on state aid is one of the fundamental cornerstones of European integration, and is included in the EU treaty (art. 107). There are various ways to determine whether a particular investment should be considered state aid. Although the EU-

treaty offers several exemptions, it is primarily the communications by the European Commission and jurisprudence by the European Court of Justice which have provided clarity over the years.

Significantly for planning, state aid is initially very broadly defined, both in terms of who is providing it (not only governments, but also quasi-public bodies) and how it is provided (not only monetarily but also by selling goods below market price) (Wolting *et al.*, 2012). All public support above a certain threshold should be announced to the EC, which then makes a judgment of whether or not to consider the transaction or policy measure as state aid. If so, it can opt to raise no objections or initiate an investigation into the matter, which may result in sanctions. According to DG Competition's online database, 64 spatially relevant cases have been registered for the Netherlands since 2000. The majority of these have been considered state aid, but not necessarily harmful to international competition, resulting in a declaration of no objection. Examples include support to the peripheral regions in the north, subsidies for wind farms and various environmental arrangements like emissions trading. The cases in which an investigation was instigated are listed in Table 1. One can notice that some cases have a directly physical component (e.g. support to harbors or municipal projects) while others relate more to the planning process (e.g. reorganization of pig farm structure, housing associations). Even the practice of an active land policy (through transactions of ownership) to support social housing has come under EU scrutiny in recent years (Tasan-Kok *et al.*, 2011).

Location	Investigation initiated
National	C96/2001 Reorganization of pig slaughterhouses
National	C26/2001 Support to road transport
Den Helder	N603/2002 Support to Visser shipbuilding to counteract Spanish aid
Krimpen	N606/2002 Support to Dredgers-Merwede shipbuilding to counteract Spanish aid
Enkhuizen, Nijkerk en Wieringermeer	C10/2003 Yacht harbors
Haaksbergen	C33/2005 Support to MARKT Passage Plan Project
Amsterdam	C53/2006 Citynet Amsterdam
National	E2/2005 Funding of housing associations
Leidschendam	A.24123 Land sale Leidschendam in 2007
Rotterdam	C4/2008 Investment in Ahoy concert hall

Table 1: Eur-lex.europa.eu

Another area of competition policy relevant to spatial planning is public procurement. Ever since the Scala judgment at the end of the 1990s against the municipality of Milan, it has been clear that the legal right of landowners for self-realization of zoning plan provisions (as enshrined in the Spatial Planning Act) does not supersede European public procurement regulations. Another case which has caused more than a little confusion is the so-called Auroux judgment against the city of Roanne in France. In this instance, a urban development scheme granted to a particular developer was considered to be a public contract, and therefore required to undergo a European tendering process. On the grounds of this decision, various Dutch parties have complained to the European Commission about municipal land development practices, for example in Eindhoven and Ede. In 2010, the European Court of Justice provided further clarification in the so-called Müller case about when an urban development should be considered a public contract: (1) when the public party has a direct

economic interest, (2) a building requirement is imposed and (3) conditions are set that exceed pure planning requirements (Wolting *et al.*, 2012, p. 66). Although these criteria do not apply to all urban developments in the Netherlands, some certainly do. Especially cases where spatial projects have been blocked or modified due to state aid violations can be considered for inclusion on the RHS map of European policies.

Finally, it is possible that EU competition policy can influence the content of spatial policy. In 2011 the European Court of Justice ruled against a Catalonian policy which seeks to limit the number and size of hypermarkets in the region. The European Commission felt that these rules limited the freedom of establishment of businesses, and was therefore in conflict with the EU Treaty. Considering that many Dutch provinces have similar provisions regarding retail development, this judgment could force them to revise their planning policies (Evers et al., 2012). For decades the Netherlands has prohibited out-of-town shopping center and hypermarket development on the basis of such rules. If these are now considered in conflict with European law, this might engender a major shift of shops to out-of-town locations and the entrants of powerful players such as Wal-Mart, Auchan and Carrefour to the Dutch market.

Agriculture and regional policy

Competition and environment are obviously not the only EU policy areas that affect spatial planning. Another important example is agricultural policy, which through its system of price controls, direct support and rural development has an impact on rural land use (e.g. kinds of crops grown) as well as spatial processes such as concentration and growing economies of scale. For this reason, areas receiving subsidies can be considered part of the main spatial structure (see Figure 4a for the areas which receive the most support per hectare under Pillar 1), such as the pillar 1 and 2 and less favored areas. Moreover, agricultural policy can impact on planning processes, for example, by changing the payoffs and hence negotiating capacity of farmers in land-exchange schemes (in which development permits are linked to demolition of other structures). By the same token, reforms to CAP will also have a spatial impact: the trend from production support towards rural development and nature management (e.g. support to High Nature Value farmland) will redraw the map of CAP subsidies in the Netherlands (see Figure 4b). European regional policy has a similar, and even more explicitly spatial, effect as the CAP: it brings about spatial transformations (e.g. construction of business parks and infrastructure) and modifies spatial development practices and governance by requiring transnational cooperation and co-financing and the coordination of projects at the Nuts 1 level (requiring the cooperation of provinces). Support granted in the framework of the trans-European networks (TENs) can also be considered in this light.

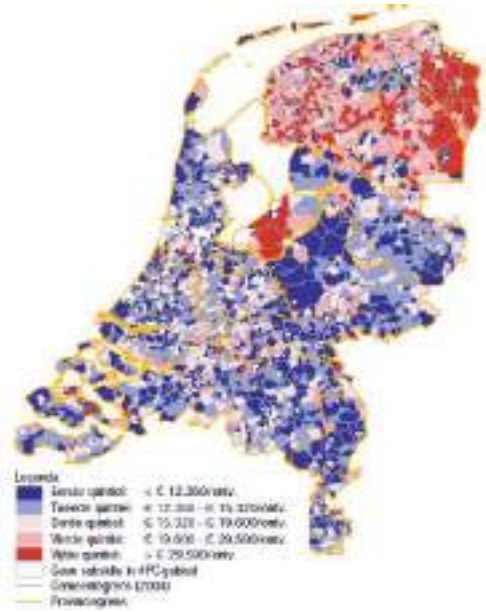


Figure 4a: Hermans *et al.*, 2006, p. 30

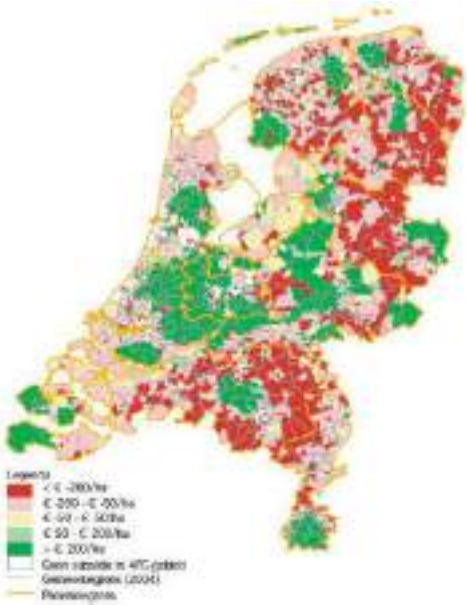


Figure 4b: Hermans *et al.*, 2006, p. 37

In summary, the three themes – environment, agriculture and competition – can be plotted out according to how they influence spatial planning (Table 2).

	Content	Process
Environment	*Natura2000 / WFD*	*EIA/SEA*
Competition	*Retail*	*State aid / procurement*
Agriculture	*Income support*	*Land trading schemes*
Regional	*Urban development*	*Regional coordination*

Table 2: impact on planning

Finally, the themes can be summarized by stacking the geographic distribution of policy effects as layers in a GIS. The result of this exercise is shown in Figure 5, which can be seen as a first approximation of the RHS of EU policy in the Netherlands. In some cases selections were made for the sake of legibility. For example, only the top 40% of pillar 1 was displayed for CAP impact, and pillar 2 support omitted entirely as its monetary value does not reach the pillar 1 cutoff point. Although this map is not complete, and some layers indicative (e.g. regional policy) it does show that a majority of the land mass of the Netherlands is influenced by one or more EU policies.

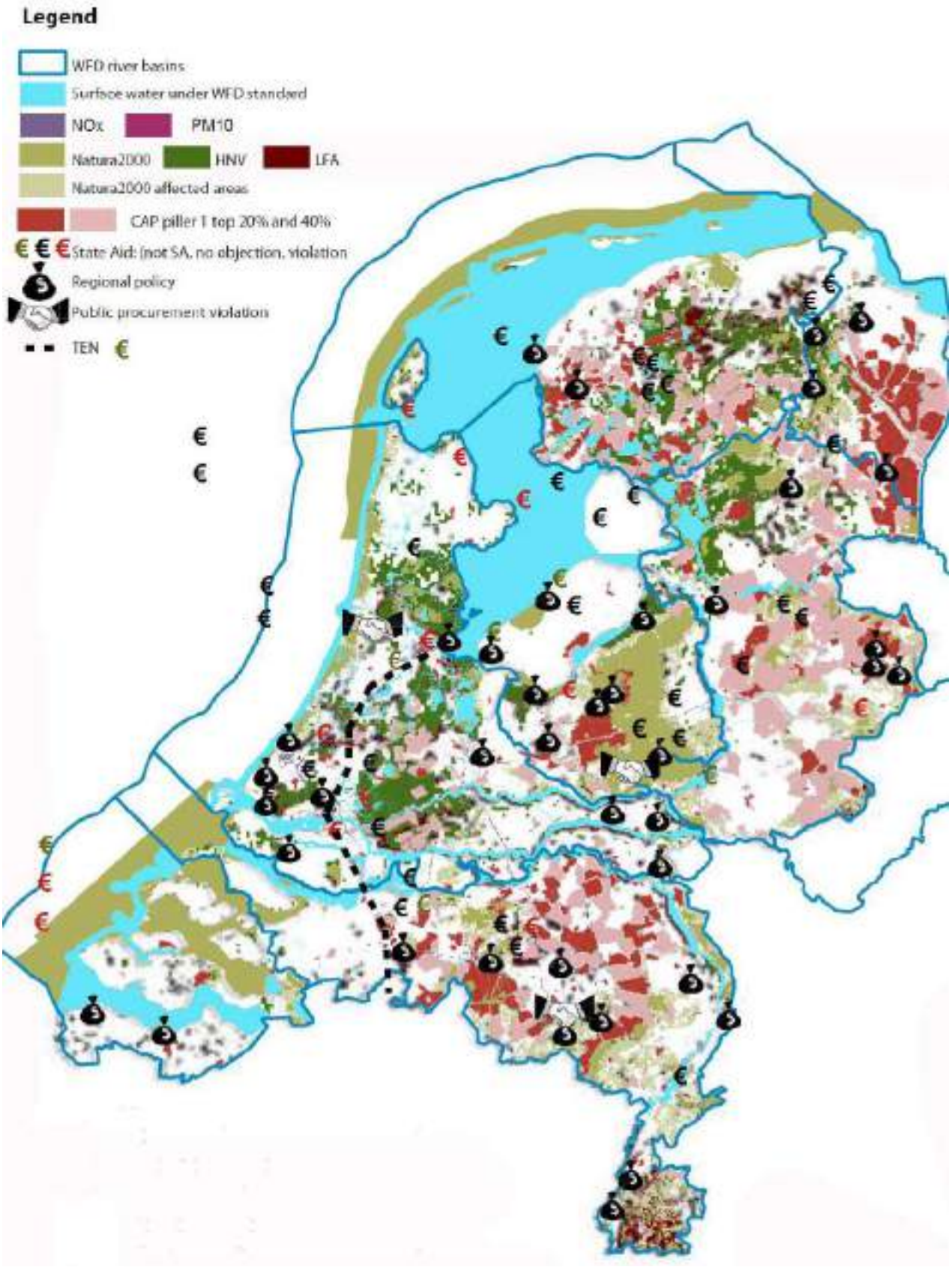


Figure 5: European main spatial structure (RHS) in the Netherlands
Source: Alterra (CAP), Schouten et al. (2008) (LFA), PBL (Natura, affected areas, WFD, NOx, PM10), European Commission (regional policy, state aid, TEN, public procurement)

3 Dutch spatial planning in transition

Dutch spatial planning is considered emblematic of the comprehensive integrated approach in which competing land-use claims are balanced against one another, and to some extent reconciled in urban design. In practice, spatial planning is primarily concerned with the issue of where and how urban development should take place. This is reflected in the kinds of spatial concepts which have been produced over the years –concentrated deconcentration (polycentricity), growth centers, and the compact city. As stated, the neutral balancing of interests is coming under pressure by sectoral European policies because these are being given preferential treatment. At the same time, Dutch spatial planning is undergoing major reform in three fundamental ways: a reform of statutory planning, a reform of planning policy and a reform of planning institutions (Van der Wouden *et al.*, 2011). These will be treated briefly in turn.

As regards the statutory planning system, the Spatial Planning Act of 1962 was replaced by an entirely new act in 2008. One of the main changes was the abolition of the plan hierarchy and reactive checks for compliance, and the introduction of a proactive system in which each governmental tier can apply the same legal instruments – including the local land-use plan – to defend their territorial interests. In addition, the law also made a clear distinction between visions, which are not legally binding, and ordinances, that are (Needham, 2007). As the planning community was acquainting itself with the new rules, they were altered again by the introduction of the Crisis and Recovery Act, intended to speed up the planning process, and the Environmental Licensing Act (Wabo), intended to simplify it by amalgamating procedures. At present, another law is being prepared to replace the Spatial Planning Act entirely and merge it with environmental legislation in a single Environment and Planning Act (RLI, 2012). The fall of the government in April 2012 has cast uncertainty over this process.

As far as policy is concerned, the decentralization and deregulation of planning set in motion since 2000 has accelerated. The government's coalition agreement states that "spatial planning should be left up to provinces and municipalities as much as possible" (VVD & CDA, 2010). This statement of intent became manifest in the National Policy Strategy for Infrastructure and Spatial Planning (SVIR), which abolishes all substantive urbanization policies at the national level, and introducing a procedural requirement called the "ladder for sustainable urban development" as a replacement. Instead of imposing targets on infill development and designating and protecting open areas, the ladder proposes three consecutive steps that sub-national governments need to take when drawing up land-use plans: (1) determine that a quantitative/qualitative need exists, and if so, (2) determine whether sufficient land exists within urban areas and if not, (3) plan development near multi-modal transport infrastructure. There is no sanction for non-compliance with the ladder. The national government still assumes responsibility for ensuring that a well-functioning spatial planning system exists, but no longer assumes responsibility for its content. This fundamental shift in the philosophy of national spatial planning has produced a situation where the main spatial structure is the result of partly overlapping sectoral interests (economic development, Olympic games, nature, energy, transport). In this respect, national spatial policy is coming to resemble that of the European Union.

Urbanization policy	Spatial Memorandum (2006)	SVIR (2012)
Urban areas	Intensification policy Bundling policy Location policy for businesses and retail Urban networks	Ladder for sustainable urban development
Rural areas	National landscapes Green in and around the city Buffer zones between cities Ecological structure with robust connections Concentration of intensive agriculture	Consolidated ecological structure

Source: Ministry of Infrastructure and the Environment, 2012, pp. 108-113

Finally, both the institutions and the institutional environment of national spatial planning have evolved. Regarding the first, at the beginning of the 2000s, the research department of the spatial planning agency (RPD) was transferred to an external institute (RPB), which was later merged with another institute for environment and nature (MNP) to become the Netherlands Environmental Assessment Agency (PBL). This externalization of knowledge, as well as various internal reorganizations over the decade, has arguably weakened the governmental capacity of national planning. Regarding the institutional environment, one of the most important developments is the severing of ties between planning and housing through the privatization of housing associations, the gradual completion of the Vinex[3] housing targets, and the recent ministerial reshuffling which has placed the departments for planning and housing in two separate ministries. In the process, the department of planning has been merged with water management and been dropped from the name of the Ministry of Infrastructure and the Environment. Oddly, the most important substantive goal in the SVIR, economic development, is still housed in the Ministry of Economic Development, Agriculture and Innovation (like planning, "nature" has also been removed from the Ministry's name).

In view of the combination of the turbulence in statutory spatial planning, the ongoing decentralization and deregulation, increased focus on sectoral objectives and disintegration of linkages between the planning department and other ministries (signified in the single authorship of the SVIR), it has become increasingly unfeasible to create a national framework which spatially integrates sectoral policy. In fact, this task is now squarely laid at the feet of the twelve provincial governments.

4 Ramifications

How do the changes in Dutch spatial planning sketched out above relate to the impact of European policy described earlier? On the basis of three points, it can be argued that the measures taken by the predominately Eurosceptic government will lead to a relatively greater influence of Europe on the territory of the Netherlands.

First, we observed that part of the national RHS is already European in origin (Natura2000) or European in effect (measures taken to improve water and air quality). In fact, the most

[3] Vinex is a Dutch acronym for the spatial planning policy drawn up in 1991 which designated areas on the edges of cities for development.

politically charged land-use conflicts are European in origin (e.g. locations for wind farms and CCS to meet EU renewable energy targets, even though these did not make it to the European RHS map). Indeed, by drastically reducing the number of national interests in spatial policy, simple mathematics dictates that the proportion of the RHS mandated by Europe increases in relative terms. Unlike the Dutch national government abolishing its urbanization policies, there is no indication of a retreat from spatial policymaking: on the contrary, there seems to be increased attention for the spatial dimension at the European level. The Barca report has stressed the importance of place-based policies (CEC, 2009), and the inclusion of territorial cohesion in the EU Treaty has opened the floodgates for new policy initiatives. Even without formal competence for planning, it is clear that urban development is a growing concern, and the Commission report *Cities of Tomorrow* (CEC, 2011) might be considered a prelude to a green paper. In addition, European influence could be intensified further in the Netherlands, or at least be made more visible, with the current operation to strip national policy of all goldplating. This strategy carries a risk: lowering standards to the European minimum removes a policy buffer against infringements, which would result in even more direct involvement of the European Commission in domestic policymaking.

Second, the decentralization of planning can perpetuate and intensify overcautious behavior by subnational governments. Corollary to the finding that parties involved in area-based developments attempt, out of ignorance or apprehension of European regulations, to seek full legal cover, it is entirely conceivable that municipalities and provinces will impose all kinds of extra research requirements, exclude certain options a priori and call for the elaboration of detailed plans that attempt to account for myriad contingencies. In addition to increasing the bureaucratic burden, this will produce substantively different plans. For example, this ‘will to certainty’ can express itself in a preference smaller development projects, where the risks are more manageable. When in doubt, provinces will be more inclined to grant less latitude to municipalities when it comes to European requirements, especially after the enactment of a law which allows the national government to pass on accountability, and potential fines, to subnational governments (Eerste Kamer, 2010). The abolition of the robust connections of the national ecological structure (EHS), coupled with the obligation to sell land obtained to this end back to farmers, highlights the complex governance issues at stake. If these physical links are indeed needed to achieve Water Framework Directive targets (they were included in the package of measures presented to the European Commission), and if the European fines for non-compliance are passed on to provinces, their resistance to the national government’s plans is as understandable as it is predictable (Kuiper *et al.*, 2011).

Third, the government's policy stance on domestic governance will affect relations with and the impact of the European Union. The relationship between area-based urban development and EU (sectoral) policy namely plays itself out against a complex institutional environment of multilevel governance with a large constellation of players. This environment is not at all conducive to the application of simplistic governance principles such as the "two-layer rule" called for in the coalition agreement (which states that a maximum of two governmental tiers may be involved in any one matter). It also is difficult to reconcile with the government's principle that governmental bodies should "mind their own business". In spatial planning as well as European policymaking there are unavoidably very many parties and very many intertwining interests, making it counterproductive if not absurd to impose strict distinctions between who can and cannot get involved. Given this, the current changes regarding planning may – again, paradoxically – result in strengthening the bond between subnational governments and Europe. The decentralization of planning has been accompanied with cutbacks. At the same time, many provinces wish to continue to carry out tasks which have not been decentralized, but abolished entirely (e.g. urban infill). For this reason, the prospect of bypassing the national government and attracting additional funding from Europe, such as structural funds, is increasingly appealing. As these sources are linked to conditions which reflect European, rather than national, policy priorities, this further increases the influence of the EU vis-à-vis the national government. In a recent letter, the association of provinces protested against the government's stance that cohesion funds should be used only for the poorest regions in Europe. Similarly, the national employer's association has also urged the national government to be more attentive in taking advantage of EU subsidies.

5 Conclusion and reflection

In addition to the three ways in which the decentralization of planning has increased the influence of the EU on spatial planning, this development has implications for how conflicts between local spatial planning and EU-policy can be resolved. As a forum where member states agree to common standards and rules, EU-policy is not just a matter of 'downloading' (i.e. transposing directives into national legislation) but also provides the opportunity to 'upload' insights from practice and policy alternatives to the European level. In the past, the Netherlands has succeeded in putting a number of issues on the European agenda. International cooperation is often crucial for solving domestic problems, especially when one is a small country with an open economy residing at the crossroads of Europe. Many EU environmental policies with which the country currently struggles, owe their very existence to intensive lobbying from the then environmentally progressive Netherlands. The Floods Directive is a more recent example of a policy that has been 'uploaded' by the Netherlands. Similarly, the friction encountered in the Netherlands between the planning system and sectoral policies can be raised in European policymaking circles. But this requires that governments work together and understand one another. At present, only national representatives take part in the European Council (not provinces and municipalities) and it is the national government which is responsible for translating European agreements into rules to be carried out at lower tiers of government. Often it is this translation, not the EU policies themselves, which are at the root of conflicts with the planning system (VROM-raad, 2007). It would therefore make sense for the national government to remain involved in thinking about spatial implications of sectoral policy. Finally, in order to anticipate undesirable side-effects of EU-policies it is advisable to become involved in the European policymaking process at a very early stage. Since the Dutch subnational governments have neither the network nor the

status to be very influential in this phase, it would make sense for the national government to involve itself more – not less – in European policymaking. The fall of the CDA/VVD coalition government in April 2012 might again mark a shift from the Eurosceptic and planningsceptic stance taken in recent years. If so, the above points should be taken on board when considering the impacts of European policy in the Netherlands.

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European Spatial Planning for the Twenty-first Century

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Whether, as the European Commission is proposing in the 'Fifth Cohesion Report' (European Commission 2010a) and the draft regulations (European Commission 2011) territorial cohesion will be more central to Cohesion policy and to the pursuit of 'Europe 2020' (European Commission 2010b) is important. However, there are deeper issues concerning the direction which the European Union (EU) should be taking, for which Faludi and Peyrony (2011) have outlined scenarios, and also and in particular what space or territory is: Is the habit of dealing with it as if it was like a property, with the government representing the people the owner correct? Here it is argued that viewing territory as more diffuse and negotiable leads to a better understanding, both of European spatial planning and of European integration:

> Awareness that the terms we use so casually are rooted not in 'nature,' but in the poetic imagination, has the effect of freeing deliberation and debate from a vocabulary of obfuscation and reveals ... the contours of a Europe that is … about deconstructing frontiers so as to bring to light a civilizational space that is … intensely urban, cosmopolitan, multilingual, and less hierarchical than in the past. (Loriaux 2008, 2)

In this light, the paper addresses three issues:

(1) the relations, in terms of spatial planning, of the EU and its Member;
(2) the meaning of territory under conditions of European integration and, indeed, globalisation;
(3) the implications for spatial planning of challenging the conventional meaning.

Section 1 discusses territorial cohesion. Section 2 criticises 'territorialism.' Section 3 focusses on 'territoriality.' Section 4 discusses 'soft spaces,' a concept that eschews the assumption of territory being a box and of territoriality a government monopoly. The Conclusions temper any expectation of a break with existing practices. Such practices will continue, but be embedded in new ones.

Territorial Cohesion and European Spatial Planning

There is a lively debate on territorial cohesion, with the consultations on the 'Green Paper on Territorial Cohesion' (European Commission 2008) its high point so far. (Faludi 2010a, 162-167; Sykes 2011; for a review of official positions see Janin Rivolin 2010) One can discern two views:

(1) Territorial cohesion must be measured, invoking indicators that stand for desirable or undesirable, as the case may be, qualities of territories. This 'substantive' view highlights the need for research of the kind which ESPON engages in. Indeed, the very concept has emerged in response to a substantive

issue, the future of 'Services of General Economic Interest' challenged by EU liberalisation policies where provisions are difficult to justify on purely economic grounds. Avoiding their marginalisation is an element in one territorial cohesion 'storyline,' 'Europe in Balance.' (Waterhout 2008) Relevant indicators are the object of the ESPON project 'Indicators and Perspectives for Services of General Interests in Territorial Cohesion and Development.' Two more storylines, 'Competitive Europe' and 'Clean and Green Europe,' are likewise substantive.

(2) Territorial cohesion is about the packaging of policies with territorial impact into cohesive wholes; in terms invoked by the Barca Report (2009) about territorial development policies being integrated, Waterhout's 'Coherent EU Policy' storyline. This 'procedural' view insists on coordination between sectors. The European Spatial Development Perspective (ESDP) calls this the 'spatial approach' representing a new dimension of European policy, saying that projects in different Member States '…complement each other best, if they are directed towards common objectives for spatial development. Therefore, national spatial development policies of the Member States and sectoral policies of the EU require clear spatially transcendent development guidelines.' (European Commission 1999, 7)

The ESDP thus sees planning in an umpire role, but argues also for attention to 'spatial factors' because '…it will no longer be possible to compensate for regional productivity disparities by consequently adjusting exchange rates.' Invoking this 'Europe in Balance' storyline and merging it with the 'Clean Europe' one, the ESDP attaches itself to EU regional policy, specifying 'balanced and sustainable spatial development' as its goal. 'Coherent European Policy' thus stands next to substantive storylines, but the prime movers as regards those are the EU sectors. Pursuing the Convergence and the Regional Competitiveness and Employment objectives, regional policy is one such sector. The unique selling point of European spatial planning is the coordination of regional, environmental, agricultural, transport and so forth policies, ensuring that such policies acquire added value by forming coherent packages, taking account of where they take effect, the opportunities and constraints there, now and in the future. (Faludi 2010a, 170)

This is not to deny the interrelations between a procedural and substantive view. The withdrawal of services, due to liberalisation, from sparsely populated areas runs counter to the express wish '…that people should not be disadvantaged by where they happen to live or work in the Union.' (European Commission 2004, 27) Flagging this inconsistency is what the EU policy on such services – invoking as the first one the concept of territorial cohesion – is about.

Coordination between policies impacting upon territory raises the question of the scale at which this should happen and whether statutory spatial plans are the vehicles. At national level, statutory plans are, however, problematic, and even more so at that of the EU. Since it does not work with statutory plans but rather by promoting development, French *aménagement du territoire* has been the EU model. The *Délegation interministérielle à l'aménagement du territoire at à l'atractivité*

régionale (Datar) responsible operates from a position between ministries using seed money to engender their cooperation. It also administers the multi-annual so-called *contrats de projets État-région (CPER)* similar to the contractual approach in EU Cohesion policy.

The intention behind the ESDP was strengthening the spatial dimension of EU policies, but because there was no EU competence, the Member States kept it to themselves (Faludi, Waterhout 2002) and the Commission in the end ceased supporting it. The term spatial planning or spatial development was replaced by that of territorial cohesion. French experts sometimes confide to each other that this means *aménagement du territoire*. Although criticised for eschewing a national spatial development perspective à la ESDP (Geppert 2009, 264), this does work with spatial scenarios, for instance the '*France* 2020' study (Guigou ed. 2000), with '*France 2040*' presently in the works. This represents a form of strategic spatial planning, a concept that has been hailed in the UK as signalling a broader, more deliberative approach than 'town and country planning.' (Allmendinger, Haughton 2009, 620; Haughton, Allmendinger, Counsell, Vigar 2010, 32; Sykes 2011, 382) The upshot is that, for as long as one does not equated spatial with statutory planning, to invoke 'European spatial planning' and the pursuit of 'territorial cohesion' interchangeably is justified. Indeed, ever since the Informal Meeting of Ministers Responsible for Territorial Cohesion at Rotterdam in 2004 kick-started the making of the Territorial Agenda (see Faludi 2009) largely the same planning experts and ministries as before are now working under the territorial cohesion flag.

Territorialism

The message here is that the relations of the EU with its members should be looked at in conjunction with the meaning of territory. If that meaning is challenged, then so are the relations of Member States and the EU and *vice versa*.

There relations are normally for political scientists to consider. The latter often take assumptions about territory as read. Baudelle, Guy and Mérenne-Schoumaker (2011, 16) point out that in the modern era territory signifies a stretch of land that has been appropriated by a prince, with its limits taking the form of material frontiers. According to Loriaux (2008) the French revolution changed this relation of princes with their – often dispersed – territories. The people were implicated by means of Romantic constructs, the invention of nations and their birth rights to ancient homelands, with identities and languages of their own which were literally beaten into children by newly established national educational systems. Modern territory is thus a container holding a nation, with fixed boundaries and the distinction between inside and outside basic to the notion of the state: The inside is subject to sovereign rule and the outside a matter of international relations.

Under globalisation, Scholte (2000, 3) signals, however, the '…advent and spread of what are alternately called 'global', 'supraterritorial', 'transworld' or 'transborder social spaces.' In terms discussed by Murphy (2008), Scholte discusses a new metageography. Metageographies generally, Murphy (2008, 9) says, shape common views and also policies and actions. As regards the EU, '…a metageography clearly

persists that casts states as the … most important internal spaces and that treats political-territorial developments at other levels in terms of the ideological norms that underpin the modern state system.' Gatawis (2000, 5-6) discusses views that deny the EU a territory beyond the sum of the territories of its members but this view has been challenged, even in the German literature (Ritter 2009, 14) where it has been put forward in the first instance. The story of European spatial planning is an example of the influence of norms of the modern state system demanding the maintenance of territorial control.

As indicated, Scholte (2000, 47) challenges this metageography calling it 'territorialism' under which '…macro social space is wholly organized in terms of units such as districts, towns, provinces, countries and regions. In times of statist territorialism more particularly, countries have held pride of place above the other kinds of territorial realms…' In reality, connections are at least partly detached from this territorial logic. In global transactions, 'place' is not territorially fixed, territorial distance is covered in effectively no time, and territorial boundaries present no particular impediment. In the terms of Castells (1996), the 'space of flows' overgrows the 'space of places.' Social space cannot, therefore, be understood in terms of territorial geography alone, and thus not in terms of administrative districts, towns, provinces and so forth, circumscribed by borders marking the limits of the jurisdiction of responsible authorities.

According to Murphy the current 'cartography of social life' – Scholte's territorialism – is the outcome of historic choices, '…of efforts to achieve particular ends with concrete implications for how things are organized and how people think about the world around them.' Invoking a concept to be discussed, Murphy points out that the '…territoriality of the European state system helped to produce a geographical imagination that privileges the "nation-states" over river basins, vegetation zones, population concentrations, or other possible regionalizations…' Other metageographies are possible and, in view of globalisation and European integration, necessary. In terms of Loriaux (2008, 2) territorialism is up for 'deconstruction,' by which he means '…interrogating myths of self and others, and through that interrogation, the discovery of new possibilities that are more powerfully mobilizing and legimitizing.' Scholte (2000, 57) concurs: 'If contemporary human circumstances have gained a substantial global dimension, then we need to develop an alternative, nonterritorialist cartography of social life.'

Rather than about metageography, Loriaux (2008, 13) speaks about 'ontopology,' a conceptual organisation, or mental map, of space. Ultimately, this is based on a myth created through a 'speech act.' It thus comes '…not from culture, language, or physical geography, but from the commitment to transcendent purpose, a *telos*.' (Loriaux 2008, 14) However, '…we need not be prisoners of *just any* myth.' (Op cit., 15) Culture and language are constructs. So are frontiers, the containers of populations and states forged into nations, allegedly so as to defend them, thus ignoring the fact that nations, too, are inventions. Loriaux thus shows that the boundary between France and Germany is the outcome of a series of specific acts, from Julius Caesar's distinction, ignoring the situation on the ground, between Gallia

and Germania – Tacitus and also Ptolemy report small German groups all over the place (Heather (2009, 36) – to the forced assimilation of regional variety by parcelling the Rhineland into competing national entities.

This may be seen as an argument for empowering regions as being closer to citizens (Faludi 2012), but a more fine-grained territorialism does not meet the criticism of space being seen as parcelled out into boxes. In this respect it is worth quoting the paper introducing the, now omnipresent concept of multi-level governance, saying that the '…polar conceptions of a Europe of the regions versus a state-dominated Europe are unsatisfactory … [E]lements of both may coexist in a conceptually untidy, multilatered polity. (Marks 1992, 223) As against the view of someone who has introduced the very concept of multi-level governance, its more common interpretation, for instance in the 'White Paper on Multilevel Governance' by the Committee of the Regions (2009) is clearly 'territorialist.' It '…considers multilevel governance to mean coordinated action by the European Union, the Member States and local and regional authorities, based on partnership… It leads to responsibility being shared between the different tiers of government concerned...'

With his partner, Marks now identifies this hugely popular territorialist interpretation of multi-level governance as but one of two types. (Hooghe, Marks 2001, 2003, 2010; Marks, Hooghe 2004) Thus Type I:

> … conceives of dispersion of authority to jurisdictions at a limited number of levels. These jurisdictions – international, national, regional, meso, local – are general purpose. … The membership boundaries … do not intersect. … In this form of governance, every citizen is located in a Russian Doll set of nested jurisdictions, where there is one and only one relevant jurisdiction at any particular territorial scale. Territorial jurisdictions are intended to be, and usually are, stable for several decades or more, though the allocation of policy competencies across levels is flexible. (Hooghe, Marks 2010, 17-18)

Type II is more like the untidy arrangements which Marks has signalled when coining the term of multi-level governance. The 'Russian Doll' figure of speech for nested jurisdictions '…where each doll/scale is understood as largely capable of being considered on its own, even while located in its (fixed) position within a preordained hierarchy' (Mahon, Keil 2009, 14) embodies territorialism. The figure is often invoked. Thus, Hajer (2009, 24) says about the increasingly redundant 'classical-modernist order' as based on the assumption of territorial, democratic institutions being conceived of as a series of matrouchkas. Levels of government are thus look-alikes that fit inside one another.

Amin identifies 'new regionalism' as being based on the same territorialism. Accordingly, the mainstream view of cities and regions '…is one which continues to conceptualise them as territorial entities.' Here comes the Russian Doll: 'The resulting image is that of a world of nested or jostling territorial configurations, of territorial attack and defence, of scalar differences, of container spaces.' (Amin 2004, 33) However, cosmopolitan forces produce a world of '…cities and regions without prescribed or proscribed boundaries.' (Op cit., 34) Criticising the idea that a new

regionalism might boost democracy, Amin denies that '…there is a defined geographical territory out there over which local actors can have effective control and can manage as a social and political space.' (Op cit., 36) A relational reading offers a different reading '…where the local brings together different scales of practice/social action.' (Op cit., 38)

Already early on, Harvey (1969, 208) criticised the absolute view of space as a neutral container, a filing system or abstract-frame-of-reference underlying absolute space, contrasting it with a view of space as a positional, 'relational' quality of the world of material objects. He gave location theory, conceptualising cities as influencing the properties of the spaces around them as an example. The distinction is filters through to planning thought.

Territoriality

Like Murphy and Hajer, Scholte (2000, 59) invokes territoriality where he says that the end of territorialism does not spell the end of territoriality, according to Sack '…a spatial strategy to affect, influence, or control resources and people, by controlling area.' Territoriality is often equated with state territoriality, but as the ESDP has already said in a statement that these days represents nothing but accepted wisdom: 'With growing economic and social integration, internal borders are increasingly losing their separating character and more intensive relationships and inter-dependencies are emerging between cities and regions of the Member States.' (European Commission 1999, 7)

Hajer (2009, 27) diagnoses the result as 'territorial synchrony' waning. Thus the '…unity of political centre, public, and problem is lost.' This makes it difficult to find the potential for reasoned elaboration. Indeed, states often lack the power to solve policy problems resulting in '…discrepancies between the geographical reach of political institutions and the scale of public problems.' (Op cit., 29) The response is network governance, with much policy work taking place next to or across established orders. 'Policy-making nowadays is most often a complex negotiation among actors with disparate backgrounds and divergent goals. The weakening of the state goes hand in hand with the growth of a civic politics and the emergence of new citizen-actors and new forms of mobilization..." (Op cit., 33) This shifts policy-making to an 'institutional void,' which chimes well with Marks' diagnosis of an untidy multilateral polity emerging.

If, as the critique of territorialism implies, states no longer have a monopoly on territoriality, does this mean that territoriality is no longer a useful concept? Echoing Hajer on the state being no longer able to provide physical security, welfare and effective socio-economic management, Brugess and Vollaard (2006, 1) ask whether the state is the appropriate problem-solving unit to deal with issues of environment, economic prosperity, finance, migration and terrorism. They point out that expert functional networks transcend the territorial limits of jurisdictions and raise the question of whether European integration and globalisation herald the end of citizens' attachment to national territories and whether mobile citizens look for better performance from non-state providers regardless of borders. In view of one of the

characteristics of the Westphalian state being the territorial demarcation of its supreme authority, they formulate the fundamental issue: Is state territoriality '...an image of the past?' Replying, they say that territoriality is a fluid and dynamic concept. 'The process of unbundling territoriality on one level might imply that a simultaneous process will occur at another level, as for example in the case of the continuous ceding of competences from the national to the EU level. However, the unbundling of territoriality may also entail non-territorial forms of organisation. (Op cit., 7-8)

Where it is being unbundled, there this means that territoriality must be negotiated, which is no revolutionary finding. 'Governing' turning into 'governance' is accepted wisdom. In planning, state territoriality working through statutory planning and publicly financed territorial development thus becomes territorial governance. The problems this raises for territorial representation – the privileged source of democratic legitimation (Faludi 2012) – are not discussed here.

Soft European Spatial Planning?

Previous sections have cast light on territorialism and territoriality, rejecting spatially distinct territories and constituencies as the exclusive framework. The problem of European spatial planning is to deal with the mismatch between conventional views and reality on the ground. Dealing with emergent soft or, as the academic literature also has it, relational spaces, planning itself must be soft.

Planning has been subject to criticism for its rigidity. Challenging 'Euclidean' planning, Friedmann (1993) pointed out that planning is located in a world of stable entities which is being superseded by multiple space-time geographies. Challenging planning for assuming a Euclidean world is to the point. In its statutory form, spatial planning relies on state territoriality, but Burgess (2006, 102) proposes '…a complex combination of territorial and non-territorial functional principles.' Much geographic thinking addresses such issues. Harrison (2012) and Harrison and Growe (forthcoming) as well as Olesen and Richardson (2011) give overviews. Haughton, Allmendinger, Counsell and Vigar (2010) on soft spaces is also relevant. 'Soft planning for soft spaces' (Faludi 2010a) going beyond the territorialism characteristic of the metageographical thinking underlying much of planning – in fact of thinking about European integration as such – helps in contemplating its future.

Asking for a new politics of space, Amin has been quoted as denying that there is a defined geographical territory over which local actors can have effective control. Globalism has become the everyday filter through which sense of place is being developed and expressed. 'The result is ... a heterotopic sense of place ... made up of influences that fold together the culturally plural and the geographically proximate and distant.' (Amin 2004, 37) Cities and regions no longer offer territorially defined public spheres. Any '…particular geographical site can only be a nodal connection in a hydra-like network space that never coheres into a local public sphere. Cities and regions are nodes in many public spheres ... An obvious implication is that there is no pre-given place for a politics of regionalism.' (Op cit., 38)

Working with varied geographies is a response to the plural public sphere involved in the making of a region as '…spatially diffuse and geographically mobile. It calls for a politics of place that has to work through this constitutive condition, not one that fakes, as does the new regionalism, a minor national politics of assumed territorial insides and outsides and an imagined regional identity.' (Op cit., 40) Referring to other work questioning the assumptions underlying UK regional policy: that London is the fount of all things 'political;' that the solution to this state of affairs is localism; that politics has to be territorially bounded (Amin, Massey, Thrift 2003, 2), Amin advocates a 'cosmopolitan regionalism.' Cosmopolitanism is a concept discussed, amongst others, by Beck (2006). Delanty and Rumford (2005) see it as a hopeful perspective for Europe.

Summarising, Amin (2004, 42) says that he is seeking to articulate '…a relationally imagined regionalism that is freed from the constraints of territorial jurisdiction.' An early planning example picking this up is by Graham and Healey (1999) criticising the bedrock-concept of the 'object-centred Euclidean conception of space.' They review notions of space under which places become complex arenas. Graham and Marvin (2001) take this further: Cities depend on infrastructure provisions. There is change from systems being run as state monopolies oriented towards equitable provisions for all to providing them through the market. This makes for a 'relational' geography: cities becoming fragmented, with relations with distant places sometimes being more important than with contiguous ones, and with a tendency of walling off nodal points from their surroundings, thus spelling the end of the 'integrated ideal' of comprehensive urban planning.

Davoudi and Strange view space, not as a set of nested containers, but as something that depends on the processes and substances making it up. In this relational view, 'place formation' becomes a process of carving out 'permanences' from the flow of processes creating spaces. 'The organising spatial principle … would be one of multiple overlapping networks with continuous flows of people, resources and knowledge. Such networks and flows would be represented and visualised through the use of 'scenarios' and 'fuzzy maps' showing untidy and complicated flows...' (Davoudi, Strange 2009, 38)

Like others, these authors refer to Healey. Re-affirmed more recently, Healey's concern is with place governance 'with a planning orientation.' She points out that '…those with a 'stake' in what happens in a place are not only local residents, or citizens, of a specific administrative-political jurisdiction. "Stakeholders" may come from other places...' (Healey 2010, 32) Place not only refers to material objects, nor is it coterminous with any jurisdiction. So a jurisdiction '…may not be coterminous with the key relations that need to be mobilised to address particular place-management and development problems and potentialities.' (Op cit., 69) In the concluding chapter, Healey summarises what place-based governance with a planning orientation is about: improving the conditions of life for people in terms of their relations. In so doing, '…it is important to move away from conceiving such relations as a kind of nested hierarchy of systems… Instead, systems are better imagined as overlapping, loosely bounded and 'loosely coupled' sets of relations.'

(Op cit., 226) Without mentioning the terms, it is clear that Healey rejects territorialism and a narrow focus on state territoriality.

Based on a case study of Thames Gateway, Allmendinger and Haughton expose similar views. Thames Gateway shares its boundaries with no other statutory body, but there is a strategy team and a Strategic Partnership. The emphasis is on scales other than those of statutory planning and on planners cooperating with other actors. 'The clear geographical and professional boundaries of planning, plus the hierarchical and silo ways of behaving are already planning history.' (Allmendinger, Haughton 2009, 618) The authors review the literature on rescaling – one of the branches of literature articulating spatial issues – arguing that rescaling involves

> …not simply a shifting of emphasis across existing scales of the statutory planning system, but the insertion of new scales for planning intervention, plus an apparent predilection for promoting new policy scales, initially at least through the device of fuzzy boundaries. ... The emergence of these 'soft spaces' is an important trend...
>
> So whilst planning still needs its clear legal 'fix' around set boundaries for formal plans, if it is to reflect the more complex relational world of associational relationships …, planning also needs to operate through other spaces, and it is these we think of as 'soft spaces'. ... The resulting relational geography of planning requires attention to a variety of associational networks across a wide mix of administrative/political spaces, 'soft' spaces, and other scales. (Op cit., 3)

The concept of soft spaces appears also in the title of the book which followed this article. (Haughton, Allmendinger, Counsell, Vigar 2010) Without couching his analysis in terms of soft spaces, Harrison (2012) analyses practice, in this case regional planning in North West England. Referring to key maps illustrating three subsequent strategies, Harrison shows how relational thinking is waxing and waning under the staying power of territorialism. In a parallel paper, with Growe, in which there is reference also to the work on soft spaces discussed above, Harrison discusses the Concepts and Strategies for Spatial Development in Germany adopted by the Federal Government and the governments of the *Länder* in 2006. The focus there is on 'European Metropolitan Regions,' soft spaces with no equivalent politico-administrative bodies. In the face of pressure to safeguard equality of opportunities, a constitutional goal and a concern that territorial authorities are keen to be seen to promote, the ensuing policy was made '…spatially inclusive by identifying "areas of influence" which are inclusive of the rural areas located beyond the metropolitan region but are to varying degrees functionally connected…' (Harrison, Grove forthcoming, 7/8) According to this study territorial and relational viewpoints are not mutually exclusive and state and territorial politics still matter in that new regional spaces are mediated through existing institutions.

Harrison and Growe also discuss cross-border region as examples of 'unusual solutions' (see also Deas, Lord 2006) to problems created by formal territorial structures. Indeed, cross-border and transnational planning puts such issues into

focus. Amongst other examples, Herschel analyses the Euroregion Neisse-Nisa-Nysa – Tri-Country Border Region sitting astride the borders between Germany, Poland and the Czech Republic. This Euroregion

> …seeks to use its multi-nationality to its advantage… Rather than representing 'edgeness' and 'end of territory', borderness is re-interpreted and projected as a strength, a sign of connectedness and international reach. The emphasis on an inherently more dynamic quality of governance, compared with more institutionalised, bureaucratic notions of government, suggests a concern with maximising indigenous capacity to overcome geo-political and geo-economic disadvantages … This involves developing a clear regional profile as a 'border bridging region' that recognises the importance of forming a sense of regional image and identity … (Herschel 2010, 163)

These were case studies of soft planning of the type of which Faludi (2010, 172ff) says that it is pointing the way for European spatial planning. They exhibit inventiveness as regards conceptualising new territories criss-crossing existing jurisdictions leading to an 'unusual regionalism,' the concept coined by authors who also applaud the '…admonitions to develop imaginative configurations that straddle national and regional boundaries in line with spatial planning imperatives' by the Commission. (Deas, Lord 2006, 1850) In this way, they contribute to deconstructing established spaces by which, as indicated, Lariaux means '…interrogating myths of self and others, and … the discovery of new possibilities that are more powerfully mobilizing and legimitizing.'

As far as European spatial planning as such is concerned, its practice so far has been couched in terms of Member States *versus* the EU, as if there were only two spatially bounded scales. This has been the basis for the positioning game around the ESDP and territorial cohesion. At the same time, there is much 'soft' planning at the cross-border and transnational scales going on. Always keen on transcending borders, the Commission promotes this. Spatial visions for each of the INTERREG transnational cooperation areas, cross-cutting national boundaries as they are, have been only a partial success. Macro-regional strategies are of a different alloy in that, on request of the Member States concerned, the European Council has asked the Commission to get involved. Complying, the Commission brokers agreement on concrete actions. As Stead (2011, 163) points out, they represent examples of the 'spatial rescaling' which Allmendinger and Haughton and others see as responsible for the emergence of soft spaces. Faludi (2010b,c) sees macro-regional strategies as portending a future form of soft spatial planning.

The soft approach and the refusal of contemplating new funding mechanisms for macro regions have not always been understood. The question is whether, without the prospect of funding soft planning has a future. In this respect it is significant that Commission proposals for after 2013 foresee, not only a larger share of available funding going to INTERREG, but also macro-regional strategies playing an, albeit unspecified role in fund allocation. That is, of course, how it should be: the spending

of taxpayers' money being influenced by – amongst others, because there are always multiple concerns – exploratory strategies that 'shape the minds.' (Faludi 2006).

Conclusions

The paper has criticised territorialism and territoriality. However, none of the authors anticipate wholesale replacement of existing systems. Deconstructing them does not mean destroying, but opening up future avenues. As regards the three issues identified at the beginning of this paper, the conclusions are:

(1) Concerning relations, in terms of spatial planning, of the EU and its Member States one must surpass 'Russian-Doll' thinking and the territorialism underlying, accepting that territoriality is not a monopoly of the state but must be shared;
(2) Territory is not a fixed entity enveloping all aspects of social and political life but the object of negotiation and compromise, and thus open to multiple and contested interpretations;
(3) Spatial planning is about inserting imaginative visions into the on-going reconstruction of the fabric of life, including the plurality of territories which this implies.

This means deconstructing frontiers. This can hardly count as novel, given the quest for a borderless Europe which implies, as Deas and Lord have been reported calling it, new configurations straddling borders. Loriaux has been quoted in the introduction as holding out the prospect of such border deconstruction bringing to light '…a civilizational space that is … intensely urban, cosmopolitan, multilingual, and less hierarchical than in the past.' This seems as appealing a perspective for European spatial planning in the twenty-first century as one can get.

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Balancing commercial and heritage scapes: Atmosphere, vitality and sterility in the urban conservation spaces of Shanghai

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1 Introduction: fear for a loss of place and urban heritage in China; to re-develop or not to redevelop

A cursory glance over the current literature on Chinese urban development and place reveals very critical positions (Mars, 2004; Abrahamson, 2011). Reflecting on the urbanscapes of Shanghai, Mars (2004) has argued that Chinese cities are cities without history; as Mars suggests Chinese cities are ever increasingly adopting:

> shapeless low-rise expansions… punctuated by a myriad of up-market housing projects — densely organised neighbourhoods of repetitive blocks fringed with small trees and parking lots. They are a cross between Celebration (a suburban enclave

developed by the Disney Corporation for the faint at heart, where unhappiness has been officially banned) and The Projects (a concept for inner-city vertical slums for non-Caucasian Americans where happiness is hard to find). They offer the suburban comforts of cheap and tranquil living in Hong Kong-style tower block neighbourhoods. And they all look the same. (Mars, 2004)

However, a more careful examination of this process by He and Wu (2007) shows that a major driving force in the shifting urban landscapes of China has been the growth of 'property-led redevelopment'; specifically as He and Wu attest

attracting a huge amount of domestic and international capital, real estate development effectively solves the problem of financial deficiency in urban redevelopment, which has troubled the local government for a long period. With the capability of instantly promoting economic growth and effectively changing economic image, real estate development has thus acquired an irreplaceable place in the urban economy and provides the major driving force for urban redevelopment (He and Wu, 2007: 194).

But with the rise of this new property-led development, He and Wu also caution that whilst generating economic growth:

urban renewal programmes have devastated the diversity and vibrancy of neighbourhoods… In a period of booming urban redevelopment, tremendous demolition and relocation have been occurring in Chinese cities. It is estimated that from 1990 to 1998, Beijing demolished 4.2 million square metres of housing in the old city… (He and Wu, 2007: 194).

A consequence of this development as He and Wu point out is that countless forms of urban heritage, including the physical and social and cultural heritages of the people living in these traditional houses have been destroyed; Reflecting on these issues, then writers such as Friedmann have lamented the loss of traditional urban street spaces such as the Hutong's in Beijing. In a recent article discussing the loss of place, (2010) Friedmann comments that:

by the turn of the millennium, Beijing's centuries-old hutong were vastly over-crowded, and that the physical infrastructure of the housing was, to put it mildly bad in need of updating and repair. Still hutong alleyways had been part of Beijing's cityscape for over 500 years, and their inhabitants had created a distinctive environment and way of life. I don't want to dwell on this process of erasure or place breaking, but if place is something to be valued… and if there is anything to the notion that cherishing a neighbourhood in which one has spent a significant part of one's life is a significant concept, if sense of place and identity are at issue, then the

demolition of places large and small proposes immense human costs (Friedmann, 157-158).

Clearly then, in the contemporary literature, two main themes capture a great deal of academic studies; these are the themes of property led redevelopment and a senseless loss of place , resulting in the loss of traditional streetscapes and community based forms of social, cultural and economic heritage. Although there have indeed been detractors from this position;

Specifically in recent work on the Lilong's in Shanghai, the Thai writer Non Arkaraprasertkul (2009; 2010) has vehemently argued that the views of these writers in the fields of geography and sociology have often been overly-nostalgic and preservationist in focus; as a result, Arkaraprasertkul has argued that these thinkers have often ignored the actual needs of poorer Chinese people living in these houses; in sum, Arkaraprasertkul's comments could lead us to the suggestion that often a lot of conservationist sentiment applied to China's older quarters are reflective of a kind of conservationist nostalgia from afar, a nostalgia that can also be equated with a Western tourist gaze that is urgently

seeking to preserve spaces of what s/he might term an ‘authentic’ China (my words rather than Arkaraprasertkul’s position);

Rather than viewing Chinese urban space as a tabula Rasa, Arkaraprasertkul’s position is more nuanced and whilst he certainly advocates demolition, Arkaraprasertkul proposes the construction of new Lilong like, low-medium rise high density houses to preserve the physical and social character of these unique Chinese urban spaces.

Thus, Arkaraprasertkul suggests that

> the traditional Lilong house is no longer the most appropriate urban housing for Shanghai…However, it is suggested that a viable solution is low medium-rise high-density, multi-functional, community-orientated urban housing that will preserve the unique nature of individual vibrant neighbourhoods (Arkaraprasertkul, 2009: 12).

2 A *critical conservationist* position

Whilst the arguments of the authors so far are relatively fair, they ignore several major points; firstly, whilst much demolition is certainly taking place, in recent years, many local urban municipal officials in China are also recognising the role of traditional urban quarters in marketing Chinese cities as unique tourist sites; thus, whilst it is

certainly true that demolition is growing at an unprecedented scale, a great deal of commercial led conservation is also taking place that presents a great number of opportunities for social, cultural and economic groups alike; secondly, whilst demolition and the construction of new high quality housing may indeed serve the functional needs of a new generation of Chinese people, the strong demolition argument still ignores the more intangible and tacit bonds that have been created between local people and their housing for years; whilst Arkaraprasertkul's argument certainly makes a lot of sense in an anti-sentimental way, it still seems to ignore the way that people often memories around stone and specific places (no matter how dilapidated these places are); whilst it would certainly be unfair and even oppressive to suggest that Chinese people should be expected to live in antiquated historic houses, that have no facilities, this does not mean that these houses need to be demolished in their droves; whilst Arkaraprasertkul's anti-sentimental argument certainly encourages us to be reflexive, it can be strongly argued that this position is still nevertheless, pretty extreme; moreover, as writers such as Pendlebury (2009) have suggested, often proponents of demolition have often been less cognizant of the different social, cultural and even economic uses of urban heritage over the years;

thus, whilst residents might not want to live in these traditional homes, the potential value for these spaces in terms of their local, cultural and economic viability may yield strong dividends (see Pendlebury, 2009: 113); thus, as research demonstrates in recent years, traditional urban neighbourhoods and older quarters in China is now becoming home to newer kinds of creative business and/or art spaces; whilst this new kind of redevelopment has also brought with it lots of gentrification and tourism, these spaces have also been the site of new and interesting spaces of place-making where artists and/or cafe and restaurant owners have sought to create an alternative 'vibe' to the usual monolithic spaces of the contemporary Chinese city.

Whilst it would be dangerous to suggest that these spaces should mean the eviction of the original residents that live there, nevertheless, it is certainly important to note that (like the west) these new 'alternative' spaces in the Chinese city have certainly brought something of an anti-dote to what appears to be the continual demolition, redevelopment and blandization of urban space; In what follows, then, it is the argument of this author, that whilst traditional residents should have the final say about their 'heritage-space', it is suggested here, that rather than straightforward demolition of these classical spaces, compromises

maybe arrived at between developers, residents and conservationists that could potentially lead to a mixture of new build, (and sometimes demolition), conservation and commerciality that could lead to the production of new kinds of interesting and creative urban space.

In the writing that follows, then, this paper will explore the conservation of some new spaces in the Chinese cities of Beijing and Shanghai; specifically and exploring these cases, it will be argued that whilst there are many pitfalls in the conservation of traditional Chinese urban spaces, nevertheless, conducted in a particular way it is argued here that developers, conservationists and residents may benefit by a combination of mixed-use approaches to traditional urban spaces that satisfies a variety of needs; however, in making these claims it will also be argued here that successful urban conservation is never straight forward and the potential for space to become inscribed and constructed through the lens of more powerful agents is a continual threat.

In this regard, whilst this paper argues for a pro-conservationist perspective, it is also suggested here, that a *critical conservation* approach to China's built landscape's must also include a great deal of reflexivity and mindfulness with regard to the various agents and stakeholders that are seeking to conserve the space; thus, as Jordan

(2006) has written about the conservation of ‘resistance spaces’ in Berlin, even in subaltern spaces, louder and powerful voices can reside; in the following sections, I shall now examine a few examples of urban conservation throughout urban China; I shall draw attention to what I believe are various kinds of interesting and perhaps less interesting attempts at conservation.

However, before we continue, I want to discuss how we might determine interesting from uninteresting urban conservation, because these narratives are purely subjective; to unpack these ideas, I want to firstly explore ideas of sterility and vitality since, these terms often haunt ideas of conservation practice; then, turning to case studies in Shanghai, I want to draw your attention to the different ways in which conservation has been conducted in the city. To explore, Shanghai, I want to suggest that particular static and sterile practices of conservation have been indeed developed in the city; however, by exploring some alternative sites, I want to argue that vital spaces of conservation also exist in the city that may offer simple alternatives to what I shall call the sterile/demolition alternatives.

3 Definitions of urban sterility and vitality.

Ideas of urban vitality and sterility can be related back to the now well critiqued work of Charles Landry; in his article "Urban Vitality: A New Source Of Urban Competitiveness" (2000), Landry argues that vitality is based on the

raw power and energy of a city which needs focusing and directing towards a purpose for it to reach viability. Creativity is the catalyst for vitality, which the creative process focuses. It becomes sustainable and viable through innovations which are of long term benefit to the city. Vitality involves levels of activity - things going on; levels of use - participation; levels of interaction, communication, transaction and exchange; levels of representation - how activity, use and interaction is projected outwards and discussed in the outside world. Viability is concerned with long term self-sufficiency, sustainability, adaptability and self-regeneration. It is necessary to promote vitality in order to achieve viability. Vitality describes the mass of activities, which in and of themselves are not necessarily good or bad. Activity, use and interaction need to be focused towards a set of purposes, goals and objectives for them to have any substantial, positive impact (Landry, 2000).

Of course Landry's focus can be related to a whole-series of creative city style approaches that have been associated with a form of 'hipster embourgeoisment' and conservative ideas of self-reliance (see Peck, 2005); but despite the problems with Landry's work and ideas, the

concept of urban vitality, involving high levels of interactivity, interaction and communication is certainly an interesting concept; one way of reworking the notion of urban vitality might take place through the concepts of Deleuze and Guattari who construct ideas of vitality through notions of immanence; here for Deleuze and Guattari, loosely speaking, immanence refers to the vital potential (in a non-essentialist way) of multiplicities or acausal heterogeneous assemblages of relations (bodies without organs) to produce new events, things, lives and subjects.

> This streaming, spiralling, zigzagging, snaking, feverish line of variation liberates a power of life that human beings had rectified and organisms had confined, and which matter now expresses as the trait, flow or impulse traversing it. If everything is alive, it is not because everything is organic or organized, but, on the contrary, because the organism is a diversion of life. In short the life in question is inorganic, germinal, and intensive, a powerful life without organs, a body that is all the more alive for having no organs (Deleuze and Guattari, 1980: 499).

Here then, Deleuze-Guattarian ethics often champion deterritorialisation's or spaces of pure immanence and becoming where acausal interactions take place, and as result of these processes new

meanings are acquired and traditional definitions and ideas are reconceptualised; in short Deleuze-Guattarian ethics encourages us to take seriously spaces of chance, randomness, hybridity and *potential* where difference is ubiquitous and where everything and anything is possible.

Taking these ideas and placing them in the urban realm, we can think of vitality in terms of the potential that urban spaces have to produce interactions, becomings, social relations, interactions, divergences and differences. Thus, rather than the 'harnessing of creative energy' for the sake of economic production (in Landry's terms), my suggestion here, is that space is creative and vital when we open up the potential for space to be utilised, interpreted and valued by as many different people as possible; in this way, quite simply, vital space is inclusive space; inclusive space, is that which can draw different types of people together, and can produce interactions and creative outcomes that could not have been realised prior to the meeting place of subjects, relations or events.

Taking ideas of vitality seriously then, we must also consider that space can also produce sterility. Thus if vital space increases flows, interactions and unpredictable becomings, sterile space refers to sites

where life has slowed down, to moments of ‘rootedness and/or bonding, which halts flows and/or social processes’ (Law, 2010: 129); and as I will suggest sterile space, can be produced by a number of features that can reduce inclusivity; this might include the excessive commercialisation of a space; or sterility might come about as a result of the dominance of one group and/or one set of meanings in that space. In short, my claim here is that, spaces are sterile if the potential for different readings, or interactions with a space are limited or traduced.

However, whilst the following writing champions these Deleuze-Guattarian ideas of space, it is also suggested here that these concepts be read as a tool rather than an explain all theory; indeed, whilst this author believes in the possibility of creating inclusive spaces by way of hybridities and heterogeneous becomings, it is recognised here, that subjects’ definitions of inclusive spaces will always already be never complete or singular; in this way rather than seeing inclusive space as an end process, it is the argument of this author, that spaces must be read as ongoing processes which will at times suit some people rather than others; however, as I am suggesting whilst it is impossible for urban planners or designers to please everyone, nevertheless, our task, when constructing space is include as many encounters as possible, be these

physical, social, cultural or economic encounters, since these will always already open up the potential of an urban site.

Encountering conservation space:

In the case of conservation spaces, the potential of these spaces is critical to the creation of more open or inclusive spaces; whilst conservation spaces may seem fixed and/or closed (that is because in essence these spaces are dominated by the preservation or conservation of a series of buildings and/or intangible heritages), the conservation of certain physical forms or relations, does not mean that these spaces have to be fixed in time. Indeed, as I shall suggest in the writing below, whilst the physical fabric of a conservation site may stay the same, new readings, interpretations, uses and even physical re-readings of a space maybe incorporated and or blended with a traditional conservation site/space to maximise the widest number of outcomes and encounters possible.

To explore these issues now, I want to explore the recent history of conservation in Shanghai; as the reader will note, I will firstly explore the more sterile aspects of Shanghai's conservation spaces, before I turn

in more detail to new and contemporary experiments that have been developed to open up traditional heritage spaces in the city.

4 background to the history of conservation in Shanghai:

As He and Wu have pointed out 'from 1995 to 2004, more than 745 thousand households were relocated, and over 33 million square metres of housing were demolished in Shanghai' (He and Wu, 2007: 194). Of these demolitions, as a variety of writers have pointed out, many older buildings, traditional quarters and indeed traditional historic concessions have been destroyed. But with the dawn of the new century increasingly old historical buildings began to be 'rediscovered for their economic value' (Ren, 2008: 24). Thus in 2002, the former mayor of Shanghai Xia Liquing, argued that historic buildings should be viewed as an additional to the progressive development of the city; as Xia Liquing believed the historic quality of Shanghai's urban heritage was critical to its future:

Shanghai is a famous city whose rich historical and cultural content is accredited by the state. The process of constructing a modern international metropolis must take into consideration all the processes of new developing

districts and the conservation and the renewal of old districts within an integrated historical context. . . . [T]he 21st Century is full of promise. In the new century, we will build Shanghai into the largest economic shipping centre in China, placing it in the first rank of historical cultural cities. (Liquing 2002: 148)

Moreover, in 2004, the new mayor of Shanghai Han Zheng developed a slogan that seemed to bring the city's historic past into a modern context: "Building new is development, preserving old is also development" (Ren, 2008: 31);

Thus, as Olds (1997), Weiping Wu (2004), Pan, (2001; 2005), Ren (2008) and Jansson and Lagerkvist, (2009) and others have argued the rise of conservation in Shanghai and particularly the conservation of Lilongs, Shikumen houses and several traditional 1920s and 1930s buildings has emerged within a wider place-making strategy to market the city and produce nostalgia. As Pan (2005) has stated:

> Colonial Shanghai rekindled collective memory and in the process of remembering, itself was re-invented. With its success in the colonial past in setting trends, finding opportunities, and witnessing miracles, Shanghai

> provided a somewhat 'infectiously decadent, but alluring background and setting' (Dai, 1997: 158) especially for those working in the film industry…
>
> … the stereotypes reflected in 'Shanghai nostalgia' were the images of colonial Shanghai as 'Paris of the Orient', 'Whore of Asia' and the 'Paradise of Adventurers'. Yet… it was the native producers who orientalised the oriental to serve their strategic needs (Tinashu Pan, 2004: 13-14).

Here then the importance of this colonial nostalgia, as Jansson and Lagerkvist claim, is that it conjures up imaginaries of cosmopolitanism, tolerance, and financial success (Wu, 2004: 167); moreover, as these writers attest, a valorisation of 1920s and 1930s has allowed developers to 'world' the city and produce it as a 'leading commercial hub' (Jansson and Lagerkvist, 2009: 43).

Particularly, Jansson and Lagerkvist argue that:

> In order to turn this increasingly global city into a leading commercial hub of East Asia, planners and politicians, commercial interests and entrepreneurs have jointly encapsulated the city by employing a Shanghai nostalgia for the Golden Age of the 1920s and 30s (Pan 2005) and by calling for a retroactive future gaze, reminiscent of the inter-war era, planners and policy makers create a hyper-real sense of futurity, inclusive of futures past and futures never fulfilled (Jansson and Lagerkvist, 2009: 43).

Thus, as Ren has eloquently stated, rather than 'hindering urban growth' the new local governmental strategy of historic conservation 'serves the same development goal in globalizing Shanghai. Historical elements in the built environment are selectively recycled to produce a new transnational space' (Ren, 2008: 23).

5 The selection of conservation space?

Arguably, then, the conservation of Shanghai's historic colonial built heritage has, in many ways, meant that other ideas of heritage, buildings and identities have been side-lined. Firstly, in line with the marketisation of the as 1930s heritage colonial heritage, Weiping Wu (2004) has suggested that a great deal of historical conservation in the city has been concerned with the Bund which lies at the centre of the city near the Huangpu river; the bund which of course, was the central trading point during the colonial period (and unofficial heart of the city) houses approximately 250 classical and grand buildings. Moreover, as Wu states the wider waterfront near the bund has also been labelled a

historical protection zone by the government and the main street between the buildings and the water has been widened so tourists can walk there.

Here whilst the conservation of these buildings is certainly important, Wu states that

> the Bund's preservation really has less to do with restoring the buildings than it has to do with widening the street and becoming a new tourist attraction. It is motivated more by the vision of a new Shanghai to rival the old than simply nostalgia for the past glory. Through this promotion of the heritage industry, the government also asserts itself forcefully in the city's future development (Wu, 2004: 171).

Interestingly also as Wu states government departments have also been located here to encourage connections between the contemporary administration and a long history of grandeur, cosmopolitanism and wealth.

Conservation and the Lilong's

But where the bund and the concessions have survived, poorer historic urban spaces (and more dilapidated areas) in the city have faced demolition. Specifically as writers have pointed out, one space in particular that has been subject to a great deal of demolition are the

Lilongs. Lilong, as Arkaraprasertkul (2010d) has claimed literally means "neighbourhood lanes", where *Li* (in pinyin) literally refers to neighbourhoods and *longs* refer to Lanes. The Lilong's as Arkaraprasertkul and others point out refers then to a material physical fabric of lanes and courtyards (and courtyard housing) that were built in the 1840s; after Shanghai became a treaty port (after the Opium Wars), 'British developers built Lilong houses to provide basic accommodation for Chinese labourers. A typical *Lilong* neighbourhood is a walled area community composed of a main lane running all or half-way across each housing block connected by perpendicular branch lanes' (Arkaraprasertkul, 2010d; page 1).

Image 1

Moreover, as Arkaraprasertkul, has pointed out, 'the Lilong was modelled after Western row houses with the Chinese characteristic lanes and courtyards… …houses are clustered to resemble the basic traditional Chinese houses, allowing many families to live together in the same compound' (Arkaraprasertkul, 2009: 17).

Another feature of the Lilong's is the houses or Shikumen (means stone gate); importantly, like western town houses or western terrace houses in the UK, the Shikumen have two to three stories and distinctively they often come with prominent stone gateways.

Image 2

The Shikumen that are attached to each other like terraces are made up of high brick walls that enclose narrow front yards, that are hidden from view. As French has argued at the height of their popularity there were approximately 9, 000 Shikumen in Shanghai housing 60% of the population; however, with continued demolition and the popular growth of the high rise, the proportion of inhabitants in the Shikumen are much lower (French, 2010: 246).

However, whilst the Lilongs can be defined in terms of their physical heritage, writers have also pointed out, that the Lilong's have a long intangible social and cultural heritage. As Arkaraprasertkul has written then,

Because each unit does not have much living space, and the Lilong rows are laid out parallel to each other in a close proximity, lanes are used by Lilong inhabitants as a living space, which is common to the Chinese who see outdoor activities as prominent to communal life. These activities that take place in the lanes range from exercises – particularly Tai-Chi – to commercial activities, hawker businesses, barbers; to recreational activities as well as service, mah-jong, cooking, laundry drying, outdoor eating, sewing food preparation (Arkaraprasertkul, 2009: 20-21).

Having visited the Lilong's in Shanghai myself, I have also witnessed first-hand this impressive urban culture which sits semi-hidden within a vast labyrinthine network of narrow streets, little alcoves and hidden courtyards.

Despite the fact the Lilong's have remained for centuries, in the last few years, as the land they reside on has gone up in value, as a result of speculative building (because they are in the city centre), these buildings have often been demolished; furthermore, as writers have pointed out, often traditional residents have been bought out by the Shanghai municipal council in return for new modern (westernised) apartments with decent sanitary facilities and kitchens (features that are often lacking in the original buildings. However, rather than keeping the

Lilong's for posterity often these buildings are destroyed to make way for commercial developments of huge residential high rise towers.

6 Renovating the Lilong's and Shikumen: The Xintiandi and the Tianzifang areas

Despite the general demolition of the Lilong's conservation has taken place in some places; As Wang and Lau, (2009) have argued, the Lilong's with their colonial association and their complex labyrinthine structure has fascinated tourist's officials and developers alike. Specifically and pointing to one development in particular the Xintiandi (a series of renovated Shikumen houses that has become a retail-shopping district,) Wang and Lau, (2009) have contended that

> Through so called adaptive reuse, US architects [Greg Yager and Scott Kilbourn] demolished old structures and reconstructed them to provide a 1930s appeal. Meanwhile after changes were instituted to the interior space, these lane-houses were converted to wine and dine and retail and entertainment complexes. The project fuelled a wave of nostalgia for the city's splendid past, as it has been previously called the 'Paris of the Orient'. Historical buildings were appreciated as being cool and fashionable, invoking a sudden vigour to every aspect of city life (Wang and Lau, 2009: 59).

The Xintiandi redevelopment, designed by Benjamin T. Wood and Nikken Sekkei International has generally been regarded as a success by many and recently, in an article in the New York Times, the redevelopment has been viewed as a

> "entertainment environment" stuffed with modern restaurants, clubs, cafes and boutiques, accessorized with old bricks, stone gates and ornately carved wooden balconies from the dense warren of old courtyard houses that previously filled those blocks. Xintiandi proved so successful a model for urban redevelopment that it spawned at least dozens of duplicates across the country. Developers now use the term "to Xintiandi" when asking their architects for more aspirational China-lite designs (Iovine, 2006)

However, whilst the Xintiandi might now be viewed as a vital space, (and a space that has been ultimately saved from demolition/land speculation) various comments have suggested that the over commercialisation of the space has brought with it a new kind of cultural sterility. Discussing the Xintiandi project then, Ren has claimed that this new kind of development has turned a historic part of Shanghai into a posh entertainment quarter for '"wealthy Chinese" locals and people

from other provinces, and foreign ex-patriots' (Ren, 2008: 31). Interestingly Ren points out, that the people who use the space and who now live near these spaces are not young affluent professionals looking to live near 'employment opportunities' in the city centre. Rather the people who move in are usually older people with money who are looking to buy older houses as 'assets' with the expectation that these buildings will eventually appreciate and produce a financial return.

All in all as Ren points out, with changing tastes

> historical preservation is driven by expectations for potential economic return through raising property prices as well as attracting investment and tourists. Old historical buildings in Shanghai, once regarded as worthless in the frenzied development boom of the 1990s, have been rediscovered for their economic value (Ren, 2008: 31).

But most importantly here as Ren suggests, what is being conserved here are only 'the shells of old buildings', and social preservation 'a practice of not only preserving historical buildings but also consciously preserving the lifestyles of residents' is not being adopted (Ren, 2008: 31). Ultimately as Ren contends here, the original residents of these spaces (residents who are usually retired or over 60; or

poor) are being increasingly displaced from these new ‘heritage zones’ (op cit, 31).

Admittedly and paying attention to Arkaraprasertkul’s critique of conservationist sentiment, many of the original residents might relish the chance of living in new and comfortable modern apartments; however, as Hammond (2006) has shown whilst many of the residents may well desire the comforts of new apartments, many people long for the personal social relationships and indeed the architectural fabric of the Lilong’s. In his recent study then, Hammond illustrates his thesis through *The Sense of Community Index* (SCI) and open-ended interviews;

> Results show that sense of community was clearly higher in the Lilong than current apartments. Results indicated 57% of all SCI questions regarding Lilong were answered in a favourable manner towards community compared with 44% regarding their current apartments. The open-ended interviews strongly support the findings of the SCI. Sense of community has diminished during the massive migration of millions of Shanghainese out of Lilong (Hammond, 2006: 55-56).

Thus, whilst Hammond acknowledges that many of the new residents love the new living standards of the apartments they have

moved to (especially in terms of sanitation), residents still long for the deep social interaction that was fostered in these traditional spaces. But most importantly – and less well explored by Hammond – Hammond's results also show that whilst some ex-residents are very much pro-demolition many of these ex-residents also wanted to see some of the Lilong's conserved for educational purposes.

After suggesting that s/he would like to see 99% of the Lilong's demolished, one of Hammond's respondents commented then:

Hammond: And if you leave them should people live in the 1% that they leave or should they just be like a museum?

Respondent: - Yeah. Maybe just like a museum. I think Shanghai should still have several Lilong like on Shimen Road. Just like a museum to teach others. The only people who choose to stay in Lilong do it because it is convenient to downtown. It's like my old Lilong, you could just walk to Huaihai Road or Nanjing Road (ex-resident of the Lilong's in Hammond, 2006: 78).

Here whilst the respondent was very much pro-demolition of the old, noticeably there is a strong conservation sentiment in this respondent's comment which reveals a sense of nostalgia and a pedagogical responsibility to new generations of Chinese people.

7 Distinctive places: Luwan and The Duolon Road

Whilst the bund and the Lilong's are two of the most prominent spaces that have achieved conservation status in the recent development drive, it is also noteworthy that a few distinctive or exceptional spaces (as identified by the municipal government) have also been ear-marked for conservation; specifically as commentators have observed mainly, the spaces of conservation are either buildings and/or concession streets that can be found outside of the central city. Some of these concessions are now home to a series of luxurious shopping spaces and entertainment zones, like the Xintiandi. As Pan (2004) has pointed the upper quarter in Shanghai particular has been hit by mass gentrification particularly in the Luwan. Luwan which was originally part of the French Concession, is well known as one of the most prestigious sections of the city and as Pan notes, the 'historical building of the Colonial French police station has been renovated and become home to cafes, restaurants and stores selling brand name merchandise' (Pan, 2004: 119).

In the north also another major district that has been subject to this new kind of commercial conservation has been the Duolon Road (originally called Darroch (窦乐安). The Duolon Road built in 1911

exists in the Hongkou District of Shanghai and was built by the Municipal Committee of Shanghai (a committee of Western businessmen); interestingly the road was built outside the international settlement (the British, French and American colonies); interestingly in the 20s and 30s this road became associated with a series of cultural elites and various famous Chinese writers who lived on the road producing new writings and ideas. Writers included such as Lu Xun (lǔ xùn 鲁迅), Mao Dun (máo dùn 茅盾), Guo Moruo (guō mò ruò 郭沫若) and Ye Shentao (yè shèng táo 叶圣陶) to name a few.

Again like Xintiandi, the development approach to the Duolon Road taken by the government has been one of commercial conservation approach where historic space has been constructed as a site for tourists and shoppers alike. And as can be gathered from the various reviews of this space, the Duolon Road has become a very attractive site for tourists and shoppers to the extent that the Shanghai News and Press Bureau of the City has praised the Road as a 'cultural street' that has witnessed a 'hundred years' of Shanghai's history (Cultural-China.

But again, like the Xintiandi, the Duolon Road has also been met by similar criticisms. Thus in the last few years writers and commentators such as Pan Lu (2008)[i] have argued in very political and

economic terms that the Duolon Road has become an unsuccessful historical simulacrum:

> Yet there is a rupture between historical value, market value, and the everyday dynamics of the surrounding neighbourhood. Being too much concerned with exhibiting every inch of cultural relics possible, Duolon Road loses in some way its charm by musealizing itself instead of enlivening its history as a part of its ongoing life… A perceptible economic depression has not left Duolon Road since its reopening. Somehow, by failing to retrieve its former cultural capital, Duolon Road has been reduced to an unsuccessful simulacrum of an old Shanghai that is simply no longer to be found (Pan, 2008: 3)

What is important here as Pan points out is that spaces like the road have been musealized; that is quite simply by attempting to over-emphasize the historical fabric and signifiers in the space, the space ends up producing a sense of 'depression' or sterility that feels lifeless and unenlivening.

In opposition to these spaces, Pan Lu argues that the Shaoxing Road located near to the French Concession is much more interesting. Essentially Pan Lu suggests that one of the most endearing qualities of

the Shaoxing road is that the shops in the road belong mainly to migrants and international arrivals, who have re-interpreted many of the old spaces constructing them in their own style. As Pan Lu contends what is exciting about these spaces – *and what is economically popular about these spaces* – is that the 'local imaginary of the old local milieu [has been given] new life' (Pan, 2008: 5).

But if she is praiseworthy of these developments, then, later in this paper, Pan Lu argues that Bund 18 formerly known as the Macquarie Bank (built in 1923) is possibly one of the most successful architectural developments in the city. Particularly Pan Lu admires the way that in its renovation the bank acquired a 'new life of its own': Thus, Pan Lu states that

> A UNESCO award was given to Bund 18 for its successful renovation in 2005, for its well-balanced combination of historical value and present-day functionality. 'Renovation' as proposed here by Italian architects richly experienced in renovating Venice, is supposedly not to remake the past but rather to provide it with a new life of its own. In this most nostalgic example of architecture we find yet another expression of nostalgia: not as a form of yearning for the return of (or to) the past, but rather as a tool for making history (again). (Pan Lu, 2008: 10).

Here Pan Lu's comments are important in that they suggest a new way of using architectural heritage in the city; as Pan Lu suggests here, an approach that allows historic buildings to be reused in modern or president day functional ways brings new life to the space; thus, rather than spaces steeped in a shallow commercial nostalgia, Pan Lu offers an alternative to the new contemporary *commercial heritage-conservation* drive.

8 the rise of heritage simulacra

Finally and perhaps most importantly in completing my survey of architectural heritage in conservation in Shanghai, I now want to finally discuss the rise of some new simulacra spaces in Shanghai. On one night in the city in September 2010, I was lucky enough to come across an underground Mall in the people's square (in the centre of Shanghai); as I ascended the steps into the Mall I was astounded to find that the Mall had been produced a replica Lilong - see image below:

Image 3

Clearly as you can see from these images, an entirely faux series of Lilong's with faux back lanes have been built by city constructors; and moreover, as I wondered through these faux-lanes I was surrounded by nostalgic images and displays for 1930s Shanghai. As Arkaraprasertkul might argue, these replica lanes could represent a neat compromise between a contemporary conservationists and nostalgia seekers that are seeking to preserve some essence of the Lilong past, and a contemporary Chinese urban population that is looking to live in well-conditioned modern contemporary apartments. But as I walked around this space and the painful attempts to preserve some sense of a nostalgic image of 1930s Shanghai I was hit by waves of sadness; possibly, the kind of sadness that is perhaps displayed in the writing of Philip K Dick when his science-fictional characters come across simulacra's of the past, or even animals – see for instance 'Do Androids Dream of Electric Sheep' (1968). What was evident to me, was that the lanes' have been 'preserved' like this in a faux simulacra space because there is in fact a very strong nostalgia for these lanes (even if many people do not want to live in them). And on walking through the lanes, I was struck by the feeling that developers had almost produced this mall

in a desperate attempt to conserve some image of this Lilong heritage before it is all completely demolished or lost by developers. This simulacrum Lilong Mall represented to me, an implicit understanding that people were already resigned to the fact that the Lilong's will be demolished.

And it is because of this attempt to produce a poor and disneyfied imaginary of the Lilong's in this highly sterile commercial space that makes me believe ultimately that within Shanghai there is still some strong underlying cultural attachment to these spaces; thus for instance in the opening lines of Wang Anyi's The Song of Everlasting Sorrow, we are hit with the following lines:

> Looked down upon from the highest point in the city Shanghai's *longtang* – her vast neighborhoods inside enclosed alleys – are a magnificent sight. The longtang are the backdrop of this city. Streets and buildings emerge around them in a series of dots and lines, like the subtle brushstrokes that bring life to the empty expanses of white paper in a traditional Chinese landscape painting. As day turns into night and the city lights up, these dots and lines begin to glimmer. However, underneath the glitter lies an immense blanket of darkness – these are the *longtang* of Shanghai (Wang, 1995; 2008: 3)

9 Conclusions: vital or sterile spaces? Mixed-use conservation spaces?

In conclusion then this paper has made the claim that there is a case of the conservation of China's traditional urban quarters; of course, as I have pointed out, the conservation of these spaces must not mean however, that the living standards of people are compromised; indeed as Non Arkaraprasertkul (2009; 2010) rightly points out, conservation nostalgia for the Lilong's could mean that many people are imprisoned in poor living quarters (by modern standards) that cannot be easily renovated.

In this way, this paper, to some extent argues that there perhaps is a case for some demolition and relocation if Lilong quarters reduce people's quality of life. Moreover, as Arkaraprasertkul suggests perhaps the rebuilding of new low-rise houses – in the style of the Lilong's – might meet the needs of a variety of social actors from residents, to economists to conservationists alike; and since high rise – as we have

seen – is often blamed for the destruction of traditional neighbourhood ties, then it would seem that the replacement of the Lilong's by new kinds of low-rise housing with Lilong features would be a more than excellent compromise. But this paper has suggested something else. Drawing upon the work of Hammond and others, it has also been argued that conservation of the Lilongs and Shanghai's built heritage should remain for pedagogical and even social psychological reasons; indeed, as I have suggested, in this short work, many of the conservation spaces we have discussed are very much tied up with wider collective and even personal ideas of memory and heritage; and in this regard, whilst demolition might be the answer for some, as I have contended here, for some the traditional buildings of Shanghai also serve as important markers – or anchors – of an age gone by. Particularly as we saw in the work of Hammond for some the historic buildings of Shanghai might actually serve as witnesses of the past, as spaces of educational value; and so in this way, it is the argument here, that there is still indeed a need for historic conservation in Shanghai – especially of spaces such as the Lilong's.

But whilst this paper has provided a pro-conservationist position, it has also been suggested that built conservation might also take place

on more social and functional terms; in this regard, I have argued for what I have called a *critical conservation* position that is wary of what we might describe as 'sterile conservation space'. Indeed, by reviewing many of the distinctive conservation spaces of Shanghai such as the Xintiandi, Luwan and The Duolon Road it has been claimed here that strong commercial approaches to these spaces have in fact produced a very sterile form of urban conservation; particularly and drawing upon the work of Pan Lu and my own conservation experiences of these spaces, it has been argued here that hard commercialisation may reduce the vitality of a conservation space to the point that the space may as well be demolished. Ultimately part of the problem of commercialisation, as I have said, is that developers often embolden the more nostalgic and hyper-real aspects of the heritage space, to the point that the space becomes sealed and or static in time – a process of museumification.

However, and drawing upon the writing of Pan Lu and my own experiences of the city, I have suggested that alternative approaches can and must exist if we are to develop an effective conservation practice; particularly as Pan Lu rightly says, often breathing life into a conservation space, only needs to involve the re-interpretation of a space

in terms of contemporary functionality. Moreover, by exploring the role of foreigners and migrants in these spaces, Pan Lu implies that hybrid identities bring new life to what we might define as well-worn physical narratives of stone.

In this regard, as I have contended in the theoretical apparatus of this paper, the coming together of the past, with new subjectivities in unrealised ways may offer contemporary practitioners with a new approach to what is now regarded as the built heritage of one of China's most amazing and unique cities.

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Critical Reviews of EIP development strategies for problems of industrial complexes in Korea[1]

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ABSTRACT

Industrial complexes have been regarded as important tools of industrial policy in Korea. In the process of industrial development, some industrial complexes have been blamed as major causes of environment-related problems. In response to social and environmental requests, researchers and policy makers have tried to introduce a new type of industrial complexes, which can deal with environmental problems and economic efficiency at the same time.

'Eco-industrial Park(EIP)' projects have already started up by the central government in Korea. EIP approaches based on industrial ecology are dealing with firms' production systems and environmental management by forming networks of mutually beneficial symbiosis that mimic natural ecosystem.

The government has already developed 5 EIPs and is planning on developing more EIPs across the nation. Throughout the EIP developments, we came to know that there have been some issues and problems in the national EIP development projects. Throughout years of experiences and researches, several important problems in recycling of resources are known because our EIP projects are implemented only on the basis of industrial parks. Recycling networks in Korea are very restrictive and relatively less effective. Also companies have seldom been interested in government-supported EIP projects, due mainly to the related laws and regulations. It has made the participation in the projects of companies less attractive to them,

The purposes of this article are to give a general view of EIP policy and its problems and give the government better ideas of solutions needed to invigorate recycling network to work more efficiently. The purpose of this paper is to emphasize that several aspects of policies and laws governing EIP should be revised to implement the new recycling system. This trial can be much of help with shrinking EIP projects and waste exchange activities leading to cyclical society.

Ⅰ. Introduction

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Problems caused by industrial complexes haven't been significantly settled so far, even though governments and industries have made a lot of efforts. Sometimes they brought about environmental accidents leading to serious conflict between locals and factories. Still industrial complexes have been regarded something unwanted and unpleasant.

With the increased environmental consciousness and strengthened environmental regulations, new approaches to industrial complexes were really needed. These days we could see the newly developed ideas applying natural ecosystem to industrial world. They are called this Eco-industrial Parks. This idea was provided by Industrial Ecology approach in the early 1980s.

The concept of EIP has been thought to be very ambiguous because of lack of generalized or standardized EIP models. Sometimes EIPs are mistaken with other types of industrial complexes like techno-parks, science-parks. EIPs have their own distinct hallmarks as compared with other types of industrial complexes.

Table 1. Comparisons between EIPs and industrial complexes

-	**Traditional ICs**	**EIPs**
Goals	Industrial Growth	Sustainable Industry
Characteristics of industries	Smokestack industry	Environmentally friendly industry
Strength of networks	Weak	Strong
Environmental regulations	End-of-pipe regulation, Direct regulation	Precautionary prevention, Indirect regulation
Viewpoints of waste	Object of disposal	Inefficiency, Potential resources, Underused resources
Relations with technology	Weak	Strong
Relations with locals	Weak	Very strong
Citizen participation	Very limited	Active
Land use	Strict land use	Mixed land use, Compact land use
Types of Regulations	Command and control	Consequentialism
Inter-companies relationship	Vertical relationship	Vertical-horizontal relationship
Types of industrial policy	black-spot policy	eco-industrial policy
Structure of industry	Artery industry-centered	Vein industry-supplemented

EIPs offer significant economic, environmental and social benefits, both to individual companies, as well as to a collection of companies. Drawing on historical and contemporary examples, proponents of EIP networks chart the following benefits: (1) Environmental benefits

linked to improved resource use efficiencies, reduced use of non-renewable resource and reduced pollutant emissions; (2) Economic benefits emerging from reductions in the resource inputs costs in production, reduction in waste management costs and from the generation of additional income due to higher values of by-product and waste streams; (3) Social benefits by generating new employment and raising the quality of existing jobs and by creating a cleaner, safer, natural and working environment(Lowe E.A, Warren J.L., Moran S.R, 1997).

However, there are several major barriers that have to be overcome. Perhaps the most significant of these is that whilst the concepts have been in existence for several centuries, ″planned/designed″ EIPs have not, and so still need time to be a proven and sustainable option. As suggested, the emphasis for the EIP should, however, be on a system approach, rather than focusing on specific streams. Clearly, there are a number of issues to be taken into account, however, the significance of each of the driving and limiting factors identified will vary depending on the geographical, social, political, environmental, economic and institutional context within which the EIPs are being developed.

Ⅱ. EIP projects in Korea

The Korea government started the EIP projects in 2003 coming up with the master plan on the EIP development by KNCPC on behalf of the Ministry of Knowledge Economy. In 2005 the government accepted three EIP projects, Banwol-Siwha, Ulsan, and Yusoo project as parts of national EIP projects. Two complexes, Chunggu EIP and Pohang EIP were added to the pre-existing EIP projects the following year. These five industrial complexes have been supported financially to make up industrial symbiosis of their own industrial sites since then.

In Korea of 2011, EIP projects which are on the second phase of the national EIP strategy are on the track. The distinct feature on the second steps of EIP development is a hub-spokes strategy, which is the world first attempt in the EIP history. To make Hub-Spoke network, other three industrial complexes, Myeonggy·Noksan, Sungseo, Kusan·Kukgang complex, joined the existing five hub EIP complexes. After all hub-spoke EIP networks in Korea consist of eight major complexes and three or four small-medium sized complexes surrounding them. Korean government and experts are expecting this EIP hub-spoke network to invigorate industrial symbiosis and thus contribute the win-win situation of the environment and economy.

Table 2. EIP Hubs & Spokes (2011)

Region	No. of HUBs	No. of Spokes	Regions	No. of HUBs	No. of Spokes
Busan	1	3	Gyeongbuk	1	4
Daegu	1	3	Chungbuk	1	4
Ulsan	1	4	Chunbuk	1	4
Gyeonggy	1	4	Chunnam	1	4

Actually it is evaluated that the first phase of EIP projects in Korea achieved a lot of benefits economically and environmentally. For example, a total of 45 by-product exchange networks have gained almost 13 million dollar economic profits so far.

Table 3. An example of Economic, Environmental Outcomes (case of Ulsan Industrial Complex)

Field	**Name of projects**	**Economic effects** (million/yr)	**Environmental effects** (Ton/yr)
Energy exchange	Steam supply by Incineration plant	$6.0	Reduction of 55,500 CO_2
	Waste heat supply of incineration plant	$3.0	Reduction of 14,810 CO_2
By-products exchange	Firming agent for sludge	$2.6	-
	Organic by-products	$1.4	-

*KICOX, 2011, Model Cases of EIP projects in Korea

Though we could get lots of outcomes, still there have been a lot of problems to solve and some hurdles to overcome so that the EIP projects in Korea make a great stride in the right direction.

Ⅲ. Reviews on some industrial symbiosis studies

Industrial symbiosis-related policy researches in Korea started in the late nineties, government-supported EIP projects fueled researches on industrial symbiosis, which led to various studies regarding EIPs and industrial symbiosis.

Especially Choi Jeongseok(1998, 1999, 2002, 2004, 2010) ushered in industrial symbiosis strategy and proved the effectiveness of industrial symbiotic networking in both economic and environmental aspects. Lee Jaejoon & Lee Sangmoon(2003) proposed several EIP

development strategies that fit for Korea's industrial world. Oh Deogsong & Kim kyungbae(2002) suggested a new kind of industrial estate design modeled on EIP mechanism. Ban Youngwoon(2008, 2009) also worked out a few important EIP tactics. Park Hoongseok tried to spread the case of Ulsan EIP project to other industrial parks at home and internationally. Besides there have been a lot of researches and studies as to industrial symbiotic network projects. Most of them have been focused on EIP policies or put emphasis upon new business practices which have obviously been making contributions to the development of Industrial Complexes and industrial symbiosis.

On the other hand, KNCPC(2003), an organization that had been charge of EIP projects at the very first has brought out a series of working papers on symbiotic networks. Taking over the national EIP projects from KNCPC, KICOX has supported not a few EIP policy projects up to this time. Among them, the policy report of 2008 came up with a new idea, which paved the way for building the world′s first Hub-Spoke EIP model. On top of that, KICOX has accepted an epoch-making EIP strategy suggested by some experts and has been trying to change the current EIP projects into low carbon oriented projects.

Internationally Journal of Industrial Ecology has been taking the lead in research fields of industrial symbiosis, EIPs, waste & by-product exchange etc. In particular a research paper by Raymond P. Côté and Tsuyoshi Fujita(2009) dealing with evaluation of state-run EIPs, an article of C. Block, B. Van Praet, T.(2011) about carbon-neutral strategies of EIPs and Pierre Desrochers′s study (2001) as to symbiosis of cities and industry were viewed as significant for Korea′s industrial symbiosis approach.

Ⅳ. Problems and Strategies for improvement of EIP projects

1. An outline of survey and interview

I conducted a questionnaire survey and interviews with experts of local EIP divisions to find out problems and get some information on policy implications. The survey with questionnaires was conducted upon 80 EIP experts with a help of KICOX from March 15th to April 2nd in 2011(KICOX, 2011). The questionnaires consisted of three categories(policy awareness, hands-on issues and policy improvement) with 18 questions. I got 43 responses included threw wrong answers. I interviewed with ten experts from five local EIP divisions so that I could investigate some problems of EIP projects.

Throughout the intensive survey, five major problems and policy implications around EIP projects were obtained and several hot issues of law and regulatory aspects. The outcomes of survey and interview are as in the following.

2. Information on waste and Database for waste recycling

Because waste policies of Korea are focused on treating environmental emissions, all kinds of waste-related statistics and their DB systems are related with end-of-pipe management or pollutant treatment by rules. Besides, as environmental statistics have been collecting on an administrative district basis, it is extremely difficult for industries and EIP organizations to know real and exact state of waste they could use in recycling network(Forbes R.M, Peter R. W, Marina F, Peter Hindle, 2007).

While EIP projects have been carried out, one of the biggest problems with recycling networks between companies was lack of data and information available for symbiosis. The survey also proved that problem, showing that 72.5%(29 experts) of respondents answered insufficient data and information on wastes and by-products as the most formidable obstacle in EIP projects.

As a matter of fact, the current statistics industrial and environmental are believed to have several problems when viewed from the side of industrial ecology. Understanding and information on industrial process or raw materials of factories are prerequisite for the industrial symbiosis. But unfortunately those kinds of information and data are usually not available for other companies at all. That's because companies don't want to let other companies know about their production process and products.

Now, it is necessary to establish new statistics and DB system for industrial symbiosis. The easiest way to ameliorate to solve statistics and DB problems is amending the existing environmental statistics into more available for any companies that want join symbiotic relationships. That contains adding waste and by-product information of Industrial complexes to Environmental Statistics Year Book(ESYB) and Annual National Waste Statistics(ANWS) respectively. New statistics and DB will have to embrace 279 industrial complexes which account for all industrial complexes made by national and local government.

On the other hand, EIP workers and researches said that the annual Korea Industrial Complex Dictionary(KICD), one of important data sources on industrial complexes, does not have environmental statistics. It means that it's very difficult to analyze both the economy and the environment of industrial complexes simultaneously in terms of industrial ecology. Therefore modifying the existing industrial complex statistics including KICD is urgently needed to help Korea's EIP strategy.

3. EIP Projects restricted spatially by the regulations

Many EIP experts have been pointing out that the EIP projects in Korea had a problem

regarding policy applications. A state-run organization, KICOX, in charge of Korea′s EIP projects, has been very consistent in carrying out an EIP policy in line with the Ministry of Knowledge Economy. It has never allowed local EIP project units to spend money on other than designated industrial activities or non-industrial complexes(Sudhakar Y, Tran Chau Nhi, Hungsuck P, 2011).

Consequently very important aspects of industrial complexes, like pollution prevention, parks and green area, energy-saving facilities, landscape, restoration etc., have been looked down on. This is believed to be one of barriers preventing EIP policy from being spread out on other realms.

The way of thinking that EIP developments should be limited to specific industrial area can be blamed for a hindrance to the betterment of EIP strategy. Place-specific EIP strategy as in Korea cannot be a great help to industrial complexes made up small & medium sized factories, small-sized, and specialized complexes. That′s because they can′t expand their symbiotic relations beyond the boundary of industrial complexes.

If we think of the general state of industrial complexes in Korea, the restriction of EIP business realm on industrial process in special area becomes one of important problems. More over 30% of 279 industrial complexes of developed and managed by national or local government is evaluated as being obsolete or needed redeveloping. These industrial complexes are now becoming a source of environmental conflict and they are subjected to a threat to close recently.

Therefore when we develop EIPs from now on, we should find out good methods to reduce environmental pollution by devising spatial design skills in non-industrial process realm. This kind of efforts may help make problematic industrial complexes environmentally friendlier and in the end can make contributions to reciprocal and cooperative relationship between industry and residents.

Although the focus of collaboration in most EIP projects has been on developing inter-firm exchange of by-products or energy, some experts state that this is only one part of EIP strategies. More areas for co-operation in Korea′s EIP projects should be identified so that EIP strategy can obtain the desired results that everyone can accept. In this respect, some EIP exports in Korea are planning to expand the EIP projects by co-operating with experts of other fields.

In fact, these challenges can be successful when they are backed by law. For example, to put those challenges into practice, landscape provisions of industrial complexes should be added to the current ″Industrial Complex Development Act″ and ″Act on Industrial Conglomeration Activation and Building Plants″.

4. Lack of motivation to participate in symbiotic networks

It is believed that one of major reasons why companies have distastes for EIP programs is lack of incentives for encouraging them to join the programs. The survey this time also came to the same thing with 35%(14 experts) of the respondents.

Clarifying incentives for taking part in EIP projects carries an important meaning to stimulate industrial symbiosis. Incentives are part of the crucial problems that EIP projects are now facing. It is recommended that government give some incentives for the participatory companies, which can be financial assistance, deregulation, R&D supports, tax break, infrastructure etc.

Throughout various economic, environmental incentives, we can boost the odds of companies' participation in EIP projects, resulting in stable recycle chains.

Industries′ participation in EIP projects will be on the rise when they can see environmental or economic performances gained from symbiotic networks. In the survey, 27.5% of respondents agreed to the importance of their own confidence in EIPs′ outcomes. Solutions to this problem might come from mutual learning about symbiotic relationship, not from just public relation as to what EIPs really are. That′s because industrial symbiosis will be more effective and successful when the relationships are made by mutual-adaptation to the wheels within wheels of up-streams and down-streams.

5. Regulations on the location of recycling industries

Unlike natural ecosystem, because there are not decomposers that mediate food chains and facilitate symbiosis in industrial world, it is almost impossible to root up waste problems in closed loops like industrial parks or estates. Environmental industries, in industrial ecological terms, industrial decomposers are prerequisite to the working of industrial symbiosis from the viewpoint of a closed system approach.

In Korea, industrial laws are prohibiting industrial decomposers from locating in industrial complexes for fear of pollution. Because Waste Management Act looks upon them as a kind of polluters, they feel pressured not to get involved in industrial symbiotic relationship so that they can avoid being taken responsibilities for pollution. Consequently, wise and smart use of wastes is shrinking and wastes have to make a long journey to be reused.

Recently experts have been seeking several solutions about discriminative environmental policy to waste-related companies. First of all, a policy believed most efficient is that waste-treatment industries should be categorized into manufacturing industry so that they can get diverse benefits and asset the same rights as other industries.

6. Absence of regionally based recycling network

It's better to link industrial complexes with recycling networks of regions than to see them as isolated islands. One reason for EIP projects not to get welcomed by locals or local governments is due to the lack of connections between industrial symbiotic programs and local communities. Actually when industrial complexes play a pivotal role for symbiotic relationship associating domestic wastes with industrial processes, we can expect much of cyclical regional economy. This can be extended to Eco-industrial Network(EIN) beyond EIPs, followed by environmentally sound regional economy.

As of now, EIP projects have rarely taken the view that neighboring areas and household wastes could be part of their symbiotic relationships, thanks to the policy that the projects have to do with industrial processes within the boundaries of industrial parks. It's time to adjust the current EIP projects to a sought-after concept of co-operating household wastes and industrial parks.

Recently Ministry of Environment has been trying to accumulate recycling industries in some special areas in the hopes of boosting scale economies in waste management and tapping into waste recycling networks nationally. To that end, the government has the plan that wastes and by-products generated in a region should be recycled in that region at first, and then they should go into recycling networks of other areas(Korean Ministry of Environment, 2011). This refers to, so called, integrated waste management systems. But the problem is how to link industrial symbiosis with domestic wastes into a recycling network. In response to this issue, I'm going to put forward a proposal of kind of a new strategy, the regionally based recycling networks.

This network means the web-based regional waste management system that regional traits and administrative districts can be taken into consideration and detailed information on major recyclables can be put together on a spatial basis(Environment & Civilization, 2012). Waste managers can have control over wastes by keeping up with waste stream of a region, while waste users are able to secure recyclable wastes with ease through this system. The regionally based recycling systems are believed that they can ameliorate one serious situation where companies that belong to a network have been complaining of difficulties obtaining sufficient wastes or by-products that can be used as materials in their recycling processes(Korean Ministry of Environment, 2012).

Ⅴ. Conclusions and some suggestions

Obviously there are not a few legal obstacles to building regional symbiotic relationship centered on an industrial complex. It's because current laws have resorted to the end-of-pipe management with little thought of symbiotic networks. This naive managerialism hasn't and

won′t be a help to an integrated waste management environmentally and economically(Sai Liang, Lei Shi, Tianzhu Zhang, 2011).

An integrated approach to environmental management and industrial regulation is needed to encourage by-products exchange network. But still environmental regulations aim to control pollution media such as water, air, soil etc., and manage individual factories and polluters.

Companies, in EIP networks as well, have a lot of obligations to comply with very strict regulations while raising the productivity and reducing the pollution at the same time. This explains a primary reason why industries are reluctant to join the EIP programs.

Currently there are 18 laws regarding the environment and five laws dealing with industrial complexes in Korea. Among these laws, in particular, four Acts (Waste Control Act, Act on the Promotion of Saving and Recycling of Resources, Act on the Promotion of Industrial Clusters and Plant Establishments, Act on the Promotion of Change into Environmentally Friendly Industrial Structure) are closely related to symbiotic networks. According to this study's implications, in the short term it's better to remedy some shortcomings of EIP strategies from a perspective of industrial symbiosis.

In the long run, it might be way effective when a special law in charge of industrial symbiosis between industrial complexes and their local communities is rolled out. However, in reality, amendments of those four laws are preferred if the difficulty of enacting legislations for industrial symbiosis like EIP projects. Now it will be crucial for the two strategies, an EIP policy of Ministry of Knowledge Economy and a regionally based recycling tactic of Ministry of Environment. This kind of combined approach can pave the path for achieving the integration of region, economy, and the environment.

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FOREST "SWALLOWING" CITY: THE ADVENTURES OF MASTER PLAN OF KAVALA IN THE CROSSROADS OF GREEK LEGAL FRAMEWORKS FOR SPATIAL PLANNING AND FOREST PROTECTION

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ABSTRACT

The effects of excessive planning regulation on planning implementations have been often analyzed in planning literature and presented in planning conferences. Rigid legislation and lack of flexibility in policies have often proved to be one of the gravest impediments in implementing good planning, effective, and supported by the public which is planned for. Administrative structure and local conditions can also play a decisive role in the final quality of planning outputs.

The present article analyzes a case study quite indicative of the controversies which might accrue from strict and restrictive legislation, high degree of bureaucracy in administrative procedures, and lack of horizontal coordination between administrative sectors. The specific case is particularly interesting because it upsets the usual phenomena of urban sprawl consuming and destroying rural land, and goes to the opposite direction, with forest "threatening" parts of the city, legally developed and with official urban plan.

The case study refers to the revision and expansion of the Master Plan of the City of Kavala, in Greece, which is in its final stage of approval. Kavala is surrounded by forest areas which constitute a buffer zone around the city. The Department of Forests is managing the forest area and is responsible for the implementation of the legislation regarding protection of forest land. It has also veto power, concerning the preparation of the Master Plan of the city, in cases where urban expansions are planned on forest land. The characterization of forest land, according to the relevant legislation, does not apply only to present forests but also to land that appeared as forest in the first maps of the Department of Forests, since 1920s and 1930s. In the case of revision/expansion of the Master Plan of Kavala, the Forest Department went few steps further than vetoing urban expansions. They claimed that part of the urban zones of the existing Master Plan and the related City Plan -officially approved since 1980 and developed with legally valid building permits thereafter- was forest land, and should be excluded from the urban zone. Furthermore, they based their claim on legal grounds stemming from the constitutional protection of forest areas. This created a legal paradox, since "de-urbanization" of this kind is not provided by planning legislation, and –according to decisions of the Council of the State- is illegal.

This article will analyze the legal aspects of the above deadlock, will examine its sociopolitical and economic consequences, and will refer to an innovative approach proposed by the planning team to overcome it, which could be used as exemplar for similar cases.

INTRODUCTION

The general framework

According to a number of theorists, governance refers to the set of rules, processes and behaviours affecting the way in which powers are exercised. It includes the State, the private sector and the civil society. Governance is the result of the written and unwritten policies, procedures, and decision-making units that govern processes at different levels and control resource allocation within and among institutions. It involves interaction between formal institutions and those of civil society, the complex mechanisms, processes, and institutions through which citizens and groups articulate their interests, mediate their differences, and exercise their legal rights and obligations. In the governance area the State (both central and local) creates a conductive political and legal environment, the private sector generates jobs and income, the civil society facilitates political and social interaction -mobilizing groups to participate in economic, social and political activities. (Campbell, Hollingsworth, and Lindberg 1991; Hollingsworth, Schmitter,and Streek 1994; Hyden 1992; Kooiman 1993; Rhodes 1996, 1997).

Urban governance refers to local governments, urban society and citizens. It assumes a multiple stakeholder scenario where collective problems related to quality of urban life issues can no longer be solved only by public local authorities but require co-operation of other players (citizens, administrative sectors of various levels and specializations, business, voluntary sector, media, etc.), it deals with formal rules (laws, regulations, plans, programs) and informal rules (codes of ethics, customs, traditions). Urban governance is inherently political, concerned as it is with the interplay of stakeholders. (Pierre, 1999; Evangelidou, 2002).

Planning regulations, policies and implementations are interacting and interrelated sectors of urban governance. Their structure and functional characteristics constitute important operative factors directly affecting the level of quality of urban governance. Inversely, the analysis of the various levels of actions generated by urban governance practices may explicitly interpret the interplay of planning regulations, policies and implementations in urban functions.

The present article focuses on the effects of excessive planning regulation on planning implementations. Rigid legislation and lack of flexibility in policies have often proved to be one of the gravest impediments in implementing good planning, effective, and supported by the public which is planned for. Administrative structure and local conditions can also play a decisive role in the final quality of planning outputs. On a first level of approach, case studies may exhibit these effects in a powerful and persuasive way. Their full interpretation, though, may be achieved on a second level of approach, by relating them to the analysis of the various levels of actions generated by urban governance practices. In this way, the link connecting theory and real life implementations may be completed.

Levels of action related to urban governance

Actions related to urban governance can be analysed in three levels. These levels, as slightly reframed by Toonen (1990) and described by De Jong et al (2002), are:

- *The constitutional level:* the whole set of legal and socio-cultural conditions, rules, norms and values that provide the context in which decision making processes and relations take place. Hesse and Benz (1990) call these *Grundregeln* (ground rules). These are rules of conduct or procedure governing the affairs of a community and enforced by a political authority. (The American Heritage® Dictionary of the English Language: Fourth Edition. 2000). These rules are comparatively “static” in not encapsulating change in action, variety or dynamic development.

- *The level of policy areas*: The system of financial, political and organisational relations between various social, economic, administrative etc. actors within a state structure. In this study, this level coincides with a policy sector and refers to plans or courses of action, as of a government, political party, or business, intended to influence and determine decisions, actions, and other matters. (The American Heritage® Dictionary of the English Language: Fourth Edition. 2000). Policies are used in order to achieve goals or objectives, they are more flexible than laws, they might propose alternatives, they are not enforced by threat of punishment if violated, and they have to be supported by active participation of concerned agents, as a prerequisite for their implementation.

- *The operational level*: the whole set of exploratory activities, procedures, techniques and administrative forms used by individuals within the constitutional and institutional framework. This operational level concerns the concrete process of decision-making.

The above three levels of action complement each other in the course of exercise of urban governance. The degree of their balanced coexistence and interaction constitutes a significant success factor for the attempted action(s). In planning, laws usually set the constitutional framework within which planning policies are introduced and planning practices are implemented. They have a supportive role to planning policies and they aim to secure good planning practices and urban and regional development, towards desired destinations.

THE GREEK GENERAL CONTEXT

In contemporary planning history of Greece, effective coexistence and complementary function of policies and laws were seldom achieved. This has affected a lot effectiveness in planning implementations. The relationship of laws and policies in planning and their dependency on specific factors were analyzed through the description of subsequent periods of “planning eras” (Lalenis, 2001) and to the identity of Greece as a member of specific “families of nations” (Newman and Thornley, 1996). Greece, as it concerns legal style, it has elements of both, the Napoleonic and the Germanic families. Consequently, there are differences in the legal style of various laws, and this depends a lot on the sector of administration which introduces them.

Greek State was developed as a very centralized organization, exercising powers and maintaining control over all sectors of public life. Although a capitalist society with conservative governments for the most of its history, the state developed a system of patron-client relations with the lower and middle class strata who became strongly dependent on it, in such a way that their main interest "was not so much in increasing production and in planning the economy but in the strengthening of their position in the state apparatus for the purpose of directly appropriating the surplus” (Tsoulouvis, 1987). For this purpose, a high degree of vertical cooperation was maintained within the State apparatus, but horizontal cooperation was –and still is- minimal. Administrative sectors traditionally have been operating in “vacuums of power”, avoiding any coordination in their function with other sectors, with which they might share overlapping fields of activities. In this way, they were securing their monopolies of power in specific sectors of society. In attempting a reference to the levels of action related to governance (as mentioned above) one can conclude that in such a centralized system, interaction of administration with various stakeholders, public, local authorities etc. was inevitably reduced to a minimum, while the State was retaining the right to control actions by legislating – something for which it had the exclusive responsibility. Thus, the constitutional level seemed to be dominant while the level of policy areas was underdeveloped, and the operational level remained under total control of the various sectors of the State, but still, greatly ineffective. Here it has to be noted that this last level was often the arena of conflicts between antagonizing sectors of the State in their efforts to maintain their vacuums of power.

LEGISLATION, STRUCTURE, CONSULTATION, AND FOREST PROTECTION AND MANAGEMENT IN MASTER PLANS

The backbone of urban planning legislation currently in Greece is Law 2508/1997. According to it, urban planning is expressed in two levels of plans: the first level consists of plans with a strategic character and general directions about land uses, survey of existing conditions, forecasts, alternative ways of development, organization of financial resources, protection of the environment and sustainable development, priorities and phasing of implementation etc. Master Plans of urban areas constitute part of this level (Melissas 2007). The second level consists of plans characterized by design of greater detail of physical characteristics, larger scales of plans, building regulations, and definition of sites of specific uses (schools, nurseries etc.). It includes city plans and revision/extension of them, implementation acts, and special types of studies, such as neighborhood revitalization, brownfield regeneration etc.

Master Plans –which are in the focus of this paper- have a certain structure consisting of three phases: the first contains the analysis of the study area and the preliminary proposal(s), and the other two contain the final proposal and the implementation programme (YPEHODE, 2000). Their area of concern is the area within the administrative boundaries of a municipality. Thus, they deal with the urban environment, the peri-urban zones, and the non urban land of various uses of the municipality (agricultural land, industrial areas, forests etc.). Master Plans are implemented by the related municipalities. Their preparation is organized and supervised by the municipality of reference, but they are approved (promulgated) by the central government, and specifically, by a regional branch of it, the "Decentralized Administration". The official approval of a Master Plan is made with a Presidential Decree which is published in the Official Journal of the Greek Government (FEK).

Part of the preparation of a Master Plan is the consultation process. It is compulsory mainly at the end of the second phase, where the final proposal and the implementation programme are presented. The outputs of the consultation are then used as inputs for the third and final phase that leads to the promulgation. Consultation is organized by the municipal council. Most times it is rather rigid, since "official" participants are only authority consulter groups and organizations (Lalenis, 1993), as well as administrative departments. Means of consultation are restricted to public presentations, and final decision is made by the Decentralized Administration. Input by the municipal council and the other participants, is only of advisory nature, and it is submitted in the type of written comments, remarks and proposals to the regional administrative unit. Consultation broader than the above is voluntary, and it comes as a common decision of the municipality and the planning team.

The predominant nature of the constitutional level of action even in this type of consultation is apparent, since the organization of consultation in the specific points of plan preparation process, the list of "official" participants, the details of submission of written remarks etc. are prescribed by law, and any diversion might lead to the nullification of the Master Plan. At the same time, other elements as flexibility in timing and phasing, variety in participation strategies, positive discrimination in "sensitive" social groups etc., are usually excluded from the compulsory parts of consultation, and this considerably weakens the level of policy areas of action.

It is crucial for the comprehension of the case study which follows, to mention that according to related legislation, participants in consultation are supposed to submit their written input to the municipality within a period of two months after the official public presentation of the Master Plan. In case that some participants fail to meet the deadline, it is assumed that they agree with the presented proposals and the process goes on. This bears an element of possible contradiction in cases that one or more of the departments and administrative units which fail to meet the deadline, might be dealing with uses of "special protection". These are legally designated, and as such, of particular importance for the

preparation of a Master Plan. Their main categories are: forests, archaeological sites and cultural heritage, sensitive environmental areas, agricultural areas of high productivity, and military installations (Melissas 2007). They are protected by the Constitution and any intervention related to them in the Master Plan has to be approved and co-signed by their equivalent department or ministry, otherwise the Master Plan may be nullified. These categories are indicated in Master Plans as ASP (areas of special protection –PEP in Greek)) followed by the specification of their nature (i.e. ASP of forest land).

Forests, in particular, have been a sensitive "heel of Achilles" in Greece in the last decades, since there have been suffering mass destruction by illegal woodcutting, illegal housing, and fires[1]. (Kathimerini, 2007). The fires of August 2007 where huge forest areas were burned, human lives were lost, and many villages were destroyed, shocked people all over the world. Consequently, protection of forest ecosystems constitutes a major social, political and financial matter in Greece.

The characterizations as "forests", or "forest land", or "areas for reforestation" are legally specified for areas which are not urban, they are not included in city plans, and they do not bear any other characterization such as archaeological sites, natural or cultural monuments, or areas of designated land uses of important technical nature. The Greek legal order has an adequate legislative framework of forest protection, while the constitutional amendments of 2001 provided provision for an official record of forests (forest cadastre), the prohibition of the alteration of the nature / characteristics of forests and woody lands, and the compulsory process of reforestation of destroyed forests and woody lands. Given the context of the above constitutional commands, the Council of the State (CoS), came forward with adjudications aiming to prohibit any kind of development in forests. CoS decisions adjudged that inclusion of forest areas in existing city plans or future extensions of them, is, under any circumstances, unconstitutional.

For the areas for reforestation, in particular, CoS ruled that they should regain their initial form as forests, prior to any consideration of altering their official characterization and accommodate other land uses. Reforestation, when declared, is compulsory and it includes both public and private forests. Legal experts claim (Zigouri, 2008) that compulsory reforestation might become a disproportional burden on private property since, according to decisions 576-577/2006, and 3848/2005 of CoS, no right of compensation arises because reforestation doesn't constitute expropriation of any sort, doesn't imply any change of property status, and hence, there is not any cause for reduction of its value. Nevertheless, the declaration of a private area as an area for reforestation repositions this area in a new category where any other land use apart from the reforestation is prohibited. Thus, it is reasonable to expect a reduction of its real value which could justify a demand for reasonable compensation. Even so, though, compensation could be problematic, since inability of the municipality or the state to reimburse the land owner, would not mean nullification of compulsory reforestation.

Given the up to now absence of a Forest Cadastre, supported by clear, updated maps, designation of areas as forests, forest lands, or areas for reforestation has always been the exclusive responsibility of the Forest Departments and the Ministry of Agriculture and Forests. Decisions of this kind were at risk of been inaccurate, since they were based in either old (since 1930) administrative acts without attached maps, or in old maps of a scale 1:50.000. Furthermore, they could not be contested in administrative procedures, but only to the highest levels of Judicial hierarchy, in the Supreme Court. This made any appeal or objection to such decisions practically impossible. It is only recently that a new law, Law 3889/2010 "Financing environmental interventions, Green Treasury, Forest Cadastre, and other arrangements" allowed for some possibilities for change. According to it, new and technologically sound forest maps are supposed to be created for all Greece, with certain procedures

[1] "Transgression of 200.000 ha in East Attica" It is estimated that more than 3,5 million ha of forest land have been transgressed so far, for housing and agricultural development, while the arbitrary houses occupy about 1,5-1,7 million ha. Kathimerini Journal, 1.12.2007, p.8.

and certain ways of financing them. In their final stage of preparation, they will be exhibited to the public, and a process of appeals is prescribed, similar to the equivalent for the preparation of city plans.

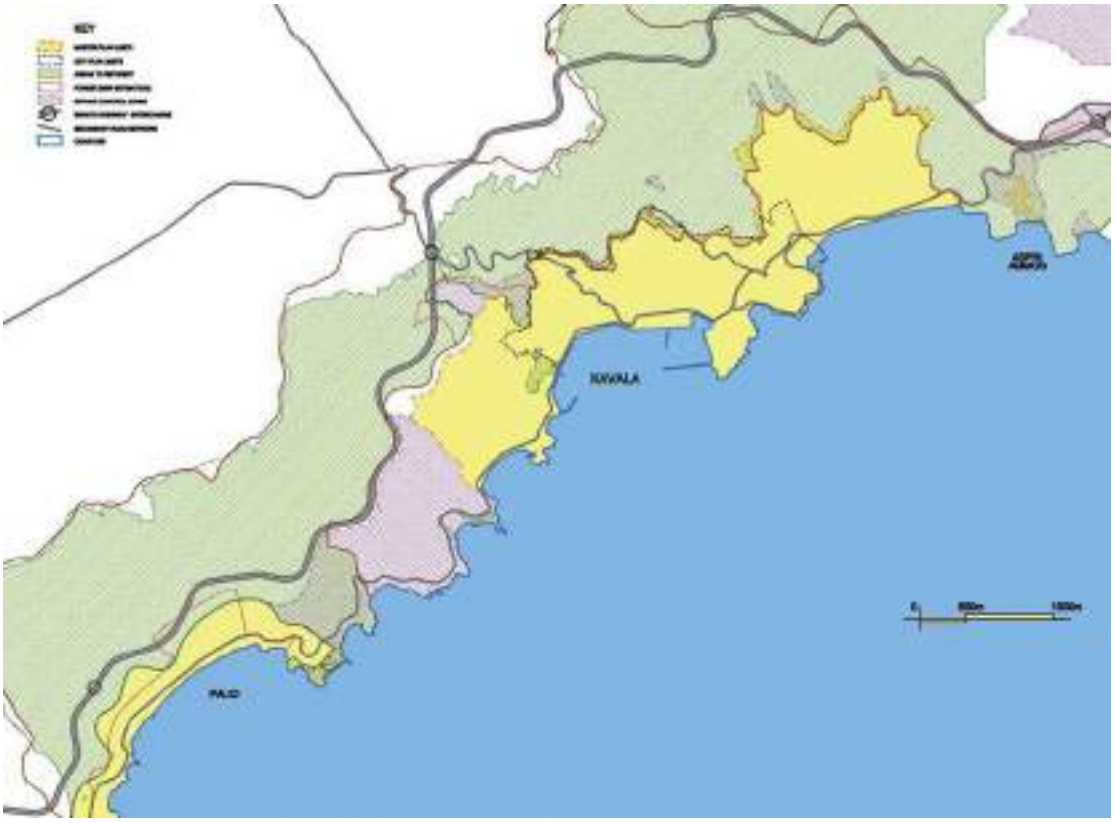
THE CASE STUDY: FOREST OVERTAKING URBAN AREAS IN THE MASTER PLAN OF KAVALA, GREECE

Kavala is the second largest city in northern Greece, and the principal seaport of eastern Macedonia. It is situated on the bay of Kavala, across from the island of Thassos, and on the southern slopes of Symvolon mountain. Its population size (80.000 people) classifies it as a middle sized city. Kavala is the major tourist center in North Eastern Greece, a transportation node where seaways, air transport, the Egnatia international motorway, and rail transport meet.

The first urban planning in Kavala was recorded during the Ottoman Empire, when Kavala was a major tobacco elaboration and exportation center. A City Plan, in the form of a map, was made in 1929, and subsequent revisions and extensions were prepared in 1936, 1939, 1958, 1980, and 1989. The first Master Plan was approved in 1987 and the last revision / extension of the City Plan (1989) were conducted according to the guidelines of the Master Plan (Loukakis, 1997).

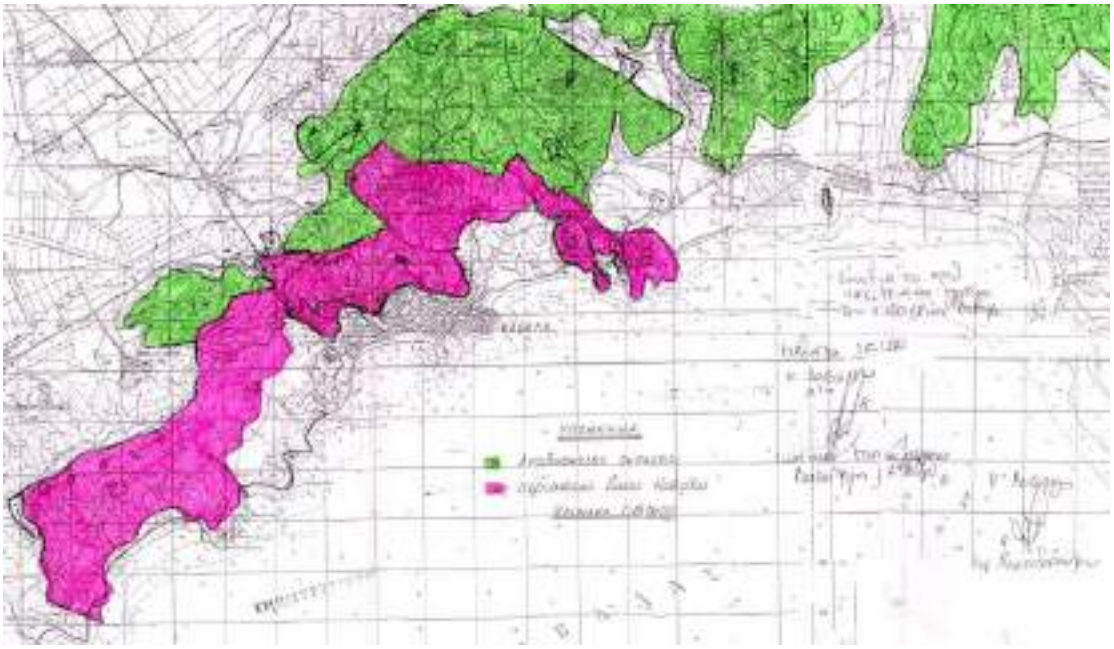
The city boundaries were set by the Master Plan, and in particular points -mainly in the northern part of the city- they concurred with the boundaries of the surrounding forest land and reforestation areas. A big part of these boundaries was later consolidated by the construction of the Peripheral Road Axis of Kavala. Other areas surrounding the city were designated as zones of “mild” tourist development, peri-urban zones designated as future extensions of the City Plan, and peri-urban green belts.

A revision-extension of the Master Plan of Kavala started at the end of 2006, and it was financed by E.C. Structural Funds (Operational Programme “Environment” - EPPER). At 2008 the final proposals were brought up for consultation (see above in page 4). The Department of Forests and Forestlands, to whom the proposals were sent, responded with a document and an attached map, which set fire to the preparation process. According to it, areas assigned by the approved Master Plan as residential areas, and developed as such since 1987, were now characterized as areas for reforestation, suggested to appear in the Master Plan as “areas of special protection – reforestation areas”. Similarly, areas designated as zones of tourist development, social infrastructure, and social housing by a Presidential Decree of 1989 (ZOE) for development control around Kavala -and developed as such since then- were also characterized as reforestation areas. The above assertions were made despite the fact that the long period of implementation of the Master Plan and the subsequent City Plan had created significant legitimate interests in land owners who invested mainly in residences, in good faith for the reliability of the administration. The Department of Forests based the legitimacy of their demands in the assertion that both the approved Master Plan of 1987 and the 1989 P.D. (ZOE) were invalid, at least at their parts dealing with forests and reforestation, since in neither of them there was written approval and co-signing of the Department of Forests for these matters. In the map of the Forest Department the – supposed to be- boundary of the reforestation areas was set inside the urban area, separating, thus, part of it from the rest of the city.



Map 1. Land uses in the Master Plan of Kavala and the new boundaries of reforestation areas set by the Forest Department. (Elaboration by authors).

Investigation of the claims of the Forest Department in the archives of the preparation of the Master Plan and the ZOE P.D. during the period 1984-1989 revealed that the Forest Department had received written invitations and had participated in all the consultation meetings that were organized. It had also been invited to submit its written comments, remarks, corrections etc. in the two months period prescribed by the legislation (see also page 5 above). The Forest Department had never submitted written remarks because, –as they invoked at that time- the maps in their disposition were old and of a scale 1:50.000, and thus, it was impossible to express an opinion about the Master Plan proposals. The mentioned maps were only in paper, since they were attached to Regulatory Acts of Reforestation approved at 1927, 1948, 1956, 1962, 1979, 1980, and 1981. Nevertheless, since no comments had been received by the Forest Department in the two months period, the preparation of the Master Plan went on, assuming that there was consent for the proposals (see also page 5 above).



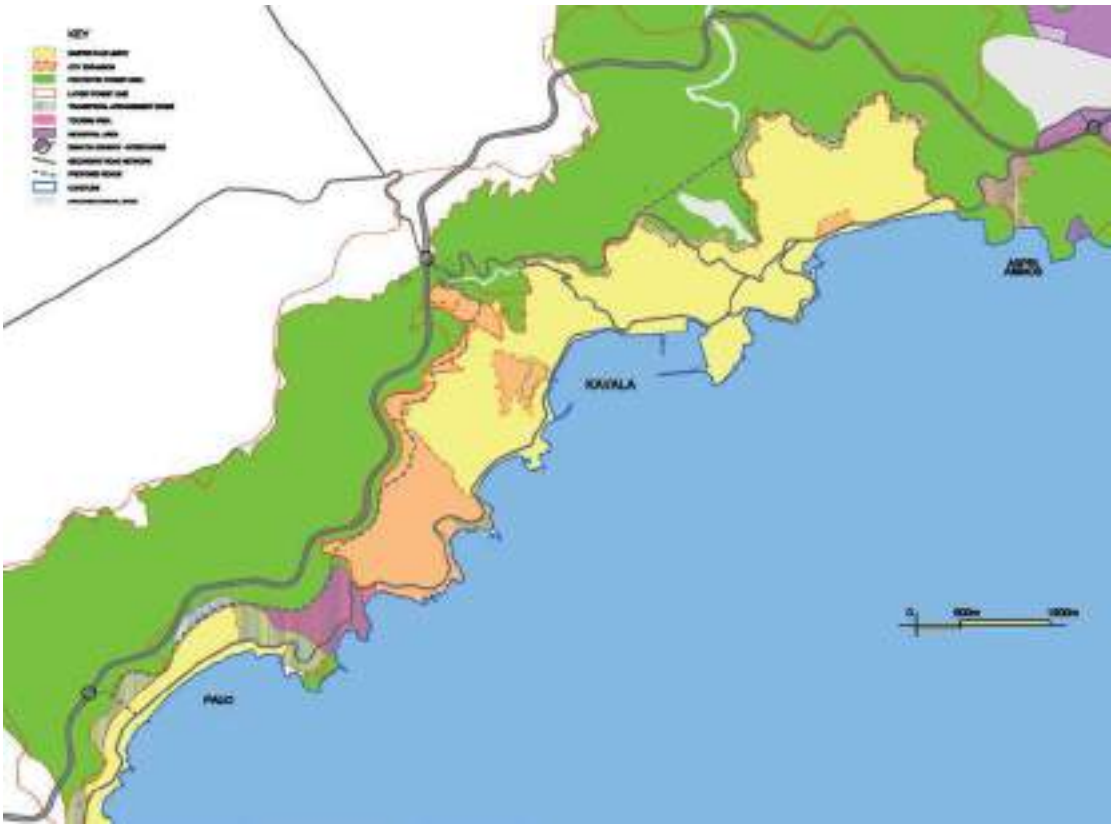
Map 2: Sample of the 1:50.000 maps of the Forest Department attached to Regulatory Acts of Reforestation (copy of the original).

The map which was attached to the document sent by the Forest Department to the Municipality of Kavala as part of the deliberation process for the revision – extension of the Master Plan was prepared in 2008 in digital form. The designation of the boundaries, though, was still based in the preexisting old paper maps, while the officially approved Master Plan of 1987 and the ZOE of 1989 were not taken under consideration[2]. The legal consequences of the intervention of the Forest Department could be grave, because –among other things- existing constructions with legal building licenses would have their legitimate status jeopardized, the new Master Plan would be at risk due to the expected reactions of the local residents, while the "de-urbanization" of areas included in approved urban plans is not provided by the relative legislation.

The inaccuracies in transferring the boundaries of the reforestation areas from the old paper maps to the digital map of 2008 were also indicated in the report of a team of experts, assigned by the Municipality of Kavala at the end of the same year. The team found that the reforestation area declared in the Regulatory Acts of Reforestation was smaller than the one shown in the digital map by 628,4 ha. Another issue which came into question was the one of the legal capacity of the mutually refuting documents. Master Plan and ZOE were officially approved by Presidential Decrees, while the document of the Forest Department was not an official administrative act, and it could be disputed on the grounds of expressing only individual opinion. On the other hand, protection of forests is clearly supported in the Constitution, and until recently, the Forest Department was the undisputed guardian of the constitutional provisions. Finally, appeals against the decisions of the Forest Department –as prescribed in Law 3889/2010- could not be implemented in the preparation of the new Master Plan because: a. they were specifically prescribed for the preparation of the Forest Cadastre and only for this, and b. the study for the Forest Cadastre for the areas surrounding Kavala was not expected before 2014. This was too late for the Master Plan since it was supposed to finish by the end of August 2012, according to the E.C. programme that financed it.

[2] When asked for the reasons that the Master Plan and the ZOE P.D. were not taken under consideration in the new forest maps, the director of Forest Department claimed that their legal obligation was to abide just to the Forest Code. He also declared their "right to ignore" the Master Plan and the ZOE P.D., since the Forest authorities had not co-signed for their approval.

Given the above, the planning team who prepared the Master Plan proposed a way out of the deadlock. According to it, the zones in dispute would be characterized as "Zones of Transitional Arrangements" with abeyance of building permits (new or revised) for a period until the preparation of the Forest Cadastre in these areas. Then, they would go through the process of appeals, and the outcome would become their permanent status by a revision of the Master Plan. This proposal was thought to be flexible enough to allow the Master Plan to be approved on time, while the future use of the disputed zones would be decided by a legal process accepted by the Forest Department. In the meanwhile, there would be no construction activities –something that was also close to the demands of the Forest Department. The difference between the proposed transitional status and the status of "zones of special protection" (PEP) –as demanded by the Forest Department- was that if characterized as PEP, these zones would be almost impossible to become again urban zones, since this changes are not considered to be an improvement for the environment[3], and the modifications would not have any justification.



Map 3: "Transitional zones" as proposed by the planning team (elaboration by the authors).

There is also a recent opinion of the Legal Advisory Council of the State (340/2011) related to the above, which states that residential areas included in officially approved urban plans and developed accordingly since then, which for some reason they were not co-signed by the Forest authorities, they should be considered as lawful urban areas and they should continue with their urban functions.

The planners' proposals and the above opinion of the Legal Advisory Council of the State were notified to the Forest Department which, in turn, responded to the Municipality of Kavala with the 25714/27.1.2012 document, rejecting the proposals and reaffirming the initial claims for the characterization of the areas in dispute as "zones of special protection – reforestation areas" (PEP). In several consequent meetings organized by the Municipality of Kavala and the Decentralized Administration of Macedonia-Thrace, there was no way out of the deadlock. It seemed as different participants were using different languages to communicate, with inevitable result the lack of

[3] This is according to successive related decisions of the Council of the State.

communication. It is characteristic that when the representatives of the Forest Department were asked about a possible procedure to change the characterization of the disputed areas from reforestation to urban uses, they responded that in order to do so, all constructions would have first to be demolished, forest should be recreated, and then the process of changing characterization could commence!! This, of course, was the "sticking to the letter" and "narrow" interpretation of the related decisions of the Council of the State[4], which, applied under the specific circumstances, seemed totally unreasonable.

Currently, no progress has been made towards resolving the above stalemate. The Forest Department insists in its proposals, but apart from stopping the revision of the Master Plan from being approved, it hasn't taken any legal initiative to nullify the old Master Plan and stop constructions in the disputed zones. At the same time, building permits are being issued as regularly, and the E.C. programme financing the study of the Master Plan (EPPER) is rapidly approaching at its end (end of August 2012). This means that if the project hasn't finished until then, the Commission will demand the money paid for the project, back from the Municipality of Kavala.

CONCLUSIONS

In an attempt to analyze the case study of this paper and relate it to a theoretical framework, one should attempt an investigation in the character of the Greek State. It is developed as a very centralized organization with a complex bureaucracy and an overgrown and ineffective public sector. Parts of it have been operating in sub-sectors developing "vacuums of power", and avoiding any coordination with other sectors. In this way they secure their monopolies of influence on specific sociopolitical and economic actors (Tsoulouvis, 1987). Inevitably, interaction with various stakeholders –beyond their "clientele"- such as public groups, local authorities etc. is usually reduced to a minimum, while the State is retaining its exclusive right to control actions by legislating. Legislating, on the other hand, is not effectively coordinated between the various administrative sectors, so that controversies and mutual retractions of pieces of legislation are not rare. In the sphere of implementations, administrative sectors often choose to exclusively implement some laws and ignore others, depending on which ones secure their position in the arena of governance. The above structure and function are grave impediments for the generation and evolvement of effective and innovative policy initiatives.

Planning, as an important element of urban governance, also suffers from the above. In contemporary planning history of Greece, effective coexistence and complementary function of policies and laws were seldom achieved. Planning was mostly attempted by legislation and not by policies because: 1. local administration had few rights and responsibilities in planning and even fewer resources. This disadvantageous position led to inability to formulate policies on the local level, which is the most suitable environment for such. 2. Central government was not in favour of genuine and broad participation processes in planning that has always been a prerequisite for effective policies. To the contrary, they were introducing laws that were not negotiable, did not necessitate participation and were enforced by authority. Furthermore, they could vacillate between conflicting and contradictory laws, bylaws, modifications of laws, and implementations of laws, initiated and implemented by different centers of authority (Ministries), or by different political parties, with related and partly overlapping subjects, in a complex system which, amidst the antagonism of institutions, guarantees a "monopoly of knowledge" (Voivonda et al, 1977, Athanasopoulou, 1998). Rigid legislation and lack of flexibility in policies have often proved to be one of the gravest impediments in implementing good planning, effective, and supported by the public which is planned for. Administrative structure and local conditions can also play a decisive role in the final quality of planning outputs.

[4] For the areas for reforestation CoS ruled that they should regain their initial form as forests, prior to any consideration of the possibility to alter their official characterization and accommodate other land uses.

The case study of this paper seems to provide explicit examples of the above statements. It is quite indicative of the controversies accruing from the interaction of excessive planning regulation on planning implementations, lack of horizontal cooperation between sectors of administration and local government, conflicting laws, and lack of policies in the domain of urban governance.

In attempting a reference to the levels of action related to governance (as mentioned in the introduction of this paper) one can conclude that in the case study the constitutional level seemed to be dominant. Antagonism of institutions (Municipality of Kavala and the Forest Department) was expressed by contest of the legal arsenal of each side. Furthermore, the might of each one of the two actors was not tested in a consultation process where other stakeholders (and especially not of the type of consulter goups) (Lalenis 1993) could also play a significant role, but according to the relevance of the legal tools that they were using to elements and levels of the hierarchy of the Legal Code of the Greek State (the Constitution, the Council of the State). In these conditions, the level of policy areas was rudimentary. Few attempts were made from the side of the planning team studying the Master Plan, and the Municipality of Kavala to formulate a policy approach that might lead to mutual compromises and help to overcome the deadlock, but they were easily discarded by the Forest Department which insisted in the by-the-letter implementation of the forest legislation. Finally, the operational level, which is usually the reflection of the antagonisms of the other levels, went to –and still is- a total stalemate, which is further threatened by the deadline of the end of August 2012, when the Master Plan is supposed to have been approved. Conclusively, the lack of coordination and complementarity among the three levels of action predefines the failure of the particular act of urban governance.

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KEYWORDS

Planning regulation, forest legislation, Master Plan, legal controversy, de-urbanization.

Local spatial planning versus UNESCO WHL Management Plans: a comparison of two cases in Sicily

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Abstract
This paper aims to investigate the relationship between tourism and planning in UNESCO World Heritage List (WHL) sites, with special reference to the relation between Management Plans and other (local and regional) planning instruments and policies able to influence the promotion of sustainable and responsible development. This will be explored through a confrontation between two important tourist locations in Sicily: Agrigento (the Valley of the Temples) and the Aeolian Islands, which have both been recognized as World Heritage Sites by UNESCO. The analysis of these case studies will point out the challenge of integrating different management and planning regimes – which mainly refer to a performative model – in a (still) very conformative planning system. The article will show how supranational policies often lose their efficacy in relation to regional and local planning systems, being in opposition to such systems. The selection of the two Sicilian case studies is particularly appropriate under this perspective, as they represent significant or even extreme examples of the gap between the supranational performative approach of the UNESCO WHL MP model and the conformative nature of the Sicilian planning system; this is due to the different nature and characteristics of the Sicilian planning law and regulations and the UNESCO WHL MP guidelines.
The comparison, proposed in the paper, will explore the influence and mutual relationships between the two UNESCO sites and the planning instruments and policies. The main questions of the paper are: In which way the above mentioned framework of planning instruments takes into account the UNESCO sites? What is the role of planning instruments and policies to facilitate integration and reconciliation? Which are the strategies implemented by the planning system and its regulations in order to manage and improve the tourist flows, according to a sustainable planning approach? On the other hand, does the UNESCO heritage label (and its related policies and management plans) guarantee international and global control over local changes and planning decisions?
The paper will underline how the interrelation among the WHL MP and other (local and regional) plans is on the one hand necessary and on the other hand problematic, due to the diversity of planning systems in each country. Consequently, the paper will consider the legal implications for local planning systems due to the fact that each national and local reality has to spot the most adequate configuration for WHL MP, in the light of existing laws and specific cases. The paper will also show the difficult integration between planning instruments operating in the same area, but managed by different actors, with different time schedules, resources and law effectiveness.

1. Introduction

This article aims to investigate the relationship between tourism and planning in UNESCO World Heritage List (WHL) sites. Its focus is the relationship between WHL Management Plans (MP) and other (local and regional) planning instruments and policies able to influence the promotion of sustainable and responsible development. This will be explored through two case studies of important tourist locations in Sicily: Agrigento (the Valley of the Temples) and the Aeolian Islands. Both have been recognized as World Heritage Sites by UNESCO. The analysis of these case studies will point out the challenge of integrating different management and planning regimes – which mainly refer to a performative model – in a (still) very conformative planning system (these terms

will be explained in the next section of the article). The article will show how supranational policies often lose their efficacy in relation to regional and local planning systems, being in opposition to such systems. The selection of the two Sicilian case studies is particularly appropriate under this perspective, as they represent significant or even extreme examples of the gap between the supranational performative approach of the UNESCO WHL MP model and the conformative nature of the Sicilian planning system; at the same time, the Agrigento Valley of Temples and the Aeolian Islands present differences which are both helpful to highlight difficulties in the use of standard procedures and guidelines for local contexts and specific purposes.

Some introductory remarks on the role and impact of the UNESCO WHL on tourism economy (and its features) are necessary. The aim of UNESCO is not only the preservation of places declared as human heritage sites. The macro-objectives to be achieved by means of the WHL also include international peace and security and the improvement of quality of life (UNESCO, 1972). Within these macro-objectives, sustainable development and sustainable forms of tourism and fruition are the central (Pedersen, 2002; UNESCO, 2005). It remains questionable whether the aims and targets of the UNESCO WHL are automatically, and everywhere, congruent with the workings of the tourism sector.

The Convention Concerning the Protection of the World Cultural and Natural Heritage (World Heritage Convention), adopted by the General Conference of UNESCO in 1972, established a unique international instrument that recognizes and protects both the cultural and the natural heritage of outstanding universal value (UNESCO, 1972). Through these systems of protection, WHL contributes to sustainable local and regional development (Rössler, 2006). Most nations are certainly interested in promoting monuments and sites for the WHL in order to improve prestige and economic growth in the form of tourism: a country obtaining a place on the WHL can be compared to a restaurant receiving a Michelin star (Brattli, 2009, p. 37). A large literature shows how tourism benefits from the UNESCO WHL label. Yet, simultaneously, UNESCO promotes awareness of world heritage sites and advocates principles of sustainable tourism (Drost, 1996; Evans, 1999; Jones and Munday, 2001; Lyon, 2007). This raises important questions. Yet, the impicit assumption that UNESCO WHL 'automatically' promotes sustainable development and sustainable forms of tourism is questionable.

Brattli (2009) suggests that the use of a common world cultural heritage – in an actor-network context where multiple and even conflictive interests take place – has first and foremost a rhetorical purpose. For example, Di Giovine (2009a) highlights the convergence between a concern for heritage and the concerns of the global tourism industry, linking the obsession with authenticity endemic in tourism with the complex issue of "authentic" heritage site preservation. The rhetorical purpose of the UNESCO label is evident in the 'sustainable' attribution which is often awarded to all the tourist activities which are developed in the UNESCO sites, notwithstanding the nature and impacts of each activity or initiative.

Therefore, if the convergence of the targets of the 1972 UNESCO Convention and the WHL with tourist activities promoted at local or global level are not taken for granted, what is the role of planning instruments and policies to facilitate integration and reconciliation? Which are the strategies implemented by the planning system in order to manage and improve the tourist flows, according to a sustainable planning approach? On the other hand, does the UNESCO heritage label (and its related policies and management plans) guarantee international and global control over local changes and planning decisions?

2. Preservation versus (tourism) development: the contested role of the WHL Management Plan

Potential conflicts between sites' preservation and development have gradually become objects of attention for UNESCO, with an increasing focus on management as a solution (UNESCO, 2002 and 2005). In order to outline the importance of proper heritage management, in 2002 the WH

Committee adopted the Budapest Declaration[1] where Member States are invited to support the protection of heritage, trying to assure a proper balance among preservation, sustainability and development. The general strategy of the Management Plans (MPs) is based on the conservation of listed sites for future generations, thus applying the sustainability principle to the management of cultural heritage. It is compulsory to submit the MP for new sites entering the list. This plan is then extended to all sites, included those already inscribed. The Convention requires the governments to encourage MP preparation for all the WHL sites, including older WHL sites, which had no MP, (Blandford, 2006, p. 356). Such obligation has been strengthened after the negative experiences in some cases, at world level, because of the lack of adequate management systems.

Consequently, the submission of a MP has been a prerequisite of WHL inscription, in order to guarantee an effective and efficient work of goods' protection and management. The MP is intended to specifically reveal how possible conflicts can be solved and how conservation of a candidate site will be managed, administered and monitored in the future (Blandford, 2006, p. 356). The MP is not only involved in the protection of goods\objects, but also in their management as one of the several targets to achieve is the integration of the management of protected goods to the life of the economic and social community they belong to (Solar, 2003).

When the good is not protected or managed according to the established terms and when the state does not have to solve a problem or cannot solve a problem, the Convention establishes the possibility to remove such item from the List, depriving it of the title of Outstanding Universal Value (OUV); to this end, there are provisions regarding regular inspections[2]. The UNESCO World Heritage Committee, in considering site nominations, has put increasing emphasis on the requirement for MPs as a "vital long-term framework for the ongoing management and conservation of the OUV of sites" (Blandford, 2006, p. 356). Thus, UNESCO avoids a position where countries which do not take their responsibilities seriously can undermine the system itself.

Starting from the values which led to the inscription on the UNESCO's WHL, the MP arranges a management system that carries out an integrated analysis of the site status, spots the changes in action, assesses future scenarios that can be reached through targets and possible interventions and also assesses their impact on the locality. It also chooses the strategies to attain prefixed goals and verifies their achievement using indicators which are monitored systematically. Consequently, a strategic MP leads to the formulation of projects that are incorporated into the annual work programme; many of these measures can be found in the development plans covering the sites (Lyon, 2007). The two fundamental elements in a MP are thus its strategic aspects and its operating features. The MP, as Palo (2007) states, should not be intended only as an instrument of protection and preservation as an end in itself, but should establish an effective management model for historical, cultural and natural resources. This model should also be able to address the choices on urban and economic planning for the development and enhancement of a wide area. Within this perspective, the MP represents the connection between different planning instruments and policies in order to: a. preserve over time the integrity of values leading to the registration within UNESCO's WHL; b. combine the protection and preservation through the integrated development of local economic resources such as tourism; c. involve numerous actors (even those having opposing interests) in a common and local decision-making process (Feilden and Jokilehto, 1998;

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1 http://whc.unesco.org/en/decisions/1217/

2 The basic principles representing the reference foundations for the MP in order to define its contents are: concepts of universal value, cultural and landscape system, methods of deliberative democracy, assessment and peculiar features of cultural values, model of endogenous development, local culture and its development, local tourism, collective property rights, risk analysis and integrated management. The management of a WHL site is based on a detailed analysis of its significance, which has in turn been part of the nomination procedure (Turnpenny, 2004; Lyon, 2007).

UNESCO, 2005; Blandford, 2006); for example, the MPs can address issues arising when visitor numbers and conservation demands are in conflict (Evans, 1999).
This aspect underlines how the interrelation among the MP and other (local and regional) plans is on the one hand necessary and on the other hand problematic, due to the diversity of planning systems in each country. This is also the reason why the UNESCO World Heritage Committee does not submit a single model of MP. Each national and local reality has to spot the most adequate configuration for this instrument, in the light of existing laws and specific cases (Wheatley, 1997; Pedersen, 2002; UNESCO, 2005). In our experience, this difficult relationship between supranational and local levels is to be ascribed primarily to the different, and even opposing, nature of planning models, that is performative versus conformative. Mastop and Faludi (1997, p. 820) borrowed from Barrett and Fudge (1981) the distinction between performance and conformance: "Conformance means concurrence between the original plan and changes in the outside world. Performance has to do with the way in which a strategic plan holds its own during the deliberations which follow its adoption."
In some European countries (Italy included), plans and policies at a broader level – Provincial or Regional – treat local implementation in terms of 'conformance' meaning that plans (or even projects) at a local level must conform to the broader strategy of the 'general' plan. The main 'nature' of the plan is, consequently, regulatory, usually through a land-use zoning design. As stated in Janin (2008, p. 170) "in conforming planning, the capacity of shaping spatial development is indeed pursued by the attempt to impose a 'correspondence in form, manner or character' to development projects, and implementation is intended as 'an action in accordance with the standards' established by the authority"; in practice, implementation often does not occur, as shown below. This cultural, political and administrative approach is quite often extended to other super-national levels, as in the case of EU policies or in the case of UNESCO MPs. Scholarly literature (Alexander and Faludi, 1989; Mastop and Faludi, 1997; Faludi, 2000) as well as many examples highlight the limits of conforming planning. This is mainly to do with the difficulty of plan implementation in the context of 'putting together' (in a conforming, top-down approach) multi-level collective strategies within a growing plurality of local visions, ideas or projects of spatial development. On the other hand, the EU – and also UNESCO – has developed territorial (spatial) governance processes based on a principle of 'performance'. In this approach, "the capacity of shaping spatial development passes rather through the opportunity of obtaining from specific projects 'the fulfilment of what claimed, promised or requested' by the plan. Thus implementation looks primarily at the 'achievement' or 'accomplishment' and at 'carrying into execution' the aims of the plan" (Janin, 2008). According to Faludi (2000, p. 300), if plans "improve the understanding of decision makers of present and futures problems they face" and help them in making sense of their situations, plans may be said to perform their role.

3. The WHL Management Plan and the planning system: universal versus local?

In the case studies we will analyse, the gap between performative and conformative approach is at the base of the difficulties in the implementation of WHL management plans. However, there are also other sources of conflict, notably the general conflict between conservation and development (Tunbridge and Ashworth, 1996). This can be intertwined with the relation (potentially controversial) between universal criteria and local actions. Recent literature has shown the limits of a global perspective imposed by the UNESCO WHL criteria and procedures (Di Giovine, 2009a). Yet, the member states have to adapt their requests to the UNESCO criteria, if they want to have any chance of seeing their monuments/sites placed in the WHL. The World Heritage List and the World Heritage Committee can control and define the nature of heritage on the one hand and the limits to development on the other hand.
However, if such international regulation guarantees a global control to spot and preserve sites of extraordinary value through strict standard procedures, this "universal" control has limits. For

instance, Labadi (2007) highlights that the criteria for assessing the sites' OUV and their authenticity, have been conceptualized, explained and understood from a European perspective; analogous consideration are also pointed out by Di Giovine (2009b). Silverman and Ruggles (2007) state that universality still is subject of a complex debate, as non-Western countries have objected to the idea of universal standards externally imposed because they consider these standards as reflecting Western, rather than universal, values[3].

Consider, too, the relations between procedures and contents of the WHL MP and those of local and regional planning systems. The status of World Heritage Site is a material factor in planning policy and development, and it is also material in the decision making process on planning applications affecting the sites (Lyon, 2007). But these factors are differently considered in each national context. In the UK, for instance, Blandford (2006) highlights that, although the UK planning system through designations to the WHS Tentative List acknowledges some conservation needs, these are not specific to World Heritage Sites' criteria; at the same time, there have been no specific statutory planning controls that apply to WHS. In general terms, the WHL MP is based on a model of continuous and coordinated planning where different instruments integrate and contribute to the building and sharing of choices. In different states not all planning systems comply with this model.

In Italy, the National Ministry for Cultural Activities and Heritage, during the Conference held in Paestum (May 25\26, 2004), has developed and submitted a MP model[4] in order to show local authorities how to connect it to the reality of managing their actual sites. The Italian Law introduced the MPs of UNESCO sites through the Law February 20, 2006, n. 77 "Special measures for the protection and the fruition of Italian cultural, landscape and natural sites, inscribed on the "World Heritage List", under the protection of UNESCO". This law identifies the Advisory Commission for the management plans of UNESCO sites and local tourist systems, established at the Ministry for Cultural Activities and Heritage. The Commission approves the MPs for the WH Italian sites and ensures the contents of the different MPs proposed in relation to the sites. In reality, the MPs differ in their site nature and in their internal structure and dialogue ability with other plans.

The MP represents, within the Italian law, a flexible instrument able to create a dialogue with plans of different nature (local and regional, regulative and strategic) to guarantee the site protection and its development as a cultural and tourist resource. However, some problematic aspects emerge. The first is that the competent Ministry is the Ministry for Cultural Activities and Heritage which, in Italy, is not in charge of the land use planning. The second problem is that MPs have been basically implemented in Italy as established by UNESCO, without any compliance with the Italian planning and protection system. In fact, Italian MPs – apart from dealing with sites which widely differ in features, size and issues - are forced to tackle a planning system that is highly fragmented because of the competences and the plurality of regional planning laws. In Italy, regional planning laws are very different from each other and do not often present the flexibility required to comply with the MPs needs, as they still refer to regulatory policies and instruments and as they are far away from a more strategic, development-led approach. In such contexts, the limits of conforming, statutory planning regard the disappointing results in implementation due to the difficulty in reconciling multi-level collective strategies to a plurality of local plans or projects of spatial development (Janin, 2008, p. 168).

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[3] For example, Brattli (2009, p. 30) shows that "both the WHL and the World Heritage Committee function as an obligatory passage point which defines the character of the physical remains from the past (…). One has either to accept a given definition of the past and cultural heritage or to perish." Despite this, there are significant differences in the way heritage is perceived and managed.

[4] According to the Italian law, the MP serves two functions: guaranteeing an adequate site protection and promoting cultural activities regarding the site. The MP, in compliance with the guidelines established by the Ministry for Cultural Activities and Heritage, faces a five-year time horizon.

4. Two WHL sites in Sicily

The 1978 Sicilian planning law is a blatant example of this situation. The Sicilian planning law is the earliest planning law in Italy. It basically implements the 1942 Italian legislation and structures the planning instruments governing the region with great emphasis accorded to the Master Plan, in a statutory, conformative approach. The Master Plan essentially regulates land use, focuses on the communal domain and is effective for 20 years.

The Sicilian regional planning law is inadequate as a vehicle for engaging with supranational, multi-level planning instruments whose action is rapid and flexible. Within this framework, it is difficult for UNESCO MPs to work as effective instruments of promotion and preservation. Under such conditions, the WHL MPs do not either work as guidelines for the master plan or become instruments able to structure what is developed and decided in other plans. Thus, the gap – as described in the previous paragraphs – between different plans and planning levels, and the consequent difficulties of getting agencies responsible for different kinds of plans to work together, does often occur.

Sicily includes five sites inscribed on the UNESCO World Heritage List:

- The Archaeological Area of Agrigento (1997)
- Villa Romana del Casale, Piazza Armerina (1997)
- The Aeolian Islands (2000)
- The Baroque Towns of the Val di Noto (2002)
- Syracuse and the Rocky Necropolis of Pantalica (2005)

The sites widely differ in their nature, territorial extension and institutions involved in the management of the site inscribed on the WHL; such a phenomenon does not only concern Sicily, since during the 1990s the interpretation of World Heritage has evolved to a great extent. Consequently, a series of places, sites and landscapes have been included on the UNESCO WHL (Rössler, 2006). Thus in Sicily we find: single monuments such as the Villa Romana del Casale in Piazza Armerina; complex and widespread urban systems, such as the Baroque Towns of the Val di Noto; large sites of extraordinary environmental value, such as the archipelago of the Aeolian Islands; sites of historical and archaeological value such as Syracuse and the Rocky Necropolis of Pantalica as well as the Archaeological Area of Agrigento.

In order to highlight the technical, political and structural factors which make the implementation of WHL MPs problematic in their local application, we will mainly focus on two regional sites: the Aeolian Islands and the Valley of the Temples of Agrigento. The reasons behind this choice are numerous and based on three fundamental issues:

- The timing and status of the two MPs
- The significance and peculiarities of the two tourist areas
- The different features of the two UNESCO sites

With regard to the first aspect, the two chosen sites are the only ones in Sicily to present an approved and operating MP for a long enough period to allow an analysis of the effective impacts of this instrument on the same sites and on tourism within them.

As far as the second aspect is concerned, the two areas are considerably different, but, at the same time, need to address the flows and the tourist offer towards sustainable and responsible tourism. The Aeolian Islands represent a landmark for regional tourism; despite the efforts made to “extend the season”, the archipelago is still marked by a huge summer presence and a high offer that, even if well-structured and of good quality, threatens its valuable environmental system. On the other hand, although it is one of the most visited, the tourist area of the “Valley of the Temples” is among those less seasonally adjusted in the region and registers a weak hotel-booking demand that is under the regional average. Finally, both the sites are places where the conflict between preservation and development is very strong and even dramatic.

The third reason behind the choice is based on the considerable structural difference between the two sites: the first is an archipelago inscribed on the WHL for its unique natural and environmental

features; the second is an archaeological site of world importance. Clearly, two sites so different need preservation and promotion strategies that are different, but both aim to increase and change tourism as well as the conflict between preservation and development. At the end, the choice of two such different cases allows us to address various issues and aspects of the implementation of WHL MP in scenarios of potential conflicts such as:

- The Aeolian archipelago and the conflict between mass tourism and sustainability of site;
- The "Valley of Temples" of Agrigento and the conflicts between development and the preservation of heritage landscape.

Despite these differences, both cases show a remarkable gap between the performative model at the core of the WHL MP and the conformative model of the local and regional planning systems in implementing a sustainable policy for tourism development. Such a gap is not just peculiar to the Sicilian region, but can be easily identifiable – in a worldwide review – in other contexts. Currently, this entails that the MPs become passive instruments, only able to implement the actions promoted by other planning instruments; when this occurs, their role in promoting sustainable tourism development is weak if not questionable.

5. The Valley of the Temples of Agrigento

In 1997 UNESCO acknowledged the value of the "Valley of the Temples" and declared it as "heritage of Humanity". UNESCO explained its choice by stating that the area is universally acknowledged for its historical value and it also highlighted that the area is a tangible evidence of a lost civilization thanks to its buildings and the agricultural landscape in which it is inserted[5]. At the time of the site inscription on the WHL, the MP was not compulsory, so the site has been exclusively regulated until 2005 by the Archaeological and Landscape Park Plan of the "Valley of the Temples" (FIG. 1).

The areas identified by UNESCO are relative to the Core area that coincides with the A zone, the most protected in the Archaeological and Landscape Park of the "Valley of the Temples" which manages the site. This area extends over 1,440 hectares and is characterized by the presence of anthropic and infrastructural structures representing the heritage of a period (from the '50s up to the '80s) when the building industry has strongly affected the development of Agrigento (FIG. 2a and 2b) destroying its original bond with the archaeological site and the landscape (Rossi Doria, 2002). The history of the city of Agrigento and its development models have become paradigmatic for the history of Italian urban planning in particular because of the clash between property speculation and heritage of the Greek settlement situated at the edge of the modern built-up area. The contrast became evident and even dramatic with the 1966 landslide at Agrigento, representing a sort of divide in the environmental sensibility of Italian urban planning (Martuscelli, 1966). In an attempt to stop the massive land speculation and the urban sprawl, around the Core area, and to testify to the importance of the Valley of the Temples, a wide Buffer Zone was established; it coincides, once again, with the perimeter of the Archaeological and Landscape Park of the Valley of the Temples (Campioni & Ferrara, 2005).

5.1 Main features and problems of tourism in the area

The Valley of the Temples is one of the most popular destinations of the Sicilian tourist offer. In recent years, the site has registered a presence of about 600,000 visitors (an average of 632,539 between 2003 and 2009) and it is the second in the whole region in relation to revenue: about

[5] In particular these temples are among the most impressive and best preserved of the Greek world. Agrigento has a special place among the classical sites because of the way it has preserved the original imposing site – so typical of Greek colonial settlements – very substantial remains of a group of buildings from an early period, not overlaid by later structures or converted to suit later tastes and cults (Lo Piccolo, Schilleci, Marotta, 2008).

2,500,000,00 € per year[6]. An analysis of the tourist presence in the decade 1999-2009 (FIG. 3) shows a considerable jump between 2001 and 2002, a year when visits more than doubled, increasing from 319,776 (2001) to 683,066 (2002). This is mainly due to a change in the area subjected to a fee payment, that was extended to the whole site[7]. Tourism in Agrigento is less affected by the typical problems related to fluctuations throughout the year which generally marks the tourist activities of the Sicilian region; however, there are still variations: the most busy month for the sites is August (89,592 visitors in 2009) with a daily average of 2,890 visitors, while the least crowded month is January (7,964 visitors in 2009)[8]. So, despite being less evident than in other places, the problem of the seasonal adjustment of tourist flows also affects Agrigento.

Data analysis of the hotel accommodation capacity shows the difficulties of getting visitors to stay in the area. The most interesting data, arising from the analysis, concern an average guests' stay, which is 2.3 days (ISTAT, Italian central statistics institute). Visitors tend to pass through Agrigento; consequently, in Agrigento, the offer of accommodation in hotels is 2,233 beds. The daily average presence, in the Valley of the Temples alone is about 1,750 tourists, with a great discontinuity during the year. Therefore, from an overall data analysis, it is evident that the tourist offer is unable to preserve tourist flows through an offer differentiation. Moreover, the presence of quality tourist facilities is very scarce: there are no five-star hotels in Agrigento, as most of them are just three-star accommodation facilities.

The main issue, arising from the analysis of tourism in Agrigento, surely concerns the low levels of take up of accommodation in the city as well as in the province (Giambalvo, 2007). In order to address this, it is necessary to carry out three convergent strategies: the improvement of general accessibility, the increase and differentiation of tourist offers in a wider area, which is rich of environmental and leisure resources[9], as well as the general improvement of tourist services. Analyzing the trend of arrivals, departures and stays in Agrigento, we observe that the site has reached its maturity i.e. tourist flows tend not to increase; however, the operators' perception is that the site is largely underused (Bazzanella, 2007). The life cycle model of tourist destinations (Butler, 1980 & 2006) identifies the start up, development, maturity and finally stabilization or falling phases. This site has followed the phases of the offer's start up and consolidation; however, such process has not been guided, so it has not fully develop in proportion to its potential. The shortcomings accord with the lack of both a regional and local tourist strategy (Callea, 2007). Also significant is the conflictual relationship that the city of Agrigento has developed with the Valley of the Temples, so that, instead of being considered as a development source, it is seen as a limitation to voracious development and speculation. In fact, "The Valley of the Temples" has not always been recognized, not even by its inhabitants, as an opportunity and a development resource. The inscription on the WHL surely ratifies and certifies the exceptional nature of the site, also defining its economic role in the tourism development of the area. Yet no efficient policy has been undertaken in order to pursue this declaration, which then serves simply a rhetorical purpose.

Moreover, in Sicily, most tourism economies spill over into adjacent areas because of the incapacity of the local tourist system to keep tourists *in loco*. In Agrigento most of the visitors take organized

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[6] According to the data elaborated by the Department of Cultural Heritage and Environment of the Region of Sicily

[7] A great increase between 2001 and 2002 is due to the fact that in 2001 only the entrance to the Temple of Zeus was considered (the only one subjected to a fee payment until 2002), while starting from 2002 the whole site was taken into account.

[8] Data source: the Archaeological and Landscape Park of Agrigento

[9] With this purpose, the Sicilian Regional Law 10/2005 "Regulations on tourism development in Sicily and urgent financial measures" have been addressed to a tourist system based on "relationality" and forms of alternative accommodation, in order to add new values to the tourist offer. In Agrigento, the regional law considerably affected the redistribution of tourist flows towards extra-hotel accommodation facilities.

tours arriving by bus and leaving the same day. The "informal" tourism, despite its being less detectable than the case of the Aeolian Islands, is noticeable and considerable. Regional studies state that informal tourism in the province of Agrigento reaches a presence equal to 76,6% of the entire provincial tourism presence (Regione siciliana, 2001). The two phenomena of unauthorized building and second homes, particularly evident in this area, have allowed the offer of unofficial tourist facilities which cannot structurally increase the tourist offer, creating unfair competition if compared to regulated structures (Giambalvo, 2007).
The WHL MP, though dating back to 2005, carries out a detailed analysis of tourism in Agrigento testifying to what is said above. The MP defines as the main problem of local tourism the improvement of the general tourist offer, in order to increase the average length of stay in days. The UNESCO site's MP also gives its opinion on the services related directly to the site, which are defined as "insufficient and qualitatively scarce".

5.2 The WHL MP and its interaction with the local planning system

The analysis provided by the WHL MP pictures a situation where an important item of cultural heritage, despite attracting huge tourist flows (it is the second largest in Sicily), is not able to create tangible economic benefit for the area. The MP elaborates a SWOT analysis where some specific issues on tourism are identified:

Strengths	**Weaknesses**
Offer potential represented by several historical, art, cultural and natural resources in the area.	Short average stay time and visits limited to the Temples areas. Tourists flows relatively concentrated in the summer. Current weak offer of accommodation facilities and tourism services. Low number of enterprises working in tourism.
Opportunities	**Threats**
Satisfying tourism demand on each expenditure level, increasing tourist flows within a sustainable perspective. Guaranteeing a minimum quality standard in accommodation facilities as well as in other services. Structuring a network of quality services connected to the Site attraction and able to meet the demand including toilet services, elderly and handicapped assistance, resting facilities, gadgets and souvenirs, parkings, etc. Creation of proper urban services able to support attendance peaks and guarantee a minimum level of guests assistance.	Impoverishment of the Valley landscape and deterioration of the preservation status of cultural heritage. Lack of integration with other tourist circuits and regional tourist offer.

The MP defines, starting from the SWOT analysis, its *vision* for the Valley of the Temples, taking into particular account the Plan of the Archaeological and Landscape Park "Valley of the Temples", approved in 2008.
The three priority targets set in the WHL MP are:

- Protection and enhancement of cultural and human heritage in an 'extended area' approach;
- Site usability in order to improve the accessibility and interrelation with other tourism circuits;

- The Valley of the Temples considered as a driving force of the area's economic development.

Such targets involve seven axes:

- Protection and enhancement of archaeological, historical and architectural heritage, landscape and nature;
- Site accessibility and usability promotion;
- Development of sustainable tourism;
- Promotion and communication of the site image;
- Development of other related economic activities;
- "Cultural re-appropriation" and local community involvement;
- Adaptation of knowledge, monitoring and interaction with other planning instruments.

Of particular interest is the "sustainable tourism development" axis; with regard to this, the WHL MP identifies certain indicators in order to assess the effectiveness of the actions adopted. The proposed indicators are:

- Average tourist stay (from Italy\abroad)
- Percentage of visitors' presence between October and March in relation to the whole year
- Number of current cultural itineraries
- Number of activated training courses for weaving factory operators
- Number of integrated tourist packages offered

If we look at the first two indicators, data on the average tourists' stay and the percentage of visitors' presence between October and March do not show any significant improvement in recent years, showing a low efficacy of the WHL MP in the promotion and development of tourism activities. Although most of the axes of the WHL MP relate to the tourism economy, if we look at the proposed measures, they do really appear as a series or collection of actions which were already formulated in other pre-existing planning instruments rather than as a coherent system of innovative policies. This weakness is mainly due to two factors. Firstly, the clash between the performative model of the WHL MP and the conformative nature of local plans and regulations, whose consequence is to have the WHL MP as a recipient of other plans' actions and previsions. This, paradoxically, gives as a result an 'inverse', and totally inefficient, process of conformity, which is that of the WHL MP in comparison with other local, pre-existing plans. Secondly, MPs – at least in Sicily and thus far – have not been able to generate and/or distribute economic resources as, for example, local development partnership programmes did (Lo Piccolo & Schilleci, 2005), being consequently considered as just a 'second rate' or minor opportunity in the local political agenda.

If we look at the management system and at the number and type of the various agencies involved, the WHL MP of the Agrigento Valley of the Temples works as an integration instrument of the Plan of the Archaeological and Landscape Park of the Valley of the Temples (approved in 2008), established by the regional law 20/2000. With this purpose, the Park authority is also responsible for the management of the UNESCO site.

At the same time, within the Sicilian planning system, the master plan, based on a strictly conformative model, mainly deals with land use. The time which passed between the final editing of the Master Plan (2004) and its approval (2009) represents a further problem in relation to the Management Plan (MP) role. The Management Plan should have a 5-year time horizon, but has to face a Master Plan started in 1997, completed in 2004 (one year before the MP) and effective from 2009 (one year before the MP's horizon).

In addition, even in its contents the Master Plan clashes against some principles of preservation and sustainability. For example, although around the "Park A area", area of maximum protection, we can find a Buffer Zone where the city Master Plan establishes only activities supporting agriculture, in the Park A area of the Valley of the Temples the city Master Plan establishes new roads which contrast to the Park Plan regulating the same area protected by UNESCO (Cannarozzo, 2009). Moreover, the Master Plan ignores the boundaries of the Archaeological Park A area. In this regard,

we notice a contradiction related to the UNESCO area: on the one hand, the Master Plan states that the archaeological area is one of the major resources of the region, yet on the other hand, it shows its inability to enter a dialogue with the body responsible for the site management.
Although the Master Plan agrees with some general principles of the WHL MP, it does not effectively implement any real action or policy. In fact, as said before, in the Sicilian planning system the Master Plan mainly concerns and regulates land use, leaving the action and intervention phase to other planning instruments, which are forced to conform to its guidelines and previsions. For this reason, the Master Plan has a weak interaction with the WHL MP.
For instance, in the general report, the Agrigento Master Plan aims at reducing the vehicular traffic which burdens the Valley of the Temples because of the tourist buses. In this regard, the Master Plan provides a reorganization of parking and access areas, establishing shuttle buses services to get access to the Valley of the Temples; however, the Master Plan does not provide specific answers to questions regarding the reorganization of tourist buses as well as their parking and possible integration with other tourist services. To this end, the plan includes two strategies: on the one hand, it attempts to separate the Valley of the Temples from heavy traffic flows; however, on the other hand, it does not provide a new organization of the access system, with provisions that guarantee neither the sustainability principle nor the target to develop a tourist circuit beyond the visit to the archaeological site.
The UNESCO WHL MP also has to deal with other instruments affecting the site area:

- The guidelines of the landscape territorial plan
- The general town planning scheme (Master Plan) of Agrigento
- The PIT n. 34 “Valley of the Temples” (a local development partnership programme)
- The Agrigento Area Contract (another local development partnership programme)
- Special protection systems
- The Plan for the Archaeological and Landscape Park of the Valley of the Temples

In particular, the WHL MP faces (or even clashes with) instruments of different nature as some are instruments addressed to landscape protection and others are instruments addressed to economic planning and investments distribution. This is in a context where economic planning has often a prominent role which overwhelms spatial planning, thus becoming an instrument working against the contents of regulatory land-use plans (Lo Piccolo and Schilleci, 2005).
At the same time, the WHL MP, elaborated in 2005, cannot take into account a series of instruments established after that time:

- The Strategic Plan for the city of Agrigento
- The landscape plan of the environmental context n.10: Sicilian central-southern hills

The increase in the number of planning instruments working with different aims and times does not allow the MP to elaborate effective interventions and actions. Basically, the MP has to dialogue through instruments regulating the land use and instruments offering investment strategies. However, it is neither able to address choices on the land use nor to address economic activities. Therefore, the MP has to accept and implement what has been elaborated by other planning instruments and programmes. Thus, the promotion and protection system of the UNESCO sites runs the risk of becoming another constraint for the area, without representing an added value for local economies. Moreover, it reinforces a tendency to randomly ‘cut and paste’ elements and strategies included in other plans rather than an integration among several levels and instruments starting from clear, shared and indefeasible targets.
In general terms, the WHL MP recognizes in several plans a shared attitude towards the UNESCO site of the Valley of the Temples. In detail, both the Master Plan and the PIT (integrated land-use planning, which is a sort of local development partnership programme) aim to consider environmental qualities as the fundamental basis for promoting development in Agrigento; they also seek to build a system of rules and occasions to strengthen the usability and to allow the preservation and enhancement of attractions. However, beyond this statement of principle, the plans in force in the Agrigento area work in a dramatic environmental situation: the massive urban

development (legal and illegal) surrounding the Valley of the Temples (FIG. 4). Therefore, today, although the government instruments promote a protection policy, they do not propose any strategy or action able to heal the serious situation afflicting the Valley of the Temples area which has become, since the Agrigento landslide (Martuscelli, 1966) an example of the ruin caused by the Italian building sector.
In this context, most of the actions promoted by the WHL MP are the result of the systematization of actions coming from other planning instruments, in a difficult interaction between the performative attitude of the WHL MP and the non conformity of outcomes and the non implementation of local plans which are – legally and procedurally – based on a conformative model.

6. The Aeolian Islands Archipelago

The Aeolian Islands were inscribed on the World Heritage List in December 2000[10] as natural heritage item. According to the justification for inscription on the WHL, the islands' volcanic landforms represent classic features in the studies of evolution of vulcanology world-wide[11]. The Aeolian archipelago represents the top of the emergent volcanic apparata (partially active) of a submarine magmatic arc in evolution; thanks to this, the archipelago is considered as a source of primary interest by Earth Sciences.
Its natural beauties, vulcanological and geological features as well as its history witnessed by ancient writers and poets, need effective protection and heritage preservation and also policies able to conserve the integrity of the values for which the Aeolian Islands were inscribed on the WHL. The Aeolian Islands' UNESCO MP analyzes the archipelago's natural beauties and the action programmes addressed to prevent the tourist flow from undermining environmental resources in order to guarantee their long-term preservation and enhancement (FIG. 5). In other words, it aims to be considered as a project for the islands' revitalization pointing at the stimulation of sustainable development, through innovative planning. Moreover, within this perspective, we should consider certain site management actions started before the WHL MP's drafting, such as the interruption of pumice mining activities to preserve the local identity.

6.1 Main features and problems of the tourist system

The recent evolution of both economy and production show that the Aeolian Islands, based on primary industry in the past, are now connected to tourism activities. Agriculture has largely lost its economic value; with the exception of vineyards, capers and some olive groves, trees groves have been largely abandoned[12]. With regard to fishing, the Aeolian Islands boast a great tradition. The Aeolian fishing trawler fleet consists of about 150 boats. This allows ten fishermen cooperatives and many family units to earn their living.
The Aeolian economy is strongly based on tourism. Activities related to trade and other services represent a good source of employment. However, they are activities subjected to seasonal demand, producing critical effects on the local reception system and services. Trade, hotels and restaurants represent 45.6% of local entrepreneurship, in terms of local units' number. This is the reason why a balanced and sustainable development of the Aeolian local economy should be supported by

[10] The deliberation of UNESCO was undertaken on December 2nd, 2002 in Cairns, Australia, after six years of inquiry.
[11] The Aeolian Islands, representing an outstanding example of ongoing volcanic activities, with their scientific study from at least the 18th Century, have provided two types of eruptions (Vulcanian and Strombolian) to vulcanology and so have featured prominently in the education of all geoscientists for over 200 years.
[12] The situation is different in the island of Salina, where agriculture is still present along with Malvasia wine production, which has a national and international reputation.

policies of territorial marketing aiming at the seasonal adjustment of tourist flows.
Despite an increase higher than 30% in the number of local units in these sectors, from 2003 to 2006 their relative influence, compared to the overall economic structure of the Aeolian islands, dropped in trade by 33.5% to 31.9% and in hotels and restaurants by 14.8% to 13.6% (Ruggieri, 2008). Moreover, the rate of accommodation capacity (ratio between available bed-places and resident population per 100 inhabitants) shows alarming data as from 2004 to 2005 a drop of 13 points has been registered. If in 2004 there were 38.95 bed-places available for 100 inhabitants, that in 2005 became 25.94. It is evident that the offer related to the official accommodation capacity is falling. According to Cooper et al. (2005), this shows that the tourist product has reached its maturity stage that will probably be followed by either a decline or renewal.
However, the Aeolian tourism market boasts highly respectable figures both at provincial and regional level. According to AST (Azienda di Soggiorno e Turismo - Stay and Tourism enterprise), the Aeolian Islands cover 10% of arrivals and presences registered in 2005 in the province of Messina and 2-3% of those identified at regional level the same year.
AST data do not offer an adequate description of the Aeolian tourist flows as they do not consider unofficial arrivals and presences, known as the so-called "informal" tourism. According to a recent study on 2003 tourist flows (Scaletta & Siracusa, 2004), that year the total of unregistered presences reaches 234,056, about 60% of the official figure. The calculation of the number of bed-places available daily in the market is not official (4,800) and provides a figure similar to the official one (4,870), as it would require to double the official estimates in order to reach a more realistic assessment of presences (TAB. 1). Moreover, if estimates are made of electrical energy consumption and solid urban wastes production, we observe an increase in "the quantification of the informal" with peaks at 10 times higher than official figures - an overall presence higher than one million in August 2003 in the municipality of Lipari (Parroco & Vaccina, 2005). We can also consider data concerning the number of pleasure craft units. The phenomenon is highly developed and considerably affect Aeolian tourism. From recent research, it emerges that for each official resident tourist there corresponds approximately one nautical tourist between April and September (Mendola & Ruggieri, 2005). According to the data provided by OTIE[13] analyzing 2007 flows, the total nautical presences are 90,720 of which 76,073 are Italian and 14,648 are foreign. This implies that the estimate of tourists grows to include approximately another 360,000 units, on the basis of an average of 4 guests per pleasure craft unit. With regard to the profile of the average tourist (official plus nautical presences), 93% is Italian, with a high prevalence of people coming from Sicily (32.18%) and Southern regions (42.4%) rather than Northern regions (almost 20%), while only 6% comes from foreign countries.
The monthly distribution of arrivals and presences shows the seasonality of tourist flows. According to Parroco & Vaccina (2005), 60% of arrivals and presences per year is concentrated in the summer months, 40% is distributed over the two intermediate seasons, while winter months show values almost close to zero. The seasonality of tourism demand in the Aeolian Islands is considerably stronger among Italian tourists than foreign tourists. Thus, the definition of a tourist offer that is seasonally adjusted and addressed especially to the attraction of foreigners would help to limit the high seasonality of Aeolian tourism as well as its impact and overload effects.
The different instruments and studies operating within the archipelago area show how the current pattern of tourism, marked by a high concentration of visitors in certain months of the year, creates many problems of environmental impact (Parroco & Vaccina, 2005; Ruggieri, 2008). Another issue which arises concerns the significant quantity of "informal activities" in the tourist system, that is the informal accommodation of guests subject to payment (Volo, 2004). This category of tourists strongly affects the environment (one only needs to think of the increase in water consumption) without paying taxes. The condition allowing this particular form of tourism is the

[13] OTIE (Observatory on Tourism in the European Islands), (2007), Flows of nautical tourism, the Aeolian Islands, www.otie.org

presence of a huge building capacity that is not utilized, due to the 70s master plans and the unauthorised building, which is still fairly widespread in the archipelago (FIG. 6).

6.2 The WHL MP and its interaction with the local planning system

The MP of the Aeolian Islands (Angelini, 2008) is divided in seven parts: the first part represents the preparatory phase for the MP and presents the criteria which merited the inscription of the islands on the WHL, the methodology adopted and the responsible subjects; in the second part we find the analysis of the Aeolian heritage; the third part deals with the rich biotic and geovulcanological heritage and offers an analysis of the structuring aspects of the socio-economic system (economy, tourism, etc.), of the urban system, landscape, transport, and services (water, electric energy and wastes); the fourth part goes into matters related to protection and risks; in the fifth part some intervention strategies are proposed in order to preserve, enhance tangible and intangible resources and in order to guarantee a sustainable and environment-friendly development of the archipelago; the sixth part outlines control and monitoring strategies for these intervention proposals; in the last part, the position of the Aeolian Islands in the WHL is strengthened, establishing further merit criteria related to the site seen as a natural good and also proposing a new candidature of the site as cultural heritage.

In order to achieve a high level of efficacy in the implementation, it would be prior and crucial to reach a collaboration and effective involvement of institutions and local actors in the site protection and preservation programs. This leads to the involvement of *stakeholders* having specific and general interests in the implementation of the area revitalisation in order to achieve sustainable development policies.

The prior targets identified by the Aeolian Islands' WHL MP are the following:

- Establishment of a body responsible for the management of the site inscribed on the Unesco WHL
- Effective identification of the *mission* in the promotion of socio-economic development and recognition processes for the population of the "Outstanding Universal Value" of the area.
- Conversion of strategic policies into management targets, coherent and integrated, in relation to: historic and art heritage conservation; urban and landscape conservation; economic and tourism development; social ability to allow a person to identify him\herself in his\her own cultural heritage.
- Ability to assess and readdress the policies carried out through a dynamic and cyclic control and monitoring system.
-

The WHL MP identifies some specific targets in relation to the tourist system:

- Stimulation of responsible and deseasonalized tourism
- Conservation and enhancement of natural ecosystems
- Conversion of the management model for services and resources towards autonomy and sustainability
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In order to obtain an overall analysis of the endogenous and exogenous factors, crucial for Aeolian tourism, the WHL MP elaborates a SWOT analysis where some specific issues on tourism are identified (Ruggieri, 2008):

Strengths	*Weaknesses*
Presence of fishing traditions Specialization in services-producing sector Environmental and landscape constraints Natural resources of particular value Archaeological resources Museums and itineraries Typical wine and food products Traditional architecture Wide offer of apartments	Condition of insularity Ineffective transport system and consequent tourists' need of external services Considerable seasonality in tourism Mass tourism Strong presence of "informal" accommodation structures Strong seasonality and impact of pleasure craft tourism
Threats	*Opportunities*
Instability of tourism demand Lack of control over tourist flows Imbalance of other economic activities Impact of mass tourism on environment and services	Possible access to Community and regional funds Use of UNESCO logo Environmental protection and naturalistic usability Increasing tourism demand related to natural phenomena Good quality product

If we look at the local administrative system, the Aeolian Islands archipelago consists of seven islands divided into four administrative divisions (municipalities). The biggest municipality is Lipari, including the small islands of Vulcano, Panarea, Stromboli, Alicudi and Filicudi. The other island composing the archipelago is Salina that is further divided into the administrative divisions of Malfa, Santa Marina di Salina and Leni. Consequently, the Aeolian Islands are regulated by several planning instruments that, over time, have assured the area management and preservation against invasive and not eco-friendly anthropic uses.

The fundamental protection instrument is the Landscape Territorial Plan for the Aeolian Islands, in force since 2001. The plan covers the whole archipelago, deploying a complex series of analyses also studied in the drafting of the UNESCO MP. The overall analysis led to a protection regime which considers cultural and landscape goods as a synergistic whole. This instrument, elaborated since the end of the 1970s, has largely contributed to the protection of the Aeolian Islands, in accordance with a regulation banning new building constructions. Alongside the Landscape Plan acting within the same domain of the UNESCO MP, we recently find (2006) the Provincial Plan of Messina that, compared to the Landscape Plan, regulates a wider area. The Plan sets the minor islands within the domain of the central Tyrrhenian cities.

Numerous actions and instruments adopted in the area have differently involved the archipelago: the PIT n.12 (Eolo, Scilla and Cariddi), the GAL (Gruppo d'Azione Locale - Group of Local Action) for the Aeolian Islands and the Territorial Pact for the Aeolian Islands. These last three instruments are local development partnership programmes collecting economic resources; despite their limits, they are crucial for the renovation and management of the local contexts (Lo Piccolo & Schilleci, 2005) and they should be integrated in the management system proposed for the UNESCO site. In this respect, the PIT of the Minor Islands just identifies a series of actions able to increase tourist offer especially in relation to archaeological sites' usability.

The Communal regulatory planning system, considering the administrative borders, consists of four distinct domains:

- Malfa, with a Building Program (the earliest version of the Master Plan) effective since 1992;

- Leni, with a Master Plan Scheme (which is a document preliminary to the Master Plan) effective since 1991;
- Santa Marina di Salina, with a Building Program effective since 1981;
- Lipari, with a Master Plan Scheme effective since 2010.

The Lipari Master Plan is the only one among the instruments just listed that could have been able to effectively interact with the WHL MP. However both the drafting and the approval of the Lipari Master plan have been protracted for about twenty years, with high level of inefficacy. Despite this, some targets and previsions included in the Master plan are consistent with the WHL MP and its purposes. In detail, the Lipari master plan identifies the archaeological areas and several other interesting tourist sites and defines as an historic centre any anthropic settlement of the Minor Islands. This seriously reduces the areas allocated to the construction of new residential buildings, in order to promote sustainable development and to stop or to reduce the excessive number of houses that are seasonally utilized and serve to boost "informal tourism" (FIG. 7). The master plan, according to general regional planning strategies (Regional Law 10/2005), proposes some small rewards based on volume in order to convert existing structures into hotel and extra-hotel accommodations facilities. The area of former pumice quarries, whose closure is underlined as essential to keep the site in the WHL, is the biggest available area to increase the tourist offer by setting-up a museum related to the pumice stone. This action, promoted by several bodies such as the *Soprintendenza* (Provincial Department of National Heritage) and the PUMEX (former mining company), is meant to increase deseasonalization.

The analysis of the instruments' chronology and nature shows how difficult it is to integrate the local planning system with the WHL MP which, also because of the lack of management authorities, run the risk of becoming an instrument only able to reassert the constraints already imposed by other instruments. The issues just underlined highlight how it is structurally impossible, in the current situation, to support an effective integration of plans regulating land use and instruments for the management of UNESCO sites.

7. Conclusions

In the analysis conducted by Blandford (2006) on the criteria and guidelines for WHL MPs in the UK, it is evident that one of the key-issues is the use of the WHL MP in order to boost chance in the nomination process rather than in the following phases of management and plan implementation. Thus, it is confirmed the significance of "join the club" as the main target rather than the importance of the following stages (once the target of being inscripted and labelled in the WHL is reached). The object of this article is the analysis of what comes after the target of the inscription on the WHL has been attained, focusing the attention on the improvement of the tourism offer and management.

The inscription on the WHL is generally considered a factor which contributes to an increase in the site popularity, in its "appeal" and consequently in tourism promotion. In our experience, however, this is just a rhetorical assumption, as data do not confirm this. In the Agrigento case, the analysis of trends in the tourist flow and hotel occupation in and around the site does not show any significant increase after the promulgation of the WHL MP. With regard to the trends in tourist arrivals in hotels, we do not observe any particular increase: the only encouraging data concern guest average stay going from 2.37 days in 2004 to 2.71 in 2007. In relation to extra-hotel structures, we register a steeply increasing trend boosted by regional policies: however the trend does not show jumps or discontinuity that can be related to the WHL MP. The comparison of tourism trends with the MP targets shows its real ineffectiveness, which is to be essentially ascribed to its structurally scarce integration with other plans and planning policies. In the case of the Aeolian islands, the historical series 2000-2009 of tourists' presence has not shown a progressive trend starting from the

inscription of the Islands on the WHL. This datum[14] proves that the inscription on the WHL does not seem to have affected Aeolian tourism. Moreover, the strong decrease in the average stay (ratio between the number of nights spent to the number of customers) has declined from 4.52 (2000) to 3.9 (2009). The trend surely confirms that one of the main targets of the UNESCO MP for the Aeolian Islands has not been reached and has even been neglected.

In the analysis of the two Sicilian case studies, our first questions were: how much do the WHL and the Management Plan influence the tourist offer, shifting it towards a "sustainable" approach? and how does the MP orient or collaborate with other planning instruments\systems (and vice versa) in order to enhance more effective and sustainable tourism policies? According to our analysis, the WHL MPs have a slight influence on those tourism policies addressed to increasing and qualifying demand. In fact, the qualification of the tourism demand should be reached through:

a. deseasonalization (The Aeolian Islands);
b. long and medium term cultural tourism (The Aeolian Islands and Agrigento);
c. tourism spread over the whole reference area (The Aeolian Islands and Agrigento);
d. emerging activities and "informal tourism" (The Aeolian Islands and Agrigento);
e. responsible tourism (The Aeolian Islands and Agrigento).

These actions have not been implemented yet, as the natural and simple effect of the UNESCO WHL logo is not able to stimulate, by itself, the implementation of the above mentioned strategies, without a systemic supranational planning policy integrated with other local planning systems and strategies.

Blandford (2006, p. 360) highlights that UK MPs have used a multidisciplinary, performative approach to assess the wide range of pressures that have and will influence change in the WHL sites, achieving a balance between conservation, tourism and public access, contribution to local communities, and contribution to sustainable economic growth. However, this does not occur in many other national and regional contexts, such as Sicily according to the case analyzed thus far, where the local very conformative planning regimes clashes with the performative approach of the WHL MP model. In fact, the latter applies in practice through the promotion of non-binding spatial policy programmes and the consequent promotion of initiatives and projects which prove themselves capable to 'perform' (Alexander and Faludi, 1989; Faludi, 2000) an agreed collective strategy, while local planning systems and instruments are still based on a conforming approach and a (formal) regulatory tradition.

If the 'implementation gap' between plans and interventions in the real world are inevitably endemic (Mastop, 1997), a conformative approach in the implementation of supranational guidelines and plans in local contexts is destined to fail. The reason is that local plans will look at a plan such the UNESCO WHL MP as a statutory plan, and here all the differences at the normative level arise, impeding any real fulfilment. On the contrary, in a performative approach "the prime concern should not be with whether or not the plan is followed, but with whether the plan plays a role in those decision situations in which it was meant to be used" (Mastop and Faludi, 1997, p. 820). In fact, how much a WHL MP can coordinate existing planning instruments in national contexts depends on two main issues: 1. how much the WHL MP is also identified as a declaration of principles as well as an operative framework through which responsible authorities and national and local communities are engaged in an active protection, in an adequate preservation activity as well as in a compatible enhancement able to comply with the identity and cultural needs of the protected area; 2. how much it is integrated at a normative level with local laws regarding land use planning. The paradoxical result, in our experience, is that in the Aeolian Islands as well as in the Valley of the Temples, the MPs – instead of assuming a 'leading role' in promoting innovative strategies and actions – become a 'collection' of objectives and measures which derive from other (already adopted) planning instruments and programmes, in an 'inverse' process of conformity.

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[14] Source: OTIE (Observatory on Tourism in the European Islands), 2010, Historical series of tourist flow in the Aeolian Islands (2000-2009), www.otie.org.

Blandford (2006, p. 360) underlines that – whilst recognizing the primacy of conservation – in the WHL MP it is important that other "drivers" and "agendas" are fully understood by interfacing with all stakeholders. However, in our cases, the MP is more effective on preservation and conservation rather than on the promotion of effective actions aimed to increase local economies and sustainable development. Moreover, the actions for site promotion fall within the competence of other programs and policies and the MPs are engaged in their implementation and "sponsorship". In both cases (Agrigento and Aeolian islands), the MPs are slightly connected to the Master Plans, whose choices and management have (negatively) affected the tourist system, favouring for instance the "informal" dimension of this economic sector, through a great presence of second homes and illegal buildings. Actually, in both cases the issues related to the tourist system stem from the peculiarities of the anthropic settlement and from the recent urban development processes: second home and illegal buildings that on the one hand threaten environmental resources and on the other hand increase negative factors in the tourist offer, whose main problem is "informal" tourism. This aspect is not covered by the MP and is only partially faced by regulative plans. Once again, the interaction between the MP and other plans and planning policies is weak but necessary for the immediate future in order to achieve the desirable changes identified earlier in this paper, including sustainability in tourism.

This is a technical, but also political, problematic aspect, which underlies a substantial anomaly: on the one hand, the WHL MPs have to manage sites that differ in nature and size and that are built according to a single (performative) model; on the other hand, the fragmentation of local (regional) urban planning laws establishes a series of different processes, procedures and time-horizons[15], based on a regulatory and conformative tradition. It is evident that a higher and more effective coordination or integration between the two approaches is difficult but necessary. If the inscription on the WHL puts the site (and respective national and local governments) under the international spotlight, this 'observation' process has two consequences: the increase of the image promotion and the increase of protection and related policies in order to promote sustainable development, which works as a deterrent (representing the threat of being removed from the WHL). For this reason, the monitoring process should not just take into account the preservation initiatives (as happens up to now), but also the level of interaction between the WHL MP and the other local plans, in order to 'bridge the gap' between the performative nature of the former and the conformative tradition of the latters, which could be re-oriented towards a more performative approach in their implementation, under the guide (and eventually the threats) of the UNESCO policy.

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[15] Thus far, it is not considered that each Italian region has its own planning law with specific times, methods and arrangements that do not easily combine with a WHL MP which should address choices and actions.

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Getting the Balance Right? Mining Interests, Planning Law and Sustainable Human Development in South Africa

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Abstract: In the 140-odd years after the first diamond was found in South Africa in 1866, mining catapulted the country from a predominantly agrarian society into a modern industrial nation. For the biggest part of this period, mining drove and planning law and human development followed. This 'order of importance' was largely the result of the huge wealth and influence of the mining houses, the (perceived) importance of the sector for the development of the country, and the broader skewed power dynamics of colonial and apartheid rule.

Over the last decade, national government enacted new legislation by which it has attempted to ensure that mining is made more serviceable to broader societal reconstruction and development. A key component of this new legislation has been a provision to ensure that mining companies make tangible contributions to socio-economic development and human settlement in 'mining areas'. At the same time, significant amendments have since the late 1990s been made to municipal governance and development planning legislation with the aim of ensuring progressive, assertive strategic planning by municipalities. Recent legal pronouncements are also adding further clarity to the mining and land use planning interface.

While these and other significant steps have been taken in the legal and policy domains to set the balance right, very little actual, empirical research has been done to establish what the outcomes 'on the ground' have been and if, how and to what extent the *actual* interface of mining companies with planning law, socio-economic development and human settlements has changed as envisaged.

In this exploratory study, the extent to which the changes in the legal framework have actually assisted in ensuring (1) a greater degree of balance, and (2) a more symbiotic relationship between mining, planning and human development, is explored in a predominantly rural districts with a long mining history. Use is made of (1) interviews with key role-players in the mining industry, municipal and provincial government, the private sector and communities, and (2) documented material. Key questions that are explored are: How do mining companies interact with municipal planning and planners, spatial planning law and sustainable human development and settlement reconstruction?

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How is this different from pre-1994 kinds of engagement and interaction? Is there *real* change, or is it just a case of legal compliance?

1. Introduction

In the 140-odd years after the first diamond was found in South Africa in 1866, mining catapulted the country from a predominantly agrarian society into a modern industrial nation. Even today, mining remains a key driver of South Africa's economic development. This situation is also set to undergo little change, for, after more than a century of intensive extraction, South Africa is (still) regarded as one of the richest countries in the world in terms of mineral reserves, and one of a handful of countries with mines with more than 100 years of remaining service at current exploitation levels (Leon, 2012).

The exploitation of the country's mineral wealth has, however, since its earliest days been a highly contested activity. Largely as a result of the huge wealth and influence of the mining houses, the (perceived) importance of the sector for the development of the country, and the broader skewed power dynamics of colonial and apartheid rule, mining drove and planning law and human development followed for the biggest part of the country's modern history and mining extraction period. Key questions that have been raised in this contestation revolve around issues of benefit, cost and ownership – i.e. who owns the resource, who gains from its exploitation and who carries the cost? Of major concern in these regards has been the impact of the activity on its host community and the manmade and natural environments in which it is located. While there have been significant direct and indirect economic benefits for many such communities, there have also been high costs in the form of (1) pollution and mining-related diseases; (2) environmental degradation; and (3) the introduction of value-systems and human interactions that challenge existing norms and values and human rights abuses.

Over the last two decades, the mining sector of its own accord, both locally and abroad, has made enormous strides in cleaning up its act and setting up a guiding framework of what is regarded as good practice in (1) the protection and enhancement of human rights and (2) co-development of host communities in mining areas (see International Council on Mining and Metals, 2003; 2009; 2011 and Ruggie, 2011). From its side, the South African government has introduced a new progressive legal framework by which it has attempted to ensure that mining is made more serviceable to broader societal reconstruction and development (see Republic of South Africa, 2002; 2004; 2008). A key component of this new legislation has been a provision to ensure that mining companies make tangible contributions to socio-economic development and human settlement in 'mining areas'. At the same time, significant amendments have since the late 1990s been made to municipal governance and development planning legislation with the aim of ensuring progressive, assertive strategic planning by municipalities.

Recent legal pronouncements have also added further clarity to the mining and land use planning interface.

Notwithstanding the many positive changes the mining sector has made in the wake of the new voluntary and legally-binding codes of conduct, the industry is often still treated as if it has not changed its ways, is a super-exploiter and is not complying with stated legal provisions. At the same time, the persisting levels of deep poverty and the slow pace of broad-based economic transformation in the country, coupled with the seemingly extraordinary profits made in the mining sector, has seen the activity becoming a key discussion point in debates about the future of the South African economy. A strong theme in these discussions has been that of nationalisation of the industry, and if not that, then ways of securing a greater tax income from the activity.

Despite (1) the introduction of the legal and voluntary steps to 'set the balance right'; (2) the importance of the industry for the South African and regional economy; and (3) the prominence of the debates out the future of the sector in the political arena, public debates and the popular media, very little actual, empirical research has been done to establish what the outcomes 'on the ground' have been and to what extent the *actual* interface of mining companies with planning law, socio-economic development and human settlements has changed as envisaged.

In this exploratory study, the extent to which the changes in the legal framework have actually assisted in ensuring (1) a greater degree of balance, and (2) a more symbiotic relationship between mining, planning and human development, is explored in a predominantly rural district with a long mining history. The questions that are explored are: How do mining companies interact with municipal planning and planners, spatial planning law and sustainable human development and settlement reconstruction? How is this different from pre-1994 kinds of engagement and interaction? Is there *real* change, or is it just a case of legal compliance? It is hoped, that in undertaking research that considers the sector from a more multi-pronged angle, a contribution will be made towards moving the debate beyond disdain, rhetoric and critique, and into an arena where more informed debates and decisions about the future of the sector and the communities that are closely tied to its prospects, can, and will be had.

The structure of the paper is as follows: The next section provides a brief overview of the changes in the legal framework in the mining-community-municipality interface in South Africa post-1994. This is followed by a short discussion of (1) the district in which the research was conducted and the reason for its selection as the area in which to do the study, and (2) the methodology that was used in the study. The next section provides the data, which is followed by a discussion of the findings in terms of the three questions that the research sought to answer. This is followed by a series of concluding thoughts.

2. Changes in the Legal Framework Governing Mining, Municipal Planning and Land Use Management post-1994

The most significant change in the legal framework governing mining activities, has been the introduction of the *Mineral and Petroleum Resources Development Act, Act 28 of 2002*, which, in accordance with its preamble, seeks to *'… make provision for equitable access to and sustainable development of the nation's mineral and petroleum resources'* (Republic of South Africa, 2002: 2). Key objectives of the Act in pursuit of this goal are *inter alia* (1) the protection and management of the environment and the management of the country's mineral and petroleum resources through environmentally-responsible exploitation, so as to ensure economic and social development for current and future generations; (2) the promotion of local and rural development in the areas where mines are active, and the social upliftment of communities hosting, affected by mining and that supply labour to mining operations; and (3) far greater participation in and ownership of, and receipt of benefits from the mining industry by historically disadvantaged persons, i.e. Black South Africans, women and persons with disabilities.

In order to achieve the stated objectives, the Act, Amendments to the Act and Regulations passed in terms of the Act *inter alia* make provision for:

- The severing of the mineral rights from the owner of the land and placing these in the hands of the State and the introduction of detailed legal procedures to apply for prospecting and exploitation rights;
- The prescription of regulatory and progressive compliance measures, including conducting an environmental impact assessment and the preparation of an environmental management programme or plan by those seeking to acquire a prospecting, mineral, exploration and production right;
- The development and setting of a *'housing and living conditions standard for the minerals industry'*;
- The development of a broad-based socio-economic empowerment Charter to set the framework, targets and time-table for ensuring that previously disadvantaged South Africans enter and benefit from the mining industry;
- The provision of assistance to historically disadvantaged persons to conduct prospecting or mining operations;
- The making of provision for communities to lodge applications for mining rights on land that they own or will receive ownership of; and
- The placing of a requirement on successful applicants for mineral rights to (1) contribute to the socio-economic development of the areas in which they are located, as well as the communities hosting, affected by and/or supplying labour

to their mining operations, *inter alia* by the preparation of and reporting on the implementation of *Social and Labour Plans* (SLPs); (2) assist with the realisation of the objective of ensuring active participation in, and drawing of benefits from mining and beneficiation operations by members from historically disadvantaged groups prior to embarking on mining operations; and (3) ensure community participation in mining operations by affected communities (Republic of South Africa, 2002; 2004; 2008; Department of Minerals and Energy, 2004; Leon, 2009; Booysen *et al*, undated.).

In accordance with Guidelines prepared in support of the Act, the SLPs that have to be prepared must include (1) comprehensive Human Resources Development Programmes that include Employment Equity Plans; and (2) Local Economic Development Programmes that will ensure poverty eradication and upliftment of the communities living in the areas where mining is undertaken (Department of Minerals and Energy, 2004: 4). This is *inter alia* to be ensured through the involvement of these communities in mining and beneficiation actions and by setting out processes to save jobs in the case of the downscaling of operations and/or mine closure (*Ibid*). The Guidelines also clearly indicate that SLPs must ensure consultation and cooperation of the mining company with (1) the municipalities in the areas in which they are located, as well as (2) municipalities in the *'major labour-sending areas'*, in their planning and development activities, notably in the preparation and implementation of their Integrated Development Plans (see the discussion on these plans in the next paragraph below) (Department of Minerals and Energy, 2004: pp. 8; 2007: pp. 16; Mabuza *et al*, 2010). A later set of Guidelines (Department of Mineral Resources, 2010: pp. 17) go further and specify that, *'The mine or production operation must furthermore consult with other economic development frameworks like Provincial Growth and Development Strategy (PGDS), National Spatial Development Strategy (NSDS), National Priorities and any other relevant stakeholders. The Mine or Production Operation must, through consultation with communities and relevant authorities provide a plan. The plan should be in line with the IDPs of the mine communities'.*

In addition to the Mineral and Petroleum Resources Development Act, Act 28 of 2002, the post-1994 government passed the *Local Government: Municipal Systems Act, Act 33 of 2000 and* a set of *Regulations* in 2001 in terms of the Act, which *inter alia* provide for the preparation of a strategic five-year plan by every municipality in the country, called the *Integrated Development Plan* (IDP) (Republic of South Africa, 2000; 2001). This Plan, which includes a *Spatial Development Framework* (SDF) that is meant to both reflect the spatial outcomes as envisaged by the IDP, is also meant to provide strategic guidance in the preparation and implementation of the municipality's land use management system. Both the IDP and the SDF have to, in terms of the Municipal Systems Act, 2000, be prepared in a highly participatory way involving all stakeholders and seek to align and integrate the plans, strategies, investment and spending proposals of (1) all spheres and sectors of government active in the municipality, as well as (2) all

the major private sector actors in the municipality (Republic of South Africa, 2000; 2001). As such, this Act, mandates the involvement of mining companies in the preparation of municipal IDPs and SDFs, and binds them to locating and programming their infrastructure investment and spending plans in accordance with these plans.

Two recent court cases have provided another dimension to the interaction between mining companies and the State (see Business Enterprises at the University of Pretoria, 2012). In *Maccsand (Pty) Ltd versus City of Cape Town and Others (12 April 2012)*, the Constitutional Court made a clear distinction between mining and land-use planning legislation and ruled as follows: While the Mineral and Petroleum Resources Development Act, Act 28 of 2002 (MPRDA) is concerned with mining, the Land Use Planning Ordinance, 1985 (LUPO), in the Western Cape Province governs the control and regulation of the use of all land. These laws serve different purposes within the competence of the spheres of government charged with the responsibility of administering them: While the MPRDA governs mining, LUPO regulates the use of land. However, the exercise of a mining right granted in terms of the MPRDA is subject to LUPO. An overlap between the two functions occurs due to the fact that mining takes place on land. This overlap does not constitute an impermissible intrusion by one sphere into the area of another, because spheres of government do not operate in sealed compartments. There is nothing in the MPRDA suggesting that LUPO ceases to apply to land upon the granting of a mining right or permit. By contrast, Section 23(6) of the MPRDA proclaims that a mining right granted in terms of that Act is subject to it (i.e. LUPO) and other relevant laws. The implication of this pronouncement is that, while permission may be granted to mine, mining cannot take place until the land in question is appropriately rezoned. The South African constitutional order provides that one sphere of government or organ of state may take a decision whose implementation may not take place until consent is granted by another sphere of government or organ of state within whose area of jurisdiction the decision is to be executed. Each is concerned with different subject matter. If consent is refused, it does not mean that the first decision is vetoed. The authority from whom consent was sought would have exercised its power, which does not extend to the power of the other functionary. This is the case, despite the fact that the effect of the refusal in those circumstances would be that the first decision cannot be put into operation. This difficulty may be resolved through cooperation between the two spheres of government or organs of state. Failing which, the refusal may be challenged on review.

In the second case, *The Minister for Mineral Resources versus Swartland Municipality (12 April 2012),* which was heard together with *Maccsand v The City of Cape Town,* the judge concurred that a party who is granted a mining right or permit in terms of the MPRDA may start mining operations only if the zoning of the land in terms of LUPO permits it.

3. The John Taolo Gaetsewe District Municipality: Overview and reason for inclusion in the study[2]

The John Taolo Gaetsewe District Municipality is one of five District Municipalities in the Northern Cape Province, and is located on the northern border of the South Africa with Botswana. The district, which is 27 293km² in size, comprises three Local Municipalities, the Gamagara, Ga-Segonaya and Joe Morolong Local Municipalities. According to the 2007-Statistics South Africa Community Survey, the district is home to 172 454 persons, which put in the 47th place out of the then 52 District Municipalities in the country in terms of population size. The density of settlement is very low by national and international comparison (7 persons per km² in 2011). Other than sizeable population concentrations in one large regional town (Kuruman) and six smaller towns (Mothibistad, Bathlaros, Moropeng, Kathu, Olifantshoek and Dibeng), the bulk of population (more than 50%) is spread across a vast landscape dotted with approximately 185 rural villages and medium to large farms. Nearly 44% of the population live in deeply impoverished conditions in the Joe Morolong Local Municipality, primarily on land which once formed part of the former apartheid-era Bantustan of Bophuthatswana. The district is marked by a harsh semi-dessert climate with annual temperatures ranging between 8ºC and 28ºC, and an annual rainfall ranging from 500mm in the south-eastern part of the district to 200 mm in the north-western part.

The district was for many decades home to large asbestos mining activities, which came to an end in the early 1980s. Large iron ore and manganese reserves and deposits of a range of semi-precious stones in the area, coupled with the commodities boom of the last decade, has seen a resurgence and massive expansion of mining in the area. Most of the mines are open-cast, with the district also being home to one of the largest open-cast iron ore mines in the world (Sishen), from where iron ore is carried by train on one of the longest iron ore railway lines in the world to the port of Saldanha, 861 km away on the south-western coast of South Africa. The last decade has also seen the arrival of multi-national mining companies in the area, largely in pursuit of the manganese reserves in the area. In addition to the mining industry, and its associated transport and logistics sectors, the two other, far smaller economic activities in the area are extensive agriculture in the form of cattle and game farming, and subsistence agriculture.

The *reason for selecting this district as area in which to do the study* is as follows: The author was part of a team that was appointed to undertake a review of the Spatial Development Framework of the district in 2011. This appointment provided the ideal opportunity to not only get access to (1) an area that is not only far removed from the major urban complexes of the country, but also (2) to the many stakeholders that would need to be interviewed in the kind of study that was envisaged. In order to ensure sound research ethics, the author (1) obtained informed consent from the project manager in

[2] The information discussed in this section was obtained from the *Spatial Development Framework* of the John Taolo Gaetsewe District Municipality (John Taolo Gaetsewe District Municipality, 2012).

the municipality to undertake the study, and (2) throughout the study, explained the dual-focused nature of his questions, interviews and requests for data to all interviewees. Given the emphasis in the preparation of the Spatial Development Framework on producing something that would be to the benefit of all that live and work in the district, which is also the reason for undertaking this research, no clashes of interest were encountered.

4. Methodology

Use was made of two sources: (1) documents and (2) semi-structured interviews. The former consisted of (1) planning documents, notably plans, policies, strategies and development frameworks prepared by the John Taolo Gaetsewe District Municipality, the Local Municipalities that fall within the area of the jurisdiction of the district and the Northern Cape Provincial Government; and (2) information on the activities of mining companies as provided on the websites of mining companies. The *interviews* entailed (1) one-on-one interviews; and (2) focus group sessions with representatives of the mining companies active in the area, municipal and provincial officials, consultants, local politicians and traditional leaders. These interviews were informed and enriched with information gained from a series of public participation meetings, conducted as part of the review of the John Taolo Gaetsewe District Municipality. All the interviews and public participation meetings were held in the period March 2011-February 2012.

While the documents and interviews provided a wide and a rich source of information on a myriad of issues and aspects surrounding the mining industry, the emphasis throughout the data-gathering and analysis session fell on exploring the way in which mining companies interfaced with the State, communities and each other in response to, and in accordance with the legal requirements for involvement with and support of: (1) the integrated development planning and implementation activities by municipalities and provincial governments; (2) the Local Economic Development plans, projects and programmes of municipalities and communities; and (3) the sustainable long-term development of the district. As such, the data gathered was both (1) quantitative (i.e. dealing with economic growth, human settlement formation and change and environmental indicators); and (2) qualitative (i.e. the views, opinions, concerns, aspirations, hopes and dreams of those interviewed) in nature.

5. Findings

The findings are structured under four themes: (1) views of the representatives of the mining companies active in the district; (2) views of representatives of provincial and municipal government officials and municipal councillors in the district; (3) views of community and traditional leaders and community members; and (4) documented evidence of investments by mining companies in the district.

5.1 Engagements with Representatives of the Mining Companies

All of the representatives that were interviewed were fully aware of the (new) legal requirements on mining companies and specifically, their own operations. In in a number of cases, interviewees indicated that they had good working relationships with (1) officials and councillors in municipalities, and (2) traditional and community leaders in the area. References were also made to stakeholder-structures on which they served and the involvement of the mines in (1) initiatives by organs of state and communities to initiate and support local economic activities and to increase job creation in the areas in why were located; (2) the provision of bursaries for learners in the area; (3) the construction and maintenance of infrastructure in the region, including the very costly maintenance and upgrading of local and regional roads; (4) the provision of housing; and (5) the construction of community facilities, such as clinics, class rooms and sporting facilities. While the level of enthusiasm for this involvement in the area and its people varied from very keen to mere compliance, there was not a single interviewee who expressed the view that such investments and contributions, while sizeable, should not be made.

What did, however, emerge in a number of interviews, was a distinct irritation, which in some cases was closer to a real frustration with a number of aspects around the way in which the public/State sector worked. These included (1) the perceivably far more laid-back approach and much slower speed at which 'things moved along' in the public sector; (2) the lack of adequately trained and committed officials to give full and real expression to the requirements of the new laws; and (3) the lack of integration and implementation in the plans, decisions and funding decisions in the three spheres of government.

In a number of the interviewees respondents from the mining sector would explain their frustration by explaining where they were coming from. What these explanations emphasised was the enormous difference between the nature and scale of a mining operation and the public sector and the way one had to function to survive in the mining sector. This business environment included (1) 300-plus carriage-iron ore trains of more than 3.2 km long; (2) hundreds of iron ore and manganese trucks running 24/7, all year-long; and (3) huge amounts of capital had to be invested in the construction and maintenance of mining infrastructure (i.e. ground preparation, erection of structures, machinery and training and relocation of workers), while being super-exposed to a highly competitive business climate and erratic fluctuations in supply and demand on a global scale. This harsh business and operational climate, it was argued, meant that miners that wanted to 'make it', and flourish in the sector had to show enormous dedication to task, work very hard and long hours, have an astute focus on what matters for the company and the mining operation, a pragmatic, can do, no-nonsense approach and have an acute awareness of the bottom line. This meant that there was no room for error or any waste of time, which it was argued, meant that it was often very hard to

fathom the very different work environment, lack of plan implementation and seemingly very different work ethos in some areas of the public sector.

On another note, a concern was expressed that (1) the enormity of the costs involved in setting up a new mine, and (2) the investments and contributions required in terms of the new mining laws, meant that older, larger, capital-rich companies were at a huge advantage relative to smaller, emerging, start-up companies who had not yet built up such reserves or access to such funds. This, it was argued, ran counter the government's objective of boosting small and medium-sized companies and new, start-up Black-owned enterprises. Coming to the same question from another perspective, it was argued by an interviewee that it is for this reason that it would not be the larger, established, in most cases global, companies that would contravene the legal requirements, but rather the smaller ones. A number of interviewees argued along similar lines that (1) the huge financial and reputational risk for global mining companies associated with contravening human rights and environmental regulations, and (2) the far longer period of exposure to both the world of mining and the rules and regulations that go with it, meant that these companies were far better than the newer, younger companies at ensuring legal compliance (see also Mabuza *et al*, 2010 for a similar finding).

With regards to the recent court cases that had the effect of requiring of mining companies to ensure that their surface activities complied with the land use rights on the properties on which they were located, there were no qualms. In most cases, representatives from the mining companies had met with municipal officials and appointed town planning firms to undertake the necessary steps to ensure that they complied with the relevant land-use controls. In others, the mining companies had instructed their legal sections to undertake the necessary steps to ensure that they were legally compliant with regards to the land use regulations.

Finally, and somewhat unexpectedly, even though prompted on the matter, none of the interviewees indicated that there was any form of corruption or bribery in the interface between mining companies and officials and leaders in the public sector or community leaders or members that they were aware of. This does of course not mean that it does not take place; it may simply mean that the mining companies have no interest in stirring controversy or engaging in debates and issues that have no direct, positive outcomes for their operations, and that could land them in costly litigations.

5.2 Engagements with government officials and councillors in the district

In the case of these role-players, the views regarding the mining industry were more mixed. While there was a generally positive view towards the industry, and a real appreciation for the endeavours of the mining companies in complying with the legal requirements, there was a clearly expressed wish for the municipality and the community to benefit more from mining activities. In addition to this, a frustration with the way in which mining companies disposed of their legal requirements was expressed

by a number of interviewees. This frustration revolved around mining companies, while spending the required components of their turn-over in the area, doing so (1) in an *ad hoc* way, and (2) in accordance with the commitments and timing of the mining company, and not necessarily in terms of what the municipality wanted to see done/invested at a particular point in time and space/place. While the Municipalities in the district (the District and the three Local Municipalities) had at various points set up economic development forums consisting of the mining companies, community members and other stakeholders in the district, these often only lasted for a short while and/or did not integrate their actions with those of other structures, especially so the planning units in the Local Municipalities in which they were located.

Officials tasked with preparing the legally required Integrated Development Plans (IDPs) and Spatial Development Frameworks (SDFs) for their municipalities, also complained about the lack of disclosure on the side of the mining companies as to their envisaged and planned future activities/operations. This not only made the 'forward planning' by municipalities difficult, but also meant that the identification and/or setting aside of land for especially housing for workers in the mines and the planning for massive infrastructure investments, could not be done, or where it was done, was done on a hunch, and not based on 'real figures'. The result of this was (1) housing shortages when new mining operations were initiated; (2) a mushrooming of informal settlements and contraventions of land use rights; and (3) shortages in key municipal services – refuse removal, water and sanitation and electricity. As for compliance with land use regulations, while officials expressed the view that mining companies cooperated very well in this regard, the concern was expressed that it does require from the municipality to take a strong position that 'the law will be enforced' and to actually do so. The situation according to one of the officials was simply that, '*while mining companies will in most cases comply with what the law requires, they in some cases needed to be reminded of this obligation'*.

An area in which a high level of unhappiness was expressed by not only municipal, but also provincial officials was the impact of the mining operations on the roads in the district and the wider region. The key challenge here was that the roads were planned for 'normal rural use', not for hundreds of heavy, fully loaded mining trucks moving across them on a daily base. Given the high costs associated with road construction and maintenance, and the huge investments required in social investment in the country post-1994, and especially so in some parts of the district, the State simply did not have the funds to keep roads in a running order by themselves. While it was indicated by both officials in the provincial and municipal governments that the mining companies often assisted with the upgrading of roads, this was generally done in an *ad hoc* way and not based on, or driven by a comprehensive roads master plan. In addition to this, the view was expressed that the mining trucks were working to the detriment of other economic activities in the area by often causing long delays on the roads to and from, and in the district, and by taking huge trucks through the central business district of the major town

in the area (i.e. Kuruman), in the process hurting this retail, education and administrative hub. Finally, the trucking industry was said to have led to a massive increase in prostitution and associated social ills in the central business district of Kuruman and also increased levels of air pollution in the region.

As for the question of improper behaviour or corruption in the dealings between the mining companies and officials, again, while it was stated in a number of interviews, that it may happen, not a single interviewee indicated that they themselves were aware of such activities in their areas of work. One of the officials wagered the opinion that, due to the urgency of mining companies to get their operations up and running, and the slow pace at which decisions sometimes move in the public sector, it may be that mining companies may have been tempted to nudge the process along in improper ways. The official was, however, quick to add that there were no such cases that he was aware of.

In a number of cases, it was mentioned by officials that unresolved questions and tensions (1) amongst councillors and (2) between councillors and traditional leaders around the economic development of the district and the future spatial development pattern of the district, have made planning for the district difficult, and has not been served by mining companies speaking to, and seeking to address the needs of individual leaders who often had very different views about the future.

5.3 Engagements with the community and traditional leaders and community members

In the case of these interviewees, while the views were generally still more located on the positive side, they were far more mixed. While nobody complained about the economic activities and jobs the mining industry had brought to the area, there was a high degree of unease at the fact that only some benefitted and not more or all of the community members. While some community members expressed the view that they lacked the skills to be employed in the industry, and that special education programmes needed to be put in place to ensure this, there was a also a view that the companies *'brought in their own workers form elsewhere'* and were not interested in employing local labour in especially the better paying positions, irrespective of how well they were trained. Rather than wait to be employed by mining companies coming in from outside, a number of local community members and traditional leaders indicated that they were interested in undertaking their own mining operations.

A number of community members indicated that they were not necessarily interested in working in or on a min, but saw secondary economic opportunities in the prevalence of the mines and their workers in the area, notably in the areas of agriculture (food production) and housing provision and road construction. Making use of these opportunities, they argued, however, required capacity building and financial support, which they believed should be provided. At the same time, they indicated that

preferential procurement practices should be put in place to assist local small-scale, start-up companies.

A number of community members expressed concerns about the levels of pollution caused by the mining industry in the area, notably the dust from the mining dumps. In addition to this, many references were made to the damage caused by the asbestos mining in years gone by, which has, despite rehabilitation activities, rendered many parts of the district inhabitable, and also led to respiratory diseases (asbestosis) and numerous deaths. It was especially the combination of having to suffer the negatives of the industry (pollution), while not being offset by receiving greater benefits from the activities that many felt to be *'just wrong'*.

In a few cases, the view was expressed that while the mining companies were involved in (1) the construction, upgrading and maintenance of municipal infrastructure provision (notably water and sanitation services) and roads and (2) the building of class rooms, community halls and clinics, more should be done in the deeply deprived rural areas with the funds generated in the mining industry. On this score, it was stated that the dominance of the mining industry meant that many members of rural communities, especially the youth, yearned for a high-paying job in the mines and were no longer interested in doing what they had done for generations, i.e. agriculture. The high levels of water-usage by the mines, and the pollution of the mining activities of especially the groundwater reserves in the district, were seen as further aggravating the situation, and leading to a growing reliance on the mining sector for jobs and an ever-greater loss of connection to earlier ways of making a living with their associated traditions and indigenous cultural practises.

In the case of the community members, there were clear signs of suspicion amongst a number of interviewees regarding the interactions between mining companies and government. It was often grimaced that corruption and unfair advantaging does happen, but again no one single case could be mentioned as to where it had actually happened. In one of the community meetings, it was argued that there is not enough transparency in the interactions between representatives and mining companies, notably in the local economic development forums on which both groups served, and that this had to be addressed by at least making the minutes of forum meetings available to the public.

5.4 Investments by mining companies in the district

This analysis revealed that mining companies active in the district have made hundreds of millions of Rands of social investment in the area[3], *inter alia* in the following: (1) the

[3] Unofficially a figure of more than R500-million (approximately $62) being invested by mining companies in the district over the last ten decade (2000-2010) was mentioned in an interview with a manager of a mine in the district. Officially, Kumba, the largest mining operation in the area, invested R134 million in 2010 and R73.6 million in 2011 respectively on the implementation of social and community development projects, and a total of R264.6 million on the implementation of its Social and

construction and upgrading of schools, class rooms and hostels at schools; (2) the provision of support for early childhood centres; (3) the provision of bursaries for learners in the district to study at tertiary institutions; (4) the provision of support to libraries; (5) assisting with the establishment of a higher education institution in the province; (6) putting in place internship and mentoring programmes in the mining industry for youths from the district; (7) the provision of one-stop business support services; (8) the sponsoring of sport activities and events and the upgrading of sport facilities; (9) the construction, upgrading and maintenance of municipal infrastructure, especially water provision and sanitation services, in the district; (10) the provision of mobile health units, support with the construction of clinics and primary health care services; (11) the setting up and support of community farming activities; (12) the provision of assistance with the establishment and development of new small-scale, local enterprises; and (12) the making available of technical expertise (e.g. engineering services) to under-capacitated municipalities; (BHP Billiton Development Trust, undated and Kumba Iron Ore, 2010; 2011a; 2011b).

6. Discussion

The study sought to explore the way in which mining companies interface with the State, and communities in response to, and in accordance with the legal requirements for involvement with and support of: (1) the integrated development planning and implementation activities by municipalities and provincial governments; (2) the local economic development plans, projects and programmes of municipalities and communities; and (3) the sustainable long-term development of the areas in which they are located.

The findings suggest that in the district that was studied, the interface, while not perfect, is far removed from the negative image that the often down-beat headlines around the sector may suggest. By and large, the interface is approached and experienced in a positive way. In addition to this, the mining industry was found to be (1) providing employment opportunities and livelihoods in an area with otherwise very little other economic activities; and (2) making a significant contribution towards the provision and maintenance of municipal services, local economic and community development ventures, education, bursaries and sport facilities and socially beneficial activities in communities. As for the law, mining companies did what the law prescribes in what could be described as an engineering efficiency-mode. There is just way too much to lose by not doing so in terms of retraction of the mining licence (the right to mine) and the danger of reputational risk. It is, however, in this careful pursuit of legal compliance that a major concern lies, *viz.* in doing what the law prescribes and not more or less than that, the spirit of the legislation and the real reason, of ensuring a joint, collective approach towards planning and development in an area, may not be served. It can very

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Labour Plan commitments and enterprise development in the period 2006-2011 (Kumba Iron Ore, 2011a: pp. 47 and 2010: pp. 13).

easily become an individual pursuit of each mining company of admittedly socially and economically very beneficial objectives, but without the 'bigger bang' that collaboration between the different mining companies could have achieved.
In addition to this, while the investment by the mining companies is crucial, it is only one part of the story – the other parts lie with the public sector and the community. Should especially the public sector, especially in cases where communities are deeply impoverished and hence not be able to contribute little else but their time and labour, not deliver what and when they can, the input by the mining sector will have far less of an impact than it could have had. Relating this to the Integrated Development Plans and Spatial Development Frameworks that municipalities have to prepare to (1) plan and (2) guide the future development of their municipal areas, the reality is simply this: should a municipality not have a very well-directed implementation strategy, and stand strong as to where investment has to be made, mining companies could invest anywhere, in no specific order, and with no specific cumulative impact in mind. In such cases, a mining company could be fully legally compliant by constructing a road segment in an impoverished rural part of the district, and assisting the movement in that segment of the district, but not necessarily be serving the collective or the the longer term development of the district or the wider region.

Associated with this issue, is that of capacity-building of officials and community members about the mining sector, how it works and how to engage it to ensure optimal outcomes for all concerned (see also Mabuza *et al*, 2010, pp. 4). At the same time, there is a need to ensure that mining companies are aware of and familiar with (1) the objectives and enabling, regulatory and supportive legal and policy framework of government, notably with regards to municipal government and (2) ways in which to support especially this sphere of government.

While the piecemeal, *ad hoc*, compliance-driven un-integrated, unsynchronised investment by mining companies may over the short to medium-term result in the municipality not succeeding with the implementation of its plans as envisaged, the result may over the longer term be that (1) living conditions on the ground and (2) economic prospects for communities do not change. Given the widely shared view amongst communities that they are not benefitting enough from the mining activities, this may lead to growing levels of unhappiness with the mining industry and even hostility towards the industry. Clearly this would not be in anyone's interest, and could, given the limited investment in other sectors of the economy in the district, leave the district highly vulnerable, should mining companies either be forced to suspend or close their operations.

While the new legal framework for mining and municipal planning has put in place a series of measures to ensure greater involvement by mining companies in the preparation and implementation of plans and proposals of government and investment in the communities and places in which they are active, the successful implementation of

the law requires leadership on the side of the representatives of the State and affected communities to provide the public voice, direction and vision in response to the very strong voice and intent of the private sector, as presented by the mining companies. One way in which this could be done is through the introduction of a governance model/structure in which the public, community and private interests are all represented in a structure that is focused on (1) the long-term planning for the district; (2) the programming of investment and spending in support of this plan; and (3) the preparation, implementation, monitoring and review of this investment and spending programme. Such a proposal, however, falls outside the ambit of this study, and will, as such, be left at that.

8. Concluding thoughts

While there are without doubt real, negative externalities to the mining industry, this exploratory study has revealed that mining companies operating in the district that was studied, are not mute to these, and have approached the new legal requirements placed on the mining industry in a positive way and are complying with these requirements. What the study, however, does suggest, is that while the new laws are a good start, more will have to be done, with a view to 'up-scaling' the legal regime to ensure (1) greater synergy in the investment by the State and individual mining companies in mining areas, and (2) that communities living in mining areas, enjoy a greater share of the benefits of these activities. Far more research in mining areas, such as that undertaken in the study is, however, required before such steps are taken.

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Planning in Serbia in the First Decade of 21. Century: Lessons from Unsuccessful Story of Planning Society within Dysfunctional Democracy

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ABSTRACT:

Over the past half a century Serbia experiences major societal turbulences – post Second World War reconstruction, nationalization, frequent changes in constitution, several changes of societal practice (centrally planned economy, self-management, decentralization, etatization at the republican level, etc.), the dissipation of former Yugoslavia, fall of communism and establishment of a multi-party system, privatization, and market economy. All these changes are followed by continuous alterations of the legislation used to guide development and arrangement of Serbian settlements and cities . Spatial and urban planning doctrine and practice adjusts to the overall societal context and its main traits. By mid1980s the planning system in Serbia is highly integrated and participatory in its nature. Unfortunately, the mostly negative circumstances of the 1990s prompted a rather incoherent response from urban and spatial planning professionals and other entities involved in the land development process. The 21st century starts on a positive political footing – the move toward a true democracy, but is obstructed by the dynamics of initial capitalist accumulation and partial and slow implementation of social and economic reforms.

We find the state of Serbian planning quite complex – driven by conflicting professional cultures and highly politicized set of other actors who represent narrow private or commercial interests. The system still lacks the capacity to exert strong guidance and implementation of generally well conceived plans and to promote (let alone protect) public interest. It is our tentative conclusion that the institutional and societal (political and economic) problems are more of an obstacle than the laws themselves. It is not the laws but their implementation that is based on flawed institutional processes and difficult societal circumstances. The legislative activity seems to be only the means of

masking the practice that disregards or abuses the laws. Yet another initiative for changing the current law that is motivated by the investment interests may be indicative of this situation. Meanwhile, the National Spatial Plan of Serbia (voted in 2010) strongly reflect the controversial situation: clearly explained in this brief review, its content is a compilation of wishes, visions rather than quantitative analysis – instead of numeric data, almost 200 strategic priorities (!) are given, showing misuse of both terms of *strategy* and *priority* as well as ignorance of economic possibilities of the country. So, we could state that spatial planning laws and system are not only born but also may be strangled by the societal circumstances, as is the case in Serbia.

The research presented in this paper demonstrates that planning is deeply embedded in the societal context and that urban planning legislation clearly reflects that. The level of political and administrative centralization and the loci of political power seem to exert substantial influence over the planning system and practice. The professional cultures involved in planning -- planners, architects, engineers, economists, sociologists, geographers – are also prominent factors. Those professional groups are in search for self-identity and the boundaries of the planning field. They are active parts in the formation of the Serbian planning doctrine and planning system, often pulling in different direction. While this is a long-standing and ongoing productive and creative "battle" that will certainly continue in future, what is currently needed is for Serbia to settle on an operational and effective practice that would exert some order and care in the process of urban development. Institutional improvements and a firm action in curbing corruption and opportunism in urban transactions and land development would be an important first step.

Key words
Planning system, transition, constraints, planning practice, Serbia.

1. INTRODUCTION

Mentioning Serbia to someone, it will bring out the recollection of social earthquakes that occurred in the past 20 years – wars with neighbours, sanctions, refugees, deep economic crisis, bombing, the fall of the dictatorship, assassination of the Prime Minister and the end of the last two Yugoslavias. In the same period, one system collapsed and another was and is still being established now in the new independent Serbia.

The move from a centralized to a market economy is never easy and it requires from government and citizens anywhere to make difficult choices. But while countries other ex-communist/socialist countries started this process in 1989, Serbia did not initiate its reforms until early 2001. Economic, social and institutional deterioration of the 1990s left a more difficult legacy than the stabilization and reform vagaries facing other countries in Central and Eastern Europe at their transitional beginnings. Serbia unlike those lost its international markets due to international economic sanctions. Also, since the state was going through a long period of deep crisis it was considered politically risky to impose any kind of financial discipline and there wasn't enough strength to build government institutions.

After the democratic revolution in 2000 the path of economic and political reform, if not always linear, has been definite and has had impressive accomplishments especially in making good macro economical climate. However, the Republic today still lags behind many of its neighbors, particularly in the rate of unemployment (over 20%); low per capita GDP of about US$ 3,525; high poverty rate (about 20%); low competitiveness (87th on the world list); striking internal and external imbalance (10.7% inflation rate and high balance-of-payments deficit amounting to 45% of the GDP in 2011); very uneven regional development by European standards (Yugoslav Survey Online, 2011). Unfortunately, now that it has reached the same level of economical development as in 1989, Serbia is standing at the point where the benefits of a market democracy have not yet been materialized and there are still other painful steps ahead that should be taken which will mostly cost already poor layers of society. Foreign direct investments inflow to the country which would mitigate these negative effects and accelerate economical growth is not sufficient (7.7% of GDP) due to Serbia's bad image, existence of risks and high rate of corruption. Social collapse is manifested through the loss of traditional values, break up of family structures, decreased family size (very small birth rate), and growth of single and elderly households. Public interest is unprotected in all spheres – social security, health, education, and spatial policy. Finally, many new laws are introduced (including the new Constitution), but are not well codified and harmonized – the fact that leads to their frequent misinterpretation or misuse.

Recovering from the legacy of 1990s and the transition, Serbia is at the same time burdened with the crimes committed in the name of its nation, swinging between alternatives – right wing and the political centre, on how to deal with it. Directly connected with it stands the future of its European integration, and all that it implies. In general, uncertainties regarding EU expansion as a political issue of EU and compliance with the International Criminal Tribunal for the Former Yugoslavia as a political issue of Serbia could reduce the value of EU integration as a key motivator for reform. Attention to reform is also diverted by the status of the 15 % of its territory called Kosovo and Metohia. Regardless of outcome of the negotiations between internal and external actors, there is a potential for negative and possibly destabilizing effects in Serbia. Other destabilizing factors are coming from constant infighting among democratically oriented political parties which form today's government, weak public sector and transition delays which have created opportunities for a rise in the influence of nationalist and populist parties. This has also resulted in a lack of political and public consensus on every important state issue, key transition policies and consistent political will to make difficult but necessary reforms.

Taken together, there are too many questions and uncertainties regarding Serbia's future in general and a lot of them are highly dependent on international scene and factors. Consequently, there are those that depend on reaching the consensus between internal players which doesn't make them any less complicated or more predictable.

Other questions are: In this country of uncertainty and bad experiences, how is a planner, a spokesman of long-term goals of development, progress and better quality of life, the carrier of mostly good news, being seen by the ones he is planning for? How does the planning work in a country like this? Since the first one is rhetorical, we will try to answer the second question further in the paper.

2. PLANNING IN TRANSITION

In almost two decades that have elapsed since the overthrow of state socialism (or communism) in Central and Eastern Europe (CEE), substantial changes have occurred in the nature, role and functioning of government and other institutions involved in spatial development and urban policy (Taşan-Kok 2004). Urban planning and policy responses of localities have been quite diverse, reacting to specific and often dramatic conditions: political democratization, reintroduction of market principles, the state's fiscal crisis, massive privatization, commercialization, discontinuation of "welfare state" programs, and intensified international financial transactions and investments in urban areas (Tsenkova and Nedović-Budić, 2006). The new circumstances have prompted not only new institutions but also a "new notion of planning" that strives to regain its legitimacy, become more flexible, and adapt to the new economic and political circumstances (Kornai, 1997; Maier, 1994). In those dynamics, an idiosyncratic mix of old, new and innovative practices interjects into the transforming reality (Nedović-Budić, 2001).

The transition of societies and cities from communist to post-communist, therefore, involves — among other things — new systems of government (or governance); new legal, constitutional and institutional frameworks; new economic order; new rules of social integration; and new policy choices for privatization and redistribution of public assets (Harloe, 1996, Andrusz et al., 1996, Offe, 1997)**.** The theory of transition is rooted in the democratization theory that views transition as primarily a political process.[1] Transition specifically of urban phenomena and processes, too, is viewed as essentially political and economic, and perhaps not distinguishable from the transition in general (Holmes, 1997; Wu, 2003).

The case of former Yugoslavia and present Serbia illustrates well the changes that a planning system undergoes in response to the changing political regime, socio-economic system and institutions. While the planning systems in other Central and Eastern European countries have been under transition during the post Second World War and the more recent post-communist period, the Serbian case is particularly heavy in societal dynamics and scope that went beyond what could be considered a typical experience and context of a communist or a post-communist CEE country (Vujošević and Nedović-Budić, 2006; Nedović-Budić and Cavrić, 2006). In Petovar's (2003) words, Serbian cities are "between the state and the citizen." The more extreme variations in how planning profession and practice operated in former Yugoslavia and how they responded to the societal circumstances from 1989 on offer a rich set of observations that would point to the relationships between planning law and its broader context on one hand and planning practice on the other hand. The lingering transition (or what Thomas (1998) terms "the moment of discontinuity"), which in Serbia seems to have been more complex and less predictable than in other post-communist countries in Europe, also allows for an extended

[1] The main features of transition theory are: 1) a comparative approach; 2) an emphasis on democratization (civil society, political society, rule of law and constitutionalism, state apparatus, economic society with an institutionalized market); 3) categorization of the pre-transition situation as authoritarian, totalitarian, post-totalitarian, sultanism; 4) the determining influence of the past on the path of transition (path dependency). The theory also includes a 'moment of discontinuity' defined as a period where the structure and function of a country or city does not correspond to the external environment with which it has to interact. Transition is the period, stage, process, or policy that encompasses this moment and leads from one period or situation to the next (Stark 1992; Thomas 1998).

time period for studying the processes and issues that underlie the formation of a new planning system.

Pajović (2005) maintains that "urban law and system 'spring' from society, are 'born' with a state, and 'grow' in the space for which they are tied, in which they are 'rooted'" (p. 6). Drawing on this notion, the paper focuses on changes in planning legislation in Serbia as the defining factor of its evolving planning system and as an important reflection of the dynamic socio-economic, institutional and political context.

3. PLANNING SYSTEM IN SERBIA: SOME STUMBBLING BLOKS

As in the other ex/communist/socialist countries, former state-centred planning system broke down also in Yugoslavia at the beginning of the 1990s. In the following decade, along with the events we mentioned and the new key factors that transition introduced: political plurality, privatization and market economy, Serbia witnessed a deep crisis of planning, not only because of the chaotic state of the country but also as a reaction to too optimistic and rigid planning that characterized previous period of communism/socialism. There was some effort to meet the challenges of these turbulent times with the creation of the new legal arrangements and the adoption of the Spatial Plan of the Republic of Serbia in 1996 but in fact, the practise showed to be a mixture of old habits and few institutional changes which couldn't match the impact and of the new political, economical and social factors. The planning system as a whole was recognised like a "strange mix of heterogeneous elements from a number of disparate modes i.e. 'crisis – management - planning', 'planning – supporting – wild – market - and-privatization', 'project – based - planning' etc." as in Vujosevic (2002; p.59). This unsuccessful retouching of the planning system that happened in the mid 1990s is well illustrated with the fact that in the next 7 years besides the national spatial plan only 2 spatial plans (one for water accumulation and one regional) have been adopted while 15 others were in different phases of elaboration. Such a system of spatial and strategic planning was characterised as:

- More or less developed spatial-geographical environmental system of criteria, i.e. a way of thinking on the spatial conditions for locating networks and development; Certain crucial mistakes of planners, which we encounter from time to time still do not discredit this planning dimension;
- Utterly undeveloped and inadequately established assessment and evaluation system of the financial-economic feasibility of planned solutions and an even more serious problem of the complete lack of an passable economic development strategy, without which the spatial plan is placed in an unreal economic space and time;
- Not of lesser significance is the social system development out of which should derive the idea on the needs, values and goals of a social community for which we make plans. This system, as yet, has been subjected to a mere improvisation in plans (urbanisation, housing, renewal, public services, special assets);

While Serbia's planning was trying to keep its head above the water, so called Western planning was entering another phase of its evolution. The consequences of globalization, deregulation, decentralization, negative processes in the environment and in the case of Europe its integrations, lightened the necessity of new more innovative

mechanisms and instruments that would shape a more 'plan-led' practice. This has resulted in promoting sustainability, subsidiarity, efficiency, cooperation, communication, coordination, spatial and strategic planning, schemes, initiatives, networks etc.

One year after the democratic change in Serbia, in 2001 works on reforming the system of planning began. The intention was to fill out the gaps created in the previous decade and to answer to the new political, economical, social and spatial context of planning as well as to incorporate new concepts and instruments that were at that time dominating the Western one.

The main carrier of this reform was the new Law on planning and construction, adopted in 2003. The intention was to bring planning closer to the citizens, to make the procedure of acquiring building licence easier and more in a concordance with European practice, to differentiate the public and other land and to make a step towards denationalization and to bring planners back on the scene by giving them more plans to work on and more responsibility (Djordjevic, 2003). Essential task to provide the framework for the prosperous development of the settlement, municipality or the state has been given to the local or state government.

The main pillars of the Law were:

- comprehensiveness (only one law that regulates the matters of planning, land and construction instead of precedent 30; plans are regulating all the conditions for every kind of construction);
- moderateness (instead of solving and defining everything, planning is more concentrated to the public interest);
- adequateness (the list of possible planning answers to different issues is extended);
- responsibility (planners have the professional license issued by the new Chamber of engineers under certain conditions; planners also have full responsibility for the quality of the product - plan);
- applicability (spatial plans contain the Contracts for implementation and urban plans have the mid-term programs);
- simplicity (every construction is welcomed if it is in a concordance with the plan, also there is a limited number of rules which can be interpreted by every professional)
- democracy (the rules determined in plans are equal for all);
- decentralization (every municipality has its spatial plan, rules and conditions for construction depending on its particularities).

Regarding planning the Law, besides its professional institution and planers' licences, regulates planning board of commissioners, Republic Agency for Spatial Planning, system of plans, their contents, institutions responsible for their adoption and hierarchy within the spatial planning, as well as subject, programs, contents, types, adoption and alterations of urban plans and other urban-architectural solutions within the urban planning.

Even though this new legal framework was debated inside the professional circle, other solution wasn't offered. Being given the new rules, not all the planners managed to take full advantage of them. While urban planning seems much stronger and more resistant in Serbia's risk society, spatial planning is far more fragile maybe because the

lack of advantages the other one has: lower stakes, longer tradition, higher number of workers and engagements[2].

Hence, the unique instruction for leading the spatial development of the country as whole and elaborating spatial plans of lower tiers is the Spatial Plan of Republic of Serbia, voted in 2010. But even though the Republic Agency for Spatial Planning along with respectable number of planning experts created the Programme for .Implementation of National Spatial Plan there is still no political will or pressure from planners to really adopt this document and continue the process. It just may be that this process is waiting for the Kosovo and Metohia resolution to definitely mark the borders of the territory that the Plan should regard. This is unfortunate for at least two reasons; first, Serbia's political elite is deliberately postponing the decision on proposed status in order to gain more time to change its position in negotiations, and second is actually a question: who really thinks that in any case scenario (supervised independence or supervised autonomy), Belgrade will really have the right to make strategic decisions about spatial development of Kosovo and Metohia as a part of its territory. In any case, Serbia should as soon as possible gather the strength and the will to create valid and updated long-term development strategy together with sector policies at the national level to steer the economic and overall societal development and offer a relevant framework for the policies and plans of lower levels.

Going down from national level of planning which lacks the system of general strategic policies, we are coming to the void presented in undeveloped regional level. Except the Regional Spatial Plan of Belgrade's Administrative Area, even though they were anticipated in the Law, no other regional spatial plan was made without serious problems. The matter of regionalization which was announced as one of the main topic of the new Constitution slipped from its contents when it was presented and adopted at the end of 2006. Again, there was no strength to deal with such a political issue. Serbia according to the Constitution has two Autonomous Regions (Pokrainas) Voivodina and Kosovo and Metohia. Their institutions have the authority over Region's spatial planning. Also, the Constitution allows the creation of more of these autonomous regions if it is the will of their citizens expressed on a referendum. It is lately that Serbia will not have regional institutions authorised and responsible for regional spatial development and planning for a long time, since the existing counties, at least for now, are as far from building them as these possible but nonexistent autonomous regions. There is however, a type of plans that stands between national and local level and which is being produced - these are the spatial plans for areas of special use. Most of them are concerning the areas of protected nature, water accumulations, basins of lignite and infrastructure corridors. Unfortunately, these along with some other regional policies which are appearing now consist of *ad hoc* measures expected to solve only urgent problems or to justify already made decisions on capital investments. They are being carried out in retroactive and non-coordinated manner, without adequate research provided and financial but even more so, organizational and institutional planning support for their implementation.

Local (municipal) spatial plans, together with spatial plans for areas of special use, are being produced more than ever. Accordingly to the current Law, these plans

[2] See: Nedović-Budić, Z., Djordjević, D., Dabović, T. (2011). The Mornings after…Serbian Spatial Planning Legislation in Context. European Planning Studies, 19(3), 429 — 455.

determine the starting point, the spatial development objectives and land use, organization and protection rules of the planning area. In theory, the number of municipal spatial plans and general plans for municipal centres, both sorts having strategic developmental aspirations can climb up to 189 each. For now they are unique wheals that are turning in Serbia's planning and the main source of our planners' existence. They are accommodating the quantitative development of planning in Serbia but most of them are not showing any shift in methodology which would enable the planning to respond quickly to changes occurring in all societal domains but foremost in the economic sphere. They are backed up by poorly assessed economic and social needs development analyses (sometimes even badly assessed spatial dimension), so that they come down to the physical/geographic definition of the often illusory planning objectives, solutions and propositions. Without applying integrative planning method, more ex post and ex continuo instead of prevailing ex ante evaluation these plans will hardly contribute to quality improvement or more importantly to a prosperous development of the planning area. There lays the chief indifference of the authorities and citizens to participate in elaboration of such plans, let alone be guided by them. The current planning practice is therefore, predominantly planners´ centred; implying that it is the planner who identifies the problems and seeks for planning alternatives. There is little or no room for different interests and ideas, intersectoral coordination and synchronization or partnership between public and private actors. Consequently, there is hardly any room for various stakeholders and shareholders to take part in the planning process and the ensuing implementation phase. Stojkov, Subotic, Djordjevic (2004) are characterizing such a system of spatial planning as:

- More or less developed spatial-geographical environmental system of criteria, i.e. a way of thinking on the spatial conditions for locating networks and development; Certain crucial mistakes of planners, which we encounter from time to time still do not discredit this planning dimension;
- Utterly undeveloped and inadequately established assessment and evaluation system of the financial-economic feasibility of planned solutions and an even more serious problem of the complete lack of an passable economic development strategy, without which the spatial plan is placed in an unreal economic space and time;
- Not of lesser significance is the social system development out of which should derive the idea on the needs, values and goals of a social community for which we make plans. This system, as yet, has been subjected to a mere improvisation in plans (urbanisation, housing, renewal, public services, special assets);

How can we explain this failure of spatial planning and which are the pillars we should build to make it more developed and more stable for turbulent times that could come in the future?

4. CONCLUDING REMARKS

Uncertainty is the only thing we can count on in Serbia nowadays. It seems that never-ending transition and predomination of neoliberal concept in both economical and social issues is still leaning our planning against the wall. Moreover, nothing is clean

from the planners' point of view: who are the main players and referees, which are the rules of the planning game and even where the playground boundaries are. Planning has always been a kind of calculated risk, but here and now it seems like it is just pure and simple risk. The situation is critical on all levels, from national straight to local, due to the absence of the regional level. Most of the planning institutions adhere to a traditional rigid planning model, which is deterministic, inflexible, with fixed land use regulations. The planning system is predominantly planners' centred, implying that it is the planner who identifies the problems and seeks for planning alternatives rooted exclusively in rational methods and objective determinants. There is little, or no room for different interests and ideas and consequently, hardly any room for various stakeholders and shareholders to take part in the planning process and the ensuing implementation phase.

With the transition, planning was supposed to mitigate the negative effects of the new player - market to the public interest. But, seems like our planning didn't find the mechanisms to mitigate those effects created by the market inside it. Planning institutions in pre-transition period were exclusively in public sector. We now have on one side, some big planning institution, partially financed from the state's budget usually with the monopoly over elaboration of one group of plans and on the other side, smaller ones which are being privatized. Both are thrown to the market and are trying to acquire as much engagements as possible in order to secure enough financing. They are producing more plans for less money in a shorter period of time. As a result, these former public agents diverted by the new hostile conditions given by undeveloped market and neo-liberal environment are still presenting traditional rigid planning model, deterministic and inflexible, with fixed land use parameters and regulations. Seems like the turbulent times in which the most important task is to survive didn't give them a chance to develop and to introduce more innovative and novel models in view of participative, strategic and action plan oriented planning.

The other problem lays in insufficient recognition of importance and purpose of planning among politicians and the lack of persuading voices and pressure coming from the profession, as well as in the loss of its legitimacy. To illustrate the confusion and neglect politicians express when planning is concerned we are informing that spatial planning was situated first under the Ministry of Capital Investments, after that Ministry of Infrastructure and now under the Ministry of Environment, Mining and Spatial Planning.

Democratic and economic reforms are not only critical to an overall successful transformation in Serbia, but also inextricably linked to achieving successes in each reform area which also includes planning. Democratic processes are an essential component of Serbia's economic growth and stability, and economic growth is essential to create the conditions for a continuing stable democracy. Reform in the social sector is also necessary in order to secure their better performance. When Serbia as a whole ensures safer environment it is certain that our planning will be able to redefine its priorities and to concentrate on the development of coherent theoretical and methodological framework as a main goal. On that path, following the stable democratic course of the country, planning has the chance to:

- advance the normative-institutional framework,

- make the new generation of national policies which would enforce the overall system of governance and harmonize the work of ministries and other planning institutions at the national tier,
- concretise and operationalize concepts of sustainable socioeconomic, spatial and urban development,
- define clear criteria and indicators to measure the achievements of plans,
- research for defining future alternative development scenarios,
- evaluate the expected short and mid term investment projects and programmes from the standpoint of the long term development needs,
- elaborate and put into operation the up-dated system of techniques and mechanisms which enable a more efficient and reliable development governance.

After showing some positive results in solving these tasks, but continuing to solve them, it is essential to establish some coalition for planning and enhance its legitimacy. So, expert and political forums, but more importantly development of education and training system not only for professionals but also for governmental officials and citizens, will be a step forward in learning planning and learning how to plan and communicate with various stakeholders, understand and articulate their interests in order to advance the relationship between them. This can give more appropriate meaning and contents to integrative approach, sustainability, subsidiarity, efficiency, cooperation, communication, coordination and networks which are currently recognized as empty concepts in our planning.

Hopefully, the system will be strong and stable enough not to collapse again in case of another "earthquake" and able to continue due to inertia with the fewest casualties possible.

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STRATEGIES ON THE INVESTMENT AND RESUSCITATION OF ABANDONED PROJECTS

CASE STUDY: SELANGOR & KUALA LUMPUR

Soraya binti Othman[1]

Abstract

Real estate development has an enormous impact on society since it produces shelter as a fundamental need for survival. Ironically, Malaysia's real estate sector has been struggling for more than two decades due to the increase of abandoned projects. Since Asian Financial Crisis, the property sector in Malaysia has undergone tremendous and significant changes over the years. As a result, the land became idle and abandoned projects became a critical issue. The problem has reasonably caused hardships and affected the financial status of many purchasers where majority of the purchasers involved are from lower income and civil servants. Abandoned projects also affect other related industries such as suppliers of construction materials, transportation companies, contractors and consultants. The symptomatic of various problems has reasonably reflected the weakness of government and gave a valuable lesson for them to be extra careful when analyzing the developers' capability before issuing the developers' licenses. A housing project is classified as abandoned when there is no activity at the project site, continuously, for more than six months after the expected date of delivery of vacant possession. Statistically, the plight remains as a major thorn of the society. The enormity of the problems appears to be deteriorating as verified by local media and non-profit organizations that often devote considerable

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time and energy focusing on the problem. Utilizing the economic stimulus package, a special government agency named Syarikat Perumahan Negara Berhad (SPNB) has been set up in the spirit of resuscitation. Property companies who are equipped with know-how and expertise are also encouraged to have the willingness in the prospect of brownfields redevelopment. Nevertheless, due to the greater risk of the investment, the number of white knights is still insufficient. This could perhaps be due to the fact that the resuscitation of abandoned project is a complicated affair involving various parties namely developer, purchasers, bridging financiers, consultants and land owners. Hence, it is the concern of this research where experts from reputable property developers that have successful and reliable history by being appointed as project revivers were being interviewed. With the existence of related analysis, this study intends to provide proper justification of the factors that lead to the willingness of Malaysia's developers to play the reviver role as part of corporate social responsibility. The study also exposed the important factors, criteria and strategies in determining the best investment decision on abandoned projects and ascertains the project's viability by using investment models and analysis. In conclusion, this study indicated that Malaysia's investors are prepared to invest in abandoned projects bearing in mind that the project is marketable and has investment opportunity. In order to alleviate the problem of abandoned projects, Malaysia should have stringent rules to prevent any company to become developer unless they have certain amount of capital in order to be used as resources for the project development. Moreover, before a project could be approved by relevant authorities, rigid effort is needed to review the viability of the project.

Keywords: Abandoned Project, Brownfields Redevelopment, Real Estate, Developer, Investment.

1. Introduction

Malaysia's property sector has been struggling for more than two decades due to the increase of abandoned projects. The problem has reasonably caused hardships and affected the financial status of many purchasers where majority of the purchasers involved are from lower income and civil servants. Abandoned projects also affect other related industries such as suppliers of construction materials, transportation companies, contractors and consultants. The problem occurred due to the utilization of Sell Then Built (STB) concept in Malaysia, where the purchasers are the financier

of the project as well as the investors who give property developers money beforehand through housing loan with financial institution, with an objective to build residential property. The problem remains as a major thorn of the society until today. Datuk Ng Seing Liong, Immediate Past President of Real Estate and Housing Developers Association Malaysia (REHDA) clarified that the cause of abandoned projects was caused by inexperienced developers who fail to manage cash flow projection and lack of capability to realize the critical situation when the cost overruns involved in constructions. Banks are also not prudent and cautious enough by making errors of over lending to developers (The Edge, 3 February 2009). Poor planning and incomprehensive market study where the mismatch of supply and demand patterns exists in project location also contribute to poor sales performance.

Ministry of Housing and Local Government will focus its attention on helping to revive housing projects that have been abandoned in order to alleviate the difficulties of the buyers as well as the developers affected by such projects. Due to aftermath of the Asian Financial Crisis, the federal government has set up a special agency named Syarikat Perumahan Negara Berhad (SPNB) to rehabilitate hundreds of abandoned property projects nationwide. In Budget 2009, SPNB has been allocated RM200 million of the RM7 billion economic stimulus package for the rehabilitation of abandoned housing projects (The Edge, 13 March 2009). Prior to the seriousness of the issue, in November 2011, an amendment has been made towards the Housing Development (Control And Licensing) Act 1966 where it stated that the parties who are responsible with the act of abandoning property projects will be considered as committing criminal offence where they will be fined (around 83,000 USD to 166,000 USD) or jailed up to three years, or both. Furthermore, under the Government Transformation Program Roadmap, one of the Ministry's Key Performance Index is to revive at least 35 abandoned projects by end of 2012.

Accordingly, in February 2012, the policy has been changed where SPNB will no longer rehabilitate abandoned projects. Another way of taking over and resuscitation of abandoned projects by the ministry is through making appropriate recommendations to the Commissioners of Buildings who will fully manage it by working with both financiers and property developers (being referred as white knights) which can include further injection of funds, improving the design of the houses or even reducing its price. As part of the responsibility, property companies

who are equipped with know-how and expertise are encouraged to have the willingness to invest in reviving abandoned projects as it is certainly crucial for developers to uphold their responsibilities by supporting community welfare. Ministry of Housing and Local Government will only act as advisor to project revivers and other affected parties in order to ensure their full co-operation and commitment to revitalize the scheme. The situation is supported with a speech announced by former Minister of Housing and Local Government, Datuk Seri Kong Cho Ha (2009):

> *"The ministry is not in the position to take over abandoned projects as it will cost a substantial amount of taxpayers' money. Also, they must understand that there are many unsolved problems associated with abandoned projects such as claims from buyers, bank borrowings and other liabilities, which are best left to the professionals to resolve. That is the reason why the ministry takes on the role of a mediator who looks for white knights to help revive abandoned projects."*

In reality, there are not many project revivers who are willing to invest in abandoned projects for the fear that it is a risky investment if compared with investment on new project developments. It is because managing and reviving abandoned project is a complicated affair involving developer, purchasers, bridging financiers, landowners and other parties. In order to reach a consensus, the whole process will take time since each party wants to protect its interest. However, despite all the hurdles and challenges, there are also some project revivers who have sufficient resource and willingness to take over abandoned projects in Malaysia. Therefore, the issues that can be discussed in this research are the factor that prompts the project revivers to revive abandoned projects at first place and their strategies on the investment and resuscitation of abandoned projects. There are limitations on this research, as it was mainly focused on developers who undertake abandoned projects in Selangor and Kuala Lumpur. This paper is based on interviews with the developers who are specialized in property development and always support community welfare by undertaking the task of turning around several abandoned projects. The developers involved were a subset of the larger group who were willing to be interviewed.

The results of this study help to identify the factors that influence project

revivers to revive abandoned projects that could be applied by the government to encourage developers to become white knights while seeking for solutions of abandoned housing woes. With the existence of related analysis, this study intends to provide proper justification of the factors that lead to the willingness of Malaysia developers to play the reviver role as part of their responsibility. The results of this study could also expose the strategies in determining the best investment decision on abandoned projects and ascertain the project's viability by using investment models and analysis.

2. Statistic of Abandoned Projects In Malaysia

In 1988, there were 184 cases of abandoned projects estimated by the Housing Ministry concerning properties worth approximately RM1 billion (Housing & Property, 1988). Subsequently, since 1990 to December 2005, there were 13,286 housing development licenses which have been approved by Ministry of Housing and Local Government. As at December 2005, the ministry has guaranteed that 8,544 of these projects were completed and delivered with Certificates of Fitness for Occupation (CFs) issued. Of the balance, 4,234 are smooth on-going projects, 166 deemed sick, 164 delayed and 168 abandoned.

Table 1: Statistic of Abandoned Projects

State	**Total Abandoned Projects**			
	Until June 2008	**Until February 2009**		
	Number of Projects	**Number of Projects**	**Number of House Units**	**Number of Buyers**
Johor	37	32	9,280	5,419
Kedah	20	9	1,445	709
Kelantan	8	3	519	367
Melaka	14	7	1,109	570
N. Sembilan	29	20	4,743	2,383
Pahang	21	11	3,866	1,972
Perak	20	6	822	597

Perlis	3	0	0	0
Pulau Pinang	26	10	6,517	4,784
Selangor	**66**	***39***	***21,733***	***14,642***
Terengganu	8	1	21	20
W.P. Kuala Lumpur	**18**	***6***	***2,406***	***1,365***
Total	**270**	**144**	**52,461**	**33,376**

Source: Ministry of Housing and Local Government

Table 1 reveals that the problems are not new, as they have been previously recorded for over two decades. However, the problems still persist and the government has to play its essential role with the increasing problems of abandoned project accordingly. The solution is important in order to discover the way out for many aggrieved buyers who are being kept in the dark and not offered with a clear picture of what was happening. The crucial problem faced by house buyers is the monetary losses and difficulties in servicing the interest on housing loans they have taken as well as paying for monthly house rental.

3. Abandoned Projects

3.1 Definition of Abandoned Projects

Accordingly, Ministry of Housing and Local Government has defined abandoned projects as follows:-

i) Construction and development works on site of the project that has been terminated for the preceding six months or more. Such termination has either occurred consecutively or occurred during the period within which the project must be completed or beyond the required completion period. Completion period means the period within which the developer has to complete the construction of the housing units. For the landed property, the completion period is 24 months calculated from the date of the sale and purchase agreement being executed, whilst for flats the completion period is 36 months from the date of the execution of the sale and purchase agreement; or,

ii) Within the said duration of six months, the developers concerned had been wound up and has been put under the control of the Official Receiver; and,

iii) The housing controller is of the opinion that a particular housing developer fails

to carry out their obligation as a developer.

3.2 Implications of Abandoned Projects

Wachsmuth (2008) stated that abandoned projects have public-health-and-safety argument since they are deemed as plague in the society and could possibly attract vermin, garbage dumping, fires and crime. According to a research made by Mallach (2006), implications of abandoned projects are strictly not fair to the public since the problem has an economic argument and dispute to the country. Abandonment cost cities money and the public has made substantial investments in building infrastructures namely transits, roads and utilities. In addition, abandoned projects not only may generate less property tax revenue themselves but also could negatively affect property values of neighboring buildings.

In Malaysia, Housing & Property (1988) stated that many of the purchasers have already started paying installments to either Treasury, banks or other financial institutions whereby on the other hand, they also need to pay for the monthly house rental. The purchasers are often on the losing end as the laws in Malaysia do not favor victims of stalled projects and they do not have protection under the existing laws. Consequently, abandoned projects have made their way to affect the credibility of Malaysia's government. This is supported by the statistic of projects that are no longer being viable for revival or that no company is interested in reviving it.

Given with the situation, it could signify a loss to the economy and the lack of integrity among the government servants. Radzi and Aminah (2009) mentioned that the abandoned projects reflect the weakness of government and give a valuable lesson to them to be extra careful when analyzing the developers' capability before issuing the developers' licenses. Former Prime Minister of Malaysia, Dato' Seri Abdullah Ahmad Badawi reckoned, *"Profits are privatized, while losses are nationalized."* Thus, it mirrors the depressing circumstances for the nation to bear with the impact of abandoned projects.

In conclusion, developers also receive the impacts of abandoned projects as some of the projects need to be ended due to the finance cutting by the financiers especially when the economy situation is at the worst level. As a result, the

developers are blacklisted by the authority. This situation indirectly gives a negative impact on the image of developers as purchasers can no longer have faith in them. The developers might also find it very hard for them to be active in project development. It can be concluded that the problem of abandoned housing projects in Malaysia is serious and can best be approached through an interdisciplinary frame of reference, taking into account the technological as well as social, economic, psychological and legal aspects of housing.

4. Case Study: Abandoned Projects In Selangor and Kuala Lumpur

4.1 Selangor

Selangor is situated on the west coast of Peninsular Malaysia and it surrounds the federal territories of Kuala Lumpur and Putrajaya. It consists of nine administrative districts and the total land area of this state is approximately 7,956 square kilometer. Selangor is the richest state in Malaysia in terms of Gross Domestic Product (GDP). Figure 1 signifies the statistic of abandoned projects in Selangor Darul Ehsan.

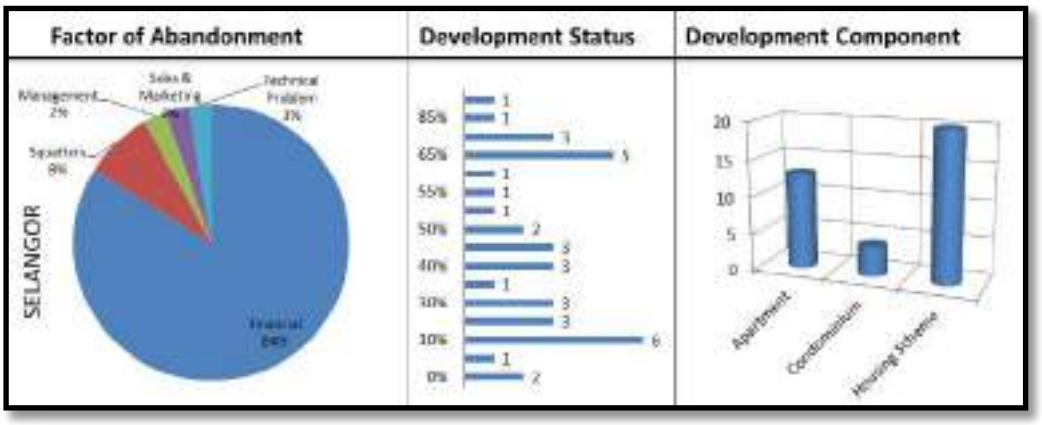

Figure 1: Statistic of Abandoned Projects In Selangor Darul Ehsan

4.2 Kuala Lumpur

Kuala Lumpur is the capital and largest city of Malaysia. It makes up an area of 243.65 square kilometer and it is the fastest growing metropolitan region. Figure 2 signifies the statistic of abandoned projects in Kuala Lumpur.

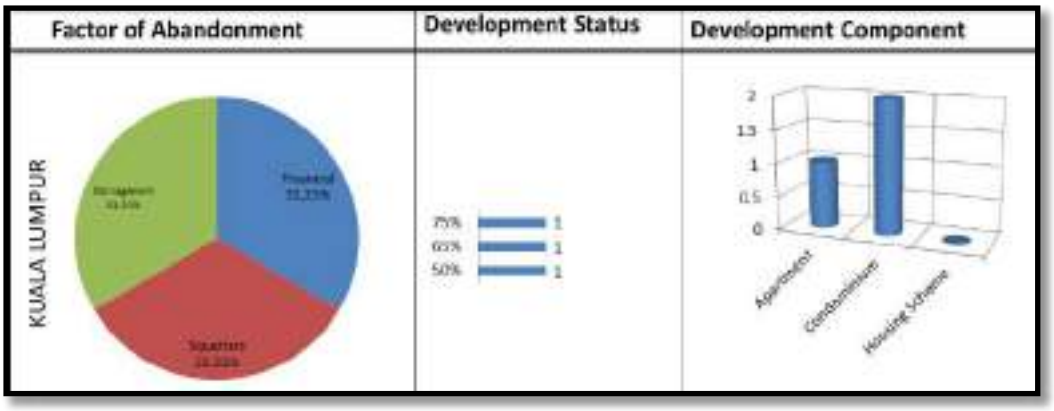

Figure 2: Statistic of Abandoned Projects In Kuala Lumpur

5. Results and Discussion

5.1 Factors Influencing Project Revivers To Revive Abandoned Projects

Based from the analysis, there are a number of factors influencing project revivers to revive abandoned projects in Selangor and Kuala Lumpur. The factors are investment opportunity, goodwill, corporate social responsibility, creating more jobs and a better living environment and helping the existing buyers. It could also be interpreted that profitability, reputation and commitment prompt project revivers to revive abandoned projects. Figure 3 illustrates the summary of influencing factors which successfully encourage project revivers to revive abandoned projects in Selangor and Kuala Lumpur.

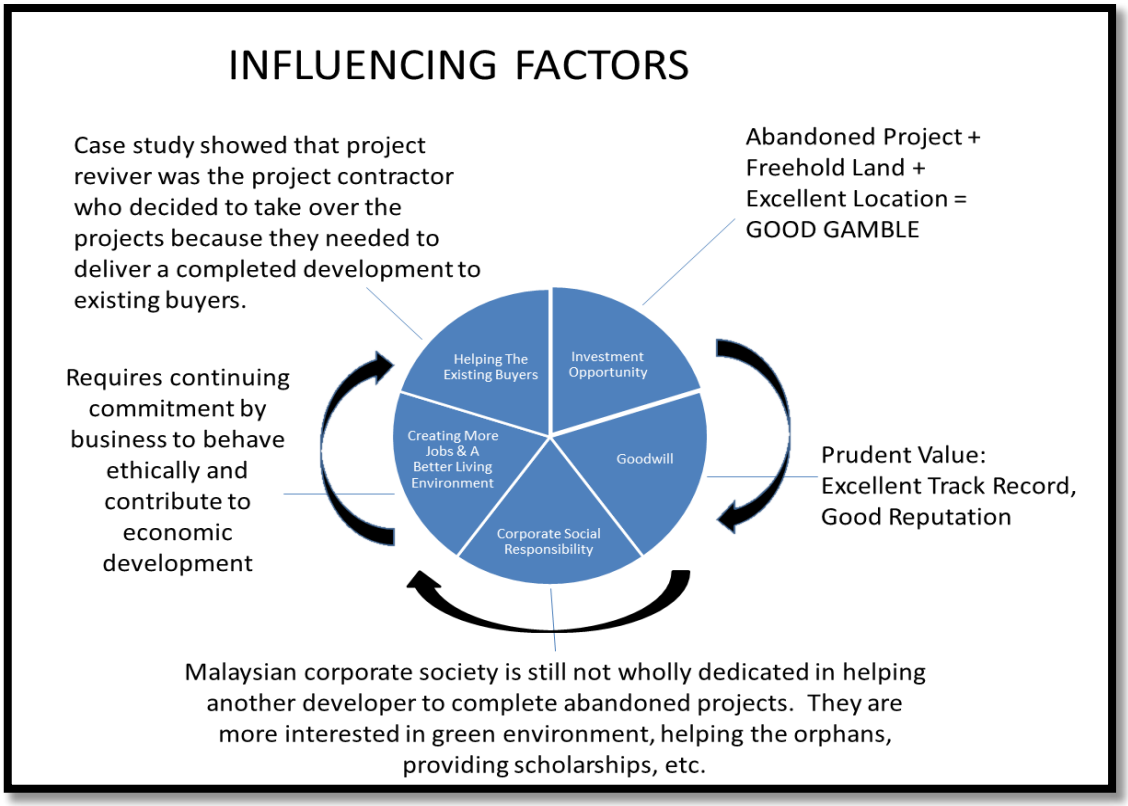

Figure 3: Factors Influencing Project Revivers To Revive Abandoned Projects

From the aspect of investment opportunity, whenever the developer thinks that the revival is viable due to its positive attributes like location, they do not mind to take over the project. Investment opportunity is also essential as it promises high

return to stakeholders. The statement is supported by James A. Graaskamp in his classic 1972 article, “A Rational Approach To Feasibility Analysis”: A real estate project is ‘feasible’ when the real estate analyst determines that there is a reasonable likelihood of satisfying explicit objectives when a selected course of action is tested for fit to a context of specific constraints and limited resources. To sum up, abandoned projects that have viability to be revived also have potential to derive more profits to company throughout the process of investment and resuscitation. The second factor that influences project revivers to revive abandoned projects is goodwill. Goodwill is used to mirror the reality that an ongoing business had some “prudent value” beyond its assets. For instance, the “prudent value” can be referred as a good reputation of the firm that is capable to derive potential synergy within the business. Goodwill is very frequently referred to as an “intangible asset”, that is to say, something the existence of which is spoken of, but is not palpable. In summary, company’s goodwill could grant an excellent track record which is a very significant implication for any property developer.

Besides goodwill, corporate social responsibility which can be defined as a commitment to improve community well-being through discretionary business practices and contributions of corporate resources (Kotler and Lee, 2005) is also one of the influencing factors. It can be concluded that Malaysian corporate society is still not keen and wholly dedicated in helping another developer to complete abandoned projects. Next, the fourth factor is creating more jobs and a better living environment. It requires the continuing commitment by business to behaving ethically and contributing to economic development while improving the quality of life of the workforce and their families as well as of the community and society at large. To sum up, as a member of society, project revivers have the responsibility to provide job opportunities and a high-quality surrounding for built environment. The least influencing factor is helping the existing buyers. In the case of the resuscitation on an abandoned project, the project reviver was essentially the project contractor for the development at the beginning stage of the project. Consequently, the old developer could not put together a payment to the contractor and at the same time, they could not deliver the apartments to relevant parties which are the purchasers. Finally, the project reviver decided to take over the projects after making considerations on the important fact that they needed to deliver a completed development to existing buyers.

5.2 Criteria of Abandoned Projects To Determine Viability

Based from the analysis, there are a number of criteria of abandoned projects that need to be considered by project revivers to determine the viability in Selangor and Kuala Lumpur. It could be interpreted that project revivers must look at marketability factor, level of risk and financial status of a project before deciding to do the resuscitation. The criteria are as follows:-

i) Abandoned Project's Background, according to Gallinelli (2004), when someone buys a piece of real estate as an investment, one must view it as the purchase of an income stream. Therefore, when a property's value lies in an excellent location, we need to translate the subjective views into objective cash flow terms. This is because location is very important in order to establish the marketability factor of the project. In conclusion, several characteristics which are related to abandoned project's background needed to be inspected thoroughly before determining the viability of abandoned projects namely the location, size of site, previous contractor, consultants involved, information of existing buyers, type of development, number of sold and unsold units, bridging loan, end-financing, sales & purchase agreement and land ownership.

ii) Internal Rate of Return (IRR), Jaffe & Sirmans (1986) reckoned that the internal rate of return (IRR) is the rate that equates the present value of the cash flows with the present value costs of investing. Some property developers do not mind to take over abandoned projects with small internal rate of return (IRR). Meanwhile, the property developers who have excellent reputation in the industry are only concerned with abandoned projects that could give a bigger percentage of internal rate of return (IRR). Therefore, it can be concluded that IRR is a subjective matter and varies according to the objectives of the developer. Based from the analysis, the percentage of internal rate of return (IRR) on the investment of abandoned projects is between the ranges of 20 percent to 30 percent.

iii) Legal Issues, Ngai (2006) stated that there are a lot of legal issues involving court and authority that might delay the resuscitation of abandoned projects. Therefore, any developer should be aware of the level of legal issues involved within the project. To sum up, every black and white has to be in order and every legal

complication needs to be settled before another developer embarks on the abandoned project. It is also important for both parties to come to an understanding that there should be a Due Diligence between the parties. Due Diligence can be defined as a process of enquiry and investigation made by a prospective purchaser in order to confirm that it is buying what it thinks it is buying. For instance, in the case of abandoned projects, the Due Diligence between new developer and old developer should be implemented to ensure that the old developer disown all their rights regarding to the project.

iv) Resuscitation Cost, resuscitation cost needs to be considered by projecting a discounted cash flow consisting of building cost, infrastructure cost, preliminary cost, insurance, contingency cost, professional fees, supervision work, surveying work, government charge and other related cost. As a conclusion, modern real estate investment analysis has generally adopted the residual method, discounted cash flow, net present value and internal rate of return to determine the viability of abandoned projects.

v) Status of Land Ownership, the particulars needed to be checked about the status of land ownership are the information on land owners, land owner's agreement on resuscitation and the land itself is free from any issue. In summary, it is important to check on the status of land ownership in order to avoid dispute or disagreement with land owners in future.

vi) Status of Previous Developer, it is essential to ensure that the previous developer is still on course of the development operation or vice versa. As a conclusion, the criterion is very necessary for the future of resuscitation and can help alleviating the trouble and burden of reviving abandoned projects.

vii) Balance On Claim, more often than not, after knowing the percentage of project completion, project revivers can estimate the balance on claim for the abandoned projects. Therefore, the balance of claim must be confirmed with end financier and previous developer before making an investment decision.

viii) Related Information, the information consists of contract drawings, contract documentations, and list of quantity, specification, implementation bond and many

more need to be acquired. The information is important for the purpose of planning and development.

ix) Bridging Loan, bridging loan can be defined as an instance of short term loan provided by the financial institutions to developers to guarantee that the projected cash flow runs smoothly. Therefore, project revivers must acquire information on bridging loan's financier and verify the amount of bridging loan taken by previous developer.

x) Number of Units Sold And Buyers Involved, the number of units sold and buyers involved is considered as the less significant criterion that needs to be considered by project revivers before making an investment decision. In order to ensure that the investment is feasible, total number of units sold must exceed a certain required amount by project revivers.

5.3 Strategies On The Investment and Resuscitation of Abandoned Projects

There are a number of strategies on the investment and resuscitation of abandoned projects in Selangor and Kuala Lumpur. The strategies that are needed by the project revivers are to ensure that the project must meet the internal rate of return (IRR) of the company, to conduct meeting with purchasers, to sort out all issues, to do a rebranding, to develop a new concept, to apply for extension of completion period and to provide rental guarantee scheme. It could also be interpreted that project revivers must be cautious, reliable, creative, innovative and resourceful in order to ensure that the investment on abandoned project is feasible.

Before determining the investment decision towards the revival of abandoned projects, project revivers must ensure that the abandoned project meets the internal rate of return (IRR) of the company. They are also responsible in conducting a meeting with purchasers, Ministry of Housing and Local Government and end-financiers in order to avoid disagreements in future and to boost the reputation of company's goodwill. Even though the company is happy to help house buyers fulfill their dreams of owning their homes, at the end of the day all the projects undertaken must meet the internal rate of return (IRR) of the company. Thorough studies would be conducted to ascertain any legal encumbrances and the potential rate of success of

a project. In addition, internal rate of return (IRR) is also significant to reflect the percentage requirement of Return On Investment (ROI) per annum for stakeholders' common fund. From the aspect of conducting meeting with purchasers, it is very essential for project revivers to contact the affected purchasers from the database given by old developer. The meeting should also be attended by representatives from Ministry of Housing and Local Government together with the association of purchasers in order to have an open discussion about various issues regarding the changes of developers and certain implications of the revival. Even though not all purchasers can attend the meeting, it is adequate to have a representative from the association of purchasers to embody the other purchasers.

Other than that, project revivers should also sign an agreement with existing purchasers and need to reach more than 50 percent concession before being able to revive the project. In addition, project revivers must also conduct a meeting with purchasers and end-financiers to instill the confidence among end-financiers to not cancel on the purchasers' loans. In summary, the meetings are very crucial to ensure that the revival of abandoned projects runs efficiently. As one of the developers in the interview revealed:-

> *"We need to conduct meetings with purchasers together with Ministry of Housing and Local Government. We must tell them to waive for Late Delivery Damages, bearing in mind that the current scenario has seen an increase in material price. Thus, the purchasers need to pay more. However, we do not want to be seen as overcharging and that is the reason why we need the Ministry of Housing and Local Government to intervene. The purchasers need to be told that it is a fair request. If they do not want to pay extra, they cannot get the building, financial institutions will chase them and they cannot claim anything from old developer who perhaps has gone bankrupt."*

Subsequently, in order to avoid dispute and disagreements that may include many related parties, it is very important for project revivers to be very careful when it comes to dealing with contracts and documents. Relevant paperwork must be arranged in order and the project revivers must ensure that every related party should sign the contracts and documents. For instance, the type of contracts and documents

consist of Due Diligence, new Sales and Purchase Agreement and Joint Venture Agreement. The contracts and documents are used as evidence in order to alleviate the problem of legal issues in future. In order to change the perception of investors and regain their trust, doing a rebranding towards abandoned projects is an essential strategy. Project revivers must be innovative by having new products to provide to target market. Marketing promotion is also important to inform the public that the abandoned project is ultimately revived. For instance, Jana Towers used to be an abandoned project in Subang Jaya. The project revivers have decided to rebrand the development by changing its name into Subang Olives. However, the project revivers should take a safe measure by not changing the old design that has been approved by the government. This is because changing the design is a very bad idea since construction is very sensitive to cost and time. Meanwhile, project revivers can develop a new concept in order to attract new purchasers by providing facilities like concierge and courier services and assistance for bill payments and online bookings. The idea can be made possible through a partnership with a multi-service provision company or any other company that provides the same service.

Other than that, project revivers can redo the entrance statement to be more grandeur, to paint the building brighter, to add a few more facilities, to build a bigger swimming pool, to decorate things, and to provide more landscape, amenities, and facilities. To sum up, the development of new concept can initiate a platform for project revivers to expand a selling point for the project in order to attract potential purchasers. Project revivers can also opt to make a request to the Ministry of Housing and Local Government. This is important for the project revivers to appeal to the legislation of their powers vested to the Controller of Housing by extending the completion period of the agreement. As a conclusion, the extension of completion period is able to give project revivers sufficient time to revive the abandoned projects that meet the required building quality.

Finally, the rental guarantee scheme can be provided for commercial development such as shop lots, office buildings and service apartments. Project revivers can give five years-rental guarantee return for commercial development and options to extend the guarantee return for potential investors. However, project revivers must ensure that they can already gain required profits at the early stage of development in order to cover the cost occurred of rental guarantee scheme.

6. Conclusions

From the finding results, it indicated that the investment opportunity was the significant factor that influences project revivers to involve in the revival. In addition, this study has achieved the expected results where the investment opportunity was not the significant influencing factors, but it can also be emphasized to be influenced by factors such as goodwill, corporate social responsibility, creating more jobs and a better living environment, and helping the existing buyers. In other words, profitability, reputation and commitment prompt project revivers to revive abandoned projects. These results stressed that Malaysian investors are prepared to invest in abandoned project bearing in mind that the project is marketable and has investment opportunity. The overall finding can be illustrated in Figure 4.

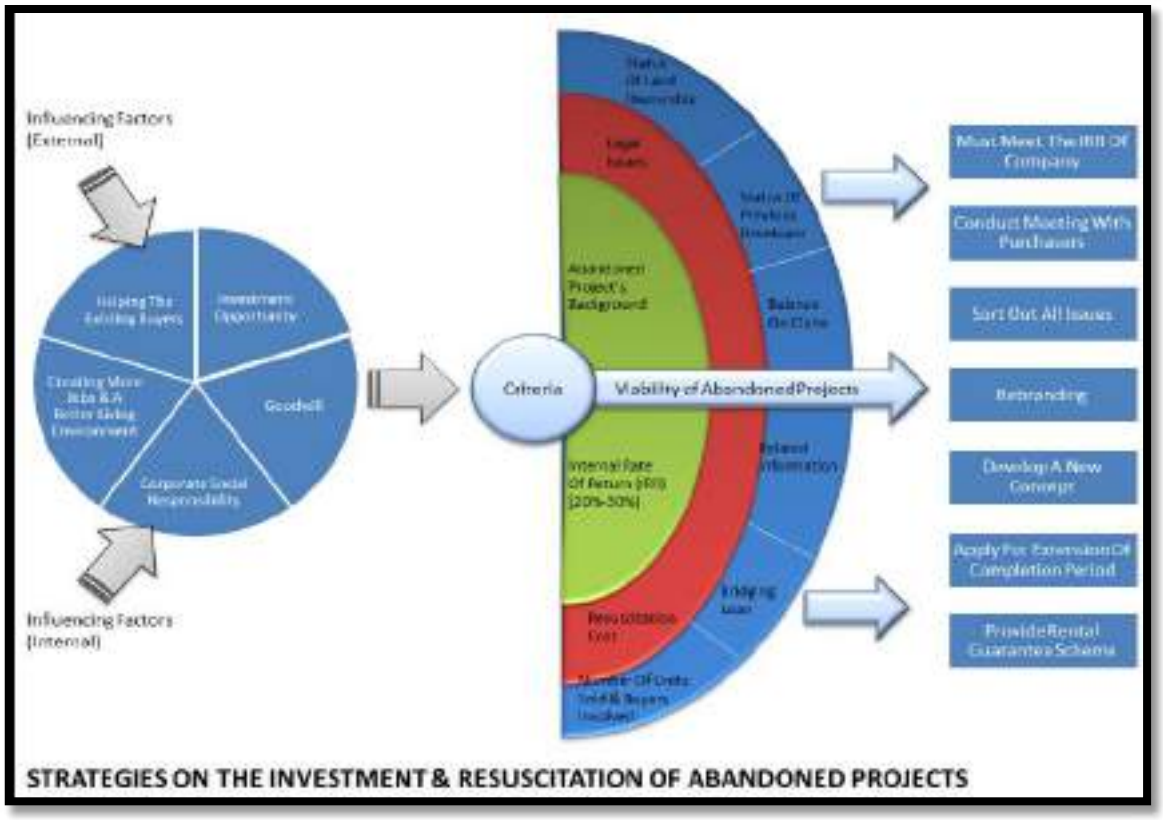

Figure 4: Strategies On The Investment and Resuscitation of Abandoned Projects

There are several relevant suggestions from various stakeholders that can be made based on the research findings. These suggestions can help the government in alleviating the problem of abandoned housing projects namely:

Government Agency

i) Strict regulation for license issuance and renewal option is only opened for excellent developers.
ii) Outline a draft document of city's new master plan that records a number of goals and recommendations related to developing and implementing a strategic demolition and resuscitation plan for abandoned projects
iii) A public hearing should be held to reflect the thoughts of residents in the area in order to request for marketability opinion from the public to lessen the problem of oversupply and property overhang.
iv) The government should develop a special agency for the purpose of enforcement where transparency is essential through the publication of names of blacklisted companies.
v) Requirement of housing development insurance before an applicant can become a licensed housing developer.

Financial Institution

i) The implementation of Islamic Law where the owner of the house (Islamic Bank) will be liable and it must be the guarantor for the completion of housing units.
ii) Sustain a reasonable interest rate with a vision to support Built Then Sell (BTS) concept.

Housing Purchasers

i) Build a strong committee among buyers in order to monitor the progress of project.

Other Parties

i) Non-profit organizations should be encouraged to provide a capital injection on the resuscitation process of abandoned project.
ii) Non-profit corporation must be created in order to coordinate housing development and provide planning and technical assistance to the problem of abandoned projects. Other than that, there could be a joint venture between financial institutions such as Bank Negara Malaysia and community-based corporation to revive abandoned projects.
iii) Insurance companies could include insurance for abandoned projects.

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ESTABLISHMENT OF NATIONAL ECONOMIC SPACE: JANSEN'S URBAN PLANNING IN SOUTH ANATOLIA

Emel Karakaya[1]

Abstract

Starting with İzmir Economy Congress in 1923, even distribution of economic development had been main spatial strategy for Turkish government (İnan, 1989a). For this reason, between 1923 and 1940, 117 urban plans for Turkish cities and towns were prepared (Karakaya, 2010; Keskinok & Karakaya, 2010). In addition, principle of etatism had gained its legitimacy in the establishment of national economic space through urban planning after 1929 crisis. The main policies to determine policy-oriented urban planning were establishment of a national economy and arrangement of the space in nation-state in this period (Keskinok, 2010). In the first and second development programmes (İnan, 1972; İnan, 1989b), there were regional foci created as agricultural and industrial development regions. Being one of the development regions, Adana, Ceyhan, Mersin, Tarsus and Gaziantep were taken to the agenda of planning to accomplish economic development of southern region.

This study examines relation between Nation-Building process and urban planning process with an emphasis on agricultural and industrial development region established in the south of Anatolia by Hermann Jansen plans. The article gives answer for question addressing translation between Nation-Building process as a political concept and its correlation with urban planning as spatial context. Thence, this translation investigates the socio-spatial dynamics of Nation-Building process of Republic of Turkey with an emphasis on southern development region planned by Hermann Jansen.

Keywords: National Economic Space in Early Republican Turkey, Hermann Jansen, South Anatolia agricultural and industrial development foci, Nation- Building process.

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1. INTRODUCTION

Tekeli (2005) defines Nation-Building project of Turkey with four spatial elements as follows;

1. Ankara's declaration as capital city
2. Railway Programme to provide unity of internal market
3. Industrialization Programme
4. People's Houses [Halkevleri].

However, Turkish modernism movements which is triggered in the late Ottoman Period and found its form in the Early Republican Turkey has a multi-layered structure and aiming at societal and intellectual transformation through economic development. These layers have characteristics of being philosophic in terms of its planning and rationalist dimension; institutional with its nation-state based structure; economic with its massive production pattern and; societal with its fiction of modern citizens and modern life. The foundation of institutional structure depended on the foundation of economic, societal and philosophic structures in which urban planning had the key apparatus to succeed. In this respect, the Nation Building project, as a socio-spatial process, has two additional spatial elements as (Karakaya, 2010);

5. Selection of agriculture, trade and industry focal (in relevance with industrialization programme and railway network)
6. Planning programme and urbanism.

Newly established state had needed a frame for spatial arrangements to achieve objectives of Republican cadre and foundation of institutional layer in Turkish cities "to form an anti-thesis in the clarity to the classical Ottoman towns" (Ökeşli, 2009, p. 45). For this reason, urban planning was seen as an agent for the success of the Republic and 117 cities and towns were planned between 1923 and 1940 period.

To construct the Republic in city space and in social life, newly emerging science, urbanism, was used as an agent (Bilsel, 1996) and foreign architects and urbanists were invited to the Republic. After declaration of Ankara Planning Contest in 1927 to create the new capital city, Hermann Jansen's plan and his planning principles would be the mold to shape the dough of Anatolia (Atay, 1933; Kezer, 2009). Following Ankara experience, Hermann Jansen planned several cities and towns in Anatolia and he accompanied planning experiences in the Republic of Turkey. Ankara, İzmit, Adana, Mersin, Tarsus, Ceyhan and Gaziantep are cities and towns planned by Hermann Jansen between 1923 and 1940.

This article investigates the relation between Nation-Building process and urban planning practices with an emphasis on agricultural and industrial development region established in the south part of Anatolia by Hermann Jansen plans. Scope of article encompasses period between 1923 and 1940, which is defined as the Early Republican Period (Karakaya, 2010). The main question to answer in the study addresses

translation between Nation-Building process as a political concept and its correlation with urban planning as spatial context. Therefore, this translation investigates the socio-spatial dynamics of Nation-Building process of Republic of Turkey with an emphasis on south development region planned by Hermann Jansen. To do so, the study uses an inter-textual analysis method for urban plans, İzmir Economy Congress 1923, First and Second Development Programs of Republic of Turkey, declarations published in articles, periodicals and journals for agricultural and industrial development in the south Anatolia between 1923 and 1940s, and archives such as Turkish National Library. The study investigates design principles used for physical and economic development in city space proposed by urban plans.

The study is divided into two main parts. In the first part establishment of national economy and spatial arrangement of national economy in Anatolia are discussed. The second part is on Hermann Jansen's urban planning in southern growth pole. Mersin, Adana, Tarsus, Ceyhan and Gaziantep urban contexts and urban plans are discussed in terms of the relation between development of the growth pole and Jansen's planning principles.

2. CONSTRUCTION OF NATIONAL ECONOMY AND SPATIAL ELEMENTS OF NATION-BUILDING

Ankara was declared as the capital city on October the 13th, 1923, before establishment of the Republic. Obviously, the capital city Ankara gives evidence for spatial reorganization apparatus in achievement of National Economy. Obviously, the intention lying under idea of new capital was integration of Anatolian lands (Altaban, 1998; Keskinok, 2010). Leaving old capital had an anti-imperialist attitude (Tekeli, 1980), became an imperative for national integration (Keskinok, 2010) and a political movement (Tankut, 1993).

In the early Republican period, formation of national economy was seen as achievement of national integration, urban-rural unity (in production and transportation) and foundation of alternative cities, growth poles and regional foci against primacy of İstanbul. This part discusses formation of National Economy in institutional manner and its spatial apparatuses to found "national economic space".

2.1. Institutionalization of National Economy

Anatolia, in 1923, was representing an agricultural society with feudal ties and a very limited industry that total population of labors was 76216 amongst 12 millions of total

population (İnan, 1972). The Republican cadre was aware that economic development, production, and industrialization were crucial for an independent National Economy to realize Republican Revolution. To illustrate, in the opening speech of the Grand National Assembly of Turkey on March the 1st, 1922, Atatürk was asserting the idea of political and economic independence for development of Nation. The first initiative for institutionalization of economic development and independency was First İzmir Economy Congress which was held on February 4, 1923 (İnan, 1989a) while the negotiations of Lausanne Peace Treaty were given a break.

The First İzmir Economy Congress had a fundamental role in the construction of National Economy till 1930s. The congress became first step for institutionalization of economy, definition of an economic development programme and it became the place for declaration of Economic Pact [Misak-ı İkisadi]. The Economic Pact was asserting principles, very basic of which were 1.development of domestic production and trade, 2.industrial investment, 3. encouragement of agricultural production and 3.development of Transportation and infrastructure (İnan, 1989a).

The pact aimed at creating national capital for economic sectors; agriculture, trade and industry. Application of Economic Pact required a series of rules and regulations, institutionalization and customs policies in all sectors. However, 1929 economic depression would cause an obligation for change in political attitude towards statism.

According to Keskinok (2010), 1929 World Recession provided a base for the statist and populist policies in 1930s. Despite acceptance of Turkey as a "People's State" in 1921 Constitution (Boratav, 1998; Keskinok, 2010) and reveal of representative attitude towards farmers and labors in İzmir Economy Congress 1923 (İnan, 1989a), populist and statist principles had gained their legitimacy after 1930s. When the Congress of Industry gathered in 1930, an industrialization programme in the scope of Anatolia was designed. Thereafter, First Congress of Agriculture in 1931 was headlining integration of industry and agriculture. This objective would embody with the First Industrial Plan in 1933, establishment of Sümerbank (cotton-production) in 1933 and the Second Industrial Plan in 1936. The realization of these policies would find their place through creation of new growth poles in Anatolia by urban plans.

2.2. Spatial Elements of National Economy

Before 1929 World Recession, decisions taken in İzmir Economy Congress brought about two main spatial strategies. The first of these was developing transportation

network and infrastructure (Figure 1). In the Ottoman Period, railway investments constituted a tree-type model to carry production of Anatolia to port cities (Figure 2). The network was composed of connection lines carrying agricultural products and raw materials to Mersin, İskenderun, İzmir, and İstanbul ports through three main routes reaching to Ankara. Herewith, first spatial arrangement of the Republic was developing railway network in Anatolia. In the opening speech of the Grand National Assembly of Turkey on March 1, 1922, Atatürk underlined the idea of political and economic independence for development by referring to railway development.

Figure 1: Reception of first train carrying Zonguldak coal; Ankara train station, 1939, "*We are an unprivileged classless coherent mass*" in the poster (http://e40003.me.metu.edu.tr/Ankara/)

The second main strategy was urban planning. After İzmir Economy Congress, it was agreed that economic primacy and dominance of İstanbul would be an obstacle for the success and ideals of the young Republic. There had to be new growth poles in Anatolia for success of Republic and the fair distribution of the wealth. Accordingly, urban planning became main apparatus that in the opening talk of Grand National Assembly of Turkey on November 1, 1927, Atatürk emphasized urban planning to reach economic targets;

> *"Dear friends, I will review our economic life. I immediately declare that when I call 'economic life', I mean that agriculture, industry, trade and the public works [bayındırlık in the meaning of urban planning] are correlative. I accept these as a whole that can not be considered separately".*

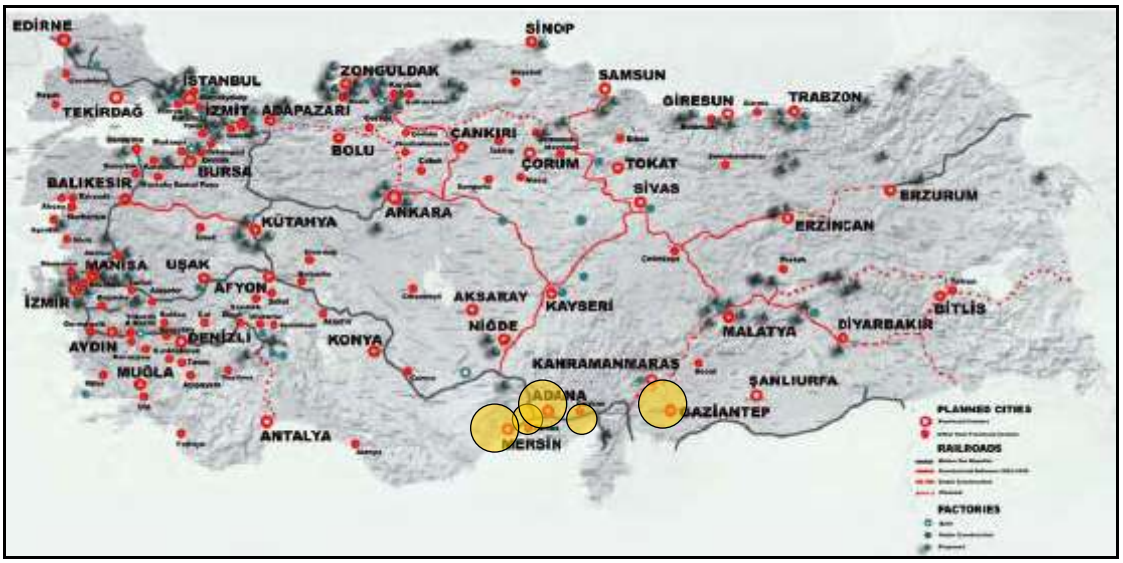

Figure 2: Railway Network development, planned cities, industrial development between 1923 and 1940 and cities examined in this study (Çağatay Keskinok's Personal Archive)

Obviously, İzmir, as a port city, was planned by Danger-Prost collaboration in 1923 right after the Congress. Similarly, Bursa plan was prepared by Prost in 1924. Further, Ankara was planned by Lörcher in 1924. Nonetheless, Republican cadre did not find plan applicable and satisfactory. Ankara plan would be prepared by Hermann Jansen in 1927[2] as a planning model for the rest of Anatolia. Ankara would be the perfect symbol for the success of the Republic by developing new social norms (Altaban, 1998) for national modernization project (Tekeli, 1998).

For preparation of plan, an international competition was declared and Jansen became the winner of the competition thanks to his planning attitude towards historical core of Ankara, working, living and socialization spaces. Jansen's planning principles that were depending on natural, historical and social properties of city (Jansen, 1937a) were found parallel to the ideal of the Republican cadre. In this respect, jury chose the modest proposal of Jansen for its human scale attitude.

[2] Ankara, after the declaration of the capital city, was planned by Lörcher in 1924. Nonetheless, plan was not found applicable and satisfactory. Although Cengizkan (2004) claim that Lörcher Plan constituted the main form and principles of Jansen plan, Jansen plan was concerning historical fabric and had attention on new residential areas. For further information, Karakaya (2010).

After 1929 turning point, 1930s became the era for mass application of second spatial strategy; urban planning related to statist and populist principles in urban and rural space. By the First Industrial Plan and the Second Industrial Plan, a term for continuous planning by integrating urban planning and economic planning began (İnan, 1972; İnan, 1989b). For continuous planning, economic development programme was linked to urban planning through creation of new development centers and growth poles, one of which is South Anatolia. Jansen (1936, p.21) declared, "Urban planning is developing economically debilitated cities and citizens" in his conference in Ankara People's House in 1936 before his planning activities for southern growth pole started. In other words, most of urban plans for Turkish cities and towns had the intention to create new economic development centers in the second half of 1930s. Selection of cities and towns to be planned were not decided concomitantly, most of those were prioritized centers on railroad network with agricultural and trade potential (Tekeli, 1980). For this reason, Yenen (1939) declares that flourishing[3] urban centers of Anatolia would be trade and industry centers while flourishing towns would be developed as agricultural foci or industrial foci. Therefore, policy applications of the Republican cadre were introduced to Turkish urban planning in two planning typologies to create growth poles (Karakaya, 2010).

1. Trade and Industrial Development Centers: After Ankara planning experience, a number of cities were planned in Anatolia in relation to decisions and strategies taken by industrial plans and strategy of developing alternative growth poles alternative to İstanbul. These cities were created as industrial centers or as trade centers located in the transportation nodes and enclosed to agricultural or industrial production nodes (Karakaya, 2010). Southern growth pole was created as a national foci that hinterlands of Adana, Mersin, and Gaziantep were prominent in agricultural production and Mersin was the port city to trade these productions. Although Gaziantep did no link to railway routes, the city was on Silk Road. Adana, Mersin and Gaziantep cities had historical importance for their trade potential and cultural structure.

2. Industrial and Agricultural Development Sub-Centers**:** Parallel to railway network construction and development of industrial nodes, several towns were planned as agricultural or industrial centers in Anatolia in 1930s. Among numerous examples, Tarsus and Ceyhan were planned as agricultural production of their fertile hinterland.

[3] Yenen uses the word "bayındır" to define developed, flourishing and potential cities. He uses word especially for towns that were still reflecting traces of their prosperous historical background .

3. JANSEN'S URBAN PLANNING IN SOUTHERN GROWTH POLE

3.1. Herman Jansen and His Planning Principles

Hermann Jansen (1869-1945) studied architecture at Technical University of Aachen. Following, he worked in Berlin as a professional between 1898 and 1945 and his planning activities in Turkey between 1927 and 1939 became most important in his career (Ökeşli, 2009).

Hermann Jansen, as an urbanist and architect, continued his education and his career in a milieu that was suffering due problems emerged with industrial revolution. Discussions for cities and urban centers were emphasizing results of industrialization and dehumanization of cities (Ökeşli, 2009). European urbanism, as a new scientific area (Bilsel, 1996), was legitimizing an urban fabric that is sensitive and together with natural, historical and cultural entities. Two academic debates under these conditions; Camillo Sitte's Sittesque (or Picturesque) approach and Garden City movement would affect Hermann Jansen.

Firstly, Jansen, as a student of Camillo Sitte, concentrated on aesthetics and artistic principles. Sittesque School with the followers of Sitte such as Eugen Fassbender, Felix Genzmer, Karl Hocheder and Hermann Jansen is said to be the "Romantic Period" of city planning (Collins and Collins, 1986) or it was said to be pictorial rather than romantic (Ökeşli, 2009) .

Sittesque or *Picturesque* argued a return to the medieval towns' humanized scale. This attitude would also highlight preservation of historic fabric and would create a response for planning according to engineering principles (Collins & Collins, 1986). He emphasized organic character of urban fabric. Contrary to Haussmann's straight lines and wide boulevards' (Tankut, 1993), he contended irregularity in urban pattern and aesthetic purposes (Karakaya, 2011).

Secondly, Ebenezer Howard's basic view was "to marry" town and country for emergence of a new hope, new life and new civilization as Fischman (1989) identified. Like Sitte, Howard was defining integration for urban areas. Collins and Collins (1986) claims that English garden suburbs were influential for development of views of Sitte in urban areas, and later Garden city would become Sittesque himself in terms of union of Garden City Theory with Sittesque layouts in Germany. Similarly, Batchelor (1969) expresses that Ebenezer Howard's Garden City idea came to Germany after promotion of Sittesque and two approaches were integrated. Thereby, Hermann Jansen was concomitantly affected by two ideas and these became notions for his planning. Sanitation issues of Garden City idea and aesthetic principles of Sittesque formed a synthesis for Jansen's planning principles. Common points of both approaches like

zoning, sanitation, aesthetics, low-density housing and green belt also became general principles in Jansen's planning (Tankut, 1993).

3.2. Southern Growth Pole and Jansen's Planning

For economic independence, creation of growth poles had found its spatial arrangement in "Development of Trade and Industry Centers" and "Industrial and Agricultural Development Sub-Centers" in the Early Republican Turkey. For identification of Southern Growth pole, this part firstly defines characteristics and spatial context of cities and towns in the growth pole till the establishment of the Republic. Then, urban plans prepared by Hermann Jansen are discussed in terms of planning principles, proposals of plans for economic development and new spatial arrangement.

3.2.1. Formation of Spatial Context towards Early Republican Period

Because Adana, Tarsus, Ceyhan and Mersin are located in Çukurova and Gaziantep, on the other hand, is located in the east of Çukurova, in between Çukurova and upper Mesopotamia, it is required to evaluate the importance, development, and specifications of Çukurova and Gaziantep distinctly.

Çukurova Region is composed of fertile lands, along Seyhan and Ceyhan Rivers, and continually inhabited urban settlements since Cilician times. Though its fertility, multi-cultural ethnic structure and historical background, the actual development did not emerge until the second half of 19th century in Çukurova. When civil war started in America, cotton became more precious and one of the substantial raw materials in the second half of nineteenth century (Ökeşli, 2009; Ökeşli, 2010; Selvi-Ünlü, 2009; Ünlü, 2009; Toksöz & Yalçın, 1999; Erman et al., 2007, Özüdoğru & Erman, 2011). "Tarsus, Adana and Ceyhan were the cities producing cotton and Mersin port was enabling overseas transport with railway connection (Ökeşli, 2009, p. 46). Herewith, Çukurova region became a node for agricultural production and trade of raw material through Mersin port.

Urban development and spatial arrangements for Adana and Mersin cities, as urban centers, started with modernization efforts of Second Constitutional Monarchy Period in Ottoman Empire. In this period, the first development plan for Adana was prepared for area between railway station and existing city in 1910 with a baroque style (Ökeşli, 2010). Mersin, on the other hand, emerged as the port city encompassing a wide hinterland in Çukurova (Ökeşli, 2010), although it was a village in the early nineteenth century. Mersin quickly developed as an international trade city after American Civil War and development of Mersin- Adana railway and highway in late 1800s (Ünlü, 2012). Moreover, the emergence of Mersin as a port city was a result of that Tarsus and Silifke ports were silted up (Selvi-Ünlü, 2009). After that, commencement of planned period and industrialization started in Republican Period in Adana and Mersin.

Tarsus and Ceyhan cities were agricultural towns in Çukurova in late 19th century. Indeed, until early nineteenth century, Tarsus was an important trade center and was a port city (Selvi-Ünlü, 2009). Through ancient Kydnos River (Berdan River or Tarsus River), Tarsus was connecting to safe dock in Rhegma Lake which made it a prominent trade and Commerce City. However, when the river split up, and American Civil War gave birth to raw material demand in Western Europe, Tarsus evolved to an Anatolian agricultural town mostly producing cotton. Ceyhan plain similarly became house of civilizations, notwithstanding, Ceyhan town did not have a historical background and continuum of civilization like Mersin, Adana and Tarsus. The town was firstly settled after Turkish seignior period as a Turkish rural settlement (Ceyhan Governorship, 2009) and was "proclaimed as a borough on 12 December 1893" (Aslan, 2011, p. 47). Development of Ceyhan dates to increase in population and change in social life after great migrations due Crimean War in the second half of nineteenth century and Wars in Balkans along 1910s (Aslan, 2011; Çomu, 2011). New comers were so talented in agricultural production and in craftwork (Aslan, 2011) which would increase the importance of Ceyhan in its hinterland.

Lastly, Gaziantep, which was named as Ayntab and later Antep, was a trade city on Silk Road connecting Anatolia to Persian Gulf (Basra Gulf) As a cosmopolitan city of the Ottoman Empire, city started to lose its importance when it was administratively connected to Aleppo State in 1818 (Günyol et al., 1982). Moreover, opening of Suez Canal in 1869 caused a change in the direction of Silk Road (Tatlıgil, 2005). The trade center of the region changed its direction to south (Egypt) and Antep would survive as a sub trade center in its region till 1900s. However, the location of city was strategic that it was connecting Anatolia to Aleppo and had fertile lands. Great author Orhan Kemal defines fertility of Antep with colors of red and green that 'soil is crimson and above is lush' (Gültekin, 2011). Nonetheless, when the Republic of Turkey was founded, there was no railway connection to Antep (Figure 2) and it would not be established until 1954 (Günyol, et al., 1982; İller Bankası, 1972). Beyond these, Antep had great importance during the War of Independence that the city fought against French Mandate for ten months (Günyol, et al., 1982). "Gaziantep Defend" was central for defence of south Anatolia. After that, Antep was honored with name "Gaziantep" [War Veteran Antep]. As a hero of War of Independence; economic development and urban issues of Gaziantep gained importance for Republican cadre (Şavkılı, 2008).

3.2.2. Jansen Plans

The motto of Burhan Arif Ongun's urbanism exhibition in Ankara People House in 1936 was "Urbanism is one of the biggest matters that the Republic succeeded in" (Ongun, 1936, p. 31). Due foundation of Ankara urban frame, Jansen's principles could

"reconstruct the rest of Anatolia with the same mold" by planning[4] Tarsus, İzmit, Mersin, Gaziantep, Adana and Ceyhan. This part evaluates Jansen plans in Southern national foci. Urban plans of Tarsus, Mersin, Gaziantep, Adana and Ceyhan are discussed in terms of Jansen's planning principles, spaces of production proposed in plans, and spaces of living and socialization.

Adana Planning Experience: City along Seyhan River

Jansen's first study for Adana was in 1935 for a limited area planned in 1910. Ernst Reuter (1940) would evaluate this experience as more economic to apply, safe in traffic circulation and appropriate to modern planning principles when compared to old plan (Figure 3).

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Figure 3: Hermann Jansen's plan in the left and 1910 plan in the right (Architecture Museum TU Berlin, Inv. Nr. 23366; Reuter, 1940, p. 19).

This plan was proposing two urban parks, Seyhan Park and Atatürk Park, integration of housing areas with Seyhan River by a green belt, schools and a theatre (Jansen, 1940). Indeed, it was creating a new neighborhood area between old city[5] and railway station. Atatürk Park, proposed in plan was the center for spaces of socialization (Figure 4) while Seyhan Park was a recreational space in riverside (Ökeşli, 2009).

[4] Approval of plans in general were as follows; Tarsus and İzmit in 1935, Mersin and Gaziantep in 1938, and Adana and Ceyhan in 1939.

[5] "Old city" is used to define existing urban core both by urbanists and politicians in the Early Republican period. The reason of this identification lies in the old- new conflict of the era. As we mentioned "new" was representing modern against old. In this respect, this study also uses old city concept to define existing city, and "new city" to express new development areas.

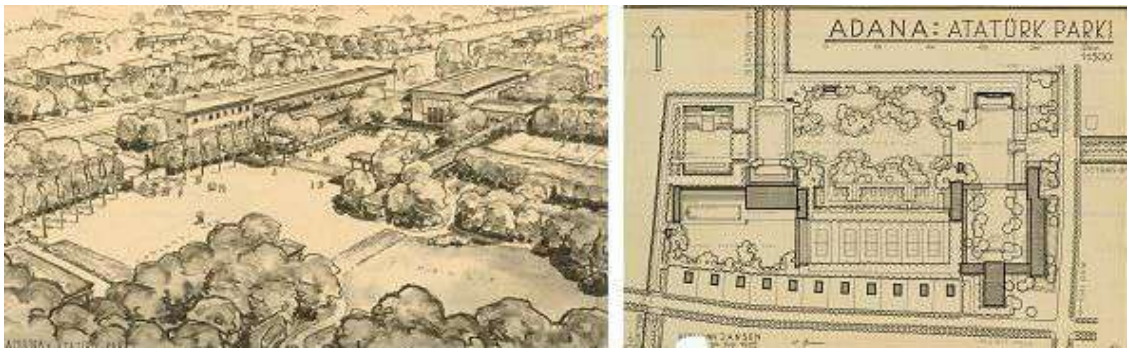

Figure 4: Adana Atatürk Park (Architecture Museum TU Berlin, Inv. Nr. 23350 and 23348).

Afterward, Jansen prepared a comprehensive urban plan for city. Plan offered development in the both sides of Seyhan River with zoning as basic principle. Old city was preserved and new development was located around old city. New industrial development was proposed along railway route and was combined with Workers' District [Amele Mahallesi]. The industrial development in Jansen's proposal was separate from old industrial district on the opposite side of Seyhan River (Figure 5). The reason for this was preservation of agricultural lands and designing a compact urban form around old city (Jansen, 1940).

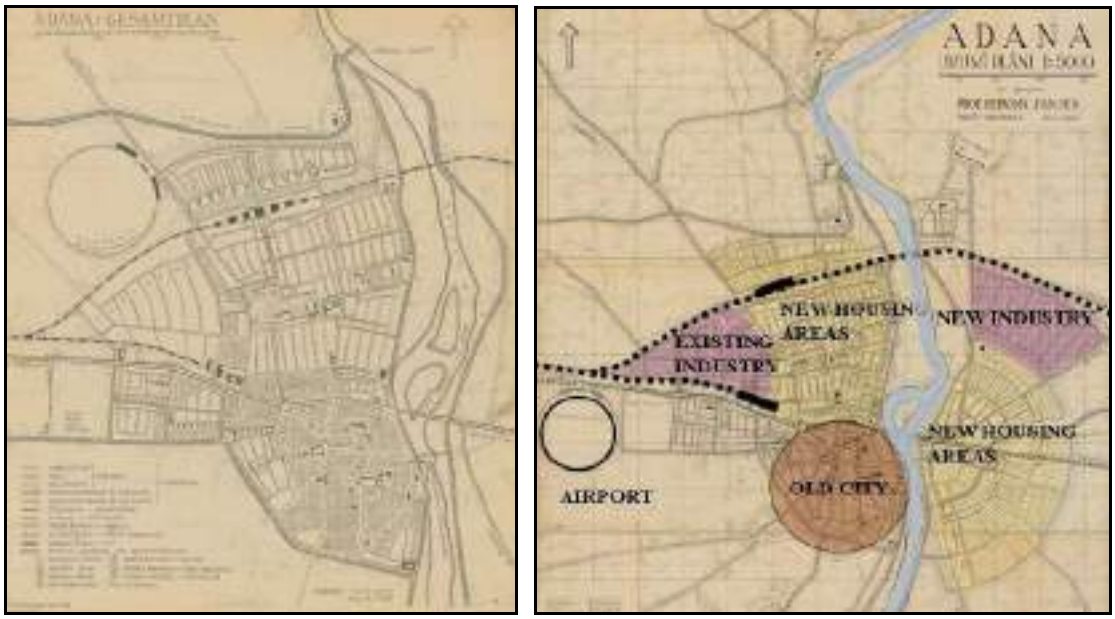

Figure 5: Adana Urban Plan and zoning (Architecture Museum TU Berlin, Inv. Nr. 23360 and 23367, 23368, 23369 merged).

Spaces for recreation were continuing along Seyhan River and socialization spaces were penetrating into new housing areas from recreational areas. Greenbelts were designed to separate industrial areas and housing areas.

New housing development was designated according to *Siedlung* approach (Ökeşli, 2009) and had traces of Garden City. Neighborhoods were also distinguished with green areas as spaces of socialization.

New administrative district was developed in old city. Jansen (1935) was insisting on conservation of historical urban fabric. However, he was declaring that administrative, cultural and commercial centers of cities should not be separated from the old core; they had to be in and around old core. In this respect, old core was not left, but was integrated with new development and was regulated with pedestrian paths and greenery areas.

Mersin Planning Experience: Southern Sea Gate

Mersin, as a cosmopolitan port city was intended to be developed as a first-degree port city in the early years of the Republic (Karacan, 2005) and this aim would find its identification in Hermann Jansen's Mersin plan. Jansen's modest planning attitude that reasoned the first prize in Ankara planning competition (Tankut, 1993) was also observable in organization of space in Mersin experience (Ünlü, 2012).

Figure 6: Mersin Urban Plan and zoning (Architecture Museum TU Berlin, Inv. Nr. 23454).

Plan was basically composed of three zoning decisions; industrial areas, warehouses and new port located in the eastern part, new housing development, recreational belt and spaces of socialization (along and in housing areas) in the west, and the old city core in between these. Old city core was connecting working areas and living spaces.

The industrial development was located between new port and railway. Workers' District was located to the north of old city core and was connecting to industrial areas through railway. The district was developed with Garden City and siedlung approaches apparently.

Administrative center was developed along old ports; Customs Port [Gümrük İskelesi] and the Port [İskele], and making an urban plaza in the existing urban square Gümrük (Customs) as in Figure 7. "Jansen designated Customs Square as a vital and functional area for community life" (Ünlü, 2012, p. 6). Commercial center was also located in the old city.

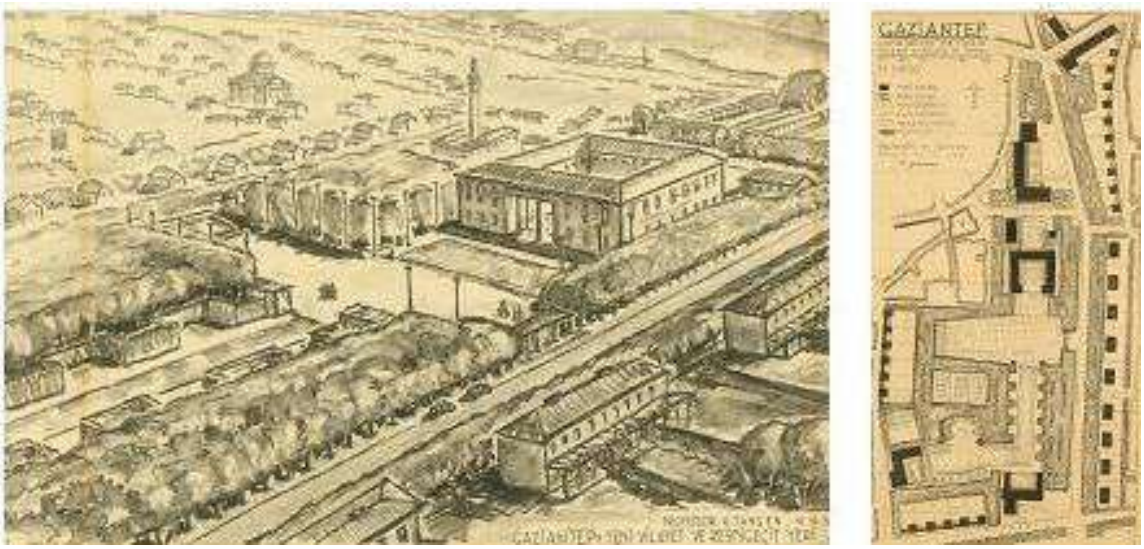

Figure 7: Mersin Atatürk Park and Hükümet Square (in Gümrük square), and Mersin City beach (Architecture Museum TU Berlin, Inv. Nr. 23452, and 23453).

Old core was separated from industrial site with a green zone and spaces of socialization were creating a unity between old city and new city. Sports, recreation and socialization spaces were arranged in the east-west direction continuing along new residential areas and reaching to the western border of city. The western border of plan was Efrenk stream and there was a city beach designed at the end of the city.

Gaziantep Planning Experience: A modern city on Silk Road

Hermann Jansen's Gaziantep plan had further specifications when compared to Adana and Mersin plans in the context of spatial arrangement and abundance of spaces of socialization and recreation.

First, the plan was proposing railway connection to the city in the northern part of old city. The other important proposal for transportation was widening highway to Aleppo in the south of old city along east-west direction.

Figure 8: Gaziantep urban plan, zoning and spatial arrangement (Architecture Museum TU Berlin, Inv. Nr. 23416).

The plan had three zones. These zones were generally distinguished with railway route, Aleppo highway, sports district (including hippodrome) and Alleben stream, which is passing along the north of old city. Similar to Mersin plan, industrial development and Workers' District in the northern part was distinguished from the old city by Alleben stream and railroad. In the southern and western part of old city, new housing development was proposed. Housing units were identified as three-storey garden houses. Further, administrative center was located in the old city between Aleppo highway and Alleben stream (Figure 9). This area was an intersect between greenbelt and the old city.

Figure 9: Gaziantep new governorship building and the official parade area (Architecture Museum TU Berlin, Inv. Nr. 23410 and 23412)

Jansen's planning attitude towards historical, natural and topographical elements can be obviously seen in Gaziantep experience. Jansen emphasized Castle and tumulus (Türk Tepe) by greenery. Alleben stream, as the natural asset of city, was designed as a recreational corridor both separating and integrating old city and new city. Topographic elements were handled as a design tool especially for arrangement of new housing areas in the southern part. Moreover, city could be watched from vista points designed in the northern and southern hills that city was presenting a pitoresk.

Main green belt was along Alleben stream and it was surrounding the old city to southern direction. In the north of Alleben stream, a sports area was designated with a hippodrome. Restaurants, children's' playgrounds, People's House, Martyrdom Monument (Figure 10) and so on were some of proposed uses in Alleben greenbelt.

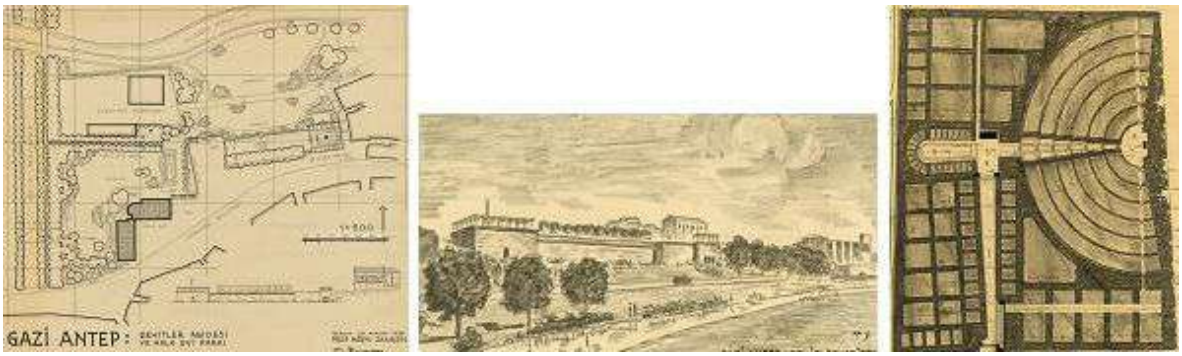

Figure 10: Gaziantep Martyrdom Monument and People's House; and New Cemetery respectively (Architecture Museum TU Berlin, Inv. Nr. 23409, 23410 and 23406)

In the south and north recreational areas, there were teahouses [kır kahvesi] in plan borders, and military barracks was forming south border of city. In the western border, a city gate was designed, while northeastern gate was designated with a new cemetery. Due Gaziantep Defence and martyrs of the War of Independence, the cemetery was designed as a monument (Figure 10).

Tarsus: urban- rural integration

Jansen's Tarsus plan, as plan of a rural settlement, had different characters than planning approaches of urban areas. Jansen in conference titled "Professor Jansen's idea about small cities" was declaring that "character of small cities should not be changed and these should not be planned like big cities" (Jansen, 1937b, p. 40).

Jansen's conference was indeed about Tarsus. Tarsus, for Jansen, was one of the most beautiful small Turkish cities that its historical and natural assets had to be appraised. In this respect, Jansen's Tarsus plan was focusing on water sources, streams and rivers of city. Plan was composed of two zones; greenbelt between water elements, the old city, and new development areas of dwelling units and industry (Figure 11).

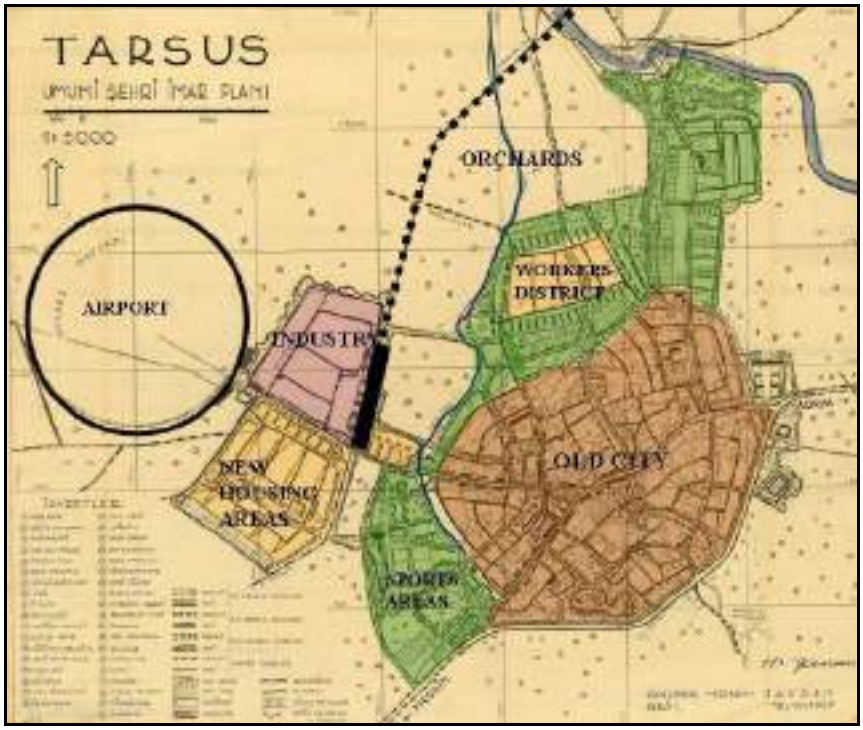

Figure 11: Tarsus urban plan (Architecture Museum TU Berlin, Inv. Nr. 23469).

Jansen (1937b) was defining the old city of Tarsus and greenery areas of the town as a pitoresk. Furthermore, Jansen was insisting on architectural assets of Tarsus. The architecture of Tarsus was unique and Jansen was offering a modern style for new housing areas designed according to architectural principles of existing settlements. For housing units, the plan qualified two-storey garden houses.

In plan, administrative center was designated in old city and it was combined with an agricultural bazaar in the north of official parade area. As the city was an agricultural town, administrative center and bazaar was the symbol of urban- rural integration. Spaces of socialization were designed to form a modern Anatolian town integrating with its rural hinterland.

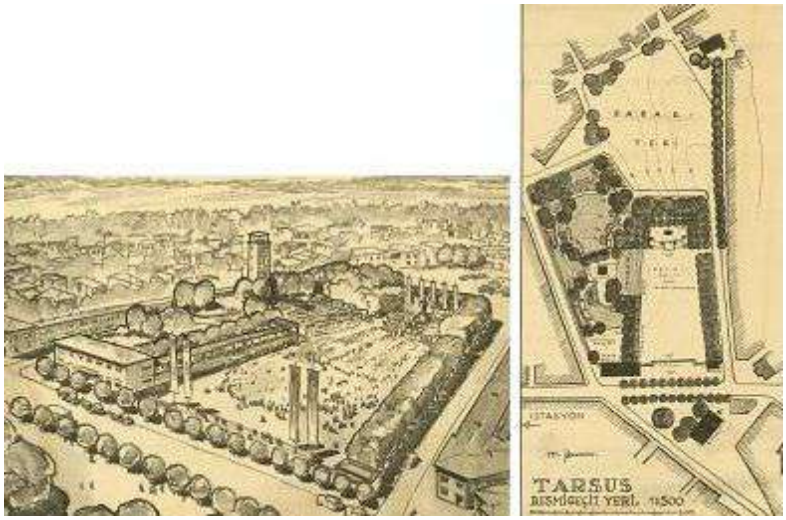

Figure 12: Tarsus Administrative Center, Official Parade Area and Agricultural Bazaar (Architecture Museum TU Berlin, Inv. Nr. 23466 and 23465)

The plan was also achieving urban-rural integration by preserving orchards of the city, which are buffer between cotton production lands and the city (Jansen, 1937b).

Ceyhan: urban-rural integration

Ceyhan, in 1930s, was in the appearance of an Anatolian village lying along Ceyhan River in north-south direction (Figure 13). The railway station was in the South of the city. People came to Anatolia due population Exchange [mübadele] were inhabited to Ceyhan in 1924 (Çomu, 2011), thus there was an increase in population of town.

Figure 13: Ceyhan town in 1930s (Architecture Museum TU Berlin, Inv. Nr. 23389).

Jansen plan was, in fact, suggesting an order for development of city (Figure 14). But, main principle of plan was a compact urban form and preservation of agricultural lands. So, plan recommended infill development and a new development area in eastern part.

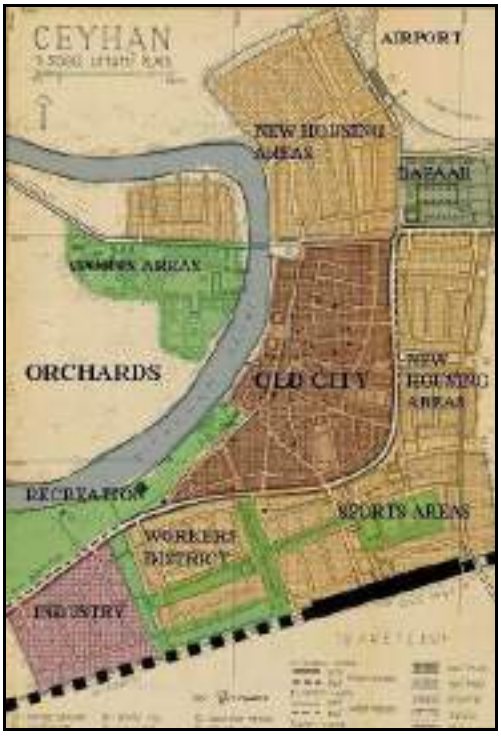

Figure 14: Ceyhan urban plan (Architecture Museum TU Berlin, Inv. Nr. 23395).

The plan had an orientation through water asset, Ceyhan River, and was using riverside as a greenbelt. Workers' district and industrial area was also distinguished by green areas and a new development area was proposed in the western side of river, in the north of historical bridge.

Administrative district and a youth park were designed in the old city. The administrative district, Atatürk square, was a gate of the old city opening to Ceyhan River (Figure 15). The eastern gate of the city was the symbol for urban-rural integration that agricultural bazaar was integrating urban core and its rural hinterland.

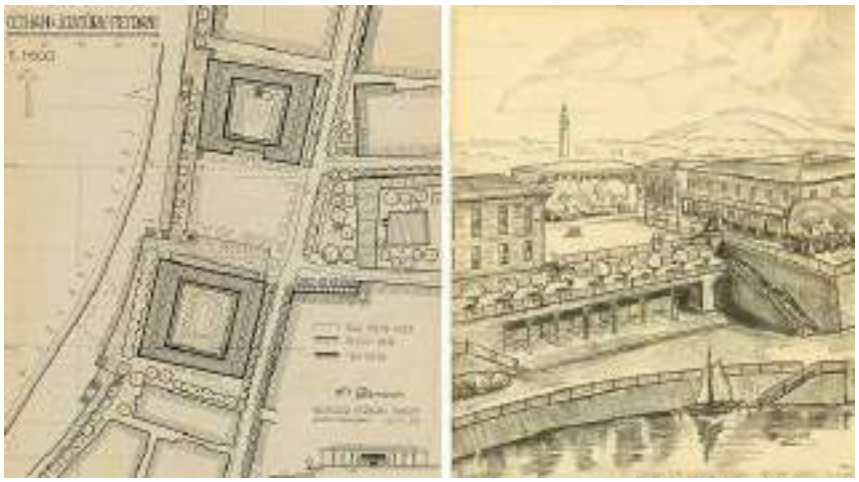

Figure 15: Ceyhan Atatürk square (Architecture Museum TU Berlin, Inv. Nr. 23396 and 23397).

CONCLUSION

The Republican Revolution had basic strategies composed of development of National economy and transportation, social progress and development of urban and rural frame. Urbanism and urban planning became key apparatus to reach aims of the Republic between 1923 and 1940.

For construction of National Economy, institutionalization and spatial arrangement of economic policies were compulsory that the Republican cadre procreated both a series of strategies for economic sectors and new growth poles, National foci and regional centers to apply those strategies in Anatolia. Southern Growth pole, which was one of National foci, was comprised by Hermann Jansen's planning in Adana, Mersin, Gaziantep, Tarsus and Ceyhan. Through urban-rural unity, agriculture-industry-trade

integration and new spaces of production, Southern growth pole was aimed to found a "national economic space".

Correlation between Hermann Jansen's planning principles and the Republican cadre would encompass economic development in urban and rural areas of southern area. For this reason, Adana was planned as an industrial town to operate cotton production in its fertile hinterland. Gaziantep also had a fertile hinterland on Silk Road, the gate to Middle East, and it was planned as an industrial-trade city as the hero of the War of Independence. Adana and Gaziantep were urban centers of urban-rural unity in spaces of production. Mersin, on the other hand, was developed as a Mediterranean trade center with agricultural and industrial production as a sea gate in Mediterrranean region. Tarsus and Ceyhan, as small Anatolian towns, were designed as modern Turkish towns encompassing historic, natural and cultural assets.

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The Planning Habitus

Notes from São Paulo Experience

Nilton Ricoy Torres

Abstract

This paper is organized in two sections. The first, deals with the propositions advanced by Bourdieu, by focusing on his theory of structural constructivism. It draws on notions such as “habitus”, “field”, and "dynamics of struggles within the field", in order to assess the extent to which Bourdieu constructs can help to understand the dynamic of planning practice in Brazil. The second section assesses four working hypothesis dealing with Bourdieu concepts of social field and **habitus** and, with the dialectical relation between **structure** and **agency** in the planning process. The empirical analysis and theoretical confrontations are simultaneously developed by taking the experience of Brazilian planning practice and particularly that of Sao Paulo city. The concepts of field and habitus are analyzed in detail, and then connected to notions such as power, domination and class struggle, which according to Bourdieu are central for understanding the process of structural change. The paper attempts to sketch a framework for analyzing planning practice as a field of struggles, where conflicting social forces seek to keep or change the social structure.

Key words: Habitus, social field, planning, urban governance, power.

Introduction

This work deals with planning as a practice of governance and takes Pierre Bourdieu notion of “*habitus*” and “social field” as driving concepts. The objective is to identify the nature and the *modus operandi* of this practice, aiming to clarify the role of the governance agents on the social structures transformations. The concepts of habitus and social field are taken from the struggles that take place within the planning and governance fields, as these struggles are directed to accumulate power and impinge domination. The first part of the paper discusses the main concepts of the structural constructivist theory of Bourdieu, and in the second four hypotheses about planning and urban governance as a social field are analyzed and evaluated. These hypotheses are extracted from Bourdieu theoretical propositions and then confronted with the reality of urban governance by taking Sao Paulo planning and governance experience.

By articulating Kuhn ideas of scientific revolution and paradigm change with Bourdieu concepts, the paper evaluates the extent to which planners practices within the urban governance field can contribute to change or to perpetuate the existing social relations.

This paper intends to develop an interpretative reflection on the public administration in Brazil in order to shed light on some aspects of planning as a practice of governance. The test of these hypotheses is accomplished by comparing them with existing governance and planning practice reality, in both professional and academic fields. The following section presents an operational synthesis of Bourdieu method aiming to raise research questions that can be of interest to fields such as planning, geography, management and policy sciences.

1. Bourdieu meta-theory of practice

Bourdieu's critical structuralism seeks to unveil the nexus between the social processes of change and the subjacent structures to these processes, by analyzing the mechanisms of both domination and production of ideas and the genesis of individual behavior. The main objective is to overcome the social sciences opposition between objectivism and subjectivism. The notion of habitus is developed as a mediating concept between the structural and behavioral determinism, aiming to break through the common sense duality between the agent and the social structure. By capturing the "internalization of exteriority and the externalization of interiority", the *habitus* seeks to explain the way society becomes 'deposited' in social agents as forms of 'durable dispositions' and 'structured propensities' to think, feel and act. Such capacities will guide the agents in their creative responses to the constraints and requirements imposed by the social structure they take part.

The method of analysis is empirical and systemic and the fundamental premise is that the social dynamic occurs inside the group (field) within which individuals (agents) as bearers of specific attributes (habitus) establish confrontations among themselves seeking group hegemony. The field is organized by specific values or kinds of capital that are produced within it. The social dynamic is framed by struggles between agents seeking to keep or change the ways capital and power relations are distributed within the field. The struggles and conflicts inside the field follow strategies that are driven by the habitus which constitutes the determinant element for the action. The field is constituted by the positions the agents occupy which determine the way individuals or groups behave within the field. To the concepts of '*habitus*' and "field' Bourdieu attaches a myriad of secondary concepts that evolve among themselves in order to underpin a relational understanding of the social phenomenon.

1.2. *Habitus*

The concept is developed not only to escape from the rational objectivism of structuralism that reduces the individual to the structural determinations, but also to avoid the philosophy of consciousness which makes the individual solely responsible for

the construction of reality. The habitus is a generative scheme of shared of perceptions, judgments and categorizations designed to mediate the relationship between structure and agency, and which constitutes itself historically. In other words, it serves to explain the dialectical relation between the social structure and the agent[1]. According to Bourdier, the habitus is a 'matrix of dispositions' which is acquired through inculcated social experiences and which can be understood as practical wisdom. That matrix bounds the ways of perceiving, feeling and thinking that leads the agent to act and react differently according to each situation. The dispositions are not mechanical neither determinist. Instead, they result from a complex process of mutual incorporation and interdependency between the structure and the agency. The agent acquires them by internalizing the social structures. Such structures while the repository of individual and collective history, are internalized to the point that the agent ignores their existence. They are both mental and bodily unconscious routines that allow the agent to act without thinking, because they are product of an unconscious learning that are expressed by a "natural" behavior in a given environment.

The *habitus* is a system of long-lasting and transferable dispositions operating as a foundation of social practices and representations attached to a specific form of existence. The *habitus* frames and is framed by our actions and emerge in the form of symbols, beliefs, tastes and preferences that characterize the social status of the agent. It is embedded in social relations and works to sort and classify these relations. Once embedded, the habitus becomes a natural component of the agent's behavior. The embodiment of the habitus occurs in two ways. The first, through family education and class rules and, is implicitly and unconsciously inculcated in the agent's mind. Second, it is an explicitly and methodically organized process that comes from formal education, the cultural industry and the mass media.

The habitus are plastic and flexible dispositions and manifests itself in the daily social relations in different ways. It emerges as a tacit knowledge and as a world view, being expressed as reactions to experiences, game perceptions, hypotheses, intuitions, sensibilities, ways of doing, feelings, predispositions, expectations, sense of place, time and timing perceptions, preferences, desires, knowledge of each one's positions within the field, logical sense, aspirations, inspirations, tactics and strategies. The habitus is central to social life organization since it works as an immanent rule to guide the agent daily interactions and the construction of practical knowledge what allows the agent to operate in the world. Thus, the habitus defines individual behavior so that it works to determine the modus operandi, motivations, preferences, aspirations and expectations of

[1] Bourdieu (1984); Hiller (2001:2).

the social agents. The habitus offers no ready solutions for every situation or context, but it is an improvised response to the circumstances of the moment. The habitus is basically adaptive as it changes and adapt to each new situations and to each change in the social structure: new behaviors, new technologies, new realities, new conditions and restrictions. Constantly, the actor must and is forced to innovate their habitus in order to adapt himself to the new situations and social demands. The critical reflexivity in the process of habitus' adaptation accelerates its transformation. In this way the habitus works as a dynamical attribute: at the time the agent enters a field or game which is not familiar, there is a habitus' transformation and the agent develops new facets of himself. By changing his habitus the actor adjusts his way of seeing, perceiving, judging and valuing the world, which in turn will determine the physical and mental way he acts. Thus, the habitus, as social structures embodied by the agent, can be understood as ''practical knowledge ... of worlds that result from the division of classes ... (age and gender, social class)", which runs below the level of consciousness and speech[2]. The habitus is the mechanism for transmitting and "inculcating" norms, values and beliefs of the group which operates in the socialization process of the agent and, which in turn, will become the principles of action, attitudes and opinions of the individual in his daily practice. Once internalized, the habitus is converted into a provision that will produce perceptions that creates meaning and practices that make sense of reality.

The habitus is not a natural space but a socially built construct that is incorporated into the mental structures of the agents. It is a mechanism that allows the production and reproduction of social practice, since it is a structured perception on how to act and behave, in accordance with rules of the field. The habitus is shaped by mimetic and participatory actions in line with the logic of social interaction within the field. It is through the practice of repeating that the agent learns a way of being and assimilates them as correct. In this process, he incorporates a worldview, a particular way of being and doing which in turn, will distinguish him from the others.

It is through the habitus that the agent takes place in the social field and allows others also occupy their respective spaces in a relationship of complementarity and reciprocity. The social agent is multiple and variable and develop "multiple habitus", for he is not inextricably immerse in a sole habitus, but cam move from one habitus to another and develop adaptive behaviors within the same habitus.

The habitus is always seeking to overcome the antinomies that emerge from the past and future tension. Bourdieu argues that the habitus varies according to changes in the social

[2] Bourdieu (1984).

and historical conditions. By this, the habitus incorporates new perceptions which will contribute to preserve or transform the structures of the social field. By legitimating the agent actions, the habitus contributes to re-signify that action in such way as to keep or change the acting of that agent within the social field. The habitus is both a product (effect) and produces (cause) history. As a producer it yields individual and collective practices that affect the social structure. As a product it emerges as a construct from of the social structures it has created. In other words the habitus – as a result – is framed by the incorporation of social structures, and as cause it frames the individual actions and representations.

Because the habitus acts as a regulator of the social actions both in the subjective and objective dimension it can be used to evaluate the subjective attitudes that structure individual representations and also the generation of new social practices. Each subject experiences life according his position in the social structure and such experiences determinate his subjectivity forming a kind of "matrix of appreciations and perceptions". This matrix will serve as a guide for the actions of the agent in later situations. By having the habitus as a foundation, practices and representations can be directed to the actor's goal, without engaging clear and conscious actions about the purposes or take complete control of the operations necessary to achieve them. These provisions are objectively regulated and regular, but not the product of obedience to rules. They are collectively orchestrated, but not coming from a guideline.

1.2. The Field

For Bourdieu, the field is the space that delimits the structure in which the habitus operates. It is a structured social space in which actors struggle to achieve their goals. It is the *locus* of praxis that mediates the relationship between actor and structure. Each field has its own structure and autonomy in relation to other social spaces, and is governed by specific rules of operation and stratification, which serve to regulate the relations among social actors within that space.

The field is a structure shaped by social practices and social interactions, in which specific rules prevail to determine what is practical, objective and rational, which is appropriate, acceptable or reprehensible and, what should be encouraged or restrained. These values will then consolidate the habitus of a particular context. A field can be understood as an arena of disputes where the agents play, develop strategies and fight for resources: symbolic goods and social positions. Inside the field individuals struggle to control production and to legitimate the goods produced within the field. These assets consist of various types of capital: cultural, economic and social *status*. These capitals have different degrees of importance and vary according to the field. Their possession determines the social position of individuals within the field. Individuals owning

significant amounts of capital are considered important within the field and will occupy dominant positions within it. The subjects occupy closer positions within the field, according to the quantity and, type of capital they own. They are far away; if they differ in the volume and type of capital they hold. Bourdieu explains that economic wealth (monetary capital) and accumulated culture (cultural capital) generate internalizations of dispositions (habitus) which works to differentiate the positions occupied by the agents.
Bourdieu seeks to overcome the dichotomy between subjectivism and objectivism, by merging the system of objective positions with the system of subjective dispositions of individuals. The habitus that exists within a field works to mediate between: 1) the invisible system of structural constraints (which shapes the actions of individuals and institutions), and 2) the visible actions of these actors (which structures the relationships). It follows that the field is not a static structure, but results from both the history of the various positions and the provisions they favor[3]. The field survival and the field boundaries depends on the interests therein, on agents' psychological and economic investments, and on the institutions embedded in it. For Bourdieu, fields are established by processes of social differentiation and modes of being and knowing the world of their members, which will determine its specific object and its principle of understanding. Bourdieu constructs the concept of field by taking a constructivist view of structuralism. He seeks to analyze fields as objective structures, apart from their member's characteristics. The analysis concentrates on the structures of different fields, approaching them as product of the incorporation (geneses) of existing structures[4]. Fields are then conceived as "universes" (such as universe of arts, of politics, of music, of science) which emerges as autonomous spaces inside the social world. Society, is seen as set of fields (universes or spaces) displaying concrete relations, specific functioning logics, which are incommensurable, not reproducible and irreducible to the logic of other fields. A field is then defined as (1) a "field of forces" over which domination is exercised; (2) a structure that restrain the agents action inside it; (3) a "field of struggle" among agents that fight to preserve or change the field structure[5]. Any field has an internal structure of relational spaces (inside which agents and institutions coexists in different structural positions) and an external space (which is not field)[6]. Internally, a field is constituted by an objective structure of positions and by a subjective structure of dispositions. In this process the field builds the habitus and the habitus shapes the field[7]. Therefore, the field is the exteriorization or the objectivation of habitus and the habitus is the internalization or the incorporation of the social structure.

[3] Cf. Bourdieu (2001, p. 129)
[4] Ibidem
[5] Bourdieu (1996, p. 50).
[6] Ibidem.
[7] Bourdieu (1992b).

The agent's position within the filed influences the way he access and consumes the field social and cultural objects and the way he produces and accumulates values[8]. The field is the place where the agents (individuals, groups or institutions) establish objective disputes and compete to command a specific type of capital. Inside the field the agents are seen as homogeneous habitus bearers, because they play the field games and compete for field positions and capital[9].

The field owns universal properties found in all fields, and specific ones that belong to a particular field. The universal properties are: (1) the field habitus; (2) the structure; (3) the laws for regulating the struggle for domination; (4) the *doxa*, or the consensual opinion. The specific properties are defined by the *nomos* (general laws governing the field's life). The *doxa* is a consensual discourse that all agents can agree, and works as a collective understanding – a common sense. The *doxa* involves issues which are accepted as natural, such as the systems of classification of reality. The concept of *doxa* was developed to elucidate the Marxist conception of ideology (as false consciousness). It is understood as a particular point of view, which is the dominant class point of view, and which is presented as universal belonging to all field members[10]. The *nomos* are stable general rules that regulate the field operation. The fields have different *nomos* because each field has a different historical evolution. For instance, the XIX century artistic field nomos was, "the art by the art"; the twenty century modern architecture had as nomos "the search of rationality between the form and function". These nomos must be accepted and legitimated by means of historical processes of struggle that takes place inside the field. The nomos is like a ruling principle which is inculcated in our minds by a socialization process.

All social fields are constituted by smaller subfields, which display the same characteristics of the circumscribing field. As social spaces formed by unequal distribution of various kinds of capital, the field and subfields are marked by class struggle among the agents, Some agents seek to keep the field structure other seek to change it, aiming to modify the hierarchical principle (economical, cultural, symbolical) that regulates the positions inside it. Dominant classes are those which succeed imposing their typologies of capital as the field hierarchy criteria. This struggle is waged in the political field and results mostly, in struggle for power.

The field is also marked (1) by the relations of force emerging inside it ; (2) by strategies (of defense or subversion) used; (3) by external pressures it experiences; (4) by other fields' conflict interpenetration and, (5) by other fields' ideas. The autonomy of a field

[8] Bourdieu (1984).
[9] Ibidem
[10] Bourdieu (2010).

depends on the volume and pattern of dominant capital. The search for autonomy requires constant interpretation of reality and refraction from influences and contaminations introduced from outside. Life within the field is not determined by the external pressures, but by the internal translation of these refracted pressures. The external struggles (economic, political, etc.) contribute to change the relation of forces inside the field, but such influences are always mediated by the structure of the field, which stands between the agents conduct and his social position. The relative autonomy of the field stems from its ability to establish its own rules, even when under pressure or influence from other fields.

2. Habitus and practice in the field of planning and governance

This section deals with planning, through the practice of urban management with reference to the propositions advanced by Pierre Bourdieu. The goal is to test the explanatory and generative elements of Bourdieu theory -considering the governance practices undertaken through planning - and to evaluate to what extent the results provide evidence to clarify specific situations related to this practice. The analysis focuses on the agents' practices. The focus of analysis is the practice of agents that directly or indirectly participate in the universe of planning as urban governance. The objective is to explain the principles guiding the action of those agents. The planning universe itself is the object of reflection. It seeks to analyze the structure of planning as a field of practices and assess to what extent this structure depends on the state tutelage.

The following text evaluates four hypotheses about the practice of planning as a process of urban governance. They are explicitly drawn from Bourdieu theoretical framework. The hypotheses tests are carried out with reference to episodes, events and situations experienced by the agents and institutions over the recent history of planning practice and governance in the city of Sao Paulo.

2.1 Hypothesis 1: The agents integrating the planning field incorporate habits that are common to all members, regardless their ideological views or field position.

Evidence suggests that urban managers, both conservative and progressives perceive planning as a "strategic instrument" with the mission to organize and discipline the social and economic physical space. The planning experience in Sao Paulo tends to confirm such hypothesis. By analyzing reports, discourses and practices of government, it is observed a convergence of perceptions, understandings and actions among the agents of the planning field. The recurrent and consensual idea is that planning, as governance instrument is a process of rational articulation of means, in order to discipline and control the social object of intervention: the urban thing. Over the years, most of the products that emerged from the planning field in Sao Paulo were statements

about the need of rationalizing and organizing the urban development in order to avoid “diseconomies,” “waste,” “exclusions,” and damages to the various kinds of uses, activities and interests within the urban space. The ultimate goal is to develop a cohesive and harmonious space in order to rationalize the actions of various actors in the urban environment.

From the reading of the master plans and public programs produced over the past 30 years in São Paulo, one can observe a clear logic of intervention and control. The habitus that emerges from this planning practice, regardless the different administrative regimes that followed, suggests the prevalence of a homogeneous perception and a common understanding on the role of "strategic" planning as an instrument to promote and coordinate the several towns within the city. As Bourdieu states, by participating in a field, the agent incorporates a system of specific provisions, which allows him to play the game inherent to the field. Taking the planning for a social field, as Bourdieu suggests, it is not inconsistent to conclude that planners incorporate habitus common to all members of the field: that sees planning as a strategic tool to propose technical, logical, and rational solutions to the issues of urban development.

As it can be noticed the habitus is not dependent on the agent ideological views, because it is already inculcated as a disposition in the agent perceptions of the world which determines how natural to have planning in order to predict, organize and provide solutions, for it would no sense being otherwise. The habitus are unconscious mental routines that allow planners to act without having to reflect on their actions. Governing seems to be a natural and reasonable attitude of those seeking "appropriate" solutions for urban problems – the object of the intervention. After all, planning is the antipode of market chaos and the anarchy that reigns in the worlds of liberalism. Without control and some form of restriction and policing over the chaos, the social order and the city could collapse. The habitus are like consolidate and unreflective certainties that produces a rationality which is not reducible to reason. They are products of learning and of a process which we no longer have consciousness and expresses itself as a natural way of being and thinking in a given context.

The daily discourse of planning shows that there are significant ideological differences among the agents of governance, regarding the meaning of their practices. In fact, these differences emerge, for example, in defining an appropriate solution to a given situation. Thus, for instance, while for some the housing issue and access to a shelter is the central object of urban governance – a mean for reducing social injustice and exclusion – for others, housing is a secondary problem, facing the imperative of recovering the depressed areas in the city. Despite the differences, what is homologous between both views is the belief in public intervention and on the ability of technical solutions. The Strategic Master Plan of Sao Paulo city, enacted in 2002, is a remarkable example of the

antinomy between the ideological antagonism and the habitus convergence. In this experience we observe more clearly how homologous habitus and opposing ideologies are connected together in a single discourse: On the one hand, the discourse of technical rationality prevails, and imposes controls to land use and land development seeking to organize the space for the convenience of the capital. On the other, the plan includes, in admirable way, all innovative dispositions of The Statute of City[11] in order to support the democratic planning and the social inclusion discourse. Finally, as an immanent totality to all these visions and discourses, hovers the idea of tactics and strategies, something like collusion among military generals, through which the planner is given the prerogative to set the rules and direction of the game.

2.2 Hypothesis 2: The planning habitus are practical knowledge that is inculcated in the agent through: (1) professional participation on governance institutions staffs, (2) tacit learning accumulated throughout professional practice, (3) formal education.

In the planning field, it is observed that habitus are assimilated in three different ways. First, through professional activity and tacit learning acquired over the practice. It is in daily confrontations with professional challenges, experimenting success and failures, that the planner constructs his way of doing and being which will constitute the field habitus. According to Bourdieu, the agents acting inside a field are directed to adjust their thinking, perceptions and actions to the objective requirements of that social space. It is through a process of adjustment and change to field requirements that the social agent constructs his practice. Those experiences he gets through field interactions are gradually integrated to past learning and that will constitute a matrix of knowledge generation that will guide the planner future practice. Bourdieu sustains that: "practical knowledge is a construction that triggers classifications systems and these are used to organize perceptions and appreciations that structure the practices"[12]. Planning practice thus constituted, is defined as knowledge built and embodied over the agent professional life. Along this trajectory, the planner incorporates knowledge about planning, about images and roles of planner, about beliefs and convictions of their practice. The *habitus* built in this way, becomes a social constraint which lead the agent/planner reproduce the social conditions of its own reproduction, which, in turn, will become the generative principle of action of the urban governance.

Second, habitus is also embodied through the culture (or habitus) that preexists in governmental institutions in which public policy is carried out. In these contexts, persists a diffuse and universal discourse about the planner social and administrative responsibility with the city. The planner in governmental contexts increasingly

[11] This is the Brazilian Federal Law enacted for regulating the urban development.
[12] Bourdieu (2010).

incorporates an awareness of his mission as the "*corpus publicus*" member which can be summed up as to care for the "common good", the "public interest" or the "general welfare." To be in the planning agent position as a member of the state, means to work for the public interest (or state interest). The "intrinsic culture" of Sao Paulo planning (habitus) is another unique way of assimilating the field's game. In the case of Sao Paulo, this culture is marked by the way of doing planning that has as its starting point the synoptic view, i.e. planning as a process that goes from top to bottom, in which the act of planning has its genesis in the development of a Strategic Master Plan that defines the general guidelines for development. The synoptic "need" becomes integral part of a tacit knowledge that comes from non-written rules which are incorporated to the administrative practices of government. To the planner eyes (habitus), it does not seem that the practice may be different. Through the Habitus, planning must run from general (*global guidelines*) to particular (*local solutions*) in a deductive process that provides control and articulation capacities of the proposals and actions.
A third way of incorporating the planning habitus is through professional education and by different modes of inculcating a way of thinking which is transmitted through the academic settings, research institutes and universities. There are several streams of thought within the academic world offering different conceptions on the meaning of planning and about its social, political and ideological roles. Such streams of thought have different premises, axioms and methods which are transferred (inculcated) to the students through the study years. These students will later constitute cultures and schools of planning which will determine the way of seeing perceiving and doing planning.

2.3 Hypothesis 3: Planning can be understood as a habitus incorporated to practices; that is it is a set of dispositions and habits that determine the way of doing planning.

Planning as a habitus can be understood as a set of dispositions defined by beliefs, ways of thinking, of understanding and perceiving. They are assumptions which are materialized in the form of truths, rooted ways of doing and perceiving. The planning habitus perceive planning as a way of carrying out a rational and strategic management, capable of articulating the administrative action to achieve the control of the urban processes. This habitus understands that the planning action starts from general formulations (global guidelines) by integrating the several dimensions of the urban space (land use, transportation, and housing) and articulating them to actions of the various administrative branches (works, health, transportation, culture, infrastructure, etc.). Likewise, as product of already established habitus, the planning is constituted through the game of repression and tutelage, in which the police action becomes an integral part of planning. Inculcated in the minds of the planner, there is a concern of protecting the public interest and a sense of social responsibility, motivated by the ideas of zeal, vigil and command.

According to planners, without planning and under the exclusive action of market forces, the city enters the chaos. Approaching the world through planning habitus, planners take the regulatory power of planning in order to minimize spatial dysfunctions and social injustices. They think that the competent state intervention and struggles within the field can promote social inclusion, enforce the social function of private property and guarantee the right to the city.

Bourdieu states that each field has a *doxa* formed by the common sense view that expresses as an ideology through which the world is accept as it is. They are like perceptions, appreciations and values shared by all inside the field. In the field of planning the *doxa* is established by the idea that planning is a rational, strategic and calculated process, for resolving the impasses and maintaining the field game. This *doxa* includes directing, coordinating and regulating and in order to achieve that planning must prohibit, restrain or encourage. For this reason, the planning *doxa*, includes implicitly, the idea of "reproduction", because it emerges as a point of view of the dominant class, but are presented as universal interests belonging to all members of the field.

The *nomos* are stable general rules that regulate the game in the field. In the field of planning these rules are linked to the field *raison d'etre*, i.e.: planning exists to rationalize government actions, maximize benefits, prevent undesirable situations, control agents' actions and penalize misconducts. As a general rule, planning exists to fulfill these functions. Regardless the meaning of the actions (to focus on the functionality of the market or to favor the social income balance), the *nomos* of planning is always to act through the state in name of public interest.

The land use policy of Sao Paulo, for instance, reproduces old habitus long ago consolidated in the way planning is carried out in the city. Such habitus perceive the city as a *bricolage* of areas with specialized land uses (zones) and different densities. The goal is to control the urban land use and urban development, in order to maintain and the city economic functionality and guarantee the reproduction of social relations. For that reason Sao Paulo zoning ordinances are seen as normal, natural and the most efficient way of governing the urban activities within the city. In the view of planners (habitus) inside the planning field, it seems to have no other way to administrate the land use besides the tutelage mechanisms and symbolic violence exercised through legal punishment. In this way, the land use management in Sao Paulo can be seen as a habitus deeply rooted in both the mental structures of planners and the objective structures of urban governance institutions. The zoning ordinances in Sao Paulo perform a fundamental role of promoting (and perpetuating) the idea that planning is a force or police instrument to control deviations, anachronisms, and dysfunctions among the

various land uses in the city. The idea of segregating the urban land in diverse ghettos of people and activities, as well as the idea of "protect ting" uses and places (zones) from those undesirable people and activities was and still is a dogma (habitus) of Sao Paulo Planning tradition. Although such habitus is slowly changing –consequence of struggle within the field – and the idea of existing a mixed urban land use starts to be conceived, struggles inside the planning field still goes on, since it is never admitted an urban space with mixed social classes. The conception (habitus) that the city territory has to be divided in different areas and zones is still fundamental.

2.4 Hypothesis 4: The field of planning produces two kinds of values (capitals) which both the economic field and the political field depend on. Planning has the power of legitimating political decisions through the technical and scientific rationality discourse and by coordinating the distribution of public money through the governmental budget. The police and regulation power attached to planning acts as a strong instrument of income distribution, by redirecting public resources.

The capacity of legitimating political decisions and to provide a less arbitrary image to closed and sectary office deals is one of the most coveted products of the planning field and yields, as suggest Bourdieu, symbolic capital. It's the capacity of producing this kind of capital that allows planning to articulate proposals and justify essential referrals for an effective public administration. Planning carried out by planning agents' becomes a form of symbolic capital, since it functions as strategy domination because it sets limits, imposes conditions, formulates assumptions, proposes goals that will little by little become the *nomos* of the entire population. The nomos, according to Bourdieu, synthesizes the dominant view and is imposed to all society (dominated groups). Therefore by submitting their proposal in the form of "the city we want" or "Sao should not stop" or the "health city", planning agents, in fact, defines a conception of city attuned to the dominant interests and expressed in the plans and policies. It can be argued that the habitus which commands planning practice (and science) can incorporate worldviews and perceptions that ultimately manipulate values, constrain possibilities and condition guidelines.

In the context of society as whole, planning is a strategic field because it produces values of main importance to the struggles in other social fields, since it is the locus where the distribution of economic and political capitals is legitimated. This power allows the planner command various ways of distributing capital on the territory and that enables to change the balance of power and capital among various agents. For this reason, intense struggles take place within the field of planning, since its operation becomes strategic for keeping or changing the relations of domination within society.'

Conclusion

Bourdieu's key contribution for our understanding of planning as urban governance is, in my view, the idea of *habitus*, and its confrontation with a specific situation from which practice emerges. It advocates that, there is no absolute truth or pre-conceived action template to follow, because practice is the actor's casual answer to issues he faces at each moment. In the case of planning, we can infer that the habitus of planning in different historical times, places and situations proves to be a key variable in the *modus operandi* of the planning field.

Planning as a habitus is a possibility and a field of research and opens an opportunity for investigating planning through the practice of planning. In this new field of study there is no pre-given determination, because there is no permanent, or priority object of analysis. The focus is not on the structures of planning or on the social actors, but on dialectic relations they establish. Bourdieu approach allow us understand planning as a structured field of forces and practices, which are permeated by structured and structuring habitus. Planning, thus defined, allows us capture planning practice as a habitus that emerges from internalization of the structures (of planning) and the structural changes in planning as a product of externalization of planners' interiorities.

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From Parks to Social Infrastructure: The Historical Evolution of Public Facility Provision Standards in the Metropolitan Planning of Melbourne

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Melbourne, Australia.

ABSTRACT

At the heart of strategic metropolitan planning are 'standards'. The term usually refers to the 'rules, regulations and specifications' that underpin the institutionalized practice of urban planning. Planning standards are used not only to regulate and manage what happens within the built environment but also to improve the quality of life of places within a city. Surprisingly, it is difficult to find much discussion of planning standards within the English-speaking literature on metropolitan planning especially in regard to how they have shaped planning practice, when and why they were devised, how they have evolved over time, plus to what extent historic and place specific factors have come to shape them. This is certainly the case in the Australian context even though this is potentially a very fruitful area of historical investigation. Using the case study of metropolitan Melbourne, this paper explores when and why planning standards that regulated the provision of public facilities made their way into the metropolitan planning schemes of this city, plus why they have changed over time and what implications this may have had for this large Australian city which was recently nominated as the world's most liveable city. The investigation makes a number of key findings. First, the adoption of planning standards in Melbourne was conditioned by locality-specific contingent factors – politics, administrative powers, public discourse and economics – as well as external structural factors - developments in overseas planning practice and the cyclical rhymes in international and national capitalism. Second, different historical phases of the city's metropolitan development gave rise to

differing attitudes towards the ‘status and practice’ of urban planning which directly impacted upon the provision of public facilities to the citizens and communities that could be found in this city. Third, those communities in greatest need for public facilities and services have always suffered the most, as the political and administrative support for their provision has varied over time. The recent rise of neo-liberalism over the last 2 decades in Australia, for example, has meant that successive Victorian state governments have been reluctant to make significant social infrastructure provision commitments in their metropolitan planning schemes for Melbourne. Fourth, the socio-spatial divide that has historically existed between the people who have lived in the central-inner and outer-fringe regions of the city has been allowed to deepen, through the unequal distribution of public urban facilities and services. This has therefore nurtured conflicting perceptions of place and the people who inhabit them in a rapidly polarising metropolitan area. Finally, the paper concludes with a series of policy recommendations that propose to redistribute public facilities and services more equally and thereby improve the quality of life of the outer-fringe communities of metropolitan Melbourne.

Introduction

In comparison to many European cities Melbourne is a relatively young city. Founded only in the early 1830s, it grew quickly after 1851, when gold was discovered in the surrounding hinterland. Melbourne would now be transformed into a modern metropolis. But much has happened in the intervening 150 years. Melbourne is no longer regarded as a city of international significance. In the last 3 decades, Sydney has surpassed it both in terms of population size and economic importance. Surprisingly then, Melbourne was ranked ahead of Sydney and other major cities as the world's most liveable city in 2011 by the Economic Intelligence Unit. The ranking is based on different qualitative and quantitative indicators across 5 broad areas including social stability, health care, culture and environment, educational facilities and infrastructure. Essential to this and any other liveability ranking method must be an attempt to establish whether the citizens of a city have access to appropriately located social infrastructure. This has and only partially continues to be the case in Melbourne.

The citizens of Melbourne are fortunate as they live in a safe and well equipped modern city where health care, schools, good roads, public transport, open space and a wide array of cultural and recreational facilities are generally within easy reach of many. This did not come about by chance but it is the by-product of many years of planning on the part of strategic and social planners working at both the state and local government levels of urban policy-making. It is therefore surprising to discover that there are no accounts of who undertook this urban planning work; to what standards did Melbourne's planners adhere too with regard to the delivery of public services and facilities, plus were these standards devised locally or borrowed from elsewhere. Essentially then, very little to date has been written on the nature and role of planning 'standards' in Australia, especially those that relate to the provision of publicly funded services and facilities in Melbourne.

This conference paper seeks to fill a void in the Australian research record by reconstructing the planning history of Melbourne but from the vantage point of when

social infrastructure delivery standards were incorporated into metropolitan plans of this city. Specifically, this paper will attempt to address the following questions: (1) what form have planning standards taken that are concerned with the provision of community services and facilities; (2) when were they first introduced; (3) what may have been their origins; plus (4) how did they evolve over the last 100 years with respect to the metropolitan development and planning of Melbourne.

Standards: The Hidden Rules and Codes of Metropolitan Planning

At the heart of strategic metropolitan planning practice are 'standards'. The term usually refers to the 'rules, regulations and specifications' that underpin the actual act of plan preparation and regulation. Standards are "...used to determine the minimal requirements to which the physical environment must be built and must perform" (Ben-Joseph, 2005b: 3). "...Standards are...[therefore] set to control the physical setting of the urban area and contribute to ensuring the...welfare, convenience, efficiency and public interest" (Ratcliffe, 1978: 291). They now extend to virtually all facets of the built environment including land use zoning, sub-division, population density, building quality, height restrictions, privacy provisions, configuration of roads, open space requirements, location of public amenities, and so on (Ratcliffe, 1978). Standards are clearly an integral part of a planner's tool kit to design and regulate the built environment but this has not always been the case.

Many contemporary urban planning standards can trace their origins back to the late nineteenth and early twentieth century's when the pioneers of the planning profession sought to improve living conditions in urban areas which were afflicted with health, safety and allegedly morality problems (Ben-Joseph, 2005a, xiii). Of course, there are examples of much older building and town planning standards dating back to ancient civilisations of the biblical era (see Ben-Joseph, 2005a), but most of our contemporary standards are less than a hundred years old. It is surprising that so little historical research has been undertaken into this facet of urban planning despite its obvious importance (see exceptions Ben-Joseph, 2005a, 2005b; Keeble,

1972; Ratcliffe, 1978; Wilkinson, 1985). What research has been done on urban planning standards has usually been locality based and pre-occupied with land use zoning, the sub-division process and buildings (see Ben-Joseph, 2005b; Delafons, 1969; Hoyt, 1933). None of this work has had an Australian focus. Even less work has been done on standards concerned with the provision of public services and facilities other than a small amount on urban parks and children playgrounds (Granz, 1992; Gold, 1973; Theobald, 1984). Again, there is a discernable gap in our understanding of what has happened in the Australian context, despite a growing interest in the planning history of Australia's cities.

Planning standards dealing with the provision of public services and facilities have been limited in both number and scope. Most have taken the form of so-called 'hard' social infrastructure such as public facilities and buildings which are considered essential to supporting community life. This often included children playgrounds, sporting fields, public parks, kindergartens, schools, libraries, town halls, community centres, baby health care centres, plus other types of recreational and cultural facilities. According to the work of Veal (2008a), public service and facility standards have usually been quantified in four different ways:

1. Fixed ratio – a prescribed level of facility or service provision for a specified number of people. For example, 1 kindergarten is needed for every 3000 people, or 10 acute aged care beds are needed for every 7,000 people aged over 65 years;
2. Area-percentage – a prescribed amount of area is suggested for a specified number of people. For example, 2.83 hectares or 7 acres of open public space per 1000 people, irrespective of where the people might live;
3. Catchment area – a service area has been identified and a set level of facility or service provision has been prescribed. For example, a household located anywhere within a designated neighbourhood should not be no more than 400 metres walking distance from a bus stop or public park;
4. Facility quota – the number and size of services and facilities have been prescribed for different types of residential communities. For example, a neighbourhood should have a children's playground and public garden, whereas a town will possess the

open space facilities of several aggregated neighbourhoods as well as major sporting fields and a large public park.

Imbedded within these specific kinds of planning standards are a host of ideological and technical assumptions which have been increasingly questioned over the last few decades and lead some to suggest that other approaches should be used by planners to decide whether communities are in need of publicly supplied services and facilities (see Gold, 1980; Marriott, 1980a, 1980b; Veal, 2008a, 2008b). It is beyond the scope of this paper to review this debate but it is worth noting that this dissention exists even though such standards continue to influence the decision-making of urban planners.

Melbourne: The Case Study

Melbourne is located in the south-eastern part of mainland Australia within the state of Victoria. It is the 2nd largest city in Australia behind Sydney in terms of population however it is the largest city in the state of Victoria of which it is also the state capital. At the last national census in August 2011, the population count for the city stood at 4,077,036 people, many of who live at very low-densities when compared to European cities. The metropolitan area is 8806 km² (or 3,400 sq miles) and stretches for more than 100 kilometers from south to north making it physically larger than Sydney. Its large metropolitan area is divided into 31 local government authorities that share planning responsibility with the state government of Victoria. The latter devise urban planning policy and overall strategic direction for Melbourne whereas local government authorities modify them for their specific locales and monitor land use development within their respective jurisdictions. Melbourne is typical of many other Australian capital cities as its urban development has been characterized by continual outward sprawl underpinned by the notion of a 'quarter acre block of land and house' for everybody. This, coupled with the popularity of the private automobile after the late 1950s, led to an auto-centric urban structure, with many outer areas being deprived of reliable public transport and adequate public facilities.

The Historical Provision of Social Infrastructure in Metropolitan Melbourne, 1835 to 2010.

The first form of town planning in Melbourne occurred in 1837 by laying out a rectangular grid of approximately 3 miles long and 1 mile wide parallel to the Yarra River. The city grew slowly until the discovery of gold in 1851. Melbourne then expanded quickly in size as it became a gateway to the goldfields and an expanding pastoral hinterland that transported its produce via ship back to England. It was therefore not long before Melbourne began to experience the same problems that had beset many older industrial cities of Northern Europe including a lack of basic public amenities, over crowded housing, poor roads, a need to secure clean water supplies, plus disposing of human waste (Barnett, 1979; Briggs, 1968; Dunstan, 1984; Grant & Searle, 1978). A growth in noxious industries and an inability to effectively dispose of human waste fuelled a fear of cholera and diarrhoea that had already claimed thousands of lives in Britain during the 1860s (Dunstan, 1984).

Amid the ensuing urban growth and public health fears, land just outside of Melbourne's town boundary was set aside for public parks in the 1850s, as a way of countering the unsanitary living and working conditions of its inhabitants by providing them with the opportunity to exercise and breath clean air (Whitehead, 1997). In addition, public parks were also viewed as a place where people from different social backgrounds could mix, a process that could help elevate the manners and morals of the working classes (Granz, 1982; Whitehead, 2005). This initiative was derived from the early English notion of the public park. Together, 11 major public parks including a botanic garden acted as a kind of green belt around the central city (Whitehead, 2005). But decades of public debate over the unsewered city and the rising number of deaths from diseases associated with unsanitatory conditions had not rectified the sewerage problem (see Dunstan, 1984). A royal commission was finally appointed in 1888 and it proposed the building of a metropolitan wide underground sewerage system by a single body not unlike the

short-lived London and Metropolitan Board of Works (Dingle & Rasmussen, 1991). The Melbourne Metropolitan Board of Works – hereafter MMBW - was established in 1891 just as a global economic depression descended upon the city and the rest of Australia.

By the start of the 20th century, housing located within central and inner Melbourne had begun to physically deteriorate and the first signs of slum conditions were now apparent, aided by the lingering effects of the 1890s global economic depression that was extremely severe in Melbourne (Cannon, 1966; Davison, 1978). Journalist reports of the time fuelled a growing unease amongst the city's middle classes towards the slums and the people who lived in them (Mayne, 1990). Successive state governments held enquiries into the problem such as the 1914-18 Royal Commission on 'Housing Conditions of the People in the Metropolis' but took little action. Concerned individuals and social reform groups therefore turned overseas for solutions. Some individuals who at this time engaged in the public debates over Melbourne's slums undertook overseas study trips to Europe and the USA attending planning conferences, collected information from foreign publications, organized visits of foreign experts, plus helped form associations that would engage in political lobbying to rectify this problem (Freestone, 2010; Garnaut, 2000; Grubb, 1976b; Ward, 2002).

Agitation to do something about slums had begun during the 1890s and gathered momentum just before the outbreak of WW1 (Russell, 1972). At the centre of the anti-slum movement was the belief that dilapidated and overcrowded housing acted as a kind of contagion that threatened the physical and moral health of the slum dweller. In other words, 'if people are put into a bad environment it will produce bad people. Bad people will make a bad environment worse' (Davison, 1983: 144). The slums were also said to harbour public health problems that could spread to other parts of the city. But of even greater concern was the belief that they were sites of moral degradation. Particular concern existed for the moral and physical wellbeing of children who needed to be rescued from this unhealthy environment. Melbourne's

social reformers turned to England and America where since the 1890s a number of social reform movements – eugenics, the settlement movement, the child saving movement - offered a range of environmental determinist solutions to the problem (Davison, 1983). The more moderate of these reform movements asserted the 'slum child' could be saved by making available free services and facilities inside the slums including children playgrounds, baby health clinics, kindergartens and food programs (Davison, 1983).

Not surprisingly, the first kindergarten was set up in the Melbourne inner suburb of Carlton in 1901 and six years later the first children's playground opened there in 1907 (Davison, 1983; Spearritt, 1974; Whitehead, 2004). The first baby health centre appeared in Richmond in 1917 (Sheard, 2005). By the early 1920s, Melbourne's inner suburbs which housed the city's poor working classes were 'encircled by a cordon' of free kindergartens, playgrounds and baby health clinics, funded by private donations and local municipal councils (Davison, 1983: 161). It is worth noting that these early urban reformers choose to focus public debate on the people who were trapped inside the slums rather than the structural causes of the problem such as the city's poorly regulated capitalist property and labour markets (Gardside, 1988). Out of this middle class reformist zeal would come the first formal planning standard dedicated to the provision of a public facility in Melbourne: the child playground.

By the end of the nineteenth century, children playgrounds had been established in English and American cities, to improve the physical and moral welfare of children (Bird & Garnaut, 2010; Whitehead, 2005). Some were supervised and segregated according to the gender and age of the children. Initially, individual social reformers such as Charles Bean, James Barrett and Madeline Murray had campaigned for their adoption here in Melbourne. By 1912, the Guild to Play had been formed and lobbied for more playgrounds which were subsequently built in working class Clifton Hill, Collingwood, South Melbourne, Port Melbourne and Flagstaff Gardens before the end of WW1 (Apps, 1944; Whitehead, 2005). Many neighbouring middle ring

municipalities would go on to build pubic playgrounds during the inter-war period for their middle class ratepayers and children.

The state government took some time to codify this development in legislation even though a 1915 report by James Morrell to the Victorian minister of public works on planning developments in American and British cities, had pointed out a growing trend in the provision of municipal parks and playgrounds (see Morrell, 1915). It was not until 1922 that the Melbourne Town Planning Commission – hereafter MTPC - was established to deal with the tremendous amount of urban growth that occurred after the end of WW1, but a final report was not completed until 1929. The MTPC was modelled on the American notion of a supra-regional 'city planning commission' that would use the latest planning concepts and techniques devised in America to develop a 'master plan' for Melbourne (Freestone, 2000, 2004; Freestone & Grubb, 1998). The final report was significant not only because it was 'Melbourne and Australia's first comprehensive metropolitan plan' (Freestone & Grubb, 1998: 134), but it also stipulated for the first time a planning standard for the provision of a public facility.

The 1929 report recommended that the following provisions be made for the supply of new public parks and playgrounds:

~ ¼ acre of playground space for every 1000 people

~ a playground to be no further than ¼ mile distance from child users

~ 3 acres of playing field for every 1000 people

~ 1¾ quarter acres of general parkland for every 1000 people

In total, 5 acres had been prescribed of general parks and playgrounds for every 1000 people, a technical standard that could now be used to establish whether different parts of a metropolitan area conformed. Disappointingly, the plan was never gazetted into law by the state government and the MPTC was dissolved, shelving its plan for the next 2 decades. Speculation has surrounded the question of why this happened with some commentators suggesting it was due to the onset of the 1930s Great Depression, the anti-planning attitudes of a conservative state government or a loss

of support from local government councils which feared the emergence of a planning authority that could usurp some of their powers (Freestone & Grubb, 1998; Grubb, 1976a; Lewis, 1995; Sandercock, 1975).

Of greater interest to this paper is the question regarding what were the origins of these open space standards. First impression suggests they came directly from America as part of the 'Americanization' of Australian planning that occurred in the 1920s (Freestone, 2004). Research indicates that American social reformers associated with the US Recreation Movement and the National Playground Association of America had devised distance thresholds, area percentages and population ratios by the start of the twentieth century (Wilkinson, 1985). Closer investigation reveals these concepts had in fact been borrowed from England. Theobald (1984) has found that the distant threshold notion - people should not be more than ¼ mile from open space - can be traced back to the 1880s and a London based organisation known as the Metropolitan Public Gardens Association. Reference can also be found to a ½ mile or 600 yard distance threshold between facilities and worker homes in Ebenezer Howard's book To-morrow: A Peaceful Path to Real Reform published in 1898 (Mann, 1965).The idea that a town should allocate a certain percentage of its area to open space is to be found in the work of an Englishman, Robert Hunter, who was writing in the early 1890s (Theobald, 1984). Allocating a specified amount of playing space to children has been found in several reports produced just before the start of WW1 by the London Board of Education (ibid, 1984). Hence, the first planning standard concerned with the provision of a public facility in the metropolitan planning of Melbourne was derived from England but refined and transported here via a new technocratic based approach to urban planning that was being developed in America.

Just as the 1890s depression had brought economic hardship and poverty to the people of Melbourne so would the 1930s depression. As in the past, working class households bore the brunt of bad economic times, many of who were living in or close to the already deteriorated inner suburbs of Melbourne. Overcrowded

dilapidated housing was a classic feature of Melbourne's slum areas during this period. Once again, the spectre of slums and their potentially dangerous occupants returned to the public debate, producing a range of responses from the city's middle classes. Some formed themselves into secret para-military organisations ready to quell any political uprisings (Cathcart, 1988). Others joined charitable organisations and distributed outdoor relief to the needy (Mackinolty, 1981). Some sought to document the city's slum problem through research and journalistic reporting such as Oswald Barnett. Then there were others who joined professional groups such as the Victorian Town Planning Association to lobby the state government to act which it finally did in 1936 by setting-up the Housing Investigation and Slum Abolition Board. It produced a damning report into the 'appalling living conditions to be found in these inner suburbs where unemployment was still high. It stressed the dangers of doing nothing about the slums where moral and political unrest was festering' (Dingle, 1984: 220). In response, a conservative state government agreed to establish a quasi-planning housing authority called the Housing Commission of Victoria in 1938, but it achieved little (Sandercock, 1975).

The outbreak of WW11 deflected public attention away from the slum problem even though the Commonwealth introduced rent control provisions as a wartime anti-inflationary measure. Residential rents were frozen at 1939 rates thereby encouraging private landlords to further neglect their already dilapidated inner city rental properties (Nelson, 1980). A new awareness for the need to devise and introduce comprehensive planning standards did not come from the Victorian planning profession or the state government, but a progressive Commonwealth Labor Government determined to eradicate slum housing that had been made worse by the 1930s Great Depression. To achieve this goal, a Commonwealth Housing Commission – hereafter CHC - was set-up that produced in 1945 probably the most comprehensive planning report every produced in Australia by either a commonwealth or state government (Troy, 2010).

In the area of public facility provision, the 1945 final report of the CHC recommended certain facilities should be provided as a ‘minimum’, at the same time when houses were built and that they had to be within a reasonable walking distance. This included shops, playing areas, an infant health and pre-school welfare centre, meeting hall, plus schools (CHC, 1945: 113). To not provide them, the report remarked, “…any housing development may be a social failure” (CHC, 1945: 113). It is unclear what might have been the basis of this claim but by the late 1930s there were already several well-known English studies on new housing estates and the problems its residents experienced due to inadequate supplies of community facilities, transport and job opportunities (Mann, 1965: 131).The report also recommend ‘later-stage’ facilities be supplied when the social development of a housing area warranted them including kindergartens, club rooms, small halls to be used for theatres and art exhibitions, a library, gymnasia, youth centre, canteen, swimming pool, adult health centre, religious buildings, children playgrounds and additional sporting fields (CHC, 1945: 113). Unfortunately, a peculiar feature of the Australian political system is that the Commonwealth, neither during war or peacetime, has the constitutional power to enforce its recommendations upon the various states and so many of these innovative ideas were never fully implemented.

Again, it would appear that several semi-official reports issued during and at the end of WW11 in England – the Barlow Commission (1940), the Dudley Report (1944), the New Towns Final Report (1946) and the 1944 Housing Manual – may have had an influence on the range of services and facilities considered necessary by the CHC on all new Australian housing estates (see Goss, 1961; Mann, 1965). Another important English development that now helped shape urban planning in Victoria was the 1944 Greater London Plan. It contained the notion of a ‘neighbourhood unit’ that has been widely attributed to the inter-war era ideas of American social reformer Clarence Perry (1939). New towns or suburbs were now to be based on the British adaption of Perry’s concept of discrete residential communities of 5,000 to 10,000 people who all lived within close proximity to a neighbourhood centre that supplied a range of basic services as well as some ‘common’ facilities - primary schools, halls,

churches and open space – that would foster a sense of community belonging (Goss, 1961; Mann, 1958, 1965; Mumford, 1954). An aggregation of several neighbourhoods formed a town or suburb which supplied an additional number of retail, commercial, educational and recreational services and facilities.

The notion of a neighbourhood unit was a crucial next step in the development of Victorian planning standards for Melbourne because it was underpinned by a host of service and facility provision requirements. These standards were partly evident in the 1948 metropolitan plan for Sydney and the 1948 Australian lecture tour of Patrick Abercrombe who had embedded them in his Greater London Plan (Carter & Goldfinger, 1945; Howe, 2000). In 1949, the MMBW was given the responsibility of preparing a metropolitan plan for Melbourne, a task it completed in 1954. Drawing upon a range of influences – the 1929 MTPC plan for Melbourne, the 1944 Greater London Plan, the 1948 Sydney Plan, plus the latest data collection and planning analysis techniques from the USA – the 1954 MMBW Plan for Melbourne did not try to arrest the urban sprawl that had once again come to characterize the city's post-war development. Instead, it made recommendations to guide such development by preserving urban farmland as a kind of green belt, set aside land for freeway and recreation uses, plus zone land for future residential development guided by notions of neighbourhood units that would provide new home owners with basic services and facilities (McLoughlin, 1992; Sandercock, 1975).

Less well known about the 1954 MMBW Plan are the numerous recommendations made for the provision of services and facilities which are possibly the most comprehensive ever proposed in Victoria. Using both overseas and local service standards it recommended:

~ 7½ acres of open space per 1,000 people (ie., 3 acres of sporting fields, 1 acre for other sports, 2 acres for parks and gardens, plus 1 ½ acres for children play-grounds). Excluded here are public golf and horse racing courses;

~ 5 acres for a primary school of 500 pupils;

~ 15 to 20 acres for a secondary school of 600 pupils;

~ 15 acres for a technical school of 600 pupils;

~ an infant welfare centre with 1 nurse per 5000 people within ½ mile walking distance from every users home;

~ 5 acres for a 200-300 bed hospital with 7 beds for every 1,000 people;

~ each neighbourhood should have 10 shops per 1,000 people which should be within ¼ mile walking distance for all residents;

~ community retail centres will have 1 ½ to 3 ½ extra shops for every extra 1,000 people whereas larger retail centres should have 5 ½ to 7 shops per extra 1,000 people and a major regional retail centre will have a further 1 ½ to 2 shops for every extra 1,000 people, plus a further 50 to 60 shops;

~ a community centre should be no further than ½ mile from a neighbourhood shopping centre. (MMBW, 1954, Volume 1, pp. 97-165)

Throughout the 2 volume report, the phrase ‘planning standard’ is repeatedly used, as its authors had tried to produce a series of benchmarks that were intended to be used as a guide for providing services in the future growth areas of Melbourne.

Surprisingly, the 1954 Metropolitan Plan for Melbourne was never gazetted into law but implemented as demand required over the next decade and a half through a 1955 Interim development order by a newly elected conservative state government that mistrusted both the urban planning profession and centralised planning. Conservative state coalition governments would go on to control Victorian parliamentary politics for the next 27 years and in the process stifle any genuine attempts to better plan

metropolitan Melbourne. Throughout this post-war period, Australia and Melbourne would experience uninterrupted economic prosperity, not seen since the economic long boom of the 1870s and 1880s. By the mid 1960s, Melbourne had sprawled out of control, forcing a reluctant Victorian state government to now pass the Town and Country Planning (Amendment) Act of 1968 and finally gazette an out-of-date 1954 MMBW Plan, as well as commission an update. The 1971 Plan – Planning Policies for the Melbourne Metropolitan Region – produced by the MMBW acknowledged the rapid rate of population growth that had and would continue to occur in Melbourne, plus it repeated an earlier recommendation made in 1967 that outward urban growth could be best managed by 'urban corridors'. To some extent, the MMBW at the time was following an emerging trend in Australian urban planning by opting for corridor guided urban growth (Morison, 2000), but it was also a very practical solution to a serious problem. It was simply not possible to finance and supply physical infrastructure -sewerage, water, gas, electricity, telephone– as well as social infrastructure –schools, parks, baby health centres, halls and recreation facilities- to all the rapidly expanding new suburbs at the same time. Instead, if people could be restricted to the proposed growth corridors situated along established transport and service trunk lines, then some of these issues could be reduced. But not everybody had the luxury to decide where they might live especially the urban poor of Melbourne.

Despite two decades of post-war economic growth, there were many people who had not benefited and were compelled to live in cheap housing located amongst the industrial western and northern suburbs of Melbourne, as well as the derelict old inner areas (Henderson, et al., 1970). These housing areas had either always been denied services and facilities or they could not be provided due to the rapid pace of post-war urban expansion. Such discrepancies had been detected between the well-supplied eastern-southern suburbs and the poorly supplied northern-western suburbs of Melbourne. In fact, the 1971 Plan warned the state government that unless this spatial disparity was addressed, there would be an out-migration from the service and facility poor areas to the service and facility rich areas. However, the 1971 Plan

offered few suggestions on how this spatial disparity could be overcome, triggering widespread condemnation for its failure to integrate social and physical planning (McLoughlin, 1992).

In response, the MMBW undertook several studies into the continuing socio-spatial disparities of Melbourne that were being exacerbated by the rising levels of unemployment associated with the 1970s global economic recession. The research repeatedly showed that the working class residents of western, northern and inner Melbourne were in greatest need for more public services and facilities, but they received them at a painfully slow pace. Reduced fiscal resources now lead the state government to question whether further outward urban expansion could be sustained in these difficult economic times (McLoughlin, 1992: 60). The seeds for the need to adopt an urban consolidation approach were now formally sown in the MMBW's Metropolitan Strategy released in 1980. One of the five main focuses of the 1980 strategy was the future delivery of community services and facilities where it was remarked that:

> "…The wellbeing of a community depends not only on the adequate provision of such basic services as water, drainage, sewerage and roads, but also on the quality and availability of such community facilities and services as schools, kindergartens, health services, clinics and welfare offices. School facilities, like other services, are affected by an imbalance of demand and supply…Pockets of need for particular facilities occur throughout the metropolitan area. In particular, the region generally to the north and west of central Melbourne is one such area where the provision of additional community facilities has been seen as desirable" (MMBW, 1980: 40).

Once again, the MMBW had acknowledged a problem with the inter-regional distribution of social infrastructure across Melbourne, but it offered only 'vague platitudes' on how this issue could be addressed (Logan, 1981: 39). Finally, in 1982,

27 years of uninterrupted conservative state government came to an end in Victoria with the election to office of a reformist-oriented state Labor Government. This government started its ten-year period in office with a promise to tackle a long backlog of badly needed policy reforms including the delivery of more urban services and facilities (Considine & Costar, 1992; Costar & Hughes, 1983). Unfortunately, no specific service delivery standards were ever supplied in any official public documents including its metropolitan strategy – Shaping Melbourne's Future – released in August 1987.

Shaping Melbourne's Future was very much a product of the austere economic times that confronted Victoria and Melbourne in the late 1980s. As a metropolitan strategy it set the tone for other strategies that followed it because they would all be preoccupied with the economic wellbeing of the metropolitan region. The Australian economy would take almost another decade to recover from the global economic recession therefore the main themes of this metropolitan strategy was to offer assistance to the private sector by upgrading the highway network, providing more infrastructure for commercial and industrial development, plus deliver public facilities and services in a co-ordinated way to new housing in growth corridors. Disappointingly, the 1987 Plan offered little in the way of any explicit service and facility delivery standards that the community could expect, when compared to earlier metropolitan planning statements and strategies. This is a significant emission from a government that claimed its reform agenda was guided by the principles of 'social justice and equity'.

The global economic recession dragged on into the early 1990s with severe impacts being felt in Victoria and a newly elected neo-liberal state government did little to assist the hardest hit areas - western and northern areas of Melbourne as well as the outer south-eastern areas - that possessed largest concentrations of working class households. Unemployment rose quickly in these areas and they had the greatest unmet need for more public services and facilities. In this context, strategic metropolitan planning was now largely disregarded and pushed down the priority

list, even though the newly elected conservative state Government initially produced a Melbourne Metropolitan Strategy statement in June 1994 (Vic. State Govt, 1994a). Public services and facilities were given only the most cursory mention. An overly economic approach to state management led to the electoral defeat in 1999 and the ushering in of a 'third way' style state Labor government that held office until late 2010. It sought to find a balance between sound economic management with a concern for social and environmental objectives that were spelt out in several post-election policy statements – Growing Victoria Together and A Fairer Victoria. In 2002, it released Melbourne 2030, the first genuine metropolitan strategy since 1987. It was a comprehensive statement of planning intent and offered a wide range of initiatives across nine key areas including the creation of a 'fairer city'. The strategy states:

> "…Melbourne 2030 plans for a fairer distribution of social and cultural infrastructure, and for the better coordination and timing in the delivery of new services in development areas…By working with local communities, gaps will be identified in major social and cultural facilities in areas such as health, education, justice, recreation and the arts. These gaps will then be addressed…" (Dept. Infrastructure, 2002: 39)

Exactly what might be the criteria or service delivery standard that would allow urban planners to decide if gaps did indeed exist across different parts of Melbourne was never spelt out. Many of the remedial initiatives offered to achieve a fairer city are very general in nature and only identify a small number of social infrastructure. This was certainly much better than its predecessor had proposed however there was still very much of a pre-occupation with ensuring the economic wellbeing of the metropolitan area. This largely explains why there was no explicit commitment to spelling out a clear set of social infrastructure delivery standards as the social needs of the community had become a lesser priority for state government in these neoliberal economic times. Hence, it almost seems as if the provision of public services and facilities has become a perennial concern for strategic metropolitan

planning in Melbourne over the last 30 years, however what the precise service and facility delivery standards might now be are never made public anymore.

Conclusions

A number of recurrent themes emerge from the historical investigation undertaken here into public service and facility provision standards for Melbourne. First, the adoption of planning standards in Melbourne was conditioned by locality-specific contingent factors – politics, public discourse and unmet human need – as well as external structural factors - developments in overseas planning practice and the cyclical rhymes in international and national capitalism. Exactly who was in control of the Victorian state government has had a profound impact on commissioning and implementing strategic plans for Melbourne as was shown with the 1929 and 1954 schemes. Throughout most of the 20th century, conservative state governments ruled Victoria and they were reluctant to engage in much urban planning, forcing individuals and reform groups to become involved especially until the end of WW2. The pressure to do something about Melbourne was also conditioned by a fear of 'slums' and the people who lived inside them because it was believed that they could infect the rest of the city with their illnesses and low morals. Slum dwellers could be rescued from their surroundings by a range of initiatives including the provision of publicly funded services and facilities. Surprisingly, middle class reformers and state governments did not explore in any serious way the role that fluctuating economic times had played in the creation of slums, plus the associated problems they generate. In fact, Melbourne expanded as a city in good economic times – 1850s to 1880s, 1920s, 1950s to 1970s – which necessitated some forms of urban planning intervention, but there were also the bad economic times – 1890s to 1910, 1930s to mid 1940s and mid 1970s to 2000 – that witnessed a contraction in urban planning activity. Melbourne, like the Victorian and Australian economies, have always ridden the booms and busts of international capitalism.

Second, Melbourne has always been a socially polarised city, with the poor and working classes initially occupying the central and inner city areas, whereas the upwardly mobile working and middle classes living in middle distant housing areas. As the city expanded, the poorer working class households were pushed out into the western and northern suburbs of the city, as well as the extreme outer edges of the south-eastern suburbs. These communities have historically been and remain in greatest need of public facilities and services but political and administrative support for their provision has varied over time in accord with the rhymes of the economic cycle. The recent rise of neo-liberalism over the last 2 and half decades in Australia, for example, has meant that successive Victorian state governments have been reluctant to make social infrastructure provision commitments in their metropolitan planning schemes for Melbourne. Difficult economic times have contributed to maintaining a faith in neo-liberalism where the economy comes ahead of the social needs of the community. The only discernable change to this spatially patterning has been the extensive gentrification of the inner areas over the last 4 decades that has now become an expensive housing area that excludes the poor.

Third, this socio-spatial division of Melbourne has been allowed to deepen, through the continued unequal distribution of public urban facilities and services. Since the late 1960s, urban planners had been warning successive state governments of the growing socio-spatial inequalities that exist between the western-northern and southern-eastern sides of the city, as this study has shown. Remedial action has been undertaken but at a somewhat slower pace than is possible largely due to the fact that policy priority remains the wellbeing of the metropolitan economy. This has therefore nurtured somewhat conflicting perceptions of place and the people who inhabit them in a sprawling metropolitan area whose inhabitants have seemingly accepted that social polarisation and inequitable access to public facilities and services is an inevitable feature of life in Melbourne. Television programs and films have even been made to lampoon the alleged differences that many assume exist between the people who live in the poor and better off sub-regions of Melbourne. Very little has changed over the last 150 years except the so-called slum housing and

its occupants have been shifted out of the inner city and into the western and northern suburbs of Melbourne as well as some outer fringe areas. It remains to be seen whether new 'urban social movements' will arise to counter this situation as had happened in Melbourne between 1890 and 1940.

Fourth and finally, it is clear that something has to be done, even if fiscal stringency has to be observed by neo-liberal state governments. A number of reforms can be considered in order to achieve a more equitable redistribution of public services and facilities, if everybody living in Melbourne is to benefit from living in the world's most liveable city. This can include a better co-ordination of state government and its various departments in the current and future delivery of such services and facilities; the re-location of public resources from the over-supplied inner and middle regions to the under-supplied western, northern and outer fringe regions that have large unmet needs; a reinstatement of genuine strategic metropolitan planning that accords equal weight to the economic, social, physical and environmental dimensions of the city. Urban planners cannot do this alone unless they have bi-partisan political support from the competing political parties that have to date controlled state government. It has taken Melbourne almost 100 years to re-acquire international standing amongst the major cities of the world but it remains to be seen whether it can hold onto it world's most liveable city status if more urban public services and facilities are not supplied to its more vulnerable residents.

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PUBLIC BUS TRANSIT TRAVEL TIME VARIABILITY IN ANKARA (TURKEY)*

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ABSTRACT

This study aims to quantify and find out underlying causes of public bus transit travel time variability using data collected in the capital city of Turkey, Ankara. Public transit service in Ankara metropolitan area is mainly based on the bus system operated by both public and private sectors. Bus transit system is generally mixed with other traffic (Right-of-Way C); therefore, it is expected that travel times are subject to high degrees of variability. The system is organized in a hub-and-spoke fashion with the hub at one of the city centers (Ulus or Kizilay) and the spoke in the urban fringe. As regards travel time variability in public transit bus system, three models are developed to account for variation induced by operational regions, trunk roads, and individual lines. Besides, two different sub-models have been developed with respect to dependent variables used: Standard Deviation and Coefficient of Variation of travel times. Three main causes of travel time variability have been identified and tested in this study: temporal dimension, spatial dimension, and service characteristics. Model results indicate that all of these factors affect travel time variability. We generally conclude that uniform organization of the system has to be changed in order to control travel time variability.

Key Words: Travel Time Variability, Public Transit, Ankara Public Bus System

1. INTRODUCTION AND MOTIVATION

While there is already a large body of research on travel-time variability and its use as a policy variable in the domain of private transportation, relatively little has been investigated in terms of public transport, either theoretically or empirically. Indeed, the public transit system's reliability is a vital issue affecting its status as a desired alternative to private transportation. In other words, attracting ridership to public transit is based, inter alia, on its reliability and travel-time variability (Bowman and Turnquist, 1981). Contrary to private (automobile) transport, public (bus) transit has many designated points for passengers to board and alight. Therefore, public transit has a frequent cycle of decelerating, stopping (or idling), accelerating, and moving. Travel-time variability in public transit may be affected by a number of factors, including passenger volume and its distribution along the route, vehicle types and vehicle design, drivers and driving habits, transit administration and operations as well as network design. For example, travel-time variability for public rail transit, which uses exclusive rights of ways, is associated with punctuality in its operations (e.g., Olsson and Haugland, 2004). Conversely, for the public bus-transit system, which commingles with other traffic, changes in traffic conditions, traffic signals, etc., might easily induce variations in travel times—similar to private transport (Strathman and Hopper, 1993).

The nature of transit reliability may be divided into different study areas. One area is the punctuality of service operations at the dispatch unit, which primarily relates to administrative structure, operations in the field, vehicle fleet size, etc. (e.g., Furth and Muller, 2009). An analysis of this area might include physical models of allocating transit vehicles of a certain size to a number of dispatch units. Another study area may focus on the busses' timeliness at the point of departure and of arrival. Although closely related to the punctuality of service operations, a prompt arrival might also be subject to numerous other factors (El-Geneidy et al., 2009). Reliable punctuality may be valued differently with respect to the characteristics of the departure point, arrival point and their spatial separation. Waiting at an unsheltered bus stop, standing in an overcrowded bus, or sitting in an empty bus may be valued differently. Each of these scenarios has a well-established a-priori temporal affinity among users that is associated with the time of day, week, or year.

This study aims to quantify and identify the underlying determinants of public bus transit travel-time variability in the Ankara (Turkey) metropolitan area. In addition, we discuss

possible remedies for alleviating travel-time variability. In this study, we draw upon data collected from five one-week periods of public bus transit operations from 2009 to 2010 in the Ankara metropolitan area[1]. Ankara is the capital city of Turkey with a metropolitan population of nearly 4.5 million people. The metropolitan area has an approximate radius of 50 km from its center.

The existing public transport system serving the Ankara metropolitan area is complex and heterogeneous in terms of operators, technologies, vehicles, and routes. Variation in any one of these factors requires a different organizational and administrative structure. The transit service in Ankara primarily relies on an extensive bus and minibus system, along with two metro-rail lines, namely Ankaray and Batikent Metro Rail Lines, and a suburban rail line running east-west[2]. The bus transit system is comprised of public buses operated by the Greater Municipality of Ankara and privately operated buses and minibuses (the number of privately run vehicles has remained stable for nearly 30 years). The entire public transit system is administered by the Public Transit Authority of the Greater Municipality of Ankara (abbreviated as EGO in Turkish). The routes, ticket prices and service levels of the entire transit system are regulated by a central council, the Transportation Coordination Center (abbreviated as UKOME in Turkish), which is headed by the metropolitan mayor.

Both publicly and privately operated transit buses may traverse parallel routes serving the same neighborhoods. Some routes are served only by public or private operators, but passenger volume on these routes tends to be either low or variable depending on the time of day or week. Thus, private operators, as small-business owners, hesitate to work on these routes; instead, they exert constant pressure on the UKOME to assign them to more lucrative routes. The bus transit system generally operates amidst other traffic (i.e., Right of Way C) in Ankara. As a result, it is subject to travel-time variability caused by traffic conditions. In this study, we focus on public bus transit service, which has market dominance in the metropolitan area.

To analyze travel-time variability, we rely on statistical measures of standard deviation

[1] First Panel: December 14–20, 2009; Second Panel: March 15–21, 2010; Third Panel: July 19-25, 2010; Fourth Panel: October 11-17, 2010; Fifth Panel: December 20-26, 2010.

[2] The suburban rail line ceased its operations temporarily on August 1, 2011, because of new junctions and road construction that cross or run parallel to the railroad.

and coefficient of variation of bus transit travel time. We hypothesize that the travel-time variability of publicly operated bus transit is subject to three sources of variation: the temporal dimension, the spatial dimension, and service characteristics. Three groups of models have been devised for operational regions of public transit, trunk roads and individual transit lines, respectively, in the metropolitan area. Altogether, there are five operational regions that comprise the entire metropolitan area. In addition, three highways have been identified. Two of the highways, Eskisehir Road and Istanbul Road, connect residential areas in the west with the metropolitan center (see Map 1 below). The third, Ataturk Boulevard, crosses the metropolitan area in a north-south direction. The majority of the metropolitan area is served by these highways, where the traffic varies significantly with respect to the time of day and week. Seasonal variation (especially between the school year and the off-school season) is also evident on these highways.

This study is organized into six sections. The second section provides background information for the study. The third section elaborates upon the characteristics of the public transit system in the Ankara metropolitan area. The information derived from the five-week panel data collected over the course of one year is presented in the fourth section. The fifth section describes the model used in this study and its results. General conclusions and policy recommendations for the public bus transit system in the Ankara metropolitan area are presented in the final section.

2. BACKGROUND

Contrary to private transport, public transit imposes additional costs and inconveniences on their riders. Riders must cope with unfamiliar areas, crowds, the weather, walking, waiting, and sometimes transferring (Horowitz, 1981). Moreover, users attach different values to each of these components, thereby subjecting the public transit system to vast heterogeneity among its riders. Apart from total travel time, transit users are quite sensitive to arriving on time, travel-time reliability and variability (Nash and Hille, 1968; Hartgen and Tanner, 1970; Wachs, 1976; Jackson and Jucker, 1982; Taylor, 1982; Bell and Casser, 2000). Travel-time variability in public bus transit is affected by both internal and external factors. Internal factors are associated with features such as the vehicle type, passenger capacity, fare-collection process, and the number of bus stops on the route (Strathman and Hopper, 1993; Hensher, 2007). External factors of public transit travel time variability primarily relate to traffic conditions, characteristics of the service area, the route and the level of passenger demand. Traffic conditions may be

associated with recurrent traffic congestion during certain times, such as peak hours, or non-recurrent incidences, such as traffic accidents, road maintenance, etc. (Noland and Polak, 2002).

Strathman and Hopper (1993) report that travel-time variability increases during the afternoon peak, with longer headways and high passenger demand. Bates et al. (2001) have developed a methodology for applying existing models of travel-time variability to scheduled transit services. In this setting, deviations from scheduled departures and arrivals are considered to be sources of disutility because such deviations may cause variations in expected travel times.

In a study conducted in US cities, it was observed that automobile speeds are 1.4 to 1.6 times faster than bus speeds (Levinson, 1983). In the same study, bus travel times and speeds were related to stop frequency, stop duration, and bus acceleration and deceleration times. The elimination of two stops per mile and a 5-second decrease in idling time (from 20 to 15 seconds) was found to produce a 4.30- to 6-minute time saving per mile, which is greater than the time saved by eliminating traffic congestion (Levinson, 1983). Restructuring and reorganizing transit services, especially by reducing the number of bus stops, changing the fare-collection method, and altering the door configurations and widths on high-density routes are important policy elements in reducing bus travel times (Levinson, 1983). By using components of bus travel time such as idling time, travel time, traffic-signal delay time, general traffic delay time, etc., another study found significant time variations in the bus services operating on differently configured routes in different regions of the city (Maloney and Boyle, 1999). According to Abkowitz and Engelstein (1983), travel time is strongly affected by trip distance, the number of passengers, boarding and alighting procedures, and intersections with traffic signals. More importantly, the same study reports that scheduling deviations at early points along the route propagate further deviations downstream. In addition to improved control and corrective actions on transit operations, shorter routes may well improve travel-time variability. Thus, it is also important to account for heterogeneity caused by different routes and the regions served by these routes.

According to Taylor (1982), metro-rail networks, which are generally free from the main causes of travel-time variability, offer more reliable and faster services to transit users than bus networks. Therefore, it is important to develop policies promoting metro-rail lines as the main transit mode that is supported by buses. Nonetheless, as bus

transit systems are less costly and more flexible than rail transit in the short run, bus systems may be more appropriate in rapidly growing cities in developing countries. The bus system and its operators enjoy high patronage in developing countries; however, the development is not sustainable because urban traffic congestion is much worse in developing countries, where road length and density is much lower than in developed countries (Cervero, 1998; Gakenheimer, 1999; UITP, 2001; Gwilliam, 2003). Moreover, public transit riders suffer from uncomfortable conditions, and the buses comingle with the general traffic. In comparison, private cars appear to be a faster and more comfortable alternative. Accordingly, the ills of the public bus transit system accelerate automobile use in developing countries (Gakenheimer, 1999).

It is important to maintain current public-transportation services in developing countries while improving the transportation infrastructure and service quality. However, the existing operational status of the bus transit systems does not support this approach. Among the many necessary actions required to improve bus transit services in developing countries, an important task is to reduce bus transit travel-time variability, which negatively affects the reliability of public transit. Therefore, this study's primary aim is to analyze the causes of travel-time variability in the public bus transit systems of rapidly growing, motorized cities, as in Ankara, the capital of Turkey.

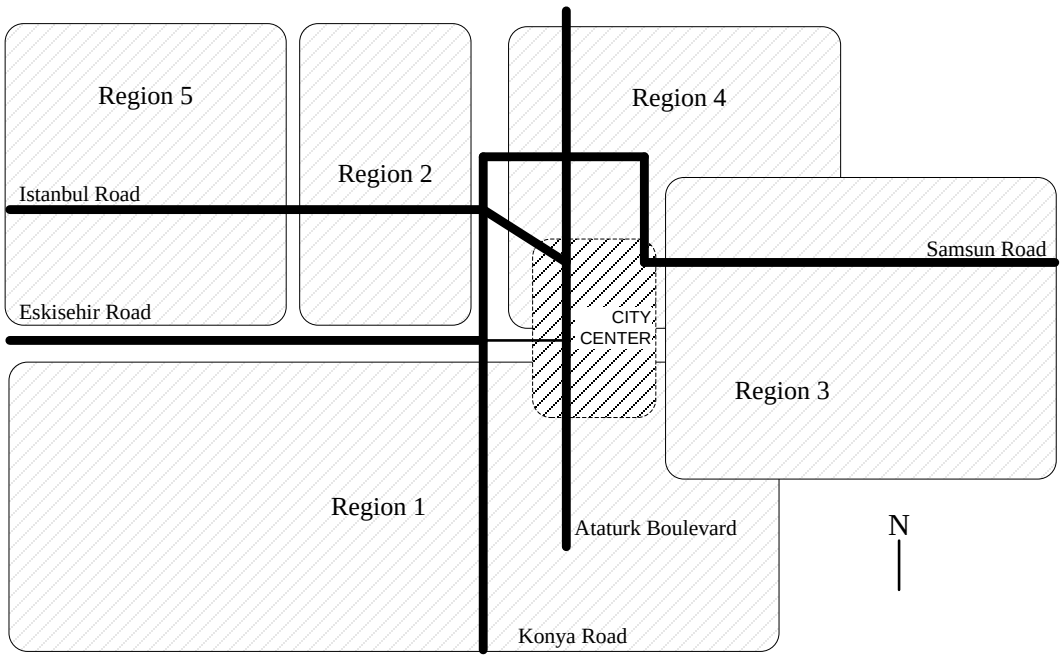
Within Turkey, Ankara is one of the fastest growing cities in terms of private vehicle ownership, which poses an important challenge for the city's public transportation system with its current and expected trends in the future. Although the public transit system represents a majority of motorized trips, 65 %, patronage of public transit is destined to decrease in the face of rapid motorization and urban sprawl. However, automobile transport is more costly than public transport because of high fuel prices[3]. Although the travel costs for public transit are lower than for private transport, public transportation has lost ridership for failing to be reliable and accessible, as the transit lines focus on the city center. Although three additional metro lines are currently under construction, and several other lines are planned for the next phase of rail network expansion, the future of public transit in Ankara is not promising if business continues as usual. In fact, metro rail-line projects had been stalled for approximately ten years because of insufficient public funds in the Greater Municipality's budget. Recently, the legislation regarding

[3] In 2008, Turkey ranked first in retail fuel prices in Europe (http://www.gtz.de/de/dokumente/gtz2009-en-ifp-part-2.pdf, Accessed on February 12, 2012).

roles in urban transportation projects has been modified to enable the central government's involvement in metro rail-line projects. It is expected that these lines under construction will become operational within 5-10 years.

3. PUBLIC TRANSIT SYSTEM IN THE ANKARA METROPOLITAN AREA

The Public Transit Authority of the Greater Municipality of Ankara maintains the public transit bus system in 5 operational regions (Map 1), which together account for the entire metropolitan region and have varying characteristics. The Greater Municipality of Ankara operates the public bus system along with two metro-rail lines. The suburban rail system is operated by the Turkish State Railways. The remainder of the public transit system is operated by small proprietors. Except for the suburban rail system, all of the transit fares are strictly regulated by the municipality. Public bus and metro-rail transit require pre-paid magnetic ticket cards to travel, while the privately operated buses and minibuses accept only cash. The fares for both systems are nearly identical and are fixed on all routes. However, there are some advantages of using multi-ride magnetic cards, such as fare reductions and lower fares for transfers, from which cash-based privately operated transit buses and minibuses are exempt. As the data are collected from magnetic card readers, the scope of this study is limited to the public bus transit service only.



Map 1

In sum, there are nearly 400 public bus transit lines operated in five regions. Nearly all of the buses execute a u-turn to complete their journeys, which end at the point of departure. A bus terminal is where the buses idle, as well as the point of departure and return. While different bus lines follow different paths through the neighborhoods near the bus terminals, their routes often converge outside of their respective neighborhoods, and nearly all of them meet at the metropolitan center. Therefore, the transit system emulates a hub-and-spoke network with the metropolitan center typically serving as the hub and the bus terminals as spokes. Passengers travelling between regions must transfer at the hub, the metropolitan center.

Although the entire metropolitan area is equipped with bus stops for transit access, the proportion of sheltered bus stops is small, and few are equipped with a timetable or route information. However, one can be certain before going to a bus station that an arriving bus travels to the city center. There are no rules governing the location of bus stops. The Transit Authority applies ad hoc criteria for establishing bus stops, taking into account the location and density of residential areas as well as activity centers. Bus stops are typically placed every 300 meters along a route. However, the location of a bus stop or the route of a line is subject to change when a certain number of local residents sign a petition requesting a bus stop or transit service near their homes. Therefore, bus lines and bus stops are often subject to change without any reference to generally accepted principles of transit operations (e.g., Vuchic, 2005). This practice often causes disruptions to bus transit service in terms of speed, comfort, etc. In addition, the unnecessary elongation of bus lines in neighborhoods inevitably increases the travel times of public bus transit.

The hub-and-spoke type of network exhibits limited flexibility and sensitivity to variations in demand in both time and space. All public transit lines connect the residential areas of the metropolitan area with the city center. Therefore, one must change buses in the city center to reach another destination. Transfers in the city center entail a 5-10 minute walk as well as additional monetary costs and wait times. If reaching a destination requires transfers, one may prefer to utilize privately run minibuses that stop for passengers to board or alight at any point on their routes, thereby decreasing walking times. Some of the main public-transportation routes are thus privately operated and include no fare reduction.

4. DATA

The data set used in this study was collected by the Public Transit Authority (EGO) of the Greater Municipality of Ankara in five one-week panels: December 14-20, 2009 (the first panel), March 15-21, 2010 (the second panel), July 19-25, 2010 (the third panel), October 11-17, 2010 (the fourth panel), and December 20-26, 2010 (the fifth panel). Each line in the data set contains information regarding the bus line number, the bus identity, the driver's identity (not associated with a single person), the departure/return times to the bus terminal, along with the number of passengers carried.

A trip begins with the insertion of the driver's card into the reader machine at the bus terminal; it ends with the card's insertion upon returning to the same terminal. The times of departure and return are recorded by the reader machine when the driver's card is inserted at the start and end of the trip. Passengers are counted by the reader machines, as each passenger inserts a magnetic card into the machine when boarding the bus (note that free passengers—police officers, postal-delivery staff, etc.—and senior card holders do not use a magnetic card; thus, they are exempt from the tally). However, we expect similar numbers of these unaccounted for passengers on all of the bus lines.

For the first panel, there were 369 public bus transit lines, while the total number of lines for the second, third, fourth and the fifth panel were 370, 350, 385 and 388, respectively. The service frequencies by day of the week are shown in Figure 1. Service frequency is at its lowest during the summer season, which is primarily due to the school holiday season.

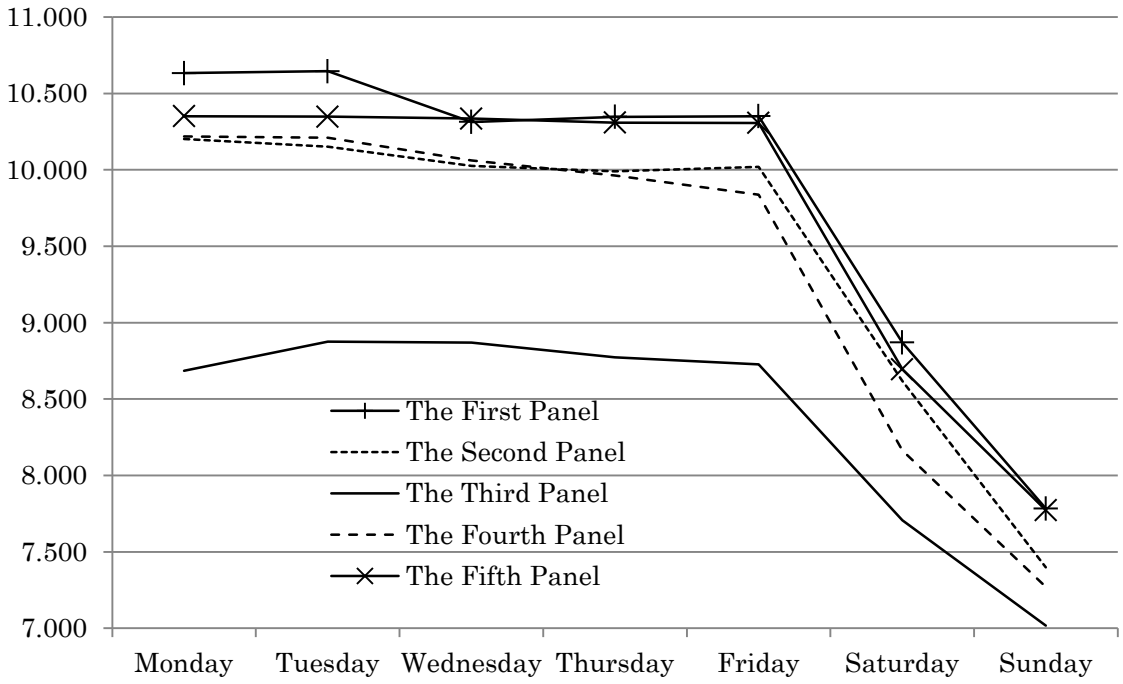


Figure 1 Service frequencies by time of week.

The average number of passengers per bus and the total number of passengers carried per day of the week for each panel are displayed in Table 1. If we assume that an average bus has a capacity of 80 persons, for all panels except for the third, the bus load is at approximately 80 % capacity during the weekdays; weekends reveal a consistency of approximately 60 % of capacity for the first, fourth and fifth panels. When the total numbers of passengers carried are compared for each panel, a consistent decrease in the total passenger number is observed. This decrease implies that metropolitan residents' preferred transportation mode is changing: they prefer to commute using their own (likely newly purchased) cars or switch to privately operated buses or minibuses, which run more frequently and flexibly. As expected, passenger demand is at its lowest in the summer season (except for Sunday in the second panel). Other sources of variation may include activities that occur in diverse locations around the city, seasonal cycles and changes in consumer preferences regarding modes of transportation.

Table 1. Average number of passengers per bus and total number of passengers carried

Time of Week	First Panel		Second Panel		Third Panel		Fourth Panel		Fifth Panel	
	1	2	1	2	1	2	1	2	1	2
Monday	62.23	661,687	60.55	617,816	53.67	466,097	60.79	621,213	61.87	640,436
Tuesday	64.51	665,371	62.23	624,021	52.20	463,024	59.68	600,426	62.57	646,728
Wednesday	63.06	671,310	61.58	625,119	52.80	468,622	60.40	616,653	62.75	649,289
Thursday	65.00	672,509	60.86	608,036	52.75	462,810	59.95	597,348	62.50	644,310
Friday	64.38	666,411	60.56	606,787	51.96	453,420	61.85	608,509	62.86	647,856
Saturday	59.44	527,202	41.31	356,056	47.90	369,173	56.02	457,321	57.82	502,707
Sunday	46.40	361,163	21.24	157,170	36.85	258,640	45.90	333,661	46.00	357,580

1: Average number of passengers per bus
2: Total number of passengers carried

Table 2 displays the distribution of average travel times according to day of the week. The average round-trip travel time is 73 to 85 minutes. The summer season (i.e., the third panel) and Sundays are associated with the shortest travel times (the average travel time is 73 minutes on Sundays in the summer) due to low traffic levels in the summer and on Sundays. During the summer season, many individuals travel outside of Ankara, and the remaining residents spend Sundays at home, in nearby locations or in non-central areas.

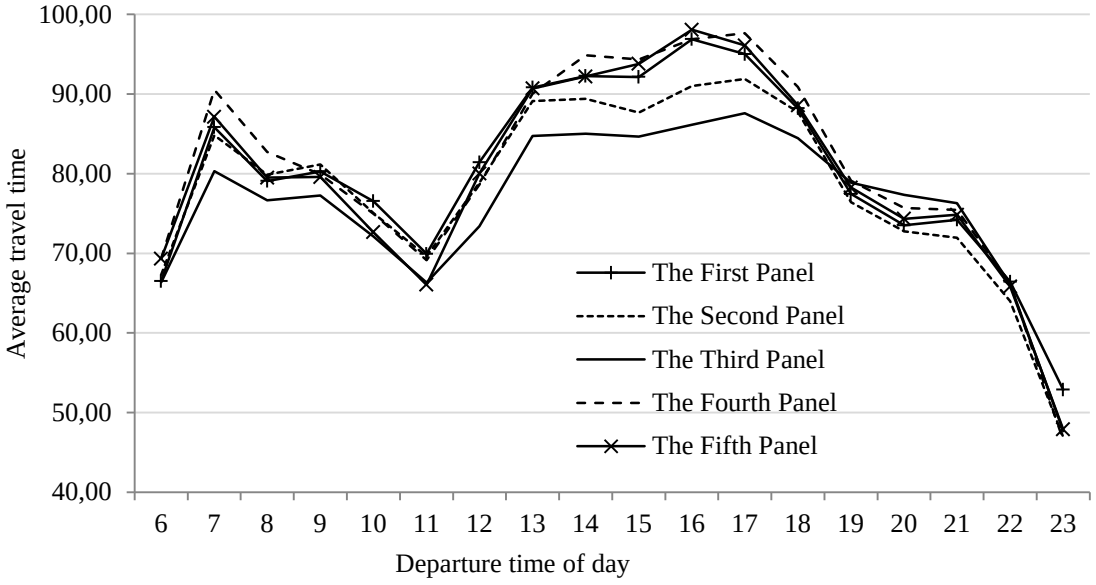
Table 2. Distribution of average travel times by time of week

Time of Week	The First Panel		The Second Panel		The Third Panel		The Fourth Panel		The Fifth Panel	
	1	2	1	2	1	2	1	2	1	2
Monday	80.66	35.42	81.78	36.76	78.86	34.71	83.20	38.12	82.92	37.89
Tuesday	81.47	36.54	80.53	35.53	78.12	34.19	82.73	37.18	83.30	38.66
Wednesday	85.13	39.08	81.33	36.17	78.21	34.08	83.41	37.33	82.66	38.54
Thursday	84.27	37.85	80.72	35.98	78.08	34.27	84.12	38.29	82.64	38.74
Friday	82.88	37.68	81.86	36.50	78.12	34.49	86.45	41.22	83.38	39.23
Saturday	81.07	34.31	79.78	33.87	77.47	33.79	84.29	40.18	80.98	37.73
Sunday	75.16	32.05	74.61	32.22	73.67	31.72	76.74	33.60	75.68	35.47

1: Average travel time
2: Standard devition of travel time

As displayed in Figure 2, the temporal distribution of travel times points to a two-peaked diurnal distribution. The earlier peak, which falls between 7:00 AM and 9:00 AM, is sharper, while the later peak covers nearly the entire afternoon and evening and is higher. All panels have a decreasing trend in terms of travel times after evening hours. Although one can detect seasonal differences in both average travel times and their standard

deviations, they generally follow similar trends throughout the day.



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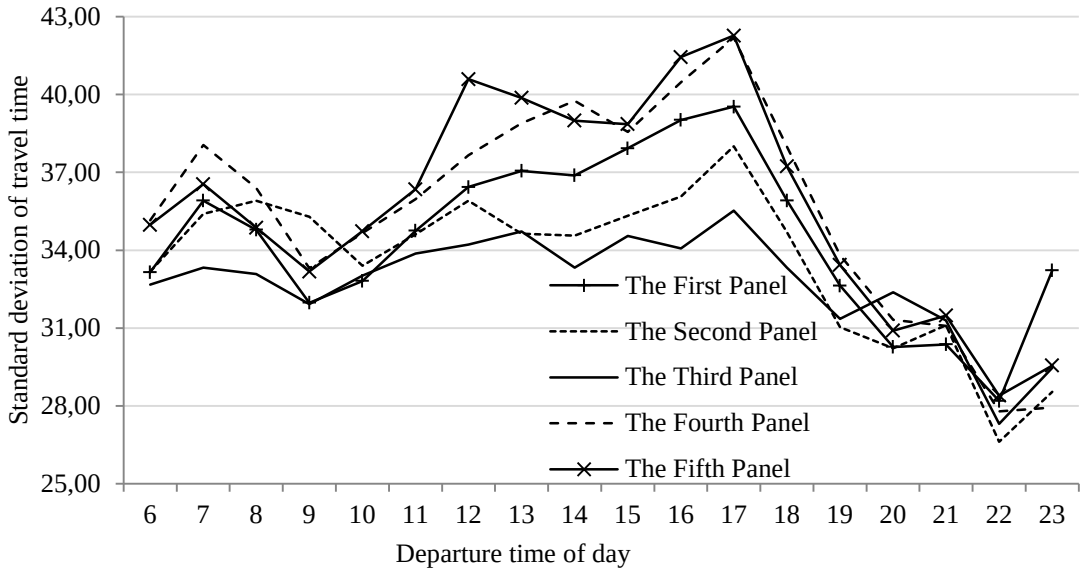

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Figure 2 Distribution of travel times by time of day.

As noted above, the bus transit system in the metropolitan area is organized within five operational regions. Trips between a region and the city center normally produce travel times in accordance with the distance of that region from the city center. For example, Region 5 is the remotest region from the city center (see Map 1 above) and therefore has

the highest travel time, ranging from 106 to 113 minutes. In terms of travel-time variability, two measures used in this study are associated with the statistical measures of standard deviation and the coefficient of variation. While standard deviation measures the deviance of travel times from the average travel time, the coefficient of variation divides standard deviation by the average travel time (the computation of these measures is given below).

We detect different levels of travel-time variation in different regions, which might be due to geographical, road-network features and the number of bus stops in these regions. Generally, Region 1 and Region 3 reveal the highest and lowest levels of travel time variability, respectively. Region 1 is elongated along the east-west axis, with the north-eastern part close to the city center. Therefore, it is probable that the travel times of bus lines serving the western area are significantly longer than the travel times of those serving the eastern past. This geographic variation may produce additional variation in travel times. Among all regions, Region 3 is the closest to the city center and thereby exhibits the lowest levels of travel time variability. When we change the statistical measure from standard deviation to the coefficient of variation, the ranking changes at the high end. The highest degree of travel time variability is found in Region 2, which has a shorter travel time. This difference is primarily due to a low level of variation among the standard deviation of travel times across regions.

5. MODEL DEVELOPMENT AND ESTIMATION

In this section, we disentangle the sources of travel-time variation of the bus transit system in Ankara. Three main sources of variation are accounted for in the models. The first source of variation is expected to lie in the temporal dimension. Time of day and time of week are two of the temporal variables present in the data set. Data analysis reveals that both of the variables cause variations in travel times. In the longer term, there is also seasonal variation, the most significant of which occurs during the school season. From September until June, with a short winter holiday in February, the school year is one of the main causes of traffic congestion in Ankara, as there are too many inter-zonal school trips along with commute trips within a similar window. Return trips from work or school create congestion in the opposite direction as well. All panels except the third fall in the school season; therefore, we expect significant differences in variation between the third panel and the others.

The second source of variation is expected to lie in the spatial dimension, as the public

bus transit system is operated in five different regions with unique physical characteristics. Almost all of the bus lines connect the neighborhoods in operational regions with the city center; out of its local neighborhood area, a bus line shares the same route (usually a highway) with other lines of the same region or neighboring regions. Therefore, differences in travel-time variability might also be affected by a highway that serves a region. The existence of a highway might increase the operational speed, which in turn might compensate for delays caused by passenger boardings in the local neighborhood. There are significant differences in the lengths of the regional highways, a fact that may cause variation in travel times with respect to operational regions.

The third source of variation analyzed in the models is service characteristics. The number of bus stops on a line and the types of bus are expected to be the two significant sources of travel-time variation caused by service characteristics. The number of bus stops, especially in the populous neighborhoods, may result in variation due to the time devoted to passenger boarding and alighting at each stop. Regarding the latter, bus types are generally differentiated according to age. Although the vehicle fleet is relatively new and is composed of similar types of vehicles, vehicle age is expected to cause variations in travel time.

This study utilizes three groups of models to investigate the sources of travel-time variation. Each group includes two individual models with different dependent variables, i.e., statistical measures of standard deviation and the coefficient of variation of travel times. For each group of models, dependent variables have been computed by using average travel times according to the time of day, time of week and time of year with respect to five operational regions (*Model 1*), three main highways (*Model 2*) and individuals bus lines (*Model 3*).

The average travel time according to time of day, *d*, time of week, *w*, and time of year, *y*, is denoted by ${}^{dwy}t_a$. The standard deviation, sd_{dwy}, of bus transit travel times is computed as the square root of the average of the total squared deviations of travel times, ${}^{dwy}t$, from their respective averages, ${}^{dwy}t_a$, i.e., $sd_{dwy} = [(1/N)\times\sum^{N}({}^{dwy}t - {}^{dwy}t_a)^2]^{1/2}$, where N is the number of bus dispatches during a time of day, and the time of day represents one-hour intervals between 06:00 and 24:00. The coefficient of variation, cv_{dwy}, is calculated by dividing the standard deviation of bus transit travel times, sd_{dwy}, by the average travel time, ${}^{dwy}t_a$, i.e., $cv_{dwy} = sd_{dwy}/{}^{dwy}t_a$. Two of the statistical measures used

in the models bear different meanings: whereas the standard deviation provides a measure of dispersion around average travel times, the coefficient of variation is a normalized measure of travel-time variation with respect to average travel times.

The first group of models (*Model 1*) has been designed to reveal variation in each region using aggregated variables for each region. The second group (*Model 2*) focuses on three of the highways along with surface streets using aggregated variables for each highway. Running in an east-west direction, Eskisehir and Istanbul Roads connect vast residential areas in the west with the metropolitan center (see Map 1 above). The final highway, Ataturk Boulevard, combines the northern and southern parts of the metropolitan area while crossing the metropolitan center; therefore, it is congested throughout the day. The last group of models (*Model 3*) focuses on the individual bus lines to determine differences that are not considered in the previous model groups.

Table 3 presents the descriptive statistics of the continuous variables used in the models. The first two models differ from *Model 3* in terms of dependent-variable calculation. In *Model 3*, the standard deviation and the coefficient of variation of travel times have been calculated using the whole day to compute travel-time variability measures. In addition, we have trimmed the data for *Model 3* by eliminating the lines that have service frequencies below 10 (36 % of the sample is excluded, leaving us with a data set of 7,424 cases). For all of the models except for *Model 3*, we have included temporal variables that account for hourly changes in travel-time variability.

Table 3. Model variables

Model 1: Region based model *Number of Cases: 3150*	Min	Max	Average	Std. Dev.
Time of Day Standard Deviation	8.81	60.31	28.74	6.66
Time of Day Coefficient of Variation	0.17	0.69	0.38	0.12
Ratio of New Busses in The Fleet	0.45	1.00	0.81	0.14
Average Number of Bus Stops per Line	27.17	107.20	65.70	19.77
Average Number of Passengers	0.00	112.61	53.42	23.31
Model 2: Route based model *Number of Cases: 2481*	Min	Max	Average	Std. Dev.
Time of Day Standard Deviation	5.18	61.34	23.21	9.57
Time of Day Coefficient of Variation	0.04	0.87	0.26	0.15
Ratio of New Busses in The Fleet	0.41	1.00	0.87	0.12
Average Number of Bus Stops per Line	41.98	111.10	83.14	22.34
Average Number of Passengers	1.07	255.20	68.15	34.73
Model 3: Line based model *Number of Cases: 7424*	Min	Max	Average	Std. Dev.

Within Day Standard Deviation	5.01	60.69	19.58	8.81
Within Day Coefficient of Variation	0.05	1.44	0.24	0.10
Ratio of New Busses in The Fleet	0	1.00	0.77	0.28
Average Number of Bus Stops per Line	4.00	144.00	64.62	29.70
Average Number of Passengers	0	173.80	57.94	25.31
Number of Daily Service Frequencies	10	152	39.40	22.33

Models have been estimated using generalized linear model routines of PASW Statistics R18 using the maximum likelihood estimation method. We have analyzed the model estimation results with respect to temporal and spatial dimensions followed by service characteristics, as displayed in Table 4.

Temporal Dimension

All of the models reveal significant variation with respect to time of year. Moreover, travel-time variation increased over the course of one year. As the bus transit system does not have exclusive rights of way, it can be concluded that traffic conditions worsened in one year from 2009 to 2010. This finding also implies the positive effects of motorization, urban sprawl, and inadequate transportation infrastructure on travel-time variability. Among the days of the week, Wednesday generally exhibits the highest source of variation across all models. Wednesday marks the weekly peak in terms of passenger demand; therefore, the additional number of passengers may increase the total passenger boarding and alighting time, which in turn increases the variation in travel times. During boarding, each passenger must insert a magnetic card into the card reader that subtracts one fare and prints the relevant information on the back of the card (a picture of the machine is provided in Picture 1). This process takes 5-15 seconds per person (233 measurements carried out by the authors of this study show that 95 % fall in this range).

Picture 1. The magnetic card machine installed in public transit buses.

Hourly variation is significant for nearly all of the hours included in the standard-deviation based *Model 1*. According to this model, the greatest variation occurs during the evening peak hour between 17:00 and 17:59 hours. However, in Model 1, which is based on the coefficient of variation, travel-time variation is increased during mid-day hours (Figure 3). According to Figure 3 above, one may conclude that longer travel times in the morning and afternoon are more reliable than shorter travel times during other times. Recurrent traffic congestion has been consistently observed during peak hours, as there is constant passenger demand in the peak hours. However, off-peak hours are subject to greater changes in passenger demand, a fact that is primarily due to the passengers who do not use magnetic cards, such as public servants or senior citizens, and non-recurrent congestion caused by traffic accidents, road maintenance, etc. As most of the trips include the city center in their routes, the effects of traffic and unexpected events are more evident during mid-day hours.

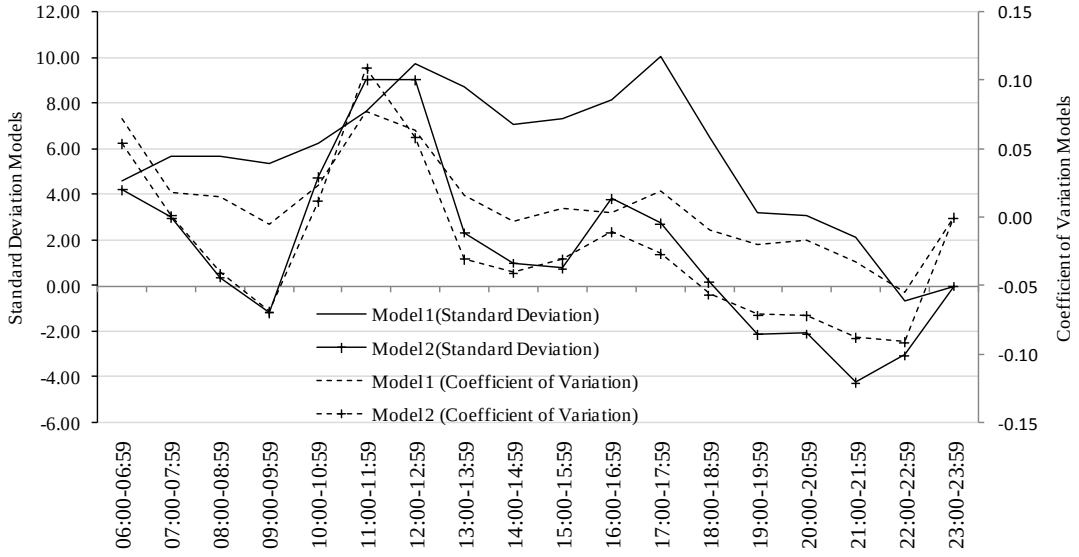

Figure 3. Time of Day coefficient estimates for *Model 1* and *Model 2*.

Spatial Dimension

Aggregation at each respective region, i.e., *Model 1*, points to Region 3 as the most reliable region and Region 1 as the least reliable region in both the standard-deviation and coefficient-of-variation models. Considering the characteristics of these regions, the results are not surprising. While Region 3 is close to the city center, has the smallest area, shortest total road length and highest road density, Region 1 has the largest area, longest road length but one of the lowest road densities among all operational regions. Moreover, Region 1 is modest and heterogeneous in terms of land use and covers part of the city center where government offices and universities are located. Upper- and middle-income Ankara residents generally live in Region 1. Therefore, higher car-ownership levels along with worse traffic conditions are expected in Region 1. There are also differences between the urban patterns of the regions that affect the travel-time variability in bus operations. The suburban districts of Regions 1 and 5, recently developed, have modern but scattered residential areas; hence, bus lines generally transverse of the streets. Conversely, Regions 2, 3 and 4 include traditional homes and informal (i.e., squatter) houses, along with residential areas with narrow and steep streets that limit the bus operations to the main streets. These characteristics of the operational regions affect travel-time variability in these regions.

Table 4. Model Estimation Results

Independent Variables	*Model 1: Region Based Model*				*Model 2: Route Based Model*				*Model 3: Line Based Model*			
	Standard Dev. Model		Coeff. of Var. Model		Standard Dev. Model		Coeff. of Var. Model		Standard Dev. Model		Coeff. of Var. Model	
	Coeff.	Sig.	Coeff.	Sig.	Coeff.	Sig.	Coeff.	Sig.	Coeff.	Sig.	Coeff.	Sig.
Constant	33.47	0.00	0.38	0.00	44.59	0.00	0.87	0.00	-4.26	0.00	0.15	0.00
Time of Year: December, 2009	-2.29	0.00	-0.02	0.00	-2.75	0.01	-0.04	0.00	-1.68	0.01	-0.02	0.00
Time of Year: March, 2010	-0.94	0.11	-0.04	0.00	-3.17	0.00	-0.05	0.00	0.15	0.83	-0.04	0.00
Time of Year: June, 2010	-1.67	0.00	-0.02	0.00	-2.86	0.01	-0.04	0.00	-2.44	0.00	-0.04	0.00
Time of Year: October, 2010	-1.37	0.01	-0.02	0.00	-0.48	0.65	-0.01	0.53	-0.52	0.46	-0.02	0.07
Time of Year: December, 2010	0.00	.	0.00	.	0.00	.	0.00	.	0.00	.	0.00	.
Eskisehir Road					-3.89	0.27	-0.01	0.80	1.52	0.00	0.01	0.05
Istanbul Road					-11.82	0.00	-0.10	0.02	-1.32	0.01	-0.02	0.00
Ataturk Boulevard					-5.26	0.00	-0.02	0.06	1.56	0.07	0.02	0.04
Other surface streets (Normalized to Zero)					0.00	.	0.00	.	0.00	.	0.00	.
Region 1	0.55	0.56	0.13	0.00					11.26	0.00	0.12	0.00
Region 2	-0.55	0.68	0.27	0.00					8.18	0.00	0.10	0.00
Region 3	-10.61	0.00	-0.01	0.42					8.14	0.00	0.08	0.00
Region 4	-1.26	0.10	0.13	0.00					13.03	0.00	0.17	0.00
Region 5 (Normalized to Zero)	0.00	.	0.00	.					0.00	.	0.00	.
Time of Week: Monday	0.63	0.27	0.00	0.92	2.79	0.01	0.02	0.05	2.44	0.00	0.02	0.06
Time of Week: Tuesday	1.45	0.01	0.01	0.14	3.38	0.00	0.03	0.02	2.83	0.00	0.02	0.02
Time of Week: Wednesday	1.52	0.01	0.01	0.07	3.55	0.00	0.04	0.00	3.19	0.00	0.03	0.00
Time of Week: Thursday	1.78	0.00	0.02	0.01	2.99	0.01	0.03	0.01	2.47	0.00	0.02	0.05
Time of Week: Friday	1.81	0.00	0.01	0.06	2.35	0.03	0.02	0.07	2.93	0.00	0.02	0.01
Time of Week: Saturday	0.81	0.15	0.00	0.68	1.12	0.28	0.01	0.27	1.68	0.01	0.01	0.07
Time of Week: Sunday (Normalized to Zero)	0.00	.	0.00	.	0.00	.	0.00	.	0.00	.	0.00	.
Time of Day: 0600-0659	4.58	0.00	0.07	0.00	4.23	0.00	0.05	0.00				
Time of Day: 0700-0759	5.66	0.00	0.02	0.03	3.00	0.01	0.00	0.90				
Time of Day: 0800-0859	5.69	0.00	0.01	0.04	0.38	0.72	-0.04	0.00				
Time of Day: 0900-0959	5.34	0.00	0.00	0.44	-1.17	0.24	-0.07	0.00				
Time of Day: 1000-1059	6.23	0.00	0.02	0.00	4.79	0.00	0.01	0.27				
Time of Day: 1100-1159	7.62	0.00	0.08	0.00	9.06	0.00	0.11	0.00				
Time of Day: 1200-1259	9.76	0.00	0.06	0.00	9.06	0.00	0.06	0.00				
Time of Day: 1300-1359	8.71	0.00	0.02	0.03	2.35	0.03	-0.03	0.01				
Time of Day: 1400-1459	7.08	0.00	0.00	0.71	1.02	0.36	-0.04	0.00				
Time of Day: 1500-1559	7.31	0.00	0.01	0.42	0.78	0.51	-0.03	0.03				
Time of Day: 1600-1659	8.14	0.00	0.00	0.63	3.83	0.00	-0.01	0.43				
Time of Day: 1700-1759	10.04	0.00	0.02	0.01	2.75	0.02	-0.03	0.05				
Time of Day: 1800-1859	6.52	0.00	-0.01	0.20	0.17	0.88	-0.06	0.00				
Time of Day: 1900-1959	3.22	0.00	-0.02	0.00	-2.11	0.04	-0.07	0.00				
Time of Day: 2000-2059	3.09	0.00	-0.02	0.01	-2.09	0.03	-0.07	0.00				
Time of Day: 2100-2159	2.13	0.00	-0.03	0.00	-4.23	0.00	-0.09	0.00				
Time of Day: 2200-2259	-0.65	0.14	-0.05	0.00	-3.05	0.00	-0.09	0.00				
Time of Day: 2300-2359 (Normalized to Zero)	0.00	.	0.00	.	0.00	.	0.00	.				
Ratio of New Busses in The Fleet	-6.60	0.00	-0.06	0.00	-9.83	0.00	-0.11	0.00	1.59	0.00	-0.01	0.03
Average Number of Bus Stops per Line	-0.07	0.00	0.00	0.34	-0.08	0.27	0.00	0.00	0.14	0.00	0.00	0.01
Average Number of Passengers	0.04	0.00	0.00	0.00	-0.05	0.00	0.00	0.00	0.06	0.00	0.00	0.00
Number of Daily Service Frequencies									0.00	0.60	0.00	0.00
Scale Parameter	14.19		0.00		38.42		0.00		43.92		0.01	
d.f.	58		58		57		57		45		45	
Likelihood Ratio Chi-Square	3584.93		6050.53		2156.94		3844.78		4174.21		2567.57	

Highway-based models include the bus lines on one of the three highways. According to the model results, we have found that the most reliable highway is Istanbul Road. It is also the fastest road in the Ankara metropolitan area, according to our inquiries at the Public Transit Authority. Istanbul Road, which crosses Region 5 and 2 in an east-west direction, has fewer bottlenecks than Eskisehir Road, which crosses Region 1 in an east-west direction. Region 1 was found to be the least reliable region in *Model 1*. Therefore, the results of the model establishing Eskisehir Road as the least reliable road are as expected. One of the reasons for this finding lies in the characteristics of Eskisehir Road and the areas it serves. Most of the public offices and major universities, as well as newly established central business districts, are in the areas served by Eskisehir Road.

The final group of models, bus-line based models, analyzes the differences on each line throughout the day. According to the estimation results, the most reliable lines are found on Istanbul Road, which has fewer intersections. Notably, there are different results in parameter values between the region-based and line-based models. As the focus switches to individual lines in the line-based model, regional variances appear to be nullified by daily line-based operations. The line-based models do not take hourly variation during the day into account; nonetheless, all of the hourly variations might be captured by the regional variations.

Service Characteristics

Among service characteristics, the ratio of new buses in the fleet is the most effective variable in decreasing travel-time variability in both *Model 1* and *Model 2*. The reason for this finding likely lies in the technical characteristics of the new vehicles. First, these vehicles are installed with automatic gears, which prevent possible time losses in acceleration and deceleration. Second, these vehicles are more reliable and easily maneuverable on surface streets, where older vehicles without anti-lock breaking systems are unable to maintain a constant speed.

In terms of service characteristics, another anticipated result pertains to the number of bus stops in the line-based model. As the number of bus stops per line increases, travel time variability tends to increase, a finding that supports previous studies of travel-time variability. Furthermore, the estimation results regarding the relationship

between the number of passengers and travel-time variability are not surprising: as the number of passengers increases, travel-time variability increases. The fastest time periods during the day are generally off-peak hours in the early morning, late evening and at night, when there are fewer passengers. Other times typically experience 70 to 110 % of total bus capacity.

Picture 2 Transit bus used by EGO with alias 07-141 which signifies the vehicle is in the fleet in 2007 for Region 1.

6. CONCLUSIONS

Three variations of travel-time variability prevalent in the Ankara metropolitan area have been investigated in this study: spatial (i.e., operational region), route (i.e., highway), and bus-line based travel-time variability. Spatial travel-time variability is computed by aggregating variables of interest over five operational regions in Ankara. Similar aggregations have been carried out separately for route and line-based models. Each operational region differs in various respects, including street length, existence of highways, a suburban or inner-city character, and the distribution of activity centers. This heterogeneity results in travel-time variability particular to each region. Highway-based models are expected to capture differences in travel-time variability among buses operating on three different highways and surface streets. Line-based models reveal individual differences between individual bus lines.

As expected, we have identified significant regional differences in Ankara, a city typical of developing countries characterized by a dual nature. In urban sectors of

developing countries, traditional and modern areas are located side-by-side. In general, modern areas are more apt to be located on the urban fringe, as modern residential areas can easily be established in these expanding areas. As modern areas are associated with topographical advantages and networks of broad streets, bus lines tend to be longer in these areas. Especially in the westernmost portions of Ankara, Regions 1 and 5 include modern residential areas that feature wide streets. Bus lines tend more to cover all of the residential districts that have wide streets, whereas this level of service is not observed in more traditional regions, i.e., Regions 2, 3 and 4. This finding suggests policies that re-organize bus operations with respect to regional differences in an urban area. Because the densities of traditional regions are higher than the densities of the modernized regions, bus-stop spacing standards should be established according to the neighborhood density. The implementation of such an approach in the Portland, Oregon, metropolitan area has demonstrated that bus-stop consolidation improves bus transit times (El-Geneidy et al., 2006).

Highway-based travel-time variability has narrowed our focus to four different routes with different characteristics. Two of these, Eskisehir Road and Istanbul Road, connect the modern residential areas in the west with the metropolitan core. The two roads differ with respect to various characteristics, including the right of way (Eskisehir Road has quasi-transit lanes in some sections), speed (Istanbul Road is generally faster than Eskisehir Road), signaled intersections (Istanbul Road has more signaled intersections), and bottlenecks (Eskisehir Road has more bottlenecks than Istanbul Road). Ataturk Boulevard is the main highway that connects the northern and southern parts of the metropolitan area, traversing the city center (see Map 1 above). All of the lines on these highways perform better than those on the surface streets. El-Geneidy et al. (2009) also lend support to bus-only shoulder policies, bus-stop consolidation, serving major streets with fewer stop signs and the implementation of smart transit signals. Highway-based models call for lane privileges and signal priorities in the inner city to improve the travel-time variability of bus transit services. Moreover, by reducing the number of bus stops on some of the transit lines, the transit time along Eskisehir and Istanbul Roads may decrease travel delays caused by unnecessary stops. All transit lines on the east-west corridors, which connect different suburban neighborhoods to the city center, coincide on Eskisehir or Istanbul Roads. However, because they have bus stops at different locations along these roads, bus-stop consolidation may improve the performance of

public-transit services on these roads.

Bus-line based models further narrow the models to individual lines. The variable results obtained through these models indicate heterogeneity among the bus lines. Regions with high travel-time variability in particular point to the existence of bottlenecks and the inadequacy of the street layout for individual lines. Notably, the regions with high travel-time variability are either traditional or informal neighborhoods, where the transportation network requires significant improvements.

In fact, the current bus transit operating system provides the entire metropolitan area with identical transit service without regard to variation induced by regional, temporal or line-based characteristics. A high degree of heterogeneity reported in the models calls for a more flexible organization of transit services. The model results suggest different policy implications. For example, highways may be used to pool all of the passengers traveling to the city center. Passengers might be transferred to high-capacity buses at certain points where most of the bus lines converge. This tactic may be helpful in alleviating regional variations in bus-line operations and increasing speed and reliability on the highways. Moreover, this change would significantly shorten the bus lines and restrict them to surface streets in the neighborhoods where bus terminals are established. Regions 1 and 5 are well-suited to this type of structural and operational change.

The results of line-based models also support the idea that the existing point-to-point bus-line operations must be changed, as there is significant variation among the regions that are connected to the city center using the same type of vehicle. The establishment of transit-only lanes may also alleviate travel time variability in certain respects. Reserved lanes in the city center at noon and during the evening hours would increase travel-time variability.

This study has produced valuable results regarding the macro-organization of the bus transit system: that is, reorganizing the transit system based on the characteristics of operational regions, highways, time of day and time of week will produce significant gains in transit reliability. Further research calls for a close monitoring of a sample of transit-vehicle operations based on the bus design, distribution of passengers on the route, driver behavior as well as detailed land-use and route characteristics.

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MOTORIZATION IN TURKEY: THE CASE OF PASSENGER CARS

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1. INTRODUCTION

According to Sperling and Claussen (2004), the inherent dilemma of motorization in developing countries is that "…for many, vehicles are desirable as a secure and private means of travel, and as status symbols…but personal motorization also imposes enormous costs, especially in cities. The well-known litany includes air and noise pollution, neighborhood fragmentation, and high energy use". Especially, the energy use will be of prime importance in the near future as oil consumption in developing countries will be two thirds of the global increase between 2002-2030; surpassing total energy consumption of developed countries around 2030 (IEA, 2004). A significant part of the energy consumption is expected to be consumed by the transport sector, in which private transport is estimated to constitute a significant part. On the other hand, sharp increases are expected in passenger car ownership levels when per capita income level reaches a level between US$3,000 and US$5,000 (Dargay and Gately, 1999). Besides, Ingram and Liu (2004) estimate that in developing countries passenger car ownership is expected to increase at a rate more than income growth. A possible explanation to this is social determinism—a sociological explanation—which associates car ownership in developing countries exclusively with middle class life styles, and stresses the social forces on the middle class to sustain a mobility level tied to car ownership (Vasconcellos, 1997).

Since 1970s in Turkey, there has been car production for the domestic and the international markets, which has been strongly supported by successful alliances of the international car makers with the domestic partners (Tekeli, 2009). Since 1980s, economic development spurred by the economic restructuring of the economy has proceeded hand in hand with urbanization. Besides economic liberalization, customs union with the European Union eased import and export of passenger cars. In addition to traditional Fiat and Renault alliances, now in Turkey, big international car makers such as Ford, Toyota, Honda, Hyundai have passenger car production units in Turkey.

Overall result of these developments is a tremendous increase in the passenger car ownership levels in Turkey—in 17 years from January, 1995 to January, 2012 number of cars owned has increased from 2,876,616 to 8,185,556 which equals to a mere 2.8 times increase.[1] Although the actual figures have increased a lot, passenger car ownership is still in its infancy when one considers that the increase has been from nearly 45 passenger cars to around 110 passenger cars per thousand people in the same period. The increase in passenger car ownership has first gained momentum in provinces such as Istanbul and Ankara where per thousand people passenger car ownership levels are around 138 and 198 respectively as of 2011. When these figures are compared with those in Europe of in North America, one can notice that private car ownership in Turkey is still in its infancy. In other words, the current condition of the passenger car ownership is on the verge of fast increase.

As traditional compact urban structure of the Turkish cities is insufficient to locate the increasing number of private cars, various sorts of problems arise in terms of traffic conditions, land use changes and daily quality of life. Accordingly, the compact urban form has been dissolving with the increasing motorization in the past 20 years. However, this is continuing only with the sprawl of the residential areas. Residential areas near city centers have been transforming into new employment centers or remain as decaying areas with the flight of new members of “the automobile club” (Dupuy, 1999).

In this study, we try to uncover the underlying regional dynamics of motorization in Turkey. To do so, we use macroeconomic and demographic statistics based on provinces and derive statistics that explain regional differences in motorization and its pace. The study has been organized in four parts. The second part presents information about historical development of

[1] Turkish Statistical Institute, Accessed: April 15, 2012.

passenger car ownership in Turkey along with other countries, i.e., France, Germany, Greece and the USA. In the third part, we devise statistical variables which account for passenger car ownership levels at the provincial level. By this, we try to relate motorization to the urban development and local economic conditions too. General conclusions are presented in the last part according to the results derived from estimation given in the fourth part.

2. PASSENGER CAR OWNERSHIP IN TURKEY

In the past 17 years from 1995 to 2012, passenger car ownership in Turkey has nearly tripled from 2,876,616 to 8,185,556. In the same period, GDP has increased nearly 2 times, the population of Turkey increased by 1.3 times, the urban population increased by 1.7 times.[2] The increase in passenger car ownership is evident and eminent. There are many factors affecting private car ownership in Turkey. As a developing country, economic development and increase in economic wealth are prime factors behind passenger car ownership. However, there are many other factors too. One may contemplate factors such as condition of the public transit, social status gained by private car ownership, status of the prospective owner, household size, etc. Whatever the factors are, if the production is not enough to meet the demand, the increase will be limited to a certain extent. This was the case especially in 1970s and 1980s as there were only two car producers active in Turkey.

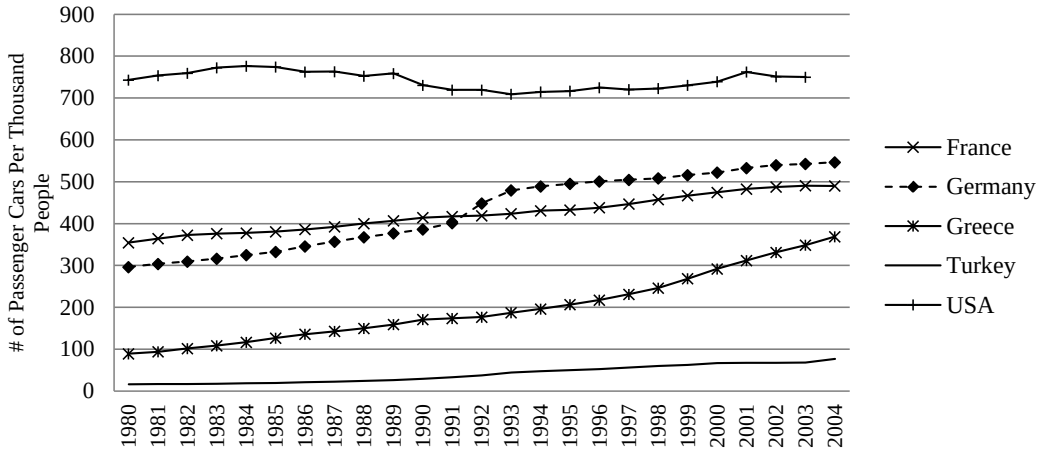


Figure 1 Passenger cars per thousand people in France, Germany, Greece, Turkey, and USA (Source: UNEP Geodata Portal, Accessed May 19, 2012)

[2] Population figures are available for 1990 and 2011.

Before 1980, import of passenger cars was restricted, only foreign cars imported earlier and those produced domestically by foreign car producers were being used. In 1980, structural reforms besides economic liberalization in Turkey have opened the domestic market to cars produced abroad. However till 1990s private car production was not enough to meet the increasing demand. Besides, there were economic obstacles too, viz., household income was not enough to purchase a passenger car. From 1980 to 2004, while Turkey reached 77 cars per thousand population (from 16 cars), Greece attained 369 cars per thousand people (see Figure 1).

If car ownership is to catch up with the levels in the developed world, one may expect that the levels are to increase levels more than 400 passenger cars per thousand people. USA shows the upper limit for car ownership, which is between 700 and 800 passenger cars per thousand people. For all countries except USA in Figure 1, there is nearly a perfect match between GDP per capita and passenger car ownership levels, i.e., correlation between income and passenger car ownership is between 0.90 and 1.00.

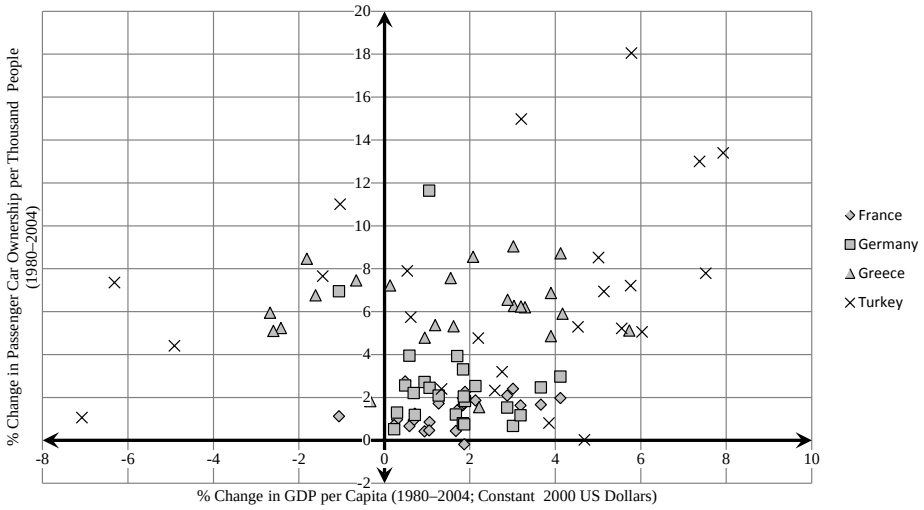


Figure 2 Income vs. passenger car ownership in France, Germany, Greece and Turkey (1980-2004; Source: UNEP Geodata Portal, Accessed May 19, 2012).

Figure 2 depicts the relationship between income and passenger car ownership better. Almost all of the extreme values are associated with Turkey in Figure 2. At all times, even when GDP per capita decreased, passenger car ownership increased at varying degrees, and mostly the accompanying increase in passenger car ownership was higher than the GDP per capita increase. In both Germany and France, the increase in passenger cars is in consonance with the increase in income, but increase in passenger car levels in both Greece and Turkey is

generally higher than the increase in incomes. This might be due to the relative saturation in European passenger car levels, which is well below USA levels. On the other hand, both Greece and Turkey are well behind saturation levels, hence the higher rates of passenger car increase with respect to income increase.

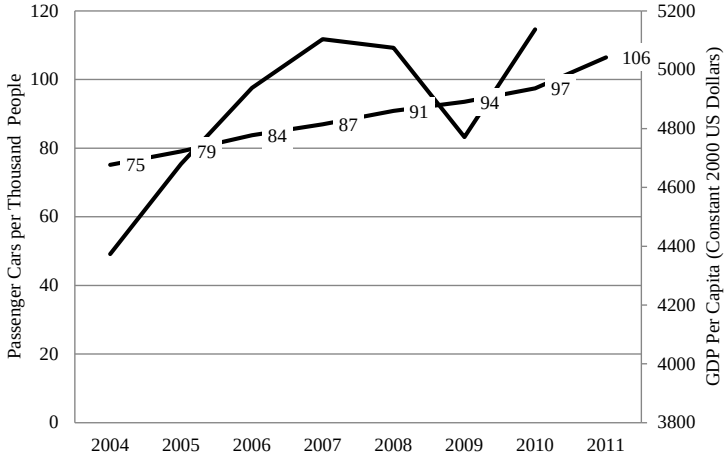


Figure 3 Passenger car ownership per thousand people and GDP per capita between 2004 and 2011 in Turkey (Source: UNEP Geodata portal and Turkish Statistical Institute, Accessed: May 19, 2012).

In Figure 3, passenger cars per thousand people in Turkey have increased 41.63 % in 7 years from 2004 to 2011 (the total number of passenger cars increased by 50.66 % in the same period). From 2004 to 2010, on the other hand, GDP per capita has increased by 17.46 %, which supports the outcome that the increase in income supports a higher increase in passenger car ownership levels, i.e., income elasticity of passenger car ownership is higher than 1). However, passenger car ownership is still in its infancy and it is expected to increase at least at these rates in the future. If the current trend continues with the same smoothness into the future, in 15 years from now, passenger car ownership is expected to be at around 225.68 per thousand people in 2027, which is more than two fold increase. However, it is highly probably that this smoothness might turn into a steepness, which means that the 226 passenger-cars is an estimate from below.

3. PASSENGER CAR OWENERSHIP AT THE PROVINCIAL LEVEL

As of 2011 (August), per thousand passenger car level is highest in the capital city of Turkey, Ankara, and lowest in Şırnak, in the South-East region of Turkey (Figure 4). The gap between the highest and the lowest figures is tremendous; the highest level is nearly twenty fold of the lowest figure. The distribution of the car ownership displays a strong regional disparity in

Turkey. South-East Region of Turkey departs from the rest of Turkey with poor level of passenger car ownership. This region is buffered with another low level region to the west. Western Turkey is dominated with passenger car ownership levels between 100 and 150 passenger cars per thousand people.

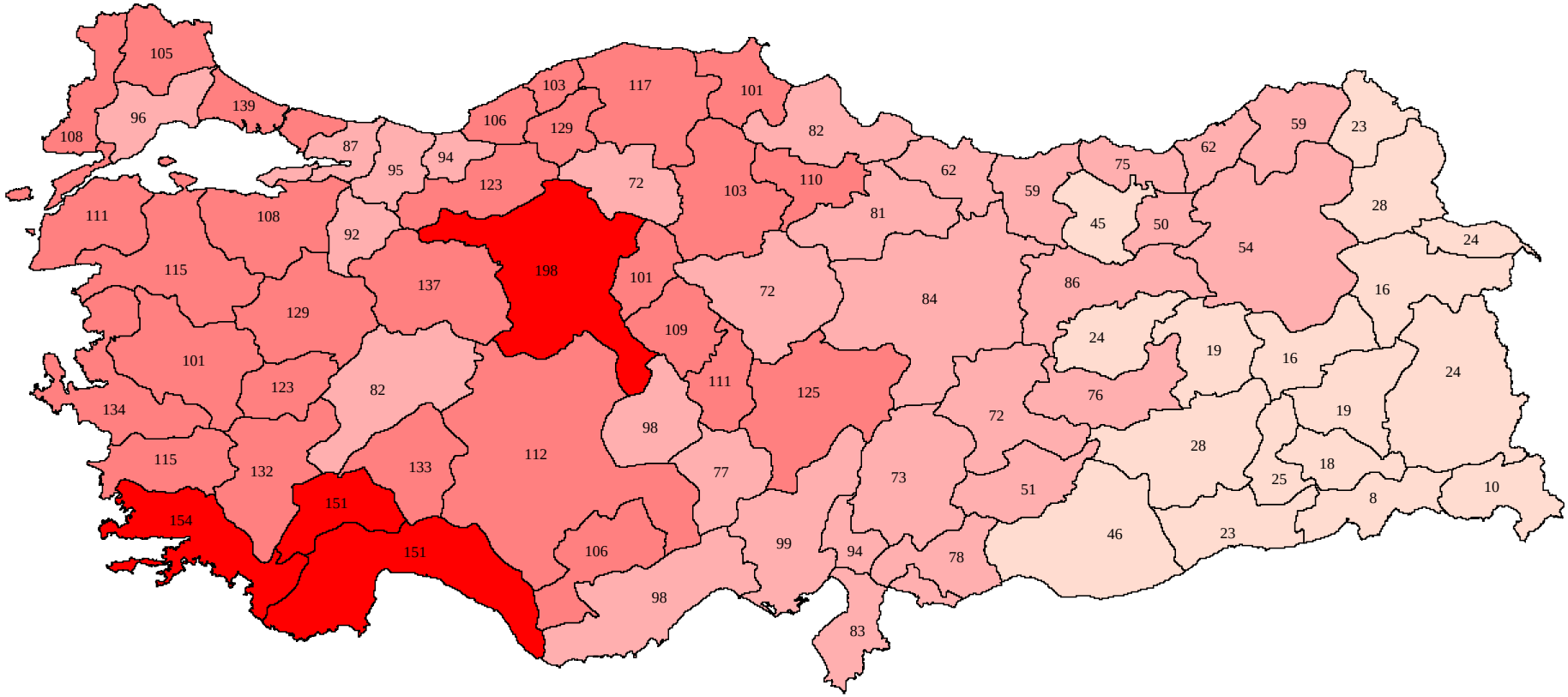


Figure 4 Distribution of passenger car ownership per thousand people in Turkey in 2011 (figures are given within provincial boundaries, scales of red represent increasing intervals of 50 cars per thousand people).

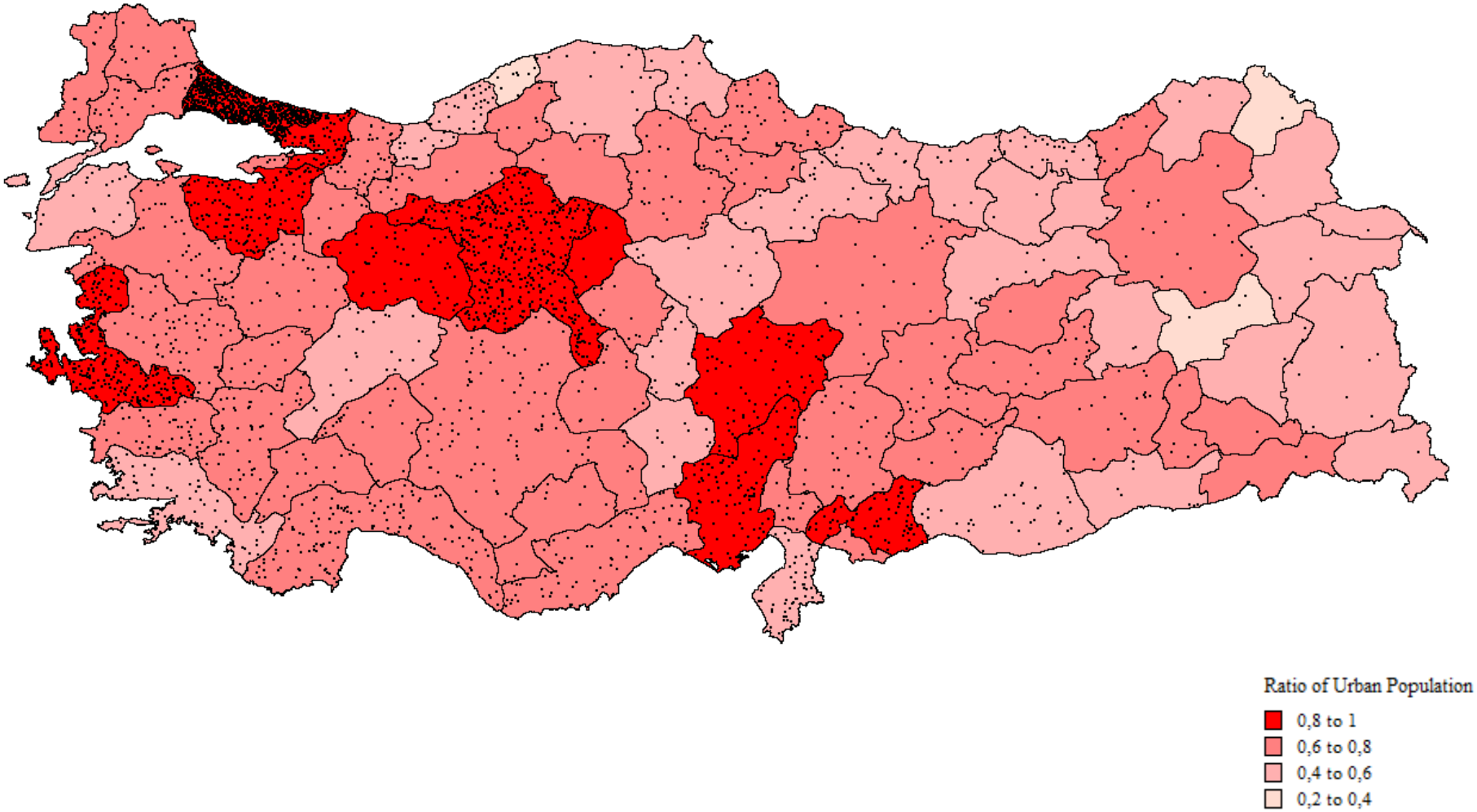
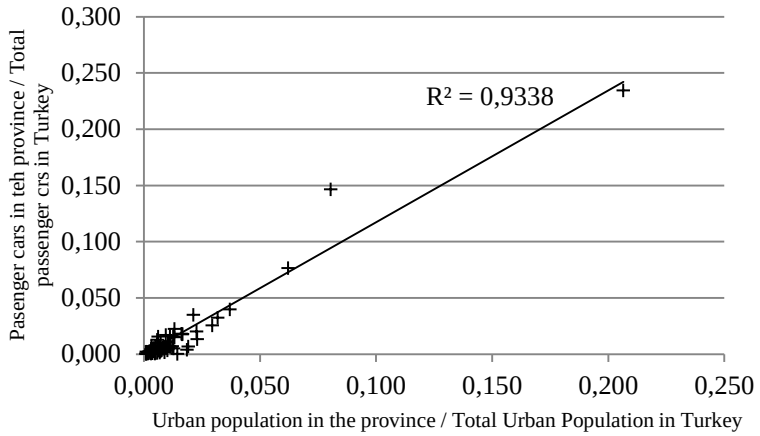
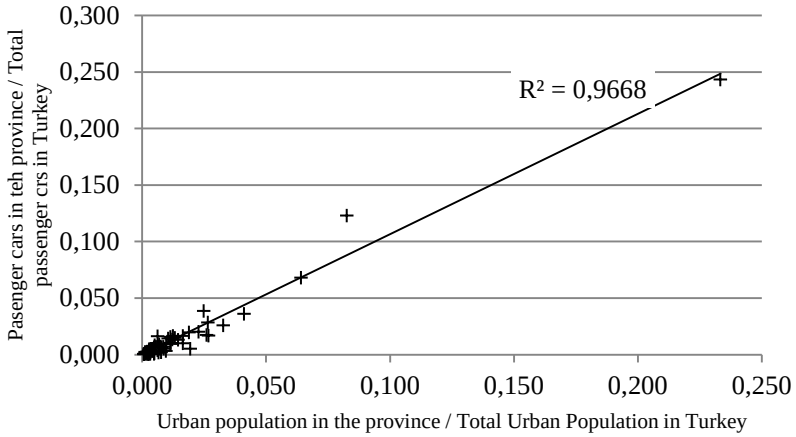


Figure 5 Ratio of urban population and total number of passenger cars in 2011 (1 dot represents 1,500 passenger cars).

Figure 5 shows the relationship between urban population and the number of total passenger cars. Although one can find relationship between urban population and number of passenger cars (correlation coefficient between ratio of urban population and total number of passengers cars is 0.52), the relationship might be spurious to a certain extent as provinces in the west at the same urbanization level with the provinces in the east have more passenger cars—possibly income is a strong intervening variable between urban population and passenger car ownership. On the other hand, one may contemplate that the total number of passenger cars in some of the provinces indicates the severity of the traffic congestion. According to this, Istanbul, which is the most populous province in Turkey with a population around 13 Million people, is almost exhausted by passenger cars.



a. 2000



b. 2010

Figure 6 Urban population vs. passenger cars.

Figure 6 depicts a perfect relationship that does not change in time: relative urbanization of a province in Turkey perfectly matches with its relative motorization in level Turkey. Following Tekeli (2008), we have derived a measure that characterizes directional change and its magnitude of both urban population and number of passenger cars in a province. Let the urban population of a province at time *t* is up_t, total urban population of Turkey at time *t* is UP_t, number of passenger cars in the province at time *t* is pc_t, and the total number of passenger cars in Turkey at time t is PC_t. Then the relative motorization of a province with respect to its relative urban population is as follows:

$$RMwRP_t = \frac{\frac{pc_t}{PC_t}}{\frac{up_t}{UP_t}}$$

When $RMwRP_t$ is equals one, then a province has attracted passenger cars in consonance with its relative position in Turkey with respect to its urban population. Figure 6 above has proved that there is equal to 1 approximately. Average of $RMwRP_t$ is 0.81 in 2000 and it has risen to 0.94 in 2011. When we consider the change between two years, e.g., 2000 and 2010, then a very different computation has to be made in order to find the direction of change, i.e., *DrChRMwRP*, and its magnitude, i.e., *MgChRMwRP*.

$$DrChRMwRP_{t\rightarrow t+n} = arctan\left(\frac{\frac{pc_{t+n}}{PC_{t+n}} - \frac{pc_t}{PC_t}}{\frac{up_{t+n}}{UP_{t+n}} - \frac{up_t}{UP_t}}\right)$$

$$MgChRMwRP_{t\rightarrow t+n} = \sqrt{\left[\left(\frac{pc_{t+n}}{PC_{t+n}} - \frac{pc_t}{PC_t}\right)^2 + \left(\frac{up_{t+n}}{UP_{t+n}} - \frac{up_t}{UP_t}\right)^2\right]}$$

When computation is made and accompanying conversions are made, we can classify motorization in terms of passenger car ownership in provinces with respect to relative population. In order to understand the change better, a two-dimensional graph can be divided into eight parts as given in Figure 7, by which we can classify the change. For example, directional change that falls in I-A means that positive change in relative population is higher than positive change in motorization, III-B means that negative change in motorization is higher than negative change in population.

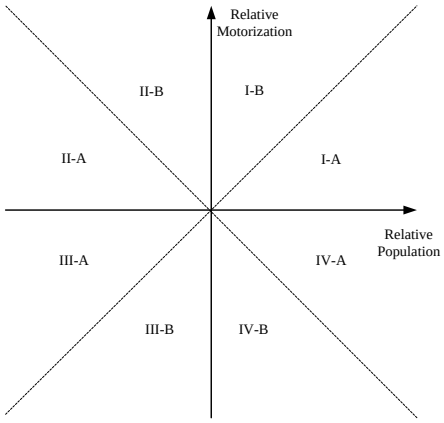


Figure 7 Change in two dimensional graph.

Table 1. Motorization With Respect to Change in Urban Population Between 2000 and 2010.

QUADRANT	RELATİVE CHANGE			
	A		B	
	Province	Magnitude	Province	Magnitude
I	İstanbul	28,362	Samsun	13,026
	Gaziantep	5,170	Antalya	5,286
	Kayseri	2,960	Düzce	3,122
			Tekirdağ	3,065
			Diyarbakır	1,645
			Muğla	0,765
			Yalova	0,524
			Bartın	0,447
			Niğde	0,420
			Mersin	0,118
			Hatay	0,090
II	Konya	4,305	Erzurum	4,043
	Şanlıurfa	4,253	Malatya	2,854
	Osmaniye	3,424	Yozgat	2,676
	Kahramanmaraş	2,639	Kırıkkale	2,361
	Karabük	2,098	Sivas	2,218
	Çorum	1,365	Afyonkarahisar	1,974
	Aksaray	1,100	Adıyaman	1,674
	Bayburt	0,563	Isparta	1,411
	Batman	0,529	Mardin	1,380
	Kilis	0,409	Çankırı	1,262
	Şırnak	0,088	Elazığ	1,245
			Muş	1,080
			Ağrı	0,852
			Hakkari	0,753
			Kastamonu	0,605
			Kırşehir	0,580
			Sinop	0,421
			Nevşehir	0,394
			Tunceli	0,394
			Bingöl	0,351
			Burdur	0,343
			Karaman	0,342
			Siirt	0,262
			Iğdır	0,171
III	Trabzon	3,493	Balıkesir	5,735
	Tokat	2,657	Zonguldak	4,384
	Ordu	2,297	Bolu	2,633
	Giresun	2,080	Eskişehir	2,115
	Bitlis	1,993	Aydın	1,778
	Erzincan	1,533	Edirne	0,995
	Rize	1,336	Kırklareli	0,636
	Kars	1,082	Artvin	0,621
	Gümüşhane	0,694	Kütahya	0,616
	Van	0,565	Çanakkale	0,245
	Amasya	0,563		
	Ardahan	0,303		
	Uşak	0,135		
IV	Ankara	23,690	Kocaeli	9,538
	İzmir	8,616	Bursa	5,514
	Adana	6,607	Denizli	2,319
	Manisa	1,409	Sakarya	1,099
			Bilecik	0,301

According to the relative change, 81 provinces are categorized into one of eight compartments of changes along with their magnitudes of change. According to the results, only three provinces with strong economies attract more population than passenger cars, ceteris paribus.

Provinces that fall into I-B show strong motorization in terms of passenger cars. Of these provinces, Samsun, Düzce and Tekirdağ show strong levels of motorization. On the other hand, provinces, where relative motorization decreases more than population increases, are Kocaeli, Bursa, Denizli, Sakarya and Bilecik. Of special interest are those cities where relative passenger car ownership increases more than population decreases.

4. CONCLUSIONS

Motorization is on the verge of fast increase in Turkey. It is expected to increase two or three fold in the next two years or so if the current trend maintains itself into the future. However, there are vast differences between provinces. West of Turkey strongly differs from the East of Turkey; the passenger car levels in the former are significantly higher than the latter. Passenger car ownership is highest in Ankara where there are 198 passenger cars per thousand people, it is lowest in Şırnak where there are 8 cars per thousand people.

There is almost a perfect match between ratio of provincial urban population in Turkey and ratio of provincial passenger car population in Turkey. In terms of relative urban population change in the provinces, relative motorization also shows strong variation. Accordingly, eight modes of change are detected. Although motorization is increasing and, moreover, it is on the verge of fast increase, we expect that the increase will assume strong variation among provinces. In the past 10 years, real motorization was detected in 35 provinces, where the rate of passenger car increase is higher than the rate of population change. These cities are medium sized cities in fact. We expect that real motorization is expected to take its toll in these cities.

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Track: Planning Theory and Methods

Vanessa Watson[1]

CO-PRODUCTION AND COLLABORATIVE PLANNING – THE DIFFERENCE

ABSTRACT

The concept of collaborative planning has had a long and fruitful lifespan in planning theory. Like other central ideas it has now been tested, assessed, critiqued and refined. One conclusion is that in those contexts where conflict and deep difference make collaboration a difficult or impossible ideal (Watson 2009), planners should search for alternative ways to think about how planning processes could still find ways to be inclusive. The idea of co-production, from other disciplinary fields, is potentially emerging as contender for this position. However, co-production itself has a complex lineage, with different interpretations of the term having evolved in different parts of the world, and important differences as well between the idea and its practice. A regional divide may be emerging in the use of the term: from that originating in the work of political economist Elinor Ostrom to the practices of Slum Dwellers International (SDI) in cities of India and Africa.

There is always a danger, when concepts 'hop' disciplines and contexts, that they are simplified and misinterpreted. It would be particularly problematic if co-production was simply to be seen as a new term for collaborative planning. If it is the case that the term co-production is beginning to raise interest in the planning field, then it is critical that the nuanced differences between it and collaborative planning are understood. The purpose of this paper is to explore some of the varied roots of co-production and how it is framing practices in informal settlement upgrade projects through SDI.

The methodology employed in constructing this paper uses discourse analysis of published literature and web-based material to understand the varied meanings of these terms. The conclusions are of relevance to planning theory where there is a history of debate on the term collaborative planning, as well as discussions on how it might differ in different socio-economic and institutional contexts.

Keywords: collaborative planning, co-production, inclusive planning/action

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1. INTRODUCTION

This paper aims to do some conceptual 'ground-clearing' in the area of state-civil society engagement, as well as to encourage planning theorists to take note of certain new forms of engagement which are happening in some parts of what might be called the global South. Innovative tactics and strategies adopted by global South urban communities and NGOs as they attempt to improve living environments might be equally useful in these kinds of struggles in the global North, but to date there has been little attention paid to these movements by planning theorists who have been primarily concerned with forms and variations of collaborative and communicative planning.

These new forms of state-society engagement have been labelled as 'co-production' – following a term introduced some time ago by political economist Elinor Ostrom. Old and new co-production do have elements in common, yet in other ways they are significantly different, and the appropriation of the term in this way can give rise to confusion, given different interpretations in time and place. The first aim of this paper is to examine the differences between these two interpretations and manifestations of the word co-production, with a focus on an explanation of its current use in relation to the work of Slum Dwellers International. The second aim is to consider some of the more interesting and positive strategies and tactics taken up by new co-production, as well as its limitations.

If Brownhill and Parker (2010) are correct in suggesting that we are now in a 'post-collaborative' era, and with growing attention to planning issues in the global South, then new co-production could be of interest to globally-inclined planning theorists. A major limitation with much of recent planning theory on state-society engagement is that it has drawn on ideas and experiences from a very limited part of the globe: the Euro-American territories. While transplanting any such ideas out of their context of origin needs to be considered with great caution, it still holds that at the level of principle different regions can productively learn from each other where concerns are common.

Regional differences offer fertile ground for comparative, in depth, case study research following the recent lines of thinking on this kind of research method (see McFarlane, 2010; Robinson, 2011). With little of this yet in evidence to support this paper, it relies on what secondary sources are available to point to areas in which the terms and practices have commonalities or differences. I am not suggesting that new co-production is the only form of state-society engagement emerging in cities of the global South nor am I suggesting that the practice is unproblematic – self-interest, exclusion and corruption are as likely in these forms as they are in any other, and it is important not to romanticise them. At the level of *principle*, however, new co-production deserves closer attention as a way in which poor urban residents try to improve their access to services and possibly a more secure foothold in the city. As significantly, for this paper, it is a process in which planning expertise (of a particular kind) sometimes plays a role.

2. DEMOCRACY DEBATES IN THE GLOBAL SOUTH

In the past decade or so there has been a steadily increasing interest in supporting democracy and civil society in countries of the global South. From the 'good governance' agenda of the World Bank to more recent (considerable) donor support for NGOs committed to social mobilization,

there has been growing faith in the ability of poor communities (rather than governments) to create inclusive and more equitable societies and cities by claiming their 'rights as citizens'. Chatterjee's (2004) argument (in a book entitled subtitled: *Reflections on Popular Politics in Most of the World*) that there is a deep divide between 'civil society' consisting of a formal political elite and 'political society' – made up of the majority who have to rely on alternative and informal ways in their relationship with the state – certainly has relevance, both in and beyond the global South.

Experiments in different forms of local citizen engagement, such as Porto Alegre's participatory budgeting, have been labelled 'best practice', available to be tried out anywhere else in the world (Cabannes, 2004). NGOs able to upscale these 'good practices' through global networks have attracted particular attention and support: Shack/Slum Dwellers International (SDI) has been prominent here, although not the only example of such networking. Arjun Appadurai (2001) has suggested that these local groupings, as they link up through transnational advocacy networks, are instruments of 'deep democracy', and are redefining concepts of governance. Emerging issue-based global networks, Appadurai argues, present a post-Marxist and post-developmentalist vision of new forms of democracy, networks being a mechanism through which the poor show that they are better able to provide for basic needs than 'the usual candidates' – the market, the state and global development agencies (p 41).

At the same time there has been a growing critique of what is seen as a naïve and simplistic faith in notions of 'community', 'citizenship' and participation, and above-all, an assumption that Western liberal democracy can be easily transplanted into any context, where communities will 'see the light' and mobilize to secure their rights from the state. Roy (2009) uses the term 'civic governmentality' to describe the strategies of SDI-linked SPARC in Mumbai as well as Hezbollah in Beirut. She sees these organizations, not as a zone of contact or mediation between state and community, but as engaged in the process of constructing and managing a 'civic realm' while both resisting and complying with top-down rule. This involves a 'civilizing' of political society (P 161), fostering civic identity and broader civic commitment. But Roy (2009) provocatively asks if SPARC and Hezbollah can also be seen as agents in/of urban redevelopment (p 168) in that their engagement with land redevelopment inevitably leads to new processes of inclusion and exclusion of the poor.

A further body of literature now points to ways in which power and patronage routinely infuse participation processes in development projects. In a useful review of this work, Robins *et al* (2008) argue that donor or agency driven community empowerment programmes frequently run up against entrenched political cultures of patronage and paternalism which are commonplace in everyday political life in many parts of the global South. They suggest that there is a logic to such practices: they are essential components of strategies of survival, creating conditions of access to vital resources and cannot be wished away by introducing political models from elsewhere. Hence poor communities will often shift between clientelism and rights-based citizenship claims, using apparently contradictory discourses opportunistically (a strategy of 'tactical bricolage'). It is important, therefore, not to confuse the emergence of organizations 'giving voice' and the actual processes in which marginalized groups engage in order to secure political and material gains.

It is within this context of debate over new forms of democracy that the paper turns to the use of the term co-production to describe current NGO work in parts of the global South.

3. 'NEW' CO-PRODUCTION:

In a 2008 article Diana Mitlin explains the work of the NGO federation known as SDI, as co-production. She defines this as a political strategy used by citizen groups and social movement organizations to '…enable individual members and their associations to secure effective relations with state institutions that address both immediate basic needs and enable them to negotiate for greater benefits' (Mitlin, 2008, pp. 339).

Mitlin (2008, pp. 340) explains the usual, or prior, understanding of co-production as initiated by Ostrom as '… the joint production of public services between citizen and state, with any one or more element of the production process being shared'. However, she argues, this approach is increasingly being used (in a different way) by the urban poor as a way of politically consolidating their base and extracting gains from the state. Acknowledging that accessing services is often reliant on large scale capital investments (for example in waste-water treatment) which can only be undertaken by the state, poor communities choose to engage with local government on these issues. Mitlin (2008) argues that (new) co-production is different from standard 'participation' or 'partnership' arrangements. It is more effective than 'lobbying' or 'protesting' in terms of actually gaining benefits, and the non-confrontational nature of the process allows greater participation from women, and better chances of securing political gains.

The (new) political strategy of co-production described by Mitlin and Appadurai involves a particular set and sequence of practices (now termed SDI 'rituals') which were tried and tested in the context of urban India over the last several decades, and have since been internationalized through the global work of SDI. Appadurai (2001) explains the broad approach of the Indian Alliance as populist and wary of experts and professionals. Rather, any 'outside' involvement (NGO appointees who may have technical expertise) aims to organize and mobilize the poor and set up a network of mutual learning opportunities. The argument is that the poor know best about how to survive in poverty. The approach is highly political but specifically non-party political. It is therefore a position of accommodation and negotiation rather than confrontation, and of slow learning and accumulation of gains, or 'a strategy of patience'.

Small scale savings schemes are of central importance to the organizations having (following Appadurai, 2001) ideological status in the organization: they are an entry point for relationship building between individuals and groups, they express a moral discipline in the organizations and a commitment to the public good, and they highlight the role of women as prime savers. A further ritual is 'precedent setting', a term used to describe the collective building of shack and toilet models (often in central public places and events) but, argues Appadurai (2001: 34), at the same time the attachment of the legal term 'precedent' to such models '…moves the poor into the horizon of legality on their own terms'. There are thus tactics of language but also of material and organizational action, in particular, self-surveys and enumerations, toilet festivals and housing exhibitions.

The tactic of self-enumeration and mapping was originally developed by the SDI-affiliated Indian NGO, SPARC (Society for the Promotion of Area Resource Centres), amongst pavement

dwellers in India. Over the last ten or so years, but with examples dating back as far as the 1980s (Patel et al., 2009), poor urban communities in informal settlements have increasingly adopted these tactics in order to reinforce and specify their demands for land and services and to increase their 'visibility' to the state. Sometimes these strategies have been followed by 're-blocking' in which shelters have been re-organized by their occupants to make more orderly spaces for the insertion of claimed basic services. Appadurai refers to this as creating 'governmentality from below'.

Chatterji and Mehta (2007), in theorizing the self-enumeration movement, have argued that the articulation of power and knowledge in practices of government manifest in technologies of mapping and enumeration by which the state makes society visible to itself, and these can end up creating new types of social collectivities. Populations generated by these governmental practices, which mark and categorize them in particular ways (as 'slum dwellers' or 'pavement dwellers') can end up seeing themselves as communities capable of resisting these technologies (P. 131). As a result, slum dwellers have used the survey like government does, to transform themselves into a quantifiable population, and to create documentary proof that they exist as a collective that can speak back to government in its own language (P. 143). In India, NGOs have used the surveys specifically for mobilization and to make slum dwellers aware of a new identity based on abstract citizenship rather than on caste or religion (P 159). NGOs therefore see the survey as an ongoing activity and not a once-off event.

The scaling up of SDI has spread these tactics from their origin in India to informal settlements in other parts of the world and the SDI website now lists 34 countries where self-enumeration processes have been undertaken. In what could be described as a growing global self-survey 'movement' amongst poor urban communities, these traditional tools of planning and governance – the survey, the map and the plan – have been appropriated and used as a mechanism to further the claims of marginalized groups to urban space.

Similarly toilet festivals and housing (shack) exhibitions have political purpose: to demonstrate that the poor have the knowledge and expertise to construct their own housing and facilities, and that the standard flow of expert knowledge can be reversed (Appadurai, 2001). In fact it has been these learning strategies between communities that has been a central feature of their work. 'Horizontal exchanges' involve groups of poor moving between sites to share knowledge and gains in savings, construction and engagement with authorities. They also help to indicate to those in authority that the poor also travel and have wider linkages, giving an element of authority and legitimation. McFarlane (2011, pp. 69) refers to these exchanges as 'translocal urban learning assemblages' of materials, practices, designs, knowledge, personal stories and local histories, with the notion of assemblage placing an emphasis on urban learning and alignment between the social and material at different sites.

The next section compares and contrasts earlier uses of the term co-production, making the point that there are some similarities but also some significant differences between the ways in which this term has been used previously and more recently.

4. OSTROM'S COPRODUCTION

Political economist Elinor Ostrom defined coproduction as '…a process through which inputs from individuals who are not "in" the same organization are transformed into goods and services' (1996, pp. 1073). The focus in this literature is on the provision of public services (sanitation systems, schools etc) where involvement of the state with communities can create synergies through parties contributing in different but complementary ways: communities (she suggests) have local information, time, skills etc and the state has resources and technical expertise. Moreover, state and society have different production capacities: for example, states can produce trunk services while citizens can produce related feeder services. The suggestion here is that state and citizens (service beneficiaries) have different but complementary forms of knowledge which together can improve the final outcome. Where citizens can substitute for the state in service provision then it is simply a case of working out which can operate most cost-effectively at a given scale (Mitlin, 2008).

Ostrom's work has strong links to social capital thinking and theories of urban governance in the US from the late 1970s, where her position was one of encouraging decentralization to bring government closer to citizens. Co-production, she argues, fosters social capital as communities organize around service provision and management. There is no direct mention of mediating social movements or NGOs here: the relationship is a direct one between communities and officials. There are important assumptions here that were at the same time being explored in the parallel 'public participation in development' literature in the development studies field. These assumptions (in both Ostrom's and participation debates) were that all community members and households would gain equal access to these services, that exclusion on the grounds of income, gender, ethnicity etc would not play a role, and that the relationship between state and citizens would be fair, consensual, and not corrupt or politicized. In other words power did not play a role in Ostrom's co-production, or if it did, then it could be contained.

Since Ostrom's 1996 article there has been further work[2] aimed at refining the term, primarily from the public administration literature[3]. Joshi and Moore (2004) argue that co-production emerges in the context of weak states, where governments are unable to provide services or lack information about need variation. Brandsen and Pestoff (2006) point to a difference between co-governance (planning and delivery), co-management (joint production) and co-production (citizen production). Hints that co-production could contribute to political change and could deepen democracy did not appear in this literature until later (Bovaird, 2007) but Miltin (2008) suggests the cases cited here are all strongly top-down.

These explorations of co-production do not specifically concern themselves with public participation (other than to suggest that officials working in co-productive mode would act rather differently). In fact there appear to be few linkages between this largely Northern public administration/economics literature and the rapidly growing body of literature from the 1970s on participation and development in global South contexts, where direct involvement of service beneficiaries (sometimes termed 'self-help') became standard and where the participation processes that accompanied these ('community participation') came to be regarded as very important. Within this literature there were opposing strands of thought as to why participation should be important – from 'project efficiency' reasons to 'community empowerment' positions,

[2] Also see New Economics Foundation www.neweconomics.org
[3] See Mitlin (2008)

and later (1990s) to World Bank and USAID interpretations of involvement as a way of securing 'customer satisfaction'. With donor interest focusing on 'civil society' from the 1990s, the role of NGOs as intermediaries between state and civil society as a way of achieving development became increasingly prominent, with a growing emphasis from the early 2000s in participation as a 'right', due to every citizen. It was within this context of a growing move to community mobilization that the social movements such as those affiliated to SDI have emerged.

5. STATE-SOCIETY ENGAGEMENT: WHAT CAN PLANNING LEARN FROM CO-PRODUCTION?

Ideas about social action have dominated the field of planning for at least as long as they have in the public administration and development disciplines. There is no one consolidated position or theory here – rather a set of differing ideas and debates informed by different (although primarily global North) contexts, and drawing on a range of different intellectual traditions. The questions driving this theorizing have, however, been similar to those behind co-production in all its variants: how should state and society engage in order to improve the quality of life of populations (sometimes with an emphasis on the poor and marginalized); how can professionals act to promote social justice and more equitable outcomes of state intervention? Both, as well, have tended to draw on case studies of practice as strong informants of theory as well as broader social theory which has offered a social constructivist perspective. The value of social networks (social capital for Ostrom) and communicative rationality (for planners) have elements in common although are not always closely connected.

Communicative / collaborative planning approaches and co-production (in older and newer forms) would find common ground in that neither takes a radical approach to social change. Both take an incremental, evolutionary and social learning approach to shifting actions of the state in particular directions. SDI takes this approach as it argues that there are certain roles and functions (such as trunk infrastructure) that the state can carry out and communities cannot, and that confrontation strategies (particularly protests and violence) tend to exclude women. The strategy of patience and slow gains is an accepted part of SDI work, although this has often attracted criticism both from communities and other NGOs wanting quicker wins. Building and sharing local knowledge and resources (through micro-savings) is also a central part of SDI strategy, given the starting assumption that the poor know best how to live in poverty. Here SDI co-production is significantly different from the tactics of current 'right to the city' movements which (frequently) take the approach that it is the duty of the state to deliver on constitutional rights such as housing and services, and that either overt protest and/or legal challenges are the best ways of securing gains for the poor. The SDI counter to this is that protest may secure delivery, but the product is unlikely to be appropriate to need unless the poor have been directly involved in shaping outcomes.

Both older and newer co-production also assume a context of democracy, where 'active citizens' are prepared to engage collectively and individually to improve their material and political conditions. Appadurai (2001) sees SDI co-production as a way of deepening existing forms of democracy. However, this is an assumption which may not hold in many parts of the world, particularly in some of the regions where SDI operates. It is useful to return to the arguments of Robins *et al.* (2008) who suggest that everyday political practices are often very different from

those anticipated by NGOs, international agencies or governments and professionals, hence '…civil society organisations do not automatically possess the democratising properties associated with the public sphere under liberal democracies' (Robins *et al*, 2008, pp. 1072). In Africa, for example (where SDI now has affiliates in 17 countries), political cultures are significantly hybridised, with elements of Western liberal democracy co-existing with (and interpenetrated by) politics of patronage and clientelism. Where day to day survival is a priority, people adapt plural strategies, often simultaneously: in some cases this may mean acting like a citizen in a liberal democratic state, in other instances it may imply establishing and exercising personal and possibly corrupt relationships in order to secure gains (also see Watson, 2003). Such relationships go against the grain of both collaborative planning and co-production, yet they cannot be either wished away or policed in situations where societal ethics have been stretched to accommodate such practices as acceptable.

In other respects however, participatory planning approaches and co-production (both old and new) have different objectives. An obvious difference is that in both Ostrom's view of co-production and SDI partnerships, engagement with the state has the purpose of achieving both planning and delivery of outcomes (land, housing, services and facilities) and as well, for SDI, their community-based management thereafter. Older and newer co-production have very different reasons for wanting to push state-civil society engagement through both planning and delivery stages. Newer co-production is far less concerned with achieving cost-efficient projects and effective local government (although these may be important preconditions) and far more with skilling and empowering marginalized communities to manage their own living environments, to deal effectively with state structures, to structurally advance citizen control over state resources and to pass on tactics for achieving this to other communities through global networks.

Differing as well from Ostrom's co-production is the way in which SDI affiliates regard their relationship with the state, described by Mitlin (2008) as a partnership, but a highly political one. The immediate goal may be to secure outcomes in terms of service and land delivery, but such initiatives also aim to shift forms of democratic practice and power, to create an alternative form of governmentality – Roy's (2009) 'civic realm' which both complies with and resists top down rule, and Appadurai's (2001) 'counter-governmentality'. Understanding the role of knowledge and power is central to these processes, and hence the need to exercise power through self-enumerations and mapping and to control the production and interpretation of this critical information.

There are two further areas in which new co-production techniques depart significantly from Ostrom's co-production and much of what is usually included in the scope of participatory planning and development. The first is less reliance on talk and debate and more on showing and learning by doing (Mc Farlane, 2011). Engagement with the state and other agencies thus has strong material and tangible expressions. Community built demonstration models – of houses or toilets – are an important element of SDI and Federation 'rituals' to physically demonstrate outcomes to the state and other communities which may be learning from the process. Similarly the acquisition of knowledge by communities is not from texts or consultants, but from learning exchanges with communities in similar circumstances to see first-hand what they have built. The

philosophy here is one of experiential learning: that direct experience is the most effective way to gain knowledge.

The second innovation is the intention to upscale local practices through networks. The global networks of SDI now span three continents, with a focus on India and Africa. Learning exchanges focus on local experiences but then these are distributed rapidly through the network. In reverse, collective global learning experiences (a global 'portfolio' of experiences and successes) can be mobilized by local affiliates giving them significant additional clout when negotiating with their own local or even national governments. The number and type of social movements have also been organizing globally (also see WIEGO – Women in Informal Economies Globalizing and Organizing, and GPEAN in the planning education field). Being networked globally gives organizations authority to respond to and pronounce on global issues; to be rapidly informed on local issues across a wide range of contexts; and they also give status to organizational statements and claims, and presence at global events. Their power lies in their information, their ideas and their flexibility.

6. CONCLUSION

The purpose of this paper has been twofold. The first is to draw distinctions between various forms and concepts of state-citizen engagement which have emerged at various points in time, from various parts of the world and from a range of disciplinary backgrounds. Planning theory frequently draws on ideas and theories from other disciplines and clarification of the origin of these concepts is important. Hence there is a significant difference between the idea of co-production developed by Ostrom within an economics and public administration field from the 1970s and the way in which the term is being used more recently by social movements in the global South. There are also important differences to draw between co-production (old and new) and planning's interests in state-citizen engagement.

The second purpose of the paper has been to suggest that, particularly with regard to new co-production, there may be a great deal in these practices and ideas that could be of interest in planning theory. Much planning thought on state-citizen engagement to date has emerged from thinkers and practices in the Euro-American regions, where these relationships take on particular forms shaped by the political histories of these countries. With some of the most intractable urban problems now located in cities of the global South, along with a host of new and innovative ideas in these cities on how to explain and respond to them, it seems that new co-production may be of particular interest to planning theorists.

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Institutions and urban development: understanding urban morphological differences between the Netherlands, Flanders and North Rhine-Westphalia

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CONCEPT

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Abstract
Even though the physical borders have disappeared, one easily notice the border between the Netherlands, Germany and Belgium through differences in the shape and measurements of urban development. Dutch city extensions are considered orderly, large and compact, while for instance urban development in Flanders – the northern, Dutch-speaking part of Belgium - appears to be more haphazard, smaller and dispersed. How can we explain such differences between countries that border each other, and have the same climate - and soil conditions? The seemingly simple answer is: institutions. Unravelling how this works exactly is, however, a much more complex endeavour.

This is the aim of this paper. We want to understand how institutions shape the urban morphology. The city-building behaviour is structured by institutions with regard to urban design, land policy, housing markets and so on. We explore these relationships by comparing three neighbouring regions: the Netherlands, Flanders and North Rhine Westphalia (Germany).The focus is on housing development because the differences seem to be most profound in that segment of spatial development.
This paper addresses particularly the effect of national and regional institutions and not so much of local institutions. Local institutions are important for understanding differences within a country or region and not so much for understanding differences between them.

The conclusion of this paper is that there are many institutions that, in combination with other institutions or for itself, influence the morphology of urban development. In our comparison the morphology of North Rhine Westphalia is a combination of the small scale developments in Flanders and the formal master planning in the Netherlands. This study might help the Dutch in finding ways for more small scale developments and to find ways to develop after during and after the current financial crisis.

CONCEPT

1. **Introduction**

Even though the Schengen treaty has abandoned border control in much of Europe, Dutch, Belgians and foreigners alike easily notice the border between the Netherlands and Belgium through differences in the landscape and in the shape of urban development. Dutch cities are considered orderly and compact, while urban development in Flanders – the northern, Dutch-speaking part of Belgium - appears to be more haphazard and dispersed. How can we explain such differences between countries that border each other, have quite comparable physical and social-economical conditions? The seemingly simple answer is: institutions. Unraveling how this works exactly is, however, a much more complex endeavor.

This is the aim of this paper. We want to understand how institutions shape the urban morphology. Following a social-constructivist ontology (e.g. Giddens, 1984) we start from the premise that institutions are made by agents, whose behavior is subsequently shaped by these institutions. This also counts for city-building behavior; this behavior is structured by institutions with regard to urban design, land policy, housing markets and so on. We explore these relationships by comparing three neighbouring regions: the Netherlands, Flanders and North Rhine-Westphalia (Germany). The focus is on housing development because the differences seem to be most profound in that segment of spatial development.

This paper starts with defining a conceptual framework for comparative institutional analysis of housing development and its relation to morphology. Section 2 explores some key differences in morphology between newly built residential areas in the Netherlands, Flanders and North Rhine-Westphalia. In the core section of this paper, we single out effects of the institutional environment on these morphological differences, clustered around four aspects of the development process: the interplay between municipality and land owners in the initial phases of development; the nature of the involvement of the municipality: as an investor or a facilitator; the organization of the process in time: open-ended or project-based; and the involvement of small investors like private persons. The paper concludes with a some remarks on the importance of both institutional and morphological analysis in understanding housing development, and with some suggestions for further research.

2. Conceptual framework for comparison

In this section, we develop a conceptual framework that enables to describe the relationship between morphological phenomena, on the one hand, and the institutional environment in a particular country, on the other. For this, we need 'intermediate' variables that describe the characteristics of the development *process* that can be linked to both morphological and institutional characteristics (section 2.2).

The morphology of a residential area comes about through the interaction of different stakeholders (project development companies, municipalities, land owners etc.). They all have their interests, and different abilities to influence the outcome.

CONCEPT

Institutions are the rules (formal or informal) that coordinate or structure the interaction of these actors (Needham 2010). (Cf. section 2.1.)

Figure 1 shows schematically the relationships between three variables being explored in this paper: *institutions* shape the conditions for actor interaction in the *process* of development, and characteristics of the process influence the *morphology* that results from it.

Other factors may be important determinants of the development process or the morphology as well. Regional *market circumstances* on the housing or land market set the conditions of development processes. At the same time, these market conditions may themselves be a result of the institutional environment (or changes in this) that create shortage or otherwise structure the market (Jokovi et al 2006, Besseling et al 2008, Ball 2003, 2006).

Of course, morphology of residential areas is also determined by *design conditions* of different types: for example local physical conditions or the 'taste' that rules the imagination of potential buyers, but also more 'institutional' conditions like esthetic municipal regulations. In this paper, these are only taken as context factors, they are not it's prime research object. It focuses on morphology in as far as it is a product of development *processes*, and not as product of *design*.

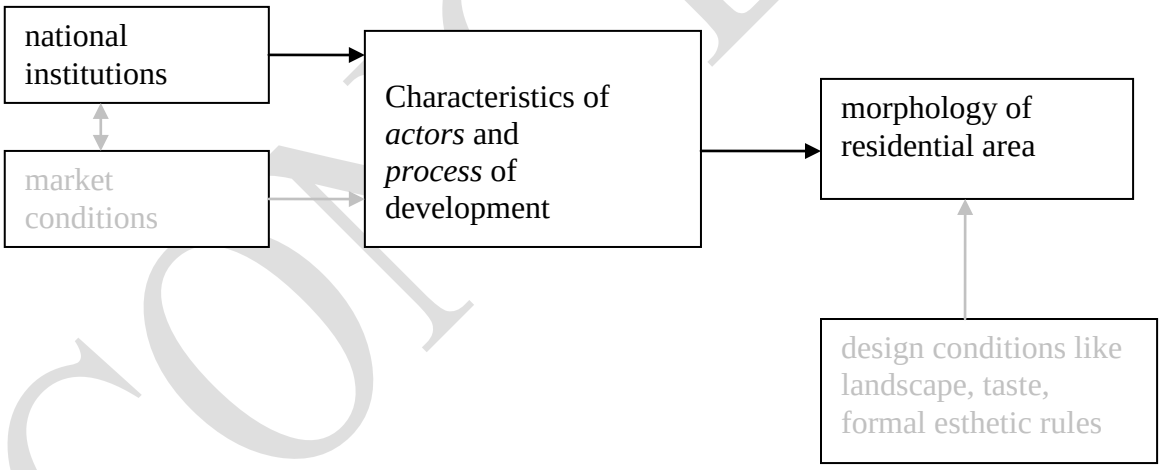

figure 2.1: main variables in this research

2.1 Institutions

Many actors are involved in housing developments. Their interaction is coordinated by formal rules (under private or public law), as well as by practices they are used to, and by the expectations they have (Needham 2010) expectations of one another, of the course of the process, and of the kind of outcome. These latter are all more informal 'rules', that nevertheless may be crystal clear to all participants. Ostrom (1999) defines institutions as all the 'rules-in-use' in a particular 'action arena'. They shape actors' possibilities in trying to reach their goals within the arena. But institutions may also structure the actors preferences that underlie their goals.

CONCEPT

The 'action arenas' that are relevant to housing development are three 'markets',: land assembly and development, house building, and house sales (Ball 2003). These are present in every country, overlapping totally in one country and more independent in another. They are always linked, in that the outcome of one process can be leading for the next, and calculations about next process may structure the first. Institutions may be relevant for every market, or for just one of three.

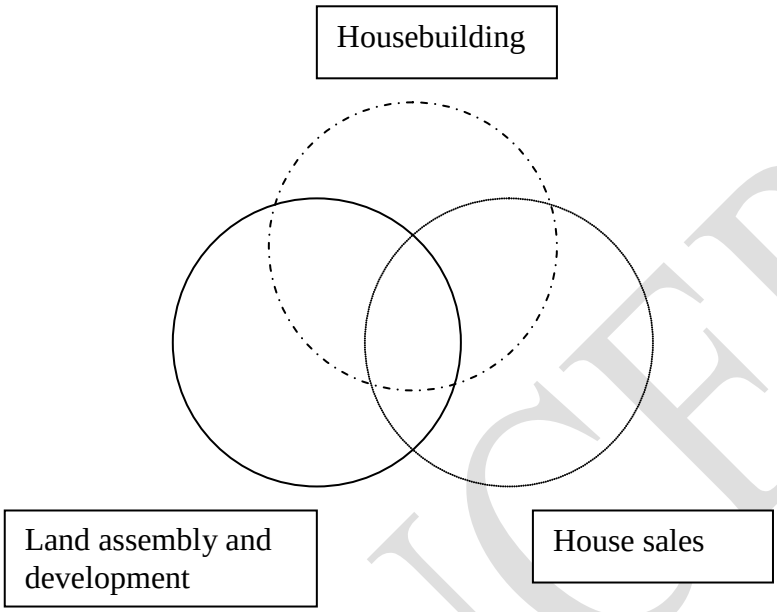

figure 2.2: structure of housing provision (Ball 2003)

Together, the kind of participating actors and their preferences, the action arenas in which they interact (by negotiating, by demand and supply), and the institutions that coordinate this interaction, are the structure of housing provision (Ball 2003) of a particular country, that constitutes the 'environment' for any particular housing development processes. Institutions for land assembly and development are for example rules that define rights of ownership, land zoning, compulsory purchase or the provision and financing of infrastructure. For house building, one can think of rules that regulate the supply of social housing, or rules that define the role of the architect vis-à-vis a client. For house sales, one can think of mortgage conditions, or rules of tenure that make it interesting to invest in private renting houses or not.

2.2 Characteristics of actor and process of housing development

Institutions structure the interaction of actors in the process of housing development, by enabling and constraining their actions (Giddens 1984) In this paper, we are interested in three type of effects on the course of the process that we expect to have an impact on important aspects of morphology. The first two effects have to do with the actors involved in the process, the second with the time-span of the project.

CONCEPT

First, how do institutions influence who has access to the development process and who has not? For what type of actors the rules-in-use are favorable, for what type of actors not? For example: can private persons enter the process as developer, or can only professional development companies participate? Are there many actors involved, or only few?

The preferences of these actors in this paper are not treated as given. The second relevant effect is therefore: how do institutions influence the way actors that are involved see their interest in the process? For example: does the municipality has an interest in the process as an developer (under private law) or only as an public body under public law?

Third, how do institutions influence the time span of the process? For example: are participants necessitated to finish the development process within a given time horizon, or not?

The number and type of actors involved or left out, their interests in the development process, and the time span of completion, all have their bearing on some crucial morphological differences between the three countries, that are discussed in the next section.

CONCEPT

3. **Key morphological differences**

The morphological analysis in this paper is limited to greenfield developments in urban agglomerations. This means that we do not consider brownfields and urban renewal, and also leave rural areas and villages out of consideration. For the morphological analysis we differentiate between three scales: the city and its agglomeration, the development area (the site), and the street.

At the scale of *the city and its agglomeration*, in the Netherlands we see large city extensions next to the existing city. Usually there is only one site under construction. In Flanders we see, besides the notorious 'ribbon development', a lot of small developments woven into the existing loose urban fabric; In North Rhine Westphalia one sees several sites of intermediate size simultaneously under construction next to the city.

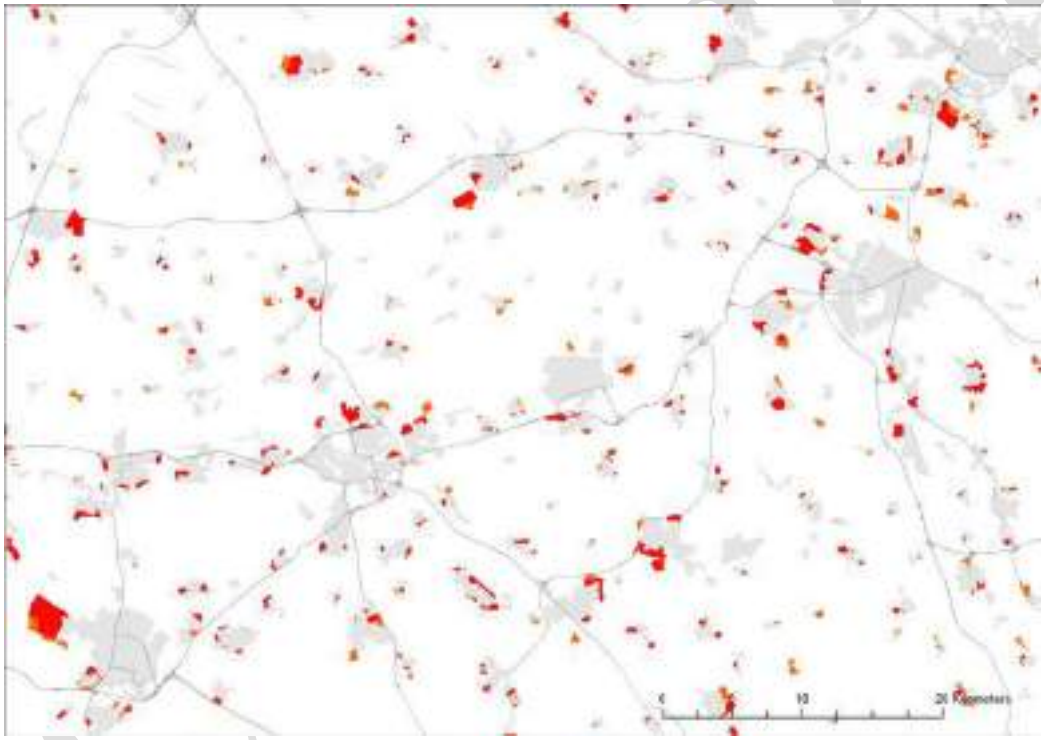

figure 3.1 urban extensions (housing) between 1990-2000 (in red) and 2000- 2006 (in orange),North Brabant region between Tilburg and Den Bosch.

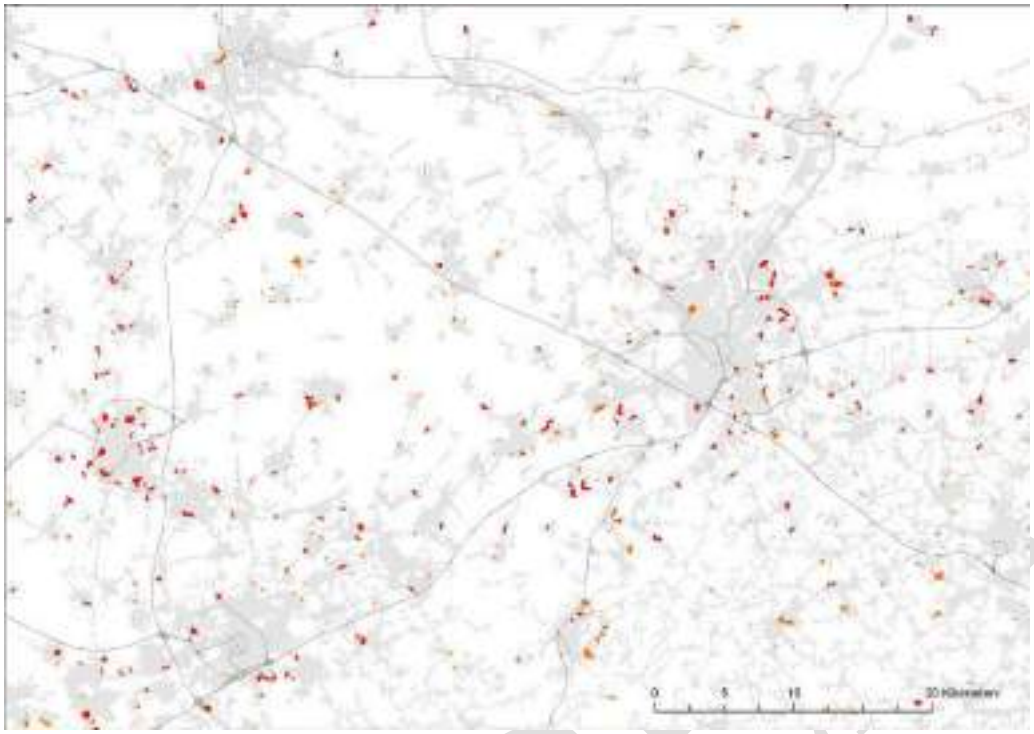

figure 3.2 urban extensions between 1990-2000 and 2000 and 2006 respectively, Gent region between Gent, Kortrijk and Brugge

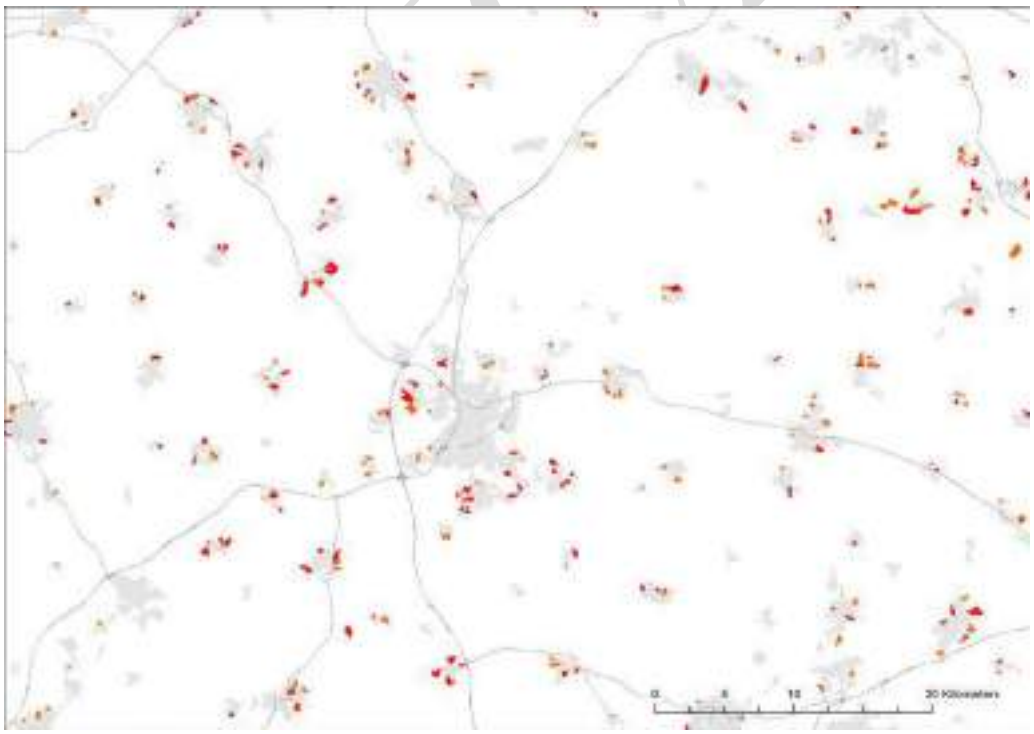

figure 3.3 urban extensions between 1990-2000 and 2000 and 2006 respectively, Munster region

At the scale of *the construction area*, one notices that the large new-development sites in the Netherlands are sub-divided into many neighbourhoods that all have their own theme and atmosphere. The Dutch urban extensions and its neighborhoods are part of a formal master plan in which a hierarchical traffic scheme, clustered facilities and 'geometric' street patterns are very easy to indicate. The small Flemish developments, usually around 10 to 20 dwellings along a dead end street, links to the existing infrastructure. The lay out of the developments in North Rhine Westphalia is more similar to the ones in the Netherlands but much smaller in size.

CONCEPT

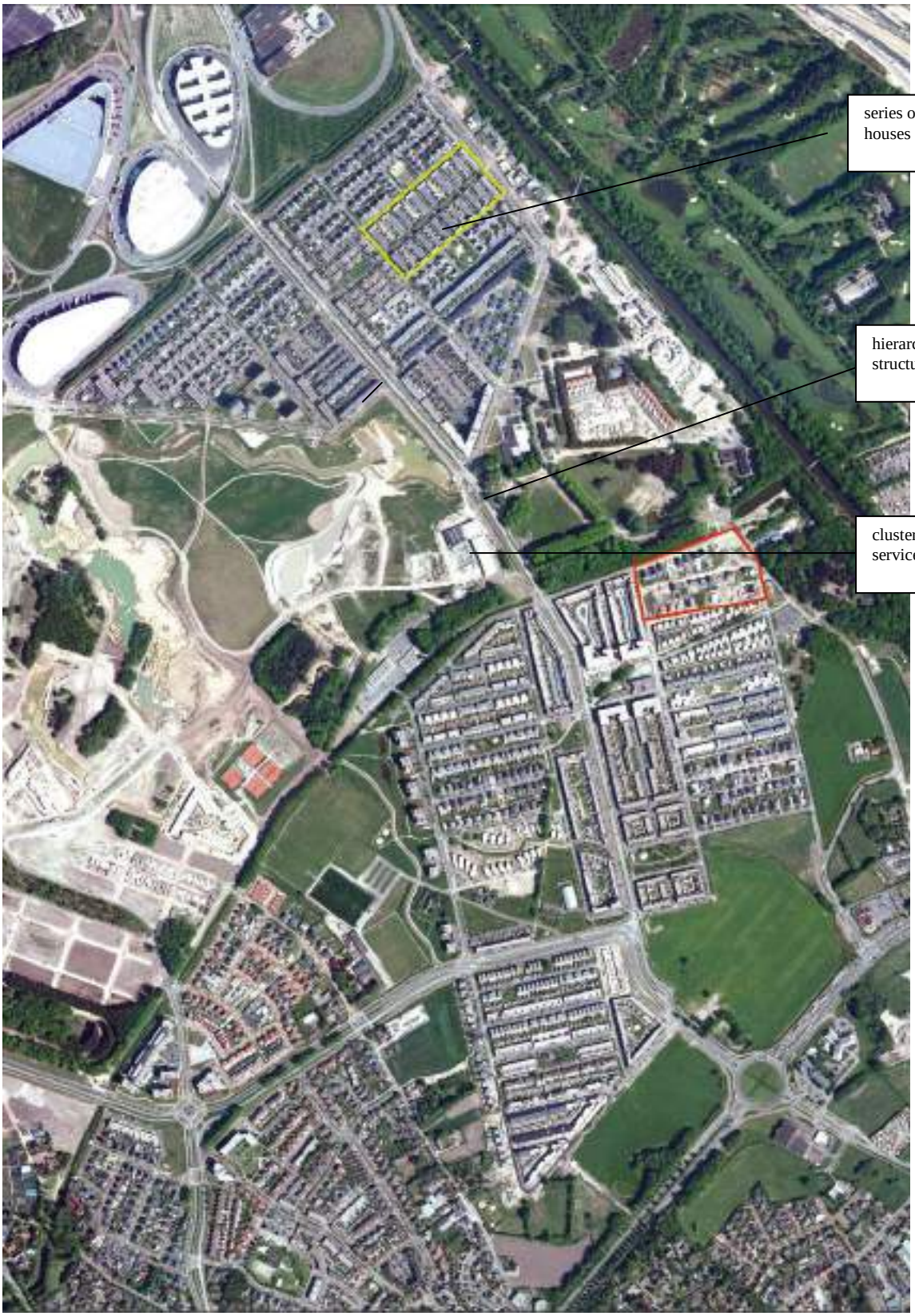

Figure 3.4 Typical morphology of city extension Eurosense BV 2008

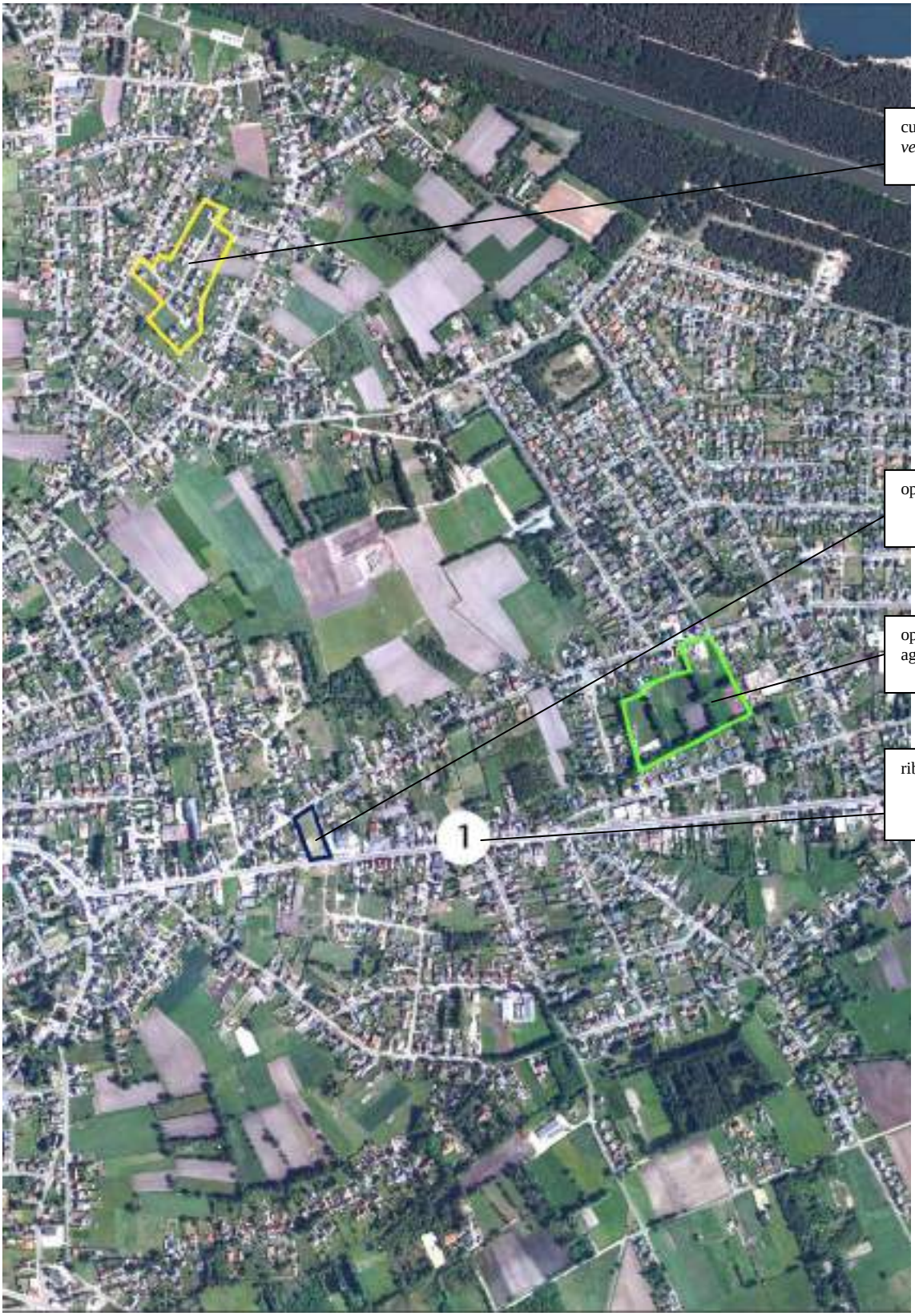

Figure 3.5 Typical Flemisch morphologyEurosense BV 2008

Figure 3.6 Typical German morphology of city extension Eurosense BV 2008

At *street level* we notice large differences in variation: The Dutch streets look very homogeneous; dwellings in one street, with usually terraced houses and some apartment buildings, are visibly constructed at one time, and have the same building style. Sometimes up to four parallel street are part of the same series. In North Rhine Westphalia we see not only see terraced houses in small series but also a majority of detached houses. Most of the houses in Flanders are privately developed detached housing, but during the last years there has been a tendency towards bigger series.

The result is a low visual variety at street level in the Netherlands. In Flanders and North Rhine Westphalia we see a higher variety at street level.

CONCEPT

Figure 3.7 typical streets in new housing developments in Flanders, North Rhine-Westphalia and the Netherlands

EPT

4 **How institutions structure processes and morphology**

In this section, the influence of institutions on the typical morphological characteristics discussed in section 2 is illustrated by means of four aspects in which housing development differ between countries: 1. the interplay between municipality and land owners in the initial phases of development; 2. the nature of the involvement of the municipality: as an investor or a facilitator; 3. the organization of the process in time: open-ended or project-based; and 4. the involvement of small investors like private persons. The first two practices are of interest for the morphology (size, structure) at regional and construction site level, the third and fourth for variation at street level.

It is clear that none of these practices of housing development in themselves can explain the resulting morphology. Not only there are important non-institutional factors (section 2), but each practice in itself does not cover all the institutions relevant for the morphology, either. Only together they should give a more or less complete picture of the institutional differences that are the most relevant for the morphology.

4.1. regulating urbanization: the interaction between municipality and land owners

In the Netherlands, urban development is very much a product of planning by the local government. It is the municipality that takes the initiative by preparing a change in the zoning plan, designating new residential areas. In order to develop a site the municipality cooperates with a limited set of large participants: property development companies, housing associations and large investors (e.g. pension funds). In most of the post-war period, the municipalities were in control of this process almost alone. They bought the land from first owners like farmers, developed the land and provided the infrastructure, then sold it to cooperating partners. Since the 1990s, municipalities lost the position to decide alone in this process. Increasingly, project development companies and other investors anticipated on municipal changes in land zoning, acquired strategic land positions in order to ' buy themselves into' the process of housing development (Segeren 2007). Still, the zoning competency gives the municipality the monopoly in starting the initiative, changing the zoning plan is its trump card in the negotiations with the developing actors.

For the private sector these investments were interesting because they could count on some very strong constants in post-war government policy: the objective to guarantee a housing production that matched quantitative and qualitative demand - as predicted by scientific housing demand studies predictions (*woningbouwopgave*) -; and the core policy belief (Sabatier 1993) in integrative and comprehensive planning as the only way to channel the rapid urbanization process, already dating from the end of the 19th century but reinforced by high population growth after WWII. De Klerk (2008) dates this ambition for integrative urban development back to the early 1900s: Since then, the municipality wanted to "bring all aspects, sectors and parts of the city into coherence and a logical hierarchy of interests: the urban traffic system, regional transport system, public health, city building, housing, preservation and creation of townscapes, parks, public gardens and recreation for inhabitants, all

CONCEPT

grounded on a financially sound estimation of land development." (p. 270). In the post-war period this belief found its expression in two leading principles in housing policy, the already mentioned 'woningbouwopgave' and the so called 'neighborhood principle': a residential area should be set up as a new, social entity in itself: it is not enough to build new houses and to provide the necessary infrastructure, but the new residential areas should be planned so that they contain all the necessary amenities for the population in its diversity: old and young, richer and poorer, catholic, protestant and socialist (Van der Cammen & De Klerk 2004): schools, recreation, churches, public transport, retail, and recreation all should be present and adjusted to a hierarchical relationship to the town centre. Although in the nineties this 'neighborhood principle' was considered old fashioned in some of its idealistic 'society engineering aspects, the thrust of its ambition of integrality is still alive in related concepts like 'integrated area development' (*gebiedsontwikkeling*).

Both policy beliefs: the belief that government should guarantee the provision of enough housing, and integral planning, contributed to a preference of municipalities for concentrating housing development on sites of considerable size next to the city: only big developing sites could provide the basis for the necessary amenities, and on large development sites it is possible to design relatively independently from the existing fabric of the city a rational road structure and new amenity clusters. At these large sites, large project development companies have an advantage over small ones, in that they can most take advantage of the economies of scale in land development, house building and financing (De Klerk 2008), and reduce the risk for municipalities that its policy objectives are not being met.

The housing process in the neighboring Flanders differs drastically from this practice. There, the initiative to develop new houses on greenfield sites is taken not so much by the municipality as by the land owner. Since the creation of the regional spatial plans at the end of the 1970s, there has been an excess of land zoned for residential use (De Decker 2011, Loris 2011), although it may still be in agrarian or other use. Therefore, not the moment of decision by the municipality to change the zoning plan is the start of housing development[1], but the decision of individual land owner to develop the land himself or to sell it to an allotment company ('*verkavelaar'*), who develops only the land and sell the plots, or develops the houses as well like a project development company. The excess of land zoned for residential use has a long history. Unlike the policy in the Netherlands of channeling, concentrating and integrating urbanization, the Belgian urban development is historically directed to the goal of private ownership of single family dwellings on the countryside. Only in the 1960s, planning by zoning instruments began to develop in Flanders. In the absence of a binding regional plan, in the beginning municipalities used these instruments to maximize possibilities for urbanization within their borders. When finally at the end of the seventies the regional planning documents in Flanders were drawn up, the necessity to incorporate these areas was one of the

[1] Although this may happen, in for example the 'woonuitbreidingsgebieden', originally meant for affordable and social housing but often not used because of the small importance of the social sector in Flanders. Here, the government holds the 'key' to development by turning it into a normal residential area (*'woongebied'*) in the land zoning plan..

CONCEPT

reasons of the excess of residential zoned land. The recent Flemish policy objective from the Flemish Spatial Master plan (Ruimtelijk Structuurplan Vlaanderen) of 1998 to try to concentrate urbanization is therefore severely hampered by the reservoir of land that judicially is already zoned for housing. Therefore, although the allotment company who is able to buy a plot of unserviced land is obliged to apply for permission, his permit cannot be refused when he services and sets up the land according to municipal guide lines and conditions. The same goes for the private person that takes the decision to develop his own plot alongside existing roads.

This practice has led to the kind of morphology of urbanization, as showed in section 3, where urban development grows both along existing roads, and in the form of new small housing projects (*'verkavelingen')* that are being built in between, and connected to, existing roads. In comparison with the Dutch urbanization, it is a rather 'chaotic', patchwork- like pattern. New building sites pop up within this existing pattern or as an extension of it. Much more than in the Netherlands location and size of a house building site are determined by coincidence: An allotment company may be able to buy a piece of land, or a private owners may decide to leave it empty.

Designating house building sites in North Rhine-Westphalia resembles much more the Dutch than the Flemish way. Like in the Netherlands, the municipality's choice to change the land zoning plan is the key for starting the development process. Although municipalities have to take into account the higher regional plans, the bigger cities are rather free to designate residential building sites in their *Flächnennutzungsplan*, a more strategic plan which is used to channel urbanization, and *Bebauungsplan*, the document that is juridical binding for citizens and developers. Although these plans - like in the Netherlands - are the expression of the municipal urban development strategy, the building sites are more dispersed and of much smaller dimensions.

What is the reason for this? Of course, population growth in the last decennia has been much less in North Rhine-Westphalia than in the Netherlands, but the dispersed character of urban development does not necessarily make the total amount of houses built much smaller than in the Netherlands. [2]

A striking difference, however, is the philosophy of the adjustment of new housing projects to existing amenities. Whereas in the Netherlands new amenities and houses are planned together at one and the same time, we found in our case study in North Rhine-Westphalia what we call the practice of 'amenity-directed planning'. In planning a new housing site, the municipality tries to avoid that the new site overburdens existing public services like schools or kindergartens, which would make the opening of new services necessary. As these services, are not being financed by the value capturing of the land of the building site as is the case in the Netherlands (cf. section 4.3), in this practice there is often little incentive to increase the dimensions of the site. Without claiming that this is the single reason for the comparatively small dimensions of the housing sites, 'amenity-directed planning' fits

[2] For example, the municipality of Münster, one of the case studies in our research, in the last two decennia had a housing production that was comparable to that of Dutch cities.

CONCEPT

well within the practice of dispersing housing development instead of concentrating it.

When the land is zoned as residential area, the municipality can start a parcel readjustment procedures (*Umlegung*), in which the land is serviced and new parcels given back to the land owners (deducted the costs of the land servicing and recoup of the value increase due to servicing). In an alternative procedure, that of the vorhabenbezogener Bebauungsplan, it is the land owner that takes the initiative. After drawing up a contract with the municipality, he services the land according to conditions of the municipality, hands over the public grounds, and only after this the municipality makes the changes in the land zoning plan become definitive.

So, in this the initial phases of the housing development process, the land assembly and land servicing, the cooperation between land owners and the municipality is quite different in the Netherlands, Flanders and North Rhine-Westphalia.

Dutch municipalities tend to cooperate with a limited group of big project development companies, housing corporations and investors in order to realize an integrated municipal plan of relatively large dimensions. It is important to notice the two sides of this cooperation. On the one hand, Dutch municipalities often *cannot avoid* cooperating with these large companies and organizations. Their land ownership gives them development rights. As long as land owners are prepared to realize the plan as designated in the land zoning plan, municipality has to cooperate with them. There are different models of cooperation. In some the land owners sell their land to a low prize to the municipality, who services the land and sells it back to an agreed prize, and the private party develops the houses and sells them. In others, municipalities and private sector companies together establish a private company that develops both the land and the houses (PPP).

But not only municipalities cannot always avoid to cooperate with private sector companies, at the same time municipalities are often inclined to remove small land owners, like private persons, from the development process. In the most extreme case, Dutch municipalities informally ask project development companies to buy land in an area of future housing development. But also in less 'normatively questionable' practices, municipalities use their pre-emption right to buy out land owners, or eventually threaten to use compulsory purchase. As a consequence, in the development of the large housing sites, there is seldom an important part to play for private persons land owners as co-developer. These are actors, that cannot contribute to economies of scale. Moreover, they could frustrate the timely realization of the development (section 4.3) as well as obstruct the desired, so-called property-neutral development of the site.

Property-neutral development designates the process, in which realization of a well-designed, integral plan for a housing location is not hampered by existing property structures. It is a tabula rasa method: existing structures and landscape elements are removed, and a totally structure is being made. Although the urban designer has the freedom to hint at landscape elements present at the location before - a country road with old trees, an old building, the landing strip of a former regional airport - he is not forced to do so by the wishes of the land owners.

CONCEPT

By buying out the remaining small land owners, actors with possibly an emotional relationship to their particular property, who have no interest in economies of scale, are removed from the process. This turns an important switch in the process that determines size and structure of the site.

In contrast, in Flanders small land owners are the drivers of the urbanization process. Housing development in Flanders takes place through all the numerous initiatives of small to middle sized land owners who start to build themselves, or sell their land to (relatively small scale) allotment companies or project development companies. The important role of small land owners is understandable, as traditionally Flemish municipalities have much less integrative ambitions than their Dutch counterparts. Property-neutral development is not necessary.

The comparison with North Rhine-Westphalia is more interesting in this case, as municipalities do foster these ambitions. Nevertheless, German municipalities seem more indifferent to the size of the land owner, and treat both large and small land owners as possible housing developers. Institutional differences - the availability of policy instruments - between the Netherlands and Germany can shed some light on the reasons.

In North Rhine-Westphalia municipalities have at their disposal the instrument of land readjustment (*Umlegung*). At the same time, it is comparatively difficult - almost impossible - to expropriate land owners for housing purposes. So, municipalities can only force land owners into cooperation by also granting them some voice, that is, in the readjustment process where they might have their special wishes, and accepting them as potential developers.[3]

In the Netherlands, compulsory purchase of the land of private persons for housing development is juridical a realistic possibility, although it may have a very high prize. Dutch municipalities, however, do not have the option to force land owners into cooperation to development without paying them a lot of money, like the *Umlegung*. Therefore, when they want to realize their integral plan in a property-neutral way, they have to offer private land owners large sums of money- for which reason private person land owners often aim at expropriation by withdrawing their cooperation of the municipal plans.

In this way, the availability of land policy instruments is one of the factors that preserve the national differences in the municipal attitudes towards small land owners, and their participation in the housing development process.

4.2. active or facilitating land policy of municipalities

In the Netherlands, in most cases the municipality is itself one of the land owners, and it traditionally participates in the development process under private law (De Klerk 2008), by means of a municipal land development company, besides its public roles. Until the 1990s, municipalities often acquired themselves most of the land necessary for development from the first land owners. When this was not possible anymore, the new models of cooperation with professional developing land owners

[3] Especially in the 'voluntary' variant (*freiwillige Umlegung).*

CONCEPT

emerged that are described above. In these cooperation models, municipality still is (co-)owner of all the land at the moment of land servicing, and sells it afterward to developing parties. Municipalities used to set land prices according to the real costs, but from the beginning of the 1990s a covenant between Dutch government and the private sector determined that land values had to be calculated according to the residual method, which enabled municipalities to share in the value increases in a favorable house market. In Flanders as well as North Rhine-Westphalia, municipalities act less often as land owners on greenfield locations. Flemish municipalities normally acquire only small parcels for public amenities or to enable or unlock greater development. In North Rhine-Westphalia it used to be common for municipalities to buy land for urban development in general, but nowadays, there is relatively little land acquisition, and mostly for social or affordable housing.

The Dutch municipal practice of actively acquiring land in order to make housing development possible, has its effects on the morphology of the site in that it strengthens the role of the municipality as one of the developing actors, instead of its role as regulator of the market. The municipality becomes one of the interested parties for economies of scale and timely realization of the site (section 4.3).

This practice is rooted in a double motivation for municipalities. First, land ownership gives control over planning content and process. Parceling out en servicing the land is one of the best way to guarantee the integrated character and overall quality of the site. Moreover, land ownership used to be the best way to guarantee an ambitious percentage of social housing of 30%. And the freedom to set the prizes made it possible to recoup costs of land development, as well as to stimulate social housing. All these reasons of 'planning content' were repaired only in 2008 by a new land policy law (grondexploitatiewet), that made them possible without active land policy. As we shall see (section 4.3) in Flanders and North Rhine-Westphalia municipalities have other solutions for these problems.

Moreover, ownership of the land also gives control over the process: it means the freedom to choose private sector companies that participate in the development, although this was undermined by the increase of land positions of project development companies (Segeren 2007), and by jurisprudence of European Competition directive (Buitelaar 2011).

Second, next to reasons of control, there are reasons of financial gain. Municipal land ownership is a means for Dutch municipalities to share in the value increase of the land - both as a result of zoning changes and of servicing - that would otherwise accrue to private companies only. In Flanders and North Rhine-Westphalia, it is indeed the private sector that does (partly) profits from these value increase. For what reason Flemish and German municipalities do not aspire to the role of land ownership, as land prices in prosperous municipalities as our case studies Munster and Gent have been rising and municipalities have the possibility to get their share?

An important factor explaining these differences is to be found in the differences between the systems municipal financing in the three countries. As showed in figure 4.1,

CONCEPT

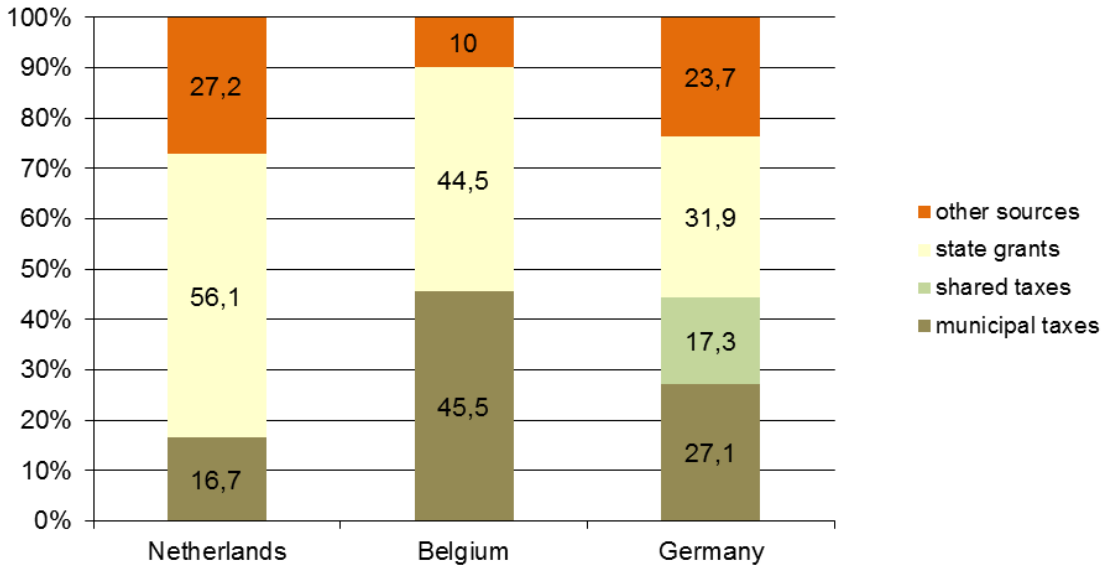

figure 4.1: income of municipalities in the Netherlands, Belgium and Germany (loans not included) in 2006. Hoorens 2008.

a relatively small share of Dutch municipal income derives from municipal taxes. Belgian and German municipalities dispose of more own taxes, the rate of which they can set themselves (within limits). A smaller proportion of their income derives from state grants.

The dependency on state grants decreases the leeway for Dutch municipalities to set its own policy priorities. Although not all state grants are earmarked, their size is fairly precisely calculated on the basis of the normal, necessary and statutory municipal expenses (e.g. social security grants). Local lobby groups monitor whether municipal expenses are according to the grants.

Besides, municipal income from the most important municipal tax on real estate property (OZB) is being leveled in the state grants: a higher capacity for municipalities to extract revenues from this tax means a lower state grant. This leaves municipalities little financial freedom for 'extra', non-statutory projects and ambitions. Therefore, Dutch municipalities have tried to find extra funds by participating in land development, in order to take advantage of favorable real estate market conditions. Although average profits for all municipalities were not very high, and although it is not a secure income source, each individual municipality could decide to try to imitate its most successful neighbors, and take the risk. Indeed, in average municipalities managed to increase their revenues from land development (Korthals Altes 2008) until the financial crises.

Municipal income from land ownership is negligible in Flanders and North Rhine-Westphalia.[4] Interestingly enough, in Flanders and North Rhine-Westphalia housing development is seen as a method to increase municipal income as well (cf. ILS 2006 for North Rhine-Westphalia). But there, extra revenues are a consequence of an increase in the amount of (high income) citizens[5], and, in North Rhine-Westphalia, an increase in the area of (serviced) land. The important difference with the Dutch system is, therefore, that municipalities in Flanders and North Rhine-Westphalia do not have to acquire land themselves and to bear financial risk in participating in the development in order to increase their revenues.

4.3. project approach vs. open-end process

In the last two sections, we have discussed some institutions that shape the conditions what type of actor participates in housing development. Who has access and who does not? In this section, we focus on differences with regard to the time span of the development process.

Comparing the Netherlands with Flanders and North Rhine-Westphalia, it is striking that the Dutch development process of greenfield locations is organized as a *project*: not only are all different functional parts adjusted to one another by integrative design (section 4.1), they are being realized within a limited *time period* as well. The development process has a time horizon, within which the 'project' of building a new residential area will be finished.[6]

In contrast, many of the greenfield housing development sites in Flanders and North Rhine-Westphalia are being developed in a process with an *open end*. In de 'verkavelingen' in Flanders parcels may remain unbuilt for decades. Owners consider them as an investment for later, or reserve them for their children. These plots also may never be built on, for example when the owners keeps it as a permanent extension of his garden. In North Rhine-Westphalia, too, it may last a very long time before all houses are realized. In Münster, the municipality kept a list of all sites where free parcels were available, some of which dated as far back as the early 1990s! These differences in organization lead to a difference in the variation (at street level) of the sites. In the Netherlands, all houses are being built in the same time period. Therefore, apart from variation or homogeneity *by design*, all buildings underlie the trend with regard to architecture and dwelling type that was fashionable in the time of building. Moreover, in Dutch residential areas, one does not find empty parcels, nor parcels that are included to the garden of their neighbor: all parcels of a block or street have the same size.

Differences in the institutional environment set some important conditions for this different organization of the housing development process. Two aspects of the

[4] Percentage in Flanders unknown, but municipal land ownership on greenfield locations is practically absent (source: interview). In NRW income from land ownership was only small part of the 1,5% 'selling of property' in 2008 (source: ILS).

[5] although at least in Germany there is a leveling mechanism with state grants like in the Netherlands. The Dutch system, however, is the most radical in this (Allers 2005).

[6] For this purpose, the development of a housing site is often managed by a separate project-organization, sometimes in joint-venture with project development companies. This reinforces the project-like character of the housing development, as the organizational mission of the project group is to finish the project in time.

CONCEPT

time span of realization have to be distinguished here. On the one hand, participating developing actors have an interest that the development is realized within a *short period.* As the land acquisition has to be pre-financed, every year that the land is not being built on, means loss on interests. The difference between the Netherlands and its neighbors is that Dutch municipalities participate in the process as private land owner and share the necessity to finish the project as quickly as possible with the private sector investors (section 4.2). Besides, municipalities as a public body are confronted with policy housing targets from the regional inter-administrative housing agreements (woningbouwafspraken). What is more, in the Vinex-period (1995-2005) central government subsidies for housing development were tied up to the time schedule of the subsidy scheme.

But the second aspect of the time span of realization is just as important. Housing development has a project-like organization not only because a quick realization is important, but more general because of the necessity of a more or less *simultaneous realization* of the houses. This has to do with financial settlement agreements between participating developing actors. These agreements serve a wide scope of different purposes: to spread evenly large pre-investments, to finance part of the unprofitable part of social housing, to share market risks in the housing sector, to finance a part of amenities, to compensate for unequal development possibilities in different parts of the site, all these are reasons for a comprehensive and often complicated contract between the participating actors (including the municipality) on the financial settlement of the project. These kind of agreements require a moment in time to make the clearance, to close the bill - for example at the moment when all participants have had their revenues. As the revenues on which the agreement was based only materialize at the moment of house sales, an open-end-process like in Flanders or North Rhine-Westphalia is no option in the Netherlands.[7]

In Flanders and North Rhine-Westphalia, these financial settlements agreements that financially link the realization of different parts of the site to one another are less frequent. In both countries, the size of the housing development is comparatively small, which diminishes the possibilities for settlement within the site itself: there would not be enough 'mass' to finance non-profitable elements. Therefore, some elements at the site like amenities that in the Netherlands would be co-financed by other, profitable elements, are being financed separately by other means, for example the municipal budget. They do not depend on the realization of other elements of the site. In both Flanders and North Rhine-Westphalia, however, some mechanisms that fulfill some the functions of the Dutch settlement practice do exist, but they put less pressure on in-time realization.

In Flanders, the allotment company or project development company has to acquire a permission in order to parcel out and service the land (*verkavelingsvergunning*). The permission contains a detailed description on the infrastructure, set-up of public space, type of buildings, use of materials etc. After the servicing has been done, the *verkavelaars* hand over the public grounds to the municipality for free. But the permission can also contain extra demands by the municipality, the expenses. In the 'larger' sites (more than ten houses) these expenses

[7] Besides: these kind of financial settlement are favourable for large sites, as this increases the possibilities for settlement, also with small margins.

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minimally require to realize some social parcels or social housing. Thus, although there is no financial settlement between different participating actors, nevertheless the allotment company/ project development company has to compensate internally the losses on one part with gains on the other.[8]

A similar case is the German procedure of the '*vorhabenbezogener Bebauungsplan*', a special form of changing the land zoning plan. In this procedure, it is not the municipality that provides the infrastructure and other amenities, as is normally the case, but the private developer himself. Like in Flanders, the private developer hands over all public grounds afterwards to the municipality for free.

Both in Flanders and in North Rhine-Westphalia, a quick successful sale of the houses may therefore be as important for the private project development companies as it is in the Netherlands. But different from the Netherlands, the municipality in these situations is not involved financially. From a financial point of view, it can allow itself to approach the housing development as an open end process.

In the 'normal' procedure of public infrastructure provision in North Rhine-Westphalia, however, the municipality is financially involved in the development project, in that it builds and pre-finances the public infrastructure. With the procedure of the *Erschliessungskostenbeitrag*, a municipality can recoup 90% of these costs. The difference with the Dutch case is here, that the *Erschliessungskostenbeitrag* is paid by the land owners irrespective whether they have already developed the real estate. Whereas in the comparable procedure in the Netherlands (*grondexploitatieplan*) the municipality can recover costs only at the moment when the land owners have realized their real estate revenues.

In short, in all three countries a long time period in which housing or other real estate is not yet realized, constitutes a financial a financial risk. But in Flanders and North Rhine-Westphalia, this risk is borne by the private sector, not by the municipality.

4.4. the involvement of small investors

In the Dutch practice of large scale housing development, not only there is little room for participation of private person land owners (section 4.1), but also at later stages in the process small investors normally do not play an active, independent role. In Flanders and North Rhine-Westphalia, functioning markets for ready-for-building parcels exists for private persons or small building companies. By contrast, in the urban areas in the Netherlands these markets have been lacking. Only very recently, more 'experiments' with 'do it yourself building' are starting up in urban areas, partly as an answer to the decreasing building production due to the economic crises since 2008.

[8] Although the losses may be lower than in the Netherlands, for the reason that all the infrastructure and other public services for social houses are constructed and paid for separately by the regional (gewestelijk) government.

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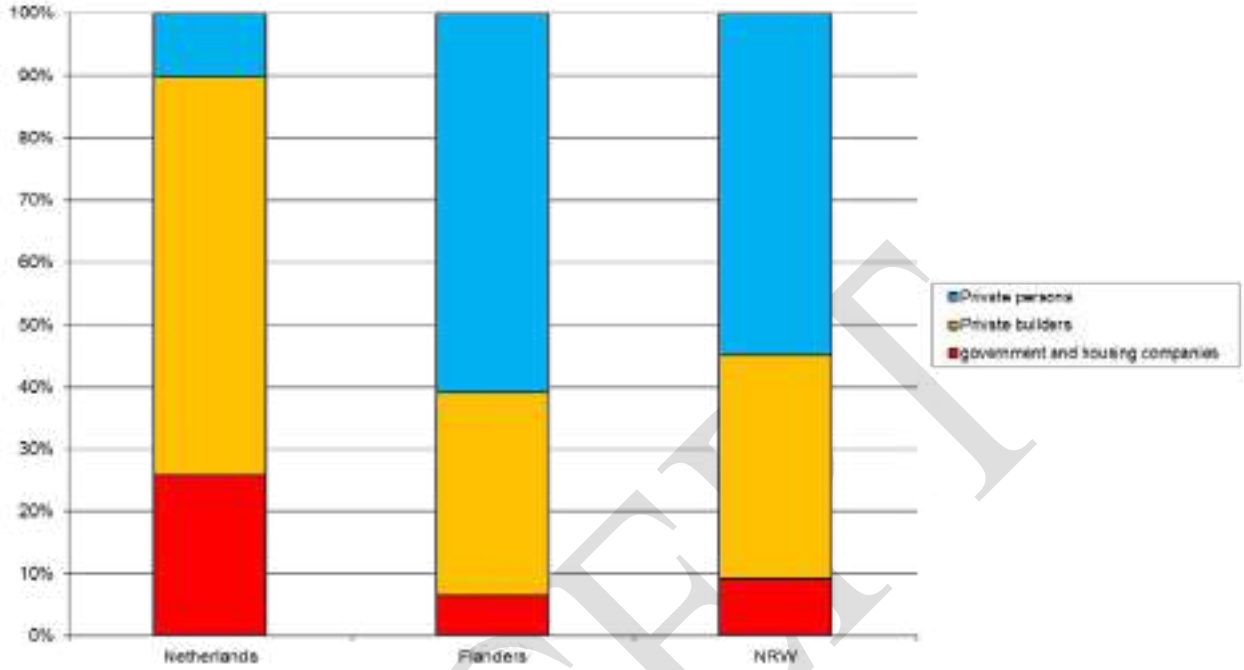

Figure 4.2 Housebuilding commissioning actors
Sources: CBS, De Decker et al (2010) and North Rhine-Westphalia Bank,
Compilation: PBL

The common practice in the Netherlands is to build houses in series (85% of dwellings is part of a series of more than 10 dwellings, 50% of more than 50 dwellings). Not surprisingly, building in series decreases variation in architecture and dwelling (sub)type

The majority of dwellings at Dutch greenfield locations are apartments and row houses. But also single family detached homes / two family semi-detached homes are being built in series. In Flanders and North Rhine-Westphalia, the dominant housing type on greenfield sites is the single/two family detached/semi-detached home, or (in North Rhine-Westphalia and recently Flanders) in comparatively very small series.

Of course, land prices play an important factor here. Land prices in Dutch urban areas on average are much higher than in the neighboring countries. The residual value of land has increased as house prices increased sharply, which came to an end only with the financial crisis of 2008. These increases are attributed both to regional housing shortage, according to some an effect of institutional factors like the spatial planning restrictions (Besseling e.a. 2008), or sudden changes in the structure of housing provision (Jokovi 2006), as well as to increased income and improving loan possibilities (Van Oort e.a. 2008) for consumers. Developing and building companies that can economize on production costs, can present higher bids on the land market. Building houses in large series, enables building companies to

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economize on costs of material, construction, and supervision. Building dwelling types of higher density like row houses and apartments means higher returns per square meter. Figure 4.3 is a good illustration of this development: in the Netherlands, financial room for buying land increased because of increasing house prices and relatively low increase in costs. The residual value of the parcel under an average dwelling in North Rhine-Westphalia is nowadays much lower than that of the parcel under a Dutch average dwelling.[9]

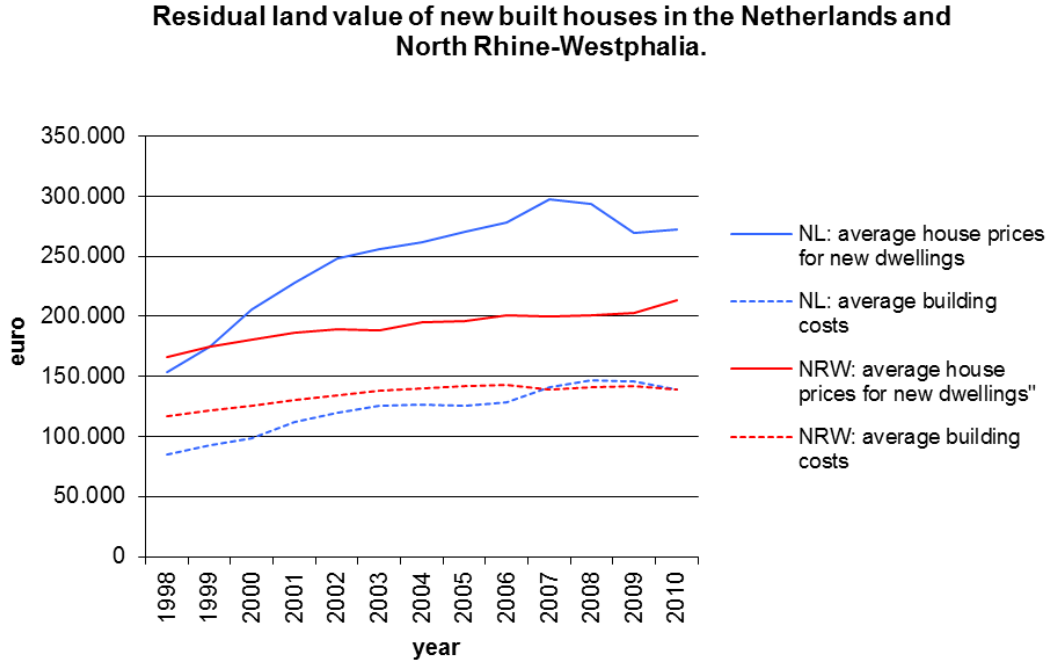

Fig 3.6 Residual land value of new built houses in the Netherlands and North Rhine-Westphalia.
Sources: CBS. OTB (Monitor Nieuwe Woningen), Obere Gutachterausschuss North Rhine-Westphalia

Although high land prices undoubtedly constitute a very important factor in the explanation of typology and variation of Dutch newly built residential areas compared to Flanders and North Rhine-Westphalia, it is questionable whether it constitutes the *only* factor. Why individually commissioned housing is normal in areas in North Rhine-Westphalia where land prices are comparable to that in the Netherlands? Let us take a look at two institutional factors, that structure the supply and the demand side in the market for newly built houses.

At the supply side, we have seen more and more project development companies and housing corporations (Buitelaar e.a. 2008) taking land positions in order to buy themselves into the housing development process (section 4.1). As their motive is to take advantage of high prices on the housing market, they will normally not sell the parcel (after the servicing of the land) to a third party, but build on it

[9] Unfortunately, it was not possible to retrieve comparable data for the Flemish case. But land *prices* in Flanders recently reached comparable values as in NRW.

themselves.[10] As municipalities have a tradition of cooperating with large, professional organizations, as described in section 4.1, they have little interest to guarantee access of private persons to the market for serviced land.

But institutional factors also structured the demand side of this market. Although some 30% of Dutch respondents of housing surveys say that they would like to build their own house (against the 10% that actually do), it is not clear how high the demand is in reality, as there is hardly any opportunity for it in urban areas. Contrary to North Rhine-Westphalia the wish to have a say over the construction of the own dwelling apparently for some is so overriding, that in situations of high land prices, they choose to commission row houses, or collectively build an apartment block.

Dol et al (2010) make use of ideal types to describe the national differences in housing markets. Following Martens (1990), they characterize the Netherlands as a *dynamic* housing market, whereas Belgium and Germany belong to the *static* housing markets. These ideal types refer to a particular collective images about housing (culture), as well as to an institutional and market structure that has developed around it.

In these two market types, people have different expectations of a house (Toussaint et al 2007). In a static market like in Flanders or North Rhine-Westphalia, ownership of a house is once-in-a-lifetime. The decision to buy or build an own dwelling is only taken when you are settled, and other factors in life like career and relationship are relatively stable. Therefore, one takes the decision to buy or build a house at an relatively late phase in life, before that time, renting is the normal option. Once you bought a house, ideally one will live there for (almost) the rest of one's life and the house is *adapted to one's changing needs*: maybe in the beginning one wants to let part of the house in order to save costs, and take all the house for oneself when the children are older. When income is higher, maybe one wants to extend the house. And maybe one wants to adapt the interior to one's needs when one is old. Moreover, much more than in dynamic markets , home ownership is seen as part of the pension, as one live there 'for free', or even let (part of it) for extra income.

In dynamic markets like the Dutch one, peoples have other expectations of home ownership. At different stages in life, you do not so much adapt the house, but sell it and buy another (bigger) one. Home ownership starts relatively young, and with different conditions (career, relationships, family) it is normal to move to another home that fits more your needs. It is not a 'course-of-life-house', but a 'resale-house'. The house is seen as an financial investment, but less as a secure 'pension in stone' but more as something that increases in value in an favorable market.

These leads to a different demand on the market, with morphological consequences, too. First, in static housing markets, houses need to be more *adaptable*. A detached house on a relatively large plot is more adaptable than row houses and apartments. Numerous alterations of the houses yield a more varied street view. Second: as home ownership comes close to a 'life destination', it is more important to have the house built according to one's own personal ideas, ideally

[10] Segeren (2007) describes this as one of the reasons for institutional investors not to wait for the supply of serviced land, but to buy unserviced land themselves.

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tailor-made. Whereas in a dynamic housing market, the overriding concern is that market value should be preserved, the house should not be so eclectic or personalized that the ability to sale is being affected.

The different expectations of home ownership are supported by differences in institutions between the two types of housing markets. In the dynamic Dutch market, institutions that support individually commissioned housing are lacking. For example, in Flanders and North Rhine-Westphalia, architects are much more adjusted to advise and coach private persons in the construction process (Dol e.a. 2011). In Belgium, architects are liable for flaws in the construction. In Germany, municipalities have set up departments to help private person in the process of individually commissioned housing in the social or affordable sector.

Institutions that structure the financing possibilities for home owners, too, differ according to housing system. In the German static housing market, mortgage banks apply a much lower loan/value ratio than used to be the case in the Netherlands (80% to 115% in 2007). In other words, Germans have to save a lot of money before being able to buy or build, and institutions like *'Bausparen'* prepare for this. In the Dutch situation, mortgage conditions were eased during the 1990s/2000s, which supported the resale of houses.

But private persons wanting to build a dwelling for themselves are not the only type of small investors that is more or less absent in the Dutch housing development in urban areas. First, in Flanders and North Rhine-Westphalia there are more small builders active on the urban market, that is far more favorable for them than in the Netherlands. Building normally for private persons, small builders in Flanders or North Rhine-Westphalia may sometimes invest in developing a couple of house themselves. Second, in the Netherlands, there are practically no private persons that invest in house building with the motive to let - in part or as a whole. The private renting market is relatively small in the Netherlands (figure 4.4). Private landlords are present in older neighborhoods, but do not often invest in new houses at greenfield locations. By contrast, the private renting market in Germany is rather large and building for private renting is made fiscally advantageous. In total it is even more promoted than home building for owner-occupiers (Braun& Pfeiffer 2004,

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cited in Haffner e.a. 2009).

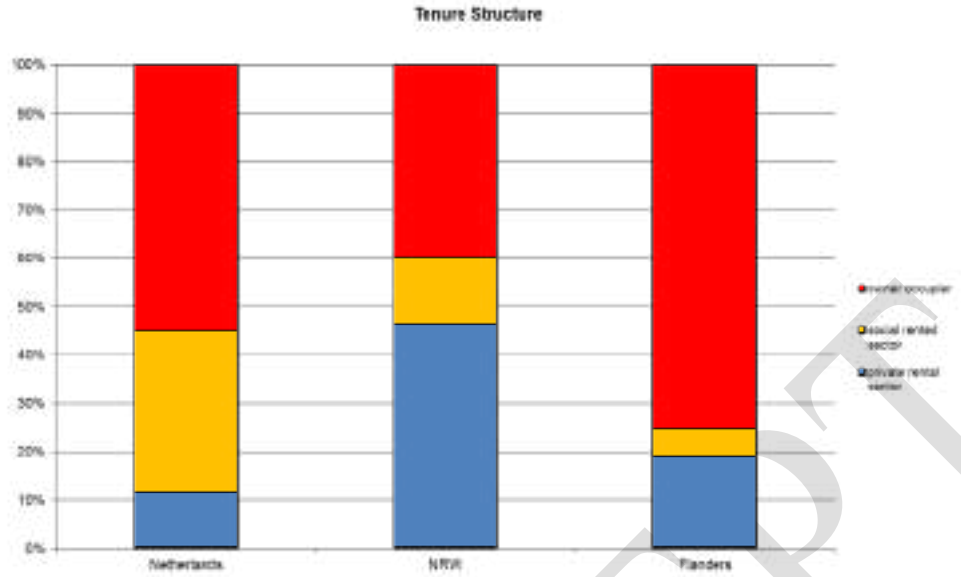

Fig 4.4 Tenure structure in the Netherland (2006), Flanders, (2005) and North Rhine-Westphalia (2005). Sources Woningmarktcijfers.nl, De Decker e.a. (2010) and Wfa (2006)

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5. **Conclusion**

Although morphology of recently developed residential areas on greenfield sites depend in many ways on local and contingent factors, the overall institutional environment determines morphology to such an extent, that it is easy to see the difference between a Dutch, Flemish or German area. Institutions structure the process of housing development, not as to determine form, but as to make some morphology as outcome of the development process more likely than others. In this way, the institutional analysis in this paper supplement other explanations, and gives a more complete account of morphological differences than mono-causal explanations like taste, the rate of population growth, or market circumstances alone. It is also supplementary to research that focuses on the influence of institutions on actor interaction, and leave the analysis of physical outcome to the field of urban design.

In this paper, we have identified some key mechanisms through which housing processes influence form that can be traced back to differences in institutional environment. The first type of mechanism is the *in- and exclusion* of actors from the housing development process. Without saying that this is a conscious process, institutions make it possible to in- and exclude actors with a certain type of interest - for example interest in economies of scale, or a timely completion of the site. The second type of mechanism is the *time span* of the building process. For example, the practice of settlement agreements between participating developing actors reinforces the necessity to complete a housing developed site within a short time period, as opposed to a more open ended and haphazard development.

Institutions give some parties the possibility to influence these mechanisms than others. For example, in large areas in Flanders municipalities do not have the possibilities to exclude private initiatives for housing development anymore because the zoning plan already designates the land for housing. In North Rhine-Westphalia, the rules for compulsory purchase constrain municipalities to exclude private person land owners from the housing process, and at the same the rules for *Umlegung* enables them to approach private persons as co-developing participants.

These institutions are originally man-made for a particular purpose, but when they become the rules-in-use, they subsequently structure the purposeful interaction and become taken-for-granted *practice*. This ' structuration theory' of Giddens (1984.) according to which action and structure are mutually constitutive, has been illustrated in this paper with four practices in housing development in different countries. In these practices, processes reinforce themselves. For example, institutions favor large building sites, so that private persons and small building companies do not have much chance on the Dutch urban housing development markets. Big building companies take over the market at the expense of small ones, private persons cease to know how to commission housing, it becomes hardly an option any more in the Netherlands and the demand for it decreases.

This example brings us to a third and final mechanism through which institutions influence morphology. Not only do institutions structure in- and exclusion, time

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span, and differentiate the possibilities for actors to influence this, but institutions also influence *preferences* of participating actors, what they consider as their stake in housing development. For example: the income-structure of Dutch municipalities make it more pressing to participate privately in land development to share in the value increase of the land (apart from the public interest stakes they might have in active land policy). Or Dutch private persons do not consider it their interest to enter the housing development process in order to commission the building of a rented dwelling, in contrast with Germany where fiscal policy subsidizes this.

Including these 'demand'-factors in an institutional analysis brings it close to cultural or discourse theories, that take 'housing cultures' and ' administrative cultures' into account (Toussaint 2007). Further research, studying more precisely the interplay of cultural and discursive factors with structural factors like institutions would yield a more complete account of the mechanisms that form our urban environments.

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CONCEPT

THEORIES OF TEMPORARY USE, CREATIVITY, AND PLANNING

Quentin Stevens [1]

Abstract

This paper examines various definitions and applications of the concept of 'creativity' within recent theoretical, empirical and planning policy studies of 'temporary uses' of derelict urban spaces in European cities, in order to articulate how these understandings of creativity and temporary suggest a transformation of the aims and methods of planning itself. Temporary land uses have always been tolerated by urban planning, but it is only very recently that they have come to be seen as important to cities' economic vitality and future growth. Creativity has, similarly, always been a defining characteristic of urban economies, but the conscious objective of urban planning to attract, stimulate and support particular creative actors is relatively new. Through analysis of field studies, policies, and academic critiques, the paper articulates three distinct contexts where concepts of 'creativity' contribute to planners' theories about temporary use and the redevelopment of abandoned and underutilised sites: creative production, consumption of creativity, and creative governance. These three contexts are argued to be mutually reinforcing. Actors from the 'creative industries' are drawn to the low rents, distinctive architecture and dynamic atmosphere of derelict buildings; they also contribute to the material and symbolic transformation of these spaces. Existing temporary uses attract and nurture additional creative workers, and are felt to add to the general quality of neighbourhood life. Planning is proactive in nurturing temporary creative uses; but these uses also require and inspire new planning tools and approaches. This paper's distinctive focus on examining various actors who are creative, what particular interests and abilities they bring, and how they engage with each other in the urban development process, sets it apart from many academic critiques of 'artist-led' gentrification of former industrial areas, which emphasise the social and economic impacts of artists' activities on future investors and existing residents, reducing creativity to 'symbolic capital'. The paper closes with an examination of how the concepts of creative production, consumption, and governance mesh together with broadly neoliberal approaches to urban governance, highlighting that creative planning for temporary use means not just reducing the regulation of urban activity and built form, but also more dynamic planning, through continual engagement with a wider range of actors. In this context, the focus of planning shifts away from permanent built outcomes and toward social activity. Planning itself begins to increasingly resemble a temporary creative use.

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1. Introduction

This paper examines various definitions and applications of the concept of 'creativity' within recent theoretical, empirical and planning policy studies of 'temporary uses' of derelict urban spaces, in order to articulate how these understandings of creativity and temporary use are changing the idea and methods of planning itself.

Temporary land uses have always existed in cities, ranging from circuses and squatting to warehousing and surface car parks. Such uses were tolerated, but they were seldom believed to be central to the vitality and future of urban districts. They were epiphenomena that were never seen as part of the plan. Two European studies (Bürgin and Cabane, 1999; Urban Catalyst, 2001) initiated a new area of planning thinking and research by examining the potential importance of temporary uses or *Zwischennutzung* - economically-marginal activities that temporarily occupy abandoned urban spaces - for developing economic and social activity, jobs, and new investment in cities. These studies appear to have introduced at least four new points of focus to planning thinking about temporary use. Temporary re-use is now seen to be an important economic and planning strategy for the redevelopment of former industrialised areas, one which takes place before, alongside, or instead of large-scale, long-term masterplans, and which contributes to the long-term development outcomes. Actors from the 'creative industries' are now generally understood as playing an important role in undertaking these temporary reuses and transformations. Thirdly, and conversely, such temporary occupations of sites are acknowledged by city administrations as being important opportunities for attracting and nurturing creative industries. Fourthly, planning policy, which generally focuses on long-term visions and permanent rules, has thus begun looking at ways to support and promote particular short-term uses.

2. Analysis

This paper draws upon the discourse of temporary use as it has developed through public policies, empirical research, and academic literature in Europe and to a lesser degree in North America. The paper outlines three distinct but interrelated contexts where concepts of 'creativity' contribute to planners' theories about temporary use and the redevelopment of abandoned and underutilised sites, namely: production, consumption, and governance. The paper then closes with an examination of how these concepts mesh together with broadly neoliberal approaches to urban development and urban governance.

2.1 Creative Production

Creative production is in itself seen as an increasingly-important component of urban economies. In relation to the planning and management of urban built fabric, the creative industries are also seen to have a more specific role, as an economically

productive way to use vacant, derelict urban spaces temporarily. This has elements of both convenience and strategy. Compared to other branches of industry, creative enterprises are typically small, low-capital, and flexible about the spaces they occupy. Few other branches of industry are willing and able to start operating at short notice or relocate in a piecemeal fashion, and can rapidly adapt their work practices to a wide variety and quality of existing sites, structures and infrastructures when they become available, without major capital investment (Becker, 2010). Today's creative actors are portrayed as largely 'footloose` or 'nomadic'; their production activities are not often fixed to physical and representational attributes of particular sites (MA18, 2003; Urban Unlimited, 2004; Dienel and Schophaus, 2005). However, the theory of temporary use tends to prioritise the development of new creative activities, rather than existing creative activities that might relocate from another site, but which may not engage creatively with the new host site. Temporary use is portrayed, for example, as "an attractive 'first step' for numerous start-up ventures in the creative economy" (SenStadt, 2007, p.101). A major study of temporary uses in Switzerland highlights that the percentage of creative workers engaged in temporary businesses in Zurich's former rail yards was four times the national average, and almost half the companies on the site had been founded there (Angst et al, 2009).

Strategically, it is believed that creative actors such as artists and architects are particularly well suited to utilizing disinvested, vacant spaces temporarily. They are able to perceive distinctive aesthetic, historic, and functional characteristics within derelict sites, as well as activate these potentials (BMVBS/BBR, 2008). They are 'pioneers', 'truffle pigs' who unearth valuable, latent opportunities for the benefit of other investors who follow them (SenStadt 2007; Lange, 2007, p.136). Creative producers have "a feel for unconventional and creative solutions", including experimental uses of sites (BAFU, 2010, p.8). A summation provided by Kloos et al (2007) is that existing planning policy literature on temporary uses embraces both this pragmatic view of the creative industries' capacities to make use of brownfields, as well as a more idealistic view of creative activities as having a positive influence on the wider development of local economy and urban form. More than just providing rent returns on devalorised properties, as would temporary warehousing activities or carparking, creative workers add significant symbolic and social capital to these disinvested sites, thereby accelerating their recuperation into the wider property market (Becker, 2010; Smith, 1996; Zukin, 1982). In exchange for low rents, many creative workers invest a lot of their labour and expertise in modifying these spaces and bringing the public's attention to them (Bishop and Williams, 2012). Because artistic projects often pursue goals beyond the purely economic, they will also often be driven forward even in the absence of profits (Becker, 2010). BAFU (2010, p.107) strike a rare note of caution, pointing out that 'impetuous' creativity in temporary use can be disadvantageous for later users, if it brings adverse changes, damage or excessive wear to the building stock. Creative users may be wilful and unrealistic, making it difficult for landlords to manage properties and transfer them to new long-term tenants. Urban Catalyst (2001, 86) notes that creative

workers at the end of their temporary tenancy of Berlin's *Haus des Lehrers* were "stubborn, explosive and radical", and fought against relocation.

Inspiration in the creative use of vacant properties runs both ways. Original, creative activity is believed to be stimulated by vacated urban sites: their location, architecture, and former uses; the mixtures of new actors that are accommodated within the given configuration such sites; the dense communication networks and collaborations that often arise among these actors; and the new and temporary nature of site occupation. These conditions inspire new artists as well as established ones (Bürgin and Cabane, 1999; Angst et al, 2009; BAFU, 2010). The large scale, openness, and specialized infrastructure of many former industrial sites, which can present impediments to their recuperation for other long-term uses, is often attractive for the production and display of creative works, whether plastic arts, performance, media, or architecture (BAFU, 2010; Bishop and Williams, 2012). Jacobs (1961) argued that the lower rents of older, disinvested buildings enable creative, risky experimental tenancies, but it is not the low rents in themselves that encourage creativity; low rents can also attract and support marginal businesses that are not creative.

2.2 Consumption of Creativity

A second component of creativity is the innovative consumption opportunities that new, temporary uses of urban spaces can offer to residents and visitors. Different economic uses for derelict urban spaces are not necessarily in themselves novel activities or directly useful and interesting to the wider public; an architecture studio in a former factory is still a private architecture studio. Whereas creative production emphasizes the tenants' practices, the emphasis here is on innovations in the products of creativity, and in particular consumers' experiences in and of the temporarily transformed urban spaces themselves.

Creative temporary uses are valued because they enhance the general cultural diversity and vitality of urban areas, by adding to the range of open space, social, cultural and commercial amenities (BAFU, 2010), and enabling new combinations of such activities, as well as providing them in new and interesting locations where existing urban form, property values, government regulations and private management policies had previously precluded them. These uses also compensate for deficiencies in publicly-funded delivery of social and cultural amenities (Urban Catalyst, 2001). Temporary uses of urban sites can be more experimental than permanent projects that require larger budgets and face larger risks. They can cater to smaller and more specialized audiences. Unconventional and controversial uses are more likely to be tolerated if they are only occupying marginal spaces that were previously out of use, and only of relatively short duration (Bishop and Williams, 2012; Havemann and Schild, 2007).

Temporary uses of industrial brownfields and other derelict land often centre on the physical redevelopment of those spaces for public access and use. Many

temporary uses are publicly-accessible sculpture or landscaping projects which have no intrinsic commercial function, although they may serve as attractions that stimulate spontaneous spending or long-term investment in their surroundings. This includes the provision of new kinds of informal, accessible spaces where the public can act, perform and interact: temporary places for relaxation, participative sports and games, commemoration, and protest (Bishop and Williams, 2012; Franck and Stevens, 2007; Haydn and Temel, 2006). Among 43 pioneering temporary uses showcased in a government-sponsored study of Berlin (SenStadt, 2007), a majority were novel open spaces for public use: community gardens (9), accessible open spaces for people and animals (8); sports areas (7); and artificial beaches (6). Such spaces and activities are, in contrast to creative industries, inherently unproductive, and therefore of relatively little interest to the mainstream economy. Their transcendence of the means-end rationality which governs long-term land use planning underscores their inherent worth and meaningfulness to culture. Temporary gardening is one oft-documented creative form of user engagement with urban brownfields which is nominally productive (SenStadt, 2007; Becker, 2010), but this productivity falls well short of what urban property market prices would demand.

Creative public use of formerly-vacant sites often engages with and enriches the particularity of space and local identity. For example, intensive, varied temporary uses of Berlin's *Palast der Republik* prior to its demolition sought to critique and experiment with the history and future of the building and of the East German society that produced it, to encourage a broad political, cultural and practical re-evaluation of its legacy (Urban Catalyst, 2007; Colomb, 2007). Creative temporary uses are thus argued to be 'identity-giving' (*identitätsstiftend*) (Krauzick, 2007).

In all these respects, the creativity of temporary uses is primarily seen in terms of its benefits to social development, rather than property development. Temporarily unused spaces provide physical and temporal windows of opportunity for public appropriation of real estate for alternative cultural needs that are not met by the open market. These temporary uses might not in themselves be profitable. Indeed, the aim is that the city and its citizens reap the advantages of private capital investments in the provision of services that enhance general quality of life.

Some innovative temporary consumption spaces do indirectly serve aims for economic and property development. Berlin's government has increasingly used entertainment- and leisure-oriented temporary uses as a form of city marketing, presenting such projects as "new playgrounds for artists, creatives, young travellers and tourists, thus shifting the focus (away) from the iconic sites of inner city redevelopment such as Potsdamer Platz" (Colomb, 2012a, p.243). Such offerings attract creative workers who seek a high degree of quality, variety and novelty in urban leisure offerings (Jorg, 2008). A report commissioned from Munich's city department of employment and business puts this clearly:

> Quality of life and a climate of openness and diversity are key criteria for the attractiveness of a location for highly skilled and creative workers… varied lifestyles create an inspiring and stimulating environment for creative working people… Arts and Culture are of particular importance for the quality of life of creative knowledge workers. Because the highly skilled especially demand art and culture in their spare time, a comprehensive cultural offering in the city presents highly creative people with a source of inspiration for their own creative production… Whether high culture in opera, theater and museums or the cultural scene in bars, in temporarily used army barracks, old factory buildings and brownfield sites, or temporary events in the summer such as Corso Leopold, the Streetlife Festival, and the "beach" on the Cornelius Bridge of the Isar River - these are all appealing pastimes for creative knowledge workers. In addition, they help highly creative people with ideas for new products and services that are economically viable and that set new trends. (RAW München, 2007, p.22, author's translation).

Similarly in Berlin, pioneering temporary use projects "personify unusual but attractive urban lifestyles and hence cater to a demand that traditional urban structures fail to meet… The broad range of temporary use projects in Berlin has become a PR and economic factor for the city… a catalyst for the relocation of international companies (and) an attraction for tourists" (SenStadt, 2007, p.41).

Where the theorisations of creative productivity outlined in the first section of this paper emphasise tangible material benefits, through increased economic activity and reinvestment in the built environment, creative consumption activities on disinvested urban sites are believed to enrich the general quality of urban life, in both the short and long term. The example of sport and leisure activities shows that citizens can have a participatory role in such re-activations of spaces.

2.3 Creative approaches to urban development

A third distinct aspect of creativity in the theorization of temporary use of brownfield sites links directly to urban planning practice. It is argued that governments, planners, property owners and temporary users all need to be more creative - i.e. innovative - in the rules, processes and investments they use to shape current activity on urban sites and future property development. This conforms to the broader historical case argued by Hall (1998), that in addition to cultural, intellectual, and artistic creativity, cities also thrive and develop through the technical and organisational creativity of city managers, particularly in terms of their engagements with local entrepreneurs (Jorg, 2008). In the context of temporary uses, urban planning is not merely a supportive conduit for creativity, but its target:

> Here a fundamental distinction must be made… The first thing that can be observed is the creativity and innovation within temporary uses. This

> means that within temporary uses, innovative things may arise. Secondly, temporary uses can contribute to innovative urban planning. This occurs particularly through the experimental nature that temporary uses often exhibit, which through the resultant urban development can demonstrate alternative solutions for various problems (Waldis, 2009, p.48, author's translation).

This latter conception of creativity as innovative planning centres on an expanded decision-making role for the users (i.e. tenants) of urban spaces, vis-à-vis their owners and regulators. Temporary users of sites are celebrated in theory as 'pioneers' who lead and demand the attenuation or renegotiation of official planning strategies and controls and lease terms, and the opening up of both urban spaces and planning processes to a diversity of visions and inputs (SenStadt, 2007; Groth and Corijn, 2005). Some analysts go so far as to portray creativity as a general characteristic of temporary uses (Dransfeld and Lehmann, 2008). With temporary uses, creative agents are able to demonstrate "not only the possibility but the necessity to overrule conventions, guidelines and red tape and conquer the murky terrain of legal and social obligations" (Kreuzer, 2001, p.19). Rules and relationships are negotiated across a broad scope of conditions including lease duration, uses, rent levels, guarantees, insurances, and utility costs. The public sector and site owners provide many kinds of direct and indirect financial and professional advice to attract and enable new users. New kinds of leases and permits are developed to suit tenant needs and capabilities (SenStadt, 2007). The need for creativity inevitably rests with whichever actor is taking the initiative to encourage temporary use in a given location, according to three different scenarios: user seeks property owner, user seeks property owner, or urban developer seeks property owner and user (BMVBS/BBR, 2008).

Creativity on the part of property owners involves flexibility and innovation in how they seek to meet their short- and long-term financial goals. This means "engaging in 'creative' (sic) reactivation of brownfields and underused sites beyond the typical economic recovery patterns of property" (Kloos et al, 2007,p.6), and creativity in finding appropriate sets of tenants for large sites and buildings (BAFU, 2010). "Creative rental concepts" may include short-term or even provisional leases, low rents supplemented by business profit-sharing, and cost-only rents to entice key attractors from art and culture to a location to enhance the marketability of other properties (Rosic and Froessler, 2009). Such innovations require that landlords become more exposed to short-term market risks. The flexibility, creativity and spontaneity of actors from the creative industries often clash with the expectations and existing approaches of property owners and managers. Such mental barriers require openness to dialogue (BAFU, 2010). On the positive side, temporary creative uses allow landlords to test out and demonstrate the feasibility of new uses, which also helps market sites to potential long-term users (Becker, 2010). Creativity is also applied to the place marketing process itself: temporary uses of derelict areas provide new techniques

and new imagery to attract new groups of consumers and producers (Colomb, 2012a).

These various kinds of creativity in land marketing, planning and management processes may or may not involve tenants from the creative industries. One analysis, of the redevelopment of a former slaughterhouse for "research-oriented, innovative companies, creative business and cultural institutions" (Schwarting and Overmeyer, 2008, p.62, author's translation), uses the German term *kreatives Gewerbe* ('creative business') rather than the usual term *Kreativewirtschaft* ('creative economy'), and notes that less financially successful artists can no longer afford the rents at this site. A major German government guide to temporary uses is careful to differentiate between the roles of 'creative industries' and innovative 'entrepreneurs', and uses the expression 'artistic-creative temporary uses' to clarify one case where both aspects are brought into play (BMVBS/BBR, 2008, p.92). These two aspects overlap most clearly in the environmental design disciplines (architecture, landscape architecture, urban design, interior design), where the core creative competency is the redevelopment of built form. These businesses are often heavily represented in the temporary use profiles of brownfield sites (Bürgin and Cabane, 1999). These actors are often forming small, new firms to pursue new kinds of projects, clients and funding. They can readily imagine, enhance, and capitalise on both the productive usefulness of individual properties, for their own business, and on the wider spatial and symbolic potential of the surrounding brownfield area and the redevelopment processes going on within it, when selling their services to other temporary and long-term users (Lange, 2008).

The dual aims of creatively utilising brownfield sites and facilitating the creative industries have also given rise to a new category of non-governmental, entrepreneurial mediating organizations whose role is as a conduit of information and negotiation between actors who need affordable space, the potentials of vacant buildings, and planning policies that regulate the development and use of those sites (Oswalt, 2002; Kruse and Steglich, 2006; Brammer, 2008; BMVBS/BBR, 2008; Angst et al, 2009). These organisations include 'Urban Residue', 'Golfstromen' and 'Urban Resort' in Amsterdam, 'SpareSpace' in Groningen, 'Precare' in Brussels (Jorg, 2008), 'k.e.i.m.' in Basle, and 'Coopolis' and 'Stattbau' in Berlin (SenStadt, 2007; Blumner, 2006).

For government planners, temporary uses of urban spaces by the creative industries can support the development of innovative planning strategies and policies in three distinct ways: as stimulus, delivery mechanism, or goal. As an inspiration or need for planning, temporary uses "can stimulate the creative process of urban design" (Bornmann et al, 2008, p.18, author's translation), by suggesting new combinations of uses and end-user groups, and demonstrating alternative physical development potentials. Temporary uses also inspire a rethinking of planning processes through a creative understanding of how development happens, particularly in terms of the engagement of a wide variety of

actors in decision-making and risk-sharing (Schwarting and Overmeyer, 2008). Because creative use projects on brownfield sites are often interdisciplinary, they require interdisciplinary action and policies from local governments (Becker, 2010). The complexity of creative temporary uses tends to necessitate the development of innovative forms of supervision, mediation or 'brokering' between and among government agencies, property owners and site users, and to inspire higher raised levels of citizen engagement in the planning and execution of projects (BMVBS/BBR, 2008; BBR, 2004).

In addition to seeing creative temporary uses as a conceptual inspiration, planning harnesses such uses as a practical tool to shape and test longer-term options for planning processes, regulations and physical development. Creative uses' typical attributes - small scale, low capital investment, flexibility and orientation toward rapid, visible outcomes – mean that they provide a relatively cheap, low-risk, constrained but extendable way of bringing innovations into urban planning. They present opportunities for cities to try out new policies and management approaches for urban development. Such 'laboratories' or 'test phases' develop the competence of various actors (including the government itself) and build trust between them (Becker, 2010; BAFU, 2010; Waldis, 2009). In addition to being 'truffle pigs' for later investors (Lange, 2007, p.136), artists are thus also guinea pigs for planners.

The two drivers of planning innovation outlined above can be applied in pursuit of many different planning goals, and the promotion of many kinds of land use, whether temporary or long-lasting. Although existing literature seldom identifies tools and policies that are focused on facilitating temporary creative industry tenancies specifically, suitable instruments appear to include giving creative users advice, financial support, and preferential access to sites, and providing detailed databases of available sites (SenStadt, 2007; Böhme et al, 2006). Oft-mentioned is the desirability of a user- and goal-oriented 'one-stop-shop' (Schwarting and Overmeyer, 2008) where potential temporary users - many of whom have little experience with the world of urban development and its regulation - can get advice and acquit the many necessary permissions; or less eloquently, a '*fachämterübergreifender Arbeitskreis'* (interdepartmental working group) to facilitate local government approvals for temporary projects (Schlegelmilch, 2009, p.498). As mentioned above, new non-governmental mediators have also sprung into existence to occupy this interface, often with a normative orientation toward encouraging fledgling uses.

Healey (2004) notes that creative approaches to governance and governance that fosters a creative society are not incompatible. Many analysts nevertheless doubt the capacity of formal, 'top-down' planning and its tools to be creative and proactively supportive of creative temporary uses. Groth and Corijn (2005, p.521) contrast the creative temporary uses of urban wastelands against the lack of imagination and creativity shown by long-range, large-scale planning which has allowed such wastelands to arise in the first place: "creative environments do not

spring into being as a result of top–down measures… they occur in the temporary lack of planning". Similarly, Larsen et al (2011, p.88) suggest "a possible alternative to the conscious design for creativity… sometimes creative practices emerge in the spaces that only wait for future development… sometimes the temporarily empty spaces make room for surprising innovations that otherwise would not emerge".

Bishop and Williams (2012) note that creative uses are difficult to create 'top down' because these uses are themselves intrinsically 'bottom up'; the most important prerequisites are cheap rents, flexible spaces, and freedom from constraints. In keeping with Jacobs' (1961) theorisation of the role of old buildings in ensuring city diversity, it is the absence of commercial attention to urban spaces that allows new, creative actors, who have different, risky ideas and who are not purely motivated by profit, to inhabit and operate in lively parts of the city, and thereby contribute to the processes of re-imagining, re-using and re-developing these areas. Becker (2010) suggests that the spontaneous, unplanned, short-term uniqueness of temporary creative uses is at odds with planning's general focus on fixed long-term visions. He argues that the emphasis needs to be on processual aspects: local governments showing openness to experiment; setting a clear basic framework of roles that creative actors can play, to provide clarity and certainty to their efforts; and 'creative support', rather than control, through new, flexible 'instruments of liberation and toleration' (Becker, 2010, p.81, author's translation).

Hall's (1998) emphasis on the importance of exchanges between cultural, intellectual, artistic and managerial creativity highlights that innovations in the practices of the various actors are connected: their interactions stimulate their creativity. This process is not necessarily smooth and cooperative. Angst et al suggest that in the case of Zurich's railyards, creative temporary use was inspired dialectically, through opposition to the interests of planners, government and the property industry: "the erstwhile forbidden nature of the former industrial zones and the illegal appropriation of many factories was part of the subculture that established itself (there) against speculation, discrimination and exploitation and in favour of alternative culture" (Angst et al. 2009, p.32, author's translation). The way that the temporary users engaged with regulation and order in this case also lent itself to creativity and difference in outcomes. Colomb (2012b) points to fundamental tensions between the increasing profitability and marketability of successful temporary leisure uses of urban sites, government policies that rigidly prescribe the desirable range of creative temporary uses, and the great wealth of informal, experimental, often unconventional practices, not all of which can achieve political or economic traction.

3. Analysis - Creativity unleashed: governing temporary uses

This closing section examines the implications of the contemporary emphasis on creativity in the production, consumption and planning of temporary uses, as

outlined above, for a general theorisation of the appropriate role and form of planning in shaping urban redevelopment and local economic activity. In broad terms, theory suggests the desirability of a liberalisation of both economic activity and strategic decision-making, by encouraging the participation of a wider range of small-scale private investors, producers, and consumers. More diverse inputs and less regulations imply the introduction of new ideas and approaches.

The emphasis within recent theorisations of temporary uses in European cities such as Berlin, on the key role of pioneering, artistic individuals who revitalise urban spaces and define new leisure lifestyles for highly-mobile urban residents, has ample parallels to earlier waves of gentrification that have been documented in post-industrial New York and London (Colomb, 2012a; Zukin, 1982; Hamnett, 2003; Pratt, 2009). Creative actors are portrayed within the context of a 'new frontier' that demands self-sufficiency, initiative, and independent action (Smith, 1996). Both artists and the unused spaces they discover and transform are seen as among "the few remaining pools of untapped resources" that define this particular frontier (Colomb, 2012a, p.244, citing Peck, 2005). Successful exploitation of such opportunities rests on governments allowing and encouraging mobile, creative minds to rush to these new goldfields of symbolic capital. Temporary artistic uses of urban space fit well to neoliberal demands:

> informal, spontaneous (temporary uses)… whose primary characteristic is the use of available urban, programmatic, economic open spaces… also have other features that make them perfectly compatible with the neo-liberal economy, from shifting risk to individuals to accelerating the use of space. (Pogoreutz, 2006, p.79)

> Persons engaged in the cultural sector and temporary users coincide with the current principle of short, fast utilisation cycles… the frameworks of both temporary use and subculture activities demand the same characteristics as contemporary entrepreneurial thinking: flexibility, cost-consciousness, environmental friendliness, efficiency, innovation, contemporary thinking, connectedness and liberality. (Erismann, 2011, p.23, citing Bürgin und Cabane, 1999)

Temporary artistic uses of derelict urban sites can indeed be seen as a rather practical case of post-fordist production: exploiting the niche of these amortized investments; accelerating their recommodification; optimising their economic potential by enhancing their variegation and cultivating new consumer groups; distributed networking of production; and minimal capital outlays on construction and infrastructure, focusing instead on 'mediatisation' of the product, which gives urban space the status of a service or an event (Ioannides and Debbage, 1997; Gale, 2009), or a web page or piece of software that users can "populate and repurpose" (Bishop and Williams, 2012, p.188; SenStadt, 2007). This re-production process is best achieved if there is a reduction of structural rigidities in the property and labour markets and in land use regulations (Haydn and Temel,

2006). Urban Catalyst (2001) note that in parallel to economic forces and technological development, two other significant causes of long-term vacancy on urban sites are the political and bureaucratic inertia of the planning system and mis-judgment of the demand for particular uses. Economic liberalisation thus lies at the core of the phenomenon of creative temporary uses. This liberalisation also brings about more rapid and widespread availability of sites for temporary occupation, by accelerating the amortization of existing investments in land (Oswalt, 2001; MA18, 2003). The dynamics and diversity of disinvested urban spaces stimulates artistic creativity, which in turn serves consumers' rapacious desire for novel products (Bishop and Williams, 2012, citing Jameson, 1999 and Klanten and Hübner, 2010).

The 'creative' (i.e. new) governance approaches that have been identified as appropriate for entrepreneurial temporary uses appear to cover a spectrum of levels of agency, from permissiveness through facilitation to direct participation. 'Creative' planning for temporary uses often appears to mean less planning, allowing more flexibility in land use, construction, and risk management. One proposed strategy is increased toleration (*Geduld*) of temporary projects, even when they have no formal planning permission. Such a stance implies that a creative re-use is recognised as being somehow beneficial, even when it falls outside the framework of the local government's and landlord's understandings of their own objectives and interests, or when it is technically illegal (SenStadt, 2007; Dransfeld and Lehmann, 2008). Such judgments depend on careful distinctions and calibrations between short-term and long-term benefits and negative impacts, and the availability of appropriate alternative mechanisms to measure and control these. Prevention of temporary uses that are undoubtedly undesirable is acknowledged as an important tool in ensuring that sites remain available for other potential temporary uses that might offer more benefits (SenStadt, 2007). The question arises as to if or how the potential benefits and impacts that a discovered temporary use has on its site and surroundings might be assessed, and by whom, if not through standard planning approvals. Although cases have been documented where tolerated uses later receive sanction, and even eventually permanent permission (BMVBS/BBR, 2008), a strategy of tolerance brings into question the relevance, predictability and consistency of the entire planning process.

The technical instruments available for governing temporary uses include specification of temporary uses for particular locations within local development, land-use and redevelopment plans, and permits for so called 'flying buildings' which, once approved, can be relocated repeatedly, with time restrictions on any given site. Several other tools are rather new and untested in the German context: uses that are permitted 'as of right' without need for inspections and permits, the granting of time-limited and conditional planning permissions, and the revocation of existing permissions when a building is demolished or a longstanding use ceases, as a way of opening up spaces for other short- or long-term use options (SenStadt, 2007). Many of these tools illustrate planning and its instruments

themselves becoming more temporary, focused on fine-tuning of current, localised performance outcomes instead of defining general long-term certainties. Such creative approaches are potentially complex, resource-intensive, disruptive and imperfect, but as Healey (2004, p.98) notes, "risky, experimental governance requires some redundancy (short-term inefficiencies) and learns from failure as well as success". As noted earlier in this paper, the justification for operational risks and potential failures is seen to lie in the capacity of the creative uses thereby facilitated to increase productive output, enhance local quality of life, and reform planning approaches themselves. As also already noted, the limited temporal and spatial scope of these experiments also confines their risks.

Facilitative and proactive roles for government include supporting, commissioning, financing, partnering, and marketing temporary uses. The creative potential of planning to facilitate temporary use includes "financial and creative enthusiasm for investment" (*monetärer und kreativer Investitionsfreudigkeit*) (Kruse and Steglich, 2006, p.17, author's translation). This suggests a characteristically neoliberal coupling of subsidies and deregulation. Planning's encouragement of the temporary use of urban spaces by creative actors fits the wider neoliberal shift from stable government-led urban service provision and regulation to flexible, facilitative governance, and increasing reliance upon entrepreneurial efforts and short-term, footloose private investments (Blumner, 2006; Groth and Corijn, 2005). In a time of reduced public spending, the vision of artists as "entrepreneurial self-starters" and "role models for a neo-liberal society" is not without its problems. These actors carry significant costs and risks; relatively few reap great rewards from success, and successful exploitation of an urban area forces out unsuccessful artists who cannot afford increasing rents (Lange, 2007, p.142).

The scope of roles and modes through which the public sector can shape a temporary use project so as to pursue public benefits and minimise negative impacts typically goes well beyond more-or-less antagonistic regulation. Governance of temporary uses is also enacted cooperatively by the public sector as one of many actors within complex networks. The public sector is often landlord, manager, funder, guarantor, and/or provider of goods, services, staff and expertise for temporary uses, and therefore contractual agreements provide significant scope for steering or hindering the development and operation of those activities in the public interest. Creative planning does not inevitably mean not planning. Dransfeld and Lehmann (2008, p.72) suggest that creative production should not go unregulated. To prevent temporary creative uses from unexpectedly becoming permanent and displacing envisaged long-term uses, they argue that governments and landlords should develop "creative shackles": contractual agreements between landlords, users and other stakeholders to consensually define targeted scopes and timeframes for temporary uses. Rather than just holding out carrots or sticks, planning can thus act creatively to govern temporary uses by wearing different hats, negotiating complex relationships and developing new frameworks.

4. Conclusion

In conclusion, the recent development of theory and practice related to temporary uses illustrates Healey's argument that governance is not incompatible with creativity:

> too much risk and uncertainty may inhibit creative responses ... This implies that governance processes which seek to encourage creativity and innovation … need to perform a delicate 'trick' of taking risks themselves in order to lessen the risks and uncertainties for others… Over-management… destroys more capacity than it builds (Healey, 2004, p.91).

Recent calls to support creativity through planning and creativity in planning tend to imply not just different land uses and ways of administering them, but more permissive approaches that tolerate more varied land-use activities and pursue a wider range of goals for a greater range of actors. These actors had presumably been excluded or undervalued by earlier planning practices, and both traits of creativity and temporariness point toward groups of actors (artists, ethnic minorities, young people) who have neither the political nor economic power to see their interests prevail in ordinary property markets and through standard urban development practices. The discourse of creativity also tends to suggest an emphasis on use rather than on built form, even when the practices in question often involve creative reinterpretation of the urban fabric. The focus of attention is clearly on the processes and benefits of urban development, rather than on pre-defined physical visions.

Calls for planning to introduce creative forms of control, or tighter guidance for the many kinds of new and untested land uses, are greatly exceeded by demands for more permissive planning tools that free up the unrealised potential of creative actors. It can be argued then that the emergence and spread of temporary use thinking in the German-speaking world reflects not only the decline of former urban industrial areas (which is less prevalent in Austria and Switzerland), but also as a response to the particular rigidities of German-style planning systems, with temporary uses, creative or otherwise, merely being a spur for this reaction.
The specific theorised connection between temporary use and creative industries would appear to be twofold: artistic people are good at adapting how they work to new spaces that lack tenants, and they are good at enhancing those spaces. But conceptually conjoining creative enterprise and temporary tenancy implies that creativity is economically precarious and expendable. If the ultimate goal for many creative workers is long-term employment, that should also be the goal of public policy. In this context, policy tools such as 'creative shackles' can be beneficial in clarifying for these ostensibly precious creative workers if and how particular temporary use arrangements benefit their own long-term visions.

The other side of the same coin is that even the most optimistic and selective data shows that the vast majority of urban work is not creative, in the narrow defined sense of artistic production. Innovation, on the other hand, is a desirable trait in most work practices, and attention to not-creative, but innovative, and even thoroughly commercial temporary uses of urban sites could probably reveal significant scope for enhancing land utilisation, economic productivity and benefits to end-consumers, which would suggest a very different range of objectives and potential planning tools for temporary use.

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Territorial Impact Assessment of European Directives

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Abstract

This paper presents the results of a project financed by the European Observation Network, Territorial Development and Cohesion (ESPON) on the assessment of territorial impacts of European policies (i.e. directives and regulations) at regional and local levels of decision making in EU member states, which was conducted from November 2010 to May 2012.

The methodological approach of the project consisted of two main elements; (a) an analytical element, which revolved around document/ literature reviews, modelling exercises and applied work; as well as (b) an interactive learning element, for which learning networks in each, the UK, Portugal and Slovenia were established. Each learning network consisted of up to 15-20 members, representing public and private sector representatives involved in spatial / sectoral planning and assessment at different decision making tiers and from different geographical and administrative levels of a specific member state. The main purpose of the learning networks was to critically and pro-actively evaluate, comment on and influence the work produced through the project's analytical element.

The outcome of the project is a territorial impact assessment (TIA) methodology which has been tested by local and regional administrations in Portugal, Slovenia and the UK. The methodology is flexible in order to allow for application in different EU member states which have very different planning traditions and approaches. It is hoped that TIA will allow to establish a more reliable picture of the territorial impacts of European policy proposals.

Introduction

Since the 1990s interest in territorial impact assessment (TIA) has emerged and taken hold in the EU. Whilst early thinking at the European level framed TIA in relation to projects, more recently it has been framed as a policy assessment tool (Böhme 2004) and as a solution to the problem of the occurrence of unanticipated impacts arising from EU sectoral policies in EU member states. To date, these have been found difficult to detect in advance.

Whilst a single approach to TIA has yet to take form, the ESPON (European Observation Network, Territorial Development and Cohesion) Programme has conducted some significant work in this area. This paper presents the outputs of a recent project in this field, proposing a practically orientated TIA methodology, developed in conjunction with practitioners. This has been designed to be applied at the EU member state level to allow member states to anticipate policy impacts and thus to respond to emerging EU policies to minimise negative and maximise positive outcomes.

The paper begins by outlining the background to the project and the methodology adopted. It then proceeds to detail the TIA approach developed and concludes by highlighting some of the possible barriers to implementation and further research needs.

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Background to the ESPON EATIA project

Conceived as a follow-up to the Action Programme of the first Territorial Agenda (2007), which encouraged further work orientated towards the introduction of TIA into the policy making process, and building on the subsequent conclusions of an EU seminar on the territorial impact of EU policies held in Amsterdam in 2009, the ESPON EATIA project sought to develop an approach to TIA which differed in two main respects from much of the previous work in the area. Firstly, the concern was to develop an approach that could be embedded at the EU member state level, differing from other ESPON work which to date has focused largely on a top-down EU level of application often searching for possible complementarities with the European Commission's impact assessment (IA) procedure. Secondly, at the heart of the approach was a concern for operational considerations. The approach was to be sufficiently simple so as to be easily comprehensible to end users - policy makers - not to have onerous resource requirements, and also, where possible, able to be latched onto pre-existing member state arrangements and procedures rather than necessitate the formulation of entirely new specialist bodies or processes. Given the variety of member state structures and administrative procedures, this latter aspect meant that the approach, by necessity, also had to be suitably flexible to be applicable in a range of governance contexts.

TIA was interpreted in the project as a supportive tool in the policy making cycle. It was seen as a means of identifying and evaluating the spatially differentiated impacts of EU policies to promote policy coherence between EU, national and sub-national policies. These impacts include those on spatial usage, governance or on wider environmental, social, economic, dimensions of a territory. The TIA approach considered in the project was to be embedded at the member state level and involve the interaction of national, regional and local stakeholders in the process. For member states this would mean that they may better understand and respond appropriately to EU initiatives by drawing on the insight of regional and local actors, whilst at the same time giving regional and local stakeholders a channel through which they could feed into the EU and national (i.e. transposition) policy-making processes. From an EU perspective, potentially, it would mean the development of policies that may be more sensitive to the spatial dimension and responsive to the territorial diversity of the EU territory, overcoming some of the significant challenges (e.g. data) of accounting for the territorially heterogeneous nature of impacts in a top-down manner, e.g. through IA.

Methodology

In light of the project's ambition, central to the adopted methodological approach was a partnership with the public authorities responsible for spatial planning in three diverse member states, the UK, Portugal and Slovenia. These authorities constituted the project's stakeholders and the three countries were to function as case studies to facilitate the development of a flexible TIA approach that would have wider applicability.

Within each of the stakeholder countries, national networks of spatial planning and policy making practitioners were established in conjunction with the national stakeholders. These groups were entitled 'learning networks' and were each made up of between 15 and 20 national practitioners from various administrative levels. The idea behind these networks was to provide a point of contact between the research team and the potential end users of the approach which was seen as being vital

in developing an approach that had practical considerations at its heart. These groups were consulted throughout the lifetime of the project and provided feedback and suggestions on various aspects of the methodology as it developed. This included three parallel workshop sessions held in each of the stakeholder countries near the beginning, mid-point and end of the project, as well as dedicated testing workshops in which selected practitioners were invited to apply and evaluate various draft versions of the proposed approach. These groups were highly influential in the design of the proposed approach which should be seen as the product of this interactive process.

A proposal for a TIA approach

In this section the approach to TIA developed under the ESPON EATIA project is presented. Following more established impact assessment traditions the approach has been structured around four sequential stages, namely, screening, scoping, assessment/analysis and evaluation. For each of these stages (1) supporting techniques and (2) governance arrangements have been developed to support the implementation of the approach at the member state level.

Appropriate *techniques* were identified working closely with practitioners in the learning networks. Whilst these had to be theoretically sound, they also needed to be pragmatic. In particular, the project's stakeholders required methods that would not have extensive data requirements, could be applied in a relatively short time frame, and were readily comprehensible. This was considered to be important in ensuring that the approach wouldn't overburden member state agencies engaged in the process, which would be detrimental to the acceptance of the methodology, and would still produce information of value to policy makers. Three main techniques are central to the approach and warrant mention here: *checklists, matrices* and *causal/logical chains*[2].

- *Checklists* are often useful in the early stages of impact assessment to ensure that key impacts of an activity are not overlooked (Glasson et al 1999; Therivel & Morris 2009; Lohani et al 1997). In the proposed TIA approach, checklists are structured around assessment criteria representing predefined important dimensions of a territory and serve to promote an early consideration of potential policy impacts.

- *Impact matrices* are a firmly established and widely recognised impact assessment tool (Glasson et al 1999). Depending on their formulation they are generally used to facilitate the identification of the effect of an action, or its sub-components, on criteria or objectives (Therivel & Wood 2005). In the TIA methodology matrices are employed to structure the assessment stage of the process.

- *Causal / logical chains* are another established impact assessment tool and have been employed previously in the context of TIA (ESPON ARTS). This method utilises expert judgement to identify the outcomes of an action by deciphering the cause-effect pathways of the intervention diagrammatically (Therivel & Wood 2005). It also has an additional role of

[2] Whilst these three techniques form the basis of the methodology, in line with the philosophy of the approach, there use still remains flexible. It is possible for these techniques to be replaced or adapted to reflect the traditions of the host member state, or to account for experiences over time, whilst still adhering to the underlying principles of the methodology.

outlining any underlying assumptions, thus promoting transparency. This approach is used optionally throughout the methodology to facilitate the impact identification process.

The *governance* dimension concerns the practical operationalisation of the approach within the administrative context of a specific member state. That is, the roles and responsibilities of specific agencies. As part of the project, specific governance arrangements were considered for implementing the approach in the UK, Slovenia and Portugal. Whilst these specific arrangements will not be detailed in this paper, general principles will be outlined that have been informed by our experiences of accommodating the approach in these governance contexts.

The following sub-sections provide a descriptive overview of the TIA framework developed, structured around the four stages of the TIA process:

1. Screening

- As is common place in impact assessment, the application of the main methodological aspects of the approach is preceded by a screening stage. The aim of the screening mechanism is to narrow the application of the assessment instrument to only those policies where it could usefully contribute to the decision making process and thereby promote resource efficiency.

- Screening decisions should be based on the case-by-case judgement of a designated body with expertise related to the policy area under consideration and also to territorial matters in the member state. In most member states screening will therefore be led by the government department responsible for preparing the national position on the particular policy proposal, or for transposing the policy nationally, working collaboratively with other departments. In particular this will include the department responsible for spatial planning which should also seek to ensure consistency in the application of the approach across policy areas.

- In line with the study's conceptualisation outlined earlier, the application of TIA is likely to be particularly desirable in cases where a policy is perceived likely to have unintended or undesirable impacts on the territory that could be significant in terms of contradicting national and/or sub-national objectives or polices. Whilst screening is a flexible process and depending on the policy proposal may not always necessitate the application of specific techniques, the causal/logical chain approach and checklist approaches can be used optionally, in isolation or in concert, to facilitate decision making in this area. Employing these methods requires that important territorial dimensions are firstly established that relate closely to national, and possibly sub-national, policies or objectives to allow impacts to be evaluated. These constitute the criteria that form the basis of the checklist approach and can be used to focus the logical chain exercise.

2. Scoping

- Policies that receive a positive screening determination need to undergo scoping. This stage endeavours to further elaborate on the impacts that may have already been partly identified in the screening process and to lay the foundation for the subsequent assessment stage. Scoping

will necessitate the same degree of interdisciplinary expertise as required in the screening process and in the interests of efficiency it will often be appropriate for the same body to have both screening and scoping responsibilities.

- The scoping approach is structured around a mandatory checklist (Fischer & Phylip-Jones, 2008). Essentially, this is an extension of that used on an optional basis in the screening stage and is developed in the same way requiring the prior definition of territorial dimensions reflecting national and possibly sub-national policies or objectives which form the criteria in the checklist. Differing from the screening checklist, however, impacts are considered in more depth. The impact of policies can, for instance, be considered in relation to their individual constituent parts, or policy elements, and the types or features of areas where potential impacts could emerge geographically are considered.

- The completed checklist serves to inform the development of an Impact Assessment Matrix (IAM). This is formed from the assessment criteria and policy elements identified in the checklist and functions as the template on which the assessment is based, specifying for each of these interactions the dimensions of the impacts that should be considered. These dimensions, or characteristics, should be appropriate to enable the impacts to be sufficiently evaluated. Three characteristics are put forward below. These can however be supplemented with other dimensions if necessary (e.g. impact probability), or reduced as considered appropriate.

    - Magnitude: referring to the size or scale of the impact.
    - Orientation: this refers to an impacts direction of action, i.e. whether it will result in an increase or decrease in terms of a given criterion, e.g. ‘employment’.
    - Temporal distribution: this refers to the impacts duration, e.g. whether it is short, medium or long term.

- In the scoping stage the geographical extent of the assessment exercise can also be determined. Whilst it is preferable for the assessment to cover the entire territory in order to develop a comprehensive picture of the potential impacts, this will not always be feasible. The assessment exercise is conducted at the sub-national level and in some member states this may be hostile towards a comprehensive approach. In England, for instance, recent changes to the planning system mean that the TIA would most readily be conducted at the local administrative level. This geography encompasses over 300 units, the engagement of which would be impractical in a fit-for-purpose TIA approach. In these cases scoping can additionally incorporate the identification of specific case study localities that can serve to be indicative of wider potential impacts.

3. Assessment / Analysis

- The aim of the assessment/analysis stage is to identify potential change in a territory, or territorial unit, as a result of a policy. This stage is foreseen as a sub-national level activity and can be conducted at either the regional or local administrative levels.

- This exercise is structured around the IAM developed in the scoping process which specifies the impacts and the characteristics that should be considered in the locality. The completion

of the IAM should be undertaken in a participatory interdisciplinary setting based on the judgement of stakeholders familiar with the area concerned, drawing on available information and evidence whenever possible. Whilst top-down approaches to TIA have typically conducted the assessment based on NUTS regions, this approach necessitates the use of functional/administrative geography in order to engage agencies or bodies with existing operational familiarity with the sub-national territorial units in the member state. This in particular will include planning departments.

4. Evaluation

- The evaluation stage concludes the TIA process. This stage is concerned with synthesising the outputs of the sub-national assessments (e.g. mapping) and evaluating the significance of the likely policy impacts. Significance, as used here, is understood as being dependant on both the nature of the likely impacts and the context in which they occur. That is, whilst impact characteristics such as magnitude, probability, spatial distribution, and duration, etc, can be used to describe potential impacts, they alone do not determine whether they are significant (George 2010). The significance of the policy impacts is determined by looking at their characteristics in light of defined policy objectives (Fischer 2007).

- The evaluation exercise is conducted by employing an Evaluation Table. Here the collective impacts identified in the sub-national assessment exercise are interpreted in terms of their compliance with the policies or objectives on which the criteria used in the assessment stage were based. The evaluation is undertaken using a 5 point scale (-2, -1, 0, +1, +2), which indicates whether the anticipated policy impacts are considered to be positive or negative for a given objective and also their degree of significance in this regard (neutral to high). Whilst this is ultimately a judgement based exercise, the use of the Evaluation Table allows for a high degree of transparency with written justification required for each determination.

- In principle, the evaluation of a policy's potential impacts can be conducted at both national and sub-national levels. Whilst it should be seen as a mandatory requirement at the national level and will normally be led by the government body responsible for developing the member state's negotiating position, or transposition strategy, in collaboration with other departments. It can also be conducted at sub-national levels by the agencies engaged in the assessment stage, allowing for the evaluation of impacts against sub-national policies or objectives.

Conclusion

The TIA methodology has been developed in conjunction with stakeholders in the UK, Slovenia and Portugal and has been tested in each of these countries. Testing has shown that those with existing experience in impact assessment are likely to find the TIA methodology approach simple and straightforward to apply. Whilst inexperienced individuals will require more time to familiarise themselves with the approach, testing has also shown that once a person starts with the assessment, they usually find themselves handling the TIA methodology in an effective manner quickly.

Fundamental to the approach is expert judgement and, as part of this, collaborative working between government agencies across multiple sectors. Accordingly, one of the main barriers to the implementation of the approach is likely to include the resistance of different departments / administrations to co-operate in the manner envisaged. At the sub-national level, regional / local authorities may also be sceptical about the possibility to be able to influence the policy making process at the European and national levels, and may consequently be unwilling to invest even minimal resources in TIA. Getting around these potential issues will require that the approach is actively promoted and championed across government.

Whilst the TIA methodology has been shown to be a promising approach, further testing is still required. This includes applying it within the real time policy development process, to date testing has been confined to mock ex ante exercises, and also in other EU member states. How to deal with trans-boundary issues in the assessment process also needs further discussion.

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Toward Integrated Flood Management in Kampala, Uganda

Dr. Richard Sliuzas[1]

Abstract

Many cities are taking initiatives to increase their resilience in the face of climate change. Despite considerable uncertainty about the nature, speed, and location of specific climate change variables municipalities need to be thinking about possible scenarios and developing strategies to mitigate climate change effects. In relatively poor cities, such as the Ugandan capital, Kampala, these are not trivial issues, as many resource constraints exist. The approach that is being developed for a new UN-HABITAT project on integrated flood management in Kampala under the Cities and Climate Change Initiative is described in this paper. Flooding is a major problem in Kampala that already has substantial effects on all aspects of urban life, and greatly affects the quality of life of the city's urban poor who are particularly vulnerable to flooding and related problems. A two pronged approach is adopted that deals with the vulnerability issues of specific communities as well as city wide flood risk assessment. The two levels of analysis provide insights that can be used for strategic planning and the identification of strategic interventions to enhance Kampala's resilience to flooding.

1. Introduction

Urban flooding may be fluvial (caused by rivers bursting their banks), coastal (due to tidal waves and storm surges), pluvial (due to overland flows caused by runoff rates that exceed the capacity of natural and artificial drainage systems), ground water floods, and artificial system failures. The causes of flooding are usually a complex combination of natural, technical and human factors but are often the result of an inability to satisfactorily deal with the concentration, transportation and discharge of surface water runoff (Jha et al., 2012). As severe or frequent flooding may have high and long lasting impacts and costs the adoption of good practices for sound surface water management to minimize flood risk is a critical component of urban sustainability. Moreover, it is becoming more important in those cities where climate change is associated with increasing amounts of rainfall and or increasing rainfall intensity.

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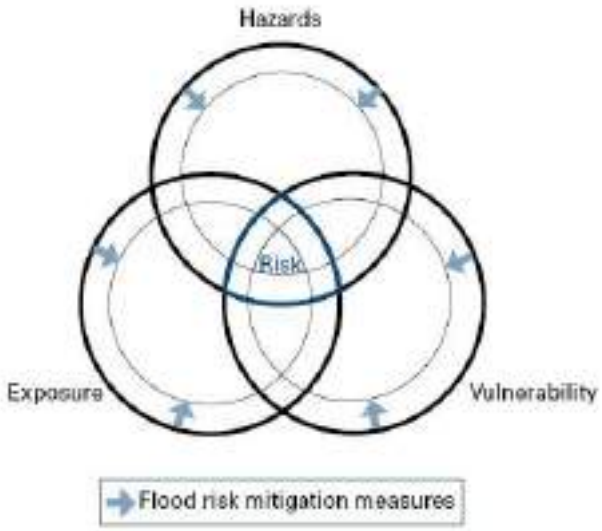
This paper examines on-going work to identify strategies to contend with flash flooding in Kampala, Uganda. Flash flooding, a form of pluvial flooding, is a widespread phenomenon in cities where extensive and intensive rainfall events that exceed the drainage capacity commonly occur. Severe storms that are occur in tropical cities are therefore likely to be problematic, especially in cities such as Kampala with relatively few technical, financial and human resources and a high degree of poverty and informal development.

Traditionally surface water management was seen primarily as an engineering problem. The classic response to flooding by civil engineers (and physical planners) was therefore to increase the capacity of artificial drainage systems to remove the surplus water as quickly as possible from the city and the affected neighbourhoods. Such approaches have though become the focus of increasingly critical discussion for several reasons. Engineering solutions are expensive to build, operate and maintain and are not easily adapted to higher rainfall regimes expected under climate change; the rapid discharge of massive amounts of water can create flooding problems downstream; ground water levels in urban areas may be depleted over time due to reduced infiltration as a result of increasing imperviousness, in combined storm water/sewer systems untreated sewerage may be discharged into natural streams causing pollution.

2. Integrated flood management

The integrated flood management (IFM) approach takes a more holistic view of flood management than the traditional engineering perspective. IFM is distinguished by its shifting of the focus from a reactive to a proactive response to flooding i.e. from flood control to flood management (APFM, 2006). In doing so it aims to develop an integrated package of instruments that target one of the three main components in any disaster event: the hazard itself, the degree of exposure or the degree of vulnerability (see figure 1). The management and hopefully reduction of flood risk therefore becomes a concern for all societal actors and not just the city engineers, though their expertise is certainly an essential element that should not be disregarded. Experience has shown that actors from all segments of society play various roles throughout the entire disaster management cycle with its three main phases: response, recovery and preparedness (Figure 2). Central to the approach is the distinction between structural and non-structural measures for flood management. Structural measures alter the physical characteristics of the flood phenomenon through water storage, upstream catchment management, channel modifications, levees and the operation of various hydraulic works and are typically the domain of engineers and physical planners who base their activities on the concept of Sustainable Urban Drainage Systems (De Bruin, 2006, Ellis et al., 2002) . Non-structural measures on the other hand are more directed at reducing exposure and vulnerability. For example by improved land use planning and development control in flood plains, better flood forecasting and early warning systems, stimulating flood

proofing measures by affected populations and businesses and offering other forms



of socio-economic assistance.

Figure 1: Construct of flood risk management and its reduction ((APFM, 2006)

Figure 2: Risk Management Cycle (APFM, 2008)

Spatial scale is a key issue in the IFM approach. Even if the main focus is a specific city's flooding problems (Figure 3), the nature of flood management is such that information will almost certainly be required for a much larger region covering an entire water basin. In some cases the water basin may require international cooperation, but almost certainly multiple administrative jurisdictions will be involved. Complex institutional settings may therefore complicate both the analysis of the problem as well as the search for affordable solutions.

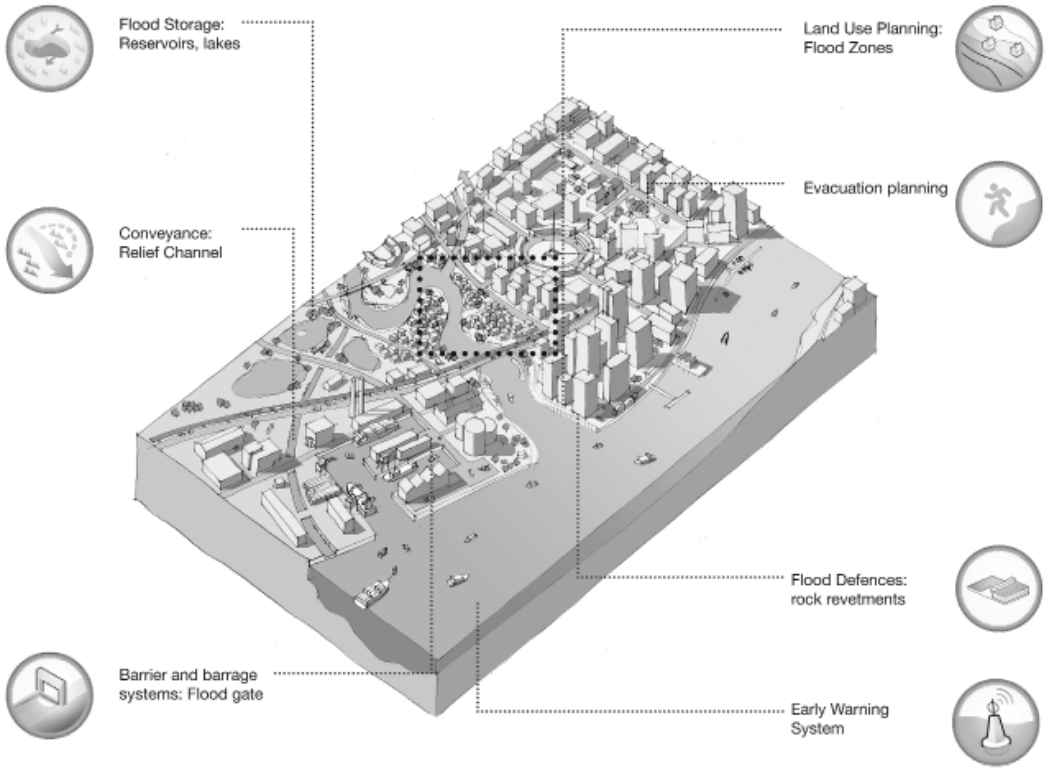


Figure 3: Overview of flood risk management measures at city scale (Jha et al., 2012)

3. Integrated flood management in Kampala

This section describes the specific setting in Kampala and explores some of the specific characteristics, the current status of the work there and some initial ideas for how an IFM approach might be implemented there.

3.1 Kampala and its flooding issues

The city of Kampala, Uganda's Capital, has been chosen as a pilot city for developing and demonstrating the use of IFM tools under UN-HABITAT's Cities and Climate Change Initiative. The city is located on the shores of Lake Victoria on terrain which is characterised by a series of hills that are separated by wetlands, some of which drain directly into Lake Victoria. Most of the original development of the city was concentrated on these hills which were interconnected through roads and

rail links crossing the wetlands at strategic places. The wetlands were also the natural urban drainage system. As urban development has proceeded the limits of natural drainage capacity have been exceeded and flooding problems have become more frequent and more severe. Currently the city faces regular flash flooding events in several locations around the city. Important contributing factors to flash floods are: significant increases in impervious surfaces leading to increased run-off rates, the lack of sufficient drainage systems (many primary drains located in the wetland areas are insufficiently maintained and under-dimensioned and secondary and tertiary drains are next to non-existent), an increasing amount of development has been allowed to take place in former wetland areas (this includes both planned and unplanned development as well as the recent construction of a major urban ring road and a new sewerage treatment works), the nature of the tropical climate with intense rainfall events which are expected to become more frequent and sever under the effect of climate change.

There are no major rivers passing through the city but flash floods occur regularly. These events are usually not of particularly long duration but they do cause significant disruption of social and economic life in the city, loss or damage to property and stock and in some cases life (Figure 4). Indirect effects include disruption of school attendance and health impacts related to the spread of feacal and other waste in flood affected neighbourhoods that rely on pit latrines for sanitation.

Figure 4: Flash floods in Kampala (source unkown).

3.2 Project approach

The project aims to develop strategies for introducing an IFM approach in Kampala at two spatial scales. The highest scale encompasses the entire administrative areas of the city supplemented by a detailed case study for one of the city's neighbourhoods known to have significant flooding problems. The whole process includes 4 main tasks (inception, data collection, flood modelling and analysis and strategy development) and will take about 15 months. The consultant team consists of a combination of Dutch and German experts with backgrounds in urban planning and hydraulic engineering and two local experts in spatial planning and climate change issues and flood modelling. During the kick-off mission the importance of

establishing a steering committee to ensure ownership and commitment from local bodies was realised. This committee includes senior staff from KCCA's planning and engineering departments, a local UN-HABITAT representative, a senior staff member of the Department of Disaster Preparedness, Relief and Management, Prime Minister's Office, a representative from the National Slum Dwellers Federation (NSDF) who provides a direct channel to the local low income communities in Kampala. Further, we have a representative from the Buganda Land Commission which is important because land rights over much of the wet lands in Kampala are held by the King of Buganda under the *mailo* tenure system, and although much of these lands are flood prone they have been allocated and settled for various uses. It is therefore evident that any actions to address current flooding problems and to prevent future development in flash flood prone areas must involve the Buganda King.

3.3 Current status of work

The team's initial focus has been on identifying the nature and extent of flooding problems, establishing institutional linkages and a project steering committee, identifying and obtaining access to useful spatial and other data for the two study areas, and undertaking some initial analyses on the basis of available data to test some assumptions about flood risk and possible IFM strategies.

Although the IFM envisages a multi-stakeholder approach in which technical expertise and analyses are combined with local perspectives and more qualitative analyses, flood modelling methods are required to provide a solid basis for dialogue throughout the project. High quality spatial data and non-spatial data is therefore required. Through the KCCA offices and other local actors it has been possible to quite quickly assemble a rich set of data for flood modelling and risk assessment. Particularly important sources of data are the Kampala Drainage Master Plan (KDMP) of 2002 and the work of the on-going Greater Kampala Physical Development Plan (KPDP) project. Initial euphoria has however been somewhat tempered by the realization that much of the available data is not available in GIS formats or has not been properly geo-referenced or is otherwise poorly documented. Although such deficiencies can usually be rectified they reflect a lack of concern for information management strategies within KCCA and other organizations, an issue which has been identified as a key success factor for GIS adoption by local government (Campbell and Masser, 1995, Masser and Sliuzas, 1999). Despite this concern, almost all agencies contacted thus far have demonstrated a readiness to share their data with the team and this is a very encouraging signal that data ownership is unlikely to become a barrier to progress.

The project will use a combination of quantitative and qualitative methods for data analysis. Rainfall run-off and flood modelling are data intensive activities that require a variety of inputs: the intensity and duration of typical rainfall events; current land cover and the built environment; terrain elevation; natural and artificial

drainage channels, etc. Much of the existing data will be updated using very high resolution colour orthophotos of the city and fieldwork. This work will be conducted together with students of Makerere University as part of an internship required in their study. In this way survey costs can be managed and combined with capacity development activities. A serious concern is the lack of high quality meteorological data for Kampala. Official meteorological data is outdated or only sporadically available. To compensate for this we have installed one low cost digital weather station at Makerere University and have started a programme of daily/nightly rainfall measurement with locally assembled rain gauges via local primary schools in flood affected areas. As many schools are in flood prone areas they are willing to assist our efforts and at the same time the collected data can be used by the schools for their own environmental education activities. The latest reading received showed that 3.8 cm of rainfall within 1.5 hours resulting in flood depth of 50 cm with waters remaining on the school for about 12 hours. The situation in nearby, more low lying areas was almost certainly significantly worse.

Stakeholder participation is a critical factor for the success of the project and any ensuing strategies. In the IFM approach stakeholders are more than victims of floods. Their behaviour is likely to be a significant factor in the level of exposure. Improper solid waste disposal for example is known to be a contributing factor in blocking drainage systems and therefore increases flood risk. Stakeholders also possess local knowledge about flood events, flood coping strategies and possible adaptation measures which could be replicated and disseminated throughout the city. Through workshops, focus groups and training activities the project will seek to engage affected communities and stakeholders in problem analysis, strategy development and implementation. Achieving and maintaining a high level of engagement will not be easy as the bonds between KCCA, Government agencies and low income communities are often fragile and easily broken. The NSDF is aligned with the International NGO Shack/Slum Dwellers International (www.sdinet.org) which promotes inclusive cities and high levels of emancipation and self-determination for low income communities. It is not yet clear to what extent the ambitions of NSDF will match with the ideas of KCCA and other project partners, but governance aspects will almost certainly be crucial to success.

Legal frameworks are another aspect of IFM activities to be addressed. Spatial planning law and development regulations for example set standard and conditions for development control and guidance. Typically such regulations adopt a one-size fits all normative approach to set backs form drainage channels for example. Restricting development within 30 or 60 metres of rivers and streams is certainly inappropriate and a gross simplification of reality. Determination of the extent of flood prone areas require a tailor made hazard assessment for each water basin, but will almost certainly generate resistance from those land owners who’s development rights and property values may be affected. Building and planning regulations too will be examined to identify opportunities for increasing rain water harvesting and infiltration options which will help to reduce the amount and speed of run-off, for example.

4. Future prospects

Although this project is in its initial stages the contours of the challenges to be addressed and some of the possible strategies are already beginning to emerge. The search for the *right mix* of options for the specific situation in Kampala will require a clear and open project governance approach. A range of IFM strategies have been identified and applied elsewhere (Schultz, 2006, Van Alphen and Lodder, 2006, van Duivendijk, 2006) and these and others can be valuable resources in the search of for approaches that are well suited to the Kampala case. Project governance will need to consider, manage and reconcile the interests of many stakeholders in the process. Given the limited technical and financial resources of KCCA and other partners, for example as indicated by the long lead time for the implementation for the KDMP, cost in terms of time and money will almost certainly be key elements of the strategy development and selection process.

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Moving the existing city towards sustainability: the role of urban planning

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Abstract

It is not easy to imagine how the existing city to can be converted to the principles of sustainability, however, the need for innovation, which you can find in European acts on the planning and regeneration of the existing city, requires a pioneering phase which must necessarily address the main problems of rehabilitation of the operating models of the city, knowing that the current condition shows the almost complete unsustainability of actual current situation of urban models. In the awareness that the efforts made to improve the performance of the existing city will move the cities towards sustainability, but not to sustainable cities, the role of urban planning in this process will be to translate the stress of adjustment towards sustainability into strategies, rules and projects that combine different disciplinary contributions. In ordinary practice, urban planning has reduced the complexity of urban systems, because they are considered stable, under the illusion that the changes are predictable and controllable. Sustainability, is considered not as a dynamic course, but as a final stable state. In many cases, moreover, the search for possible solutions to fight the effects of climate change has been delegated by urban planning to other disciplines, obtaining sectoral responses with very limited effectiveness. Today, however, there is a growing awareness that the identification and implementation of policies and measures to promote the adaptation, resilience and reversibility of the existing city, require the contribution of our discipline. This breakthrough, which is primarily a cultural matrix, is present in some recent international experiences of "Climate Plans", in which the envisaged measures are closely interwoven with those of urban planning. As a result of these early experiences, urban planners are called upon to move their attention to scenarios concerning the evolution of urban ecosystems as a whole. These early experiences, provide some answers principle questions, such as: how the strategies to combat climate can be integrated in the instruments of the local government; what new and specific analysis must be introduced in urban planning in order to understand the issues of urban sustainability's and how analytical and project reasonings combine at different spatial scales. These strategies, together, will lead to an urban plan that has been developed in stages, representing a dynamic process, open to continuous audits and amendments. It will provide a verification process of sustainability and a validation process of the practices proposed by various stakeholders, wherein one learns as one goes.

1. Introduction

As of 2008, more than half the world's population now lives in cities and starting in 2025, our planet will house more than 5 billion people in urban contexts. According to the United Nations, almost 80% of energy consumption occurs in cities; in addition to energy, cities need a concentration of food, water and materials that nature cannot provide at current growth rates. The moment has come to start thinking about how to avoid leading tomorrow's city into collapse by activating a lifesaving procedure. We have probably arrived at a point at which even urban planning should start to take account of climate changes, above all when the search for better urban efficiency requires cities themselves to actively contribute to a possible response to local and global impacts. However, one should not fall into the error of refining the concept of sustainability with reference only to energetic terms and thereby err in evaluating the complexity of questions in the field with the risk of compromising development choices and the city's future itself.

For some years now, the theme of sustainability in urban development has actively entered the urban planning debate; but if even societies that seem, at least apparently, more prepared and more experienced in the pursuit of this objective are repeatedly thrown into crisis by devastating and unexpected environmental and climactic variations, it is necessary to ask what has worked only partially or not at all. In fact, in ordinary practice, the urban planning discipline has managed to reduce the complexity of urban systems, considering them substantially stable and deceiving itself that the transformations were preventable and controllable; it has thought about sustainability not as a process and constantly evolving course, but as a stable final state. The temptation has sometimes prevailed to limit intervention to a small scale, for circumscribed environments, for timely projects, for single architectures, imagining the reconstruction of the urban mosaic possible when starting from single pieces. Lastly, in many cases the urban planning discipline has delegated to other disciplines the search for possible solutions to contrast the effects of climate changes, favouring responses of a sectoral approach and with rather limited efficiency.

A series of experiments has descended from this cultural structure, of which only a few cases have produced mature results and concrete applications for improving the environmental and social quality of our cities. In fact, the experiments have often concentrated above all on technological innovations directed toward building sustainability and saving energy, omitting broader and more complex reflections on the contemporary settlement model and the lifestyle of the inhabitants.

The modest success of politics experienced up to now (primarily compared to the existing city), the global economic crisis and above all the energy crisis and environmental catastrophes, necessitate a radical rethinking today on the contents and means with which to trigger real environmental, social and economic

sustainability processes in cities. The same uncertain success of international politics, emerging after the failure of the recent climate conference in Durban, obliges those dealing with city projects to examine new principles of responsibility implicit in a broader view that is expanded to look for new configurations and the modification of current operational models. In the awareness and hope that cities can and should become places in which to experiment with new, more sustainable forms of living and working, new social relations, smarter ways of using one's time and a better quality of life – not necessarily associated to the growth of material consumption – and in the awareness that the effort necessary to improve urban performance will lead to obtaining cities transitioning to sustainability rather than sustainable cities, a reflection is required on the role of territorial and urban planning in managing this process and on its capacity to translate the anxiety of adaptation to sustainability into strategies, rules, and projects able to create synthesis between different disciplinary contributions.

Among the strategies to counter climatic changes, research on existing urban areas and politics defined on the local scale assume a greatly relevant role today; it is above all with reference to the existing city that a fertile exchange of different responses to sustainability objectives that cities have put at the centre of their agendas for some years is made necessary, serving as a compass to orient strategic choices for development and to achieve a rethinking of urban spaces within an ecological perspective. Starting from this heritage of experience, it is possible to identify some significant questions regarding urban planning, with particular attention to themes that seem to shift the terms of the debate and disciplinary research, opening up new occasions for learning and intervention.

2. Reflections for a work agenda

2.1 The need for a transdisciplinary approach and the integration between adaptive and mitigation measurements

If sustainable urban development is, as numerous studies and international reports suggest, primarily a process that is enriched by collective learning, the capacity for conflict resolution and the capacity for strategic design, it is also the result of synergistic integration and co-evolution between the large subsystems comprising the city (the economic, social and physical-environmental systems). To obtain the substantial evolutionary equilibrium of these subsystems, it is necessary to promote integrated intervention politics that confront the theme of urban sustainability with a transdisciplinary approach directed toward three principal goals: technology (primarily energy and transport), the environment and urban form, and the *habitus* (characteristics of the individual behaviours) (Camagni R, 1996). Urban planning will not be able to confront these principal paradigms of urban sustainability by making use of traditional analysis and evaluation instruments, but will have to resort to an overall dynamic analysis of the urban system, with contributions from multiple integrated disciplines, including thermodynamics, ecology, statistical mechanics, technological

sciences, economy, sociology and architectural composition, making use of innovative interpretive methods such as: the analysis of environmental cycles and networks in relation to the infrastructure, energy and settlement networks in the city; the analysis of urban growth limits in relation to carrying capacity criteria applied to the urban environment; the analysis of environmental comfort in relation to the quality of life in cities, etc. Through these new interpretive methods, the urban planning discipline is asked to promote politics and action that not only allow urban organisms to mitigate catastrophic effects, but also adapt themselves to climate changes, constructing new social, economic, and environmental responses to allow the city to withstand the urging of both the environment and history in the long term. The promotion of this equilibrium is among the new tasks of urban discipline, which is therefore called to act in an overriding way on the organizational and management models of the city. Up to now, the theme of mitigation has always been predominant; the reduction in emissions in the atmosphere has been, justly, much discussed, but there has been little about adaptation, or rather how urban organisms can absorb and counter the effects of climate change, above all with reference to existing cities. On other fronts, however, the joint application of politics for adaptation and mitigation is called for, along with the definition of a worthy strategic approach that is able to hold together different levels of management, from both the intervention and acting sectors, with the goal as well of resolving the inevitable conflicts between complementary but different measures. If, with respect to measures for climatic impact mitigation, an abundance of experience in the whole European territory is recorded, expressed through precise targets for the reduction of CO_2 emissions with respect to 1990 (the Kyoto Protocol reference year) – from Amsterdam, which foresees a reduction of 40% by 2025, to Berlin (-40% by 2020), to Barcelona (-50% by 2030) – the concrete experience relative to the operational and organic application of adaptation measures is instead still rather limited. Also, in the "SEAP"[1], the idea of adaptation is commonly only cited, whether in the scientific community or in official documents; but more importantly, programs and projects financed by the EU[2] demonstrate a growing interest in adaptation practices and the role that urban planning can play in their definition. Going further, the conviction that climate changes should be confronted in an integrated way and on different scales is spreading. This new approach has been pursued by the AMICA (Adaptation and Mitigation, an Integrated Climate Policy Approach) project, financed by the European Union within the Interreg IIIC Program. In the explanation of the program, the drafters maintain that "… choosing between mitigation and adaptation is analogous to the choice between

[1] The Sustainable Energy Action Plan (SEAP), promoted by the European Commission Campaign SEE (Sustainable Energy for Europe) within the "Covenant of Mayors" (D.C.C. 48/2009) is the document that communities undersigning the pact are obliged to create for reaching objectives in the reduction of carbon dioxide emission established for 2020.

[2] For example, the GRaBS (Green and Blue Space Adaptation for Urban Areas and Eco Towns) project is a network of leading pan-European organisations involved in integrating climate change adaptation into regional planning and development. The principal aim of the project is to stimulate and develop the adoption of AAP's (Adaptation Action Plans) through the application of good practices and guidelines.

repairing faulty brakes on a bicycle and buying a helmet. Functioning brakes help to prevent accidents (mitigation), while the helmet is designed to avoid disasters if an accident should occur (adaptation)."

AMICA proposes a new approach to territorial environmental politics that integrates long-term protection of the climate (a measure of mitigation) with short- and medium-term adaptation measures, improving the coherence of local development strategies and the allocation of financial resources, and promoting the projection, planning and operational capacities of local administration to confront threats of climate change and seize opportunities. From this double response method with long- and short-term measures, a different relationship with analysis and project scales also follows. If, in fact, politics and mitigation measures are similar in large part, adaptation measures should necessarily be oriented to the specific vulnerability of the territory. With such a goal, the program is aimed at motivating local governments to include climate protection and adaptation in their ordinary planning activities, favouring those synergies that are created when mitigation and adaptation measures are complementary and not alternative between themselves. For example, some interventions in land management, such as the planting of trees, act both as adaptation interventions to avoid soil erosion, and as mitigation interventions (forestation). Another meaningful example in such a direction is given by water conservation (adaptation intervention), which also translates into energy savings (mitigation intervention). Understanding possible synergies between adaptation and mitigation measures can soften conflicts and, in such circumstances, good planning can become very useful. For example, if it is true that a higher living density is a means to improve the overall energy efficiency of an urban area, it is also true that responding to climate change with adaption requires space in and around buildings. In this case, good urban planning can lead to a reduction in greenhouse gases and contribute to adaptation, offering the parallel opportunities of lowering carbon dioxide emissions and the recourse to an average density of settlements, their differentiated use and green areas.

The experience of the city of Lyon is of particular interest in such a scenario. Since 2005, the Urban Community of "Grand Lyon" began preparing a Climate Plan scaled to its territory (55 towns and 1,300,000 inhabitants). Three original aspects are immediately evident:

- the commitment of the urban community to the AMICA European Program;
- the search for adaptive solutions and innovative practices, above all in matters of managing green areas in the city;
- the commitment to synthesizing all of the objectives of climate effect reduction contained in long-term planning documents (PDU, PLU, SCoT).

The originality of the experience of Lyon lies mainly in the importance given to adaptation and the willingness to promote public action in climate matters that are not limited to emission reduction measures. In fact, a study was promoted that aimed to measure the vulnerability of the urban area in its entirety with respect to three types of risk: water resources, heat islands and flooding. This study showed that heat peaks caused the greatest vulnerability in the territory. With this in mind, the "Charte de l'Arbre"(Fig.1), created by the "Arbres et

paysages" service in 1994, on the occasion of its revision in 2005 decided to consider climatic warming on nature in the city through a deepening of knowledge related to the impact of vegetation on the urban climate. The case of Lyon, in addition, testifies to the variability of the reference scale in the definition of adaptation measures; if management on short timescales is undoubtedly favoured in the "Plan Canicule", the need to draw on long timescales passing through extensive urban policies is highlighted, where for example, the redefinition of the urban form occurs with the support of vegetation.

Figure 1. Lyon. Charte de l'Arbre

In addition, city governments can take a range of planning decisions related to urban development to reduce greenhouse gas emissions. They can be proactive in regulatory and educational measures and apply mandatory density and energy efficiency criteria. Cities can make a substantial long-term contribution to the prevention of motor traffic if they consider this aspect early in the planning process. Urban development planning is a key factor in the demand for mobility: whether it is a compact city where the various functions – residential and commercial, services, education and recreation – are located and how they interconnect, or whether public transport is available for newly developed areas, etc. For example, the State of California is currently a pioneer in what could be the next step against global warming: filing lawsuits to hold cities accountable for greenhouse gas emissions caused by poorly planned suburban sprawl.
There is, in reality, a lot of significant European experience in such a direction. One of these is in the PTCP[3] of 2009 for the Province of Modena, Italy. In this

[3] The "Piano Territoriale di Coordinamento Provinciale" (PTCP) is the provincial planning instrument in Italian urban legislation aimed at governing territorial resources through their protection and development. It is the planning act with which the province exercises its own role in territorial government, connecting and adapting

plan, the themes of sustainability were dealt with in a participatory course on the Agenda 21 model prior to drafting the PTCP. In particular, the participatory process has lead to sharing and to inserting the following adaptation measures into the definitive version of the plan:
- increasing the hydraulic security of the territory from flooding phenomena by reducing the vulnerability of residential and productive areas to the danger of flooding;
- stopping settlement expansion in relation to waterway flows increasing with climate changes and the impermeabilisation of the soil. With such an aim, the PTCP provides for an increase in urbanized area that does not exceed more than 3–5% of the territory urbanized as of 31 December 2006, requiring towns in the provincial territory to accomplish selected goals through the application of territorial adjustments;
- controlling atmospheric emissions of climate-altering gases by introducing rules for the energetic efficiency of buildings and the identification and regulation of provincial ecological networks.

2.2 Time variables and risk management

Thinking about urban planning within a global warming scenario leads to looking for responses to the impacts in solutions that are not only for civil protection and emergency, however indispensable these may be.
Within the plans, one should evaluate and consider how conditions for the security and liveability of different urban areas can change in time and, as a consequence, project any transformation hypothesis onto a scenario that considers risks and impacts linked to the climate, some already in place, others potential.
Two examples are interesting in such a sense: the climate plans of New York and Toronto, in which great importance has been given to the timely programming of operations to accomplish in relation to the hypothesised risks. Some action is identified as “short-term”, to be realised immediately and without passing through the planning instruments; others are defined as “long-term” because they are more complex and because only progressively can some necessary preparatory steps for their effective realisation be completed.
In the “Climate Change Adaption” of 2008, the city of Toronto foresees two types of action for adaption to climate change: short-term operations that make reference to existing programs regarding areas of the city in which vulnerability characteristics have already been noted, and long-term actions that will need systematic elaboration with the aim of identifying and evaluating vulnerability characteristics of determined urban areas and the consequent adaptation strategies (Fig.2). The short-term actions were immediately made operational and have dealt with already-financed interventions and adaptation measures recommended by the “Several City divisions and agencies”, which were able to improve existing programs and increase their resistance to climate changes. In

itself to territorial policies in the region, coordinating and directing urban planning at the community level and provincial sector planning.

contrast, the long-term actions enter into a global adaptation strategy that deals with urban infrastructure and planning, and which, in the identification of risk and the measurement of adaptation, should make use of knowledge to be implemented within a time frame that is established but susceptible to modification. Nine successive steps have thus been identified, programmed in general terms, but to be elaborated in detail with time; among them, the third step forcefully highlights the fact that "… Climate change will affect nearly all aspects of Toronto's life. As a result, it is important to incorporate climate considerations into the planning of most City operations and services. A description of the challenges posed by climate change for the city, and goals for both mitigation and adaptation should be incorporated into relevant plans, strategies and programs".

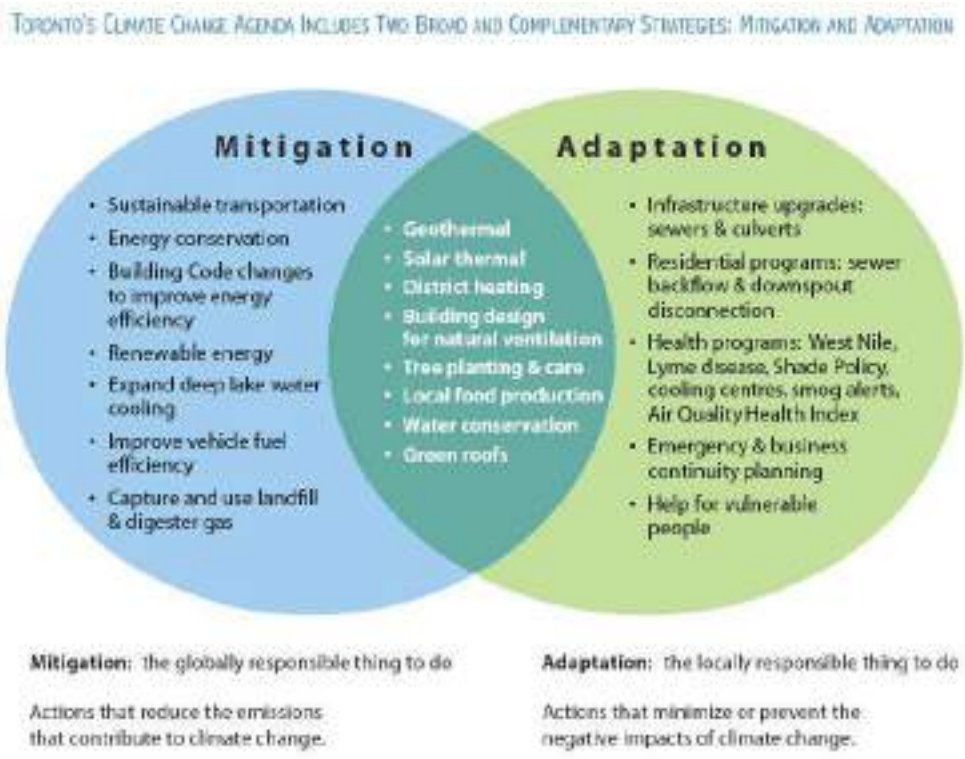

Figure 2. Green spaces as means to both mitigate and adapt to climate change

In addition, the document reports a list of the city's policies and plans that should include climate change considerations and explicit goals for adaptation.
Lastly, step eight establishes that once the city has identified and chosen overriding adaptation measures from among the different options, it should first incorporate them "…into major infrastructure projects that are expensive, long-lived and will have to operate under changing climate conditions".
The criteria that the city will use to identify the most-recommended adaptation measures may concern:
- the effectiveness of the adaptation action in providing protection for vulnerable populations;

- the extent to which the proposed adaptation options protect against loss of life or major economic losses;
- whether the adaptation option reduces stress on vulnerable systems;
- the cost of the adaptive action compared to the cost of alternative strategies, or to the potential cost of not acting;
- the extent to which adaptation options also reduce greenhouse gas emissions or provide other benefits that increase the sustainability and liveability of the City.

3. Diffusing a model of integrated urban planning that is multi-scale and flexible to accompany the transition toward sustainability

The tendencies emerging on a global level in recent decades have required cities to confront problems through a vision that integrates the three dimensions of sustainability – economic, social and environmental – and that is shared at the same time by the highest possible number of urban actors (citizens, administrators, interest carriers, etc.).
The need for an integrated approach is the unavoidable condition necessary to respond effectively to problems connected to the city's use and development and to ensure the joint confrontation of different but interconnected themes and problems: not only energy, transport and building, but also economic and competitive well-being, social inclusion and environmental management. These themes are normally managed in an isolated manner and by different public administrations. The integrated management model foresees interdisciplinary and sectoral cooperation capable of involving the different institutional levels – local, regional and national – and, transversely, the individual sectoral abilities involved in intervention politics. The instrument used to activate such a model is one that makes reference to a long-term planning strategy, which by putting into relation different politics and different administrative levels guarantees the coherence of development operations, improving their efficiency and eliminating the risk of contradiction. This model imposes a shift in the approach to defining politics and instruments aimed at assuring the sustainability of the transformations, calling for an approach to planning that renounces the prescriptive and deterministic vision of rationalist urban planning. The objective is to make the city able to respond to continually developing needs by forecasting flexible and adaptable scenarios, and anticipate knowledge where science still does not give reliable responses, above all regarding the possible environmental implications of land consumption, resource withdrawal, the rate of pollution, etc. In addition, sustainability dictates being ready to confront problems on different territorial scales, since problems extend from the planetary dimension, with climate variations correlated to the greenhouse effect or the effects of ozone reduction, to the continental dimension with the phenomenon of acid rain, down to the regional or local dimension with questions linked to urbanization. Identifying the most appropriate scale to deal with the different aspects of sustainability and the reading of environmental problems opens the door to personalized sustainable development solutions; this promotes the role of local administrations in the most appropriate areas for experimentation with the

integrated policies of adaptation and mitigation aimed at guaranteeing the sustainability of urban organisms, thereby reinforcing the European tendency to consider cities as fundamental and favoured territorial units of reference.
A particularly significant experience in such a direction is Rotterdam, with the RAS "Rotterdam Adaptation Strategy", which provides for the application of an adaptive strategy through continual adjustments to the definition of operations counteracting climate change as a function of changing circumstances. In particular, through the "Route Planner", the principal objectives are identified and the action and options for each task are confronted,[4] while the measures taken are evaluated through continual monitoring action, registering the effects that they will have on the speed and extent of the awaited change. On one hand, this procedure offers the possibility to weigh the measures adopted and, on the other hand, the opportunity to evaluate the possibly positive implications of the program with the additional goal of the city's greater attractiveness and added value from the economic point of view. The path toward resilience to climate change, different for each theme, is additionally incorporated within territorial planning.

4.Conclusions

From the most significant European and international experience, it emerges how cities today constitute one of the best opportunities to counteract climatic changes and that to advance in this direction requires adopting urban governance systems able to assume within them the theme of climate change, improve the cooperation among the different institutional levels and promote a multilevel system of governance that recognizes the role of regions and cities, entrusting them with real standardization and planning power and concentrating on them a good part of the resources destined to support the great change that awaits in the coming decades.
However, even if there is this awareness on behalf of public administration and planners, they often lack the instruments necessary to analyze and design concrete sustainability strategies. Innovative paths regarding adaptation and mitigation strategies can be constructed only starting from the integrated evaluation of urban systems in the awareness that the spreading of cities over vast areas of the territory beyond the administrative confines of the municipality, the mobility and logistics of merchandise and the contextual necessity of

[4] These are the tasks on which the Programme on Sustainability and Climate Change will focus during the period up to and including 2014:
- Leading the way in reducing CO2 emissions
- Energy savings
- Converting to sustainable energy and biomass raw materials
- Stimulating sustainable mobility and transport
- Reducing noise pollution and improving the air quality
- More trees and green areas in the city
- Increasing investments in sustainability and stimulating sustainable products and services
- Increasing public support for sustainability and firmly anchoring sustainability in education and research
- Preparing for the consequences of climate change
- Stimulating sustainable urban and regional development

maintaining and protecting natural resources urge linking urban transformations to integrated territorial government.

Faced with the challenge of governing the change, the necessity and utility of urban planning as a general approach is confirmed, even if completely renewed in its form and contents in the name of flexibility and resilience. This, in fact, represents a particular capacity for favouring adaptive action to reduce vulnerability and increase the resistance of urban organisms, but the knowledge, procedures, and instruments necessary are still largely inadequate to allow such planning to acquire the key role that was attributed to it more than a decade ago by the Green Paper "Adapting to climate change in Europe – options for EU action" [5].

In particular, given the fact that traditional planning instruments are not able to adapt to new conditions, the application of more dynamic procedures is spreading today, procedures that:

- make reference to a strategic planning approach capable of constructing more sustainable adaptive measures;
- make reference to different specific time frames;
- make use of a systematic multi-scale approach;
- require profitable collaboration among the different sectors of local administration and also between different levels of territorial government.

Thus renewed, the Plan will be able to configure itself as:

- an extraordinary "director's chair" of sustainability politics that organizes strategies in a flexible and dynamic way, monitoring developments with the possibility of modifying the objectives and instruments with respect to inevitable change in contextual conditions and with the assistance of diversified analysis and project scales;
- one of the essential instruments for constructing social and environmental quality if situated, as it should be, in the framework of politics and action of integrated government and based on realising sustainable development;
- a useful confrontation area to profoundly reform the methods and contents of public intervention and to adopt sustainable urban policies taking shape through genuine shared courses.

It is necessary, however, to be very clear that, next to the rules, clear principles, political addresses and governance at the height of the challenge of sustainable development, it is necessary and that each urban policy not be made in such a way that it is divorced from the people living, working and transiting in the territory as active users of the contemporary city.

[5] The green book on the urban environment from 1990 (COM (90)218) identifies the problems of cities and underlines the implicit existence of an urban dimension in many actions of the European Union. A subsequent resolution from February 1991 (C33/02) "hopes that the objectives defined in the ecological field will constitute an integral part of future urban planning strategies and will activate a European group of experts on the urban environment, formed from national representatives, independent experts and observers. Their task is to evaluate the methods for integration of environmental objectives into the planning strategies and instruments of the future city, to formulate recommendations to the Commission on the methods with which the urban dimension of the environment can enter into the vast European environmental politics and, coherently, to suggest the operational methods for contributing to the improvement of the urban environment in Europe.

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INSTITUTIONS AND PLANNING: TOWARDS A MULTI-PERSPECTIVE THEORETICAL FRAMEWORK?

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Abstract

The paper aims to explore the relationship between institutions and planning. Using different 'new institutionalist' perspectives, it describes the several factors that contribute for change and continuity in institutional processes. This framework is then used in a brief analysis of recent developments in Portuguese planning governance, particularly concerning inter-municipal coordination. The paper concludes that as each perspective is endowed with specific strengths and weaknesses, an integrative, multi-perspective approach is not only defensible but also desirable. Rather than a 'chaotic' approach in a striking need of deconstruction, 'new institutionalism' may add value to planning research by criss-crossing conflicting and intersecting views.

1. Introduction

The relationship between institutions and planning has been 'revived' in the last decade. This may hardly be considered surprising as institutions - both formal and informal - provide the setting for planning (Verma, Ed., 2007). Yet institutional contexts may be looked from different angles and with diverse lens, as testified in the profuse literature on 'new institutionalism', a theoretical framework that has been gradually extended across different fields of social science (Della Porta and Keating, Ed., 2008). Planning, in particular, often values diverse, and apparently contradictory, institutionalist perspectives. Some writings focus the central role of institutions in lowering transaction costs, hence turning planning procedures more stable (Alexander, 2007). Other perspectives emphasize the significance of values, norms and practices in shaping the identity of actors, or at least in their strategies (Healey, 2006). Other studies focus the role of discourse and ideas in promoting change in urban policies (González, 2006). Nonetheless, there is a need for a more transversal approach of the relationship between institutions and planning governance, in order to overcome the main drawbacks of each specific perspective.

The paper centres this subject in the recent evolution Portuguese territorial policies, focusing the intermediate scales between the municipality and the nation-state. As

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complex socio-spatial contexts, inter-municipal territories, notably those located in metropolitan regions, provide a strong support for an institutionalist analysis of planning methods and practices. Portugal tries to renew its often crystallized institutional landscape, in order to respond to escalating social and economic challenges in a particularly delicate moment of the country history. By exploring transition and change from different institutionalist perspectives, we aim to conclude that a multi-perspective theoretical framework may strongly contribute to enlarge our knowledge of the relationship between institutions and planning.

2. Change and continuity in the 'new institutionalism'

At least since Thomas Hobbes, social theory has been dedicating strong attention to the role of social contexts in the behaviour of institutions. This influence has been theorized in different ways, however. Grannovetter (1985) argues that it often ranges from what he calls an *undersocialized* perspective of rational, independent institutions, only marginally affected by social relations, to an *oversocialyzed* perception of institutions as deeply embedded in their contexts. This debate achieved increased predominance during the 90s, with the diffusion of the so-called 'new institutionalist' literature (Hall and Taylor, 1996).

Nevertheless, the 'new institutionalism' is not a single, coherent theoretical approach, as three main perspectives may be distinguished; notably racional choice; sociological and historical institutionalism (Hall and Taylor, 1996). The so-called rational choice institutionalism may be compared with the *undersocialized* perspective identified by Grannovetter. Having its roots in several streams of the economic theory, this perspective describes political action as a succession of 'collective action' dilemmas (Scharpf, 1997). Rather than being compelled by social relations, each actor is predominantly driven by its own strategic calculations. Institutions are predominantly a product of their functions, and of the benefit these functions may represent to the involved actors (Hall and Taylor, 1996).

Racional choice institutionalism provides a systematized and often very precise theoretical model, supported on easily generalizable concepts. Game theory is among the most widely used tools of this kind (Scharpf, 1997). By reproducing actor preferences and expectations, game theory matrices and calculations aim to identify more or less predictable patterns of behaviour. Yet this variant of 'new institutionalism' is often criticized for oversimplification. Its conditions of use are often too restrictive and relevant aspects, such as subjective preferences, are disregarded. Rational choice institutionalism has difficulties in explaining why so many institutions persist, even though the functional reasons that lay behind their creation are not in existence anymore. Nevertheless, these drawbacks do not erase the obvious contributions of rational choice institutionalism. It brings one of the main problems of political phenomena – the management of uncertainty – to the core of social theory; it gives more space to the study of individual action at the expense of more structural variables such as 'culture'; and it avoids giving an excessive emphasis on contingent aspects (Scharpf, 1997).

Sociological institutionalism contrasts sharply with the rationalist variant, as it relates to what Grannovetter (1985) would classify as an *oversocialized* view of institutions. This branch of new institutionalism conceives institutions in a much broader way (Thelen, 1999). Actors are not just independent, individualist beings looking for the maximization of their benefits but also 'social beings' trying to adjust their patterns of behavior with the norms, values and practices prevailing in their social context. In this perspective, institutions are not just formal entities but also norms and procedures, symbolic systems, cognitive mechanisms and moral patterns in such a way that the devising line between the concepts of 'institutions' and 'culture' is often ambiguous (March and Olsen, 2005). Culture, rather than institutional functions, explains either the creation of new institutions and their persistence through time (Steinmo, 2008). They not only influence actor decisions but also their basic preferences and even their identity (Hall and Taylor, 1996). This, of course, does not mean that actors are not rational, simply that their rationality is socially constructed.

The strengths and drawbacks of sociological institutionalism often contrast with those of the rational choice branch. Unlike this last approach, it provides consistent explanations for the persistence of many institutions through time, and for the more subjective motivations of actors' behaviour. Nonetheless, using an inductive methodology that aims to clarify institutional phenomena by selecting one among several possible explanations, sociological institutionalism fails to provide a systematic, general theory (Jenson and Mérand, 2010).

Historical institutionalism introduces a temporal dimension in the study of institutions. These are conceived as the product of often long-standing trajectories of development, whose evolution may be explained either by functionalist or by cultural factors. Historical institutionalism is 'agnostic' concerning human nature (Thelen, 1999). Actors may be both 'individualistic' and 'social', in the sense described by the two other streams of thought. As a consequence, depending on the specificity of each situation, their action may be conditioned by their own self-interest or by social purposes (Steinmo, 2008). This perspective poses many epistemological problems. How to assess if, in each specific moment, their behaviour was driven by individual or collective factors? The answer to this question, according with historical institutionalism, resides in studying all the facts that lay behind each specific institutional trajectory. As Steinmo (2008:127) put it, in 'taking History seriously'.

The eclectic approach of Historic institutionalism provides an opportunity to combine two equally pertinent approaches of the relationship between institutions and individual action. Nonetheless, as the other branches of institutionalist thought, it is not exempted from drawbacks. The most prominent of them resides in the difficulty to provide an accurate explanatory model of institutional phenomena. If we conceive the mission of science as the development of theoretical models able to deliver adequate explanations to the majority, if not all, natural and social phenomena, then historical institutionalism methods are questionable, at the least (Steinmo, 2008).

Yet Historical institutionalists counter this concept of science as flawed, or at least limited to specific branches of scientific knowledge, such as Newtonian physics. In the social and even life sciences, absolute and invariant laws are simply ineffective, as their objects of study not only vary through time, as they are subjected to a wide range of complex and interdependent factors. The best way to deal with these difficulties, according with historical institutionalists, is by using comparative studies that embrace diverse institutional contexts. In the long range, especially if experienced by a multi-generational community of researches along decades, the combined results of a large sample of specific cases will produce more general models (Steinmo, 2008).

The three institutionalist branches present different explanations for change and continuity in institutions, which are described in the next two sections.

Institutional change factors

Change in rational choice institutionalism is strongly related with actors' strategic calculus. Certain actors are particularly motivated to promote change. This is especially true in the case of the *losers*, or actors marginalized by the political system. Having little to lose, they are in good position to challenge the establishment (Pierson, 2004).

Rather than concentrating on the strategic calculus of specific actors, sociological institutionalism approach of institutional change focuses wider, powerful forces that lead to change at the deeper level of the prevalent norms and values of each context. DiMaggio and Powell (1983) and other researchers sustain that institutions are endowed with a motivated behaviour that structures their action through systems of shared and more-or-less harmonized rules, norms, attitudes and taken-for-granted beliefs. Institutions may be coerced to converge, either by pressures from other institutions that hold the power to impose their standards, or by cultural expectations. They may try to reproduce successful models as a way to cope with uncertainty. Or they may integrate agents with different beliefs and values that will internally contribute for change. These three kinds of isomorphism, called *coercive*, *mimetic* and *normative* respectively, may work as triggers of institutional change. Usually, these processes are neither easy nor abrupt, as they involve change at the deeper level of cultural norms and beliefs, rather than shifts in actor's interests (Healey, 2007).

Historic institutionalism provides a wider range of explanations for institutional change. Pierson (2004) distinguishes between short and long term time horizons, either for causes or for outcomes. A process may occur rapidly but produce long-standing outcomes. Such is the case of what is often called 'critical junctures' (Mahoney, 2000), according to which one or more successions of causal factors converge in a specific moment in History, generating a 'legacy' of institutional transformations (Collier and Collier, 1991). Major shifts, such as the Industrial Revolution, may be analysed using this model. Goldstone (1998), for instance,

describes the invention of the steam engine as the result of the convergence of two chains of interrelated events, one of them related with environmental transformations and the other with social-cultural shifts. This 'critical junction' was at the origin of such deep economic and institutional changes that radically transformed Britain.

Change, according with historical institutionalists, may be the product of other kinds of processes, however. These may be long-standing, both in their causes and effects. Robert Putnam's work on social capital (2000) describes remarkably how an enduring phenomenon (the decline of social capital in the US, during several decades) is in itself the result of also persistent causes, such as urban sprawl and the massive consumption of television. Change may be instantaneous in both its causes and effects, although there may be a temporal lag between them. Some political studies, for instance, establish a link between economic development and democratization processes that, although both brief in time, are not immediately subsequent (Przeworski and Limongi, 1997). In other situations, as the 'threshold effects' model illustrates (Grannovetter, 1978), the causal factor (economic growth) may be long lasting, but not the democratic process.

Institutional continuity factors

As much institutionalist literature is predominantly focused on institutional change, the continuity of existing pathways is often neglected. This fact is regrettable as much institutional design destined to promote change is often harmed by not anticipated change-resistant factors. Institutional continuity variables are, nevertheless, presented in all the main streams of institutionalist research. Part of rational choice literature, for instance, is dedicated to the so-called 'veto points', or the aspects of formal institutions that provide opportunities to block, or at least retard, decisions. A high degree of compromise required to promote the change of rules, such as two-third majority in Parliament, may be considered an example of a veto opportunity (Tsebelis, 2002). Some federal systems are 'trapped' in a 'Joint decision' system involving different levels of government, may also contribute to institutional inertia (Scharpf, 1988). The same will happen with presidential or bi-cameral parliamentary systems.

Sociological institutionalism, on the other hand, is often concentrated on 'embeddedness' (Grannovetter, 1985), or the persistence in time of deep-rooted norms, values and beliefs. Putnam (1993) analysis of civic cultures across Italy emphasis this aspect, as he goes back to the history of the country's different regions since the middle ages, in order to explain diverse patterns of *civicness* in present days.

Perhaps the better-known Historic institutionalist continuity effect relates short-lived causes and enduring effects. Path-dependent processes are long-standing, self-reinforcing dynamics generated by an event produced in a specific moment in History. Once triggered, either by chance or as a consequence of a conscious decision, this event will generate a positive feedback process, meaning that each

stage along a particular trajectory will increase the attractiveness of that trajectory over time (North, 1990; Pierson, 2004). Path-dependence is a source of inertia in the long run, as the further we move in time, the harsher it becomes to change the course.

Table 1 synthesises the above-mentioned institutionalist factors for both change and continuity.

Table 1 - Institutional factors for change and continuity

Theoretical approach	Change factor	Continuity factor
Rational choice institutionalism	**Actors' collective action**: Change is promoted by local actors, either leaders or those marginalized from institutional arrengements who try to revert the situation in their benefit.	**Veto points**: Change is blocked when multiple actors are involved in decision processes.
Sociological institutionalism	**Coercive isomorfism**: Chang is driven by powerful external actors. **Mimetic Isomorfism**: Change is driven internally, by the will to replicate other institutional contexts perceived as more successful. **Normative isomorfism**: Change is driven by individual ('institutional entrepreneurs') or collective ('epistemic communities'), who bring with them diferente values from other contexts.	**Embeddedness:** Powerful beliefs, norms and rules are crystallized in the institutional context, blocking any attempt to shift existing traditions.
Historic institutionalism	**Critical junctions**: Change is the result of converging chains of events. **Cumulative causes**: Gradual changes are directly related with equally enduring causes. **Cumulative effects**: Short-term events produce long-lasting change. **Strutural processes**: Both causes and effects are brief, although temporally lagged. **Threshold effects**: A long-standing causes generates change a brief effect change.	**Path-dependence:** Events occurred in a more-or-less distant past triggered self-reinforcing dynamics.

Sources: DiMaggio and Powel (1983), Grannovetter (1985) Pierson (2004), Tsebelis (2002)

3. Tangled institutionalisms: the case of inter-municipal coordination in Portuguese planning

Literature on 'planning traditions' usually portrays Portugal as a member of the Southern European 'family' of countries (Nadin and Stead, 2008), meaning that it emphasises regulation more than negotiation; That its local government is relatively weak, especially concerning its human, technical and financial resources. And that trust among public and non-public actors, as among actors belonging to different levels of government, is generally low, leading to cumbersome procedures and high levels of red tape (Breda-Vázquez and Oliveira, 2008).

Nonetheless, attempts to change this general setting have been recurrent in the last few decades. Yet the intensity and direction of change may vary strikingly between different aspects of territorial policies concerning the objectives, instruments and scales of public policy intervention. The evolution of territorial policies in Portugal in the last few decades may help to understand that this diversity of outcomes often derives from the mix of institutionalist factors existent in each context.

Among the most recurrent attempts to introduce institutional change were the rescaling of territorial policies through devolution of planning competencies to sub-national levels and the involvement of non-public actors in decision processes, notably territorial strategy-defining. Different degrees of change were observable at three levels: the administrative system, the formal planning system and other territorial-focused initiatives such as territorial development programmes. Inter-municipal coordination is a particularly intriguing field of work, as Portugal was subjected to several transformations in the last few years, with varying results in terms of institutional change and continuity (Oliveira and Breda-Vázquez, 2011; Silva and Syrett, 2006; Syrett and Silva, 2001).

In a country where intermediate scales between the municipal and the national levels were remarkably weak (there are no metropolitan or regional governments in mainland Portugal), attempts to promote inter-municipal coordination represents a major challenge. Successive legislative packages devolved increased competencies to the local government but the lack of human, technical and financial resources often hampered further development (Syrett, 1995). On the other hand, although many different kinds of inter-municipal institutions were created in the last thirty years, they are generally emptied of significant competencies. Further integration on territorial policies faced resistance from local authorities in giving up their own competencies at the expense of supra-municipal entities (Oliveira and Breda-Vázquez, 2012).

This is especially evident in the case of formal planning. In spite of the existence of law provisions for Inter-municipal plans (PIOT) since the end of the 1990s these plans, which are not compulsory, remain nearly absent in Portuguese planning practices. As a consequence, old traditional top-down procedures remain, as the intermunicipal scale of planning is mainly provided by regional plans, which are promoted by agencies controlled by the national government (Oliveira and Breda-Vázquez, 2012). This situation reproduces the main characteristics of the planning system as a cumbersome, over-centralized and technocratic apparatus (Amaral and Monteiro, 2004), where attempts to change are regularly hampered by deep-rooted administrative practices.

Other instruments were more effective in introducing governance-led practices. The raise of so-called territorialized programmes was apparent in the last two decades, frequently in close association with European Union funding. Some of the most innovative experiences involving inter-municipal coordination were either incentivised by the EU or inspired in other European experiences. Nevertheless, in

the case of Portugal, they hardly assumed a prominent role in the country territorial policies, which remained deeply committed with more traditional, regulative approaches. 'Institutional isomorphism', fostered coercively by EU rules, promoted through good-practice exchanges or the activity of key actors, contributed to transform institutional landscapes, yet this process was strongly conditioned by the strategic calculus of local actors, as many of them were far more interested in funding access rather than on long-lasting local strategies (Oliveira and Breda-Vázquez, 2012).

In all these examples, a web of 'tangled' institutionalist factors is apparent, either in promoting or in hampering change. Change may be fostered by sociologic institutionalist factors such as isomorphism, or hampered by the strategic calculus of local or national actors, especially in contexts where 'veto points' proliferate. Change may be the product of historical institutionalist factors, either abrupt such as 'critical junctures' or smooth such as cumulative decentralization measures. But it can be halted, or at least mitigated, by the continuous presence of deep-rooted non-written norms.

5. Conclusions

By using different streams of institutionalist thought, the paper aimed to expose the main factors laying behind change and continuity in institutions, and their relationship with recent evolution in spatial planning and territorial policy issues. We conclude that the mix of institutionalist factors present in each context is a central factor in determining the outcome of processes such as the rescaling of administrative and planning systems or the transition from government to governance.

The wide range of 'new institutionalist' perspectives would lead us to evaluate institutionalism in planning as a 'chaotic' approach, in a striking need of deconstruction. Nonetheless, the case described in this paper illustrates how co-existence among different perspectives is not only defensible but also desirable. Multiple threads of thought do not necessarily lead to incoherence, as long as each of them remains parsimonious in its claims, and the boundaries between them are rigorously defined (Benneworth and Henry, 2004). As each theoretical perspective is endowed with a specific set of strengths and weaknesses, an integrative approach may even lead to a more enlightened description of the role of institutions in planning.

There is a need to deepen this multi-perspective approach of planning in further research, as the joint exploration of conflicting and intersecting threads of thought offers new opportunities for adding value to planning and territorial policy studies.

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Path Dependence and Plan Formation: Envisioning and Implementing Chicago's Plan for Transformation

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Abstract

Over the past decade, the concept of path dependency has begun to appear in planning literature with increasing frequency as planning scholars have sought to explain historical continuity in a variety of urban policy issues including the economic development of regions, the provision of infrastructure and transit and the organization of planning processes. However, while path dependence offers a useful theoretical framework for exploring continuity and change in urban planning and policy, it remains an under-theorized and underutilized concept in planning.

This paper uses historical institutional analysis to investigate and interpret the conceptualization, planning and implementation of the public housing redevelopment program in Chicago. The paper argues that the evolution of Chicago's public housing program between the 1950s and the 1990s left an institutional structure, in which many local actors were deeply invested, that shaped and constrained efforts to create and implement redevelopment plans. Chicago's public housing program initially proved resistant to change. While it did eventually change, this change was highly contested and the resulting plan for redeveloping Chicago's public housing continued to reflect the institutional structure and corresponding power relations under which it was created. This institutional structure filtered attempts to develop a coherent approach to applying the HOPE VI program, a federal program which funded the revitalization of public housing, in Chicago and framed the process through which actors and resources were rallied in order to implement this approach.

Drawing on interviews and a detailed history of Chicago's public housing program between 1937 and 2007, this paper attempts to further understanding of how institutional path dependency shapes plan formation and implementation and the implications of this for urban growth and change.

1. Introduction

Over the past fifteen years, the concept of path dependency has begun to appear in planning literature with increasing frequency. The reason for this growing interest appears to be a desire to explain historical continuity and the resistance to change being observed in a variety of urban phenomena ranging from the economic development of regions to the provision of infrastructure and transit to the organization of planning processes. Yet, planning scholars, while increasingly referring to plans, policies and processes as path dependent, have rarely engaged with the concept of path dependence in a systematic or deep fashion. References to path dependence are made to suggest the importance of history in shaping the outcomes of a particular case without theoretical development or empirical support with a few notable exceptions (c.f. Moulaert et al. 2007; Henderson, Bowlby and Raco 2007; Pflieger et al. 2009 and Sorenson 2010). Despite growing recognition of that path dependence offers a potentially useful theoretical framework for exploring continuity and change in urban planning and policy, it remains an under-theorized and underutilized concept in planning scholarship.

This paper is an attempt to do three things: first, to provide a brief outline of a theoretical framework of path dependence as it applies to planning processes; second, to use historical institutional analysis to investigate and interpret the conceptualization, planning and implementation of the public housing redevelopment program in Chicago; and, third, to reflect on the implications of this theoretical framework and analysis both for planning practice and for planning scholarship. Underlying these three endeavors is an attempt to explain why Chicago's public housing program, a program that was glaringly unjust and inefficient, so stubbornly resist change. Chicago's public housing program was initially considered a model to which other cities across the US should aspire. Less than 15 years after its founding, its esteem had fallen such that it was already being considered as an example of how not to undertake public housing. Despite widespread recognition of its flaws, Chicago's public housing program retained the same basic structure that had garnered such criticism for another forty years. What explains this persistence? Further, what effect did this historical path have on efforts during the 1990s to revitalize and reform Chicago's public housing?

This research initially began as an investigation of Chicago's public housing program between 1989 and 1999. This period which began with the initiation of the Mixed Income New Communities (MINCs) program and the formation of the National Commission on Severely Distressed public housing and ended with the release of the Plan for Transformation of Chicago's public housing, was chosen because it encapsulated a 'policy window' (Kingdon 1995) during which Chicago's public housing program was restructured and redeveloped after decades of inertia. This initial research focused on how a new direction for Chicago's public housing was chosen, by whom and for what ends. This research found that the eventual agreement on how to restructure

and redevelop Chicago's public housing had been produced by an (unequal) coalition of the variety of different actors noted above and that the inclusion of several unexpected actors was the result of the exercise of their ability to impede the planning process and force their inclusion (Gebhardt 2009 and 2010).

This initial 'snapshot' case study is where most planning studies would have ended. However, the results of this initial research were unsatisfying for two reasons. First, while it explained the changes that took place during the policy window and the negotiations that led to the new strategy for Chicago's public housing set forth in the Plan for Transformation, it did not explain why change of some sort had not come earlier. Every single actor involved in the process agreed that the program that existed in 1989 was broken, yet this was the same program that had existed for 30 years. Why and how had it lasted so long despite being so clearly deficient? Second, and perhaps more interestingly, the negotiations between the different actors were framed by inherited institutional constraints. Setting a new path for Chicago's public housing required nearly a decade of highly contentious battles and the alteration or elimination of many existing institutional structures. These institutions were absolutely essential for explaining why certain actors were able to force their inclusion in the planning process and why certain approaches required dramatic changes. The snapshot approach revealed that these institutional structures existed, but not where they came from or why they persisted.

The rest of this paper describes Chicago's public housing program prior to the policy window that opened in the 1990s as path dependent and examines the implications of this conclusion. The first section provides a brief summary of the concept of path dependence. The subsequent three sections describe how the path of Chicago's public housing program was first set, then maintained and finally changed. The final section examines the implications of this for planning theory and practice.

2. Theoretical Framework

The term path dependency provides a label for empirical observations and intuitions about the historical continuity of institutions and organizations (Kay 2005, 558). At its most basic, path dependence is the assertion that it is possible to identify a clear historic pattern in which some initial often historically distant event(s) change the probability of later events. As a result, some are more likely to happen than others.

Path dependence originated in economics as a means of explaining the adoption and persistence of technologies. The first to articulate this concept was David (1985). David used the example of the persistence of the QWERTY keyboard despite its inefficient design to illustrate how, once a particular technology is adopted by a large number of users it becomes increasingly difficult to challenge even if other, better

options are available and the original circumstances that prompted design no longer exist. The concept was later elaborated on by Arthur (1994) who argued that the persistence of technology could be explained by high set up costs reducing the incentive to switch and learning and coordination effects along with adaptive expectations increasing the value or expected value of an existing technology to individuals as they both learn how to use the technology more efficiently and benefit from others adoption of the same technology. In both arguments, increasing returns and positive feedback "lock-in" the original advantage of a given technology over its rivals. Douglass North (1990) used this same logic to explain the role of the constraints imposed by historic institutions on economic growth arguing that path dependence in institutions helps explain anomalous economic performance.

Path dependence has since been borrowed and adapted by scholars in other disciplines. Of particular interest for this paper is the application of path dependence to politics and policy formation. Kay (2005) suggests that path dependency is a useful and emerging conceptual tool for understanding the public policy process because it allows observers to unpack dynamic processes as they unfold over time and to better understand the historical antecedents of a particular policy. Pierson (2000, 2004) presents the most developed conceptualization of path dependency as it applies to public policy. He argues that policy outcomes are the result of historical events, both large and small. The timing and sequencing of events matter; even small events that happen early in in a sequence can have profound impacts on outcomes and once a particular course of action is initiated can become increasingly difficult to reverse. Thus, starting from relatively similar conditions, it is possible to arrive a wide range of outcomes.

Drawing on the literature in economics, Pierson (2004) emphasizes how actions in the political and policy making realms can become self-reinforcing through the positive feedback as "the relative benefits of the current activity compared with other possible options increase over time". The longer a particular path is followed the more actors invest in a particular course of action and build institutions, policies and partnerships around it and the more the relative benefit of continuing this course of action and the relative cost of switching to an alternative increases. Eventually, alternatives that may once have been feasible become unattainable (Pierson and Skocpol 2002). Thelen (1999) makes a similar argument stating that once a path is chosen and a system is in place, actors adapt their strategies to reflect and work with and within this system. This also serves to reinforce this system as the new relationships and institutional arrangements can increase the cost of exit. Over time, the amount of sunk costs as well as the number of vested interests increase can "lock-in" a particular path making changing course difficult (Thelen 1999).

In Mahoney's (2000) formulation at the outset there must be more than one competing choice available. The choice made at this point in time is consequential because it

creates a pattern that endures over time. Mahoney (2000) suggests that there may be several different mechanisms at work maintaining path dependent sequences. The first is efficiency. An institution, policy or program is reproduced because it serves a function for an overall system and the transaction costs associated with changing the original decision are prohibitive. The second is legitimacy. Here decisions that have been made are viewed as legitimate because they fit with broad institutional norms while alternatives lack this legitimacy. The final is power. In this case, elite actors with power reinforce and support a path because it suits their purposes. While only one of these mechanisms is necessary to initiate and maintain a path, all three appear to be present in the Chicago case.

While path dependency describes the persistence of particular institutions, policies and programs over time, it suggests that the old is not scrapped every time something new comes along or is proposed. Change continues as social, economic and political fluctuations put pressure on an existing path. However, this change is bounded change until something erodes or swamps the mechanisms of reproduction that generate continuity (Pierson 2000, 265). Rather than these pressures causing dramatic shifts in an existing path, new ideas and strategies are assimilated and made to fit the that path. New institutional layers are formed as the new ideas are coopted into existing structures (c.f. Mouleart et al 2007). Institutions may be changed through layering as new rules or structures are added on top of what already exists. Institutions may be reoriented to serve new purposes or reflect new power dynamics. They are not abolished altogether, but rather are changed to reflect external demands in order to survive. These new layers represent only small changes individually, but cumulatively may result in a fundamental change in an institution (Thelen 1999). As the below case suggests, the longer a policy or program remains in place, the more external pressures it will be subject to and the more institutional layers it will accumulate.

Path dependency is potentially useful for explaining continuity and persistence of institutions, policies and programs. However, this does not help explain how and when change does occur. To resolve this problem, scholars of path dependency have incorporated the concept of "critical junctures" (Collier and Collier 1991, Thelen 1999, Katznelson 2003). Critical junctures are part of a punctuated equilibrium model wherein endogenous contradictions and/or exogenous forces result in crisis points at which an existing path ceases to be sustained. At these points, path shaping takes place and alternative systems compete for dominance (Davies 2004). Drawing on Mahoney's (2000) observations about the mechanisms sustaining path dependent sequences, critical junctures represent moments at which the costs of switching to a different path are lessened or an existing path loses legitimacy or powerful supporters.

Finally, Harvey's (1989) concept of artifacts adds a useful spatial dimension to the path dependency literature. "Artifacts" (Harvey 1989, 6) are physical, social and cultural

constructs, the result of the process of creating a city, that "dominate daily practices and confine subsequent courses of action." Generally concerned with the operation of institutions or economies, path dependency typically does not explore the way a particular course of action produces urban space or the way that these physical manifestations serve to constrain future actions. Patterns in the built environment would certainly seem to match descriptions of path dependent sequences as contingent decisions that occur early in a process can constrain later events, particularly as actors make investments and decisions based on this initial pattern. Studies of national housing systems that have applied path dependency have noted that one factor that contributes to the path dependent nature of these systems is that housing is expensive, lasting and place bound (c.f. Bengtsson and Ruonavaara 2010). When looking at Chicago's public housing program, it is impossible to separate out the local policy arena, the organization and the housing itself. The politics of public housing, the structure of the CHA and the expensive, immovable public housing itself all contributed

The next three sections provide a history of Chicago's public housing program from its inception in the 1930s through to the turmoil and eventual restructuring in the 1990s. These sections apply the concept of path dependence in an effort to identify what event or events set the program on the trajectory that carried it through second half of the 20th Century. It also describes how this path persisted (and was maintained) despite considerable external pressure to change. Finally, it concludes with a discussion of how the persistence of the path over three decades and the steps taken to maintain it constrained efforts to conceive a new path for the program during the 1990s.

3. Data and Analysis

3.1. Establishing the Path

The Chicago Housing Authority (CHA) was established in 1937 by Mayor Edward Kelly. The board of the organization was originally filled with many of Chicago's most progressive reformers. The board was led by prominent African American, Robert Taylor. Elizabeth Wood, a progressive reformer herself, filled the position of the CHA's first executive secretary. The CHA was considered at the time to be a model public housing authority known for cutting-edge design and conscientious management. Despite the progressive orientation of the CHA (and at times because of it) by the time Elizabeth Wood left the organization in 1954, Chicago's public housing program was on a path that would lead it to be considered forty years later as one of the worst in the country marked by poorly constructed high-rise developments ill-suited to the needs of families located on enormous, isolated, segregated tracts and an inefficient, chaotic bureaucracy incapable of maintaining these buildings. This need not have been the path but for decisions made at the outset of the program, and, indeed, the leaders of the CHA pushed hard during these initial years for a quite different program. Yet once the path

was set, it became increasingly difficult to change producing the program that became one of the most notorious in the country. This section details the setting of the path.

The CHA was established in response to the 1937 Housing Act which authorized and funded the establishment of local public housing authorities. The CHA initially constructed housing for war workers and returning WWII veterans. These early housing developments were low rise and built in both slum and greenfield locations. In keeping with the requirements of the authorizing Act which tied public housing to slum clearance, the CHA's leadership, dominated by housing reformers, gave preference to new projects on cleared slums. While not consciously segregated, the policy in place at the time was to fill public housing projects according to "neighborhood composition" wherein the number of families admitted to a new public housing complex would mirror the composition of the surrounding neighborhood. This rule meant that, despite concerns about the progressive tendencies of the leadership of the CHA, public housing itself remained acceptable to most residents and politicians and was built in neighborhoods throughout the city (Meyerson and Banfield 1955, Hunt 2009).

The nature of Chicago's public housing program changed in 1946. In that year, the CHA began selecting tenants to fill two new temporary housing developments. Both were greenfield sites near existing, predominantly white neighborhoods. With the conclusion of WWII, demand for public housing increased substantially as returning veterans sought inexpensive housing options. To deal with this pressure as well as demands for equality from black veterans, the choice was made to pursue racial integration for these developments. The integration of the first, on the northwest side, went unnoticed. The attempt to integrate Airport Homes on the southwest side raised the ire of white residents of the adjacent neighborhood. They protested the move and attempted to intimidate the project's black families into leaving.

This event precipitated decisions that would set a path for the CHA that would persist until the late-1980s. The unrest at Airport Homes in 1946 alerted Chicago's white aldermen to the CHA's intentions to integrate new public housing. The CHA had, up until that point, been protected by a sympathetic mayor in Kelly. His ouster in 1947 exposed the CHA to a backlash from various sources. Many of the CHA's powers for slum clearance and site selection were taken away by the State legislature in 1947 and, in 1949, the Chicago City Council was afforded veto power over the selection of sites for new public housing construction (Meyerson and Banfield 1955, Hirsch 1983, Hunt 2009). If there was a single, contingent event that set Chicago's public housing program's path, this was it. It was the fight over integrating Airport Homes that resulted in greater City Council interference in the CHA. And it was this fight that resulted in decreased decision-making authority of Taylor and Wood.

Previously, Taylor and Wood, while not entirely trusted by the City's aldermen, had been allowed to operate the CHA largely free from Council control and built public housing in both black and white neighborhoods on both clearance and greenfield sites. The ultimate shape of the program had yet to be established. Had the issue of integration been raised at a later point, after Taylor and Wood had established a clear path, it is possible that the pattern of public housing sites would have been different. Further, as the following paragraphs explore, had Taylor and Wood not expended their political capital on this battle at this point in time, they would have maintained some ability to affect some of the subsequent decisions regarding the physical design of Chicago's public housing. As it was, neither survived the fight over Airport Homes with sufficient power to shape later events.

Between 1948 and 1950 a series of proposals for new public housing sites were presented by the Chicago City Council and the CHA. The proposals put forward by the City's aldermen were decidedly in favor of building large projects in the City's African American neighborhoods while avoiding nearly all white neighborhoods. In contrast, the CHA presented a series of proposals for building a large number of units on both slum clearance and greenfield sites. The majority of the CHA's original commissioners were in favor of a large public housing program that would be built both on vacant sites and on slum sites throughout the city. They also favored a program that was desegregated (Meyerson and Banfield 1955, 45). The demand for housing in Chicago was substantial at the time with nearly a half million people living in neighborhoods considered slums (Meyerson and Banfield 1955, 91). Large slum clearance projects were perceived as necessary because the scope of the slum problem in Chicago was considered so large that small renewal efforts would be overwhelmed.

The CHA lost every fight with the City Council over new public housing sites. Eventually, after arguing for several years for a broader program, the CHA was forced to accept the City Council's sites in order to be able to build at all (Hunt 2009, 91). Robert Taylor resigned in exasperation in 1950 after it became clear that Chicago's public housing program had become a vehicle for promoting redevelopment and reinforcing segregation (Hunt 2009, Meyerson and Banfield 1955, Hirsch 1983).

As Hunt (2009) argues, the City Council's blatant racism helps to explain why little or no public housing was built in predominantly white neighborhoods, but is insufficient to explain the extensive building of public housing in the City's black neighborhoods. In this, the progressive tendencies of the early leaders of the CHA also played a part as they attempted to improve the conditions of poor blacks and slum dwellers. Driven in parts by the available funds, by the amount of substandard housing in the city and by a desire to create modern neighborhoods to replace old slums, the CHA pushed for large-scale projects over a more limited, scattered site approach (Hunt 2009). The construction of large amounts of public housing in the City's predominantly black wards was also

supported by African American aldermen who sought to consolidate votes and political power in their wards (Meyerson and Banfield 1955). Yet despite the concern with slum clearance and large projects, had the CHA retained some authority over site selection and the greenfield sites that it proposed been accepted, the concentration and density of the projects built in the City's black neighborhoods would not have needed to be so high. This density proved to have disastrous consequences.

Another key characteristic of Chicago's public housing program, one that has been intensely criticized, was the predominance of high-rise buildings. The original CHA manual specifically directed the organization's architects to design only buildings with a "domestic" and "non-institutional" appearance (Meyerson and Banfield 1955, 95). In the early-1950s, the CHA experimented with high-rise buildings. The first elevator buildings, Dearborn Homes opened in 1950. Loomis Courts opened in 1951. Further complicating the situation, the CHA pursued a well-intentioned program to design and fill flats that met the needs of perspective tenants. As the majority of perspective tenants were large families, the majority of new units being built were for large families. This had the effect of concentrating large numbers of children into the new public housing.

While she originally supported experimentation with high-rise developments, Elizabeth Wood quickly identified that low-rise projects were a better form for public housing particularly for families with children (Hunt 2009, Meyerson and Banfield 1955). In 1952(!), less than two years after the first high-rise buildings had been completed in Chicago, Elizabeth Wood wrote a piece for *Architectural Forum* where she stated that the experiment with high-rises had been a mistake and argued instead for low-rise buildings more suitable for families. Experience with the first two high-rise developments made clear the flaws of this approach. Yet, by that point the path had already been set and Wood's authority was all but gone. Local politicians and civic leaders had reached a mutually satisfactory agreement over the shape of Chicago's public housing program which required high density high-rise development. This approach was further bolstered by the position of national level bureaucrats who viewed high-rise development as the most cost effective design. The cost restrictions imposed by the federal government coupled with the structure of Chicago's public housing program meant that high-rise buildings were inevitably the "best" choice. Thus, in a rather dramatic illustration of path dependency nearly 14,000 units including high-rise buildings at Harold Ickes Homes (1955), Grace Abbott Homes (1955), Henry Horner Homes (1957), Stateway Gardens (1958), Cabrini-Green (1958 and 1962), Rockwell Gardens (1961) and Robert Taylor Homes (1962), were built by the CHA using a model and designs that the leadership within the CHA had clearly identified as flawed.

Between 1948 and 1952, Elizabeth Wood and her staff became increasingly isolated from the CHA board. In a further confirmation of the chosen path of Chicago's public housing program, Wood was fired in 1954, after several years of increasing tension with

the CHA Board over design, siting and integration culminated in a scathing letter criticizing their lack of commitment to achieving social goals. After Wood's departure former General William Kean took over as Executive Director. He lifted all racial quotas imposed on CHA developments, the result of which was that black demand for public housing quickly overwhelmed white demand. Kean changed the focus of the CHA from one in which progressive social goals were paramount to one in which administrative efficiency was most important. This fit neatly within the chosen path. In 1956 Mayor Richard J. Daley appointed a close political ally, Charles Swibel, to the CHA board. This move was intended to bring the CHA more closely under the control of Chicago's political machine. Swibel assumed the chairmanship of the CHA board in 1963 which insured the Authority's quiescence.

3.2. Maintaining the Path

Political, social and economic changes at both the local and national level resulted in considerable pressure being applied to the path of Chicago's public housing program at several points in the program's history. There were multiple points at which CHA and City of Chicago decision-makers were presented with opportunities to change the trajectory of the CHA. While minor changes were made, at each point the cost of switching to a different path was judged too high. The overall path remained constant. In keeping with the observations of Pierson (2000) and Thelen (1999), new rules and institutional structures were created and fit into the existing path. These layers, while they had little immediate impact on the program, had profound implications when a policy window opened in the 1990s and attempts to shape a new path for Chicago's public housing program were begun. This section discusses the period between 1955 and 1990 and the challenges that were made to the path of Chicago's public housing program and the steps that were taken to maintain it.

Chicago's public housing program followed the basic path set out in the early-1950s without major challenge until, in 1966, a group of CHA residents filed a lawsuit against the CHA. The product of the changing social environment of the Civil Rights era, this lawsuit claimed that the CHA had engaged in racially discriminatory project siting and tenant selection procedures in violation of Title VI of the 1964 Civil Rights Act by locating all but a handful of public housing projects in predominantly African-American neighborhoods and placing African-American tenants only in the segregated projects. In 1969, a federal judge ruled on the lawsuit against the CHA in favor of the plaintiffs. Known as the Gautreaux decision after the lead plaintiff in the case, this ruling divided Cook County by census tract into "general areas" (areas with less than 30% African-American population) and "limited areas" (areas with 30% or more African-American population). For every unit of public housing built in a limited area, three units had to be built in a general area. This legal decision put pressure on the CHA to change and offered an alternative path for Chicago's public housing program. The standard practice

in Chicago of deferring to aldermen regarding development decisions in their ward essentially rendered General Areas off-limits to new public housing construction. As the Gautreaux plaintiffs and the presiding judge argued at the time, this was an opportunity for the CHA to change its practices and create a very different program (*Gautreaux v Chicago Housing Authority* 1969).

Rather than pursing an alternative path, opening additional neighborhoods to public housing and establishing a scattered site approach, the City and the CHA instead chose to halt new public housing construction altogether (Popkin et al. 2000, Wilen and Stasel 2006). Opening the City's white neighborhoods to public housing, which was by this point occupied nearly exclusively occupied by African American's, could not be done without enormous political cost. This calculation was made plain in 1971 by a request by the CHA to postpone making public sites for new public housing that had been located in white neighborhoods so that they would not become "the central issue of the upcoming campaign" (Wade 1970 quoted in Hunt 2009, 250) and the immediate and ferocious response from the City's white aldermen when this request was denied and the list was made public immediately before an election. A scattered site program would have enraged white voters, introduced black voters into white wards and drained black voters from black wards. None of these were acceptable outcomes for local politicians, black or white. The status quo worked for those in power, and they saw no need to change it.

The CHA again was pressured to change in the mid-1970s. Under Charles Swibel, CHA projects were allowed to deteriorate as a result of rampant fraud, cronyism, mismanagement and corruption. Poor engineering and lax maintenance also contributed to a precipitous decline in buildings. During Swibel's tenure, the CHA's employment rolls ballooned and maintenance of CHA properties declined significantly (Hunt 2009, Sheppard 1982). Despite ample evidence of managerial incompetence and considerable pressure from tenant groups during the 1970s, the CHA proved "immune to reform" (Hunt 2009, 214). During the 1970s, CHA residents formed the Chicago Housing Tenants Organization (CHTO) and began a campaign to force the CHA to improve conditions in Chicago's public housing. Here again, those that benefitted and drew power from the existing configuration of Chicago's public housing program used their authority to adjust institutional structures to maintain the overall trajectory of the program. The residents' campaign led to the creation of the Central Advisory Council (CAC) which would include residents from each project in a monitoring and oversight board. However, the CAC was populated with resident leaders hand-picked by the CHA and beholden to Swibel. Local Advisory Councils (LACs) were set up at each site ostensibly to provide greater tenant control over CHA projects. In practice, these were used to discourage resident activism and give the illusion of resident authority.

In addition to pressure from below, pressure was applied to the CHA from above. As the fiscal crisis of the 1970s deepened and greater emphasis was placed on the efficient operation of programs such as public housing, nine different reports were written by auditors and consultants between 1978 and 1982 outlining numerous and widespread problems with the CHA's management. As with before, little was done to actually reform the organization. The CHA as it existed benefited some powerful interests including black politicians, the Democratic machine and Swibel himself. It was happily ignored by most everyone else. In 1982 the most comprehensive and scathing review of the CHA was written by Oscar Newman on behalf of the federal government (Sheppard 1982). It outlined in excruciating detail managerial intransigence, less-than-competent senior leadership and a bloated bureaucracy that resulted in crumbling buildings and an organization that resisted any attempts at reform (Hunt 2009). The CHA ran a deficit every year and public housing buildings were not maintained.

In 1981, newly elected Mayor Jane Byrne had appointed a new executive director, Andrew Mooney, who brought credentials as an advocate of "good government". However, Swibel, a major contributor to Mayor Byrne's campaign, was allowed to continue to serve as CHA chairman. After Newman's report was released in 1982, HUD finally forced Swibel to resign his position under threat of a federal takeover of the CHA. HUD's report and the dismissal of Swibel offered another chance to change the trajectory of the CHA, but again the cost of doing this, both in political terms for the politicians that benefitted from the existing arrangement and, for the first time, in fiscal terms[1] given the enormous maintenance backlog, prevented change. Also, as with earlier actions taken to preserve the existing path of the CHA, the legacy of Swibel's tenure as chairman of the CHA and the political fight with Mayor Byrne over his resignation left lasting legacy that would affect later attempts to restructure and redevelop Chicago's public housing. The fight to preserve Swibel led to a period of distrust between HUD and the CHA. It also led to a period of regular turnover of CHA leadership. Mooney lasted only two years as director of the CHA and accomplished little. Between 1982 and 1988, the CHA had three different chairmen and five different executive directors. The regular turnover in CHA leadership resulted in the further deterioration of the housing stock and of the CHA's relationship with residents and with HUD.

The upheaval within the CHA was reflective of the changes occurring in Chicago's political landscape during the 1980s. In 1983, after one term as mayor, Mayor Byrne lost the Democratic primary to Harold Washington. While Harold Washington's election

[1] One of the common myths about Chicago's public housing program is that the buildings deteriorated because there was insufficient national government funding to maintain them. As Newman's report details, up until the early-1980s, the CHA had sufficient funds to cover maintenance costs, but corruption, incompetence and poor organization meant the money was not used effectively. Here is a case where initial political costs of switching to a different path eventually led to and were compounded by actual financial costs.

as mayor altered the Chicago political landscape making it more inclusive of disaffected minorities and neglected neighborhoods, the governing coalition he assembled ultimately did little to change the CHA. Mayor Washington remained loyal to the public housing residents who helped secure his election victory, strongly opposing tentative plans to demolish public housing that began to appear during his mayoralty (Ziemba 1987a). Nevertheless while he supported many reforms, Washington remained a Chicago politician and, thus he ultimately did little better than his predecessors in changing the culture of the CHA. The status quo continued to benefit too many powerful players to be changed. One of the Mayor's powerful supporters, Renault Robinson, was appointed chairman of the CHA. Robinson's support of Washington secured him the job and insulated him despite repeated failures and poor management (Polikoff 2006). Robinson finally resigned as chairman in early-1987 when his performance became an impediment to Mayor Washington's reelection campaign (Spielman and Golden 1987).

As with previous opportunities, the choice was made to preserve the existing path by adding another new institutional layer. The constant turnover in CHA leadership meant that the agency was not able to pursue a coherent strategy to maintain deteriorating units, reduce criminal activity, improve budgetary practices or reform bureaucratic inefficiencies. In 1987, as they had in 1982, HUD threatened to take over the CHA. The CHA's lack of progress on construction of scattered site public housing had led the Gautreaux plaintiffs to repeatedly return to the Gautreaux court to try to force the CHA to comply with the consent decree. Beginning in 1980, Polikoff requested the appointment of a receiver to implement the scattered site program. This request was denied in 1980. In 1981, the Gautreaux case was assigned to a new judge, Marvin Aspen, who repeatedly accepted the CHA's arguments that the leadership turnover was responsible for the delays and pushed for the two sides to resolve their differences outside of court and without a receiver. Finally, the 1987 revelations of financial mismanagement that forced the resignation Robinson led HUD to strongly suggest that the CHA consider hiring a private management firm. Eventually, faced with enormous maintenance and new construction obligations, a lack of funds for these programs, and hoping to stave off direct HUD, Mayor Washington chose to support a receiver for CHA's scattered site program. The costs of more drastic changes (i.e. allowing HUD to take over the CHA) were judged to be too high in political and financial terms, but also, for the first time, in terms of the number of jobs that might be lost through a major reconfiguration of the program.

In May 1987, the Habitat Company was named by Judge Aspen as receiver. As receiver, Habitat was empowered to oversee the scattered-site program including "all CHA non-elderly public housing development programs which may in the future be authorized by HUD" while the Gautreaux decision remained in effect (*Gautreaux v Pierce and Chicago Housing Authority* 1987, 2). Thus all new family public housing construction in Chicago became the responsibility of the Habitat Company while

jurisdiction over senior public housing buildings and over rehabilitation remained under CHA control. Over the next five years, the Habitat Company would do little more than the CHA to expand the supply of public housing or encourage integration. Again, decisive change was avoided through the addition of a new institutional arrangement that had little immediate impact on the overall trajectory of the program. Yet, as with earlier adjustments made to preserve the existing system, these new institutional arrangements only prolonged the inevitable critical juncture and would eventually complicate later path shaping efforts when that juncture did arrive.

3.3. Critical Juncture

The period between 1989 and 1999 appears to encapsulate a 'policy window' (Kingdon 1995) during which Chicago's public housing program was reshaped after three decades of inertia and before settling back into a new period of relative stability. As the previous section described, this was not the first time Chicago's public housing program was under pressure to change. Chicago's public housing program eventually collapsed under the weight of a combination of different pressures during this critical juncture. However, while the previous path was abandoned, the past choices, particularly those made to sustain the path in the face of previous pressures to change, narrowed the set of options that could be considered and increased the costs to certain groups of alternatives to these options. This section describes the arrival of the critical juncture and the forces that precipitated it.

Chicago's public housing had been built in areas of the City that were previously considered slums. The choice to locate public housing in these areas was a choice that satisfied both the housing reformers in charge of the CHA during its formative years that wanted to remove Chicago's slums and aldermen that preferred public housing in the least desirable sites for development, far away from the City's white wards. The design of the buildings also represented a compromise that was, at least initially, supported by both groups. However, these decisions led to maintenance problems brought on by the size and design, little interest from non-poor families in living in public housing, and little interest from politicians in fixing the problems. The decline of Chicago's public housing was self-reinforcing: growing maintenance issues confounded management and poor management led to more maintenance issues. Chicago's public housing became deteriorated concentrations of poverty and crime, an image popularized in media reports and books such as Alex Kotlowitz's *There Are No Children Here*. Eventually the deterioration and mismanagement reached a point at which the status quo could no longer be tolerated or ignored. Beginning in 1986 with a plan for redeveloping the vacant of Lakefront Homes, advanced by prominent local developer Ferd Kramer, Chicago's public housing projects faced mounting pressure for redevelopment. As interest in reorganizing and redeveloping public housing grew among local elites in the early-1990s, Chicago's public housing stock was so physically dilapidated and

symbolically reviled that it was relatively easy to argue that drastic change was necessary. Further, when the federal government mandated an assessment of the viability of all of Chicago's public housing stock in 1996, nearly 18,000 units failed, meaning that they *had* to be demolished. The decisions made during the first decades of Chicago's public housing program had a cumulative effect that, by the 1990s, meant both the literal and figurative cost of keeping Chicago's existing public housing complexes had become too high. Even Vince Lane, who had initially favored rehabilitating existing buildings into mixed-income complexes, eventually accepted redevelopment.

Second, as noted above, much of Chicago's public housing was built in areas formerly considered slums. Chicago's historic pattern of development outward from the central area meant that the oldest residential neighborhoods – the areas considered slums – were located very near the city's core. Thus, many of Chicago's public housing complexes were located in a ring around the City's central business district, the Loop. The decision to locate Chicago's public housing in these areas had the consequence that, fifty years later, these complexes were located directly in the path of the City's revitalized and growing Loop. Thus the redevelopment of public housing is consistent with the ongoing redevelopment of Chicago's core neighborhoods. The growth of the Loop was a result of the City's changing economy as well as political changes made in response to these changes. Even as Chicago continued to lose manufacturing jobs for the preceding several decades, during the 1980s the City began to add service jobs. These jobs were concentrated in the Loop, spurring a prolonged period of new office, retail and residential construction. Eventually, the demand for space in the Loop exceeded supply and development spilled over into adjacent areas. When Mayor Richard M. Daley took office in 1989, he instituted policies that continued and enhanced this pattern of development, and which appear to reflect, in part, recognition of Chicago's changing economy and, in part, a politically motivated choice. The initial investments in downtown infrastructure made immediately after Daley's election were chosen both to appease the business interests that helped him get elected and to appeal to Chicago's residents and visitors. These Loopcentric, pro-development policies proved popular with Chicago's voters and created a positive feedback loop that then reinforced these policies. In the mid-1990s this path collided with the path of Chicago's public housing. Sustaining both was considered infeasible. Suddenly the calculation of the relative costs and benefits of maintaining the trajectory of Chicago's public housing program was flipped. The costs of keeping the program now dramatically outweighed the costs of changing it. Further, public housing reorganization and redevelopment, as it has been implemented in Chicago, works because it is consistent with the Daley administration's broad, and popular, strategy that favors enhancing the city's image and tax base through civic beautification, public safety, gentrification, consumption and development. Moore (1986) argues that ideas are more likely to be brought into practice if they demonstrate consistency with established practices, and, indeed, the Daley administration's approach

to public housing redevelopment is remarkably consistent with its approach to all redevelopment.

In June 1988, after the resignation of yet another executive director, Mayor Eugene Sawyer appointed Vincent Lane as executive director of the CHA. When Lane assumed control of the CHA, approximately one sixth of all units were vacant. Years of no maintenance meant that many of these units were uninhabitable. One quarter of the elevators in the CHA's high-rise buildings were non-functional, and Lane lacked financial reserves with which to address maintenance backlogs (Flaherty 1989). Under Lane the CHA began to slowly remedy existing maintenance issues, conducting crime prevention sweeps of Chicago's projects, and lobbying HUD for flexibility to pursue income mixing; however, despite his initial position in favor of fixing public housing, he eventually became an advocate of demolition and redevelopment. Lane explained his reversal as a realization that high-rise public housing could not be saved, claiming as evidence several high profile incidents involving Chicago's high-rises. However, Mary Pattillo (2007) notes that Lane's circle of close friends and associates included several developers who were strong advocates of demolition and redevelopment and he was apparently influenced by their views. These include Alison Davis and Ferd Kramer, both of whom would later be involved in redevelopment efforts at one or more public housing site.

Changes at the national level brought about by the election of a Republican Congress in 1994 and the subsequent threat to dismantle HUD completely, created an opportunity for major reform of public housing generally and Chicago's public housing in particular. New sources of funding and greater flexibility to pursue comprehensive redevelopment of public housing was made available through the HOPE VI program. This removed or at least reduced the constraint on change presented by federal funding and regulation.

Perhaps more significant still was the election of Richard M. Daley, the son of former Mayor Richard J. Daley, as mayor of Chicago in 1989. Daley narrowly defeated the incumbent Mayor Eugene Sawyer, who was appointed after Harold Washington's death, along with three other candidates in the Democratic primary in a vote that largely split along racial lines. Daley went on to defeat Harold Washington Party candidate, 4th Ward Alderman Timothy Evans and Republican Party candidate, 10th Ward Alderman Edward Vrdolyak in the general election. Again, this vote vote was largely split based on race. Daley was elected based on his image as a competent administrator. Washington had had an acrimonious relationship with the City Council during his tenure – his first term was marked by the so called "Council Wars" in which the remnants of the Democratic political machine attempted to block all of Washington's major initiatives – and Daley appealed to voters' desire for stability and action (McCarron 1989). Daley had been elected despite drawing only about 6 percent of the black vote and could conceivably have won reelection without any black support. While he did

make overtures to Chicago's black communities, unlike previous mayors, he was not reliant on public housing residents as a major voting block (Dold and Hardy 1989). Thus, Mayor Daley, rather than attempting to shield Chicago's public housing program from another federal takeover threat, chose to embrace it instead. Unlike previous Chicago politicians, Mayor Daley had no vested interest and drew no power from Chicago's public housing program. Quite the contrary, the existing program was a major potential impediment to his source of power and popularity, the expansion of Chicago's middle class neighborhoods and Loop.

3.4. Setting a New Path

Throughout its history pre-1990, Chicago's public housing program and its powerful supporters had continued to resist comprehensive reforms. The program had repeatedly faced pressure to abandon the status quo brought on by social, economic or political changes. Instead of yielding, when faced with negative feedback that encouraged abandoning the old path and forging a new one, the CHA and the City repeatedly opted to create new institutional structures to that would neutralize the negative feedback, maintain the existing system and push any changes further into the future. In the estimation of those with the power to change the trajectory of Chicago's public housing program, the costs of changing the path to their own political power and to the city in terms of civil service jobs as well as the actual financial costs of altering the physical stock were simply too great. By the time HUD took over the CHA in 1995 minor corrections such as the appointment of the receiver had, as Hunt (2009, 257) observes, "closed off possibilities for policymakers and left only the option of drastic measures."

During the 1990s Chicago's public housing program was remade through concurrent efforts to assemble coalitions to create and implement redevelopment plans at multiple public housing sites and citywide efforts to reorganize and restructure the CHA. These efforts were shaped and constrained by the institutional structures that were inherited from the previous era. Initial attempts by first the CHA and then the CHA (under HUD control) and City to impose restructuring and redevelopment plans on the City's public housing failed because of these institutional structures. Repeatedly throughout the planning process, a group of actors attempted to move forward with redevelopment, and repeatedly these efforts were stymied by the entrance of a new actor with the power to impede implementation, power that derived from the institutions and institutional structures put in place during the preceding thirty years in order to maintain the previous path. Over the course of the coalition building process, the participants first made visible the layers of institutions and institutional structures that constrained the trajectory of the Chicago's public housing program. Each time a new layer of sedimentation that impeded agreement upon and implementation of a redevelopment plan was discovered, it had to be lifted away. The process of peeling away the institutions and institutional

structures that impeded redevelopment continued until a coalition of actors was assembled with the power to successfully proceed.

At each public housing redevelopment site throughout the city coalitions were formed, often after raucous battles. Each member of the coalition planning and implementing redevelopment brought power to resolve a specific problem or complete a specific task. Some were the result of prevailing economic and political forces acting at a national or international level. For example, developers were necessary to provide financial backing for and build the proposed developments. The CHA was necessary to secure demolition grants and oversee relocation and social services. However, the participation of many actors was necessitated by the left over institutional structures from the previous path. The Gautreaux plaintiffs' counsel was necessary to secure court approval for redevelopment. This was only necessary because the requirements of the original consent decree had not yet been met as the choice had been made to preserve the status quo rather than build integrated projects. The Habitat Co. was necessary to build new public housing units, a direct result of the choice to allow the appointment of a receiver in 1987 in order to avoid more dramatic restructuring through a HUD takeover. Residents, through their LACs and the CAC, established as a cooption mechanism to neuter resident demands during the 1970s, were also necessary participants. This, then, explained the odd makeup of the coalition that was assembled to oversee the restructuring and redevelopment of Chicago's public housing. It was a direct result of the steps taken between the 1950s and 1990s by those in power to preserve the path of Chicago's public housing program for their benefit.

Beyond the organization of the coalition, the initial decisions to pursue large-scale, high-rise developments in segregated neighborhoods also constrained the choices available during the policy window. The path of Chicago's public housing program prior to the 1990s had left projects that were no longer viable even with improved maintenance. The decline of Chicago's public housing had been self-reinforcing: growing maintenance issues confounded management and poor management led to more maintenance issues. Eventually the deterioration and mismanagement reached a point at which the status quo could no longer be tolerated or ignored, and, when interest in reorganizing and redeveloping public housing grew among local elites in the early-1990s, Chicago's public housing stock was so physically dilapidated and symbolically reviled that it was nearly impossible to argue that anything other than drastic change was necessary. Further, when the federal government mandated an assessment of the viability of all of Chicago's public housing stock in 1996, nearly 18,000 units failed, meaning that they *had* to be demolished. The decisions made during the first decades of Chicago's public housing program had a cumulative effect that, by the 1990s, both the literal and figurative cost of keeping Chicago's existing public housing complexes had become too high. Even Vince Lane, who had initially favored rehabilitating existing buildings into mixed-income complexes, eventually accepted redevelopment.

4. Conclusions

For a little more than three decades from the 1950s to the 1990s, Chicago's public housing program followed a path that to most observers was blatantly unjust and inefficient. The buildings were isolated, segregated and poorly designed and maintained and the organization was ineffective, bloated and poorly managed. Yet no steps were taken to change this by any with the authority to actually affect change. Instead, when faced with external pressure to change, steps were taken to bolster the existing program. This inertia is not surprising. Pierson (2000) has illustrated that institutions and public policies, once established, tend to be self-reinforcing by establishing patterns of relationships and behavior that are not easily altered. In the case of Chicago's public housing, local elites were deeply politically invested in the existing program. Public housing residents represented a significant and captive voting block for a group of powerful, black Aldermen. The CHA represented a significant employer of black civil servants and a landing spot for patronage hires. In addition, federal regulations governing public housing made reorganization and redevelopment nearly impossible by requiring replacement of demolished units, prohibiting mixed-financing arrangements and limiting the use of modernization funds. Finally, with the exception of Cabrini-Green, there was little incentive to reconfigure public housing into the 1980s as development in the Chicago region was occurring either in the Loop or in the suburbs. There were other costs as well. The cost in time and political capital necessary to change federal laws and rules governing public housing was simply too large, particularly when public housing had such a small and relatively powerless constituency.

For planning practice, this case offers some useful lessons. Most importantly, the history of institutions, actors and places matters in the crafting and implementation of new policies and plans. Planners and policy makers do not start with a blank slate, but begin with the accumulated sedimentation of existing policies, plans, procedures and places. Certain events, some of which may have occurred in a quite distant past, play a crucial role in creating new plans. Understanding the history and context of a plan or program, and in particular why a plan or program has persisted over a long period of time, can help planners to better understand how to change it. This can also better identify what constraints exist or what historical institutional structures need to be addressed in order for a new plan to be established and implemented. If one knows how stability is maintained, who is invested, how power is exerted, coalitions constructed and agendas set this can provide opportunities for change. This case also suggests that, if processes, even inefficient or unjust processes, tend to persist rather than change, then conflict can be good. It can produce negative feedback and reduce the value of particular courses of action to produce change. Negative feedback and conflict eventually led to window of opportunity to change. Lawsuits and protests and media campaigns, while they were resisted by those benefitting from Chicago's public housing

program for some time, eventually helped create moment of change. Finally, events around (including preceding and immediately following) a critical juncture are crucial – this suggests that planners need to have a vision of what should be put into practice.

This case also provides some useful lessons for planning scholarship. Studying the historic path of a plan or a program is useful because it allows a researcher to unpack dynamic processes as they unfold over time and to better understand the historical antecedents of a particular policy. As this case demonstrates, there may be significant temporal distance between causes and effects. Decisions made at the outset of Chicago's public housing program had enormous ramifications fifty years later. Focusing on singular events or those with short time frames may erroneously lead to conclusions and generalizations that are really idiosyncratic or contingent while missing crucial contextual and historical factors which may be causal. This is an argument in favor of longitudinal studies, of panel studies and of evolution over time rather than one-off studies. Some outcomes are the result of a sequence of events that happened over a long period of time. Finally, as with practice, it is important for planning to have a coherent theoretical and conceptual justification and vision. Policy windows may open only infrequently, and it is important for planning to have a position in order to be able to influence decision-making rather than simply observing from afar.

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IDEOLOGICAL MIS-DIRECTION: IRANIAN LOW INCOME HOUSING POLICY OR SURFING PLEBIAN EMOTIONS

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Abstract

This paper will explore social housing policy in Iran and attempt to illuminate the ideology underlying and facilitating these policies and the consequences that they induce. Ideology is as an essential and universal essence, it constitutes a society's social reality (Žižek 2008). Any dominant ideology produces a series of fantasies that partially shapes the way its members contextualize knowledge, the economy, society, and obviously planning (Gunder, 2010). For instance, the egalitarian creeds underlying social housing are imbedded in a fantasy promise of addressing a deficiency, such as "better life for low income groups" or "the right of people to possess housing commensurate with their needs", which also appears in constitutional laws, rules and policies of the state. Yet, this paper contends, following Gunder and Hillier (2009), that these policies and laws tend not only to, fail to achieve success, but also to often ignore and obscure other humanistic needs and democratic demands. In this vein, the attractiveness of housing and its related land policies make housing one of the most effective tool of popular domination (Laclau, 2005). Accordingly, governmental housing policy is often one of the most important tools for the manipulation of mass movements. This paper attempts to demonstrate, in an Iranian context, three main issues: first, the fact that housing policies based on the promise of egalitarian achievement can act as a hindrance to citizen rights and democratic demands. Second, housing policy can act as a political tool, which reproduces the dominant ideology, and third, as technocrats, planners facilitate the use of these populist and ideologically inducing policies.

In more democratic and modern societies, the function of planning is a complementary to the market; however, in a non-democratic, reactionary and dictatorial populist system, the role of planning changes to become the actual distributor of public goods and services; this is sometimes at odds with democratic demand. In the shadow of this egalitarian rhetoric, populist policies are used to create the mass movements of government support and to legitimize decisions that have been made. The paper will demonstrate that the consequences of these policies are that over the thirty year period of the current Iranian regime, a consolidation of capital has occurred drawing accumulation from the wealthy and middle classes to the central government. This has hindered private investment in housing and the pertinent related industries, further increasing dependency on, and support for the current regime by the masses. In this regard, the policy inherently impedes the

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formation of social and economic market mechanisms to meet the needs of the populace and further reinforces dependence on, and support for the regime.

1-Introduction

This paper argues that a dominant ideology frames all of our ideals and ideas. Ideology identifies our action as planners. It discusses how ideological creeds structure society's norms, ideals, expectations, and finally, policies and planning. Based on Althusserian's understanding of ideology, ideology encompasses all aspects of our social life. It includes 'more or less all unconscious medium of habitual behaviors' (Payne & Barbera, 2010, p. 340). It can be considered in planning as well, Gunder (2010) contends that planning always has an ideological component which largely reflects the dominant ideology of the time. He emphasizes that, in the current world, this ideology is causing the evolution of capitalist market. In fact, it is not only capitalism but also every hegemonic ideology that can drive the mechanism of society and planning.

However, Yates (cited in Allmendinger & Gunder, 2005) mentioned that 'environment of policy making and the character of urban problems determine the shape of urban policy'. Based on Foucault's works (1979b, 1992, 2002, 2008), this paper argues that power and power relations determine both the environment of policy and the character of urban problems. Dominant power and hegemonic ideology are the different names for the same mechanism (Carpentier, 2011). Hegemonic ideology may be seen as having core concepts and peripheral concepts; the importance of concepts has changed over time. At times, some concepts are borrowed from other ideologies to provide the aims of power (Freeden, 2003). Therefore, power, through a hegemonic ideology in a specific space and time, identifies and codifies everything. Where are the planner and the planning in this hegemonic ideology? As Gunder (1999, 2010) stated, planners work for the desire of the Other (power). The desire of the big Other (power) appears in the form of laws, policies and planning. Actually, planning and policies provide the best tools for power according to the modern interpretation of power that is the state or bureaucratic government. Specifically, planning in less democratic mechanisms has provided better apparatuses to legitimize power or dominant ideology.

One of the oldest questions in politics is how those in power are able to maintain their rule over those they oppress. According to many political theories, there are four ways for power to reproduce itself (Hume & Hendel, 1953; Machiavelli, 1961). The first is through charismatic power, which uses rhetorical speech, promises and discourses to attract people and masses. The second is providing for people's needs; dependent people accept oppression more easily than those who are independent. The third way is through populist policies that include emotive slogans such as, "we give people whatever they want". Finally, the traditional and easiest way for power to be reproduced is through the military, the police force, and by the use of threats to the populace. As Foucault (1979a) stated, in the modern world, the punishment of the body has changed to more modern methods and mechanisms such as: policies, fines

and the use of media. Indeed, the forces of power may be using more than one of these tools at the same time.

This paper deploys a Lacanian approach to explain how housing policy, as one of power's (Other) apparatus – repressive government – is used to reproduce and sustain the dominant ideology and to oppress demands for civilization rights. This paper analyses public housing, or low-income housing policybased on Islamic egalitarian ideology and populist interpretations of it in Iran. The main concern is a particular type of public housing 'Maskan Mehr'. This recent policies have reverted to the first years of the revolution. The policies have a radical, Islamic approach, egalitarian and anti-elitism ideologies determine all policies and decisions. The paper will try to explain how these ideologies, as fantasy, encompass all reality and how planners as agents of power work to shape this fantasy for all society.

In this regard, I try to answer four questions:

- How does a dominant ideology shape and encircle policies in planning?
- What is the role of the actors, including planners, and who affected by these policies?
- What are the populist policies?
- What are the functions and consequences of these policies?

2- Dominant ideology and planning

> *Ideology... is indispensable in any society if men are to be formed, transformed and equipped to respond to the demands of their conditions of existence.* (Althusser cited in Eagleton, 2007, p. 150)

According to McLellan (1986) ideology is the most elusive and very essential contested concept in social science. As Žižek (2008) implied that the very elementary definition of ideology goes back to Marx. Orthodox Marxism believed that ruling class-interests determine and justify ideology; consequently, ideology, as a dominant ideology, integrates superstructures (law, political systems, religion). Orthodox Marxism denotes negative meanings in ideology such as misrecognition, distorted representation, false consciousness, commodity fetishism. Marx'(1946) famous quotation describes his concept of ideology: "They don't know it, but they are doing it." Therefore, ideology is merely presented as an epiphenomenal illusion to be dispelled by positive science. Later, Marxism is criticized because it conceives that the human mind spontaneously misrepresents the external objects presented to sense experience. Althusser elaborated the notion of ideology, which Marx had initiated and Gramsci had developed. However, he was greatly influenced by Lacan (Gunder, 2010). In fact, an articulation between Marxism and psychoanalysis provided a materialist account of how subjects were constituted in, and by, Ideology. In relation to this, Lacan with Althusser and Foucault made a triple alliance, the common denominator being their theoretical anti-humanism (Payne & Barbera, 2010). Namely, anti-humanism rejects autonomous subjects. Humans should not be

considered as individuals. The human as a subject is a part of a chain, the chain of society. Althusser believed that there would no ‘end of ideology’. ‘Ideology would persist, both because of the ineliminable opacity of the deep structures of any conceivable Social formation and because human beings were not the rational animals of pre-Freudian liberal humanism. (Payne & Barbera, 2010, p. 343)’.

As mentioned, oppressors cannot rule those they oppress merely by force, body punishment and the power of the police. Power cannot use police or army members to easily control a large population that unequivocally desires a change of regime. ‘Oppression can only be sustained if a substantial number of the oppressed come to hold beliefs that their oppressors’ rule are legitimate (Hume & Hendel, 1953, p. 18)’. Where does such this legitimation come from? How and from where power gains its legitimation. Althusser introduced a distinction between the repressive state apparatus (RSA) and ideological state apparatuses (ISAs). These two categories developed Gramsci's differentiation between coercion and consent. ‘Whereas the RSA operates by force, the ISAs- the family, schools, the mass media, etc. - function to reproduce existing relations of production by subjecting social classes to the dominant ideology (Payne & Barbera, 2010, p. 345)’. The fact is that, ideological state apparatuses configure our unconscious to accept the legitimation of power and the unconscious is Lacan’s most important concept in relation to ideology. We believe in dominant ideology, deeply. As Pascal stated (cited in Butler, et all, 2000, p. 118; Gunder & Hillier, 2004, p. 228), ‘if you do not believe, kneel down, act as if you believe, and belief will come by itself’, Not only do we have to, but also we spontaneously welcome the values, norms and rules of dominant ideology.

Freeden (cited in Gunder, 2010) believes that Lacanian approaches provide a new way of critic toward ideology. The core of Lacanian approach of ideology is the impossibility of escaping from ideology and of not being subjected to it. There is ‘no utopia, no solution just awareness’. We move from one ideology to another ‘perhaps we can make an ideology that does not dehumanize those who hold it’ (Gunder, 2010, p. 308). ‘Lacan described the unconscious as a discourse: the unconscious is the discourse of Other’ (Evans, 1996, p. 219). According to Lacan, the Other must first of all be considered as a locus, a locus in which discourse is constituted. Therefore, Other as a government, market interest, ruler, law-making institution or decision-making institution, takes this locus. Accordingly, planning as an apparatus of government/state (Other), plays the role of assistant for it. Pursuant to Gander (2010, p. 305) planning is a facilitator for the state to ‘normalize and internalize the dominant logic of state in the minds and bodies of citizens, so that planning is integral to governmentality and is an important ideological state apparatus’.

On the other hand, based on Lacanian psychoanalytical theory (Allmendinger & Gunder, 2005; Gunder, 2011), ideology defines and works based on ‘lack’ or ‘deficiency’. It works as a fantasy to fill this lack. As Laclau (2005) illustrated, the identification of a lack such as inequality, insecurity, etc. needs a solution. The solution frames a necessary specific ideology. ‘The ideological articulation of the solution provides an emotive and powerful political tool for the implementation and desirous materialization of public planning policy’ (Stavrakakis cited in Gunder,

2010, p. 306). Therefore, planning and policies work to provide the desire of Other to fill its lack. In fact, planners work based on desire of Other (power or hegemonic ideology). As Gunder (2003, 2011) stated, policies have been made to fill the lack of Other. The fantasy of better life that housing policies provide specifically for poor people can support an egalitarian or justice-oriented ideology for a government. According to the Žižekian interpretation of ideology 'it is a fantasy-construction' or 'illusion which structures our effective, real social relations and thereby masks some insupportable, real, impossible kernel (Žižek 2008, p. 45)'.

The main purpose behind a policy is adherence to one, or to a set of, existence ideologies through normative or prescriptive processes. These processes make central to politics the concept of ideologies. Implicitly every political or economic tendency entails an ideology. It is how society sees things. Therefore, ubiquitous ideology encompasses and identifies everything including planning policy, planners' responsibilities, their concerns and even people's expectations of planning.

Poverty is an economic problem in every society. Poor people live with the desire for a better life. They demand better houses, equality and wealth. In a society with a majority of poor, unemployed people who live in inappropriate houses, egalitarian creeds can be the best ideology to make movement amongst them. An ideological state based on egalitarian rhetoric, can easily free ride over this movement. Planning is the best apparatus to provide the fantasy of "better life for low income groups" or "the right of people to possess housing commensurate with their needs". However, planning as the ideological state apparatus takes a paradoxical position. It has to maintain deficiencies to maintain the hegemonic ideology. This mechanism will be developed in following section of this paper.

3- Political or apolitical planner: Nefarious planner

This section of the paper endeavours to define the profession of planner based on the two following concepts: firstly, the planner is a subject that works in the context of a hegemonic ideology whose profession is identified by the prevailing informal norms, values and laws. These characteristics are located in the field of Other, as Lacan said, in symbolic order. Secondly, the planner is a subject presumed to know. The planner (subject), unconsciously knows the consequences of his/her work (Žižek 2008). Specifically, he/she knows he have to accept his/her apolitical responsibility therefore, he/she masks this compulsion by being a professional. Planners know they cannot make a better life without political and radical intervention. In practice, they devise a fantasy to justify their inability. In other words, power defines an apolitical role for the professional planner- a semi engineer -to justify will to power. They know their plans cannot obliterate poverty in an ideology, which is supported by the poor. They have to mask their inability by scientific methods or diminish it to merely scientific failures; the mechanism will be explained in the next paragraphs.

Referring to the Lacanian attitude, the planner, in a hegemonic ideology, acts based on identification (Gunder & Hillier, 2004). How is this identification configured?

Based on the Lacanian notion, identity emerges through three stages: first, the mirror stage ‘this is where a child sees its image in reflection and commences to identify itself as the image in the mirror…it is a transformation that takes place in the subject when he assumes an image’. In fact, identification with images is the most important aspect of this stage. The mirror stage is followed by the imaginary stage. In this stage the identification with image continues. This image can be ‘the imaginary ‘other’’. In this stage, the subject realizes a permanent split between the self and the image. In fact, identification is never completed. On the other hand, the subject is always driven by a tragic desire for completeness and attempts to reunite with others. The third stage is the symbolic, in which the subject ‘socializes in to language, culture, informal norms and values and formal laws’ (Gunder & Hillier, 2004, p. 222). In this stage, the subject identifies with signifiers and Other.

In addition, according to Lacan, the subject is not simply equivalent to the conscious sense of agency. Consciousness is a mere illusion produced during the mirror stage. However, the subject is equivalent to the unconscious. Lacan stated that, ‘the subject is a subject only by virtue of his subjection to the field of the Other (Evans, 1996, p. 198)’. Therefore, the planner works in the field of Other or in hegemonic ideology and power. He/she must act in Other’s field and be responsible toward his/her actions. Therefore, the planner, as a subject, identifies her/himself in accordance with the law, the employer and the norms and values which the dominant ideology defines for everyone, including planners.

One of the most useful of Lacanian topic discussions is ‘Science and Truth’ (Fink, 2004, p. 855). He ‘criticized modern science (positivism) for ignoring the symbolic dimension-including; language, culture, the external identity of a signifier, informal norms, values and laws - of human existence and thus encouraging modern man to forget his subjectivity’ (Evans, 1996, p. 176). He also compared modern science to a ‘fully realized paranoia’, in the sense that its totalizing constructions resemble the architecture of a delusion’ (Evans, 1996, p. 176). Specifically, his critique points to positivism because he believed that it is a ‘deviation from true science’ (Evans, 1996, p. 176). Lacan argues that science is characterized by a particular relationship to truth. On the one hand, it illegitimately attempts to monopolize truth as its exclusive property. The modern human subject is a ‘subject of science’; a subject that has a mono rational a scientific route to knowledge; this is now a common presupposition (Fink, 2004).

Nevertheless, it is necessary to ask: What is the relationship between these Lacanian concepts and planning? Based on genealogy of planning, it emerged in the modern era with the objective of pacifying the side effects of modernism (specifically its industrial effects) and of interfering and intervening in modern urban space relations (including those of society, the economy, state and power relations, amongst others.) (Allmendinger, 2009; Foucault, 1979b; Friedmann, 1987; Lefebvre, 1991). In fact, planning was created to facilitate market relations. Planning, as a product of the modern era, has the problem of modernism including; sing instrumental rationality to overcome social problems. Based on the Lacanian discussion in regard to science, which was mentioned in previous paragraph, a scientific approach illegitimately

monopolizes truth as its exclusive property. The rational scientific management of space dominates the field of planning. On the other hand, as Foucault (2002; Foucault & Rabinow, 1984) stated, power codifies and identifies knowledge. The dominant ideology needs apolitical professionals who provide, without question, the right apparatus for the political implementation of laws, plans and decisions. Professionals should accept and enjoy their role. As Žižek (2008, p. 49) stated an ideology can hold us only 'when we do not feel any opposition between it and reality- that is, when the ideology succeeds in determining the mode of our everyday experience of reality itself'.

The everyday life experience of planning is revealed in its visual representation in structures, in cities, highways, buildings and shapes. The everyday life of planning provides a fantasy of beautiful buildings, high-rise structures, affordable houses and beautiful roads accompanied happy and satisfied people who can gain whatever they want or they need. Both the planners and citizens enjoy that fantasy. Such fantasies take the place of real demands and relations and change the motivation of planner's function. Therefore, they find themselves in a prevailing environment and in a specific frame in which they can act and work easily, enjoyably and indisputably. Planners in theory and practice generally misinterpret the symptoms. Planning deploys scientific and technocratic approaches instead of finding the underlying causes of socio-cultural problems.

4- Populism as an ideology or a policy

Populism can be defined as an ideology of political philosophy. The Cambridge dictionary (2008, p. 1100) defines populism as: 'political ideas and activities that are intended to represent ordinary people's needs and wishes'. Ernesto Laclau (2005) made a profound study of the concept of populism and its characteristics. He gave a broad explanation of populism through a genealogy of the way in which it works and how it shapes the space of policies and politics. He stated that the vagueness and indeterminacy of populism is not its weakness but it is the sign of inscribed vagueness and indeterminacy in social reality. According to Laclau's opinion, populism is the 'royal road' to understanding something about the ontological constitution of political issues and devices. Therefore, populism is 'one way of constituting the very unity of the group (Laclau, 2005, p. 73)'. However, it is not the only way of accomplishing it.

I endeavor to develop Laclau's notion populist configuration in order to apply it to the Iran case. According to Laclau, an unsatisfied demand is a precondition of populist configuration. The demand or a series of demands have been shaped based on a difference. The social logic of difference makes an internal antagonistic frontier separating the people from the power. In the next step, 'an equivalential articulation of demands makes the emergence of the people possible (Laclau, 2005, p. 74)'. Finally, the third step is a unification of these various demands. The third step can come in the form of a hero, a charismatic leader or even a popular president. The

logic of populism is interesting. ‘Equivalence does not attempt to eliminate differences. If the particularity of demands disappears, there is no ground for equivalence (Laclau, 2005, p. 79)’. In fact, the functions of difference and equivalence are related to each other. In a spiral movement, they reproduce each other and the existence of difference relies on the existence of equivalence. Therefore, populism needs that particular demand or difference to continue working. If populism has been configured based on the demand for equality and justice, it needs continuous poverty and inequality to survive.

For instance, in a society with a large mass of agrarian migrants who live in informal settlements in marginal areas of big industrial cities, living in poverty in unqualified housing; obviously, these people will demand better housing. This demand can be the starting point of a populist movement. The demand for better houses and public services establishes an equivalential relationship between masses. Every claim based on the provision of better life and housing and services can be an emotive factor in absorbing them in a new charismatic power.

Laclau implied that there are three important aspects in the construction of social and political identity. ‘The relationship between words and images, the predominance of the emotive over rational the sense of omnipotence, the suggestibility and the identification with the leaders are all too real features of collective behavior (Laclau, 2005, 39)’. Thus, words and rhetoric can help to construct a fantasy and a kind of image for the crowd. Thereupon, rhetoric has been ancillary to the classical ontology of populism. This fantasy acts as a ‘means to simplify the anxiety inducing complexity and apparent inconsistence of reality so that social reality appears as a coherent materialized, yet simplified (Gunder, 2012)’.

In fact, distinguishing the populist policies and the results of them is not difficult. Populist policies emphasize some of most important needs of people and appear to give people whatever they want. People think, that their demands will come true through the provision of images through populist devices. People find their demands in the words of their leaders. Notwithstanding populist policies succeed in providing satisfaction because they respond to some parts of the desires of the supporting group. These policies render as the movement of masses who have not experienced political movements. As a result, the people think they have proper rights to determine their taste, needs and rights. The very best example of this is the current situation in the United States of America. Many thinkers have criticized American culture because they believe it has become more populist although, superficially, it appear to be more democratic (Strinati, 2004).

In fact, differing demands, as the basic principles of a populist movement, exist in every society and thus populism can be configured in a wide political spectrum from left wing to right wing. Populism sometimes appears in the form of elitism, or, at other times, as anti-elitism or National Socialism, such as in Nazism. It tries to provide the desires and demands of the masses. As mentioned in previous sections of the paper, planning is one of the hegemonic ideology/power’s forms of apparatus. Hegemonic ideology defines and codifies planning’s responsibilities to reproduce

that ideology. Planning - including housing policy and the distribution of public services and goods – provides policies to respond to the demands of the people. Populist ideology, as a hegemonic ideology, easily codifies planning to provide the fantasy of satisfaction of demands. Undoubtedly, planning is the best apparatus to promise a better life for the masses and to respond to their demands. Therefore, Planning can be the best apparatus to assist power in maintaining itself.

5- Low-income Housing policies: fantasy or reality

Iran is a developing country; a producer of raw oil that is led by a regime whose ideology stems from the Islamic Revolution. In Iran, planning application is predicated on two processes. Firstly, there is a politico-rational process, where by the preliminary and final decisions made by government authorities and institutions even the supreme leader. This level frames all policies, rules and laws. The second process is a techno-rational one in which plans and projects are made based on supreme plans. These techno-rational processes use GIS, maps, modeling, technics and statistics to collect and analyse data. In some local action plans or projects, professionals in governmental sectors and consulting companies use the partnership of private sector to provide financial aid. They legitimate and justify the first decisions and follow the first line in their plans and projects. Obviously, power or hegemonic ideology defines and dictates all the lines and policies in the planning and, the planner, as an agent operates consistently within the supreme frame.

After oil, Iran's construction industry is one of the most important industries in the country. Housing policy has been one of the most important tools of planning. During the three most recent decades, three different policies, including those of; urban land supply; financial policies and social housing, have been applied in Iran. This paper will survey only the last one, 'public housing'. Islamic egalitarian ideology and populist interpretation of the notion of private in Islam such as 'brotherhood', 'unity', 'equality', postulated the ideology of post-revolutionary planning in Iran (Valibeigi, 1993). As has occurred in other developing countries, Iran has faced huge migrations to big cities and informal settlements. In fact, planning faces expanded urban poverty. The population of informal settlements is estimated to be about 10-12 million people living on the outskirts of cities. On the other hand, there was a baby boom in the first years of the revolution. After 30 years the 'baby boomers' have become young people who demand jobs, housing and facilities. Official statistics reveals that Iranian cities have experienced a serious growth in the population of young couples who have a high demand for affordable housing. However, many people cannot afford appropriate housing due to expanding unemployment, the high price of housing and the increasing demands for accommodation. In addition, a house is a kind of investment for an Iranian family. People have the tendency to buy and own their own homes.

Based on what it mentioned in the definition of populism, a crucial demand has been configured: the demand for housing. It was timed to coincide with the third policy

period between the years 2005 and 2009 started with the presidency of President Ahmadinejad. The main concern of this period is a certain type of public housing 'Maskan Mehr'. The policies in this period turned back to those of the first years of the revolution. Radical Islamic approaches, egalitarian and anti-elitism ideologies determined all policies and decisions. Thus, the main rhetorical ideology of the revolutionary Iranian government re-postulated most of its policies and plans, including intended equality and wealth for the poor. However, after more than thirty years, many surveys have concluded that none of those pro-poor policies have achieved their claims (Saeidi, 2001; Salehi-Isfahani, 2009). Even the many governmental surveys have revealed many failures as a result of the plans and policies. In fact, most of policies have merely transformed rural poverty to urban poverty, squeezed the middle class and reproduced the prevailing power relations; and finally, have led to the suppression of other demands in the political domain (Milani & McFaul, 2008-2009). Nonetheless, the current president of Iran started his presidency with some rhetoric promises such as arresting the corrupt previous authorities and managers, providing justice and equality. In this case, the populist leader would seek to mobilize the masses against the corrupt elite, regenerating the values and norms of first year of revolution by redistribution of wealth (Dodson & Dorraj, 2008). Many planners have unofficially criticized policy because they believe the current policy has diminished the whole of the planning system to being solely that of a housing policy, or even just a project.

Indeed, a supreme housing policy was imposed upon all of the province's organizations and companies. People, both the poor and the wealthy one rushed to specified centers of registration. Housing institutions registered 4,234,766 people. However, after about 7 years, official statistics announced that only 946,890 people have the appropriate criteria for getting public housing. Many cases of infraction and infringement have been reported to the Ministry of Housing from different cities and provinces. Therefore, a special office has been established to deal with infractions and to supervise the projects in the various cities. The enacted law in relation to public housing specified a deadline for the officials; the establishment of the office was supposed to solve housing problems for Iran up until 2013. Many of the parliamentary representatives criticized the policy because they found it expensive and to be consuming their budget; in addition it still did not solve the problems of housing. As the first step of this policy, the government considered a 53 billion USD budget for public housing. But now, because of such things as, sanctions, stagnation and inflation, the government faces a budget deficiency. Therefore, it cannot provide the necessary credit for the plan. Many professionals have stated that the government needs 140 billion USD more than its primary estimate.

Moreover, because of hasty decision-making about the policy, many projects have been started on unsuitable land and planners have faced problems in providing infrastructure. For example, for the provision of water pipes for just three projects in Tehran requires 6 billion USD. In addition, people who have registered for public housing now need more personal finance to be able to their own homes, far more than first predicted. Nonetheless, the government had to cut in its budget in the 2012 New Year because of the deficiency and consequently, the public housing policy will

receive less credit than last year. To the contrary, when a journalist asked authorities about the future of policy, officials answered: ‘Maskan Mehr is not a governmental phenomenon, it is a popular plan of which the credit and budget is provided by the people; therefore, it is not necessary any governmental credit or budget for it’.

6- Conclusion

One of the most important effects of the above-mentioned policy in Iran was the agglomeration of all the considerations and implementations in the central government. In addition, all the processes of financial transformation and transaction for housing have to pass through government institutions. Indeed, these sorts of central policies make the government sector larger and diminish the private sector. Many private, individual, and micro-companies have been bankrupted in the favour of monopolic governmental sector. Finally, the mentioned policy has diminished the urban bourgeoisie - the social class that can provide the appropriate context of democratic demands. Inversely, the policy plumps up the mass who are dependent on central power at the same time as supporting power. However, the policy never eliminates poverty and lack of the housing; the policy is merely used as an apparatus of populism to get the support of the poor.

Unfortunately, when plans fail and are relinquished, planners search for fault in agencies or computation failure, they think that it is the fault of the professionals because they have made mistakes in calculations and in the technical aspects of plans. They try keeping on with the fantasy for themselves and continue to criticize plans by finding mistakes. However, the reality is that the policy worked in the best way, because it was not supposed to solve housing problems from the start. It was supposed to reproduce the power and impede democratic demands.

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Multi-Location Recovery Planning in Japan

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Abstract

The Great East Japan Earthquake and Tsunami of March 11, 2011 was Japan's first multi-location disaster event in modern times resulting in over 16,000 deaths, severe economic and physical damage in Iwate, Miyagi and Fukushima prefectures and the release of radioactive material from a damaged nuclear reactor. This article examines how Japan has structured its recovery planning from this multi-location event. Three themes dominate the plans: ensuring safety, rebuilding lives, and expansion of technology and natural resource based industry. After one-year, all major infrastructure systems are working, debris disposal remains a challenge, and funding has begun to address housing, land use, economic, and safety needs. A mixed model of municipal and prefecture based proposals with central ministry oversight has emerged and the creation of a central government recovery agency. A partial strategy for the nuclear accident has emerged, but challenges remain for long-term stability.

Key Words
Risk reduction, Recovery, Governance, Multi-location Disaster, Nuclear Accident, Land-Use Planning, Tsunami, Tohoku

1.O Introduction

All large-scale disaster events present complex challenges in shaping a recovery strategy. Central governments must determine what is best for the survivors, for the region as an impacted economic area, and at times for the country as a whole. Prefectures (provincial governments) need to determine how to address needs of municipalities and people living outside of city limits. Municipal governments try and restart basic services, address safety needs, and help to get people working again. The survivors struggle to address loss of family, jobs, and community ties. This occurs in the historical context of the country and socio-economic context of the impacted region (Alesch and Siembieda 2011).

The Great East Japan Earthquake and Tsunami of March 2011 (known as 3/11) was Japan's first multi-location disaster event in modern times resulting in over 16,000 deaths, 330,000 destroyed or heavily damaged houses, severe damage to 32 coastal cities in three prefectures, and a release of radioactive material from a damaged nuclear plant.1 Ninety five percent of the deaths were tsunami related, and there were no

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reported deaths due to radiation exposure. Table 1 provides a listing of selected damage indicators. Its intensity on the Japanese Meteorological Agency (JMA scale of 1-7) was 7 in Kurihara and Miyagi prefectures and 6 in 8 other prefectures. The tsunami that followed the seismic event and its aftershocks occurred over 530 km of coastline with a run-up level of 10m and above, the highest one in Ayasato Bay of 40m breaks record of the Meiji Sanriku Tsunami in 1896.2 Figure 1 shows the spatial extent of the tsunami inundation, and Figure 2 shows the primary towns in Iwate, Miyagi and Fukushima prefectures damaged by the earthquake and tsunami. Within Figure 2 is the chart of casualties and destroyed and heavily damaged buildings by municipality.

TABLE 1 Selected Casualty and Damages Categories

	Iwate Prefecture	Miyagi Prefecture	Fukushima Prefecture
Death/Missing [1)]	5,989	11,250	1,989
Building Damage [1)]	24,739	222,081	83,557
Inundation Area [2)] (building Infrastructure land use %)	58 Km^2 (37%)	327 Km^2 (23%)	112 Km2 (13%)
Economy Loss [3)]	257.3 billion (JPY)	7.39 trillion (JPY)	NA
Coastal Area Capital Loss Rate [4)]	47.3%	21.1%	11.9%
Evacuee at maximum [1)]	51,553 (2011,3,15)	320,885 (2011,3,14)	131,665 (2012,3,12)
Current evacuee [5)] (inside/outside Prefecture)	42,771 1,574	127,952 8,494	98,221 8,494

Source: Iwate Prefecture, Miyagi Prefecture, and Fukushima Prefecture documents, Geospatial Information Authority of Japan, Iwate Reconstruction Basic Plan, Miyagi Reconstruction Basic Plan (not inclusive of JR and automobiles), Development Bank of Japan, Reconstruction Agency (2012, Mar 12)

Figure 1 Tohoku Regional Inundation Map, 10 meters Run Up

Source: AIR Worldwide by permission

Figure 2 Tohoku Region Damage and Causalities

	Death: Missing	Building Damage
Hirono	0	26
Kuji	4	277
Noda	38	479
Fudai	1	0
Tanohata	29	270
Iwaizumi	7	200
Miyako	531	4,675
Yamada	761	3,167
Otsuchi	1,286	3,717
Kamaishi	1,048	3,641
Ofunato	425	3,629
Rikuzentakata	1,848	3,341
Iwate	5,989	24,739
Kesennuma	1,368	11,034
Minamisanriku	875	3,311
Ishinomaki	3,761	33,378
Onagawa	931	3,261
Higashi-Matsushima	1,113	10,996
Matsushima	2	1,783
Rifu	46	921
Shiogama	32	4,470
Shichigahama	75	1,303
Tagajo	189	4,942
Sendai	730	124,608
Natori	967	3,904
Iwanuma	183	2,165
Watari	269	3,308
Yamamoto	690	3,292
Miyagi	11,250	222,081
Shinchi	114	566
Soma	458	1,760
Minamisoma	638	6,738
Namie	184	614
Futaba	54	83
Okuma	43	30
Tomioka	73	0
Naraha	33	50
Hirono	3	unknown
Iwaki	347	37,501
Fukushima	1,989	83,557
3 Pref.	19,228	330,377
Japan	19,294	359,226

Source: Compiled by H. Chen,

1.1 The Main Questions

How then did the three levels of government move forward to develop their recovery strategy? What are the components of the strategy? How well is it working after one year? This exploration in how Japan has fashioned its recovery strategy directs itself in part to the issue of centralization and decentralization in planning (Siembieda et al., 2012). Do the efficiencies of centralized systems outweigh the tendency of decentralization to be more diverse in addressing planning issues, or do decentralized approaches provide more humanistic outcomes simply because they are diverse and reflective of cultural variation?

1.2 Content of Sections

Section 2 describes the shaping of central government policy. Section 3 examines some aspects of the voluntary sector. Section 4 summarizes salient aspects of the prefecture and municipal recovery plans. Section 5 the outcomes of the first round of central government funding to the municipalities and prefectures. Section 6 provides a conclusion and discussion in terms of future actions based on the present strategy and the RA model.

1.3 Nuclear damage

Not since Chernobyl was there a nuclear accident like this. Reactors 1 and 4 of the Tokyo Electric Power Company (TEPCO) plant the Fukushima 1 plant had accidents related to their fuel cooling systems. Reactor 1 had a meltdown and spilled contaminated water into the Pacific Ocean and dispersed radioactive materials into the surrounding area that was mostly farmland and ocean.[3] The fact that there was an earthquake and then a tsunami in this area did not come as a surprise. The Japan National Earthquake Council's 2010 Annual Report stated that there was a 99% probability of an estimated 7.5 Mw event in the next 30 years in this area (Japanese Headquarters for Earthquake Research Promotion 2010).

This accident was classified as a 7, the highest level, on the international nuclear accident scale. This led to a temporary 30-kilometer evacuation area of around the reactor. Sixty thousand people were then cut off from their houses, work and fields. The temporary evacuation zone was later reduced to 20 km and has been declared by the central government as a restricted zone for the indefinite future. After one year residents along the zones edge have been allowed to visit their homes for short periods.

The ripple effect of this nuclear accident is extensive. The Prime Minister requested that all the 54 nuclear reactors in the country be shut down and inspected. All the companies compiled the central governments request and conducted inspections. No plant has been restarted, although requests have been made to do so prior to annual

increased summer demand for power. Shutting down of all the plants has called into question the nation's overall energy policy.

The restricted zone creates particular recovery challenges for recovery for land use, resettlement, livelihood, and health. Mayors of Namie, Futaba and Okuma towns in Fukushima prefecture have proposed new creation of "temporary towns" in adjacent cities, and the major of wishes to merge his town with that of the next town (Kyodo, 2012). Because the restricted zone is likely to span at least one generation, this form of resettlement becomes a permanent population shift within the region. Requests are being made to the government to exempt the residents of Namie Town for life from paying any medical costs. Figure 7 shows the locations of these towns that are partially included in the restricted nuclear zone.

1.4 A region with multiple municipalities

This is a multiple location disaster with major impact in three prefectures (total population 5.67 million) containing over two hundred municipalities, only three have populations of more than 100,000. Prior to 3/11 the region was loosing population and faced economic challenges in many business sectors. The recovery challenge is not one of restoration of prior buildings and infrastructure, but how to address the population decline, radiation exposure, and loss of employment in many towns. Fishing, a major employer in small coastal towns has begun a slow recovery as boats are replaced and fishing areas reestablished. The development planning challenge, as recognized by the Reconstruction Design Council Report (2011) is how to bring this region forward during a period of rethinking Japan's future.

2.0 Shaping of Central Government Policy

The central government has shaped its recovery policy in three phases: the Disaster Headquarters period, (months 1-3); the Recovery Headquarters (months 4-10); and the Reconstruction Agency (month 11 onward). While a Disaster Headquarters was established in the Office of the Prime Minister on 3/11 there also was an effort to provide a broader strategy for recovery. After three months there was a report to the Prime Minister laying out seven principles that link the recovery of the region to the nations economic well being (Reconstruction Design Council 2011).[4] The report sets out the concept of "disaster reduction" as a central tenant in reconstruction planning and includes "people-oriented measures" as well as structural (hard built) measures. The local people then become part of disaster reduction process, not separate from it. This is a form of collective action to reduce vulnerability. Also called for is a "New Public Commons" where a wide range of actors could the included in the reconstruction process. This is an attempt to broaden the decision-making base for recovery, something learned from the Great Hanshin Awaji (Kobe) Earthquake experience of 1995. The Report calls for reconstruction planning to utilize a strategy of multiple defenses rather than lines of defense (the existing approach) and to place this concept into the Building Standards Act. If placed in the law it would then require local governments to make plans in such a manner.

A fundamental principle is that the main actors should the municipalities themselves. The role of the national government is to set overall policy, provide a vision, and provide financial, human resources and knowledge as needed. The national government, it is suggested, shall take prime responsibility for resolution of the nuclear accident at the TEPCO Daiichi reactor. Most of what this Report suggests has become reality, through the dual-level governance model finally put in place. This duality is not one of equal influence as the ministries set the rules by which the municipalities are required to follow. This report was given to Prime Minister Kan in month three (June) and by month nine (September) Mr. Noda (from the same party) became Prime Minister. During this time there was a Disaster Headquarters in charge of the recovery effort.

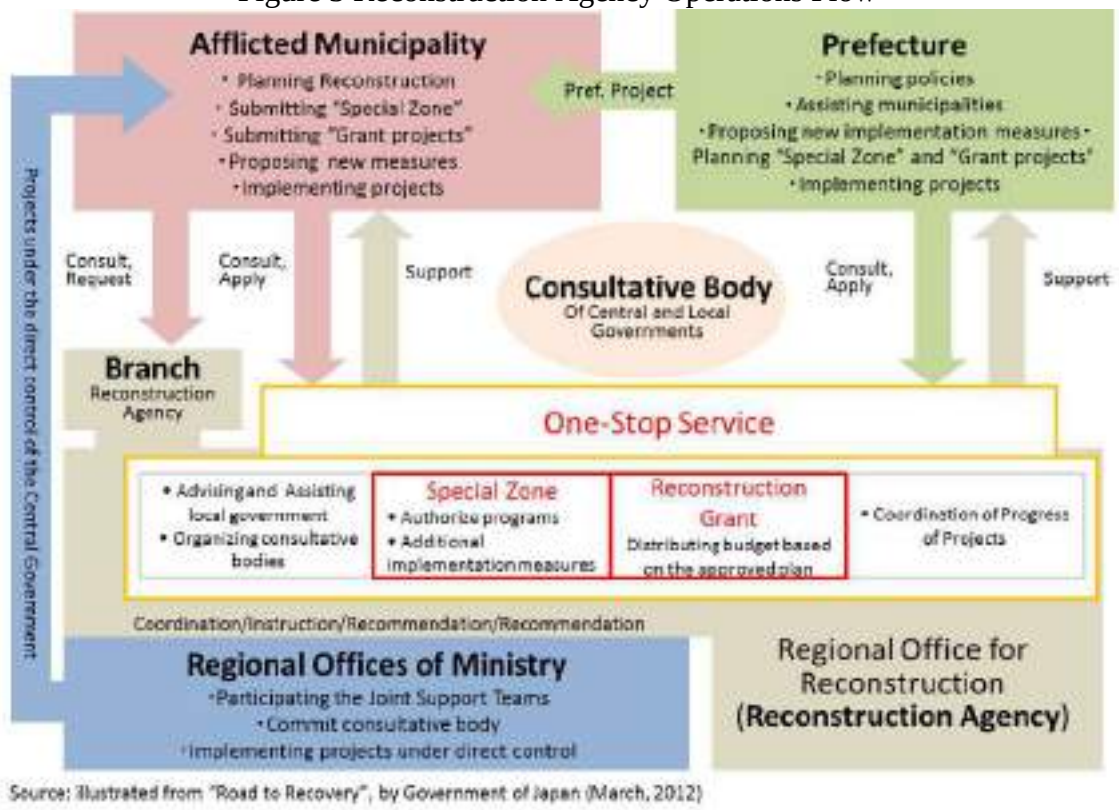
Four months after the event the Disaster Headquarters issued a “Basic Guidelines” document setting out the central government strategy to implement the Basic Act on Great East Japan Earthquake Reconstruction (Law No. 76, 2011). This strategy closely followed the Design Council Report, and also sets down economic sector objectives for Fukushima prefecture where the nuclear accident occurred. Also mentioned, but in no great detail are the issues of an ageing population, the need to rebuild with a generational focus in mind and a recognition that gender issues need attention. The Basic Guidelines forms the basis for what was to become the next phase: a new central government Reconstruction Agency (RA) that began its work February 11, 2012, eleven months after the event. The RAs primary functions are to approve the Creation of Special Economic Zones at the prefecture level (for all cities), to administer grant applications from municipalities and prefectures, to provide technical and consulting support and most important for implementation, to coordinate the actions of the various ministries through which reconstruction funds will flow. A "private-sector investment promotion special zone" in Miyagi Prefecture and a "public health, medical service and social welfare special zone" in Iwate Prefecture was approved within 10 days of application and a special external business committee activity was created to craft a regional economic expansion scheme for the region. Table 2 provides a Time Line of Main Events during the first year.

Table 2 Time Table of the Main 3/11 Events

Mar 11, 2011 14:46	Earthquake Occurred
15:14	Establishment of Headquarters for emergency disaster control
17:15	Establishment of Nuclear Emergency Response Headquarters
Mar 11	Application of Disaster Relief Act
Mar 12	Designation of Extreme Severe Disaster
Mar 12	Application of Act on Support for Livelihood Recovery of Disaster Victims
Mar 13	Designation of Specified Disaster
Mar 17	Establishment of Special Headquarters for Measures to Assist the Disaster Victims Lives
Jun 24	Enforcement of the Basic Act on Reconstruction of Great East Japan Earthquake
Jun 24	Establishment of Reconstruction Headquarters in response to Great East Japan Earthquake
Jul 25	Approval of the 2nd Supplementary Budget of FY2011 (1.9988 Trillion JPY)
Jul 29	The Basic Guidelines for Reconstruction in response to the Great East Japan Earthquake
Aug 11	Iwate Prefecture Great East Japan Earthquake and Tsunami Reconstruction Plan
Oct 19	Miyagi Prefecture Earthquake Disaster Recovery Plan
Nov 20	Approval of the 3rd Supplementary Budget of FY2011 (12.1025 Trillion JPY)
Dec 26	Enforcement of the Special Recovery Zone Act of Great East Japan Earthquake
Dec 28	Plan for Revitalization in Fukushima Prefecture
Feb 9, **2012**	Recognition of the first recovery promotion plan
Feb 2	4th Supplementary Budget
Feb 10	Establishment of Reconstruction Agency
Mar 2	Announcement of the 1st round recovery subsidy possible amount

The RA is headquartered in Tokyo with regional field office in the three prefectures. This model is different from that used in Indonesia and in New Zealand where the central government's recovery agency was located in the impacted region. The RAs general workflow structure is shown in Figure 3. Japan generally uses a toshikeikaku (top down) model more than a machizukuri (bottom-up) model of planning due to the central government being more comfortable with large infrastructure projects (Edgington 2010). It is not clear how the Consultative Body shown in this figure operates or to what extent it provides input to the process. It does however; recognize the political need for such a unit.

Figure 3 Reconstruction Agency Operations Flow



Source: Illustrated from "Road to Recovery", by Government of Japan (March, 2012)

2.1 Framework for Land Use Planning

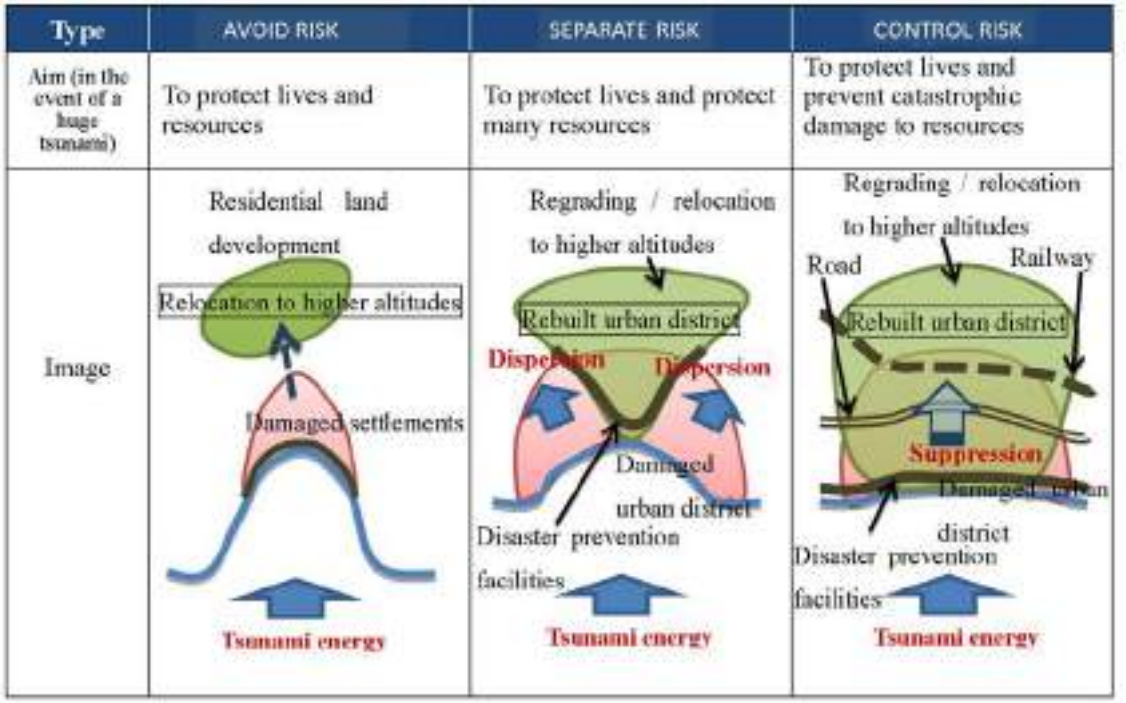
The main land use planning issues are shown in Table 3. For towns closely surrounded by steep hillside reuse of existing sites, if safe, is the preference. Relocation of critical facilities such as hospitals, government offices, and schools is needed and will require years to complete. Some cities, such as Rikuzentakata, lost all of their public buildings and require entire new visions of where to locate the new facilities and how to make them safe. Cities that experience subsidence and liquefaction need to apply both technical strategies for reuse and relocation strategies. In Fukushima the decontamination of land and buildings and the prevention of further exposure to radiation is the main land use and public safety issues. Salt intrusion on rice fields requires decontamination, and is focused mainly on parts of the Sendai plain.

Table 3 Land Supply Issues in the Tohoku Region

Land Use Issue	**Challenge**
Retention of Useable Land	Providing protection for urban uses
Sites for relocation of urban activities	Availability, location, cost, time to acquire
Subsidence and liquefaction	Technical issues and alternative uses
Decontamination	Radioactivity and salt intrusion

From an examination of the prefecture and municipal plans there three land use strategies emerge to that address safety from tsunami events. These strategies are: Avoid Risk, Separate Risk and Risk Control Through Multiple Defense. They are illustrated in Figure 4

Figure 4 Frameworks for Tsunami Defense



Source: Illustrated from "Iwate Prefecture Great East Japan Earthquake and Tsunami Reconstruction Plan Basic Reconstruction Plan"

To **Avoid Risk,** the areas of highest danger become restricted zones for residential uses and people who lived in such zones are relocated or use limited to specified non-residential activities. These areas can be used for non-residential purposes. The strategy establishes the separation of uses concept, not popular in Japan where there are few controls on building in hazard prone locations. This strategy is being considered in various municipalities and imposed to 20 km in the cities adjacent to Daiichi nuclear power station in Fukushima prefecture. To **Separate Risk,** that some land areas are restricted, while other area are elevated and still other areas serve to divert tsunami inundation in designated directions. To **Control Risk,** means multiple defenses are part of the preferred solution (e.g. sea walls, levees, elevated roadways, and elevated land areas that lessen the tsunami inundation at various locations). These strategies can be used in different locations within a municipality. For example, on the urging of community members the town government of Otsuchi in Iwate prefecture has adopted a variation of this strategy (The Daily Yomiuri 2012).

Each strategy generates its own land use requirements. For example, to **Avoid Risk** requires a relocation plan, the identification of available sites, and the determination of what infrastructure is needed for the new sites and its costs. Existing legislation under Article 39 of the Building Standards law allows a municipality to implement the **Avoid Risk** strategy. To **Separate Risk** requires determining where to elevate land areas, how

to relocate buildings on these sites and how to redirect the tsunami impacts. Where there is subsidence this also requires avoiding such areas for elevation. For the **Control Risk** strategy this means determining heights and locations of multiple defenses and what to allow in each area that lies within the different defense zones.
Related to each of these strategies is the policy on the height of sea walls or levee (dykes) defense areas. The central government supports the construction of Level 1 defenses designed to protect against 100-year events. The exact height of any sea wall or levee is determined through tsunami simulation modeling that takes into account data from the 3/11 events. The government has chosen to support a third worst historic event height as the level 1 baseline. Data on such events go back as far as the year 869 in some townships. In most area the height allowed will be increased over present levels. In Iwate prefecture this means as high as14.5-meter sea walls, and increase of nearly 8 meters in some communities (The Daily Yomiuri, 2012).

The central government practice has been to pay 50% of sea wall costs however; now with added grants possible from the Reconstruction Agency this can be raised to 100% of the cost. Level 2 defenses are those heights derived from a 1,000-year event. If the municipality with the support of the prefecture chooses a Level 2 defense, funds for this would not be forthcoming from the central government. Heights between levels 1 and 2 can also be agreed upon. The achievement of level 2 protection can also come about through applying the control risk strategy and elevating roads inland from the sea wall. This variant is proposed by Sendei City, mostly due to the extent of its low lying plain from the ocean to the central areas of the city.

3.0 Voluntary Sector Actions

Voluntary actions are broad ranging and extensive in the Tohoku region. They include continued financial support from businesses to small enterprises, organized non-profits working to improve temporary housing conditions to people spending a week helping out whomever they can. This effort reflects the national spirit of support for the people of Tohoku that is reflected in actions at all levels. Many Japanese universities have ongoing assistance projects to cities such as Kamaishi, Otsuchi and Ofunato. Two of the many efforts in place are discussed in this article.

3.1 NGO efforts

The NGO/NPO sector continues to play and important role in the recovery. NGO/NPO organizations began they efforts in the region five days after the 3/11 earthquake.
In Miyagi prefecture 26,588 volunteers were registered three after the event, and then rose to 91,549 in May 2011 (Sakamoto, 2012, 28). Taking lessons about the coordination challenges with the NGO/NPO sector from the Great Hanshin Earthquake of 1995, major coordination tasks were assigned to the Japan Platform (representing 17 NGOs) working with the local Social Welfare Councils and the Government Disaster Management Headquarters. This arrangement allowed for four party consultations to occur. Four party consultations involve the center government disaster on-site headquarters, the Self Defense Forces, the Prefecture government and the NGO/NPO coordinating representative. This level of coordination was supported by the central government and reflects part of what is called as part the new “public commons”

approach. The NGO/NPO work initially was to provide basic life support services to victims. This quickly expanded to assistance with housing recovery in terms of repairs and communications for those in temporary shelter, to consultation assistance with local government and groups in communities related to recover plans and support services such as improvements to temporary housing and making sure people were visited and cared for on a regular basis.

Prefectures have the responsibility to provide the temporary housing, but the local municipalities are charged with ongoing social service support and some maintenance. Temporary housing (total of 135,944) units is supplied by new construction, government owned units, public housing and private rental housing. It is scattered throughout the prefectures, mostly in clusters of less than 50 units. This presents a challenge communications and support challenge to smaller towns, and an opportunity for continued NGO support services.

3.2 Prefecture to prefecture cooperation and support

As part of the recovery system for the Wenchuan Earthquake of 2008, the Chinese Authority utilized a system of "twining" prefectures governments. This support function to prefecture and city governments was a positive step in rebuilding local government capacity. The Chinese Authority choose and matched (twining) the prefectures and cities. In the case of Japan the Union of Kansai Governments, a seven-member prefecture group (a local public entity created using the Local Government Authority Act for the purposes of pursuing decentralized government in Japan) decided to engage in "twining" on a prefecture-to-prefecture basis, rather than a regional basis. This initiative was voluntary and not central government directed.

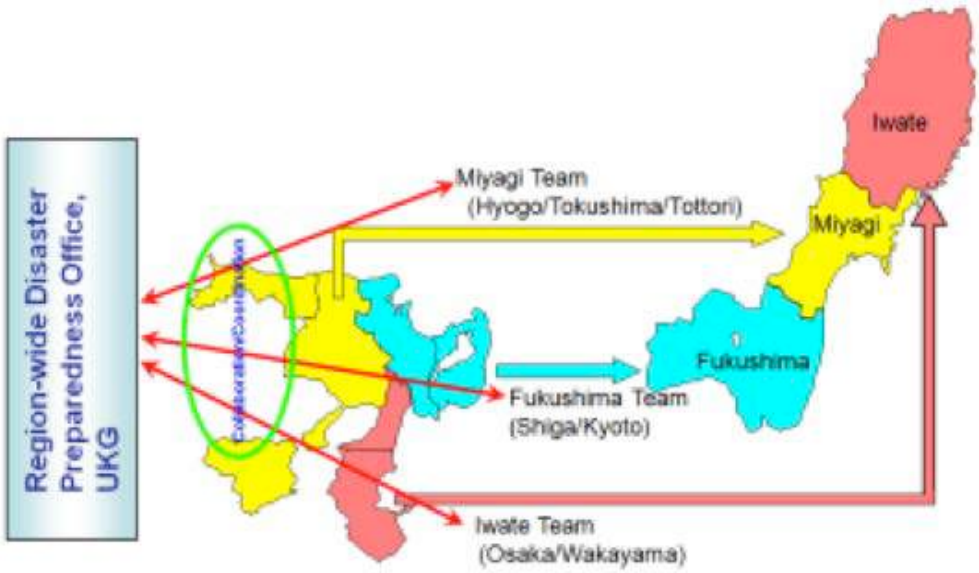
The Kansai Union activities included: provision of relief supplies, provision of personnel and the acceptance of refugees. Hyogo prefecture alone houses 1,058 refugees, the largest group coming from Fukushima. This counterpart system worked well as all of the prefectures in the Tohoku region received assistance. Some prefectures such as Hyogo are now development mid and long-term assistance plans. This is in keeping with the Kansai Union's objective of strengthening a decentralize society in Japan. The assignment of the prefectures is shown in Table 4, and illustrated in Figure 5

Table 4 Japan Prefecture "Twining" Assignments

Receiving Prefectures	**Sending Prefectures**
Iwate	Osaka, Wakayama
Miyagi	Hyogo, Tottori, Tokushima
Fukushima	Shiga, Kyoto

‘

Figure 5 Twining Prefectures in Japan



4.0 RECOVERY PLANS – Initial Version

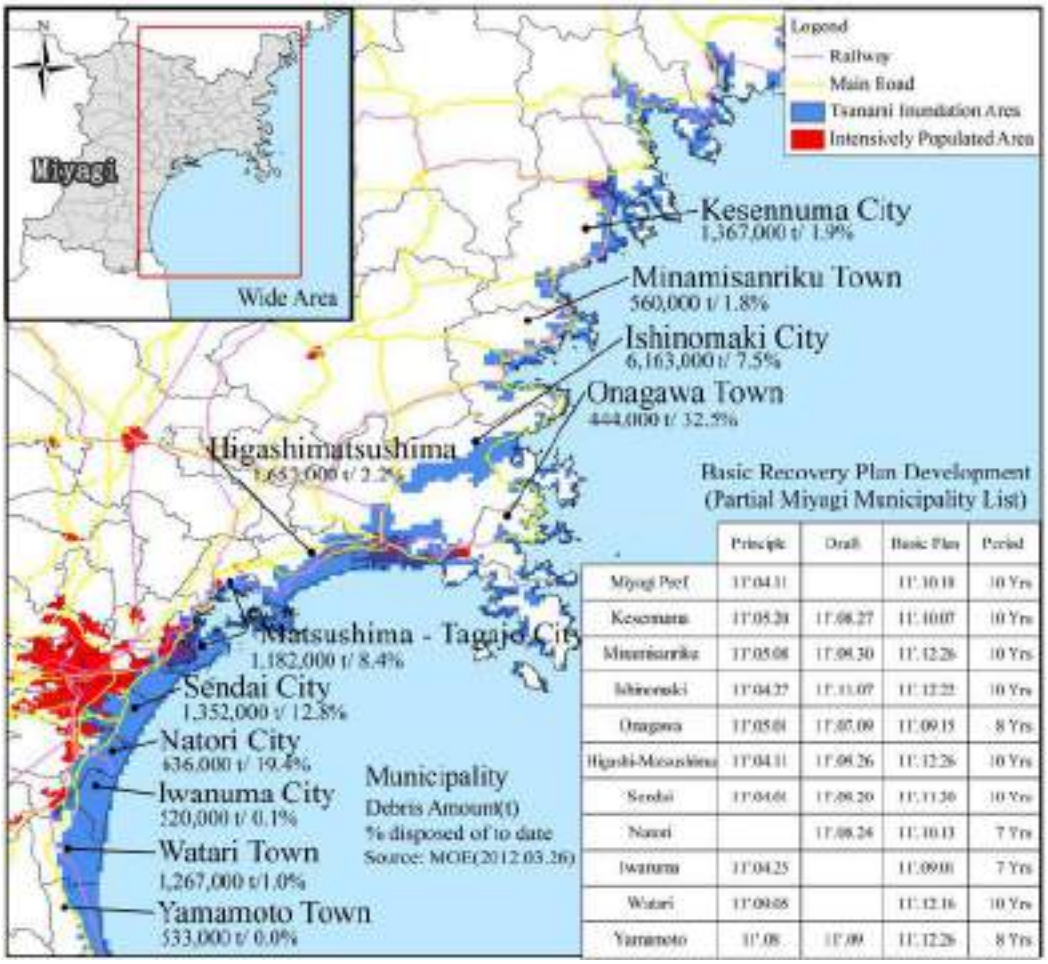
Initial recovery plans are meant as starting points, not as final products. All are subject to revision as is usually the case in large-scale disaster. They provide the basis for continued discussion on the vision for the place and people and a guideline for what to do next.

4.1 Prefectures

Miyagi Prefecture. The prefecture passed the initial recovery plan on October 18th, 2011 seven months after the earthquake and tsunami. The first work group plan meeting began three months after the event. The plan draft was presented to citizens in the north, south and southern part of the prefecture. Six hundred people participated directly and 200 written statements were received during the open public comment period. The plan time frame is 10 years is to be staged in three phases: restoration (3 years), reconstruction (4 years) and development (3 years). Figure 6 shows the prefecture, its main towns, the plan periods and the amount of debris and the % of disposal. Miyagi received assistance from 17 other prefectures, but did not have enough staff to coordinate the effort. This created a coordination challenge in terms of where to allocate staff and support services. It demonstrates the important function that coordination plays in the recovery process.

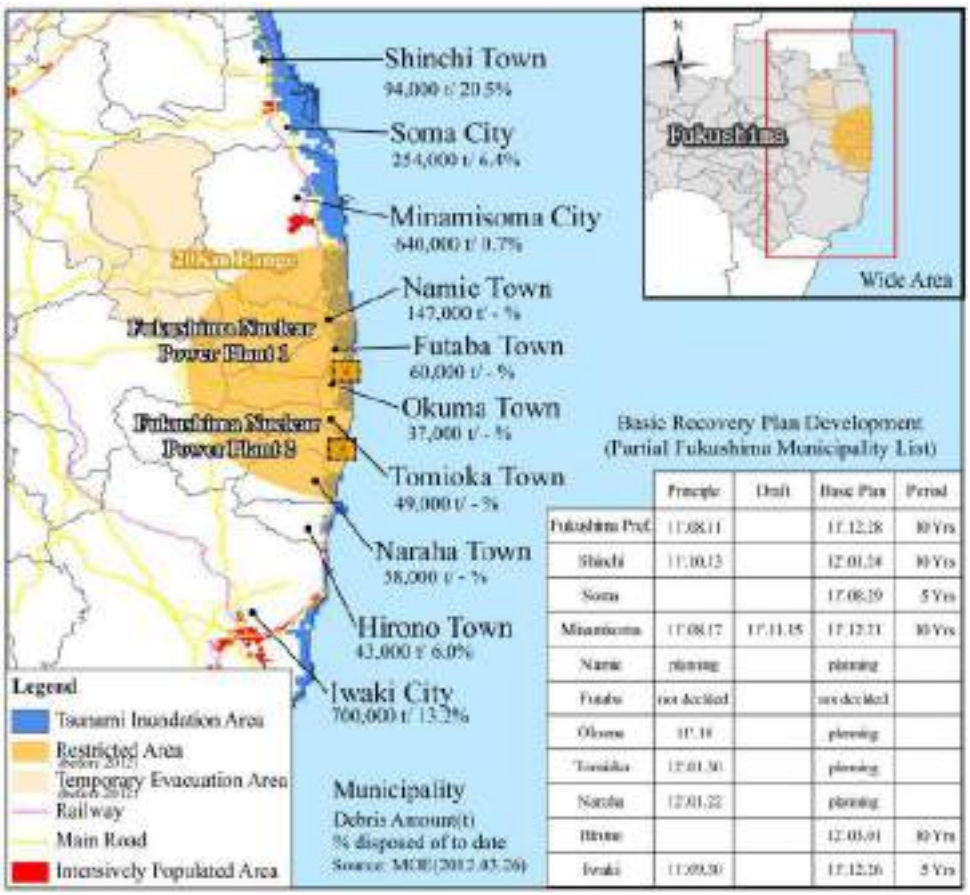
Figure 6 Miyagi Prefecture: Recovery Plans Dates and Disposal Status

Source: Compiled by H. Chen.



Fukushima Prefecture. Is basic vision reflects the unique situation of the nuclear accident at the Tokyo Electric Power Company (Tepco) Daiichi nuclear plant #1. The basic concepts for the vision are: Building a safe, secure and sustainable society free from nuclear power, revitalization that brings together everyone who loves and cares about Fukushima, and a homeland that the prefectures people can all be proud of once again. Certainly this has a strong basis in collective action. See Figure 7 for the towns within the restricted zone. This creates not only a land use distortion, but also eliminates any economic recovery for these communities and their residents. This plan lists 729 proposed projects. This is a very large number and reflects special character of the nuclear accident impact.

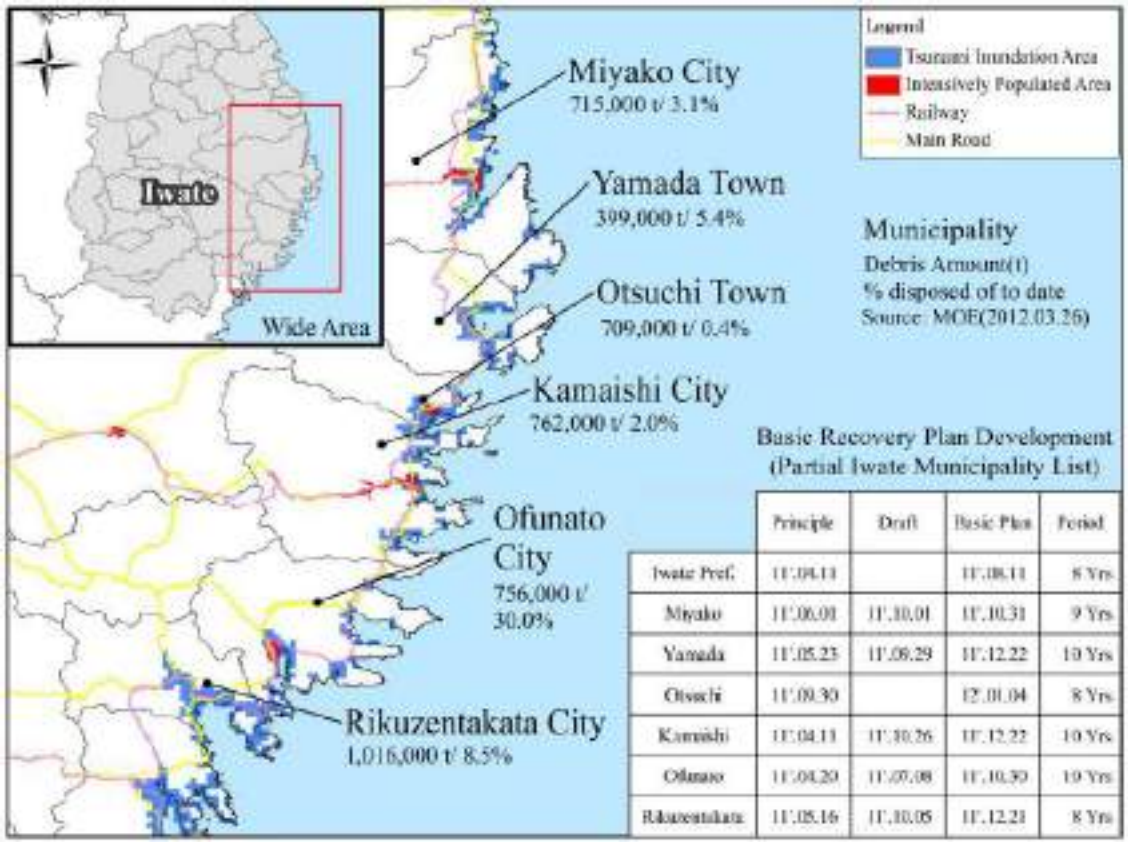
Figure 7 Fukushima Prefecture Plans and Debris Status



Source: Compiled by H. Chen

Iwate Prefecture. The prefecture assembly passed the initial recovery plan in August 11, 2011, just five months after the earthquake and tsunami. The Plan consists of three basic principles: ensuring safety, rebuilding lives, and regenerating industries, and reconstruction to return to a society in which people can safely live and work. In 2009 An Iwate Prefecture Resident Plan was developed and its objectives are incorporated into this recovery plan. The Plan envisions a 7-year period divided into thee phases 2011-2013 where foundational reconstruction is done; 2014-2016 when full-fledged reconstruction is done; and 2017-2018 is a consolidation period for further development. It will use a multi-preventative community planning that appropriately combines coastal protection facilities, community planning, and cultural measures. It expects the government to take a central role in reconstruction efforts as a national project, including nationally run initiatives. See Figure 8 for the main cities, and information on the debris status in these cities.

Figure 8 Iwate Prefecture Recovery Plans and Debris Status



Source: Compile by H. Chen

4.2 Municipal level plan(s)

The municipal recovery plans in the three providences were adopted between July and December 2011, or 4-9 months after the event. All cities in Iwate and Miyagi prefectures have a plan as have 9 of the 10 coastal cities in Fukushima. The plans ranged from 5 to 227 pages in length. A content analysis of the plans was conducted using basic chapter areas to list main content. The plans were consistent in stating the basic principles on which the plan is founded, the basic concepts, and framework. Stating the principles is a fundamental starting point for a Japanese plan and many principles can find support in those of the Disaster Reconstruction Council Report. Reconstruction periods of between 7-10 years are called for. Only 40 percent of the plans contain a list of program of projects to move forward. Such lists likely were being developed as project proposals (discrete actions), as this is the way in which funding is provided by the central government.

The statement of principles and concepts do establish the direction the municipalities wish to take and therefore form the basis for their strategy, and a means by which the local officials can continue a dialogue with the citizens related to the choices and options open to them (such as relocation, job expansion, where to locate public buildings and how to insure safety in the future). The majority of plans are not “road-maps” to action and fall short of what is called for in a recovery plan that can be

quickly become operational (Blakely et al. 2011, p.198). Given the short time period in which the plans were developed, and the uncertainly of the central governments position on the way assistance would be provided (beyond the emergency phase of caring for the victims and providing them temporary shelter). The variation in plan content reflects in part the context of the event for each municipality. Some communities lost municipal personnel and many lost the city halls and other public buildings. These plans are the beginning of a process that will have much iteration in the coming years as critical employment, land use and hazard safety issues are resolved (Olshansky et al., 2012). The plan tone is quite positive and reflects a belief on the nations ability to assist and their own desire for betterment.

4.3 Central government driven approach – general model

In the case of the Hanshin-Awaji earthquake (Kobe earthquake) of 1995 the central government established an Earthquake Recovery Headquarters to coordinate the efforts. There was no Reconstruction Agency but there was a Hanshin-Awaji Reconstruction Committee reporting to the prime minister on construction priorities. The committee was composed of local officials, business leaders and professional experts in city planning and reconstruction. This mechanism provided the guidance needed for central government actions. The Hashin-Awaji Reconstruction Committee took a position that all reconstruction programs are carried out by the prefecture and the municipal governments, thus keeping with a decentralization and a smaller central government policy at the time. This position meant that Kobe City government (that had special city status) and Hyogo prefecture would be in charge of the planning and implementation with the central government ministries providing support expertise and coordination according to their basic service mandates, such as major highways, etc. This policy suited the Japanese ministries that are funded sector by sector and are not experienced in working together in a coordinated manner. Also the legislation directing ministry activities is developed by sector (Transport, Marine, etc.) and makes cross-boundary decision-making difficult to accomplish.

In the Great East Japan Earthquake the prime minister transformed the disaster headquarters function into a reconstruction agency function, something that was rejected by in the Kobe earthquake and the central government also passed legislation to relieve municipalities and individuals from tax burdens. The Tohoku region did not have the municipal strength of Kobe and the vast number of cities required a more integrated tool for coordination of resources and assistance.

5.0 Initial Funding Choices

Examining where the money is spent is a strong indicator of priorities. Living support payments to survivors, relief from social insurance premiums for individual and tax relief for municipalities were but in place within six months. Nearly one year after 3/11 the first round of funding for reconstruction was awarded. It combined recovery grant funds with public funds already in ministry budgets. This reflects a model that relies on the ministries to be supportive of requests from lower government levels. This is part of the system of checks and balances within the Japanese general governance model. Table 5 lists the main project categories. Housing is the largest funding

category, with 44% of the total. This reflects the pressure to move from temporary housing to permanent housing for the large number of survivors. Relocation is the second highest category with 16.9% of the funds. This will be used for acquiring new land sites and preparing them for new construction. It implements the Separate Risk and Control Risk strategies discussed in Section 2.1.

Table 5 (a) Main Recovery Grants By Category, Round 1

Main Project	Municipality	Amount
Fishery Industry and Port Facility Development Project	21	258 (8.5%)
Disaster Prevention Collective Relocation Promotion Project (project fee for expected initial project areas, 5200 household)	12	437 (14.3%)
Disaster Prevention Collective Relocation Promotion Project (survey fee)	15	79 (2.6%)
Disaster Recovery Public Housing Development Project	32	1,356 (44.4%)
Farmland Development Project	16	52.8 (1.7%)
Urban Disaster Prevention Integrative Promotion Project (survey fee and so on)	39	30.0 (1.0%)
Urban Area Liquefaction Countermeasure Project (survey fee)	6	7.9 (0.3%)
Residential Land Sediment Disaster Countermeasure Project	12	324.7 (10.6%)
Total	59	3,053.2

Source: Reconstruction Agency (Mar 2, 2012), Amount: 100 Million JPY; percentage of whole amount

Table 5b First Round Recovery Grants Structure

Category	**Amount**	**% of Total**
Housing	1,356.0	44.4
Relocation	516.0	16.0
Disaster Prevention	362.6	11.9
Industry	310.8	10.2

6.0 Conclusion and discussion

The central government and the people of Japan are united in support of the Tohoku recovery. This is evidenced by the legislature (the Diet) approving $US 129 billion in recovery funding, the purchasing of the initial recovery bonds entirely by people within Japan, and the continued work of the volunteer section to support municipality recovery efforts at all levels. The nuclear accident by itself makes this event unique and the focus of worldwide attention. The ripple effects of the nuclear accident create special challenges in crafting a long-term recovery strategy. This strategy, out of

necessity, must be led by the central government, keeping in mind the wishes of the prefecture citizens. In each city however, the process local decision making that balances safety with efficiency is occurring, This article has not addressed in any detail the needs of those people in temporary housing, how livelihoods are to be restored or if the incentives of the special economic zones are sufficient to yield an expansion of regional employment.

As in all large disasters, the weakness of the place are quickly revealed. In this case, these include many towns with declining populations, a growing elderly population and slow economic expansion. No central strategy to address these issues has come forward to date from the prefectures or the central government. This is the real recovery challenge after the safety issues are properly addressed. The model of projects coming from the municipalities for funding must be supported by a clearer and broader regional strategy they may not come from the central government but from groups such the Union of Kansai Governments that has demonstrated it commitment to regionalism. After one year, the Tohoku region has just begun its journey to recovery, and will need at least a decade to get to where it wishes to be.

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[1] In contemporary terms (the last 100 years) this event was the deadliest in Japan, with over 15,800 deaths 95% tsunami related, and over 3,200 injured. This was not the largest death toll in history for the region, that distinction going to the Meiji-Sanriku earthquake and tsunami of 1896 that has over 27,000 victims.

[2] Run up is the maximum height on land reached by the tsunami wave as it comes ashore. For example, a 40-meter run-up would reach the top floor of a ten -eleven story building at its highest point.

[3] This meltdown was caused by lack of adequate water supply to cool the nuclear fuel rods because all power to the plant was stopped due to falling power lines (weakened by soil failure) and the back-up diesel generators being destroyed by the tsunami that breached the walls of their uncovered storage area.

[4] The Reconstruction Design Council was for created by decision of the Cabinet on April 11, 2011 and on April 14th then Prime Minister Naoto Kan approved and made the request that establish a 15 member Council made up of business, academic and elected officials of national stature.

Abstract: AESOP 15 Jan 2012

Accepted to Track 12: VULNERABILITIES, RISKS AND MITIGATION PLANNING

Title:

Resilience in complex adaptive systems: the relationship between planning and institutional resilience in bushfire prone regional Australia

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Abstract:

Research on institutional resilience in complex adaptive systems such as regional towns in Australia has demonstrated that resilience in bushfire events is a product of complex interactions between capabilities held by different organisations and indeed the individual community members at different scales. However in the face of disaster (the breakdown of most or all of these capabilities) the ultimate level at which resilience will be found is in individuals. This reality suggests that measures introduced in planning must be mindful of their effect, not just on the resilience of the organisation to which they are targeted, but also on the resilience of individuals in the community. This has implications for the traditional institutional separation of disaster functions: Preparation, Response, Relief and Recovery, particularly where the professionalization of bushfire services creates increased separation between agencies and individuals in the community. This paper will present the findings of research into institutional resilience to bushfire through a case study of the Australian regional city of Bendigo during the 2009 bushfires.

Key Words:

Bushfire, Planning, Resilience, Complex adaptive systems

The Relationship Between Planning and Institutional Resilience in Bushfire Prone Regional Australia.

1. Introduction

Planning for the management of bushfire risk requires the coordination of a wide range of activities. This is because planning for management of bushfires, and individual survival in the case of bushfire disasters, requires development of a set of capabilities that run across the disaster domains of prevention, preparation, response, and recovery. These domains of action take place at different times in relation to any particular bushfire event. They are acted upon by a complex array of institutions operating at a variety of scales, from individual, local to state level, of which urban planning is only one. Because urban planning affects the spatial layout and functions of urban systems, its activities can impact many features of disaster resilience.

The functions of institutions and a given community interact in a complex adaptive system (which is, to a degree, self-organising) including a range of monetary, governmental, ecological, individual and other elements that influence resilience to threats such as bushfires. Key adaptive capacities sets identified by Norris et al are (2008) 'economic development, social capital, information and communication, and community competence' (p.127). The ways that these capabilities are built upon and modified by institutions after disasters, such as the Australian Black Saturday Bushfires of 2009, interact with the ongoing self-organisation of the complex adaptive systems of regional towns, impacting upon the overall resilience of the system. In disaster events, which are understood as the breakdown of all or most of institutional support systems (Handmer and Dovers 2007), the final expression of resilience will be by individuals acting within any remaining systems. This research examined the implication of this: that individuals' resilience in a disaster will be a product of the remaining capabilities available to them. Accordingly, planning for bushfire disasters must always seek to enhance resilience in ways that appreciate impacts that any actions may have upon complex adaptive systems. This perspective creates a new imperative for planning for bushfires and explains concerns expressed by interviewees in our research. It is argued in this paper that improvements in professional urban planning, response and communications relating to bushfire may actually reduce community resilience, resulting from mismatches between government expectations of self-reliance and community belief in improved professional abilities and disaster resistance.

This paper firstly outlines the methods of our research, and provides background on the regional city of Bendigo, which was chosen as a case study. It then sets out a discussion of the theory of resilience in complex adaptive systems, followed by contextual information regarding bushfire management in Australia, the concept of 'shared responsibility', and concerns over the professionalization of bushfire

services. We then provide an example of one set of capabilities (namely "communications") which are subject to planned changes across a variety of institutions. The example includes an exposition of the communications failures experienced by Bendigo, the nature of proposed changes in capability and the concerns expressed by interviewees about the likely impact of those changes on community and individual resilience.

2. Method

The questions examined in this paper arise from research into institutional resilience and bushfire conducted by the University of Melbourne. The research was undertaken by a multidisciplinary team from planning, social work, marketing and geography. Leveraging concepts of resilience, complex adaptive systems, and capabilities, the team developed a working theory of the nature of resilience in complex adaptive systems (see section 4). To begin to test the usefulness of the working theory, a case study was developed on the institutional response to the Australian Black Saturday 2009 bushfires in the town of Bendigo in regional Victoria, Australia. The research included reviews of changes to policy introduced since the fires and in particular in response to the Royal Commission of Inquiry conducted by the State Government of Victoria. A description of the institutions central to prevention, preparation, response and recovery of disasters in Bendigo was developed. Seventeen qualitative interviews with members of these various institutions both within Bendigo and at the state level were undertaken. Based on the key elements of resilience forming the basis of enquiry for the study (set out below), the interviews focused on institutional capabilities, how they had responded in the event of disaster, and what had occurred since. The use of a detailed case study of communications systems was used to allow deeper understanding of adaptive change in one feature of the complex adaptive system, from which conclusions could be drawn back to the theory of resilience, adaption and complex systems, rather than the entire complex adaptive system itself (Yin, 1993).

3. Background

On 7 February 2009 the State of Victoria in Australia experienced severe bushfires across much of the state. The day has become known as Black Saturday. One area affected by fire on that day was the regional city of Bendigo. Bendigo is a major regional city, part of the City of Greater Bendigo which encompasses both the urban area of the town of Bendigo and outlying towns spanning an area of approximately 3000 square kilometres. Bendigo lies approximately 150km North West of Melbourne, with an estimated population of 91,713. The fire started within the municipal boundaries about 8 km from the central business district. Before being brought under control, it came within 2km of the central business district and within three blocks of the main police station. One fatality occurred. A spot fire threatened a major hospital and an adjacent retirement home, and 61 homes and 125 sheds were damaged or destroyed.

Fire agencies and emergency services across Victoria were aware several days before the event of the forecast weather and fire conditions for the weekend of 7th February. In preparation, the Country Fire Authority had prepared a level 3 Incident Control Centre (ICC) in Bendigo which was fully staffed and linked with central command centres in Melbourne. A secondary level 2 ICC was established in Bendigo to handle any smaller incidents which might occur. At 15:11 a fire commenced at Coliban Park Road, Redesdale, a small community which was partly within the region of Greater Bendigo. The level 3 ICC in Bendigo responded to the fire by sending trucks and equipment, and commencing coordination of efforts to fight the fire at Redesdale. At 16:20 another fire commenced in the city of Bendigo itself.

4. The nature of resilience in complex adaptive systems

To consider how institutions have sought to improve disaster preparedness in Bendigo, this section sets out key concepts used in the study. The concept of resilience varies considerably between its "origin" disciplines of physics, psychology and ecology (Norris et al 2008). In ecology, resilience is said to be the amount of disturbance a system can absorb before shifting into an alternative regime (C. Holling, 1973). Under this understanding resilience is therefore improved by improving the capacity of the system to *resist* disturbance. One key method developed in human systems for improving this type of resistance to disturbance (or even avoidance of disturbance) is risk identification and mitigation (Beck 1992).

In physics, resilience is about the ability to "*bounce back*" after a serious shock. In this understanding things are resilient if they do not break when placed under pressure, nor do they change their fundamental properties (for example change to gaseous form, become permanently more brittle). In psychology, this idea of resilience has been applied to individuals, whereby an individual's resilience is a measure of their ability to maintain a stable equilibrium (Bonnano 2004). Applied to human systems this understanding leads to a concept that resilient systems are typically those which have developed, through experience, mechanisms to cope with "shocks" so they can return to normal states (B.H. Walker et al., 2006).

In a disaster, the fundamental conditions which formed and maintain the system in normal states are changed. In these circumstances "bounce back" to previous states isn't necessarily possible nor desirable. This has led to a concept that in disaster terms, systems can be considered resilient when they are capable of *adapting* (Handmer, 2007). Or put another way, systems can be considered resilient when they are capable of adapting, while maintaining their essential identity. "By resilience we mean the capacity of linked social-ecological systems to absorb recurrent disturbances such as hurricanes or floods so as to retain essential structures, processes and feedbacks" (Adger et al 2005 p. 1036).

An additional concept is that human settlements such as the regional city of Bendigo in Victoria can be understood to be *complex adaptive systems*. Complex adaptive

systems are systems that adapt and evolve while self-organising over time (Urry, 2005). They include a number of inter-related functional components: social networks, institutions and inter-related systems of economics, ecology and physical structures. The capabilities of each element and their interaction produce the self-organisation of the system. Perturbances caused by the interaction of these elements are necessary to the ongoing adaptation (or maladaptation) of these systems (Cork, 2010, p.133). The scale at which these systems interconnect, the level of connectedness and ability to adapt to different shocks will be variable (Cilliers, 2005, 257).

Taken together, the concepts set out above suggest that resilience in the context of regional communities and bushfire can be understood as a set of dynamic capabilities. These capabilities firstly allow the complex adaptive system to *resist* being effected by the bushfire, but then in the event of failure of the response capacities (disaster), would ideally allow rapid and appropriate '*bounce back*' to normal states, and where necessary, positive *adaptation* to new circumstances over time. That is, resilience is a set of capabilities built up and utilised before, during and after emergencies. It is "a process linking a set of adaptive capacities to a positive trajectory of functioning and adaptation after a disturbance" (Norris et al, 2008, p. 130). Where adaptive capacities are defined as "those with dynamic attributes, that is resources which are robust redundant and rapidly accessible" (Norris et al., 2008, p. 131). These adaptive capacities include dynamic capabilities such as management processes, organisational structures and competencies which are internal to a community (Teece & Pisano, 1994). They can be improved through longer term strategic policy in emergency management (Handmer & Dovers, 2007).

According to this framework, improving disaster resilience can be understood as a broad approach to a cycle of activity which encompasses the general contexts of planning, preventing, responding to and recovering from disasters. Disaster resilience requires a suite of capabilities across a range of organisations, institutions, communities and places, at a variety of scales to be effective, integrated with predilections for adaptive learning across scales (Gunderson et al 2008).

This understanding of resilience is depicted in simplified form in diagram 1, where resilience is shown as responses to an event in one of three ways (resistance, bounce back, or adaptation). Timeframes will differ for specific capabilities and in each of the elements. Because of the systems' complexity, capabilities within given elements may take any one of the responses, self-organising over time to form a new set of pre-event capabilities adapted to the environment developed in the intervening period. Thus resilience has to be understood as a process which is constantly developing and changing in response to a myriad of factors across the complex system.

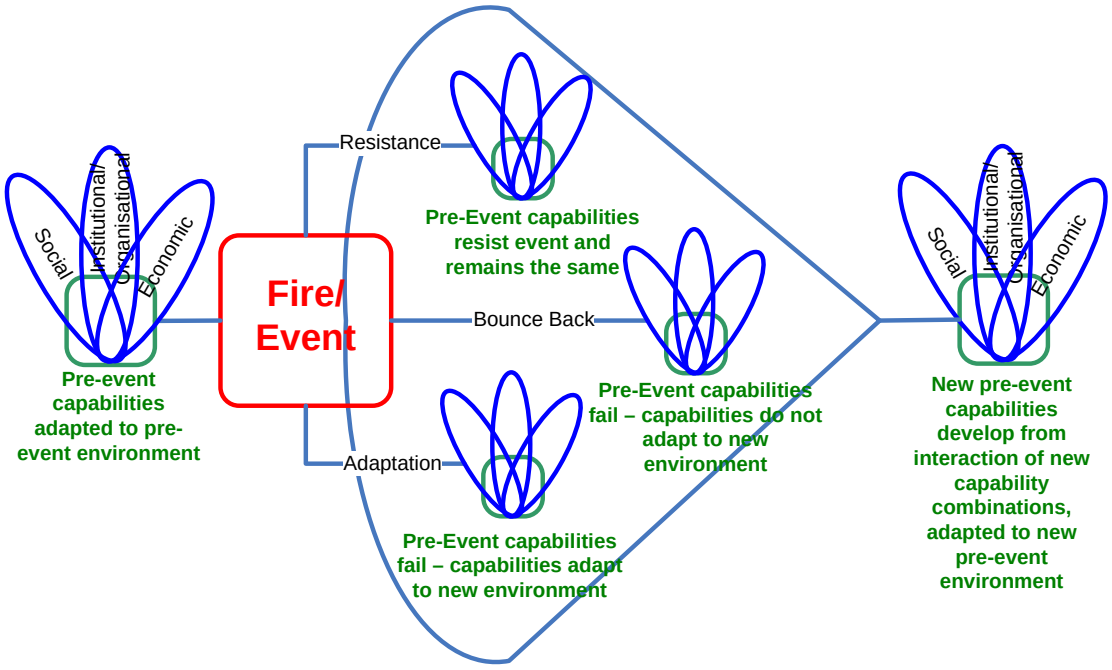

Figure 1: Resilience in Complex Adaptive Systems

Our research suggests that increased disaster resilience exists in communities and within agencies that empower the lowest possible levels to take responsibility for their own preparedness and recovery, while at the same time developing close working relationships across the community. As we will demonstrate with an example below, this means that actions to increase resilience in one area or one organisation need to be coordinated and planned so that they do not destabilise resilience in other sections of the complex system as it self-organises in response to changes.

5. The structure and professionalization of disaster services – and their separation from the community

In Victoria the key institutions involved in bushfires are organised across the activities of prevention, preparation, response and recovery as listed in table 1. Each agency is separate and has developed specialised capabilities and increasingly professionalised delivery of services. They are often multi-scalar, operating at both State and local levels. This presents challenges for the integration of service delivery and for understanding their interaction and the interaction of their capabilities within complex adaptive systems.

Table 1: List of Main Institutions involved in Victorian Bushfire by Domain of Action

Domain of action	*Institution*

Prevention of fires or reduction of intensity	*Planning System* (Bushfire Management Overlay; building codes) *Department of Sustainability and Environment* (management of forests)
Preparing for the event of fires or reduction of intensity	*Country Fire Authority* (education of community) *Private Landholders* (Clearing around houses, maintenance of private property)
Responding to fires	*Country Fire Authority* (direct fire management and containment) *State Emergency Service* (Logistics assistance, assistance with emergency centre staffing, assistance with provision of camp services for front line fire-fighters *Local Government* (Municipal evacuation centre, emergency relief, coordination of local resources – bulldozers, fuel, clearing equipment) *Police* (road blocks, assistance with coordination of evacuation centres, logistics, management of the public) *Red Cross* (registration of persons in distress)
Recovering from fires	*Department Human Services* (short term provision of emergency accommodation, longer term counselling services) *Department of Planning and Community Development* (longer term community recover, community engagement officers, economic recovery, distribution of longer term aid) *Health Services* (ambulance services, hospitalisations, dealing with injured in direct aftermath)

Professionalism, as a system of allocating specialised roles and responsibilities to experts, has traditionally been seen as a guarantee of high standards, delivering overall benefits to the public, but at the risk of distancing the public excessively (Koehn, 1994: 147; Friedson, 2001: 217). A theme that emerged in the research was that "planned" and agency based responses to bushfire risks have increasingly professionalised and institutionalised action in many ways that separate the public from bushfires, while paradoxically seeking to "share responsibility" a theme taken up in the Council of Australian Government (COAG) documentation on National Disaster resilience (Ellis et al., 2004) and reiterated increasingly after the 2009 fires, including in the Final Report of the Royal Commission of Inquiry (2009: Volume 2).

In contrast to professionalization of bushfire response is the long tradition of volunteerism in the Country Fire Authority (CFA) of Victoria. This has engaged large numbers of the public directly with preparation and response processes over a long period. The CFA's focus upon local provision of fire preparation and response, has long been intertwined with volunteerism and community engagement (Murray & White 1995). The brigade structure which still exists today, and which was originally entirely self-funded and relied entirely upon volunteers, was formed in 1926, in response to serious bushfires in Victoria, although its history goes back to the 1870s. In 1945 the CFA was formed to coordinate the brigades at the recommendation of a Royal Commission of Inquiry into the devastating 1939 bushfires. Over 1,200 brigades now exist in Victoria, only some of which are staffed by a core of 629 professional firefighters in larger regional centres supported by some 60,000 volunteers (Strachan Research, 2000; CFA: 2012).

Largely in response to the disaster of 2009, recent changes in Victorian fire risk management systems have been dramatic by comparison to previous progress, with the introduction of significantly stricter policies via urban planning and building regulations in 2011. The introduction of planning and resource management controls over time increasingly map, assess, design and seek to reduce bushfire risks through expert and centrally derived urban planning mechanisms. In summary, these controls have been oriented to improved building and construction standards, combined with urban design and forest management mechanisms that modify vegetation near to buildings and settlements. In addition attention has been given to the distance of buildings to fire sources and provision for response and escape routes.

Australian Standard 3959 establishes a scale of building performance levels against Bushfire Attack Levels (BAL), progressively requiring more resistive structures as the risk level of the environment increases. In parallel, the Wildfire Management Overlay (WMO) which was previously applied only to limited spatial areas, has been replaced with the Bushfire Management Overlay (BMO). The BMO, used in parallel with the BAL, provides for development setback distances and "asset protection zones" according to the nature and level of the bushfire threat in an area, thus combining building and planning mechanisms. The BMO and BAL "tests" must be used in all areas designated to be "Bushfire Prone" according to recent mapping which has identified most areas outside established towns and cities as being at risk. Finally, the state has committed to an extensive ongoing fuel reduction programme, requiring 5% of all land or 390000ha of bushland to be treated each year (VBRC 2009). While the long term impacts of these changes, focused upon developing *resistance*, remains unclear the following sections consider the impacts of these institutional changes upon the complex adaptive systems in which they are implemented.

6. An example of a planning measures which effect institutional resilience and individual resilience.

We have argued above that in complex adaptive systems resilience is a product of capabilities developed by and available to individuals and institutions across a range of timeframes. These capabilities develop and interact across the complex system, and thus learning in one institution, which changes the capabilities of that institution, will affect capabilities unevenly across the wider system. In some cases the improvement of capabilities in one area, may actually destabilise disaster resilience in other areas. This occurs because in the event of disaster, when normal capabilities are overwhelmed (Handmer and Dovers, 2007), the capabilities left to individuals on the ground need to be 'theirs', and cannot be sourced in a professional organisation that will 'save them'. We argue that given this reality, care needs to be taken with the context in which improvements to capabilities are made, so that they provide for generalised improvements to resilience of the system overall. To achieve this, the interconnections and context of the complex adaptive system must be properly understood.

An example allowing us to explore this theory is the development of communications capabilities since the 2009 fires. To understand the impact of changes to the information capabilities within and between response and recovery agencies on the resilience of community members, it is first important to understand the context of information failure during the fire of 2009. This example will therefore provide firstly a basic description of the communication failures during the 2009 fires. The response of the Royal Commission of Inquiry held by the Victorian government will then be examined before the data collected on agencies concerns about the impacts of changes to communication capabilities is presented.

6.1. The problem of information in the Bendigo fire of February 2009

From the beginning, fighting the fire in Bendigo was plagued by difficulties in communication. For example, there was a failure in the central emergency control centre for the State of Victoria so that telephone calls could not get through. The first report of the fire was provided by residents who drove to Eaglehawk Country Fire Authority (CFA) base to report the fire in person. The Eaglehawk pumper was en route before being paged by central command which had eventually been contacted by phone. ("Redesdale and Bendigo Fires Submissions of Counsel Assisting: Letters Patent ", 2009)

During the initial stages of fighting the fire communications with those at the fire front were limited. Communications between the ICC and central command were also limited. The Regional Emergency Control Centre was alerted to the Bendigo fire by Eaglehawk CFA, and moved to establish who would take control of incident management for the fire. At 16:45 the level 2 ICC at Adams Street in Bendigo ('Adams St') was given the Bendigo fire to manage. Adams St was unable to make radio contact with the crews on the fire ground using the CFA Regional channel, the trunking system[1], or fire ground channels. There was also very limited communication between the two ICCs. The level 3 ICC sent a number of staff to the fire front without informing Adams St that they had done so. One of those was Mr A, an experienced field controller. ("Redesdale and Bendigo Fires Submissions of Counsel Assisting: Letters Patent ", 2009).

An example of the lack of communications is the lengths Mr A[2] went to to bring about control of all aspects of the fire fighting effort. Initial incident control was undertaken by Mr B of Eaglehawk CFA who was first on scene at 16:40, established a command centre, sectorised the fire as he saw it and commenced fighting it. At about 19:15 Mr A, having driven around to find Mr B and a number of others now fighting the fire, held a meeting and from a map drawn on the bonnet of his car, re-

[1] *Trunking systems* are complex multi-channel radio system managed by a computer that allow higher numbers of simultaneous users on a given frequency.

[2] Names have been changed to protect anonymity as per human ethics requirements.

sectorised the fire and allocated command points to those present (Interview Gilmore). At 19:45 Mr A was contacted by Mr C at Adams St, who asked him to come and provide a briefing. This was done at 21:00. Consequently the Adams St ICC was largely irrelevant in fighting the fire. The crews on the ground were largely responsible for controlling the fire, with almost no communications and assistance. ("Redesdale and Bendigo Fires Submissions of Counsel Assisting: Letters Patent ", 2009)

Further evidence of difficulties were apparent in communications with the public. One issue was that on a very hot day, most people were inside their houses with curtains drawn to prevent heat entering, in the main watching cricket on television, rather than tuning into local radio stations (Morris 2009). As a result many residents who were under direct threat were unaware of the problem until the police or a neighbour knocked on their door to advise them. The police communications were overwhelmed, both at the level of contact with the public and the police radio band (Interviewee 1 Victoria Police). An initial evacuation centre was set up at Eaglehawk which was subsequently threatened by the predicted wind change. A new evacuation centre was established at Kangaroo Flat. 60 persons were relocated from relief centre at Eaglehawk to Kangaroo Flat (Morris 2009). The radio stations made mistakes concerning the location, directing people to Eaglehawk even though it had been moved due to threat from fire.

The broader community of Bendigo became aware of the fire, if through no other medium, via the amount of smoke in the vicinity. Embers and ash fell on areas of the town south and then east of the fire, up to 7km away from the actual fire (Interviewee 1 Bendigo Business Council). Many members of the community thus experienced considerable uncertainty, which given the lack of knowledge about the exact location of the fire front was not able to be ameliorated by announcements being made from the ICC (Interviewee 1 Community Sector). In fact, conflicting announcements were made. For many members of the community, this lack of information was unexpected and unacceptable.

Information required for critical forward decisions on the distribution of resources in recovery was also limited.

> “The bits we didn’t do all that well in was the initial 24 hours after. From 6 on the 8th feb until 6 on the 9th feb I reckon we were in absolute trouble. Because couldn’t get the picture right. We couldn’t work out how many people didn’t have a home. We couldn’t get the data and information to make good decisions.” (Interviewee 1 CFA).

The only element which seemed to do a reasonable job with regard to information was the sharing of information on what had happened between recovery agencies after the initial recovery period

> "With the bushfires we managed that (the distribution of welfare payments) better because agencies shared information about who exactly had been effected. We share information well. Early on we got an agreement that so long as we collected the information for this purpose we could share it " (Interviewee 1 Local Government).

6.2. Post-Disaster Response of Agencies to the issue of Information

These types of communication difficulties were repeated across the state.

> "Clearly the gathering of information was overwhelmed, there was no capacity to collect the amount of information that needed to be collected, considering what was going on. But when you think about it, it still was pretty good. We knew the regions that fires were in – not necessarily where they were" (Interviewee 2 CFA).

Unsurprisingly, the Royal Commission made many recommendations relating to communications. In summary, the recommendations involve improvements to information provided to community prior to bushfire seasons to enable them to be better prepared (recommendation 1, 2, 7 37, 44) and to provide for improvements to on the ground communications between response agencies in the event of a fire (recommendation 14, 22 and 23). These recommendations collectively provide a clear message that the community members will be informed of how best to protect their families and property in the event of fires, and that during the actual event fire response agencies will be able to communicate and accurately know where a fire is and to predict its movements.

At the same time that these recommendations concerning information were made, two other recommendations of relevance were made. Recommendation 3, essentially provides for municipal authorities to plan for the identification of and evacuation of vulnerable persons. Recommendation 5 provides for the opportunity to encourage people to evacuate where circumstances indicate that will be a safer option than staying to defend properties. Both these recommendations radically change the nature of Australia's long-standing 'leave early or stay and defend' policy. They provide a clear message to the community that in the event they are at serious risk, they will be instructed to evacuate, and that prior to this they will have had all necessary information at their disposal.

The complete wording of each of these recommendations is included in the table below.

Table 2: Recommendations of the Victorian Royal Commission into 2009 Bushfires pertaining to 'communications'

Recommendation 1: The State revise its bushfire safety policy. While adopting the national Prepare, Act, Survive, framework in Victoria, the policy should do the following:	Recommendation 7: The Commonwealth lead an initiative through the Ministerial Council for Police and Emergency Management, facilitated by Emergency Management

- Enhance the role of warnings – including providing for timely and informative advices about the predicted passage of a fire and the actions to be taken by people in areas potentially in its path
- Emphasise that all fires are different in ways that require an awareness of fire conditions, local circumstances and personal capacity
- Recognise that heightened risk on the worst days demands a different response.
- Retain those elements of the existing bushfire policy that have proved effective
- Strengthen the range of options available in the face of fire, including community refuges, bushfire shelters and evacuation
- Ensure that local solutions are tailored and known to communities through local bushfire planning.
- Improve advice on the nature of fire and hose defendablity, taking account of boarder landscape risks.

Recommendation 2: The State revise the approach to community bushfire safety education

Recommendation 3: The State establish mechanisms for helping municipal councils to undertake local planning that tailors bushfire safety options to the needs of individual communities. In doing this planning, councils should:

- urgently develop for communities at risk of bushfire local plans that contain contingency options such as evacuation and shelter
- document in municipal emergency management plans and other relevant plans facilities where vulnerable people are likely to be situated—for example, aged care facilities, hospitals, schools and child care centres
- compile and maintain a list of vulnerable residents who need tailored advice of a recommendation to evacuate and provide this list to local police and anyone else with pre-arranged responsibility for helping vulnerable residents evacuate.

Recommendation 5: The State introduce a comprehensive approach to evacuation, so that this option is planned, considered and implemented when it is likely to offer a higher level of protection than other contingency options. The approach should:

- encourage individuals—especially vulnerable people—to relocate early
- include consideration of plans for assisted evacuation of vulnerable people
- recommend 'emergency evacuation'.

Australia, to develop a national bushfire awareness campaign.

Recommendation 14: The Victorian fire agencies amend the AIIMS framework before the 2010–11 fire season in order to do the following:

- designate the Information Unit as a separate section reporting directly to the Incident Controller and require that the Information Unit contain a dedicated Public Information Officer whenever a full incident management team is required
- specify a set of functions in relation to which the Deputy Incident Controller for a level 3 incident will have oversight, which may be adjustable for a particular incident by agreement between the Incident Controller and the Deputy Incident Controller
- ensure that an individual with local knowledge is incorporated in an incident management team.

Recommendation 22: The Country Fire Authority and the Department of Sustainability and Environment standardise their operating systems and information and communications technologies with the aim of achieving greater efficiency and interoperability between agencies.

Recommendation 23: The Country Fire Authority review and improve its communications strategy as a matter of priority and develop a program for identifying and responding to black spots in radio coverage.

Recommendation 37: The State identify a central point of responsibility for and expertise in mapping bushfire risk to:

- review urgently the mapping criteria at present used by the Country Fire Authority to map the Wildfire Management Overlay, to ensure that the mapping used to determine building and planning controls is based on the best available science and takes account of all relevant aspects of bushfire risk
- map and designate Bushfire-prone Areas for the purposes of planning and building controls, in consultation with municipal councils and fire agencies
- finalise the alignment of site-assessment methods for planning and building purposes, taking into account bushfire risk to human safety as well as to property.

Recommendation 44: The Country Fire Authority produce for community guidance material on fire-resistant landscape and garden design, including a list of fire-resistant species

6.3. Analysis of likely impact of information recommendations on institutional and individual community member resilience

Taken together with the changes to the wildfire management overlay and changes to the planning provisions, the community could be forgiven for expecting that they will be protected by the State both before and during bushfires. As one senior government interviewee put it:

> What have we done? Well if you live in a bushfire area well you need to be prepared and plan to leave, but if you get caught short, first of all you will get information, you will probably get a fire truck rolling up, DSE will keep the forests safe in any case (and if it isn't then it is their fault), the CFA will tell you how to build your house. You have this place you can go to – which you will be told in plenty of time to go there – and if that doesn't happen then the police will order an evacuation and they will organise to send you somewhere else. And if you are vulnerable then DHS will have a plan to deal with you (Interviewee 2 CFA).

The conflict between this set of community beliefs and a disaster management system which is based on shared responsibility is perhaps obvious. Concerns were raised by interviewees that the recommendations and improvements to institutional capability are likely to create unrealistic expectations concerning the capacity of response agencies during disasters and the role of the community in shared responsibility.

> But the other thing is that you can't separate the emergency service from the community. So the commission has also decreased community resilience. The treatments it came up with have built an … expectation of a place to go, an expectation that information and expert advice will always be available, … . All of that is in parts of the recommendations coming out of the royal commission, which is completely contra to the COAG disaster resilience strategies for community. We (COAG) talk about communities talking to each other, taking each other on the journey, looking after each other, knowing that it is going to happen (Interviewee 2 CFA).

The specific concerns raised by interviewees were as follows. First it is considered critical for CFA functioning that front line response personnel make decisions in a timely fashion, a long standing disaster response principle. These front line people need to be able to make a decision on low levels of information.

> When you are at the sharp end, what you are relying on is having people who are able to view the situation and see a number of options, and choose one. Choose one based on the knowledge they have available to the then, and act on it (Interviewee 3 CFA).

Thus in situations of fighting bushfire it is necessary to make decisions with minimal information. This is as true for central command as it is for the front line. Indeed evidence shows that acting decisively is critical for survival at the individual level (Interviewee 3 CFA).

> Resilient organisations have people who have the experience base, or the place to go, or the processes by which they are able to make decisions

> without all of the information they would normally have. The worse a situation is, the more difficult to it is to get information (Interviewee 2 CFA).

Not only does the findings of the Royal Commission potentially destabilise individual decision making, the fact that it also sought to determine blame for individuals, based upon 'who knew what, when', further destabilises the capacity of response agencies to function.

> When you are pushed outside of normal routine operations, and I am talking about within the emergency management scenario, in the ones where the agencies have to come together, then you need to be adaptable, flexible and supported in making decisions. You only make decisions with the information that you have at that point of time, and it is challenging to do that (Interviewee 1 State Government).

Without support in making decisions, there is a risk they will not be made because information is not available, or that unreasonable levels of resources will be put to documenting the exact nature of information available on which the decision was made.

> The big issue is being able to justify your decisions after you have made them and the problem with that is that the worse the disaster gets the less information is available to you. The system of information gathering breaks down or at least provides you with less information the worse things get (Interviewee 2 CFA).

The second big issue is that the CFA now feels that it has a responsibility to provide the community with information.

> The other big change is that we are a lot more aware of our responsibility to provide public information. It is really annoying at times when you are trying to work on a fire. But we feel we have to do it. We track fires, and now we want to know what will be affected in the future, with a public message that we can get out immediately it becomes necessary… . Now we accept that we need to tell people what is going on, even if it is just where the smoke is from (Interviewee 3 CFA).

This is despite the fact that in many cases of bushfire, this information is not known during the response phase, and the fact that any system will be subject to overload and dysfunction at some point in a disaster. Given that the CFA increasingly feels it is responsible for disseminating information, combined with the technical and professional work being undertaken by various agencies to increase capabilities to give information, it would hardly be surprising if that created an expectation in the community that information will be available on which to make decisions. Indeed there is evidence from the Bendigo Community Recovery Plan that the community

does indeed expect better information in the future. Under the heading "Community Awareness/Planning for next time", they have highlighted the need for "communication and fire warning". Noting that the community was unprepared and no fire warnings were universally recognisable on Feb 7th. They felt there was a need to facilitate community preparedness and awareness of where to go and what to do in case of evacuation in any natural disaster (Victorian Bushfire and Recovery Authority 2009).

A concern with this expectation of information being available on the day, and during, a disaster is that it will also destabilise efforts at preparation and even prevention. Recently improved building codes provide for buildings to be located in areas at risk of bushfire, assuming that preventative and protection measures are carried out, especially in maintaining vegetation distance from buildings. This requires ongoing action by individual property owners in perpetuity. As individuals' expectations of information and advice increases, it is possible their attention to messages of prevention and preparation will decrease. Thus, even with an increase in the amount of messaging and awareness of the risk of bushfire, the effect on actual preparation is possibly diminished. As one CFA interviewee put it:

> The message is out there more, and the expectation that information will be better is out there. I worry about if we do a code red day, and people's expectation about what they should do and what that means. I don't think we have changed this personal responsibility issue. We know that if you can stay at home and do all those things I was talking about before within the community, looking after yourself and neighbours, stay informed and aware of what is going on around you. Then if you are told you are under particular threat you will make good decisions. I don't think we are at that point. I think that if there is a fire out there at Castlemaine or somewhere, people will be flocking in to the Neighbourhood Safer Place with carloads of stuff and pets and all that thinking that it will be open and there will be people there to feed them and stuff like that. So I think that some people will do better, but that will be offset by people doing stupid things and chewing up resources unnecessarily (Interviewee 3 CFA).

This is therefore a good example of a situation where planning for increased resilience by improving the system of communications could potentially lead to a destabilisation of resilience in the people who will need it in the event of disaster. In the final analysis we can return to Norris et al (2008) who state that 'information increases survival only if it is "correct and correctly transmitted". Closer local sources of information are more likely to be relied upon than unfamiliar distant sources' (p.140).

7. Conclusion – Avoiding Maladptation and Reduced Resilience

In this paper we presented a working theory examining the relationship between institutional actions post-disaster, and the resilience of the wider complex adaptive system affected by the changes. The study examined the case of Bendigo after the 2009 Victorian Bushfires, particularly communications breakdowns in response phases. The study shows that building the capacities of institutions active in the domains of prevention, preparation, resisting and responding bushfires can raise significant doubts as to the ongoing resilience of local communities to bushfire risks, particularly in disaster situations where "normal" processes of response are overwhelmed. The interconnected and largely self-organising response of citizens to the institutional changes in capabilities may be to increasingly rely upon formal system of communication for information about fire risks and evacuation decisions.

Further, ongoing changes to forest management and building and planning systems give the impression that existing settlements have become less risky. In fact, the effect of these actions will be realised at vastly different time scales, due to the slow rate of ongoing change allowed by development control systems in planning. In addition, the focus of planning and building controls upon improved resistance will lead to greater expectations of safety based upon underlying expert processes, aided by improved professional response abilities facilitated by better communications. This suggests that actions to increase resilience in one area or one organisation need to be coordinated and planned so to minimise destabilisation of resilience or maladptation (Adger, 2005) in other sections of the complex system that self-organise in response to changes.

This research points to methods and a need of researching how increases in state intervention and improvements to institutional capbaility can lead to decreased individual responsibility, capability and resilience. Further research is required into the nature of the complex adaptive systems which are our regional towns if improvements in capabilities are going to lead to the desired outcome.

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PLANNERS' TECHNICAL EXPERTISE. CHANGING PARADIGMS AND PRACTICES IN THE ITALIAN EXPERIENCE

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Abstract

Why is a planner hired? What is the specific knowledge and know-how that he/she brings into a planning process? These questions recurrently arise in planning practice owing to the rapid change taking place in disciplinary approaches and methods, the legal and administrative framework, and the ways in which actors interact. It is well known that political and technical aspects are intertwined in the planning process, and this may give planners a key role also in the definition of the goals for action. More often, however, common knowledge prevails in public decisions.

Planners have long been required to address issues no longer circumscribed to physical spatial organization and planning process management. Consequently, technical expertise has evolved from its architectural-engineering base to include socio-economic and environmental issues, as well as communication methods and participatory procedures. This evolution is still ongoing, challenging professional practices and educational programmes. This progress responds to the need for sounder methods and more effective tools with which to manage complex problems. But at the same time it produces a looser image of the planner as involved in a variety of issues, and distant from such strong professional figures as the engineer and the architect, who, in many countries, are traditionally responsible for physical planning. As a consequence, a wider – but well-defined – field of competence must be devised.

The paper focuses, after an analysis of how technical paradigms have evolved in the planning discipline in Italy, on the emerging types of expertise that are expected to form the planners' "toolbox". This requires linking the discipline's progress with that of the professional practice (controlled by the professional orders), overcoming the so-called theory/practice gap, as well as connecting the legal framework with the educational system (which still reflects traditional models). The analysis of the emerging need for planning expertise makes it possible to define some paradigmatic "planning figures" which can well represent the variety of technical expertise required.

Keywords: technical expertise, planner's profession, Italy

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1. Introduction. Why is a planner hired?

Why is a planner hired? What is the specific knowledge and know-how that he/she brings into a planning process? These questions recurrently arise in planning practice owing to the rapid change taking place not only in socio-economic phenomena, but also in disciplinary approaches and methods, the legal and administrative framework, and the ways in which actors interact.

The complexity of urban government requires an extraordinary ability to understand change, to forecast future trends, to build consensus on feasible proposals, and to construct coalitions. There is also an urgent need to give efficiency and equity to the public choices taken in the concrete forms of urban space organization and land-use regulation. Accordingly, specialized/sectoral knowledge is required together with expertise in decisional and implementation process management. In short, there is an increasing need for planning, although it is an activity whose legally binding rules and formally defined disciplinary practices recurrently become obsolete, and even more so land-use plans (Alfasi et al., 2012).

It is well known that political and technical aspects are intertwined in the planning process, and this often implies that technical expertise (which should "complement democratic discourse": Alexander, 2008, p. 210) play a minor role, while common knowledge, and in many cases political rhetoric, tend to prevail in many public decisions. This is why in some countries, Italy included, planners are marginalized with respect to administrators (Mazza, 2002, p. 24).

While for some scholars the focus of planning theory has been put on ethical and political issues, so that "planning theory literature… tends to flatten down planning to politics", thus marginalizing or cancelling the role of technical knowledge (Mazza, 2002, p.17, p.12), for others the opposite is true: "much of professional rhetoric of planning" remains "resolutely attached to the reassuring claims of technical expertise". It is stressed, anyway, that there is "at least implicit recognition that moral judgements and ethical questions pervade the daily practice of planning" (Campbell and Marshall, 1998, p. 117; also: Campbell and Marshall, 2000a).

Planning is a procedure applied to a variety of contexts and decisional processes, some of which are highly specialized, while others are more loosely connected to practices organized and defended by professional orders and associations. Planners have long been required to address issues no longer circumscribed to physical spatial organization and urban planning process management. Consequently, technical expertise has evolved from its architectural-engineering bases to include socio-economic and environmental issues, as well as communication methods and participatory procedures, and the process is still ongoing, challenging professional practices and educational programmes.

This progress responds to the need for sounder methods and more effective tools with which to manage complex problems. But at the same time it produces a fragmented discipline and a looser image of the planner (Mazza, 2002). The planner, in fact, is involved in a variety of issues, and his/her status is distant from that of such strong professionals as the engineer and the architect, who in many countries are entitled to take responsibilities for spatial planning.

In general, it is expected that a planning process (or a 'plan' as a statutory document) will bring 'rationality' (in its different conceptions: Alexander, 2000) into spontaneous processes (the market, social behaviours), as well as efficiency, effectiveness and equity into public decisions, operating with a view to the 'public interest', whatever its definition (Campbell and Marshall, 2002). From this perspective, what is the expertise provided by the planner?
The paper addresses these issues with clearly borne in mind that motivations for planning must be found in the search for collective benefits, going beyond the "implementation of a set of statutory requirements". This implies that the "importance of competence should never be disregarded" (Campbell, 2010, p. 472), because the "status of planners as experts resides in their command of specialist knowledge" (Rydin, 2007, p. 53).
The paper focuses on the Italian case by analyzing the progress of technical expertise from the traditional 'urbanistica' – characterized by the integration into the figure of the architect of the diverse competencies required by recurrent professional demand – to a more complex articulation of competencies.
The research questions addressed – with specific regard to the Italian case – are the following:

- What specific technical expertise is required of the planner?
- Is planning a compact discipline or is it fragmented into a number of sectoral bodies of expertise?
- What evolution has occurred in the educational system and what is the role of the professional orders?
- What are the expert roles performed by the planner?

An additional question regards whether there is a short-circuit between the demand for and supply of qualified expertise, considering that in many cases the awareness necessary to involve an expert emerges from a structured representation of problems and feasible solutions, as well as from the availability of qualified professionals.
In the paper, some key terms are used to define the issues at stake. In particular, by 'knowledge' is meant a person's endowment of information organized by means of theories and methods (on the basis of "causal relationships": Rydin, 2007, p. 53), considering that knowledge production follows different paradigms (Alexander. 2010), but in planning it is mostly "socially constructed" (Healey, 1997), or "constructed through social processes" (Rydin, 2007, p. 52). Know-how (competence) is the ability to make use of knowledge in order to achieve the results expected. Expertise is the capacity of a person (often recognised as a professional) to make use of appropriate knowledge and know-how to analyze problems and propose solutions.

Planning theory and planning practice

The nature of planning is primarily operational. Its rationale consists in its capacity to yield results better than those expected from the unplanned course of events. Its main goal is "the development of practical outputs" (Goldstein and Carmin, 2006, p. 68) in order to provide benefits for the communities involved, and its strength

consists in the ability to furnish a strategic framework that interacts with the operational solutions (Mazza, 2002, p. 11).

These premises stress that the discipline is oriented to devising and applying operational methods and tools, and that it accompanies political actions in order to improve current conditions from a 'public interest' perspective (Alexander, 2002; Campbell & Marshall, 2002). This is a key issue which raises ethical concerns due to the application of values, so that a strong role is assigned to political representatives and – when activated – to participatory processes.

It is traditionally assumed that, in order to pursue specific goals, a government authority "can select one instrument among others" (Ponzini, 2008, p. 12), but policy tools and government instruments – planning practices included - become part of the 'government culture' and problems are often expressed in light of the consolidated technical-administrative instruments. This is the case of Italy, where the role of municipal plans has become consolidated in the public opinion (notwithstanding their unsatisfactory effectiveness), and professionals are educated and trained in order to address problems by means of the statutory planning instruments.

It is probably counter-intuitive that the prevalent operational orientation of planning and the complex technical/political relationships require a strong theoretical basis. In fact, actions must be supported by a sound knowledge of reality, an appropriate interpretation of phenomena and trends, as well as by the ability to connect diverse points of view and sectors of activity. And this implies a sound theory and interdisciplinarity. In fact, planning "has a history of drawing from many disciplines" (Goldstein and Carmin, 2006, p. 68) and this can be considered "a weakness – making it difficult for planners to know exactly what belongs to planning", while "others see it as a key strength" (Davoudi, 2010, p. 33). The risk is the fragmentation of the discipline and the coexistence of different – sometimes conflicting – theories and methods, while there is a strong need for technical knowledge meant as "a formalized knowledge that is linked to defined theoretical frameworks and leads and affects practices" (Mazza, 2002, p. 12).

Planning is characterized differently among countries, but it is generally founded on technical sectors – in particular urban design – on the one hand, and it shares methods and tools with social sciences on the other (Goldstein and Carmin, 2006, p. 67). In short, it concerns policies and practices, and its scientific bases are related to sociology, economics, environmental sciences, geography and GIS, but it also includes creativity and know-how in urban design and many other substantive fields of operation.

A key question regards the connections between methodological and operational aspects, and therefore the extent to which theory is important for practice and, on the contrary, the extent to which experience is important for innovating theory (Salet and Finka, 2010). In planning, theoretical issues are not commonly addressed by practitioners, who leave to academia the task of working on theory, developing criticisms, and formulating new proposals, while practitioners are subject to well-regulated procedures and must apply rules and respect legal constraints. These differentiated roles create the 'theory-practice gap', which regards "how theory is or is not used in planning practice" (Allmendiger, 2002-2009, p. 23) or, as Alexander (2010) put it, whether "planning theory affects practice", due to the complexity of

transferring innovative knowledge into operational practices. In this regard, it must be considered that "epistemic communities… or communities of practice… operate to construct knowledge in processes that involve scientific experts and practitioners" (Rydin, 2007, p. 53).

As said, planning is intrinsically locally connected because it is related to the politico-administrative system, the educational tradition, and the professional environment, and because it reflects a wider institutional culture. However, there are common bases and similar historical developments, together with shared current concerns. A first step in the evolution of the discipline dates back to the public interventions in the economy after the 1929 crisis, which gave a wider role to the state, enlarged the areas of regulation from the physical space of the city to other sectors, thereby requiring the development of methods and techniques for programming – temporally and spatially – the interventions and assessing the expected results. A second step can be identified in the 1960s, when planning "became firmly ensconced as a public sector activity that drew increasingly on formal social-scientific theories and rational decision-making to solve problems" (Forsyth, 2007, p. 464). In the 1950s planning split between "'town planning', which is essentially procedural, and 'urban design', which is essentially qualitative" (Alfasi and Portugali, 2007, p.166).

These are the bases on which the discipline has developed in recent decades, with growing exchange and integration across regions and countries. However, differences among countries in planning trends and practices still persist. In recent years, planners in the USA and the UK "have seen themselves as applied social scientists" (Stiftel and Mukhopadhyay, 2007, p. 565), after a struggle with Urban Design and Architecture (Anselin et al., 2011), whereas "Design approaches to planning appear to be more common in continental European schools and in schools in developing regions" (Stiftel and Mukhopadhyay, 2007, p. 565).

In the European countries planning has evolved significantly in recent years, defining a discipline not centred on design and rational-comprehensive urban planning models. In fact, European integration has produced an amalgam of intervention models which were once markedly distant. Moreover, professional planners increasingly share approaches, languages and tools (Fürst, 2009), although there are still important differences in the founding bases (national legal systems, in particular), in their denominations (Vogelij, 2008), and in the instruments and procedures adopted (Tira et al. 2011).

In Italy, the delivery of planning courses mainly at the schools of Architecture and Civil Engineering and a professional practice still dominated by such practitioners keep the discipline connected to urban design.

2. New planning demands. The Italian planning case

The Italian case is characterized by a paradox: a unique urban history but poor current urban development. This is due to the ineffectiveness of planning practices, which goes hand in hand with the weak recognition of the role of planners, in contrast to the celebration of a handful of 'archistars'. The inefficiency and the

lengthiness of planning processes reflect, on the one hand, patron-client relationships and the role of 'dark and grey networks' (Scattoni and Falco, 2011, p. 48), on the other the involvement of practitioners not specifically trained or professionally focused on planning (Scattoni and Falco, 2011, p. 48).
The Italian planning system has been defined in terms of an 'urbanism tradition' (CEC, 1997; Espon, 2007). In fact, it is based on urban design and centred on the municipal plan, although this level is nested in a hierarchy of different spatial plans, and in recent years sectoral programmes and different approaches and practices have emerged. The innovation has concerned different issues: firstly, the form of plans, then their contents, lastly the planning process.
As regards the form of plans, the following aspects should be stressed:

- a distinction between structural features and operational contents, with the former role assigned to spatial/regional plans, but also to structural municipal plans framing operational/ implementation documents (Tira and Zanon, 2011; Scattoni and Falco, 2012);
- the multiplication of spatial (regional, provincial, landscape defence) and sectoral plans;
- the activation of a variety of implementation plans by means of concerted actions (Gelli, 2011; Governa and Salone, 2005);

As regards contents, plans must deal not only with the organization of new urban zones but also the rehabilitation of already built-up areas (historical centres included), the protection of natural values, and support for economic development (Piccinato, 2010). The innovation of the planning process is closely bound up with the previously cited aspects, and it includes citizens' participation, a pivotal role of assessment procedures, and a growing weight of public-private partnerships. More generally, there is abandonment – in many cases without it being clearly stated – of the 'rational-comprehensive' model in favour of a multi-level system and an incrementalist method. And the technical competencies required must change accordingly.

3. Evolution of planning expertise

In Italy, planning is a regulated profession as far as statutory plans are concerned, while numerous other planning processes and actions do not require a chartered professional. Territorial and urban planning processes must be conducted, and in particular concluded, by an expert who is entitled to 'sign' such a plan. This implies that different figures intervene in the process, but its coordination is the duty of a chartered professional. Social scientists, geographers and experts in legal and administrative matters are therefore excluded.
With the inception of formalized urban planning procedures (in the 1930s and in particular after the approval of the urban planning law in 1942), both substantive and procedural contents started to be addressed by architects and civil engineers. Subsequent changes in the issues to be tackled and the way in which planning processes must be managed have not reduced the role of such technicians, who are well protected by their professional orders.

In the 1960s and 1970s, the shift towards regional development and the emergence of social concerns required new kinds of expertise. Regional economics and regional science began to play a role, in particular at the territorial level, while concerns about urban quality and the effectiveness of urban plans – reflected in new legal requirements – entailed a renewal of planners' expertise. The drawing up of municipal plans required more accurate forecasts as well as precise quantitative definitions of housing, social service, and green area needs. Zoning became a more structured way to provide rules. Notwithstanding the search for 'fairness' and 'transparency', the planning process remained top-down and bureaucratic.

In the 1980s the issues were, at the territorial level, landscape defence and environmental protection. At the urban level, the rehabilitation of historical heritage and, more extensively, of the built environment – including derelict land and industrial sites –- constituted the main theoretical and operational innovations. These concerns required not only assigning new tasks to local authorities but also defining new challenges for urban planning, and soliciting new technical expertise. Finally, a response to the complexity, lengthiness and ineffectiveness of usual planning was found in an incremental approach based on "a kind of informal deregulation, characterized by 'doing', with emphasis on achieving greater effectiveness through specific urban policies" (Gelli, 2001, p.190).

In the 1990s other challenges and opportunities brought about further innovations. In particular, the perspective of sustainable development and the adoption of practices such as Local Agenda 21s – together with many environmental conflicts – were characterized by the involvement and participation of citizens, interest groups and associations. And new kinds of expertise started to be required to facilitate the participation and involvement of citizens and social actors, as well as for dispute resolution.

Other changes characterized the controversial 'negotiated programming' schemes which, at different politico-administrative levels, produced "public-private agreements or pacts" formally reached among different administrations and interest groups (Gelli, 2001). This period was also characterized by the role of European Union's projects and programmes as well as by the European spatial planning culture (Governa & Saccomani, 2004). In particular, urban regeneration programmes marked an evolutionary shift "from physical renewal to urban regeneration" (Governa & Saccomani, 2004, p. 337), because they addressed spatial-architectonic aspects together with social and urban quality issues – including competitiveness goals. As regards the expertise required, the incrementalist method implies the capacity to choose the appropriate 'policy tool' (Ponzini, 2008), to assess alternatives, and to elaborate agreements among different actors. Communication, assessment and negotiation should characterize such planning processes.

Other issues at the urban level regard efficiency, quality and equity of land-use plans. And these have prompted experimentation with new planning methods and tools, in particular with 'equalization' schemes intended to balance the gains and losses due to zoning prescriptions, as well as to share the advantages of development rights between private operators and the public authority.

Planning approach	Perspective	Planning model	Key technical figure	Expertise required	Legitimacy and justification for planning
Urbanism	Aesthetic quality	Urban design	'Integral architect'	Town planning	Architecture history/ Creativity
	Functionalism	Planning techniques (infrastructure, functions allocation)	Civil engineer Infrastructure engineer	Spatial organization Infrastructure planning	Techniques
	Land-use rights assignment	Zoning	Law expert	Legal framework	Law
	Planning procedures	The plan 'as the law says'	Administrative procedures expert	Legal framework / organization management	Legal procedures
Economic / local development	Socio-economic development	Regional development plan	Economist/ social activist	Regional / local development	Effectiveness of public expenditure
	Service provision	Social planning	Sociologist	Sociology	Social quality
Concerted planning	Effectiveness Equity Feasibility	Incremental planning Land-adjustment PPP	Assessment expert Mediator	Assessment /	Consensus
	Multi-level governance	Multi-level planning	Mediator	Communication / Interaction	Agreements
Participatory planning	Citizens' involvement /participation	Communicative planning	Facilitator	Communication / Interaction	Deliberation/ Plan effectiveness /efficiency

Table 1. Planning approaches , motivations, models, and practices, planners' roles, expertise and legitimacy for planning in Italy.

The current situation is therefore characterized by a plurality of issues to be tackled by different planning processes and documents, and the need for technical expertise has increased and also diversified. The recent evolution of technical instruments from GIS to data management and communication tools (internet and social

networks) has added new requirements for planners, who must intervene in complex processes and appropriately manage such a variety of instruments.
In table 1. it is provided a synthesis of the coexisting planning approaches, motivations for action, planning models used, key technical figures involved, expertise required, and legitimacy foundations for planning (and plans as legally binding documents).

4. The educational system and the professional environment

The change in the planning practices required the innovation of professional expertise. The need for change in the educational process was well understood back in the 1970s by Giovanni Astengo, who founded the first planning school in Italy at the Faculty of Architecture in Venice (Vettoretto, 2009). The new school gathered scholars qualified in various disciplines, but recognition of the professional role of planners was slow in coming because of the consolidated role of architects and engineers and the opposition raised by their professional orders.
In recent years, as the other European countries, the Italian universities have been reformed following the 'Bologna system', and also planning courses have been re-organized (Davoudi and Ellison, 2006; Geppert and Verhage, 2008; Geppert and Cotella, 2010). Not only have courses been split into undergraduate/master levels, but greater freedom has been granted to schools, which can now propose a variety of programmes. In theory, a break in the traditionally strict connection among the school (until recently called 'Facoltà', now 'Dipartimento'), the degree course, and professional practice has been introduced. In the past, in fact, graduates from faculties of architecture, having passed a 'state examination', could enrol with the professional Order of Architects, similarly to engineers, doctors, and lawyers, all of whom were entitled to enter professional orders. Now, different disciplinary schools can offer similar degree courses, and new programmes have been introduced in response to demands that had long gone unsatisfied. This innovation has required reform of the technical professions, recognizing the differentiation of specialisations and competencies, and finally accepting new figures into the boards of engineers and architects. This new system is more open than the previous one, but it reinforces the role of chartered practitioners against others whose expertise is more loosely defined, such as urban sociologists, geographers, environment analysts, etc. In particular, innovation has concerned the activation of courses, within the schools of architecture, in landscape architecture, historical heritage preservation, urban, territorial and environmental planning. The schools of engineering, for their part, have activated courses, besides the traditional one in civil engineering, in territorial and environmental engineering and in building engineering-architecture. A number of other courses relating to territorial matters have been activated, reflecting the specific orientations of the schools. For instance, undergraduate courses in landscape are offered by the schools of agriculture, while master courses in geography and cultural heritage management have been activated in the humanities faculties, and master courses in urban sociology, tourism and environmental subjects are present in the schools of sociology and economics.

An analysis of the planning courses offered by the Italian universities prompts some considerations. A total of eight master courses have been activated (plus one by a distance university). Contents and organisation are described in similar ways, but it is difficult to determine, on the basis of the usual wording of the 'Dublin descriptors' (Knowledge and understanding, Applying knowledge and understanding, Making judgements, Communication, Learning skills: Geppert, 2010), the differences among formats and contents. In general, they reflect the international debate and in particular the requirements of the 'core curriculum' proposed by AESOP and the 'common core' elaborated by ECTP-CEU, associations which devote considerable effort to gaining recognition for the role of planners (Geppert, 2008), promoting quality education, and amalgamating educational processes across Europe.
Descriptions define planning courses offered by the Italian universities not centred on urban design, which is a central subject for the schools of architecture. The aim is to train professionals able to support public authorities in the devising and implementation of policies, plans and projects. This implies knowledge of the issues tackled and the methods, instruments and procedures involved in planning processes. The planner must be familiar with economic, social, institutional, legal and ethical issues, and as a professional must be trained to support strategic, physical and land-use planning by public authorities but also by private companies. He/she must be able to coordinate experts in the various disciplines involved in urban, territorial, landscape and environmental planning processes.
Planning is considered a methodology with which to manage complex decisions, and as a process with which to draw up strategic, spatial, urban, landscape, sectoral and land-use plans. It is described as a complex and multi-disciplinary activity requiring different types of knowledge and abilities:

- ability to understand urban and territorial change, also in a historical perspective;
- knowledge and use of planning theories, methods and techniques;
- knowledge of methods and procedures for drawing up urban, territorial, landscape and environmental plans;
- ability to define strategies for urban development, spatial organisation, landscape and environmental protection;
- capacity to coordinate inter-disciplinary experts and activities;
- ability to communicate and manage participation processes;
- ability to make use of assessment procedures.

As said, the university reform has also required reform of the professional orders, which are now differentiated between undergraduate and graduate levels. The engineers' order is organised into various sectors. The civil engineers' sector gathers graduates in civil engineering, engineering-architecture, and environment and territory engineering. All of them are qualified to take responsibility in planning processes. Also the architects' order is now composed of different sectors: one is for 'traditional' architects, who can operate in all the various fields. Other sub-divisions regard historical heritage conservationists, landscape architects, and planners (Davoudi and Ellison, 2006, p. 34).

Considering the figures on the practitioners enrolled, the success of the reform has been limited. In 2008, there were only 468 planners compared with 134,507 architects. Engineers number more than 540,000, of whom one-fifth work in the civil and environmental sectors.

5. Planning paradigms and technical expertise

The following discussion rotates around the distinction between 'urban design' and 'urban planning' and draws on the distinction between 'theory in planning' and 'theory of planning' (Faludi, 1973) in order to ascertain what 'knowledge of planning' and what 'knowledge in planning' is needed.
The professional environment and the dominant demand by local authorities are still oriented towards the traditionally strong role of physical planning. But design of the urban space is one of the tasks to be accomplished by planning, and it can be regarded as either the key tool, within the 'urbanism tradition', or one of the products to be delivered by a multifaceted decisional process. More generally, planning should support the efficiency, effectiveness and equity of public decisions. But it is also concerned with goal definition. Planning expertise therefore regards the process, on the one hand, and the multiple issues addressed on the other, as well as the ability to communicate and interact with the client and the community, appropriately managing value-laden decisions. Different theoretical approaches, methodologies and knowledge characterize the action of the professional figures involved in planning.
As far as planning approaches are concerned, a variety of models coexist owing to the fragmentation of decisional processes, but an incrementalist practice dominates, together with the trend towards differentiating between strategic/structural planning levels and operational ones. Different directions are taken by regions and cities: the drawing up of specific 'strategic plans' in parallel with consolidated urban planning, re-interpretation of the statutory plans (Balducci et al. 2011), and activation of the 'two levels' system. This model integrates a strategic approach with the definition of structural-territorial aspects – concerning non-negotiable values and long-term decisions – to frame operational decisions. Current trends are strict defence of environmental and landscape aspects at the upper level and public-led operations at the lower one (this is the policy of regions like Tuscany and Emilia-Romagna), but also neo-liberal methods giving large space to private initiatives (Milan's position). The results are not entirely satisfactory: in particular, the Tuscan policy has not attained the efficiency expected (Scattoni and Falco, 2011) and Milan's planning is criticised in terms of its transparency and effectiveness (Mazza, 2009).
Methodologies connect the planning model adopted with the type of knowledge used. In particular, together with more technical-scientific methods concerning environmental, urban and social analyses and interpretation of future trends, design-oriented methods are used to elaborate proposals, and participatory methods support interaction with the actors involved.
As far as knowledge is concerned, it must be considered that in planning the scientific paradigm can be used only partially, because knowledge "informs 'good'

practice by 'enlightening' practitioners to improve their judgment rather than equipping them with technologies for better practice" (Alexander, 2010, p. 100). Therefore, different knowledge types can be recognized (after Rydin, 2007):

- empirical, relating to specific issues (design, infrastructure, assessment, etc.);
- process coordination, relating to process management ;
- communication/interaction, relating to process management and the involvement of stakeholders and citizens;
- legal/procedural, relating to process management and definition of the statutory contents of plans;
- normative, relating to the goals and decisions taken in the public interest.

The adoption of a planning model, and the use of specific methodologies and knowledge, define different professional profiles. The New Charter of Athens 2003 (ECTP-CEU, 2003) sees the planner as a scientist, a designer and a visionary, a political advisor and mediator, an urban manager. The analysis of the Italian case confirms these roles, and enables their operational definition. The proposed description may help in making planners' profiles clearer and more visible, expressing not only 'what they do' but 'what they are', considering that the legitimacy of expertise derives not only from recognition of the usefulness of the expert's knowledge but also from the trust gained by the expert. The scheme follows in some way the "role theory" (Mayo and Johnson, n.d.), because planners not only make use of their expertise, but intervene in a social arena, thus assuming a recognized role or, better a role-set, together with the associated professional responsibilities and obligations (Campbell and Marshall, 2000a, p. 300). They make use of different types of knowledge, take part in the co-production of knowledge during the planning process (Rydin, 2007) and play diverse "parts and scripts" (Mayo and Johnson, n.d., p. 3), adapting their behaviour to the context, but also contributing to change the context itself.
In short, the following planners' profiles can be described, stressing that roles depend on the specific planning approach adopted, but in many cases this choice is rather vague and multiple roles are performed.

- The 'process manager'. The planner knows how the planning machine works, first of all in legal terms. S/he is the 'driver'. This is not a minor role, because the Italian legislation is rather complicated, and a specific ability is required in order to overcome a bureaucratic application of rules (the plan as 'what the law says') which would refrain from innovating practices. Planning requires adopting an approach which can give the planner a minor (executive) or a major (consultant, social activator) role. In particular, a strategic approach should give the planner space to help change even the urban policy agenda (Pasqui, 2011). Management also involves coordination 'of' the planning process, that is, the multiplicity of actors involved, each pursuing his/her own objectives, as well as coordination 'in' the planning process, which concerns the experts in the different sectors involved. Management also requires communicative abilities, and the capacity to face the effects of the technological innovations (GIS, web-GIS, etc.) which are changing not only the materials of statutory plans (from 'paper documents' to 'electronic plans') but their

very nature (becoming dynamic, flexible, easily accessible to everyone, and hopefully interactive).

- The 'urban designer'. This is a consolidated role for the Italian tradition. The planner is expected to be able not only to physically organize the urban space connecting different structures and resolve conflicts in the use of space, but also to add value to the city. In particular, this is why the most celebrated urban planners and 'archistars' are involved in urban projects aimed at changing the face of cities suffering from economic crisis or loss of strong functions (Frank Gehry's Guggenheim museum in Bilbao has become the paradigm in this regard). Expertise therefore oscillates from technical know-how concerning zoning, building codes and the like to more creative abilities. The emerging demands concerning sustainability, energy efficiency, environmental protection, urban security, require the innovation of consolidated knowledge, and the development of new urban models.

- The 'infrastructure engineer'. This is a traditional role, but innovation is rapid, and the consequences for the space organization of such 'sociotechnical' constructions (Graham, 2001) are important. Expertise therefore regards the specific structure and its effects, material and immaterial, direct and indirect, on space and society, on the environment and the landscape. The search for a more consistent connection between infrastructure networks and the territories involved (and local societies and economies) has been the focus of a programme of the Italian Ministry of the Infrastructure which showed the crucial importance of this topic and the sophisticated nature of the expertise required, which involves strategic thinking and local development perspectives (Fabbro and Mesolella, 2010; Janin Rivolin, 2010; Servillo, 2011; Zanon, 2011).

- The 'expert in local development'. Territory can be seen as the material basis on which to operate (as usual for economic development initiatives) or it can be considered the result of the complex relationships among the local society, the natural heritage and the historical organization of space (Balducci, 2011, p. 34, note). Competition among regions and cities has become a challenge for public policies and planning is progressively engaged in 'intercepting economic resources' and in supporting place-based economic development. 'Social capital' (Coleman, 1988; Putnam, 2000; Trigilia, 2001) and 'institutional thickness' (Amin and Thrift, 1995; Healey, 1998) are the terms supporting this bottom-up vision and the planner is expected to play the role of a social activator, and to provide expertise in EU projects and financial support (Governa and Salone, 2004; Salone, 2010).

- The 'expert in assessment'. Planning increasingly relies on assessment of alternative proposals and on the evaluation of actions as far as environmental, social, economic effects are concerned. The ineffectiveness of traditional urban planning solicits replacement of the usual methods based on a prior design and allocation of rights and the subsequent control of the compliance of actions with legally binding rules. Also the 'two-level' articulation of plans requires the establishment of assessment criteria based on clear parameters in order to ascertain whether the goals

defined by the 'structural plan' are achieved, and what the environmental and social effects are (Scattoni and Falco, 2011; Tira and Zanon, 2011). As regards equity, this regards the equal treatment of landowners but also assessment of public spending and the effectiveness of planning because the public administration must find the resources and land to build the 'public city' (Micelli, 2002). Other issues are involved in terms of urban quality, feasibility, and sustainability. Planning tends to become a 'decision machine' generating a continuous flow of analyses, proposals, social and political interactions. It therefore requires the accurate assessment of decisions, and often negotiation with the stakeholders in order to manage land adjustment or to assign bonuses. The paradigmatic experience in terms of 'equalization practices' is that of Casalecchio di Reno, close to Bologna (Pompei, 1998), while environmental aspects were first addressed in innovative manner by the plan of Reggio Emilia (Campos Venuti, 1995).

- The 'regulator'. The planner knows how the legal framework operates and how the planning process must be developed in order to gain legitimacy for the plan. And this is strictly connected to land-use and development rights assignment. This role can simply involve the application of disciplinary knowledge or legal rules, but it is expected to go beyond such bureaucratic procedures. In fact, the innovation of planning is connected to the ability to manage land-use and development rights when the public authority grants bonuses in order to obtain additional public space, greater urban quality, and energy saving.

- The 'facilitator'. Participation is a problem of democracy (in order to involve citizens) and of efficiency (preventing the 'NIMBY syndrome'). The communicative method has become an "orthodoxy", although the search for consensus can imply quite different approaches and sensitivities (Rydin, 2007, p. 54). The consequences of this approach are important. Firstly, it supports the production of "local, experiential and contextualized knowledge", allowing the "contextualization of conventional scientific knowledge" (Rydin, 2007, p. 54). Then, it implies that planners, assuming a 'deontological' perspective (Campbell and Marshall, 2002), can help define what the public interest is among a plurality of interests. Communication expertise is not consolidated in Italy, in particular among technical planners, although participatory planning schemes in Italy are not new. In the 1960s and 1970s some charismatic architects (in particular Giancarlo De Carlo) and social activists (Danilo Dolci) experimented with participatory processes and more radical experiences. During the 1970s the city was the issue for many spontaneous political groups that pursued the 'right to the city' theorized by Henri Lefebvre, but were soon institutionalized in the form of 'neighbourhood councils'. In the 1990s the Local Agenda 21 schemes led to the activation of public participation, and in the past decade the multiplication of environmental disputes has pushed towards change in decisional methods, often after harsh social conflicts, which shows that local communities want to be informed and to take an active part in decisions. Finally, the strategic/structural role of upper-level plans, and the negotiation practices of operational levels, imply active interactions with the community, on the one hand, and landowners and economic operators on the other. A specific expertise is

therefore required for the management of participatory processes in order to avoid a misuse of citizens' involvement, to make an appropriate use of non-technical knowledge (Campbell and Marshall, 2000b) and to balance the power asymmetry among actors (Fainstein, 2000, p. 451).

6. Conclusions

In conclusion, what is the specific role for the planner? Certainly, most of the types of substantive expertise cited above do not specifically regard planners or planners alone. But some of the key roles devised require the involvement of professionals with sound specific knowledge, specialized training, and openness to experimentation (Balducci et al., 2011). In recent decades, the technical expertise of planners in Italy has been enlarged to include a variety of issues, and it is difficult to understand why the planner's role(s) is (are) not yet fully recognized. Of course, the discursive contents of most of the documents produced are not as impressive as architects' plans and engineers' calculations. But most often management of the planning process is extremely difficult and requires specific competencies. Some 'planning disasters', like that of the high-speed train project in Valle di Susa (Bobbio and Dansero, 2008), testify to the need for the appropriate management of decisional processes.

	Type of knowledge				
Planners profile	Empirical/ Technical	Planning process	Communication/ Interaction	Legal/ Procedural	Normative/ Value laden
Process manager		√	√	√	
Urban designer	√	√		√	
Infrastructure engineer	√				
Expert in local development	√		√		√
Expert in assessment	√		√		√
Regulator	√		√	√	√

Table 2. Planners profiles and types of knowledge involved.

Many of the pivotal issues characterizing planning, and in particular forecasting/time management, coordination and regulation, together with communication/interaction and assessment are fields to be covered by specific expertise. One risk is that specialization tends to fragment the discipline into a number of strands which often do not communicate with each other, bringing about, together with the "flattening

down to politics", a de-professionalization of planning (Mazza, 2002, p. 12). An effort to make specific expertise more visible (the 'roles' described above), and to coordinate the different sectors, would produce more recognizable and 'marketable' professional profiles, that are experts able to master different knowledge types, as described in table 2.

Italian planning education has been innovated, and its quality is comparable with, and competitive with, that in other countries. But planning still lacks an adequate recognition in Italy. Professional architects' orders have accepted planners but still tend to enhance the role of architects. The university reform has given sounder recognition that a specific educational process is required for planners, but the reform has given rise to a variety of courses in different subjects (geography, cultural heritage, etc.), some of which are extremely weak in professional terms, while the traditional subjects (architecture, engineering) still remain strong. Moreover, more operational expertise (typical of bachelor degrees), similarly to other technical professions (architects and engineers), is not yet recognized, although some specific competencies (GIS, for instance) are not covered by the usual degree courses.

Recognition of the roles performed by planners may help in developing awareness that different planning practices are performed, each requiring specific expertise, thus giving autonomy and visibility to policies, planning actions, and, at the same time, to planners.

In conclusion, planners are hired because they can play a specific role, and often in order "to be advocates for particular interests" (Campbell and Marshall, 2000, p. 302), but in many regards they are successful when they play more roles and these change over time, because planning becomes a learning process contributing to modify the decisional environment, and possibly the balance among the power relations.

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ENVIRONMENTAL ASSESSMENTS INSTRUMENTS FOR URBAN TRANSPORTATION PLANNING. FROM A REACTIVE TO A PROACTIVE APPROACH.

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Abstract

There is a growing interest regarding the development of environmental assessment instruments for application in urban transportation planning. Nevertheless, a great number of studies show that present instruments have a very low effectiveness when confronted with the complexity of the environmental consequences of urban transportation in its interaction with land use factors. Furthermore, the majority of environmental instruments are rather oriented towards monitoring plans than towards supporting decision-making.

To address these problems, this paper presents a strategy for proactive environmental instruments design ('PEID strategy') as a method for developing environmental assessment instruments for supporting decision-making in urban transportation planning. Accordingly to this strategy, environmental instruments must fulfil four key criteria: be performance-based, reference values-based, integration-oriented and decision-oriented. To illustrate and assess the worth of this strategy, an environmental assessment instrument has been developed following these criteria and applied to evaluate alternative plans for a transit corridor in the city of Granada, Spain. The paper describes this application and reflects on the advantages and disadvantages of the strategy as well as on issues for futures research.

Keywords: Environmental assessment, decision-making support, urban transportation planning,

1. Environmental assessment for urban transportation planning

The growing interest regarding the incorporation of sustainability goals into planning has a relevant milestone in 1972. In this year was celebrated by United Nations the seminal conference on 'The Human Environment' in Stockholm, Sweden. Ever since, sustainability has been incorporated into many levels of society such as education, planning, economy, etc.

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In the case of planning, the transition to sustainability requests that its performance must be assessed (Ness et al, 2007). This has originated important challenges to the scientific community in providing efficient tools. As a response to these challenges, sustainability assessment has become a rapidly developing area associated with the family of impact assessment tools (Pope et al., 2004) (e.g. Environmental Impact Assessment and Strategic Environmental Assessment). In Devuyst´s words (2001, p. 9) a sustainability assessment tool is 'a tool that can help decision-makers decide what actions they should take and should not take in an attempt to make society more sustainable'. In recent years, a lot of countries have conferred to sustainability assessment, and specifically to Environmental Impact Assessment (EIA), an important and decisive role into their planning systems.

EIA is a widely used ex-ante tool to support decision-making in transport planning. It is aimed to make an overview of the environmental impacts of projects. The central goal is to reduce the potential negative effects using corrective or compensatory measures (Ness et al, 2007). It has a long tradition starting in the 1960s and a lot of countries made EIA compulsory into their planning systems. For this reason, the role of EIA has become increasingly important. In the case of EU, Council Directive 85/337/EEC was the first European Community directive to provide details on the nature and scope of environmental assessment, its use and participation rights in the process. The origins of the 1985 Directive lay in the EEC's 1973 First Environmental Action Programme, which identified the need to implement procedures to evaluate the environmental effects of certain activities at the earliest possible stage. Ever since, EIA was periodically introduced in the legislation of Member States (EC, 2009). Due to such legal requirements, nowadays there are strict guidelines for the EIA process in the EU and other countries (e.g. USA or Canada) (Cornaro et al., 2010).

Like many others cases, a reduction of negative environmental impacts in urban transportation (air pollution, energy consumption, etc.) is thought to be decisive in promoting more sustainable planning outcomes (Banister, 2005; Litman, 2009). Nevertheless, evidence show that this objective is hardly achieved in daily planning practice (Hull, 2008; Joumard and Gudmunsson, 2010). As a consequence and among other factors, the effectiveness of the EIA for evaluating urban transportation plans/interventions is contested, as strongly argued by several academics (Arce and Gullón, 2000; Browne and Ryan, 2011). Accordingly, assessment innovations seem to be needed. Many of them focus on supplementing and improving the predominant environmental assessment instrument, EIA.

This paper hypothesizes that the problem of EIA in the case of urban transportation planning could be related to its increasingly reactive use in the planning processes by practitioners. This means reacting to environmental

impacts that happen rather than avoiding them to happen. This is a consequence of, on the one hand, that many times the EIA process only includes environmental specialists, and on the other hand, that the used methods are not always the most suitable to identify ways of preventin potential impacts (Soria, 2011).

To face this, the paper identifies the need to overcome a certain number of substantive communication barriers between EIA makers and transport planners. Firstly, these barriers are linked to the types of results hoped for. EIA measures static environmental impacts, however, urban transportation is a dynamic system, with varying environmental performance in varying temporal and spatial contexts, as described by different scholars (Peyrbrune, 2000; Dobranskyte et al., 2007). Secondly, transport planners scarcely receive inputs from EIA in order to support their decisions (Soria, 2011). Therefore, tools that foster learning between different specialists are needed.

This paper presents a strategy for proactive environmental instruments design ('PEID strategy'). According to this strategy, environmental instruments must fulfil four key criteria: (i) be performance-based; (ii) reference value-based; (iii) integration-oriented and; (iv) decision-oriented. To illustrate and assess the worth of this strategy, an environmental assessment instrument (ETV-model) has been developed following these criteria and applied to evaluate alternative plans for a transit corridor in the city of Granada, Spain.

The case of Spain is illustrative of the problems previously described (Gomez-Orea, 2007). The RD 1131/1986 Law incorporated EIA into its planning system. The main consequence of that was that different Spanish governments (local, regional, etc.) have used EIA to prioritize their proposed plans and projects. However, despite the application of EIA since 80s, it is being difficult to achieve sustainable goals in the case of urban transportation (Serrano, 2009; Valenzuela et al., 2011). Authors such as Garmendia (2005) and Gomez-Orea (2007) explain that the design of more proactive environmental assessment instruments could contribute to solve that.

In the following, we will start by defining the 'PEID strategy' (section 2). Then, the Environmental Threshold Values Model ('ETV-model') will be presented (section 3). This model has been designed following the 'PEID strategy' and it has been applied on metropolitan transit corridor in Granada, Spain. The suitability of this study-case is due to institutions nowadays debating implementing a Light Rail System in the corridor. Finally, we shortly discuss on the worth and advantages of this strategy, as well as on issues for future research (section 4).

2. The 'PEID strategy'

The central goal of the 'PEID strategy' is to lead the design of proactive environmental assessment instruments. The strategy is done in two phases. The first phase is the analytical and comparative phase and the second is the decision phase (see figure 1).

The first phase (analytical and comparative) focuses on designing tools that can compare different alternatives and diagnose the advantages and disadvantages of them. The objective is to evaluate urban transportation according to its dynamic characteristics rather than valuate only its final effects. To achieve that, the 'PEID strategy' proposes to develop environmental assessment instrument fulfilling three key criteria: be performance-based, reference values-based and integration-oriented.

To be performance-based (first criterion) means changing the goals of the evaluation. While EIA measures how each alternative transforms its environment, the performance-based evaluation analyses what alternative has a better environmental functioning. The advantages are not only that the performance based evaluation could represent better the dynamic characteristics of urban transportation (Dobranskyte et al., 2007) (Ricci et al., 2010), but also, it permits the incorporation of other practitioners (non-environmentalist) into the evaluation since earlier stages. This aspect is a consequence of the fact that performance-based evaluations can calculate easier than other methods an aggregated or synthetic value (Gerike et al., 2010).

Complementary to performance-based evaluations, understanding sustainability as a normative orientation can be a useful way to make the outcomes of evaluation more understandable for the spectrum of decision-makers. This could be determining performance trends through the incorporation of reference values into the evaluation (second criterion of the 'PEID strategy'), (Nijkamp and Ouwersloot, 2004). The major problem faced in practice is that the reference values are many times fuzzy, and decision-makers may have different views on their adoption. Consensus solutions to the above could focus on designing methods based on experts´ opinion.

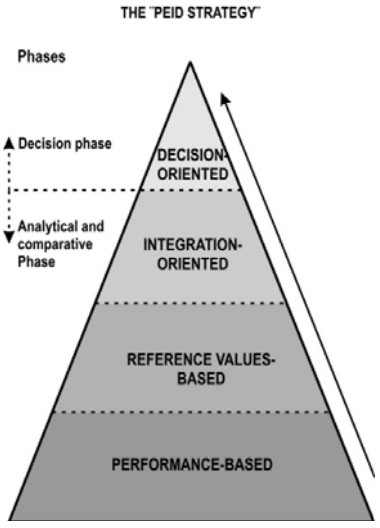

Figure 1. Key criteria of the 'PEID strategy'

The third criterion of the analytical and comparative phase is that the evaluation should be transport land use integration-oriented. In an urban transportation context, this is especially relevant in the case of the interrelationships between urban structure and transport. As studied by several authors (Priemus et al., 2001; Cervero and Kockelman, 1997; Naess, 2006; Cao et al., 2009), the empirical evidence demonstrates that there are significant influences between spatial planning and transport. Nevertheless, traditional environmental assessment approaches focus solely on transport as environment-polluting agent, obviating these interrelationships. The main advantage of an integration-oriented evaluation is to understand the environmental performance of each alternative under determined urban contexts. This would permit to generate a discussion framework between EIA-makers, urban planners and transport planners since the early phases of the planning process.

With respect to the first phase of the 'PEID strategy', each of the three described key criteria tries to adapt the environmental assessment to the specific characteristics of urban transportation. This can be especially appreciated through the idea of promoting a performance-based evaluation, as well as through the incorporation of an integrated vision between urban structure and transport. On the other hand, this phase pursues to make the environmental assessment results more understandable to non-environmentalist. The proposal of reference values and the adoption of a performance synthetic value are related to this objective. Finally, the interaction and discussion between decision-makers is one of highlighted aspects of this phase. The promotion of integrated visions between urban structure and transport into the evaluation could stimulate this.

Once the first phase of the 'PEID strategy' has been completed, the second phase focuses on implementing decision-oriented tools. The main goal is that decision-makers can know how their decisions can affect the environmental performance of urban transportation. The problem is that traditional instruments as EIA aim to identify the alternative with the lowest negative impact. Nevertheless, it is difficult to find examples where environmental assessment instruments can support to take decisions to design/modify alternatives, and thus improve by decreasing negative impacts. The growing use of sensitivity analysis in social sciences could be a good solution to develop support tools for this (Geneletti and van Duren, 2008).

3. Case-study: the ETV-model and an application in Granada, Spain

To illustrate and assess the worth of the 'PEID strategy', an environmental instrument has been developed following the four criteria established by this strategy. The instrument was labelled Model of Environmental Threshold Values (ETV-model) and applied to evaluate alternatives for a transit corridor in the city of Granada, Spain.

Since the 1970s, the metropolitan area of Granada (MAG) began to have significant urban transformations that have lasted until the present. The origin of these transformations is an intense growth in real estate development, the creations of new infrastructures, the growth of the private vehicle market, etc. (Aguilera, 2008). Parallel to this process, a huge increment of environmental problems has been experienced in the region, especially problems originated by urban transportation (e.g. congestion, air pollution, health problems…). To face these problems, local institutions are, among other policies, promoting the implementation of a Light Rail Tran (LRT) System into the most important transit corridor in MAG. The EIA is the tools used to evaluate different alternatives and practical solutions. Concretely, ETV-model will be applied on two possible alternatives: (i) Alternative S.0, based on non-implementation of LRT into the corridor; (ii) Alternative S.1, based on implementation of LRT. Figure 2 shows the location of the proposed Light Rail Train System in MAG.

Figure 2. Light Rail Train System in the Metropolitan Area of Granada.

The most representative substantive problems in the use of EIA discussed in section 1 seem to be also present into the study-case (related to types of results hoped for and the fact that transport planners are scarcely involved into EIA processes) (Soria, 2011). Hence, it could be asserted that there is a great suitability of this case-study to prove the 'PEID strategy' through the elaboration and application of the ETV-model.

Before explaining the details of ETV-model development, table 1 shows its main characteristics.

Table 1. Main characteristics of the 'ETV-model' following the criteria of the 'PEID strategy'

The 'PEID strategy'		ETV-model
Analytical and comparative phase	Performance-based	-Input to system (energy and resource consumption). -Output to system (waste emission and noise). -Integrated use of corridor (barrier effect and public space)
	Reference values	-Quality Critical Threshold (QCT). It represents an optimum value of indicators where the environmental impacts of urban transportation would be irrelevant. -Impact Critical Threshold (ICT). It represents an impact value of indicators where the environmental impacts of urban transportation would be very serious.
	Integrated orientation	-It proposes the concept of 'mobility environment' as spatial unit of integration between urban structure and mobility patterns. -The environmental evaluation of alternatives is focused on these mobility environments.
Decision phase	Support-based	-Using sensitivity analysis, the model proposes four decision support indicators for decision-makers.

As can be seen in figure 1, the ETV-model has been developed following the four key criteria proposed by the 'PEID strategy'. The methods proposed through this strategy will be detailed for each criterion below.

Performance-based:

The adoption of performance evaluations must include indicators that reflect various levels of analysis, although it is important to take their relationships into account to avoid double-counting (Litman, 2009).

Therefore, the central goal is to propose an indicators system that permits to evaluate and compare the two alternatives in the case-study. Given the characteristics of the corridor, the indicators system will cover the main negative externalities of urban transportation (figure 3): (i) An inefficient use of energy and resources; (ii) Emission of wastes and noise; (iii) Integrated use (both for staying and passing-through) of corridor.

Six indicators are proposed (see figure X): (i) Energetic efficiency (Mj/Passenger-Km); (ii) Spatial efficiency (m2 corridor/Passenger-km); (iii) PM10 Concentration (μgr/m3); (iv) Noise emission (dbA); (v) Barrier effect (BE/m); (vi) Public space liveability (m2 non-motorized/m3 motorized).

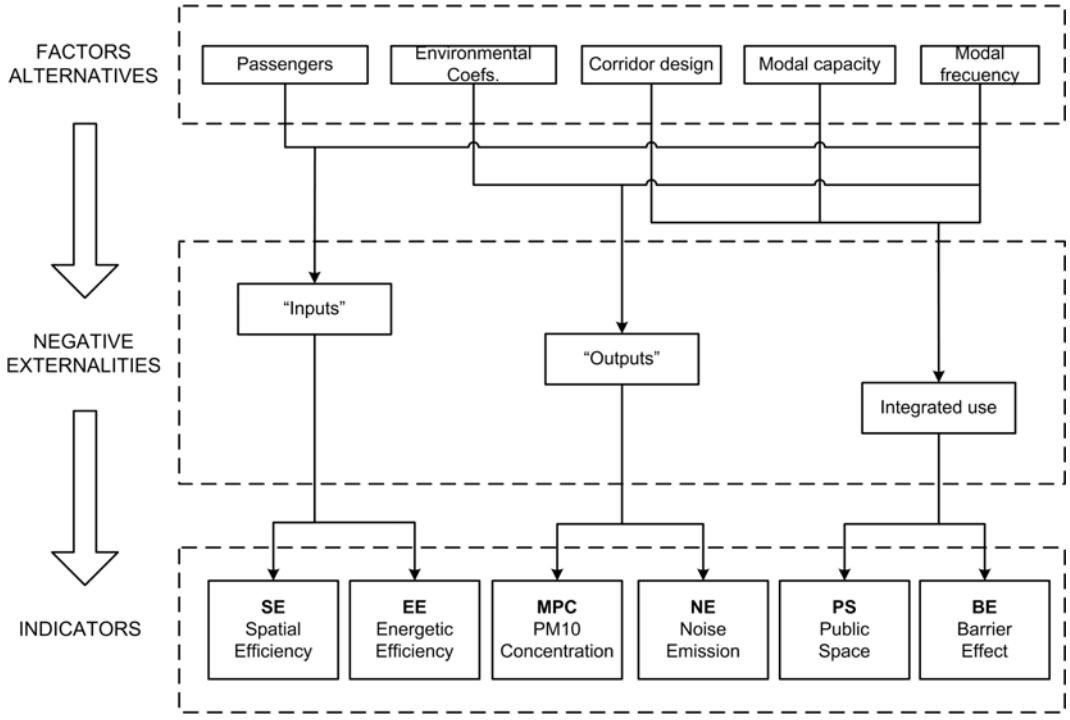

Figure 3. Performance indicators system

Following step-by-step the 'PEID strategy', an aggregated value will be obtained in order to make more understandable the results for non-environmentalists. To address this, simple additive weighting methods are used. These methods have been operationalized using a GIS system. The decision-makers directly assigned weights to each indicator by means of an expert panel. Formally, each alternative (Us) is evaluated by the following formula:

$$U_s = \sum_j w_j x_{ij}$$

Where x_{ij} is the score of each indicator, and w_j is a normalized weight, so that $\sum_j w_j = 1$.

Reference values-based:

Another important aspect of the 'PEID methodology' is to establish a decision framework taking sustainability as a normative orientation. The strategy considerers that the identification and definition of reference values could be useful to achieve this objective.

Inspired by e the 'Flag Model' (Nijkamp and Ouwersloot, 2004), the 'ETV-model' determines two threshold values for each indicator: (i) Quality critical threshold (QCT); (ii) Impact critical threshold (ICT). On the one hand, the QCT would indicate an optimum value per indicator where the environmental impact of urban transportation would be negligible. This means that this concept refers to a threshold value identifying the limits of an acceptable damage to the environment. On the other hand, the ICT would be an impact value indicator where the environmental impacts or urban transportation would be serious. This means that this concept refers to a threshold value that cannot be exceeded without causing unacceptable damage to the environment.

The adoption of two thresholds (QCT and ICT) determines three possible environmental performance ranges for urban transportation (see figure 4): (i) Optimum performance, when the indicator doesn´t exceed the QCT: (ii) Acceptable performance, when the indicator is between QCT and ICT; (iii) Negative performance, when the indicator exceeds the ICT.

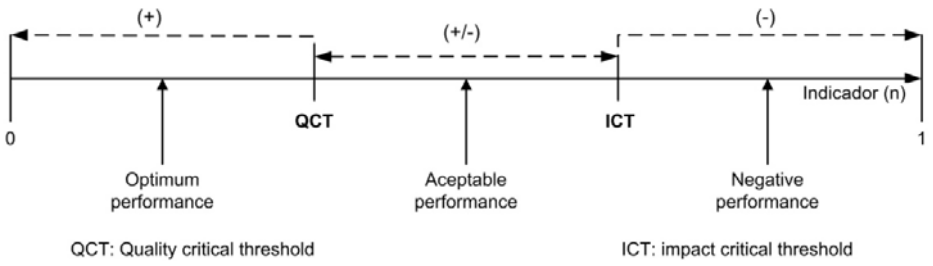

Figure 4. Reference values and performance ranges.

The existence of legislation has been the chosen criteria to determine the reference values for each indicator. Performance indicators such as energetic efficiency, PM10 concentration and Noise emission are regulated by European and national legislations. In the cases of the other three indicators (spatial efficiency, barrier effect and public space), specific thresholds have been estimated for the case-study following handbooks, guidelines, etc.

Integrated-orientation:

Due to the inextricable interrelationships between urban structure and transport, understanding the environmental performance of urban transportation under these parameters seems to be a determinant aspect. The main advantage would be to generate a common framework for discussion between decision-makers since the early planning phases.

To achieve that, the 'ETV-model' proposes to identify 'mobility environments' (inspired by Bertolini and Dijst, 2003) as operational spatial units for the assessment. The objective is that the environmental performance of each alternative can be interpreted under the contexts of these 'mobility environments'.

The ETV-model proposes a method to identify 'mobility environments'. The method includes the definition of representative indicators and mobility vectors of urban structure and transport for the study-case. The combination of indicators and vectors will be used for identifying and defining 'mobility environments'.

After applying the model, five 'mobility environments' have been defined for the corridor: (i) Proximity and local dimension; (ii) Proximity and transit distribution; (iii) Motorized transit; (iv) Metropolitan centrality; (v) Intermodal station. Figure 4 shows the location of each 'mobility environment'.

In the first mobility environment identified (proximity and local dimension), the majority of daily necessities (working, shopping, etc.) can be covered without motorized modes. This is a consequence of that the proximity component is very relevant. On the other hand, in the second 'mobility environment' identified (proximity and transit distribution) is not only very important the proximity component, but it has an important role for the motorized modes too. The rest of 'mobility environments' nominated are more associated with a motorized use of the corridor. Table 2 shows the proposed criteria to diagnosticize the environmental performance of the alternatives in each 'mobility environment'.

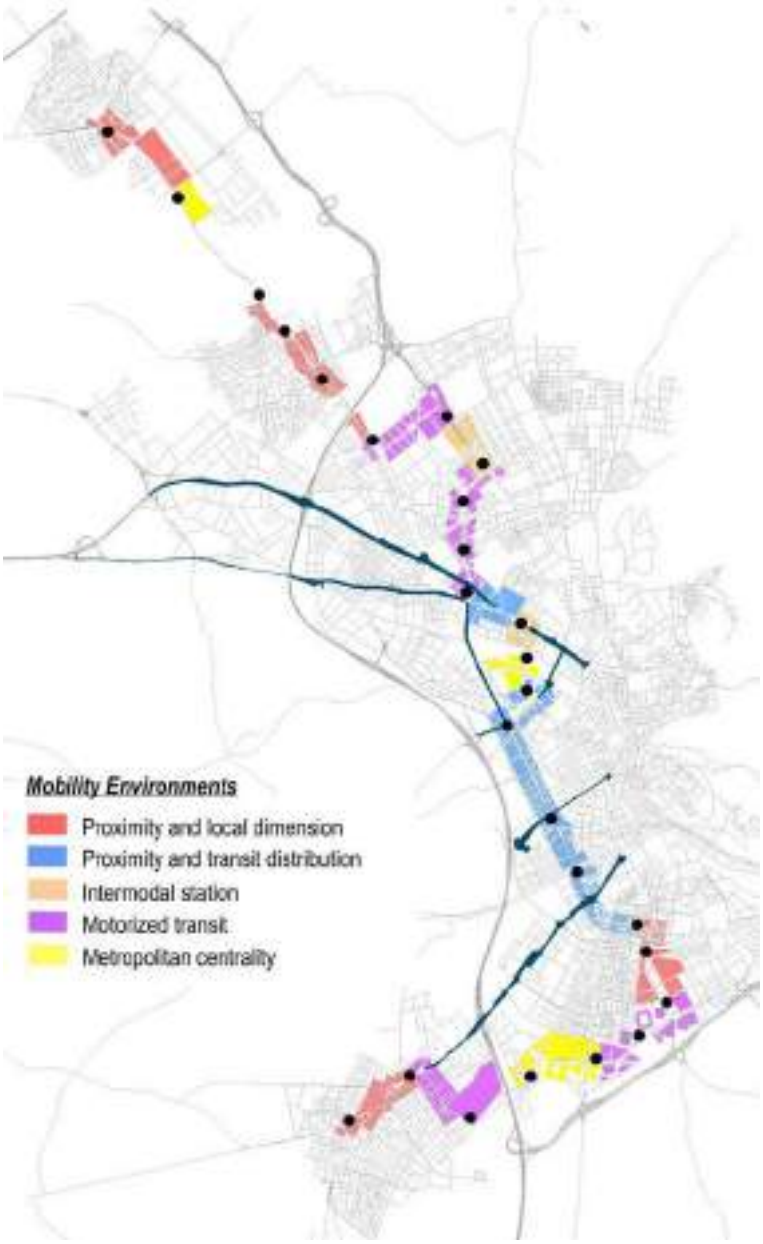

Figure 4. 'Mobility environments' in the corridor

Once applied these three sets of criteria (performance-based, reference values and integrated orientation) to the case-study, different conclusions could be underlined. Alternative S.1 (corridor with Light Rail System) seems to be more performing than Alternative S.0 (corridor without Light Rail System) when the results are valuated under the two first criteria (performance-based and reference values). Nevertheless, when these results are filtered through the specific requirements of the identified 'mobility environments', it could be asserted that Alternative S.1 is not always the most convenient according to the characteristics of each of them. Eventually, decision-makers chose Alternative S.1 for the corridor. However, the assessment indicates the need to modify this alternative in

those 'mobility environments' where its urban integration was worse (specifically this was the case in the menbility vironments 'motorized transit' and s 'metropolitan centrality'). Following the 'PEID strategy', next a module oriented towards design support was developed. This is discussed in the next section.

Table 2. Relationships between performance indicators (see Figure 3) and 'mobility environments'

'Mobility environments'	Environmental performance of corridor					
	Inputs		Outputs		Integrated use	
	EE	SE	MPC	NE	PS	BE
Proximity and local dimension	○	○	●	●	●●	●●
Proximity and transit distribution	●●	●●	●●	●●	●●	●●
Motorized transit	●●	●●	●	○	○	○
Metropolitan centrality	●●	●●	●	○	●	○
Intermodal stations	●●	●●	●●	●●	●●	●●

○ Without influence ● Important ●● Very important

Decision-oriented:

According to the 'PEID strategy', the incorporation of decision-oriented tools into environmental evaluation could be an important way to promote proactive assessment instruments. One of the main problem of EIA is that while it allows to identify the alternative with the lowest negative impact, it doesn´t say how decisions of decision-makers could affect the environmental performance of the alternatives.

The last part of the ETV-model incorporates a decision-oriented module that allows decision-makers and practioners to know how their decisions can affect the environmental performance of alternatives. In our case-study this module will be used to analyse possible design modifications on Alternative S.1 in order to solve its integration problems in some 'mobility environments'.

To address this question, the ETV-model proposes two indicators labelled 'Absorption capacity' and 'Improvement capacity'. Both indicators are based on the respective reference values estimated for each performance indicator. The

'Absorption capacity' indicates the capacity of a mobility environment to absorb a reduction in its environmental performance without overcoming its Impact Critical Threshold. On the other hand, the 'Improvement capacity' indicates the capacity of one mobility environment to increment its environmental performance reaching its Quality Critical Threshold.

The development of these indicators has its origin in the growing use of sensitivity analysis in the social sciences (Geneletti and Van Duren, 2008). Both indicators evaluate the sensitivity of environmental performance to different characteristics of alternatives such as passengers, modal capacity, modal frecuency, etc. In this way, decision-makers could know how their decision can affect to the environmental performance of corridor.

Finally, these decision indicators were applied on Alternative S.1. They were used to check what elements of this alternative could be modified to increment its performance in those mobility environments where it was less convenient. Given the expected level of passengers in these mobility environments, the results showed that reducing the number of public transport lines could be acceptable and useful for incrementing the energetic efficiency and reducing the barrier effect. These changes would situate the environmental performance of Alternative S.1 at an 'acceptable level' in all 'mobility environments'.

4. Conclusion and discussion

This paper started with describing the problems of the EIA to assess urban transportation plans/interventions. It was hypothesized that this was partly due to the existence of the merely 'reactive' use of this assessment instrument. Substantive communication barriers between EIA-makers and transport planners were identified as responsible of this situation. These barriers were related to the types of results hoped for and the fact that transport planners scarcely receive inputs from EIA that can support their decisions. Accordingly, the objective of the paper was to present a strategy for proactive environmental instruments design ('PEID strategy'). According to this strategy, environmental assessment instruments must fulfil four key criteria: be (i) performance-oriented; (ii) reference value-based; (iii) integration-oriented and; (iv) decision-oriented. To illustrate and assess the worth of this strategy, an environmental assessment instrument (ETV-model) was developed following these criteria and applied to evaluate alternatives for a transit corridor in the city of Granada, Spain.

The 'PEID strategy' was implemented in two phases. The first phase (analytical and comparative) included three of the four key criteria of the 'PEID strategy', specifically, be performance-based, reference values-based and integration-oriented. Its central goals were basically two. On the one hand, to develop assessment and diagnostic methods oriented to the dynamic characteristics of urban transportation. On the other hand, to facilitate the involvement of other practitioners and decision-makers (non-environmentalist) into the evaluation processes. To follow the three key criteria above mention seems to be

fundamental to achieve the goals of this first phase. The connection between these criteria was relevant when the ETV-model was applied in the metropolitan area of Granada. In this application, the outcomes of the model reflected in general that Alternative S.1 (corridor with Light Rail System) had less environmental negative impact than Alternative S.0 (corridor without Light Rail System), although this statement was dependent on the 'mobility environment' considered. During the application of the ETV-model the outcomes were related to dynamics characteristics of urban transportation, covering different temporal periods and including the interaction between urban transportation and urban structure. Another relevant aspect was that the outcomes of the model stimulated and facilitated the discussion between different decision-makers (environmentalist and non-environmentalist) to obtain comprehensive conclusions, being a relevant aspect of the development of more proactive environmental assessment instruments.

The second phase of the 'PEID strategy' (decision-oriented) aimed to support the practitioners in their decisions. In other words, complementing the assessment through tools that can be also useful to know how environmental performance of urban transportation can be modified by the decisions of planning practitioners. Following the fourth key criterion of the 'PEID strategy', designed a decision-oriented module was into the ETV-model. This module was completed with two indicators labelled 'Absorption capacity' and 'Improvement capacity'. These decision indicators were applied on Alternative S.1 in order to evaluate possible changes for improving its adaptation to the different 'mobility environments'. The outcomes obtained oriented decision-makers to modify the alternative with respect to the number of lines of public transport.

Following use of the 'PEID strategy' to develop proactive environmental assessment instruments, future research needs to analyse the impact of this strategy into planning practice and identifying ways of improving it. As a consequence of the results obtained in this paper, the case of Spain could be a representative context for this objective. The elaboration of sequential workshops following an 'experiential approach' (Straatemeier et al., 2010) with decision-makers and practitioners could be a useful way to analyse and improve the worth of this strategy and the impact of ETV-model in practice.

5. Acknowledgments

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Cross-border Planning in Europe – The Case of ULYSSES

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Abstract
ULYSSES is a case study oriented project focussing on the implementation of applied research results produced under the ESPON 2006 and ESPON 2013 Programmes as a yardstick for decentralised cross-border spatial development planning. The main aim is to produce analytical results rather than realising a cross-border harmonisation of quantitative data.
ULYSSES addresses the following cross-border areas: The Upper Rhine area along the land borders between France, Germany and Switzerland; the area along the entire Spanish-French land border (Pyrenees); the area along the land border between Greece and Bulgaria; an area covering parts of the Northern Finland-Russian land border (Karelia), an area along the borders between Poland, Germany (land border) and Sweden (maritime border); the area along the land border of Spain and Portugal (Extremadura/Alentejo).

Out of these six cross-border areas under full research, three will be presented as example for a Northern Europe border area with an EU external border (Karelia), Southern Europe border area with one of the new member states of the EU (Greece-Bulgaria), and a centrally located "old" border area, having an external border, though (Upper Rhine). After giving an overview of each cross-border area, results of the factor analysis are described as basis for the results and lessons learned.

The Transnational Partnership Group of ULYSSES used a multi-scale performance and a cross-border institutional analysis in order to find out to what extent borders influence the economic performance and the social interaction of territories and to reveal if and how the economic performance and social conditions of border regions are affected by the fact that they are generally at the outskirts of their countries.

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1. Introduction

Territorial cohesion is one of the main objectives of European policies, and territorial cooperation is among the key strategies to reach this objective. In this context, cross-border cooperation plays a vital role. It contributes to creating synergies and coordinating actions between different Member States' regions, featuring different governance systems and performance realities. On regional scale, cross-border cooperation is representative of the actual performance of the European territorial cohesion process. This territorial dimension of European policy is also highlighted in the document "Europe 2020: New European strategy" (2010) approved by the European Commission.

1.1 The project ULYSSES[9]

ULYSSES is an experimental and innovative project supported by 18 European border and cross-border areas (hereafter CBA) that aims at using applied research results from ESPON as a yardstick for decentralised cross-border spatial development planning. Within this overall framework, a targeted analysis including high-quality, comprehensive and **multi-thematic territorial analyses** (hereafter MTA), has been performed on six specific CBA across Europe (see Map 1, page 4):

- The Upper Rhine CBA along the land borders between France, Germany and Switzerland
- The CBA along the entire Spanish-French land border (Pyrenees)
- The CBA along the land border between Greece and Bulgaria
- A CBA covering parts of the Northern Finland-Russian land border (Euregio Karelia)
- A CBA along the borders between Poland, Germany (Euroregio Pomerania, land border) and Sweden (maritime border)
- Extremadura/Alentejo (ES/PT)

The **territorial analyses** focused on the main topics mentioned by Territorial Agenda of the European Union (EC 2007; EC 2011b), namely (i) cross-border polycentric development, (ii) patterns of urban/rural relationship, (iii) levels of accessibility and connectivity, (iv) effects of demographic change (*territorial profile*), and (v-vi) level of attainment of Lisbon/Europe 2020 and Gothenburg objectives by the CBA (*territorial performance*). In parallel, an **in-depth statistical analysis** focused on the six MTA areas was performed as well. This analysis included (i) a catching-up analysis; (ii) a principal components analysis, and; (iii) a multiple regression analysis.

Additionally, a comprehensive **cross-border institutional performance analysis** has been included as well in every MTA. This analysis captured the diversity of governance frameworks existing within each CBA by paying regard to both the *structural dimension*, i.e. the overall framework that can hardly be influenced by the partners of cross-border cooperation, as well as the *activity dimension*, i.e. the

[9] Texts and maps stemming from research projects under the ESPON Programme presented in this paper do not necessarily reflect the opinion of the ESPON Monitoring Committee.

intensity and continuity of institutionalised cross-border cooperation on the regional level.

All the abovementioned activities crystallised in a comprehensive diagnosis for each MTA area that was delivered as an annex to the Interim Report of ULYSSES. On that basis, an **integrated analysis** taking account of previous inputs was performed at a later stage of the project. From a methodological perspective, this integrated analysis adopted the form of a two-phase SWOT analysis that included (i) a *status-analysis phase* in which the findings derived from previous research tasks were organised and prioritised as main challenges and opportunities, and; (ii) an action-decision phase in which a response to each one of the challenges and opportunities identified in previous phase was proposed as a potential strategy.

Both the challenges and strategies were discussed and validated by stakeholders of the MTA areas.

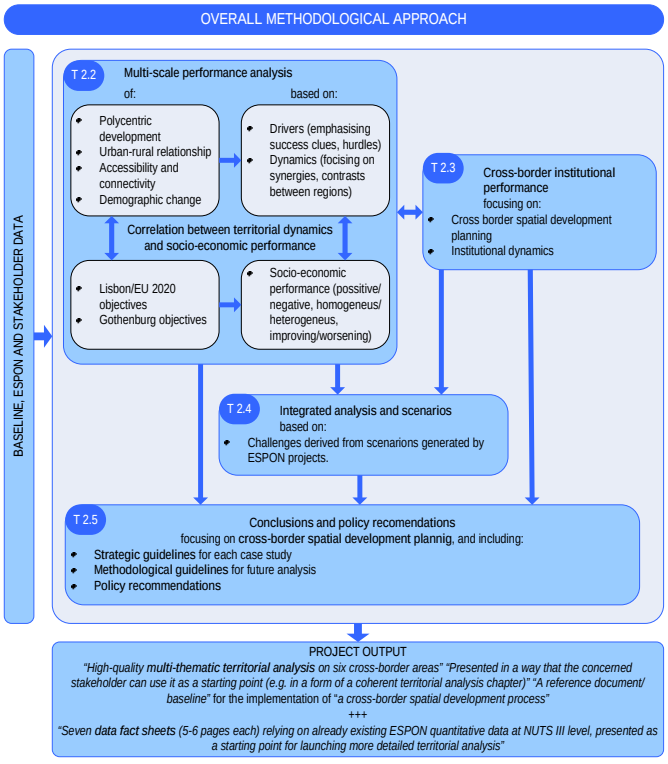
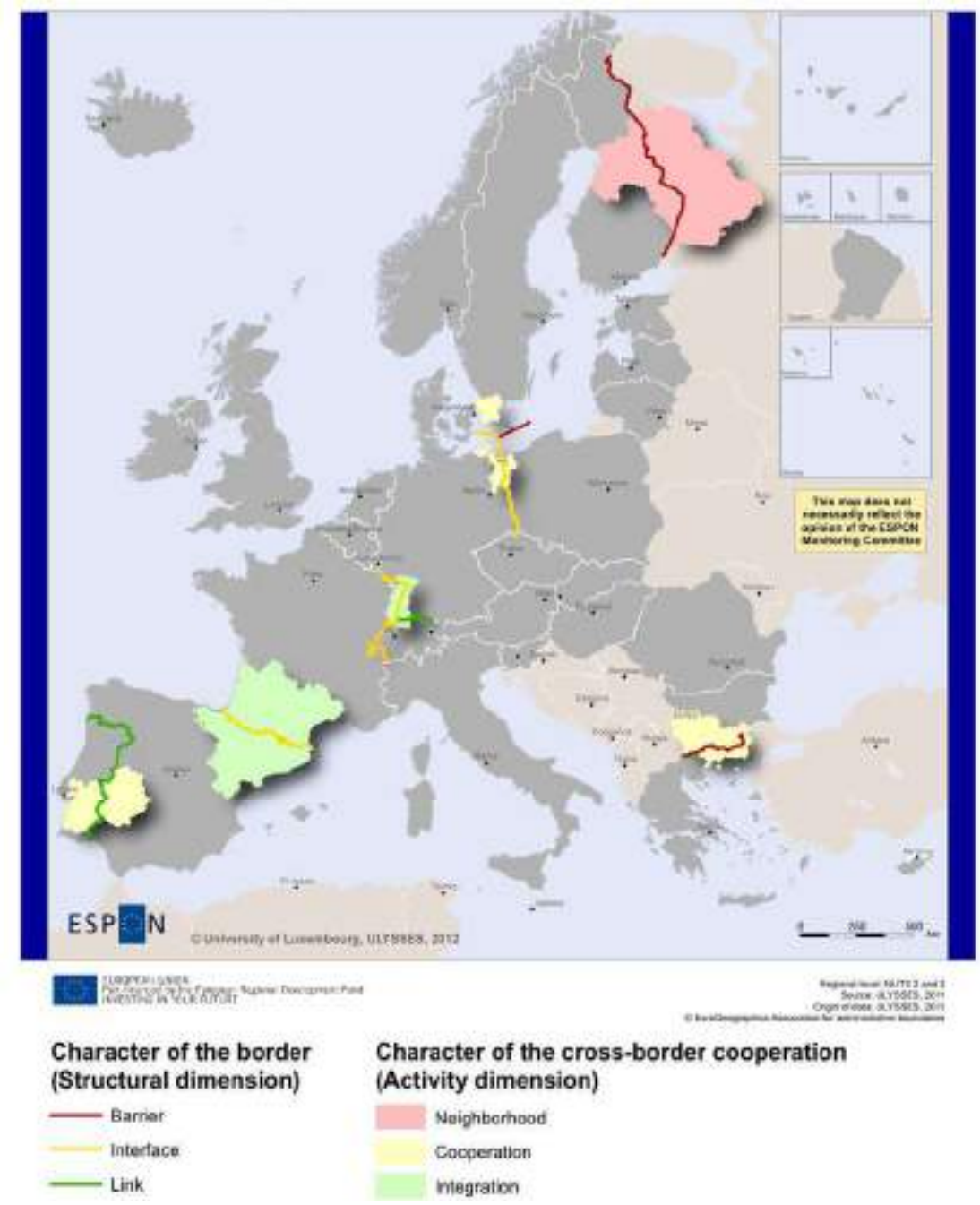


Figure 1: Methodological Approach

2. Key findings of the multi-thematic territorial analyses

Borders are almost synonymous with political, demographic and economic remoteness and they also behave as functional and territorial discontinuities. Consequently, economic activities do not tend to concentrate close to the national borders and public institutions normally have a limited interest in investing in these areas. However, the growing integration of European regions should therefore lead to the development of many border regions that could exploit their formerly hindered potential, as well as to an increase in population and Gross Domestic Product (hereafter GDP) growth along the borders.

The level of cooperation already achieved is shown in Map 1, p. 4, which gives also an overview of the cross-border areas under full research in the project ULYSSES.



Map 1: Structural Dimension and activity dimension of the ULYSSES regions' institutional setting

The following chapters give an overview of three out of the six cross-border areas under full research in the project ULYSSES: the centrally located Upper Rhine along the land borders between France, Germany and Switzerland, the rather remote

Euregio Karelia covering parts at the Northern Finland-Russian land border, and a Southern-Europe CBA, the land border between Greece and Bulgaria.
After giving an overview of each cross-border area, results of the factor analysis are described as basis for the results lessons learned.

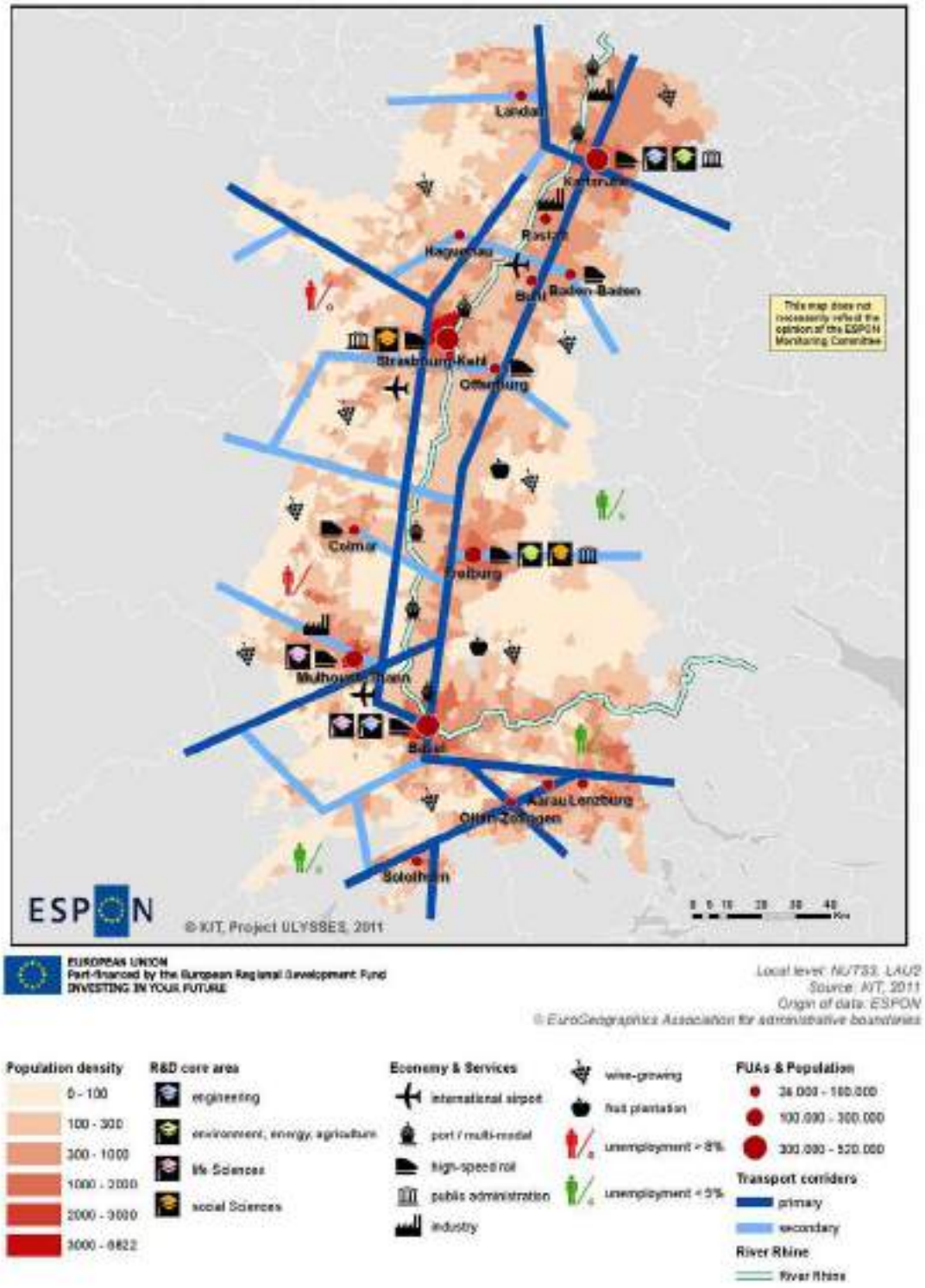
2.1 Upper Rhine

2.1.1 Overall situation

The Trinational Metropolitan Area Upper Rhine is a peripheral and at the same time central region in Europe: it is peripheral as it is located in the northern part of Switzerland, eastern part of France and south-western part of Germany with the River Rhine as its natural border between these three countries. And it is at the same time centrally located within Europe, being part of the "Blue Banana" respectively the "Pentagon". With its central position in Europe and the existence of a variety of small, medium und larger cities and conurbations, the CBA hosts a quite strong economy, administrative centres (e.g. the European Parliament), and research centres, resulting in rather low unemployment rates and high GDP respectively GVA.
There is a dense network of larger and medium sized cities in the CBA, though advantages of the development following the principle of decentralised concentration cannot not fully be exploited, as the network does not quite work in a cross border way. While the Rhine Valley is place of various land-use conflicts of environment, settlement, economy and transport, the more rural areas of the low mountain ranges suffer from losses of population and functions.
The Rhine Valley is one of the European main corridors for passenger and freight transport. There are excessive networks of road and rail, but the interconnections between those are still insufficient. The expected increases in traffic all over Europe – especially freight traffic – and new connections through the Alps like the Gotthard will put pressure on the transport networks in this important part of the North-South connection within Europe.
Also the public transport of the CBA is quite comprehensive in all national parts. The existing transport network is focused on national needs and institutions and a shared use is seldom aspired. The interconnections and qualities of service in-between are hence still an important issue of cross-border cooperation, as a real cross-border network does not exist.

Cross-border cooperation in the region has a long tradition. Even though the affiliation to national spaces is still dominant, the region disposes of a diverse and differentiated governance structure, with several cross-border institutions on different scales with different tasks coexisting complementarily. This causes a twofold situation, as stakeholders pointed out: On the hand institutional simultaneities hinder the regional ability for marketing, lobbying and strategy building, as it is often criticized. Also time consumption due to engagement in multiple institutions is an issue. On the other hand, stakeholders reminded, that institutional differentiation and redundancy provide for a plurality of arenas and levels on which cross-border cooperation can be achieved. Also, the density of regional stakeholder networks is

positively affected by this, as well as the regional governance system is less prone to stagnation due to institutional blockades or dependency on charismatic leaders.



Map 2: Territorial synthesis of the Upper Rhine CBA

2.1.2 Centrality

This factor has its highest values in central European countries, especially in the Ruhr, Belgium and Southern England, in a pattern that clearly lines out the „Blue Banana“. In the less central regions, the higher values tend to be concentrated around capitals and other major urban agglomerations. The factor centrality has high positive correlations with all the indicators expressing potential accessibility and, to a lesser extent, with the share of employment in the financial intermediation and real estate, the employment in high and medium tech manufacturing activities and with commuting to other regions. It also has a strong negative correlation with the share of employment and GVA in agriculture and fishing.

All NUTS3 units of the CBA fall into the two highest percentiles of all European NUTS3 units, expressing the high centrality of this region. The CBA Upper Rhine can be seen as part of the Blue Banana with slightly less centrality indices than the highest scores of Rhine-Ruhr or Belgium. This could also derive from excluding Switzerland as the data is missing here, which could in the analysis lower the centrality index for South-West, Germany and North-West Italy.

2.1.3 Economy

The factors regarding economic development appear to represent the proximity of NUTS3 areas to public administration centres, as the indicators positively correlated with this factor are the share of employment and the GVA in public administration, community services and activities of household and the indicators negatively correlated with this factors are the share of employment and the GVA in industry. The regions with the highest scores of this factor are majorly depressed regions in which, because of their poor economic performance, the public sector assumes an important position. It is interesting to see that most of the borders NUTS3 areas in Spain and Portugal have very high scores in this factor, as well as Karelia.

In some border areas, the involved regions seem to have higher scores in the indicator unemployment than the more centrally located regions. This is the case in Portugal, on the northern border of France and Bulgaria, Finnish Karelia or the Czech Republic where it borders Eastern Germany. The coefficients indicate that high levels of unemployment have a strong negative correlation to a high investment in R&D, demographic dynamism, central locations and high levels of immigration. As expected, the factor referring to administrative centres has a significant and positive impact.
The CBA Upper Rhine has quite low scores regarding this factor, as unemployment rates are significant lower than the national and EU averages (exceptions are DEB37 Pirmasens and FR422 Haut-Rhin). Including data from Switzerland (data is missing here) would have highlighted to good conditions for workers and employees in the CBA.

2.1.4 Research and Development

This factor represents the innovation dynamic and the scientific development of each NUTS3 area of the EU27 space. This factor appears mostly related to R&D

investment of the different sectors and, to a lesser extent, to EPO patent application and the tertiary educated active population. Mapping the spatial distribution of factor scores, it is interesting to note that, besides the capital cities, it is possible to identify specific innovation strongholds such as important university towns or high tech industries (Airbus in the Toulouse area, Volkswagen around Wolfsburg, Cambridge or the Silicon Glen). The Scandinavian countries also have a very favourable position in this factor.

The CBA shows high values of the R&D indices, all but the two French NUTS3 units above the national averages and within the highest percentiles in Europe showing the high capacity of R&D of this region within Europe and in comparison to the average. This accounts especially for the German parts of the CBA, where a common German prejudice comes true about the people of the state of Baden-Wuerttemberg being "Tueftler" (tinkerers – like Walt Disney's Gyro Gearloose) and hence having the highest amount of patents per inhabitants.

2.1.5 Demographics

This factor seems to express the demographic dynamism of NUTS3 areas, as the indicators positively correlated with this factor are the young age dependency rate, the crude rate of natural population increase and the total fertility rate. This factor depicts negative correlation to the old age dependency rate parameter. Mapping the spatial distribution of factor scores, it occurs that the regions with the lowest scores of this factor are in the Mediterranean countries, such as Portugal, Spain and Greece, as well as Germany. On the contrary, the northern parts of France, Ireland, central Great Britain, Scandinavia and Eastern Europe are the regions with the highest positive scores.

The factor analysis reflects the different natural population development especially in comparison between France and Germany with a big difference in fertility rates and hence dependency ratios. While the German parts of the CBA still grow due to migration, the natural development of the population is negative, while the French NUTS3 units still have a slight natural increase. Although the CBA has continuous immigration, scores compared to the national averages are relatively low, i.e. the EU average of all NUTS units is higher than the rates of the CBA.
Although being a border region, the indicators used show a high attractiveness of the CBA by steady immigration. Despite low fertility rates, the CBA is slow but steadily growing by immigration. This indicates a strong labour market, especially in the Swiss NUTS3 units of the CBA, with a high share of incoming commuters from France and Germany.

2.2 Karelia

2.2.1 Overall situation

Euregio Karelia is a cross-border region situated on the Finnish-Russian border area. It is formed out of three Finnish regions; North Karelia, Kainuu and Northern Ostrobothnia and the Republic of Karelia in the Russian Federation. The borderline dividing these regions is an external border of the European Union and it is approximately 700 kilometres long with only three international border crossing points between Finland and Russia. In contrast to EU internal borders, there exists no visa-free entry on the Finnish-Russian border, and the visa regulations are determined by EU-Russian visa agreement and the Schengen-regime.

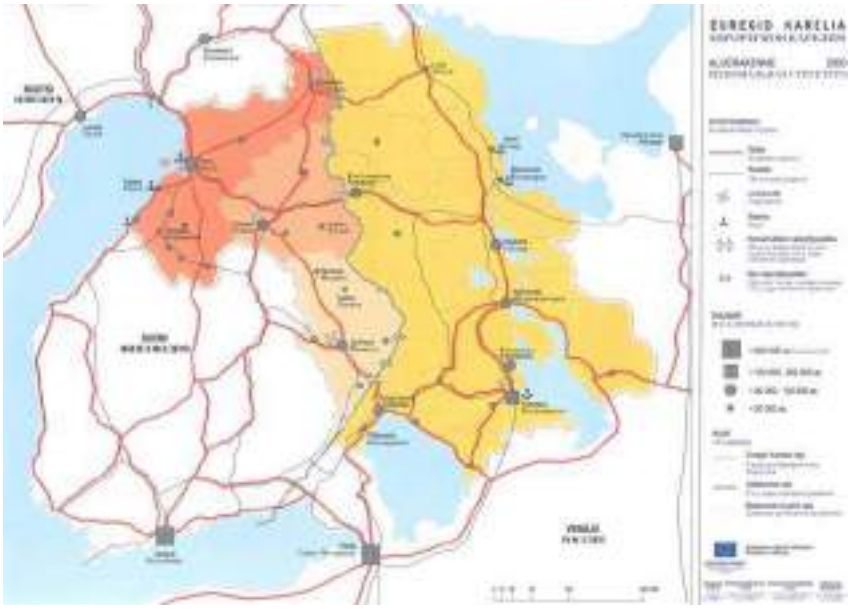
In demographic terms Euregio Karelia is struggling from negative population change. Accordingly the population density in the CBA has been declining. Net migration has not been able to compensate for decrease of population, because it has been moderate and below the national averages. Urban structure in Euregio Karelia is not dominated by one big city, but it is relatively polycentric. However, the urban structure of the CBA could be fragile, because there is a fairly small total amount of Functional Urban Areas (9) in the CBA compared to the European average. On the Russian side of Euregio Karelia there is only one FUA, which is Petrozavodsk. The FUAs are dependent on traditional manufacturing and thus very vulnerable to effects of globalisation.

Euregio Karelia is in the European context classified as a CBA with low urban influence and low human intervention. Eurostat classification considers the CBA as a predominantly rural region. The Euregio thus appears rural from the European perspective. However, the share of agricultural areas in the region's total area is significantly lower than the European average. This is partly explained by the large share of forests in the total area.

Euregio Karelia is located far from central European road and rail infrastructure and thus has low accessibility and connectivity.

All the Finnish regions of Euregio Karelia (except for Northern Ostrobothnia) have been in economic terms identified as less developed non converging regions. There are also large differences in GDP per capita between the Finnish and Russian regions of the CBA. The Finnish-Russian border has had positive effects on trade in the regions located in close proximity of the border. There is a strong variance between regions of Euregio Karelia concerning performance in research and innovation and social cohesion, Eastern Finland and the Republic of Karelia performing the weakest.

Euregio Karelia is located on the EU external border, which creates a relatively difficult structural context for cross-border governance and institutionalized spatial planning. Cross-border cooperation does take place in Euregio Karelia in a multi-faceted and increasing way. Still, the difference to internal EU cooperation is very obvious and a spatial planning or a transport policy has not been institutionalized on a cross-border level yet.



Map 3: Transport infrastructure in Euregio Karelia (2000)

2.2.2 Centrality

Euregio Karelia scores very low in the centrality factor. All the regions of the CBA are below national average and the average of all the studied countries.

When we look at the location and accessibility of Euregio Karelia from the perspective of services and transport factor, we can see that in the European context Euregio Karelia scores low in these aspects as well: Euregio Karelia is located far from central European road and rail infrastructure and thus has low accessibility and connectivity. Despite its remote location, air connections make the CBA better accessible to the European countries. Considering connectivity within the CBA, the Finnish-Russian border, being an external border of the European Union, does not allow free movement of people and goods. Cross-border traffic has been steadily increasing and the border crossing infrastructure has been developed. Thus the Finnish and Russian regions of the CBA have become better accessible to each other.

2.2.3 Economy

The factor of economic development has a high correlation with GDP per capita, share of Natura 2000 areas and soil sealed area. It is a factor, which expresses high degrees of development and urbanization. In Euregio Karelia Northern Ostrobothnia has the highest score in this factor. North Karelia and Kainuu score significantly lower than Northern Ostrobothnia and the Finnish and European average. In Europe regions with the highest scores for this factor are concentrated in Central Europe, Scandinavia and in capital cities of more marginal countries. Regarding the economic catching-up, a factor that relates GDP level and growth between 1997 and 2008 of a given region to the pattern evidenced by the leading region, Northern Ostrobothnia is again the best performing region of Euregio Karelia. The overall pattern of the border regions is to follow the national tendency.

Concerning the factor of unemployment the situation is similar to the performance of Northern Ostrobothnia being more positive. The unemployment factor correlates

with variables such as unemployment, long-term unemployment and youth unemployment. The geographical distribution of this factor's scores shows a concentration of highest values in the more depressed areas of Europe and countries with a structurally high unemployment.

2.2.4 Research and development

Total intramural R&D expenditure in Karelia in 2007 was higher in Finland than in EU countries in average. Expenditure was even higher than the Finnish average in Northern Finland while in Eastern Finland R&D expenditure was below Finnish and EU average. When looking at the sectoral R&D expenditure it is obvious that expenditure in Northern Finland and Finland in general has been greatest in the business sector. Northern Finland shows stronger performance than Eastern Finland both in the amount of EPO (European Patent Office) patent applications and the amount of persons employed in high and medium tech manufacturing activities.
In Euregio Karelia Northern Ostrobothnia is the only region performing better than national or EU average, while North Karelia and Kainuu are performing weaker in respect to this factor.

2.2.5 Demographics

The factor of demographic dynamism correlates with the young age dependency ratio, crude rate of natural population increase, total fertility rate and old age dependency rate (this last one has a negative correlation). In Euregio Karelia the regions are performing very differently in demographic terms and the only region that is performing better than the European average is Northern Ostrobothnia. In the European context, regions with the lowest scores in demographic dynamism are in the Mediterranean countries.
Concerning the factor of immigration that correlates with the indicators of population growth and net migration ratio, Northern Ostrobothnia is the only region in Euregio Karelia that is performing better than European average.

2.3 Greece-Bulgaria

2.3.1 Overall situation

The Greece – Bulgaria CBA is considered as a region distanced from the central parts of Europe, facing population reduction, over-ageing and low fertility rates. Although fertility rate gradually increases over the latest decade, its value appears significantly lower than the corresponding EU27 rate. Population distribution shows strong disparities, with higher population densities near urban conglomerates. Along the well-established transportation axes, the border seems to attract population and economic activities, affecting population density and growth patterns. On the contrary, newly opened crossings do not seem to affect settlements near the border.

Population density decreases over the latest decade, due to strong depopulation, although the CBA may still be characterized as a 'strongly rural area'. Over the last decade a gradual increase in urbanisation has occurred in the CBA, mostly shown by the sharp decrease of population employed in the primary sector and the respective

GVA produced. This urbanisation tendency of the CBA is also accompanied by a subsequent transformation of agricultural areas into artificial areas.
The accessibility and connectivity infrastructure has improved in the CBA during the latest years, especially by the construction of motorways and the expansion of airports. However, more development in the cross-border transportation infrastructure is needed to integrate CBA's economy and improve its performance.

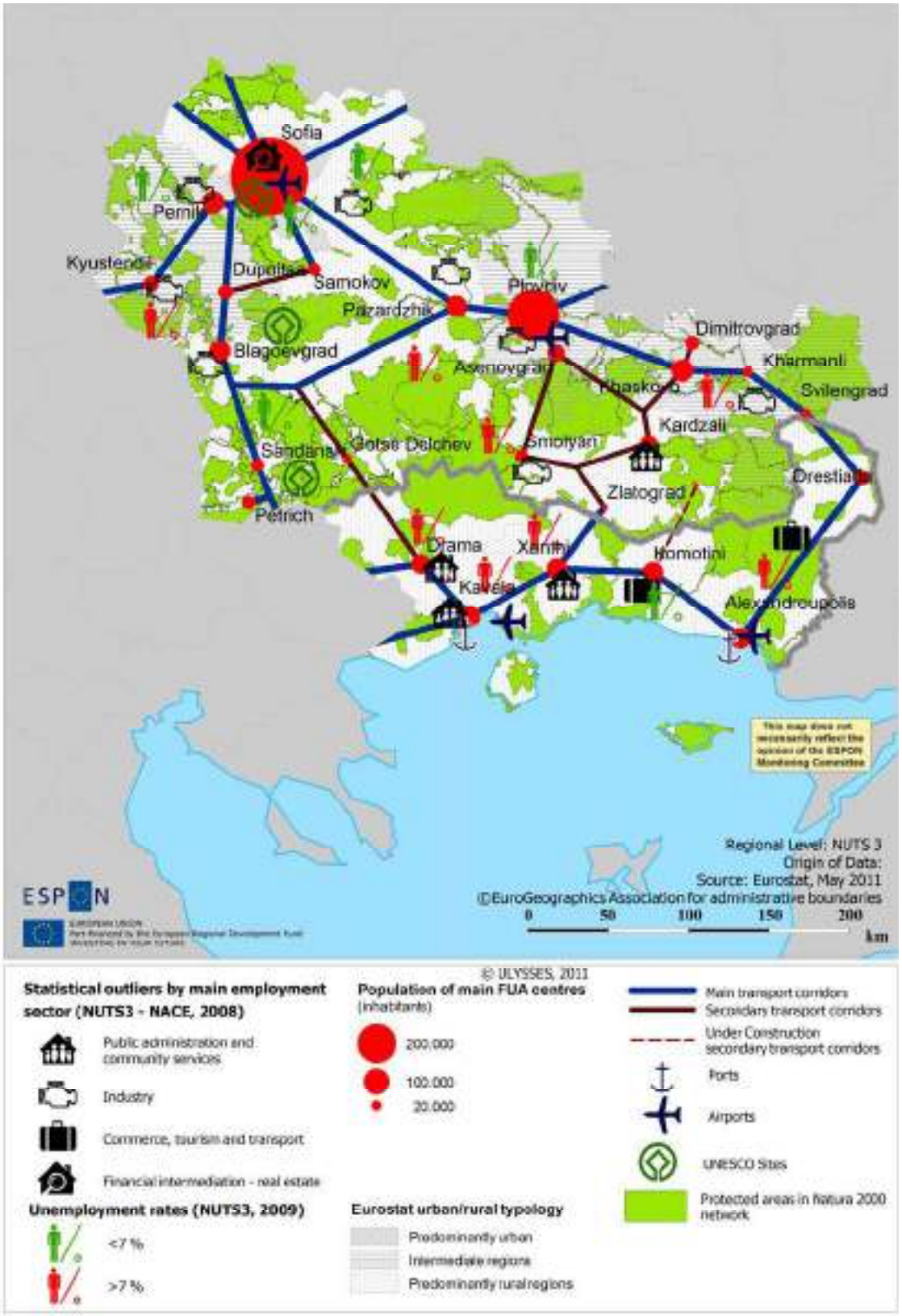
Significant disparities exist in terms of the convergence dynamism of the CBA, as the Bulgarian part exhibit a steady catching-up behaviour, while the Greek areas are characterized by a slow converging pattern. Employment in the CBA seems distributed rather evenly among all economic activities, exhibiting a marginal annual rise over the last decade. This increase seems attributed to construction, the financial and real estate sector. Trade, tourism and transport are the main economic sectors supporting local CBA's economy. The reduction in the employment in the primary sectors is apparent.

2.3.2 Centrality

The Greece – Bulgaria CBA shows very low factor scores in relation to 'centrality' in comparison to central European countries or around capitals and other major urban agglomerations of less central regions. Most NUTS3 areas score at the lowest 5th and 20th percentiles of all EU27 areas. Territorial profile analysis revealed that the lack of central CBA's location over the EU27 space is a major disadvantage: Poor economic convergence seems related to the low centrality of the region and the increased public administration sector. Central location appears a more important factor to support economic development of a region, than the R&D investments.

2.3.3 Economy

Trade, tourism and transport seem to be the main economic sectors supporting local CBA's economy, followed by subsequent reduction in construction and service sectors. The CBA underperforms in all social cohesion indices, although they showed a gradual increasing tendency up to 2008. Thereafter, a sharp decline was noted, increasing unemployment in most economic sectors.
Overall, the poor economic performance (high unemployment, especially at its southern parts, and limited economic development, showing spatial disparities due to the stronger Bulgarian convergence tendency) of the area seems related to its low centrality, the exaggerated public administration sector, the low R&D investments and the limited demographic dynamism.



Map 4: Territorial synthesis of Greece-Bulgaria CBA

2.3.4 Research and development

Bulgaria and Greece are modest innovators exhibiting a below average performance, and the three NUTS2 regions under study present similar characteristics, demonstrating low innovation performance and weak innovation potential that in terms of the number of patents fall well below the EU27 and the USA averages. The Greece – Bulgaria CBA shows relatively low factor scores in relation to 'innovation dynamism'. R&D investments and innovation orientation appear below average, having low contribution to CBA's economic growth.

2.3.5 Demographics

Over the latest decade, the total population of the CBA shows a significant decrease by approximately 4.3%, Based on this trend, the total population of the CBA in 2020 will be diminished at the level of 4,062,969 inhabitants. Excluding Sofia, the CBA's population reaches 2,9 million inhabitants in 2009, exhibiting depopulation with an annual rate of 5.0%. Xanthi (GR113) and Sofia (BG111) are the only NUTS3 areas of the CBA depicting positive population growth rates, even higher than the mean EU27 growth rate.

Net migration is responsible for the population increase in Sofia. In most of the NUTS3 unit levels of the Greece – Bulgaria CBA, population decrease is due to both, natural causes and out-migration.

2.4 Results

The territorial profile and performance analyses conducted in ULYSSES are interested in understanding how the borders function in different contexts and the impacts of the general challenges they pose. From this perspective, there are some aspects that can be highlighted from the different multi-territorial analyses of the border areas as well as from the factor and regression analysis that was performed at the EU27 countries:

- The first one is that the **differences in the CBA seem to be pretty much a consequence of their overall location and not so much of their border position**. This means that the central European CBA are performing at a similar level than other centrally located regions, while border regions in peripheral countries perform similarly as other peripheral regions.
- The second one is that **borders keep playing a major role in explaining the behaviour of the different regions**, by dividing different national realities.
- The third one is that **the border condition seems to be more relevant at the regional than at the local level**. For example, while the position of the total CBA in the national or European context is clearly relevant, the settlement patterns at the LAU 1 or 2 levels seem often to be indifferent to the border.
- A fourth one is that the **cross border commuting still tends to be low**, when compared to the commuting between regions of the same country.
- The fifth is that the **borders seem to keep functioning as a limit for the diffusion effects of development poles**. This essentially indicates that, besides the European effort in promoting territorial cohesion, the national level maintains a prime role in regional development.

From a **governance perspective**, border regions are often called 'laboratories of Europe', and this label is also confirmed by the ULYSSES project: the 'contact zones' of different national systems reveal very clearly the added value and, at the same time, the challenges of European integration. The six regions under full analysis in ULYSSES confirm the diversity of borders and border regions in Europe also from the institutional point of view: The structural and the activity dimension have very different values, and the analysis such diverse conditions lead to some general conclusions:

- **The internal EU 15 borders are, from a structural point of view, still more favourable for cross-border governance** than, for example, external EU borders or borders with transition states.
- At the same time, the structural dimension cannot be explained in a *deterministic* way, that is to say, **the degree of institutionalisation cannot be directly linked to any specific status or socio-economic arrangement**.
- **Socio-economic development alone does not determine cross-border governance**, neither.

Territorial diversity has to come along with different institutional settings, and the involved institutions have to face the respective challenges on the ground. Hence, following the principle of tailor-made strategies, **all regions have to develop their own ways in order to exploit their cross-border potential**. It became obvious though that ongoing deepening of cross-border-cooperation depends strongly on the commitment and effort of leader personalities as well as the great persistence of those efforts.

3. Conclusion/Lessons learnt for policy development

Generalising the crucial findings from the ULYSSES study we have pinpointed some general ideas that might be of relevance for European cross-border policy development:

- **Borders matter**: The evidence collected by ULYSSES project shows as (i) borders keep playing a major role in explaining the behaviour of the different regions; (ii) border effects are clearly perceivable at the national and regional levels; (iii) cross-border commuting between different regions still tends to be low, and; (iv) borders seem to keep functioning as a limit for the diffusion effects.
- **Geography matters**: Local geographic conditions impact on territorial development within cross-border areas in many ways. Indeed, borders are very diverse across Europe and may have different implications depending on the sometimes neglected geographical features that characterise such borders.
- **Regional delimitation matters**: The territorial analyses made evident as the regional statistical units available for statistical purposes across Europe, namely NUTS 2 or 3 regions, have totally different connotations depending on the area.
- **Scale matters**: Evidence have shown that (i) the geographic scale at which data is produced/collected conditions the final results of the analysis in various ways, e.g. the NUTS units are of very uneven sizes in the different Member states and in general, NUTS 3 or even 2 are too rough for analysis; (ii) many of the topics covered would require further analysis based on fine-grained data; (iii) ESPON data is a precious asset in approaching the cross-border issue at the European level, but its reference scale seems somehow inappropriate for designing local strategies.
- **Cohesion matters**: Both the multi-thematic analyses and the governance analysis show clear differences between the different parts of each border region, between the border regions and their domestic hinterland, and amongst the border regions across Europe. The goal of a balanced territorial development remains a challenge.
- **Diversity matters**: The diversity of the involved territories must not be regarded as a barrier to a successful territorial development but as an opportunity for complementary labour markets and cultural richness. The challenge is to enact place based approaches that make use of the territorial potential.
- **Territorial cooperation matters**: All ULYSSES regions have a certain experience with bi- and multi-lateral cross-border institutions. In all regions, the institutional setting shows the overarching importance of the structural funds, in particular with regard to the INTERREG programme. Moreover, the new European tool of the European Grouping for Territorial Cooperation (hereafter EGTC) is broadly tested and adopted within the ULYSSES regions.
- **Spatial development strategies matter**: ULYSSES experience proves that the knowledge basis for cross-border regions is not comparable with the ones of domestic regions, and that most regions have already formulated strategic elements for territorial development, either in form of more analytical studies

or of joint political declarations. However, we see a certain tendency that these documents are often quite abstract and not always institutionalised in a political way.

- **Knowledge matters**: Reciprocal knowledge of current territorial trends by all parties is essential in order to boost successful strategies. This calls for a joint effort for producing focused, complementary and tailor-made analyses within all the CBA.
- **Institutionalisation matters**: Cross-border strategies related to spatial planning will only be able to influence later territorial development if the key messages will be institutionalised in political way. On top of aligning agendas and priorities at regional and local levels, this would allow the CBA to have a shared strategic objective to lobby national or European authorities in support of local actions.

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Cost-benefit Analysis in Participatory Planning: Deliberative Theory Coming to Use

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Abstract

The paper provides an overview assessment and critique of CBA as an evaluation technique to be applied in participatory processes, including communicative and collaborative planning. Broad citizen involvement requires different things from the evaluation technique than expert-oriented processes, as participants should be able to grasp what the experts are doing, make sense of the technique, and figure out how they are likely to be affected by the proposed project. Individuals who are very strongly devoted to one single value or one special kind of project effect (environmental degradation, for example) will find the economic reasoning of CBA particularly unsatisfactory. The preferences of wholeheartedly dedicated people are not likely to be properly incorporated in the CBA by standard tools, and some consequences of this are outlined. One suggested solution is to elicit non-market preferences not only from contingent valuation techniques but also from hybrid techniques involving both stated preference interviews and deliberative small-group processes. This brings analytic evaluation closer to communicative planning theory. The recently proposed 'deliberative monetary valuation' can for example make use of focus groups, citizens' juries, consensus conferences, and deliberative polls and thus allow for preferences that change throughout the planning process.

1. Introduction

Planning processes can differ widely in character, ranging from top-down strategies organized by the state at the national level, to local bottom-up empowerment efforts initiated by grass-root movements. The problems of selecting the best method/process combinations and adapting well-known analytic techniques to

participatory processes have been pondered for decades, also when it comes to the cost-benefit analysis (CBA) (Sager 1979, 1982). Since the 1970s, much progress has been made on problems that are highly relevant to the theme of the present chapter: how small-group problem solving and dialogical planning processes can form and yield preferences; distinguishing types of preferences, and the potential (and limitations) of stated preference techniques for eliciting preferences that are appropriate for collective decision-making; deliberative monetary valuation of environmental consequences.

Two very different approaches can be used in planning and decision-making. One might employ an algorithm allowing calculation of 'the best' solution, or one might discuss the matter and try to reach an agreement. Planning can be algorithmic or communicative, and the title of the paper indicates that even hybrids are possible. The purpose of this paper is to show that standard CBA employs techniques and procedures that may de-motivate lay participants, and to suggest how the drawbacks can be ameliorated by methodological simplifications and recent developments of theory and practice, such as deliberative monetary valuation. As understood here, the CBA is an economic evaluation method which is used ex ante to calculate in monetary terms the net benefit to society from an infrastructure investment, a plan or a policy (Mishan and Quah 2007). The focus here is on the philosophies and techniques for establishing the entries on the list of costs and benefits expressed in monetary metrics. The part of the evaluation dealing with consequences that are not transformed to pecuniary figures is not discussed. Participatory planning is conceived as preparation for democratic decisions by means of processes in which the citizenry as well as the stakeholders are involved and can debate the planning proposal with each other, developers, public planners and other bureaucrats.

This paper presents a critical view of CBA in participatory planning processes. Every theory and method in the social sciences can be criticized from some relevant perspective, and the CBA is no exception. It should thus be said already at the outset that knowledge of valid criticism does not imply that one should abstain from using the method. Furthermore, it is a good rule to avoid making a caricature of the method under scrutiny and not waste energy on chasing some imaginary bogyman. Criticism hits harder if it is valid even in a sympathetic interpretation of CBA.

Relevant objections to CBA as an element in participatory planning can point out theoretical, practical, and political inadequacies. There are limits to meaningful critique, however:
(1) Critique should be in line with the purpose of the analysis under scrutiny. For example, the ambition should not be for analytic method to provide final answers in a democracy, as that would make elected politicians superfluous (Saitua 2007:29). CBA should not be blamed for giving an incomplete basis for making decisions. Findings obtained from the CBA can have a legitimate role as an input into, but not as a substitute for, political deliberation.
(2) Critique should not be utopian. CBA is a tool for practical planning and decision-making in the real world, so suggestions based on assumptions of a perfect society or

reaching for unachievable ideals are of little use. For example, in the context of participatory planning processes one objection to CBA might be that one should instead ask people how well they like the project or plan (Osborne and Turner 2010). However, to yield answers comparable with the CBA, this assumes much more information among people than they actually possess. The answers would not tell us whether or not the project contributes to the economic efficiency of society.
(3) Critique should be directed towards good established practice (state of the art), not towards misconception or careless use of the method. For example, double-counting of benefits occurs time and again in evaluations by means of CBA. This happens when the same attractive consequence is hidden in several entries on the list of benefits. In assessments of road projects including the entries 'better accessibility' and 'improved transport standard', both can be valued partly because of the travellers' time savings, which would then be counted twice in a carelessly conducted analysis. Double-counting is not an inherent weakness of CBA, but the result of sloppy practice.
(4) Critique put forward in this paper does not deal with the way single variables are gauged or the way parameters are estimated. For example, the economic value of reducing CO_2 emissions by one ton, and the correct size of the social discount rate in long-term environmental projects, are both controversial. Current practice will nevertheless not be discussed here.

The next section explains a few concepts from moral philosophy. These will prove helpful in the following when responding to potential critical questions about CBA from groups of participants, and when considering what is reasonable to demand from evaluation techniques in processes with citizen involvement.

2. Philosophical background for critique of the CBA

Planning processes with broad participation are likely to include people with very different motives, values, and rules to live by. Some will see opportunities to reap advantages where others will see breach of principles or self-serving violation of values. Such conflicting positions often have philosophical counterparts. The philosophies are only sketchily outlined here, as the modest aim is to give just enough background to understand why they – consequentialism and deontology – help to explain different attitudes to the CBA.

Deontological ethics determines the value of an action (project, plan, policy) not primarily from its anticipated consequences and, for example, welfare effects. The duties one tries to do by carrying out the action are important for its moral value. A road project that interferes with a vulnerable ecosystem can be rejected regardless of economic costs and benefits by people believing that they have a duty to protect the natural environment. And a gentrification plan regarded by some as entailing an encroachment on the rights of working-class inhabitants of the regeneration district can be voted down by people feeling a duty to defend rights regardless of economic considerations. For some people, deontological ethics requires that certain rights

should be respected not only for humans, but also animals, plants, and ecosystems. Duties and rights are often treated as absolutes, while the CBA assumes that anything can be traded off. This can alienate deontologists in the planning process and lead to protest responses in the valuation process.

Consequentialism is an ethical position holding that the consequences of an action should be the ultimate basis for judgment about the rightness of that action. It is morally right to implement a project, plan, or policy if it is expected to produce an overall good net outcome – a tenet that is endorsed in the CBA. Consequentialism is usually contrasted with deontology, although the distinction may be less clear than it appears at first glance. Sen (2000) contends that anticipated violations of rights can be regarded as consequences, and thus be incorporated in a consequentialist CBA.

The consequentialist position gives room for a wide range of assessment rules, among which only rules differing along the equity dimension are mentioned here. Several evaluation approaches that emphasize equity and fairness more than economic efficiency put heavier weight on those who are worst off or stand to lose because of the proposed action (prioritarianism). For example, the Difference Principle of Rawls (1971) takes the form of making the worst-off members of the society as well off as possible. This implies a radical breach with the everybody-counts-equal principle and takes us a long way from classical utilitarianism.

Classical utilitarianism says that a proposed action is to be subjected to the following test: will it produce a greater balance of benefits over harms than any competing course of action? It is right to perform that action which will be productive of the greatest happiness of the greatest number, which will have the greatest utility (MacIntyre 1977). In calculating the greatest utility, the standard utilitarian practice is to let everybody count for one and nobody for more than one, which is also CBA procedure. CBA may be regarded as an operational definition of what is implied by basing a public policy on a utilitarian calculus. There will most often be some losers, but the plan is nevertheless recommended if there is the theoretical possibility of fully compensating the losers by costless redistribution of money – the Kaldor-Hicks criterion.

In the following, I shall assume that standard practice of CBA is in line with classical utilitarianism. Utilitarianism requires that consequentialism be combined with another pair of ideas. These are utility as a measure of value, and sum-ranking, meaning that the ranking variable is the sum of the individuals' net utilities.

3. Questions from participating groups

This section answers five pertinent questions that might hypothetically be raised by sceptical citizens involved in a planning process that makes use of CBA for providing background information to the public debate.

Why don't you just ask us?

Like other evaluation techniques, the CBA disaggregates the future impact of the project into a number of consequences and then adds up again all these costs and benefits. Maybe some aspect or byproduct of the project is lost in the way the totality is split into separate items and then put together again. As already mentioned, we do not know that a monetary assessment of the project as a whole would be equal to the sum of the entries in the CBA account.

Planners may, for example, *impute* that the local users of a new road will obtain a positive net utility from the project because of time savings, fewer accidents, reduced driving costs, etc. In principle, these users might nevertheless be opposed to the new road. The reasons may be their conviction that:

- Some politician promised in the last election campaign that the road would be postponed to protect nature
- The money would come to better use on other public tasks
- They have been let down in the planning and decision-making process
- The project is in conflict with the rights of some group
- The project is ugly or it does not fit with the image of the locality
- The project should be further examined before a decision is made
- The funding of the project should have been organized differently
- Some unpopular big shot stands to gain from the project.

The list could be expanded, but the above suffices to make the point: There will very likely be considerations extraneous to the CBA which contribute to citizens' overall assessment of projects. The CBA is not meant to give a complete picture of the viewpoints that form people's opinion. Instead, the CBA answers questions about efficient use of society's resources, which are not clarified by asking for citizens' opinion. This is not a weakness of the CBA.

We have other goals than economic efficiency. Will the CBA take them into consideration?

Academics can handle a problem in different ways. They may be able to change reality and solve the problem, or they may try to change people's conception and interpretation of reality so that the problem no longer seems to be important. Academics are sometimes modelling the problem away, making it invisible in their theoretical world. The CBA provides an example: Many people see unfair distribution of economic welfare as a real and important problem. But the more attention given to CBA as the normative basis of decision-making, the less likely we are to deal with the equity problem, as standard CBA models it away by complying with the Kaldor-Hicks criterion and thus not requiring factual compensation of losers.

Transfers between domestic accounts cancel each other out in the national summation of costs and benefits. CBA is therefore not well suited for evaluating policies which aim at redistributing economic activity between regions, such as relocating state agencies from the capital to peripheral cities. For the same reason, CBA may not be the best technique for evaluating measures improving Universal Design. The main objective in many UD projects is fairer treatment of people with reduced ability to master the transport system, for example. The wish to increase their access to a range of destinations is founded more on justice than on the anticipation of economic benefits.

CBA is, by and large, a summation of willingness to pay for good things, minus summed willingness to accept compensation for bad things. Analysis founded on preferences deduced from revealed willingness to pay raises serious worries about equity goals, given the unequal endowments among members of society. Willingness to pay is affected by ability to pay, and as we live in a market society, what we can do is constrained by what we can afford.

Equity is not the only goal to be inadequately treated by CBA. CBA cannot measure multi-dimensional aspects of project desirability, such as sustainability, issues of rights, and social values associated with respect, dignity and identity. Several environmental goals are closely connected to ethical values and are better catered for in deontological than in consequentialist analysis. Projects that are primarily aiming to affect goal variables of, for example, ecosystem management, biodiversity loss, and global climate change might not be adequately assessed by CBA.

When we state our preferences, will they be built into the CBA at the expense of market information?

CBA calculates profitability on the basis of individual preferences. This is an attractive feature in participatory planning, as it is regarded as democratic that people's input about what they like and dislike is applied in the evaluation. Nevertheless, there have been objections of at least two types. The first relates to the characteristics of individual preferences; their knowledge base, independence, stability, and consistency (Kahneman and Tversky 2000). I concentrate on the second type of objection to the use of individual preferences for making collective decisions, questioning the way preferences are elicited. Different elicitation procedures can produce dissimilar orderings of options, so individual preferences sometimes seem to provide a weak basis for imputing the prices serving as value coefficients in the CBA.

Where market prices are available, standard CBA procedure is to use them for establishing pecuniary measures of costs and benefits. When market imperfections are caused by externalities, for example, market prices should be corrected. Even with corrections, value coefficients deduced from preferences revealed through market transactions may well differ from value coefficients deduced from 'stated preferences'. Stated preferences are elicited from individuals who fill in elaborate

interview forms. The respondents state their choice between a number of hypothetical options which are designed to enable the planners to estimate the monetary value that the respondent puts on some cost or benefit component in the CBA.

There may well be a difference between the private preferences people reveal when buying goods and services in the market, and the 'laundered' preferences stated in interviews (Goodin 1985). The first reflects their selfish desires as consumers. However, when co-deciding on a public good that will serve numerous people, they might aim to act morally superior to the standard they manage to keep in day-to-day private affairs. They might want to act in a public spirit as good citizens, with an other-regarding attitude. Preferences for collective decision-making can thus differ from those that can be inferred from willingness to pay in market transactions.

Individual preferences are seldom exogenously given. They are rather formed in the planning process designed for exchange of information, debate, and consensus building. The private preferences of participants in open and inclusive planning are influenced by the social and interactive process (Niemeyer and Spash 2001). Participants must be prepared to defend their viewpoints and arguments against critique from groups with opposing interests. It is usually assumed in communicative planning and theories of deliberative democracy that ignorance, malevolence, envy, and revengefulness will form the resulting laundered preferences to a lesser extent than the initial private ones.

CBA can be used for assessing street lighting, roads, parks, sanitation systems, and water purification facilities, among many other kinds of public goods. We buy toothpaste without any need to know what others are willing to pay for the tube. However, when asked for the amount of money we will contribute to a public good, the answer depends on what others are expected to pay. Uncertainty about this affects the estimated utility of environmental conservation projects as well as man-made public goods. For example, the relative value of noise abatement compared to other aspects of a road project depends on the organization of the planning process. Psychological and economic literature on public goods experiments shows that communication between potential contributors tends to increase their willingness to pay (Meier 2006). CBA can take into account other preferences than those revealed in markets, but even stated preferences can insufficiently reflect the preference 'laundering' taking place in participatory planning processes.

Does the CBA respect that we know our own best?

Lay participants know that decision-making politicians are not bound to comply with their wishes. Against individual preferences, government can set default rules and take certain other limited actions that the government believes are in most individuals' self-interest, for example, concerning prevention of climate change or prohibition of building on ground prone to land slide or avalanche (Mandel and Gathii 2006:1054-55). Participants may still worry whether expert tools such as CBA

do justice to their opinions and preference input. We shall see that several lines of reasoning open for CBA practice that can lead to paternalism. Paternalism is defined as the interference of an individual or a collective actor with another person, against the will of the latter, and justified by claiming that the person interfered with will be better off or protected from harm. Paternalistic attitudes on the part of experts and decision-makers may de-motivate lay participants in planning processes.

It is difficult to evaluate paternalistic policies, such as prohibiting the use of segways, or making the use of cycle helmets compulsory. The reason is that a presumably significant cost element of such policies should reflect the annoyance created by restricting people's autonomy, and a credible way to value the loss of autonomy has not been developed.

Mainstream economic theory treats society as the sum of individuals, and individual preferences are added up (or in other ways aggregated) to the welfare of society. Næss (2006) advances an heterodox viewpoint when professing, on a critical realist platform, that the value of something for society is not reducible to the aggregate utility of individuals. If preferences of society – over and above the preferences of individuals – are allowed into the CBA, the possibility arises that individual preferences will be overruled, which in turn opens for paternalism. It seems difficult to defend a planning process in which citizens are first invited to actively take part, and then not trusted to know their own best. Furthermore, if the decision-makers were to determine society's preferences in the CBA, it would be difficult to separate the advisory ex ante evaluation from the actual decision. Such a mix-up, designing CBA to simulate the final answer, is an often-voiced critique of elaborate evaluation tools.

Some scholars hold that the satisfaction of people's preferences is not an adequate index of well-being because there are conceivable circumstances in which these preferences might be satisfied, even though the individuals' true interests are far from being served. Adler and Posner (2000) examine the reasons for such distorted preferences, for example, lack of information and unjust social conditions. The preferences of some participants in the planning process may have been misshapen by poverty, lack of basic education, or damaged self-respect. Adler and Posner argue that CBA can and should be modified in a way that corrects for the failings caused by inserting distorted preferences into the analysis. Disrespect for some preferences invites paternalism, however.

Distorted preferences would not disappear in practice even if people were to express volitions and inclinations in dialogical and deliberative processes rather than through market behaviour or stated preference studies. Misuse of power can distort the outcome of communicative processes as well as bias the result of analytic work. It is not obvious that more confidence should be placed in preferences drawn from a 'willingness to say', than in preferences inferred from a willingness to pay.

Standard CBA takes preferences as exogenously given, thus not distorted in the planning process. Preferences revealed in market transactions are usually taken at face value. There is more room for paternalism when using stated preference studies and adjusting them for lexicographic preferences and protest responses. Such adjustments are briefly discussed below.

We have strongly felt values that we do not want to compromise. How does the CBA deal with that?

According to mainstream economic thinking, everything can be compared and traded if the price is right. All items in the CBA account are regarded as commensurable and measured in money metrics and can therefore be summed.

Lexicographic preferences follow from absolute values or duties and are associated with deontological ethics. With such preferences, one particular consequence dealt with in the CBA is seen as overwhelmingly important, while other consequences are insignificant as long as the state of the primary goal variable is not satisfactory. In stated preference interviews it often happens that the option of protecting the environment is chosen by a significant share of the respondents no matter which attractive attributes the alternative options are supplied with. Hypothetically, the environment would be protected at any cost (Spash 2000).

Stated preference studies work best when interviewees adjust to a utilitarian mode of thinking when filling in the forms. The reaction of deontologists to methods like contingent valuation concerning environment or justice can engender protest responses resulting in missing answers, zero or infinite registered willingness to pay, or very strange observations as judged from rational choice theory (Price 2000:188). The planner may treat such preference data as unreasonable outliers, branding the respondents as irrational. Some value coefficients in the CBA may easily become biased if the planners exclude or misinterpret the answers from those who express a willingness to uncompromisingly protect the environment.

Much work has been done on the design of stated preference studies to avoid protest responses of various kinds, but the underlying difficulty is that asking people to trade their principles, even hypothetically, is seen as inappropriate and even morally disreputable to some. They are reluctant to choose between something of instrumental value and a truly moral position (Söderholm 2001:489). Ultimately, CBA risks developing into an institutional mechanism that systematically pushes the preferences of a significant group to the background; that is, the part of the citizenry believing in inviolable rights (Spash 2008). Lexicographic preferences do not necessarily receive proper treatment even in alternative decision tools, though. In referenda, for example, a majority of people with weak preferences always defeats a minority with strong preferences.

4. Demands on evaluation technique for use in participatory planning

This section deals with the following characteristics of evaluation techniques, which seem to be attractive in participatory processes. I comment on the points below in the same sequence as they are listed.

- Methodological basis reflecting democratic values
- Transparency
- Procedures to display consequences for each affected group
- Ability to deal with preference change
- Openness to values and preferences articulated by participants in the planning process

A basic premise of CBA is that of consumer sovereignty, meaning that the analysis respects individual preferences. Government decisions should reflect what the citizens want their government to do. 'The will of the people' is a problematic concept, but other things equal, the mere fact that a citizen prefers an option counts in its favour (Richardson 2000:991). In addition, every individual's willingness to pay is given equal weight in the analysis. This gives CBA the flavour of being a fair and democratic analytic tool for preparing collective decisions, even if willingness to pay depends on how the respondent is blessed by the existing income distribution. When CBA is used as informational input to a democratic decision-making process, it can be a problem that the technique is not politically neutral. If lump-sum transfers are not feasible, CBA cannot rank projects without relying on specific normative and controversial assumptions, such as indifference to marginal redistribution of income in society (Medin et al. 2001, Nyborg and Spangen 2000). Moreover, the democratic flavour is diluted by the relatively low score of CBA on some of the other points above.

An evaluation technique can advance transparency in the sense of lifting choice criteria and value trade-offs from inside the head of the planner to a text that is available to the public. Here, however, transparency concerns the ease with which participants in the planning process can unlock the black box of expert analysis and figure out what the algorithms of CBA are really doing, and how the results of the analysis are correctly interpreted. The evaluation technique should use procedures and criteria for valuation that are easily understood and accepted both by lay persons and the political decision-making bodies. The purpose of several computation routines that make CBA hard to penetrate for lay people is to transform quantified environmental consequences from physical units to monetary metrics (Nyborg 2000, Vatn and Bromley 1994). Other algorithms that may be conceived as complicated make adjustment from private to social costs, discount future costs and benefits, monetarize time savings and accidents, forecast future demand, and derive individual preferences from stated preference approaches, such as contingent valuation. Participating lay people who are unable to play any meaningful role in this work may suffer reduced motivation, spilling over on their attitude even when there is eventually some real decision-oriented content to discuss.

The evaluation technique should be general enough to consider the consequences separately for initiators of the project, groups of project users, nearby residents, and workers and others in the vicinity. It is of special importance in controversial planning that evaluation deals properly with those bearing the disadvantages of implemented projects. It would be preferable, when addressing a politically diverse public, if the CBA were flexible and able to highlight the aspects of economic valuation of particular interest to the different stakeholders and affected groups. This need must be balanced against the disadvantage of complicating the CBA by including ever more hard-to-value social and environmental variables. It speaks in favour of CBA that just in situations with many conflicting interests and thus with fragmented presentation of the consequences of the plan, the decision-makers are most likely to request an aggregate assessment: Is the plan desirable for society regarded as a whole?

Preferences are not exogenous to the planning and decision-making process of the project being analyzed, and are not likely to be stable for the time frame in question. For instance, big highway projects in Norway often have a planning period of eight years or more. People do presumably have the capacity to reformulate ends and aims in light of what emerges about the costs and benefits of proceeding with a plan, and their preferences for the various planning alternatives will change accordingly. Such reconsideration is essential to using resources wisely and effectively, but CBA takes individual preferences as given and stable and lacks procedures for incorporating revisions (Richardson 2000). There can be considerable alterations in affected groups' ranking of the planning alternatives without any changes showing up in the CBA. The analysis in effect supposes that all significant practical reasoning has already taken place, or else there would still be room for revision of preferences.

Use of information from the participatory planning process itself should be an invariable rule. It is surely the case that dialogue and deliberation in planning can be distorted by manipulation, lies, threats and other power games, and – consequently – preferences can also be distorted and deviate from the real interests of the person who holds them (Adler and Posner 2000). But the solution is not to ignore preferences articulated in planning forums and place all confidence in preferences revealed by market transactions. Firstly, this is usually infeasible, as some environmental items on the list of costs and benefits are not traded in the market. Secondly, preferences revealed by transactions can also be distorted. There is a huge industry of public relations and marketing aimed at affecting purchasing behaviour and thus preferences.

Self-reflection, response from others, and need to make one's own arguments sound reasonable to others, can make deliberators change their preferences. This is an important political reason for letting extensive deliberation processes precede final decisions, whether they are made by popular vote, legislative assembly, or government agency. Even if deliberation and dialogue do not lead all the way to consensus, the legitimacy of the final decision can be greatly improved, and thus also the willingness of the citizenry to comply with it. The recent trend among scholars is

to recommend that these political rewards be sought through deliberative monetary valuation (Niemeyer and Spash 2001, Söderholm 2001, Spash 2007, Vatn 2009). This approach is an interplay of analytic technique and social deliberation based upon values, interests, and policy options.

Several deliberation techniques have been proposed, such as focus groups, citizens' juries, consensus conferences, and deliberative polls. They have in common that lay people develop preferences about complex policy issues through informed discussion. Planners should not push hard for consensus in the valuation exercise. Conflicting views on environmental values can give useful information to decision-makers, and consensus can be repressive, particularly in communities with cultural diversity and historically excluded minorities. Deliberative monetary valuation in small groups seems to work best when:

- The important interest groups have their representatives in the deliberative valuation
- Countermeasures are taken against manipulation and domination in the small-group process
- Silent parties are encouraged to have their say
- Participants have a common set of rights and capabilities
- Communication between group members is comprehensible, factually true, sincere, and appropriate within the normative context of public planning.

Small-group deliberation faces problems of inclusiveness, representation, competence, and manipulation, so deliberative monetary valuation is no panacea. The deliberative approach can nevertheless answer some of the criticism against contingent valuation: The outcome is not limited by narrow definitions of rationality which result in exclusion of interlocutors' judgments on the suspicion that they are acting strategically, protesting, or just violating the accepted constraints of economic valuation.

5. Concluding remarks

In democracies, the final decision concerning important public plans and projects are made by elected politicians. The political decision can be influenced by the preceding process of policy analysis and planning, however. The paper at hand is about democratization of this process by demanding that analytical tools be designed to take into account the values of involved citizens and address their problems. Rather than having the many engage in the actual policy decision, this democratization asks that planners devise and actively practise ways to recruit and include citizens' views into the policy development and assessment process. More engagement with the evaluation techniques facilitates the partial return of planning and policy formulation to the constituencies (deLeon 1992). The finally enacted policy may not agree with their particular preferences, but for citizens to accede to a political judgment that they have helped formulate is presumably less alienating than

having to accede to a majority that have outvoted them without preceding deliberation.

The Kaldor-Hicks compensation test underlies the recommendations of standard CBA. In the words of Lutz (1995:190) it is 'contaminated with the inequities of the existing income distribution, as well as being blind to notions of human rights and human needs'. In order to centre policy evaluation on human dignity, he defends a three-steps procedure: It starts by testing the project in terms of its consistency with relevant rights, then appraises the project in terms of its impact on basic human needs. Only if the results of these steps are favourable is the project moved on to the third stage of assessing costs and benefits on the basis of market prices and stated preferences. This procedure is in line with the critique of CBA put forward in this paper.

Richardson (2000:1000) suggests that advocates of CBA as a normative standard face a dilemma: if democratic legislatures and elected representative councils at lower administrative levels are legitimate assemblies for setting collective ends, 'then these ends, as worked out in collective deliberation – and not individuals' preferences as revealed in the market or in contingent evaluation studies – should provide the crucial basis of evaluating alternatives'. As the party politics of local councils does not necessarily fully absorb the popular feeling and the interests of those strongly affected by a plan or project, this paper argues for a compromise: The values people hold regarding matters of collective choice can be constructed and articulated through reasoned dialogue and debate with other members of society in participatory and deliberative planning processes (Howarth and Wilson 2006). Deliberative monetary valuation is a promising set of hybrid techniques combining economic and political science knowledge to clarify participants' preferences and insert them into analytic evaluation.

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AESOP 2012 ANCARA, TURKEY
9. HERITAGE, URBAN CULTURES, URBAN DESIGN

Nightscapes: from the urban design to the urban cultures

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KEYWORDS
Night, urban design, urban cultures, Lisbon

ABSTRACT

Research of spatial practices related to urban design tends to be concentrate on processes and events during day time; the urban design and spatial practices at night has been marginalized and underexposed in geographical studies. With this paper we pretend to discuss how the urban design could promote new opportunities of development in some areas of the cities at the night and create new forms of urban cultures. The central question is how urban design can stimulate the use of the space at night and play a determinant role on the social construction of nightscapes and new urban cultures?

We start with some examples of Lisbon where urban design has been an opportunity to develop new economic activities and to stimulate the old economy with new forms of consumption, attracting residents from other parts of the city and tourists, particularly at night. In these areas the pedestrian movements are very important and give life at street level. The night landscape is very different from the day landscape. There are two cityscapes and the nightscape is more vibrant, full of life. The old quarters, with cozy streets, and the traditional viewpoints have a key role in these dynamics.

At the same time, in Lisbon, we have some developments of night life in restrict places, like old factories or port installations, with impact on the economic developments of these areas, but with little effects on people movement in the streets. Travel with car is more important and the existence of places to park is strategic to the success. In some cases the heritage has an important role in the selection of the places and the revitalization of old urban areas.

The work of a research project about the night in Portugal (*Night: Opportunities and Innovation in the Territory* PTDC/GEO/64240/2006) demonstrate in the case of Lisbon that the night-time economy and the processes of production, reproduction and consumption have create new opportunities to some areas and have transformed the urban nights in practices and discourses, creating a new urban cultures.

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1. Urban nights a lost and unexplored space-time in literature

Research of spatial practices related to urban design tends to be concentrate on processes and events during day time; the urban design and spatial practices at night has been marginalized and underexposed in social studies, in general, and in geographic studies, in special.

The night has been a neglected dimension of urban life but has already led to remarkable works such as Anne Cauquelin (1977) *La ville la nuit*, Luc Bureau (1997) *Géographie de la nuit*, Luc Gwiazdzinski *La ville 24 heures sur 24 heures* (2003) and *La nuit la dernière frontière de la ville* (2005), which contributed to a multidisciplinary approach of this space-time. Generally in the literature originating in the countries of Francophile tradition, the night is seen as a territory to discover, with a character closely related to the arts and creativity.

On the other hand in the United Kingdom scientific literature, the night economy is limited almost exclusively to trade in alcohol, sex, drugs and gambling. The regeneration of many of the cities centers, that had lost vitality with the end of the economic model based on manufacturing industry, is often based on investments that promoted the growth of economic activities related to the consumption at night (O'Connor 1997, Helms 2008). According Marion Roberts (2009) the UK planning system was constrained by a neo-liberalist insistence on land-use planning in the 1980s and early 1990s, thereby providing the institutional framework for deregulation of the numbers, capacities and types of licensed premises in town and city centers. This had a direct impact on crime level, violence and anti-social behavior. Criminologists have criticized planners for their complicity in this process, but Roberts argues that entertainment uses have been marginal to the social and ecological preoccupations of the planning.

In the literature on urban design are few references about the night and only recently appeared some works thinking about the issues of the city at night.

The works of Elizabeth McDonald and Michael Larice (2006) *The Urban Design Reader* and Matthew Carmona and Steven Tiesdell (2007) *Urban Design Reader* contain an anthological selection of classic and contemporary texts, concerning various aspects of urban design, but no one spoke about the urban night. With contributions from Howard, Le Corbusier, Lynch, Jacobs, Hiller, Koolhaas and Sorkin these works provide perhaps the most important historical material of the urban design, from the foundations of the urban design to the alternative agendas focused on lively places, strategies for reinforcing local physical identity and the creation of memorable places. These books provide essays about sprawl, density, community health, public space, everyday life, sustainability and urban resiliency. Never in any of these texts occurs a discussion or a reflection about the necessity of thinking in urban design for a city that can have life 24 over 24 hours, the need of a good urban design to support cities lived continuously, day and night. Urban design as a form of place making has become an increasingly

significant area of academic studies, of public policy and professional practice, but without consider the space time night it is not possible to implement a complete work.

The books edited by Alexander R. Cuthbert (2007) *Designing Cities: Critical Readings in Urban Design* includes essays by Manuel Castells, David Harvey, Christian Norberg-Schultz, Peter Marcuse and others. The organization of this work promotes a particular theoretical paradigm, suggesting that urban design is best viewed as a branch of spatial political economy. The material is assembled in categories with an associated guiding question for each. The categories are: theory, history, philosophy, politics, culture, gender, environment, aesthetics, typologies and pragmatics. For example the questions: philosophy - what systems of meanings informs the urban process? politics – what value systems and compromises are involved in the design of the cities?;, culture – how do society and culture give rise to urban form?. Also here the night is never a matter of discussion, even when considering the case of Las Vegas (Chaplin, 2007). The analysis of Las Vegas design urban are related to the development of urban entertainment centers, where consumption is the new production, and where "cultures industries" replace manufacturing and the tourism market are the objective. Despite everything that is described, including the series of shows that make Las Vegas a collective spectacle, is more relevant at night, the fact is that the analysis don't refer any difference in how we live day or night in Las Vegas Strip. It would be interesting to discuss why space inside casinos is designed with the absence of natural light. The objective is to make to believe that it is always night? If the city is conceived like a theme park ("safe, clean, predictable yet diverting" (Chaplin, 2007: 349)), casinos contain the greatest illusion, eternal night, which only ends when we want.

Starting from the idea that the "personality of the city's night became the detonator of its attractiveness in the context of international competition between cities" Marc Armengaude, Matthias Armengaude and Alessandra Cianchetta (2009) *Nightscapes.* show how the night redefines the framework of thought and action in the realm of the imaginary of territorial planning and the practice of urban design. The aim of the authors is to arrive at contemporary urbanism based on perceptual experience. In the first part Marc Armengaude reflect about the originality and value of the experience of nocturnal landscape for thought and creativity, the nightscape as an experience, a symbol and representation. In the second part Matthias Armengaude define infrastructures as the nocturnal landscape´s real scale and strategy. The infrastructural nature of the night because only the night as revealing the scale of the territorial network. In the third part Alessandra Cianchetta presents some examples of nocturnal architecture and landscape: urban lighting projects, architectures in the night and temporary nocturnal cities. To these authors space, scales, speeds and time are dimensions with different magnitudes on day or at the night. At night the city is still very soft, vulnerable, most spaces are not planned to be used. We need to invest, plan, imagine, relocate, revitalizing or simply leave sleep. As an

element ephemeral night calls of different interventions of the day, more light, playful and dreamy.

2. Methodology

The main sources of information were surveys to 1) people in public spaces of the most important areas of night life in Lisbon, and 2) people, in general, in several areas of the country and 3) 25% of municipalities of Portugal (from the research project *Night: Opportunities and Innovation in the Territory* - PTDC/GEO/64240/2006). We surveyed people to see how they perceived the places where they stay at the night. We surveyed municipalities to understand the role of local power on planning the territory at the night.

Another main source of information is the direct observation. Many hours walking and watching how people use the streets, plazas and the best view points of the city. Many hours filming and photographing them, analysing films, photos and data, and quantifying what we observe about people using public spaces in order to specify principles for good pratices.

Secondary information sources were consulted, including academic, professional and the popular press. Websites were also explored. The late night economy in Lisbon was examined by interviews with police, council and employees in the late night economy.

3. Urban nights a lost and unexplored space-time in planning

In Portugal almost all of the municipalities don't have figures in planning related to the night. A survey to the local planning authorities in Portugal, found no planning actions related to land use dedicated specifically to the period of the night (source: surveys to municipalities - *Night: Opportunities and Innovation in the Territory* PTDC/GEO/64240/2006).

Some decisions can occurs when some conflicts happens, like the hour of close the nights activities or restrictions on the location of economic activities that produce noise at night. In some cases there is a ghettoization policy of economic or cultural activities with a higher incidence during the night, removing them from residential areas, and locating them in more peripheral areas. Sometimes in areas whose economic activities have declined, as former industrial or storage sites.

Even in the field of public lighting only in very specific cases there have been light-plans for restricted areas. The first action in lighting planning has occurred for over 20 years and has covered the historic center of a city classified by UNESCO World Heritage (Évora). Process of this dimension was not repeated in other cities. The normal is the development of projects for small areas.

1. Planning related to the space-time night by type of municipality

	Rural Areas	Middle Towns	Metroplitan áreas
Noise	-	X	XX
Electronic surveilance	-	-	X
Lighting	-	X	XX
Nighlife	X	XX	XXX
Land use	-	-	X
Activities night schedules	-	-	X

Source: Surveys to municipalities 2008-2010 from the project *Night: Opportunities and Innovation in the Territory* (PTDC/GEO/64240/2006)

In recent years the municipalities of the largest cities (Lisbon and Oporto) decided to install electronic surveillance in areas with more leisure at night. Although still very few municipalities reveal concerns about issues related to space-time night, these are more evident in areas with higher population density or metropolitan areas (Table 1).

In the same survey all municipalities have said that make annual investments in cultural activities, entertainment and leisure with particular importance of which occur at night. In some cases they are regular activities in municipal facilities such as theaters, in others there is a concentration of activities in the summer or at the time of the annual municipal festivities. The support for the nightlife often occurs by the incentives to local associations that produce annual traditional festivals. A survey of residents in different regions of Portugal show that regardless of age, education level, type of work or place of residence all people surveyed said they go out at night for leisure at least several times a year (Table 2). The frequency with which people go out at night for leisure increases with the level of urbanization.

2. **Reasons to go out at night by type of local of residence**

(%)	Rural Areas	Middle Towns	Suburban Metroplitan áreas	Lisbon
Work	10	19	28	12
Family	15	31	35	22
Leisure	100	100	100	100
Shopping	5	56	87	25

Source: Surveys to persons 2008-2011 from the project *Night: Opportunities and Innovation in the Territory* (PTDC/GEO/64240/2006)

In the document that founded the National Policy Planning (Programa Nacional da Política de Ordenamento do Território - www.territorioportugal.pt/pnpot/) there is no single reference to the space-time night. The National Policy Planning is the instrument of territorial development of a strategic nature that sets out the main options of relevance to the organization of the national territory, constitutes the reference framework to consider the elaboration of other instruments of territorial management.

The night, though, has still remained an unknown space-time, a kind of unexplored territory, where politicians and scientists have made little investment. The blackout and the dark appear frequently associates to the absence of life, the time in suspended, when nothing can be done. But the social changes and techniques of the last decades had taken significant alterations in the way as we live the night. The activities that we associated with the day are each time more present in the night. The night already does not correspond to a suspension of the time. The number of people who study, work or play in public places at night continues to grow.

4. Urban design, opportunities of development and the social construction of nightscapes

With this paper we want discuss how the urban design could promote new development opportunities in some cities areas at night and create new forms of urban cultures. The central question is how urban design can stimulate the use of the space at night and play a determinant role on the social construction of nightscapes and new urban cultures?

The work of a research project about the night in Portugal (*Night: Opportunities and Innovation in the Territory* PTDC/GEO/64240/2006) demonstrate in the case of Lisbon that the night-time economy and the production processes, reproduction and consumption have create new opportunities to some areas and have transform the urban nights in practices and discourses, creating a new urban cultures. The urban design of this areas are or not a crucial role in this process?

In Lisbon the areas with more life at the night are filled with persons who come from outside the municipality. The aging process of resident population of Lisbon is very intense. In 2011 the resident population aged 65 and over reached 25% in Lisbon (the national average was 19%). The resident population aged between 15 and 24 years did not amount to 9% of the total (the national average was 11%). So Lisbon by night welcomes people that during the day don’t have place in the town, because they don’t have conditions to work or to live there.

According to a survey[2] conducted in several locations (Fig. 1) of the night in Lisbon the majority of the respondents resided outside the city of Lisbon (Table 3). However this was the place of work or study for 57% of the respondents and the municipality first chosen for the night leisure (75%). The fact that over 40% of respondents are studying in higher education justifies the relevance of Lisbon as place of study. The municipality of Lisbon concentrated almost all institutions of higher education in the Metropolitan Area of Lisbon.

3. Lisbon night: places of residence, work, study and leisure

%	Lisbon	Others in MAL	Others out MAL
Municipalities of residence	27,3	62,1	10,6
Municipalities of workplace or study	56,6	36,4	7,1
1st municipality for leisure at night	74,6	23,3	2,0

Source: Surveys to persons 2010 from the project *Night: Opportunities and Innovation in the Territory* (PTDC/GEO/64240/2006)

When asked about the reasons for the choice of the places to go out at the night we find the main reason was “a very lively night” (72% of the responses) immediately followed by a “high probability of finding friends” (68% of the responses). Safety or proximity to the place of residence had no significance (less than 12% of the responses).

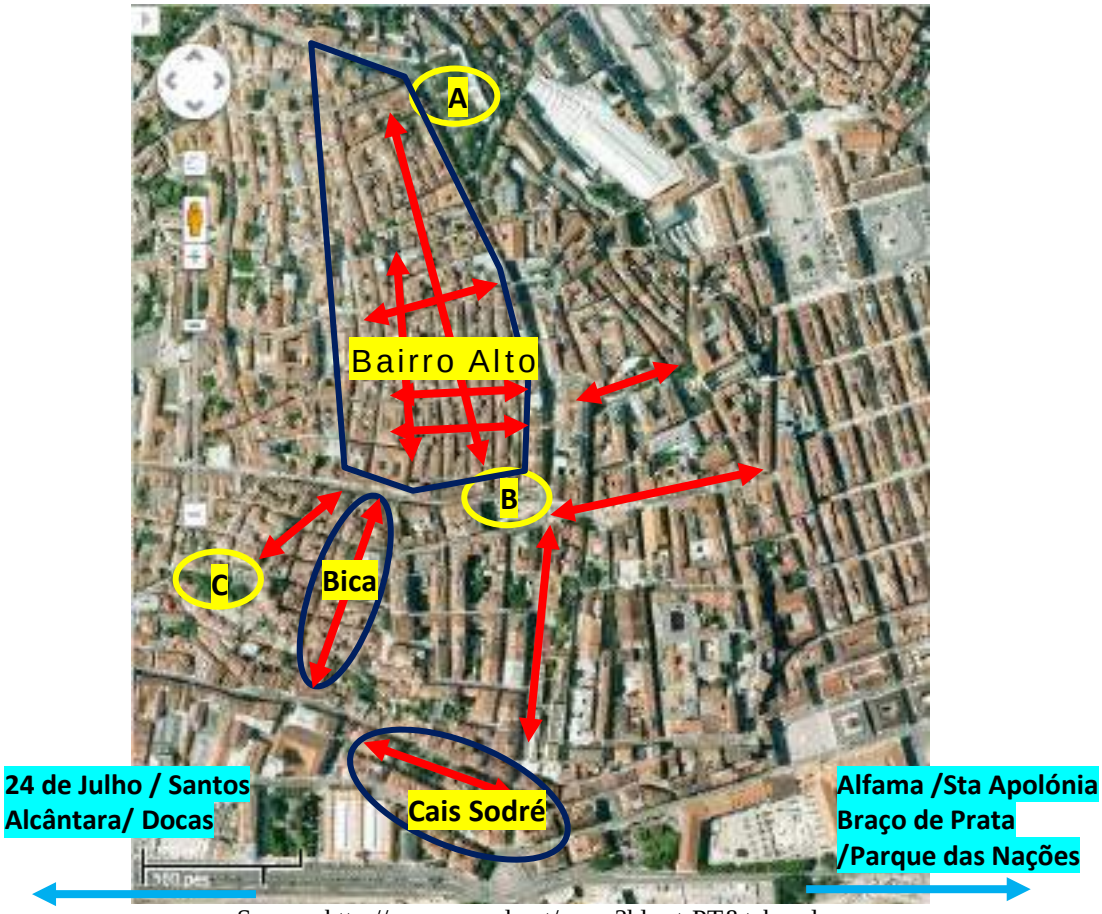
The level of lively of the night depends of several aspects, but the most frequently mentioned were being freely in public, drinking, smoking, walking or talking (78%). The existence of bars and clubs is important but not decisive (39%). The existence of restaurants is even less relevant (32%). The existence of specialized commerce that keeps open late is not a factor of attraction for these respondents (15%). The proximity of spaces such as theaters and art galleries also has no significant impact on the decision to choose this or that place at night (10%). But the existence of certain indoor concerts was very relevant to the presence of these persons (57%). The conditions for "stay" in public spaces are the most important aspects for the choice of places to go out at night.

And what are these conditions: streets with low traffic or completely closed to traffic; streets where are ease and secure walking; good accessibility by public transport or in parking facilities; spaces integrated into traditional neighborhoods where the housing function continues to be relevant and where some more traditional outlets sell at reduced prices, drinks and food until hours later; the existence of pubs or

[2] Survey of 180 randomly chosen people in different places of the night in Lisbon: Bairro Alto; Santos; Santa Catarina and S. Pedro de Alcântara.

restaurants, but also clothing, personal services with hours that extend into the night and give to these neighborhoods the air of spaces with life.

Figure 1- Main area of the night in Lisbon



Source: http://maps.google.pt/maps?hl=pt-PT&tab=wl

A - S. Pedro de Alcântara (viewpoint and public garden)
B - Camões / Chiado
C - Santa Catarina (viewpoint and public garden)

Main lines of pedestrian circulation
Others places and directions of the night

The physical characteristics of the spaces can improve the success of the night life. Bairro Alto (Fig. 1) is the case with more longevity and success on the night of Lisbon. It is a traditional neighborhood in the old city center. The resident population is elderly, but has been rejuvenated with the rental homes to foreign students and the development of luxury real estate projects. Bairro Alto has narrow streets with significant slope in some cases. The undulating shape and the more or less straight perpendicular paths contribute to a sense of territorial control that helps to circulate in the busiest nights. In the interviews are often referred

expressions like "we can see the confusion and cut to other way" or "when BA is full, we can always go out and avoid confusion". The narrow streets closed to non-residents traffic, become welcoming to visitors. From Thursday to Saturday thousands of visitors arrive to this area at the night.

Bica (Fig. 1) was an extension of Bairro Alto, but in this moment have a specific life with the presence of lot artists. This area is focused on one of the steepest streets in Lisbon. In this street during the day is one of the traditional lifts, but at the evening is filled with people run way from the excesses of the Bairro Alto. The excitement of the night results from the combination of bars that have opened recently and old associations and local communities. Once again the absence of traffic, the integration into traditional neighborhoods and the renovation with new functions (bars, restaurants and art galleries) are very important to the dynamics of the night life in this area.

The success of spaces like the gardens and viewpoints of Santa Catarina or S. Pedro de Alcântara (fig. 1) is due to the fact that they are close to Bairro Alto. They are large public gardens, with facilities such as cafes and street furniture like tables and places for people stay seated. In general they are the places where the night ends. After Friday or Saturday nights, the cleaning services of the municipality collect hundreds of empty bottles in these spaces.

The Cais do Sodré (Fig 1) near the Tagus River keeps more marginal activities particularly related to the practice of street prostitution. Because of this the commercial prices are lower than in other areas around. What has been stimulating to the location of successful activities that integrate, renew and create new dynamics in the area. Thus we find the theater company Casa Conveniente (House Convenient http://casaconveniente.pt/), Music Box one of the most innovative music place in Lisbon (http://www.musicboxlisboa.com/), and new spaces of a bar which share the street with the old activities.

The success of these night areas can be related to an urban design sensitive to human needs: cozy streets are comfortable even in the winter; physical format make the space functional; a strong relationship between art, culture and leisure; an economic dynamics associated to the food and drink; ease access to transportation systems. The fact of local resident use the space creates more sociable places. The presence of historical and traditional elements, the human scale development or the design of built environment may not determine human behavior but can have powerful, positive influences on human beings (Armengaude, Armengaude and Cianchetta, 2009).

The bibliography of other cases (Helms, 2008; Roberts, 2009; Talbot, 2007) show very negative positions and criticize how badly the built environment fits human needs ugly, impersonal, dirty, dangerous, dysfunctional, race and gender segregate areas dominate many cities nights today. On the contrary the spaces of the night in Lisbon are felt by thousands of users as spaces that belong to them. Despite

the poor hygiene, some conflicts due to noise and disrespect, problems with excessive drinking, that can disturb the peace of the residents and visitors, the night of Lisbon can be classified as peaceful. [In the survey in Lisbon night sites we asked how often have watched situations of disrespect. The dominant response has been not frequent, less than 10% of times.] The older residents have the presence of visitors as something that does not disturb their lives and have become accustomed to their presence. In some cases, may even be to ensure more revenue with the renewal of commercial space and the extension of the traditional trading hours.

The pedestrian friendly streets, the permanence of historic buildings, the presence of residents in public space and the revitalizing economy create spaces that tell to "outsiders" they are welcome and they fell as at home. Urban design has been an opportunity to develop new economic activities and to stimulate the old economy with news forms of consumption, attracting residents from other parts of the city and tourists, particularly at night. In these areas the pedestrian movements are very important and give life at the level of the street. The landscape of nights is very different from the landscape of days. There are two cityscapes and the nightscape is more vibrant, full of life. The old quarters, with cozy streets, and the traditional viewpoints has had a key role in these dynamics.

4. The nightscapes and new urban cultures

The culture of the night in Lisbon in the old neighborhoods of the city center is closely linked to life in public space, walking between the different locations, close but also distant. The night usually starts in the Luis de Camões Square in Chiado (fig.1). The proximity to public transport is very important. This plaza serves as the gateway to the Bairro Alto, is the place of reunion to start the night.

Walk through the streets of the Bairro Alto is a ritual. Rather than stopping at a bar is important to move and find more friends. Access to food and drink is not exclusive of modern spaces, the traditional commerce has adapted to the night life time and ambulant vendors provide goods at lower prices. With the economic crisis there are many who eat and drink at home before leaving, or purchase goods and bring them.

The race and gender segregation is more present inside restaurants and pubs. There are bars and restaurants with more clients from some community, but that does not make the public space more segregated for those who do not belong to these groups. When we ask on the survey if there are spaces from specifics communities in Bairro Alto the answers is always: yes. When we asked if this creates limitations to the movements the answer is always: no.

Noise, litter, graffiti, fly-posting, alcohol, drugs and drug dealing are problems present in Bairro Alto, but they don´t have sufficient importance to create an anti-social behavior. When confusion begins, for disrespect or simply because there are too many people, the tendency is to go out and search a place more calm like S.

Pedro de Alcântara and Santa Catarina. When economic activities close at 2 am or 3 am (Friday and Saturday), people move to other places or try the discos and bares near the river, either in the direction of Santos, Alcântara, Docas de Santo Amaro or Santa Apolónia (Fig. 1).

Outside the old districts in the city center night life in Lisbon comes in a strip along the banks of the Tagus River where the activities take advantage of the availability of space and because they are outside the constraints of the residential areas. The closing times are later and larger parking facilities are more accessible. In some cases there are located in new buildings, but others take advantage of old storage facilities linked to port activities. The night life is more important inside, but some spaces are developed in plane air or with view to the river.

Braço de Prata and Lx Factory are two of the most relevant places of the cultural live in Lisbon with a significant innovation in the night activities. These two spaces have in common: the fact of occupied former factories, become localized at points where accessibility is very dependent on private transport and a strong association between arts, culture and entertainment.

Braço de Prata exists because the financial crisis has failed the development of Renzo Piano project for the area. Braço de Prata is one of the main centers of cultural life in Lisbon, presenting every day performances, conferences, forums and debates, cinema, art fairs or expositions. A bookshop and a restaurant create some dynamic all the day, but the night is the most important moment (http://bracodeprata.net/).

In the case of Lx Factory the space was originally abandoned (http://www.lxfactory.com). The company that own the buildings is waiting for the council´s decision about the zoning plan of Alcântara area and decide to go ahead with the Lx factory project. Attracted by rents of 6 to 12 euros per square metre, about 80 companies (design, architecture, restaurants, advertising, mode, arts, performance, music, technologies, marketing, communication, leisure...) have occupied almost all the available space.

One of the main attractions of Lx Factory is a bookstore - Ler Devagar (Read Slowly) - with more than one hundred and fifty thousand books, is installed in the room of an old rotary that have printed the main newspapers in Portugal. It was considered one of the most beautiful bookstores in the world. With a permanent cultural program and a small space to eat and drink is a great mark of Lisbon nights (www.lerdevagar.com).

In the weekend we can see in Lx Factory parties with thousands people into the vast empty space in the main building of the old factory. Other innovation in Lx Factory is the Open Day event, with live music, film, food, art fairs, expositions and DJ until late. In the Open Day event visitors can enter in all the spaces and know what is happening there. From the start the occupation of Lx Factory was provisional, but that’s a part of the project, the main asset of this project is the ability to use creativity

to produce spaces suited to activities with low levels of investment taking advantage of the environment.

These projects have stimulated the development of new economic activities and renovation of older ones in areas where they are located. The developments of night life have impact on developments of these areas but with little effects on people movement in the streets. Travel with car is more important and the existence of places to park is strategic to the success.

The industrial heritage has an important role in the selection of the places and the revitalization of old urban areas. These places are very important to the development of tourism and cultural events in Lisbon night. Particularly in a context of resident population reduction in the city centre the development of these leisure clusters creates conditions to attract both people and new economic and cultural activities.

When we asked about what persons associated to the night, the answers more frequent are: bohemian, party, fun, mystery, dream, freedom, creativity, rest and sleep (more than 60% of the answers). Almost no one associated the night to responsibilities, work or study (less than 10%). Drinking, drugs, violence and insecurity are associated to the night for who don´t have frequently night life. On the survey to people in the night street of Lisbon these items have less than 20% of the answers with association to the night.

5. Conclusions

In the dynamic of Lisbon nightlife we found a very strong tendency to use public spaces as living spaces, meeting, socializing, shared by residents and nonresidents. The law which prevents smoke indoor stimulated the development of outdoor terraces. Also traditional close spaces like restaurants and bars tend to open themselves occupying spaces in the street for their clients.

In the neighborhoods of the historic center with narrow streets and no traffic make the stay in public spaces safe and cozy. The thousands of visitors who circulate in the Bairro Alto, Bica and Cais do Sodre feel safe and are not felt by residents as threats. Despite the trash, noise and confusion in some places there are always "islands" of peace that are used as alternatives.

On the banks of the Tagus the night spaces are design to live the life inside. But this inside is relative, the development of the spaces take advantage of the quality of the climate, mild all the year, and the quality of the landscape, and have generous areas at open air. Here more than the urban design is the natural characteristics and the proximity of the river that contribute to the quality of night life. The music program could have some influence on the attraction of clients, but the quality of the places could be sufficient.

Other important aspect of the night life in Lisbon is the strong association between arts, culture and entertainment. Live music is present in many spaces of the night. Cultural events like art exhibitions, concerts and street entertainment are also very common.

The nightscapes in Lisbon is associated to the possibility of chose, be free, be alive, with friends in the street. The urban design can stimulate the life in the streets with news forms of consumption, attracting residents from other parts of the city and tourists. The old quarters, with cozy streets, and the traditional viewpoints has had a key role in these dynamics.

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Revitalization Strategies in Iranian Historical City Cores
The Case of Shiraz

Azadeh Arjomand Kermani[1], Eric Luiten[2]

Abstract

The issue of cultural heritage preservation is more challenging in developing countries than in other parts of the world. In societies eager for progress, the modern European cities are regarded as the most desirable reference for a high quality urban environment. Urban settlement transformation in the developing world was very slow before the industrial revolution but old urban fabrics experienced a significant structural transformation with commercial, economical, social and cultural changes.

During the last fifty years, Iran has had numerous experiences in various scales and subjects of urban design in the context of historical city parts, ranging from urban renewal projects to urban regeneration and rehabilitation projects. Most of these have not been actually successful, and unfortunately no lessons have been learned from those failures.
The mutual strategic aim in all projects was to reach out into more interesting communities that inhabit the old urban area; these communities can help the whole city to provide better facilities for more residents. This goal would only be achieved by creating a new balance between conservation and development. Urban design strategies that illustrate these specific principles and methods should be developed.

This paper attempts to identify major approaches to revitalize Iranian historic cores. It focuses on ways to revitalize traditional structures, patterns and values in the process of regeneration of Shiraz; one of the most historical cities in Iran. It starts with a brief discussion on the history of large-scale interventions in Shiraz and its key stages of transformation. Rehabilitation projects of *Sang-e Siah* and *Shah Cheragh*, two major historic neighborhoods in the city center of Shiraz are described and analyzed. The main successful results and policies in these two projects are defined and shortcomings and possible solutions are discussed in the last section.

1. Introduction

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The modernization movement in Iran started with Qajar king's travel (Naser-ed-Din Shah) to Europe in the 1870's, but it was during the Reza Shah period (1921-41) that the idea got momentum. The European influences that had been filtering into Iran since the 16th century finally gained ascendancy and the country underwent a phase of intense westernization.

Reza Shah's urban modernization led to changes not only in cultural patterns of urban life and the economic structure of the country, but also in spatial organization. He attempted to modernize major cities by driving a network of long straight roads through the heart of the urban fabric. Construction of urban highways and boulevards intensified the urban circulation system from the 1950's during the Second Pahlavi era as a sign of modernization (H.Bahrainy – 2007). Wide streets with free access to traffic and different parts of the city became an apt place for shops and commercial spaces following the preference of both shopkeepers and consumers. This has caused maintenance and exploitation problems for the old Bazaar structure.

The result was a radical heterogeneity in major historical cities because old city cores had been generated by different social and environmental circumstances and were not capable of accommodating the requirements of a modernized society. Large areas of most old urban centers are becoming desolate wastelands of empty stores and buildings which are hostile to a vital society. Regeneration of these urban areas will help the whole city to function better.

2. Shiraz formation and transformation

Shiraz, the sixth largest city in Iran after Tehran, Mashhad, Isfahan, Tabriz and Karaj is the center of Fars province in southern Iran. The city is located 895 km south of Tehran and 100 km north of the Persian Gulf.

2.1 Shiraz transformation before *Safavid* period

The earliest reference to the city, as *Tiraziš*, is on *Elamite* clay tablets dated to 2000 BC found in the south western corner of Shiraz city (Cameron 1948). According to some Iranian mythological traditions, it was originally erected by *Tahmuras Diveband*, and afterward fell to ruins (Conder 1827).

Figure 1. Shiraz; Physical structure of the city in 12th century A.D

Although the foundation of Shiraz was before the Islamic period, the city became the provincial capital only in 693 A.D, after the Arab armies

conquered *Estakhar*, the nearby Sassanian capital. As *Estakhar* fell into decline, Shiraz grew in importance under the Arabs and several local dynasties.
The *Buyids* (945-1055) made it their capital. Although Shiraz was spared destruction during the *Mongol* invasion, the town was devastated in turn by *Timur* (1387 and 1393), by great floods in 1630 and 1668, by the Afghan invaders in 1724, and by earthquakes which partially destroyed the city in 1789,1814, 1824 and 1853 (Lockhart 1939; Clarke 1963; Wilber 1975).

2.2 Shiraz transformation until 1925

During the *Safavid* period (1502-1722), security and prosperity returned to Iranian cities and was maintained for about two centuries. The Governor-general of Fars put great effort in beautifying Shiraz. He copied Shah *Abbas*'s famous *Chahar-Bagh* at Isfahan" (Lockhart 1939; Arberry 1960) and constructed a magnificent palace in the great square.

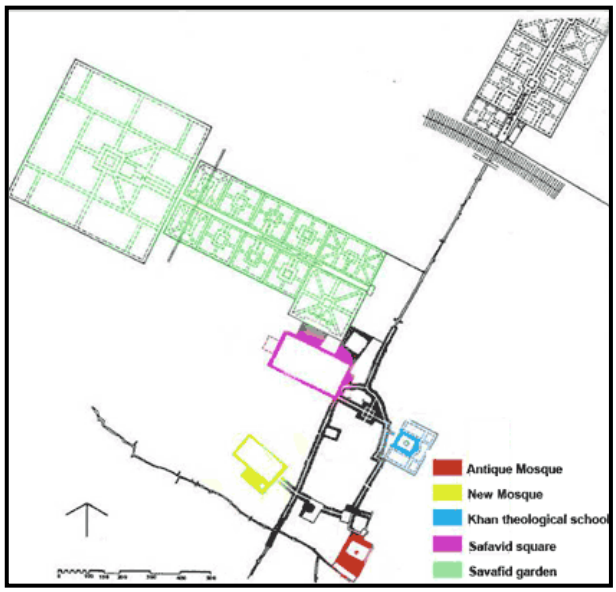

Figure 2. Shiraz; Physical structure of the city in 16th century A.D

Shiraz was initially circular in shape, however the regular pattern of the city soon changed to an organic structure like other Iranian cities, comprising the main elements of such cities. The form of the city stabilized in the 15th century and its shape from that time until the 20th century exhibited a fair representative of a typical traditional city before modernization (Karimi 1998). Shiraz's decline started with the Afghan raids in the early 18th century, several earthquakes, and an internal uprising. In the middle of the eighteenth century, the city again came back to life and splendor "under the benevolent attention of a regent-ruler, *Karim Khan Zand*" (Wilber 1975; Boyle 1978). Twenty-seven constructions in Shiraz, of which sixteen remain today, are attributed to *Karim Khan Zand* (Scarce 1991).

Although the prosperity of Shiraz was seriously interrupted by the decline of the *Zand* dynasty (1794) and Tehran took the place of Shiraz as the Capital from this period, Shiraz remained one of the most important provincial cities during the *Qajar* period.
The map of the city in this period shows that the old district is clearly the most integrated place in the city, which coincides with the geographical centre of the city as well. The city consisted of eleven distinct quarters (*mahallas*), inhabited by separate communities with powerful social cohesion.

2.4 Shiraz transformation after 1925

The metamorphosis of Shiraz into a modern city began with the attempts of Reza Khan (1925-1941), the founder of the Pahlavi dynasty (1925-1979). After the first period of modernization the growth and development of Shiraz became radically different from its traditional pattern. A regular pattern of modem networks was superimposed on the historic core as the common pattern of expansion, and the organic shape of the traditional area has been trapped inside the enclosed and segmented historic core.

Apart from the influences of many political and economic changes since World War II, the intensified forces of modernization and industrialization transformed the city in the late 1960s and the 1970s. The old core turned into a very small part of the sprawling city, suffering from decay and lack of maintenance. Social, political, and economic changes during the post-revolutionary period, particularly during the first two decades after the revolution (1979-1997), also affected the fate of the old core. This was particularly executed through the direct interventions of the state and a constant desire toward unbridled development and modernization despite the apparently traditional nature of the government.

Figure 3. Expansion of Shiraz during 1960, the historic core gradually became a minor part of the sprawling city and lost its physical, social, and economic significance.
Source: Shiraz municipality

Master planning in Iran started in the 1960s. Before this era the act of road building was on the agenda in different cities, but these acts did not follow any predetermined plans. The decisions were rather casually prepared depending on the time and location. The need for master plans started to emerge when cities grew enormously, and when the country was introduced to the achievement of Western planning methods. These master plans had three important components: road network, land use, and building density or heights. Through the control of these three elements, the master plans attempted to achieve their initial goals.

After the first program of road building in Shiraz, the first comprehensive plan was produced by Tehran University, department of architecture in 1966. The plan produced

by these planners was very radical. A rectangular grid of roads designed for cars has been superimposed on the older grid without the slightest regard to the historic evolution and older patterns of growth. The usable land area for different urban factors increased from 22 sq. kilometers in 1962 to around 80 sq. kilometers in 1992.

In reality the comprehensive plan was not fully implemented. Only some of the major streets proposed by this plan were built. New streets created by this plan together with the ones created before were enough to influence the whole integrity of the city. The second master plan was prepared by *Naghshe-Jahan-Pars* Consultants about two decades ago.

The autocratic control of the decision-making, policy formulation, planning and design exercises by the central government and its agencies, together with access to financial resources made the instrument of authority a determining factor in the implementation of large-scale redevelopment oriented programs. All these schemes involved the modernization of the pre-existing urban structure of the historic center by means of cutting wide and straight avenues through its densely built-up quarters. However, since 1997, several political and administrative reforms at national, provincial and local level changed this situation and provided a basis for the emergence of a new series of regeneration and conservation activities in this area.

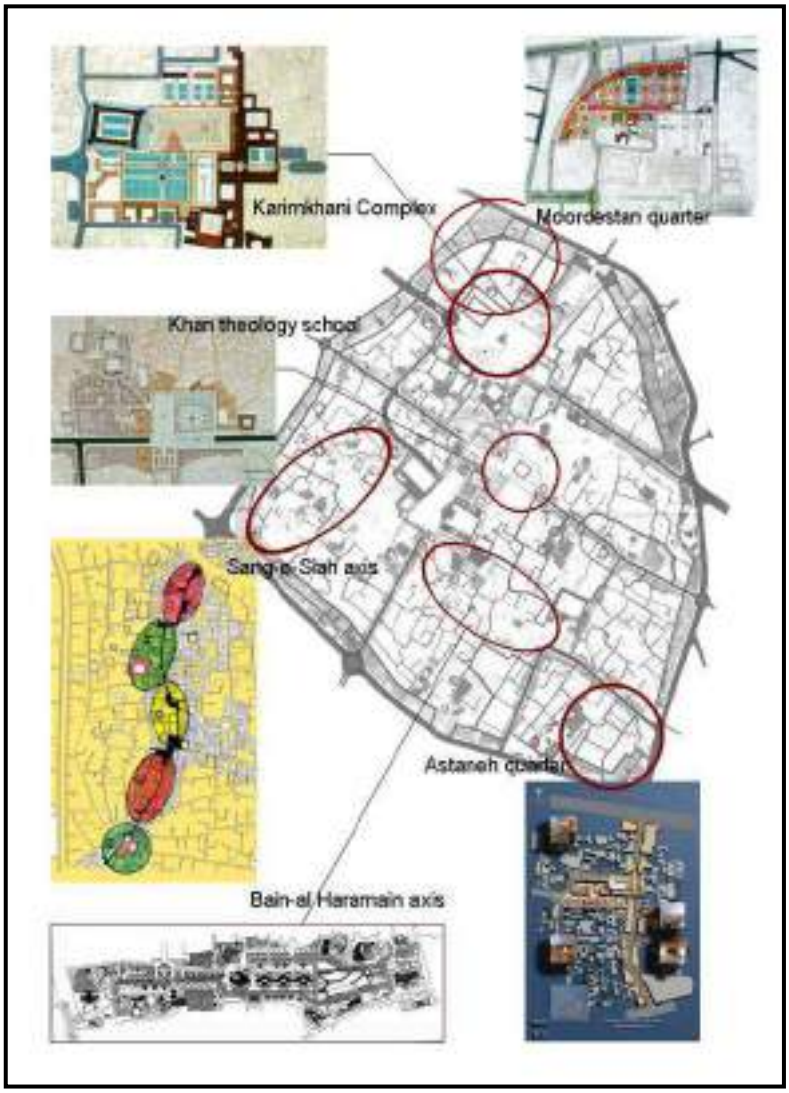

Figure 4. The Comprehensive Plan for the historic core of Shiraz. (Naqsh-e-Jahan-Pars 1998)

According to the above discussion, four key periods are identified during which the historic core was under pressure from various waves of renewal and redevelopment including: *Zand* dynasty [1750-94], Modernization under Reza Khan [1920-41], the period of city sprawl in the late 1960s-1970s, and the first two decades after Islamic

Revolution of 1979, the so-called post-revolutionary period (1979-1997).

3. Case studies

During the past decades, the historic city centre has suffered from depopulation, extensive deterioration, several legal impediments and official obstacles, lack of investment, high crime rates, social fragmentation, poverty, deprivation and inefficient urban management. However, since 1997, several political and administrative reforms have changed this situation and provided a basis for the emergence of a new series of regeneration and conservation activities in this area. In this section two major projects that have been designed for the old city of Shiraz are discussed.

3.1 Sang-e Siah project

The study area is located at the heart of an urban block on the west side of the historic core which encompasses the old quarters of *Darb-e Masjed*, *Armenian Sar-e Bagh*; as well as the main parts of Shah Square, *Sar Dezak*, and the Jewish quarters. The names of the neighborhoods are still used as general geographical locations, but the corporate structure of individual quarters no longer exists.

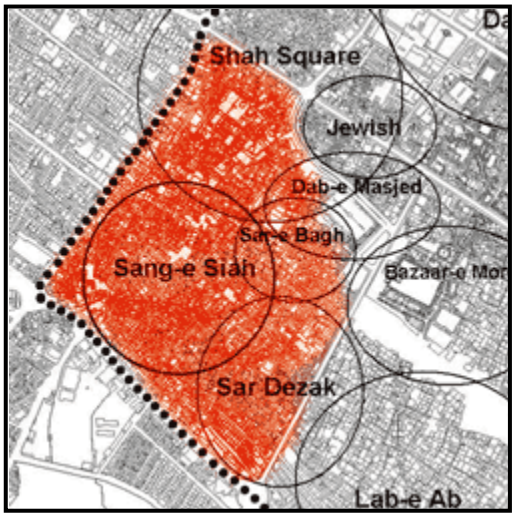

Figure 5. The boundary of the urban block, which contains historical quarters

3.1.1 Site analysis

The imposed avenues of the 1920s and 30s disintegrated the social and spatial networks of the old quarters and formed a series of large urban blocks which contain parts of historic quarters. This block covers approximately 70.4 hectares and contains over 2476 residential units, with 15435 inhabitants (18.74 percent of the historic core area) (Naqsh-e-Jahan-Pars 1998; Pardaraz 2003). Residential area is the dominant use (62%). The second most dominant use is access network with 19%. Most commercial uses are located along new streets on the border of the urban block. There are also four local commercial centers, literally *bazarcheh*, in the proximity of the historic neighborhood centers which mainly provide the daily or regular needs of the residents of their immediate neighborhoods. The area contains more than 26 religious centers including mosques, local shrines, and theological schools.

Although the spatial dimension of the area has changed to some extent, it still largely retains its traditional layout. There are fourteen monuments listed by the Cultural Heritage Organization, as well as more than hundred unlisted but architecturally

significant buildings (mainly historic residential houses) that determine the quality of this urban context.

The dominant route for pedestrians is "*Sang-e Siah*" axis, the north to south spine, from *Bibi Dokhtaran* tomb to the *Taj-al Din Gharib* mausoleum near the old *Kazeroun* Gate. Although Shiraz is not a pilgrimage centre like Mashhad, mosques and shrines dominate the skyline of the historic core, and are the most noteworthy features of the urban landscape (Clarke 1963). A close examination of the area shows that the major monuments are in close proximity to each other and form five distinctive clusters. They are located along *Sang-e Siah* axis, the main spine of the area.

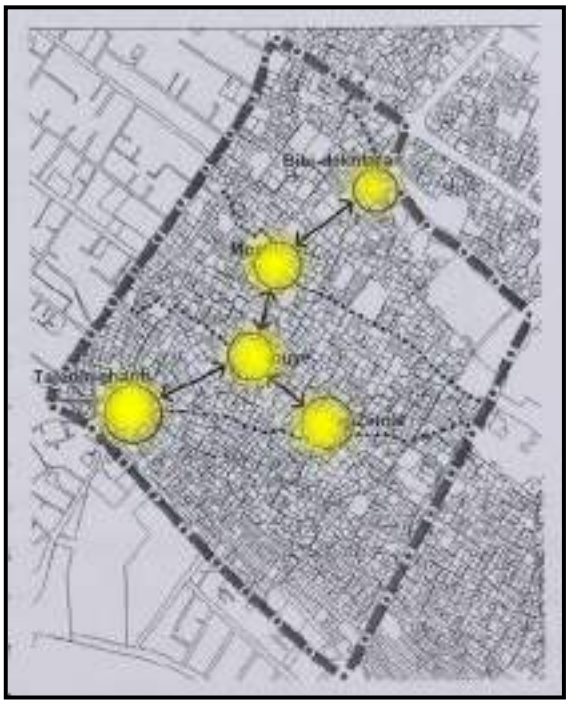

Figure 6. The monuments clustering along the *Sang-e Siah* axis define a heritage corridor which plays a vital role in this area.

3.1.2 Design analysis

The origin of the *Sang-e Siah* Project lies in 1999 when the Council for Historic District approved a proposal presented by the local representative to share the implementing responsibilities of a regeneration program for the eastern part of the historic core, called *Sang-e Siah (Izadi 2008)*. From the beginning, the basis of the project was to be a partnership among the different agencies involved each with responsibility for conservation and regeneration at their respective levels. The *Sang-e Siah* regeneration project has been planned and designed in order to reverse the dramatic conditions in the area.

The manifesto prepared by the Council for Historic District justified protection of the historic environment. It was a guidance note which emphasized the importance of the historic area and its elements. The manifesto (called *maram-nameh*) marked a major step forward in official attitudes towards the historic environment. This manifesto reflected anxiety about the increasingly rapid loss of parts of the historic environment. Nevertheless, it authorized small scale development of ruined buildings and vacant lands into required functions and services for the neighborhoods (Izadi 2008).

At the preliminary stage of the program, the main focus was on restoration of individual buildings and public open space. However, regarding the critical situation of the area, it needed to be complemented and supported by other modes of interventions, such as adaptive re-use, careful urban renewal and even substitution of elements which were no longer viable or needed to be replaced by the new functions.

Historic houses and monuments have been rehabilitated in an effort to revitalize the existing architectural heritage and make them accessible to the local community as well as visitors. The adaptive re-use of restored buildings is considered from the beginning in order to keep the building alive, provide meaning to the physical intervention, make local communities 'own' the building and generate income for future operation and maintenance (UDRO 2001). The program is specifically aimed at attracting investment in the historic urban centers by promoting the re-use of key buildings as a means of encouraging sustainable regeneration of these neighborhoods.

There was an emphasis on a gradual process of physical rehabilitation and economic improvement. The new policy declared that facilitating the gradual rehabilitation of existing residential units through the creation of necessary conditions including the improvement of infrastructures, development of required services and functions, and upgrading of public open spaces.

As can be seen from figure 7, there are five zones identified by the strategic plan including pilgrim and tourist zone (*Bibi-dokhtaran*), local commercial and service zones (*Moshir* and *Haj-zeinal*), cultural zone (*Sibuyeh*) and commercial zone (*Kazeroon Gate*). These five prioritized zones were introduced by the strategic plan, each forming a focus for rehabilitation, upgrading and conservation.

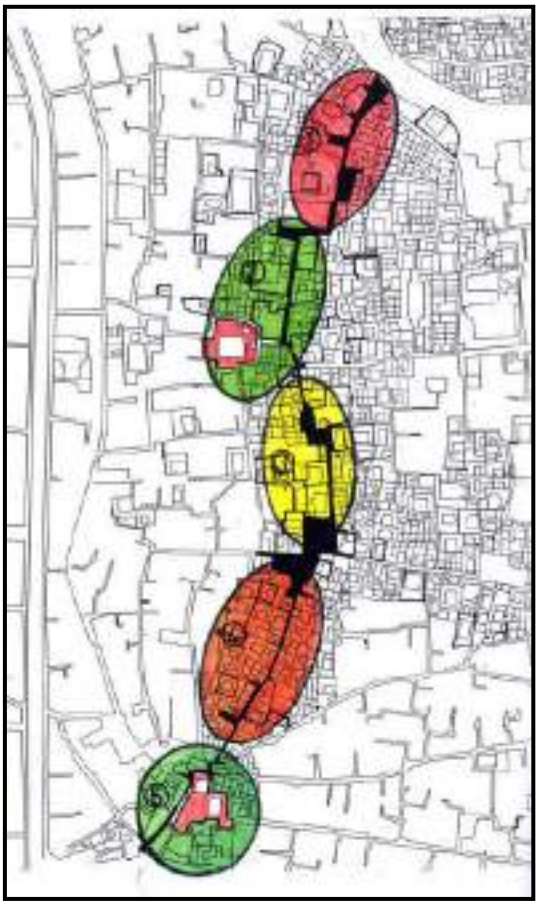

Figure 7. Five zones identified by the strategic plan including pilgrim and tourist zone (*Bibi-dokhtaran*), local commercial and service zones (*Moshir* and *Haj-zeinal*), cultural zone (*Sibuyeh*), and commercial zone (*Kazeroon* Gate). These five prioritized zones were introduced by the strategic plan, each forming a focus for rehabilitation, upgrading and conservation.

With recent social and cultural changes, historic buildings have been subject to extensive changes, alteration and in some cases a considerable amount of damage. The historic houses which were in danger of destruction has been rehabilitated, upgraded and converted in to a local library and cultural centre. These structures are seen not only as monuments and historic building to be preserved, but also as potential focal points that can attract tourists and stimulate the inhabitants to continue or start new activities. In this project, the infrastructure improved, the main access resurfaced, and building facades

were rehabilitated with the traditional patterns particularly those which are located around the newly constructed plaza.

3.2 Shah Cheragh Project

The second case study is located at a very central part of the historic core which encompasses the old quarters of *Bazaar-e Morgh*, *Balakaft*; as well as some parts of *Darb-e Masjed, Eshagh Beig*, and the Jewish quarters. This area is significant for the important monuments that it houses such as *Shah-e-Cheragh*, New Mosque (*Masjed-e-No*), *Hakim* theological school, Antique Mosque (*Masjed-e-Atigh*), *and Seyed Alaeddin Hossein* shrine.

3.2.1 Site analysis

The project area covers approximately 61.2 hectares and contains over 1000 residential unit, with 6000 inhabitants (7.23 percent of the historic core area) (Naghsh-e-Jahan-Pars 1998; Pardaraz 2003). Residential is the dominant use (31.1%). Apart from access network, shrines and religious activities are the second most dominant use with 14.8% in total. There are also short parts of the local bazaar which mainly provide regular needs of pilgrims.

In 1995, imitating Tehran municipality in its *Navab* project, the mayor of Shiraz introduced a comprehensive redevelopment scheme joining two religious complexes, *Seyed Alaeddin Hossein* and *Shah-e Cheragh* called *Bein-al-Haramain*. Between 1995 and 1996, Shiraz municipality demolished 4.95 hectares of the historic core to create a new axis between those two religious centers. Much of the urban fabric was demolished without any consideration for the local culture and architectural heritage in this area. The guiding principle was the construction of a broad, straight street (450 meter long and 110 meter wide) which would allow the circulation of traffic right through the historic urban fabric. It was an ambitious plan which not only failed to provide income for the municipality, but also wasted the resources of the municipality.

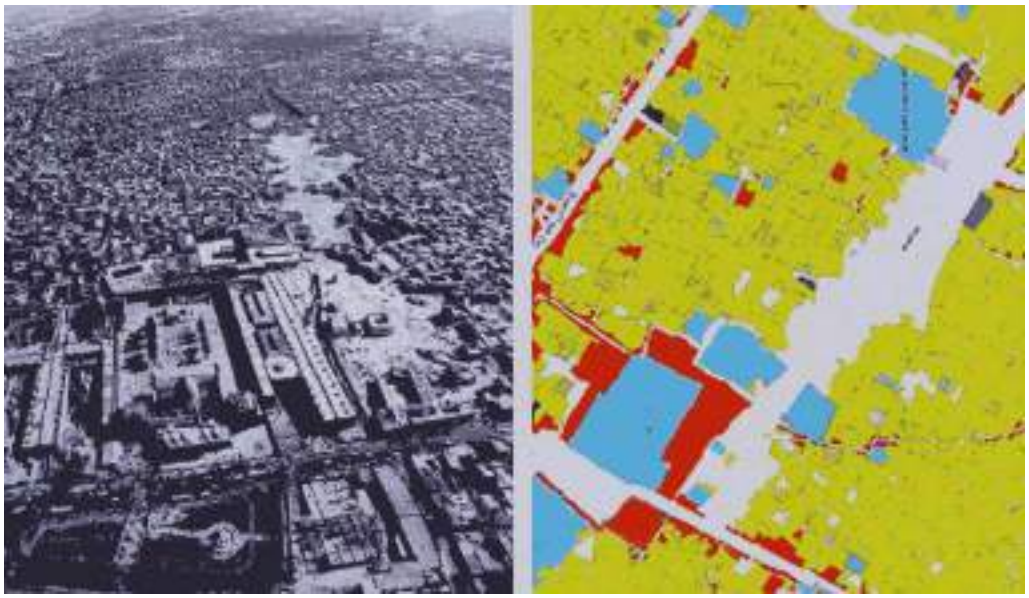

Figure 8. Comprehensive redevelopment scheme of *Bein-al Haramain*, Shiraz, 1995- 96
Source: Iran Surveying Organization (left photo), 1996, Pardaraz Consultant, 2003 (right map)

The comprehensive redevelopment scheme for *Bein-al Haramain* was not an isolated case which was superimposed on the historic urban fabric during this period. The pressure on the *Shah-e Cheragh* Shrine and *Sayyed Alaeddin* complex generated by a mass pilgrimage, which require facilities and new spaces, persuaded their administrators to seek an extension scheme in order to provide wider open spaces around the shrines, the enlargement of old structure and preparing modern facilities.

The financial abilities of these institutions, which were supported by the religious authority particularly after the revolution, enabled these agencies to manage large scale redevelopment projects. The integration of the shrine with associated functions and surrounding buildings was the prime objective of these redevelopment schemes. However, in practice, the main factors of change were the increasing demand for vehicular access and improving circulation, combined with large scale commercial development. These redevelopment schemes transformed the vast area of the historic urban fabric around these pilgrimage centers.

Although the spatial structure of the area has changed to some extent, it still contains valuable monuments and spaces. There are more than 30 monuments listed by the Cultural Heritage Organization, as well as more unlisted but architecturally significant buildings. Although the area of these historic buildings is less than 8% of the whole area, the traditional design of the district is distinctive.

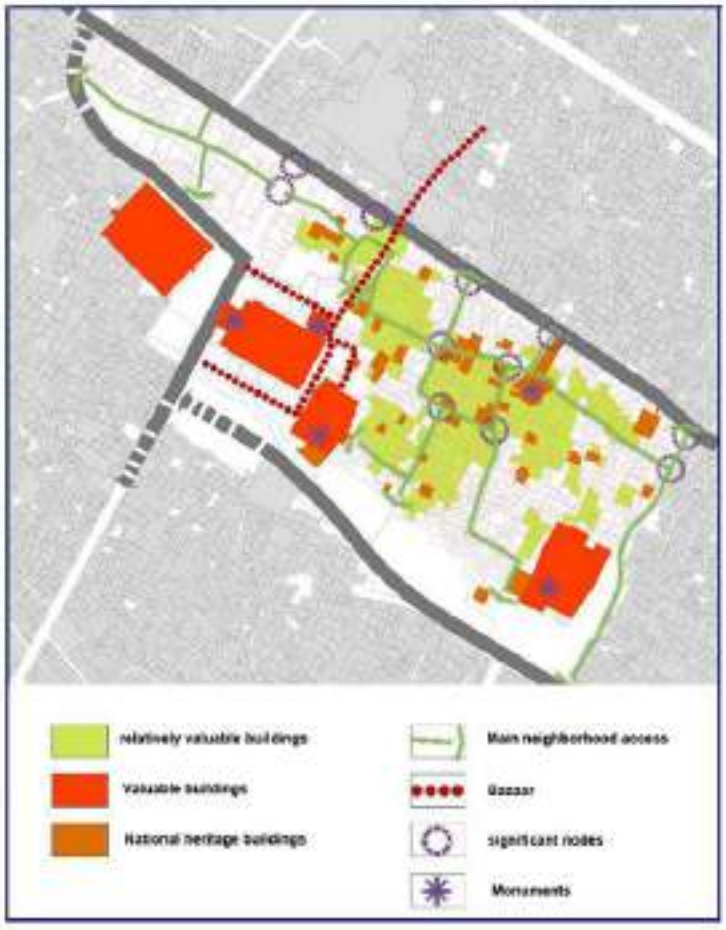

Figure 9. The existing fabric and its valuable and historical buildings in the area
Source: Bavand consultant report, 2010

3.2.2 Design analysis

Revitalization and development project of *Shah-e Cheragh* was designed to compensate the insufficiencies and shortages of religious buildings and their pilgrims and also residents and employees of the area.
The main aims of intervention in this district as mentioned in the report are: the major aim of intervention in this district as mentioned in the report is spatial restructuring of *Shah-e Cheragh* complex with respect to history and religious spaces and monuments in order to equip it into the top tourist pilgrimage destination in the country and region. To achieve this, providing sufficient space for future development of shrines and religious monuments is essential. A central and significant position for the shrine has been defined, the peripheral range around them organized and improved and tourist facilities for hundreds of thousands of annual pilgrims to the shrine has been provided. Solving traffic problems of pedestrian and vehicle traffic and creating proper space for inhabitants and pilgrims to move, stop and rest along transport networks is the other aim of this project.

In order to achieve mentioned aims, some strategies were declared. Green and public transport has been prioritized. Courtyards around shrines and their connection to pedestrian routes were organized. Multi land use spaces along these pedestrian routes were located and appropriate urban furniture in proposed areas were designed for rest and recreation. District development was restructured with participation of private and public investors according to valuable patterns based on sustainable development and urban environment quality.

By considering other functional areas for residents and also the fact that the designed area is a combination of various old neighborhoods which has been separated by later built street, six major routes have been designed to define the main structure of the area. These routes link shrines, pilgrimage facilities, and cultural activities and make corridors for visitors and residents full of experiences and life. They also lead tourist from other neighborhoods and bazaar towards the shrines and cultural centers in the area (figure 17).

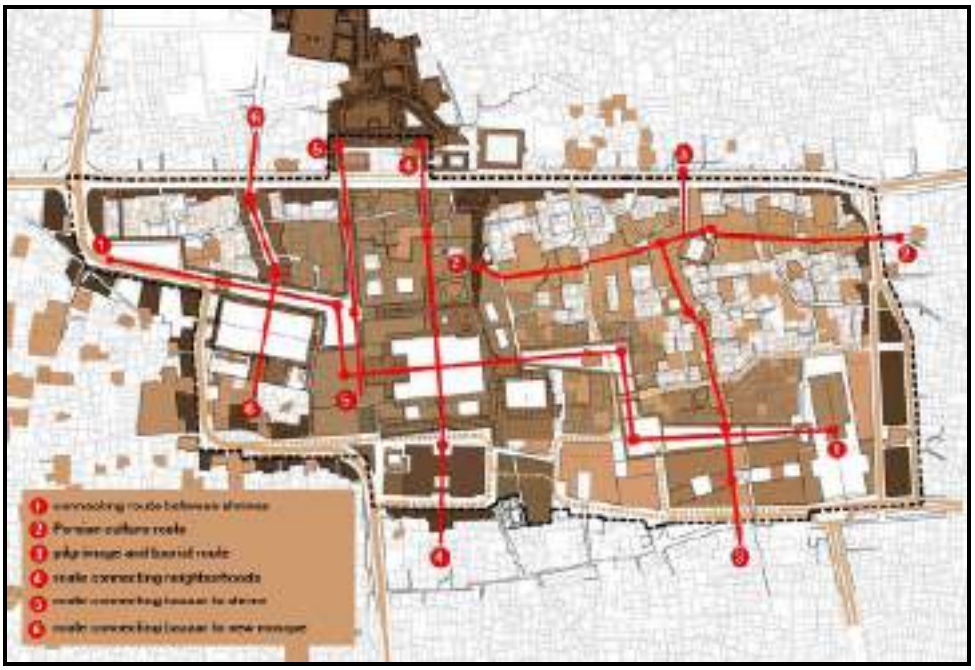

Figure 10. The final urban design of the area focuses on six main axes which connect a number of monuments and buildings and link the area to the rest of the old city (Source: *Bavand* consultant report, 2010).

4. Discussion and Conclusion

The preceding section has identified the features of two different projects in Shiraz city center and explored the driving forces behind them. Although both projects have been driven by a desire to revitalize the historic core and the concerns for the quality of the urban environment, each has followed a different approach, policy and strategy in addressing the issues.

Large-scale interventions in the historic urban fabric have always been associated with the autocratic powers, whether central or local, secular or religious, and traditionalist or modernist. In these projects, a new revitalization program has been formulated based on the lessons learned from previous experiences, which were mostly run by the central government.

There was a shift in attitude and the development of initiatives, in which the local authorities were encouraged to form partnerships and compete for regeneration funds. *Shah Cheragh* project has not been implemented yet but the project for revitalization of *Sang-e Siah* quarter is a prime example of this new approach. Some successful strategies and approaches are as below:

1. Small scale redevelopment of ruined buildings into a centre of local retail units has proved to be the catalyst for the general revival of the area.

2. The new role of the central government influenced by the decentralization policy which the state redistributed the authority, responsibility and financial resources at provincial and local level

3. The strategic and efficient role of the local leadership in building networks of communication and trust among the different actors

4. Careful replacement of new buildings on vacant or broken-down land used to enhance the prestige and importance of monuments and historic buildings Sang- e Siah project is notable for reinforcing and stimulating a gradual process of the historic environment revitalization.

Intervention strategy of this program gave priority to facilitate the gradual rehabilitation of existing residential units, avoiding large scale intervention and focusing on structure and infrastructure of the area. Although the implementing phases of *Shah Cheragh* project are already underway, a gradual strategic plan is neglected, maybe because of the autocratic religious power with enough resources and money. This will cause a comprehensive development in shrine complexes, which may damage the residential area. Concentrating on infrastructure and public space improvement and focusing on cultural activities can be seen as the engine of rehabilitation.
Description and analysis of these two projects introduce some useful approaches towards livable Iranian historical city cores. Despite a number of creative strategies utilized by the local authorities, economic deprivation of inhabitants in the historic core and high rate of mobility of residents prevent public participation in these areas. With description and analysis of more interventions in Iranian historical urban areas, strategies in historical city cores should be introduced and evaluated. Singular successful patterns and strategies should be brought together to build up a framework of strategies of urban design in context of historical Iranian city cores.

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BUSINESS NETWORK AND LOCATIONAL MAP OF FASHION AS A CREATIVE INDUSTRY IN IZMIR

Onur Mengi [1], Koray Velibeyoğlu [2]

Abstract

In today's globally competitive environment, the shift towards to the production of culture and creativity, and the presence of a class driving the new knowledge and creative economy becomes essential to the city development. Many scholars have underlined competitiveness as a result of globalization (Begg, 1999; Uzun, 2003; Hall, 2000; Landry, 2003; Kunzmann, 2004). Cities competitive advantages now derive from creativity and innovation based on a blend of their social, economic, political, cultural and environmental assets. For the social assets, a high concentration of the so-called 'creative class' and for the economic assets, tourism, fashion, visual arts, radio/television, publishing firms, toys/entertainment, sports, architecture, design, film/video, advertising, events, television, film, computer games and cultural institutions the so-called 'creative industries' together help to cluster culture, creativity and development.

The city of Izmir illustrates an instance of such intent of clustering the industry around the production and consumption of fashion and textile. This research intends to analyze its business network and locations in the city to understand the ways in how fashion industry are situated in complex webs of economic activity network and agglomeration trends and locational dynamics. The methodology will cover literature review and open-ended interviews. The data is processed in two phases; creating a preliminary chart after the collection of initial data that illustrates certain components and functions, and developing a more detailed locational map indicating the findings from additional interviews.

The overall aim here is to draw current picture of the fashion industry in Izmir. The findings will present a network analysis and map that illustrate locational agglomerations of the industry, and how they cooperate with other interrelated sectors. The paper will also briefly cover the problems and suggestions for the current fashion industry in the city.

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1. Introduction

The 1980s were characterized by the cities competing internationally, nationally and at regional levels within the globalization phenomena. Many scholars (Landry, 1995; Begg, 1999; Uzun, 2003) have underlined the rise of new economy which can be named ‘creative’ over the past 20 years. According to this economy, there is a competition between cities through urban restructuring in order to promote themselves for attraction of international attention and gain profit from various investments. For the last mid century, as Gospodini (2007) reported, we have witnessed three shifts of evolving production systems and their influence on urban restructuring and landscape. During the 1950s and 1960s, urban restructuring was based on industrial development and the growth of size and height of the city centers was substantial. Between the 1970s and 1980s when the post-fordist mode of production became visible, new service sectors including management, marketing and engineering consulting, commercial and industrial real estate were emerged. Consequently, urban area became a part of greater global networks. However, through the 1990s, new specialized services, information technology, innovation and design, cultural production and creativity have led a major change in the spatial and social structure of cities. Since then, cities have been shifted and expanded, consequently evolved to a new spatial as well as social organization. This spatial and social organization has been mainly shaped by the concepts of creative class and the creative industries.

The new type of spatial and social organization in a competitive environment has led the emergence of the creative cities and the rise of the creative class with the aim of promoting specific values, attracting international investment and showing up on the global scene as being ‘creative’. In previous researches, it has been found that the economic viability of a place depends on its ability to attract creative people and render a creative class, and these people prefer places which are innovative, diverse and tolerant. In addition to that, locational, cultural and political preferences of the creative class greatly differ from those of scientists, engineers, managers and lawyers. It is assumed that the group of creative people in a city prefers to be in certain urban spaces which reflect their particular interests and wants (Florida, 2002; Kim and Short, 1999). Then, how does this affect the industry and its spatial organization and locational dynamics?

Particularly, fashion industry has been chosen from the given creative industries for this study. Regarding, the case study looks at the city of Izmir, since its future development is also planned around the production and consumption of fashion and textile. Then, how does fashion industry operate now in Izmir province? This qualitative research aims at drawing its business network and locational organization as well as bringing out the problems and suggestions. The data for business network is processed using components involved in the network and considering some actors with their major and minor roles, and their connections in creating such business network. Second, the data for its locational characteristics are visualized.

This paper consists of the following sections; the second section begins with discussing how creativity is defined in general and why we talk about creativity in relation to cities. Then, it carries on with defining and understanding the concept of the creative class and the creative industries, and their more recent interpretations in the related literature. The third section portrays a case study giving general description of fashion industry in Izmir, and then goes into the details for its organization specific to the city and, problems and suggestions accordingly with the literature review and results of the interviews. This will also include the business network chart and the current picture-locational map for the fashion industry in Izmir province. In the last section, implications for the city regarding its organizational and spatial configurations within such business environment are presented.

2. The Creative Class and the Creative Industries

The shift towards the production of culture and creative products and the presence of a class leading the new knowledge and creative economy associates with the emergence of the creative city and the concepts of 'creative class' and 'creative industries. This section aims to elaborate the definitions for these concepts. Before start, the general meaning of creativity will be discussed, especially in relation to cities.

2.1 Creativity and the City

Landry and Bianchini (1995) claims that much of the literature makes use of the etymological base of creativity, seeing it as about bringing something into existence, generating, inventing, dealing imaginatively with problems. Creativity is not solely about something new, but also involves opening ourselves out to the ideas, influences and resources that are all around us. In addition, Kunzmann (2006) defines creativity as originality, capability to develop new projects, procedures or approaches, visionary power, willingness and readiness to experiment and to take risks, mental and cognitive flexibility and multi-dimensional thinking. Moreover, Higgins and Morgan (2000) employ the meaning of creativity as an ability to relate or combine knowledge in a new way which is of some practical use or adds value. Why do we to talk about creativity in relation to cities then?

Despite the fact that old industries have faded away as the industries of the 21th century initiated the applications of new knowledge to products, processes and services, the case is not only for our century, but also throughout the history. For instance, as Hall (1998) stated, cities have tied together their technological, organizational, productive, intellectual and cultural innovations for many years. Also Charles Landry refers to history that creativity has always been significant contributor for cities that it is needed to work as markets, trading and production centers, with the entrepreneurs, artists, intellectuals, students, administrators and power-brokers. Besides, his work together with Bianchini (1995) states that "whereas the dominant industries of the nineteenth and twentieth century's depended on materials and industry, science and technology, the industries the twenty first century will depend increasingly on the generation of knowledge through creativity and

innovation" (Landry & Bianchini, 1995: pp.2). On the other hand, for Higgins and Morgan (2000), creativity in relation city and its planning, is not an end in itself, rather a means which can lead to development. Creativity in relation to the urban context is an integrated process including social, economic, political, cultural and environmental assets that together cover every aspect of urban living. In this respect, Florida (2002) suggests that the economic success of a city is determined by the attraction of the 'creative class'. Florida (2005) has found that the creativity is the most important commodity in our economy, and thus the economic health of a place depends on its ability to attract creative people and render a creative class. In his interpretation, the creativity can be achieved in a city where the presence of the creative class is highest.

2.2 The Creative Class

The notions of creative talent and creative class that lead urban economic development have been studied by Richard Florida. Florida (2002) claims that the urban economy of the 21st century is driven by the location choices of creative people who prefer appealing place that is rich in cultural diversity. He emphasizes a social structure comprising new systems for technological creativity, innovation and entrepreneurship, and new models for producing goods and services. Florida (2002) suggests that the heterogeneity in cosmopolitan cities is the spine of creativity and innovations He defines the creative class as those who creates new ideas, new technology, and new creative content.

According to him, the workers who invent and create new products, who apply knowledge, who invent brands and designs associated with new life styles and commodities are integral part of the creative cities. These creative workers are called the creative class. This class is not necessarily highly educated but considerably engaged in creative, innovative jobs. The creative class does not only include writers, designers, musicians, painters and artists, but also scientists, managers and people in computer, engineering, education, healthcare, legal and financial occupations (Florida, 2002, pp.328-329). Florida asserts that "creative people power urban and regional economic growth, and these people prefer places that are innovative, diverse and tolerant" (Florida, 2005, pp.34). What Kim and Short (1999) have found from their empirical research on the impact of creative artists on urban growth, is that the locational, cultural and political preferences of artists, a key component of Florida's creative class, differ greatly from those of scientists, engineers, managers and lawyers.

Cities are now in search for the presence of arts, creativity and culture and they intend to provide a diverse and tolerant urban environment in order to attract the creative class and to foster the certain-mainly creative- industries for their future spatial and economic developments. Again in the literature, industries indicating creative essence are increasingly highlighted as an important contributor to the degree as much as they contain creative class.

2.3 The Creative Industries

The creative industries encompass a broader range of activities that indicates knowledge and information, and all the cultural or artistic production. These activities in different industry categories are largely based on the capabilities of creative workers, a substantial realization of artistic or creative endeavors. The value of output in the creative industries depends on the creative production means of individuals and the sort of organizations that they are associated.

The original conception of creative industries was developed by the Department of Culture, Media and Sport in the United Kingdom in the late 1990s. The department describes the creative industries as "those industries which have their origin in individual creativity, skill and talent and which have a potential for wealth and job creation through the generation and exploitation of intellectual property" (DCMS, 2001, pp.4). This contains twelve creative sectors in their 2006 documentation; Advertising, Architecture, Arts and antique markets, Crafts, Design (Communication Design), Designer Fashion, Film, video and photography, Software, Computer Games and Electronic Publishing, Music and the Visual and Performing Arts, Publishing, Television and Radio. As stated previous sections, these industries provide a basis for being creative and innovative as one of the powerful competitive advantages in the globalizing world to race with other cities and even countries, especially since many urban places now appears the same (Landry, 2003).

The contribution of creative works and creative industries is considerable to cities and countries (Hall, 2000). Kunzmann (2004) intends to prove that through some statistical facts of the UK's particular creative economic development for the last decade. Through art, culture and innovation, the creative industries do not only support the economic development, but also provide a social base for intellectual capital and creativity via employing the creative workers. This base is realized through agglomerations of small businesses, self-employing and artist-hiring employers in media, advertising and arts and entertainment industries. On the other hand, Evans et al. (2006) state the importance of creative industries for place quality, creative thinking, and construction of urban identity, and they are one of indicator of the creative city formula (Durmaz et al., 2008). Such cities are driven by strong innovation, knowledge and culture-indicated activities as well as by the creative class and art organizations. The creative industries render a positive image for cities and bring livability and quality to urban life.

Scott (2000) has conducted a research on Los Angeles and Paris and mainly found out that that creative industries flourish where three conditions are met: first, multiple interdependency and agglomerations of competitive firms; second, regional policy enterprises that attract and retain these industries and consider their locational preferences; and, last, the industries should reflect and capitalize their status and distinction of their urban locations (Scott, 2000).

3. Case Study: Fashion Industry and the City of Izmir

No doubt that the creative industries appear as an important component of post-industrial creative economy and a considerable incubator for urban development. Despite a growing attention on creative sectors for policy makers, practitioners and academics for the last decades and their awareness in this fact, some localities are still unconvinced of the importance of supporting growth of any of these sectors. Nevertheless, an increasing number of governments have recognized the significance of creative industries and started to develop specific goals to encourage them.

Izmir province, located on the west coast of country by the Aegean Sea and according to the Turkish Statistical Institute census record for 2010 with population of 3.9 million recently, has been familiar with the term creative industries. Throughout the past years, the city of Izmir fell behind in the global inter-urban competition and began to lose its appeal among the other Mediterranean cities. Consequently, Izmir Metropolitan Municipality collaborating with the representative from different sectors and universities determined to gain its previous reputation and envisioned a creativity-based development to overcome this deficit. To this end, the city of Izmir is now in the progress of constructing a new path for its future progress. Various design industries and their related key actors appear in the center of such path. Latest improvements in this regard came into sight as a design forum. Izmir Design Forum that organized collaboration with the Izmir Metropolitan Municipality in 2011 brought creative sectors and their representatives for the future goals of the city on the way to being creative. This aspiration brings the fashion sector in attention.

An examination of the Izmir fashion industry reveals some path dependent development so far. Hence, the following sub-sections will present some very limited literature and the interviews conducted as a pilot study to investigate how fashion industry operates now in Izmir.

3.1 Fashion and Textile Review

Since globalization brings inter-urban competition and advances in technology today, fashion design with its supporting components has become a sector that draws new and more investments and an industry that grows rapidly (MUSIAD, 2009). Similar to a research conducted by Antwerp Management School (2011) in Flanders-Brussels which presents creative industries, in general, operate within supporting creative components, facilitators and peripheral organizations, and actors from other sectors, Enlil et al. (2011) categorizes the fashion design industry mainly consisting of three areas; main activities, related activities and cooperated activities. The main activities cover clothing design, preparation of collections and seeking advice for textile companies. Second, the textile and ready-to-wear industries and retailing are considered as related activities. Third, for the cooperated activities, design education, graphic design, fashion photography, hairstyling-cosmetics, modeling and magazine publications, and accessory and perfume design are considerably supportive for the fashion industry. On the other hand, the relationship between the fashion design, and

the textile and ready-to-wear manufacture has been vital since growing global competition obliges textile and ready-to-wear sectors concentrate on design than ever before. The textile sector now encompasses 28% the country's industrial employment (Enlil et al, 2011).

Specific to Izmir, textile sector covers 9,8% of the total employment in Turkey (IZKA, 2010). Textile industry is the third most demanded sector with 732.012.937 USD export share (8,85% of the total export in the district, % 6,13 of the total export in the country) and has the second largest employment range in Izmir (IZKA, 2009; IZKA 2010). According to IZKA (2009) research report prepared for Izmir province, there are 12.603 people employed in the textile sector in Konak (6,32% of the total employment in the district) 10.443 people in Bornova (8,8%), 1.657 people in Karsiyaka (3,49%), 4,160 people in Cigli (10,60%), 7.458 people in Gaziemir (23,05%) 638 people in Torbali (2,21%) and 2,384 people in Buca (8,44%) by the year 2008. For the recent years, there has been a growth around the city center in terms of clustering textile sector. Despite the accumulation of the textile in Cigli has decreased, it has raised up in Buca, Gaziemir, Konak and Bornova (Figure 1).

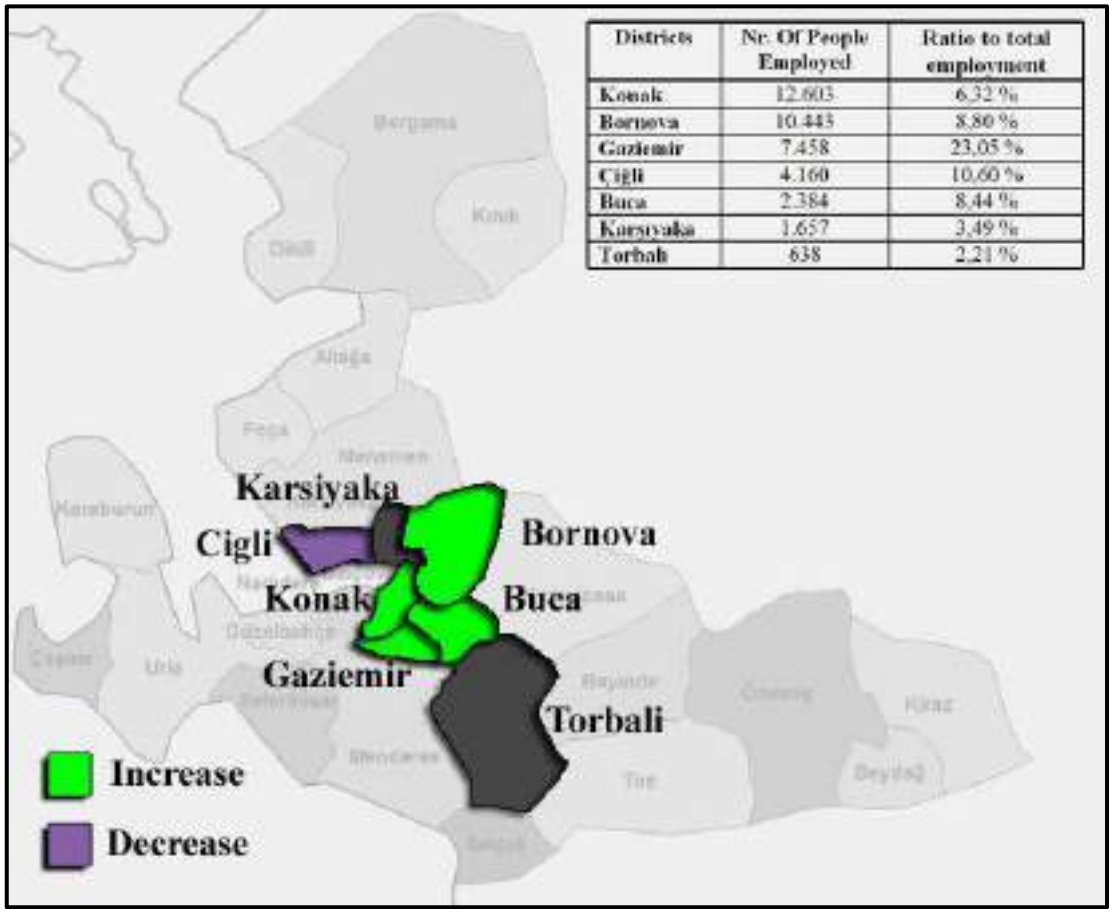

Figure 1. Izmir Province Textile Sector-Intense Districts Employment in 2008 and Accumulation Change between 2004-2008
(Adapted by the author, Source: IZKA 2010)

Particularly in Izmir, the fashion sector is mainly based on manufacturing, textile outsourcing and wedding industry and that one hand provides a greater flexibility in the overall production network, lower investment, and a chance to switch production according to varying market conditions, but on the other, stays very limited and weak in terms of appearing in the international fashion network, attracting global investment and branding the city. For the wedding industry products, Izmir leads the Turkish market (IZKA, 2010). According to IZKA research report (2010), this sector has been found sufficient in terms of its production capacity, human resources, financial resources and information and knowledge web. Yet, it is unsatisfactory for international trade and marketing. It is also insufficient regarding fashion design implications on their products range. However, recently Izmir has started to more focus on these weaknesses. There has been a rise in number of national and international fashion events. Fashion Weeks and Weddings Fairs have been organized for few years. IF Wedding Fair has been held for six years and every year almost 1000 fashion firms participate to be seen internationally (IZKA, 2010). This event brings designers, models, agencies, photographers, celebrities, fashion magazines, retail buyers, stylists, venture capitalists, media and advertisers together. Fashion fairs make known and attach importance to the production networks of fashion industry. Also Izmir University of Economics and Dokuz Eylul University with their Fashion Design Departments located in Izmir and some private design programs courage that process. Their ties with the fashion practice are considerably strong.

3.2 Interviews

The design of this research is based on the open-ended interviews through snowball sampling with the information-rich academic members of the Fashion Design Department in Izmir University of Economics. Snowball sampling method (Atkinson and Flint, 2001; Biernacki and Waldorf, 1982) has been conducted to identify key players in the field, product, manufacturing processes, and other interrelated actors and sectors, since the department academic members are considerably involved in the fashion design practice of the city. Snowball has applied here to use one contact to help us recruit another contact, who in touch with someone else. However, the research content for this study has been kept limited to the academic members. Other key player and interrelated actor contacts discovered in this research, namely a set of potential contacts, will be interviewed in the further studies (Table.1). The Fashion Design Department has been regarded as a primary source to us to know the sector, especially the key players, creative workers, organizations and associations as well as their locations.

In addition to that, many of those members we have interviewed took roles as representatives in Izmir Design Forum 2011, where architecture, fashion, communication and industrial design, film and photography, the visual and performing arts, as well as publishing sectors came together for the future goals of the city with respect to the creative industries including particularly the fashion industry.

Table 1. Snowball Sampling Stages

STAGE I	STAGE II	STAGE III	STAGE IV (Potential Contacts)	NETWORK
Academic Member 1	Academic Member 2	Academic Member 5	Zuhal Yorgancıoğlu Ertan Kayıtken Zeynep Acar Demet Moda Evi Simay Bülbül Bora Aksu Faik Üçok	**Designers & Wedding Ind.**
			Kapadokya Tekstil Sabri Ünlütürk (Suntex)	**Ready-to-wear**
		Academic Member 6	Aegean Region Chamber of Industry Aegean Exporters' Unions, Aegean Clothing Manufacturers' Association Association of Aegean Leather and Leather Products Izmir Chamber of Commerce Izmir Development Agency	**NGOs**
	Academic Member 3	Academic Member 7		
	Academic Member 4	Academic Member 8	Gökhan Talay Ertaç Demirçelik Ebru Yolver Ufuk Kuran	**Accessory & Ateliers**
		Academic Member 9	Yasemin Biricik Özlem Erkan Emin Emrah Yerce Uğurhan Akdeniz Duygu Akdeniz Şafak Fişek Uğurkan Erez Başak Gürsoy	**Events**

The interviews also cover some hints from the outcomes of the forum. The preliminary results gained from the interviews have been grouped as the following statements;

Problems

- Izmir has a potential, consciousness and demand, despite, still it is not a competitive city
- Fashion industry wants to be visible within the city
- Wedding as a sub-industry carries a considerable importance yet it is neither well-organized nor well-formulated in terms of its regulation
- The clusters and the organization of stages for the value chain in fashion industry is limited and old-fashioned
- Izmir lacks of "identity" (for ex. Florence is known as men's wear capital and Bologna is labeled as shoe design quarter)

- There is no art direction and a lack of people with in-depth knowledge in art and design involve in the production of fashion in Izmir.
- There is a lack of agency dealing with the fashion industry's relation with the other sectors
- What we call fashion in Izmir is based on outsourcing. After having learnt the process and designs from the leading producers, companies and firms start to develop its own brands yet they do not employ any fashion designers or styling and photography experts for business.

Suggestions

- Fashion industry is more than textile and manufacturing, that should be empowered and re-envisioned in Izmir
- Fashion industry should work with the production companies/agencies that offer locating, planning, transportation, crew, models, digital equipments, styling and photography production
- Besides agencies, fashion shows, fairs, retailing and media should be involved in fashion production and consumption
- Production, retailing and education with sectoral power should be brought together
- Wedding industry should be supported, improved and promoted
- There should be a supply platform to meet demands of the fashion design potential in Izmir
- There is a need for a commission to manage and organize the industry and its supply
- Fashion sector should be interactive with the supporting sectors and cooperated activities namely with other creative industries
- Creative workers, fashion designers should be encouraged to work in Izmir, not in Istanbul

Apart from the current state of the industry in Izmir, preliminary literature review on fashion and textile in Izmir, and interviews based on experiences in the industry and Izmir Design Forum have eventually enabled us to draw the business network and locations of the industry.

3.3 Business Network and Locational Map

The fashion design sector offers a value chain including various steps of creation, production, distribution, to consumption steps (Table 2). In a highly competitive market, many other outsourcing countries threat the textile sector in Turkey so that there has been a shift towards more design based creative production and improving the quality of what is produced (Table 3).

Table 2. A Typical Fashion Industry Value Chain

Stages	Planning & Development of Collection	Design & Prototyping of Models	Production, Design, Planning and Monitoring	Manufacture & Assembly	Marketing	Distribution and Logistics	Point-of-sale Marketing	Sales
Steps	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**

Thus, the textile and ready-to-wear manufacturing processes are now highly involved in the fashion design. This is also expected for Izmir according to the interviews. Eventually these sectors will start to chase global trends, promote cultural aspects and to develop brands besides a mere production and manufacturing. That will enable the fashion design sector take a crucial role in the process.

Table 3. New Type of Production Structure in Fashion (Source: MUSIAD, 2008)

Stages	**Old Type**	**New Type**
Production	Mass Production and Bigger Capacity	Customized, Faster
Design	Outsourcing	Still Outsourcing but advanced with some contributions and Own Designs
Marketing	Passive Marketing	Active Marketing
Branding	Outsourced Products	Own Brands

Specific to Izmir, there are basically five non-governmental organizations in Izmir (NGO) namely Aegean Region Chamber of Industry, Aegean Exporters' Unions, Aegean Clothing Manufacturers' Association, Association of Aegean Leather and Leather Products, Izmir Chamber of Commerce and Izmir Development Agency. There is no other professional association of which covers managing the fashion design, textile and manufacturing. This absence is one of the reported inadequacies with the industry. However, Izmir fashion industry together with textile sector illustrates a different picture (Figure 2). According to the Aegean Region Chamber of Industry data, for the Aegean Region where Izmir is located, there are 904 textile firms and 45113 workers registered in the Aegean Region Chamber of Industry. In recent years, Izmir has become synonymous with fashion, increased profits and opportunities for apparel manufactures focusing exclusively on wedding dress design, accessory and outsourcing for ready-to-wear.

Additionally, the fashion industry operates with different components; fashion photography, modeling agencies, fashion designers, retailing (boutiques and franchise), accessory (mainly zip and footwear), ready-to-wear, manufacturers (factories), magazine and media.

Figure 2. Izmir Current Fashion Industry Network

Many of the previous researches on the subject discussed the power of specialized industry built-ups in specific localities and clusters since the signifiers of new economy are found in fashion precincts that generally clustered in cheap inner-city rental space. Though having such a network including main activities (ex. clothing design, wedding industry), related activities (ex. textile and ready-to-wear) and cooperated activities (ex. events and fashion education) of the fashion industry, there are hardly formed a complete "fashion district" in Izmir. Spatially, Izmir has rather wedding based firms and clusters, as well as outsourcing and manufacturing based organized zones (Figure 3). The Chamber of Industry claims that the fashion together with textile manufacturers appears as the most important industry in the Aegean Region. In terms of clustering in certain locations of Izmir, there are 28 firms in AOSB Industrial Zone and 42 firms in ESBAS Free Zone according to the records of the Izmir Development Agency (Source: http://www.izmirkumelenme.org/).

In a locational analysis of the sector in Izmir province, Cankaya (Mimar Kemalettin Street) and Kemeralti Bazaar are places to the low profile and generally copied design fashion industry, and also excessively wedding dress. Comparatively, Alsancak spatially serves for higher profile boutiques and fashion design stores which are yet clustered. Alsancak is also a place to the trade chambers and associations as well as some fashion-related sectors' (supporting activities) agencies.

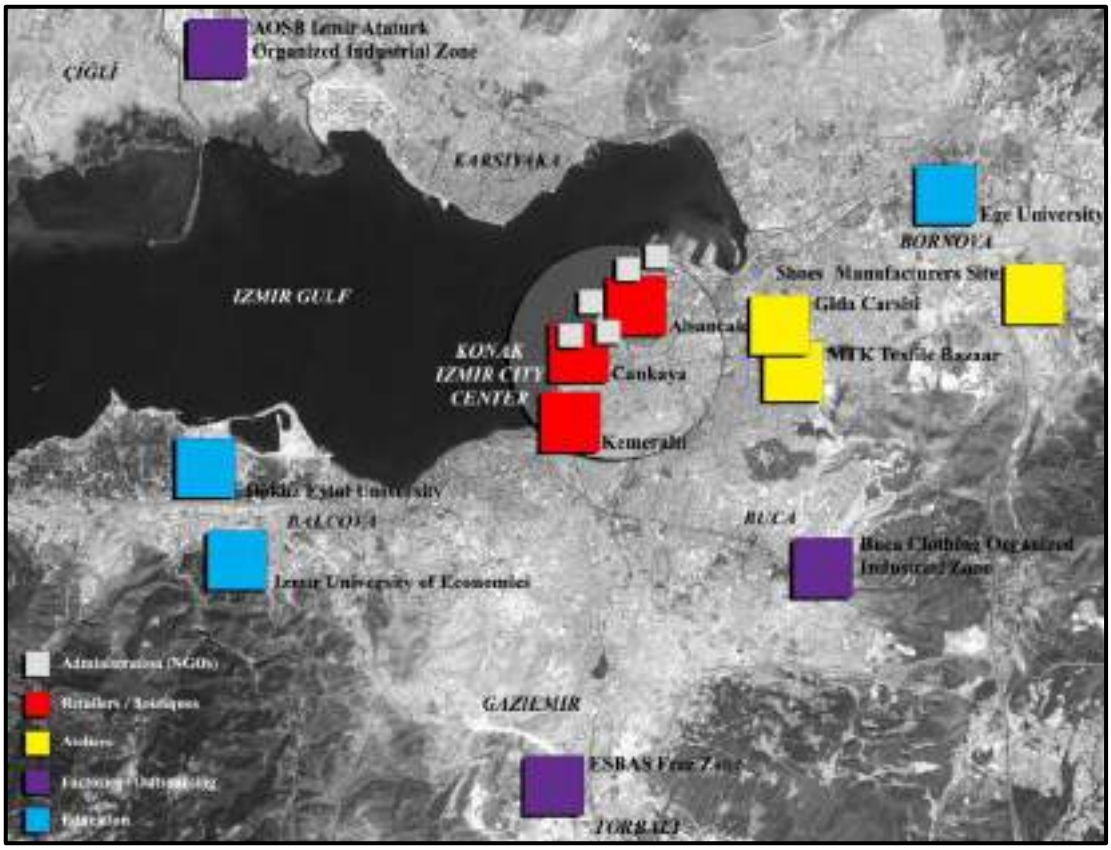

Figure 3. Location of Fashion Industry in Izmir Province
(Drawing by the author on the image from Google Earth)

Throughout the peripheries of the city, there are some manufacturing-based industrial sites; namely MTK Textile Bazaar, Shoes Manufacturers Site, ESBAS Free Zone, AOSB Izmir Ataturk Organized Industrial Zone, and Buca Clothing Organized Industrial Zone. For the education aspect, Balc”ova on the west axis of the city is where Izmir University of Economics and Dokuz Eylul University fashion design departments are stand out. Furthermore, Ege University the department of Textile Engineering is located on the east axis.

4. Implications for Izmir Fashion Industry and Its Future Development

Many governments in the world now see the creative industries as principal drivers of their future development and economic success. As globalization has diffused, the fashion industry has been identified increasingly as leverage in order to create economic and cultural values for the city. Regarding, in Izmir, some creative industries, particularly fashion, have been tried to be harnessed to governmental aspirations to appear on the global scene, at least to compete with other cities outside the region and reinvent the city as a fashion capital. Fashion as a creative industry is now closely associated with the production of consumption spaces, the development of urban characteristics and uniqueness, as well as city branding.

The present study is a pilot research and illustrates very preliminary findings. Looking at the picture, Izmir's current "fashion related" business operates through export-led, outsourcing manufacturing and textile. For the network evaluation, the fashion industry operates through a complex yet very weak and unconnected pattern of networking including following components; fashion photography, modeling agencies, fashion designers, retailing (boutiques and franchise), accessory (mainly zip and footwear), ready-to-wear, manufacturers (factories), magazine and media. For the locational evaluation, certain points in the centre of the city and the peripheries especially industrial zones and free zones appear as major spots, but none of these acts as serving pieces of the whole fashion industry. Rather, they are mainly divided into ready-to-wear, accessory and wedding industry concentrations. Despite its potential to serve as a creative industry to city where creative class can both live and work, the fashion design industry is still not well-planned or organized in Izmir province. Just for few years, national and international fashion events have started to be held, and there has been attempts to shift towards more design based creative production and improvement of the fashion industry. This shift should be extended to an opportunity to retain creative class, interact with other relevant creative sectors, and to learn about the latest trend as well as develop national and international connections as a creative city.

Organizational

The industry is governed by the Aegean Region Chamber of Industry, Aegean Exporters' Unions, Aegean Clothing Manufacturers' Association, Association of Aegean Leather and Leather Products, Izmir Chamber of Commerce and Izmir Development Agency. With respect to the interviews, fashion industry in terms of its clusters and the organization of stages for the value chain is limited and old-fashioned in Izmir. There is not a strong identity for the industry. However, there are some signs of the three components of the fashion industry; main activities (ex. clothing design, wedding industry), related activities (ex. textile and ready-to-wear) and cooperated activities (ex. events and fashion education). The workers in the sector are hardly called creative class who design and develop new products, use knowledge and skills to invent brands and new life styles. While companies and firms develop their own brands they do not entail and employ any knowledgeable fashion designers or stylist collaborating with photographers and magazines. There are problems with managing and organizing the whole fashion industry and its supply since a leading commission is absent. In addition to that, there is also a steering agency problem that dealing with industry's relation to the related sectors.

However, the findings from the interviews show that the fashion industry is more than textile and manufacturing, should be empowered and re-envisioned in Izmir. Thus, the production companies that offer locating, planning, transportation, crew, models, digital equipments, styling and photography production should be involved in the process. In other words, fashion industry is expected to collaborate with the other creative industries. As well as, fashion designers should be encouraged to take role in the fashion industry in Izmir. Also, fashion shows, fairs, retailing, media, education and education should be brought together. Specifically, wedding industry

carries a considerable importance to the city's creative potential. Last but not the least, except the recent efforts in Izmir Design Forum, our research has illustrated that Izmir lacks of a comprehensive public policy, a team work or a full-bodied robust network for the improvement of fashion as a creative industry. Considering the creative industries and creative city concepts, the focus is to be on creative workers as individuals and independent workers, besides, team working, networking, and cooperation should be promoted. These are known as integral to the clustering of particular types of creative sectors in specific geographical locations.

Spatial

For business characteristics and locations, certain points in the centre of the city and peripheries especially industrial zones and free zones stand out. According to this analysis, Cankaya (Mimar Kemalettin Street) and Kemeralti Bazaar are the areas in where mainly wedding industry and the copied design fashion, Industrial Zones in where textile and manufacturing as well as accessory production are concentrated. Most of the textile and manufacturing companies reduce their production costs by locating in the organized industry zones and free zones. Also, some, but not clustered, boutiques and fashion design stores and administrative chambers and associations are located in the prestigious spots in Alsancak.

All in all, the fashion design in Izmir has seen promising as an industry that can do more than manufacturing and outsourcing. Our findings have illustrated that firm clusters, inter-firm networks and linkages, and relationships with the supporting creative activities and consumers have been reported as inadequate and unorganized. Such findings, we believe, are significant, and appear as reasons not to create and develop clusters, and most importantly not to compete with Istanbul as well as other fashion design-led city developments around the world. Clusters are seen to be vital for innovation, productivity growth, comparative advantage and international competitiveness. They also become important since that fashion designers and the creative workers in the network want to be in physical proximity to each other as well as to textile retailers and other relevant actors in order to construct strong, face-to-face relationships. More generally, our work has brought some important clues into the determinants of successful business network of fashion industry in the city. What has become apparent is that the fashion industry is not well-clustered, creative workers are not present. However, fashion design would actually enable regional development in the form of clusters and incubators via identity building. In addition to that, this development would indicate young and marginalized groups, namely latent creative workers dealing with innovative and creative work.

This research can be furthered with the investigation of key player and interrelated actor contacts discovered in this research, namely a set of potential contacts acting in the network of Izmir fashion industry and their spatial expectations from the city. Such in-depth research would generate substantial awareness and foster collaboration with a range of creative workers that can later influence the city's future precinct development policy. Eventually, this merges a base for urban planning and design in

imagining and creating new spaces such as creative cities, clusters, and globally and socially connected cities, regions or neighborhoods.

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EVENT-LED REGENERATION: SUSTAINABLE DEVELOPMENT AND STAKEHOLDER DECISION-MAKING IN LONDON 2012 OLYMPIC GAMES

Ozlem Edizel[1]

Abstract

Appealing to politicians and other interests, the hosting of mega-events as a competitive city strategy is a controversial topic since there are several environmental, social, economic and urban risks involved. Nonetheless, there is a widespread trend towards the use of mega-events to promote a city, stimulate the local economy and regenerate rundown post-industrial areas and communities. City governments thus develop event-based strategies in order to increase city attractiveness and (re)position themselves in the regional and world city hierarchy. However, a set of questions arise about how to regulate pro-growth strategies within sustainable urban development imperatives. The success of mega-event led regeneration lies in a more inclusive approach which considers the cultural values of the 'local'. In practice however, many cities bidding for mega-events do not adopt or consider this approach and limit their efforts to the event site, external visitors and to short term branding exercise. By the nature of competitive bidding, most aspiring cities are of course unsuccessful (and some re-bid again and again). This study examines the contradictions between sustainable development and competitive city agendas through a study of mega-event led regeneration and explore the changing landscape and communities resulting from mega-event led regeneration. Regeneration in the Lower Lea Valley where the London 2012 Olympic Games will be staged is analysed as a case study area.

Research methods include document analysis, semi-structured interviews with the stakeholders in the planning and organization of London 2012 and observations. The primary research analysis provides a sound base from which the planning of more sustainable major events can be undertaken in the future and the evaluation of their impact more fully measured across a wider stakeholder community.

1. Introduction

In many respects, regeneration has become a major element and driver of urban policy since the late 1970s. In a broader sense, urban regeneration is considered as a dynamic process of physical, social, environmental and economic transition. It is a normative process where policy makers and others agree on what an urban area should look like, how it should 'perform' and the practical process whereby visions for these places come into action (Raco & Tunney 2010).

The aim and emphasis of urban regeneration projects has changed in different periods. From the 1980s, there has been a shift in urban governance system from a managerial to an entrepreneurial structure which means that urban governance has started to adopt

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entrepreneurial strategies such as new ways to foster and encourage local development and employment growth; instead of the managerial practices of earlier decades which focused on the local provision of services, facilities and benefits to urban populations (Harvey 1989, p.3) . Therefore, boosterist policies as the main feature of urban entrepreneurialism have started to gain more attention from city and central governments as a result of globalisation and the imperative for place competitiveness. Peck (2005) suggests that regeneration projects have an important role in urban development since policy-makers develop various strategies in order to increase city attractiveness, (re)position their cities in the regional and world city hierarchy and also, provide new gentrified work, leisure and housing for the 'professional managerial'(B. Ehrenreich & J. Ehrenreich 1979) and the more recently identified 'creative' class (Florida 2005). Cities have consequently started to expand their marketing policies (Ward 1998) to create and change their image to attract more tourists, businesses, inward investment and service industry workers.

On the other hand, sustainable development principles and sustainable community planning and aspirations have become core components of urban regeneration policies since the beginning of the 2000s. Since UNCED (1992), more than 2,000 local governments have implemented Local Agenda 21 (LA21) Plans indicating that the sustainability agenda has started to be taken seriously at the local level because at local level it is easier for governments to integrate economic, social and environmental professions so as to facilitate sustainable policy developments (Newman & Kenworthy 1999). It is now obvious that sustainable development is not only an environmental concern, but it also has economic, social and governance (and cultural) dimensions (Dalal-Clayton & Bass 2002; Hershgal 2008).

In the UK, the holistic approach to regeneration inferred by the term 'sustainable' fits in the 'agendas of inclusiveness, multiagency partnerships, and the shift from government to governance' (Jones & Watkins 1996, p.1416). Deindustrialisation has left considerable vacant, derelict, brownfield and waterfront areas where there are numerous development challenges and opportunities (DCLG 2008). However, in the 1970-80s, powerful, localist quango agencies applied 'fast-track' initiatives to make sure that property-led regeneration projects were delivered in designated sites with minimum local opposition and involvement (Cochrane 2007; Raco & Tunney 2010). Without this local democratic planning process, Urban Development Corporations (UDCs) were able to focus on converting these spaces into highly visible regeneration areas (Raco & Tunney 2010). By the early 2000s, the tension between sustainability and development is highlighted in national and international documents and policies. During the International Conference on Financing for Development in 2002, world leaders agreed to mobilise and increase the effective use of financial resources and achieve economic conditions for poverty reduction and sustained economic growth. Also, Tony Blair suggested that 'development, growth, and prosperity need not and should not be in conflict with sustainability' in Securing for the Future Report (DEFRA 2005). The report suggests that it is important to maintain a more competitive economy, to compete internationally and also, build a sustainable community which is possible by improving the knowledge and skills base of everyone.

In order to strike a balance between competitiveness polices and sustainable development, stakeholder partnership and community involvement are considered to be the two main components of sustainable urban regeneration. Among different types of urban

regeneration models such as property-led, retail-led, housing-led and design-led regeneration; event-led regeneration has had a greater economic, tourism, physical and socio-cultural impact and meaning (e.g. self image, identity) for host cities when compared to their relatively short duration (Ritchie 1984). According to Harvey (1989), when some events are used as a tool for urban regeneration, they give the host city the opportunity to produce a new and entrepreneurial image, internally and to external audiences. In this frame, mega-events being normally one-off, high profile festivals, sports competitions or trade fairs held for a limited time in which the built environment has global and symbolic significance and attract national and international interest - investors, media, tourists (Getz 1997; Ritchie 1984; Roche 2000) have distinctively bigger impact on urban regeneration and related governance policies.

In the context of mega-event based regeneration, Getz (2009, p.65) suggests that multiple stakeholder perspectives are essential when analysing the outcomes of such events and all stakeholders have to be in consensus in order to deliver sustainable events. In order to understand how event policies are realised, it is important to know how different actors are involved and interact (Hall & Rusher 2004). Accordingly, a set of questions arise about how to regulate pro-growth strategies within sustainable urban development imperatives. Sustainable events are arguably the ones that can fulfil crucial social, cultural, economic and environmental roles that people value (Getz 2009). However, an important deficiency has emerged - as cities try to adapt the same strategies for their social, environmental and economic regeneration, irrespective of each city and region's cultural assets, architectural capital, political organizational and economic structure. This study examines the contradictions between sustainable development and competitive city agendas through a study of mega-event led regeneration and explore the changing landscape and communities resulting from mega-event led regeneration. Stakeholder decision-making structure in the regeneration of the Lower Lea Valley where the London 2012 Olympic Games will be staged is analysed as a case study area.

2. Conceptual Framework

Broader research methodology adopts an integrative approach in which built environment, social structure and stakeholder organizations are studied together. In order analyse sustainable development in any regeneration project, it is important to understand the relation of these three components with each other. The research uses multiple theoretical perspectives, sources of data and methodologies to analyse cases. Changes in built environment, social structure and stakeholder organization are analysed in connection with each other, not as single units. Each aspect is evaluated accordingly with the changes in others to understand the complex structure of the regeneration in the area in a holistic way. While analysing the relation between organisation structure and community, participation between two bodies is considered as the main element. Inclusion of local and cultural values on the changes in the built environment and the extent local communities are involved in regeneration decisions are one of the sustainable development factors in a regeneration project. Finally, the effect of stakeholder decision-making strategies on built environment and different regeneration policies are analysed through stakeholder interviews and document analysis which is the focus of this paper. (See the Figure 1).

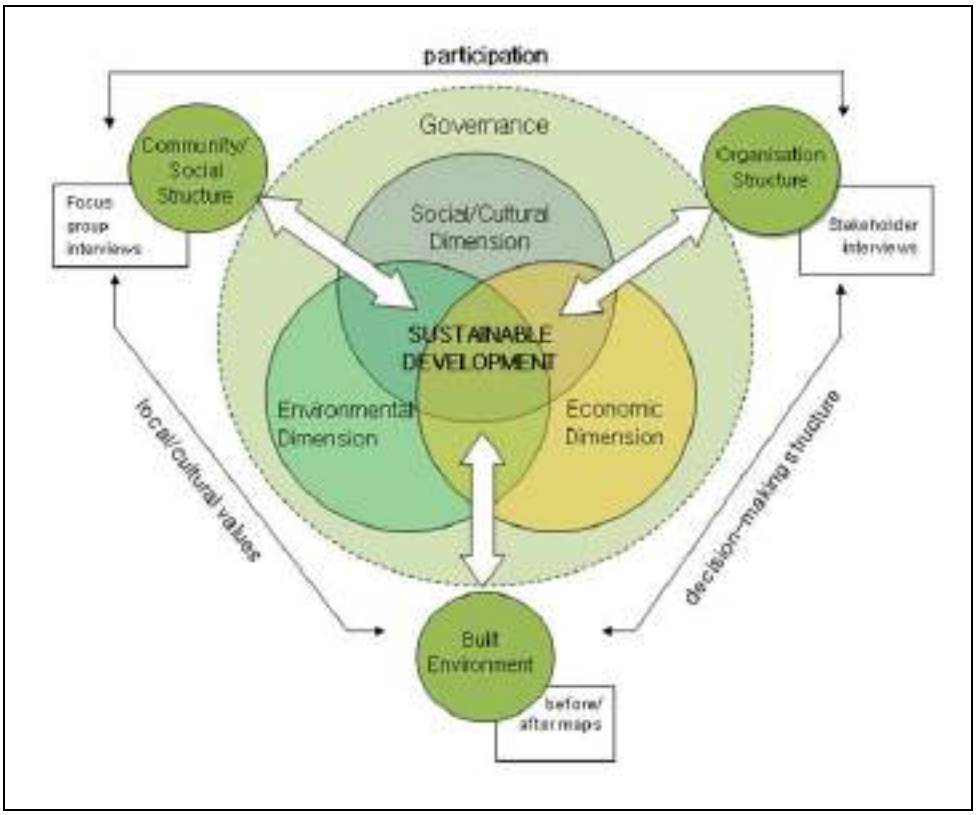

Figure 1. Conceptual Framework (Work-in-progress)

3. Case Study: London 2012 Regeneration Games

The Olympic Park is located within the Lower Lea Valley, in the Boroughs of Newham, Hackney, Tower Hamlets and Waltham Forest. It is situated around the River Lea, bordered by the A12 in the north and Stratford High Street in the south (See Figure 2). The Park is primarily situated on contaminated and derelict land. Much of the land is fragmented and divided by waterways, sewers, overhead pylons, roads and rail lines.

The area is also home to some of the most deprived communities in the country. According to the English Indices of Deprivation 2010, three of the Host Boroughs still contain the sixth, seventh and the fourteenth most deprived wards in the country respectively Hackney, Tower Hamlets and Newham[2]. East London also experiences significant levels of unemployment roughly twice the English average: with Hackney 16.4 per cent, Newham 13.5 per cent, and Tower Hamlets at 11.8 per cent[3]. The area has one of the highest levels of black and ethnic minority populations in the capital.

From 2012, the area will be providing valuable resources to local communities and visitors. The Olympic Village will accommodate 17,000 athletes and officials during the Games. After

[2] http://www.communities.gov.uk/documents/statistics/pdf/1871208.pdf

[3] London Divided Income inequality and poverty in the capital, 2002: static.london.gov.uk/mayor/economy/docs/london_divided_all.rtf

the Games, it will leave the legacy of around 2.800 new homes, parks, and community facilities which will form the first phase of a far wider regeneration and development of the whole Olympic Park. Five new neighbourhoods will be established around the Park, each with its own distinct character which will involve up to 11,000 new homes where 35% will be affordable and 40% will be family homes[4]. This regeneration will be supported by new schools, infrastructure, roads, transport, and community and health facilities in the local area.

Figure 2. London 2012 Olympic Park Map in year 2012

4. Methodology

Semi-structured interviews are conducted with the decision-making stakeholders of London 2012 Olympic Games as a research methodology. Interview questions are directed towards understanding plans undertaken to develop the mega-event strategy, the response to the mega-event led regeneration, reasons behind decisions made, expectations from regeneration, relationships with other stakeholders and opinions about public participation. Before deciding on the interview questions and questionnaires, research indicators are determined and related

[4] London Legacy Development Corporation: http://www.londonlegacy.co.uk/the-park/homes/

questions are decided to reach the information about the indicators. Determined indicators are as follows: changes in organization structure led by mega-event, organization structure of the mega-event, leadership, representativeness, conflict resolution, success factors, legacy and lessons learned, changing community structure, mega-event as a catalyst for social, economic and physical regeneration and public participation. Interview questions are also considered in relation to the Meta-Evaluation of the Impacts and Legacy of the London 2012 Olympic Games and Paralympic Games study and necessary adjustments applied.

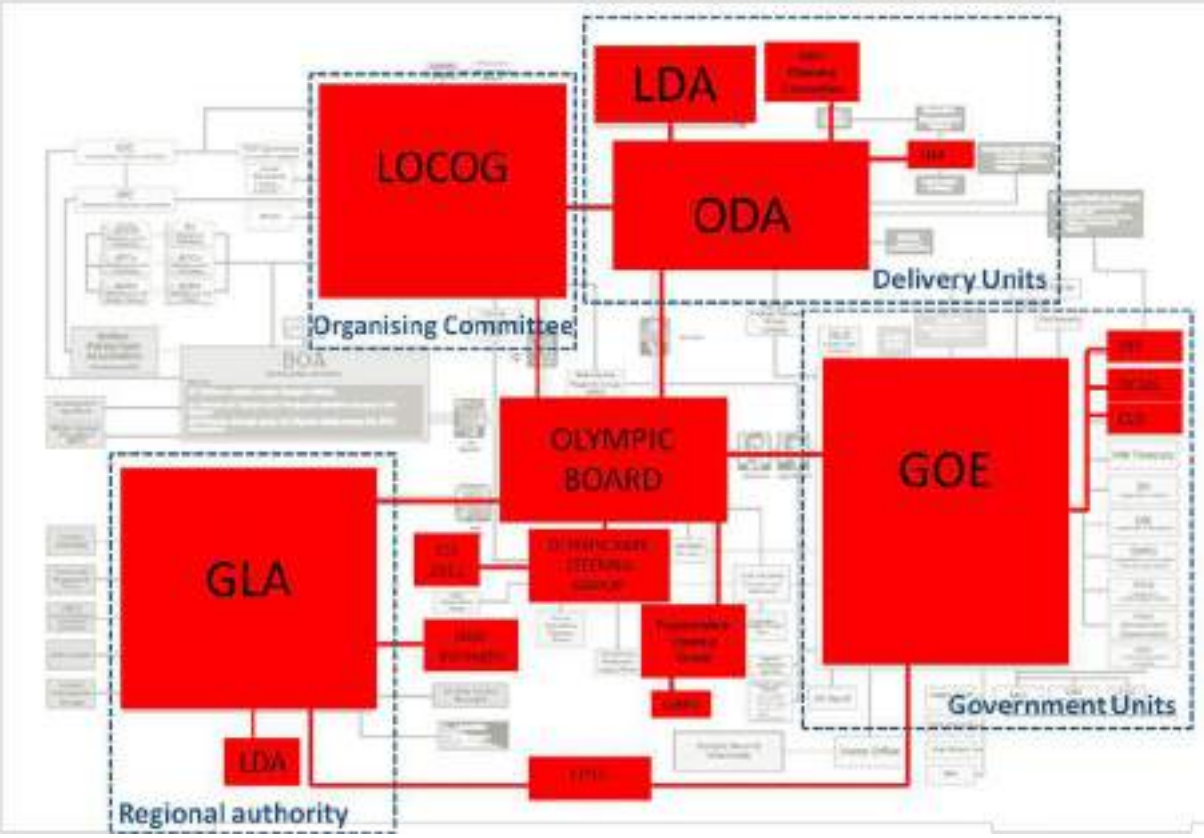

Figure 3. Regeneration Decision-making Structure of London 2012 Olympic Games

Investigation of the stakeholder interviews including deciding on the contact database and questionnaire design started in May 2010. A contact database is being created of the case study organisations, intermediaries and key informants (See Figure 3). Before starting interviews, a letter is emailed to the central regeneration and mega-event contacts. The letter indicates the intention to conduct further research in the area and ask support for the research (including access to key people, policy and other non-public documents, e.g. 'grey' material). The contacts are telephoned/e-mailed and agreed contacts participate in the study. 24 interviews have been conducted with 20 institutions. Additionally, 10 informative meetings have been held with university members doing research about London 2012 Games, research institutes and community relations staff. These meetings helped to figure out different perspectives and reach a broader scale documents and reports in this area.

5. Preliminary Results

The overall vision of the London 2012 Olympic & Paralympic Games is "to host an inspirational, safe and inclusive Olympic and Paralympic Games and leave a sustainable legacy for London and the UK" (CSL2012, 2010). The six resulting strategic objectives are:

- To make the UK a world-class sports nation: elite success, mass participation and school sport.
- To transform the heart of East London.
- To inspire a new generation of young people to take part in local volunteering, cultural and physical activity.
- To make the Olympic Park a blueprint for sustainable living.
- To demonstrate that the UK is a creative, inclusive and welcoming place to live in, to visit and for business.
- To develop the opportunities and choices for disabled people.

Regarding the vision and objectives, it is clear that leaving a sustainable regeneration legacy in the East London is one of the most crucial targets of the London 2012 Olympic Games. In terms of social and economic regeneration, hosting the London 012 Games helped to raise aspirations, offered training, apprenticeship and volunteering opportunities for local people. Moreover, it is expected to have employment opportunities in the area before and after the Games. Chief Planner in London Borough of Hackney thinks Media Centre is the biggest piece of land that potentially can generate employment in the borough. It is expected that the area around Media Centre will turn into a high-tech hub and create employment for locals. Hackney representative says “it is an amazing capacity and with the government decision of Hackney, being the heart of the high-tech digital companies focusing and clustering in the borough, that potentially targeting one end of in Hackney other end in Shoreditch”. Similarly, Councillor in London Borough of Newham highlights the importance of job creation and education in the borough with following words: “For us employment is very, it is crucial. You can have a flat but if you’ve got no job, it’s no good. That’s the first thing. The second thing is improving education in the Borough, driving up standards in education”. Income levels, employment, educational achievement, housing and health may be regarded as major signifiers of a community’s well-being. Targets in these areas may be achieved in a variety of ways and take place over a timescale that extends several years beyond 2012 and the Games themselves.

In terms of organisation structure, sustainable regeneration covers the schemes of inclusiveness, multiagency partnerships, and the shift from government to governance. GLA interviewee supports this by saying “delivering the Games is a multi stakeholder proposition, it has to be, and we’ve found that obviously there’s a number of challenges, different organisations have different organisational priorities and, and managing some of that it has been basically a lot of effort”. As different actors from a range of fields were involved in the Olympic Board, “heterarchy” which can be defined as ruling through diversity (Jessop 1997) was sustained at some point however; knowledge transfer was not completely achieved. LDA interviewee thinks that the park will be better than before but will not have the integrated model that was planned in the beginning because of the deficiencies in organization structure

saying “So you’ll end up with a special park, you’ll end up with great housing around you, but what you won’t have the integrated model that you wanted in the first place”.
Moreover, several stakeholders agree that the responsible body of the Games should have been a transparent, public sector institution which is accountable to tax payers. GLA interviewee says “I would say that I think it would have worked better if there was one delivery organisation, so if LOCOG, the role, the functions of LOCOG and the functions of LDA could have been brought together in one organisation, that’s public sector organisation and therefore publically accountable”.

6. Conclusion

It is hoped that the findings and primary research analysis will also provide a sound base from which the planning of more sustainable major (‘mega’) events can be undertaken in the future and the evaluation of their impact more fully measured across a wider stakeholder community. This may go some way towards what Getz proposes as a model of sustainable events (2009) and for which this study will contribute empirical evidence and conclusions which may be further developed in subsequent research.

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CRIME MAPPING IN URBAN AREAS: CASE STUDY CITY OF PATRAS

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Abstract

The work describes the development of a Geographical Information System designed to analyze and study the spatial distribution of violent acts and events (property crimes) that took place at the city of Patras (Greece) during the years 2007 – 2010. The final geodatabase is composed of 5400 records (occurrences) categorized in 50 distint fields (variables) Crimes of violence are an old and rather common category of crime. Property crime is a category of crime including, among other, burglary, robbery, theft, motor vehicle theft etc. (Spinelli, 1985); it includes only the seizure of money or property, and does not involve force or threat against a victim. The main objective of the described GIS is to contribute to the study, research and analysis of criminal incidents parameters in conjunction with the parameters of the urban environment – which is the receptor space of such events – in order to design and identify strategic orientations and create safer urban areas. Generally speaking, people have legitimate and obvious right to be and feel safe in their homes, neighborhoods or the city center, and generally in the broad environment where they live. Cities are places where people meet, where social life is more intense and complex, where culture is produced, where economic development together with technical and scientific changes are more evident. People are increasingly sensitive to the perception of social risks, including risks related to crime and victimization (AGIS, 2006-2007). As it turns out, it is interesting to clarify how theory and practical analysis can help to apply their knowledge to design and prove that although the socioeconomic characteristics of the residents exert a strong influence on crime rate, the physical characteristics of the urban layout can exert a counteracting influence. Particularly the work documents the theoretical background of crime mapping and crime analysis process and presents all steps of logical and physical design of the GIS and its implementation: organization and verification of the crime report data, identification and encoding of variables, design and implementation of the databases structure, normalization as well as the spatial dependence process of data georeference. Finally, it presents the early conclusions of the research, regarding the spatial distribution and inventory of events accompanied by visual examples.

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1. Introduction

The focus of strategic urban planning issues in deterring crime events has not been adequately studied. There are not only actions to improve the built space preventing and reducing the likelihood of generation of criminal incidents and antisocial behavior but also the principles and objectives of public and / or private space (Cohen, LE & Felson, M., 1979). The spatial structure of city's infrastructures (roads, open spaces, etc.) requires special attention in order to prevent such types of actions (Nes A. Van, 2005a). According to international literature (Shu, 2000; Keith, 1999) it is indicated that under certain circumstances, urban planning parameters such as building factor, the number of floors in a building, the distance from the city center, the width of the sidewalk, land use, the area of building blocks, the age of buildings, population density, the territoriality etc. are important elements which contribute to the "safe" image of a city. The design process of the Greek cities, and the legislation framework, do not correlate such relationships and parameters. The focus and the only approach are from the point of view of forensics (Deladetsimas, 2009).

The objective is to study the relationship of the spatial distribution of criminal actions with the spatial and planning parameters of the urban environment in which these acts are committed. The main research question is whether it is possible for the urban planning to take into account factors that can prevent the commission of criminal incidents or hostile / antisocial behaviors. The research focuses on the contribution of criminal analysis results in the improvement of urban planning.

Geography has a major influence on crime. Combining geographic data with police report data and then displaying the information on a map is an effective way to analyze where, how and why crime occurs. Computerized crime maps became more common with the introduction of desktop computing and software programs called Geographic Information Systems (GIS). Analysts map where crime occurs, combine the resulting visual display with other geographic data (such as location of schools, parks and industrial complexes), analyze and investigate the causes of crime, and develop responses. Recent advances in statistical analysis make it possible to add more geographic and social dimensions to the analysis (AGIS, 2006-2007).

2. Space and Crime

The creation of urban environments that are defensible against crime has been a focal point of criminological discourse from as far back as the 1960s, when sociologists discovered that certain places, like people, possess a higher risk of being victimized than others. Although much attention in criminology has rested on sociological explanations of the concentration of crime at place – such as social disorganization and control theories – many researchers have subsequently changed focus, looking to the built environment rather than the sociological context for causal explanations of crime (e.g. Jacobs, 1961; Newman, 1972; Jeffrey, 1999). With this principle, the crime–design perception offers an exclusive point of view, because it emphasizes the fact that the built environment is more easily manipulated than the sociological con-

text, making it a potentially more fruitful angle from which to tackle crime prevention at place (Reynald & Elffers, 2009).

The early studies on crime and the urban image of the city were developed in The Chicago School in 1920 (Shu, 2000). As a key question had been claimed, whether crime as a phenomenon, can be identified in areas within the city of Chicago and associated with the 'type' of residents. For that purpose, there was a data collection focused on victims, such as the gender, the residence and age and the type of criminal act. Hence, applying this information in city maps and taking into account the population and the crime rates in each region, the research concludes that higher ratios are located on the outskirts of the city and especially in areas in transition. Terence Morris (1957), Brantingham & Brantingham (1975), Hope (1988), and Gilling (1997) emphasize that in the correlation of space and crime, the place of crime is not connected with the offender's residence (Shu, 2000).

One of the most remarkable theories focused especially on how urban space can affect the kind of criminal acts was in the book 'The Death and Life of Great American Cities' of Jane Jacobs (1962). Jacobs supports the idea that the relationship between space and crime depends on the city's function and all parts of a city are not safe in the same way. However the citizens and the visitors of an area can play a key role in the feeling of safety. In this direction, the author states the following conditions in order a city to be safe: mix of land use, small building blocks, coexistence of old and new buildings and finally should be enough density of residences and visitors. The appearance of Oscar Newman's '*Defensible Space'* in 1972 signaled the establishment of a new criminological subdiscipline that has come to be called by many "Crime Prevention Through Environmental Design" or CPTED. All 'Defensible Space' programs have a common purpose: they restructure the physical layout of communities in order to allow residents to control the areas around their houses. This includes the streets and grounds outside their buildings and the lobbies and corridors within them and it depends on resident involvement to reduce crime and remove the presence of criminals. Also, it has the ability to bring people of different incomes and race together in a mutually beneficial union. The key word in Newman's concept is territoriality.

In what follows in 1989, Hillier and his research team address the controversy about the relationship between crime and spatial design. There are two divergent views: the one which advocates open and permeable environments in which strangers as well as inhabitants pan through spaces and the second based on the model of defensible space in single mix which advocates closed and impermeable environments. Research by Simon, Shu (2000) and other crime–space studies carried out by the Space Syntax Laboratory have some striking results – they found no correlation between crime and density, only a poor correlation between affluence and crime, but a very strong correlation between layout type and all kinds of crime, with traditional street patterns, the best, and the most 'modern' hierarchical layouts, the worst. The approach offers some simple design guidance: join buildings together, avoid any kind of secondary access, make sure that all public spaces are continuously 'constituted'

by dwelling entrances and maximize the intervisibility of these entrances by a linear rather than a broken up layout.

The dual relationship of crime and urban planning keeps an important role in predicting crime in urban areas. Crime prevention through environmental design (CPTED) began as a theoretical effort in order to demonstrate the relationship between the urban environment and crime and also to prevent crime through urban interventions (Crowe, 1991). The theory of CPTED belongs to the criminologist Ray Jeffery, after the publication of his book in 1971. The aim is to prevent crimes through a design which will also influence positively human behavior and will leave no room for committing crimes while it reduces the chances. People living in areas where CPTED strategies are followed should feel a sense of security, and potential criminals consider this area as a particularly dangerous place to commit a crime. The main issue of Crime Analysis is the prevention of criminality. Generally speaking, the design of urban spaces prevents or allows the commission of a crime (Keith 1999).

3. Urban Planning Strategies

A complex range of factors contribute to insecurity in the city. Economic conditions and social problems are generally considered as the main causes, but safety is also affected by the physical environment. It depends also on the way in which cities are planned, designed and built; the way in which people identify them with the environment which they live in, and the way in which urban spaces are looked after and managed. The layout and organization of urban spaces influence their level of security: they can contribute to making them safer, but they can also contribute to making them more dangerous. A good or bad layout can contribute to making a city more or less safe. Urban planning deals with the distribution and physical organization of activities and population in urban spaces; it can contribute to prevent phenomena of insecurity in our cities because there is a link between crime and the structure of urban spaces (AGIS 2006-2007).

To commit a residential burglary the offender must first navigate public space in order to gain access to private space and then negotiate entrance to the proper. The crucial question that must be answered is which particular part of public space gives the easiest access to the private space from the viewpoint of the offender. This question determines which kind of spatial information is relevant and needs to be extracted from the crime records in order to map each burglary case to its exact location and link it to the part of public space responsible (Shu, 2000). In fact, accessibility, density, mix of uses, integration, pedestrian and vehicle network, number of floors and vitality are key issues for crime prevention through urban planning. Crime prevention criteria should therefore be considered from the early stages of decision making, at the scale of planning; strategic plans, master plans, local plans and urban regeneration programs as well as infrastructure projects all affect in their specific way urban safety. The research focus on the following urban parameters:

- Social and Physical structures: the city is a living organism, where inter-relationships are the essence of urban life. It has been shaped over time by a self-regulating process. Any intervention affects the existing equilibrium and therefore the insertion of a new part requires careful evaluation in order to avoid rejection. New projects (regenerating an existing urban district or developing a new area) should become part of the whole urban structure. Social inclusion and social cohesion are goals to be strongly pursued for preventing isolation and social exclusion that lead to insecurity or at least are favorable grounds for crime. Indeed, social and economic characteristics of residents are strong predictors of crime (AGIS, 2006-2007).
- Accessibility: good accessibility and a capillary road network are essential to foster flows of movement which produce vitality, natural surveillance and therefore increase safety. To guarantee continuity of movements it is thus important to avoid fractures in the road and pedestrian networks. Lack of accessibility can also contribute to social segregation, and can create enclaves or isolated areas concentrating social problems.
- Vitality: traditional zoning practice tends to separate land-uses (residential, business, commercial, industrial, institutional). This creates districts with streets and public spaces which are not used some times of the day or days of the week, curtailing natural surveillance. Areas with "mixed use" avoid this drawback and therefore should be preferred to single function zoning, wherever possible. Activities add vitality to streets and public spaces, and provide an efficient "eye on the street". They are therefore one of the most powerful tools for creating spontaneous surveillance. Moreover, vitality is also important for social inclusion and cohesion, and thus for the potential reduction of crime.
- Providing mixed status: a safe city is a mixed and open city, with districts where different social groups live together. Providing diversified housing units on the same site attracts different economic groups and persons of different ages, with different habits, schedules and patterns of movements. This helps to create neighborhoods with good vitality which improves safety. In many cities, offices are concentrated in business districts which – being unpopulated at night – may become dangerous places that have no natural surveillance and are difficult to control even employing private police. Natural surveillance is lacking also in residential areas where housing density is too low to generate vitality and flows.
- Visibility: visibility allows people to see their way (and thus avoid dangerous situations) as well as to be seen as they use public spaces, thus making spontaneous surveillance possible. Natural surveillance is defined as the capacity of physical design to provide surveillance opportunities for residents and their agents (Newman, 1972). Indeed, windows and doors that are designed to face each other along a street have a better visibility of the private and public space around residences. The increased sense of security results in a more frequent use of space by residents, which in turn increases surveillance and improves the desire to defend that space (Reynald & Elffers, 2009).
- Number of floors: in residential buildings, the height of the ground floor should be such as to allow switching from residential to commercial use or vice versa. This allows replacing activities which close down with dwellings, and avoid the

sense of abandonment and the lack of surveillance generated by empty ground floors.

- Territoriality: the degree of safety of a place – public or private – depends considerably on the sense of belonging of the users and their identification with the place, because people respect and protect the places they feel as theirs (Newman, 1972). The appearance of residential space creates an image of the area that symbolizes the lifestyle of inhabitants. When the image of an area is a negative one (isolated, dilapidated and neglected) it becomes negatively differentiated from surrounding areas, making it vulnerable to criminal activity. If, from its outward appearance, an area appears to be well maintained, Newman suggests that a message is communicated to offenders that an area is well cared for and controlled by residents, and this serves as a symbolic deterrent to potential offenders.
- Attractiveness: an attractive place, instills respect, enhances the sense of belonging and civil responsibility of the users and inhibits misbehaviors. Besides, the *broken windows theory* which is a criminological theory of the norm setting and signaling effect of urban disorder and vandalism on additional crime and antisocial behavior, states that monitoring and maintaining urban environments in a well-ordered condition may stop further vandalism and escalation into more serious crime.
- Pedestrian network: walks shall be provided for safe convenient direct access to each unit and for safe pedestrian circulation throughout a development between facilities and locations where major need for pedestrian access can be anticipated. Walks shall be located so that they are easily surveyed from the interior of units.

Crime and fear of crime can affect the way a city works as well the attractiveness and functioning of some urban areas. When people feel threatened, they alter their lifestyle and consequently the way they use the city on a daily basis. Many do not go out in the evening, do not use public transport in the slack hours, avoid underground car parks, do not use public spaces (parks, squares etc.) and shut themselves in armored flats or gated communities. Local crime problems also make business activities and life in public spaces decline. Therefore, safety affects economic development. A complex range of factors contribute to insecurity in the city. Economic conditions and social problems are generally considered as the main causes, but safety is also affected by the physical environment.

4. Crime Mapping & GIS Analysis

During the past 20 years, many scholars have introduced definitions of Crime Analysis. Although definitions of crime analysis differ in specifics, they share several common components: all agree that crime analysis supports the mission of the police agency, utilizes systematic methods and information, and provides information to a wide range of audiences (Boba, 2009). The following definition of crime analysis could be the best description of its meaning: *"Crime analysis is the systematic study of crime in order to solve problems related with socio-demographic, spatial and temporal factors and focus to the crime and disorder reduction, crime prevention and evaluation".*

Crime analysis is the systematic examination of crime and disorder problems. It is not haphazard or anecdotal; rather, it involves the application of social science data collection procedures, analytical methods and statistical techniques. More specifically, crime analysis employs both qualitative and quantitative data and methods. The qualitative methods, specific to crime analysis, include field research (such as the observation of characteristics of locations) and content analysis (such as examining police recording reports). Quantitative data and methods deal with statistical analysis of numerical or categorical data. The spatial nature of crime is crucial to understanding the nature of the phenomenon. Crime Mapping is the process of using GIS technology to conduct Spatial Analysis of criminal incidents.

Crime mapping serves three main functions within crime analysis (Boba, 2009):

- It facilitates visual and statistical analyses of the spatial nature of crime and other types of events.
- It allows analysts to link crime data with geographic variables and location.
- It provides maps that support the visualisation process.

Based on the previous, a typical schema for a feasible crime analysis process includes: data collection, data collation, analysis, dissemination of results and feedback from users of the information.

Collection: The crime analysis process begins with observations (data). Data is drafted from various sources including, in most cases, outside crime analysts. Crime analysts examine data observed and collected by others, such as police officers, call-for-service dispatches, community service officers and geographers (Crowe, 1991). The police agencies, officers or civilian employees insert crime reports and other data into a computer system (not always as in our case). These data usually include longhand reports and have no specific form. However, the manner in which data are stored and the amount of data stored are important in crime analysis. Data must be kept in a digital format and to be collected for a significant amount of time to be useful for crime analysis. In general, the crime analysis data collection process requires the following:

a. The data must be collected accurately and consistently.
b. Only data appropriate for crime analysis should be compiled.
c. The data must be collected in a timely manner
d. The data must be stored for an adequate amount of time to allow effective analysis.
e. The data must be accessible in digital raw form to be queried and downloaded.

Collation: The main sources of the crime analysis data are from police sources. These data are not often coded or under any type of quality control. Data collation entails a number of different tasks, but it generally takes three forms:

a. Cleaning: the process of correcting mistakes and inconsistencies in the data.
b. Geocoding: the process of locating the crime analysis data and therefore to be enriched with spatial data and characteristics.

c. Creating new variables: the process of recoding or computing new variables from existing variables for more effective analysis.

Analysis: Analysis takes place after data collection and collation, including the use of many different statistical and visualization techniques. The crime analysis process in not a linear process. Very often the crime analyst is aware of problems related to data until the analysis begins. When this occurs, the analyst must often return to the collection and collation steps in order to improve or change the way data is collected, stored or collated. This practice is called data modification subcycle. Therefore the crime analysis process has to move from collection to collation and to analysis and vice versa. These tree steps are the most important and time-consuming and define the quality of the next steps.

Dissemination: Once the data analysis is completed, the crime analyst needs to disseminate the results to various types of audiences. In fact, tables, graphs, diagrams, and thematic maps are easily understood. However, the presentation should be tailored to the knowledge of the particular audience and the presentation of the results should convey only the most necessary information. In more specific terms, much of the work of crime analysis takes place behind the scenes and the presentation of results need not include all the information and all the work has been done.

Feedback: The researcher has to benefit from the dissemination process and to enrich the analysis results by receiving feedback and transform it to new information. This step improves the whole process. Analysts must receive feedback about the quality and the nature of the analyzed data in order to reach to a better decision making.

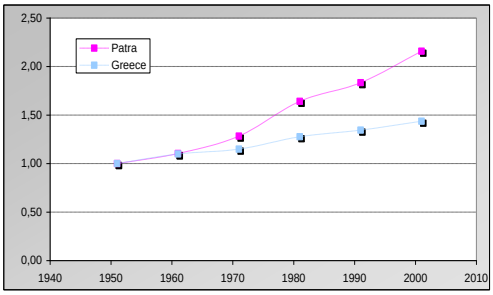
To sum up, the crime analysis process is not linear. It is cyclical since in every step there are improvements and feedback. Analysts spend a lot of time in the modification of their data. However, the process is constantly evolving by improved policies such as technologies, databases, training and examples of effective analysis. The research of space and crime can be achieved by creating a complete, appropriate and flexible methodological framework. This would define the main axis that will make easier the problem's solution by providing a logical interpretation, a prioritization of targets and a development of new data and information.

5. The Database for the city of Patras

The present chapter refers to the development of GIS and the relevant thematic database. The case study is the city of Patras (Greece), third urban complex in Greece and one of the oldest, having a continuous history of 4.000 years. The modern history of city is characterized by a rapid and continuous development and transformation, concerning its structure, function and physiognomy. It presents all the characteristics of a developing urban center as it concerns to the organization of its urban structure and socio-economic activities. Patras has a population of approx. 203,000 inhabitants (2001), and the evolution of its population, is shown in the following table and graph compared to the population of the country (Table 1).

Table 1. Population evolution in Patras and Greece

YEAR	PATRA	GREECE	PATRA	GREECE
(real population)				
1951	94.192	7.632.801	1,00	1,00
1961	103.985	8.388.553	1,10	1,10
1971	120.847	8.768.641	1,28	1,15
1981	154.596	9.740.417	1,64	1,28
1991	172.763	10.259.900	1,83	1,34
2001	203.273	10.964.020	2,16	1,44



At the beginning of 2008, the Central Police Department of Patras, offered to the university Laboratory all census forms of criminality acts (1614 reports) - for year 2007 – however, not including those who do not safeguard the privacy of the individual (data referred especially the so-called "Crime of the road"). These data have a great volume and do not exhibit any standardization in coding.

Therefore there was an obvious and time-consuming appropriate treatment in relation to their standardization and more specific the focus was to identify variables' encoding and credible digital conversion into a database. Along the way, the database was tested with respect to data reliability and normalization rules. After the final database tests, all the records were georeferenced using the digital cartographic structure (digital map) of Patras – which includes building blocks, buildings, roads, etc - by the Greek Statistical Authority (2001) as it is the only reliable digital map with such information. We have to mention that more updated maps are not yet available as there are only preliminary results from 2011 population and building national census. The final database contains 50 distinct fields describing the inventory data sheets. That georeferenced data was the source material for a pilot approach which used to control the process efficiency. Then the police passed to the laboratory the inventory records of violent acts for the years 2008, 2009 and 2010. These records- more than 5.400- are on hard copy and currently they are being rendered in an electronic database. In this sense, the initial results presented below (Figure 1), refer to the pilot data of 2007 (1624 cases). The characteristics of a crime are distinguished into three categories: a) modus operandi, b) persons involved in the crime and c) vehicles involved in the crime.

Modus operandi (MO): a Latin term meaning literally "method of procedure" refers to the method of crime, which is the key elements of the crime incident itself (Boba, 2009).

What: the nature of crime (e.g. burglary, robbery etc.).

How: the way the crime was carried out (varies by type of crime). Characteristics include but are not limited to the following: a) point of entrance, b) method of entrance, c) suspect's actions, d) method of escape etc.

Where: Where the crime was committed. Characteristics include but are not limited to the following: a) address, b) location, c) area, etc.

When: when the crime was committed. Characteristics include the following: a) exact time, b) first date and time, c) last date and time.

Persons involved in crime: the information about a person involved in a crime typically includes a description of the victim and the criminal. These data refer to the name/address/date of birth and gender.
Vehicle involved in crime: this category of information concerns the involved vehicles. This kind of data is important because vehicles often serve key roles in the commission of crimes. Some of the characteristics include the color and the type of vehicle (car, truck, motorcycle, etc).

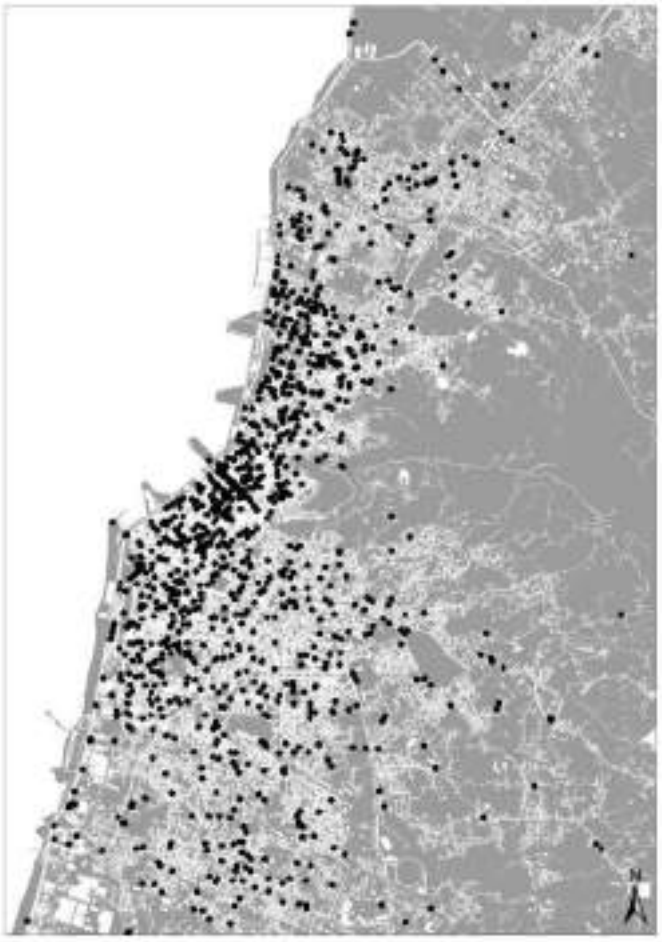


Figure 1. Spatial distribution of crime events

Based on the available information, the implementation of the previous modus operandi renders the database structure for the city of Patras, as presented in Table 2 below.

Table 2. Database variables

modus operandi (MO)	**NAME**	**TYPE**	**DESCRIPTION**
	XID	Integer	The serial number of every criminal record
	YEAR	numeric	The year of the committed crime (2007, 2008, 2009, 2010)
WHAT	XTHEME	text	The theme of the committed crime (α = attempt, δ = burglary, κ= theft, λ = robbery)
	XTYPE	text	The type of the commited crime (building, citizen, state property, vehicle)
HOW	XENTRANCE	text	Point of entrance (door, window, unknown, balcony, etc)
	XLEVEL	text	Level of entrance (1^{st} floor, 2^{nd} floor, etc)
	XATTACKED	text	Object of offence (against person, against property)
	PRESEN	text	Situation of victim (presence, absence)
WHERE	PLACE	text	The name of the city (Patras)
	ADRESS	text	The exact address (example Ag.Nikolaou Street)
	XNUMBER	text	The precise number of the address (1, 56 ,102, etc)
	LUSE	text	The type of location (commercial, public space, residential, street)
WHEN	STARTDATE	date	Precise start date xx/xx/2007 etc
	ENDDATE	date	Precise end date xx/xx/2007 etc
	MONTH	text	Month of the incident (February, March etc)
	EPOXH	text	The incident's season (α = spring, κ = summer, φ =autumn, χ = winter)
	STARTTIME	date	Precise start time (example 11:45, 12:50)
	ENDTIME	date	Precise end time (example 13:45, 17:50)
	FOUND	text	Criminal's arrest outcome: arrested or

CRIMINAL			not (yes, no)
	CGENDER	text	Criminal's gender (α = male, θ = female)
	CYEAR	numeric	Criminal's year of birth (example 1965 etc)
	CAGE	numeric	Criminal's age (example 18, 20, 52 etc)
VICTIM	VGENDER	text	Victim's gender (α = male, θ = female)
	VYEAR	numeric	Victim's year of birth (example 1975 etc)
	VAGE	numeric	Victim's age (example 22, 30, 42 etc)
VEHICLE	COLOR	text	The color of the vehicle (black, red, blue etc)
	VTYPE	text	The type of the vehicle (car, motorcycle, truck, bus)
PROPERTY	AOBJECT1	text	The type of the stolen object (passport, documents, clothes etc)
	VALUE1	numeric	The value of the stolen object (100, 20, 1000 etc –in euro)

As it was mentioned earlier, the database records are georeferenced based on their address with visual confirmation on a map. Therefore, an independent digital cartographic structure with point topology was created, compatible with the digital base map in accordance with the current Greek reference geodetic system (EGSA '87). The GIS software used is ArcGIS of ESRI. As the research is in progress, there is a growing literature research simultaneously ongoing with the collection and input of new data. In this framework, the paper presents initial results and, obviously, there is a potential of changes or rejections in the future. The results in the following tables and figures present a first statistical description of selected variables from the database and the spatial distribution of positions of the violent acts in the city of Patras (pilot data of 2007) in cooperation to initial experimental applications for calculating density distribution (Kernel density) for different instants of time. As these are some initial results, there are no comments so that they cannot be considered as main positions of the research. The main aim is to give an indicative impression of the spatial database's potentials with regard to the upcoming data of the years 2008, 2009 and 2010.

Table 4. Theme of crime

Attempt	89	5,5%
Burglary	642	39,8%
Theft	847	52,5%
Robbery	36	2,2%
Total	1614	100,0%

Table 3. Type of crime

Deceit	232	14,4%
Armed Robbery	24	1,5%
Break/Force	1324	82,0%
Physical violence	34	2,1%
Total	1614	100,0%

Table 6. Main land of venue

Commerce	205	12,7%
Private House	243	15,1%
Private Office	35	2,2%
Recreation	36	2,2%
Public Installations	60	3,7%
Public Space	917	56,8%
Other	118	7,3%
Total	1614	100,0%

Table 5. Presence of victim

Presence	310	19,2%
Absent	1304	80,8%
Total	1614	100,0%

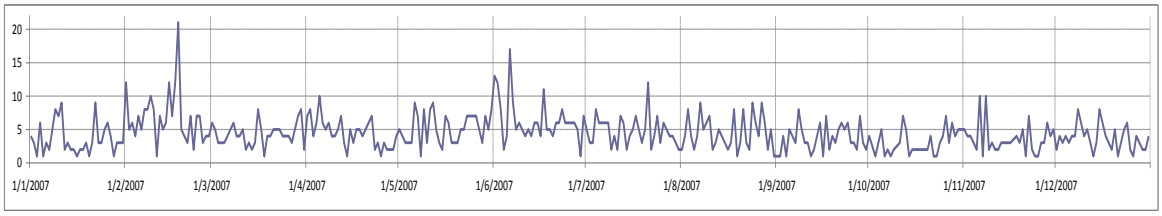


Figure 2. Daily distribution of crime events

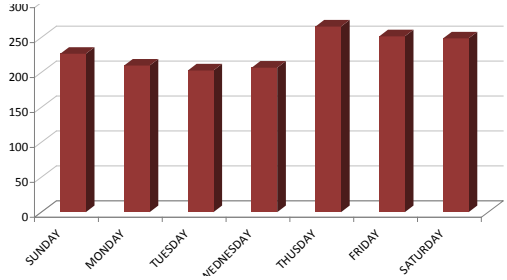


Figure 3. Crime events per day

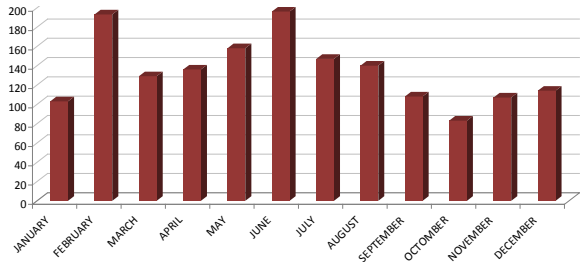


Figure 4. Monthly distribution of crime

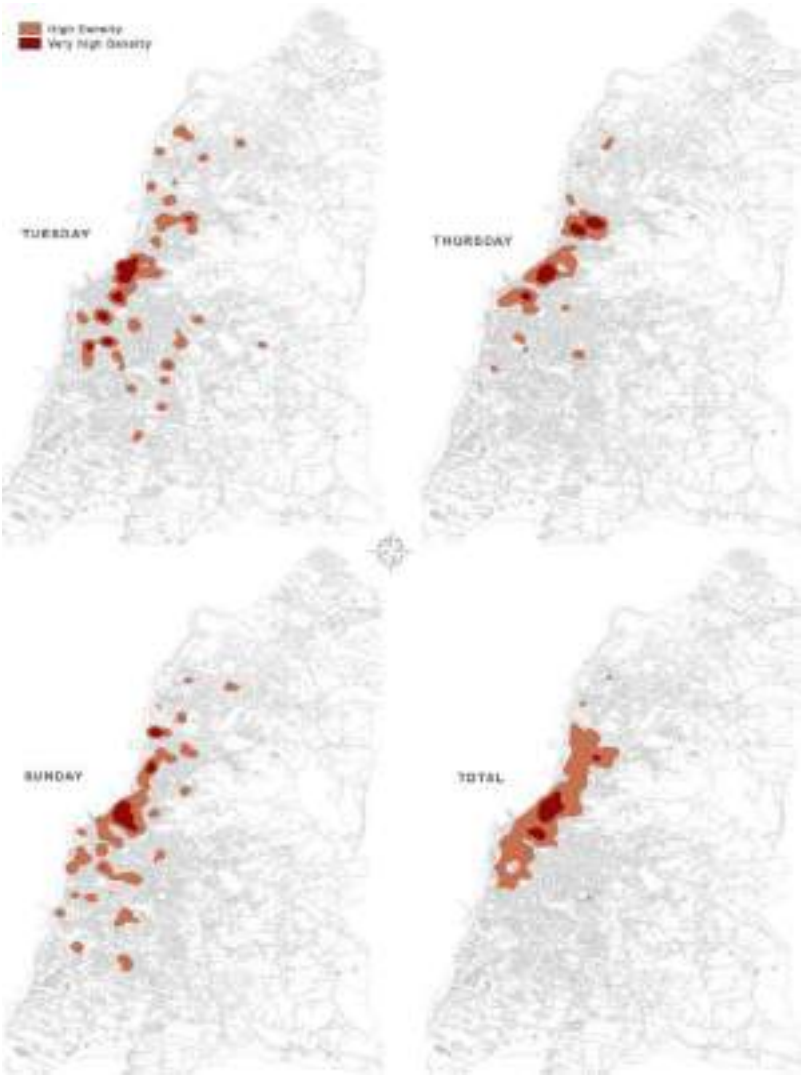


Figure 5. Spatial densities

On Tuesdays the minimum of average events is occurring and on Thursdays the maximum. They are only the top two classes from Kernel densities.

6. Future research

The future research will focus in the effort to integrate and incorporate the results of the study of space and crime in the process of urban planning. On a broader level, it seems that violent acts are the product of social and environmental factors (Nes van A., 2005b).

Unfortunately, there are still hidden analytic dangers lurking just below the surface, especially at the larger scales of analysis. First and most obviously, there is always an extremely uneven distribution of crime opportunity in cities because cities have uneven distributions of people and activity with more people, cars, activities in some areas than others, and, above all, far more people and activity, and therefore crime

opportunities, in the central areas than elsewhere (Shu, 2000). So if we do a simplistic analysis, we will always find the highest rates of crime in the city centers, because this is where there is by far the highest concentrations of crime opportunity are, and this might be taken – mistakenly, as we will see - to reinforce the idea that people are a source of danger. However, nearly all of this is property crime against commercial premises, and this can -by definition- only happen where commercial premises are located, and commercial property crime rates are often well above those for dwellings (land use).

Crime rates must clearly then always be correlated to opportunity, and comparison shall be made with variables of same spatial nature – for example city centers to city centers, not city centers to residential areas. This applies not only to the number of premises offering crime opportunity. This inherent difficulty in spatial analysis is exacerbated by the spatial distribution of social and economic factors. A third difficulty is the correlation between the crime and spatial mechanisms: pickpockets are helped by crowded streets; muggers need victims one at a time, burglars need secluded access to dwellings and so on. Again Alford's work shows that different crimes have different distributions, and also different distributions by night and day, but all are powerfully related to space. An overly aggregated analysis might well have missed the genuinely spatial influences on crime distributions that articulates so good.

Finally, a fourth difficulty arises from the familiar search for 'crime hot spots'. The identification of these can of course be very useful for the police in deciding where to deploy their resources, but from the point of view of identifying spatial influences on crime, they tend to be misleading because most hot spots turn out to have social explanations. So, even if it is shown that the crime rate in an area is higher than in another, or even that more criminals come from one area than another, it still isn't known whether the high rate has been produced by the area itself or by the social process that put its population there. In principle, it ought to be possible to resolve this statistically by using multivariate analysis to isolate the influence of different factors (Scott, Ken & McLaren, 2000). In technical terms, more effort to control the layout variables needs to be made.

Eventually, the applied part of the research is in progress and in the near future, according to the methodological design of the research, it will focus on the methodological integration of investigation's findings of literature and how these are specified in accordance with the requirements of the collected and organized in a GIS spatial database. Moreover, there is a growing literature research simultaneously ongoing with the collection and input of new data. Hence, the theoretical phase will identify the models of spatial analysis to determine the contribution of urban parameters in the process of spatial distribution of crime incidents. The objective of crime mapping is to offer some directions about how to deal with such kind of urban transformations. A crime map sets out to show us something we cannot otherwise see. Its goal is predictive, to identify patterns and anticipate future criminal acts by collating information about the time, place, and frequency of past crimes, not only to see, but to foresee (Aurora, 2009).

7. Acknowledgments

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GREEN INFRASTRUCTURE RESILIENCE PLANNING FOR CLIMATE CHANGE: STORMWATER BMPS AND SOCIAL VULNERABILITY FOR CLIMATE-INDUCED FLOODING RISK ASSESSMENT FRAMEWORK

Chingwen Cheng[1]

Abstract

Climate change and urbanization affect hydrological cycle and lead to more frequent and intense human-influenced climate-induced floods that subsequently have significant environmental, economic, social, and cultural impacts on the society. Under increasing urbanization trends worldwide, more people are likely to be exposed to flooding hazards that threaten their livelihood; particularly for those who are socially vulnerable with low coping capacity. Green infrastructure, including both structural and non-structural stormwater best management practices, has been widely accepted in polices for stormwater management and an emerging strategy for climate change adaptation in spatial planning. There is a need in planning for integrating risk assessment and using green infrastructure as an adaptive planning strategy for resilience planning. The goal of this research is to provide a resilience planning framework to unpack risk assessment methodology and a tool for investigating the role of green infrastructure for climate change adaptation using the Charles River watershed in the Boston Metropolitan Area as a case study.

The overarching research questions are: (1) to what degree does the climate change become sensitive to long-term flooding hazards? (2) what are the key indicators for evaluating urban resilience and social vulnerability to long-term climate-induced flooding risks in the Boston Metropolitan Area? (3) to what degree can green infrastructure mitigate long-term climate-induced flooding risks of the Boston Metropolitan Area? (4) what is the role of green infrastructure in integrating social vulnerability and climate-induced flooding risks for climate change adaptation in landscape and urban planning?

Risk assessment is synthesized and spatially correlated through hazard, exposure and vulnerability studies. The long-term flooding hazard is defined by the probability of daily flow rate higher than the bankfull discharge. Exposure refers to the population who live in the flooding hazard zones. Vulnerability is reflected upon social-economic indicators related to flooding hazards coping capacity. Hydrological modeling for stream flow is conducted using the Soil and Water Assessment Tool

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(SWAT). In addition, six green infrastructure land cover patterns varying in development density with a combination of various stormwater BMPs (porous paving, bioswales, and green roofs) based on the concept of transect planning are identified for Hydrologic Response Units (HRU) in SWAT. Climate change sensitivity approach through combinations of temperature and precipitation scenarios (+1, +2, +3, +4 ºC with an increment of 10% daily precipitations) are used to assess climate-induced long-term flooding hazards and mitigation threshold capacity from stormwater BMPs.

The expected results will demonstrate the effectiveness of applying a full range of probable stormwater BMPs in rural to urban transect planning for reducing climate-induced long-term flooding risks. The limitation of structural BMPs indicates that non-structural BMPs and comprehensive land use and watershed management policies for green infrastructure planning is needed for climate change adaptation. More over, an integrated hydrological risk assessment including social vulnerability is essential for resilience planning. Finally, this paper proposed a comprehensive green infrastructure resilience planning framework and methodologies that can be applied in practice to cope with climate change and enhance resilience in the Boston Metropolitan Area and other urbanized watersheds.

1. Introduction

"*Man takes a calculated risk when he builds his towns, cities, and other installations on the floodplain of a river. He, thus, is responsible for flood damages, if not for the floods that cause them.*" (Savini and Kammerer, 1961, pp.1591-A)

Not only is man responsible for the human-induced floods as a result of urbanization but also for the environment and the society that man created for socially vulnerable groups to be more susceptible to flooding hazards. Our built environment is multifaceted that involves limited natural resources and diverse cultures under local, regional, and global political and socio-economic context. The complexity between natural and human systems is intertwined and intangible. The world population grows exponentially since industrial revolution changed the face of civilization. The consequence of urbanization development has caused significant and irreversible environmental, economic, social, and cultural impacts that are not sustainable for our future generations (Bruntland 1987). One of the pressing issues is the climate change, which is a result of green house gas emission largely derived from urbanization and anthropogenic changes to the atmosphere (Karl, Melillo, and Peterson, 2009; IPCC, 2007).

Climate change and urbanization affect hydrological cycle and lead to more frequent and intense human-influenced climate-induced floods that subsequently have significant environmental, economic, social, and cultural impacts on the society. One of the major impacts from urbanization is the increased impervious land cover that alters hydrological cycles resulting in excessive runoff, lack of infiltration, and insufficient aquifer recharge (Booth and Jackson, 1997; Brabec, Schulte, and

Richards, 2002). Consequently, human-induced flooding at various scales is a problem in urbanized areas. Under climate change impacts, climate-induced flooding as a result of increased intensity and duration of storm events are likely to affect the New England region (Rock et al., 2001). Compounded by population growth in urbanized areas, more people are likely to be exposed to climate-induced disasters. The under-served population would be particularly more vulnerable due to a lack of available resources for risk mitigation, preparedness, response, and recovery (Hardoy and Pandiella, 2009; Bartlett, 2008; Douglas et al., 2008; Maantay and Maroko, 2009). Hardest hit are often the socially vulnerable groups, such as the elderly, those of low socio-economic status, and minority communities. Finally, top-down regulatory planning over past decades tends to dismiss local knowledge that traditionally passes down to generations in coping with Nature. The alteration and eroding of local culture therefore increases community's vulnerability to climate change (Umemoto and Suryanata, 2006).

1.1 Green Infrastructure and Stormwater BMPs

Green infrastructure, including both structural and non-structural stormwater best management practices (BMPs), has been widely accepted as alternative stormwater management for restoring or enhancing ecological services. In lieu of grey infrastructure, green infrastructure is defined by the United States Environmental Protection Agency (EPA) as a system that "uses natural systems – or engineered systems that mimic natural processes – to enhance overall environmental quality and provide utility services." Applying what ecosystem services can provide to achieve the same functions that are designed to serve urban infrastructure purposes; green infrastructure incorporates alternative BMPs to better improve environmental quality. The enhanced ecological functions consequently help to increase resilience of ecosystems to absorb environmental impacts from climate change.

Structural BMPs emphasize ecological engineering design such as bioswales or rain gardens, porous pavements, and green roofs. Non-structural BMPs emphasize policy and regulations that help to alleviate the root of the problem – urbanization – and engage the public (Urbonas, 1994). Non-structural BMPs include a wide range of strategies, including but not limited to land use planning, natural resources management, streams and wetlands restoration (Ellis and Marsalek, 1996), and smart growth. Recent research suggests that the integrated structural and non-structural approach in green infrastructure plays an important role as an adaptive planning strategy for mitigating flooding risks and serves as a climate change adaptation strategy in spatial planning (Gill et al., 2007).

1.2 Planning for Climate Change

Planners have been given the challenge for decades in resolving conflicts between environmental protection, economic development, and social equity for sustainability (Campbell, 1996). Under the climate change impacts with increased risks to human-influenced and climate-induced natural disasters, planners have a greater mission in

planning for resilience and facilitating resources distribution to achieve multiple mutual benefits for the environment, economy, equity, as well as diverse cultures.

Planning for resilience in enhancing capacity of adaptability to climate change impacts is a top national priority in cities (Godschalk, 2003; Beatley, 2009) and a top agenda in the world climate change summit. Planning strategies in the new urban world require robustness and adaptability with multiple objectives in order to be resilient to climate change variations and uncertainty (Ahern, 2011). The theory and application of resilience in planning application remain an open discussion in that what a resilient urban form is like (Hamin and Gurran, 2009), how the governance structure can be more resilient (Lynch, 2008), or in what planning process can achieve resilience (Hebbert, 2009; Lessard, 1998). This research is intended to fill the gap of resilience research in green infrastructure planning.

1.3 Research Goals

The goal of this research is to provide a resilience planning framework to unpack risk assessment methodology and a tool for investigating the role of green infrastructure for climate change adaptation using the Charles River watershed in the Boston Metropolitan Area as a case study. The overarching research questions are: (1) to what degree does the climate change become sensitive to long-term flooding hazards? (2) what are the key indicators for evaluating urban resilience and social vulnerability to long-term climate-induced flooding risks in the Boston Metropolitan Area? (3) to what degree can green infrastructure mitigate long-term climate-induced flooding risks of the Boston Metropolitan Area? (4) what is the role of green infrastructure in integrating social vulnerability and climate-induced flooding risks for climate change adaptation in landscape and urban planning? This paper will address those questions from theoretical and methodological framework and provide implications of using the green infrastructure planning framework into practices for climate change planning.

2. Theoretical Framework

2.1 Resilience Theory

Resilience is defined as a capacity in a system to absorb shocks from disturbances that change the system's ability to return to the state of the same structure and functions (Holling, 1973; Walker and Salt, 2006). Resilience thinking can be applied to society as a "capacity to anticipate, prepare for, respond to, and recover from significant threats with minimum damage to social well-being, the economy, and the environment" (NRC, 2010). It provides system thinking in dealing with complex issues such as climate change in the coupled natural and human systems (Liu et al., 2007). The resilience framework should be robust rather searching for optimal control in the social-ecological systems and this framework is intended to inform adaptive planning (Anderies, Walker, and Kinzig, 2006).

2.2 Vulnerability Theory

Vulnerability is a sign for the erosion in the elements of social-ecological resilience (Adger, 2006). When communities have insufficient coping capacity for the shocks and disturbances in the coupled natural and human systems, they are more vulnerable to the adverse effects of uncertainty and extreme variation which climate change has promised. Vulnerability for climate change is closely associated with social resources in terms of an individual as well collective adaptive capacity to mitigate, prepare for, respond to, and recover from environmental hazards (Birkmann, 2006). Under the context of complexity in politics and economics in the urbanization process, a "risk society" is often created with socially vulnerable groups who are more susceptible to environmental hazards (Colten, 2006; Blaikie, 1994).

Social vulnerability is therefore intertwined with environmental, economic, social, and cultural dimensions. Environmental vulnerability refers to the physical environment that is susceptible to natural or manmade hazards. For example, the low land and floodplain areas are prone to flooding hazards or the built environment with massive impervious areas increasing the risk of flash floods. Economic vulnerability is intertwined with the economic systems at global, national, regional, local, and individual levels. Depends on the scale of vulnerability assessment, the economic vulnerability can be specified at appropriate scale. For example, poverty is the key indicator for economic vulnerability and its measurement is often to be gross domestic product (GDP) at the global or national scale and median household income at the regional or local scale. Social equity vulnerability refers to whether the society created inequitable environment in which the policies and resources distribution are limited for marginal groups of society thus making those people who tend to get more exposure to hazards and are susceptible to damage and causality caused by disasters. Socially vulnerable groups include low income, disabled, women, children, aged groups, minorities, and immigrants (Pelling, 1997; Laukkonen et al., 2009). Cultural vulnerability is the inverse of cultural sustainability that aims to preserve tangible or intangible cultural heritage. It is related to individual as well as collective attitudes and behaviors toward actions in climate change mitigation and adaption to achieve the culture sustainability. All vulnerability factors among four dimensions are interrelated and have impacts and feedbacks on one another.

3. Green Infrastructure Resilience Planning Framework

Climate change and urbanization have impacts on hydrological cycle, land cover change, and people's livelihood. Landscape and urban planning is essential for an integration of coupled natural and human systems to reduce environmental hazards and social vulnerability while in the mean time achieve climate change mitigation and adaptation. Risk assessment encompasses three components: hazards, exposure, and vulnerability. Hazards are spatially defined in the physical environment; exposure refers to population who are located in the hazard zones. Social vulnerability indicates coping capability of a community to mitigate, respond to,

recover from, and adapt to the exposed hazards (Birkmann, 2006; De Wrachien, Mambretti, and Sole, 2008). When exposure is highly spatially correlated with social vulnerability, it implies an equity issue in which people who have least resources to cope with disasters live in the highest environmental hazard areas. This research focuses on climate-induced long-term flooding risk assessment.

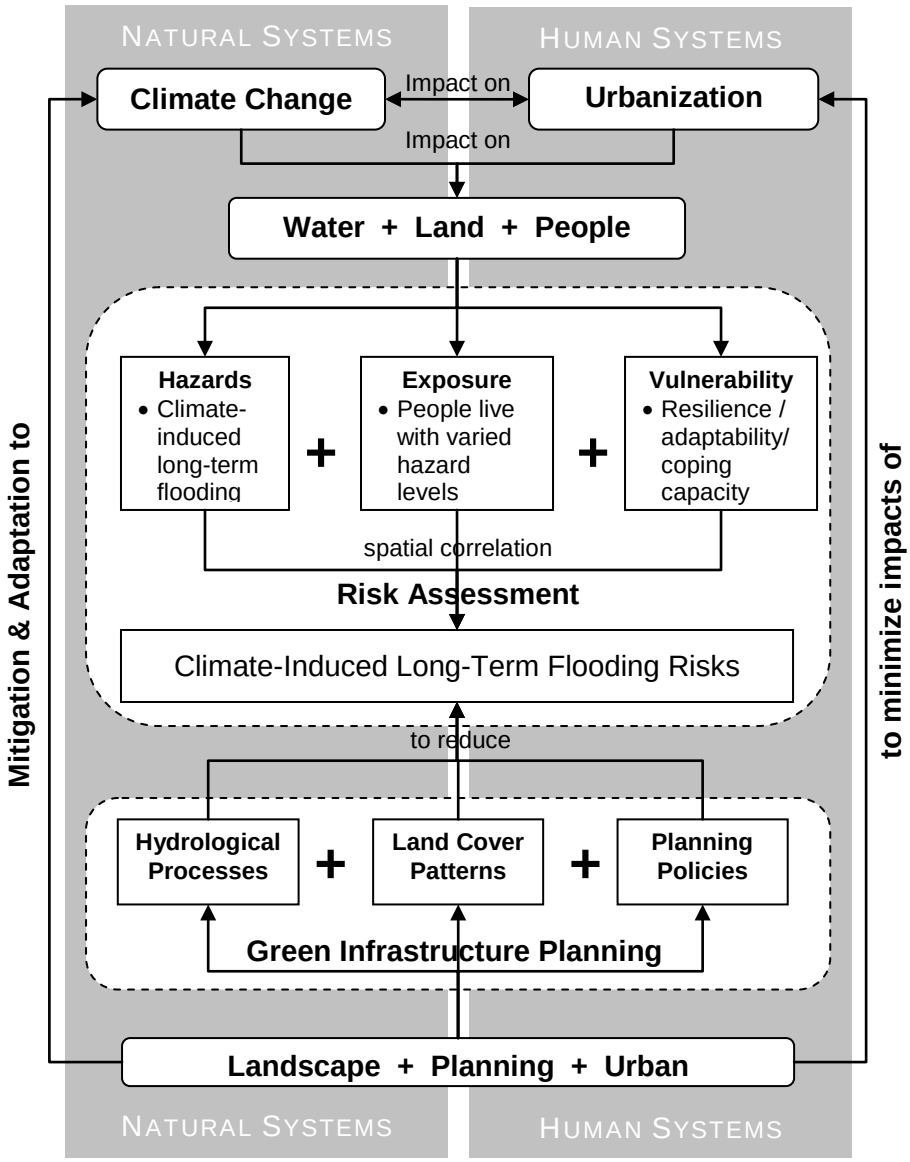

Figure 1. Green infrastructure resilience planning framework integrating climate-induced flooding risk assessment for climate change adaptation in the coupled natural and human systems

A comprehensive green infrastructure planning addresses hydrological processes, land cover patterns, and planning policies for reducing climate-induced long-term flooding risks. Effective integration of structural and non-structural BMPs can reduce impervious land cover and restore hydrological function in urbanized areas for stormwater management and long-term flooding hazards mitigation. Planning

policies influence the location and implementation of green infrastructure practices that are closely linked to land cover patterns and hydrological processes. Finally, green infrastructure has multiple benefits that can subsequently mitigate urbanization and climate change impacts such as reducing carbon emissions, minimizing impervious surfaces, reducing urban heat island effects, and improving environmental quality (Figure 1).

4. Methodologies

4.1 Study Area

The study area includes 24 municipalities in the 770 square kilometers of the Charles River watershed. As population growth continues in urbanized areas under current development patterns, more impacts from urbanization and interactions with climate change will impose more potential risks for society. Aside from the potential climate-induced sea level rise impacts on the coastal communities, this study focuses on inland climate-induced long-term flooding risks. Charles River watershed has over 3 millions population and is the most populated watershed in the Boston Metropolitan Area, including the City of Boston. Charles River watershed encompasses the most environmental justice populations defined by the Massachusetts Office of Geographic Information, including neighborhoods with high minority, non-English speaking, low-income, and foreign-born populations.

4.2 Risk Assessment

Risk assessment is highly spatially correlated in the coupled natural and human systems through a comprehensive synthesis of three major analyses: hazards, exposure and vulnerability. Long-term flooding hazard is defined as a probability of daily stream flow higher than the bankfull discharge:

$$P(Q > Q_{bankfull}) = \frac{days\ when\ Q > Q_{bankfull}}{365}$$

Stream flow can be simulated through hydrological models. Soil and Water Assessment Tool (SWAT) is a long term hydrological model that operates on a daily time step (Arnold et al., 1998). Key elements used to simulate hydrological balance in a subbasin level include digital elevation model (DEM), temperature, precipitation, land use, soil, and slopes. The hazards index will be built upon 20 years of data from 1992 to 2011, in addition to 2-year warm up period 1990-1991. Assuming the maximum long-term flooding hazard reaches the probability of stream flow surpasses bankfull discharge everyday in the raining season; the long-term flooding hazard index can be scaled from 0 to 1 for each subbasin in the watershed. Climate-induced long-term flooding hazards are calculated through climate sensitivity study using a combination of incremental temperature (+1, +2, +3, and +4 ºC in daily temperature) and precipitation (an increment of 10% in daily precipitation) change until the long-term flooding hazard index reaches 1. The climate sensitivity study reflects a range of probable climate change scenarios at the local scale.

Exposure index is illustrated by the ratio of percentage population of total in the US census 2010 at the unit of block groups in GIS. Based upon hazard index in each subbasin, population at the census block groups can be spatially overlaid to determine the total affected population in the watershed as well as affected population in each subbasin. Exposure index can then be calculated based on the ratio of affected population in each census block groups over the total affected population in the watershed.

Social Vulnerability Index is built upon a US nation-wide study conducted by Cutter (Cutter, Boruff, and Shirley, 2003). Key social-economic indicators related to the Boston Metropolitan Area will be identified to reflect regional characters for climate-induced long-term flooding risks. Vulnerability index will then be constructed at a scale from 0 to 1 based on key indicators in each unit of the census block group.

4.3 Stormwater BMPs Assessment

Structural stormwater BMPs for mitigating climate-induced long-term flooding risks are assessed through land cover patterns change on the hydrological processes under the assumption that on-site stormwater management can help to mitigate a range of long-term flooding hazards under climate scenarios. Three commonly used stormwater BMPs are tested: bioswales or raingardens, porous paving, and green roofs. Six stormwater modeling typologies (SMT) are developed based on the concept of rural-urban transect planning (Dunay and Talen, 2002) as hydrologic response unit inputs for SWAT hydrological modeling. Land cover patterns vary in close association with development density that is largely defined by six land use categories: forest, rural residential density or agriculture, low density residential, medium density residential, high density residential and other intensely built areas such as commercial, industrial, transportation, and institutional land uses. Each type of development patterns implies different potential for stormwater BMPs applications. For example, bioswales or raingardens can be applied at a greater scale in the low density than those in the high density residential areas. In addition, porous paving and green roofs are more likely to be implemented in the high density and intensely built areas than those in the rural and low density residential areas. As a result, six stormwater modeling typologies with a full range of probable stormwater BMPs are developed. Then determine parameters in the SWAT model to reflect the stormwater BMPs in each stormwater modeling typology for completing the risk assessment described above.

4.4 GIS Spatial Analyses

Risk assessment and stormwater BMPs assessment designed in this research are highly spatially correlated and rely heavily on GIS spatial analyses. The expected results will indicate the low, medium, and high risks levels for long-term flooding under low, moderate, and high climate change scenarios. In addition, socially vulnerable index can be spatially correlated with exposure index to examine to what extent the vulnerable populations are also spatially distributed in the high hazard

zones. Moreover, the stormwater BMPs assessment will indicate a range of threshold capacity under various climate change scenarios. Finally, risk assessment at the census block group level in the watershed scale can reflect the variance of sensitivity and vulnerability to climate change scenarios between municipalities and between upstream and downstream communities.

5. Conclusions

Planning essentially is a science of resolving people's problems over time addressing long-term sustainability. As climate change emerges as a top global as well as local agenda, its impact on the coupled natural and human systems needs to be addressed in resilience planning. This paper explores the link between climate change, risk assessment, and green infrastructure planning through the lens of climate-induced long-term flooding risks, social vulnerability, and stormwater BMPs. Climate Change is likely to impose long-term hydrological impacts on the urbanized watershed. As a result, more people, particularly socially vulnerable groups, will be exposed to climate-induced long-term flooding hazards. Structural stormwater BMPs have threshold capacity and are not sufficient in mitigating climate-induced flooding risks. Therefore, it is critical for green infrastructure planning to incorporate risk management and non-structural BMPs across watershed scale for climate change adaptation. The proposed comprehensive green infrastructure resilience planning framework and methodologies can be applied in practice to cope with climate change and enhance resilience in the Boston Metropolitan Area and other urbanized watersheds.

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Some Determinants of Growth in Off-Java Lagging Regions Since Decentralization

Jennifer Day and Peter Ellis

ABSTRACT

This study explores some determinants of sub-national growth in Indonesia, and focuses particularly on off-Java manufacturing outcomes since the country's "Big Bang." Since 2001, Indonesia has been undergoing administrative, fiscal and governance decentralization. Often referred to as the "Big Bang," provincial and local (district) governments began to assume control over many policies. District governments – with varying levels of capacity – coordinate local service delivery such as health programs and local roads, in addition to elections of local and national representatives. In 2006, transfers to sub-national governments increased again. Indonesia's provinces and districts now spend a record 37 percent of total public funds, which is higher than the OECD average.

One of the main inquiries in this study is whether urbanization or localization effects are more significant for development in off-Java lagging districts, sine the Big Bang. Our analysis excludes districts on Java completely. Java is the most-populated island in the Indonesian archipelago, and also generates the most economic activity.

Our intent is to examine the impacts of urbanization (urban growth and population concentration), localization (concentration of like businesses), government investment in infrastructure, population, human capita, and other relevant factors, on economic growth in the manufacturing sectors, since economic decentralization began in 2001. To this end, we develop two sets of econometric models to examine panel data for Indonesian administrative districts (*kabupaten* and *kota*) for the seven years between 2001 and 2007. We choose three outcome variables and estimate separate equations for each of them: number of manufacturing establishments in a district, number of manufacturing jobs in a district, and total manufacturing value-added *per capita.* We define a "lagging" district as one with less than the median *per capita* income for overall Gross Regional Domestic Product (GRDP).

We analyze off-Java urban and rural areas separately. We estimate the general overall effect of a given variable, and also the differential effect for lagging districts using interaction terms. This set of interaction terms was introduced because we found disappointing levels of significance on most growth variables when the differential effects of lagging regions were not accounted for. In general, the outcomes for leading and lagging regions are so different that their combination can skew the findings.

Our findings indicate that lagging districts in both urban and rural areas respond much better to localization than to urbanization. This presents two issues for consideration. First, the more immediate gains to the industrial sectors are to be gained from the concentration of industry. Second, Indonesia is failing – at least with regards to the manufacturing sectors – to leverage its urbanization for economic growth. We also find that, in both urban and rural districts, the presence of state- and local-government-owned enterprise boosts economic outcomes, but government participation in industry suppresses growth in urban districts. As we said above, this makes a strong case that government-led industrial growth can provide a core set of firms and value-added in lagging regions, but future policy programs should focus on growing the private sector.

INTRODUCTION

This study explores some determinants of sub-national growth in Indonesia, and focuses particularly on off-Java manufacturing outcomes since the country's "Big Bang." Since 2001, Indonesia has been undergoing administrative, fiscal and governance decentralization. Often referred to as the "Big Bang," provincial and local (district) governments began to assume control over many policies. District governments – with varying levels of capacity – coordinate local service delivery such as health programs and local roads, in addition to elections of local and national representatives. In 2006, transfers to sub-national governments increased again. Indonesia's provinces and districts now spend a record 37 percent of total public funds, which is higher than the OECD average (Adams, Fengler et al. 2007).

The bulk of studies that address the spatial issues of the New Economic Geography (Krugman 1991a; Krugman 1991b; Krugman 2007) focus on countries as the unit of analysis. While this type of study is useful, they cannot address critical questions such as how to handle the particular issues of lagging sub-national regions. With more than 17,000 islands and vast regional disparities in incomes, health, accessibility, infrastructure, ethnicity, literacy, governance, and levels of urbanization, Indonesia provides an enough internal variation to study sub-national growth outcomes while also providing a stable over-arching political and cultural context.

One of the main inquiries in this study is whether urbanization or localization effects are more significant for development in off-Java lagging districts. Our analysis excludes districts on Java completely. We already know that on-Java districts are richer, with higher Gross Regional Domestic Products (GRDP) *per capita* than all but a few districts in the outlying Islands (Vidyattama, Hill et al. 2009). Economic activity in Indonesia is concentrated on Java, and on Java, it is even more concentrated in the Jakarta Metropolitan Region (JMR). In 2004, Java contributed 61, 66, and 67 percent of the country's total GDP, non-mining GDP, and household expenditure, respectively. In 1975, no province held more than a 20-percent share in the manufacturing economy. By 2004, seven provinces and three on Java, has shares greater than 20 percent – with West Java holding 43 percent. The only significant case of "deindustrialization" since the mid-1980s in Indonesia has occurred in Jakarta, where the manufacturing has declined as factories migrate to outlying districts of the JMR (Vidyattama, Hill et al. 2009). We know that firms are much more likely to locate on Java than anywhere else in Indonesia, to take advantage of agglomeration economies (Deichmann, Kaiser et al. 2005).

What we know less about, are the factors that induce growth in off-Java regions. Any analyses of growth in Indonesia that include Java – even if they don't focus on Java specifically – are essentially using Java's attributes as a baseline. Using Java as a baseline is appropriate in some contexts – for instance, when studying firm location choice, since firms will locate where conditions are most favorable. The problem with this approach is that the (relatively) overpowering growth and productivity on Java can mask albeit smaller effects that could be instructive on other islands. Our study attempts to fill this knowledge gap.

With a GDP of about $3,039 nominal USD *per capita* in 2010 (WB 2010), Indonesia still has some way to go before it reaches the roughly-$10,000 threshold, after which Brulhardt and Sbergami (Brülhart and Sbergami 2009) conclude that agglomeration provides few benefits in terms of economic output. Thus, Indonesia is well-positioned to take advantage of agglomeration economies, though it has historically failed to do so (Ellis, Dowall et al. 2011).

The remainder of this paper provides a brief review of the background literature, a summary of our approach to the analysis (including data, indicators, and modeling), findings, conclusions and recommendations.

BACKGROUND

Studies on economic growth in Indonesia are relatively sparse, especially since the Big Bang administrative decentralization that began in 1999. McCulloch and Sjahrir (McCulloch and Sjahrir 2008) examine value-added growth and convergence in all sectors (not just manufacturing), and including Java, and conclude that poorer districts tend to grow faster than better-off districts, and that nearness to a growing district is associated with growth. They find no evidence of spatial divergence in growth after 2001. They do not differentiate between urban and rural districts. They also rely solely on GRDP as an outcome variable, which even they admit is very noisy.

In Indonesia, most studies focus on the country as a whole (McCulloch and Sjahrir 2008) (Deichmann, Kaiser et al. 2005) or on Java only (Henderson, Kuncoro et al. 1996; Kuncoro and Dowling 2004; Kuncoro and Dowling XXXX????). Few studies examine off-Java effects specifically. In a national study, Deichmann and Kaiser (2005) conclude that road-infrastructure improvements would do little to draw manufacturing to outlying, lagging districts in East Kalimantan and South Sulawesi provinces in Eastern Indonesia. Although they address the issue of regional disparity in firm location, their approach is cross-sectional, only for 2001. Our study examines change over time in Indonesia's post-Decentralization period, beginning in 2001.

Numerous studies have commented on various legacy factors that can lend advantage to certain regions within a country. Natural advantages – endowments that make regions attractive for investment by firms – can include legacy investment such as roads and power (Ellison and Glaeser 1999). Production externalities, on the other hand, result from attributes of the local economy that provide efficiencies for a firm's production process, interactions with its market, suppliers, and pools of qualified labor. This study attempts to differentiate effects of natural advantage and local externalities.

Local externalities can include the institutional and regulatory climate (Peck 1992; Amin 1999). McCulloch and Sjahrir (2008) note, although do not have the data to study, the potential influence of institutional factors such as strong local leaders, on growth in Indonesia. As they note, forthcoming data on local parliaments and leaders are available only after 2004, so our analysis leaves out leadership variables. However, our analysis attempts to capture the effects of institutional legacy on growth in the manufacturing sectors. Other studies in the enormous literature on political and institutional policies that affect growth, have concluded that pre-Bang national policies in Indonesia favored Jakarta, resulting in better economic outcomes there (Henderson and Kuncoro 1996; Kaiser 1999). In a cross-country study, Davis and Henderson (Davis and Henderson 2003) argue that investment in both inter-regional infrastructure and fiscal decentralization promote growth of population and economic activity away from primate cities and into lagging hinterland cities. Our study pays particular attention to the issue of government involvement in manufacturing activity.

Beginning with Krugman's seminal work on the New Economic Geography (Krugman 1991a; Krugman 1991b; Krugman 2007) numerous theorists have argued that transaction costs affecting trade can be reduced by lessening distances – a concept that is operationalized in the World Development Report 2009 (Lin, Gill et al. 2009) as "economic distance." Our analysis also pays particular attention to the issue of economic distance in the formulation of critical indicators of urbanization and localization.

APPROACH

Our intent is to examine the impacts of urbanization, localization, government investment in infrastructure, population, human capita, and other relevant factors, on economic outcomes in the manufacturing sectors. To this end, we choose three outcome variables and estimate separate equations for each of them: number of manufacturing establishments in a district, number of manufacturing jobs in a district, and total manufacturing value-added *per capita.* We note that value-added is measured per resident in the district, not per worker. This was

done because we wish to measure the size of the industry, not its per-worker productivity. We define a "lagging" district as one with less than the median *per capita* income for overall Gross Regional Domestic Product (GRDP). We take the median of GRDP for urban districts, and a separate median for rural districts.

We analyze off-Java urban and rural areas separately. We estimate the general overall effect of a given variable, and also the differential effect for lagging[1] districts using interaction terms. Like McCulloch *et al* (McCulloch and Sjahrir 2008), we found disappointing levels of significance on most growth variables when the differential effects of lagging regions were not accounted for. In general, the outcomes for leading and lagging regions are so different that their combination can skew the findings. Noting that wealthier districts will be slower-growing while lagging districts play catch-up, we decided to isolate the effects of growth on lagging districts.

For each of these spatial designations (urban and rural), we develop two sets of models:

1) *Cross-Area Panel Growth Regression (CAPGR)*. These models are a variation of the cross-country panel growth regressions initially developed by Barro and Sala-i-Martin (1991a) and subsequently used extensively in analysis of economic growth, e.g., (Hausmann, Klinger et al. 2008). This model regresses GDP per-capita growth over a period of time against the logarithm of initial GDP per capita and other explanatory factors:

$$g_{it} = \gamma + \alpha \log(y_{i,t-1}) + X_{it}\,B + X_{it}(L)\,B + \varepsilon_i$$

where
γ is a constant
g_t is the nominal growth of GDP per capita over the time period
y_{t-1} is the initial level of GDP per capita
X is a matrix of relevant district characteristics
B is a vector of coefficients to be estimated
L is a dummy variable denoting a lagging district
ε_i is an idiosyncratic error term.

A note regarding equilibrium is in order. The CAPGR and fixed-effects models were chosen because they most-closely match the effects that we wish to observe. We recognize, however, that the CAPGR models were developed as long-run growth models, and that one limitation of our application of these models here is that it is difficult to conclude the long-term effects of policy changes from them, since they do not reflect long-run equilibrium (Acemoglu 2010), i.e., changes in supply and demand of various factors as a long-term result of policy changes. We present the findings here, mindful that system equilibrium adjustments could affect the outcomes we report.

2) *Fixed Effects Panel Model*. A fixed effects model was used to examine the impacts of change in the independent variables over the analysis periods, on growth over that time period. Unlike the cross-area panel growth models, which examine the effects of initial conditions on growth, the fixed-effects model examines growth as a function of change. Both models have advantages: since the effects of some processes (e.g., infrastructure investment) often need a longer time horizon for their effects to manifest, the CAPGR models are useful. However, CAPGR models cannot help us to understand the outcomes of change. For those

[1] Lagging districts are defined as those below the median GRDP *per capita* in a given year. Urban lagging regions are those below the median GRDP *per capita* for urban regions; rural lagging regions are those with GRDP *per capita* below the median for rural regions.

effects that are more immediately apparent (e.g., EXPY), the fixed effects model can perform this function. In tandem, the models tell a more complete story. The fixed-effects model has the additional advantage of controlling for time-invariant unobserved variables, which helps with the potential specification bias that we identified with the CAPGR models. A Hausman test was used before the regression was run, to determine whether the fixed or random effects model was appropriate. A fixed-effects model was run as follows:

$y_{it} = \gamma + X_{it}\beta_1 + Z_i\beta_2 + L*Z_i\beta_3 + \alpha_i + \varepsilon_{it}$,
where
y_{it} is the nominal GDP per capita for a given year t in district i
X_{it} is a vector of time-varying regressors
Z_i is a vector of time-invariant regressors
L indicates a lagging interaction term
α_i is an unobserved effect for individual districts
ε_{it} is an error term.

One advantage to the fixed-effects approach is that it controls for the effects of unobserved and time-invariant, location-specific effects. These could include natural advantages – endowments that make regions attractive to firms like legacy investment such as roads and power (Ellison and Glaeser 1999), protracted religious and ethnic conflicts that have been running through the analysis period (as in Aceh and Maluku). We use heteroskedasticity-robust and clustered standard errors (clustered by urban agglomeration[2] for metropolitan areas and by Island Region[3] for rural areas).

One advantage of focusing on lagging districts is that we can ignore some of the problems with endogeneity in the lagging interaction terms in the fixed-effects models. Many of the factors that are related to growth – education and human capital, population growth, capacity for innovation – are endogenous to the system. That is, we would expect (for example) higher levels of GRDP to lead to better education outcomes, in addition to the reciprocal relationship. If endogeneity is not corrected for (generally using some sort of instrumental variables technique), then bias is introduced into the models. When there are multiple endogenous relationships, suitable instruments become a problem, as is the case in this study.

Our approach assumes that most of the endogenous effects, e.g., increased median years of schooling as a result of economic growth, occur in the leading districts. Our findings imply that this is true – that is, the effects in the general case and on the lagging terms are often opposite each other in the direction of the effect. When the effect on lagging districts is isolated, as we will show below, we see effects consistent with the hypothesis that the endogenous effects are concentrated in leading districts.

We focus on the 2001 to 2006 time period for the analysis, because we are interested specifically in determinants of growth in the post-decentralization period. We recognize that 2004 provides an interesting break-point in this type of study, as Indonesia's national Gross

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[2] Urban agglomerations are metropolitan regions, and were defined using Uchida and Nelson (2008) framework for identifying metropolitan agglomerations, with modifications to make the framework more suitable for Indonesia. In general, the process works as follows: an urban core region is identified using GOI-defined *kota* as the core. Then, surrounding non-*kota* districts are added to the agglomeration if they meet certain proximity and density standards. We refer the reader to Ellis *et al* (2011) for a detailed explanation of this process.

[3] The Government of Indonesia (GOI) has designated seven Island Regions: Java-Bali, Sumatera, Sulawesi, Papua, Kalimantan, Nusa Tenggara, and Maluku.

Domestic Product (GDP) returned to pre-Asian Economic Crisis levels in 2004. However, we felt that the 2004-2006 analysis period was too short to provide interesting insights on growth. We save the post-recovery analysis for a time when sufficient data are available.

Both models include metrics designed to capture the effects of the following factors on economic outcomes:

i. Population
ii. Human capital
iii. Composition of the economy
iv. Development expenditure
v. Innovative capacity
vi. Capital
vii. Urbanization and localization economies

Data were drawn largely from surveys conducted and compiled by Indonesia's Central Bureau of Statistics (BPS). In general, we draw on surveys which provide representative samples for each district, and which are conducted annually. Our outcome variables (value-added, firms, workers) come from the Manufacturing Survey of Medium and Large Firms (also known in Indonesian as the *Survei Industri*, or SI). The National Socio-Economic Survey (Susenas) is conducted annually by BPS, and has been a nationally-representative sample since 1993. For our study, Susenas provides population figures. The Regional Finance Information System (SIKD) provides data on public investment in infrastructure development.

Human capital is proxied using median years of education in the district, from Susenas. Given Indonesia's relatively recent (1999) and continuing transition to centralized to local governance, and the variation of different regions in levels of reliance on state-owned industries, we follow Fan and Scott (2003) in including the level of government intervention in the economy, and include proportions of the local manufacturing economy that are generated by nationally-owned, local government-owned, foreign-owned, and private Indonesian-owned enterprise. As another measure of economic composition, we use EXPY. EXPY is a measure developed by Hausman *et al* (2007) as an indicator of the sophistication of a country's export basket – i.e., whether a country is producing goods that are on the "upscale" end of the product spectrum. The core idea behind the EXPY computation is that, if all other factors are held constant, "an economy is better off producing goods that richer countries export." Hausmann's results show that high EXPY values – that is, countries whose exports are more upscale – are associated with high levels of economic growth. We apply Hausmann *et al* (2007) framework to a sub-national data, to develop an indicator of the competitiveness of Indonesia's sub-national (district) economies. EXPY values are computed from ISIC Revision 2 manufacturing data at the four-digit level. We direct the reader to Appendix A of Ellis *et al* (Ellis, Dowall et al. 2011) for a detailed discussion of the EXPY computations.

Many studies on growth in Indonesia and throughout Asia have noted the importance of infrastructure in economic growth (Deichmann, Kaiser et al. 2005; Vidyattama, Hill et al. 2009). SIKD data on public works development (as opposed to maintenance and operations) expenditure by local governments, was used as an indicator for infrastructure investment. Electricity reliability was proxied using SI measurements showing the proportion of manufacturing energy that firms self-generate (as opposed to buying it from PLN, Indonesia's state-owned electricity company)[4]. As an approximation for capital, we use the proportion of

[4] *Perusahaan Listrik Negara*

manufacturing value-added that is dedicated to the servicing of loans, also from SI. We note that more-precise measures of capital were not available for all study years.

In addition to using BPS-prepared statistics, we compute several spatial indicators using GIS. Urbanization and localization economies are approximated using gravity indices that represent their position relative to major population centers and sector-specific industrial concentrations. We believe this approach is an improvement over previous indicators for urbanization economies, which have considered only population or distance, but not both. For instance, Fan and Scott (2003) use population of largest city in the province in a provincial-level study of agglomeration in China. Deichmann and Kaiser (Deichmann, Kaiser et al. 2005) use road density and travel time measure access to markets and population centers. McCulloch and Sjahrir (2008) use a weighted average of GRDP growth in neighboring districts. Our analysis takes this further, employing a gravity index that considers distance and weight. Unlike these simpler measures, a gravity index provides a measure of the proximity of a place to regional attractions, weighted by the distance that must be traversed to reach those attractions. Thus, it reflects "economic distance" (Lin, Gill et al. 2009), and unlike measures that reflect accessibility to one urban concentration, the gravity index also captures the effects of smaller urban agglomerations that may be in close proximity but not adjacent. The general formula for a gravity index is as follows:

$$GI_i = \Sigma_j \frac{[ATTRACTION_j]}{e^{\gamma(ED)ij}}$$

where
i denotes a spatial area (in our case, a district)
j denotes an attraction (in our case, metropolitan and economic centers)
GI_i is the gravity index for a given district
$ATTRACTION_i$ = denotes the attractive force of a population or economic center
γ is a analyst-defined decay coefficient, which we assume to be one
ED_{ij} is a measure of economic distance, e.g., time or physical distance between origin i and destination j (in our analysis, travel time)

Higher gravity indices denote higher levels of accessibility to the attracting areas. We use this principle to develop two sets of gravity indices:

1) Market gravity to proxy urbanization economies (ATTRACTION = population)
2) Sector economic gravity to proxy localization economies (ATTRACTION = sector value-added).

Following but modifying the procedure set forth by Hausmann *et al* (Hausmann, Hwang et al. 2007), we compute EXPY, an index reflecting the sophistication of the manufacturing basket for a district. This is done using the Industrial Statistics (see Annex XX for a detailed discussion of EXPY). Finally, using a gravity model, we compute measures of spatial accessibility to population centers, and to manufacturing hubs by sector. These gravity indices provide a measure of the proximity of a place to regional attractions, weighted by the distance that must be traversed to reach those attractions.

One complexity arising from comparisons of data over time is the large number of new districts that have been created as a result of decentralization. At the time of decentralization in 1999, there were 292 districts and five additional districts comprising Jakarta. As of 2009, there were 497 districts, including six making up Jakarta. Fortunately, districts were largely formed by splitting an existing district into two or more new districts, so it was fairly easy to collapse the data to pre-Bang spatial units. We follow McCulloch and Sjahrir (2008) in collapsing the data to the 292 pre-Big Bang districts, so that they can be compared over time. All monetary values are in 2000 constant Indonesian Rupiah (IDR).

Noting the potential influence of spatial autocorrelation, Moran's I test was run to determine whether spatial autocorrelation was present in the outcome variables. Spatial autocorrelation is a problem in regression techniques that assume independence of observations, such as OLS. We ran Moran's I test on both overall *per capita* value-added and value-added for the sectors examined in Section 6, using districts as the spatial unit of analysis. For overall GRDP *per capita*, the test reveals very weak but statistically significant spatial autocorrelation for all analysis base years. Given the weakness of the association, we assume that spatial autocorrelation will cause few problems in the analysis. For the sectors, spatial autocorrelation is again statistically significant in all years, and has larger effects, with Moran Indices of between 0.1 and 0.12 (Moran's Index varies from -1 to 1, with -1 and 1 representing perfect correlation, and zero representing no correlation). We conclude that these levels of spatial autocorrelation are unlikely to heavily bias our results.

FINDINGS

Final model specifications were chosen from a number of candidate specifications. For the general-effect variables (i.e., terms that are not interaction variables, hereafter referred to as the "overall effect") variables were allowed to remain in the final models if they were of theoretical import, regardless of significance levels. For the interaction terms, given the small sample size, variables were allowed to remain in the models if they were approaching significance, i.e., standard errors less than 0.2, and the lagging term produced an effect with the opposite magnitude as the overall term. Tables XX and XX present the final models. Note that p-values are not presented in this table, but asterisks on the coefficient indicate the level of significance. Variables with significances between 0.1 and 0.2 are presented in ***bold italics.*** This section presents the findings.

Multicollinearity

Pearson correlations between population gravity and manufacturing gravity ranged from 50 percent overall to 58 percent for 2006. These high correlations would be expect to inflate standard errors, as the two metrics would partly measure the same underlying effect. However, for lagging districts, the correlations were much lower: 15 percent for all years (2001 to 2006) combined and 14 percent for 2006. This makes us reasonably confident that multicollinearity does not pose a threat to the viability of our findings.

In rural regions, correlation between population gravity and manufacturing gravity was much lower – ranging from 8 percent overall to 11 percent in 2006. Thus, we can be reasonably assured that they are not measuring the same underlying effect.

Findings – Urban Regions

Urbanization and Localization Effects

In general, larger populations are associated with higher levels of manufacturing value-added. The fixed-effects models indicate a positive association between population and manufacturing value-added: an increase in population of one million persons is associated with around 9,000 Rupiah increase in manufacturing value-added per capita (note that this is not value-added per worker, but that the metric is indexed to the entire population of the district, so the effect is large). We note the potential bias due to endogeneity; however, the bias on this variable should be downwards – that is, the additional population that would be attracted to high value-added regions would tend to pull down the average value-added per person. Thus, our estimate may be a conservative one, but we can reasonably conclude that the effect is positive, though we do not speculate on the causality of the relationship here.

For the panel growth models, the coefficient on population for lagging districts provides a counterweight to the general population effect, in the equation for manufacturing value-added. Endogeneity is not a concern for this model, as it models growth against a set of initial conditions (i.e., conditions in the district or metropolitan area in 2001, at the beginning

of the analysis period). Although there is a significant and negative effect for lagging regions, this effect does not counterbalance the positive association between population and value-added. We note that the effects on interaction terms should be interpreted as the sum of the coefficients for the overall indicator and the lagging interaction term. Thus, the effect of a population increase of one percent on value-added in lagging regions would be: 3,224.75 – 2116.15 = 1,108.60 Rupiah. This is still a significant positive effect, though less than for leading regions.

Table 1. Growth Models for Urban Districts 2001-2006

VARAIBLES	Fixed Effects Models			Panel Growth Models		
	VA (IDR) *per capita*	Firms (N)	Jobs (N)	VA (IDR) *per capita*	Firms (N)	Jobs (N)
	(1)	(2)	(3)	(4)	(5)	(6)
Log of initial manufacturing value-added *per capita*				6,384.64**		
Log of initial number of firms					57.53***	
Log of initial number of workers						284.79
Urbanization and Localization Economies						
Log of population of the urban agglomeration (x1,000,000)	9,051.86***	-71.61	-7,785.19	3,244.75**	-8.66	-149.88
Lagging districts	-	-	-	**-2116.15****	-	-
Log of manufacturing gravity index (localization)	2,076.93***	1.65*	31.44	-3,783.12*	-2.53	-1,481.38*
Lagging districts	**-1,908.8*****	-	-	-	-	**1,863.39****
District Industrial Characteristics						
%VA generated by central government-owned firms	-75.75*	-0.01	-0.78	122.32	1.82	78.37
Lagging districts	**90.65****	***0.46***	-	-	***-3.51***	**-286.64****
%VA generated by local government-owned firms	***13.87***	0.08**	2.92	191.39	0.26	67.62
Lagging districts	-	**-0.07***	-	-	***-1.12***	-
%VA generated by foreign-owned firms	-9.79	-0.04	-10.01*	2.53	-0.05	***100.35***
Lagging districts	-	-	-	-	-	***-138.04***
Log of EXPY	-1,107.99	***-14.95***	978.32	***7,810.94***	-41.41	2,180.50
Lagging districts	**3,230.74****	***3.00***	-	-	-	**-3,799.23***
Human Capital						
Median years of schooling for adults over 25	822.24	-2.30	-590.02	144.80	-17.72	***-880.70***
Lagging districts	-	-	**1,208.74****	-	-	***1,108.14***
Energy						
% manufacturing energy that is firm-self-generated	3.55	-0.03	-2.61	-44.97	0.40	***30.28***
Lagging districts	-	-	***-18.31***	-	-	**-59.82***
Development Expenditure						
Log of infrastructure expenditure (4-year lag for FE models)	219.92	***-6.22***	-485.07**	-4,250.34**	-13.16	-555.29
Lagging districts	-	-	***74.94***	**3,043.47***	-	-

Capital						
%VA dedicated to loan servicing	-1,960.54	-40.59	-12,607.2***	***68,908.92***	-510.20	-20,739.12
Lagging districts	-	-	**10,611.73****	**-101,843.56***	-	-
Constant	-45,502.16*	495.76***	8,827.41	-15,916.80	938.36	8,226.62
Observations	247	247	187	79	80	58
R-squared	0.467	0.126	0.192	0.623	0.583	0.432
Number of id_292	85	85	65			

Robust pval in parentheses; standard errors clustered by metropolitan agglomeration

*** p<0.01, ** p<0.05, * p<0.1, 0.1<p<0.199 in *italics*

Table 2. Growth Models for Rural Districts, 2001-2006

VARAIBLES	Fixed Effects Models			Panel Growth Models		
	VA (IDR) *per capita*	**Firms (N)**	**Jobs (N)**	**VA (IDR) *per capita***	**Firms (N)**	**Jobs (N)**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Log of initial manufacturing value-added *per capita*				420.89*		
Log of initial number of firms					2.44	
Log of initial number of workers						-196.43
Urbanization and Localization Economies						
Log of market gravity index (urbanization economies)	617.78	-9.26	464.47	26.67	0.88	100.25
Lagging districts	**-19.84***	**-0.49****	-	-	-	-
Log of manufacturing gravity index (localization economies)	150.74*	0.69	325.12*	-20.91	-0.11	-1,018.3***
Lagging districts	**-140.03***	-	-	-	**11.16***	***1,171.12***
District Industrial Characteristics						
%VA generated by central government-owned firms	***-6.65***	-0.02	1.35	6.94	-0.67	55.76
Lagging districts	**10.14****	-	-	-	-	-
%VA generated by local government-owned firms	2.09	0.06*	10.66*	-8.35	-0.99	-11.2
Lagging districts	-	-	-	-	-	-
%VA generated by foreign-owned firms	44.30	***-0.09***	-29.89**	1.46	-0.89	***135***
Lagging districts	-	-	-	-	-	-
Log of EXPY	***-1,529.12***	-6.22*	25.49	-31.07	18.77	-14.41
Lagging districts	**960.86***	4.43*	-	-	**-29.21***	**-1,283.91***
Human Capital						
Median years of schooling for adults over 25	341.65*	17.20***	374.61	639.62	-7.38	***1,340.54***
Lagging districts	***-283.63***	**-10.34****	-	-	**14.73****	-
Energy						
% manufacturing energy that is firm-self-generated	-1.18	-0.06*	0.52	-2.87	-0.18	-12.64***
Lagging districts	-	-	-	-	-	-
Development Expenditure						
Log of infrastructure expenditure (4-year lagged for FE models)	***233.95***	4.91***	-69.39	394.7	-2.63	882.36

Lagging districts	-	-	**55.85***	-	-	-
Capital						
%VA dedicated to loan servicing	-63.51	-2.62	863.90	738.84	-193.96	-23,275.1**
Lagging districts	-	-	-	-	-	***26,530.9***
Constant	5,743.09	-32.68	-5,615.09	-9849.33	-109.7	1003.42
Observations	517	517	500	101	101	99
R-squared	0.165	0.171	0.100	0.394	0.424	0.474
Number of id_292	125	125	123			

Robust pval in parentheses; standard errors clustered by Island Region

*** p<0.01, ** p<0.05, * p<0.1, 0.1<p<0.199 in *italics*

With regards to localization, districts with high levels of accessibility to manufacturing centers demonstrate higher levels of value-added and more firms (Models 1 and 2), but slower growth (Models 4 and 6). This is expected, as districts with larger economies tend to grow more slowly. Model 1 indicates that lagging districts with higher levels of accessibility also have net positive levels of value-added growth (a one-percent increase in accessibility has a net effect of 2,076.93 – 1,908.80 = 168.13 Rupiah *per capita* for lagging districts).

Interestingly, better levels of accessibility in lagging districts' is associated with higher growth in job numbers in manufacturing (Model 6). Lagging districts have a net positive effect on this variable of (-1,481.38 + 1,863.39 = 382.01 jobs over the 2001-06 analysis period). Although this effect does not hold for value-added or firm numbers, we read it as a positive sign that increased accessibility in lagging districts can improve growth outcomes and help lagging districts narrow the gap with leading districts.

Effects of Economic Composition

In lagging districts, higher levels of central-government participation in the manufacturing economy are associated with increased levels of value-added and more firms (Models 1 and 2). At first glance, this suggests that increased state-owned enterprise (SOE) activity has positive impacts for productivity and job growth in lagging places. However, Panel Models 5 and 6 paint a more-complicated picture. In lagging districts, increased SOE participation is associated with slower firm and job *growth* in lagging regions over the analysis period. We suspect that the legacy of SOEs in lagging regions is still strong and positive in that they provide firms and productivity to districts that would otherwise have little economic activity. However, their apparent inability to generate growth in lagging regions is worrisome.

The story with local-government participation in manufacturing is similar. For firms (Model 2), lagging districts with higher concentrations of local-government-held manufacturing, show small but net positive effects (the net effect in Model 2 is 0.0.08 – 0.07 = 0.01), even though the impact in lagging districts is lower. In lagging districts, though, firm growth slows as local governments produce more of the value-added (Model 5).

Together, these findings suggest that government-led industrial growth can provide a core set of firms and value-added in lagging regions. However, their presence seems to have the effect of suppressing growth relative to private-sector activity (the suppressed term in this group of variables is the percent of manufacturing value-added generated by privately-held, Indonesian-owned manufacturing firms). There is no urgency for central and local governments to abandon existing industrial programs, then, but future policy programs should focus on growing the private sector.

The other industrial variable, EXPY, suggests that lagging regions with more-sophisticated economies have higher levels of value-added and more firms than lagging regions with lower EXPY levels Models 1 and 2). Model 4 suggests that higher EXPY levels raise value-added growth in general (this includes lagging regions), but that higher EXPY can have a suppressant effect on jobs in lagging districts. This is not surprising, given that more-upscale industries tend to be less labor-intensive.

Human Capital

The variable we chose to proxy for human capital reflects the median years of schooling for adults over the age of 25. The effects of education are significant only in the jobs equations – Models 3 and 6 – and have sign and magnitude splits between the overall terms and the interaction terms. Increased levels of average education suppress the number of jobs (Model 3) and job growth (Model 6) for the overall variable. This is expected, as districts with higher levels of education cannot benefit as much from marginal education gains. However, the lagged term indicates significant gains to job numbers (Model 3) and job growth (Model 6) as education levels rise in lagging districts. We conclude that industry – particularly low- to

medium-skilled, labor-intensive manufacturing – can benefit greatly from marginal increases in the education levels of the labor pool.

Energy

As a proxy for the quality of infrastructure, we use the percent of manufacturing energy in a district that is self-generated by the firm – that is, not purchased from PLN or other off-site electricity providers. We also included variables reflecting road extensiveness and connectivity in previous iterations of these models, but they were highly correlated with the energy reliability variable and show no significant values. Thus, they were left out of the final specifications.

The expected sign on this variable was negative, as districts with less-reliable energy sources should be less likely to attract and retain firms. The jobs models show negative signs on the job numbers (Model 3) and job growth (Model 6) for lagging districts. In Model 6, the coefficient on overall job growth is positive. This likely reflects high growth outcomes in extractive industries in isolated districts, which would require self-power generation. In lagging districts, however, the effect on job growth is significant and negative – indicating that lagging districts have better growth outcomes when their PLN-supplied energy supply is reliable.

Development Expenditure

Local government expenditure on infrastructure development is a complicated issue in Indonesia. Districts with larger tax revenues will spend more on infrastructure, so we expect to see some positive association between infrastructure spending and economic outcomes. At the same time, high-spending regions with slower growth will likely still spend large amounts on infrastructure improvements, though their economic growth may not reflect this investment to the same degree. Also, transfers from the central government allow lagging regions to increase spending on infrastructure. Our analysis isolates the effect of infrastructure spending on lagging regions, allowing for comment on the relationship between expenditure and manufacturing outcomes in the worst-performing districts.

Models 2 and 3 suggest an inverse relationship between infrastructure spending and both firm and job numbers for the general (non-interaction) term. This is likely because firm-rich and job-rich districts have a legacy of infrastructure and do not need to spend more on new projects (they may spend more on maintenance, but our metric captures only spending on new infrastructure). We do not speculate on the causal relationship here, as there are likely positive effects in both directions, i.e., the effect of expenditure on economic outcomes, and vice versa. The net effects on the lagging districts also have a net negative effect.

The interesting relationship here is the lagging interaction term in Model 4. In lagging districts, a one percent increase in infrastructure spending in 2001, has a negative net effect (-4,250.34 + 3,043.47 = -1,206.87 Rupiah of value-added *per capita* for each one percent increase in infrastructure expenditure). This means that, even in lagging districts where the suppressant effect of high-income, slow-growing districts is removed, lagging districts lack the ability to generate positive returns to infrastructure spending. This is problematic and an issue worthy of further study.

Capital

Capital is a problematic issue for Indonesia's local governments. In both the overall case and in lagging regions, higher levels of capital is associated with more sluggish job markets (Model 3), though lagging regions do mitigate this effect somewhat. The negative net effects seen here could be the effect of capital-intensive industries with minimal labor needs (e.g., mining).

Even more disturbing is the effect seen in Model 4, which suggests that higher levels of capital generated stronger growth in value-added over the 2001-06 analysis period. However, for lagging regions, this trend is reversed. Lagging districts have a net negative coefficient (68,908.82 – 101,843.56 = -32,934.64 for each additional percent of value-added that is dedicated to loan servicing). This suggests that – even for those manufacturing firms that can secure credit – increased capital investment does not yield productive returns. This is a fundamental problem that should be addressed in future research.

Findings – Rural Regions

Urbanization and Localization Effects

For rural regions, we use an index of market gravity in the place of the size of the population agglomeration. We do this guided by the hypothesis that access to urban agglomerations will be more important to rural district development than the population of the individual district. Once manufacturing gravity is controlled, there are no significant overall (non-interaction) effects in any of the models for the market gravity index. This implies that, once we have accounted for manufacturing gravity and other relevant controls, the effect of nearness to population centers is not important. In Models 1 and 2, there is a differential effect on the lagging variables, suggesting that lagging rural districts with higher levels of accessibility to population centers have lower value-added and fewer firms compared with those further away from population centers. This is an unexpected result. Likely, the negative sign in Model 1 reflects population pressures, as high-accessibility rural districts that border metropolitan areas are often settlement areas for economic migrants to metropolitan areas.

Localization effects are larger and generally have more significance than urbanization effects. Models 1 and 3 suggest a stronger presence in value-added and jobs for districts with better access to manufacturing centers, and the lagging term in Model 1 suggests a net positive return to accessibility (150.74 – 140.03 = 10.71, so we expect an increase of 10.71 Rupiah *per capita* for each one percent increase in manufacturing accessibility). Furthermore, Models 5 and 6 indicate that lagging districts have net positive returns to accessibility in firm and job growth (a growth of 11.16 firms and a net growth of -1,018.29 + 1,171.12 = 152.83 jobs per one-percent increase in accessibility over the 2001 to 2006 analysis period).

We draw two important conclusions from these findings. First, urbanization effects are less important in growing Indonesia's manufacturing economy than localization effects for lagging rural districts. Second, accessibility to manufacturing concentrations is important for lagging districts seeking to increase their presence in the manufacturing economy. The gravity-based metric used here reflects both the magnitude of economic activity and distance to that activity. Although not much can be done about a district's geographic location, decreasing its the economic distance (Lin, Gill et al. 2009) to manufacturing hubs can have positive effects on growth. Connectivity policies and infrastructure development, then, can help to bring economic growth to lagging communities. Our infrastructure and development findings (discussed below) provide some further support for this assertion.

Effects of Economic Composition

The variables reflecting the extent of participation by central and local government, and local and foreign companies, in the manufacturing economy, are largely insignificant. Model 1 shows an effect approaching significance, which suggests that higher levels of value-added produced by central-government firms is correlated with lower manufacturing value-added *per capita*. In addition, the lagging term suggests that central government participation can have a net positive effect in lagging districts. This concurs with the findings for lagging urban regions above. For the overall variable, local government participation appears to have a positive effect on firms (Model 2) and jobs (Model 3). A higher presence of foreign-owned firms is correlated with fewer workers, which is likely because foreign firms tend to be

involved in extractive industries, which are less labor-intensive than other manufacturing activities.

EXPY is a perplexing indicator in all of the models where it is significant. Models 1 and 2 suggest that districts with higher levels of EXPY generate less value-added and have fewer firms. The net effects for lagging districts are also negative, though somewhat less in magnitude than the overall scenario. Furthermore, Models 5 and 6 indicate that higher levels of upscaleness in 2001 were associated with slower growth in firms and jobs over the 2001 to 2006 analysis period. We expected the effect to be just the opposite in both sets of models – that increased upscaleness in the economy would yield higher returns, particularly in lagging regions, and lagging districts with more-upscale economies would grow faster. Our evidence suggests that Indonesian districts do not capitalize on innovative capacity to make further gains in growth and development. We think this is a serious problem: innovation is key to economic development. Exploring this issue further is beyond the scope of our study, but worthy of future inquiry.

Human Capital

Median years of schooling has positive returns for the overall variables, and positive net returns for the lagging variables, in the fixed-effects equations for *per capita* value-added and firms. That is, even though the coefficients on both variables are negative, the net effect in Model 1 is 341.65 – 283.63 = 58.02 Rupiah *per capita* of value-added for each additional year of schooling. The net effect in Model 2 is 17.20 – 10.34 = 6.86 additional firms for each additional year of education.

In the growth models, only the effect on firms is significant. An additional year of schooling for the median adult is associated with a positive differential firm growth. This suggests that better-educated populations help to attract manufacturing firms, and that investments in human capital can help lagging regions close the gap with leading regions.

Energy

None of the lagging terms on our proxy for energy reliability produced significant effects, but where significant, the coefficients for the overall effects produced the expected results. Models 2 and 6 suggest that districts in which firms self-produce more of their energy, have fewer firms and grow jobs more slowly than districts with lower levels of firm-produced energy. This is an argument for investment in reliable power.

Development Expenditure

Spending on capital projects appears to be associated with positive effects in all districts regardless of leading or lagging status, for value-added and firms in Models 1 and 2. Model 3 provides evidence that development expenditure in lagging districts can have a positive effect on manufacturing jobs in these districts.

Capital

Most of our models did not produce significant coefficients. The exception in Model 6, the growth model with job growth as its dependent variable. The negative coefficient on the overall variable indicates a negative correlation between loan capital and growth. As with other variables, this is more likely the effect of larger amounts of capital being concentrated in already-leading, slower-growing districts. We are more interested in the lagging term, which suggests that capital applied to lagging regions more than makes up for the negative overall effect. In lagging regions, the net return to loan capital is -23,275.08 + 26,530.90 = 3,255.82 Rupiah for each additional one percent of value-added dedicated to loan servicing. Though we cannot comment here on the overall average benefit for all districts, we can conclude that lagging districts where capital is more available to firms, have better growth outcomes.

DISCUSSION

Table 3 summarizes the effects for the variables considered. A plus sign indicates that an increase in the independent variable is associated with a positive effect in the dependent variable. One plus or minus character indicates a count of the three indicators (value-added *per* capita, firms, and jobs) that showed an effect in that direction, i.e., two plus signs means that two of the three dependent variables showed a significant and positive effect in the models. A negative sign indicates an inverse relationship. The cells are left blank if no effect was observed. Where the lagging term was excluded from the model, overall (non-interacted) effects are counted as affecting lagging districts (because they affect all districts).

Table 3. Summary of Effect Strengths

URBAN	Fixed Effects Models	CAPGR Models
Initial	NA	++
Log of metropolitan population (urbanization economies)		
Log of manufacturing gravity index (localization economies)	++	+
%VA generated by central government-owned firms	++	- -
%VA generated by local government-owned firms	++	-
%VA generated by foreign-owned firms	-	-
Log of EXPY	++	+ -
Median years of schooling for adults over 25	+	+
% manufacturing energy that is firm-self-generated	-	-
Log of infrastructure expenditure (4-year lag for FE models)	- -	-
%VA dedicated to loan servicing	-	-
RURAL		
Initial	NA	+
Log of market gravity index (urbanization economies)	- -	
Log of manufacturing gravity index (localization economies)	++	++
%VA generated by central government-owned firms	+	
%VA generated by local government-owned firms	++	
%VA generated by foreign-owned firms		+
Log of EXPY		- -
Median years of schooling for adults over 25	++	++
% manufacturing energy that is firm-self-generated	-	-
Log of infrastructure expenditure (4-year lag for FE models)	+	
%VA dedicated to loan servicing		+

positive effects: + weak ++ moderate; +++ strong
negative effects: - weak - - moderate; - - - strong

Table 3 provides some insight into the kinds of policy interventions that could help improve the outcomes of lagging districts. Lagging districts in both urban and rural areas respond much better to localization than to urbanization. This presents two issues for consideration. First, the more immediate gains to the industrial sectors are to be gained from the concentration of industry. Second, Indonesia is failing – at least with regards to the manufacturing sectors – to leverage its urbanization for economic growth. If Brulhardt and Sbergami (2009) are correct in concluding that urbanization within countries boosts GDP growth up to around 10,000 USD per capita (Indonesia's GDP *per capita* was $3,039 nominal USD *per capita* in 2010 (WB 2010), then Indonesia can capitalize on it urban areas – perhaps in manufacturing, and perhaps in other sectors.

In both urban and rural districts, the presence of state- and local-government-owned enterprise boosts economic outcomes, but government participation in industry suppresses growth in urban districts. As we said above, this makes a strong case that government-led industrial growth can provide a core set of firms and value-added in lagging regions, but future policy programs should focus on growing the private sector.

The other obvious areas of intervention are in education, power, infrastructure, and capital. A better-educated population consistently produces better economic outcomes in this analysis (all four model sets), indicating that lagging regions with a better-educated public are both better off and grow faster than their counterparts with lower education levels. The variable reflecting energy reliability, percent of energy that is generated by the firm, shows negative signs across all four sets of models, indicating that higher levels of self-generated power are associated with negative economic outcomes in the manufacturing sectors.

There is some evidence that increased expenditure on infrastructure is associated with positive effects in lagging rural districts. This encouraging result is somewhat diminished by the reverse finding in urban areas: increased infrastructure expenditure is associated with diminished outcomes in the fixed-effects models, and slower growth in the CAPGR models. Although this may simply reflect the long way that some lagging urban districts have to go to begin producing net returns on infrastructure investment, the positive effect in lagging rural regions – which would presumably be even more behind in infrastructure development than the urban districts – suggest that some other forces may be at work that are hindering urban districts from developing net positive return on infrastructure investment. This topic is worthy of significant future study.

Finally, our findings provide some evidence that the injection of capital can improve the outcomes for lagging rural districts. For the same reasons as with infrastructure expenditure, the findings for urban regions are worrying. If rural districts can realize positive growth returns with the infusion of capital, then it stands to reason that urban areas can do the same. This suggests that there are different challenges faced by Indonesia's urban and rural districts. Identifying these challenges and suggesting strategies for surmounting them, should be addressed in future research.

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The practice of multicultural planning in American and Canadian cities

Abstract

There is a disconnect between academic discourse about urban planning's neglect of cultural diversity and the robust embedding of ethnic cultures in the landscape of North American cities. We assess how planning practice is responding to cultural diversity through culturally sensitive policies adopted by municipalities in selected metropolitan areas in the United States and Canada. Using an index of multicultural policies as the basis of a questionnaire, we surveyed local planning departments in major immigrant-rich metropolitan areas in the United States and Canada. The survey, though limited in scope, yielded revealing findings on planning practice. Planning departments, led by market initiatives and community demands, are accommodating cultural diversity on a case-by-case basis, particularly in large and medium-sized cities. Canadian cities have gone farther in adopting multicultural polices, but American cities are not far behind. Practice is outpacing theory, which is largely occupied with advocating greater sensitivity to cultural differences and emphasizing measures to involve ethnic minorities. We find that planning processes are already responsive to ethnic minorities, but challenges lie in reconciling competing objectives in land use, development, and the provision of community services. This article not only illustrates the state of multicultural planning, but also points to a strategy of reasonable accommodation of cultural diversity.

Key words: multicultural planning, culturally sensitive policies, cultural diversity and urban planning, pluralistic planning.

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The practice of multicultural planning in American and Canadian cities

Introduction

Ethno- racial diversity of urban populations in cities of the US and Canada has reached levels beyond the point of minorities being dotted among white majorities of European origins. Increasingly, these cities and even states are turning into majority- minority areas, where whites are less than 50% of the population and minorities are made up of many groups, from native born Blacks, aboriginals, as well as the second generation and immigrant Latinos, Asians, South Asians, Africans etc. William Frey, a demographer at the Brookings Institute, concludes from an analysis of the US 2010 census data that of the 50 largest cities, 32 are now majority non-white and among those cities are not only in New York, Los Angles but also in small southern cities such as Austin and Charlotte (Frey2011). Moreover, the minorities are not largely concentrated in central cities but they have a proportionate share of population in suburbs, namely 35% of suburban residents in 100 metropolitan areas are non-white minorities equal to their share in the total population. Canadian cities are also heading towards majority-minority status. Markham and Brampton were already majority immigrant (mostly non-white) cities, Mississauga and Toronto city were at the cusp of majority-minority by the 2006 census as were Richmond and Surrey in the Vancouver metropolitan region. They would have turned into majority immigrant cities by now.

This demographic transformation of the North American cities is realigning the urban economic organization, social structure, ethnic and race relations as well as politics and power. Today's city is a new city on the old foundations. This transformation necessitates

rethinking of both planning theory and the practice. Of course, both the academe and profession are responding to this challenge though somewhat at variance from each other. Under the rubric of multicultural planning or planning for diversity, a substantial volume of literature has emerged critiquing the practice and exhorting planners about equity and responsiveness towards ethno-cultural minorities, particularly asking for the accommodation of their cultural differences, implying that the current practice is deficient on this score. (Sandercock 2003, Burayidi 2000, Pastieau and Wallace 2003, Qadeer 1997,2009, Milroy and Wallace 2004, Reeves 2005, Viswanathan 2009).

Practicing planners write sparingly about their approaches and experiences. Yet they point to the thriving ethnic enclaves and business districts, malls and mosques, fairs and parades, involvement of immigrants and minorities in public policy discussions including the provisions of translation and interpretation services, and the most striking evidence of the inclusiveness of today's cities lies in the parade of ethnic restaurants, music festivals and cultural shows and other manifestations of the multicultural civic life. Professional planners imply that the vibrant multiculturalism of cities is a testimony to their responsiveness to ethno-racial groups' needs[1]. Particularly, urban planning can be credited to have evolved through its responsiveness to immigrants needs (Vitiello, 2009).

The divergence between the discourse of planning theory and urban planning practice regarding the state of responsiveness to the interests of ethno-racial minorities has inspired this article. It attempts to answer empirically the question: how has urban planning as an institutionalized practice responded to the growing ethno-cultural diversity

of North American cities? In order to answer this question, we will briefly review the planning theory (in fact a series of opinions and propositions) and examine what guidance it provides to urban planners. This review combined with empirical evidence will cast light on the relationship between the theory and the practice of urban planning on the one hand, and point out the scope and limits of accommodating ethno-cultural differences in the shared spaces of cities, on the other.

Cultural diversity and equality as the goals of multicultural planning

The discourse about the incorporation of ethno-cultural differences in urban planning processes and policies is rooted in two values: diversity and equality (Reeves 2005, Sandercock 2003). Diversity is the variation of forms in a social, biological or economic system or organization. In our context it is about the recognition of cultural differences and racial identities among people both as individuals and groups. Class, race and ethnicity have been the historical markers of social differences, but recently gender, ability (disability), age and, in some instances, lifestyles have come to be the bases of defining differences in people's needs, identities, and entitlements. Our focus is primarily on ethnic-cultural diversity, which includes both racial and cultural markers, and its bearing on urban planning policies and processes.

Equality is the right or entitlement to equal access and fair treatment in the public sphere, regardless of race, ethnicity, gender, etc. The Canadian Charter of Rights and Freedoms states clearly: "Every individual is equal before law and has the right to the equal protection and equal benefit of the law without discrimination based on race, national or

ethnic origins, color, religion, sex, age or mental or physical ability" (Constitution Act 1982). The Fourteenth Amendment of the U.S. constitution (1868) and U.S. *Civil Rights Act* (1964) as well as many court rulings confer similar rights. Both countries have enacted human rights legislation as signatories to the Universal Charter of Human and Minority Rights. These laws firmly lay down equality as a goal of public policies. Equity, frequently used as a synonym of equality, is the realization of the right of equality and the results obtained there from. One talks of equity when referring to the policies and programmes through which the principle of equality is implemented. It is essentially the result of equal treatment with recognition of differences. Recognition of diversity would be an empty slogan without equity in the provision of public policies, programs, and services and equal access to the planning decision-making processes. This is how diversity comes to be combined with equality as the basis of urban planning's responsiveness to ethnic differences or in other words multicultural planning.

Academic discourse on diversity and urban planning

Paul Davidoff's seminal article, "Advocacy and pluralism in planning" (1965) was the first to recommend addressing diversity of communities and interests through planning, instead of conceiving singular plans in the name of unitary public interest. It laid open the path to the recognition of the divergent goals and needs of Blacks, the poor, and ethnic minorities.

The rise of feminist theories and their influence on planning thought combined with the emergence of large Hispanic, Asian, and Eastern European ethnic communities from the

post-1965 wave of immigration, have extended the definition of diversity to include ethnics, immigrants, women, and gays among the objects of pluralism in planning (Burayidi 2000, Qadeer 1997, Sandercock and Forsyth 1992, Spain 1992, Thomas and Krishnarayan 1994).

The academic discourse largely revolves around two themes: 1) the biases in the dominant paradigms and 2) the advocacy for including the perspectives of women, Blacks and ethno-cultural minorities in planning theory and practice. Leonie Sandercock speaks for many theorists in pointing out "some of the glaring absence in mainstream account of planning history" (Sandercock 2003:45). The excluded interests and perspectives (such as ethno-racial minorities and women) point to the "relationship of planning to power and the power of the system of thought" (Sandercock 2003:45).

Generally, planning theorists are critical of the planning approaches, methods, and practices applied in culturally diverse cities, which would include most North American cities now. Their criticism is built on four sets of propositions.

1. Urban planning is embedded in Anglo-European cultures and elevates their perspectives into universal values, sweeping away cultural differences. Yet culture matters, as Burayidi says, including the cultures of minorities (Burayidi 2000:2). The built environment is culturally inscribed and the planning system is the agency for imprinting it (Thomas 2008). This proposition is sometimes extended to add institutionalized racism and discrimination as other forms of white euro-centredness.

2. The modernist bias of planning theories, emphasizing scientific reason, technical rationality, and what historians call "the Enlightenment tradition," predispose urban planning to ignore diversity of traditions, customs, and cultural values. The rise of citizen participation and community-based modes of planning are counterpoised as the post-modernist answers to the modernist biases of planning processes, as are qualitative methods, discourse analysis and story telling are elevated to be the methods of information gathering (Burayidi 2000, Pestieau and Wallace 2003, Reeves 2005, Sandercock 2003).
3. Cultural differences should not only be recognized, but also expressed in planning policies and programs. Milroy and Wallace maintain that "Ethno- racial diversity is not a separate environmental condition that must be processed through the planning framework. It is the framework and planning sits in it (Milroy and Wallace 2004:4) A vision of multicultural planning should guide practice, in which the goals and values of different communities are fully taken into account. This argument is couched in abstract terms such as, "the right to difference and the right to city…recognizing the legitimacy and specific needs of minority or subaltern cultures… to participate as equal in public affairs" (Sandercock 2003:103).
4. From the above critiques are constructed visions of new planning paradigms that emphasize expansive goals for the profession and prescribe community organizer's virtues, roles and skills for planners. The discourse shifts to their personal qualities and organizational cultures, calling for "new modes of thought and new practices … (shifting away) from outmoded assumptions embedded in the culture of Western planning" (Sandercock 2004: 140). Leonie Sandercock offers a planning imagination

based on four key qualities: i) political- to be alert to the politics of who gets what from their proposals, ii) audacious- daring to break rules, iii) creative – both in the form of offering visionary leadership and in the ability to mobilize creativity of residents, iv) therapeutic- to bring people together for working through their differences. It involves dialogue and negotiations across the gulf of cultural differences (Sandercock 2004 : 134-139). Patsy Healy observes that planners are under pressure not only "to absorb new sensitivities and demands in their thought worlds and practices, but (also) to transform their own cultures" (Healy 2003: 245). Leela Viswanathan demands from planners postmodernist and postcolonial imagination which brings "to the fore ideas about identity and citizenship as associated with colonization, immigration and naturalization…. with conceptions of justice, in particular, the struggles of recognition and redistribution" (Viswanathan 2009: 169).

From these propositions, planning theorists have constructed vigorous critiques of planning practice that form a part of ongoing arguments about procedural planning theory and the processes of decision- making in planning. Even suggestions for making planning systems more responsive to diversity are largely conceived in terms of increasing the participation of minorities in planning processes and powers. In fact, the theorists often use the term planning without any adjectives, such as urban, which define the institutional parameters of the practice. They conceive of planning as a societal planning or some form of generalized community planning. They rarely engage with the substance of urban planning, namely with strategies, policies, programs, and proposals for land use

and development, housing, services, environment, economic development, and transportation in cities and metropolitan regions. Even in terms of the planning process, the arguments of advocates of multicultural planning are dated. The involvement of citizens is now a legislatively mandated part of the planning processes and minorities are not unrepresented. The practice of planning has long been communicative and collaborative (Healey 1997, Innis 1998).

So how does one square the vibrant multiculturalism of New York, Los Angeles, Chicago, Toronto, or Vancouver with critiques suggesting that the interests and needs of ethnic communities have been neglected in the planning practice? What of the thriving Chinatowns, Barrios, India Bazaars, and other ethnic commercial areas and malls, the expanding ethnic economies, the national and religious parades and festivals, the multilingual street signs, and the range of religious institutions in the cities of the US and Canada and slow but steady advance of minority representations in local and regional authorities?[2] There is an obvious disconnect between the theory and what can be seen, heard, or even smelled in our cities.

This is not to suggest that minorities' interests are fully reflected in urban planning outcomes or there are no structural biases against communities of colour, the poor, and the disadvantaged.[3] Members of ethnic groups, like everybody else, are frustrated by the cumbersome, costly, and time-consuming planning processes. Paradoxically, these complaints are themselves partly the result of the extensive participatory requirements of the planning processes, as practicing planners often point out.

Planning theory presents a static view of planning institutions, as well as of the cultures of urban communities. However, both are evolving. Planning institutions are shaped by national and regional legislative and political systems and embedded in the social values and ideologies of societies. They change with socio-political systems. The American planning system has been restructured by the Civil Rights movement of the 1960s and subsequent national and state legislation and court cases. Equal opportunity laws and fair housing provisions, employment equity and requirements for the equitable distribution of public services have had visible effect. Since 1980s, the conservatives' ideologies are realigning urban planning institutions. Similarly Canadian planning institutions are subject to the country's multiculturalism policy (1971), the Charter of Rights and Freedoms (1982), and the *Multiculturalism Act* (1988), as well as other equity and cultural rights provisions Planning practices operate within the framework of these values and laws. It cannot be discriminatory without being challenged in courts and undermined in the political arena.

Similarly ethno-racial cultures are not static and are continually affected by technology, economy, and interactions with society as a whole and with each other. Processes of fusion, hybridization, and differentiation keep transforming all cultures. The fluidity and dynamism of ethnic cultures has to be acknowledged in assessing urban planning's response to cultural differences. It is a mistake to regard ethno-racial cultures as fixed and always at variance with the dominant values. When minorities are becoming majorities, new challenges of inter-minority relations and mutual recognition are arising.

Finally, an assessment of urban planning's responsiveness to diversity has to take into account competing demands on planners and the multiple objectives of planning policies and programs. Urban planners are answerable to city and regional elected leaders, higher levels of governments, legislative bodies, and diverse local communities. Also they have to make trade-offs among goals of common good such as sustainability, affordability, cost-effectiveness, public health, job creation, fair housing, the reduction of car dependency with the accommodation for cultural differences .

Obviously, diversity cannot be pursued single-mindedly without regard to other goals of urban development. Howell Baum has summed up planners' challenge in accommodating cultural differences in the title of his article, "Culture matters – but it shouldn't matter too much" (Baum 2000). We would rephrase this as Culture matters, but it should dovetail into the common interests and goals of a community as a whole. Accommodating cultural differences should be conceived as a two-way process in which responsiveness to culture is accompanied by the incorporation of common interests in community cultures.

Although planning theory is primarily focused on modes of planning, but there is a growing body of case studies that describe the workings of the planning systems around issues of land uses, housing and community services. They range from development of multicultural places of worship, ethnic malls, neighbourhood and housing (e.g. monster home controversies) policies, programming of community services and, special use permits (Preston and Lo 2009, Poirier, Germain and Billett 2006, Harwood 2005). These

case studies are as much the evidence of the demands and controversies arising from cultural differences as they are the examples of the balancing acts of the planning practice to work through divergent interests, albeit by muddling through.

Two sides of multiculturalism and urban planning

A culture is made up of a web of norms, values, beliefs, and attitudes that serves as a map for the ways of life of a group.[4] The term 'culture' applied to ethnic communities and religious, or lifestyle groups, forming part but not the whole of a society, is of limited scope. It is essentially a (sub) culture embedded in the mosaic making up a national or societal culture. This multiculturalism is evident in the lived reality of the social life in the United States as much as it is an official creed in Canada.[5]

Multiculturalism is a two-sided coin. One side stands for the private domain of family, domestic, and community institutions of distinct beliefs and behaviours in which (sub) cultures operate. The other is the public domain of laws, economy, citizenship, education, technology, official language(s), and environment in which common values, norms, symbols, and even everyday etiquette (such as using subways) reign (Rex 1996). Cultural diversity is complemented by shared but evolving common ground. The construction and reconstruction of common ground, incorporating the interests of minority (sub) cultures, is a necessary part of an inclusive society.

Urban planning plays both sides of multiculturalism. It is expected to meet the culturally defined needs of diverse groups and reconcile them with the common ground of space,

environment, and provision of services and facilities (Qadeer 2009). A city itself is a form of common ground ruled by public interests and collective goods. Here the health, welfare, and satisfaction of some are indivisible from the well-being of others. The expression of cultural differences in the private domain goes hand-in-hand with their reconciliation with the norms, standards, and values of the public domain. Fulfilling these two demands is the challenge of urban planning practice.

Accommodating cultural differences in urban planning

In urban areas, the cultures of ethnic and lifestyle communities are expressed in their preferences for housing, neighbourhoods, jobs, and services. They are also represented in strivings for a fair share of power and participation in civic decision-making. What brings this about is the strategy of reasonable accommodation of cultural needs, often practiced as cultural differences come into clash with the embedded values in planning norms and policies. As proposals to develop synagogues, mosques and Mandirs uncover the tilt towards churches in the planning and zoning polices, the policies and standards are appropriately revised to accommodate these new places of worship (Germain 2009, Agrawal 2009, Hequet 2010)

The strategy of reasonable accommodation has not been formally defined in planning, but it is implicit in planning practice and now increasingly referred in planning reports. . It is based on long practiced legal and public policy doctrines. A demand may be accommodated if it does not cause undue hardship, unreasonable cost, the disruption of an organization or institution's operations, infringement on other people's rights, or the

undermining of security or public order (Bouchard and Taylor 2008:19). Reasonable accommodation is not an uncontested concept. Its critique comes from both the right and left perspectives. For the commentators of the right it is a question of the limits of accommodation and reasonableness. For the left, it is the primacy of the rights of minorities that define both the scope of reasonableness and the extent of accommodation. Arguments range around specific practices; is face veil of Muslim women in public places a right to practice religion freely or stepping outside the boundaries of reasonableness from the perspective of national values of secularism? As the idea of reasonable accommodation has been injected in Quebec's political discourse, it is there that much of debate about it is presently raging (Nieguth and Lacssagne 2009).

Reasonable accommodation has long been the guiding principle in the legislations of occupational health and safety, disability management and educational administration. In practice it is a pragmatic and balanced approach to accommodate differences while maintaining institutional integrity. In urban planning, reasonable accommodation means that the cultural needs of a community should be balanced against common interests of a city as a whole and the criteria of fairness and equity for others. Leonie Sandercock acknowledges common good and maintains that it "must be generated not by transcending or ignoring cultural and other differences (the liberal position) but through their interplay in a dialogical, agnostic political life" (Sandercock 2003:104). Urban planners have the challenge of tacking between the two currents, common good and cultural differences. Paul Davidoff's model of advocacy planning also envisages interest-driven community plans as means of generating value – explicit alternatives to be

debated in the public arena allowing for trade-offs among divergent groups and interests (Davidoff 1965).

Framing planning practice

We may reiterate that our focus is on the institutionalized urban planning. The term "reasonable accommodation" suggests that the urban planning practice should include policy measures to respond to cultural diversity within the parameters of common good and equity for others. These measures encompass the full range of activities that constitute urban planning, namely from procedures to ensure the representation and participation of ethnic communities in planning processes to policies for the provision of culturally sensitive housing, neighbourhood and land use plans, and community services for members of ethnic minorities and immigrants. This is how the needs of multiple (sub) cultures can be accommodated, while advancing area-wide objectives in equitable ways. Using the range of substantive activities that fall in the jurisdiction of urban planning as the basis, we have drawn on the policy index from Qadeer (2009) as the yardstick for measuring the responsiveness of planning departments, see Figure 1[6]. It captures a range of initiatives conceivable in North American urban planning practice and serves as the tool of our survey of culturally responsive planning practices in major metropolitan areas of the United States and Canada. It can also be used as a guide for multicultural planning.

Figure 1 about here

The survey

We followed an empirical approach to assess how urban planning departments respond to cultural diversity. In 2009 we mailed or e-mailed a questionnaire to municipal planning departments of central cities, suburbs and exurban jurisdictions of (selected) metropolitan regions in the United States and Canada. The regions selected for the survey are the first and second tier gateway areas, known in the literature for their diversity. The survey did not include regional or metropolitan municipalities of these Census Metropolitan Areas or Regions. Included in this survey were the municipal planning departments of the component municipalities of Los Angeles, San Francisco, New York, Chicago, and Houston metropolitan areas in the United States and Vancouver, Calgary, Edmonton, Toronto, and Montreal metropolitan regions in Canada. All in all, 109 large and small municipalities were contacted by e-mail and followed up in many cases by a second or third wave of questionnaires and calls to the offices of directors of planning. We addressed the questionnaire to the directors or persons in charge of planning in all municipalities asking that it be filled by a managerial level professional fully knowledgeable about the jurisdiction's policies. A total of 42 completed questionnaires were received from 23 U.S. and 19 Canadian municipalities, a return of 38.5%.

It is not a statistically random but a purposive sample. We wanted to measure how some high-immigrant areas are responding to cultural diversity in planning practice. The aim is to get some practitioners' perspectives on what they are doing to accommodate ethno-cultural differences. It is not to generalize for all North American cities .The questionnaire was based on the index of policies shown in Figure 1. Questions were designed to assess the incidence of these policies in municipalities. The questionnaire

also included open-ended questions eliciting comments and elaborations and asked for information such as the percentage of immigrant population in the particular city and some indicator of the economic base.[7] The answers to these open-ended questions have been used to triangulate, confirm and explain the responses to the closed questions and to get some descriptive accounts of measures taken.

The practice of culturally sensitive planning

The responses show a clear pattern in which large cities (those with populations of more than 500,000) have adopted a substantial majority of the 19 policies listed in the index. The mean number of policies adopted is 15.4 (out of a maximum of 19) for Canadian and 12.6 for the American large cities of the sample. Figure 2 shows the distribution of policies adopted by large, medium-sized, and small cities differentiated by the country. These sampled places are within metropolitan regions; "small" usually means an exurban municipality.

Two trends stand out from Figure 2. First, the Canadian policy of multiculturalism is reflected in the higher values of the mean number of adopted policies by large and medium-sized cities, with small municipalities lagging behind. Second, large American cities, though lagging their Canadian counterparts overall, were also following most of the listed policies. American medium-sized and small cities were almost at the same level in terms of adopted policies. All in all, the incidence of culturally sensitive planning policies is related to the size of the municipality and the country in which it is located.

Statistical tests of the significance of these relationships show that U.S./Canadian differences of mean values are significant (0.05 level) for large and medium-sized cities, but not for the small cities.[8]

These observations suggest that the planning practice is fairly responsive in initiating multicultural policies in these cities. We are not witnessing here a striking lag in the initiation of multicultural measures. These responses are not a proof of the outcomes of these measures. For outcomes we have looked at the generalized state of the North American cities regarding their accommodation of diversity.

Figure 2 about here.

The 19 listed policies have been grouped in three clusters. Policies number 1 to 5 relate to factors such as the use of minority language(s), representation and inclusion of ethnic groups in decision-making, and routinely using ethnic variables in analysis. The other two policy clusters are land use and development polices (numbers 6 to 11 and 14 of the index) and policies relating to community services to meet ethnic needs (policies 12, 13, and 15 to 19). Figure 3 provides a cross-tabulation of the incidence of 19 policies according to the size of city and the country. Figure 4 is extracted from Figure 3. It shows the weighted average (standardized mean) of the incidence of policies in the three clusters.[9]

Figure 3 about here

Figure 4 about here

Before getting into specific policies, we want to paint an overall picture by looking at Figure 4 first. The patterns noted above are confirmed by this table. Large and medium-sized Canadian cities use a larger number of policies on average than American cities in all three clusters. Small cities show the reverse pattern.

In terms of the incidence of policies in the three clusters, the differences among them are notable. In all sampled cities, land use and development policies have the lowest level of use. By and large, planning process policies have the highest average values, followed by the policy cluster of community services. Small Canadian cities vary slightly from this pattern in that community services scored relatively high on the mean values.

What this all means is that the sampled cities, specifically the large and medium-sized ones, were following most of the policies that promote the inclusion of the interests and voices of ethnic groups in planning decision-making. This finding goes against the academics' insistence on the neglect of ethnic interests in the planning process. Policies for accommodating cultural diversity in providing community services are the second most common practice among the sampled cities. Land use and development policies have the lowest use of the three clusters. Yet it does not mean that little is being done to accommodate cultural diversity in this area. This will be discussed later.

To probe these patterns further, we examine the incidence of policies individually as shown in Figure 3. None of the 42 cities had adopted any citywide policies for the development of "ethnic neighbourhoods, places of worship, and other cultural

institutions" (policy 7). Such developments, being plentiful, have occurred through market processes and under the rubric of zoning and site plan regulations. The creation of such neighbourhoods and institutions has been worked out on a case-by-case basis rather than by any overarching policies of culturally specific development. The next least-used policy is the deliberate development of ethnic business enclaves or malls, such as Asian malls. In responding to questions on how these commercial developments have come about and what role the city played, only six cities, Chicago in the U.S. and Toronto, Montreal, Edmonton, Saskatoon, and Richmond in Canada, indicated that they either designated such developments as special districts or had special commercial policies for them. The other 35 indicated that these developments had occurred within the scope of overall policies with some case-by-case adjustments.

The most frequently used policies are numbers 14, 18, and 11 with frequencies of 30, 30, and 27, respectively, out of 42 (Figure 3). These are policies intended to protect ethnic heritage, including the heritage of indigenous people, promote ethnic art, culture, fairs and parades, signage and street names. Planning departments have varying roles in relation to these policies; some fall directly in their jurisdiction, while for others their role is advisory. For example, in the matter of signage, Montreal must conform to the Province of Quebec's official language laws, which give primacy to French for public signage. San Jose in California, under the rubric of its Strong Neighborhood Initiative (SNI), gives wide leeway to local communities to set cultural or ethnic identity as a priority goal. Certainly, most ethnically diverse cities have streets and squares named by the ethnic identity of an area, such as Greek Village, Little Italy, or Chinatown. Toronto

had 310 street closures in 2002 for parades and community events. Its Caribana parade of Caribbean dance and music annually draws about a million spectators every year. Responsiveness to cultural diversity is also manifest in community events and initiatives.

Figure 3 supports the observations derived from Figure 2. Policies for cultural accommodation in community services generally show a wide range of usage, ranging widely from 12 to 30 cities out of 42; paralleled by policies for accommodating diversity in planning processes, falling in the range of 19 or 24 cities for each policy. The incidence of land use planning and development policies brings up the rear, in the range of 0 to 19 cities, with 27 being an outlier. The differences by the size of city and the Canadian/U.S. divide are also confirmed by these findings.

We also probed some other relationships, most of which turned out to be weak. A brief summary of those probes is shown in Figure 5.

Figure 5 about here

We attempted to see whether the proportion of immigrants in the population of a city affects the number of multicultural policies it adopts. We were interested to determine whether the percentage of immigrant is an intervening variable in the relationship between city size or US/Canada location and the number of policies.

The correlation coefficients for the percentage of immigrants relative to the number of policies of cities differentiated by sizes and countries, for six samples controlling for the

city size and the country were calculated (Figure 5). The results show that the percentage of immigrants as an independent variable has either no or very little effect on the number of policies adopted. Certainly the large and medium-sized cities of both countries have low correlation coefficients and are not significantly affected in the adoption of policies by the percentage of immigrants.[10] Small cities are the only ones with a significant correlation between the two variables. It may be that once a certain threshold of immigrant population is reached in case of medium and large cities, variations in the percentage of immigrant population make little difference. Whereas, for small cities falling below that threshold, this variable has some effect. Overall, this analysis suggests that the percentage of immigrants is at best a weak intervening variable, largely applicable to small places.

At this point, we turn to the interpretations of these findings for the broader question of the responsiveness of planning practice to cultural diversity.

Interpretive discussion

What do the findings of the survey mean for the broader discussion of multicultural planning and responsiveness to cultural diversity? We believe they are relevant to the three areas of planning practice.

1. Representation in the planning process

The planning process, by and large, is well attuned to the needs and interests of ethnic minorities. As our survey indicates, this is particularly true of large and medium-sized cities in both Canada and the United States, where ethnic diversity is a structural

condition. Ethnic minorities are drawn into the citizen participatory processes of decision-making, which are now deeply entrenched legally and institutionally in urban planning. Over the years, innovative approaches continue to be forged to involve minorities and other communities of interest more closely in planning processes. From translation and interpretation services, kitchen meetings, public hearings, task forces, community mobilization, and web dialogues to mediation and negotiation among conflicting interests, a host of techniques are employed to involve minorities and other communities.

Examples of the use of innovative techniques for involving citizens, particularly minorities and immigrants, are a staple of planning reports and practitioners' journals such as *Planning* and *Plan Canada*. Vancouver, for example, has a protocol for providing translation and interpretation services. New York's mayor Michael Bloomberg issued an executive order in 2008 for all agencies to provide language help to people who spoke little or no English.[11] Similar practices are followed by most of the large and medium-sized cities we surveyed. Yet it takes resources to employ translators and interpreters. Even then such services can only be provided for major linguistic groups, e.g. Chinese, Korean, Latino etc. but not for all groups which number could run into hundred or more. The point is that citizen involvement is a necessary condition for urban planning exercises and minorities are often actively involved, with support from planners within the scope of resources.

The empowerment of minorities through representation in city councils, planning boards, or planning departments is not, however, coming about in parallel with the increasing number of immigrant ethnics. Breaking into the power structure is largely a political process and not a planning exercise. Minority representation in these bodies is increasing in Los Angeles, New York, Toronto, and Vancouver as the composition of the population changes and ethnic minorities collectively become the majority. The conflict of interests between whites and non-whites or native-born versus immigrants may give way to interethnic political competition and cultural clashes among Latinos, Blacks, Chinese, South Asians, and other groups.[12]

Planning theorists have not moved beyond the narratives of the 1970s and are not taking into account rapidly changing reality. Planning processes are including minorities and responding to cultural diversity to a large degree in cities where the needs are pressing and the infrastructure of participation has developed.[13] The locus of culturally responsive planning lies in substantive issues of land use, development policies, and equity in the provision of services and opportunities. These are the arenas of resource allocation in which competing interests vie with one another and limitations of resources have major influence. The post 2008 era of budgetary deficits is already affecting the overall planning activity in these substantive matters. Ethnic communities' needs are bound to be affected.

2. Equitable cities and reasonable accommodation

We have found a paradox of multicultural practices in land use and urban development, the core area of urban planning. Our survey shows a low incidence of citywide policies for the siting and development of ethnic places of worship, cultural institutions, commercial areas, enclaves, or other spatial manifestations of multiculturalism. Canadian cities such as Toronto, Edmonton, and Richmond have more frequently instituted such policies compared with the U.S. cities in our sample. Yet such developments are plentiful in both countries and are thriving and vibrant assets in many cities. Policies or no policies, cultural diversity has been incorporated in the spatial organizations of North American cities.[14] Relatively low incidence of land use policies in our survey may be a reflection of the land use decision being site specific and thus accommodated through community negotiation processes incrementally and not through city wide general policies and standards.

Cultural accommodation has apparently come about by market and community initiatives on an incremental basis, case by case, through site-specific planning approvals. At the macro level, multicultural planning practice has languished, but at the micro level, it has flourished. Ethnic minorities have created a lively community life in North American cities. This does not mean that their situation is free from problems, including intimations of discrimination. Yet these institutions and identities continue to be incorporated in urban structures.

This is by no means an argument for not bothering with city-wide multicultural policies. The need for comprehensive planning is pressing. The major issues of integrating ethnic

enclaves, commercial areas, and institutions in the urban fabric and reconciling cultural interests with the overarching goals of sustainability, compact urban form, equitable development, good design, economic growth, and fair housing remain to be addressed. A comprehensive set of policies defining the criteria and performance standards of reasonable accommodation have to be forged to allow for mediation among competing cultural and civic goals. It is necessary to establish both the scope and limits of cultural accommodation. The bases of reasonable accommodation have to be explicitly defined in comprehensive planning goals and policies. As a start, sustaining cultural diversity should be among the goals of comprehensive plans and a legal basis for minor variations and rezoning in land use planning, within the scope of public interest, health, and welfare.

3. Restructuring community services and carving a common ground

The differences in access to housing, jobs, good-quality schools, recreation, sports and arts facilities, and cultural services arise both from inequalities of income and of political and social resources on the one hand and cultural and linguistic barriers on the other. Community services are meant to be equitably distributed. Yet ethnic communities and new immigrants regularly confront barriers of cultural predispositions and linguistic inadequacies in getting access to services, in addition to economic and political handicaps. The culturally sensitive mode of delivery of these services is meant to overcome the former biases.[15]

Pertinent to multicultural planning are two values: equality of need satisfaction and uniformity in the provision of services. Practitioners say they cannot play “favourites”

and produce one type of service for one group and another for others. Yet in many services, assumptions about needs are based on historical norms. Feminist scholars have bared many such cultural biases, even in the definitions of a family or household, and pointed out the resulting inequities. Similar cultural biases of what constitutes "need" in recreation, sports, arts, or culture have been found in the provision of such services for multicultural cities.

A city of diverse ethnicities, whose cultural and recreational policies focused only on symphony orchestra and museums, or on baseball diamonds and hockey rinks, is not accommodating the needs of communities, who enjoy Bollywood songs, Latin rhythms or play cricket or bocce. Even the policies regulating funeral services have built-in biases towards Christian rituals to the disadvantage of Hindus, Muslims, and others (Agrawal and Hathiyani 2007). These examples illustrate how cultural assumptions about the form of services affect people's satisfaction. The thrust of multicultural polices in the provision of community services is to uncover such hidden biases and find common ground to equalize outcomes and make pluralistic provisions.

Such changes are happening incrementally both in the market sphere and in the public arena. Wherever ethnic populations have increased in medium-sized and large cities, the pressures of demand have realigned community service policies. Ethnic art and culture are flourishing with the support of cities. Libraries have expanded their multilingual holdings. Ethnic business improvement services are part of many cities' economic

development strategies. In the Toronto area, municipalities have incorporated cricket fields and bocce courts in their park plans.[16] New York and Los Angeles have built cricket pitches. All in all, responsiveness to ethnic diversity can be seen in the provision of services but it is reactive rather than proactive.

Conclusions

Culturally sensitive planning in North America is a work in progress. It is vigorous in large and medium-sized cities within metropolitan regions, where ethnic communities are expanding with immigration, and emerging in small, exurban municipalities. Under the umbrella of national multiculturalism, Canadian cities are more responsive to cultural diversity than the U.S. cities. Yet the Civil Rights movement and lived multiculturalism of the U.S. have resulted in parallel developments in large American cities. New York, Planning institutions, energized by market initiatives, are responding to the demands of diverse communities, more in some places than others. Practice is outpacing theory, which is largely occupied with advocating sensitivity to cultural differences and involvement of minorities.

Our empirical survey of planning practices, albeit of a limited scope, suggests that planning decision-making processes by and large include ethnic interests. The issues that exercise planners relate to balancing ethnic demands against general interests and common objectives, as well as balancing the demands of competing communities. The greatest challenges lie in land use and urban development policies and the provision of community services, where ethnic communities' demands are most concretely expressed.

How do we sustain pluralism in planning policies while maintaining equality of outcomes, without compromising overarching goals such as sustainability, smart growth, fair housing, or job creation? Put differently, how do we construct a common ground that reflects diverse interests, but advances general health, welfare, and environmental sustainability? The complexity of balancing diversity, equality, and public interest is the challenge of planning practice. The strategy of "reasonable accommodation" appears to be the key to multicultural planning. The policy index used in this study has turned out to be a good instrument of measuring multicultural planning practice. It also offers a framework for institutionalizing reasonable accommodation.

Multicultural planning is not a new type of planning. It is not going to be a new idiom of planning. It is largely the strategy of embedding, within the existing planning system, explicit modes of reasonable accommodation of cultural diversity and constructing a common ground of objectives, criteria, and standards that balance pluralistic interests. Obviously much more work needs to be done to flesh out this strategy. At present, reasonable accommodation is happening incrementally. It has to be made more explicit and anticipatory.

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Figure 1: Policy Index of Multicultural Planning

1. Providing minority language facilities, translations and interpretation in public consultations.
2. Including minority representatives in planning committees and task forces as well as diversifying staff.
3. Including ethnic/minority community organizations in the planning decision –making processes.
4. Routinely analyzing ethnic and racial variables in planning analysis.
5. Studies of ethnic enclaves and neighborhoods in transition.
6. Recognition of ethnic diversity as a planning goal in Official/ Comprehensive Plans.
7. Citywide policies for culture-specific institutions in plans, e.g. places of worship, ethnic seniors homes, cultural institutions, funeral homes, fairs etc.
8. Policies/design guidelines for sustaining ethnic neighborhoods.
9. Policies/strategies for ethnic commercial areas, malls and business improvement areas.
10. Incorporating culture/religion as an acceptable reason for site- specific accommodations / minor-variances.
11. Accommodation of ethnic signage, street names and symbols.
12. Policies for ethnic specific service needs.
13. Policies for immigrants' special service needs.
14. Policies/projects for ethnic heritage preservation.
15. Guidelines for housing to suit diverse groups. .
16. Development strategies taking account of inter- cultural needs.
17. Promoting and systemizing ethnic entrepreneurship for economic development.
18. Policies/ strategies for ethnic art and cultural services.
19. Accommodating ethnic sports (e.g. cricket, Bocce, etc.) in playfield design and programming.

Figure -2
Adopted policies by the size of cities in the US/Canada

	US Municipalities			Canadian Municipalities		
Policies	Large Cities over 500,000	Medium Cities 100-500,000	Small Cities less than 100,000	Large Cities over 500,000	Medium Cities 100-500,000	Small Cities less than 100,000
Total number of adopted policies	63	91	28	77	58	45
Total number of cities	5	14	4	5	5	9
Mean number of policies per city	12.6	6.5	7	15.4	11.6	5

Source: The Survey

Figure - 3
Incidence of Policies

		No. of Cities adopted a policy						
No.	Policies	US Municipalities			Canadian Municipalities			Total
		Large Cities over 500,000	Medium Cities 100-500,000	Small Cities less than 100,000	Large Cities over 500,000	Medium Cities 100-500,000	Small Cities less than 100,000	
1	Involvement + Consultation	5	7	2	4	3	1	22
2	Representation in Planning Communities	4	7	3	5	2	3	24
3	Participation in Decision-making	5	6	3	4	3	2	23
4	Routinely Analyzing Ethnic Characteristics	4	4	1	4	4	3	20
5	Studies of ethnic enclaves	5	3	1	5	3	2	19
6	Ethnic Diversity as a goal	3	5	1	5	4	6	24
7	City-wide policies for cultural institutions	0	0	0	0	0	0	0
8	Policies/guidelines for ethnic areas	1	1	1	3	2	1	9
9	Policies for ethnic business areas	1	0	0	3	2	0	6
10	Culture/religion for site-specific accommodations	3	4	2	4	3	1	17
11	Ethnic Signage/Streetnames	5	9	2	4	4	3	27
12	Ethnic-specific service needs	4	3	1	5	3	3	19
13	Immigrants special services	4	6	2	5	3	4	24
14	Ethnic heritage preservation projects	5	8	3	5	5	4	30
15	Housing to suit diverse groups	2	4	0	3	3	2	14
16	Providing for Inter-cultural needs	2	5	2	4	4	2	19
17	Promoting ethnic entrepreneurship	2	3	1	4	2	0	12
18	Promoting ethnic art and culture	4	10	2	5	4	5	30
19	Accommodating ethnic sports	4	6	1	5	4	3	23
	Total	63	91	28	77	58	45	

Source: The Survey

Figure - 4
Standardized Means of Policy Clusters

Standardized Means of Policy Clusters per City						
Policy Cluster	US Municipalities			Canadian Municipalities		
	Large Cities over 500,000	Medium Cities 100-500,000	Small Cities less than 100,000	Large Cities over 500,000	Medium Cities 100-500,000	Small Cities less than 100,000
Planning Process (Policies # 1-5)	6.4	2.7	3.5	6.2	4.2	1.7
Land Use and Development (Policies # 6-11,14)	3.6	1.9	2.3	4.8	4.0	1.6
Community Services (Policies # 12,13,15,16-19)	4.6	2.6	2.3	6.2	4.6	2.1

Source: The Survey

Figure - 5
Correlation Matrix

Variables	Sample	Number (N)	r (Pearson Coefficient)	P-value (2-tailed)
Percentage of Immigrant vs. Number of Adopted Policies	All Cities	42	0.533	<0.0001
Percentage of Immigrant vs. Number of Adopted Policies	US Cities	23	0.393	0.063
Percentage of Immigrant vs. Number of Adopted Policies	Canadian Cities	19	0.459	0.048
Percentage of Immigrant vs. Number of Adopted Policies	All Large Cities	10	-0.018	0.960
Percentage of Immigrant vs. Number of Adopted Policies	All Medium Cities	19	0.459	0.048
Percentage of Immigrant vs. Number of Adopted Policies	All Small Cities	13	0.747	0.003

Source: The Survey

[1] These opinions are expressed in planning conferences and in personal interviews. Though there is some evidence in print also see Qadeer 2009. In the magazine Planning, a planning director is quoted as saying, "the whole idea of customer service is based on respecting differences in the population and acknowledging them as positive thing" (Knack 1997). This is a common theme among planners.

[2] For example, a Google search revealed lists of about 100 mosques and 70 temples in the Toronto area; New York has 75 mosques and 30 temples and Gurdwaras; and Los Angeles has 59 mosques testifying to religious diversity of these cities. In each of these cities, new places of worship are being built every year. They would not have come about without accommodation within the urban planning policies.

[3] There is no evidence of pervasive dissatisfaction with the planning systems among ethnic minorities. Public meeting in planning have heated arguments, sometime along ethnic lines, but there is little sense of permanent deprivation among various ethnic communities, except among poor Blacks and immigrants. For example in the Toronto area, every single mosque seriously proposed has been eventually approved, although many were opposed in community meetings, sometime after appeals to the provincial planning board.

[4] There are innumerable definitions of the term "culture." We have taken the most common elements referred in these definitions. For reference, see the entry on culture in Abercrombie, Hill, and Turner 2000.

[5] Canada has officially adopted multiculturalism as a national policy and social identity. It is described in the metaphor of a social "mosaic" in contrast to the long-held view of the United States as a "melting pot." Yet, the lived reality of the United States is different. It is an amalgam of cultures with a stronger sense of national identity. That the United States is also a multicultural society is now widely accepted among sociologists and other observers of the American social life. Nathan Glazer, the dean of American assimilation studies, observes, "Multiculturalism must be accommodated whether in schools, in the work places and in public ceremonies" (Glazer 2004:72). Others have described New York, Los Angles as multicultural cities (Davis 2001, Foner 2007, Waldinger and Bozorgmehr 1996).

[6] Policy index for measuring multicultural policies is increasingly used as a tool of evaluating the effectiveness of multiculturalism. See Soroka, Johnston and Banting 2007.
[7] The questionnaire was pre-tested by a graduate student as part of his master's research work and was reviewed for consistency and clarity (Newman 2008). The survey followed the ethical protocols of survey research (e.g. promising confidentiality) and methodological criteria for validity by framing questions in objective terms and cross checking results with those of the fore mentioned study and other information.

[8] Two sample T-tests were used to compare the probability of mean values of Canadian and the U.S. cities by size for significance. The null hypotheses were rejected at the .05 level for the large and medium-sized cities but not for small cities.

[9] The weighting of means was done to standardize the size of three clusters, as two clusters include 7 policies each and one has only 5, namely, the planning process cluster.

[10] It may be that after a certain threshold level of ethnic population, there is enough diversity of interests to sustain multicultural polices. Any further variations in the percentage of immigrants may have little effect.

[11] The language help was found to be inadequate two years later.

[12] Illustrative examples of inter-ethnic clashes of values include Orthodox Jews' and Caribbean Blacks' differences in Crown Heights, Brooklyn; the conflict between Blacks and Koreans over businesses in poor areas of Los Angeles; and disagreement between Chinese and Muslims over the building of a mosque in Markham, Ontario. (See Lee 2002, Henke and Irish 2004)

[13] The infrastructure of participation includes staff resources for interpretation and translation and negotiations, community organizations and NGOs that advocate ethnic communities' interests, and the ethics of negotiation. This does not mean that there are no dissatisfactions with processes of participation. Minorities are also subject to NIMBYism and a failure to fulfill goals may be described as evidence of discrimination.

[14] A recent and striking example of site-specific accommodation of an ethno-religious institution is the Lower Manhattan Community Board's approval of a 13-storey Islamic centre near the iconic symbol of the current American war on terrorism, Ground Zero of the World Trade Centre. The proposal aroused strong emotions in view of the symbolic value of the site, yet in the end, with the support of Mayor Bloomberg, the Board in a vote of 29 to 1 approved the development of the centre in May 2010. The controversy continues to rages in the media, led by neo-conservative politicians.

[15] For example, if housing code requires that no more than two persons occupy a bedroom, then members of ethnic minorities who live in large, multigenerational families may be effectively barred from rental housing.

[16] In the Toronto area, schools offer equipment and facilities for cricket. There are scores of cricket teams and many tournaments. The city of Toronto has built a cricket field in Thorncliffe Park.

POLICY AND INSTITUTIONAL REFORM OF INDONESIAN PLANNING SYSTEM: NEXUS TO METROPOLITAN AND LOCAL PLANNING EFFECTIVENESS

Mahesti Okitasari [1], Tetsuo Kidokoro [2]

Abstract

Started in 1999, Indonesia has embarked on a program of fiscal, administrative and political decentralization in the same time. With spatial planning no longer a main policy field for the central government, decentralization had shifted the country to the most decentralized side in term of planning governance and policy. Following the decentralization program, within the span of 10 years, Indonesian planning system undergoes rapid changes with issuance of new planning policies range from plan making to land use control, thus forcing all level of governments to adapt in the new system. In the same time, decentralization movement with its devolution of power transforms the relationship between central and local governments. However, only little known about how these changes affects the planning effectiveness in regional and local level.

The concern of this paper is to examine the implication of policy and institutional changes to the Indonesian tiered planning system while reviewing the cogency of planning institutions in region-wide comprehensive plan and municipal master plan toward rural-urban development. What it offered is an understanding about the process and effect of alteration power of the metropolitan region planning compare with the pre-decentralized time. As a case study, depth identification of land use changes and correspondent instruments in Surabaya peri-urban area was done to understand the consequences of the transformations in local land use planning and its effectiveness. Assuming decentralized planning shall be able to give positive feedbacks to the local planning system and land development process with a significant decreasing number of land use change deviation that did not comply with the plan, the study discuss alternative ways of understanding why decentralization in Indonesian planning system still has long way to go to achieve its stated aims in terms of promoting good governance.

Keywords: decentralization, planning policy, land use, peri-urban.

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1. Introduction

The study of decentralization has important policy implication for planning system as it related to many aspects of planning namely urban growth management, environmental conservation and property taxation. Decentralization gives local government power to regulate its planning within the general guidelines set by higher authorities. However, the transfer of power to local governments is nothing less than controversial. Precedent research claimed that decentralization will increase both efficiency and equity in the public sector because it allows customization of public services to local preferences, promotes scrutiny by citizens of government expenditures, and encourages innovation through inter-jurisdictional competition (Oates, 1972, 2006; Tiebout, 1956) while also raised problems due to lack of administrative capacity, potential corruption and the risk of raising elite (McLure, 1999; Sewell, 1996).

The importance and duality of the argument on decentralization provided the rationale for a number of studies to review decentralization in both developed and developing countries and to explore areas of consensus and disagreement among scholars on the opportunities and risk of decentralization. The evidence presented shows that results on the link between decentralization and effectiveness are vary significantly across cases (Ingram and Hong, 2007). Furthermore, the connections between decentralization and local policies appraise how decentralization is related to jurisdiction size, local environmental policy and urban economic development strategy (Fischel, 2007; Oates and Portney, 2001; Wallace, 2007).

Started in 1999, Indonesia has embarked on a program of fiscal, administrative and political decentralization (Law 22/1999 and Law 25/1999). With spatial planning is no longer a main policy field for the central government, decentralization had shifted the country to the most decentralized side in term of planning governance and policy. Following the decentralization program, within the span of 10 years, Indonesian planning system has been undergone rapid changes with issuance of new planning policies range from plan making to land use control, forcing all level of governments to adapt in the new system. In the same time, decentralization movement with its change of power transforms the relationship between central and local governments. The local government, including Provincial and Local (Regencies and Municipalities), will have a greater role in several important functions. Hence, the reform could potentially change the pattern of urban and regional development (Firman, 2003) and governance towards a pattern of spatial segregation and a fragmentation of regional development (Firman, 2009). However, only little known about how these changes affects the planning effectiveness in regional and local level. Thus, this study tried to raise questions: How does decentralization shape local governance? What are the implications of decentralization towards the policy and institutional changes?

The aim of this study is to examine the implication of policy and institutional changes to the Indonesian tiered planning system while reviewing the cogency of

planning institutions in region-wide comprehensive plan and municipal master plan toward rural-urban development. What it offered is an understanding about the process and effect of alteration power of the metropolitan region planning compare with the pre-decentralized time. The focus is on the particular case of land use change and the possible local government effectiveness on local level within the metropolitan region.

In the reminder of this paper, the relationship between the plans and the actual land use change in timely manner will be analyzed to identify the inconsistency of urban planning and urban area development will be addressed through the comparison between the planned areas as mentioned in the master plan and actual built up area, planned and actual land use structure, to highlight the difference between before and after the decentralization law was enacted. To compare the effectiveness, the disparity of building permit application and the number of incompliant land use change to draw the elasticity of local planning implementation. This elasticity is estimated using data assembled for the period from 1999 to 2009.

2. Decentralization and change of power in Indonesian governance

After experienced a nation wide reformation movement in mid 1998, the Indonesian National Assembly issued Law 22/1999 and 25/1999, regarding administration and fiscal decentralization in Indonesia. From local and regional planning point of view, both laws state clearly that the local government and local communities through local representative councils should have greater discretion in deciding what is best for the urban and regional development in their areas. However, after a decade, it remains a debate what kind of actual decentralization taken place in Indonesian governance and up to which extend the change of power from central to local government occurred.

Theoretically, decentralization leads to more power designated for local government to control its planning (Stiglizt, 1999), both preparation and implementation. It assumed that people will solve problems better at the local level, if they were allowed and can be considered an institutional arrangement that brings about participation and local decision making. Another scholar defined decentralization as transferring functions and responsibilities to lower levels of government or as leaving tasks to the market (Helmsing, 2000). Thus legislation is very important in the case of decentralization. It prescribes a planning procedure and specifies the level where the responsibilities are put, where central government has to delegate certain functions and responsibilities to lower levels of government.

While reviewing the type of decentralization and the transfer of power took place in other developed and developing countries, there are three common types acknowledged (ADB, 2008). The first is being deconcentration or the transfer of responsibility from central agencies and ministries to their regional or field units where some discretion is allowed but they are subordinate to the central authority. Second type is delegation described as moving functions from central government to semi-autonomous public authorities and corporations granted the authority of

planning and implementation. The last is devolution defined as transfer of decision-making power and authority to local governments which have the power and resources to perform relatively independently from central agency intervention. The exact meaning of Indonesian decentralization cannot be fitted into a single type aforementioned above but can be pointed between deconcentration and devolution. The essence of Indonesia's decentralisation policy reform is a shift of several government functions, responsibilities, and tasks which previously located in the central to local government (Firman, 2003). It is not intended to weaken the role of central government under the principle of as much as autonomy as possible and as much as central power as necessary (Koswara, 2000)

Before the law concerning regional autonomy and fiscal decentralisation in 1999, involvement of central government at local and regional level is very strong and at some extend there is competition within local agencies to prepare the plans due to own preference interests. After the decentralization act was enacted, all central government agencies previously located in its subordinate level were merged into its correspondent department under the authority of provincial and local government. Local and regional government planning office (Local and Provincial Development Planning Board) became the main agency responsible for planning as illustrated in Figure 1.

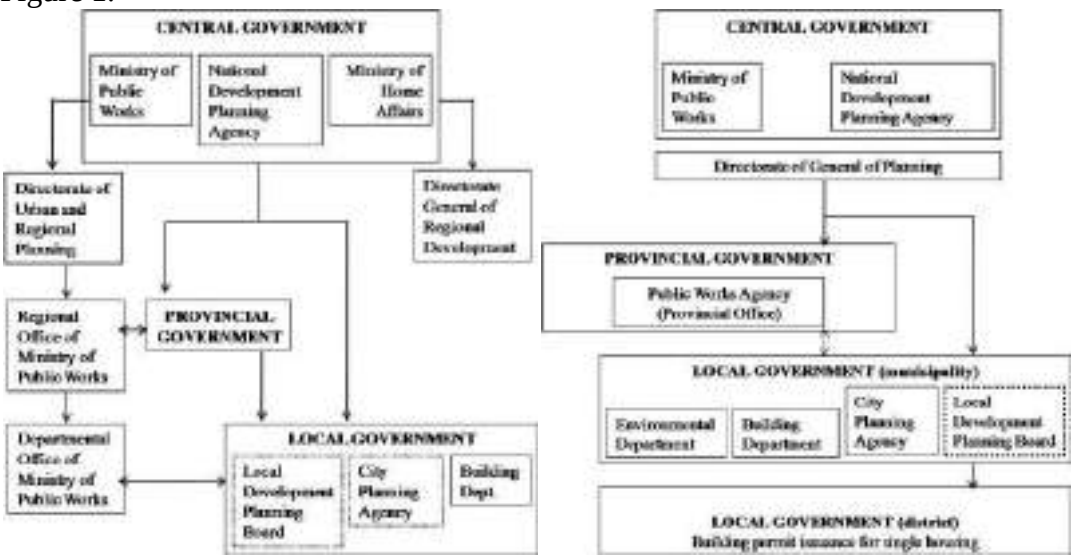

Figure 1. Indonesian Planning Administration before and after the decentralization.

According to the newest Law on Regional Administration (32/2004) amended Law 22/1999 that further defined the transfer of responsibility, decision-making and authority from central to local government, spatial planning is no longer a main policy field for the central government. It encouraged most of policy fields to be transferred to the provincial and local level with exception of foreign policy, defense, security, judicial, monetary and fiscal, and religion. At present, the process of transforming governance ideology experiencing in Indonesia already has been taken place for more than ten years but as many would agree that this kind of process result

only can be recognized in long run. When the new planning law was enacted in 2007 to replace the old one in 1992 it shifted some responsibility from master plan to district plan and introducing several new set of development control, a question was raised regarding this shift whether the new system will give more benefit to more sustainable urban development or will contribute to more negative impacts.

After the issuance of the Presidential Decree regarding spatial planning implementation, the making of regulation and management of urban planning especially those related to land use in Indonesia became even more inconsistent and confusing. Planning law still accommodate the role of central government in all planning policy aspects characterized in rigid hierarchical plan making, land cultivation, land cultivation control (Hudalah and Woltjer, 2007). While planning system still shows centralized direction, the gap caused by the centralization has been reduced since all the coordination was concentrated on the local government level but the existence of intergovernmental conflicts between local-provincial and local-central became more evident, as well as the movement of the planning practice towards informal, discretionary approach due to strong influence of private sector (Hudalah et al, 2009). Nonetheless, the central government should focus on the broad planning policy framework and cede the planning implementation such as urban land development to the local authorities. Moreover, the current Regional Administration Law in 2004 validates the decentralization principle in the spatial planning act. The importance of local citizen aspirations is applied later in spatial planning, carried out by government by involving community participation and conducted at least through a public consultation through a forum created by local authority. This means the decentralization has improved citizen participation in spatial planning from the level of informing to the level of consultation.

3. Institutional context of metropolitan and local planning system

Post issuance of the Spatial Planning Law (26/2007), metropolitan planning in Indonesia is becoming more and more complex, not less, with the changes in its planning policy. Under the same law (update from Law 24/1992) metropolitan planning policy was put into more rigid position and interconnected with other planning levels while before only as a mere acknowledgement. Subsequence to Law 26/2007, Government Regulation 26/2008 on national spatial planning specified the definition of metropolitan areas according to Indonesian context. Metropolitan is defined as an urban area covered a minimum one million inhabitants which consist of single city or urban core with its surrounding area functionally linked to each other and connected to integrated infrastructure system. Metropolitan is included in National Strategic Area, an area with a priority spatial planning due to national importance, if qualified as National Core Centre *(Pusat Kegiatan Nasional/PKN).* PKN is an urban area functioned to serve activities in international, national or several provinces level (economically). The boundary of metropolitan included in National Strategic Area is decided by Central Government through each Government Regulation in Metropolitan Spatial Planning. Boundary is based on administrative

boundary but not always according to municipality/regency boundary but can be down to district boundary.

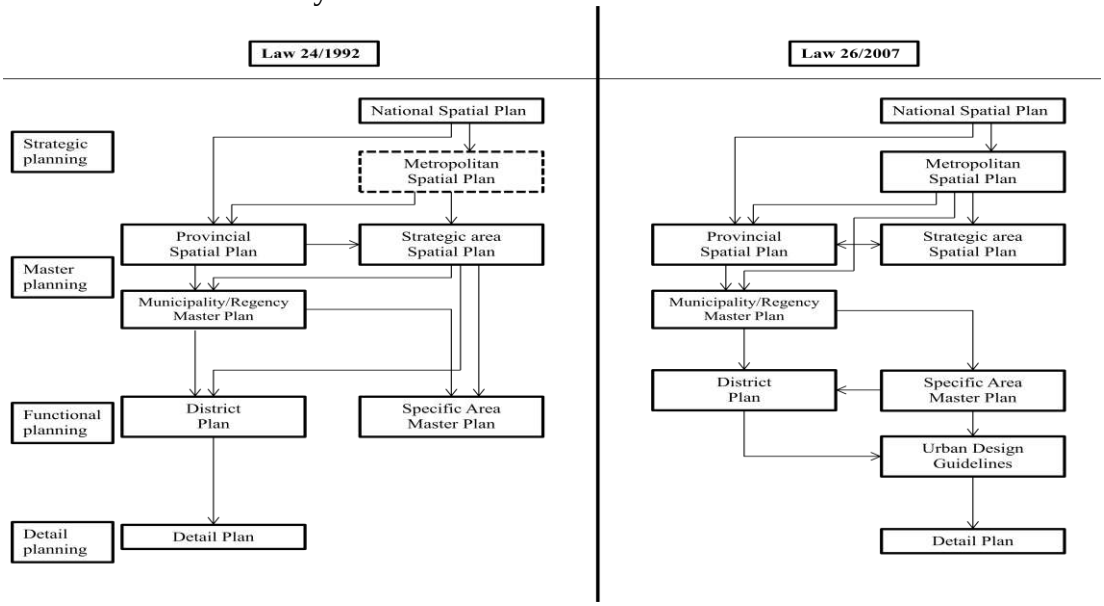

Figure 2. Indonesian Spatial Planning System before and after the decentralization.

According to the spatial planning law, metropolitan area is defined as a national strategic area and is put on the spatial plan hierarchy (same planning level as island-wide and national border area planning) and under the responsibility of central government. The spatial law also regulated the scope of planning and coordinating agency for each level of planning including metropolitan spatial plan and introduced zoning system attached to spatial plan as a planning control measurement. Zoning system shall be based on its correspondence spatial plan and refer to higher level of plan. In local level, zoning regulation was made based on detail plan and then translated into urban design guidelines. Before zoning regulation was implemented, development control on local level was done through technical plan. Since there is no fixed administration government body for metropolitan area, spatial planning documents are prepared by central government (Ministry of Public Works, Directorate General of Spatial Planning). In some cases there are development plans (transportation, settlements) but in general there is no specific long-term and medium term development plans for metropolitan area. Before 2007, some of metropolitan spatial plans were prepared by provincial government which different with strategic program prepared by central government.

As for 2008, central government has acknowledged 7 metropolitan areas categorized as the National Strategic Area in Indonesia. The first and most populated metropolitan is Jakarta the capital, served as home for 26.6 million inhabitants as per 2010, followed by Gerbangkertasusila, a metropolitan area enclosed Surabaya, the second biggest city of the country. 4 out of 7 metropolitan located in Java island, making the island as the most populated and conurbated region in Indonesia. Those four metropolitan areas spread from east to west, creating a continuous urban

corridor. Jakarta Metropolitan Area was the first declared as metropolitan area in early 1970s, translated into a regional plan created in 1975 by the Ministry of Public Works making JMA as the first metropolitan region planned by the central government. On the other hand, Gerbangkertasusila was originally planned by the regional government around the same time when JMA was introduced, making the metropolitan approach can be seen as more a bottom-up planning. Its first spatial plan was created in 1980s as a joint works of provincial and central agency. Among 7 metropolitan areas, the government initiating the planning varies among central and regional level government. At some metropolitan area, spatial plans were made by provincial government, but after the implementation of Law 26/2007 and Government Regulation 26/2008 regarding national spatial planning, it should be done by central government through Ministry of Public Works. Assessing these issues raised question whether this movement shift back the metropolitan planning to the top down planning and from decentralized to centralized planning approach.

Table 1. Metropolitan area planning in Indonesia.

Metropolitan area	Year started	Pop.	Spatial and Development Planning
JMA	1969-central	26.6	Regional Plan (1975 - MoPW) Development Plan (1980s - MoPW) Structure Plan (1985 - MoPW) Development Plan (2005 - MoPW) Jabodetabekpunjur Spatial Plan (2008 - MoPW)
GKS	1970s	9.1	Spatial Plan (1980-MoPW - Prov. Public Works Agency) Spatial Plan GKS+ (2007 - Prov. Public Works Agency) Spatial Plan (2010 - JICA, PDPA)
BMA	1980s-central	7.0	Spatial Framework Plan (1984 – MoPW) Urban Development Plan (1993 – PDPA) Under Provincial Master Plan (2001 - PDPA) Spatial Structure Plan (2005 - MoPW)
SMA	1984	5.9	Spatial Plan (1984 – PDPA) Spatial Plan (1988 – MoPW)
Mebidang	1985-provincial 2011-central	4.5	Spatial Plan (1985 – MoPW) Spatial Plan (1996 – PDPA)
Mamminasata	2003-provincial 2008-central	2.5	Spatial Plan (2001 – PDPA) Mid-Term Development Plan (2005 - PDPA)
Sarbagita	2008-central	2.2	Spatial Plan (2008 - MoPW)

Note: MoPW: Ministry of Public Works; PDPA: Provincial Development Planning Agency; BMA: Bandung Metropolitan Area; SMA: Semarang Metropolitan Area; Mebidang is metropolitan area surrounding Medan; Mamminasata is metropolitan surrounding Makassar and Sarbagita is metropolitan region enclosed Denpasar.
Statistics are from 2010 (in million inhabitants).

The influence of central government in planning extended through planning preparation, implementation as well as conflict resolution. Any spatial planning issue and dispute regarding spatial planning are handled through discussion in the central level, handled by the National Planning Coordination Board. The outputs resulted from the discussion are in the form of policy recommendation. Moreover, provincial

government has no control over local spatial planning issues handling process and only acts as facilitator for planning taking places in two or more municipalities/regencies under its jurisdiction. During technical substance consultation local government can challenge development substance from central, provincial government and vice versa as long as it is not violating zoning system. Conflicts between local and provincial government usually occurred during process of obtaining governor recommendation.

After 2009, metropolitan region coordinating scheme is conducted in provincial level in lieu with Local Planning Coordination Board (Ministry of Home Affairs Decree 50/2009) Nonetheless, the regional coordinating agency has remained left with no commanding power upon local governments to impose the metropolitan planning in their local planning. Each municipality and regency has statutory power for planning implementation but none at metropolitan level. Since coordinating between governments related to regional administration law, the agency is regulated under Ministry of Home Affairs, instead of under Ministry of Public Works which in charge of preparing the metropolitan spatial plan, making a scheme of multi departmental stakeholders maintaining the responsibility of metropolitan planning together with other ministerial agency such as transportation, environment, etc. Furthermore, central government also retained the responsibility for coordinating all planning level. This contradictive stipulation appeared due to the position of the metropolitan region as a national strategic area (according the spatial planning law), making central government to become a more prominent figure in coordinating its planning even though it supposed to be the responsibility of provincial government. Due to its importance toward national development, most of the discussions regarding metropolitan planning are conducted under the platform prepared by the National Development Planning Board and attended by correlated ministries and departments. Thus the spatial planning law marked the change of coordinating board of metropolitan area from regional level to more centralistic coordination.

In contrast with centralized direction of metropolitan coordinating system, local level planning actually demonstrated decentralization practice in Indonesian planning through change of distribution of the tasks between the different government institutions and coordinating institutions, including planning implementation. According to the responsibility shift from central to the local government, the decentralization law takes effects on the planning adoption and approval process in local and provincial level. Despite that the plans continue requiring to be adopted by law but the institutions involved no longer spread in every level from central to provincial to local level. Under the new system, the Master Plan prepared by the local goverment (Municipal and Regency) will need to get recommendation from the Governor before presented to central government approval. The appointed institution to coordinate in the central level is the Planning Coordination Board which is under the Ministry of Public Works. The Master Plan also no longer need adoption and approval from the Provincial level. The same manner applied for the Detail and Technical Plan, which only need local adoption before it is ready to be implemented.

The change of the adoption and approval check list for all plans is shown in the following table.

Table 2. Plan adoption and approval, before and after the decentralization.

BEFORE					
Type of Urban Plans	LOCAL	PROVINCIAL			CENTRAL
	Local Adoption	Governor Recommendation	Provincial Adoption	Governor Approval	MHA Approval
Master Plan	Yes	Yes	Yes	Yes	Yes
Specific Plan	Yes	Yes	Yes	some cases	Yes
Detail Plan	Yes	Yes	Yes	some cases	Yes
Technical Plan	Yes	-	-	-	-
AFTER					
Type of Urban Plans	LOCAL	PROVINCIAL			CENTRAL
	Local Adoption	Governor Recommendation	Provincial Adoption	Governor Approval	MoPW Approval
Master Plan	Yes	Yes	-	-	Yes
Specific Plan	Yes	-	-	-	-
Detail Plan	Yes	-	-	-	-
Urban Design Guidelines	Yes	-	-	-	-

Note: MHA is Ministry of Home Affairs; MoPW is Ministry of Public Works.
Source: Analysis from Law 24/1992, Government Regulation 69/1996 and Government Regulation 15/2010.

4. The background of the study area and the rising of local planning power

Surabaya is the second biggest city in Indonesia. Surabaya and its surrounding adjacent regencies and municipalities formed the metropolitan area of Gerbangkertasusila, an abbreviation of Gresik, Bangkalan, Mojokerto, Surabaya, Sidoarjo and Lamongan which are the municipalities and regencies formed the metropolitan region. Gerbangkertasusila is the second prominent metropolitan area after Jakarta Metropolitan Area. According to the regional development concept by the Ministry of Public works, the city of Surabaya is situated as the primary central core covering the whole region of East Java Province and the primary economic core for East Indonesia Region. The total population as per 2010 is 2.7 million inhabitants, occupied an area for about 333 sq km. However, as one of the most important city in Indonesia, Surabaya was considered lack in planning as unfortunately the city has no master plan until 1978. Due to lack of planning and its control measurement, in the fringes of Surabaya, during 1990-1995, sizeable areas of agricultural land had been converted into residential and commercial areas (Firman, 2000). The first master plan clearly sought to segregate industry from the settlement as industrial land use areas were planned to be concentrated in several places with most of them developed in the peri-urban area.

In case of Surabaya, the local government agencies that responsible for planning are: (1) Local Development Planning Board; (2) City Planning Agency, and (3) Building

Department (Public Works). However, before the passing of two pieces of decentralization legislation, Law 22/1999 and Law 25/1999, in practice, most decisions affecting Surabaya were made at the provincial if not the national level, while municipal government functioned simply as the bureaucratic institution. This quasi-centralized power was taken advantaged by the developers where the development permits process to control local land uses so as to accommodate the developer needs. Although the government considers this regulation as a form of bottom-up planning in regional development, local priorities were inevitably lost in the process of developing the national program. In terms of participation by the local stakeholders, there was a wide gap between what the regulation prescribed and what happened on the field.

For the first time since decentralization law was enacted, the master plan issued after the decentralization law, Master Plan 2003-2013, identified the consistency level of hierarchical planning in local level. It identified both consistency and inconsistency between master plan and detail plan, master plan and technical plan, and between detail plan and technical plan. Total area with inconsistent development reached 2.879,59 Ha (see Table 3). This identification shows that somehow even though it is clearly mentioned in the spatial planning act that district plan should follow the master plan but the reality shows differences.

Table 3. Identification of inconsistency between Master Plan 1995-2005 and District Plans.

Land use allocation		Area (Ha)
Detail Plan	Master Plan	
Residential	Open Green Space	203.06
Residential	Mixed use	810.06
Residential	Public Facilities/Service	52.00
Residential	Commercial	171.70
Residential	Industry	63.50
Industry	Port	184.82
Open Green Space	Industry	14.00
Open Green Space	Public Facilities/Service	221.00
Embankment/Conservation	Mixed use	289.00
Embankment/Conservation	Residential	535.70
Commercial	Residential	57.70
Public Facilities/Service	Commercial	147.25
Mixed use	Commercial	10.00
Industry	Commercial	18.70
Industry	Mixed use	13.00
Mixed use	Industry	88.10
Total Area (Ha)		2879.59

Source: Surabaya Master Plan 2003-2013.

In the local context, the passing of Spatial Planning Law in 2007 made municipal authorities responsible for designating land uses and approving new development, and effectively recognized the municipality as the main planning entity. Greater

authority was given to the lower levels of government, thus weakening the central government's control over provinces and municipalities. The zoning system is officially introduced in the new spatial planning act. In addition to the long-established permit system, the new law required the government to prepare zoning regulation supported by environmental and building codes as key instruments for controlling land development. Following the renewal of master plan in nationwide, central government declared the minimum requirement for open green space land use allocation as mentioned in the Spatial Planning Law, however, Surabaya already tried to increase their greenery since Master Plan 2003-2013 which gave means local government put attention to the importance of this greeneries to the urban environment.

Table 4. Total area allocated for conservation area in Surabaya Master Plan 1978-2009.

Year	Total Area (Ha)
1978	7434.89
1984	5979.01
1991	2494.41
1996	2489.93
2003	4035.46
2007	4745.69
2009	7026.00

Source: compiled from Surabaya Master Plan 1978, 1984, 1991, 1996, 2003, 2007 and 2009.

5. Inconsistency between plan and reality: Planning effectiveness and development control

It is identified that large scale of deviation from the master plan happened in the peri-urban of Surabaya. It followed the development pattern of the built up area but occurred in places with close proximity to wide open space. In 1990s, the development that did not comply with the plan took place in the outskirts of the city, preferably in the borders close with neighboring regencies. This pattern continued in 2000s but the development no longer in large scale development but merely small scale and scattered developments.

The number of development that did not follow the master plan is reduced after the master plan was updated. However some developments that already occurred which found to be in accordance with master plan of 2003 becomes in disagreement with the new master plan 2007, especially those took place in the open green space and conservation area. This happened because the local government changed the delineation for the open green space and conservation area since based on the Spatial Planning Law 26/2007 the total area of those two land uses should be increased into at least 20% of the total urban land area.

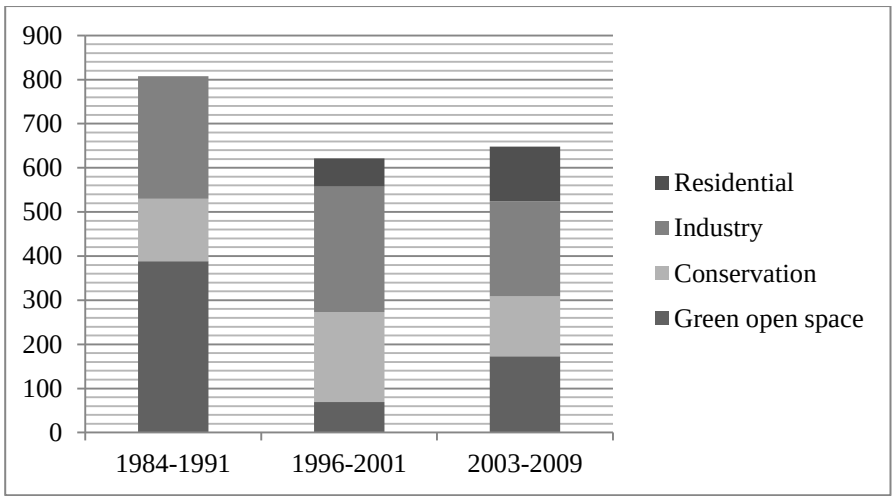

Figure 3. Proportions of the source of land being deviated.

In each period, development of residential, industrial, public facilities and service did not comply with the plans. During 1984-1991, residential development was the highest cause for deviation from master plans. The residential use constantly took place on land intended for industrial land use and vice versa. Surabaya is a regional core city with high urbanization rate from neighboring regencies. Thus, land for residential is always in high demands, especially for cheap settlements. The number of workers and the need for settlements near with working places may the reason this deviation.

Table 5. Total area of Residential land use change that did not comply with the plan.

Year	Land being converted based on Master Plan (Ha)		
	Conservation	Open Green Space	Industrial
1984-1991	141.71	388.03	277.54
1996-2001	146.82	47.19	251.31
2003-2009	121.87	140.66	189.26
2007-2009	3.50	79.20	149.33

Furthermore, what does the record say about the functions of local authorities before and after the decentralization planning was applied? And what general conclusions can we draw from the record? In Indonesia, according to building permit status, urban development could be classified as four types: planned with permit, planned without permit, informal with permit and informal without permit. Table 6 shows the total number of permit issued in Surabaya. 1996 record shows the highest number of permit issuance in one year. The following years from 1991-2001 showed the declining trend. However, in 2002, one year after the promulgation of Presidential Decree 10/2001 regarding decentralization in Land Affairs, the number of permit issued increased again.

Table 6. Number of permit issued in Surabaya 1996-2008.

	Year								
	1996	1997	1998	1999	2000	2001	2002	2003	2004
No. of permit	12490	10700	9963	9964	7537	6042	9543	9007	7090
	2005	2006	2007	2008					
No. of permit	6446	5469	4486	5181					

Source: Building Department, Surabaya Municipal Government.

In Indonesia, in prior to be able to build residential clusters, developers should acquire location permit, issued by National Land Agency (before decentralization) or local government (after decentralization). Figure 4 show the comparison of built-up formal residential and location permit to check the coherence within the two of them.

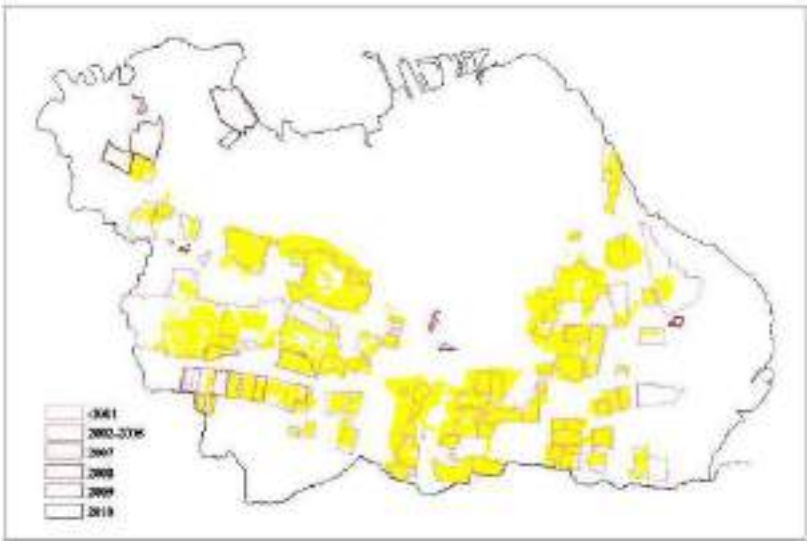

Figure 4. Comparison of number of formal residential based on location permit in Surabaya 2001-2010.

As can be seen from Figure 4, the development of formal residential is in accordance with the location permit issuance which means no developer builds without the permit. Most of large scale residential development occurred before 2001. The period after 2001 characterized with smaller scale residential projects.

6. Concluding remarks

Decentralization is clearly a complex process, and the various reform efforts intended to create an appropriate intergovernmental system and to empower local citizen will require time to take root interact and produce broader improvements in governance. The findings that can be drawn from this study are as follows:

1. *Decentralization has little influence towards metropolitan planning since it show no further effectiveness differences*
   After the decentralization the local governments have greater discretion in deciding what is best for the urban and regional development in their areas. However, planning system still shows centralized direction especially in

metropolitan planning thus creating intergovernmental conflicts. Planning law also still accommodate the role of central government in all planning policy aspects.

2. *Metropolitan planning remains less effective before and after the decentralization*
   The absence of authoritative coordinating board makes difficult to implement the plan. However since the setting up of another hierarchical governmental structure at a supra-local level may not fit into the Indonesian decentralization principles which valued the decentralized power of local government, metropolitan governance through inter local government collaboration in the near future is more likely become possible preferred action rather than setting up new metropolitan government entities.
3. *Decentralization give positive feedback to planning system but unable to restrain from development pressure yet.*
   Aside from those legal transfer of administration and planning arrangement, from the analysis it was found that there is increasing total area allocated for conservation and open green space in Master Plan after decentralization planning was applied. The number of encroachment of residential and industrial land development on the open green space and conservation as deviation from master plan is also reduced.
4. *Master plans and the subsequent land use plans were not effective in both controlling the urban expansion and managing land use change.*
   In Surabaya case, the deviations of built up area between the plan and actual development were wide enough to demonstrate the drawbacks in local planning systems. It is found that there is inconsistency between planning and reality. Master plans changes rapidly and have tendency to follow the current development as shown in the analysis result.
5. *The pattern of land use change basically did not change much after decentralization but it is getting better.*
   Regarding green space, there is change in land use allocation before and after 1999 decentralization. Total area allocated for conservation increase significantly after local government has been given more power to arrange their master plan. Overall, development which did not comply with the plan reduced compare to during centralized planning system.

Sustainable urban development requires efficient urban development planning. As affected by the decentralization and power transition, planning in transitional cities has faced unprecedented challenges. After decentralization reform in late 1990s, Indonesian cities had to develop in a climate of great uncertainty not previously experienced while problems emerged in the rapid urbanization process challenged the planning system. In this research, the overspread unplanned land use change reflects the weak land use control, cheap land, while attracted illegal activity around unclear planning.

Continuing the administrative institutions reforms shall be highly encouraged in Indonesia. Over centralized had been proofed as a major cause of delay, inefficiency and increasing the likelihood of noncompliance. The main objective is to avoid

bureaucratic delays and lengthy approval processes. An efficiency audit should be established to set performance standards for regulating agencies, monitor performance against these standards, and develop incentives and penalties for meeting or not meeting the standards. In the other hand, transparency in planning control is very much needed. During the centralized system, any planning decision made in arbitrary and even when decentralized system required more transparency however there is still no mechanism in reviewing planning through an independent system. Therefore, independent organization outside the government system is needed; such as independent planning inspector (in USA case), planning commission (in Japan case), or local council (European case).

Regarding deviation from master plan, further legal status of urban planning and efficient planning control are recommended. The prosperity of unplanned land use change reflects that rules regulating the land uses had not been taken seriously by land users and land administrators. There is no supervision mechanism to regulate the government activities in changing the master plan. Furthermore, currently there are no efficient and effective instruments for monitoring the unplanned land development. GIS and remote sensing technology should provide an efficient and economical measure to monitor the unplanned and illegal land use change. Not only gives evidence of the unplanned land use change, it provides information about the distribution characteristics of those lands. The adoption of those techniques can lead to a more operative and efficient planning control system.

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Sustainable development, planning integration and spatial plans in Greece: from the institutional framework to planning practice

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Abstract
The notion of sustainability constitutes a core aspect of spatial planning, while planning for sustainable development has become a crucial component of all planning systems during the last two decades. In Greece, by the end of the 1990s a couple of important new Laws were issued which, on the one hand, formed an explicit hierarchy of plans from the national to the local level and, on the other, clearly adopted the notion and principles of sustainable development in all spatial levels: firstly the Urban Planning Law "Sustainable Urban Development of Cities and Towns" (Law 2508/1997) and, secondly, the Regional Planning Law "Spatial Planning and Sustainable Development" (Law 2742/99). These changes echoed an effort to keep pace with the wider Europeanization of planning policies, but also an inherent ambition that the system could smoothly move towards achieving the goals of sustainable development and planning integration at various spatial levels. The approval of the two Laws, which covered spatial development at the urban, regional and national level, apparently completed the institutional framework of the contemporary planning system in Greece. However, the relations and synergies between the various spatial levels as well as the substantial adoption and implementation of sustainability principles remain a question, which should be examined empirically in relation to the actual planning practice.

The paper discusses the way the planning system in Greece is structured after the above institutional reforms and highlights those aspects that indicate a transition from the central approach in planning to a more hierarchical and integrative approach, which at the same time incorporates notions and principles of sustainable spatial development. Drawn from empirical research on spatial planning practice in the region of Central Macedonia during the last decade, the paper argues that although the system attempted in many respects to be hierarchical with an integrative perspective, in the end planning practice is still oriented to accommodate new land for development, undermining objectives such as sustainable spatial development and spatial integration of planning. The research illustrates the considerable gaps between framework and outcome, an established feature of the Greek planning system, reflecting the longstanding deficiencies of the planning tradition in Greece.

Key words: Greek planning system, sustainable development, spatial planning, planning practice, planning integration

1. Sustainability and spatial planning systems

It is a common argument that for the last 20 years the idea of sustainability has provided a large part of the agenda of spatial planning and even its much needed "vision" (Davoudi 2000). Sustainable development has been increasingly adopted since the 1990s as a dominant policy goal in all international, national and local official policies and the public discourse in general (Rydin 2011). At the same time not only has the purpose of spatial planning become

the delivery of sustainability in a community and in a globalized urban context, but spatial planning is also considered a critical tool to manage globally driven development processes and global environmental changes in order to reach a long-term sustainable management of urban development. Moreover, the improvement of spatial planning as a tool for addressing both social and environmental externalities in urban economy has become a goal for many officially stated national and international policies (Andrikopoulou et al. 2007).

Sustainability as a vision of spatial planning brought back to the agenda the role of spatial planning as mediator and equalizer between the three corners of the "economy, environment and equity" triangle or even better between the tensions generated by three conflicts "property, resource and development" (Campbell 2003). However, planning in practice and its institutions gave emphasis primarily on the environmental aspect and more specifically on how urban growth can be managed in a sustainable manner taking into consideration the resource availability and the environmental impacts and promoting further the integration of environmental aspects into urban planning. Although there are still open questions as to what the substantive content of a sustainable spatial planning is (Naess 2000), issues such as urban form, sustainable transport, re-use of abandoned urban sites, more efficient use of sites that can be built or creation of more effective mechanisms in order to involve citizens in the planning process have gained a central position in spatial planning (Haughton and Hunter 1994, Naess 2000). In the 2000s in particular, as the issue of mitigation and adaptation to climate change has brought more and more at the top of the agenda the target of reducing emissions of greenhouse gases, regulating urban growth, and particularly urban sprawl, mobility patterns and their economic, social, environmental implications have become the core interest of spatial planning (Davoudi et al. 2009).

Achieving sustainable management of urban growth within the sustainability framework was the subject matter of the reforms of the planning systems that took place by the end of the 1990s or in the 2000s in many European countries, as did the whole system of planning and control to cover these dimensions. By and large these adaptations of formal national arrangements for planning to address common challenges of sustainability along with global competition, to which they were unsuited, provide even a measure of convergence between the European planning systems (Nadin and Stead 2008). These reforms apparently had two common features, the shift to strategic planning and the integration of sustainability into the proactive and regulatory dimensions of spatial planning.

In France, for example, the latest Law of 2000 on Urban Solidarity and Renewal reformed all basic plans, moving its emphasis from land management to planning coherence, and included instruments giving special attention to the coherence between urban planning, housing, commercial equipment and transport policies (Booth 2003). Sustainability was introduced as a key planning criterion both at the metropolitan and local level of planning. Among the main aspects of this legislation was the desire to make planning proactive and strategic, with special emphasis on the sustainability of development (Booth 2003). In England, the 2004 Planning and Compulsory Purchase Act, which was considered the most important review of this country's system in the last 25-30 years (Nadin 2007), seeks both politically and institutionally to promote changes that enable the planning system to become more transparent, flexible, predictable, efficient and targeted to results (the latter being the substance of sustainability policies) and to examine, in the context of globalization, how planning policy and processes can create economic development and prosperity along with the objectives of sustainable development. In the Nordic countries, where planning remains focused on managing ubran growth (Böhme 2003), policies of sustainable development have

entered the planning agenda in a very dynamic and persuasive way, although not always within a wider planning reform. In the Mediterranean countries there was a growing interest in spatial visions (Giannakourou 2005) within which sustainability was adopted as central strategy. Thus the discourse about sustainable development left no aside almost all planning systems including the Greek system which explicitly incorporated the notion of sustainablity by the end of 1990s, a time of important institutional changes, both at the local and the national level, which strengthened the interest in spatial planning (Coccossis et al. 2005).

Promoting sustainable urban development, which is a long term goal, involves two important institutional levels of spatial planning: the local, addressed in the planning system mainly by the development of land-use plans (or local development frameworks of the more recent English planning system) and the national or regional level which function as a higher level of coordination and policy guidance in the planning system. Besides, this higher level of coordination is necessary at regional, national or international scale in order to resolve the 'prisoner's dilemma' facing individual local communities in relation to global and national environmental problems whereas such planning is necessary to avoid the dispositions made to shift problems of one area to another within a region, a country or the globe (Naess 2001).

In the following sections we first examine the way the planning system in Greece is structured after the institutional reform of the second half of the 1990s and how it incorporates notions and principles of sustainable spatial development. Then, drawn from empirical research on spatial planning practice in the region of Central Macedonia during the last decade, the paper discusses how this guidance was specified in practice and more particularly by the General Development Plans.

2. Changes in the planning system in Greece: structuring a hierarchical system and incorporating the notion of sustainability

The Greek spatial planning system, as in fact the Greek decision making system, is traditionally highly centralised, thus classified in the past among the Napoleonic systems, whereas the EU Compendium of spatial planning systems and policies classified Greece to the 'urbanism' tradition, which had an architectural flavour and a strong concern in building control, with regulation being undertaken through rigid zoning and codes (EC, 1997). The multiplicity of laws and regulations, the lack of implicitly stated policy priorities and the lack of public approval of planning are some of the important characteristics of this tradition, characteristics that lead to ineffective control of development in particularly in the outskirts of all cities and towns. It has been long pointed out that the Greek system is a model of centralised and regulatory planning style, where important gaps exist between established plans and the reality (Giannakourou 1998).

In the second half of the 1990s, a period of high economic growth rates, spatial development and policy in Greece went through a phase of change, with two notable features: in the field of spatial development, the relatively high growth rates of all bigger and smaller cities were accompanied by very high rates of suburbanization and urban sprawl, rates that were intensified in the 2000s to such extent that they transformed the traditional compact model of the Greek cities (Yiannakou 2012). In the field of spatial policy, European policies were widely adopted in the public discourse becoming particularly influential and having a direct impact on the planning institutional framework. Giannakourou (1998: 8) at that time indicated three main trends of this last impact: a) the emphasis on strategic spatial planning, as a result

of the country's participation in the then on-going process for spatial co-operation in Europe and the European awareness for spatial planning issues, b) the introduction of the notion and principles of sustainable development into the Greek spatial planning approach and c) the introduction of the subsidiarity principle and of the partnership approach into the domestic spatial planning process, putting into question the centralised character of the Greek spatial planning policy and system.

In this period two important Planning Laws were issued, which on the one hand, formed an explicit hierarchy of plans from the national to the local level and, on the other, clearly adopted the notion and principles of sustainable development in all spatial levels. First of all, Law 2508/97 "Sustainable Urban Development of Cities and Towns" adopted, as its name suggests, the notion of sustainability into the institutional framework of urban planning and constituted the statutory basis to link urban planning to the principles of sustainable development. The purpose of the Law 2508/97 is the specification of the principles, preconditions, procedures and patterns of urban planning for the sustainable urban development of towns and cities. Among the main objectives that are stated in this Law are land use control in the areas surrounding all cities and towns, protection of the environment, prevention of unauthorized development and specification of criteria for development in a way that further land for development is very wisely released, improvement of the environment in the depressed areas, protection, enhancement and upgrade of city centres, etc. At the time of its enactment this new Law was widely welcome as it included principles and directions for the sustainable future development of cities and towns as well as for the improvement of the built environment, which affect "the qualitative options of every urban plan" (Aravantinos, 1997: 216).

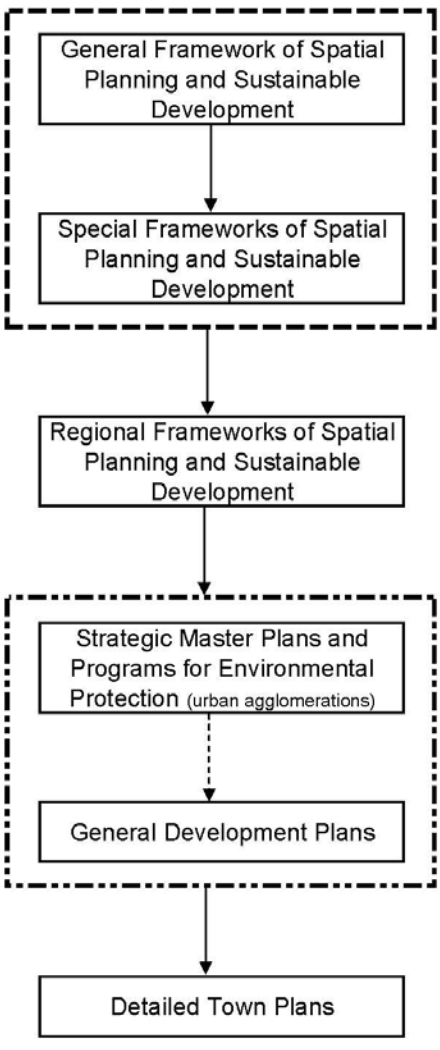
According to Law 2508/97, and following the previous Law 1337/83 with certain adaptations, urban planning is completed through the elaboration of two levels of plans: the first level which can be described as "strategic" includes a) the Master Plan and Program of Environmental Protection (Ritmistiko Sxedio) which covers the metropolitan areas and big urban agglomerations and b) the General Development Plan (*Geniko Poleodomiko Sxedio*, GPS), which is elaborated at the level of each municipality. The second level includes the detailed town plans (*Poleodomiki Meleti*) and their detailed Implementation Plan (*Praxis Efarmogis*). One of the basic statutory elements of this Law is the fact that the Master Plan and the GPS need to coincide with the principles and directions of higher level spatial planning. During the 2000s most municipalities elaborated new GPSs or revised the old GPSs along the lines of Law 2508/97, most of which have been enacted in the second half of the 2000s.

Secondly, Law 2742/99 "Spatial Planning and Sustainable Development", which was introduced two years later, initiated the notion of sustainable development - again as its' name suggests - at the level of regional and national spatial planning, a level of planning essentially enacted for the first time in the Greek planning system. The main purpose of this Law was to provide the fundamental principles and the enactment of contemporary agents, procedures and instruments of spatial planning practice, that promote sustainable balanced development, entrench production and social coherence, ensure environmental protection at the level of national territory and its different areas and strengthen the position of the country in the international and European context.

Focusing on the instruments of spatial planning at the regional and national level, Law 2742/99 enacted the elaboration of the so-called Spatial "Frameworks" apparently adopting a

more strategic and coordinative nature of these plans. At the national level, the Law introduced the General Framework of Spatial Planning and Sustainable Development (General FSPSD) and the Special Frameworks of Spatial Planning and Sustainable Development (Special FSPSD). The General FSPSD assesses the factors that affect long-term spatial development and structure of the national territory, evaluates the spatial impacts of international, European and national policies and defines the main priorities and strategic directions for the integrated spatial development and sustainable organization of the national territory. The first General FSPSD was enacted nine years later, in 2008. The Special FSPSDs specify and supplement the directions of the General FSPSD that concern the development and organisation of the national territory, especially regarding a) the spatial structure of specific of national importance production sectors, b) the spatial structure of technical, social and administrative networks and facilities of international magnitude and c) special areas characterised by strong environmental interest of crucial environmental, economic and social problems. Up to now, three Special FSPSDs were issued, all of them by the end of the 2000s: the Special FSPSD for Renewable Energy Resources (2008), the SFSPSD for Tourism (2009) and the SFSPSD for Industry (2009).

At the regional level, Law 2742/99 introduced the Regional Frameworks of Spatial Planning and Sustainable Development (Regional FSPSD). The Regional FSPSDs assess the position, role and intra-regional functions of the Region concerned, as well as the factors that affect its development and spatial structure, evaluate the spatial impacts of European, national and regional policies and define the main priorities and strategic options for the integrated and sustainable development of the regional territory. The Regional FSPSDs should harmonize with the directions of the General FSPSD and the Special FSPSDs and specify and supplement their options. All 12 Regional FSPSDs of the country's Regions (the Region of Attica was not included) were elaborated and enacted during the first half of the 2000s, in other words before the enactment of the national Spatial Frameworks. Currently these Regional FSPSDs are revised so as to harmonize with the national level of spatial planning.



Similarly at the municipal level, as mentioned above, all GPSs should harmonize with the national and regional Spatial Frameworks, while it is clearly stated that the already approved GPSs (on the basis of the previous legislation) ought to be modified in order to harmonize with the directions of these Spatial Frameworks. Thus, both Laws seek to assure the synergy between national, regional and local spatial planning and to achieve the goals of sustainable development and planning integration at various spatial levels. On the whole, the enactment of the two Laws, of the Spatial Frameworks and the new GPSs by the end of the 1990s shows a transition to a systematic and formal hierarchy of plans, from the national to the local level, that aim to coordinate the various sectoral activities of the public sector. Figure 1 shows this hierarchy among the various plans at the various spatial levels.

Figure 1. Hierarchy of spatial plans in the Greek planning system

Focusing further on the sustainability goal, the General FSPSD states that it aims at forming a spatial pattern of development, in the context of sustainability principles that will be the outcome of a synthetic and balanced consideration of those parameters that promote the protection and enhancement of the natural and cultural environment and strengthen social and economic cohesion and competitiveness. In this context, apart from the emphasis on the enhancement of natural and cultural resources as well as on the protection of the biodiversity, the General FSPSD adopts a model of balanced – polycentric development of the country accompanied by the restriction of excessive urban growth, through the improvement of the countryside's attractiveness and the strengthening of complementarity and balance among urban centers and rural areas. The General FSPSD includes a specific provision in which it adopts the principle of compact city and suggests that it should be promoted in all levels of spatial planning. Thus, it states clearly that all new development should be justified and substantiated on the basis of what is called "objective needs" (demographic, residential and production).

The three Special FSPSDs aim primarily to achieve a more rational spatial allocation of the activities concerned, formulating policies, general regulations and criteria for the location of

these activities, again in the context of the sustainability goal. More specifically, the Special FSPSD for Renewable Energy Resources defines location criteria which will allow, on the one hand, the creation of sustainable installations of renewable energy resources and, on the other, their harmonious incorporation into the natural and built environment corresponding to the goals set by the relevant European and national policies. It is worth noting here that this Spatial Framework provides a concrete context to the authorities responsible for the planning permissions of these activities and the interested enterprises, in order to orientate their businesses to appropriate - from a spatial aspect - areas without allowing the GPS to alter these regulations. The Special FSPSD for Tourism considers the protection and enhancement of the environment a precondition for the survival and strengthening of the competitiveness of the tourism industry. It aims at creating the conditions for the promotion of sustainable and balanced development of tourism in the country, according to the physical, cultural, economic and social specificities of every area, for the qualitative environmental upgrade of tourism activity, and for the provision of the necessary directions towards the lower levels of spatial planning in order to promote tourism development within the framework of sustainable, balanced, compact and integrated management of spatial development. Moreover, it seems to promote the control of dispersed tourism activities in certain areas, such as the agricultural land and islands with massive tourism activity. The Special FSPSD for Industry states that its objective is the transformation of the spatial structure of industrial activity towards sustainable development namely protection of the environment, social equity and cohesion and economic prosperity. For this purpose, it includes specific goals to strengthen the competitiveness of industry as well as its greater economic and spatial role, though the promotion of a more rational spatial pattern. Among these goals is the promotion of a radical transformation of the current dispersed and scattered model of industrial location and the incorporation of the environmental dimension into the spatial structure of industrial activity, especially by making the location of industrial plants within planned sites compulsory and by suggesting that these sites are more preferable to be planned in areas already developed with such activities and not in open land.

Taking one Regional FSPSD as an example, that of the Central Macedonia Region, its main objective is the promotion of sustainable, balanced and continuous development of the Region based on its natural, economic and social particularities. Among others, the RFSPSD proposes a spatial development pattern for the Region, which has as its core a balanced and polycentric network of urban centres, which can function complementary to the urban agglomeration of Thessaloniki, to the adoption of the principles of compact city and limitation of urban sprawl, the wise use of natural resources etc.

On the whole, the above planning framework clearly adopted sustainability as the core objective of spatial planning which is pursued through a hierarchy of guideline Spatial Frameworks and plans at the national and regional level and more specific development plans at the metropolitan and the local (municipal) level. Although this reform was not accompanied by a hierarchical decision-making system this hierarchy of plans apparently assures that sustainability is a principle regulating planning at all levels.

3. Sustainability and planning integration in the planning practice

In order to examine how planning integration, formed by the two planning Laws and the hierarchical guidance of the Spatial Frameworks, contributed to more sustainable policies adopted by the hierarchically lower spatial plans, we focused our investigation on the way the

GPSs that were elaborated and approved during the 2000s treated basic principles related to sustainable development. As previously stated, the GPS is the proactive as well as the regulatory level of planning which by law specifies the regional and national spatial planning guidance at the municipal level, regarding land use planning and development guidelines and regulations.

By law the GPSs aim at defining the main spatial planning goals of a municipality's territory, forming the basic implementation instrument of the Frameworks of Spatial Planning and Sustainable Development, especially of the Regional ones. In this context, they specify the capacity and the needs for housing development, according to the principles of sustainable development, local needs and land use suitability, and determine the Areas of Special Protection that are not intended to be developed, the planning zones for production activities, the land use and development control zones around the cities and towns and the general land use and planning rules of the existing and proposed residential areas, defining also the areas inside the inner city parts that require regeneration interventions.

Taking into consideration the nature of the GPS on one hand and the guidelines of spatial planning laws and frameworks on the other, and based on recent research conducted by the authors, the examination focuses on three issues: a) the management of urban sprawl and the proposals for new residential areas, b) the management of dispersed industrial location and the specification of planning zones for industrial and entrepreneurial activities and c) the adoption of regeneration tools in the inner city areas.

First of all, it should be highlighted that in both Laws and in almost all Frameworks the notion of "compact city" constitutes an almost axiomatic principle of the proposed development pattern, stating at the same time some general goals regarding the limitation and the control of dispersed development (the so-called "out-of-the-town-plan" development) in the outskirts of the cities and towns. This principle though, apparently in accordance with the traditional urban model of the Greek city, was incorporated into the Greek planning framework in a period where unplanned - and in many cases unauthorized - urban development all over the outskirts of the bigger as well as of the smaller towns and the tourist areas was very extensive, thus drastically transforming the traditional compact city model (Figure 2, Yiannakou 2012).

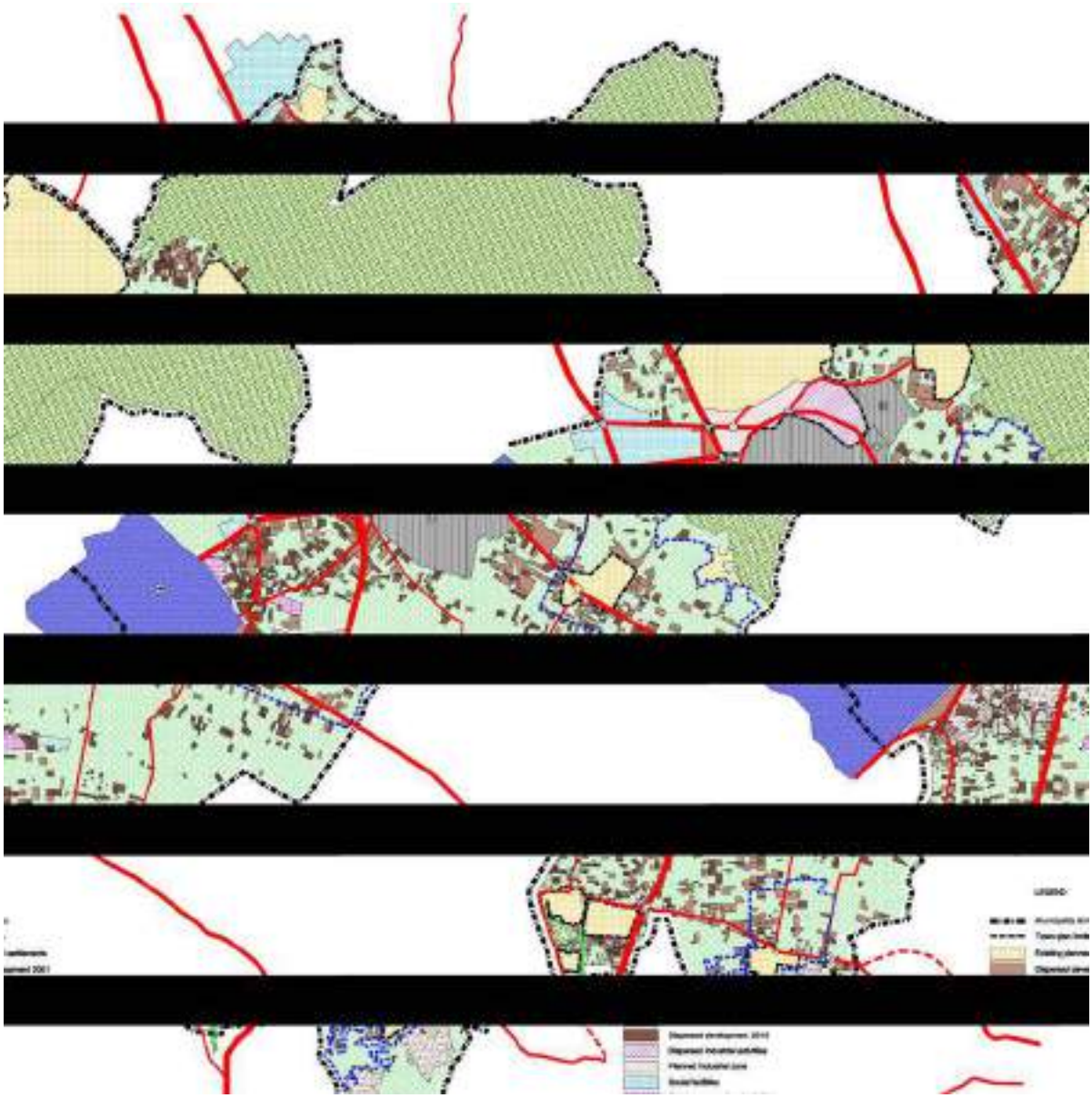


Figure 2. Dispersed development in part of the southern suburban Greater Thessaloniki Area and proposed new residential areas (Source: Yiannakou 2012)

Based on Law 2508/97 as well as its specification by a Ministerial Guidance regarding the planning and design standards that was issued in 2004, two guidelines were directly related to the goal of sustainable urban development: a) "the pursuit of the largest possible economy in new extensions of the town plan" - in other words the new areas for residential development - should be released and planned with the biggest cautiousness and b) the provision of adequate residential densities, which according to the above Ministerial Guidance should not be less than 100 inh/Ha (and not more than 400 inh/Ha), although the selection of lowest densities in soft residential and tourism areas and highest densities in large cities is not forbidden. A research conducted by Tasopoulou (2011) in 30 approved GPSs in the Region of Central

Macedonia in Northern Greece[1] showed that the new residential areas proposed by all these GPSs corresponded to more than 40% of the existing residential areas. It should be reminded here that this was not the first time that massive elaboration of GPSs took place in Greece. The first package of GPSs was elaborated between the mid 1980s and mid 1990s and by these plans a proposal was placed for 31% of extra land to be released for residential development, a size that had already been characterized as big enough (Economou, 2009). Only in the suburban area of the Greater Thessaloniki Area (GTA) approximately 5,700 Ha have been approved or are about to be approved for planning new residential areas in the 2000s by the newly enacted GPSs. For comparative reasons it should be noted that the residential area within the limits of the town plan in the compact part of the city inhabited by the 85% of the GTA's population covers an area of 5,500 Ha.

In the examined GPSs the approved plot ratios were so low that resulted in very low residential densities, inappropriate for achieving a sustainable urban planning pattern, according to the national guidelines (Tasopoulou 2011). This low-density model was selected as it was the only way to provide a reasoning of the proposed extensive new residential areas, although even in this case the anticipated housing need was far beyond any realistic future forecasts. It is worth noting at this point that the selection of low plot ratios and consequently models of development of low densities was a practice accepted and adopted by the statutory authorities in charge of the approval of these plans as a counterbalance to the mayors' pressures for as extended as possible town-plan expansions.

Regarding the management of the location of industrial and other productive activities, first it should be pointed out that in most cases it is located at the perimeter of cities and towns, usually following a linear pattern around major road axes. This location is either concentrated in certain areas or dispersed. The Special FSPSD for Industry explicitly seeks a more rational organisation of productive activities, through their aggregation into planned zones, thus avoiding their dispersed location (Evaggelidou et al. 2009). Apart from this emphasis on planned industrial zones, the Special FSPSD explicitly favours the mix of uses of the secondary and tertiary sector, even providing in some cases the possibility of coexistence of housing, naturally with certain prerequisites. An in-debt analysis conducted by the authors on GPSs currently under elaboration and after the enactment of the National Spatial Frameworks (Yiannakou and Tasopoulou forthcoming) found that in general they incorporate the guidelines of the Special FSPSD for these planned industrial zones in existing concentrations, avoiding the use of new land and promoting the mix of land uses. However, it seems that they are not fully following the Framework's provisions for restraining the dispersed industrial location and development.

This research also records some important problems that relate to the difficulties in specifying the guidelines of the National Frameworks which arise in the planning practice of the lower level plans such as the GPS. For example, the Special FSPSD for Industry includes some very useful and innovative tools for industrial organisation and development, such as the so-called "eco-zones" which nevertheless raise many questions regarding their actual application at the level of development planning. This is due to the absence of more specific guidelines, arrangements and prerequisites which the central administration should issue for the application of such tools into planning practice. Moreover, the proposed mix of uses seems to

[1] It should be noted here that most GPSs examined by this research (based on the Law 2808/97) were elaborated before the enactment of the national level Frameworks (i.e. the General and the Special FSPSD), and so the only higher-level Framework that was active at that time was the Regional FSPSD.

contribute to the solving problems that usually derive from the planning rigidity to separate the secondary from the tertiary sector uses. A second important issue is the fact that the Special FSPSD anticipates that the necessary studies and the necessary infrastructure for the creation of an industrial planning zone should be undertaken by a special agent (a municipal authority could also play this role). This kind of special planning agents (anticipated long ago in other planning instruments as well) have never before been put into practice in the Greek spatial planning practice and is always seen with suspicion by the municipal and central administration authorities involved. A third finding was the fact that even the public authorities in charge of the enactment of the GPSs hesitated to adopt these new planning tools since there was no additional guidance regarding the way these tools and mechanisms can be efficiently adopted by and implemented in the lower levels of planning. Thus, the way and even the option of using these tools and mechanisms was left to the personal believes, knowledge and perceptions of each planning consultant and/or each local administration or executive authority. Additionally, in most GPSs, dispersed development of activities is still anticipated in the areas outside the plan limits, based mainly on the already established land-uses but also affected by local interests.

Finally, one of the novelties for which Law 2508/97 was widely accepted was the fact that it included several tools for the deprived inner city areas, all under a general provision regarding urban renewal which is the nearest notion of the Greek planning system to that of regeneration, however with strong urban design flavor. The renewal of an area was defined as the directions, measures, interventions and processes of urban, social, economic and special architectural character that aim mainly at the improvement of the quality of life and the built environment, and the protection and enhancement of the cultural, historical, morphological and aesthetic elements of the specific area. According to the Law, areas that appear to have problems of degradation can be defined as “renewal zones”. Although the GPSs are the statutory plans to determine these renewal zones, it was found that in practice very few such areas have been defined in the GPSs that were approved in the Region of Central Macedonia during the 2000s (Tasopoulou, 2011). This tool has not been utilized, because of the hesitation of the public authorities (and especially the regional administration) to allow the designation of such zones. Andrikopoulou et al. (2007) argue that this deficiency is a result, on one hand, of the additional legislative requirements needed and, on the other and more substantial one, of the inherent problems of urban policy in Greece. Besides, according to the same authors, a basic feature of the Greek planning system is the great deficiencies regarding its proactive character, since there was almost no activation of other basic planning tools too that were included in the previous legislative and planning framework (the one that was initiated in the mid ‘80s).

4. Concluding remarks

Moving from a public discourse and even a legislative framework to planning practice is a difficult path, in the same way as it remains generally a difficult path to move from the theory of a very attractive notion to specific and effective strategies that make it a feasible mode of development. Most planning systems are practically at the development stage as far as the harmonization of spatial planning policies and regulations to sustainability objectives is concerned.

The reform of the Greek planning system with the introduction in the 1990s of the two Planning Laws regarding sustainable urban development and sustainable spatial planning at the national and regional level, followed in the 2000s by the enactment of the Regional Frameworks, the new GPS and by the end of 2000s the General and the Special Frameworks led, for the first time, to the formulation of a formally hierarchical spatial planning system from the national to the local level. Within this context, sustainability is adopted as a fundamental notion and the core objective of spatial planning at all levels. However, this adoption came into force in the light of no substantial understanding and assimilation of its dimensions regarding planning in practice. This planning integration concerned only the spatial instruments and not the decision-making itself, which remains centralized. In this context, it seems that the central government's role was restrained to the promotion of planning legislation without any effort to clarify and specify the directions set by the upper level frameworks and guidelines, thus leaving - as it is usually the planning practice in Greece - many of its aspects to legal interpretations which in no way function as proactive planning policies. Despite this specific planning integration, the spatial planning system does not show yet an institutional maturity including governing and learning processes that would allow for specifications and adaptations, for searching and peering into the preconditions for sustainable development in the context of the Greek urban development and for incorporating them into specific planning practices and strategies.

The principle of sustainability was introduced as a policy goal in Greece at a time of high rates of urban growth and in particular intense suburbanization and dispersed development in the outskirts of the cities and towns. The experience gained from the planning practice through the elaboration of GPSs in the Region of Central Macedonia not only shows that these development pressures along with the local communities' aspirations for further official release of land for development had a negative impact on the actual application of the sustainability principles, with planning failing to deal with sprawl dynamics in a sustainable manner and applying concepts such as that of the "compact city" (Delladetsimas 2012), but above all, it shows how strongly spatial planning is enmeshed to the development process, to specific ideologies and to a wider social model (Nadin and Stead 2008). In Greece, the new planning framework was put into force at a period of a building boom where explicit unsustainable policy and planning practices on behalf of the local and central authorities, the developers, the landowners, the professionals and the households were not simply the norm but the "life-style, building and planning" culture (Yiannakou 2012). The current crisis in the country and the deeper reasons that determined it is a new set, which should lead to a reassessment of this socio-cultural approach.

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THE EU STRATEGY FOR THE DANUBE REGION – THE EMERGENCE OF SOFT SPACES AND THE ROLE OF ACTORS

Franziska Sielker[1]

Abstract

Since 2009 the appearance of macro-regional strategies has stimulated discussion regarding new concepts of territorial cooperation in the EU where functional linkages become more and more important. The emergence of soft spaces linking fuzzy functional geometries with different stakeholders is one of the most significant discussed phenomena. Driven by the current interest in macro-regional strategies this paper examines whether they can build an appropriate framework for the facilitation of transnational soft spaces. In order to analyze whether the concept of soft spaces is applicable, the governance structure and the role of the different stakeholder groups in the strategy are analyzed through the example of the newest strategy, the EU Danube Region Strategy. As clear definitions for the different stakeholders in the strategy are missing, the paper summarizes a set of tasks for each committee in order to understand the role of the different stakeholder groups and estimate the potentials for the development of transnational soft spaces. Building on the analysis of interviews the potential added-value, challenges and the expectations of stakeholders towards the EU Danube Region Strategy are examined, in particular with respect to relational geographies.

This paper shows that the Danube region, initiated by Nation States and thus following mainly a political logic, shows important characteristics of the concept of soft spaces. It argues that the governance-structure is fuzzy in a vertical, horizontal and geographical dimension and thus offers possibilities to foster soft spaces.

1. Introduction and theoretical background: macro-regional strategies and soft spaces

After the development of the first EU macro-regional strategy for the Baltic Sea Region similar initiatives evolved quickly, leading to the adoption of the EU Strategy for the Danube Region (EUSDR) in June 2011. The development of further macro-regions is currently under discussion. Macro-regional strategies build “an integrated framework” (Samecki, 2009) for transnational cooperation contributing to territorial cohesion. The macro-regional concept aims at integrating different sectors, levels and politics in one strategy through an overall coordination - tailored for functional

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regions. Hence, forming a strategic roof, they link regional policies as a project focused approach with sectoral policies. According to the European Commission (EC) macro-regions are defined as "an area including territory from a number of different countries or regions associated with one or more common features or challenges" (Samecki, 2009).

The appearance of macro-regional strategies has stimulated discussions regarding new concepts of territorial cooperation in the EU. As a result of ongoing globalization and Europeanization, functional linkages become more and more important, hence leading to new conceptualizations of territory based on functional approaches. Macro-regional strategies constitute an adaptation process and shape spatial development as well as the creation of networks. In the light of the rescaling debate, macro-regional strategies operate as a new framework for cooperation in the multi-level governance system of the EU (Schymik, 2011).

The emergence of 'soft spaces' at the regional level is one of the most significant contemporarily discussed phenomena in the recent planning debate. The shift from government to governance entails a new understanding of states, away from 'hard containers' towards actors in networks. The underlying processes are as well ongoing globalization, Europeanization and rescaling processes. Simultaneously, discussions on relational geographies and 'spaces of flow' aim at developing new conceptualizations of territory following functional linkages. In the course of these debates Allmendinger and Haughton (2009) argue that planners using the legal set of boundaries need to operate within 'soft spaces' across different ranges of geographies, scales and networks. Soft spaces describe "multiple spaces of governance alongside other devices for policy integration" (Haughton et al., 2010, pp. 23-24). They follow a flexible approach with respect to stakeholder participation, time frame as well as territorial delineation and they result from existing networks and functional cooperations. Soft spaces are informal and have fuzzy horizontal (across sector policies), vertical (across different levels of governance) and geographical (across different boundaries) dimensions (Dühr, 2011, p. 26). Stead (2011) and Faludi (2010, pp. 167–168) consider that with macro-regions as a new layer of intervention an example for soft spaces has occurred at the EU level. Thus, macro-regional strategies offer a chance for stakeholders of administrative units as well as for issue-bound stakeholders pursuing sectoral aims in order to cooperate loosely within their priority areas.

It remains open if the emergence of transnational soft spaces at a European scale might be facilitated in future due to the soft framework of macro-regions. Emphasizing the importance of different stakeholder groups, this paper discusses the appearance of soft spaces through actor-networks within the framework of macro-regional strategies. Against the background of the rescaling debate it is to be analyzed whether macro-regional strategies, initiated by nation states and thus following mainly a political logic, can build an appropriate framework for governance within fuzzy functional geometries. For this reason, part of this work is to examine whether the concept of soft spaces can be applied to further explain

processes on the macro-regional level. Compared to the Baltic Sea Region there is less experience in cooperation within the Danube region as there are fewer and younger transnational structures and initiatives. Hence, the governance structure developed throughout the macro-regional cooperation may give a new strategic roof that leads to new incentives linking political and functional processes. Moreover, the cooperation between old and new member states with membership aspirants and non-member states makes the Danube region an interesting case. Therefore, the example of the Danube region enables to analyze the potential to strengthen functional linkages via a flexible, macro-regional metagovernance-level in an area with less cooperation experience. All in all, the focus of the paper is to analyze whether macro-regional strategies foster the development of transnational soft spaces at the European scale based on the case study of the Danube region.

The paper is structured as follows: for setting the stage, first the Danube region and the EUSDR are introduced. Then, the governance structure of the EUSDR is worked out and the tasks of the different stakeholders within this organizational set-up are examined. Drawing on the analysis of interviews with representatives of all relevant stakeholder groups in the EUSDR, the potential added value and challenges for a successful implementation as well as the resulting expectations towards the EUSDR are presented thereafter. Building on these results, it is finally discussed whether the concept of soft spaces is applicable to the macro-regional level. The concluding remarks include opinions whether due to their governance structure macro-regional strategies foster transnational soft spaces.

2. Setting the stage: The Case of the EU Strategy for the Danube Region

The Danube macro-region

The macro-region Danube “is a functional area defined by its river basin” (CEC, 2010). Geographically it concerns primarily but not exclusively fourteen countries: “Germany (Baden-Württemberg and Bavaria), Austria, the Slovak Republic, the Czech Republic, Hungary, Slovenia, Romania and Bulgaria within the EU, and Croatia, Serbia, Bosnia and Herzegovina, Montenegro, the Republic of Moldova and Ukraine (the regions along the Danube) outside” (CEC, 2010) A map of the macro-region is shown in Figure 1. The region encompasses one fifth of the European territory, thereby constituting an important economic area within Europe (CEC, 2010). Cooperation in the Danube region has to face different challenges due to the diversity and history of the region. During its colorful history the Danube countries were involved in various conflicts and wars coming along with changes in power. After the World War II the region was separated by the iron curtain. Since the political change of 1989, a transformation and convergence towards Europe started over (Weigl, 2010). The Danube itself is still of relevance as a border river along its way (Deimel, 2010). The Danube region is characterized by high social and cultural diversity influencing the cooperation possibilities and the behavior of the stakeholders. Regarding the economic diversity the Danube region contains some of the richest and of the poorest countries of the EU (EUROSTAT, 2011). The natural

environment includes mountains such as the Alpes or Carpathians as well as low lands such as the Danube delta as well as huge diversity in flora and fauna. The whole Danube basin contains more than 800,000km^2 (Zuser, 2010). The EUSDR shall support new opportunities in order to address common challenges in this region and lead to a sustainable development.

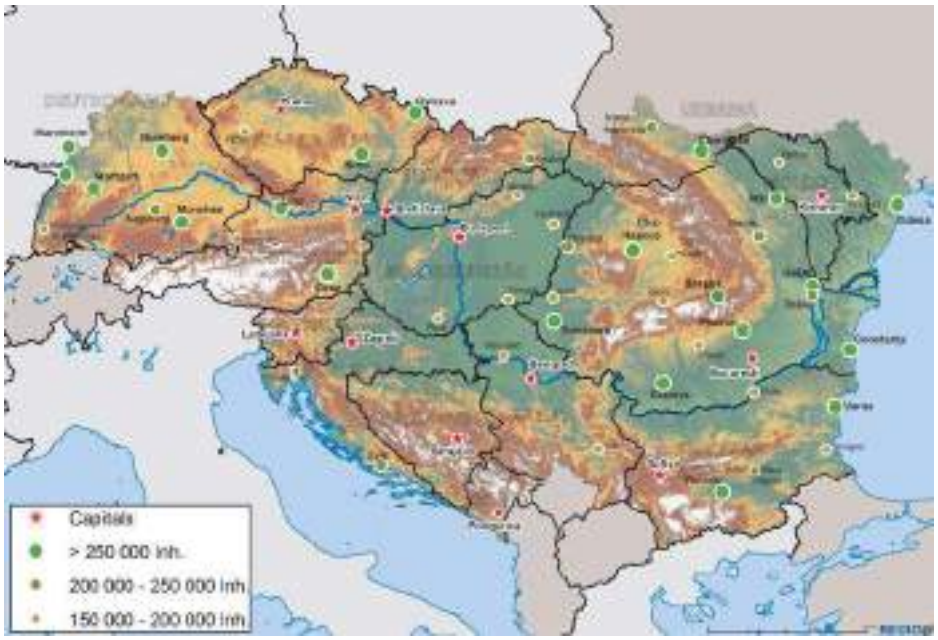

Figure 1. Geographical coverage of the Danube Region (EEAS, 2012)

Content and structure

The EUSDR consists of the Strategy document and an accompanying Action Plan. These documents are the result of an extensive consultation process coordinated by the European Commission (EC). From the idea by the end of 2008 until the Communication document of the EC in December 2010, the EC played the leading role in organizing, coordinating and drafting the document. The strategic document presents the overall goals as well as the challenges and opportunities of the region. Thematically the EUSDR is structured in four pillars with eleven priority areas (PA) (CEC, 2010; Figure 2). PA 1 is separated in PA 1a and PA 1b.

Figure 2. Set-up of EUSDR (own illustration based on Simoner, 2011)

For each PA possible aims and main issues are presented. The Action Plan provides more detailed information on the main problems within each PA and the respective actions. Furthermore, illustrative projects supporting the actions are listed (CEC, 2010a). In total the Action Plan comprises 129 actions and names 123 project examples (Figure 2). The EUSDR aims at addressing the main challenges of the mobility of the TEN-T Corridor Danube River, energy supply and production, environmental pollution, risk prevention, socio-economic disparities, security and organized crime.

3. Analysis of the EUSDR with respect to the governance structure

3.1 Methodology

The aim of this paper is to analyse the EUSDR and to reflect on this basis whether the macro-regional strategy fosters transnational soft spaces and whether this concept is applicable to the macro-regional level. As soft spaces are determined by a flexible approach in a horizontal, vertical and geographical dimension, the underlying governance structure and the participating stakeholder groups are of interest in the analysis. The development of the governance structure, the tasks of the different committees and the analysis of the involvement of the different stakeholder as well as their logics are results of an extensive analysis of 27 interviews, one written questionnaire and of primary literature, policy documents as well as presentations. The interviewees were chosen with respect to three criteria in order to include all relevant opinions. The first criterion was to include representatives from each committee of the governance structure. Secondly, interviewees from each level and from different logics were chosen. Thirdly, stakeholders of countries with different EU status were involved. In order to figure out whether macro-regional strategy might lead to transnational soft spaces, the governance structure itself as well as the participation of the different stakeholder groups during the development of the strategy were analyzed. Moreover, the potential added-value, the challenges and the expectations from the viewpoint of the different stakeholders on the EUSDR were studied and related to their institutional logic.

Governance structure of the EUSDR

The governance structure of the EUSDR is under development and may also change during the process. In particular during the first phases each committee had to find its place in the governance system. No detailed description was given top-down which as well led to a different understanding in the different PAs. There still remains uncertainty on the exact tasks and understanding of the roles of the different committees. Thus, during the conduction of the interviews it turned out to be of huge interest by all stakeholders how these different committees interact and who does

what. Building on the analysis of the interviews and existing policy documents this paper presents a first attempt to summarize a common current understanding of each stakeholder and their interactions.

The governance structure of the EUSDR can be described in three parts. First the political level (dark gray) can be identified, being responsible for the overall strategic decisions of the EUSDR. This level consists of the European Council, European Commission represented by the Directorate General Regional Policy (DG Regio) and the High Level Group (HLG) for macro-regional strategies. The fourth committee is composed of the Priority Area Coordinators (PACs) and the National Contact Points (NCPs) (Figure 3, Table 1).

The second level is the strategic level (light gray) which includes the political level and the three committees of the PACs, the annual Stakeholder Conference and the Steering Groups (SGs). These are on the linking position between the political level and the operational level (light green), but they still have an important role in the strategic decision-making and the overall development of the strategy. The annual Stakeholder Conference plays an indirect role whereas the PACs and the SGs represent the strategic decision-making level in each Priority Area (Figure 3, Table 2).

The third level, marked in light green, is the operational level responsible for the implementation of the strategy. All elements marked in dark green exist for each PA, thus, 12 times. In addition to the Stakeholder Conference, the PACs and the SGs, this level comprises consultants, Observers, different Working Groups and the Projects (including preparatory and pilot projects) (Figure 3). The implementation of the strategy is further supported by the INTERact Labgroup, the interregional group “Danube” of the Committee of the Regions as well as by other transnational cooperations and institutions of the Danube region. The implementation of the strategy builds on financing resources by Nation States and the EU (e. g., ERDF Funds and Cohesion Fund) and their project funding (Figure 3, Table 3).

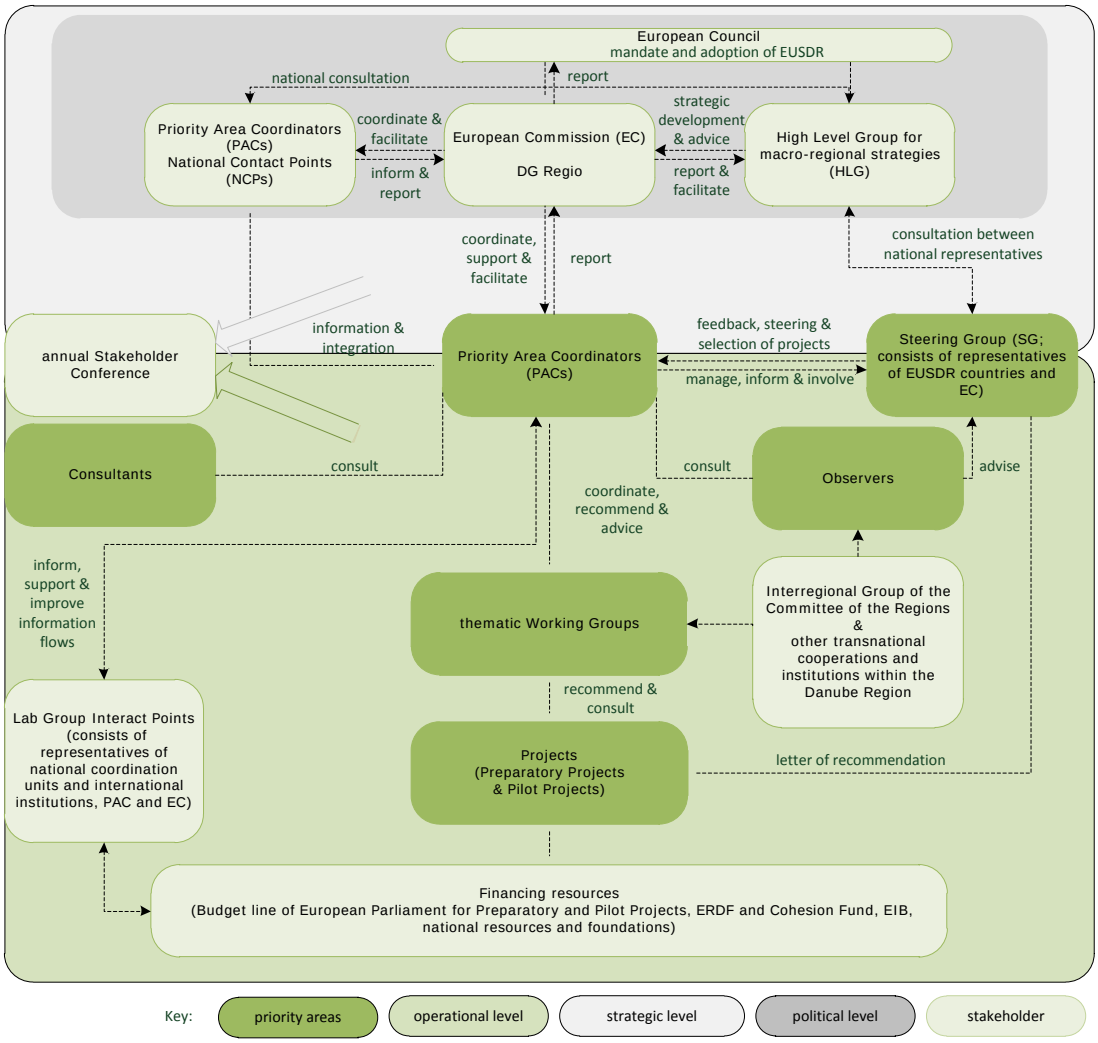

Figure 3. Governance structure of the EUSDR (own illustration on the basis of Simoner and Vorderwinkler 2011, p. 2; Schmitt, 2011)

The role and tasks of the crucial committees within the governance structure of the EUSDR can be shortly described as follows. A detailed description of the tasks of each group is given in the Tables 1 to 3.

The European Council is responsible for mandating to the EC and adopting the strategy. The ECs main task is the overall coordination, facilitation and evaluation of the strategy. During the development of the EUSDR the HLG approves the decision of the European Council. The newly constituted HLG for macro-regional advises the EC and member states and decides upon the future strategic directions. The NCPs are responsible in their national context for coordinating the official national position and implementation activities (Table 1).

Table 1. Tasks of stakeholders of political level in the EUSDR

European Council	· mandate and invite the EC to present an EU strategy · endorsed the EUSDR and call on actors to implement the strategy
European Commission (EC), mainly represented by DG Regio	· coordinate consultation and take into account other relevant policies and EU programmes · draft and review EUSDR and Action Plan · consult Member States via the HLG and NCPs · evaluate and report on progress to member states and European Council · facilitate implementation as well as decision-making and support SGs and PACs · review concept of macro-regional strategies
High Level Group (HLG)	· advise EC and Member States and make strategic decisions on future political direction and feedback evaluation of EUSDR
National Contact Points (NCPs)	· coordinate and formulate national positions and non-paper · ensure and coordinate implementation of EUSDR in home countries · inform and consult national institutions and all relevant stakeholder · report to EC on progress and implementation activities within home countries · support SGs and PACs and other stakeholders during implementation · inform on EUSDR and promote actions taken, communicate results · coordinate and ensure integration of EUSDR in national policies

(own summary based on analysis of interviews and INTERact Point Turku, 2011)

The annual Stakeholder conference is the forum for information exchange between all stakeholders. Furthermore it builds a monitoring system for the implementation steps within the year and gives the opportunity for the committees to meet and outline further strategic steps based on the presented results. The PACs are responsible for the overall management of one PA and coordinate and organize activities. They maintain the dialogue with other PAs and feedback the development of the EUSDR to the EC together with the NCPs. Having in mind the coordinating task of the implementation activities, the PACs are as well responsible for the integration of the different PAs specifically within its pillar. The Steering Groups are responsible for the strategic decisions within one PA and include representatives of each country. These ensure the implementation of the PA in the home countries (Table 2).

Table 2. Tasks of stakeholders of strategic level in the EUSDR

annual Stakeholder Conference	· forum for all stakeholders and information exchange · presentation of results and networking between all stakeholders and PAs · meeting of different committees and strategic development of strategy
Priority Area Coordinators (PACs)	· responsible for overall management of PA: coordinate and organize activities · link different stakeholders and committees in PA · propose updates of Action Plan and targets · manage SG, ensure contact and prepare project selection · report to EC on progress in PA twice a year · ensure vivid contact with each country and the policy level · maintain dialogue with projects and financing resources · facilitate alignment of funding, policies and instruments · ensure integration and communication with other PAs · ensure communication of PA and make actions taken visible · advise HLG together with NCPs in overall strategic development of strategy
Steering Groups (SGs)	· responsible for project selection and identification · promote and encourage implementation in home country · integrate strategy in policies and with different sectors · integrate, inform and contact all relevant stakeholders in home countries · integrate different sectors and different levels · seek for funding opportunities and impulse new initiatives · ensure implementation in respective field of interest in countries · decide on targets for PA and feedback PACs · prepare implementation and ensure proper circumstances in home countries · (in some countries) report to the NCPs or HLG · communicate and enhance visibility of the strategy · support transnational networking
(own summary based on analysis of interviews and INTERact Point Turku, 2011)	

The operational level is complemented by all other stakeholders involved in the implementation of the EUSDR. The Observers have an important role in advising the SG content-wise and thereby represent the functional approach of the projects. Consultants support some PACs. The Working Groups are temporarily constituted committees on expert level that support the project selection of the PAs. The projects represent the implementation activities of the EUSDR. In addition, the Labgroup supports the PACs in finding solutions for their management and builds a forum for enhancing the alignment (Table 3).

Table 3. Tasks of stakeholders of operational level in the EUSDR

Observers	· advise the Steering Group content-wise and ensure quality of projects
Consultants (of PACs)	· support organization and management of PA
Working Groups (WGs)	· responsible for content related support of PA and advise SG on expert level · prepare project selection, support PA with preparation and coordination of implementation activities, and detail Action Plan · integration of different PAs and facilitate contact with other PAs
Projects	· networking and implementation of targets of EUSDR · communicate EUSDR and ensure visibility · overcome challenges and use opportunities of the region · link the functional approach of concrete actions with targets of the EUSDR
Labgroup	· support PACs in particular concerning project identification · seek and propose operative solutions to identified issues · propose common approaches for PACs and programmes concerned · improve information flows and awareness-raising in projects and programmes and discuss possible ways to exploit synergies · support alignment of funding and integrative approach · constitute a committee for stakeholders outside and inside EUSDR

(own summary based on analysis of interviews and INTERact Point Turku, 2011 and INTERact Point Vienna, 2011)

Within the governance structure of the EUSDR the different committees have their tasks as described in Tables 1 to 3. The group of PACs with NCPs, the EC and the HLG are responsible for overall decisions for the strategic development. The EC plays an important role in linking these two committees and the European Council. The EC coordinates the political decision-making level and ensures the contact of this level with the different Priority Areas and the operational level in general. The PACs are presented in the center of Figure 3 as they are on the linking position between all stakeholders. Thus, the PACs collect a huge amount of knowledge which is beneficial for all stakeholders. The PACs work closely in particular with the SG, the EC, WGs and Observers. Moreover, they link these stakeholders. The SG ensures the implementation within the home countries and works closely together with NCPs, PACs and observer. This committee is the most important committee within each PA for proposing common initiatives of the different countries and ensuring the political commitment of the countries within each PA. Furthermore, the SG is the responsible committee for the agreement and coordination between the countries in

the implementation phase. The representatives within the SGs link national stakeholders to the EUSDR. Thus, the SG links politics and administrative challenges for the implementation. The interaction of the Observers with other committees of the governance structure is different in each PA.

From the initial idea to the implementation of the EUSDR and the stakeholder participation

Knowing the governance structure of the EUSDR and for analyzing the fostering of soft spaces within this framework, an overview of the development of the EUSDR and the involved stakeholder groups is of interest. The initial idea for a macro-regional strategy for the Danube region came up by the end of 2008. The initiative was driven forward in particular by Austria, Rumania and Baden-Wuerttemberg. The European Council endorsed the strategy in June 2011. In the time between the initiative and the adoption of the strategy three phases can be distinguished. The first one includes the period from the first idea to the mandate of the ER to the EC. Within this phase exclusively political stakeholders were involved. With the official decision approving a macro-regional strategy in the Danube region, the first two levels of the governance structure were developed along with decisions on the content, targets and the overall strategic direction (Figure 4). The second phase started in June 2009 and lasted till December 2010. It includes the consultation process and the drafting of the EUSDR. The European Parliament got involved defining tasks and giving indications on the content. The participating countries appointed NCPs that organized the consultation within the countries being responsible for the thematic direction of the strategy. Thus, e. g. ministries, NGOs or private stakeholders were included in the process in the countries. Through the consultation of the EC the administrative, civil and private logic got increasingly involved (Figure 4).

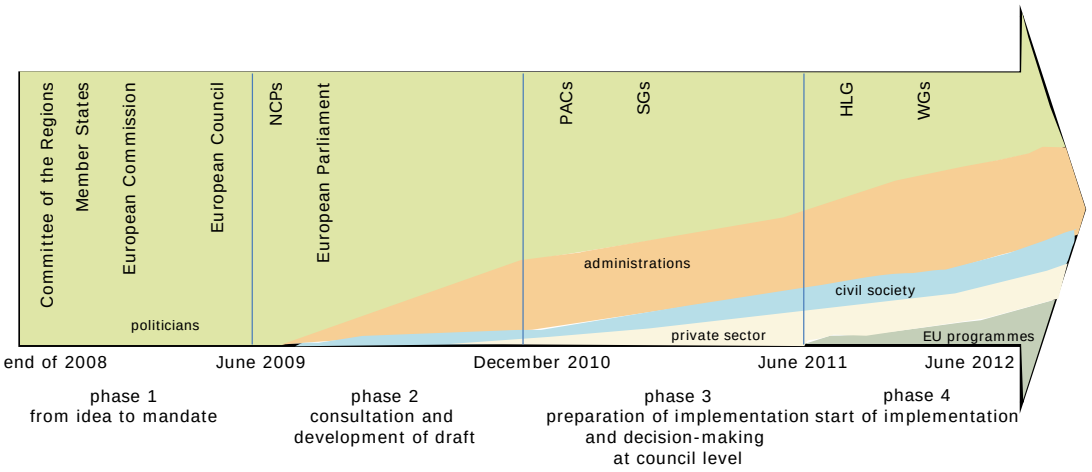

Figure 4. Different stakeholder groups during the development of the EUSDR and its governance structure (own illustration)

All in all, during the first two phases the first level of the governance structure was developed and came into action. In the implementation phase the NCPs as part of the governance structure will work in a committee with the PACs together.

The third phase embraces the time period from December 2010 till June 2011. After the drafting of the strategy document, the EC and the NCPs decided to appoint a tandem of PACs for the PAs. While the final decision on the selection of the managing countries of the PAs was in hand of the EC, the countries themselves appointed the PACs. After the PACs had started their work, the constitution of the SGs began immediately. With these stakeholders coming into charge for the preparation of the implementation, the administrative logic became more important. As Observers serve directly the SGs the private sector and the civil society became more and more influential on the decision-making. By end of this phase, also the Labgroup took up its work. It contains different logics, but most importantly includes the logic of EU programmes. With the endorsement of the strategy by the European Council the EUSDR entered officially into the implementation phase by the beginning of July 2011. The fourth phase comprises the implementation which is in a testing phase until the first annual Stakeholder Conference. In the meantime, a HLG constituted for macro-regional strategies took over from the general HLG. In order to start further detailing the Action Plan and to select projects for recommendation each PA formed Working Groups. The PACs started to communicate with the existing EU programmes and to provide letters of recommendation according to the selections of the SG. Thus, the integration of programmes and projects with their logics has started to gain more importance.

4. Analysis of stakeholders' opinions and expectations

Apart from the governance structure and the participating stakeholders soft spaces are invoked by stakeholders' behavior. The attitude towards the strategy depends therefore to a high extent on their expectations and the potential added-values of the cooperation and the challenges they see for a successful implementation. Hence, the participating stakeholder groups and their logics in the process are examined. Thereafter, a short analysis of the stakeholder opinions with respect to the added-values and the challenges is given before summarizing their expectations.

Involvement of different logics and key stakeholders for a successful implementation

Whereas in the first phase the political logic has dominated the process, gradually other logics got increasingly involved. However, mainly the political logic and the administrative logic (partly following as well a political approach, e. g., in ministries), are dominant in the process (Figure 3). It remains open whether others will gain more importance in the implementation. It can be assumed that they will. However, the direct influence on results and strategic lines will remain limited. In particular within the SGs, which as well have a decisive role, the different logics are coming together. Also, the WGs and projects include different logics. The network

formed through this process may lead to strong or weak ties between the different logics and committees depending on the interaction of the different stakeholders.

Within the governance structure of the EUSDR the stakeholders themselves and external observers assess that a successful implementation of the strategy depends highly on the PACs and their engagement. In particular stakeholders of the political and strategic level see the responsibility for a vivid implementation of the different PAs lying in the hands of the PACs. All stakeholders, in particular those of the operational level, attribute the responsibility for a successful implementation to the Nation States and their political commitment. Generally they are considered being key stakeholders as their commitment is estimated crucial for a long-lasting cooperation and support of implementation activities. The operational level concludes in accordance that without a formal mandate the PACs need to rely on strong support by NCPs and SGs. The role of the EC is evaluated more ambivalently. All stakeholders know and also accept that they have a coordinating and facilitating role. However, most of the stakeholders expect top-down orders for the different committees for enabling an efficient cooperation of the 14 countries. It should be noted that interviews were conducted in the orientation phase of the stakeholders, so this wish might as well diminish later on.

Added-values and challenges for the macro-regional cooperation

The aim to work in an integrated framework in a region with common features in order to integrate sectors, levels and politics is welcomed warmly by all stakeholder groups. The EUSDR triggered a huge dynamic. Generally a lot of interest in this new cooperation form could be observed. Knowing the governance structure, observing the first implementation steps and taking into account challenges of former cooperations within the Danube region, the stakeholders consider challenges for the EUSDR and award added-value. Thus, it is of interest what the main challenges and estimated potentials are. Further it is interesting to analyze what expectations the stakeholders have for the EUSDR due to the potentials and challenges. Thereafter, analyzing these results it is reflected whether the stakeholders consider functional regions to be fostered by the macro-regional approach.

Generally the different stakeholders are widely in agreement with respect to potential added-values of the EUSDR. Regarding the challenges the different stakeholder groups point attention to different ones. It can be observed that the political logic at this point of implementation considers more potential and does not see crucial challenges. On the contrary, the administrative stakeholders and the private sector do agree upon the EUSDR facing many challenges.

The added-values awarded to the EUSDR are the networking via this cooperation itself, the political commitment and the functional approach of the strategy. Furthermore, all stakeholder groups underline the attempt to cooperate between countries of different EU status with this conflictual history and diversity among the countries. Moreover, the agreement on common targets and priorities is considered

being of added-value for the region. The constitution of a region built on common challenges raises hopes for the development of a common identity.

Due to the orientation phase of the strategy the stakeholders mentioned in total more challenges for the cooperation. Compared to the added-values these include practical challenges for cooperation within this framework. The political stakeholders themselves consider it as a challenge that the EUSDR will have concrete influence on national politics. While the three No's of the EC (no new funds, no new legislation and no new institutions for the macro-regions) are not considered an overall challenge, the implementation of the strategy via a letter of recommendation is estimated not to be effective. Thus, many question what the concrete implementation activities are. The administrative stakeholders and the private sector emphasize the challenge of insufficient political commitment, additional administrative and financial effort as well as limited time resources. The integration of different sectors and levels as a challenge is pointed out as well. However, the most important challenge outlaid by the different stakeholder groups refers to challenges of cooperation between these different countries and the need to build up trust as well as to establish regular contact among them.

Stakeholders' expectations

The EUSDR and the first implementation steps aroused many expectations of stakeholders. In order to be considered successful the strategy is about to meet these. The analysis of the mentioned expectations by the interviewees shows clearly that the overall expectation of all stakeholders is the development of long-lasting cooperation networks and an enlargement of the individual network. The added-value of a strategic cooperation relying on existing networks coincides with this overall expectation. Moreover, the history and insufficient political support for the political involvement in these functional networks of the PAs is considered a crucial challenge for this expectation. The EUSDR raises hopes that the existing differences in the countries that have hindered the network building can be overcome under the framework of the strategy. More expectations for the EUSDR are that there will be new impulses and incentives, a high self-commitment by the different stakeholders and a long-lasting level of cooperation between the Nation States and the EC. Furthermore, the stakeholders expect the EUSDR to become a platform for agreements on policies and formulation of common targets and actions as well as a first step to harmonize standards in different sectors. The EUSDR is expected to be a first step into the direction of an integration of the different sectors and the preparation of future common policies. Through the strategy stakeholders expect existing initiatives and cooperations to be stimulated and old projects to become more prominent. The strengthening of the functional linkages is expected to possibly result from this cooperation and the political support.

5. Discussion: The EUSDR as a soft framework for transnational soft spaces?

From these results on the expectations towards the EUSDR it can be concluded that the overall expectations concern an improvement of networking and the political reconcilement of the countries in the Danube region. The direct advantages for functional regions are estimated to be a long-term added-value indirectly evolving from stronger political ties. However, a more efficient functional cooperation to overcome common challenges remains the overall goal. This paper aims at showing whether this long-term goal may be achieved with the macro-regional strategy as an appropriate framework. Do the governance structure and its actor-networks facilitate the emergence of transnational soft spaces at a European scale? Does the EUSDR as a new metagovernance-level offer possibilities for new incentives that strengthen and link political and functional processes as well as networks via a fuzzy approach?

First it is to be examined whether the concept of soft spaces can be applied to explain processes on the macro-regional level. The EUSDR, in particular during the first preparation phase, can be considered as a mainly political process. Thus, the external boundaries are administrative building a political space. The Danube Region can rather not be considered as one soft space. As soft spaces are multiple spaces of governance alongside other devices for policy integration, this framework and the macro-region Danube can be considered as such other devices for policy integration. As soft spaces are shaped fuzzy across different ranges of geographies, scales and networks within the Danube region the Priority Areas and their set-up in the governance-structure can be considered fuzzy in these senses. The governance-structure enables the PAs to operate at different levels depending on the radius the stakeholders involved use. The networks involved are changing depending on the subject currently on the top in the PAs. This means e.g., that the Working Groups and the involved projects are temporarily and change over time. Hence, the networks in the strategy are flexible and result from existing networks. Different committees, e. g., the SGs include administrative units as well as issue-bound stakeholders pursuing sectoral aims. These are all characteristics of soft spaces. If the EUSDR follows a flexible approach concerning the outer boundaries is not obvious yet. However, within the PAs and the Danube region the activities are geographically fuzzy. The concept of soft spaces may thus explain the processes on the macro-regional level. Furthermore, the overall goal and the necessity to cooperate in order to overcome common functional challenges suggest itself for applying the concept. Macro-regions may be considered as a new layer of intervention at the European level as in particular the SGs, being responsible for strategic decisions, lay out the route to take. Nevertheless, macro-regional level does not have formal competencies neither do the different committees.

All in all the governance structure may facilitate the emergence of transnational soft spaces as the different stakeholder groups are interacting with each other and thus learn about the needs of the others. Generally the governance structure offers possibilities for fuzziness to meet functional linkages as stakeholders from different levels, geographies and sectors are involved. The whole governance structure may serve as metagovernance-level for the PAs and the relational geographies in them. The different committees may as well come up with new incentives and give

impulses to the region depending on the main challenges: future political commitment and assignment of competencies, the cooperation between the different countries in the strategy and the upcoming implementation activities.

6. Conclusion

Analyzing the governance structure of the EUSDR as well as the expectations and added-values of this cooperation, the process can still be considered to be mainly a political one and thus the EUSDR also being a political cooperation. Nevertheless, the EUSDR enables through the PAs a vertical, horizontal and sectoral integration. The EUSDR offers an official metagovernance system while still leaving room for fuzziness. The Danube macro-region may strengthen functional linkages in particular in this area with little cooperation experience. Also, the EUSDR as a metagovernance-level can consolidate networks while building on existing ones. The PAs show key aspects of characteristics that transnational soft spaces would have. Concluding, macro-regional strategies and their governance structure can lead to a new macro-regional governance with the potential to favour functional linkages and thus foster soft spaces. The overall expectation of networking can be satisfied in the EUSDR. These potentials are not yet fully recognized and exploited. The author therefore underlines the importance of the PAs. How and in which way the PAs can foster soft spaces will be subject to further research and publications.

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CURRENT CHALLENGES OF MANAGING URBAN HERITAGE IN TURKEY

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Abstract

Turkey acquires a remarkable wealth of historic and cultural heritage. Yet, changing economic, political, legal and social conditions often turn this legacy into a liability. Since the mid-1980s, along with the neo-liberal policies, the widening of market mechanism and a competitive real-estate market were followed by the rapid privatization of public lands and other assets, the expansion of local governments' jurisdictions, and the growing presence of global capital especially in big cities. Together with the neo-liberal urbanism, heritage has been recognized more and more as a physical asset with its economic and symbolic contributions to the cities' competitiveness within the global market. This understanding of heritage has not only commodified and commercialized it, but it has also been undermined its social and cultural significance and values. In Turkey, heritage, like in many other countries, has become a city-marketing and branding instrument and a catalyst for urban regeneration schemes. Likewise, the rapid urbanization in Turkish cities has also acted as a growing threat against the historic and cultural heritage. This paper aims to underline and discuss a variety of current challenges and threats on the conservation of cultural and historic heritage in Turkey. It will examine these challenges and threats regarding political, legal, financial, economic and social dimensions, as well as the new planning priorities.

1. Introduction

Turkey acquires a remarkable wealth of historic and cultural heritage, but changing economic, political, legal and social conditions often turn this legacy into a liability. Since the mid-1980s, along with the neo-liberal policies, the widening of market mechanism and a competitive real-estate market were followed by the privatization of public lands and other assets, the expansion of local governments' jurisdictions, and the growing presence of global capital especially in big cities. Together with the neo-liberal urbanism, heritage has been recognized more and more as a physical asset with its economic and symbolic contributions to the cities' competitiveness within the global market. This understanding of heritage has not only commodified

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and commercialized it, but it has also been undermined its social and cultural values. In Turkey, heritage, like in many other countries, has become a city-marketing and branding instrument and a catalyst for urban regeneration schemes. Likewise, the rapid urbanization in Turkish cities has also acted as a growing threat against the historic and cultural heritage.

This paper aims to underline and discuss a variety of current challenges and threats on the conservation of cultural and historic heritage in Turkey. It summarizes the evolving legal, institutional and financial background of urban conservation from the mid-19th century to the 1980s. Second, it focuses on the changes in the legal, institutional, organizational and financial dimension of heritage conservation over the last 30 years, and third, it examines the current planning system on historic heritage sites. Within these three sections, the paper seeks to underline the challenges and threats against the historic heritage sites regarding political, legal, financial, economic and social dimensions, as well as the new planning priorities.

2. Evolving legal, institutional, organizational and financial background of urban conservation from the mid-19th century to the 1980s

The early conservation policies started to be shaped in the second half of the 19th century due to the demands of European archaeologists to undertake excavations within the territory of Ottoman Empire. A series of legislations - *The Ancient Monument Regulations (AMR) of 1869, the AMR of 1874, the AMR of 1884, the AMR of 1906,* and *Conservation Regulations of Monuments of 1912*- were subsequently enacted to establish the legal and institutional frameworks for the protection of historic monuments and artifacts, particularly those that were discovered throughout these excavations and to found an imperial museum in order to exhibit these discovered historic artifacts (Table 1). The central government was the sole authority responsible for the conservation of historic monuments and artifacts. While the Ministry of Foundations (*Nezaret-i Evkaf-ı Hümayun*) was the major authority for the preservation and regular maintenance of historic artifacts owned by the Foundations, Conservation Committee of Ancient Artifacts (*Muhafaza-i Asarı Atika Encümeni*) was the agency responsible for the implementation of conservation laws. The urban conservation approach of this period was based on the idea of preserving historic assets individually. The major historic artifacts to be preserved were seen as the historic artifacts of state and foundations, such as castles, city walls, palaces, theatres, bridges, churches, monasteries, synagogues, rather than urban fabrics and neighborhoods with historic and cultural characteristics.

After the foundation of Turkish Republic, all the legal and institutional organization of the state was renewed to create a secular nation-state. The Directorate of Turkish Ancient Artifacts (*Türk Asarı Atikası Müdürlüğü*) was established in 1920 within the organization of the Ministry of Education (MoE) to be responsible for all issues of museums and archaeological excavations. A year later, it was renamed the Directorate of Culture (*Hars Müdürlüğü*). This was followed by the establishment of the Directorate General for Foundations (*Evkaf Umum Müdürlüğü*) responsible for

the regular maintenance of historic buildings belonged to the foundations in 1935, the establishment of Conservation Commission of Monument (*Anıtları Koruma Komisyonu*) in 1933 to document the historic heritage of the country and the establishment of the Directorate General for Ancient Artifacts and Museums (*Eski Eserler ve Müzeler Umum Müdürlüğü*) in 1944. During the period of 1920 and 1950, the central government was the only authority responsible for the conservation of the majority of historic heritage, while municipalities were only responsible for the conservation and regular maintenance of castles, towers and graveyards. State-funds for conservation of historic heritage were very limited. The total budget of the Parliament, MoE, Directorate General for Foundations and the Ministry of Public Works that were allocated for the conservation of historic heritage was only 0.12 % of the total national budget (Madran and Özgönül, 2005). There was no subsidy to help support the restoration costs of private individuals / agencies, although they were legally obliged to restore or carry out the regular maintenance of historic properties (Madran and Özgönül, 2005).

The conservation policy of the early years of the Republic was more or less the same with the Ottoman era (Table 1). Although preserving historic artifacts individually were the dominant conservation approach of this period, the *Municipality Law of 1930* enforced municipalities to prepare development plans of cities and to be responsible for the conservation of historic monumental artifacts. Likewise, the *Building and Road Law of 1933* claims that "monuments within the boundaries of these plans (*urban development plans*) were to be 'marked' and a ten-meter strip of open space was to be designated around them" (Şahin Güçhan and Kurul, 2009, p. 27, *italics added*). Despite the responsibilities given to municipalities in the field of conservation by the *Municipality Law of 1930* and the *Building and Roads Law of 1933*, their power, experience and financial resources were too limited to take necessary actions for the restoration and regular maintenance of historic artifacts in cities. Besides, the implementation of the development plans through the *Building and Roads Law of 1933* to build 'modern' Turkish cities led to the severe destruction of historic fabrics of cities, especially those in Istanbul throughout the 1950s (Şahin Güçhan and Kurul, 2009, p. 27).

The *High Council for the Historic Real Estates, Artifacts and Monuments* (HCHRAM) *(Gayrimenkul Eski Eserler ve Anıtlar Yüksek Kurulu)* that was founded in 1951 was seminal in the field of urban conservation. The High Council was the absolutely autonomous agency which was primarily responsible for determining the principles on the restoration, maintenance and management of historic heritage and monitoring and auditing of the implementation of the conservation projects according these principles. One of the major contributions of the High Council was their attempt to introduce the understanding of conserving historic urban areas, rather than individual historic artifacts or monuments (Şahin Güçhan and Kurul, 2009, p. 28). Despite the establishment of the High Council, historic heritage conservation continued to be seen primarily as the major responsibility of the central government agencies between the 1950s and 1980s. As a part of this centralized state

organization, local departments of the *Directorate General for Ancient Artifacts and Museums* were established in cities.

The period of 1950-1980 was also characterized by the enactment of the first conservation law, namely *The 1973 Law of Historic Artifacts No. 1710*. The law introduced the understanding of conserving 'areas' rather than 'individual artifacts', defined 'conservation sites' as 'historic', 'archaeological' and 'natural', expanded the responsibilities and power of the HCHRAM, and introduced the technical and financial supports from the state to private individuals for the restoration of their historic properties. In the 1970s, following the designation of archaeological and historic conservation sites in cities, the development plan decisions for these sites became ineffective and this revealed the need for preparing 'conservation plans' for the designated areas within two years (Şahin Güçhan and Kurul, 2009, p. 29). The notion of 'conservation plans' which emerged in these years became a subject of discussion among planners, conservationists and experts in the field (Şahin Güçhan and Kurul, 2009, p. 29). Despite this progress, the legal requirements for conservation sites were mostly seen as obstacles against urban development by municipalities and private property owners (Şahin Güçhan and Kurul, 2009, p. 29). Also, municipalities were inadequate in preparing conservation plans and conserving historic areas of cities due to their limited power, funding and experts in the field of conservation. Beside such hindrances, moving out of wealthy dwellers of historic neighborhoods to newly developed modern apartments and their replacement with the poor migrants or citizens as the tenants or new owners also led to the deterioration of these historic quarters of cities and their continuous decline in the 1960s and 1970s.

The legal, institutional and financial framework of conservation has significantly evolved since the 1980s. The Law No. 2893 of 1983 and the enactment of subsequent legislations that have made amendments on this law (*The Law No. 3386 of 1987, The Law No. 5226 of 2004, The Law No. 5571 of 2006, The Law No. 5728 of 2008, The Law No. 5835 of 2099 and The Decree Law No. 648)* provided the legal bases for urban conservation. The next section discusses the changes in the conservation field since the 1980s to today.

3. The conservation policies between the 1980s and 2010s

The neo-liberal policies came to the political agenda in Turkey following the 1980 military coup. Since the early-1980s, the policies seeking to establish a free market economy have gone hand in hand with the privatization, deregulation and liberalization policies. Since the 1980s to today, a number of legislations which came into effect have provided two parallel planning systems for historic sites in Turkey (Table 1). The Law No. 2863 (The Conservation Law of Cultural and Natural Assets) of 1983, and the legislations and regulations which have come into force to make some amendments on this law have brought about a planning procedure with a 'conservation' emphasis. That is to say, the Law No. 2863 replaced the concept of 'historic artifacts' with the concepts of 'cultural assets' and 'natural assets' into the

conservation planning in Turkey. Besides being historic, it underlined the importance of having qualitative merits (such as their architectural, economic or social qualities which represented the historic period in which they were built) of historic buildings, monuments or sites to be designated and listed as cultural assets. It also emphasized the importance of conserving the historic sites within an urban context, instead of conserving historic buildings or monuments individually. The Law No. 2863 was also a pioneering legislation in terms of introducing the concept of 'conservation-led development plans' as a new type of plan specific to conservation areas. Although the planning approach behind this law is not based on an integrated conservation approach, it is still important with its decentralization and localization policies by empowering local authorities to prepare approve and implement conservation-led development plans. The Law also brought a two-tier control mechanism for the planning procedures and actions taken for conservation sites: '*Higher Conservation Council of Cultural and Natural Assets*' (HCCCNA) that was set up within the organization of the Ministry of Culture and Tourism and '*Regional Conservation Councils*' (RCCs) that were established locally for the designated conservation sites with listed buildings and monuments.

The most important legislation, which complemented the Law No. 2863, is the Law No. 5226 (The Law of Conserving Cultural and Natural Assets) enacted in 2004. The law broadened the content of 'conservation-led development plans', making extensive studies on conservation sites compulsory, prior to plan preparation (Dinçer, 2009a). These studies were to regard conservation sites not only their archaeological, historic, natural, architectural and demographic dimensions, but also their cultural, social and economic dimensions (Dinçer, 2009a). The expected outcomes of such studies, therefore, were to be conservation plans integrating multi-dimensional problems of localities; that is to say, plans addressing not only the problems of conservation of physical environments, but also responding to the needs of communities living and working and providing collaborative planning models, financial, organization and management models for the planning process (Dinçer, 2009a). The law also introduced new financial devices for private owners (10% of the total property taxes allocated to be used for the conservation of historic heritage sites), as well as the new concepts, such as 'management area' and 'management plan' into the conservation agenda of the country (Dinçer, 2009b). It also introduced a new planning tool, transfer of development rights, into the Turkish planning legislative system. Additionally, it became compulsory to establish new specialist offices called 'Conservation, Implementation and Control Bureau (KUDEB)', employing experts in the areas of art history, architecture, city planning, archaeology and engineering sciences, were to be responsible for managing and controlling the implementation of conservation-led development plans (Dinçer, 2009b). The law suggests the identification of the 'action areas' and 'priorities' as the major requirements of the conservation-led development plans. It also emphasizes on the importance of the participation of all the stakeholders in the planning process. By suggesting a participatory management plan for conservation sites, a new financial resource and organization models, planning phases, determining the actors

responsible for the implementation of the plans, the law introduced a sustainable conservation approach to Turkish conservation policy agenda.

Parallel to this conservation-led planning procedure, a series of legislations (especially the Law No. 5393 and the Law No. 5366) were enacted to create alternative planning procedures for conservation sites to be designated either as 'urban transformation and development sites (UTDS)' or as 'urban renewal sites (URS)'. The Law No. 5393 (The Municipality Law) of 2005 defined the conditions for local authorities to designate UTDS. The article No. 73 of the Law claims that municipalities are authorized to designate UTDS on the deteriorated urban areas through municipal council decisions. The article empowers municipalities to implement 'urban transformation and development projects (UTDP)' (rather than development or conservation plans) to redevelop deteriorated urban areas, or to restore historic and cultural fabrics of a city, or to take precautions against earthquake. The Law has also given local authorities a wide range of powers to implement these projects, such as to identify the monetary values of properties on the designated UTDS and to redistribute the raising urban rents to property owners based on these values. Yet, contrary to the general planning principle of hierarchical integrity of different levels of plans, it has not enforced local authorities to integrate UTDPs with the upper-scale development plans or to prepare projects with a comprehensive planning approach. Consequently, it has opened up the way of making piecemeal and area-based projects, independent from the vision or upper-scale development plans of the city or region. For the UTDS, the Law has primarily promoted a physical and economic regeneration. Although the Law claims that mutual agreement between property owners and municipalities are compulsory to clear out and knock down the buildings and to expropriate private properties within the UTDS, it has provided a legal basis for the displacement of the poor communities living in such areas. According to the law, municipalities are required to provide new properties in the URDS only for the title holders who have had the privileged legal rights because of the amnesty laws. For the title holders other than these privileged ones, municipalities have the authority to offer alternative housing solutions in exchange to their properties in URDS, such as selling houses or lands on urban lands outside these project sites or by selling houses developed by TOKI. The law however has not had any regulation for tenants living in UTDS. Thus, local inhabitants (both property owners and tenants) who are provided such housing solutions by the UTDPs will be deprived of their homes and their rights to live in their neighborhoods and localities. The Law No. 5393 has not only provided a legal basis to violate the property rights of private owners, but it has also opened up the project implementations with a strong emphasis on physical and economic regeneration by displacing local poor dwellers and replacing with the potential wealthy incomers.

From 2005 onwards, the new legal arrangements emphasized the exchange value rather than the use value of the conservation areas. The Law No. 5366 (The Conservation Law of Deteriorated Immovable Historic and Cultural Assets by Renewal and their Utilization), which was enacted in 2005, enabled local authorities to undertake 'urban renewal projects (URPs)' which can bypass legislation on urban

planning and conservation within designated ‘urban renewal sites (URS)’. It has enabled the Council of Ministers to designate URS, while giving local authorities a great deal of planning and implementation powers on these sites by making them responsible for preparing ‘urban renewal projects (URPs)’ outside the conventional planning system without looking for any reference to vision or strategy plans of cities. Thus, it has also given local authorities the power of preparing piecemeal and area-based projects on conservation sites. Only architectural preliminary draft projects and implementation projects would be sufficient to initiate an URP in a designated historic site. The renewal of the historic environment has been the major motivation of the law that has not included any article about social and economic dimensions of designated URSs. Thus, the law has mainly envisaged and promoted a physical renewal approach for historic sites rather than an integrated and comprehensive conservation and regeneration approach. Behind this physical renewal approach that will be put into action as quick as possible through URPs, it is possible to note the intention to reveal primarily economic exchange value of historic heritage sites, rather than their cultural and historic values. Against all possible interventions from the existing regional conservation councils of a conservation site where URS are designated, the law has given the local authorities to establish regional conservation councils for the smooth operation of URPs. On the other hand, the law has failed in providing financial support to private owners to repair their houses. Yet, aiming to accelerate the renewal process, it has eased the process of expropriation and bureaucratic issues at the expense of jeopardizing individual property rights. In case private owners were not able to afford the restoration costs of their properties, or they did not accept the agreement conditions put forth by the local authority, the law enabled local authorities to expropriate the historic buildings and even to sell them to the third parties. In this sense, it has brought about not only a high risk of violation of property rights for the owners of historic buildings, but also the rise of gentrification (Dinçer, 2009a). Finally, according to the law, local authorities are only required to inform the interested parties about the URPs when necessary, rather than facilitating effective participation of all the actual stakeholders of such projects.

The Decree Law No. 648 which was enacted in 2011 to establish the Ministry of Environment and Urbanization has made significant changes in the Law No. 2863. The article No. 42 which enforced local authorities to prepare conservation-led development plans within two years following the designation of conservation sites was changed by the Decree Law and this time period was extended to three years. According to the law, when necessary, this time period can be extended as longer as possible by the RCCs. This amendment creates the possibility of not only turning the temporary conservation and use conditions during the transition period (the period when the plans are prepared) into permanent ones, but also the possibility of taking some actions in designated conservation sites without conservation-led development plans. The Decree has also narrowed down the jurisdiction of RCCs. For the issues that cannot be resolved at local levels, the Decree has given the authority of resolving these problems to HCCCNA which are to be made up of professionals and experts appointed by the Ministry of

Culture and Tourism. The Decree Law also changed all the members of RCCs and appointed new ones. Thus, by removing the autonomy of RCCs, it has shown the government's intention towards the centralization of planning power on such sites. The Decree has also limited the opportunities for NGOs and professional chambers to participate to the RCCs' meetings. All in all, the recent legislations have represented a radical move away from the decentralization which has evolved until the mid-2000s, and they therefore have brought forward the centralization of control power on conservation sites in cities.

4. Current challenges of planning conservation sites

Heritage conservation, first and foremost, requires a carefully constructed legal framework that clarifies responsibilities of public authorities, rights of private owners, types of plans in heritages and control mechanisms. There are currently two levels of development plans in Turkey which create significant conflicts and challenges against effective heritage conservation: 'Environmental plans' (*çevre düzeni planları*) which are the upper-scale strategy and vision plans at the regional or provincial scales, and 'development plans' (*imar planları*) which focus on the city level development strategies and planning actions.

Regarding the upper level spatial plans, the authorities responsible for preparing general spatial plans are the Ministry of Environment and Urbanization, Provincial Special Administrations and/or Greater Municipalities. They are prepared at the scales of 1/100 000, 1/50 000 and 1/25 000 depending on the size of the settlement. While the Ministry is responsible for the preparation of 'strategic spatial plans' and 'environmental plans'; provincial special administrations and greater municipalities are in charge of preparing 'provincial environmental plans' (*il çevre düzeni planı*) (Ersoy, 2011).

Theoretically speaking, the plans at these scales are ***structure plans*** where general strategic lines for spatial development are indicated. Nevertheless, the distinctions between the mentioned plan types are not clarified in the legislation. The Urban Development Law defines 'environmental plan' as "the plan that determines housing, industry, agriculture, tourism, transportation, etc with respect to national and regional planning decisions". As one can note, this definition does not include any statement on the conservation of cultural and natural heritage. Moreover, the law on the provincial environmental plan only defines the responsible authorities for the preparation of this plan, and does not describe ***what a provincial environmental plan is*** and ***what it should contain***. Regarding heritage conservation, 1) the multiplicity of responsible institutions with contradicting jurisdictions, 2) more than one plan type with similar aims, and 3) negligence of the conservation dimension in upper level planning lead to contradictions and inefficiencies in practice. Unlike other territories, heritage sites (cultural or natural) are places for which even further authorities are responsible and further laws are employed, contributing to the inefficiencies of conservation efforts. (Ersoy, 2011)

As far as local territorial development plans are concerned, municipalities are responsible for preparing settlement plans in accordance with the upper level plans. Settlement plans can also be accepted as strategic land-use plans that guide the preparation of the implementation plans (at the scale of 1/1000). How it is differentiated from the above group lies in its language: 1/5000 plan displays land-uses with proper forms, densities and coordinates.

As far as urban heritage sites are concerned, there are three more plan/project types, namely *conservation-led development plans, urban transformation and development projects (UTDP)* and *urban renewal projects (URP)* generally prepared at the scales of 1/5000 and 1/1000. The very name of the conservation plan in the Turkish context implies the urban development aspect in these areas together with their conservation. The Law No. 5226 defines the conservation-led development plan as the one "...prepared to improve the socio-economic conditions of households and shopkeepers; to create employment and surplus; to define conservation principles, conditions for use and limitations for construction; to show open space system, pedestrian and vehicle circulation, densities, financial aspects; to include a participatory land management model, with respect to the archaeological, historical, natural, architectural, demographical, cultural, socio-economic, ownership and building data". The Laws No. 5393 and No. 5366 however enable municipalities to prepare, approve and implement UTDPs or URPs on the designated historic conservation sites with no reference to either upper-scale plans or conservation-led development plans. The lack of hierarchical integration between these plans and projects is another factor for the inefficiencies and ineffectiveness of conservation efforts.

European Urban Charter necessitates a carefully constructed legal framework for an effective conservation strategy. In the Turkish context, the legislation defines numerous plan types that directly or indirectly related to heritage sites together with multiple authorities. An inner city urban heritage is under the jurisdiction of the Ministry of Environment and Urbanization, Ministry of Culture and Tourism, the relevant municipality; and is bound to many territorial laws and regulations. If the heritage site is a coastal one, the contradictions become even more serious since the number of authorities and laws increase.

The impracticalities caused by this situation can only be overcome through a careful revision of legislation: Under the leadership of public sector, one single upper level strategic spatial plan (the scale would be central to the settlement's particular conditions) and one single strategic conservation plan should be prepared (which should be followed by the detailed implementation plan) through the collaboration of relevant stakeholders. The three intervention types mentioned above (1) no-go areas, 2) sensitive areas, and 3) opportunity areas) should be carefully defined in these two plans. Principles for planning and design, and conservation strategies in these areas should be clarified together with the duties of relevant stakeholders. Otherwise they would not have the power to guide the implementation plans and lead to conflicting situations in practice.

5. Conclusions

The legal, institutional and organizational structure of urban conservation which was evolved over the last century has created a very complicated, patchy and messy system which includes conflicts between the legislations, agencies and jurisdictions of authorities. Especially the legislative and institutional arrangements which have come into effect over the last 30 years have not only increased the number of state agencies with planning and control powers on historic heritage sites, but they also have exacerbated the conflicting jurisdictions among these authorized public agencies at both central and local governments' levels. There is no collaborative and cooperative organization among these agencies, neither is there working attitude between them. This inevitably leads to the development of contradictory policy decisions on conservation sites.

Unfortunately there is no integrated and comprehensive strategy for the conservation of historic and cultural heritage at the national level, either. This also causes the development of piecemeal decisions on the historic heritage sites, depending on the level of knowledge and awareness of political authority in power towards cultural and historic heritage conservation. At local level, despite the legal regulations which set up new specialist offices (KUDEB) within local authorities' organizations, professionals and experts employed by municipalities with insufficient knowledge and experience in urban conservation still put further obstacles against the conservation efforts of heritage sites. Likewise, at local levels, with their diminishing autonomy, RCCs have become to be operated under the control of central government. Especially those that are set up for the designated renewal areas have been turned into the councils which approve the market-driven and profit-oriented URPs of the municipalities. The participation of NGOs to the planning process of conservation sites through the recent legislations has been limited, as well. Inadequate financial resources, grant and funding programs from public and private sectors for the conservation and regular maintenance of historic heritage is another field of challenge against the conservation of historic heritage. Despite the new state-funds and grants, and tax exemptions, high cost of restoration and conservation projects is still one of the major challenges for private property owners of historic buildings and local authorities. Rather than expecting property owners of historic properties and local authorities to pay the cost of conservation of historic and cultural heritage, all society should contribute to finance conservation projects. This requires the invention of new financial models and means for urban conservation.

Any attempt for the conservation of urban heritage is multi-faceted: Many practical cases all around the world prove that conservation is not simply a question of defining the boundaries of a historically significant area. Nor can it be limited to the restoration/rehabilitation of the historical beings within a defined area. Conservation of cultural heritage –ranging from archaeological beings to the 20th-century modern architectural/urban settings—is a rather complicated field with its physical, social, economic, environmental and political dimensions. When the heritage area under

concern is a living urban environment, it becomes even more complicated, since the area to be intervened is an integral part of the contemporary urban life. People live, work, go to school, use public spaces and have their leisure activities there. An integrated and sustainable conservation approach that reconciles the conservation and regeneration policies with community policies is indispensable in Turkey.

The legislative regulations which have come into effect over the last three decades brought about two parallel planning processes for historic sites, one of which has developed on the integrated and sustainable conservation planning approaches. This conservation-led planning system seeks to focus on the multi-dimensional aspects of conservation sites, while introducing the collaborative and participatory planning into the conservation planning, underlining the need for financial, organizational and management models for the planning process of conservation sites. It introduces the concepts of 'management area' and 'management plan' for conservation sites, suggests the identification of the 'action areas' and 'priorities' of the conservation-led development plans, and puts local community and stakeholders participation at the forefront of the conservation planning process.

The other planning system has been developed on either an 'urban renewal model or an 'urban transformation and development' model. Along with the neo-liberal policies which have increasingly promoted historic heritage sites as means of capital accumulation and instruments of maximizing urban rents, both models have put solely a strong emphasis on the economic exchange value of historic heritage rather than its cultural and heritage values. Within this understanding of urban conservation, historic heritage sites have not only been recognized as the assets to be protected for future generation, but as the spaces to be 'transformed and developed' or 'renewed' for their short-term economic benefits. This understanding has not only been significantly threatening historic sites in cities, but it has also resulted in planning actions conflicting with the public interests, as well as the interests of local communities of such historic sites.

The property-led transformation and renewal model shaped by this planning system has brought about a physical and economic renewal and transformation while undermining historic, cultural, social, environmental and ecological aspects of renewal and transformation. In recently launched urban renewal projects (such as Tarlabaşı, Sulukule), it is possible to trace the deliberate intention to protect the historic atmosphere of such sites, although the major motivation behind these projects unfortunately has not been a sensitive conservation of historic and cultural values that these places have possessed. In some projects, the facades of historic buildings were kept while the rest of the buildings were knocked down and were rebuilt to be used for residential, office or tourism purposes. In some projects, all historic buildings were torn down and their replicas were reconstructed (such as Tarlabaşı URP). This newly proliferating approach in Turkey has not only led to de-contextualize the historic sites by stripping off their historic, cultural, political and social values and contexts they have been embedded, it has also turned them into

mere ‘commodities’ to be sold and bought in property markets and ‘commercialized entities’. It is currently crucial to realize that cultural and historic heritage is not a renewable resource. To conserve and protect them for the present and future generations are one of the major challenges of not only the government agencies but also all members of the society.

The planning system based on ‘urban renewal’ or ‘urban transformation and development’ models brought about piecemeal and area-based project planning which has replaced integrated and comprehensive conservation approach to historic sites. This planning system, based on ‘project development’, has resulted in a new and flexible planning model to be easily developed, redeveloped or revised according to the demands and needs of private sectors and capitals. The legislations on ‘urban renewal’ or ‘urban transformation and development’ have not only provided the legal basis for the violation of the property rights of private owners, but they have also empowered local authorities and TOKI to restructure historic conservation sites in physical, economical and social terms. In this sense, the displacement of local communities living in these areas and their replacement with prosperous social groups are generally the inevitable and expected outcomes of these legislations. The relocation of poor vulnerable communities from their localities without addressing their problems and needs does not only strengthen gentrification, social segregation and exclusion in Turkish cities, but also raises significant concerns on how sustainable urban conservation and regeneration can be achieved in such historic heritage sites. Therefore, one of the major challenges for the local government appears to find ways of carrying out a sensitive historic conservation and sustainable community developments for the long-term success of these historic quarters of Turkish cities (such as, maintaining civil peace, raising standards in education, offering alternative affordable housing opportunities for poor dwellers, ensuring cooperative working between health and social services, providing permanent employment opportunities and improving environmental quality).

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Table 1 Evolution of legal, institutional, organizational and financial aspects of urban conservation in Turkey from the mid-19th century to 2012

Period of time	***Legislations related to conservation***	***Institutional structure***	***Conservation authorities and responsibilities***	***Finance for conservation***	***Conservation approach (attitudes towards conservation)***
Ottoman Period 1850 – 1920	*Ancient Monument Regulations of 1869,1874,1884,1906:* defined historic artifacts to be preserved established rules and regulations for archaeological excavations banned the export of archeological artifacts discovered throughout the archaeological excavations set the regulations for the archaeological artifacts which were to be found through excavations to be registered as state property.	▪ Opening of the first imperial archaeological museum *(Müze-i Hümayun)* ▪ Establishment of the *Ministry of Foundations* to preserve and carry out the regular maintenance of historic artifacts owned by the foundations ▪ Establishment of the *Conservation Committee of Ancient Artifacts* as the agency responsible for the implementation of conservation laws.	Conservation of all historic artifacts and monuments were under the control of central government agencies	▪ Self-funding for the excavation undertaken with the Sultan's permission by the private agencies / archaeologists ▪ State funding for the excavation undertaken by the Ottoman government	▪ Preserving historic artifacts individually ▪ Preservation of the historic artifacts of state and foundations, such as castles, city walls, palaces, theatres, bridges, churches, monasteries, synagogues, rather than urban fabrics and neighborhoods with historic characteristics ▪ Both the public and local governments had a low level of awareness towards historic and cultural heritage

Period of time	*Legislations related to conservation*	*Institutional structure*	*Conservation authorities and responsibilities*	*Finance for conservation*	*Conservation approach (attitudes towards conservation)*
1920 -1950	▪ *Ancient Monument Regulations of 1906* ▪ *1930 Municipality Law* ▪ *1933 Building and Roads Law*	▪ *Conservation Committee of Ancient Artifacts* as the major state agency responsible for conservation ▪ Establishment of the *Directorate of Turkish Ancient Artifacts* in 1920 (named the *Directorate of Culture* in 1921) within the organization of the Ministry of Education ▪ Establishment of Conservation Commission of Monument in 1933 to document the historic heritage of the country ▪ Establishment of the *Directorate General for Foundations* responsible for the regular maintenance of historic buildings belonged to the foundations in 1935 ▪ Establishment of the *Directorate General for Ancient Artifacts and Museums* in 1944	▪ Conservation of the majority of historic heritage was the responsibility of the central government agencies *(MoE, Directorate General for Foundations, Turkish Parliament)* ▪ Municipalities were responsible for the conservation and regular maintenance of castles, towers and graveyards	▪ Self-funding for the excavation undertaken with the Sultan's permission by the private agencies / archaeologists ▪ State funding for the excavation undertaken by the Ottoman government ▪ Public funds allocated for the conservation of historic heritage within the total budget of the Parliament, MoE, Directorate General for Foundations and the Ministry of Public Works was 0.12% of the total national budget ▪ No subsidy for the conservation costs of historic buildings owned by private individuals/agencies (although this was a compulsory legal duty of private individuals / agencies)	▪ Preserving historic artifacts individually ▪ Preservation of the historic artifacts of state and foundations, such as castles, city walls, palaces, theatres, bridges, churches, monasteries, synagogues, rather than urban fabrics and neighborhoods with historic characteristics ▪ Both the public and local governments had a low level of awareness towards historic and cultural heritage

Period of time	*Legislations related to conservation*	*Institutional structure*	*Conservation authorities and responsibilities*	*Finance for conservation*	*Conservation approach (attitudes towards conservation)*
1950 -1980	▪ *The 1957 Development Law No. 6785* ▪ *The 1972 Development Law No. 1605* ▪ *The 1973 Law of Historic Artifacts No. 1710*	▪ The establishment of the *High Council for the Historic Real-Estates, Artifacts and Monuments* in 1951 ▪ The establishment of local departments of the *Directorate General for Ancient Artifacts and Museums* in cities	▪ Conservation of the majority of historic heritage was the responsibility of the central government agencies *(MoE, Directorate General for Foundations, Turkish Parliament)* ▪ Limited power, funding and experts of municipalities in the field of conservation	▪ Tax exemptions for private property owners of historic listed buildings to a limited extent ▪ Technical and financial supports from the state to private individuals for the restoration of their historic properties (*by the Law No. 1710*)	▪ Introduction of the notion of '*conservation sites*' defined as '*historic*', '*archaeological*' and '*natural*' ▪ Preparing conservation plans by local authorities for the designated historic and archaeological sites became a legal requirement ▪ Legal requirements for conservation sites were mostly seen as obstacles against urban development by municipalities and private property owners

Period of time	*Legislations related to conservation*	*Institutional structure*	*Conservation authorities and responsibilities*	*Finance for conservation*	*Conservation approach (attitudes towards conservation)*
1980 - 2012	▪ *The 1982 Constitution* ▪ *The Law No. 2863 (The Conservation Law of Cultural and Natural Assets) of 1983* ▪ *The laws which have made amendments on the Law No. 2863:* *The Law No. 3386 of 1987* *The Law No. 5226 of 2004* *The Law No. 5571 of 2006* *The Law No. 5728 of 2008* *The Law No. 5835 of 2099* *The Decree Law No. 648 of 2011* ▪ *The Law no. 5216 (The Metropolitan Municipality Law) of 2004* ▪ *The Law No. 5391 (The Provincial Administration Law) of 2004* ▪ *The Law No. 5393 (The Municipality Law) of 2005* ▪ *The Law No 5366 (The Conservation Law of Deteriorated Immovable Historic and Cultural Assets by Renewal and their Utilization) of 2005*	▪ The abolishment of *High Council for the Historic Real-Estates, Artifacts and Monuments* and its replacement with *Higher Conservation Council of Cultural and Natural Assets and Regional Conservation Councils* within the organization of the Ministry of Culture and Tourism ▪ *The Directorate General for Ancient Artifacts and Museums* within the organization of the Prime Ministry between 1972 and 1989 was replaced by the *Directorate General of Scheduled Monuments and Museums and the Directorate General of Cultural and Natural Artifacts* under the Ministry of Culture in 1989 ▪ Increasing number of state agencies with the planning control on historic heritage sites (TOKI, Privatization Authority, Ministry of Culture and Tourism, Ministry of Urban Development and Settlements, Directorate General of State Railway, etc.) ▪ Establishment of the Ministry of Environment and Urbanism by replacing the Ministry of Urban Development and Settlement	▪ Decentralization of power on conservation from the central government agencies to local authorities throughout the 1980s and 2000s ▪ Increasing jurisdictions of local governments on conservation planning, as well as the planning of UTDS and URS ▪ Beside the decentralization policies, some intentions towards the centralization of planning power on conservation sites, UTDS and URS throughout the 2000s by increasing jurisdiction of TOKI, Privatization Authority, Ministry of Culture and Tourism, Ministry of Environment and Urbanism ▪ Increasing central government control on the Higher Conservation Council of Cultural and Natural Assets and Regional Conservation Councils by the Decree Law No. 648 of 2011	▪ New funding by the Law No. 5226 - 10% of total property tax allocated only for the conservation of historic environments in cities ▪ New credit options of TOKI for private property owners with low interest rates ▪ Trade-offs ▪ Grants provided by the Ministry of Culture and Tourism ▪ Tax exemptions for private property owners of historic listed buildings ▪ Despite the new funding means for conservation projects, they are still inadequate	▪ Introduction of *'conservation-led development planning'* which has become the compulsory duty of local governments ▪ Increasing awareness towards historic and cultural heritage among society ▪ Rising importance of historic areas in cities because of their economic exchange value rather than their heritage values ▪ Two parallel planning systems being in effect on conservation sites: a *conservation-led planning* procedure (under the control of the Laws No. 2863 and 5226) developed on the integrated and sustainable conservation planning approaches and the *planning procedures for urban transformation and development sites and urban renewal sites* under the Laws No. 5393 and 5366) ▪ Centralized control on urban conservation sites (by the Decree Law No. 648)

DEMOCRATIC ASSESSMENT OF COLLABORATIVE PLANNING PRACTICES

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Abstract

Over the past decades, collaborative planning as the communicative and interactive nature of planning practices has been increasingly emphasized (Forester, 1989, Friedmann, 1973, Healy, 1992, Innes, 1996). Nevertheless the evaluation of collaborative planning practice is not elaborated extensively yet (Laurian and Shaw, 2009). Some efforts have been spent on devising comprehensive practical assessment frameworks (Frame et al., 2004, Innes and Booher, 1999, Margerum, 2002b, Moote et al., 1997), but they all ignore specific democratic values essential for any collaborative practice as part of urban democracy (Agger and Loefgren (2008).

Agger and Loefgren (2008) tried to fill this gap by suggesting a conceptual structure called "Democratic Assessment Framework". To be applicable in practice, the framework however lacks well-defined criteria. This study therefore aims at defining a comprehensive set of criteria for a framework that enables planners to assess to what extent different phases of collaboration (input, process and outcome) meet democratic norms. The defined criteria were used to evaluate different cases and types of collaboration (decision-making and consultation). The result reveals that with the criteria the framework gives a good overview of the success or failure of the practice and its reasons. As a complementary aspect, defining a set of qualitative explanatory criteria can further explain output of evaluation process by explaining the context in which the practice is happening.

1. Introduction

Collaborative planning was introduced during 1980s in response to failures of technocratic planning which was predicated on independent experts and scientific analysis. Relying on critical theory of Jürgen Habermas, this new approach was built on the idea of public involvement in planning. The fundamental assumption was that stakeholders with different preferences can come up with shared goal and principles through unconstrained discussion (Pellizzoni, 2003). In practice this approach seeks to bring together major stakeholders to address controversial issues (Margerum, 2002b) in order to come up with more innovative solutions.

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Despite considerable attention given to public participation in planning practice and research, the field of collaborative planning evaluation is still behind. Published evaluations of participation are limited and they mostly rely on few case studies (Laurian and Shaw, 2009). Planning professionals and academics lack definitions and criteria of success in participation as well as methods to assess participatory processes. Hence for devising any assessment framework it is important to explore ideals of urban democracy in theory and practice.

2. Urban Democracy in Theory

In urban planning context understanding and explaining the democratic character of urban transformation processes and the power relations that lie in such processes continue to challenge planning theorists and practitioners. Two dominant theoretical frames are commonly used to explain and understand democracy in urban governance processes: communicative planning theory and Mouffe's radical agonistic pluralism which are both predicated on deliberative democracy notion (Bond, 2011).

The term communicative planning is used to refer to a broad and varied range of concepts including collaborative, deliberative and argumentative planning. This concept was introduced in 1960s and later was developed by many planners such as Patsy Healy, Judith Innes and others. Habermas theory of communicative action became basis for many of these works. In communicative approach it is assumed that the most democratic way of decision-making in planning practices is consensus oriented debate between all the relevant stakeholders (Bond, 2011).

Reaching such consensus require a communicatively rational process and appropriate tools and techniques. Focusing on reaching consensus will also influence the process and tools used in the practice. It will overemphasize the importance of key communicative events in planning, such as public meetings and consequently fails to capture the importance of non-communicative processes and action (Friedmann, 1973). It is believed that Habermas's efforts to achieve more rationality and democracy draw attention away from critical attention to relations of power (Flyvbjerg, 2002).

An alternative approach to urban democracy is the agonistic theory. According to Hillier (2003) in planning practices, making a decision requires accommodating for some values against others. In this sense consensus cannot exists without control and exclusion of some ideas. So instead of trying to omit differences in conceptions and values of participants in communicative theory, agonistic approach tries to values them as driver for reaching better decisions (Flyvbjerg, 1998, Flyvbjerg, 2002, Gunder, 2003, Hillier, 2003).

The Foucauldian approach criticizes existing planning tools and processes, suggesting the need for a power-sensitised understanding of the nature of knowledge, rationality, spatiality, and inclusivity in planning theory. According to this approach effective communicative planning comprises an impossible set of tasks for the planner to successfully achieve within the real world (Flyvbjerg, 1998, Gunder, 2003, Hillier, 2002). Hence as Forester (1989) express the planner responsibility is to "work toward the correction of needless distortions, some systematic and some not, that disable, mystify, distract and mislead others".

Adopting an agonistic approach to urban democracy and Dahl's theory of democracy (Dahl, 2009), the main standpoints in this study is considering the ideal practice of collaboration as a process which does not seek complete consensus, instead it should be able to unmasked power relations and as an outcome it should give all participants the better insight of how existing power relations are. On the other hand, the process should be supported by urban or general laws as part of its accountability and effectiveness.

3. Urban Democracy in Practice

Communicative theory was introduced to the planning domain in 1966 with the work of Godschalk and Mill (1966). They believed that "meaningful and effective planning must be based on a two way communication flow between the public and the planning agency" (South Manchester Regeneration Team, 2010). Although the terminologies have been changed during decades, "planning as collaborative process" is still the main element of planning domain (Margerum, 2002a) and over the past several decades, it has been increasingly emphasized as communicative and interactive nature of planning practice (Forester, 1989, Friedmann, 1973, Healey, 1992, Innes, 1996). Adopting different approaches to urban democracy, planners have designed different tools and processes for engaging all affected parties in urban projects. These processes vary greatly in their aim, approach, tools and responsibilities and roles of those involved in the process. Therefore for developing any framework for assessing these practices, understanding the different components of these practices is essential.

To better practically reach theoretical ideals of participatory approaches, different guidelines and principles have been developed in governance and planning fields. Although there are some differences in suggested guidelines, there exists a huge overlap between concerns of different practices. Specific characteristics of context, such as social, political and cultural backgrounds, can partially explain these differences. Therefore in reviewing and analysing different guidelines it's important to have in mind how context can influence details of principles and guidelines.

Although in some cases there exist some guidelines for monitoring and preparation of the process of participation, most of the guidelines and principles are focused on the appropriateness of the process of collaboration itself. This can be considered as

one of the main limitation of existing guidelines for collaborative practices. For the purpose of this study it is necessary to classify different guidelines and principles based on each phase and step of collaboration. Therefore it adopts the three step structure proposed by Gunton (2010) being input, process and outcome.

4. Urban Democracy Assessment

Some efforts have been made to develop frameworks for assessing small scale urban democracy as public participation. According to Gunton (2010) evaluation of collaborative practices is so challenging due to great number of "confounding variables" and absence of consensus on the variable to be used.

Innes and Booher (1999) devised their framework for evaluation based on three sources being the results of theirs and others' research and practice in consensus building, the emerging ideas of complexity science and the concept of communicative rationality. Based on complexity perspective which suggests that a high quality consensus building process in an uncertain and changing society should be self-organizing and evolving, good at gathering information from the environment, and effective at making connections among participants (Innes and Booher, 1999). Using this concept they conclude that consensus building should help a community to learn and be creative. They discuss that for the framework to be practical it needs a set of criteria for process and outcome of collaborative practice.

Margerum (2002b) studied existing frameworks for consensus building in land use planning practices. According to him the important factor influencing the effectiveness of collaborative planning is the quality of the process. Reviewing existing frameworks he has used following indicators as suitable indicators for evaluation of participatory land use planning practices: "Include the full range of stakeholders", "Include public participation and involvement", "Support and facilitate the process", "Establish a common problem definition or shared task", "Organize the proves in terms of ground rules, agendas, etc.", "Engage participants, jointly search information, and invent new options", and "Reach agreement through consensus".

Considering all the discussed frameworks Frame et al. (2004) introduced one of the most comprehensive frameworks and criteria for evaluating collaborative practices. The framework consists of 14 process criteria, which define desirable features of process design and 11 outcome criteria, which define desirable outcome objectives. For using this framework in different cases he had done a comprehensive survey of participants in the collaborative planning process and a review of all relevant planning documents (Frame et al., 2004).

Although most of the criteria which are defined in these frameworks are helpful for using in any context, there are some limitations in nature of criteria and applying the framework to practice. In most of the evaluation studies done in urban planning or

environmental planning field, the main focus is on process and outcome of collaboration. Although they have mentioned some criteria for pre-negotiation phase most of the time, they have overlooked the importance of considering all three collaboration phases. On the other hand the defined criteria are not as specific as they should be for being used in practice. So there is a need for more comprehensive framework which covers all collaboration phases and provides well-defined criteria.

5. The Democratic Assessment Framework

Considering collaborative planning as part of urban democracy and comparing main components of frameworks for assessing democratic nature of governance and collaborative practices, one can conclude that the existing frameworks used in planning context, have not considered certain democratic components (Agger and Löfgren, 2008). Although there is a huge overlap between existing frameworks in planning context and democratic governance, there is a need for reconsidering components of evaluation frameworks. Agger and Lofgren (2008) have come up with five criteria for developing their framework. These criteria are: "access, public deliberation, democratic adaptiveness, accountability, the development of democratic identities (political identity)". Agger and Lofgren give some guiding questions which reflect the main points to be discussed in each norm in each phase. The output of their study can be considered as conceptual basis for a comprehensive assessment framework for collaborative practices.

To be used practically for assessing collaborative practices, this conceptual framework needs to be elaborated. All the broad concepts which are introduced in this framework need to be investigated in more details in a way that they can be related to real practices of collaboration. Then it would be possible to reflect these concepts in a number of criteria by which different aspects of collaborative practices can be evaluated. For defining the criteria, concepts and evaluation methods can be used from many different fields such as large scale urban governance, urban democracy and also ideals of collaborative planning practices.

5.1 How to Make a Practical Democratic Assessment Framework

Three main sources are used to define criteria: Literature on collaborative planning and its ideals, existing principles and guidelines for effective participatory practices and existing frameworks for evaluation of large scale governance and collaborative planning. So in the first phase of this study, extensive literature review was done to define all the possible appropriate criteria related to democratic nature of collaborative planning. Then criteria were categorized based on the suggested structure of democratic assessment framework. In order to make criteria more understandable and measurable, a set of sub-criteria were suggested for each criterion. The summary of the defined criteria is shown in table 1.

Table 1: Democratic Assessment Framework Criteria

	INPUT	PROCESS	OUTCOME
ACCESS	• Information on project • Information on stakeholders • Appropriateness of channels • Citizen's right to the city	• Information on project • Quality of provided data • Appropriateness of chosen tools for participation	• Accessibility of outcome • Fair distribution of costs and benefits
POLITICAL IDENTITY	• Existence of social institutes in city	• Contribution to empowerment of different social groups in the process	• Contribution to empowerment of different social groups
PUBLIC DELIBERATION	• Inclusive targeting of stakeholders	• Inclusiveness of the process • Equal chances and resources for all stakeholders	• Public monitoring of outcome of the project • Compatibility of final plan with agreed outcomes
ADAPTIVENESS	• Flexibility of project alternatives	• Flexibility of process and the chosen tool	• Flexibility of plans for implementation
ACCOUNTABILITY	• Public trust in urban authorities	• Transparency of process and chosen tool	• Ownership of produced maps and data • Sustainability of participatory practices

Due to the complexity of collaborative practices and importance of specific characteristics of context in which collaboration is happening, it is impossible to evaluate different practices using single type of data and criteria. Hence an embedded type of integration of quantitative and qualitative data is adopted. Furthermore this approach will reduce possible bias of an evaluator in the assessment framework. This way, using the same criteria, two different evaluators can come up with the same results.

In this framework evaluating criteria will be in a form of checklist in which existence or non-existence of certain democratic qualities of collaborative practices will be evaluated (see annex 1). After defining all the possible criteria and sub-criteria, the maximum score a project can achieve in each criterion will be defined based on measurement of its sub-criteria. Beside this binary measurement there are also some quantitative criteria which directly are measured (such as number of people who attend the practice out of maximum number of possible attendants) and the result is combined in the score of criterion. To be able to better describe outcome of this checklist, certain qualities of context have been studied qualitatively. Also to be able to judge on existence or non-existence of certain criteria in the practice qualitative analysis have been performed. Using different tools such as content analysis, document review and interviews with real and potential participants of collaborative

practice, existence and non-existence of democratic values are evaluated. For qualitative analysis direct observation, interview and document analysis have been performed.

The final score of the project in each phase is presented by a radar chart including five points which represent five democratic norms in each phase. Since the number of criteria is not equal in different norms, scores are standardized to enable the user to compare performance of the project in different norms in the final radar chart. The criteria in each phase are defined in a way that there is no correlation between different norms within a single phase. But based on existing literature it is assumed that a combination of two norms in a phase may affect other norms in following phases.

6. Case studies

This framework was applied to three case studies. Case selection was based on aim, scale, tool and specific context of each project. All cases are similar in their scale as they are all plans for neighbourhood. The other important factor in case selection was whether the project is completed or not. Since the framework contains the outcome phase, the chosen project should be already completed and have approved or implemented plans. Two cases were chosen in England and one case in the Netherlands.

Chorlton Local Action Plan: City of Manchester has a long history of practicing collaborative planning. In Manchester Partnership's Community Engagement Strategy for 2011-15 typologies of different participation practices have been defined. From different typologies two most commonly used in urban planning context have been chosen for this study. Developing action plans for different neighborhoods (in this study Chorlton neighborhood) is part of consulting type of participation. Chorlton District Centre is one of the strongest and most distinctive district centres in Manchester. Therefore a plan was developed for its centre. Along with the plan public consultation was carried out for 3 months and its findings was used for refining the plan. In this program gathered feedback on the strengths, challenges and draft key principles in order to form a foundation for the District Centre Action Plan. Survey results were obtained from 1,003 completed questionnaires and targeted focus group feedback (South Manchester Regeneration Team, 2010).

'U Decide Events': Apart from regular participatory practices for preparing urban plans, the city of Manchester is experiencing another type of public engagement which is called 'Participatory Budgeting'. According to the developed toolkit (Manchester City Council, 2009) for carrying out such project, Participatory Budgeting (PB) is a "mechanism of community engagement to devolve power or influence of public budgets to the community at a local level." In Manchester council has some grants (CASH grant) dedicated to each neighbourhood. So Manchester

Councillors, Ward Co-ordinators, and Support Officers have been encouraged to use these money to engage residents and community groups to discuss and vote on spending priorities. This has been done through holding "U Decide" Events. Among practiced participatory budgeting, Chorlton and Whalley Range neighbourhood were the most successful ones (Manchester City Council, 2011, Manchester City Council, 2010).

Roombeek Redevelopment Plan: With its 154,000 inhabitants, Enschede is one of the most important cities in the east of the Netherlands (Gideon Consult bv., 2008). "In 2000, a major explosion in a fireworks storage depot destroyed the entire urban district of Roombeek in the city. More than 900 people were injured, well over 1,500 citizens were displaced because their homes were destroyed, and more than 200 companies were forced to relocate" (Denters and Klok, 2009). Weeks after the disaster intensive participation was initiated among all groups concerned: young people, older people, tenants, home owners, migrants, entrepreneurs, building corporations and schools. Simple question were asked from the residents: 'what do you want to keep – or bring back – from the former neighbourhood or district, what must be different, and what is important?' In the end, more than 3,000 wishes, suggestions and ideas were received (Gideon Consult bv., 2008).

7. Results

Adding all the criteria and sub-criteria scores in each norm and phase, the overall performance of projects is evaluated. The maximum possible scores are also calculated by adding maximum possible scores of each criterion in different phases and norms.

Chorlton Action Plan: As it is shown in radar charts (figure 1), in the input phase this project meets democratic values quite well except for accountability. This is mostly because of the unsuccessful participatory practices that have previously happened in this neighbourhood. The project though has not fulfilled ideals of democratic process of collaboration. Avoiding conflicts is the main cause of such low score. In the outcome phase, although in the public deliberation and political identity norms, project has scored low, the overall outcome of the negotiation phase and the project is as democratic as the input phase.

Although different stakeholders had a quite well access to information about the project and they were invited to participate (high score in public deliberation), the actual participation in the process (public deliberation score in process phase) is not high. One of the factors that explain this low score is the lack of trust among public in urban local authorities which is reflected in the very low score of accountability norm in the input phase. On the other hand high score of political identity in input phase shows that there are a lot of opportunities for collaborative practices but with low amount of actual participation in the process and low accountability score in the input phase, the project was not successful in using this potential or to enhance it.

'U Decide' Events: Since these events directly engaging public in decision making process, they seemed to be more democratic than previous practices. The results shows that 'U Decide' event were not successful in meeting democratic values in the input phase (figure 2). Inability of the project in identifying stakeholders, strict timing and plan for participation and number of previous unsuccessful participatory project lead to low score of these practices in input phase.

Despite insufficient stakeholder analysis, due to good publicity and high potential of participation (reflected in high political identity in input phase) in both wards, many people actually participate (high score in public deliberation) and that leads to more collaboration between different community groups in the process (high score of political identity in process phase).The design of the event in which decision making process happened once without any chance of modification, leads to 0 score in adaptiveness in process phase. In both prior and during the process, people have quite well access to all the necessary information for decision making. This can be one of the reasons that the actual participation is relatively higher than what it was planned. Compared to the Chorlton Action Plan case, these projects were more successful in enhancing political identity of the community.

The outcome of these practices highly meets democratic ideals of collaborative practices. The type of the practices which is decision making by public and the scale of the decisions allow people to be more involved in outcome of the project and it increases accountability of the outcomes. Since in most of the chosen projects public are responsible for implementation, people get more informed about different social events and consequently get more involved in them.

Roombeek Redevelopment: This case is considered as one of the successful participatory practices in the Netherlands and Europe in many studies. The specific context of this case was so influential in success of this project. The post disaster situation and the urgent need for the redevelopment plan and compensating people's loss were factors which enforce authorities to involve people in the planning and decision making process from very early stages. The stakeholders were mostly former residents of the neighbourhood. So certain group of people with specific aim gathered together and planned for future of their neighbourhood. This can explain high public deliberation in process phase, adaptiveness of the input and high accountability in outcome phase.

The chosen method for informing people which was sending personal invitations for former residents leads to high public deliberation in the process phase (figure 3). Also due to high sensibility of the issue for city authorities and national authorities, full access to necessary information was given to all possible stakeholders prior and during the process. Also the planning of participatory process was so flexible because public were free to choose their desired way of participation but when the process was planned, during the process the methods and meeting was not so flexible

due to limited time for deciding on the final plan. That is why the adaptiveness in the process phase is low.

With high access to information, high accountability of the process and the fact that people were free to express their ideas, the outcomes are highly accountable. Also the process has helped the residents to strengthen their community activities. Although this practice is special in many aspects it can be considered as a successful practice in meeting democratic values.

Figure 3: Radar Charts for Chorlton Action Plan Assessment

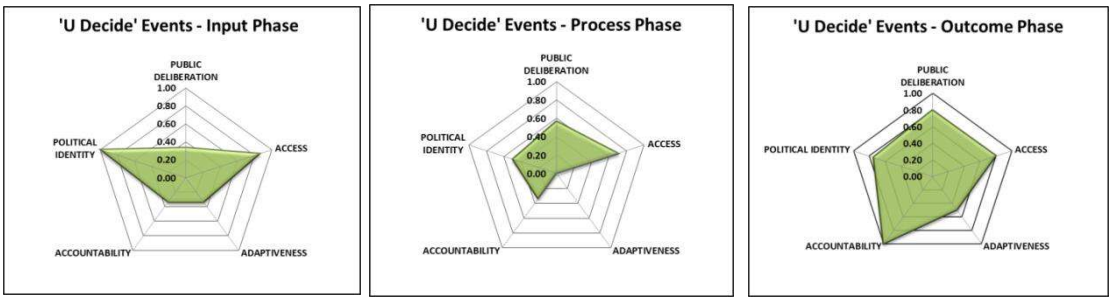

Figure 3: Radar Charts for U Decide Events Assessment

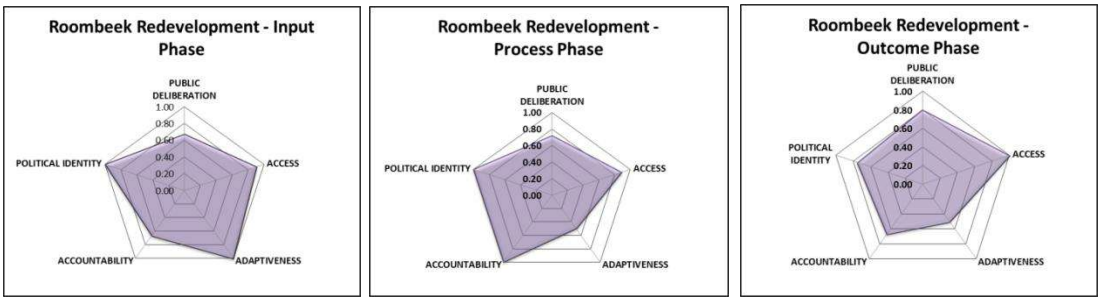

Figure 3: Radar Charts for Roombeek Redevelopment Assessment

8. Is a Democratic Assessment Framework Useful?

Applying the democratic assessment framework in different cases reveals that compared to other existing evaluation tools, this framework can more comprehensibly evaluate the democratic nature of collaboration practices. Its structure with five norms and considering three phases enables the user to define which particular deficiency in input, process and outcome, has led to success or

failure of the practice in meeting democratic values. The overall output of this framework which is radar charts and detail score of the projects in different criteria, gives an overview of democratic nature of the practice and how they have changed during the phases. These outputs can be used as a starting point for defining processes and reasons behind success or failure of collaborative practices.

Although the output of this framework gives an overview of the processes, it cannot explain reasons behind it. With help of some explanatory criteria, the outcome of democratic assessment framework can be used for explaining reasons of success or failure of any collaborative practice. Democratic assessment framework evaluates a single practice. The scores of the project in any of the norms are explainable within the limits of the defined criteria and sub-criteria. On the other hand, the output of the framework for different practices and the reasons of their success or failure won't be comparable unless explanatory criteria are investigated. These criteria focus on the context in which the practice is happening and can for instance include:

- *Motivation for public to participate:* in any context, each individual can have his/her own reasons to participate in the process. In cases like Roombeek in which the situation after the disaster has led to collaborative planning practice, due to direct impact of the plan on people's life and the high importance of the issue, people are more eager to participate or even it can be said that they need to participate. So they have more motivation compared to regular collaborative practices for modifying neighbourhood plans like the Chorlton Action Plan case. So high score of public deliberation in the process phase can directly be related to this criterion.

- *Dominance of certain political/social/ethnic group*: in some cases dominance of certain groups limits existence or activity of community associations. These dominant groups can also influence number of participants in the process and the outcomes of negotiation and implementation phase. In some cases this criterion needs more attention. It can be the case that many active NGOs or associations are present in the context but all of them have same political or social view so although political identity will score high it is not comparable to the case which has different groups being active in several fields and in favour of different social, political or ethnic groups. Low public deliberation in process phase, low political identity in input phase, accountability of input and outcomes and unfairness of outcomes of negotiation can be all related to this criterion.

The outcomes of the democratic assessment framework can also be used in designing new processes and tools for participatory practices. The results of applying the framework in different cases show that some correlations can be found between norms of different phases. The structure of the framework and nature of the norms provided enable the user to explain the process between input, process and outcome phases. Investigating common co-relations which exist in all participatory cases, and determining how these relations influence the success of practice in each phase, can

be useful in designing new processes and tools. Although to be able to find these co-relations the framework should be applied to several cases, general assumptions can be made as follows.

It is assumed that if in the input phase people do not have enough information about the project or not all the stakeholders are invited in the first phase, public deliberation in process phase won't score high. Also it is assumed that if public deliberation and political identity in the process phase is high, accountability will also increase in the outcome phase. Many other assumptions exist in collaborative guidelines and many evaluation frameworks are developed based on them but not all of these assumptions are proven. By applying this framework to different cases, validity of these assumptions can be evaluated.

Beside benefits of democratic assessment framework, there are some challenges in applying the framework in practice. Availability and accessibility of detail information about the process of participation is a crucial factor in successful application of the framework in different cases. Since the framework includes outcome phase, the participation process has happened at least some months or years before the assessment. In most cases the actual participants of the process are not accessible or some of them do not remember the details which are necessary in assessing the process phase. In the case of 'U Decide' events where evaluation forms were filled by participants immediately after the process, the evaluation is more precise than the other cases. Therefore for further assessment, it is better if after the process, based on defined criteria, an evaluation will be performed.

The other challenge is that unequal number of criteria and sub-criteria for different norms and phases make the framework sensitive to some qualities of participatory practice. Some norms such as access and public deliberation and specifically process phase have been studied and discussed more comprehensively. So properties of them are known to planners and more sub-criteria and criteria can be defined for them. Other fields such as accountability of planning practices have not been investigated as thoroughly. Therefore small variations in these norms can change the overall credits of the project. On the other hand a high number of criteria and sub-criteria will make the framework too complex to be used in practice and it will demand more data and information which may not always be available. Striking a balance between the complexity of the framework and its comprehensiveness will therefore be a decisive factor for the efficiency of the framework in practice.

9. Towards an Enhanced Democratic Assessment Framework

This study attempts to examine how the given conceptual structure of democratic assessment framework would be useful in devising new assessment frameworks for collaborative planning practices. The outcome of this study showed that this structure equips planners with opportunities for further exploring the democratic nature of collaborative practices.

Different aspects of this framework can however be improved by further studies. From a conceptual point of view it is essential to determine which notion of democracy would better suit collaborative planning in an urban context. There are few studies about how urban democracy is defined within broader notions of democracy. This issue itself can be a subject of further studies since it would change nature of criteria in the framework. This would also influence scoring of projects. In this study 'rule of law' was considered as a component of democracy which can assure sustainability and accountability of any democratic practice. This was reflected in the framework by defining criteria concerning the existence of certain urban laws and regulations. But these criteria had a weight of 0.5 compare to other criteria. Adopting different notions of democracy would therefore change these components.

Besides the conceptual grounding of the framework, the main challenge in devising a framework is to define how the different criteria will be evaluated. This can be considered as one of the main aspects of any assessment framework which is greatly affecting the efficiency of the framework in practice. If the evaluation is completely quantitative, it would be unable to capture and evaluate the many democratic aspects of collaborative practice. If it is completely qualitative, due to the large number of criteria, collecting the necessary data would be too time-consuming. For qualitative assessment it is also important to have access to those who were present in the process which is in many cases impossible. The framework therefore should use a mixed method approach to evaluate each criterion.

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Annex 1: Democratic Assessment Checklist

Access

Input

- **Availability of information about the project for all stakeholders** **5 Credits**
  - ☐ Availability of information about purpose of the project and participation
  - ☐ Availability of information about the exact location of project
  - ☐ Availability of information about responsible authorities
  - ☐ Availability of information about the bigger context in which the project is being planned
  - ☐ Availability of information about the participation process (number of meetings, deadline of the project, location, time, etc.)
- **Availability of information about other stakeholders** **2 Credits**
  - ☐ Availability of information about all other involved stakeholders
  - ☐ Availability of information about the role and responsibility of each stakeholder
- **Clear ground knowledge about rights to the city** **1 Credit**
  - ☐ Availability of information about the legal rights of the citizens to the city
  - ☐ Availability of information about land administration laws
- **Appropriateness of channels for informing participants** **3 Credits**
  - ☐ Affordability of accessing information for all stakeholders
  - ☐ Time limits: how long before the process the information were provided? Is the provided time enough for stakeholders to collect enough information that they need?
  - ☐ Clarity of information provided before the process (clarity of maps showing location of project, explanation of technical terms, etc.)

Process

- **Availability of information about the project and participants** **6 Credits**
  - ☐ Awareness of participants of goals and benefits of each stakeholder in the project
  - ☐ Availability of information about the costs of each alternative
  - ☐ Availability of information about benefits of each alternative for different stakeholders
  - ☐ Availability of information on short term and long term effects of each alternative on their daily life and business
  - ☐ Availability of information about other possible locations for implementing the project
  - ☐ Access to plans and maps of larger context of the plan (surrounding neighborhoods and important city-wide projects)
- **Quality of provided data** **5 Credits**
  - ☐ Availability of different version of data/reports for different stakeholders
  - ☐ Availability of explanations for technical terms and expressions or reading maps and plans
  - ☐ Level of accuracy and amount of information given (how detailed were the maps for determining spatial effects of the project on each participant property)
  - ☐ Equality in amount of information for different stakeholders: (Is it the case that amount of detail provided for different stakeholders benefit them greatly in decision making?)
  - ☐ Comprehensiveness of data provided: do they contain all the necessary information for proper decision making?
- **Appropriateness of chosen tools for participation** **6 Credits**
  - ☐ Possibility of giving feedbacks on previous discussions
  - ☐ Possibility of getting to know other stakeholder's feedbacks on the project
  - ☐ Accessibility of updated information about the participation process during the process
  - ☐ Accessibility of channels for getting more information about the project

- ☐ Affordability of the process and method for different stakeholders
- ☐ Compatibility of the chosen tool with resources of the target context

Outcome

- ➢ **Accessibility of outcomes of negotiation and agreed plans for all stakeholders** **3 Credits**
  - ☐ Accessibility of outcomes of the participation practice to all stakeholders involved in the process
  - ☐ Accessibility of final plan for all involved stakeholders
  - ☐ Accessibility of the final plan for public
- ➢ **Fair distribution of costs and benefits** **2 Credits**
  - ☐ Fairness of outcome of final plan: (Does the final plan favor specific groups of participants?)
  - ☐ Fairness of outcomes of the discussions: (Are they biased to favor ideas of specific stakeholders?)

PUBLIC DELIBERATION

Input

- ➢ **Inclusive targeting of stakeholders** **3 Credits**
  - ☐ Presence of local knowledge/ their representatives in designing phase of the process
  - ☐ Existence of a clear stakeholder analysis and proper recognition of stakeholders before the start of the process
  - ☐ Existence of plans to approach different groups of stakeholders differently in participation process

Process

- ➢ **Inclusiveness of the process** **2 Credits**
  - ☐ Presence of different social/economic/cultural groups in the participatory process
  - ☐ Existence of a proper incentive for public participation
- ➢ **Equal chances and resources for all stakeholders** **5 Credits**
  - ☐ Equal chance for each stakeholder to express their point of view (opposition and approval groups)
  - ☐ Equal resources for all stakeholders to make others aware of their point of view (existence of appropriate media for doing so)
  - ☐ Handling conflicts: Success of the project in dealing with conflicts
  - ☐ Equal opportunity of changing properties of the plan and giving new alternatives for different stakeholders
  - ☐ Neutral influence of mediators (organizers) on emergence of or change in dominant ideas

Outcome

- ➢ **Public monitoring of outcome of the project** **3 Credits**
  - ☐ Existence of Clear ground rule for involving public in implementation phases for monitoring the progress
  - ☐ Existence of channels for communicating output of different phases of implementation with public: (like website, specific organization or a department in urban governance)
  - ☐ Possibility of monitoring and giving feedbacks on output of participation process which will be used in preparing final plan
- ➢ **Compatibility of final plan with outcome of participatory practice** **2 Credits**
  - ☐ Compatibility of outcome of participatory practice with final plan
  - ☐ Occurrence of modification in pre-defined alternatives

ADAPTIVENESS

Input

➢ **Flexibility of project alternatives and participation process design** **3 Credits**

- ☐ Non-Existence of pre-defined alternatives for the plan
- ☐ Extent of possible changes in the alternatives based on plans in larger context
- ☐ Non-existence of any political mandate for implementation of specific alternative or planning specific participatory process

Process

➢ **Flexibility of process and the chosen tools** **4 Credits**

- ☐ Possibility of modifying process and tool during the process, based on feedbacks
- ☐ Time limits: Enough given time to participants to evaluate the alternatives and make possible changes
- ☐ Possibility of getting data and operating analysis for new suggested alternatives for the project (whether the tool allows instant analysis of data for new alternatives or there is a need for another session)
- ☐ Existence of alternative tools (availability of alternative tool in case the chosen tool is not comprehensive for specific stakeholders)

Outcome

➢ **Flexibility of plans for implementation** **2 Credits**

- ☐ Existence of different agreed alternatives for implementation in case of facing problem in implementation of the most agreed alternative
- ☐ Existence of clear ground rule for determining responsible authority/organization for deciding on changes in the plan in case of facing unpredictable barrier in implementation
- ☐ Existence of clear ground rule for dealing with oppositions and negative feedbacks during or after implementation

ACCOUNTABILITY

Input

➢ **Level of public trust in authorities** **3 Credits**

- ☐ Existence of previous successful participatory practices in recent years
- ☐ Regular meetings of local authorities/representatives with residents
- ☐ Existence of specific known channels/plan for participatory practices in context

Process

➢ **Transparency of the process and the chosen tool** **3 Credits**

- ☐ Clarity of the logic behind analysis for all stakeholders (are stakeholders aware of the logic of analysis for defining alternatives and effects of each alternative)
- ☐ Awareness of participants of when and how other stakeholders will participate in the process
- ☐ Accessibility of updated information about the feedbacks and changes in the process during the process

Outcome

➢ **Ownership of produced maps and data** **1 Credit**

- ☐ Existence of clear ground rules for determining who will be the owner of output of participatory practice
- ☐ Existence of any urban law or regulation which legitimizes decisions taken in participatory sessions

➢ **Sustainability of participatory practices** **2 Credits**

- ☐ Low risk of dramatic changes in participatory practices by modifications in planning system
- ☐ Increase in trust of the people in participatory practices after this practice

ACCOUNTABILITY

Input

- **Existence of social institutes in the city** **3 Credits**
  - ☐ Existence of different NGOs and social institutes with different domain focus
  - ☐ Existence of active NGOs besides governmental organizations/groups
  - ☐ Clear role of public representatives in structure of urban governance organizations

Process

- **Contribution to empowerment of different social groups** **2 Credits**
  - ☐ Contribution of the process to unifying or separating different social, economic or cultural groups during the process (regarding the design of the process and chosen tool)
  - ☐ Does the design of the process allows emergence of strong dominant opposition or approval group during the process

Outcome

- **Contribution to empowerment of different social groups** **2 Credits**
  - ☐ Increase in number of members of different community groups
  - ☐ Increase in number of organized social events after the practice
- **Addressing needs of specific social groups or institute in final plan** **2 Credits**
  - ☐ Addressing specific needs of different economic groups of the community
  - ☐ Addressing specific needs of a desired target group of the project (would it be different ethnic groups, elderly or children)

GENDER AND MOBILITY - EVERYDAY MOBILITY DURING CHANGING GENDER RELATIONS

Mechtild Stiewe [1], Juliane Krause [2]

Abstract

Mobility is embedded in the existing gender relations of our society, whereby both the biological sex and social gender are significant. Taking the gender perspective into consideration in mobility research means broaching this aspect through data collection and data analysis and evaluation. A broadened gender concept has been developed in connection with mobility studies and has been relied upon for analysing the designs of the major German mobility surveys. It has been possible to ascertain that although gender aspects such as looking after, caring for and accompanying children and dependents have been included, they have been hitherto accorded only little consideration in the analyses and publications. Against this background, the data on "Mobilität in Deutschland" [Mobility in Germany] (MID 2008) are analysed and evaluated in line with gender mainstreaming.

1. Outline of the problem

Mobility and transport behaviour are embedded in the existing social structures and gender relations of our society. Commuting to work, going shopping, and accompanying children or older people determine our daily activities. There are always men and women, children and old people, persons with reduced mobility, people from a migrant background who cover such distances, i.e. people with a biological sex and a social gender.

Taking the gender perspective into consideration in mobility research means discussing gender relations (through specific data collection and data analysis and evaluation), whilst carrying out an exchange of views and focusing on different living situations, lifestyles and strategies for coping with everyday life, which are no longer tied exclusively to biological sex or traditional gender roles.

Mobility surveys (observations or interviews) are carried out in traffic planning to gauge transport behaviour, whereby in addition to individual mobility behaviour, determinants and subjective reasons of the behaviour are examined. Mobility and transport surveys yield socio-demographic information about people and households as well as the way they travel (e.g. whether they have a driving licence or a car, travelling purpose, and mode of transport used).

Mobility surveys in the form of household interviews in municipalities and regions are often geared to what is known as Kontiv® design (household forms, individual forms, road protocols). Although the biological sex is broached as a

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matter of course in all major studies as well as in municipal mobility surveys, as are gender aspects (e.g. looking after, caring for and accompanying children and dependents), these aspects have hitherto been given only insufficient consideration in analyses, evaluations and publications.
Criteria for gender-sensitive mobility surveys must consequently be developed as well as suggestions on how to modify and supplement the traditional survey designs and how to develop their evaluation and interpretation; the ultimately aim being to contribute to greater gender fairness in mobility research.
A successful implementation of gender mainstreaming in the transport sector is a quality feature of planning and policy and indispensable for the development of more concrete approaches, particularly at a time of ever greater differentiation of household structures and lifestyles.

2. Concepts and indicators with gender aspects

2.1 Gender

Gender means not looking at "women" or "men" stereotypically, but considering people in terms of their difference and diversity (Table 1). No one is only male or only female, but we live in a world which is decisively shaped by the attribution of gender roles. Through the use of the concept "gender," the sexes and their relations are brought more into the foreground, the social differences or roles are described, and social differences or roles that men and women have in our society depending on their social situation or their role are described.

Table 1. The concept of gender

The term gender...
… refers to the economic, social and cultural attributes and opportunities associated with being male or female. In nearly all societies men and women differ in respect to their activities, access to and control of resources, and participation in decision-making processes. The definition of gender – what it means to be male or female – varies between cultures and changes over time.
(Source: EU Guide on Gender Mainstreaming 2005 / EQUAL Programme)

2.2 Gender Mainstreaming – definitions

Gender Mainstreaming is aimed at gender equality and entails that due account of the gender issue is taken from the outset in all plans and decisions, regulations or laws that could have a different effect on men and women, since there is no gender-neutral reality.
The gender perspective implies that men and women, but also children/young people, persons with reduced mobility, the elderly, people with a migrant background have different living conditions and opportunities in society. They all develop specific interests and needs owing to specific gender, social, or ethnic and cultural socialisation and different living situations. They are affected differently by social processes and their repercussions.

Thus broadened, the concept of gender includes the aforementioned gender groups, whereby differentiation would still be made each time in accordance with sex and age. The broadened concept of gender comprises also the physical environment structures, i.e. the concept of **settlement structure.** The living conditions of the population vary depending not only on the regional context but also on sex, i.e. the situation of men and women differs between core cities, surrounding districts, rural areas and/or the countryside (varying availability of public transport, different types and proximity of infrastructure and facilities, remoteness of locations of everyday life).

2.3 Indicators with reference to gender[3]

Indicators indicate something. The starting point for developing indicators is expressly or implicitly the definition of an objective, towards which reality is supposed to veer. Consequently, the development of indicator systems is not unbiased.
Transport or mobility is (still) not an issue in the case of indicator systems with a gender reference in an international context, but the first steps have been taken in the national context, whereby the gender index and the federal equality atlas are significant.
The United Nations Development Programme (UNDP) publishes a report on human development every year in which the Human Development Index (**HDI**), is calculated and, since 1995, the Gender-related Development Index (**GDI)**[4] as well. At the national level, the numerous indicator systems relating to "sustainability" should be mentioned first and foremost. These are intended to help guide the necessary processes towards sustainable development on the basis of the Agenda 21.
The **national sustainability strategy** "Prospects for Germany: Our strategy for sustainable development" presents 21 indicator subjects (as per the 2008 progress report). These indicators fall under four areas. Under quality of life, the indicator subject "mobility" with the sustainability postulate "secure mobility – preserve the environment" is however presented only through indicators such as goods or passenger transport intensity or the share of rail transport in freight forwarding.
The **Gender Index**[5] is an instrument that is supposed to indicate and present equal but also unequal opportunities between the sexes and to make them comparable between the regions. It is the first nationwide measuring instrument for the regional comparison of equal treatment of men and women. The relative deviations of the values for men and women are calculated for 19 indicators for education, employment and participation. The Gender Index is the average value of these 19 relative gender differences.[6] Based on the spatial information system, the continuous spatial planning observation of the Federal Institute for Research on Building, Urban Affairs and Spatial Development (known by the German initials BBSR), the regional living conditions of men and women in these three areas (education, employment and participation) were compiled and assessed in the Gender Index for the first time in a comprehensive, systematic and exhaustive manner nationwide. The aim is to make the complex circumstances of gender equality visible and in so doing to illustrate the central

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3 For more details, cf. KRAUSE, 2011.

4 Its significance is based on the same variables as for the HDI. The Gender Empowerment Measure (GEM) stands for the strengthening of the role of women and the promotion of participation in the political and social decision-making processes.

5 www.gender-index.de

6 This formula for calculating the Gender Index is based on the Swedish Jäm Index (also known as the Gender Equality Index). Statistical tests support the Gender Index as a suitable measuring instrument of regional equal treatment of men and women.

fields of activity for more equality of opportunity in the different regions (cf. www.gender-index.de). Mobility and transport have not been an issue (hitherto) however.
The atlas of equal treatment of men and women in Germany (**Equality Atlas)** is an initial localisation of the equality situation per federal state in Germany on the basis of 30 indicators. Of interest for the research topic is the category of the living environment with two indicators: "older people in single-persons households" and "life expectancy." Both indicators show clear, specific gender differences (BMFSFJ, 2009).
The regular consideration of key figures from the mobility area – such as consideration of the purpose of mobility or the attainability of different objectives from the gender perspective – could help to demonstrate equal opportunity or gender differences based on social conditions, attitudes and habits. The regular surveys of the population's mobility behaviour provide a good data basis.

3. Nationwide surveys on the mobility behaviour of the German population

The three nationwide surveys on the mobility behaviour of the population in Germany are "Mobilität in Deutschland" (MID) [Mobility in Germany], "Mobilität in Städten" (SrV) [Mobility in the Cities] and the "Deutsche Mobilitätspanel" (MOP) [German Mobility Panel]. These surveys also serve as empirical (calibration) bases for traffic models and thus for the overall urban or regional traffic plans.
"Mobilität in Deutschland" (MID) [Mobility in Germany] is the nationwide survey[7] on mobility behaviour. Activities outside the home and the mobility of all persons living in the household among selected samples of households were gauged on a reference date by means of a standardised questionnaire. The first nationwide comprehensive survey of the population's mobility behaviour was carried out in 1976 under the Continuous Survey on Mobility Behaviour (known by the German acronym KONTIV), which has been repeated, with a similar design each time, in 1982 and 1989. In 2002, the study was conducted as a nationwide project for the first time under the name of Mobilität in Deutschland (MiD) [Mobility in Germany]. In connection with MiD 2008, a survey was conducted over 12 months in 25,000 households with 62,000 people. Other municipalities were involved as more regions were included. The types of settlement of the Federal Office for Building and Regional Planning (known by the German initial BBR) are taken into consideration for the analysis and evaluation (cf. MEYER/ MILBERT et al., 2007). Unlike MiD 2002, the nationality (reference to migrant background) is no longer asked in Mid2008.
The "**System repräsentativer Verkehrsbefragungen" (SrV)** [Representative Survey System] collects data on the everyday mobility of people on the basis of household surveys in cities. The SrV was developed at the Technical University of Dresden (TU Dresden) for gathering data on urban passenger transport in the German Democratic Republic. The first such household survey was conducted in 1972. Pursuant to the SrV, data for midweek days (Tuesday to Thursday) were collected. The SrV results are analysed and evaluated for the participating city (random sample of at least 1,000 people per city) and abstracted for various city sizes. The principals are the municipalities, states and transport companies. The scope of the SrV 2008 study covered 76 cities, municipalities and administrative districts on the territory of the Federal Republic of Germany.

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[7] In household surveys on mobility behaviour, the activities outside the home and the mobility of all persons living in the household among selected samples of households are generally gauged on a reference date by means of a standardised questionnaire. As a general rule, data and information are collected on mobility behaviour during work days and Sundays. The survey unit is the household, i.e. the survey documents are sent to the household address for all household members. The unit of investigation is the individual person.

The "**Deutsche Mobilitätspanel" (MOP)** [German Mobility Panel] is a longitudinal study on mobility behaviour conducted as a panel. The persons from the same household are questioned once a year about their mobility behaviour over a total of three years. The participants (all members of the household aged 10 and over) are asked each time in autumn to keep a travel diary for one week. The random sample consists of about 1,500 people (750 households) every year, two thirds of whom are "repeat participants" in the survey, and the other third is recruited newly for the panel.
Explicit "gender questions" have scarcely been broached in the mobility research up to now. There is of course a series of studies, which show time and again, that men and women move differently outside of the home (use of mode of transport, purpose of the trip, etc.). Thus, such indicators as vehicle availability, driving licence possession, choice of means of transport, and purpose of the trip are analysed and evaluated from a specific gender perspective and often also by age group. A differentiation between sex and gender has hardly been made hitherto.
The nationwide "Mobilität in Deutschland" (MID) [Mobility in Germany] will be examined closely in the context of this study.

4. Gender aspects in mobility in Germany – Basis for a gender balanced analysis and evaluation

Participation in society is a precondition to equal opportunities, irrespective of a person's sex. This is determined essentially by mobility opportunities as well, whereby easy access to the places of residence, work, care, education and cultural institutions is important. That the mobility of men and women differs can be seen in all phases of life. Only a differentiated analysis of mobility behaviour from a gender perspective can provide a realistic picture of the societal, social and spatial conditions for mobility (cf. STIEWE/ KELP-SIEKMANN, 2010).

The formation of reference groups (known as gender groups, e.g. older people, people living alone, persons with reduced mobility, people in family households, people with a migrant background) is based on the premise that the mobility and transport behaviour of these groups is "homogeneous" owing to certain attendant conditions and similar needs. The concept of reference groups was derived from the designations of phase of life (MiD), lifestyle/mobility style and household types (MiD), traffic sociological groups (SrV) as well as studies on the mobility behaviour of behaviourally homogenous groups, or on the living situation or the mobility behaviour of women. Common criteria for the formation of such groups are occupational activity (position in the work force), position in the occupation, sex, age, vehicle availability, and the presence of children in the household (cf. HOLZ-RAU, 1990).
Significant indicators for the formation of reference groups from the gender perspective and in reference to mobility behaviour were developed on the basis of a comprehensive literature research (Figure 1). The central factors for determining the mobility behaviour of gender groups turned out to be the social situation (single, single parent, partner), occupational activity and the presence of children in the household (care, accompanying mobility). Other significant factors are age, sex, phase of life, household type, economic status, vehicle availability and region type.[8]

[8] This structural typing by the BBSR breaks Germany down into three region types and nine district types, according to population density as well as the central function of the core cities of the regions (MEYER/ MILBERT et al., 2007).

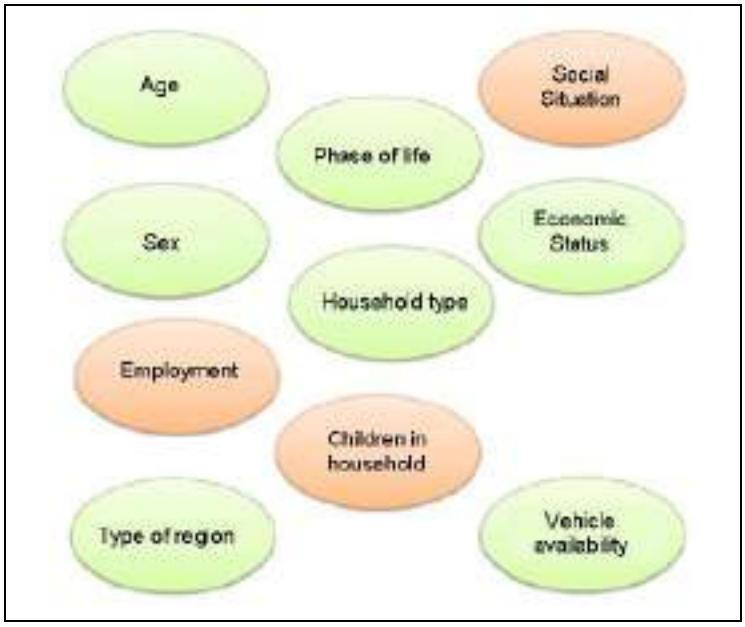

Figure 1. Indicators for the formation of the reference groups

The following reference groups with gender reference ensue: Children and young people, people with a migrant background, persons with reduced mobility and people in specific situations of life.
In what follows, the mobility behaviour of the reference group "people in specific situations of life" will be analysed from MID 2008 data as a first step:

- Single parents (1 adult and at least 1 child under 18)
- Single-person households (people aged up to 64)
- Family households (2 adults and at least 1 child under 18)
- Elderly people (aged 65 and over)

The observations are each time differentiated by gender.
The group of people living alone is, as expected, characterised by a very high percentage of women (88%); the average age is 42.2. More than one fourth (26%) of the households in this group has no car.
The group of elderly people stands out with 55% women, which is explained by the higher life expectancy of women. Almost a quarter of this group too has no car.
Only 2.4% of family households have no car; 38% of the households have a car, and 50% have a vehicle. At 40.00 years of age, people from family households have the lowest average age among the reference groups. Apart from the group of elderly people aged 65 and over, the group of people living alone has the highest average age (46.6). An examination of the age group shows that 58% of men living alone are concentrated in the 30 to 59 age bracket, while a relatively balanced distribution among all age groups can be observed for women. The number of households without a vehicle among people living alone is 29%.

5. Differences in mobility behaviour – Some results from the "Mobilität in Deutschland" [Mobility in Germany] survey

With regard to the differences in living situation in terms of gender, ethnic group, origin and socialisation, there is a perceptible tendency towards harmonisation in many areas. However, women are as before at a structural disadvantage in many social areas, in particular as regards income, working conditions or assets. In addition, irrespective of their occupational activity, they are sill responsible for the most part of household tasks such as bringing up the children, caring for dependents, housekeeping, etc. They need to move about more in order to carry out these tasks and consequently their mobility is different from that of men. Women go about more often on foot or by public transport.

Statistics show that mothers, for instance make 4.3 trips per day, compared to the overall average of only 3.4 trips per day in Germany (MiD 2008). An increase in occupational activity by women – especially mothers – does not however lead to equality between the sexes, but in doubling the workload for women whilst conditions tend to remain pretty much the same for men. On the other hand, there are no significant differences up to the age of 30 – if only gender is taken into account, irrespective of the living situation.

Some selected results of the analysis and evaluations of the MiD are discussed below (all persons aged 18 and over are taken into consideration).

5.1 Driving licence possession

A key precondition to mobility is a driving licence (Figure 2). Overall, 93% of men and 83% of women have a driving licence. The number of people with a driving licence has continued to grow in recent years. If the growing number of driving licences is considered specifically in terms of age groups, however, a slightly declining trend is perceptible among young adults: 87% of women and 85% of men have a driving licence, making this the only age group in which the number of women with a driving licence is higher than that of men. Women in all age groups are catching up in driving licence possession; however only 49% of women aged over 74 have a driving licence.

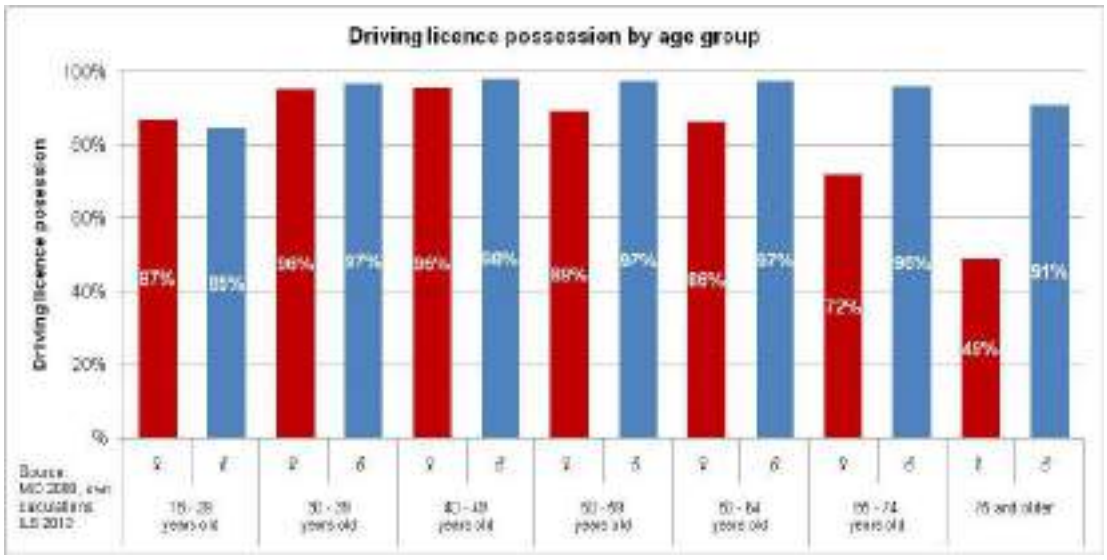

Figure 2: Driving licence possession by age group

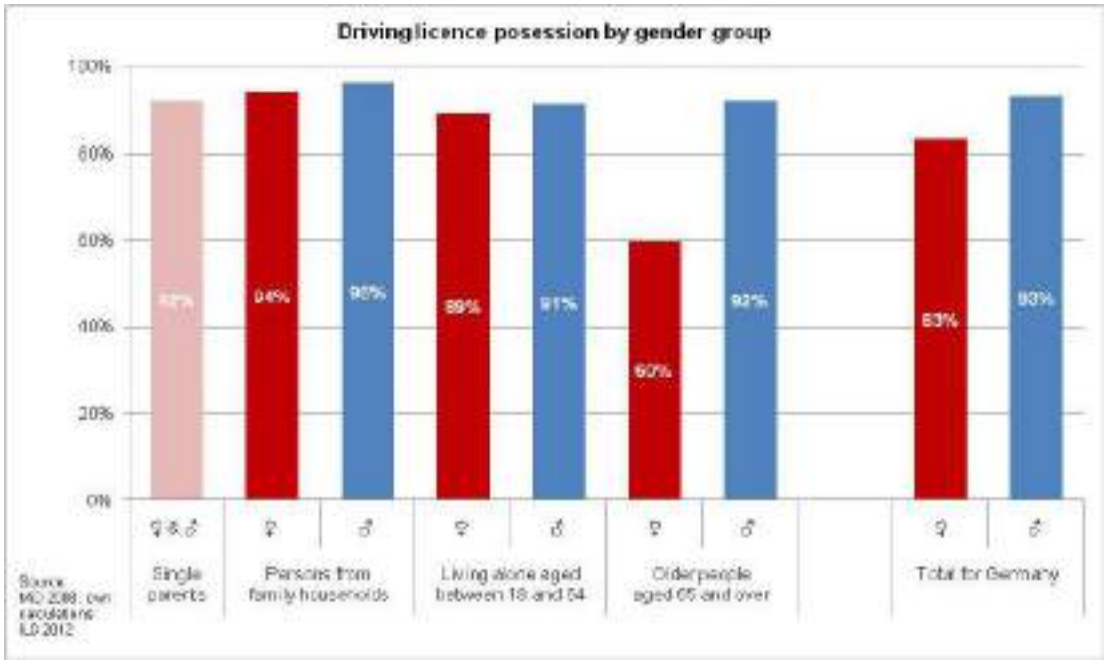

Figure 3: Driving licence possession by gender group[9]

Differences in driving licence possession are clearly evident depending on the living situation (Figure 3). Family households have the highest level of driving licence

9 There were (seven) overlapping cases between the group of elderly people and single parents as well as between elderly people and people from family households (210 cases). The cases concerned were assigned to the group of elderly people.

possession (men and women alike). Similarly, 92% of single parents[10] (88% women) have a driving licence (above average, therefore).

5.2 Vehicle availability

Apart from a driving licence, a decisive factor for mobility behaviour is the availability of a vehicle (Figures 4 & 5). Young women have a driving licence more often than men in the same age group, but they have less often a vehicle available. Overall, 83% of the men but only 72% of the women indicate that they can have a vehicle at their disposal at all times. That possession of a driving licence is not necessarily accompanied by vehicle availability can be seen in the group of young adults in particular. Across all age groups, men tend to have a vehicle at their disposal more than women. If women can avail themselves of a car, they are often not the owners of the "available vehicle." This is explained by the fact that the owner of the vehicle (especially of the first vehicle) is often the man. It can be assumed that women will have to forego the use of the vehicle more often, if there are more people than vehicles available in the household.

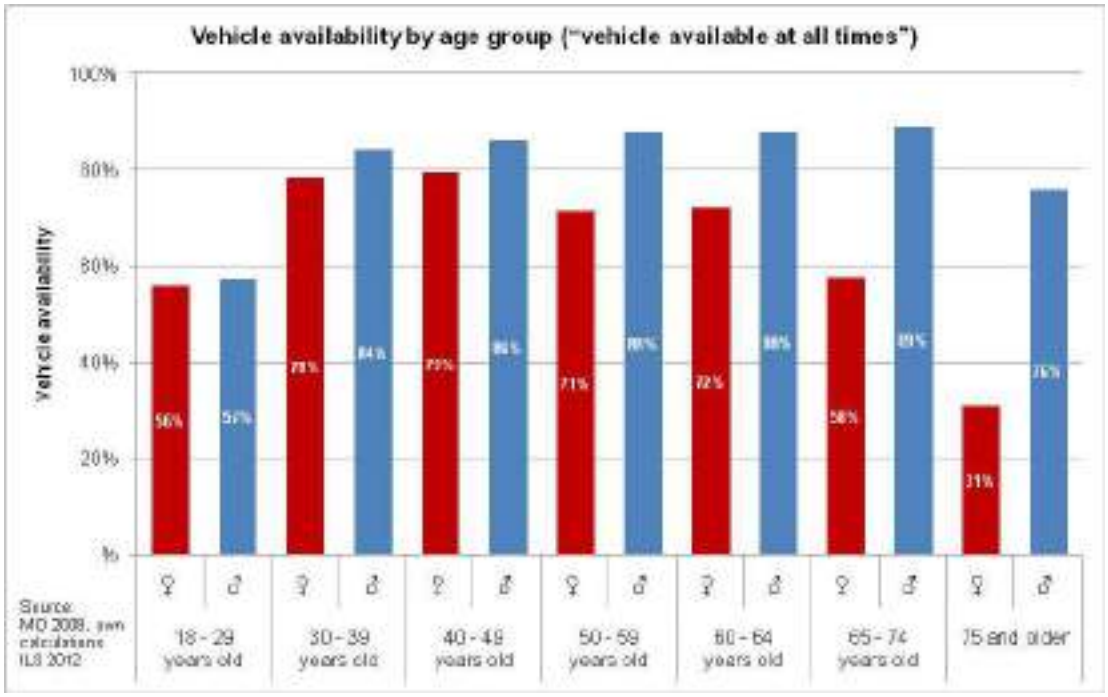

Figure 4: Vehicle availability by age group

[10] Since the proportion of men among single parents is only 12% (54 of the respondents), no gender-differentiated presentation was provided.

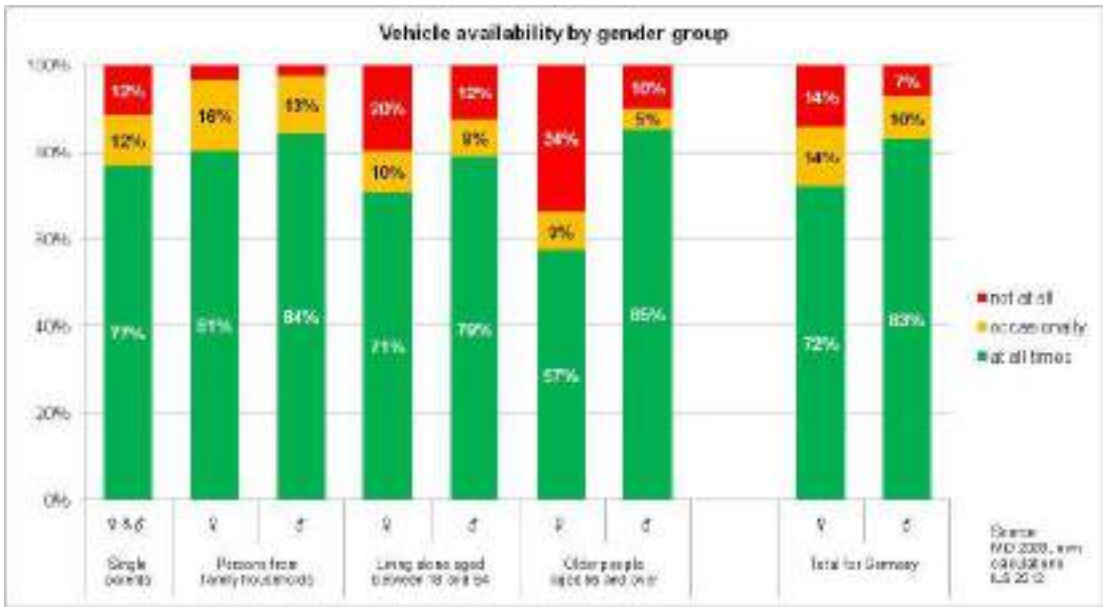

Figure 5: Vehicle availability by gender group

If income is considered in the equation, then more than half of low-income households do not own a vehicle nor can avail themselves of one. These are mostly pensioner households or households without children. Single parents constitute an exception, because in spite of their low income, they often do have a vehicle at their disposal, so as to be able to meet their multiple mobility needs and pressures. It becomes evident, therefore, that unlimited access to a vehicle is not the rule, and that there are clear cut differences depending on age and the respective living situation.

5.3 Use of means of transport

Women get about on foot decidedly more than men; this can be seen in all age groups as well as in all the different living situations (Figure 6). There is scarcely any difference between the sexes perceptible when it comes to use of public transport. Only older women clearly use public transport more often than men, which can be attributed to the fact that fewer of them have a driving licence. Most trips with the vehicle are undertaken by men from family households. It can be said overall, that the car is the means of transport used most often up to old age, and that men tend to get about by car more often than women. The use of the car is in large measure also determined by vehicle availability. If a vehicle is available, it will be used.

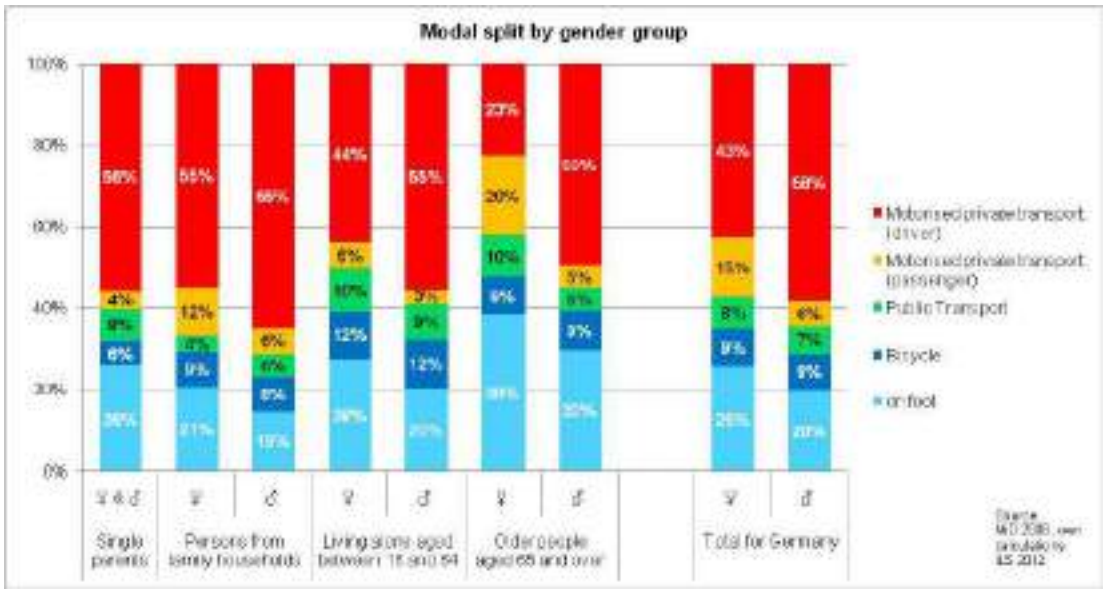

Figure 6: Modal Split by gender group

5.4 Mobility purposes

Clear differences between the sexes and in respect of the living situation can be gauged when considering the mobility purposes, where age plays a decisive role as well (Figure 7). Thus, the proportion of accompanying trips by single parents and women from family households (18% or 20%) is clearly higher than in the other groups. The number of shopping trips by women from family households (23%) is also higher than that by men (15%). At the same time, the proportion of commuting to and from work and business trips by women is clearly smaller than by men of the same group. This points to a traditional division of labour, in spite of the increasing occupational activity among women. Mobility for leisure time activities has the smallest share in the group of women from households, with 28% of all trips.

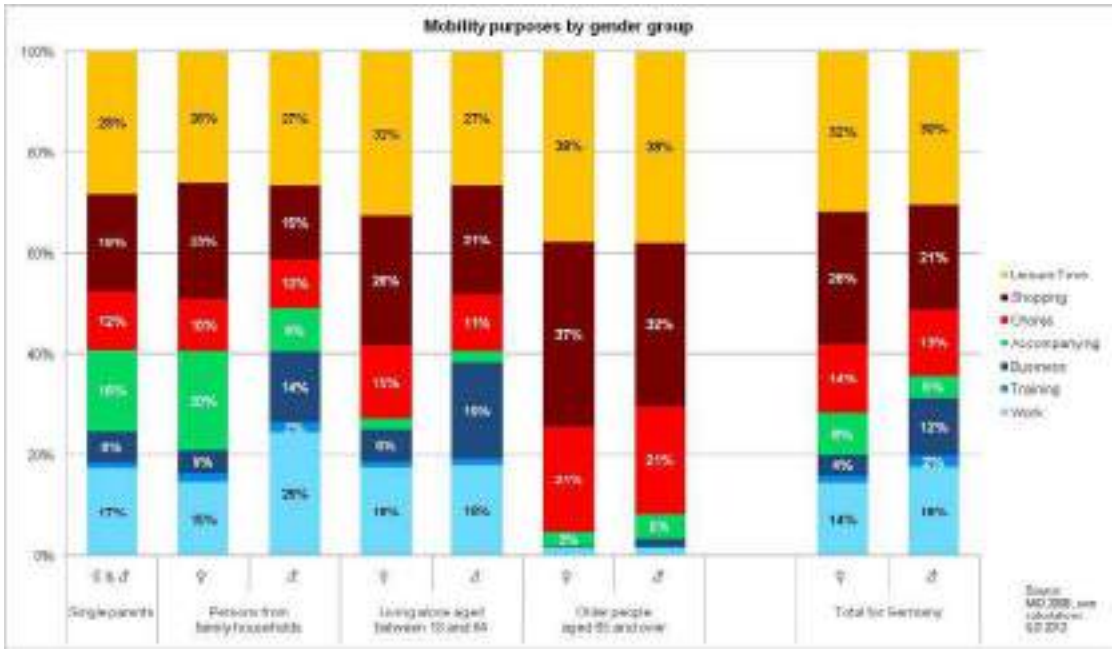

Figure 7: Mobility purposes by gender group

5.4.1 Accompanying trips

Accompanying trips (accompanying as the main mobility purpose) are trips where a person accompanies other people. The main purpose is not one's own objective, but the accompaniment – and thus the objective – of the person who is accompanied. An altogether typical accompanying trip by mothers is taking children to the kindergarten. A typical accompanying trip by children, on the other hand, is accompanying their mothers when they do the shopping. The main mobility purpose of younger children in particular is in large measure to accompany adults.
Single parents and women from family households tend particularly to accompany other persons, accounting for 16.1% or 19.9% of all trips. For younger people, people living alone and elderly people, accompanying as a "main mobility purpose" plays only a subordinate role. This does not mean, however, that they are always alone on the road, but that they have the same "objective" together with others.

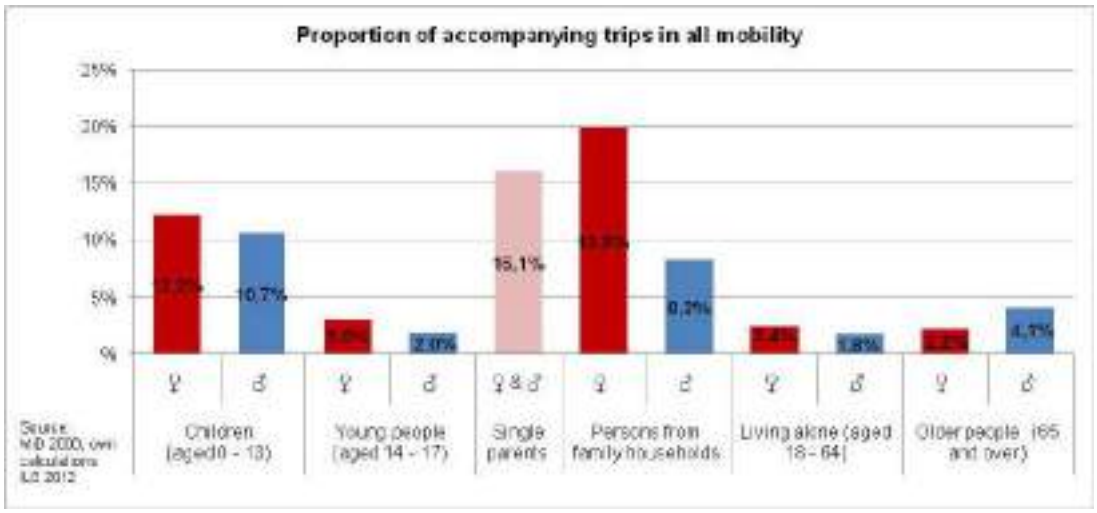

Figure 8: Proportion of accompanying trips in all mobility

5.4.2 Commuting to and from work

When considering the use of the main means of transport for commuting to and from work, the car turns out to be the most widely used means for the groups. It turns out, however, that women use the car, including the work vehicle, less than men. Apart from the elderly people – only a small segment of whom are still working—women living alone use the car the least. They cover nearly 40% of such commuting with environmentally friendly means of transport, compared with only 24% for men from family households.

Figure 9: Main means of transport for commuting to and from work by gender group

5.5 Proportion of trips, travel times and distances

Clear differences come to the fore among the reference groups in the central mobility parameters “mobile on reference day,” proportion of trips, daily travel time and distance covered (Figure 9). The number of daily trips between men and women scarcely differs, but clear differences do emerge depending on the living situation. Thus, single parents account for the largest number of trips per day (4.2), whereas older women account for only 2.6 trips. 95.5% of single parents were en route on the reference day, and account for the longest travel time with about 100 minutes per day. The average distance covered (10 km) is clearly shorter than that covered by men from family households (16 km per trip). The daily routine of single parents, but also of women from family households is characterised by a variety of trips for care and accompanying purposes, often made on foot, and considerably time consuming. Elderly women have the lowest mobility rate: 20% of them were not at all on the road on the reference day; they make 2.6 trips per day of average, and are en route for ca. 64 minutes, while they make a large portion of such trips on foot.

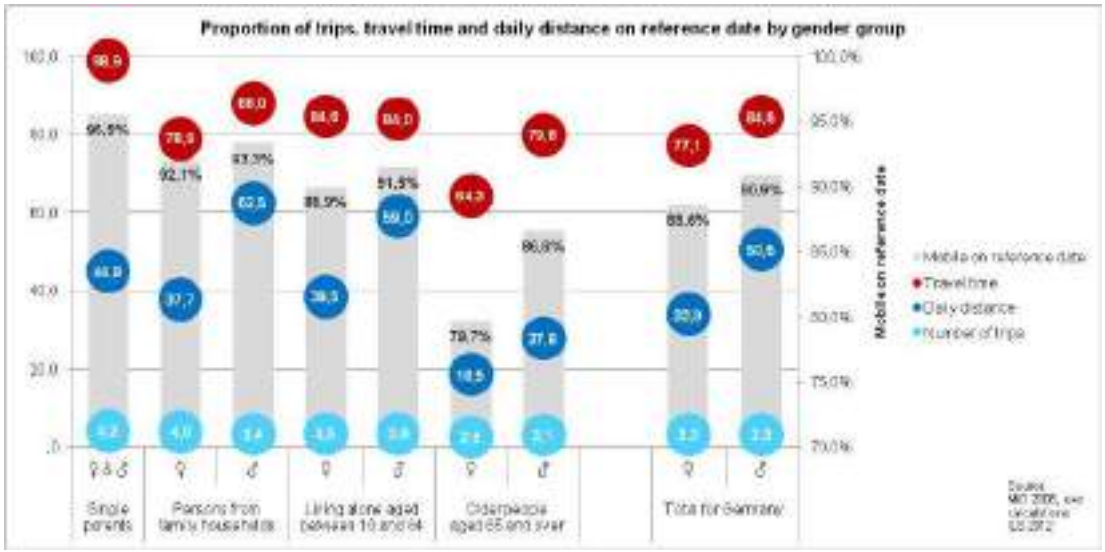

Figure 10: Proportion of trips, travel time, daily distance on reference date as well as number of mobile persons by gender group

6. Conclusion

The analysis of the design of major mobility surveys has shown that whereas gender aspects have been duly included in various surveys, they have hitherto been broached only to a limited extent in evaluations and publications.

Analyses and evaluations of the available data show that there are differences in the mobility premises and behaviour between the sexes.

More measures are therefore needed to restore equality between the sexes, whereby a key precondition is to make the status quo visible and to analyse and evaluate the available survey data in terms of gender mainstreaming.

Gender equality cannot be achieved without taking migration aspects into account. With gender mainstreaming the focus is turned to these structural differences, but at the same time the different needs, interests and requirements of men and women are sharpened within the groups (depending on the living situation). The social position, age, but also ethnic background come into focus. This requires that corresponding data be collected as well. For instance, there has been little knowledge (and hardly any data) available hitherto about the mobility behaviour of people with a migrant background. The current ILS research project entitled "Mobility of people with a migrant background and social discrimination through unequal mobility opportunities" can provide the first leads.
Even though the federal government, the states and municipalities in Germany are required to implement gender mainstreaming and thus gender monitoring, there are few gender indicators on the mobility front and data analysed in terms of gender mainstreaming.
Nationwide surveys such as "Mobilität in Deutschland" (MiD) [Mobility in Germany], "System repräsentativer Verkehrsbefragungen" (SrV) [Representative Mobility Survey System] and "Deutsche Mobilitätspanel" (MOP) [German Mobility Panel], but also mobility surveys conducted at the municipal or district level, already offer a sound data basis differentiated according to gender for gender monitoring, which can also be used for planning purposes.

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REGULATORY MEASURES TO REDUCE LOCAL RISKS AND VULNERABILITIES IN PLANNING DECISIONS

Pınar Ertan[1]

Abstract

During the past decade, tools and frameworks for global disaster risk management have shifted the priorities from emergency management to pre-disaster risk management, which demand new tasks from urban planning. Safety and resilience at local, national and global levels became a shared accountability which brings in a prominent role to the planning discipline in reducing local seismic vulnerabilities via defining a local mitigation strategy. The international frameworks of pre-disaster approach bearing proactive strategies could not be easily and conveniently internalized and improved by the developing countries.

Local seismic attributes as primary indicators for urban risk management highlighted that the requirement of constituting a common language of mitigation should be clustered at the local level and linked to the international framework at the upper scale. The urgent requirement of a local mitigation strategy, which is self-organized and less dependent on current politics could provide a safety ground for urban risk management extended to the national level.

In the local context, the so-called Disasters Law, the Development Law and Act on Regeneration of Disaster Prone Areas do not provide the necessary concern and means for safety in urban planning and have no aspiration to devise appropriate tools for mitigation. The role of city planners', who could mainstream a holistic approach and facilitate community participation in decision-making processes, is hardly apparent in legislation. The constraints and possibilities in urban mitigation planning methodology provides a new area of progress which defines new objectives and roles for planning as risk mitigation and the planner as an actor accountable to utilize local, national and global capacities in mitigation. In mitigation planning, the legitimacy of the planning method and the planner is neither challengeable nor coercive but should be developed over a new ethics for the affected communities and local initiatives. The emergent requirement of building local capacity to be integrated with the national mitigation strategy is examined through the case of disaster mitigation plan Fatih district in Istanbul.

The local capacities, vulnerabilities, and the ‘risk sectors’ in the district, the regulatory measures to develop a mitigation plan, the obstacles to be integrated into the current policy structure and international frameworks will be explored via empirical data of the Fatih District. This reasons challenging the utilization of local capacity in mitigation including technical, organizational and political failures and defects are to be taken into account to build up new connections to the global framework through spatial and non-spatial terms of risk reduction.

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Keywords: Risk reduction, mitigation planning, local capacity, urban planning, local seismic attributes, vulnerability

1. Introduction

1.1 The Definitions of Risk

Risk is a peculiar and intermediary state between security and destruction where the perception of threatening risks determines thought and action (Adam, Beck, Van Loon, 2000).

For many years, evaluating risk as "destruction", promoted actuarial methods of rationalist approach, has reduced risk in to the probability of loss through accepting a certain level of loss at the beginning (Adam, Beck, Van Loon, 2000). Post-disaster approach prevailing relief and rehabilitation was the product for this claim failed by the last decade. Social dimensions of risk embedded in natural disasters and socio-technical capacity to adopt in to a new system shock was ignored and tragic consequences was faced in worldwide 1999 events. Risks as complexities both alter and interact community and create different levels in 'the willingness to accept risk' related to the difference in between dangers and risks (Luhmann, 1993). Whether dangers are externalities that are uncontrollable, initial definitions in rationalist approach refer to risks are controllable by decision making but in urban systems, risks and dangers evolve in to each other creating a level of uncertainty The uncertainty refers to relative levels of perception, ignorance or speculations in communities. Today even security might have connotations in other forms of risk as 'socially constructed phenomenon' (Beck, 1999). The dynamic structure of risks grown out of unintended consequences in transnational or global scales, hypothetical assumptions and irreversible interventions built up a wide gray area to search new ethical ground for reducing risks. Mitigation is an initial step to that, 'precaution through prevention' (Beck, 2006) rather than compensating risks; was a new strategy adopted to reduce risks at all levels for everyone. Further, how to build mitigative capacities is still a legitimate question for communities to call for new technologies of deciphering urban risks and developing new socio-technical capacities for prevention culture (UNISDR, 2005).

Moving from industrial society to information society, cities on the edge of transforming, growing or contracting as a result of deindustrialization had a major effect on change in population trends and urbanization. Urban risks and vulnerabilities pooled in cities through accelerated geographical concentration of population and productive capacities in limited areas (Balamir, 2009) which are rather pervasive in developing countries. ‘The modern approach to foresee and control the future consequences of human action’ was shifted to mitigate risks which were ‘unintended consequences of radicalized modernization’ (Beck, 1999). Modern risks or man-made hybrids are situated in a combination of natural hazards and urban risks constituting natural disasters which were aggregated in a way that the impacts of externalities: natural hazards and internal factors of urban system: urban risks are became uncertain to be separated distinctly. The uncertainty at first level is related to the inadequacy of socio-technical capacities which construct the ability to discriminate between externalities and internal factors to build proactive capacities.

At second level, uncertainty stands with a territorial ambiguity as a result of time and space compression and distantiation create the potential of contagious risks. In other words mystery hides in the problem: Do we know urban systems adequately to diagnose risk generating factors and emergencies to build consciousness and capacity?

1.2 Conflicting Perspectives in Risk Reduction

Under the shadow of seismic risks and other natural hazards, Turkey is inadequate in diagnosing uncertainty or building capacity and got far behind to integrate in to international framework. Failure causes are wide range drawbacks on legal, institutional and political processes that Turkey has been faced up. On contrary, the more emphasis given to institutional or legal failures confronting the development of a national mitigation act, the more it becomes hard to enlighten the major flaw to constitute local mitigation strategy while international framework mainstreams the ways of developing a mitigation strategy drawing away from post-disaster paradigm since 1990s.

For developing countries, difficulties to cope with global framework and internalize general principles are quite clear. As social aspects of risk and social differences in local communities are primary factors differentiating the measures in mitigation capacity. As well as, local seismic attributes are primary indicators of natural disasters reveal the significance of starting from a local strategy then built up on it. Global platform for risk reduction and mitigation mentoring to affected countries offer homogeneous principles and actions that could not be easily internalized by developing countries. A bottom-up strategy with a multi-disciplinary framework is required to cling to global framework. Developing incremental and case by case strategy through local praxis; global framework would be rich in risk definitions, emergency scenarios, mitigative measures improving the terminology on global risk sectors as an alternative way to adapt in to emergence.

International platforms under UN determined the primary roles in building an epistemological and theoretical framework parallel to post-disaster approach of emergency management and relief. The turning point for adopting pre-disaster strategy of risk reduction and mitigation has started since 1990 when UN declared that natural events were global threats and a new body: International Decade for Natural Disaster Reduction-IDNDR should be assigned. The worldwide 1999 earthquakes also claimed that the former paradigm could not go any longer and a new approach for risk reduction must be held. Later on, the Yokohoma Strategy (1994) and the Kobe Conference (2005) constructed a common language for developing prevention culture through prioritizing risk reduction, integrating risk reduction in to national, sectoral plans and defining participatory methods as an apparatus for learning programs and capacity building. The transformation period from reactive to proactive state had changed global initiative of identifying risk in quantitative loss scenarios in to a broader concept: 'risk as a socially constructed phenomenon' also shaping society (Beck, 1999).

Brand new paradigm of international community also changed the political function. As 'manufactured uncertainty', risks ‘become a major force of political mobilization’ (Beck, 1999) through the promise of security for future's unintended consequences while clouding present political goals and objectives. The more of a technical capacity building risk reduction is changed in to a matter of governance and policy making to provide sustainable development and optimal risk distribution as a primary challenge to risks emerging not only in particular regions but also in sub-regions or trans-regions (UNISDR, 2005). In order to reduce uncertainty of risks, international framework puts forward disaster preparedness in social, spatial and technical dimensions at local and national levels. Encouraging coordination and dialogue in pre-disaster and post-disaster views, is the primary objective through capacity building in terms of political and legislative frameworks, risk assessment, emergency management, educative and knowledge-sharing networks. Especially risk assessment is underlined as pre-condition for mitigation to be incorporated in to urban planning, mainstreaming sustainable development. Adapting into risk environments, requires both technical and administrative capacities but beyond this international community revealing itself through the notion of risk society (Balamir, 2009).

1.3 Mitigation Planning As Necessity

New task introducing a new ethical ground for planner, would be mediating participatory processes, 'relations of definitions' (Beck, 1999) and mitigation planning. Risks solely taken by the decision maker become danger for affected communities who are incapable of deciding or controlling the situation (Luhmann, 1993). Participatory processes are critical to eliminate the representation problem of affected communities as entitled parties have the primary right to participate to decision making processes through mutual accountability and responsibility. 'Delocalized, incalculable and non-compensable' (Beck, 1999) entities, risks are burdens of all human beings as the prior condition for survival. Risks threat everyone equally but definitions of risks may not. In Beck's risk society (1999); 'relations of definitions' refers to power of defining risks in accordance with hidden agendas that could easily change the dimensions of perceiving risk collectively through making some risks visible while making others disappear. Through participation and transparent knowledge sharing processes in hazard identification and risk assessment; planner could provide an ethical ground for risk prevention without any semantic change implies governing classes to depict risk in accordance with their private political interests. Developing democratic, power-free decisions and institutions for mitigation was an updated objective for epistemological communities, governments and planner as an mediator for coordinating all public and private actors at all levels.

Mitigation planning is the efficacious apparatus for planner to mediate national and local levels of participation and technical coordination of hazard identification and risk assessment. Urban mitigation planning is consisted of the main components hazard identification, spatial risk assessment and planning socio-economic and

spatial terms for risk reduction. Identification of hazards delivered by experts such as earth scientists identifying local seismic attributes including active faults, liquefaction,...etc. and then planners transform the data in to development plans to determine the types and levels of risks in underdeveloped and developed lands and decide the conditions for new development areas (Balamir, 2009). In fact risk assessment; evaluating, estimating and prioritizing risks according to vulnerabilities, potential life and material losses covered through scenarios is an available tool for planner to activate actors, coordinate resources and reduce uncertainty in future. Eventhough the know how was ready to be implemented for mitigation, existing administrative and technical capacities at city level may became obsolete and inert to cope with dynamic risk society.

City level is a center and a medium to collect, coordinate, share risk knowledge from lesser administrative units to national organizations. Planner developing her/his adequacy to mediate socio-technical capacities and administrative capacities at all levels through providing accessibility to local communities in developing prevention culture. Participatory processes mainstream community building and raising risk consciousness are essential to construct collective perception of risk that is known, expected and prevented through local community to society. Mitigation Planning is not a paper work but an adaptive behavior for today to minimize future's uncertainty. International community or local communities may have different definitions of risk and different objectives as conservation or sustainable development but "survival of the fittest" hast both partial and global meanings not depended to political power relations but scientific and social adequacy for adaptation which should be accessible to all socio-economic classes under 'involuntary enlightenment' (Beck, 2006).

Planner's role shifting from predictor to mediator is also an adaptive behavior to share responsibility and accountability for unintended consequences for all levels of society. From a realist perspective, planner's adequacy to intervene risks is context-dependent as it is primarily restricted to national legislative measures which may present capabilities and incapabilities in professional praxis. The absence of a compatible legislation and executive institutions for mitigation precisely paralyzes planner to play any role in the face of uncertainty. In Turkey, the dichotomy of international discourse and national discourse on risk reduction is grounded in this kind of paralyzing effect and clearly observed recently. Pre-disaster approach prevailing mitigation is incrementally blocked through political and legislative drawbacks. Planner is armless as her/his functional capacity is eliminated through political constraints for prevention of risks.

1.4 Turkey's View: Drawbacks and Constraints on Mitigation

Urban vulnerabilities engendered by seismicity and flooding hazards in Turkey are historically inherited from location and clustered in buildings. People were settled where water and fertile land was available and trends of urbanization developed according to former risk generating conditions. High population, unauthorized building stock and reinforced concrete technology speeding up the growth of cities

without applying professional engineering services and provision, created unintended consequences and transformed cities in to urban risk pools. A parallel with developing construction practice, risk prevention strategy developed around building stock as retrofitting and post-disaster approach as relief and emergency management formulating the prevention of losses after disasters happened (Balamir, 2009). To make matters worse, natural disasters were perceived as fatalistic externalities and life losses are accepted as the minimum level of risk by certain parts of society.

Turkey is exposed to seismic activity as located on Eurasian Geological Plate including North Anatolian Fault from east-west ax, East Anatolian Fault and Western Graben Complex at the Aegean Sea. Recent major earthquakes happened in between 1903-1999; at Adapazarı, Gölcük, Yalova and Bolu-Düzce; more than 100.000 people died, 150.000 people injured and 420.000 buildings were suffered significant damage (AFAD, 2009). Last major earthquake was happened at Van in 2011 with a magnitude of 7,2 in which tragic consequences and disaster management failures are observed as most of the lower class population has been still living in aid tents or containers and exposed to secondary hazards such as tent fires and lost their lives. Notwithstanding relief and disaster management failures, another conflict in resource management was declared as Compulsory Earthquake Insurance Fund necessary to reconstruct buildings after disaster was spent for road construction, social security expenditure and government debts, formerly by national government (Alp, 2011). It is crystal clear that there is an underestimation of risk and organizational ignorance in variable circumstances which produces intolerable unintended consequences, secondary risks and system faults that are even duplicating and worsening disaster impacts.

In Turkey, the definition of risk and risk perception is shaped under the general apprehension; "Earthquakes don't kill people, buildings do." Mitigative measures are applied through retrofitting of buildings and building codes could only be revised in 2007 as Earthquake Design Code. Risk knowledge produced by civil engineers and geologists and risk assessment concentrated on failures in building stock. Shortly, city level risks were reduced in to building stock risks. However cities as urban risk pools and complex systems, involve variant conflicts related to land use planning, scarcity of land and green areas, high population concentration, inadequate infrastructure and so on which could not be handled solely through retrofitting and building stock oriented approaches.

1999 events triggered a new structuring under Earthquake Board of the Prime Ministry; Disaster Affairs referring to Disasters Law (7269) established to develop disaster resistant buildings and monitor seismic activities; Development Law (3194) includes decisions related to disaster risk reduction and development such as Regulations on Construction in Natural Disaster-prone Areas but merely focused on post-disaster activities. As an encouraging step, Disaster Affairs provided that developing multi-hazard maps by local governments and assigned responsibilities for municipalities but regional or sectoral plans for mitigation is still off the agenda. National strategy for mitigation was about to be developed in 1989 when

International Decade for Disaster Reduction was declared. National Committee established under the Ministry of Public Works and Settlement to develop national action plan for risk reduction (Ertan, 2009). National Plan assigned to State Planning Organization (DPT), partially applied and implementation was interrupted by shift in the political wind alluding the problem of non institutionalization of mitigation which should be above politics in practice. National Earthquake Council (2000) and Earthquake Information Council (2009) under Disaster Affairs were two distinct models indicate different conflicts. National Earthquake Council (UDK) was established by the purpose of scientific mentoring and formed of multi-disciplinary members from academia but unfortunately abolished in 2007 for the basis of being functionless. Earthquake Information Council (DDK) involves the representatives of related ministries, research institutes and a minority of five academic member selected by the Prime Minister. In institutional arena, the ground of the action for legitimation is shifted from academia to central government. Denying, transparent participatory process of defining our own risk may rise another danger of comprising powerful actors who 'maximize risks for others and minimize risks for themselves' (Beck, 2006). Risk definitions should be represented via broader sectors and participation of independent actors such as academia and NGOs. As Beck asserts that 'even the most restrained and moderate objectivist account of risk implications involves a hidden politics, ethics and morality' (Beck, 2006) but at least defined political interests could be eluded from ethical ground for mitigation. National Mitigation Act and Mitigation Fund should be established to provide a necessity area to steer lesser administrative units and develop a holistic approach.

An obtrusive drawback for mitigation in terms of legislative framework was Act on Regeneration of Disaster Prone Areas which was actually a secondary disaster in case of local communities who have no legal support to object or counteract to compulsory regeneration activities. Urban regeneration is implemented as a mitigative action to redesign disaster prone areas. The process composed of reconstruction and construction of reserve areas for new settlements through expropriation by Housing Development Administration (TOKİ) under the Prime Ministry by transferring all the rights of planning and design. Local communities' counterclaims could get a stay of execution by the court and entitled parties indebted to government, were as if penalized with hard payment conditions. Not depending on any other legislation, Act on Regeneration of Disaster Prone Areas presupposes the denial of significant acts on military areas, sea fronts, historical and conservation areas, fields and olive orchards Local communities should own the rights of protest and bargain in large scale urban decisions such as regeneration. Otherwise, monopolistic tendencies and center-local tensions generate social risks and parallel hegemonic spaces impeding policy learning stages and the diffusion of prevention culture for all levels of society.

Mitigation is a new borne area for Turkey captured by post-disaster strategies, engineering concepts and risks on building stock. Despite the post-disaster approaches as reconstruction, rehabilitation and relocating of settlements at city level, risk reveals in more complicated and socially constructed versions such as

dangerous land use in social facilities located on the top floor of gas or LPG stations or historical districts on landslide areas. A comprehensive approach to combine post-disaster and pre-disaster stage is necessary in both fundamental law and legislative framework. A risk definition coping to social vulnerabilities such as lower socio-economic classes have to be considered in legislation. Mitigation both implemented to former legislations and compelled to be exclusively structured as a legislation should be developed and internalized by all actors at all levels in the form of shared responsibilities and accountabilities. The broader feasibility of mitigation allows discarding of short and long-term conflicts and costs that emerge in post-disaster period while providing more space for planner to play his/her role. For the sake of political dependencies and institutional inadequacies, Turkey is maladjusted to new policy on risk reduction that claims to protect natural resources, communities and cultural values. Post-disaster view as relief-based institutions and experts, symbolize a narrow paradigm that oversimplifies urban risks and invites more vulnerabilities and losses in future. As a powerful tool and a technical capacity, mitigation planning integrating hazard identification and risk assessment should be sustained and improved by local governments like a primary step to provide resilience for stratified urban risks evolving at city and duplicating the impacts of natural disasters as it was happened in Istanbul.

2. Analysis

2.1 Istanbul Fatih District As An Urban Risk Pool

Istanbul, an urban risk pool of geographical, historical, structural, infrastructural and social constraints evolved through the historical development. Fatih District at the Historical Peninsula, at the center of the Metropolitan Area harbors all the conflicts originated from its central layout and functional relations. The Historical Peninsula or Old City separated by city walls is situated at Çatalca Peninsula including the entire area; Haliç, Beyoğlu and the Bosphorus at east, the Marmara Sea, three other districts at west (Zeytinburnu, Eyüp, Bayrampaşa), laid upon the west boundary with Bulgaria (Ertan, 2009). Through the history hosting to Greek, Roman civilizations and Ottoman Empire, the district preserves the significance as a center of culture and business. Small industry and wholesales functions contradict and endanger historical structures. Therefore Fatih District is a contextual priority including various challenging attributes for planners and an inclusive prototype for containing all the general problems and constraints that Istanbul is still facing with.

Figure 1. Fatih District and The Historical Peninsula (Google Maps 2012).

The Historical Peninsula is defined as 1st Degree Earthquake Zone (Ministry of Public Works and Settlement, Disaster Affairs Earthquake Zone Map) and Fatih District is evaluated in first ten hazardous settlements.

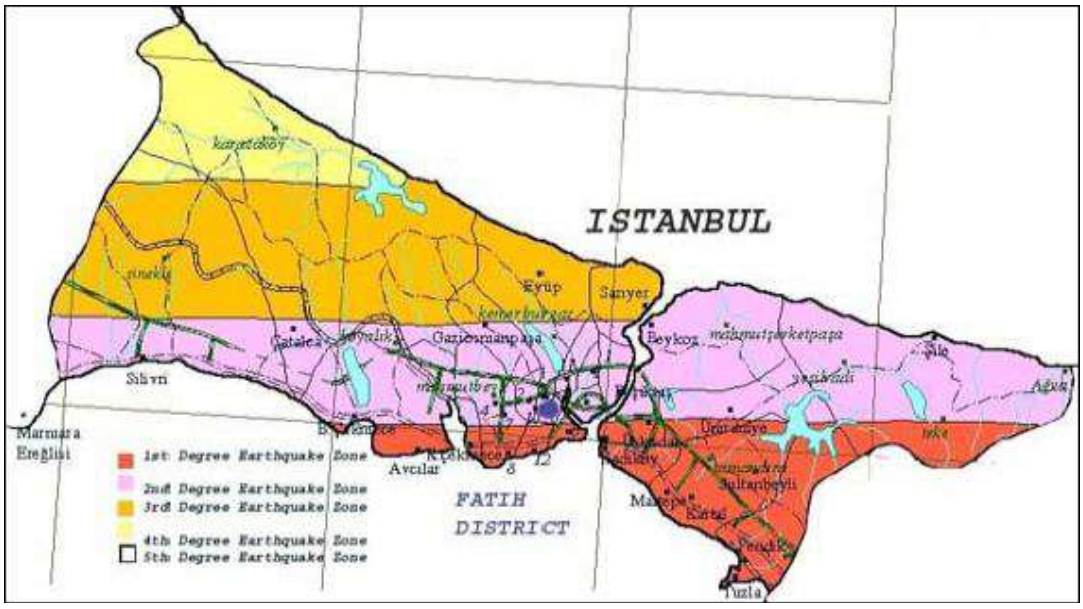


Figure 2. Seismic Zones In Marmara Region (AFAD, 2012).

2.2 A Method for Identifying Local Seismic Attributes

Natural hazards in the district are inherited from the interaction of terrain shape and hazardous geological formations to form various seismic attributes. The first step of

mitigation planning for the district is hazard identification to define, classify, represent and synthesize natural hazards to determine local seismic attributes.

Table 1. The Determination of Local Seismic Attributes in Multi-Hazard Map

[1]Available Data on Potential Natural Hazards	[2]Spatial Categorization of Hazard Areas			[3]Local Seismic Attributes
Seismicity	TERRAIN HAZARDS	LOCAL GEOLOGICAL ATTRIBUTES	HYDROLOGIC HAZARDS	**Multi-Hazard Zoning**
Landslide	Slope	Seismic Geological Formations	Watercourses	2 Hazard Combinations **(axb)**
Earthquake Faults	Liquefaction	Variations in High Peak Ground Acceleration-PGA	Water basin	3 Hazard Combinations **(axbxc)**
Liquefaction	Landslide		Tsunami	4 Hazard Combinations **(axbxcxd)**
	Artificial Fills			5 Hazard Combinations **(axbxcxdxe)**
	Alluvial Grounds			

Potential hazards are determined as distinct hazard potentials such as seismicity, landslide, liquefaction and earthquake faults with 150 m impact area. Natural hazards are categorized under three subtitles. Terrain Hazards are formed out of terrain character with high slope (20-38%) on coastal areas and lower in the mid like a great calix. (90 m to 10 m of altitude) Landslide areas on sharp slopes and soft ground attributed in liquefaction areas and alluvial grounds are the areas with high seismicity just as infill areas (>20% slope) concentrated at coastal parts (Ertan, 2009).

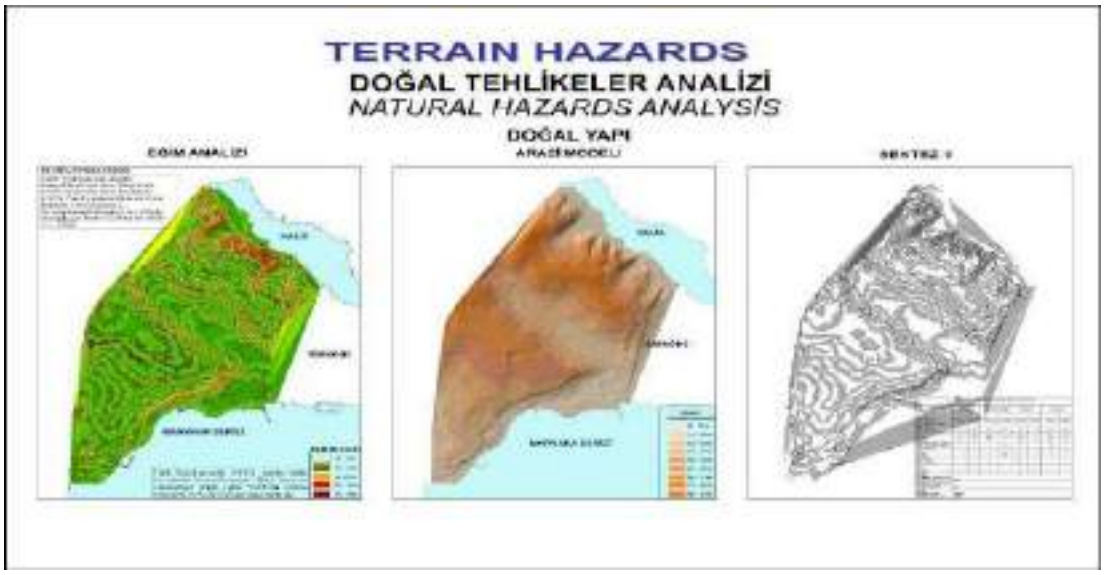


Figure 3. Natural Hazards: Slope Analysis and Terrain Model (Ertan, 2009).

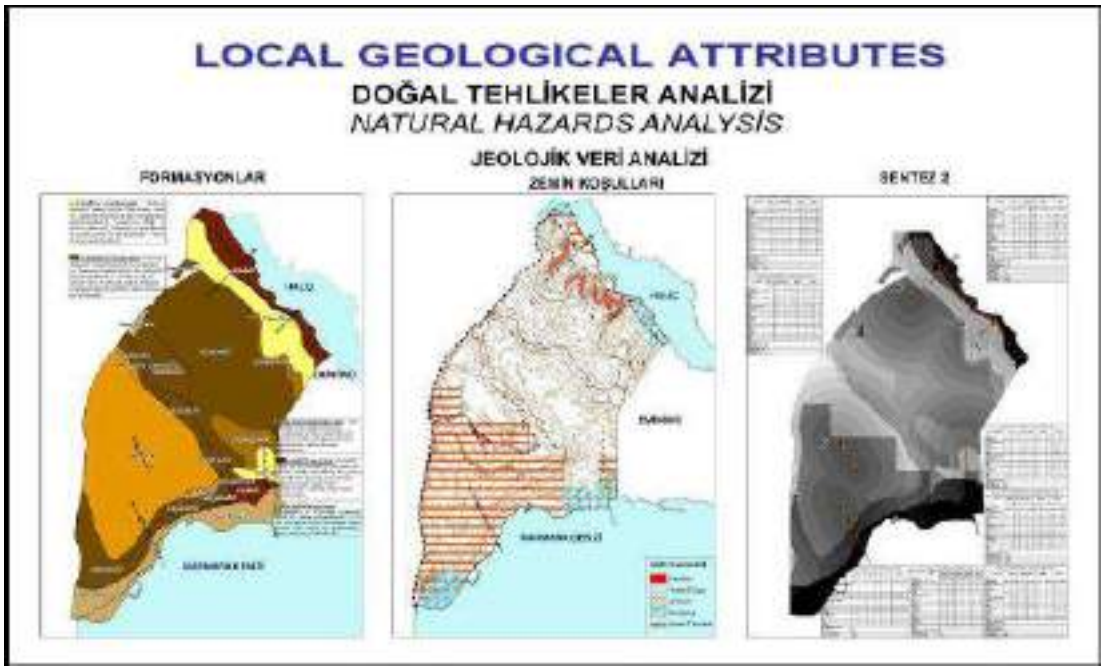


Figure 4. Local Geological Attributes: Geologic Formations and Geologic Data Analysis (Ertan, 2009).

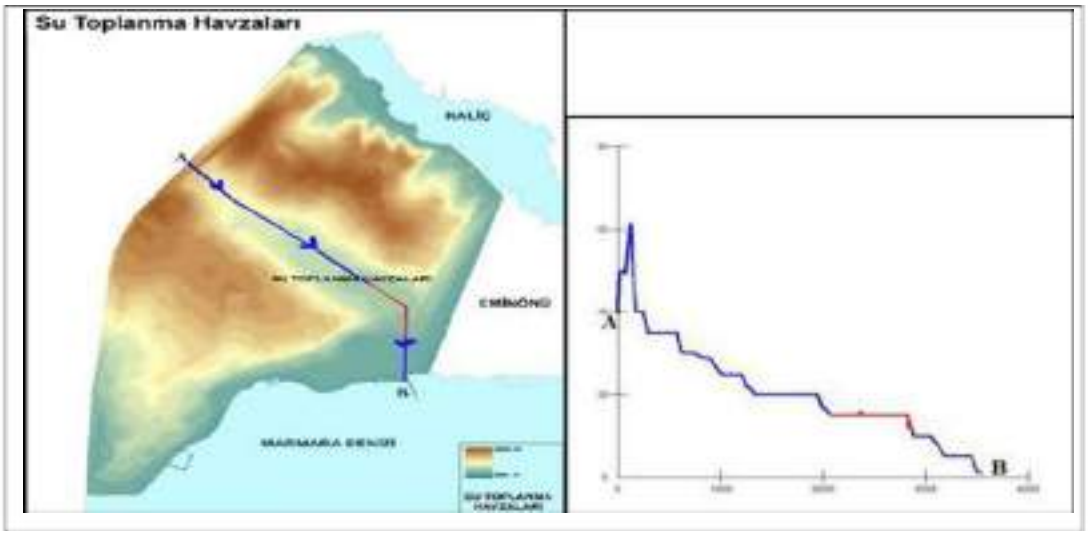


Figure 5. Hydrologic Attributes: Water Basin Model and the Profile of Water Flow (Ertan, 2009).

Local Geological Attributes include fine grained geological formations hazardous for construction and high PGA areas (Peak Ground Acceleration-PGA), seismically active areas with a high value of earthquake acceleration on the ground. In third place, Hydrologic Attributes referring to water basin form of the terrain morphology, tsunami area and old watercourse areas located in the mid of the district laid under the busy street ax holding infrastructure problems and flood hazard.

After natural hazards are examined distinctly, local seismic attributes are determined in accordance with their interactions to each other. Through the areal superimposition of natural hazards in ARCGIS 9.0 program, it is observed that natural hazards form combinations in 2,3,4,5 groups (Table.1) which determined the first level of priority and a ground map for further analyses. In order to evaluate hazards comprehensively and model a form of relationship, hazard combinations are observed and a multi-hazard map showing the most hazardous areas with 5 combinations to lesser are projected in Figure. 5 from dark red to light. In order to select most hazardous combinations a qualitative observation is required as two hazard combinations such as landslide and earthquake fault could generate more powerful impact in terms of their interaction.

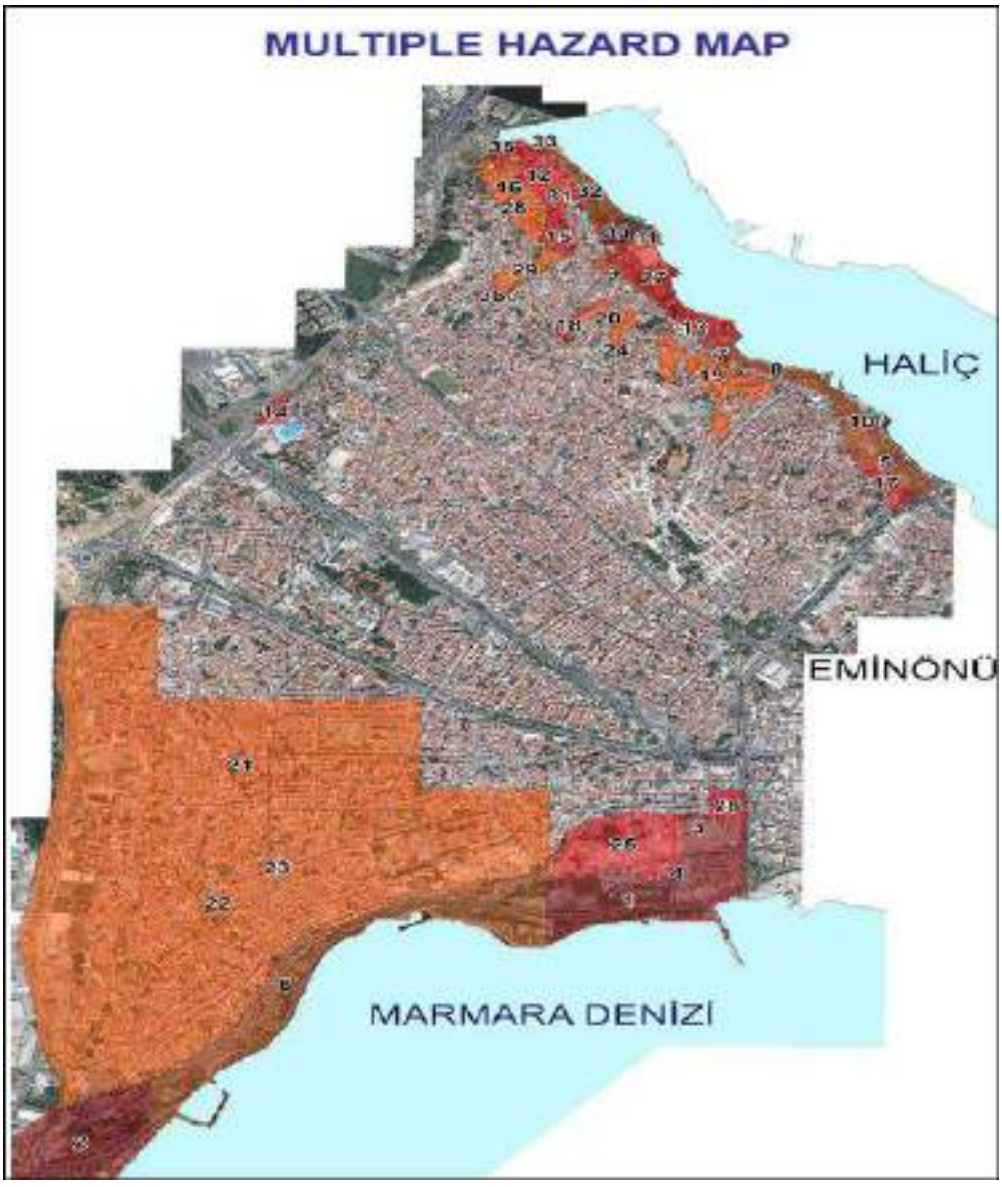


Figure 6. Multi-Hazard Map (Ertan, 2009).

The correlation in between multi-hazard areas and total built area is checked for evaluating total hazard potential of the district. Fortunately, it is observed that natural hazard combinations decrease as total built area (ha) decreases. (Figure. 7)

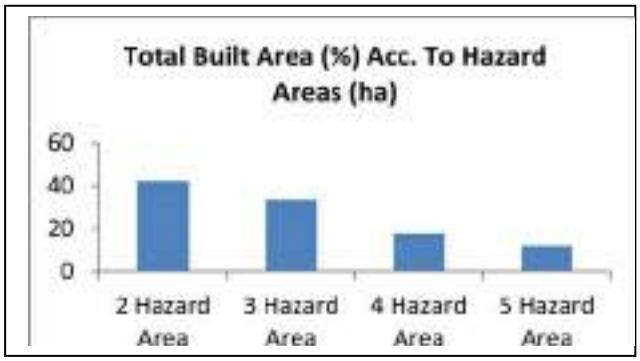


Figure 7 Multi-Hazard Map

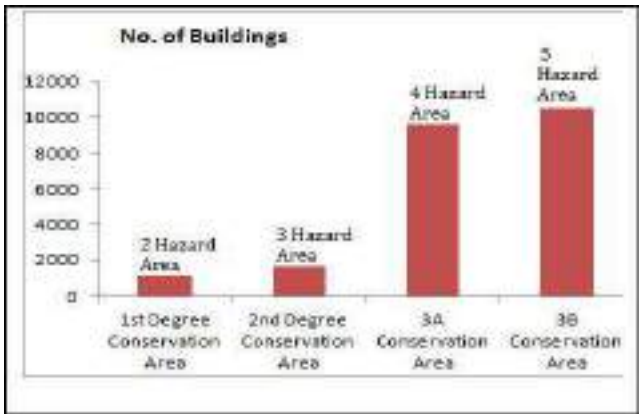
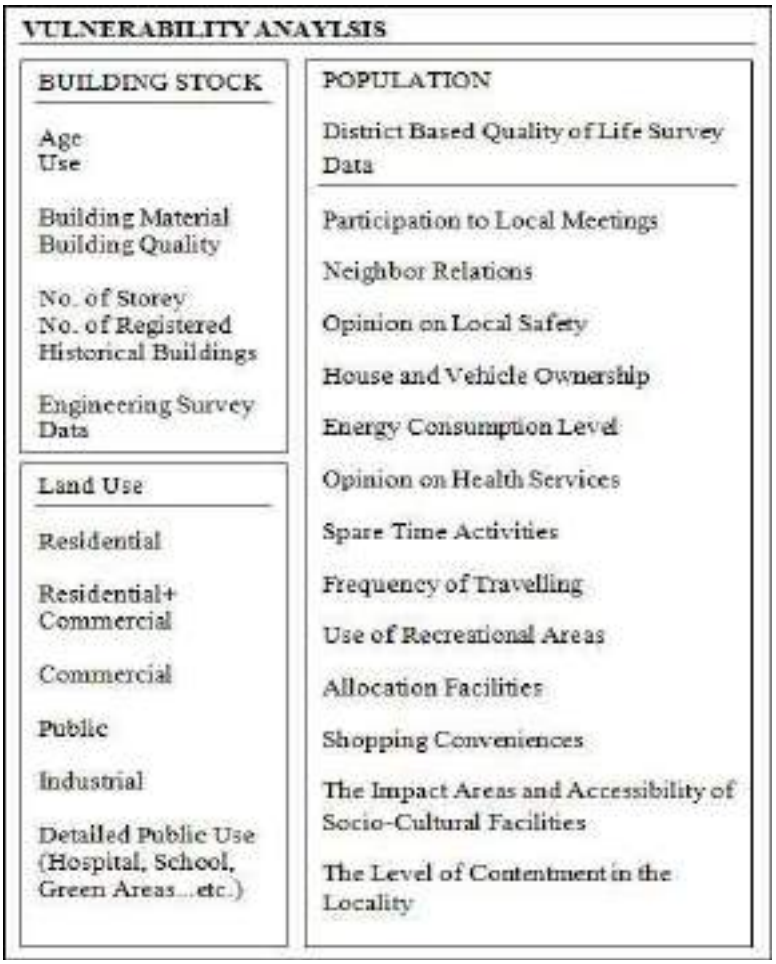


Figure.8 Multi-Hazard Map

It is observed that there is no relational increase in between degrees of conservation areas, hazard areas (ha) and no. of buildings. Hazard combinations decrease as total no. of buildings per conservation area decrease. (Figure.8) After qualitative observation and determining the physical/natural constraints for planner a second constraint is needed to be analyzed: Conservation Areas. By the areal superimposition of Multi-Hazard Map and Conservation Areas the level of allowance to physical intervention and a path for planner is revealed. (Table.4)

Second step involves Vulnerability Analysis bringing out socio-economic input to diagnose social dimensions of local seismic attributes. The socio-economic input embodies building stock, land use and district-based quality of life survey data. In view of physical and legislative constraints social constraints for planner are observed and deciphered. Buildings stock in case of age, material, quality, no. of storey, no. of registered historical buildings, engineering survey data is considered for risks, vulnerabilities and local-historical attributes of site.

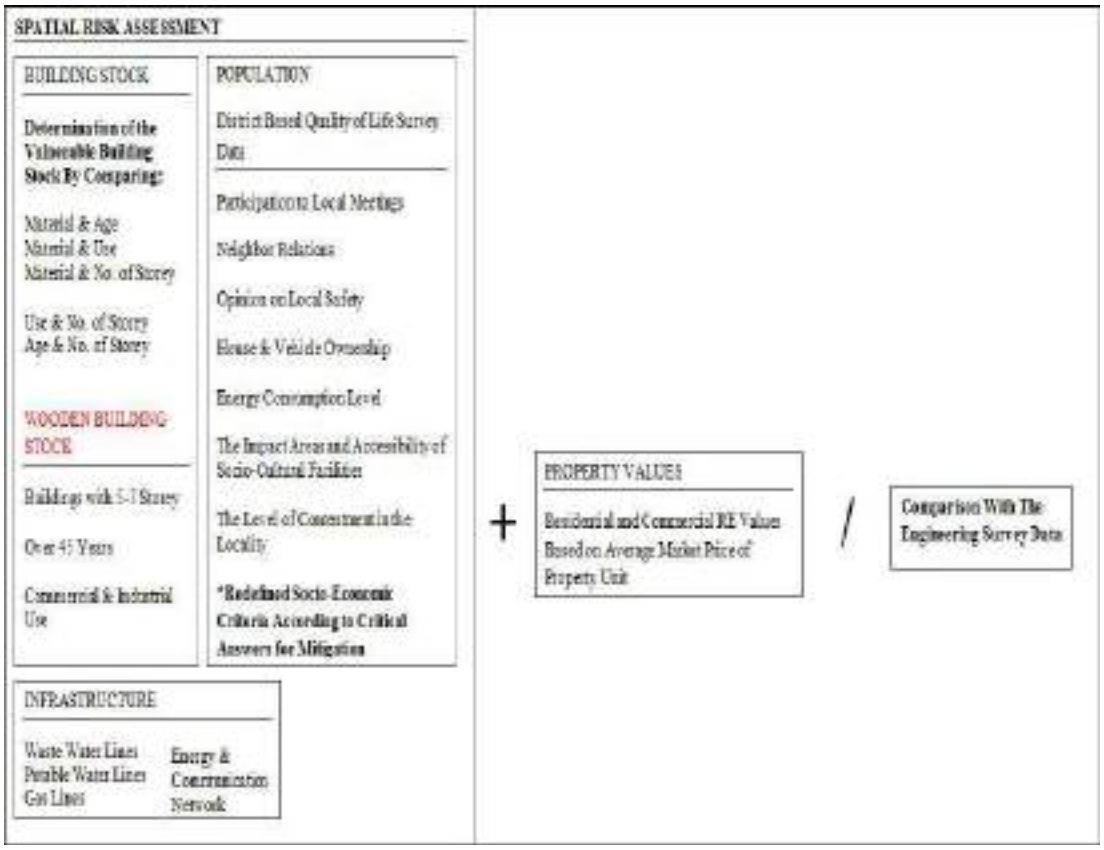
Table 2. Vulnerability Analysis



Land use is checked out to catch connections between risk sectors to residential, residential + commercial, commercial, public, industrial uses and green areas. A detailed public use survey to determine the capacities of emergency centers and public-private use ratio is carried out distinctly. As a significant input, district-based quality of life survey depicts local population to measure vulnerabilities and evaluate the medium for community building.

Spatial Risk Assessment is the third step introducing economic aspects of hazards forming risks which concentrate intensely or distinctly over the district. (Table.3)

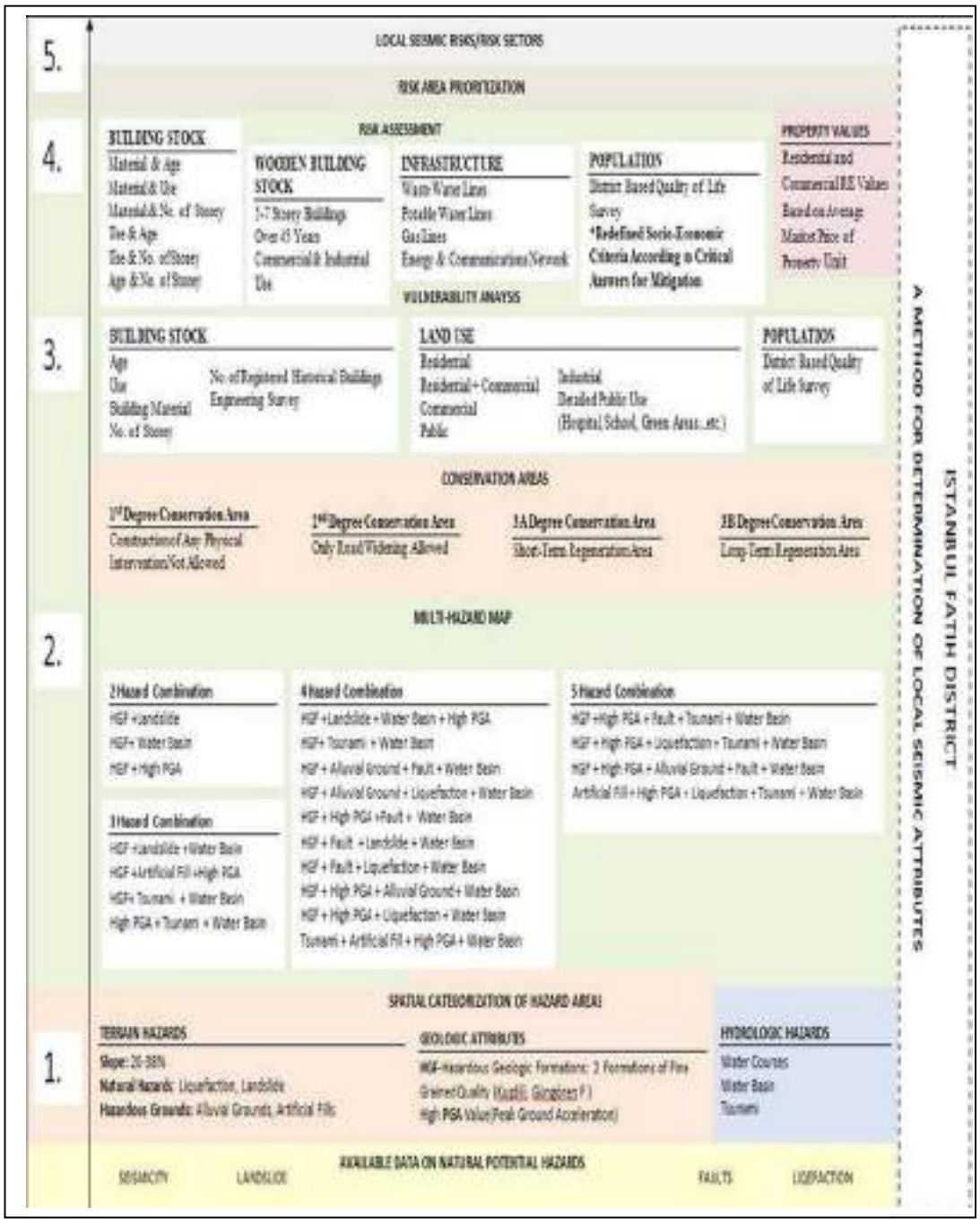
Table 3. Spatial Risk Assessment



Property values projecting residential and commercial real estate values based on average market price per unit of property are integrated to previous vulnerability analysis including building stock, land use and social survey. In order to emphasize local attributes and carry out a dynamic process, criteria for risk assessment was redefined from the marginal or extreme values of the vulnerability analysis which marks risk generating factors as wooden building stock or high level of energy consumption in high risk zones.

In building stock, it was observed that wooden building stock should be examined distinctly; even it is less in amount, hazardous to generate secondary disasters as fires which was general in district's history. Another fine difference is marked as risk-weighted answers achieved from district-based quality of life survey in which yes or no concentration is high at some social survey criteria relatively to others. Therefore, participation to local meetings, neighborhood relations, house and vehicle ownership, energy consumption, accessibility of socio-cultural facilities in impact areas and the level of contentment in the locality are separately examined through spatial risk assessment. Infrastructure as a vulnerable resource and a physical factor to generate secondary disasters such as explosions; gas lines, waste water lines, potable water lines, energy and communication networks are covered in scope of risk assessment.

Table 4. A Method for Determination of Local Seismic Attributes.



Risk Area Prioritization is the last step for determining prior areas for mitigation planning. Combining pre-disaster and post disaster priorities and eliminating short-term impacts of disasters, physical constraints to be eluded in view of emergency management are determined. Emergency measures of local administration are spatially tested for vulnerabilities in road network, availability of designated emergency facilities, temporary accommodation availabilities, emergency storage

requirements and hospital capacities and approximate schools. The capacity adequacy for hospitals and emergency centers designated by metropolitan municipality, temporary accommodation for evacuated communities, road networks for evacuation, school-hospital proximity and earthquake faults-hospitals proximity are the basic criteria proposed for emergency management as a completing step to mitigation planning.

3. Results

According to the findings, Fatih District is exposed to various socio-physical risks and natural hazards likely bear secondary disasters and contagious risks. The emphasis on local seismic areas reveals the way of interaction of hazards are specific to locality. Multi-risk areas determined as a result of multi-level election include common hazardous attributes and risk sectors.

3.1 Old Urban Texture

When multi-hazard zones are monitored, hazardous combinations located at old urban texture are the initial conflict, calls for complementary legislative approach. 1st Degree Conservation Areas contain both 150 m impact area of seismic faults, historical listed buildings and mixed uses as high percentage of health services, education facilities, auto parks, commercial use, manufacturing industry, public use. Old city texture with wooden buildings are the primary problem in case of building stock. Wooden buildings above 45 years/3-5 storey, wooden buildings with industrial and commercial uses, wooden buildings with hazardous uses at periphery and proximate gas lines constitute secondary disaster potential as fires and explosions during disaster. Through narrow road network for 2-3 m, there was a problem of accessibility in emergencies. On contrary, allowance to retrofitting and construction in those areas could invite exploitation of historical and cultural assets. It is required to be ensured by a special Act on Restoration of Historical Buildings and Cultural Assets at Disaster Prone Areas and national fund on mitigation for historical assets.

3.2 Geologic Macroform Risks

Hazardous ground types constitute the basis of local seismic risks. Building stock and green areas located on infill areas, landslide areas, liquefaction areas and hazardous geologic formation with high PGA concentrated on coastal areas and include public use and recreational facilities. Mitigative measures as national early warning systems connecting to global networks, development restriction, height restriction and floor reductions should be implemented to prevent doubling impacts of multi-hazards.

3.3 Building Stock

Building stock vulnerable to seismicity other than wooden buildings are aged (older than 45 years) (Figure.9) and high storey (5-7 storey) buildings (concrete/concrete-masonry/masonry) clustered in 3rd Degree Conservation Areas that allow regeneration. 37% of total stock are adjacent at corner increasing the vulnerability of the area during seismic shocks. Allowance for urban regeneration could be tempting for developing new opportunities by local governments but urban regeneration for the purpose of mitigation is a delicate implementation of participatory processes. public buildings and emergency facilities Demolition of weak buildings, reconstruction, retrofitting and urban regeneration methods should be decided mutually and transparently through dynamic negotiations rather than decisive top down processes.

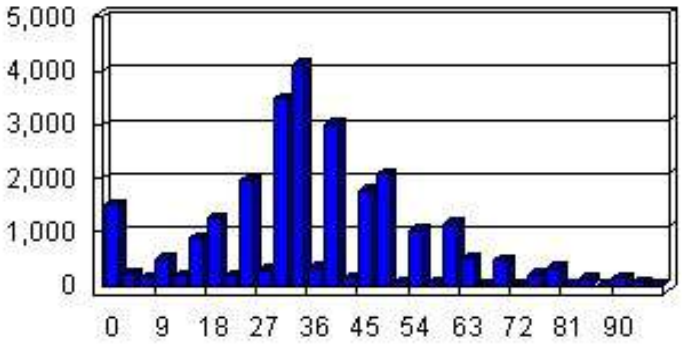


Figure 9. Age of Buildings and No. of Buildings

3.4 Social Inaccessibility

The socio-economic structure is rather depressive as 59% of the local community discard neighborhood relations, 73% discontent with the environment, 66,7% afraid to go after dark and most of the individuals are illiterate. Fatih District is preferred for cheap rents 200-400 TL and real estate values 1000-3000 TL (per unit price) District Disaster Volunteer (MAG) (Ertan, 2009) for disaster management and local community associations as FEBAYDER (Fener Balat Ayvansaray Protection of Tenants' and Property Owners' Rights and Social Collaboration Association) as a counter movement for urban regeneration projects. Social platform for mitigation gathering all small associations could be an innovative step for building community. Social development projects, revenue generating activities for unemployed individuals and women might help for social organization and collaboration. The design of participatory processes should depend upon confidence building between local government and local communities through negotiation and mutual correspondence. Further, socio-cultural programmes increasing the sense of belonging of the neighborhood, educative programmes and training programmes for public officials, trainers and local communities to build awareness, emergency preparedness and collective action for risk reduction.

4. Conclusions

For many years, risk analyses are reduced in to actuarial methods, statistical analyses, high-tech innovations in civil engineering supported by global and local economic programs. Risks and impacts have been evaluated through harm and loss analyses led to oversimplification (Denney, 2009). Social aspects of risks ignored in risk reduction praxis and changing paradigm from relief based post-disaster approach to mitigation determine an obligation for national communities to make their own definitions of risk. Socially determined or distorted risk constructed by information processes, institutional structures, social group behavior and individual responses produce risk consequences which reproduce other risks like a ripple effect. Social amplifications of risk changes the definition of risk through interacting cultural groups to interpret and validate signals, behavioral intentions to tolerate or take actions against risk, engaging in groups or individual actions to accept, ignore, tolerate or change the risk. Therefore it is impossible to define risks solely through engineering data or land use hazards that contain hidden meanings and complex networks of a social medium. Changing definitions of risk also changes the dimension of risk perception (Kasperson R.,Kasperson J., 2005).

In Turkey, the main reason of not internalizing international framework for mitigation is that dimension, reducing risk in to building level rather than city level. Building as a spatial economic vulnerability manufactured risk as an asset exchanged to avoid. Legislative framework also copes to the definition via partial implications of mitigation merely focused on post-disaster strategy in Development Law and Disasters Law. Recently updated, Act on the Regeneration of Disaster Prone Areas define risk as opportunity for redevelopment, creating power actors but increasing social amplifications of risk and social exclusion. Mitigation reveals a new ethical and technical area for policy learning and praxis that are above politics.

Mitigation plan for each risk sector enables to develop horizontal relations organized from locality to global framework on floods, earthquakes and many other natural disasters to develop common risk definitions and parallel mitigative measures. Hazard identification and risk assessment methods projecting multi-hazard maps and distinct hazard maps are essential to evaluate potential damages of hazard as well as their interaction. The collaboration of local governments to according to different risk sectors should be implemented, shared and systematized in to actions by all responsible and accountable actors as NGOs local civil movements, media and stakeholders from public and private sectors. Organizational fear of responsibility in local and national levels should be eliminated through micro-level social learning programmes of community building which successfully integrated to academic education mainstreaming all levels of mitigation plan.

The role of planner and epistemic community are prior to construct a new paradigm for the implementation of mitigative capacity. The dismissal of social amplifications of risk should be provided by developing socio-technical capacities to perceive all dimensions of risk and a broader perspective by the participation of all accountable

stakeholders. Involuntary enlightenment is a new pace for everyone to realize that risk reduction is not a zero-sum game and if not then it would be not the system but us that create new risks : The significant problems we have cannot be solved at the same level of thinking with which we created them. (Einstein)

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THE NEOLIBERALISATION OF STRATEGIC SPATIAL PLANNING

Kristian Olesen[1]

Abstract
Despite the fact that strategic spatial planning practices recently have taken 'a neoliberal turn' in many European countries, 'neoliberalism' and 'neoliberalisation' are rarely used as analytical concepts in planning theory. This paper seeks to fill in part of this gap by examining the relationship between neoliberalism and strategic spatial planning. This is done through an analysis how the key theoretical ideas underpinning strategic spatial planning might be appropriated by neoliberal political agendas in planning practice. In conclusion, the paper argues that neoliberalism and neoliberalisation are helpful analytical concepts to examine and understand contemporary transformations of spatial planning discourses and practices, and that planning theory by adopting such analytical concepts can play an important role in assisting critical empirical studies of how spatial planning practices are being transformed under neoliberalism.

1. Introduction

In the planning literature, significant attention has been paid to the renewed interest in strategic spatial planning spreading across Europe from the beginning of the 1990s[i] and across the UK from the beginning of the 2000s[ii]. So far this 'revival of strategic spatial planning' (Albrechts, 2004; Healey et al., 1997; Salet and Faludi, 2000) has been treated as rather unproblematic in the planning literature, celebrated amongst planning scholars as a welcome opportunity to recover the lost ground of the planning scepticism in the 1980s. Strategic spatial planning has been seen as a new way of transforming planning practices, effectively breaking away from the neoliberal project-led planning approaches in the 1980s, and the mid-20th century welfare state planning based on land use regulation (Albrechts, 2004). This perspective still dominates the strategic spatial planning literature, despite increasing discussion of neoliberalism as a hegemonic discourse in urban policy-making and spatial planning in the more critical-minded literature.[iii] The core argument in this literature is that the fields of urban policy-making and spatial planning are today underpinned by a more pragmatic version of 'roll-out' neoliberalism, in which the state plays an active role in supporting market logics by putting policy objectives of economic growth and competitiveness in the centre of spatial policies.

In the planning literature, neoliberalism has often been associated with large-scale urban development projects (Swyngedouw et al., 2002). However, more recently it has been argued that neoliberalism penetrates planning practices in many different

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aspects of planning (Tasan-Kok and Baeten, 2012), including strategic spatial planning practices (Allmendinger, 2011; Allmendinger and Haughton, 2012; Cerreta et al., 2010, Haughton et al., 2010). Empirical research from many European countries suggests that strategic spatial planning across Europe has recently taken 'a neoliberal turn',[iv] as it has been noticed how "the ideal of strategic planning could easily be used to favour the most aggressive neoliberal models of urban and regional development" (Cerreta et al., 2010, p.x). This has led to an increasing awareness that strategic spatial planning practices are unable to resist the hegemonic discourse of neoliberalism. Instead, strategic spatial planning practices seem increasingly to be guided by neoliberal political agendas, reinforcing a post-political condition in which neoliberalism as a hegemonic discourse within spatial planning remains largely unquestioned (Allmendinger and Haughton, 2012).

In fact, strategic spatial planning practices seem to provide a smokescreen for neoliberal transformations of spatial planning in different ways (Cerreta et al., 2010, Haughton et al., 2010). This process of 'neoliberalisation of strategic spatial planning' can be understood as "the ongoing project to install market logics and competitive discipline as hegemonic assumptions" (Purcell, 2009, p.140) in planning processes. Tasan-Kok and Baeten (2012) has argued that concepts such as 'neoliberalism' and 'neoliberalisation' have generally been overlooked in planning theory and planning research, despite getting increasing attention in other social sciences. In the planning literature, there are very few empirical studies, which critically analyse how planning systems, spatial logics, and strategic spatial planning practices are changing and being transformed under neoliberalism over time in particular settings, and what the implications of such transformations are. This paper contributes to fill in part of this gap by analysing the relationship between neoliberalism and strategic spatial planning. The aim is to offer some theoretical insights and initial building blocks on which such future empirical analyses of contemporary neoliberal transformations of spatial planning practices may build.

In this paper, I firstly attempt to draw out the relationship between neoliberalism and the revival of strategic spatial planning in the beginning of the 1990s. I argue that a particular model of 'roll-out' neoliberalism played an important role in paving the ground for reviving and (re)legitimising strategic spatial planning practices in Western Europe at the time. Secondly, I seek to demonstrate how some of the key theoretical ideas underpinning strategic spatial planning, that is communicative planning, relational geography, and soft spaces, might be appropriated in planning practice to support neoliberalism as a hegemonic discourse in spatial planning. Finally, I argue that neoliberalism and neoliberalisation are helpful analytical concepts to examine and understand contemporary transformations of spatial planning discourses and practices, and that planning theory by adopting such analytical concepts can play an important role in assisting critical empirical studies of how spatial planning practices are being transformed under neoliberalism.

2. Neoliberalism and the Revival of Strategic Spatial Planning

Until recently, critique of neoliberalism in urban policy-making (and spatial planning) was a topic reserved to critical geographers writing predominantly from a Marxist or neo-Marxist perspective (Castree, 2006). More recently, 'roll-out' neoliberalism has been associated with the state spatial project of reviving strategic spatial planning in Western Europe, predominantly in the UK under the New Labour era (Allmendinger, 2011; Allmendinger and Haughton, 2009b, 2010; Haughton et al., 2010). Yet also in other European countries like Germany, Denmark, and Belgium 'a neoliberal turn' in spatial planning has recently been reported (Murray and Neil, 2011; Olesen and Richardson, 2012 forthcoming, 2013 forthcoming; Van den Broeck, 2008).

In this section, I first outline the main characteristics of neoliberalism, drawing out two different models of neoliberalism: 'roll-back' neoliberalism and 'roll-out' neoliberalism. Second, I attempt to draw out the relationship between the less visible model of 'roll-out' neoliberalism and the revival of strategic spatial planning in Europe in the 1990s.

2.1 Two Models of Neoliberalism

The basic assumption behind neoliberalism is that "society functions better under a market logic than any other logic, especially a state-directed one" (Purcell, 2009, p.141). In many ways, neoliberalism attempts to reintroduce Adam Smith's concept of 'the invisible hand' from the 1750s, as a metaphor of how the market is more efficient in allocating resources than the state. In the context of globalisation, neoliberalism has more recently been presented as the only way to promote economic growth and competitiveness. Here, neoliberalism should not only be understood as a set of policies, but as a political ideology promoting the argument that there is simply no alternative to the market in allocating resources effectively (Peck and Tickell, 2002; Purcell, 2009). Alongside this legitimising argument of no other alternatives, neoliberalism has since the 1980s developed into a dominant 'common-sense' discourse, in which market competition, including creation of a business friendly environment, has become a necessary (and at times the only) value in decision-making (Purcell, 2009). Peck and Tickell (2002) refer to this development as the normalisation of a 'growth-first' approach to urban development.

The more recent literature on neoliberalism distinguishes between neoliberal ideology in its pure theoretical form, and what is referred to as 'actually existing neoliberalism' (Brenner and Theodore, 2002), which tends to have a more pragmatic form in practice. Peck and Tickell (2002) divide the 'actually existing neoliberalism' into two different models. The first model of neoliberalism, which is closer to neoliberalism in its pure ideological form, is often associated with the elections of Margaret Thatcher in the UK and Ronald Reagan in the US in the 1980s. In the context of economic recession and increasing globalisation, neoliberal state policies were introduced, which sought to promote market logics and competition in the

public sector, whilst reducing the role of the state to a minimum. This more well-known model of neoliberalism is often labelled 'roll-back' neoliberalism (Peck and Tickell, 2002) or *laissez-faire* (let-do) neoliberalism (Purcell, 2009).

During the 1990s, a different model of neoliberalism emerged, which is much further apart from the neoliberal ideology and therefore potentially less visible in practice. This model is described as 'roll-out' neoliberalism (Peck and Tickell, 2002) or *aides-faire* (help-do) neoliberalism (Purcell, 2009). In this model, the state plays a much more active role in facilitating the accumulation of capital. The state is actively intervening in the market by among other things generating public investments into infrastructure and urban development projects in order to support market logics and competition. This softer form of neoliberalism has also been associated centre-left governments such the former New Labour government in the UK (Allmendinger, 2011, Haughton et al., 2010; Peck and Tickell, 2002). It is this latter model of neoliberalism, which in many ways helped to pave the way for the 'revival of strategic spatial planning' in Europe in the beginning of the 1990s.

2.2 The Revival of Strategic Spatial Planning

In the mid-20th century, spatial planning was mainly concerned with growth management through preparation of structure plans. It was widely recognised that a strategic approach to land use planning was needed to manage the rapid population growth and urbanisation processes characterising Europe at the time (Healey et al., 1997). In this period of spatial Keynesianism (Brenner 2004), spatial planning played an important role in correcting market failures by distributing growth and economic development evenly across state territories, providing services for a reasonable quality of life. In the 1980s, this core idea of planning came under pressure in the increasingly neoliberal political climate. Here, policies of 'roll-back' neoliberalism resulted in an increasing disbelief in planning, which was largely regarded as restricting economic growth and competitiveness. This was in particular the case in the UK, but also in many other European countries the state's role in planning was reduced, whilst planning tasks increasingly were left to the private sector, or various forms of quasi-public or public-private organisations. Planning was increasingly directed towards the market and became more project-oriented, focusing primarily on large-scale urban development and infrastructure projects (Allmendinger, 2011; Healey et al., 1997).

Whilst this new understanding of the core idea of planning as facilitator of economic growth and competitiveness first resulted in a disbelief in planning and a 'roll-back' of the nation state in the 1980s, these ideas were later put in the centre of the new strategic spatial planning emerging in the 1990s. Here, strategic spatial planning was increasingly seen as an activity for positioning cities and city-regions in the European competitive landscape or within a global market (Albrechts et al., 2003: Healey et al., 1997), promoting what Brenner (2004) refer to as the neoliberal competitive state. Rather than focusing on expanding the welfare state by promoting

equal development across the state territory, public investments were generated into major cities and urban regions, promoting a new set of spatial logics centred on major cities and urban regions as key sites for economic activity. We might thus understand the new strategic spatial planning practices emerging from the beginning of the 1990s as an attempt to transform the core idea of planning to fit the increasingly neoliberal political climate.

In the planning literature, the new strategic spatial planning has been articulated as a substantially different activity than traditional land use planning and neoliberal project planning (Albrechts, 2004, 2006; Healey, 2007; Healey et al., 1997). Planning scholars have seen the renewed interest in strategic spatial planning as an opportunity to transform planning practices and rebrand planning after a decade of considerable planning scepticism. This means that strategic spatial planning remains a rather elusive concept, defined just as much by what it is not, as by what it is (Haughton et al., 2010). Friedmann (2004) notes how it is difficult to find a clear-cut definition of strategic spatial planning in the planning literature. Instead, the understanding(s) of strategic spatial planning seem to remain somewhat implicit among planning theorists (Needham, 2000), deeply rooted in different European planning cultures. This is perhaps not surprising as 'spatial planning' was invented as a Euro-English term in process of preparing the *'European Spatial Development Perspective'* (ESDP) (CSD, 1999), as an attempt to capture the essence of various European planning traditions such as the French *aménagement du territoire*, the Dutch *ruimtelijke ordening* and the German *raumordnung* (CEC, 1997). Strategic spatial planning might thus mean different things in different contexts and planning cultures. On one hand, strategic spatial planning has been used as an umbrella term to describe a range of different planning activities taking place across Europe since the beginning of the 1990s at scales above the local governance level. On the other hand, it has been used within planning theory and by planning communities to promote a new set of normative ideas about what constitutes 'good planning' (Haughton et al., 2010).

These elusive characteristics make strategic spatial planning rather vulnerable to neoliberalisation. In the next section, I discuss how the key theoretical ideas underpinning strategic spatial planning might be appropriated by neoliberalism in planning practice.

3. The Neoliberalisation of Strategic Spatial Planning Practices

The new strategic spatial planning practices emerging in Western Europe from the beginning of the 1990s have been the subject of considerable interest in the planning literature. In academia, planning scholars have sought to elaborate and refine the concept of strategic spatial planning by adding a normative theoretical dimension to the concept in order to guide future planning practices. In this section, I attempt to demonstrate how the key theoretical ideas underpinning strategic spatial planning expose strategic spatial planning practices to neoliberal political agendas, which seek

to maintain the status quo and reinforce existing power structures. The key theoretical ideas that I discuss in this section are communicative planning, relational geography, and soft spaces.

3.1 Communicative Planning as a legitimising tool for neoliberal discourses?

Alongside the revival of strategic spatial planning in planning practice in the beginning of the 1990s, planning theory seemed to be taking a communicative turn (Healey, 1992) in which communicative planning was presented as a new paradigm within planning theory (Innes, 1995). Communicative planning ideas had a significant influence on the theorisations of strategic spatial planning, which was conceptualised as collaborative social mobilisation exercises aiming at transforming policy discourses and planning practices (Albrechts, 2004; Healey, 1997, 2007).

Here, a spatial strategy is said to have a transformative potential, if the core ideas behind the strategy are able to mobilise support and gain recognition, as they travel from arena to arena across an increasingly fragmented governance landscape (Healey, 2007). Such a strategy, it is argued, needs to be both selective by prioritising some issues over others, and synthetic in integrating diverse issues under the shelter of a single frame (Albrechts, 2004; Healey, 2007). To be successful, a spatial strategy requires the prospect of win-win situations in which all actors involved gain something from participating in the process, and develop a shared recognition of that handling particular issues is beyond the capacities of the single actor (Albrechts, 2001). Empirical research by Albrechts (2001) and Olesen and Richardson (2012, forthcoming) suggests that such win-win situations are more likely to be designed within certain policy fields, such as transport (including investments in transport infrastructure).

This expectation or requirement of win-win situations or ‘consensus’ in collaborative spatial strategy-making processes has recently been highlighted as highly problematic in the planning literature (Hillier, 2003; Purcell, 2009; Pløger, 2004), as it seeks to remove disagreements, conflicts, and political ideology from planning processes. As all participants in collaborative planning processes will serve their self-interest, and indeed are expected to do so (Innes, 2004; Innes and Booher, 2010), win-win situations will per definition not fundamentally transform existing power structures, but rather contribute to reinscribe these in the particular planning process (Harris, 2002; Purcell, 2009). A focus on designing win-win situations will therefore contribute to maintaining the status quo rather than supporting social mobilisation around issues of conflict. In fact, communicative planning practices might (unintentionally) legitimise a reinforcement of the status quo, including neoliberalism as a hegemonic discourse, as outputs from collaborative and consensus building processes are generally considered more inclusive, fair, and democratic (Purcell, 2009).

Here, Mouffe's (1999, 2000) theory of agonism is helpful, as it helps us to understand how a focus on win-win situations and consensus building suppresses conflicts and politics and depoliticises strategic spatial planning processes. This post-political planning condition has been furthered by a neoliberal discourses promoting the idea that win-win(-win) situations such as sustainable development can be designed and achieved through spatial planning practices (Allmendinger and Haughton, 2012; Swyngedouw, 2010). In the UK and possibly in many other European countries, we see a planning system and spatial planning practices emerging, which

> "gives the superficial appearances of engagement and legitimacy, whilst focusing on delivering growth expedited through some carefully choreographed processes for participation which minimise the potential for those with conflicting views to be given a meaningful hearing." (Allmendinger and Haughton, 2012, p.90)

3.2 Relational Geography as a Medium for Depoliticisation?

As part of the theorisation of strategic spatial planning, there has been an increasing concern with bringing the ideas of relational geography into the field of planning (Davoudi and Strange, 2009; Graham and Healey, 1999; Healey, 2004, 2006, 2007). The new relational conceptions of space and place set out to break with the Euclidean and absolute view of space, which dominated spatial plans in the mid-20th century (Davoudi and Strange, 2009; Healey, 2007). Instead, a relational understanding of spatiality draws into attention the multiple webs of relations or 'spaces of flows' (Castells, 1996) that intersect or transect urban areas, and opens up for multiple ways of understanding or getting to know an urban area (Healey, 2007).

The ideas of relational geography have played a dominant role in European spatial planning discourses since the beginning of the 1990s. Here, a new spatial vocabulary of networks, webs, flows, nodes, and hubs has been introduced as new, more up-to-date organising principles (Davoudi and Strange, 2009; Healey, 2006). One of the ways, in which planning practice has tried to see the world through webs, flows and networks, has been through what Davoudi and Strange (2009) refer to as 'fuzzy maps'. Rather than relying on Euclidean geometric accuracy, these 'fuzzy maps' depict the planned territory as fluid with fuzzy boundaries (Davoudi and Strange, 2009).

Whilst, the use of fuzzy spatial representations can be understood as attempts to appropriate the ideas of relational geography in planning practice, they also seem to fulfil other (and perhaps more important) roles. First, fuzzy spatial representations seem to play an important role in distancing spatial planning from its regulatory characteristics normally associated with Euclidean geography, thereby supporting the discourse of a new core idea of spatial planning.

Second, fuzzy spatial representations can be understood as the result of attempts to broker agreement or build consensus in strategic spatial planning processes. The planning literature stresses how spatial representations are highly political sensitive constructs, as they more clearly depict the potential 'winners' and 'losers' of a given spatial policy (Dühr, 2007; Jensen and Richardson, 2003; Zonneveld, 2000). The 'fuzziness' of a spatial representation, or the absence (or presence) of a spatial representation in a spatial strategy, might therefore reflect the extent of consensus among actors in the process (Jensen and Richardson, 2003). Faludi and Waterhout (2002) and Zonneveld (2000) have for example illustrated how the spatial politics in the ESDP process remained highly contested and prevented the European member states from agreeing on a policy map depicting the future European territory.

In cases where fuzzy spatial representations are prepared, their abstract characteristics might provide convenient temporary spaces for consensus. Here, the suggestive nature of fuzzy maps might play an important role in avoiding controversial or politically sensitive issues, such as distribution of future urban development (Davoudi and Strange, 2009; Olesen and Richardson, 2011). The representational vagueness of fuzzy spatial representations becomes then an effective means for camouflaging or blurring the spatial politics of strategy-making. In this way, relational geography and in particular the use of fuzzy spatial representations in planning practice might act as a medium for depoliticisation.

3.3 Soft Spaces as vehicles for neoliberal transformation of spatial planning

More recently, strategic spatial planning has been associated with the new 'soft spaces with fuzzy boundaries' emerging in-between formal scales of planning in the UK (Allmendinger and Haughton, 2007, 2009a, 2009b, 2010; Haughton et al., 2010) and beyond (Olesen, 2013 forthcoming). These new soft spaces can be understood as a mix of i) new spatial imaginations promoting new informal planning spaces located outside the formal planning system and formal scales of planning, and ii) new networked forms of governance seeking to work outside the rigidities of statutory planning.

Although, the strategic spatial planning literature does not refer explicitly to soft spaces, these spaces seem to share similarities with what Healey (2007) refers to as a restless search for policy integration and joined-up government at the scale of urban regions. According to Healey (2007), strategic planning efforts have at times to move away from formal planning arenas in order to destabilise existing policy discourses and practices, and this is what soft spaces seem to do. This search for new opportunities for strategic thinking and breaking away from pre-existing working patterns by working outside formal planning arenas is what seems to characterise soft spaces.

However, contrary to Healey's (2007) understanding of informal strategic spatial planning, the new soft spaces emerging in the UK seem to have an explicit neoliberal

agenda. In the UK, the emergence of soft spaces has been associated with transformations of spatial planning under the former New Labour government. Here, the soft spaces are characterised by New Labour's pragmatic view on spatial planning, focusing on 'what works in practice' in terms of implementation and policy delivery (Allmendinger, 2011; Allmendinger and Haughton, 2009b). They reflect attempts to short-circuit formal planning requirements and move beyond the rigidities of statutory planning in order to facilitate development. Furthermore, the soft spaces seem to be defined in ways that deliberately are fluid and fuzzy, so they easily can be amended and shaped to reflect different interests and challenges (Haughton et al., 2010). This flexibility manifested itself in the transformation of the soft spaces' rationale in UK in aftermaths of the global credit crunch, where, the soft spaces were transformed from functional spaces for policy integration and coordination to vehicles for policy delivery and growth Allmendinger (2011).

In this way, we might understand soft spaces as a reaction against statutory planning, which is perceived as incompatible with neoliberal political agendas of promoting economic development. Olesen (2013, forthcoming) has for example demonstrated how spatial strategy-making in soft spaces in Denmark was used to unsettle a particular Danish approach to strategic spatial planning rooted in a rational comprehensive planning and social-welfarist perspective, by calling for more flexible and solution-oriented forms of strategic spatial planning. Often soft spaces seem to promote certain agendas and certain ways of thinking about strategic spatial planning, which reflect a neoliberal understanding of society. In this sense, we might think of soft spaces as vehicles for promoting a particular neoliberal version of strategic spatial planning.

4. Conclusions and Future Challenges for Planning Theory

The concept of strategic spatial planning has played an important role in breaking the planning impasse of the 1980s by adjusting the core idea of planning to fit the increasingly neoliberal political environment. Throughout the 1990s and 2000s, strategic spatial planning has been promoted as a substantially different practice than traditional land use planning (Albrechts, 2004), paving the ground for a new set of planning practices primarily concerned with positioning cities and city regions in a European competitive landscape (Albrechts et al., 2003; Healey et al., 1997). Within these strategic spatial planning practices, economic growth and international competitiveness have evolved into common-sense policy objectives, reinforcing neoliberalism as a hegemonic discourse within spatial planning. In this way, the revival of strategic spatial planning was partly supported and partly legitimised by the emergence of 'roll-out' neoliberalism as the dominant political-economic agenda in Europe from the beginning of the 1990s.

Furthermore, empirical evidence of spatial planning practices seems to confirm the thesis that strategic spatial planning has recently taken a neoliberal turn in many European countries. This paper has sought to illuminate how this neoliberalisation

of strategic spatial planning are taking place in planning practice, by drawing attention to the emerging contradictions within the key theoretical ideas underpinning strategic spatial planning, when these are examined in the context of neoliberalism as a hegemonic discourse in spatial planning. The paper has demonstrated how the theoretical ideas of communicative planning, relational geography, and soft spaces might be appropriated by neoliberal political agendas in planning practice, supporting the contemporary neoliberalisation of strategic spatial planning.

The theorisations of strategic spatial planning have been criticised for being too naïve (Bengs, 2005) and too theoretical (Newmann, 2008), thought too far from the current realities of the socio-political contexts in which strategic spatial planning takes place. At the moment, we seem to know very little about how neoliberalism affects spatial planning practices, and what the potential consequences of the contemporary neoliberalisation of strategic spatial planning might be. What seems to be missing in contemporary theorisations of strategic spatial planning is a critical understanding of how the hegemonic discourse of neoliberalism shapes strategic spatial planning practices. Building up such an understanding is crucial if we are to move beyond the 'more of the same' thinking that Albrechts (2010) recently has criticised.

Here, I see a value in bringing analytical concepts such as neoliberalism and neoliberalisation into planning theory and planning research. By incorporating these analytical concepts, planning theory has a stronger foundation for assisting critical empirical studies of how strategic spatial planning practices are being transformed under neoliberalism. At the moment, there is only limited work which seeks to conceptualise the relationship between strategic spatial planning and neoliberalism, and only limited empirical research, which critically analyses how strategic spatial planning ideas might be appropriated by neoliberal political agendas in planning practice. In an environment without a strong theoretical critical mass and sufficient theoretical insight, critical studies of strategic spatial planning practices might have limited resonance in planning practice, and powerful actors and policy agendas will continue to shape and transform planning practices unchallenged. There is a need to build up a strong theoretical and empirical foundation on which such critiques can build. I believe that this is an appropriate and important role for planning theory and planning research in the future, and at least one way for planning scholars to influence and hopefully improve planning practices.

Notes

i) Examples here include Albrechts (2001, 2004, 2006), Albrechts et al. (2003), Healey (2004, 2006, 2007), Healey et al. (1997), Kunzmann (2001), Salet and Faludi (2000), and Sartorio (2005).

ii) Examples here include Allmendinger (2011), Davoudi and Strange (2009), Harris and Hooper (2004), Haughton et al. (2010), Morphet (2011), Nadin (2007), and Tewdwr-Jones et al. (2010).

iii) See writings of Brenner (2004), Brenner and Theodore (2002), Peck and Tickell (2002), Purcell (2009), and Raco (2005).

iv) Examples from the UK include Allmendinger (2011) and Allmendinger and Haughton (2012), and examples from continental Europe include Murray and Neil (2011), Olesen and Richardson (2011, 2012 forthcoming, 2013 forthcoming), and Van den Broeck (2008).

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PARTICIPATORY PLANNING OF SOCIAL AND SPATIAL ORGANIZATION IN AGRARIAN REFORM POLICY IN BRAZIL: AN ASSESSMENT OF THE IMPLEMENTATION CHALLENGES

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Abstract

The social endeavors for Agrarian Reform in Brazil have a history of at least sixty years. Throughout this time, distinct political regimes, increased land concentration, disordered urbanization and the development of a dynamic agribusiness sector inserted in global economy led to both the aggravation of social conflicts over land in Northern and Southern Brazil as well as new inquiries on the features necessary for an efficient Agrarian Reform Plan in our country.

As embodied in the second National Plan of Agrarian Reform (II PNRA), the current assessment admits that corrective measures should encompass not only land issues (regulations, expropriations and settlements), but also marketing infrastructure, social support and targeted technical assistance and credit. The II PNRA cooperates with the efforts to reconstruct the National Policy of Technical Assistance and Rural Extension (PNATER), reoriented to strengthen general family farming. A renovated National Program of Technical Assistance and Rural Extension in the Agrarian Reform and Family Farming (PRONATER) reflects this perspective and calls for a participatory governance system anchored in a complex institutional structure, connecting governmental and non-governmental organizations in multiple levels.

Focused on the agrarian reform projects in the Brazilian Amazon, this work discusses on the philosophical and methodological perspectives drawn in the II PNRA. Framing our account mostly along the theoretical scaffolding provided by the Bloomington School of Institutional Analysis, we analyze the multiple challenges facing the organization and the maintenance of the institutional structure designed to facilitate participatory planning and governance of collective resources in highly complex socio-ecological systems wherein socioeconomic asymmetries, cultural diversity and poor social capital and education promote political and ideological disputes that jeopardize safeguarding global commons.

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1. Introduction

As a direct intervention on the access to one of the most important factors of production – land – agrarian reform has always been a sensitive issue wherever the matter is raised. Due to its strong relations with sources of wealth and power, land expropriation and redistribution was ahead most revolutionary processes, as those in Russia, Mexico, China, Cuba, Vietnam, Nicaragua and Portugal.

In Brazil, the social endeavors for agrarian reform have a history of at least sixty years. By the fifties, the theme was adopted as a common language and focus, joining different forms of conflicts present in Brazilian rural areas (Medeiros, 2003). In the early sixties, agrarian reform became one of the main themes on the public debate concerning the definition of a national project of socioeconomic development.

Embedded in an international geopolitical environment marked by the Cold War and the dissemination of communist ideologies among rural areas, the revolutionary facet of the agrarian reform project in Brazil was aborted by the military breakdown that overthrew President João Goulart, in March 31, 1964. With a discourse that sought to harmonize ideas of social justice with agricultural productivity, the military regime subsumed the issue of the agrarian reform under the Land Act (Law 4.504) of November 30 of the same year.

Throughout the authoritarian period, which lasted 21 years (1964 – 1985), the Land Act was primarily an instrument of agricultural policy, designed to foster the advancement of capitalism in rural areas and the industrialization of the country. Increased land concentration and significant rural exodus led to the aggravation of social problems and conflicts over land in both Northern and Southern Brazil.

Pushed by growing social organization, the first National Plan of Agrarian Reform (I PNRA), predicted in the Land Act, was created about twenty-five years later, during the government of President José Sarney (1985-1990). Despite ambitious goals, the I PNRA progressed timidly along the decade, counting the governments of Fernando Collor (1990-1992) and Itamar Franco (1992-1995).

Throughout this period, major changes in the technical and economic basis of the Brazilian agriculture led to new concepts of the requirements for an effective agrarian reform in Brazil. The leading views about the issue in both Fernando Henrique Cardoso (1995-2003) and Luis Inácio Lula da Silva (2003-2011) administrations admitted that the PNRA should be renewed and extended beyond land distribution programs to encompass marketing infrastructure (roads, warehouses), social support (education and health in rural areas) and targeted technical assistance and credit.

This work discusses our views on the implementation challenges faced by the second National Plan of Agrarian Reform (II PNRA), launched in November, 2003. While we mention results from literature occupied in evaluating the agrarian reform

movement all around the country over time, our focus rests on our own recent experiences with limited reformed areas in the eastern Amazon.

The framework developed by the Bloomington School of Institutional Analysis, whose outline we present in the following section, provides us orientation. Next, we expand our view on the II PNRA as State Policy embedded in a polycentric political system (Polanyi, 1952; V. Ostrom, 1972) open to social control. Then, we address the substantive discussion on the challenges perceived in the implementation of participatory planning in agrarian reform projects, and how unsatisfactory results may jeopardize safeguarding natural resources that function as global commons. The final session concludes the work with a short reference to the role of values systems and moral choices of the individuals occupied in the social and spatial organization in the agrarian reform.

2. An outline on the IAD framework

The conceptual scaffoldings supplied by the Institutional Analysis and Development (IAD) framework went through a series of transformations since the *Governing the Commons* (E. Ostrom, 1990). Figure 1 is one of the latest attempts to portray the structure of complex governance problems involving integrated social-ecological systems (SESs). It represents a response to the challenge presented to SES scholars, in search for a proper language "to map and explore the institutional, praxeological and normative complexity of polycentric systems of human governance" (Aligica; Boettke, 2009, p. 29).

The map starts from the prior recognition that many variables affect the patterns of interactions and outcomes in those systems. It was conceived to help SES scholars "to examine the nested attributes of a resource system and the resource units generated by that system that jointly affect the incentives of users within a set of rules crafted by local, distal, or nested governance systems to affect interactions and outcomes over time" (E. Ostrom, 2007).

Figure 1 shows only the most abstract level of analysis of a generic SESs. To investigate real problems in focal SESs, scholars are required to "unpack" each one of the compound units shown in the figure in as much tiers as necessary to reach the relevant data for the particular question under study. Table 1 presents a first list of second tier variables in each category. The variables marked with an asterisk (*) are thought to affect self-organization (E. Ostrom, 2009).

Based on extensive empirical research, Ostrom and her associates on many fronts suggest that self-organization is facilitated when the resource is sufficiently small (RS3) to be monitored (GS8) and to generate reliable information (knowledge) about its general condition (U7) at reasonable costs. The likelihood of successful self-organization also depends on both the productivity of the system (RS5) and the predictability of its dynamics. The productivity of deteriorated systems should allow for feasible improvements at reasonable time schedule. These conditions are better

fulfilled when the system has clear boundaries (RS2) and the resource units are set within them (RU1). They also interact with the technology (U9) used both to harvest and recover the resource units.

The technology at the reach of users that are too distinct in their economic resources (U2) also affects the likelihood of successful self-organization. The ability to craft locally sustainable collective-choice rules is generally improved when economic asymmetries are limited and do not lead to large differences in the harvesting levels of diverse users (I1).

The economic value of the resource units (RU4) also interacts with user attributes to determine their dependence on resource (U8). According to E. Ostrom (1999), self-organization is more likely to occur when users depend on the resource for a major portion of their livelihood or other variables of importance to them. In agreement with Olson (1965) contribution, self-organization proved to be facilitated when the number of users (U1) is not too large and leadership is present (U5). In connection with property right systems and collective-choice rules, informal norms and social capital (Coleman, 1988; Putnam, 2000) also contribute to self-organization.

E. Ostrom (1999) suggests that successful governance systems addressing the core problem of how to restrict the appropriation from a common-pool resource (GS4) allocate benefits proportional to the required inputs (GS6) and are crafted to take local conditions into account. Since rule infringement (I4) is hardly ever eradicated,

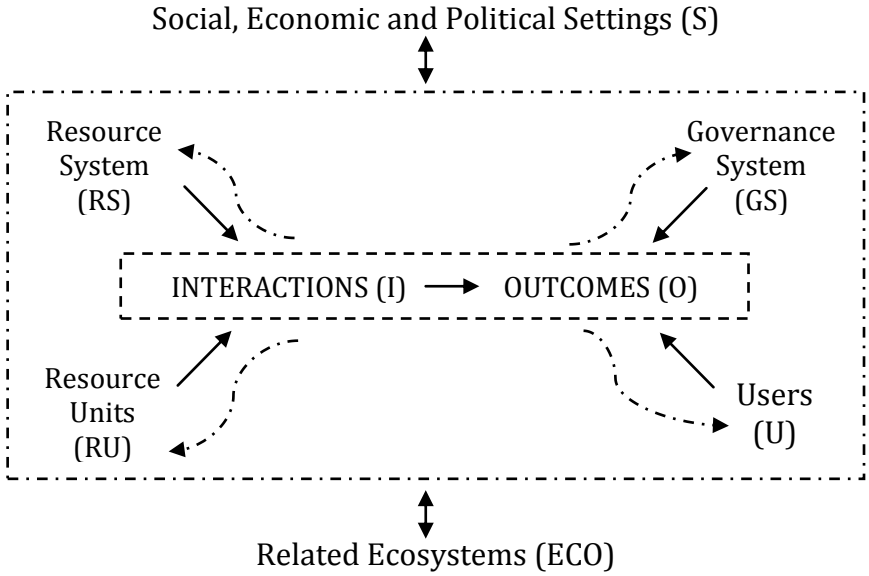

Figure 1: A multitier framework for analyzing interactions and outcomes in a linked social-ecological system (straight arrows refer to direct causal links; curved arrows refer to feedbacks)

Source: Adapted from Ostrom (2007).

sanctioning mechanisms (GS8) classified according to the seriousness and context of the offence seem to work better to reinforce the appropriation rule than disproportionate punishment.

When collective-choice rules are designed, participation emerges as a key principle underpinning the social capacity to sustain both the governance and the resource systems. E. Ostrom (1999) suggests that most individuals affected by the resource regime should participate in making and modifying their rules (I3, I7). Also, successful social agreements usually rely on monitors selected by the community of users, either individuals accountable to users or the users themselves.

Table 1: Second-tier variables in framework for analyzing an SES

<table>
<tr><td colspan="2">Social, Economic and Political Settings (S)
S1- Economic development. S2- Demographic trends. S3- Political stability.
S4- Government settlement policies. S5- Market incentives. S6- Media organization.</td></tr>
<tr><td>Resource System (RS)</td><td>Governance System (GS)</td></tr>
<tr><td>RS1- Sector (water, forests, pasture, fish)
RS2- Clarity of system boundaries*
RS3- Size of resource system*
RS4- Human-constructed facilities
RS5- Productivity of system*
RS6- Equilibrium properties
RS7- Predictability of system dynamics*
RS8- Storage characteristics
RS9- Location</td><td>GS1- Government organizations
GS2- Non-government organizations
GS3- Network structure
GS4- Property-rights systems*
GS5- Operational rules
GS6- Collective-choice rules*
GS7- Constitutional rules
GS8- Monitoring & sanctioning processes*</td></tr>
<tr><td>Resource Units (RU)</td><td>Users (U)</td></tr>
<tr><td>RU1- Resource unit mobility*
RU2- Growth or replacement rate*
RU3- Interaction among resource units
RU4- Economic value*
RU5- Size
RU6- Distinctive markings
RU7- Spatial & temporal distribution</td><td>U1- Number of users*
U2- Socioeconomic attributes of users
U3- History of use
U4- Location
U5- Leadership/entrepreneurship*
U6- Norms/social capital*
U7- Knowledge of SES/mental models*
U8- Dependence on resource*
U9- Technology used*</td></tr>
<tr><td colspan="2">Interactions (I) → Outcomes (O)</td></tr>
<tr><td>I1- Harvesting levels of diverse users*
I2- Information sharing among users
I3- Deliberation processes
I4- Conflicts among users*
I5- Investment activities
I6- Lobbying activities
I7-Self-organization of U*</td><td>O1- Social performance measures (e.g., efficiency, equity, accountability)
O2- Ecological performance measures* (e.g., overharvested, resilience, diversity)
O3- Externalities to other SESs</td></tr>
<tr><td colspan="2">Related Ecosystems (ECO)
ECO1- Climate patterns. ECO2- Pollution patterns.
ECO3- Flows into and out of focal SES.</td></tr>
</table>

Source: Adapted from Ostrom (2007:15183)

Finally, since the authority of users to devise appropriation rules over economic resources of global interest is set by larger governance and political systems (S4), their rights to organize and formulate their own rules have to be minimally legitimated by official governmental agencies (GS1). The access to rapid, low-cost, local arenas to resolve conflict among users or between users and officials is likewise referred to as an important requirement for successful self-organization (E. Ostrom, 1999).

With this broad framework in sight, we can better approach, first, the complex institutional structure drawn in the II PNRA, and then the implementation challenges brought about by different sorts of structural limitations and conjunctures.

3. The II PNRA: a polycentric political system open to social control

In November 2003, the second National Plan of Agrarian Reform (II PNRA) was launched as a comprehensive endeavour resting on an amplified conception of agrarian reform – which considers it as a State policy, open to social control and designed to foster the sustainable development of rural areas and overcome poverty and inequalities.

Hosted in the Ministry of Agrarian Development (MDA) and managed by the National Institute of Colonization and Agrarian Reform (INCRA), the implementation of the II PNRA requires strong institutional cooperation of various ministries and federal agencies, plus the committed involvement of state and local governments. Resting on a *territorial approach*, the Plan integrates different policies, plans and programs aimed at boosting the economy and the social and cultural life of the areas wherein land reform projects concentrate.

The achievement of the PNRA objectives depends largely on the efforts to reconstruct the Brazilian System of Technical Assistance and Rural Extension (SIBRATER), reoriented by the National Policy of Technical Assistance and Rural Extension (PNATER), to strengthen and empower family farming.

Based on an apt criticism of the model of technology transfer adopted in the seventies, the PNATER definitely calls for participatory planning of social and spatial organizations both in the agrarian reform settlements and the surrounding areas (as targeted territories).

4. Participatory planning in agrarian reform settlements in eastern Amazon: reflecting on our experience with the IAD framework

In this section, we organize our reflections regarding a series of implementation hindrances experienced in our work with agrarian reform projects in the eastern Amazon.

4.1 Social, economic and political settings (S)

Following the 2003 democratic elections, which brought Luis Inácio Lula da Silva to the Presidency for the first time, the political scenario was marked by popular fervor and unhampered expectations regarding historical social demands, such as the agrarian reform.

Tempered by the violent repressions happened in Corumbiara (RO), 1995, and Eldorado dos Carajás (PA), 1996, the social movements intensified occupations of target properties, believed to be potentially expropriated. The media coverage of these deeds broadcasted the issue nationally and overseas, pressing for action.

Also, based on data on economic and democratic trends, and the expectations associated to social programs of income distribution, the II PNRA document (MDA, 2004) predicted increasing demand for food and other agricultural products, and highlighted the positive impacts that the agrarian reform plan should have on food supply, employment, migrations and urban problems, inequalities and social exclusion in Brazilian society.

In many aspects, the socioeconomic and political settings outlined in the II PNRA remain applicable today. Yet, the new President, Dilma Rousseff, refuses to commit her administration with quantitative goals for agrarian reform. With a discourse that prioritizes the quality of existing settlements, the number of new families settled during the first year of her administration (22.021, according to data from INCRA) is the lowest in sixteen years (including the first years of both Cardoso's and Lula's administrations). These numbers have deeply dissatisfied the social movements, which are pressing the government.

Notwithstanding, Rousseff's focus on qualifying the existing settlements encounters support in the broad Brazilian society and is in line with the principles stated in the II PNRA. To achieve this goal, Rousseff carried out an administrative restructuration of the National Institute of Colonization and Agrarian Reform (INCRA), which included the change of its president[4]. Also, the nomination of the new Minister of the Agrarian Development Ministry (MDA), Gilberto Vargas, was welcomed by the social movements.

On the other hand, a recent decree announcing the curtailment of R$ 36 billion in the Union budget for 2012 compromised the MDA/INCRA ability to implement the necessary measures, tumbling directly their capacity to finance rural extension services and education programs in agrarian reform.

[4] INCRA current president is Celso Lisboa de Lacerda, who substituted Rolf Hackbart.

4.2 Resource systems (SR), resource units (U) and related ecosystems (ECO)

As a countrywide plan, the II PNRA encompasses a variety of integrated social-ecological systems (SESs) with different degrees of complexity and histories of use, involving different sorts of resources. Even within the geographic area under the jurisdiction of INCRA regional superintendency in Belém (SR-01/PA), the diversity of situations concerning only the physical aspects of different agrarian reform settlements poses a significant challenge to INCRA staff in charge of evaluating the ability of technical assistance suppliers to provide appropriate services in different circumstances.

The formal processes for creating new agrarian reform projects require the clear demarcation of settlement boundaries and detailed inventories of existing physical resources (both natural and human-construed facilities). This should facilitate the social organization demanded to carry out further planning activities. However, regarding the periurban settlements we have been working with, both the system productivity and the suitability of the area for organic agriculture, which is incentivized, are possibly impaired due to prior history of land use.

Located in a region considered of high biological importance and a priority for corrective measures (MMA, 2007), these settlements are marked by large changes in the primary forest cover and many social and environmental problems. The alternatives to cope with these limitations should emerge from detailed studies accomplished in partnership with the settlers, carried out by multidisciplinary teams, using participatory planning methodologies (CONAMA, 2006). Yet, the very application of participatory planning is hindered by limitations related to the governance systems and the attribute of users themselves.

4.3 Governance systems (GS)

In Section 3, we suggested that the success of the II PNRA depends on the ability to make a complex polycentric governance system work. We shall now develop this idea by exploring selected relationships, linked more directly with our field work.

Besides the Ministry of Agrarian Development (MDA), where the II PNRA was elaborated, five other Ministries are mentioned in the document (MDA, 2004, p. 16) due to their important role in the support of the Plan: the Ministry of Social Development (MDS), Ministry of Environment (MMA), Ministry of Health (MS), Ministry of Education (MEC) and Ministry of Culture (MinC). Several Programs with both complementary and overlapping purposes are developed in these Ministries and are carried out by complex bureaucratic structures that further fragment authority and accountability.

The territorial development model adopted in the II PNRA, for example, is carried out by the MDS (Ministry of Social Development). The model encompasses five categories of territories, including one that targets areas of landless encampments and

agrarian reform pre-settlements. The target territories work as priority areas to where programs developed by different Ministries converge.

Family farmers located within the so-called Territories of Citizenship, including agrarian reform beneficiaries, are entitled to benefit from the Food Acquisition Program (PAA). The PAA allows local government services, such as popular restaurants and public schools, to acquire food from those farmers, free from bidding, at regional market prices. The PAA is implemented in five modalities in cooperation with the National Supply Company (Conab), state and local governments. It is coordinated by a Management Committee chaired by the MDS and composed by other five Ministries: Ministry of Agrarian Development (MDA), Ministry of Agriculture, Livestock and Supply (MAPA), Ministry of Planning, Budget and Management (Mpog), Ministry of Finance (MF) and Ministry of Education (MEC). Social control over the PAA is provided by the National Council of Food and Nutritional Security (Consea).

The PAA in the Territories of Citizenship relate to the National Policy of Technical Assistance and Rural Extension (PNATER), which focuses on family farming and defends an *agroecological transition* in the production technology. The provision of Technical Assistance and Rural Extension (ATER) services also relies on the cooperation of multiple actors with overlapping jurisdictions that often create duplication of services or functions. Under the guidelines established in the PNATER, the Brazilian ATER System (SIBRATER) aims to organize the ATER services in a decentralized fashion, covering a number of committees, councils and other representative entities, gathering government and non-government organizations in multiple levels.

The SIBRATER social management structure includes a National Committee of Technical Assistance and Rural Extension and a National Council for Sustainable Rural Development (CONDRAF). Besides, there are also the State Councils for Sustainable Rural Development (CEDRS) and their Boards of Technical Assistance and Rural Extension (Bords of ATER) and a number of so-called “social webs” of ATER, formed by government and non-government suppliers of ATER services.

Similarly, in order to cope with the environmental issues legitimately and comply with the principles and standards laid down in the Federal Constitution, the National System of Environment (SISAMA) brings environmental organizations and institutions of the Union, States and Municipalities together with civil society. At least eight collegiate bodies with overlapping compositions and tasks interact with the structure of the Ministry of Environment (MMA): a National Chamber of Environmental Compensation (CFCA), two National Councils (CONAMA – National Council of Environment, and the CNRH – National Council of Water Resources), a special Council for Genetic Resources Management (CGEN), three National Commissions (CONABIO – Biodiversity, CONAFOR – Rain Forest, and CONACER – Savannah), and a special Commission for the Management of Public Forests (CGFLOP).

The National Council of Environment (CONAMA) issued a resolution (RN 387/2006) defining the requirements for environmental licensing in agrarian reform projects. Among other studies to be produced in different phases and circumstances of the licensing process, the Settlement Development Plan (PDA) stands as a key instrument to devise the social and the spatial organization of the projects "in strict compliance with the diversity of cases" (CONAMA, 2006). The PDAs call for detailed information highlighting the particular physiographic, social, economic, cultural and environmental aspects of settlements. They must work as basic instrument to formulate technical projects and all activities to be planned and executed in settlement areas, and as reference in monitoring and sanctioning these actions.

In agreement with the guidelines established in the National Policy of ATER (PNATER), CONAMA Resolution 387 explicitly requires that the PDAs be accomplished by multidisciplinary teams together with the settled people, using participatory planning and action research methodologies (CONAMA, 2006).

Although soundly articulated and compelling, the apparently ordered relationships comprising the governance systems under the II PNRA face a series of practical obstacles that impact the interactions of the agents and their outcomes (see Figure 1).

A great hindrance facing the implementation of II PNRA is the patently disordered definition of property rights. While the legal framework allows for unambiguous designation of "who have rights to have rights on land" (Benatti, 2011, p. 203), serious flaws in the Brazilian real estate registration contribute to what can be qualified as true "property chaos". Particularly in the Northern region, the situation reveals a "large discrepancy between the lands that are formally registered and what is actually on the ground" (Silva, 2011, p. 188). As an example of an extreme case, in the Municipality of Moju (PA), the total area registered in the notary offices is almost *twelve times* (!) bigger than the Municipality area itself (Treccani, 2012). In the State of Pará, the registered area is more than four times bigger than the total area of the state (ibid). Efforts for land title regularization, especially in the Amazon areas, face uncertainties even regarding the property rights of different public sectors. Federal, State and local governments dispute the property right on supposedly inhabited land, which is, in fact, irregularly occupied.

The described "land chaos" complicates the obtainment of land for agrarian reform settlements. Yet, when the land is obtained via expropriation, typically, the property is occupied for a long time by landless people led by social movements, particularly the MST (Landless Worker Movement). In one that we dealt with, people dwelled in the area for five years, before the formal creation of the settlement project. When the settlement was formally established, in November 2009, the people there had already implemented their own social and spatial organization in absentia of any planning. In addition to the problems relating to the definition of legal reservation areas, this sort of spatial organization also produced resource asymmetries, since some people

occupied areas previously cultivated with economic species – especially Paricá (*Phyllachora schizolobiicola*) and Guinea's Palma (*Elaeis guineensis*) – while others settled in uncultivated or degraded areas.

Apart from these challenges, Caporal (2005) mentions four groups of problems hindering the apt implementation of the PNATER, with negative impacts on the participatory planning of the social and spatial organizations in agrarian reform projects. He considers that the public ATER service institutions are still unprepared to supply and evaluate the results from actions intended for promoting the agroecologic transition recommended in the Policy. He extends this criticism toward most non-government ATER suppliers, and suggests that the development of the said social web of ATER services is stalled due to the competition for limited public funds. The author blames, at least in part, the education system for this situation. He suggests that the professional formation in most rural universities is still tied to the "green revolution" technology transference model, resting on didactic methods that are adequate neither to the attitudinal nor to the cognitive requirements requested by the new PNATER.

The agrarian reform governance system is also hindered by lacking operational performance of the public entities responsible for the policy at different levels. These problems negatively affect credit authorization, provision of infrastructure, recruiting and funding the ATER services, monitoring and sanctioning the performance of the ATER suppliers. Operational failures are often linked to structural deficiencies, including insufficient human resources.

4.4 Users (U) and interactions (I)

The broadened conception of agrarian reform drawn in the II PNRA entails a similarly extended target public. Amounting to about 50 million people, according to the document (MDA, 2004), this public also includes small family farmers, people living in traditional rural and riverside communities, those affected by dams and other major infrastructure works, the non-indigenous inhabitants of indigenous areas, rural female workers and rural youth, and other segments of a population linked to agricultural activities living in rural counties.

To some extent, the existing modalities of land access contribute to reduce the heterogeneity of beneficiaries, especially in ethnic settlements (indigenous and afro-descendents). The said agroecological forms of land access favors symmetry in the level of user dependence on resource, technology and harvesting. Among the traditional forms of land access, land title regularization presumably favors knowledge of SES.

On the other hand, the dilemmas associated with the attributes and interactions of users are increasingly important for beneficiaries of expropriated land. As previously mentioned, land expropriation processes are typically forced by occupations of rural properties led by social movements. Socioeconomic and cultural heterogeneity of the

people living in camps and occupied areas increases as these movements recruit all kinds of people on the outskirts of cities to strengthen the pressure groups and draw public attention.

Considering the settlements we have been working with, which are located in the vicinities of the metropolitan area of Belém, social organization is troubled by unequal dependence on common resources and mutual aid. On one hand, this disproportion results from unplanned forms of spatial organization that occur even prior to the settlement formal constitution, as said before. On the other hand, the proximity of urban centers opens alternative income sources for those settlers less inclined to farming work. This situation greatly complicates the participatory planning, since conflicts among users or between users and officials from INCRA often end up in either threats or effective aggressions.

The political struggle to expropriate land owned by political figures and multinational companies also leads this class of settlers to disagreements as soon as their primary motive to work together is achieved. At this point, different social movements and organizations start disputing ascendency upon split groups clustered around competing leaderships. In one of our focal settlements, nine associations with no overlapping members were instituted after the settlement was formalized, with 370 families. The occasion clearly reveals a dispute to control the distribution of the supporting funds. In cases like his, while the development of subgroups helps both information charging and deliberation processes (Ostrom, 2002), it may not reveal or favor the development of shared norms.

4.5 Outcomes (O)

The philosophical foundation and guidelines of both the II PNRA and the new PNATER call for profound changes in the conventional evaluation criteria used to measure the performance of the Policy.

Sparovek (2003) highlights the need to move beyond the usual information about number of settled families and total amount of the reformed area. The evaluation of *land reordering efficacy* should take into account the number of families actually living in the settlements, relatively to its total capacity, the numbers of abandoned and agglutinated parcels, plus the relations between the areas in Legal Reserve (RL), areas in Permanent Protection (APP), and areas that are not being used with the total area of the settlements (Sparovek, 2003).

To these indicators, the evaluation of the II PNRA performance should add a series of qualitative information. Sparovek's (ibid) estimation of the qualitative aspects of agrarian reform performance included three compound indicators. The first (living quality) characterizes the basic infrastructure (housing, electricity, roads, water supply), family access to health, education and transportation services in settlements, after government intervention. The second (social organization) refers to the relations between settlements and the external community (e.g. commercialization)

and the internal social organization (participation in associations and cooperatives, collective use of common areas). The third (operational efficiency) basically measures the liberation of predicted supporting funds and the provision of basic infrastructure.

The main instruments to enhance these qualitative dimensions are qualified ATER services and INCRA operational efficiency, including the monitoring and auditing of the contracted ATER service suppliers. New challenges emerge at this point given INCRA structural limitations to assess the effective quality of the participatory methods and the empowerment achieved through them in the field. Furthermore, the quality of INCRA (SR-01) monitoring activities is undermined by the weakness of the internal controls.

5. Conclusions

The Brazilian government official endorsement to action research and participatory planning as recommended methodologies to foster the sustainable development of rural territories has a profound philosophical significance, in terms of political superstructure (worldview). It stands as a paradigm shift when compared to the authoritarian planning-and-executing style that prevailed throughout the military period (1964 – 1985).

Concurrently, after the neoliberal policy that prevailed from 1990 to 2003, the II PNRA and the accompanying efforts to reconstruct the Brazilian System of Technical Assistance and Rural Extension (SIBRATER) reveal that the State resumed its leadership in socioeconomic development in a direction that counters the one guided by purely economic concerns and marked forces.

Rising above the conventional state *versus* market dichotomy, polycentric governance systems emerge as an adaptive rule order with potential for balancing the government exercise of command, while preventing it from becoming authoritarian and corrupt. In pursuing this performance – and central to the very existence of democratic societies – *participation* and *social control* become key elements. As Aligica and Boettke (2009) indicate, discussion on polycentricity is not only related to "legitimacy", distribution of "power" and multiplicity of "decision centers," entrenched in a general system of "rules," but also a discussion about fundamental political values, leadership and formation of political coalitions.

However, the *authentic* participation required to engage in political activity to generate public-goods and sustain the polycentric order is difficult to achieve, since it hinges on *moral conscience*, rather than pure self-interest (Meyer, 2010). Consistent with regular classroom practice, observations produced both in the laboratory (Ostrom; Gardner; Walker, 1994; Meyer, 2010) and in recent experiences in the field suggest that no institutional engineering shall ever work as substitute for genuine interest and willingness to cooperate. Concepts of authority, justice and motivations framing the choices of the individuals and their expectations regarding

the behavior of others encompass cognitive structures and stage-like changing processes that cannot be altered by social reinforcement (Maslow, 1954; Graves, 1970; Kohlberg, 1981; Selman, 1980; Heiner, 1983; Habermas, 1990; Wilber, 2000).

Hence, an important aspect in the discussion of the principles that support polycentric orders is neglected if the role of cognition, value systems and moral choices is not properly considered. Failing that, the multiple deeds leading to the selection of political leaderships and the formation of political coalitions, wherein the entire governance system relies, are prone to degenerate in disgusting battles for power and undeserved prestige, relying on the offer of personal advantages. This sort of collapse of the principles of public interest that should guide the participatory planning of social and spatial organization in agrarian reform settlements jeopardizes not only the safeguarding of environmental resources that function as global commos but also the very spirit of democratic governance and social control drawn in the Brazilian II PNRA.

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HUMAN RISK AND THE CONSERVATION OF URBAN HERITAGE. AN INTEGRATED APPROACH FOR SUSTAINABLE ENHANCEMENT AND FRUITION

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Abstract

Planning and conservation policies in many European historic cities are fragmented and short sighted as they result mainly interested to the short term economic advantages of tourism. Similarly, the enhancement of the cultural heritage has direct consequences on the conservation of artefacts, in as much as it increases fruition, which implies a greater risk of decay due to the greater numbers of visitors and their interaction with the artefacts and the environment in which they are located. The so called "human risk" still nowadays is not comprehensively studied and one can observe a lack of methodological approaches capable to monitor the state of conservation of urban historic sites while in the meantime the increased mass tourist pressure in these sites alters their characteristics and inherent values.
Starting from these premises, the aim of this paper is to propose an integrated methodology, still lacking from relative literature, dealing with monitoring urban conservation in relation to tourist impact and place identity. The methodology elaborated and experimented uses two complementary approaches. The first one consists in monitoring the impact of mass tourism with respect to tangible and intangible transformations, such as uses, buildings' state of conservation and urban quality of historic sites. The second approach refers to a dynamic urban analysis and design which consists in the application of the PlaceMaker method and software devoted to both the detection of elements which constitute the contemporary identity of the places and identification of appropriate project interventions. Furthermore, suitable recommendation for sustainable enhancement and fruition of historical places will be proposed.

1. Introduction

The negative impact of mass tourism on the conservation of urban heritage and the impoverishment of central places from their traditional civic values is

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apparently evident and had already been noted in European and International Reports (Council of Europe 2000; ICOMOS 2002; ICCROM 2005; Drdàcky and Drdàcky 2006). The historic centres of many European cities (Brussels, Prague, Barcelona, Rome, Venice, etc.) are besieged by masses of tourists and are being depleted (of their traditional civic values) and degraded (growing occupation of public property, disproportionate increase of commercial activities, filth, bad smells, overcrowding). Moreover, the authorities in charge of preserving these monumental sites often authorise restoration work with dubious results; while, planning and conservation policies in many European historic cities continue to be fragmented and short sighted as they result mainly interested to the short term economic advantages of tourism. Similarly, the enhancement of the cultural heritage has direct consequences on the conservation of artefacts, in as much as it increases fruition, which implies a greater risk of decay due to the greater numbers of visitors and their interaction with the artefacts and the environment in which they are located. The so called "human risk" still nowadays is not comprehensively studied and one can observe a lack of methodological approaches capable to monitor the state of conservation of urban historic sites while in the meantime the increased mass tourist pressure in these sites alters their characteristics and inherent values (Boissevain 1996; Frers, Meier 2007; Gunn 2002; Haldrup, Larsen, Urry, 2004; Urry 1995).

Starting from these premises the initial aim of our research was to identify criteria and define a method for monitoring mass tourist impact in historic centres with respect to their conservation in physical and functional terms as well as regarding their inherent intangible values. The methodology elaborated and experimented comprised two complementary approaches. The first one was a monitoring survey consisting in a systematic collection and planimetric representation of data. Based on survey forms -- similar to the one produced by pioneers of urban conservation, such as Donald Insall for Chester in 1966-1968 – our study documented the transformations historic cores were undergoing in relation to three major aspects: buildings' uses and state of conservation; urban spaces' uses and state of conservation; place identity and traditional intangible values. Our methodology was confronted with recent research on the subject (such as for example the European 6FP project "Picture") and two major fields of experimentation were undertaken: one, regarding small historic centres of great value but relatively abandoned and not attracting mass tourism and the other regarding the historic cores of major cities under constant tourist pressure. The respective case studies were Asolo (situated in North east Italy) and Rome, whose results were presented in the ISUF conference in Guangzhou (Porfyriou 2009) and in Recife-Brazil (Porfyriou-Sepe 2011). Within this context was also elaborated and financed by the European Commission (Culture Programme 2008-2010) the project "Preserving places. Managing mass tourism, urban conservation and quality of life in historic centres" which under the co-ordination of Heleni Porfyriou (CNR-ICVBC) promoted a more broad comparison, on these issues, among six European countries (Porfyriou 2010).

The second methodology elaborated was a dynamic urban analysis and design approach based on the PlaceMaker method and software, which identifies the cultural resources and the identity of places – introducing also visitors' participation through questionnaires -- and consequently projects interventions for their conservation (Appleyard 1981; Hague, Jenkins, 2005; Lynch 1960; Massey, Jess, 1995; Sepe 2009). The PlaceMaker method gathers, processes and reconstructs the data deriving from nominal, perceptual, graphic, photographic and video surveys, and compares these data with those provided by an analysis of expectations, traditional cartography and the two questionnaires administered to local inhabitants and users. The method has been experimented in urban sites of historical relevance all over the world, including the Ramblas in Barcelona, the Oxford street in London, the Kitano-cho area in Kobe and the South Broadway Theatre district in Los Angeles.

In this paper, the case study of the Trevi-Pantheon itinerary, situated in the historic centre of Rome, will exemplify our integrated methodological approach and its results.

2. The history of the case study area

The case study area has a very long history going back to the Roman empire when Pantheon was built by Marcus Agrippa as a temple in the first century BC while later in the 7th century it was consecrated as a church. Also Hadrian's temple, situated along the itinerary has being built by a roman emperor in 145 AD, and transformed later in the 17th century by the famous architect Carlo Fontana into Dogana di terra. Only the Trevi fountain is of a more recent origin. In fact it had been completed in 1762 giving to the small square in front of it a fascinating and originally scenic image. Both Pantheon square and the one in front of Hadrian's temple have been used through centuries as market and civic places where commerce and public manifestations were held. The urban form of this old part of the city had not been changed as the Nolli map of 1748 shows when compared with the Pio-Gregorian urban cadastre of Rome of 1820s. In these squares community life has taken place, through the centuries, consecrating them as places of cultural, artistic and historical importance and as places of collective identity and civic pride, where the sense of belonging grows and takes root. In 1991 the municipality of Rome announced a competition for the "re-qualification" of this central part of the city . The aim was to close it to vehicular traffic and create a pedestrian itinerary (Fig.1) connecting Pantheon square with Trevi Fountain -- that is two of the most famous and visited monumental sites of the eternal city! Furthermore, another experimental project was proposed for the same area: the pedestrian itinerary had to be specially equipped for blind people (with pavement, infrastructures, and appropriate signs). The direct beneficiaries of these interventions should have been, according to the municipality's aims and declarations, the citizens of Rome, whose life should have been improved by less cars (due to more pedestrian streets), cleaner air, better streets and infrastructures.

These conditions should also have had a positive effect on the conservation of this monumental part of the city (Ufficio per la Città Storica 2002).

Fig. 1: The Pantheon –Trevi itinerary in the historic centre of Rome, Italy

The project was supported by the special funds of the 2000 Jubilee and had finished on time. Since then, in the last 10 years, the numbers of tourist had grown at an exponential level in Rome (and in Italy more in general). More than 30 million people per year are calculated to visit Rome (on the basis of hotel presences); which means that on a daily basis 100.000 tourists are present in the historic centre. The Pantheon square and Trevi fountain are probably together with the Coliseum and the Vatican area the major attractions of the city. Connecting Trevi to Pantheon with a pedestrian street (initially specially designed for blind people) implied creating a privileged itinerary especially attractive to tourist groups and flows; who in fact immediately adopted as the only real-direct connection between these two monumental spots of the city. It's amazing that nobody in the municipality's offices (where this project was conceived) seems to have thought of it and nobody either considered to monitor its effects, which have been devastating for the area, as our research has shown.

The aim of our experimentation at this point was threefold:

1) to monitor tangible and intangible transformations related to the increased tourist presence;

2) to evaluated the effects of increased tourists' flows on the monuments' both material and historical connotations;

3) to develop techniques for mitigation and control of tourist impact and risks having as a final aim the development of recommendations for a sustainable enhancement and fruition.

3. An integrated methodology for monitoring tourist impact

As it has already been mentioned the methodology elaborated for monitoring the Pantheon – Trevi area utilised two complementary approaches: one static, the other dynamic. The first approach consisted on three interrelated surveys mapping changes and transformations with respect to: the uses and functions of the buildings along the itinerary; the state of conservation of their facades and the urban quality of places. In other words a systematic collection of data along the itinerary was undertaken for each building in two forms created on purpose (Porfyriou, 2010a).

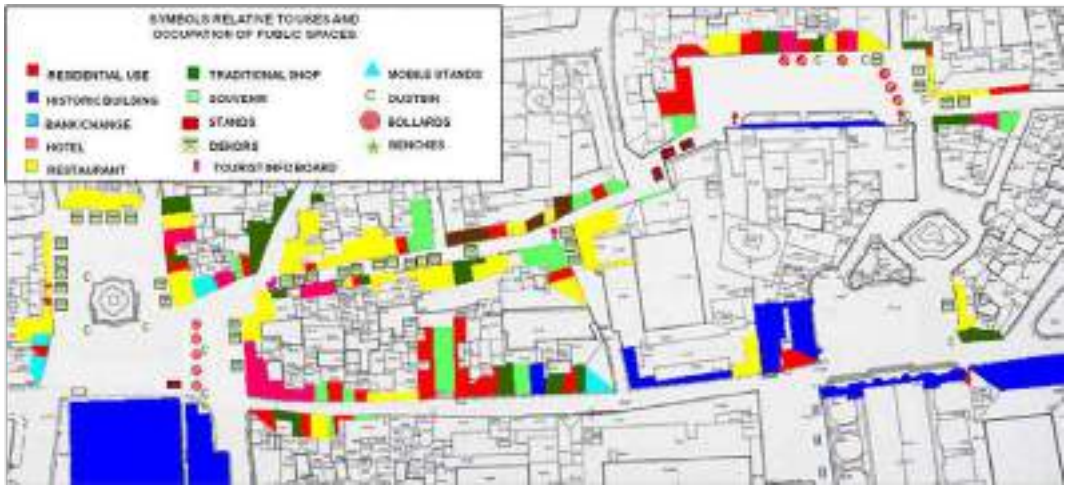

Fig. 2: Planimentric representation of uses and occupation of public space, along part of the Pantheon – Trevi itinerary

The first one documented the uses and the occupation of public space directly related to the building's pertinence. The second one documented the state of conservation of the building's street façade, particularly in relation to the various changes of uses the ground floors were undergoing. This documentation has then been utilised in order to create three thematic maps representing the: i) the uses and functions to which are destined all buildings along the itinerary; ii) the occupation of public space, both legal and illegal along the street (Fig. 2); iii) the state of conservation of the facades of the buildings along the itinerary. Finally a contextual representation of buildings' state of conservation in relation to their functions and to the use of public space of their pertinence summarised all three thematic maps (Fig. 3).

Fig.3: Contextual representation of buildings' state of conservation in relation to their functions and to the use of public space of their pertinence

The second approach implemented, that is the dynamic urban analysis and design consists in the application of the PlaceMaker; that is a method supported by a software (Sepe, 2010a) which comprises eight phases, five of analysis and three of design (Sepe, 2007).

With respect to the analysis phases, the first one is anticipatory, namely an analysis of expectations which introduces the core surveying methodology of PlaceMaker with the aim to describe, using any type of instrument or tool of expression, all information or ideas relative to the area in question, known prior to the first inspection of the site. Then follows the second one which comprises five surveys: namely the *denominative* - consisting in the collection of data regarding constructed elements, natural elements, transportation mode, people -, the *perceptive* - consisting in a survey carried out on perceptions related to smell, sound, taste, touch and visual sensations, and on the global perception, focusing on the localization, type, amount and quality -, the *graphical* - consisting in sketching the places according to a visual-perceptive standpoint -, and the *photographic* and *video* survey of the whole study area, taking care to record facts rather than an interpretation of the places. The third phase involves the analysis of traditional cartography of the selected sites. The fourth phase is a survey related to the questionnaire administered to visitors of the area in order to gain an idea of the place as perceived by those who are not involved in the study and are not

specialists in related fields, but only perceive the site as users, at various levels, such as inhabitants, passer-by, tourist. Then, the last phase of analysis is that of assembling the collected information. In this phase, we test the maps produced, the congruence of the various collected data, and choose the useful elements to construct the final map of analysis. We then have three design phases. The first one is devoted to surveying identity resources in the study area, through three distinct measures: the identification of the identity potential, the identity problems and the identity quality. In this phase the identity resources available for the project are represented as a sort of map of intents, the first step for the construction of the complex map for the identity project in question. The second one is a survey of the identity resources now addressing the users of places, locals, passers-by and tourists, to whom a questionnaire designed to elicit information emerged from the previous phase is administered. Finally, the overlay of data collected during the previous phases is represented in a complex project map, that identifies also the project proposals. This map is the last step in the design process, where the information contained in the complex map of analysis, after being filtered and transformed into resources, gives rise to proposals for the construction and enhancement of a sustainable place identity.

The PlaceMaker method is supported by its software (Sepe, 2006b, 2010a) elaborated on purpose in order to relate appropriately and communicate easily all the information collected during the different kind of surveys (Fig. 5c). With the PlaceMaker software it is possible to represent and interpret the places in an area through interactive dynamics and by creating multimedia maps (Ayeni et al., 2004; Graziano, 1999; Marinelli, 1999). Places are represented by inserting symbols and elements into maps connected to multimedia schedules that can be continuously updated. The prime users of this tool are: urban planners, administrators and citizens.

The main characteristics of the software are: flexibility, facility and rapidity of use, strong graphical impact, and indexing of the results. Its flexibility makes it possible to store, manage, modify and update in a particular format the data required to create the multimedia schedule, connected to the symbols placed on the maps. The database contains all information collected in the different phases of the PlaceMaker method as well as those related to the state of conservation of buildings and monuments in relation to their functions and to the use of public space of their pertinence -- that is the information collected from the first static monitoring survey of the proposed integrated methodology. With respect to the indexing of the results, the symbols created to construct the complex maps can be connected to a database and translated by PlaceMaker into numerical indices in order to allow the calculation of data useful for the study of the sustainability of the places in question, such as liveability, well-being, etc.. Furthermore, the map can be adapted to local changes by updating both multimedia database and symbols.

3. The outcome of our survey regarding tangible and intangible transformations

The data of our case study -- collected in the above mentioned maps -- was analysed and evaluated in relation to the original situation of the area, before the realization of the re-qualification intervention by the Municipality. In synthesis the results of our monitoring reveal that human risk and the impact of mass tourism on the state of conservation of buildings is relatively low, while totally absent is the impact on urban morphology, as revealed by a comparison between historic cartography and today's urban form. The urban form of this antique part of the city has not in fact changed at all, during the last 200 years, as one can see when comparing the Nolli map of 1748 or the Pio-Gregorian cadastral map of 1820 (Fig.4) with a contemporary Google map. Significant, on the contrary, is the impact of mass tourism on the quality of life in the area and on the quality of these places, considered as symbols of collective identity; in other words on the related to the area intangible values.

Fig. 4: The Pio-Gregorian urban cadastre of Rome (1820s) is superimposed to the Nolli plan (1748) and compared with the city plan of the area today

More specifically the outcome of our survey shows that: commercial activities, specially restaurants and bars, have been extremely increased; often substituting previous commercial activities related to residential needs, such as shops for fruits and vegetables, bakeries etc, or other neighbourhood services. While most souvenir or commercial shops don't sale anymore local products but instead products of a global market. Furthermore the commercial activities related to restaurants, bars, gift shops, souvenirs etc., gradually increased their occupation of public space (both in legal and illegal terms) with tables, umbrellas, stands, benches, dustbins, fences, flower vases, etc (see Fig. 2). The increased presence of tourists attracted also other itinerary activities, such as street actors and street sellers, taxi and carriage parking, gladiators, police cars, etc, all of them occupying in a savage way the public space. We also observed that tourist masses increased in an exponential way along this street; thus destroying the new

pavement put by the municipality, when it re-qualified the area. The urban decay of all spaces along the itinerary is quite evident, both in material terms (graffiti, occupation of public space, bad pavement, congestion), social (expulsion of residence and related functions) and civic terms (civic activities have less space to be expressed as they have to share it with mass tourist presence). The street has changed in fact from a residential to a tourist one: overcrowding, filth, unqualified occupation of public space, disproportionate increase of commercial activities.

In reference to the effects of increased tourists' flows on the monuments' both material and historical connotations we identified two major approaches. Through the analysis of the state of conservation of the facades of the buildings along the street (see Fig.3) one observes numerous interventions of maintenance and of external bettering of the facades, often realised by commercial activities occupying the ground flour of historic buildings of minor architectural prestige, which give a fresh colour to the façade of the new activity they open; a plaster, often of slightly different colour with regard to the original building colour, thus resulting to a patchwork which contributes negatively (instead of bettering) the appearance of the whole area. In parallel, important historic buildings get restored. These interventions often related to buildings bought by tertiary or commercial activities, such as hotels or banks, which want to add prestige to their investment, at times look exaggerated in their restoration or pose questions regarding the city's colour plan or relative conservation regulations (as for example in the case of the building in Piazza del Pantheon which turned from ochre to light blue after its recent restoration). The question of a city's colour plan as a method for contributing to urban conservation and to a city's visual integrity is a characteristically Italian approach. The debate was in fact initiated in the 1980s in Rome by Paolo Marconi and others in reference to issues of authenticity (Muratore 2010). It was later developed, influencing European debate, involving diagnostic methodologies, such as stratigraphic analysis and colorimetry, with the aim to define a scientific approach (Conference Proceedings 1990). However, although colour plans are integrated in Italian conservation legislation, their application remains an issue, as the Trevi –Pantheon case study reveals.

In brief, the outcome of our investigation sounds an alarm on three major aspects: i) enhancement policies (or re-qualification ones) devoid of a comprehensive vision and lacking impact monitoring may produce negative results and may become counterproductive, as the case of Trevi –Pantheon has shown; ii) conservation policies are more effective if not restricted to the restoration of a single building or monument, but to the historic centre in its integrity, comprising both tangible and intangible heritage; iii) human risk or in other words mass tourism has a negative impact on the vitality of a place, on its quality of life and on the identity of places stratified through centuries - in other words it conditions the "city of people" more than the "city of stones".

4. Mitigation techniques and recommendations for a sustainable enhancement

Among the techniques for mitigation and control of tourist impact, that our case study had posed as its third aim, we identified the following interventions which are derived from the “complex map of analysis” (Fig. 5a-b) and exemplified in the “complex map of project” (Fig.6).

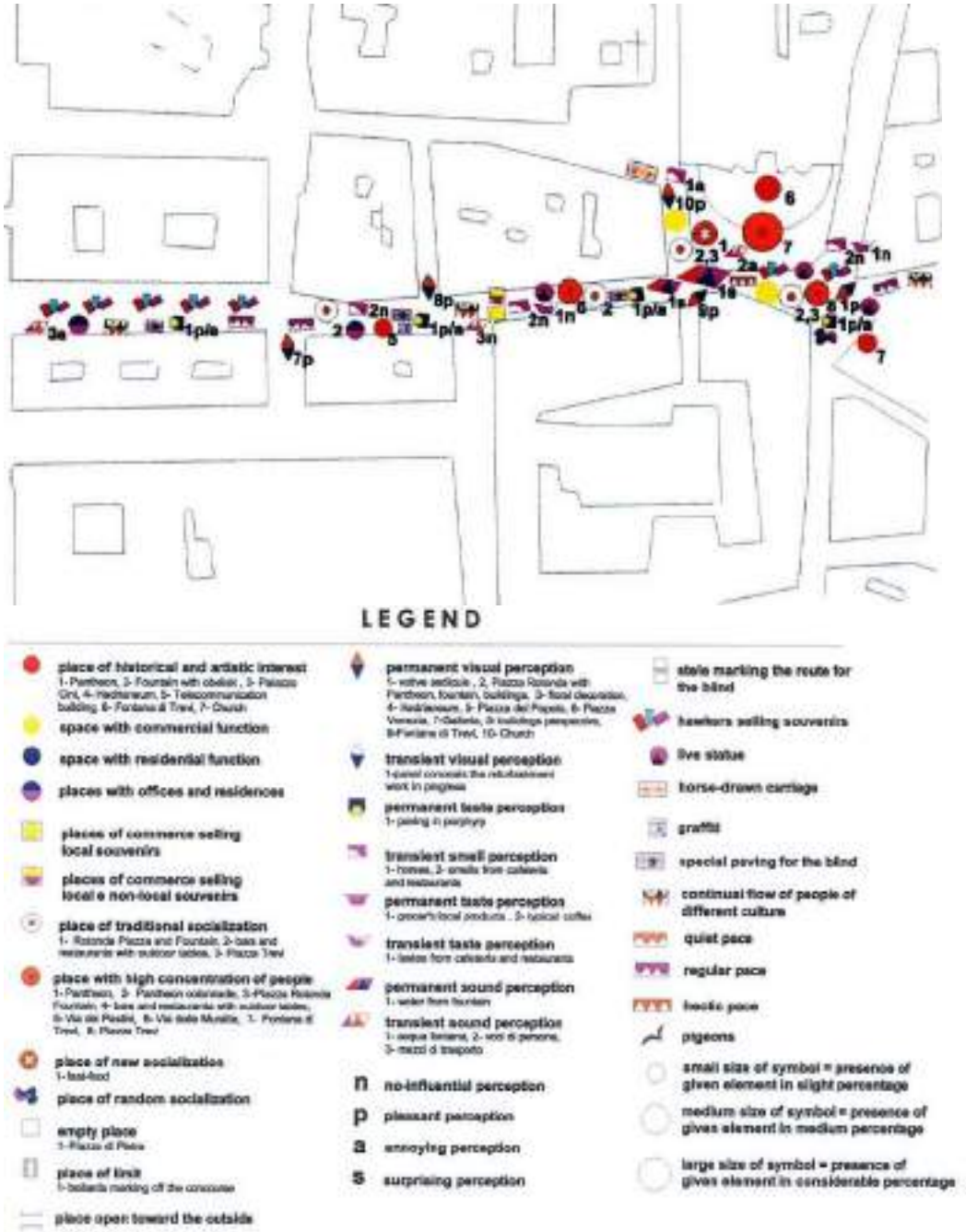

Fig. 5a-b: Detail and legend of the complex map of Trevi-Pantheon

Fig. 5c: PlaceMaker software

The first one regards restoring traditional activities, such as handicraft, or other local products, including high-quality goods, thus rescuing vanishing skills and eventually reducing the commercially undifferentiated global goods present in tourists' streets, which contribute to feelings of displacement. Similarly, the design of a coordinated project for shop signs and windows, particularly for the streets which connect major squares may ensure a greater balance in the composition of spaces and organisation of the various activities, eventually discouraging the creation of additional fast food shops and outlets. The second intervention envisaged aims to create alternative routes between the monumental squares of the Pantheon and the Trevi fountain, thus reducing tourist pressure on the pedestrian street introduced by the municipality. This solution may well prove both educational and sustainable: it would attract visitors' attention to buildings, churches, architectural features, religious icons inserted in facades, and other cultural and historical aspects which pass unobserved in a hasty visit under the pressure of mass tourism.

Other interventions identified consist in giving identity to what is transitory by: creating lightweight multifunctional structures to be introduced at the focal points of monuments and street commerce, variable in extension and dimension, opening and closing, where artistes, hawkers, living statues and others can create their own fluid spaces within a dynamic, light grid which nonetheless constitutes a framework. This form of urban décor can be equipped for various functions including multimedia. Similarly, by virtualizing the graffiti or visitor's path with multimedia guides alternative and attractive solutions can be introduced which may distribute in more thoughtful way tourist pressure and related activities (Sepe, 2010b).

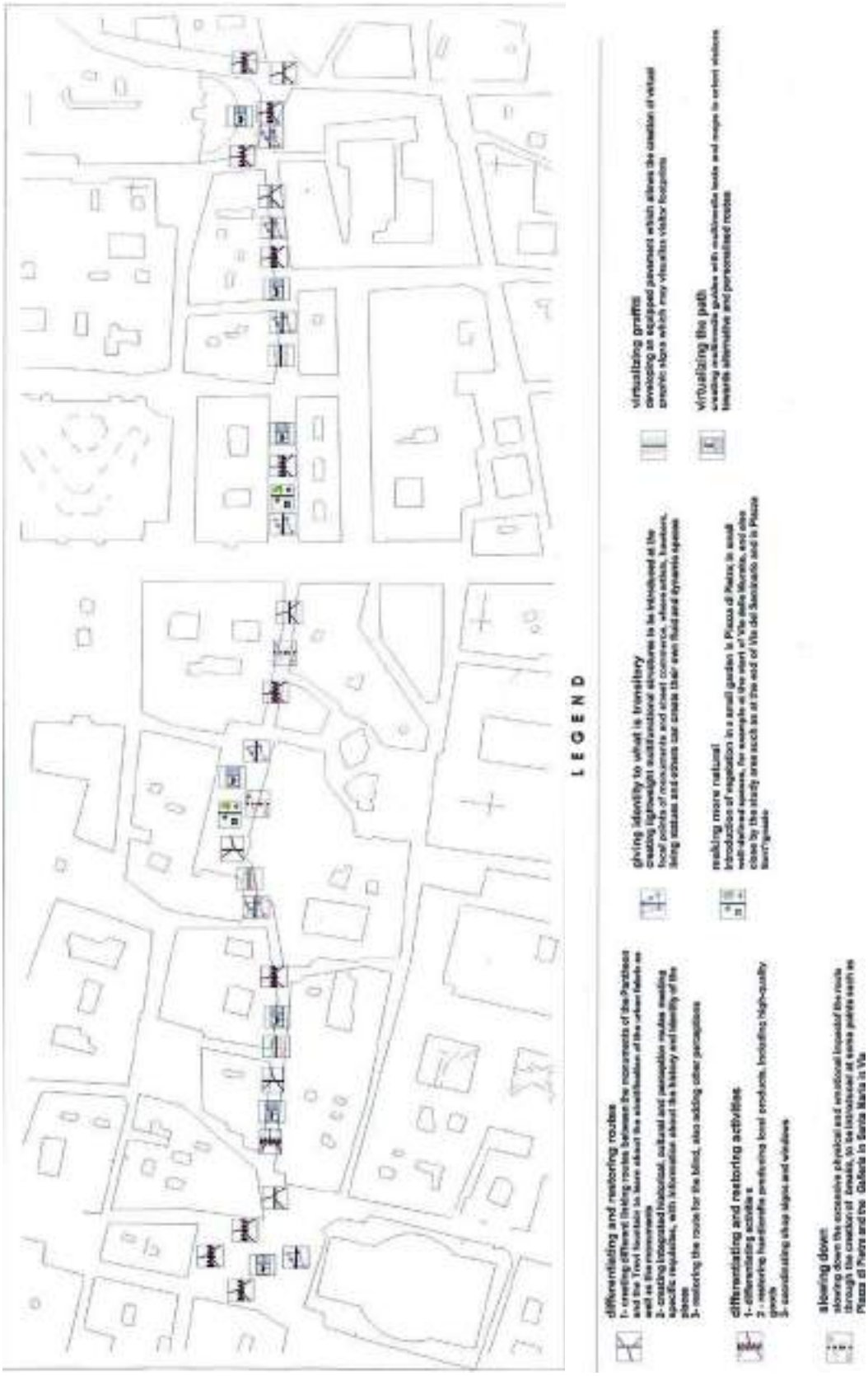

Fig.6: PlaceMaker, complex project map and caption

5. Conclusions

The case of Rome is not unique, as we all know Venice (Montanari and Muscarà 1995; Van Den Borg and Costa 2004) and many other European historic cities (Porfyriou 2010) are besieged by the constant increase of mass tourism and are being depleted (of their traditional civic values) and degraded (growing occupation of public property, disproportionate increase of trading activities, filth, bad smells, overcrowding). However not dissimilar is the situation in many other countries as for example in China (Anderson 2005; Cina 2005). Therefore, if we wish to safeguard the places of collective memory, we must immediately commit ourselves to finding ways to reconcile the needs of the tourist industry with those of life in historic centres and the conservation of their monumental cores. In this respect the final recommendations resulting from this research are of two kinds regarding a set of principles and a number of suitable tools to obtain-maintain place-identity.

The principles identified as the outcome of the various experiments carried out by using the PlaceMaker method, (Sepe, 2012) are specifically related to the place identity enhancement and are the following:

1. The identity resources of a place have to be protected and enhanced so as to give the place in question a distinctive character.

2. Place identity has to be determined with ad hoc methods.

3. Attention to context is to be understood from a social, environmental and urban perspective.

4. The maintenance of buildings, roads and public spaces should be programmed.

5. Places should perform functions which do not cause intensive use that can damage site quality.

6. Local business should be enhanced.

7.Users of a site should be questioned about place identity during both the survey and design phases, taking different needs into account.

8.Place identity should be monitored periodically.

9. Vehicle use in areas with heavy pedestrian throughput should be avoided or slowed down.

10. The safety of users is paramount.

11. Proper enjoyment of the physical characteristics and natural beauty of the place should be considered a priority.

12. Respect for place identity should be considered a sine qua non within the framework of a project's quality requirements.

The suggested tools to obtain-maintain place-identity are the following:

1. to introduce coordinated urban policies instead of fragmented ones;

2. to diversify tourist offer instead of simply increasing the incentives of demand;

3. to promote monitoring of enhancement policies and of tourist impact instead of repeating an urban policy without testing its results.

It should be kept in mind, however, that although the above mentioned tools should remain unaltered the principles elaborated should be considered in a dynamic way, thus keeping in pace with the increasingly rapid rates of change and allowing for a constant updating related to new procedures and requirements in site design.

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How to Incorporate Environment in Water Resources Management: A river management approach for Çoruh Catchment Area

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1. Introduction

When water resource management is defined as a process of "optimizing the available natural water flows, including surface water and groundwater, to satisfy the competing needs of natural water cycles and human activities" (World Bank, 2011), it suggests managing things that cannot be managed (Jonker, 2002). A more suitable definition of water resource management can be managing people's activities in a manner that improves livelihoods without disrupting water cycles (ibid). Alongside the over-exploitation of water resources, devastation of environmental services and an increasing number of social conflicts, there is a growing body of work in the literature offering different approaches to water resource management, mainly integrated, participatory, adaptive and ecosystem based (De Groot and Lenders, 2006). However, implementation of these approaches demonstrates a wide gap between management practices and the objectives of sustainability (Rammel et al., 2007). This gap urges us to review these approaches carefully in order to determine both their short-falls and merits.

As a new approach to management, ecosystem-based management (ESBM) builds on existing management approaches of human activities affecting natural resources and natural cycles by recognizing the ecosystem as a third party (UNEP,

2011). ESBM reinforces the characteristic “co” in co-management and provides parties with a common footing before entering into their more adversarial roles (De Groot and Lenders, 2006:314). As a new approach to management, ESBM addresses shortcomings of traditional natural resource management, such as considering only single sectors or objectives and overlooking the value of ecosystem services (Tallis et al., 2010). What sets ESBM apart is its holistic and science-based approach to understanding how ecosystems work (Curtin and Prellezo, 2010). This approach recognizes ecological systems for what they are, the deep connectivity amongst all elements of the ecosystem including humans, as well as the underlying processes of producing the services people need and want (UNEP, 2011).

ESBM is based on solid knowledge and an understanding of ecological and social systems (ibid). Thus, the effectiveness of ESBM implementation depends crucially on data availability. Poor data poses a key challenge to its implementation as knowledge of complex ecological processes, interactions, cumulative effects and drivers depend on data acquisition. Poor data is the result of a lack of documented qualitative and quantitative information about the ecosystem, whether from published or unpublished research, experts, stakeholders, or local knowledge holders. Governance system characteristics may also pose a challenge to ESBM implementation. In weak governance contexts, the level of co-operation and co-ordination between government entities, the number of jurisdictions within the management region, and the ability of governments to enforce laws are factors inhibiting ESBM implementation. If laws do not exist or are not reliably enforced, rule of law is not stable, property rights are not defined or enforced, decision processes are not transparent and inclusive, and

stakeholders are in conflict over goals, the situation can be considered as weak governance (Tallis et al., 2010).

Under less than ideal conditions with poor data and weak governance, ESBM does not seem a productive management approach. However, as case examples to date have demonstrated, there is always an opportunity to progress towards ESBM regardless of how challenging the context may seem. There are cases with ample data; however, there are also cases of governance structures obstructing data sharing and access, and cases showing poor data conditions while stakeholder engagement has been fruitful in formalizing knowledge and meeting information requirements (see Samhourt et al., 2011; Tallis et al., 2010). These cases have inspired this study to investigate how ESBM can improve water resource management under poor data and poor governance conditions.

2. Implementation of Ecosystem-based Approach in Çoruh Catchment Area

2.1. Methodology

The case investigation (November 2011) started with an analysis of documents relevant to the Çoruh River Basin problem, i.e. reports of the State Hydraulic Works (SHW), the Ministry of Energy and Natural Resources (MoENR), the Union of Chambers of Engineers and Architects, and with determining the study area and the people involved. Interviews were conducted in Artvin (city), Yusufeli (town) and Altıparmak (village) with around 60 people from local authorities (governor, mayor and village governors, local tourism authority, local SHW authority), local communities, environmental NGOs, local councils, local organizations, as well as investors, scientists and researchers. The

interviewees were approached with three groups of semi-open questions about the real world, and the problem-oriented and solution-oriented loops, following the 10-staged SSDM framework. The first set of questions was aimed at their view on the problem situation in the Çoruh River Basin; the second set of questions targeted how they identify problematic sub-themes of the broader problem situation; and the third set of questions aimed to tap their suggestions on the solution of the problems. The most referred sub-theme was selected and analyzed as a sub-system in the rich picture by using the stages of the framework.

2.2. Water Management Problems in the Çoruh Catchment Area

The Çoruh River is among the 10 fastest flowing rivers in the world, and the fastest flowing and the wildest river in Turkey (State Hydraulic Works Report, 2006). It rises at Civilikaya Hill, located in the Mescit Mountains at the North of the Erzurum Plateau and flows through East Anatolia and the East Black Sea Regions of Turkey to finally reach the Black Sea near Batumi Georgia (UNECE). It is 427 km long, 400 km of which lies within Turkey's borders (Kibaroglu and Tigrek, 2011). The Çoruh River Basin is one of the most picturesque yet under-developed and poorest regions of Turkey. The main economic activity in small towns and villages along the river is agriculture. Rural incomes from agricultural activities are one third of the average for the country as a whole (Akpinar et al., 2010). Increased tourist activities in the basin area, such as rafting on the Çoruh River, has significant economic impacts on the local economy.

The Çoruh River valley lies within the ecological zone of the Caucasus, which is considered one of the 35 hot spots of biodiversity in the world by the World Wildlife Fund and Conservation International. The valley is rich in plant-life and contains 104 nationally threatened plant species of which 67 are endemic to Turkey (Ozhatay et

al., 2005). The area surrounding the river is rich in wild life, including brown bear, bezoar goat, wild boar, wolf, jackal, fox, badger, otter, rabbit, partridge, wild rooster, woodcock, white-headed duck, stock dove and golden oriole (Conservation International Biodiversity Hotspots, 2011).

2.3. Legal and administrative background of the energy sector

The rich natural habitat and water resources of the region remained undisturbed until Turkey's Electricity Market Law No. 4628 was issued. Since then, private sector companies have been authorized by the State Hydraulics Authority to approve, monitor and control hydropower plants. The Ministry of Energy and the water authorities have promoted the use of the region's hydropower potential as economic and environmental panacea. They prefer hydropower and consider it a clean and renewable energy source to meet the country's energy demand and rapidly rising growth rate. Development of hydropower capacity to 3,132.7 MW in the Çoruh Basin was planned to correspond with 29.4% of the country's energy needs (Turkish Electricity Transmission Company Statistics, 2007). Alongside the energy plan, a number of new regulations were released to facilitate the licensing procedures for hydropower plant projects, the expropriation of local settlement areas for public purposes, and environmental impact assessment (EIA). These new regulations, the 2003 Water Use Rights Consensus Legislation, the 2005 Law of Utilization of Renewable Energy Resources (no. 5346) with revisions (no. 5496) in 2006, and revisions to the EIA Regulation (eliminating the requirement for EIA reports for plants smaller than 10 MW) in 2008 (no. 26939) have facilitated the boom in power plant projects in the basin. Currently, there are 10 dam projects for the Çoruh River, and more than 100 regulator-type dams (117 projects), and innumerable small river-type plant projects on its tributaries.

2.3.1. Legal and administrative background of water resource management

The following are the main regulations relevant to water resources in Turkey (Moroglu and Yazgan, 2008):

(1) Water Pollution Control Regulation (2004/25687)

(2) Control of Pollution by Dangerous Substances in Water and its Environment Regulation (2005/26005)

(3) Fisheries Regulation (1995/22223)

(4) Quality of Surface Water Intended for Drinking Water Regulation (75/440/AB)

(5) Protection of Waters from Nitrate Pollution from Agricultural Sources Regulation (2004/25377)

(6) Urban Waste Water Treatment Regulation (2006/26047)

(7) Water Intended for Human Consumption Regulation (2005/25730)

(8) Bathing Water Quality (76/10/AB)

However, the EU Water Framework Directive (2000/EC/60) (WFD) is the most ambitious and complex piece of legislation about water resources, the adoption of which was commenced in 2005 and which has not been completed yet in Turkey (Sumer and Muluk, 2011). The WFD has been designed to be the centre piece of legislation for the management of European waters (ibid) and is considered to be the “constitution” of water-related legislation in the European Union (Cicek, 2010). It demands a fundamental change in the way water resource planning and management is understood (Estevan and Naredo in Mencio et al., 2010). WDF aims to cope with the problems of excessive use and quality reduction of water and requires Member States to aim to achieve ‘good ecological and chemical status’ in surface waters and ‘good chemical and quantitative status’ in ground waters by 2015 (WFD 2000/EC/60). In addition, it also requires that no deterioration in water status takes place and that the objectives of protected areas are met (Van Wijk et al., 2003). The WFD promotes integrated

management of water resources to support environmentally sound development and to reduce problems associated with excessive water abstraction, pollution, floods and droughts. The Directive provides the framework for water policy decision-making within the river basin (catchment) context. It requires the integration of industrial, agricultural, rural development, nature conservation and forestry programmes at the river basin level. Implementation of the WFD also requires the efforts of local government as well as NGOs and stakeholders. Environmental NGOs, public authorities and the private sector offer considerable support for the principles and purpose of the WFD (Moroglu and Yazgan, 2008).

Although some aspects of the Water Quality Acquis are already covered by Turkish legislation, only limited development in transposition of the WFD has been reported, especially concerning water quality (Water Framework Directive in Turkey, 2006). Significant efforts are needed in order to achieve full compliance with and implementation by the WFD (EC Turkey Progress Report 2005). However, there are institutional obstructions for a full transposition and implementation of the WFD in Turkey. The institutional structure for water management is complex and fragmented; it does not provide sufficient guarantees for implementation, and river basin-based management has not been set up yet (Moroglu and Yazgan, 2008). Decision-making within water management is highly centralized. The main governmental actors at the national level are the Ministry of Environment and Urban Planning (MoEUP), the General Directorate of State Hydraulic Works (SHW) of the Ministry of Forestry and Water Affairs (MoFWA), the Ministry of Agriculture an Rural Affairs (MoARA), the Ministry of Health (MoH) and the State Planning Organization (SPO).

Within the complex administrative structure of Turkey, the Ministry of Environment and Forestry (MoEF) is responsible for water pollution control, while SHW is responsible for the development and management of water resources. MoARA

has some water management tasks related to agriculture (e.g. fisheries), and MoH is responsible for drinking and bathing water quality. The SPO develops National Development Plans under the auspices of the Prime Minister (Moroglu and Yazgan, 2008). Division of responsibilities for water management among the relevant institutions and limited co-ordination between sectoral ministries on environmental matters are the cause of inadequate water resource management in Turkey.

2.4. *Challenges to ESBM Implementation in the Çoruh Catchment Area*

The government and the water authorities expected to enjoy socio-economic benefits from the hydropower projects. However, the hydropower plants, the ones under construction and those already in operation, have resulted in cumulative negative impacts and socio-ecological problems rather than offered benefits. The construction of one plant immediately after another, starting very near the source of the Çoruh River, has resulted in the deterioration of a nature reserve and of the high levels of biodiversity, and has threatened local residents of the surrounding villages.

Construction activities, including tree cutting, excavation, filling areas, road construction, blasting, and construction and excavation of supply channels have resulted in a large amount of damage to the basin area. The damage includes the loss of the riparian zone, the destruction of wetlands and the deforestation of the riparian forests. The construction of 1–6 km long water pipe-lines in extremely steep mountainous areas has resulted in tree cutting, erosion, excavated material and its dumping; also, the construction of water tunnels results in waste water in the tunnel site and excavations (Baskaya et al., 2011). Due to habitat fragmentation and alteration caused by these construction projects, fish and wild animal routes have been disrupted. Another impact

of the plant construction projects is the danger of flooding of the highly productive agricultural land surrounding the river.

The water basin ecosystem has been harmed by inadequate environmental flow, as well as by waste, dust and noise resulting from construction. The amount of environmental flow released into the river basin to ensure the continuity of natural life and its monthly distribution does not correspond to the right amount of water. The calculation method (Tennant Method) for environmental flow is borrowed from another country, the USA, with different climate conditions and slope. It is applied subsequently to the environmental flow calculations for each project without adjusting for the conditions of the Çoruh River Basin (ibid). Thus, inadequate water releases from the dams affect aquatic life and the basin ecosystems that depend heavily on the hydrological characteristics of the river environment (ibid). Unfortunately, effective assessments of the negative impacts on the ecosystems in the basin are not available. Regardless of the quality of the environmental assessments, almost all EIA reports on the hydropower plant projects have been approved by the authorities. Lack of a cumulative impact assessment for all projects in the basin is a major problem that needs to be addressed as a priority before the problem with the individual EIA reports for each single project.

Apart from the ecological problems, it has been observed that dam projects in the Çoruh basin result in significant social problems. Approximately 30 villages have been expropriated for the dams to be built. The affected people have moved to cities throughout the country where they are struggling to survive. Expropriation sums paid to landowners were higher per acre than in Central Anatolia due to higher value of land in the catchment area. However, as families owned usually small, but productive plots, the

total amounts paid to landowners were small. While some landowners still await compensation payment, landless residents were left to find new lives without any compensation or support whatsoever as no resettlement or income restoration scheme was developed. The insecurity of the population about their fate in the wake of the projected dams is a major social problem, as is the lack of meaningful participation of local people in decisions made about these projects. Local and central authorities are reluctant to notify and consult local people and NGOs, and there is no genuine scheme to share the benefits of the projects with the affected population. In some cases, NGOs are prohibited from calling for public hearings on the impacts of dams and hydropower plants. Despite the prevailing disputes over the social and environmental problems, there is no response from the ministries to pleas for a slowing down of plant constructions.

2.5. Findings of the Case Study

"Lack of strategic planning for regional energy development" has been expressed by the respondents as the most important problematic theme in the rich picture of the problem situation of the Çoruh catchments area. The Ministry of Energy and Natural Resources declares that "it is our mission to ensure efficient, safe and environmentally sensitive use of energy and natural resources in a way that reduces external dependency of our country, and makes the greatest contribution to our country's welfare" (Strategic Energy Plan 2010–2014). On the other hand, the Ministry aims at utilizing maximum hydropower potential for electricity generation and promotes development of hydropower plant projects without considering the adverse impacts on the environment and the aquatic ecosystems in and around the Çoruh River. The Strategic Energy Plan (2010 and 2014) considers hydropower as a clean, renewable, lasting and efficient

domestic resource with low operational costs and no fuel costs, which is not externally dependent and, therefore, can serve as a fuse for energy prices. The Electricity Energy Market and Supply Security Strategy Paper (2009) outlines the long-term energy targets and emphasizes maximum use of hydropower potential for the period until 2023.

The energy plan formulation currently used by the Ministry of Energy and Natural Resources of Turkey sees hydropower as renewable and everlasting, thus the best energy source to meet the demand in the Eastern Black Sea Region. It promotes the development of a large number of hydropower projects on the Çoruh River despite the opposition of the majority of the local residents and leads to conflicts between the locals and the authorities. Implementation of these projects affects all elements of the Çoruh Catchment Area which are ecosystems, including local residents. However, this problematic energy policy is implemented ceaselessly as planned regardless of the complaints from locals and experts.

4. Conclusions

This research has dealt with increasing the awareness and organization among local community members, whose interview responses have informed the study. The local community members who live in the Çoruh catchments area have identified key pressures on themselves and on their environment and criticized the unsustainable progress of the hydropower plant projects in their areas. They have marked the conflicts between the declared mission of the Ministry of Energy and Natural Resources, which addresses sustainable use of energy and natural resources, and actual approach, which ignores information flows about the impacts on the ecological and socio-cultural resources in the basin area. Subsequently, the local respondents have urged the energy

planning authority to exercise the political will to open up to the information flow from local communities and experts.

The most desired change suggested by the respondents has been stakeholder engagement in the policy-making process. The respondents have expressed their willingness to share experiences and information with the authorities to guard their environment from the adverse impacts of booming hydropower projects. The respondents have also suggested some long-term changes to improve the problem situation in the Çoruh River Basin. One of these changes has been suggested as the enforcement of existing national and international regulations in Turkey's legal system, which would imply development of integrated basin management plans, assessment of cumulative impacts rather than assessing impacts of single projects, and protection of water resources and water rights. Another change has been suggested as the priority-setting approach of the planners and policy-makers to give equal weight to environmental, economic and socio-cultural components.

This research reveals that establishing an effective information flow between the local community members and the planning authority is of vital importance; hence, the political will of the planners is the key condition to improve the problem situation in the areas under poor data and weak governance conditions. The research addresses the role of the strategic decision-makers in utilizing ESBM and underlines the fact that progress towards ESBM is possible even in a challenging data and governance context.

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NARRATIVES OF DISASTER RESILIENCE IN L'AQUILA RECOVERY

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Abstract

Resilience is constantly emerging as one of the dominant concept in understanding the reaction of social and ecological systems to an environmental crisis. In case of post disaster recovery in urban environments, resilience should exploit the power of place and the grassroots capacities, as well as suggested by disaster management guidelines. On the contrary, often grassroots capacities are overwhelmed and/or marginalized by top down, centralized interventions from national governments. In this way, two differing paths of disaster resilience exists: one is covered by the State, aiming to reach a paternalistic and centralized outcome of assumed efficiency, and the other by grassroots, that autonomously and spontaneously try to reorganize their life. Here resilience is considered in the second path, as stated by Manyena (2006, p. 439): "a deliberate process (leading to desired outcomes) that comprises a series of events, actions or changes to augment the capacity of the affected community when confronted with singular, multiple or unique shocks and stresses, places emphasis on the human role in disasters". In this vein, the paper objectifies resilience as a process analyzing the recovery of L'Aquila, Italian city hit by the earthquake of 6th April 2009. The paper highlights the necessity to consider the process toward a new objectification of disaster resilience, leading to understand different strategies enacted by different actors. Toward this goal, the paper proposes a narrative of resilience through a qualitative methodology, based on semi- structured interviews to members of "emergent groups" (EGs), local associations and spontaneous committees born after the earthquake, taking part in the reconstruction process of the city. Particularly, it describes the resilience process of EGs, strictly focused on social issues in reconstructing L'Aquila and hidden by government strategies. The paper claims that an integration of these initiatives in urban recovery would facilitate the rehabilitation of L'Aquila. In the way to facilitate disaster management, the paper underlines that in urban recovery built environment and social issues should be considered in an holistic and integrated understanding. Finally, it remarks the necessity of strengthening grassroots capacities and involving in an inclusive way affected population.

1. Introduction

Resilience is constantly emerging as one of the dominant concept in understanding the reaction of social, ecological and socio-ecological systems to an environmental crisis. Resilience could be defined as "the ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner" (UNISDR, 2009, p.24). In this way, it has been

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widely recognized as an helpful framework engaging with disaster management (Mileti, 1999; Manyena, 2006; Handmer and Dovers, 2007; Lettieri *et al.*, 2009; Kuhlicke, 2011).

This paper focuses on disaster recovery, within disaster resilience is defined as "the capacity of hazard affected bodies to resist loss during disaster and to regenerate and reorganize after disaster in a specific area in a given period" (Zhou *et al.*, 2010, p.28). The paper sheds light on the process of resilience enacted by spontaneous grassroots groups grown after the earthquake that struck the Italian city of L'Aquila on 6th April 2009. Quoting several contributions of disaster sociologists (Kreps, 1984; Saunders and Kreps, 1987; Kreps and Lovegren Bosworth, 1993; Stallings and Quarantelli, 1993), these groups could be considered as "emergent groups" (EGs), not existing prior to the events compelling their creation. EGs in L'Aquila are pursuing social and cultural initiatives reconstructing the city.

In this way, the paper highlights the relevance of these initiatives to deepen the understanding of victims' needs, and reveals mismanagements in reconstruction practices, due the marginalization of victims' "voices" in approaching to disaster resilience with a top-down perspective. Therefore, it suggests the necessity to consider resilience as a shared and dynamic bottom-up process, instead of a simplifying outcome (Manyena, 2006). The paper uses a qualitative methodology through semi-structured interviews (Secor, 2010), aiming to propose a narrative (Riessman, 1993) of grassroots resilience process considering as primary data the words of EGs' representatives. In this way, the paper further aims to encourage the use of qualitative methodology exploring disaster resilience in a holistic view, facing to the complexity of post disaster reconstruction (Zetter and Boano, 2010).

In literature, several attempts to identify characteristics of resilience exists, with the aim to evaluate system performances facing a disaster and to measure them in quantitative analysis (Bruneau *et al.*, 2003; Cutter *et al.*, 2008a; Cutter *et al.*, 2008b; Cutter *et al.*, 2010; Zhou *et al.*, 2010). On the opposite, it seems to exist the necessity to further develop qualitative methodologies in resilience studies (Berke *et al.*, 2008; Kuhlicke, 2011 and, mixing qualitative and quantitative approaches, Marschke and Berkes, 2006; Mills *et al.*, 2011; Keogh *et al.*, 2011). This paper tackles that, although is acknowledgeable the validity of quantitative approaches developing the debate about resilience, often they lack of relevant data in understanding the disaster as a social construct. Particularly, quantitative interpretations do not help to identify resilience experienced by different stakeholders coping with a disaster, the relations among different actors and their enacted strategies, or the political strategies and power relations besides resilience (Cannon and Muller-Mahn, 2010).

After justified the choice of qualitative methodology, in this way it reveals crucial the remarks of Manyena (2006) revisiting the concept of resilience. Manyena argues that two different visions of resilience exist, leading two different approaches in disaster management. The first considers disaster resilience as an outcome, simply identified as a 'shock absorber' ensuring to the system small-scale negative impacts. In disaster management, this view tends to reinforce traditional practices, following a paternalistic and top down approach, potentially leading to the skewing of activities

towards supply rather than demand. These typologies of programs for disaster resilience tend to adopt a command-and-control management (Alexander, 2002; Alexander, 2007) that centralizes decisional power, preserves the *status quo* and marginalizes aspects such as social and spatial inequality, oppression and lack of civil rights that could often result in case of disaster. In this way, they neglect and/or marginalize grassroots empowerment and participation activities (f.i community or generally "local" initiatives) that could be efficient on the set of response and recovery strategies (Manyena, 2006).

On the opposite side, the second considers disaster resilience as a deliberate process (leading to desired outcomes) that implies the enactment of events, actions or changes to strengthen the capacity of the affected community facing with shocks and stresses. Therefore, it emphasizes the human role in disasters, exploits the human capacities and poses attention on how human beings, both individual and collective, are capable to face a disaster and, therefore, on how they enact strategies. In this way, this vision highlights grassroots potentialities coping with a disaster and strategies and considers them as decisive for reconstruction practices.

On these statements, the paper poses two main question: does top-down strategies from government respond effectively to the needs of disaster victims, or exist a neglect and/or a marginalization of some of them? Is the objectification of resilience as a process rather than an outcome helpful to a more holistic and integrated interpretation of reconstruction period?

Initially, the paper describes disaster management in the Italian city of L'Aquila after the 6th April 2009 earthquake. Next, it presents the qualitative methodology to analyze the process of disaster resilience enacted by grassroots EGs in L'Aquila. Afterwards, results are presented about grassroots initiatives, in satisfying needs neglected by governmental strategies. Finally, conclusive remarks are offered about the qualitative methodology analyzing disaster resilience, the revisitation of resilience approach as a process and the holistic perspective of disaster management.

2. Analysis

2.1 Contextualizing disaster management in L'Aquila

On 6th April 2009, L'Aquila Municipality and its 14 surrounding villages have been affected by an earthquake with a record magnitude of 6.3, causing the death of 308 people in the main shock and the injure of 1500 people, 202 of them seriously (Alexander, 2010). The damage of residential buildings has been severe: more than 60,000 buildings have been entangled, of which 18,000 judged as unsafe for occupancy (Papanikolaou *et al.*, 2010).

In this case disaster management has been strongly addressed toward centralized solutions, replacing the local response with a national one, under the powerful guidance of Prime Minister Silvio Berlusconi and Italian Civil Protection Department (ICPD) (Alexander, 2010). In the emergency phase the historical center of L'Aquila

was declared unsafe and consequently off-limits (Red Zone) and militarized. The immediate step in the emergency phase was the implementation of tent camps for 22,000 evacuees and the recovery for other 21,000 in tourist accommodations (Alexander, 2010), as previously enacted for example in occasion of earthquake in Friuli region in 1976 (Geipel, 1978; 1991). The necessity of quickly providing shelters to survivors drove ICPD and Italian Government to opt for emergency management leading to reconstruction strategies aimed at a direct transition from homelessness to secure accommodation (Alexander, 2010). Afterwards, two different strategies have been enacted for reconstruction. The first was the construction, between September 2009 and February 2010, of new earthquake-proof buildings in peripheral areas called CASE Projects (*Complessi Anti-Sismici Eco-compatibili* - Earthquake-proof Sustainable Eco-compatible Housing Complexes) (Calvi and Spaziante, 2010; Alexander, 2011a) capable to host about 15,000 evacuees of L'Aquila city. This project included 184 buildings and 5,736 residential flats at 19 sites around L'Aquila (Alexander, 2010). The second was the implementation of MAPs (*Moduli Abitativi Provvisori*- Temporary Housing Prefabs) in 54 localities, both in peripheral areas and closer to the damaged sites within L'Aquila municipality for the recovery of 8500 people (Alexander, 2011b).

Figure 1: CASE Project areas, identified with 19 black shapes. These have been proposed by the Italian Government to build the new housing complexes in L'Aquila Municipality (ICPD, 2009).

Although this scattered strategy seems to indicate a successful recovery plan, emergency and reconstruction mismanagement, both from an environmental and social perspective, have been recently pointed out by Alexander (2010; 2011a; 2011b),

Calandra (2011) and Microdis (2011). The reconstruction strategy followed two parallel lines of intervention: the closure of the historic centre, still declared off-limits after more than two years, and the creation of new peripheral settlements in predominantly rural areas used for agricultural activities.

The CASE project was approved by legislative decree just 22 days after the earthquake. The Government's priority was to find a timely solution to housing recovery which was carried out without consideration of the long-term consequences. The rapidity of the decision provoked a misallocation of resources both in terms of an excessive expenditure of funds (Alexander, 2010) and of soil consumption.

Furthermore, one of the most significant critiques that the government has received is the lack of involvement and participation of citizens in the decision-making process (Alexander, 2010). As regards the reconstruction, this has been perceived as a lack of attention to the prioritized needs of the population affected (Calandra, 2011). In addition, the displacement of the population, from their prior locations to the new CASE project areas, has caused the fragmentation of the pre-existing communities challenging the re-creation of a new feeling of belonging (Microdis, 2011).

The reconstruction strategy, exemplified by the CASE project, is representative of a paradigmatic top-down and emergency-led disaster recovery approach, merely focused on achieving a quick response. Furthermore, governmental proposals were not based on sustainable and ameliorative aims. In this way, grassroots decide spontaneously to take responsibility for their place and, therefore, to enact a more appropriate response, aware of their needs.

2.2 Methodology

In analyzing disaster resilience in urban systems, a multi-level understanding is necessary (Resilience Alliance, 2007), particularly highlighting issues related both to built environment and to social relations (Vale and Campanella, 2005; Campanella, 2006). Specifically, this understanding reveals crucial in post disaster reconstruction period, that should be understood in an integrate and holistic view considering its complexity (Zetter and Boano, 2010).

As mentioned before, this paper proposes a qualitative methodology to analyze disaster resilience. This methodology reveals itself helpful in understanding how social processes are shaped and constructed and, in a more critical way, how the 'truth' is acknowledged and socially represented (Knigge and Cope, 2006). The paper argues that a qualitative methodology is relevant in understanding how social phenomena are diversified in relation to actions and networks contexts. Furthermore, it poses the dialectical conundrum about how they exist in the 'real' world and how they are represented in their social construction (Bailey *et al.*, 1999).

In this sense, the paper aims to go beyond mainstream 'truth' about reconstruction practices in L'Aquila, and to highlight grassroots necessities marginalized by centralistic strategies. In fact, one of the main characteristic of disaster management in L'Aquila has been characterized a distortion of events' description by mass media and

a rhetorical sensationalism describing the 'truth' (Felice, 2010; Carnelli *et al.*, 2012). In this way, it seems necessary to underline 'other voices' aiming to understand the social implications of L'Aquila earthquake from a marginalized standpoint. Therefore, primary data have been retrieved from semi-structured interviews, extracting grassroots voices. According to Crang (2002) about a re-examination of their validity within social sciences, here it claims that semi-structured interviews represent additional sources to a standard archival research in case of information about events and facts not recorded by documents (Secor, 2010). In this vein, Kumaran and Negi (2006) suggests these interviews in disaster studies if it is necessary to spread marginalized and hidden opinions. Additionally, in understanding resilience, this typology of interviews allows to shed light on how individuals experienced disaster and resilience (Kuhlicke, 2011).

The fieldwork in L'Aquila took place since 15th May to 20th July 2011. As previously mentioned, it consisted in conducting semi- structured interviews focused on the autonomous resilience process of several grassroots EGs, born after the earthquake. In this way, several EGs exist with different goals depending to the number of members, the scale (neighbourhood, urban) of proposals and the perceived priorities. In selecting EGs for the research, earlier screening has been based exclusively on their spontaneous origin and, therefore, in the analysis have been excluded groups affiliated to local or national pre existing organizations.

EGs aimed to find a solution for individual and community necessities for whom Italian Government has been not aware through its centralistic disaster management. Additionally, these interviews were supplemented by field notes taken in attending formal and informal meetings of the groups. Numerous informal discussions were also held with inhabitants of L'Aquila members about emergency and recovery strategies enacted both by Italian Government and grassroots. Other information have been retrieved by articles from local media and Internet sources, and studies and reports produced by government and local agencies. Therefore, next session will propose results from these research in order to realize a narration of resilience process, as the existing work in literature by Berke *et al.* (2008) about resilience in Thailand after tsunami in 2004 and Kuhlicke (2011) after floods in Germany in 2002. Regarding L'Aquila earthquake this paper aims to fit within the critical literature about disaster management: Alexander (2010) highlights the strategies enacted by Italian Government and ICPD; Frisch (2010) underlines the impacts of CASE Project on urban planning; Pisu and Zardetto (2010) sheds light on the impasse one year after the event; Calandra (2011) analyzes the new social geography in some of the areas of C.A.S.E. Project; Comitato 3.32 (2010) reveals the strongly market-oriented mould of the reconstruction; finally MICRODIS (2011) proposes empirical results about social, economical and health impacts of the earthquake.

3. Results

3.1 Origin of EGs resilience and its objectification as a process

EGs are not existing before the disaster. As underlined in literature about spontaneity mechanisms of post disaster community solidarity (Solnit, 2010) and in enhancing

resilience (Tierney, 2009), L'Aquila experience sheds light on a spontaneous and autonomous way to enact a process of resilience by grassroots. In the immediate aftermath of the earthquake, in tents camps and in an open space in front of a dismissed mental hospital, in a locality called Collemaggio, groups of unorganized citizens meet in spontaneous assemblies to propose their capacities in restoring the city. During following months these assemblies resulted in some public initiatives, as for example the "wheelbarrows rebellion" in 2010, (Farinosi and Trerè, 2010) to clean up rubbles in the city center, and in a legislative proposal to Italian government (PLIP, 2011), recommending precise guidelines for a better organization of disaster management in Italy. These initiatives strongly claimed the necessity to involve grassroots in the whole disaster management both in L'Aquila and in Italy, rejecting top-down strategies in decision processes for the reconstruction (Farinosi and Trerè, 2010; PLIP, 2011).

Notwithstanding these claims, interviews clearly show two different approaches to resilience: one institutional top-down, aiming to the outcome to timely, and the other bottom-up, a process enacted by grassroots, marginalized in the government activities.

The first is based on a paternalistic view of reconstruction, a lack of flexibility and short-term goals, aiming to timely reach the result in providing to housing solution (the CASE Project). Within this priority a strong centralistic management of L'Aquila emerged, and a member of EGs declares:

"…. It has been adopted the justification of urgency and emergency and democracy has been abolished in L'Aquila. Through Civil Defence Department the Government occupied the territory. Military solution have been applied. Furthermore, local institutions concealed behind this urgency/emergency. They abandoned our place in powerful hands of central govern because they had fear about the complexity of the problems and about their incapacity. Therefore, CASE Project has been imposed."

Thus, it clearly manifests that central and local institutions have taken initiatives unshared with the grassroots, without any attempt to enlarge the consensual base and to rely to grassroots capacities helpful to strengthen and integrate their efforts. Central levels, as Italian Government and ICPD, and local institutions (Mayor and City Council, identified as the closest to the grassroots in issues of urban planning and management) worked with civil defense and "command-and-control" methods. The abused slogan "from tents to houses", which briefly describes the strategy of a direct transition from emergency housing to residential building of CASE Project (Alexander, 2010), endorses the necessity to adopt a "state of emergency" to provide temporary housing to the population. Concretely, this slogan describes the perversion of the democratic functioning and of the assumptions upon which to develop and legitimize public policies coping with the disaster (Calandra, 2011).

In this dichotomous landscape, several EGs grew up with different goals. The interviews do not cover all targets of EGs in L'Aquila, but partially describe the existing scenario, constantly in evolution. Here resilience process is narrated based on story-telling by representatives of following EGs: artists' associations, neighbourhoods promoters of recovery plans and social spaces, occupiers of a disused kindergarten, founders of a new ecovillage, cultural associations, promoters of

participatory initiatives, students' associations. Their names will be not identified to preserve privacy of interviewees and according to anonymity requests by some of them.

The first step to frame their resilience process is to clarify why it could be defined as a process and not an outcome as Manyena (2006) stated. The objectification of resilience as a process is claimed by an interviewed that explains:

"….an idealistic recovery model does not exist in general and specifically for L'Aquila. Several difficulties exist in analyzing current needs for grassroots. In this way, citizens must be powerful, must be actors in reconstruction, everyone aiming to solve their problems and developing their theoretical and practical skills and capacities. They must share their ideas in a slow and dynamic process".

The interventions enacted by the institutions is considered reductive and not aware of the urban complexity of L'Aquila. In fact, the strategy of CASE Project does not consider both the past and the future of the city (Calandra, 2011). In this way, it rejects its history the acknowledged peculiarity of L'Aquila as a "planned city" of medieval foundation (Clementi, 2009; Clementi and Piroddi, 1988), with a precise urban form within the city center (now Red Zone) historically represented – still performing after more than eight centuries- the cultural, social and economical heart of the numerous surrounding small villages. Furthermore, it lacks of any mid-term and long-term evaluation of urban planning of the city, neglecting a vision necessarily perspective of recovery (Berke and Campanella, 2006) and an holistic view of reconstruction practices (Zetter and Boano, 2010). These remarks are strongly affirmed here:

"CASE Project is a wicked attempt to move inhabitants outside our historical city center, in the *periphery of the periphery* (emphasis added).The renaissance of L'Aquila must begin in the city center, our heart, where people lives. People can't move elsewhere, because this 'elsewhere' consists of buildings not existing as social, cultural and relational structure. They just exist as buildings on crossing roads, they are *non-places* (emphasis added)."

Additionally, the reference to the "non-places" of Augè (1995) seems to represent the core of the inputs for resilience process. In fact, EGs underline that institutional strategies of recovery marginalized the manifold issues related to the planning of social aspects, in the new areas of CASE Project and in the rest of inhabited areas of the city. In this way, interviews prove that EGs perceive as relevant the lack of generic spaces for sociality for the whole population and the necessity to regain a sort of 'everyday life' able to recreate community ties.

As stated by this interview:

" due the lack of places where we can meet, our group (*one of the EG, n.o.A.*) represents at least a partial solution to recreate a place to meet, to share ideas or simply to have fun."

Another interviewed declared that

"it does not exist more the *everyday* (emphasis added), children playing in green areas or in the square, benches taken by people chatting. There is an emptying of the public space."

3.2 Desired and enacted interventions of EGs

Based on the above statements, resilience process by EGs in L'Aquila is slowly shaping along these three years. Since the aftermath of the earthquake a permanent Citizen Assembly attempted to develop own ideas about emergency and recovery solutions. These solutions

"…have been elaborated and shared among citizens and laid open different options. However, we had a common goal: to avoid the spread of inhabitants after the emergency period in tents camps. We aimed to respect the historical peculiarity of L'Aquila and to maintain both the geographical and psychological continuity of inhabitants with their places. Therefore, we proposed to promptly implement more wooden buildings (the MAPs mentioned in the Analysis paragraph, N.o.A.) both close to the hamlets and to the city center. Furthermore, we propose to implement containers classified as A+, the highest standards of liveableness for these structures. These are earthquake- proof and they require small areas for the assembly and pitches of excavation, without large soil consumption".

Here it appears significant the proposal of the traditional approach to post-disaster temporary housing (Quarantelli, 1982 in Johnson, 2007): temporary shelter (tents camps), temporary housing (for L'Aquila, MAPs and containers A+), permanent housing (refurbishing or reconstruction of pre-existing buildings).

Regarding the villages around L'Aquila the resilience process is essentially based on three different interventions:

- reconstruction plans for some of the small historical centers of the villages around L'Aquila;
- construction of multifunctional center to regain a daily life in the struck villages;
- construction of multifunctional center supporting areas of CASE Project.

In these three cases, a strict relation exists between the reconstruction of the built environment and the restore of social aspects.

In the first case, EGs claim the physical reconstruction of historical centers is vital for their future, for the future of the village and for the community belonging. The resilience process has been exactly enacted to take responsibility about their place, and consequently about their future life.

"We absolutely want to come back in our neighbourhood, and for this goal we have necessarily to rebuild the historical center, even because is the place where we had our houses and usually met. We don't want to wait the slowness of Italian machine, we don't want to take the risk to spend 20 years to rebuild our place as well as the reconstruction for center of L'Aquila. Further, we want to come back together, at the same moment, in our houses. It is a nonsense coming back in different moments. For

this, we have planned to subdivide our historical center in five areas, assigning each of them to a building firm. Our goal is to come back in five years".

In the second case, EGs claim that in the post disaster period is relevant the emergence of a disorientation among grassroots, and that an intervention focused on *ad hoc* structures for the local social issues could lead to re-establish daily networking. In this way, a member of an EG declare:

"We deliberately are not focusing on housing reconstruction, because it is right the owners would personally decide about this. We think it is inopportune taking decisions instead of them……So, we pose our attention on public spaces and facilities concerning the community and not the individual. We wondered what would happen after the period in tents camps. Before the earthquake the social life of our neighbourhood took place in the main square and usually consisted in children playing football, women chatting on the benches and guys meeting in a room in the parish recreation center. After the earthquake our desires were to reestablish these forms of community life, even because people was disoriented. We decided to reevaluate or belonging to the place and to avoid the loose of our cultural roots. We found donors financing a multipurpose structure with a recreation centers for donors, a playground for children, a small auditorium with a library and a multimedia room…..In this way, we hope just to give the people some social spaces avoiding a strong emigration".

In the third case, the given reasons are identical, but the aim is to intervene both for grassroots of struck areas and for people moved on CASE Project areas. As stated in Calandra (2011) new social geography of these areas lead to an acceleration of community fragmentation and exacerbate individualized and atomized choice, whom EGs attempt to contrast through an own initiative. Regarding this, a member of an EG involved in this issue reported:

"Our aim is to realize a trait-d-union among our struck village and new CASE areas….The idea of a multifunctional center has been developed because we considered our current condition just as temporary, but this temporariness seems to stretch indefinitely. We were wondering about how integrate in our community people moved in CASE from the center of L'Aquila. This is not their place; people from the center know anyone and for them this condition is surely traumatic."

3.3 Taking relations with local institutions

The resilience process by EGs need institutional support in organizational, bureaucratic and technical issues. Nevertheless, difficulties in relations with institutions are relevant: missing or incorrect communication channels, lack of preparedness in solving problems in a quick and flexible way resulted as decisive in slowing this process. An interviewed states:

"Difficulties in communication with institutions exist. People have a blurred vision of post- earthquake administrative and bureaucratic machine. People rely mostly to technical staff as those can explain and solve the so-called "papers". This often creates a word-of-mouth, for which information are omitted, misrepresented or forgot.

Obviously, this happens because some people do not have such a background through whom you should filter information, and therefore real difficulties exist in understanding the current situation.

Another interviewed declares:

"There has been a great confusion because the institutions have never been able to relate with people in a satisfying way. When Civil Defense was responsible for emergency management (since 31/01/2010 decisional power passed to the Region Abruzzi President, N.o.A.) it was our first interlocutor. When local authorities became our referents, they really were just formally. People were so confused with so many leading figures but nobody gave us precise answers, often passing the buck. Also for our project we faced a long bureaucracy, every week going to municipal offices to understand what to do."

Furthermore, laconic is one commentary:

"I note really numerous difficulties interacting with the *politicians* (emphasis added). In town councils each politician has an own problem about which he barks, however citizens' problems seem to not exist, nobody cares about us."

4. Conclusions

This study considered disaster resilience *à la* Manyena (2006), as a process able to exploit human capacities facing a disaster. The resilience process has been analyzed from the standpoint of grassroots EGs in the Italian city of L'Aquila and, specifically, on how they have enacted initiatives aiming to satisfy their necessities reconstructing the city. Two main conclusions can be extrapolated.

The first is that, for L'Aquila case, EGs are born and have decided to take in action due the marginalization of some of their necessities in the institutional interventions. The neglect of their voices and the marginalization of a due attention both about social issues and built environment peculiarities motivate the grassroots to focus on these forgotten arguments. In this way several initiative took placed by EGs, particularly in restoring a sort of 'everyday life' that was impossible to maintain in new temporary housing areas. The second is that an objectification of resilience as a process provokes a shift in viewing post disaster period. This period is the most challenging and complex in disaster management (Zetter and Boano, 2010) and requires necessarily inclusive strategies to better restore urban environments. Such an inclusion could be better enacted considering the most vary capacities that grassroots have taking

responsibilities of their place. L'Aquila case shows that, in case of disaster, grassroots demands for involvement and participation as well as social spaces to share their ideas and their knowledge. The objectification of resilience as a process could help to activate more inclusive mechanism in post disaster management.

Furthermore, the use of a qualitative methodology allows to give voice to the victims of the disaster, that are usually marginalized in political and management discourse (Mercer *et al.,* 2008), and of whom instances are often underestimates in quantitative methodologies.

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The building of public space and the insurgent citizenship in Palermo

Davide Leone[1]

Introduction

The idea that a city is no longer the expression of an average value of necessity, but it is an arena in which different actors face and meet each other is a new (post-modern) metaphor interpreting the urban space (Sandercock, 1998, 2003; Fincher & Jacobs, 1998; Sibley, 1995; Milroy, 1992). The difficulty of imagining urban policies and, also, new shapes for the city to ensure and augment this function is an issue of the actual city, and it remains hard to do.

Very often, the difficulty of interpretation of this paradigm justifies "doing nothing" which is typical of the administration of some cities, including Palermo. In this sense it is particularly interesting observation of what is happening in Palermo, where, compared to a general lack of political and physical interventions, we are witnessing a fervent self-organization "from below" to (informally) build some pieces of the city.

In Palermo, the lack of urban policy has stimulated a mobilization that amplifies the self-construction in the reuse and maintenance of city spaces. The construction of the physical elements that affect the public space by citizens' groups, "clandestinely" organized, together with the construction and occupation of public spaces by users of the city are the mirror of a post-modern use of the city. In this sense it is useful to study the case of Palermo with its informal characteristics trying to encode a taxonomy of actions that take place on and in the city. An initial categorization of the nature of the actions that take place in the city is listed below:

- Physical and durable actions
- Demonstration Events
- Replacement of basic services

The research focuses on the stories of different stakeholders acting on the city of Palermo trying to understand the organizational arrangements and strategies underlying interventions, following a search method described by Forester (1999) in which the stories take on a role for the understanding of problems. The aim is also to trace how the actions promoted by the new intangible technologies of web 2.0 material affect on the actions of the city.

A second taxonomy concerns how the movements, that affect the city, organize themselves. In this way It's possible to understand what aspects has to be increased to generate appropriate urban policies to govern the transformation of the city through post-modern city metaphor. These categories are:

- Communication on Internet
- Contacts and telephone
- Gathering places

In the background is the belief that the multiplication of opportunities for discussion among people is able to increase people's intelligence and, in some way to subsidize one of the functions typical of cities that have had since their "invention".

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Together with utilitarian functions, defense, trade and exchange, the city had, until now, a further and fundamental function: to boost the intelligence of man.
This is one of the peculiarities of the city, but it is also one of the functions less noticeable by the people because it is a consequence of living together and of the generation of community rather than a primary and founding of the city. That is to say: Innovation is a consequence of the cities, but is not perceived as a cause of their foundation. In this sense, no wonder the need to delineate the boundaries and conditions of the creativity that puts this function of the city in the foreground. According to one of the planning mainstream, that has been developing the 90s especially in the U.S. (Florida, 2003; Landry, 2000), this function is amplifiable engaging creative elements in the social texture of the city.
The city is the necessary condition for the construction of all the innovations of mankind (Mumford, 1961; Benevolo, 1993) because it can multiply the thoughts of men. Moreover, the production of thought has created the conditions and requirements to allow the accumulation of knowledge to spread it on from generation to generation.
Using a metaphor, which sees the city as a brain capable of generating innovation and people like ganglia, we are witnessing a real revolution in which the needs of neighbourhood (Synapses) characteristics of the city are flanked by the new possibilities due to information technology. In this sense we are witnessing a phenomenon that builds new creative energy in the city, but runs the risk of loose some of the reasons for the existence of the city itself.
From another point of view it’s clear that not only the quality of ganglia is useful to augment the innovation capabilities of a city, but the quality of connections (Synapses) is important too. For that the actions, which act directly on the public spaces of the city, are quite important, because they substitute the local administration in managing the transformation of public spaces and so, in a way, they build sense of communities (Lo Piccolo, 2008; Fera, 2008).
The paper tries to overcome the Creative City strategy for urban regeneration in which the urban policies wants to attract creative people (musicians, artists, etc.) to ensure the urban renewal.
This paradigm, although considered one of the mainstream of contemporary planning, has some critical issues both for the durability of the interventions that concerning the ability to encourage creativity self-generated by the city itself. the metaphor of the creative city does not explain the reasons that led some cities, at certain times, to be especially creative by building physical products and traditions that are perpetuated (durability) and are an expression of local culture.
In this framework the insurgent citizenships, as described by Holston (1998), have a strong role because they operate informally on the public spaces of the city building defining a new way of acting in the city.

Differences and similarities of insurgent citizenship in Palermo

The term "insurgent citizenship" is introduced by Holston (1998) with the intent to criticize the system of rational comprehensive planning typical of the '70s and

deriving from the tradition of CIAM. The insurgent citizenships are considered as a response to the stiffness of a template-directed plan. In the Italian context and even more in the southern, the reaction to a too rigid schedule (according to a controversial justificatory perspective) has been evident in a series of informality whose apex is the illegal building.

In the cities of southern Italy, the struggle between the blueprint and the informality of the city, seems to have been won by the latter. The city of southern Italy is the expression of other forces that don't express, the logic, languages and tools of Planning (Inzerillo, 1984; Cannarozzo, 2000; Zanfi, 2008). In this case urban spaces has constructed through the tension of three forces: on the one hand, the public project of the city (the blueprint), on the one hand the needs of citizens, and on the other hand, the criminality will of managing the spaces. These three actors contributed in shaping the landscape of Italian southern city. The use and construction of public space are the expression of these forces that often retreat, leaving unused space for manoeuvre, in which groups of organized citizens can express themselves.

In the case of Palermo insurgent movements, rather than confront the results of rational comprehensive planning, tend to answer to the construction and organization of a city whose spaces are defined between the management of organized crime and administration of public administration. In the folds of these managements there are spaces left by the conflict and not governed, managed and designed by none of these two forces. In these areas the phenomena of insurgent citizenship is moving, tending to remember the responsibility of local administration to ensure the common good.
Planning has accepted the need for participatory pathways to act on the public space of the city, reducing the gap between the blueprint of the city and the needs of citizens. Forester (1989, 1999, 2005) and Healey (1997) as well as many others, as Innes (1995, 1996), Innes & Booher (1999), Fischer & Forester (1993), have defined the critical nature of this type of participatory approach especially as regards the choice and selection of stakeholders and the will to build consensus around prebuilt projects.
In the case of Palermo, however, there is an overcoming the paradigm of participation in favour of direct action on urban places over which there are not actions by public decision-maker.

In Palermo, the issue of ethics of inclusion, (Bonafede & Lo Piccolo, 2010) is "tackled" by the local decision maker audience through inaction, this, for years, provided an opportunity for organized crime to move on urban space and this is the condition that generated the reaction of insurgent movements.

Palermo is a complex case in which the fluidity is evident between the three forces above expressed. Urban spaces left without care and functions are the privileged arena for the expression of insurgent movements, when these spaces are not already a criminal arena.

The insurgent movements in the city of Palermo

The cases explored in this brief paper concern the movements that act directly on the public space by giving a physical transformation. The various movements were collected in a multimedia map that identifies the sites of transformation and provides links to websites and videos that describe the actions[2]. The tendency to physical modification of public spaces exceeds the need of interaction with the administration and proposes actions that take place according to specific rules and procedures. The cases collected are far from each other for what concerns the spaces of the city on which they act, how to organize and objectives that arise, however, several cases have in common the desire to be subversive in the use of the city and by mode of action almost clandestine.

Figure 1 QR code use it with your smartphone to see the on line map

What makes these actions unique is to act with the purpose of building and shaping the public space. This occurs without conflicts because the citizen groups operate on marginal spaces in which it is expressed the indifference of the forces that govern the city.

The cases include:

- The Guerrilla Gardening actions and the Palermo flowerbeds,
- The Santa Rosalia Gardeners actions on the neighborhood Albergheria in the historical center of Palermo,
- The Committee for the collective good actions,
- Stories of struggle for the re / opening of parks and public spaces in cities,
- The Mafia physicalization use of public space;

We chose to bring a clearly negative example in the use and physical transformation of public space because the act physically and permanently over the city is not without problems. The insurgent movements, trying to respond to a lack of administration, are interpreters of a collective good that is not unique, is not codified and is elusive.

Along with these actions, the city of Palermo is the theatre as many other cities, within which other events are happening, that have subversive demonstration purposes and unsettling use of public space. The flash mob events are the best known of this trend, but they tend to do this demonstration also structured events such as Saddles of Stars, Critical Mass (Carlsson, 2002) and Milonga Blitz, which animate parts of the city with unusual uses. Saddles of Stars and Critical Mass are aggregations of cyclists that travel along a a path in the city pointing out the existence of alternative ways to move over the cars, the milonga blitz is a collective time to dance that takes place in some public spaces in the city. These are just some

2 http://maps.google.com/maps/ms?ie=UTF&msa=0&msid=212981471588689928612.0004bde05eccf1e5f7a14

examples of structured multi-functional public space can absorb very different uses. However, these uses are unusual manifestations of the simple need for expression, but not physically change and lasting space, while the actions of the insurgent movements are becoming dependent on these characteristics.

Assuming that these actions are certainly a creative element for the city, the effort that we are trying to do is to understand what are the factors that give rise to these forces and how they can design policies that can encourage these creative self-generated movements from the social context of the city, and how it's possible to prevent the problem of possible conflicts caused by the change in the public space. To better understand the sphere of influence has moved to the changes that were widely shared by citizens, who have generated very little opposition from the community, but this state of things it's not always possible. The actions on public space have shown how, doing something / anything is still preferred by citizenship in relation to doing nothing.

The Guerrilla Gardening actions and the Palermo flowerbeds

The Guerrilla Gardening is a form of radical gardening, which operates on the public flowerbeds degraded in the city. The movement was born in the 70s in the U.S. with the intention of operating on exposed sites where it was forbidden to act.
The first example of this is due to Liz Christy who has worked in New York working on a lot was empty with a garden that is still retained by citizens and is henceforth part of the city's parks department.

An example, which has even led research in formal actions, is the Garden of Eden, that was starter once again in New York by Adam Purple. The garden, created in the space left by the demolition of some lots in the Lower East Side of Manhattan, has continued to grow until 1986 when it was destroyed[3]. From a formal point of view, the garden is a very interesting case: its circular shape is able to grow without limit, compared to the blocks town, it always retains a recognizable form. In a sense, the implicit project of this garden is a metaphor of a plant that can continue to grow, while its architectural counterpart is the spiral of the museum of unlimited growth by Le Corbusier.

Figure 2: QR code Use it with you Smartphone to see a related video

he actions of the beginning had a strong symbolic sense facing with areas of private property. The aim of these interventions was, in fact, to struggle against excessive privatization of space in the city, while, in Italian and current configuration, the actions of guerrilla gardeners are oriented towards maintenance and new significance of public space. The early actions in New York are a model which inspired by the actions of disobedience by guerrilla gardening. The movement of guerrilla gardening

[3] http://www.youtube.com/watch?v=-VfBvdzgQxY

in Palermo began to operate in 2011 and scored nearly 50 operations on the flower beds in the city, they are public spaces in which the degree of conflict is quite low, because are abandoned by local administration and are useless for the criminal organization. Even in Italy guerrilla gardening are disobedient regarding the legislative framework, at least they clash with the Civil Code rules, governing the occupation of public land, but also with the Article 347 of the Penal Code that punishes the usurpation of public function.

The two years of activity by Palermo Guerrilla Gardeners have led to an evolution of the mode of action: the early actions had, in fact, had a demonstration function, aimed to highlight the lack of maintenance and care of public green spaces, new initiatives bring out the clear intention of wanting to create communities around the actions of re-signification. The events are an invitation for people to deal and take possession of their public spaces. To do this, the most recent actions have been carried out by a communication campaign and preventive involvement with the residents. This will produce more lasting effects on the city.

The involvement of citizens takes place the week before the event and activities include leafleting in condominiums and a signal on the site chosen warning the imminent arrival of a new garden. The direct participation in an event of Guerrillas increases the interest of the neighbourhood towards this strange action, which is illegal, it happens at night in the flowerbeds near the houses, which for years have been left neglect. People fall curious and realize a revolutionary concept: they, too, can take care of public space. The evolution towards actions on public space and the lack of enforcement actions are evidence of the limited sense of ownership of public space and the consequent neglect in which it is.

The mode of organization of the movement and aggregation of the guerrillas are held mainly on the Internet, through social networks. This mode of virtual aggregation gave the opportunity for a real and physical mobilization exercise. The social Network, in this case, has subsidized the typical function of the city to provide a space for formation of ideas, which are generated in a virtual space through a comparison of experiences and desires of people. Interestingly, these modes of aggregation encourage physical action on the city, but it is also worth noting how the city as an organism that can produce innovation by connecting intelligences is now in competition with other tools.

The Santa Rosalia Gardeners actions on the neighborhood Albergheria in the historical center of Palermo

The actions of the Santa Rosalia Gardeners are also ascribable to the movement of guerrilla gardening, but this group has decided to focus on a specific part of the city of Palermo, retracing more closely the mode of action of the beginning of the movement that concentrated their actions on a specific place for a long time, like the Garden of Eden stated previously or Green Guerrilla by Liz Christy.

The Santa Rosalia Gardeners actions take place within the historical center of Palermo. This area, paradoxically marginal (Lo Piccolo & Leone, 2008; Cannarozzo, 2000, 2008) is proposed as an ideal playground for the resignification actions proposed by the Gardeners. The empty spaces in the district are still often the outcome of the collapse of the Second World War, while the historic fabric of the medieval matrix has been replaced by partial demolition, the result of nineteenth-century project of the city continued throughout the twentieth century. These interventions have created a space in which schizophrenic hybridize languages and functions.

Figure 3: QR code Use it with you Smartphone to see a related video

In this arena Santa Rosalia Gardeners move, since the choice of name, evoking a poetic situationist. The reference to Palermo the patron saint is a pretext to ensure the involvement of citizens and the people using as a protective heritage the sanctity of Santa Rosalia. The reference to the Saint offers a consonance between the symbol most sacred and untouchable for Palermo and public spaces left without care, questioning, from a semantic point of view, affection and sense of belonging that is manifested in public spaces.

Figure 4: QR code Use it with you Smartphone to see a related video

The group's activities began in 2010 with the recovery of a flower bed on G. Barbieri street, between Porta di Castro street and the Mongitore street[4]. The group consists of residents and not, their choice to act on the neighbourhood Albergheria reveals the intention of highlighting the abandonment of public space and the peripheralization of a location physically in the centre of the city, but consistently ignored by the institutions. The Gardeners activity will be consolidated with the recovery of Mediterraneo Square, an urban void formally indistinct outcome of the collapse of a building unit, owned by the church[5].

Figure 5: QR code Use it with you Smartphone to see a related video

In this space the detailed plan for the Town Centre provided accommodation to green, but the use, before the Gardeners, was parking and landfill. The self-generated expression of the sum of the wills of individuals (parking and landfill) denounced a need and a necessity, while the field work by the Gardeners, the fact of dialogue with its citizens, has

[4] http://vimeo.com/40713786

[5] http://vimeo.com/40713785

created a shared understanding of the collective good which managed to go beyond the sum of the individual to become an expression of convenience goods (either the construction of the square). This empowerment should be the basis of institutional interventions on the city, because the generation of community is the only guarantee for a long-term management of the spaces.

The last intervention involving Gardeners, relates to a small garden space owned by the Institute for Independent Social Housing Palermo[6]. This space has been created within a unit buildings partially collapsed. This space created, but never opened and managed, was privatized and became a landfill before being recovered by the Santa Rosalia Gardeners. The story, in this case highlights an important aspect of these movements, rising as opposing forces, have an interest to do things, but not to be institutionalized.

The Gardeners were contacted by the result of their disobedient actions carried out around the garden, but they could not have direct management on the garden because they are not formally binding, or want to become. The garden was, therefore, assigned to the management of an formally association that has transferred the management informally to Gardeners.

This qualification of the story highlights an important aspect of spontaneous committees that act on the city. The purpose of most of these, in fact, is highlighting the need for public action and the Institutional city and not the will to replace it, as they tend to make associations formalized. To be clear the will of the formal associations of the third sector is to manage some parts of the public city, while the willingness of informal associations is to highlight the need for direct government intervention over the city. For this reason, the ethical approach to the work on public space is deeply different. From the point of view of urban policy this, leads us to consider carefully the generation of policies that tend to institutionalize the insurgent forces of a city. In many cases it is more appropriate to use these social forces such as the launch for institutional policies, in other words according to their side without overlapping groped or worse to attract them in an institution groove.

The mode of organization of the group are manifold and set up a more complex communication strategy refined than other groups. Social networks are used to gather ideas and organize group activities, a site is a sounding board to share and explain its nature and inspiration, and a newsletter keeps participants updated on the activities.

The Committee for the collective good actions

The actions of this committee are distinguished by a reasonable approach to design interventions, even before the demonstration. The purpose of the group is to create community around physical transformation projects. Their main interlocutors are the schools and aggregations of citizens who are asked to take the first step in working to

[6] http://vimeo.com/41490759

apply the action of the group. The instruments used are those of participatory planning, through which change is being proposed public space of the city.

In this case, actions do not focus only on urban green spaces, but come to define the furniture and made changes in the appearance of public space. The main purpose of the actions is to create a culture of collective good overcoming personalism and particularism. In this sense the action of the Committee is an interesting experience in the various reality of the insurgent citizenships in Palermo. The organization of events pass through a request by groups of residents who contact the committee to start along the path of participatory planning. The actions propose the construction of participated microarchitectures and paths of road adoption. In both cases, actions are proposed as a demonstrative element to increase the awareness of the collective good. The aim is to place under a way attention to act on the urban space based on the involvement of persons. Involvement modalities define a framework of action that requires a certain maturity from the citizens engaged, for this reason the Committee's actions were concentrated in some parts of town where the themes of participation are more mature and understandable.

Even for what concerns clandestinity of actions, the Committee has some positions less disobedient than other committees described. The need to make changes in physical space, in fact, has set up authorization procedures to achieve true partnerships with local authorities, as for intervention in Mario Francese square. Other work carried out on semi-public spaces or in which the use is public, but the property is private, have been carried out without the need of permits.

The Committee involvement Tools go through a web site that collects and amplifies the results of actions and social networks. However, the mode of action of the committee define it as a more restricted group when compared to other physical action has a prevalence of project action.

The Committee is proposed as a guide for building projects and urban micro-transformations in the city. His design approach provides a formal quality that no other movements have, but it puts on the background the direct and self building actions on the city and citizen involvement in the construction of public space.

Stories of struggle for the re / opening of parks and public spaces in cities

This section of the research brings together the experiences of insurgent citizenship that have highlighted the need for open public spaces of the city whose design process and construction is already completed or to be defined.

The physical actions on the city of Palermo are concentrated in certain areas that catalyze the insurgencies of citizenship. These locations represent physical evidence of the inefficiency of the local authority with respect to the need for maintenance of public spaces. Parks, theaters, meeting places, squares, docks already made are often left hanging waiting for a use. It seems more important that you do things rather than

use it. In Palermo, places physically retrained expect even decades before finding a use and before being opened to the public.

The story of the opening of the Park Ninni Cassara is the most valid to describe what often happens. The large green area, close to a very marginal district, has been the subject of a redevelopment began in 2005 and completed in 2009, but its opening in November 2011, should not be a decision of the local administration, but it's a conseguence of citizens committee action. Even between some difficulties, the park has become a particularly enjoyed place capable to renew a part of the city, generating flows of visitors who reach a marginal area of the city.

Figure 5: QR code Use it with you Smartphone to see a related video

Based on the successful experience of Park Cassara were born other initiatives that seek to pursue the opening of new public spaces with different instruments. The theme, as already mentioned, is slightly different than the other cases exposed. In this case is asked to the administration a specific question about a clear target. The municipality is placed in front of its faults and is asked to respond with consequent actions. The most direct derivation of the dispute over the Cassarà park is the movement that takes care of acqua dei Corsari park, also finished, but never really inaugurated[7]. In this case, the current administrative vacuum has not yet produced results, but the media tools and legal pressure are the same in all the two parks stories.

They have a different story, the actions born around the Uditore park and Luparello Fund in which the request of citizens' groups has been structured around places not yet built or planned. In particular, the Uditore park is an area where it was constructed an action of participatory planning to arrive to formally define the park. In this case the action of the committees was not antagonistic to the administration, that was an entity with which talk to get the actual construction of the park. In the case of Fund Luparello, however, the action arose in relation to the defense of green agriculture from Italia Nostra association, in relation to speculative uses proposed for the area, however, in contradiction with the master plan. The actions on cultural spaces have focused, in recent months, around two places strongly connoted: the Garibaldi theater and Cantieri culturali della Zisa. Very often some spaces have a strength and a legacy to connect these energies that are generated around them by taking a strong symbolic value (Kohn, 2001). Notwithstanding the reasons, the claims and the history of the movement, is important in this short paper, to outline what are the tools and channels used to build the insurgent movement or to facilitate the participation of citizens and movements to build dialogue between the Committees and other institutions. The two things go hand in hand and feed each other. In the case of Cantieri Culturali della Zisa antagonistic actions resumed places

[7] http://vimeo.com/40727333

and thoughts about an area already well equipped for the culture, but tragically unused. Reflections are channeled into a series of focus groups that summarize the results of the meetings. This mode of action has brought such a credibility to cause the Commissioner who administers the city to grant the use of the cinema of cultural sites to the Committee itself.

In this case it was established a relationship arduous but healthy between the institution and insurgent citizenships. Where the local authority takes note of the demands coming from below and give room to the inurgent movements. Where all this will lead is unclear, but certainly boosted and increased production of confrontation and thought on the city. Listed below are the main tools and strategies used by movements to pursue their claims and the main channels used to engage participants.

Cassarà and Acqua dei Corsari Parks

- Proposals and involvement actions for the citizens
  - Class action and legal notice act against the Municipality asking specific answers for the non-use of the spaces,
  - Demonstrative actions
- Main communication channels
  - Social Network

Uditore Park (U'Parco)

- Proposals and involvement actions for the citizens
  - Participatory planning,
  - Collaboration with the institutions
- Main communication channels
  - Internet site
  - Social Network

Fondo Luparello – Italia Nostra

- Proposals and involvement actions for the citizens
  - Awareness Actions,
  - document processing and scientific research to illustrate the situation of the site
- Main communication channels
  - Internet site
  - Social Network

Garibaldi Theatre

- Proposals and involvement actions for the citizens
  - Demonstrative actions (shows and happening) to improve the urban culture policies
  - Verification of the procedures for awarding public spaces of the city to associations.
- Main communication channels

    - Social Network
    - Word of mouth

Cantieri culturali della Zisa – The factory that we want

- Proposals and involvement actions for the citizens
    - Participatory planning,
    - Communication and descriptions on the sites
    - Physical actions for revaluation of the site
    - Development of a manifesto about the culture policies in the city
- Main communication channels
    - Internet site
    - Social Network

One of the preconditions generating insurgent movements such as those just described, is the presence of a strong speculative and intellectual context that has no methods and possibilities of work and expression and as such has the ability to regenerate the city using antagonistic actions and creative able that are underused.

To fully understand what happens in these places and through these movements has chosen to include in the text refer to certain videos that seem to be able to describe more fully the emotion that is also present in these movements.

The Mafia physicalization use of public space

The decision to conclude this survey with a pejorative use of public space is clearly provocative. You can not equate actions created to pursue the common good of an idea born from the will to manage and take profit from the public spaces, however, should highlight how the actions on public space are formally similar, so put a planter on a sidewalk is a similar action to put the bollards on a parking lot (as we shall see later), but they are well apart the aims pursued.

The Mafia is a complex organization, a powerful lobby with the specific characteristics also on the scope in the urban and city management (Cannarozzo, 2000, 2004, 2008). The main and the most unjust, perhaps, is to focus its attention on predatory goods that have little market value, but a high marginal value.
It is for vital goods, to be clear:

- Water,
- The air,
- The urban space
- ...

All these goods are shared by definition, are so common that their market value tends to be very low, but they are necessary so that their marginal value, or value that is assigned when the good is scarce, it is very high. The state, guarantor of such goods, not always claims their public nature.
In these folds the Mafia is organized to manage and pay for these goods to those who do use them, exerting a very strong power and coercion.

Very often these enforcement mechanisms are real but invisible.

The Mafia handles most of what is not managed and monitored daily by state and local authority: car parks, public spaces, water, garbage. This happens for various reasons, sometimes the state abdicates its role clearly, other times it simply fails to honour its commitments.

This hood above the town is not seen, acts on connivance, on coercion and conventions. But sometimes it happens that the management of criminal territory discloses even through physical signs. The extortion demand of lace Parking is a small sign and, basically, is possible to avoid it, but if an obstacle occupies the public space, which an operator authorizing the parking lot removes, is a different matter.

In the historical centre of Palermo if you want to park your car in a public road you can find some bollards, you expect a few seconds and it comes a "gentleman" who "authorized" to park by moving the bollards (also public) he took care to be taken from a restricted area and arranged in good order. The Mafia does not almost ever see!

In the following photos you can have the exclusive privilege: see the hood of the mafia of the city, where to park on a public space you have to ask permission to a person who has taken the bollards for the mobility of public properties and uses them for his private purposes with which appropriates public space. All this happens while the city is moving normally, and all is normal. This fake outrage of normalcy is another feature of the Mafia.
Perhaps this story does not speak of the great Mafia, who organizes one of the lace and peddles drugs, but talks a lot of relationships with rights and in particular with the public space that's in the city of Palermo.
Compared to virtuous cases that have been exposed previously is also assists in this case to a modification of the public space, but with very different purposes. It is also important to understand how thepublic space in Palermo is an arena within which they move a lots of different forces that do not all contribute to the definition of the common good.

Conclusions

The attention to the argumentative turn in planning outlined by Fincher and Forester (1993) is the framework that has structured the exposure of very different cases presented in this paper. The methods of research and action on the field in many cases allowed interacting directly with the movement coming to tell a story that is emerging as a revolution that comes to design autonomous geographies (Chatterton, 2006, 2010, Pickerill and Chatterton, 2006). However, it remains in the background a strong effort making claims to whom would be appropriate to give an answer in terms of urban policies.

The insurgent citizenships of Palermo are describing a path positively creative for regeneration of public space not promoted by urban policies. In this sense the schedules described by Florida (2000) in which creativity is a tool and a strategy to compete with parts of a city in decline, and even by Landry (2003) in which creativity is seen as a force capable of fighting some effects of globalization, are overcome and integrated into a new vision where creativity blossoms into independence as long as there are some preconditions. The spontaneity of the creativity is in continuity with the passing of the formulas set out by the urban marketing Palestino (2009) as ingredients and conditions to open paths of urban creativity.

The preconditions, encountered in Palermo cases, relate primarily to a technology shift that has been strengthened and structured in recent years.

The development of social networks has, in fact, given the opportunity to simulate and enhance an important social aspect of the city having a multiplicative effect of the ideas together with a sum function of thought.

The arrangements of the Internet already described by Castells (2001) in fact allow not only to add ideas and thoughts in a container, but to generate comparison on the same having a multiplicative effect. This has always been a function delegated to public places and is one of the preconditions for self-organization of insurgent movements. The second condition is the availability of a social and cultural context of high level that does not find room for expression and representation. The third is a state of disuse or underuse of public spaces. The fourth is the lack of cultural policies that generate a strong "hunger" of events, ideas and thoughts. These conditions are all present in the actual context of the city of Palermo and they are a very local expression and hard to find in other cities. The comparison of the reported cases

shows that none of the movement is free of an organization that passes through the social networks and the Internet. This has at least two aspects: on one side accentuates the features of the hedonistic contemporary society, and the other helps to organize thoughts and gives order to the history of outbreaks by providing a clear framework for those who decide to approach them.

Many questions remain suspended: the first one concerns the role of virtual communities. It is not clear how long these communities will need to get to propose a physical action on the city or if they do not come to a point of dematerialize their protest too.

It is an extreme example, but that should be taken into consideration because the city is risking to lose the primacy of the function to be an enhancer of intelligence in favour of virtual social communities. At present, the city seems to be a theater in which its occurrence and the casual relationship between physical and people seem unavoidable, but it will always be so?

The second aspect concerns the manner in which you can promote generation of creative energy self-produced, or what are the most effective policies to do so. In this case what is important and necessary, beyond spells and saving, is the ability to listen to the local authority to be able to build a dialogue with the insurgent forces of the city to prevent situations of conflict, but for channeling energies into durable paths and sustainable over time.

The insurgent movements described are deep affinities with the work of Danilo Dolci in Sicily in the 50s and 60s, especially with the reverse strike of 1956 in Partinico. In that case the principle was to strike working against unemployment. The action of Dolci, achieved by a process (Calamandrei, 1956), has many similarities with those conducted by insurgent movements.

Beyond the physical and tangible actions on the territory, the example of Dolci helps to understand how the generation of a conscious thought and creativity is the main legacy, more profound and lasting action to fight like those insurgent movements, even in the face to a lack of institutions.

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ADAPTING TO CLIMATE CHANGE: THE NEED FOR EU COHESION POLICY TO ADJUST FUNDING

Kathrin Prenger-Berninghoff [1]

Abstract

Climate change is inevitable and is why the need for mitigation and adaptation has become obvious. Both approaches need to play an important role in future climate change policy. Until now mitigation has always played a bigger role in the fight against climate change than adaptation and policies implemented in the 1990s mainly focused on activities that foster mitigation. In the last decade more attention was paid to adaptation. But governments are still regarding the need for adaptation with different degrees of urgency. The problem of financing adaptation strategies is probably one of the most evident reasons for the current restraint. However, adaptation is of great relevance and should play a bigger role in the future.

One climate-change-associated area already trying to put in place measures and investments that help Member States and regions to mitigate and adapt to climate change is the EU Cohesion Policy. Climate change may cause certain impacts, which might negatively affect some regions, thus changing socio-economic patterns and exacerbating existing inequalities. It should therefore be of interest for Cohesion Policy to support regional adaptation strategies and to specifically invest in actions improving the adaptive capacity of a region, in order to avoid those effects that counteract its own policy objectives. Consequently the incorporation of adaptation into its funding efforts and the reduction of climate change risks are turning into a major task. However, a challenge will be the appropriate application of funds. Until now Cohesion Policy has concentrated on economic indicators only. The fact that the risks of climate change will be unequally distributed and that both developed and less developed regions can show low degrees of adaptive capacity is not taken into consideration. Hence, it is suggested that Cohesion Policy considers other indicators, such as the level of adaptive capacity or regional vulnerability, in the future, rather than just focusing on indicators such as the GDP per capita. Such an approach would benefit developed and less developed regions and thus comply with both objectives; efficiency and equity.

Due to the fact that adaptation has so far been rather neglected from the policy side, this paper highlights the need for an adjustment of the EU Cohesion Policy funds in regard to climate change adaptation. After first explaining why both mitigation and adaptation are equally important in handling the risks of climate change, this paper will demonstrate why action at EU level in the context of climate change adaptation is necessary and reasonable and explain the current funding approach. Cohesion Policy and the consideration of climate change-related vulnerability will then exemplarily be closer examined in the Italian Veneto region. The example will hint at the required changes and improvements that Cohesion Policy needs to make in

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order to further promote adaptation and resiliency. Finally, the current role of climate change in Cohesion Policy will be outlined and the reason for an adjustment of funding mechanisms clarified.

1. Introduction

1.1. Considering climate change impacts within the EU Cohesion Policy

Climate change is inevitable and is why the need for mitigation and adaptation has become obvious. Until now mitigation has always played a bigger role in the fight against climate change than adaptation – from a scientific point of view as well as from the policy perspective. Policies implemented in the 1990s mainly focused on activities that foster mitigation (Swart & Raes, 2007). In the last decade more attention was paid to adaptation. But governments are still regarding the need for adaptation with different degrees of urgency (Gagnon-Lebrun & Agrawala, 2006). The financing of adaptation strategies and measures combined with the uncertainty of the actual risks of climate change is probably one of the most evident reasons for the current restraint. However, adaptation is of great relevance and should play a bigger role in the future.

One climate-change-associated area already trying to put in place measures and investments that help Member States (MS) and regions to mitigate and adapt to climate change is the EU Cohesion Policy. Climate change may cause certain risks and impacts which might negatively affect some regions, thus changing socio-economic patterns and exacerbating existing inequalities (CEC, 2007a). It should therefore be of interest for the Cohesion Policy to support regional adaptation strategies in order to avoid those effects that counteract its own policy objectives. Consequently the incorporation of adaptation into its funding efforts and the reduction of climate change vulnerability are turning into a major task (European Commission DG Climate Action, 2010). However, a challenge will be the appropriate application of funds. Until now Cohesion Policy is concentrated on economic indicators only. The fact that the impacts of climate change will be unequally distributed and that both developed and less developed regions can show low degrees of adaptive capacity is not taken into consideration. Hence it is suggested that Cohesion Policy considers regional vulnerability in the future, rather than just focusing on indicators such as the GDP per capita.

1.2. Objectives

The objective of this paper is to highlight the need for an adjustment of the EU Cohesion Policy funds in regard to climate change adaptation. After first explaining why both mitigation and adaptation are equally important in handling the impacts of climate change, this paper will demonstrate why action at EU level in the context of climate change adaptation is necessary and reasonable and explain the current funding approach. Cohesion Policy and the consideration of climate change-related risks will then exemplarily be more closely examined in the Italian Veneto region.

The example will hint at the required changes and improvements that Cohesion Policy needs to make in order to further promote adaptation and resilience. Finally, the current role of climate change in Cohesion Policy will be outlined and the reason for an adjustment of funding mechanisms clarified.

2. Analysis

2.1. Mitigating and adapting to the impacts of climate change

As indicated by the IPCC, climate change is happening and is human-induced. Consequently, climate change scepticism and a cautious behaviour are no longer justifiable. In contrast, mitigation and adaptation strategies are more affordable and reasonable than inaction with its subsequent damages and costs (UNDP, 2007; CEC, 2009a).

Therefore, mitigation and adaptation should play an important role in future climate change policy. On the one hand, projected climate change impacts can only be limited or in the best case prevented, when the main driver of climate change – the current amount of greenhouse gas emissions – is being reduced. For that reason the EU has to implement measures that promote, for instance, a low-carbon economy. Ignoring the importance of carrying out mitigation measures might increase the risk of adverse climate change impacts. As a consequence, costs for adaptation measures could rise (CEC, 2007b). On the other hand, climate change is already underway. That is why, at the same time as mitigating, it is important to adapt to climate change. Adaptation is supposed to either reduce the risk of expected negative impacts or to deploy possible favourable effects. However, adaptation action should not be misinterpreted as an alternative to mitigation. According to the Green Paper 'Adapting to climate change in Europe – options for EU action', there are several reasons for this. First, certain climate change impacts simply cannot be reduced by adaptation. Second, with growing impacts adaptation becomes more cost-intensive. Finally, while mitigation measures have global affects, adaptation measures rather operate regionally and locally, so that lagging and less developed countries or regions are being disadvantaged (ibid.).

The regional impacts of climate change differ among Europe. Therefore climate change needs to be tackled at the regional level. However, the main problem is that not all the Member States, or regions respectively, have the same capacity to mitigate and adapt. Furthermore, not all governments regard the need for adaptation with the same seriousness. For instance, although all MS have included information on the current level of their adaptation plans in the Fifths NC's to the UN Framework Convention on Climate Change, by 2010 only twelve European countries had adopted national adaptation strategies (EEA, 2012). This implies two consequences: first, as not only the impacts of climate change will vary throughout Europe, but also the capacity of European regions to adapt to these changes, support from EU Cohesion Policy will be essential in order to avoid the deepening of regional disparities, which might arise when unprivileged regions are left alone to cope with

adverse impacts. Second, adaptation measures have to be adjusted to the potential climate change impacts, and the diverse impacts need to be tackled and adaptation measures realised at regional level. This is why MS should promote the implementation of national, but also of regional adaptation strategies.

2.2. The need for action at EU level

As stated above, different response strategies are needed at national and regional level. Certainly, the implementation of concrete strategies and measures is in the responsibility of national governments. Nevertheless the EU has a certain saying and also the duty to co-ordinate and offer support to its MS, in order to promote the preparation of national and regional adaptation strategies and to foster mitigation and adaptation across the whole European territory. As the EU has already been involved in certain climate sensitive policies (agriculture, energy, water etc.), an additional involvement in associated sectors is considered as useful (Rayner & Jordan, 2010). In fact, an adaptation policy at EU level will have several favourable effects in general.

Climate change is quite a complex issue. Actual effects of climate change depend on several aspects such as the exposure of a region, the sensitivity of exposed elements as well as its adaptive capacity or the stage of socio-economic development etc. Due to this enormous variability, a multilevel governance approach is necessary, where all actors and stakeholders from local levels to the EU level are involved. Although adaptation measures are usually implemented at the local level, the regional level is also very important in adapting to climate change. Regions with a low adaptive capacity would particularly benefit from more information and a better co-operation. The uncertainties of climate change cause problems in securing concrete information and knowledge and in guiding regional authorities which prevents effective policy-making (CEC, 2009b). So the regional level alone cannot cope efficiently enough with the adaptation to climate change.

As a result, the EU needs to be involved in order to provide for the co-ordination of regional adaptation initiatives across the European territory. By adopting a coordinative function, by ensuring a comprehensive and coherent approach and by supporting adaptation measures, major gaps between EU countries and regions may be avoided (CEC, 2009a; CEC, 2009b). The EU could also assist in the design of efficient adaptation policies. Furthermore, municipalities and regions will most likely be in need of financial support as they will not be able to enable adaptation when left alone with the funding, so that the questions of burden sharing and solidarity and the development of a new financial support framework shall arise (CEC, 2009b). Thus, there is no doubt about the importance of certain co-ordination at EU level.

2.3. The need for new funding mechanisms

Solidarity among Member States is a necessary prerequisite. The notion of solidarity should be contained within the adaptation strategies in order to help those who need

(financial) support most (CEC, 2007b; CEC, 2009b). In this context the European Commission also highlights the role of Cohesion Policy, which "can further contribute to address the consequences of new disparities between those regions which suffer most from climate change and those that can more easily cope with its impacts" (CEC, 2009b, p. 21). The Fourth Cohesion Report already pointed out the important role of climate change in the EU Cohesion Policy and the necessity to analyse, how climate proofing can be integrated in those programmes and projects that will be financed by European Funds such as the Cohesion Fund, the Regional Development Fund and the Rural Development Fund (CEC, 2007b).

Public funding of adaptation measures is a major requirement. Adaptation measures will most likely only receive private funding when located in less affected regions and when provided for economically interesting projects. As a consequence the less developed regions, especially those most at risk, will likely have difficulties obtaining private funding for their investments or risk coverage. If they receive appropriate funding at all, it will most likely only be at comparably high costs, which might lead to the creation or deepening of disparities and inequalities between stronger and weaker regions. For the latter regions, public funds are the most important source of financial support, mainly in cases when natural hazards or extreme weather events hit the region (CEC, 2009b). In order to fill this gap, the Commission plans new funding instruments which will serve to finance long term adaptation. But there will be a great competition for those funds, as many regions will be in need for them. All the more, investments into projects have to take future climate change impacts into consideration, i.e. promote those that support mitigation and adaptation measures and prevent those that hinder them. Accordingly, the Commission acknowledged the need to determine how EU funding mechanisms within the next multi-annual financial framework can better support MS in becoming more resilient to climate change (ibid.). Financial help will be necessary in order to develop and realise adaptation strategies that help reduce vulnerabilities and thus also contribute to the reduction of disparities.

An important step towards a more successful and target-oriented adaptation policy was the adoption of the EU White Paper on Adaptation to Climate Change. In the EU White Paper the importance of financing adaptation is acknowledged by the explanation, that "climate change is one of the priorities for the current multi-annual financial framework (2007- 2013) and it is important to ensure that the available funds are used to reflect this priority" (CEC, 2009a, p. 13). This means that funds and other financial instruments shall be applied better and more efficiently, especially in view of the fact that the total EU budget may not be increased, but only redistributed. Therefore all climate change relevant sectors need to define specific adaptation strategies including an estimation of adaptation costs, which can then be considered by the prospective financing schemes. In addition the Commission foresees actions which comprise an increased incorporation of adaptation actions into the EU financing schemes of the current period as well as a review of existing funds, in order to improve their use and capability when addressing climate change vulnerability in the coming framework (CEC, 2009b). For example, the Cohesion

Policy instruments of the current period should be used and exploited in a way that climate change adaptation can be supported. At the same time each project or programme that is applying for or already receiving EU funding shall be tested for its mitigative and adaptive capacity and its vulnerability to climate change respectively. It is important that adaptation activities are being considered when preparing Community funding programmes. This means that investments into infrastructure or buildings should generally take account of the projected changes in climatic conditions (CEC, 2007b). Thus, certain adaptation measures should already be integrated when designing a programme. Therefore the Commission is aiming at mainstreaming mitigation and adaptation in the EU's Operational Programmes. Further options for integrating the funding of adaptation into the next multi-annual framework should also be evaluated (CEC, 2009b). The actions proposed in terms of financing clearly highlight the necessity to integrate adaptation issues, i.e. in particular adaptation funding, in current funding instruments and in the financial framework after 2013. The Impact Assessment accompanying the White Paper points out once more the future task of Cohesion Policy, to take mitigation and adaptation into account when adopting the Operational Programmes and when deciding on and managing the use of EU funds.

However, some initial ideas that had been considered important before were not elaborated within the White Paper. For instance, the Commission's original plans to integrate adaptation measures into the EU budget and allocate funds directly to them were cut out (Rayner & Jordan, 2010). Rayner & Jordan (2010) also criticized, after examining the "Impact Assessment", that several options had been dropped too early. This includes those options that imply considerable adjustments in EU financing schemes, which are difficult to foresee under the current framework (CEC, 2009b). They concluded that the discarding of these options is a sign for the incapability of the EU to change its investment patterns and to purposely add the adaptation dimension to future funding schemes.

This means the Commission's intentions are honourable, but they lack an actual realization.

2.4. Cohesion Policy and climate change adaptation in the Veneto region

A closer look shall now be taken at Cohesion Policy in the Veneto region. Although it is usually the less developed regions that are in need of financial aid for adaptation measures most, the Veneto is insofar an interesting example region, as it represents a rather rich European region, but at the same time also one of the most climate change vulnerable ones (Figure 1). It is therefore essential to implement mitigation and in particular adaptation measures and to increase the adaptive capacity of the region in order to decrease its vulnerability. The region is covered by the competitiveness and employment objective and is thus supposed to generally invest less funding in mitigation and adaptation activities or has less funding available for these kinds of activities. However, the region is expected to actually have a great interest in improving its adaptive capacity in order to stabilise and preserve or even improve its

competitiveness and to protect its citizens, especially against river floods or flash floods, and its important cultural heritage.

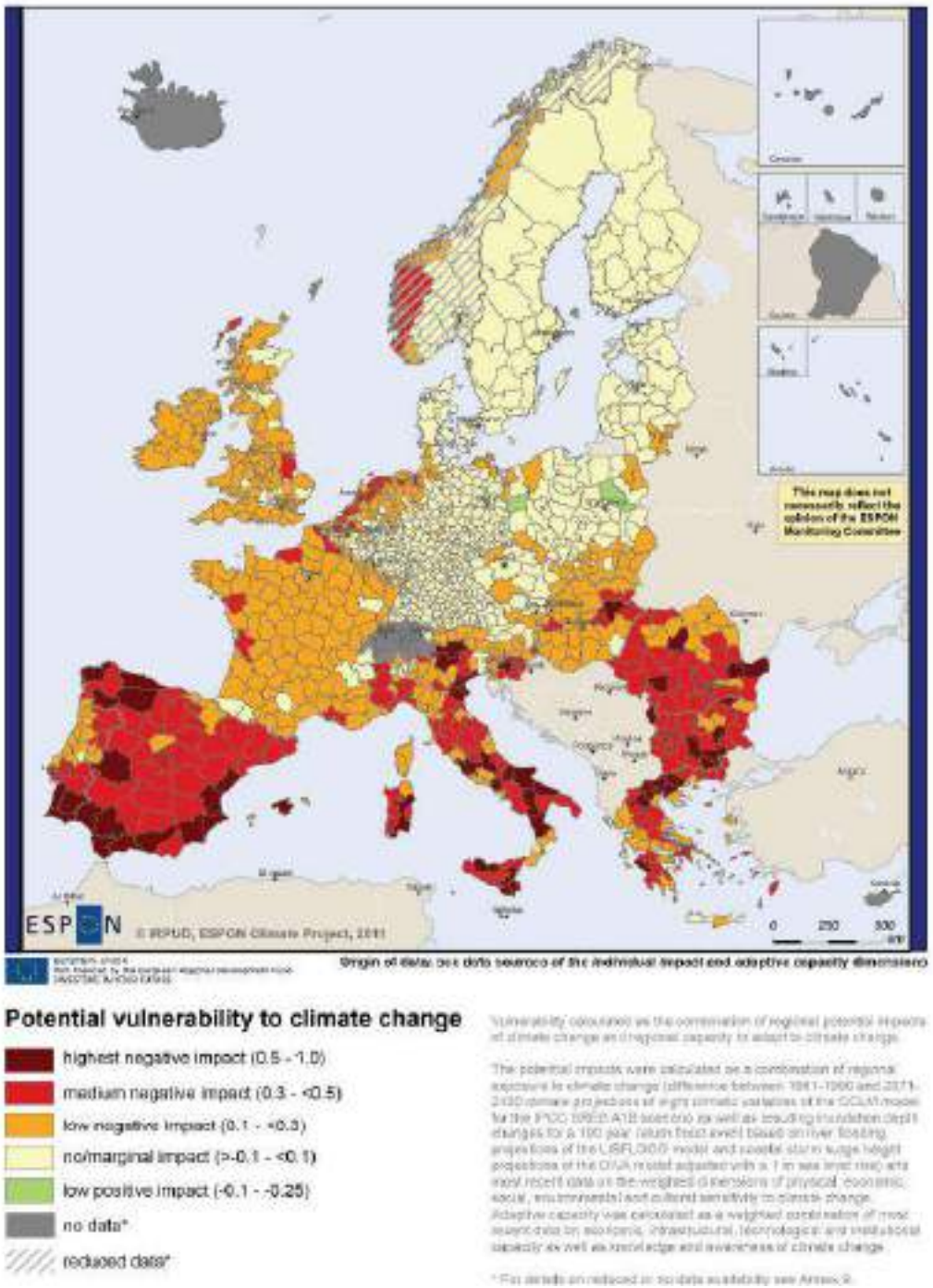

Figure 1. Potential vulnerability of European regions to climate change (Source: ESPON & IRPUD, 2011, p. 24)

In the current programming period, Italy receives around 28.8 billion Euros. Most of its funding (around 21.6 billion Euros) will be invested in the convergence objective, i.e. for the lagging regions in Southern Italy. The regional competitiveness and employment objective has a budget of 6.3 billion Euros. The national level adds

another 31.3 billion Euros funding for its regions within these two objectives. A major part of funding in Italy is directed towards the goals of the Lisbon Strategy: growth, jobs and competitiveness (CEC, 2007c; CEC, 2009c). It strikes that climate change activities or measures to fight or adapt to climate change are not taken into account in the national direction of Italian Cohesion Policy. Investments into climate-proofing as well as mitigation and adaptation measures are not mentioned, nor is risk prevention. The fact that investments in the field of climate change could also lead to economic growth, the emergence of new businesses and thus new employment opportunities and potential innovation is not being considered.

The Veneto region has a total funding amount of 452 million Euros available for its Operational Programme. In line with the above said, investments will mainly be made in fields that support the Lisbon objectives. However, one of the priorities of the Operational Programme is "Environment and risk prevention", which implies actions that try to minimize health risks as well as measures which are supposed to contribute to an intact environment by protecting the natural heritage and historic buildings (Zuliani, 2007). Even if the protection of the environment as well as risk prevention play a certain role within the Operational Programme of the Veneto region, at no point is the problem of future climate change impacts specified. "Risk prevention" is expected to be a rather general term and not necessarily directed towards risks posed on people, settlements and the environment by climate change. A concrete attacking of climate change-related risks and effects can therefore not be assumed. On the contrary, the priorities indicate a clear focus on the Lisbon Strategy objectives, by rather investing in economic growth and job creation.

European coastal regions generate a high share of the total GDP of the EU, thus they are not only economically important, but also economically sensitive. The Veneto is one of those productive coastal regions and generates a high economic activity, representing one of the most competitive regions in Italy. Since the costs of inaction in coastal areas, i.e. costs related to coastal flooding and erosion, would rise up to 6 billion Euros per year at EU level by the year 2020, adapting to climate change is quite essential for any coastal region. Accordingly, policy makers should be aware of the respective vulnerability of a region at local level in order to take adequate adaptation measures (CEC, 2009d). Severe risks in coastal areas could impact the local and regional economies and might harm a country in terms of GDP. Hence, not taking any adaptation measures might have severe consequences for a region's or a country's competitiveness.

The EU may support risk reduction and adaptation measures, for instance by providing for financial aid within the specific priorities under the funds of the EU Cohesion Policy (Structural and Cohesion Funds), which regions can apply for. Generally speaking, funds for coastal protection works can mainly be looked for at national and EU level. About 4% of the total investments into coastal protection and risk reduction measures are defrayed by the EU (Figure 2) (CEC, 2009d; CEC, 2009e). In the light of the economic importance of coastal region, this constitutes a comparably low share. The bigger part of investments (63% over the period 1998-

2015) still needs to be procured by the national governments of the MS. Both, national and regional authorities together, make up for 95% of all expenditures, which is a high share compared to the 4% the EU contributes. In view of the fact that decision makers usually do not consider the option of inaction, precisely because of the enormous socioeconomic effects of future risks, MS are financially challenged (ibid.). This might turn into a problem especially for less developed countries that have to procure a high amount of national funds which might also be needed for economy-related investments such as the promotion of entrepreneurship, the creation of jobs or infrastructure development.

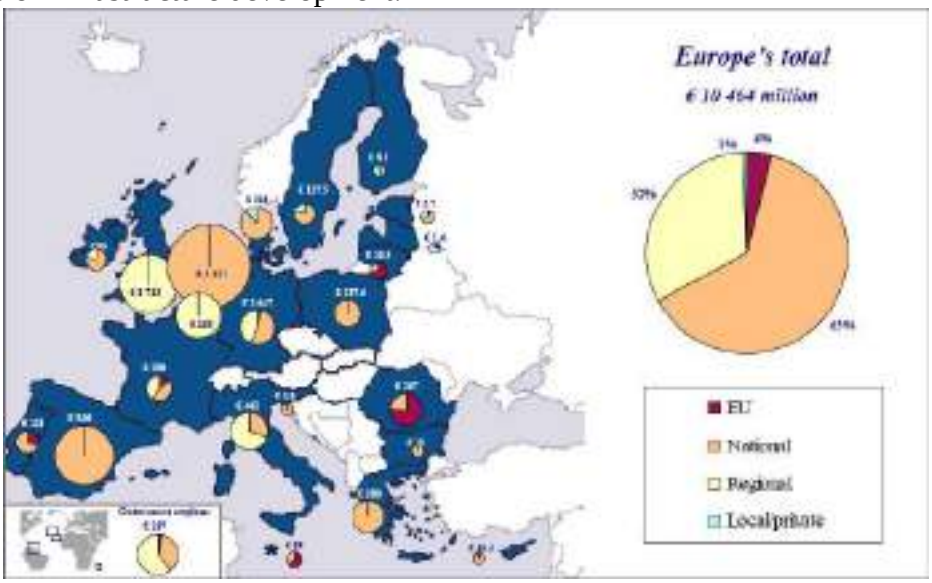

Figure 2. Normal coastal protection expenditure at European, national and sub-national level (regional, local and private) across Europe in € billion (1998-2015) (Source: CEC, 2009d, p. 11)

The Adriatic basin in northern Italy is supposed to be at high risk from sea level rise, coastal and river flooding, especially the Po Delta and the Venice Lagoon. The city of Venice, for instance, counts as a highly vulnerable part concerning flood hazards and extreme weather events. Reasons for the vulnerability of the Veneto region are its exposure to climatic changes as well as its sensitivity in form of existing socio-economic characteristics, such as a dense population and the presence of numerous economic activities, e.g. tourism, agriculture and industry (Carraro & Sgobbi, 2008; CEC, 2009e). Especially against the background, that the overall impact of climate change is relatively high in the Mediterranean, and especially in the Veneto region, the adaptive capacity needs to be equally high in order to cope with the projected future impacts.

In contrast, it has been proven within the ESPON Climate project "Climate change and territorial effects on regions and local economies", that the vulnerability of the region stems, among others, from a low adaptive capacity (ESPON & IRPUD, 2011). As noted above this would actually be essential to fight the impacts though. The more surprising it is that no EU funds are allocated in the Veneto region. In fact, no EU funds are allocated in Italy for coastal protection at all, but it is solely borne by national and regional authorities (CEC, 2009d).

Considering the fact that adaptation measures do not play a very big role within the Italian Cohesion Policy anyway, it can be concluded that the current EU Cohesion Policy is not paying much attention to the respective vulnerability to climate change of a region and that adaptation measures are handled rather carelessly. In Italy Cohesion Policy focuses on the Lisbon Strategy and tries to achieve economic growth and more jobs. However, it does rather neglect the fact, that climate change impacts could have an adverse impact on these efforts, by affecting local and regional economies, thus counteracting economic development by harming physical infrastructure and/or human workforce. This is against the spirit of EU Cohesion Policy, which actually intends to promote regional competitiveness and employment in the more developed regions to maintain the strong overall competitiveness of Europe as a whole. Consequently, EU Cohesion Policy should make sure that its own efforts are not undermined. A potentially greater contribution of Cohesion Policy in regard to climate change adaptation should therefore not be left disregarded.

2.5. Cohesion Policy weaknesses and the current role of climate change

Cohesion Policy is a very adequate tool to reach economic growth and prosperity as well as solidarity throughout the European Union. The DG Regional policy has an enormous funding capacity after all. Though, to ensure all the different benefits the policy holds, its funding must be appropriately applied, so that its value can be used to the full extent (CEC, 2010a). For instance, Cohesion Policy funds can guide investment decisions by preferring the funding of adaptation measures or by demanding that the funded projects take account of future impacts (European Commission DG Climate Action, 2010). As an allocation of EU funds for the improvement of adaptive capacity is quite an essential requirement, the involvement of the DG Regional Policy is of great importance.

The Europe 2020 Strategy, the follow-up strategy of the Lisbon Strategy, and Cohesion Policy shall be very closely aligned. As the benefits and targets of Cohesion Policy can only be ensured when funding is purposefully applied, a specific focus on the Europe 2020 objectives is not far to seek. The Europe 2020 Strategy offers not only specific priorities to focus on, but also a framework that helps identify funding priorities. The reason for aligning Cohesion Policy with the Europe 2020 Strategy is that this linkage can help promote both, a further development of poorer regions within the EU and further growth of the EU as a whole (CEC, 2010a). However, this points at a further strong concentration on rather unprivileged and less developed regions within the EU.

Cohesion Policy intends to advance a balanced development of European regions and Europe as a whole. Therefore it aims at reducing existing economic, social and territorial disparities. To promote a harmonious development, Cohesion Policy supports investments that tend to achieve improvements in the fields of competitiveness, employment, social inclusion and environment (CEC, 2010b). However, despite some successes achieved in regard to competitiveness and

cohesion, a report for the DG Regional Policy, compiled by Fabrizio Barca in 2009, revealed the limits on judging policy performance in quantitative terms. In an analysis of the policies' strengths and weaknesses, two conclusions could be drawn: First, a place-based approach or strategy should be implemented and the policy should concentrate on just a few priorities which play a big role for the union and its citizens (Barca, 2009). Second, there needs to be a general reform of Cohesion Policy in order to be able to meet all the different challenges the EU will face in the coming decades. The report outlines that the policy has to distinguish between two goals: 1) increasing income and growth, known as the efficiency objective, and 2) reducing inequalities, known as the social inclusion or equity objective. Choosing and determining the above mentioned priorities requires a comprehensive political debate. Six potential priorities were recognised, one of which is "climate change" as part of the efficiency objective (ibid.).

Often Cohesion Policy is equated with financial redistribution within the Union. However, neither the efficiency nor the social inclusion objective could be achieved by a mere redistribution of (financial) resources among MS. Instead, the main purpose of Cohesion Policy is institutional improvement. By providing the needed goods and services, the work of public authorities should become more efficient (ibid.). In addition, Barca (2009) points out, that Cohesion Policy should consider all regions and not only the poorer ones, as social exclusion and weak institutional capacity can arise everywhere. However, current and future Cohesion Policy still seems to stick to "business as usual". The DG Regional Policy bases its policies primarily on a model of economic competitiveness, where environmental factors are hardly represented (Rayner & Jordan, 2010). Dhéret (2011) refers to this approach as an outdated system and claims that cohesion funding should not be limited to GDP indicators only. And even for the next period the allocation of funds "would be differentiated between regions based on their level of economic development (measured by GDP per capita), drawing a clear distinction between 'less' and 'more' developed regions" (CEC, 2010b, p. 10). In consequence, the managing of financial support is not going to be altered for the next period.

The EU Budget Review introduced some proposals on how to better apply cohesion funding and maximise the benefits in the future. It is stated, for instance, that a greater concentration of resources on EU priorities will be essential. This corresponds to the arguments outlined in the report by Barca (2009). It could be done through an identification of specific, important priorities. Such a concentration on certain priorities would allow a better allocation of funds and the addressing of different needs (CEC, 2010a).

Furthermore the Budget Review mentions the necessity to improve the quality of funding expenditure. It recognises that the institutional capacity at all levels is a key element for successfully producing and implementing policies that are essential for reaching the Europe 2020 objectives (ibid.). In order to obtain high quality expenditure, the allocation of funds should consider the respective capacity of each MS and its regions to apply these financial sources in the most efficient way.

Consequently, it should be the task of Cohesion Policy to finance the capacity strengthening of the public sector, which includes also the improvement of adaptive capacity.

In his report on future Cohesion Policy, Barca also underlines the need to consider climate change, by admitting that "cohesion policy, as any policy aimed at delivering public goods and services, must take account of the impact on climate change when designing measures" (Barca, 2009, p. 136). The current EU funding period already tries to take account of the problems climate change induces. By allocating 1.3% (4.8 billion Euros) of financial resources to promoting renewable energy, 1.2% (4.4 billion Euros) for energy efficiency and 9.2% (31.7 billion Euros) to the support of green transport, a step in the right direction has been made (ibid.). However, these investments only regard mitigation, not adaptation. This means that there are still several weaknesses in the current allocation of EU funding.

It has to be acknowledged, that in the Fifth Cohesion Report climate change finally plays a bigger role than in previous Cohesion Reports. A whole section is dedicated to "Enhancing environmental sustainability", which concentrates on the future challenges of climate change and environmental degradation. In fact, the Commission even approves the territorial dimension of climate change and the role of Cohesion Policy to provide for a certain coordination at EU level by stating that "the growing threat of climate change and the political goal to radically increase the share of renewable energy in the EU underlines the fact that policies at different levels will need to be coordinated to respond to these various threats and opportunities in an efficient and effective way and to avoid them counteracting each other" (CEC, 2010c, p. 124). This shows the Commission's awareness of the future task of Cohesion policy in regard to fighting climate change impacts, although a focus on mitigation is obvious, so that certain limits and weak points still remain.

3. Why adjust funding?

Summarising, it can be stated that there are several weaknesses of Cohesion Policy that should be addressed in the near future in order to achieve the efficiency and social inclusion objectives. First, there is no real place-based approach and territorial perspective yet. Second, there is no focus on priorities and the efficiency and equity objectives are not being addressed specifically enough. Third, attention is mostly paid to financial aspects and Cohesion Policy lacks an intervention in all European regions. At a first glance it is reasonable that under current conditions and in view of a rather difficult financial situation Cohesion Policy (or EU policies in general) rather focuses on economic aspects such as cost-effectiveness and an output-driven performance (Dhéret, 2011). But when aiming at considering both objectives, efficiency and equity, it is necessary to go beyond this economic rationale.

Climate change does in fact need special consideration. Due to its different regional pattern it needs a place-specific approach. It was shown by the ESPON Climate project that countries which are highly affected by climate change also seem to have

the lowest level of adaptive capacity and are mainly less developed, poorer regions with a low competitiveness index. This hampers cohesion as it might actually widen existing disparities between Europe's heartland and the peripheral countries. This is why the unequal distribution of vulnerabilities to climate change requires particular efforts which should help in changing these vulnerability patterns and in reducing imbalances in order to meet the key challenge of Cohesion Policy. Hence Cohesion Policy needs to take account of these varied vulnerabilities and of the risk of widening territorial disparities when designing its next funding period (ESPON & IRPUD, 2011). Although Cohesion Policy is already aware of the problem and the fact that it has to take over responsibility in climate change issues, it lacks the actual process. The urgency of the matter requires yet an immediate adjustment of policies, with a distinct focus on the improvement of institutional, or adaptive capacity respectively.

It has also been proven that there are vulnerable regions in more developed parts of Europe such as the Veneto region. A generalization of the given conditions, i.e. a general assumption that high economic development also means a high level of adaptive capacity, would therefore not take reality into account. When these regions are affected heavily by climate change, this could also have negative consequences for cohesion. This fact implies the need to consider the vulnerability of a region and to try to improve its adaptive capacity for increasing resilience rather than just concentrate on economic values. It is essential that future Cohesion Policy considers other factors and indicators than just the GDP so that its contribution to the Europe 2020 objectives can be facilitated and advanced. Only when it pays enough attention to other driving forces that determine cohesion and competitiveness, future Cohesion Policy will be able to translate and achieve its main objectives.

This future mission has also been clearly formulated by Barca (2009) who claims that Cohesion Policy must inevitably consider the specific climate change impacts when elaborating and implementing measures. It has already been pointed out, that mitigation and adaptation are unavoidable necessities to stabilise and promote competitiveness and cohesion. The current EU funding period already tries to consider this, by allocating a comparably high amount to climate change mitigation. Although the Commission acknowledges, that a certain financial support in regard to mitigation and adaptation will be necessary and that funding can and should support the development and realisation of adaptation strategies, much more emphasis has to be put on the application of funds.

Consequently, the weaknesses in the current allocation of EU funding need to be tackled for the next period. An identification and improvement of the potential of funds should take place so that they can be better used for addressing climate change vulnerabilities. It should also be ensured that climate change aspects are included in the funding reporting. In general Cohesion Policy needs to make sure, that its instruments are applied for climate change adaptation. As stated by the IPCC, a high economic development and existing technology are not the only aspects influencing adaptive capacity. Factors such as human capital and educed institutional abilities are

just as important. Thus, it shall be pointed out, that the adaptive capacity of a region must be considered and not only the level of economic activity: a high level of economic development does not necessarily imply an equally high degree of adaptive capacity (Adger et al., 2007). Accordingly, Cohesion Policy needs to take adaptation into account when adopting Operational Programmes and when deciding on the use of EU funds. It also has to consider the distributional effect of climate change and its diverse consequences across Europe. Adaptive capacity determines the vulnerability of a region and thus impacts current and future territorial disparities. Therefore it is essential that Cohesion Policy not only focuses on economic aspects, as it does now, but also on indicators such as the adaptive and the mitigative capacity (ESPON & IRPUD, 2011), as these have a significant influence on the level of achievements of the cohesion objectives.

4. Conclusions

As the Operational Programme of the Veneto demonstrated, the region's objectives are strongly focused on the improvement of the competitiveness and on the reduction of regional imbalances, while the problem of future climate change impacts was not addressed. The priorities indicate a clear focus on the Lisbon Strategy objectives, without taking account of the necessity to adapt to climate change. The Veneto is a relatively competitive and economically high developed region, while at the same time being vulnerable to climate change impacts. Further economic growth will most likely trigger the current vulnerability and cause conflicts between economic development and adaptation to climate change. Nonetheless, investments in adaptation, especially in coastal protection, are urgently required in the short term in order to maintain its current status. Here, those strategies should be prioritized where synergies with economic development options exist. However, there are no EU funds allocated in Italy for coastal protection, which means that coastal protection in Italy is borne by national and regional authorities. This example implies that the current EU Cohesion Policy is not paying enough attention to regional vulnerability to climate change and that the need for adaptation measures in some regions is rather neglected.

The example of the Veneto region also hints to the importance of considering all vulnerable regions, not only the less developed ones. Mitigative and adaptive capacity has to be high, so that a region can cope with future impacts. Economic development is just one of many determinants of adaptive capacity. It should not be generalised that only less developed regions have a low level of adaptive capacity. Vulnerability also concerns more developed regions, which means the focus cannot be on the level of economic development alone. In fact, climate change impacts could have even more severe outcomes for the regional and national economy – and thus also for the regional and national competitiveness and the competitiveness of Europe as a whole – when the more competitive regions, i.e. those regions that are highly productive in economic terms, are being affected and weakened. All regions and citizens can be concerned with disadvantages and thus should be equally protected. A high GDP is not a guarantee for the ability to adapt to external changes.

In conclusion, it can therefore be stated that the allocation of Cohesion Policy funds should be based on more indicators than just on the GDP and that other indicators, e.g. those that determine the adaptive capacity of a region, must be considered. Such an approach would benefit various regions and thus comply with both objectives; efficiency and equity. Taking account of the respective vulnerability of a region could therefore help, allocating EU funds in a more reasonable way.

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DOWNSIZING DETROIT: RESHAPING DETROIT O RESHAPING PLANNING?

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Abstract

Detroit: the images and numbers of the crisis of a city and an economic system have fed up the pages of local, national and international news during the last two years. In fact, the city has become the symbol of how a city can 'die'.

Actually this situation is not a recent one, dating since the sixties and seventies. But the recent economical crisis has particularly exacerbated the frailty of this, as many other cities in the American rust-belt. Press and media have grasped the importance of the case, providing chronicles of a dramatic urban condition, but also chronicles of research and projects, public and private, of ways to get out of the crisis. These include on the one side a particularly striking revival of the practice of urban agriculture, which has brought to the light the traditional role of this economic activity in the history of American cities, but also a challenging way to stress the same idea of "city" and the relation between "city" and "growth". On the other side this process is dealing with the challenged role of planning: where on the one side there is a new federal urban agenda, with a revived central action proposed by President Obama, and on the other a local administration, with a major, like Bing, which is proposing uneven programs to contrast foreclosures effects and dealing with NGOs action in order to save the city.

The paper will discuss the case under two perspectives .

The first is related to the reinvention of city-ness, in which the city is engaged. Where the city-ness (Brenner, 2009), is what makes a city such a place, livable and vivid (a "city that works", is the title of Major David Bing): which kind of city-ness for Detroit ? which kind of city-ness for the city after the crisis? What is the role of urban and nonurban, of density and proximity? All traditional urban paradigms seem in fact to be at stake. The second is about "planning": what is the role that planning can play and which challenges to planning is the financial crisis urban effects proposing?

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1. Introduction: Cities under the current economic crisis.

Considering the 2011 Mc Kinsey report (2010), more than half of the Gross Domestic Product (GDP) produced in the entire world during 2007 has been generated by the economies of 600 cities, where approximately 22% of world population lives. The first 100 world cities in 2007 have produced the 38% of the world GDP; projections over 2025 contained in the same report assumed that more than 25% of world population would be concentrated in those 600 cities, engines of the entire economy, raising to 60% the share of the world GDP they would produce. During 2007, and more evidently during 2008, a large, sprawled financial and economic crisis has produced significant changes, as well as, the projections over the future and the paths of growths assumed for the future of the urban economies. From many points of view, the global economic crisis exploded in 2007 created a reduction of jobs and wealth in 7 out of 8 cities of the OECD countries. according to the GLOBALMETRO MONITOR 2011 Report (2010), (written by the Brookings Institute in cooperation with the "Cities Programme" sponsored by the London School of Economics), less than half of the examined 200 metropolitan areas increased their economic conditions if compared to the data before the crisis began.

The economic crisis that hit the world started from a financial crisis and it boomed when this latter touched the real estate market, first and above all the residential real estate market, something evidently connected to the idea of urban development in the last century. In fact since the beginning of the new century, many urban areas and systems around the world have pushed the local economy, supporting with low interests mortgages and huge public investments the transformation and growth of many urban environments, confirming to many national economies that urban areas and cities were able to boost the economy of the whole country. After the beginning of the crisis, this system began to be under pressure; the effects are now evident in several cities, deeply affecting their processes of growth and development.

The recent international literature has started reflecting upon the role that cities have played and are now playing during the financial crisis. At least, two points of view emerge: for many scholars urban development and growth are still the only possible answers to economic and financial crisis and the city is destined to play a key role in the economic recovering (Glaeser); on the opposite side, for many others authors urban development and many contemporary urban environments are responsible for the size of the crisis and cities are required to rethink their role accordingly to a different development model (Harvey, 2008). In both cases cities are central again, even if regarded as problems or solutions (Donzelot, 2008).

If the crisis generated different effects and different reactions in the western world urban environments, at the same time, also the answers and the solutions urban planning and planning policies gave to the crisis have been different. In any case it can be stated in this perspective, that not only cities have been questioned and

stressed by the crisis, but also urban planning is being questioned. Considering all the differences, it is possible to say that several fundamental pillars of contemporary urban planning are challenged by the current economical crisis: among those, we could consider, just as an example, the mechanisms and tools of public –private partnership. Lack of resources from the public sectors on the one side, involved in investing its limited resources to assist emergent social troubles, and lack of convenience on the other in investing in urban development processes from the entrepreneurs' point of view, together with a general reduction of the possibilities to borrow money, put into crisis this XX century mechanism. This sufferance is blocking many urban regeneration or redevelopment projects and shelved many sectors of the constructions processes, showing even in this case how weak was the world of contractors and builders, pushed to grow in the precedent lucky period but too weak to bear the new crisis. All the factors that helped the building sector to be one of the main actor on stage of the previous period of urban growth are now in sufferance, and the engine of urban development slowed its run, putting urban environments in a new condition of projects stalled, stopped, abandoned.

Simultaneously, therefore a new big pressure over urban planning started: urban planning is supposed, much more than in the recent past, to be able to address, if not to solve the problems, and find a way out the crisis. On the one side, as in previous crisis, public works are seen as a way-out of the crisis: on the other side planning can be considere a way to produce new courses of action and new common frameworks against uncertainties, both for public and private actors, both for citizens and economic actors.

Nevertheless planning is not at ease in this situation, since some of the tools on which it has based its approach to urban problems in the last decades can no more be taken for granted; at the same time the crisis is producing further effects on some of the most relevant and well-known problems of contemporary city (growing dualisation, for example), paradoxically lowering down others (the environmental dimension, or traffic congestion). This opens up the possibility, as in every crisis, to reverse the perspective and produce important innovations. As a matter of fact, if 1929 crisis has fostered the introduction of social welfare in developed countries, and the 1973 crisis fostered a renewed attention to environmental issues, we could expect that the current crisis could offer new space for innovation. Under which perspective it's hard to say: nevertheless we could try to contribute to this moment challenges, adopting a challenging perspective towards the contemporary urban question (Secchi, 2011, 2010) and the role planning and public policies can play.

In order to do that the paper selects a case study, which is considered interesting under many respects, even if not exemplar or exhaustive, because of its specificities.

The city of Detroit is in fact the object of this paper. The city has been at the centre of many attentions since many years under a more general perspective of

investigation on urban crisis; as such it is considered since quite a long time as the symbol of urban decay and urban crisis in American literature. Already in bad economic conditions since the sixties, the city suffered even more from 2008 and for the global crisis, that speeded up the process of abandoning homes and neighbourhoods, whose mortgages in many cases were no more affordable for residents.

The focus of the paper is twofold: on the one side the first paragraph presents reflections concerning the process of downsizing of the city, which has naturally occurred in the last decades and has been assumed as a general aim of the new urban policies of the Mayor Bing. The demographic size of the city has in fact been consistently changing in the last decades, producing a process of physical shrinking that is leaving many parts of the city without any kind of use; from an industrial metropolis to a strange discontinuous combination of CBD and suburbs, the physical downsizing of the city has become a central slogan for the preparation of the new plan. Actually "downsizing" Detroit, means at the same time reshaping the city, redefining its form and role: thinking the city form and the urban space and organization in a new way for a different population and for different uses from the consolidated ones. But how can a city like Detroit can be reshaped? If "downsizing" in fact can be more simple to be achieved, bulldozing entire neighbourhoods abandoned by people and activities reshaping the city is a hard task. Not only in terms of the form of the built environment, but also in terms of the entire urban organization.

In order to "reshape" Detroit a process of revision of the urban plan has been seen as the right solution to address the problems of the city. Actually two years after the decision to produce a new plan to reshape the city, taken by the mayor Bing, it became clear that in order to reshape the city (and not just to downsize it) a normal plan process could not be effective and a reshaping of planning itself was necessary. Also in order to address some of the long-term problems that the city has accumulated during the century, which have to do, not only with the economical crisis, but with the way in which the city has developed during the last century in relation with the urban region it is part of. As it is demonstrated by the fact, that, while the economic seems to be recovering, the city is now still living a very dramatic moment.

2.1 The recent past: a city too big for its population

In the last 50 years, Detroit has lost more or less one million of residents, about 57% of its population before the trend started. Many other Northern US cities have lost population during the last 50 years, as a national trend of residents moving from the historic cities to the suburbs, or to more economical and fiscal attractive cities. Many cities have seen numbers declining, and people moving out to find new jobs, new urban environments or new opportunities, but Detroit’s trend cannot be seen, studied and considered as part of a national trend. Its

exception is easily analyzable: the increase of population loss has been so evident in the last 10 years, that the recent Major Bing question:"who will live here?" has been the most justified question at the beginning of his job in 2010. Not considering here the trends of population mobility and population transformations, the most relevant aspect of this change has been the physical transformation of the city: when residents left, they left their homes and their neighborhoods so empty that more than 40 squares miles of urbanized and urban lands where considered in 2010 completely empty and no more lived by anybody. A size as large as San Francisco urban area[3]. In the two years between 2010 and 2012, these completely empty urban lands generated a big loss of employments, with more than 24% of unemployment rate, a number particularly high if compared to the national level of 9% of unemployment during the same years.

The crisis that hit the city comes from the very specific way in which the last 100 years have pumped it up very quickly, and then, as quickly as before, history has deflated it. Together with the fast growth of the automobile industry and its related world, Detroit grew and flourished maybe more than many other cities in the US, becoming the symbol of a town able to grow at the same pace than the main industries that shaped its urban environment. A well designed city center, a rationalized system of neighborhoods in between the city center and the industrial belt, a world-known designer for its major park, made the city of Detroit a symbol of how an industrial town can be attractive and economically very productive.

After few years, considering how long is human settlements history, and more or less in 30 years, Detroit became a different symbol, absorbing all the bad of economic changes that affected western world during the passage from fordist to post-fordist economy. The book "Origins of the Urban Crisis: Race and Inequality in Postwar Detroit" (Sugrue, T.J., 1996) focused on what was already happening more that 15 years ago and it is considered nowadays as one of the most brilliant and evident study about the so called "narrative of failures", addressing in particular urban policies failure. So, after having been a symbol of economic growth, with the same evocative power, Detroit has been described already more that 15 years ago as the symbol of a failure and today we can easily say that the image of Detroit is the example of Northern American urban policies failure. The urban crisis began to hit the Central Business District, and it became worldly renowned for its being able to close historic buildings, to leave abandoned masterpieces of past architecture and to keep value away from the most central and prestigious part of the central city and its downtown areas. Above all, many people, in a typical American way of facing troubles, considered first of all the city as a economic environment, and they judged it so unable to regain its past position to look for a different future without it, leaving it and searching for applications and jobs elsewhere.

2.2 The present: a shrinking city

[3] www.detroitworkprojects.com

This crisis in fact generated, soon after the reduction of the central city values, the continuous loss of population in the suburbs: it became thus evident that the entire city of Detroit was on the center of a stronger catastrophic phenomenon. All the urban aspects of the city are now under a particular attack: no people enough to populate commercial and recreational activities, no more city dwellers enough to live in the built up spaces, no more citizens enough to use public facilities and services or to claim the use of them.

Once again, many North American cities have lived such a dramatic change: from the rusty belt to upper New York State, the effect of economic changes has hit the central business district first and the inner residential city soon after. Cities like Albany, NY, Buffalo, NY, Rochester, NY, Cleveland, OH, Toledo, OH, even Chicago, IL have seen a decline of population in the city center and soon after in the first residential belts around it, seeing at the same time new suburbs flourishing as a different place to live and work.

In Detroit, for the first time in the urban American history, the city showed that even the suburbs where affected by the same problems and processes of abandon. Residents and users left the suburbs, the highways, the shopping complexes and the industrial areas. For the first time, Detroit showed that the crisis was so deep that even the physical result of the American Dream wasn't strong enough to resist, and the combination of residential suburbs, highways and commercial strips was about to surrender to the crisis.

We can easily argue that this aspect was not the core of the crisis, but only one of its aspects. The core of the crisis, clear in the way it emptied suburbs and highways, was the failure of the public policies of urban renewal mainly focused on the regeneration of urban central areas. Detroit and its crisis showed clearly that the crisis was able to hit a urban and territorial typology such as the suburbs at the same speed that was revealed when the suburbs where planned and built. The loss of population left abandoned the sprawled city keeping away very quickly the fragile sense underneath the origin of suburbs themselves.

In this way, and under these forces, the city began to shrink.

It is not the first time in human history, and in the history of cities, that a shrinking of the whole size of the city happens: European medieval cities were smaller that Roman Empire towns and villages; Colonial South American establishments were more than half of the pre Colombian cities. But the shrinking forces that affected Detroit showed for the first time in the US history that a modern city can be smaller instead of being larger; that suburbs can be the most awful places to be instead the epitomes of the American Dream; that urban renewal policies cannot be effective by default, resulting otherwise in a huge waste of money and time, that traditional planning is not able to cope with such a situation; in general that a certain kind of reasoning, adopted by a city (people, as well as politicians and economic actors) cannot address similar processes of change without a changed perspective.

At the beginning of 2010 the situation of the city was evident, well known and already so studied to be able to produce graphics, data, images, analysis absolutely clear: the economic change that affected the way productive processes re organized themselves during the 80's and the 90's generated huge changes in the economic organization of Detroit industrial economy, first of all reducing the first and most important product the Detroit engine was able to produce, automobile. And bringing together down to the paths of crisis the specific urban environment created by that world, suburbs and generally speaking, sprawled city.

In "Leaner, greened Detroit" (American Institute of Architects, Sustainable Design Assessment Team, 2008) this situation was already well described and evident, even if with a strange feeling, considering Detroit' situation as something that could always happen and as something a city can avoid easily, investing in its fundamentals and in its DNA's aspects. Detroit population in 2008 was around 800.000 residents, already less than half its 1950 population; 40 squares miles in the city were already without meaning, and something between 3000 and 5000 buildings set empty. Urban decay was the word used to describe the situation, in the 2008 report.

Describing the fast change from a sprawled city growth to a spotted city fast decline, the 2008 report introduced clearly the race matter and the struggle between white and blacks communities. By the 1950's, the movement of more affluent families to the suburbs had already begun, but the riots of 1967 turned that movement into full-fledged "white flight", changing the destiny of the central parts of the city and the history of the inner part of the city. From 1950 to 2000 Detroit population plummeted, as factory after factory closed, and its economic condition steadily worsened; and as white-collar employment moved to the suburbs along with large parts of the city's middle class, the population who remained in the city center and in the inner city, before the sprawled areas of the white suburbs, was poorer, and more highly dependent on public services. But the city, without enough affluent people paying taxes, could no longer afford to provide just those services. So, from the early stages of recent history to 2008, the fast changes of Detroit urban geography can hardly be separated from race's struggles and race's geography. In 2008, over 80% of Detroit's population was African American, with approximately 666,000 residents, plus a large part of population belonging to the Latino southwestern triangle. More or less, the same geography of 1970, showing that while white American population had the opportunity to leave the crisis and the declining city, the poorest part of population couldn't, and it became the largest part of its residents.

The 2008 AIA report turned to be very optimistic about the way Detroit could save its future and change its decline into a challenge, and it is from these years' perspective that Detroit has been seen as a "shrinking city". The report focused on the challenges of the city, many of them, after 4 more years today, still persisting, but considered at that time as central elements of a renewal strategy: the architectural heritage, history, legacy and physical assets, with a well recognizable CDB with a value in architectural, artistic and historic legacy is still to be

reclaimed to a contemporary beauty and prosperity; the power and cultural diversity of neighborhoods is still a problem, today, rather than being that opportunity able to glue together parts so different in the same urban environment; even the matter of the size of the city, that for the first time appeared during those years, is still a problem rather than being an opportunity to re-imagine the urban condition, and the city has been very close to bankruptcy, due to the relations between general, administrative size, number of taxes collected in that cluster and costs for maintaining everything the original size required.

The recent history and the last 5 years have in fact shown the deep relation between loss of population, economic crisis, tax collection reduction and territorial assets' troubles. When residents have left the city, in many cases they left the buildings where they used to live; without any customer and any dweller aiming at buying them, the buildings remained abandoned; the first self help for people already left, trying to balance the cost of owning an apartment or a building and not being able to sell it and to gain a rent from it, has been to stop paying taxes to the city. This way, the municipality of Detroit began to collect properties instead of taxes, finding itself as owner of more than 67,000 units, left abandoned, without taxes paid for years, and expropriated to relief the loss of tax gains. This policy, more or less natural for a municipality, brought to the situation we see today, with the municipal budget below zero and a huge concentration of derelict building without any possibility to produce any profit. In this respect the city council has acted in deep isolation from both the state and the county, behaving as a singular and individual actor on the institutional and political scene. In this sense the focus on the traditional urban renewal tools and objects, on the one side, on the other the isolation from the larger urban region and the institutional framework, as a result also of the contraposition between the black city and the white-state provoked a collapse larger than ever expected.

2.3 The future: downsizing Detroit or reshaping Detroit

From 2008, the real challenge began to be evident. With a very pragmatic way of doing, from many voices the main suggestion was the reduction of the size of the physical area of the city. Even in the 2008 AIA report, and in many studies that followed, the reduction of the size was considered the best receipt not only to solve the problems of a urban dimension that didn't represent anymore the real demographic and social geography of the city, but also the way to copy with a more sustainable way of thinking and planning the city.

The emphasis on the size came to be evident. And the main question started to change: Detroit began to be a smaller city and the question was whether a smaller city, and a smaller Detroit, could become a stronger, healthier and more sustainable city. From many points of view, even without investing in the way such a change could have been reached, local policies, expert studies started

considering enthusiastically Detroit as a test to show that the shrink of a city was an opportunity to reclaim urban lands to agricultural uses and to reduce the need of public money to make a urban environment work.

Under this cultural umbrella, the new mayor David Bing called an already awarded US planner, Toni Griffin, professor of urban planning at Harvard University. The aim of the mayor was great: considering what he found when he became mayor, a city declining, a continuous reduction of taxes, jobs and population, David Bing decided to invest in a new general urban project, but with a different aspect. Without considering the opportunity to start a new, comprehensive structural plan for the re-birth of the city, the project called for a 12/18 months perspective called "Detroit Works Project", aimed at producing "an effort to map the city's future" following what Prof. Griffin said in one of the first interviews after she has been called to Detroit. "This leadership saw now as the opportunity to create a shared vision for the city, across sectors, and inclusive of broad civic engagement. I was asked to join the mayor's team to assemble and manage a team to create the vision with members of his staff".

The first idea, calling Professor Griffin, was ambitious: even if the possibility to generate a comprehensive plan has always been seen as very hard, in the first stages there was a general curiosity and expectation toward the production of a long term strategy which could save the city. After several months, however, with the worsening of the economical crisis, the idea of such a plan, based on certain datasets, and able to find a solution to the variety of troubles the city was living, was abandoned, even after many critics.

It is important to say that many of the critics, and one of the reasons for which the plan didn't work, were underlining an evident disconnection between the idea of the plan and the size of the maps it was considering, and the real city that was changing within the plan and within the city limits. Local associations and local organizations in December 2010 contested very hardly the idea of plan the mayor was working at, and they showed the deepness of this disconnection, above all showing how more important were experiences gained on the ground, day by day, by the spontaneous effort of local associations rather then data, technical points of view, academic solutions. Reading the reports of the public meetings held during 2010 a growing concern about the effort of the mayor is evident, and a general disaffection over its aims. During these public meetings, the disconnection between plan, tools and the real situation of the city gave the possibility to contest also the democracy of the process, with a mayor representing even less population day after day, considered in charge of planning a city that was no longer existing.

This criticism paved the way to a period of confusion, and to a systematic announcement of a new plan, full of solutions and above all able to plan the downsizing of the city, the concentration of the population still living in the city in few neighborhoods and the general, planned shrinking of the city. The question then shortly became evident: no plan would be enough well planned to plan for a city whose destiny was to disappear; if the choice was the reduction of the city

and the reduction of the urban area, the idea of a urban plan was in strong, evident opposition, so strong that for many months the option "no plan" became to be one of the most realistic, as well as feared.

Mayor Bing began to face a totally new, but at the end evident situation: Detroit as a traditional city was no more existing. Population was declining, jobs were flying away, economy was not recovering even if US were experiencing a general change over the previous economic crisis, the size of the cancer that was emptying many neighborhoods was even growing and the number of houses and buildings abandoned was so high that entire neighborhoods were now empty and without anything that could assure them to be part of a urban environment. The fiscal crisis of the municipality brought the city to a collapse on April 2012: no more money to spend, no more urban facilities able to operate, no more services assured for population.

But beside these facts, a different geography was still enough strong to be evident, in this derelict atmosphere: local communities, small efforts to change the destiny to some few, small, groups of blocks, the city Hospital and the Wayne University city campus able to supportt very limited but evident processes of urban renewal on the one side, plus some spontaneous phenomena of people getting back to the city on the other, were the facts that pushed mayor Bing to change his perspective and start a different process of planning, more tailored to this new urban geography.

As a result of this, the idea of a plan was changed into the idea of a process of planning, helping the city in developing a mid-term strategy by July 2012. While in the previous period dedicated to the elaboration of a plan at the same time the municipality had started the demolition of 10.000 houses in the city suburbs, starting a process of physical shrinking of the urban areas, the new season is characterized by a new process of public dialogue and outreach. Enhancing and supporting even more the public debate, the municipality started investing into a two levels strategy: from one side trying to keep alive a city commission for the new plan, even if without assuring money enough to make it run, in order to produce at the end a vision for the future, in the form of a new plan, on the other side concentrating some special projects over three different neighborhoods of the city, developed with the help of the citizens, listening and learning from the lesson cities such as Cleveland were showing to US cities trying to fight urban decline4.

[4] Cleveland started some processes of urban renewal investing in the neighborhoods and trying to find new energy from the revitalization of their economic and social environments. The Cleveland Neighborhoods Development Coalition (http://www.cndc2.org/) was created in 1982 and still working to focus urban planning attention on urban neighborhoods. From this experience and others, the city published the new 2020 perspective plan, Connecting Cleveland, aimed at creating a stronger link between communities.

Also at the federal level, within Obama administration, with the Strong Cities[5] program, many things were learned from the Detroit case: if the city itself change its physical, human, economic and cultural reason and size, urban policies should change and they should come back in the agenda of all levels, from municipal to federal. A group of target cities has been selected by the federal level, even if it was not clear how the help of the federal level could work together the local municipal policies and in coordination with the state level policies; this aspect has been particularly evident in Detroit where the opposition between municipal and state level policies was very strong, from all the points of view. In this situation, the strategy of the city changed completely: a two level approach is now evident, with a first, locally based approach to urban policies, focused on three sectors of the city and a second, long term strategy, rather then plan, able to work even sighing but following the time and the pace of the city. Downsizing Detroit had its first evident result: the re-sizing of the approach to the way the city should be thought and planned.

From this new approach, a new awareness emerged, maybe in a really pragmatic way of approaching the urban phenomenon. The crisis of the urban environment is still very strong, and it is affecting also the small cities around Detroit (The title "Hyatt is leaving Dearborne"[6] shows how the crisis is affecting also the industrial, established Ford's city headquarter). The idea of shrinking the city became to be really the only one available, and once again the American Institute of Architects developed a strategy to organize the city investing in its urban core and in few, established urban villages around it, leaving the space in between empty, with greenbelts and banked lands. And in many ways, the shrinking of the city and the new geography of a multi polar local organization gave the possibility to think to a new land use for the vacant lands: agriculture.

As a result the size of the city seems to change once again. From the urban prairie as it has been described[7] to a real prairie, where agriculture becomes one of the land uses in the new land use plan; Detroit soils seem to have all the characteristics to help this process: there is open land, fertile soil, ample water, willing labor, and a desperate demand for decent food. And there is plenty of community will behind the idea of turning the capital of American industry into ad agrarian paradise, with many communities aspiring to change Detroit into the first one hundred percent food self-sufficient city of the world. And today, Detroit is already producing more food inside its borders than any other traditional American city: about five hundred small plots have been converted and created by

[5] Strong Cities is a pilot initiative, sponsored by Obama administration, to strengthen local capacity and spark economic growth in local communities while ensuring taxpayer dollars are used wisely and efficiently. To accomplish this, federal agencies are providing experienced staff to work directly with six cities: Chester, PA; Cleveland, OH; Detroit, MI; Fresno, CA; Memphis, TN; and New Orleans, LA. These teams are working with local governments, the private sector, and other institutions to leverage federal dollars and support the work being done at the local level to encourage economic growth and community development.

[6] http://www.detroityes.com/mb/showthread.php?13532

[7] http://www.detroitblog.org/?p=287

an international organization called Urban Farming, founded by the songwriter Taja Sevelle. Realizing that Detroit was the most agricultural promising of the fourteen cities in the five countries where Urban Farming now exists, Sevelle moved herself and her organization's headquarters there in the last years. The goal is to triple the amount of land under cultivation in Detroit each year.

The different size of the city created room also for other locally based phenomena, able to change step by step and little by little the geography of the city. Raising while the incapacity of the official efforts was evident, a movement of people buying houses at ridiculous prices began to be evident. Toby Barlow 8 wrote in a New York Times article about people buying up $100 houses, moving to Detroit and doing all sorts of interesting things with them. Artists and architects, painters and inventors are buying some derelict plots and houses investing few money and trying to transform them in a local workshop of new ideas. Local, very small things such as "Heidelberg Project"9 or "Ancient Evenings Project" began to happen in the interstices of the declining city, filling them with new, little forms of urban life. Many other cities, such as Buffalo, NY and Cleveland, OH or Cincinnati, OH have invested just on these small, local efforts to invent something new so strongly that nowadays those cities are seen as the new "Rust Belt Chic".

3. Conclusions

Alongside a series of significant contributions in the field of economic studies (see especially Glaeser, but also Landry and Florida, Trigilia, Kurz) that quantify the current financial crisis and explore its economic reasons and relationship with the 'city', in order to come to a general conclusion of this paper, a series of reflections coming directly from the world of urban studies shall be taken into consideration, which focus on the challenges that the crisis is proposing to planning.

Particularly useful in this sense is to consider the section edited by Soureli and Youn of Critical Planning and dedicated in 2009 to discuss "urban restructuring" processes in progress as the result of processes induced by the crisis, but also as the actions of individual agents and collective response to the crisis, among which, we could say also the responses of planning.

That multi-voiced debate between Neil Brenner, John Friedmann, Margit Mayer, J. Allen Scott and Edward Soja, in fact presented already a general reflection on the crisis of the city and its urban implications and challenges in the field of planning, policy and action. It was argued that the crisis has introduced elements of turbulence in society and in cities and urban regions, which require not only a

[8] http://www.nytimes.com/2011/04/06/us/06detroit.html?pagewanted=all
[9] http://www.heidelberg.org/

greater ability to analyze precisely the effects on the city, but to address some theoretical questions that have to do with the conceptualization of the city and related approaches to planning.

According to Brenner in fact, first, the current crisis shakes the city processes of urban restructuring and questions the "city-ness of cities", i.e. what has made the city such a thing; secondly the city, involved in the crisis, appears, even more than we have hitherto refused to acknowledge, grappling with problems of trans-scale governance, crossing global and local (Friedman) and spatial and social effects of particular relevance in forms different from those to which we are accustomed to name and map (Mayer). Nevertheless, thirdly, cities, as nodes of cognitive-cultural economy, are again at the centre of important tensions: in fact the materials that have fuelled the contemporary city can reveal to be highly fragile in terms of crisis response (Scott). As a result, fourthly, the condition of transition to a different economic and social model carries with it a transition to new urban models, such as what Soja defines a metropolitan post-transition, where cities have become spaces of high volatility and mutability, rather than elements of permanence and stability.

On this base, as the Detroit's case seems to show, it is necessary to change deeply the conceptual frameworks that have so far been used to study the processes of urban restructuring generated by the crisis. The challenges in the field of planning, appear equally relevant. In fact, the crisis not only calls into question a revision of the mechanisms of urban development linked to a neo-liberal season (Brenner) but also pushes to sight the possibility of producing a vision antagonistic to the forms of regulation and planning that we have developed in this perspective. At the same time, according to Friedman, there is the need for a new "progressive view" of planning, one linked to the necessity to accept the idea of a finite world adopting a perspective of sustainability for the city, to avoid a process of commodification of everyday life adopting the reference to a friendly city, capable of nourishing the spirit and restore a sense of civic obligation, and where there is an economic accounting system capable of taking in count both system use values and exchange values. In spatial terms, finally, Soja, proposes also to work on new urban models (community-based regionalism) and multi-scalar coalitions that shall take more seriously into account new emerging urban issues, responding to a renewed request of "right to the city".

The case of Detroit, presents traces of these challenges and provides materials to be studied in order to reflect upon them. The changing size and form of the city is in fact deeply affecting on the one side the city-ness of this city; at the same time it is challenging the role that planning can play in similar conditions, showing its limits, but also the symbolic power it is still asked to play.

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A CONTINGENT AND FLEXIBLE APPROACH FOR URBAN PLANS

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Keywords: Planning process; Uncertainty; Contingency; Programming; Management

Abstract

When the whole world is facing a global crisis, the efficiency and efficacy of urban planning process must increase in order to achieve more "value for money", especially when we are dealing with diminishing public resources. This crisis, due to the increased uncertainty, affects significantly all kinds of projection exercises and, consequently, the planning process that requires a prediction of context evolution in order to adequately schedule the actions proposed.

Usually the urban planning process, even in the operational level, has its action in medium/long term (10 to 12 years), which requires the adoption of new, more flexible approaches, allowing for a continuous adaptation to an ever-evolving context.
Once the urban plan is approved, the implementation process starts. It is in this phase that the programming and management are fundamental.

We propose a new approach to the programming, and implementation management of urban plans that aims at improving its chances of success and make the most of good opportunities. The basis for this new approach derives from the methodologies used in project management, so it becomes useful to understand it through the discussion of the differences and the parallels between a project and a plan. An urban plan process can be seen as a very complex project, with a large expected time of duration, a lot of relationships with other different projects, strong dependence from external environment, stakeholders from distinctive areas, and no strict time and budget limits.

The Portuguese law imposes that all urban plans have an execution program and a financial plan to support their implementation, but the vague and insufficient requirements and guidelines lead to incomplete and lacking roadmaps for an effective implementation. Given this situation, there is a need to (re)think how to program and manage the urban plans, namely through the introduction of new themes (the phenomenon of uncertainty and contingency).

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According to all aspects referred above the main objective of this work is the development of a programming and management model for urban plans which is able to incorporate different kind of contingent factors and has the ability to adapt easily to an evolving reality – a model that will face the uncertainty without stresses, while providing a flexible and adaptive way to adequately implement the strategy drawn on paper in the real world.

1 – Urban planning theory

Urban planning has, for a long time, been seen implicitly as a process of professional activity though, until the mid-1960s, it was practiced principally as an art form within a traditional design context (Bracken, 1981).

In general, definitions of planning from the 60's and 70's, emphasized its proactive and rational nature, characterized as: a mental process and a method to achieve decisions regardless of the planned phenomenon (Weber, 1965); an activity centered between knowledge and organized action (Friedmann, 1974); and a mental process of influencing the future (Faludi, 1976).

(Faludi, 1973) distinguishes different dimensions of planning, or concepts related to the way of planning, which are expressed as opposites and that are related to the different attitudes of the planning stakeholders and the socioeconomic and political context in which it develops.

The 1st dimension opposes the *plan-document* to the *plan-process*. On the *document* are defined not only the objectives but also the precise manner of achieving them, while according to the *process* view the established plan is adapted during the implementation whenever new information requires changes.

The 2nd dimension analyzes the rational/integrated planning against the unbundled/developmentalist planning. The first type of planning believes that all possible actions should be identified and evaluated according to all purposes, while the second considers that it would be impossible and undesirable to evaluate all actions that will be undertaken for all purposes.

(Kaiser, 1995) introduces the adaptive rational planning model as a logical and systematic path, from the definition of the objectives through to implementation. This model considers feedback cycles which may produce revisions to the process all the way back to its starting point, unlike the rational planning model, which doesn't consider the necessary changes over the time in order to, namely, gain acceptance by the community and to respond better to the transformation processes.

Based on the presented framework the authors identify themselves with the *planning as a process* concept in which the plans shouldn't be seen as *plan-product*, an expression of passive planning that starts with a commission and ends with a delivery, but rather as a structure and framework to support the decision making.

2 – Planning process

The act of appropriating the territory requires a conscientious judgment and achieves its most proactive dimensions through the changes made to the land use (Costa Lobo et al, 2000). These changes in the territory can be made through a spontaneous mode or based on a planning process.

Nevertheless, the concept of *planning process*, through which these changes are introduced to the territory, can have diverse definitions:

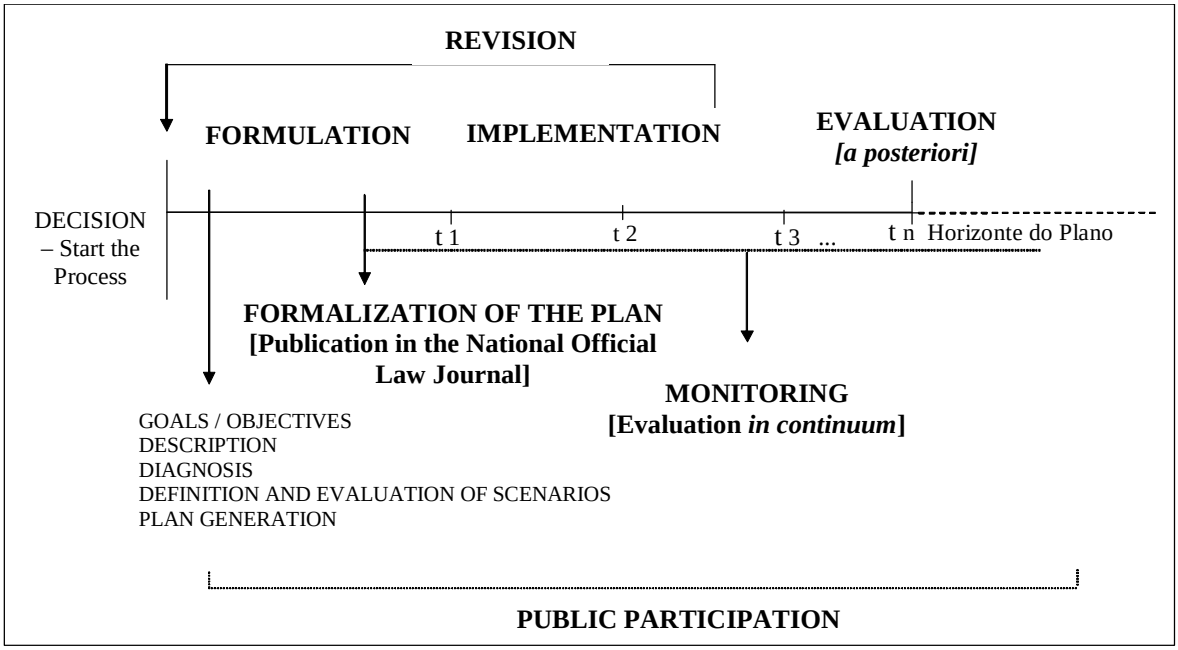
"(...)Planning is the deliberate social or organizational activity of developing an optimal strategy of future action to achieve a desire set of goals, for solving novel problems in complex contexts, and attended by the power and intention to commit resources and to act as necessary to implement the chosen strategy." (Alexander, 1992)

"Planning is an ongoing process that supports the practice of management which suppose a framework of responsibilities, skills and tools (…) Planning is therefore an optimization and urban management process which should be interactive in transversal subjects and in time line" (Costa Lobo et al, 1995)

For us the planning process needs to be continuous on the time and all its phases must be a sequence of cycles and not only one linear path. The figure of the *Plan* is very important throughout the process because it's assumed as the main tool for decision support in the implementation of objectives and actions.

The existence of the plan is important but not synonymous to the process' success because the reality isn't static, as such, the plan can't be limited to the status of administrative regulation without the management component. For this component to be effective, it is critical to conduct the monitoring and evaluation activities which allow the creation of alternative options and adapt the plan in face of new realities (not predictable at the first formulation).

Figure 1 – Urban Planning Process Model



3 – Portuguese planning system

The Constitution of Portugal is the highest regulatory instrument of the law at the national level. It intended to be a political project of desirable society. In it are laid down unequivocally the basis of a virtual model of territorial organization (…) with general objectives, based on principles of equality, economic and social justice in order to improving the quality of life, increasing social justice and defense the collective public interest (Alves, 2001).

During the 90's more attention was given to the organization and management of urban systems and to the deepening of the environmental component, in the context of territorial planning and the operationalization of the arrangements for safeguarding and protecting natural resources (Alves, 2001).

In 1998 was published the Law of Bases for Territorial Planning and Urbanism (Law n.º 48/98, 6th August) which sets the policy framework for planning and urbanism such as the territorial management tools that materialize it. This law also regulates the relationship among the various levels of public administration, between this one and population and with the different social and economic interests' representatives.

This law states the purposes, principles and objectives for land use planning and urbanism which should be pursued in the country, creates a territorial management system that is organized in 3 different scales (national, regional, municipal) and developed through a set of planning and land use management instruments. (Alves, 2001)

The regulation of the Law n. º 48/98 was made in the following year, with the Decree-Law n. º 380/99, 22th September. It defines the coordination between the different scales of the territorial management system, the general system of land use and the system for preparation, approval, implementation and evaluation of the territorial management instruments.

Table 1 - Type and scale of the Territorial Management Instruments: Portuguese context

TYPE		SCALE
PNPOT (National Program of the Planning Policy)		National
PS (Sectoral Plans)		National / Regional
PEOT (Special Plans)		National / Regional
PROT (Regional Plans)		Regional
PIOT (Inter-municipal Plans)		Regional / Municipal
PMOT (Municipal Plans)	**PDM** (Municipal Master Plan)	Municipal
	PU (Urbanization Plan)	Municipal
	PP (Urban Detail Plan)	Municipal

The issue of territorial scope (scale) plays a relevant role in the territorial management system embodied in the fact that the national, regional and municipal can't be understood singly. The main planning options and guidelines defined by the plans with a wider territorial scope and represented in small scales (eg. PNPOT-1.1000000; PROT-1.100000) need to be more detailed in the municipal level with the PDM (1.25000), PU (1.10000) and PP (1.2000) where the programming component is more tangible. In face of this reality, we think the most appropriate scale to address in this communication is the municipal (PMOT), whether by the proposed actions / interventions are more effective over the territory but also because in these plans there is a directly binding of the private landowners through spatial planning.

4 – Programming

4.1 What is it?

From the operational point of view a plan can be seen as a set of listed actions to respond to the defined objectives. To transpose the plan's objectives to the reality it's important to have all actions well described, scheduled over the time, with the allocation of available resources and funds and define the priorities depending on the imposed restrictions.

4.2 How to do it?

In the programming of urban plans there are some key procedures which are important to have a good roadmap for the implementation phase.

a) Inventory and description of the actions
A plan as a complex project needs to be structured into a set of actions which must be clearly defined with an individual codification and attributes for each action as well as the description of the tasks that integrate these actions.

b) Budjeting of the actions
In order to implement any action the balance between available financial resources and costs is essential. There needs to be an estimate of the costs through past similar actions or a compounded global cost based on the current unit costs.

c) Scheduling of the actions
On the actions' phasing it is crucial the estimation for durations which are many times associated with uncertainties. The scheduling procedure are influenced by some constrains such as sequential relationships, financial capacity and resources, and the political options. There are methods well known for scheduling that are very used in project management, such as PERT (Program Evaluation and Review Technique) and CPM (Critical Path method).

4.3 What the law requires?

The territorial management instruments that assume, clearly and unequivocally, a dimension of programming, are the PMOT's in the sense they are the only, together with the PEOT's, bind directly and immediately landowners. They are equally those for which the law gives the responsibility to pre-order the implementation and schedule tasks.

In the Decree-Law n. º 380/99 the programming for PMOT's is stipulated by the need to formulate an implementation program in association with a financing plan. To illustrate the law's requirements on this subject we present below the transcription of the articles.

Article 86. º nº2 d)[PDM] –implementation program, including namely indicative provisions about the provided municipal interventions as well as its financing means.
Article 89. º nº2 c) [PU] - implementation program, including namely indicative provisions about the provided municipal interventions as well as its financing means.
Article 92. º nº2 d) [PP]- implementation program for the provided actions and respective financing plan.

Thus we must take into consideration, to characterize this legally mandated programming, the level and type of PMOT that is in concerned.

In the case of a PDM (Municipal Master Plan), given the scale at which it's developed, this programming can not mean a rigorous definition of all steps, procedures and times of completion / achievement for the defined actions. This solution is moreover enhanced by its strategic nature which appeals for a programming type that, although it should maintains some accuracy, should not conform a very inflexible scenario in the implementation phase.

In the case of the PU (Urbanization Plan), being a planning instrument which focuses specifically on the use, occupation and transformation of the soil in urban and urban expansion areas, the programming must ensure that the main components of the urban system remain coherent between each other, and that the execution of needed interventions on it doesn't cause disruption on the urban life operations.

The Portuguese legal framework includes the figure of UOPG, an operational spatial unit for planning and management, which can appear either in PDM or at PU. These units admit a generous flexibility because only point their objectives and reference terms for future interventions or more detailed plans. Thus it's allowed a reasonable portion of modeling at the time of PDM's and PU's implementation, either by the possibility of actions re-priorization or still by identifying the concrete execution procedures.

The PP (Urban Detail Plan) establishes the distribution of functions, define the urban parameters, urban design, circulation and parking places, alignments, volumetric distribution, location facilities and green areas; it is the most detailed PMOT and very close to the architectural project concept. In this PMOT type the private biding has a high and strict level which, combined with its technical features, requires a programming much more detailed than in a PDM or in a PU. It is desirable that the land owners be involved in the plan since the beginning of the process.

4.4 Is the reality deterministic?

The concept of programming is appealing in pursuing the need for the plan to become more accurate, in terms of implementation; one must not forget, nevertheless, that the precise procedures / methodologies should be used only when

there is certainty in the possibility of effectively implementing the original plan, without further adaptation.

Planning is about changing the future, or at least the expected future. Therefore, understanding what is known and unknown about the future, the links between the past, the present, and the future, and how we act based on this understanding, are critical issues and challenges (Abbott, 2005). That is why planning means, essentially, controlling uncertainty – either by taking action now to secure the future, or by preparing actions to be taken in case an event occurs (Marris, 1987).

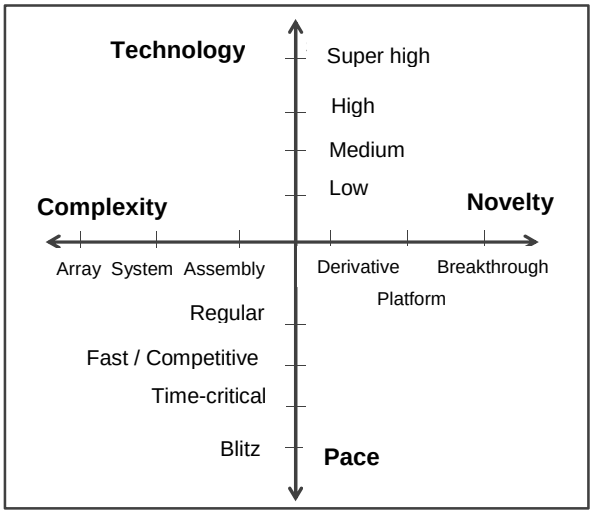
The definition of uncertainty isn't easy and clear but it is known that it is created either by the planning process itself, or through changes in the environment or planning context. A concept related with the uncertainty is the risk, which is more noticeable and well defined.

The PMBOK (Project Management Body of Knowledge), a reference in project management, defines risk as an uncertain event or condition that, if occurs, has a positive or a negative effect on at least one project objective, such as time, cost, scope or quality. For the authors, in the context of urban planning, a risk is an event that compromises the achievement of plan's fundamental objectives, which can be measured by quantitative (probability; intensity) or qualitative methods and be affected by internal or external factors.

A contingency approach, both at the programming and managing stage, can be a way to deal with the uncertainty and risk as well as their effects. The PCT (Project Contingency Theory) argues that the best approach to managing a project depends on context: different conditions require different project organizational characteristics, and the effectiveness of the project is related to how well organization and conditions fit each other.

According to Shenhar et al. (2005), the "myth" that a single method can fit all types of projects (one size fits all) has led to dissatisfaction with the field of project management. As a result of this, they argue in their research, that the ''one size fits all" approach is suboptimal, and that a project's structure and management practices should be tailored to suit its context. They proposed a model which is composed by 4 contingency factors (novelty-V; complexity-C; technology-T; pace-P), very focused in engineering-based projects, but which may equally have application in the programming and managing of urban plans.

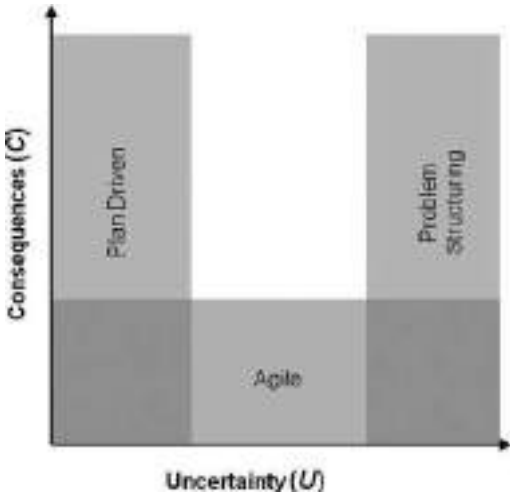
Figure 2 – NCTR Diamond Model



Source: *Adapted* Shenhar et al., 2007

A project contingency framework, proposed by Howell et al. (2009), UC Framework, can be used to identify which process models are appropriate for programming and managing a particular project, or stage of a project. It identifies three different examples of project management process models: ‘‘plan-driven”, ‘‘problem structuring”, and ‘‘emergent”.

Figure 3 – UC Framework



Source: Howell et al., 2009

The first process model considered is the “plan-driven”. This model can be defined as the group of methodologies which broadly consists of:

- Identifying project goals and the necessary steps to achieve them;
- Organizing the steps into an optimal sequence given resource and other constraints to form a project plan;

- Following the plan, with the objective of management being to administer the activities, to deal with deviations from the plan, and where deviations cannot be dealt with, to manage revision of the plan.

This process model includes methodologies such as PERT and CPM. For this model, the objective of planning is to anticipate and avoid surprises, their consequences are irrelevant and so the plan is inevitably based upon assumptions about the goal, methods, required effort and resource constraints among other things. As uncertainty increases, these assumptions will be less valid, but can be partially compensated for by increased planning effort; however, there are cost and practicality limitations to this, and in any case not all events can be anticipated – eventually the ‘‘unknown unknowns” (Pich et al., 2002) become significant factors.

The second model considered is the “problem structuring” model. This is defined as a group of methodologies which:

- Presume that the dominant issue to be dealt with in the project is the understanding of its objectives and environment;
- Attempt to elicit this information by modeling of cause/effect relationships.

The effectiveness of this process model is again independent of the C axis but varies again along the U axis. At low uncertainty levels, where the situation is relatively clear, the process of understanding the problematic situation becomes a trivial one. In this situation, problem structuring methods become irrelevant. The problem structuring process model is thus also limited by uncertainty, but the limit is at the lower bound, as shown in Figure 3.

The third model, the “emergent” model, is defined as the group of methodologies which involve:

- A presumption that the project goals will be ill-defined at the initial stages;
- A highly iterative process involving partial implementation of the goals, followed by redefinition of those goals based on feedback from this implementation.

In the ideal case, the emergent model’s effectiveness is independent of U (uncertainty). The approach assumes high uncertainty level so if in practice it is low, this has no effect on effectiveness. However the model’s effectiveness is limited in the C (consequences) dimension which means a lack of a robust overall project plan may run away to disaster if any event which the team is unable to handle occurs.

Finally, as the model relies on the team’s ability to react to events, it is less effective where the team is less empowered to do so. These factors mean that the process model is restricted to situations where the team’s ability to handle unexpected events is high (meaning small and expert teams), and ‘‘failures” cannot be overly serious: the model is “consequence limited”.

After this exposition, the main idea to retain is that the planning process needs to deal effectively with the uncertainty and risk and must have the capacity to adapt to all future events.

5 – Management

5.1 Implementation

Is in this phase that takes place the implementation of the objectives, goals and actions, which were just written words or intentions in the plan-document, therefore finally having to deal with bureaucratic delays and legal difficulties by adjusting the appropriate schedules and deadlines, as well anticipate alternative actions.

Planning and its implementation are often regarded as separate processes with their own actor networks and their interests and, as such, even considered as being rather opposed. We could say there is an "implementation gap" linked to the knowledge disconnection between plan formulation and implementation.
The modelling of a conventional urban planning and implementation process indicates that the end of a plan's formulation, the moment when it is "finished", is also a point where, usually, discontinuity occurs in the process. For this gap contribute some factors such as:

Time

The time periods between the 2 processes may be exceptionally long and so have the consequences of the actors in the network change over time, socioeconomic trends may shift their direction totally, and the preferences and tendencies may transform dramatically.

Political-institutional context

The political-institutional structure for the implementation process (eg. coordination mechanism for effective working and relations between the different entities/departments with responsibilities), the influence exerted by persons with political or economic interests during the implementation, and the role of the planning team in the implementation process have a large importance in the effectiveness of the plan's implementation.

Attributes of the plan

The planning techniques used, the goals articulated, and any other attributes associated with the quality of the plan have also importance. Here it's relevant to highlight that over half of the plans' report typically discusses existing data and proposals about different territory sectors such as facilities, environment, transport and infrastructure but have few information about the implementation mechanism for

those sectoral policies. So it seems to perpetuate an attitude "more interested in formulation plans than implementing them".

Due to the gap between these two processes there is the need to better articulate the programming and the implementation of the plan. For this articulation the monitoring and the evaluation procedures will have a relevant role.

5.2 Evaluation

Accompanying the era of the modernist planning approach, the focus of the plan evaluation (also known as plan assessment or plan appraisal) was on developing criteria for determining "good plans". As (Alexander, 1989; Faludi, 1989) noted "If planning is to have any credibility as a discipline or a profession, evaluation criteria must enable a real judgment of planning effectiveness: good planning must be distinguishable from bad."

Evaluation may be designated as an analysis process of outputs, outcomes, impacts, and also implementation mechanisms, aimed at setting how the objectives and results are to be achieved. In this process there are some strategic issues which should be listed such as:

a) Relevance – Are the proposed actions a good idea in terms of improving the current state?
b) Impact – What are the positive and negative outcomes of the plan?
c) Effectiveness – Were the objectives, activities and outcomes achieved? What is being done is the best way to maximize impact?
d) Efficiency – Are the resources being used optimally? What could we do to maximize the (positive) impact at an acceptable cost?

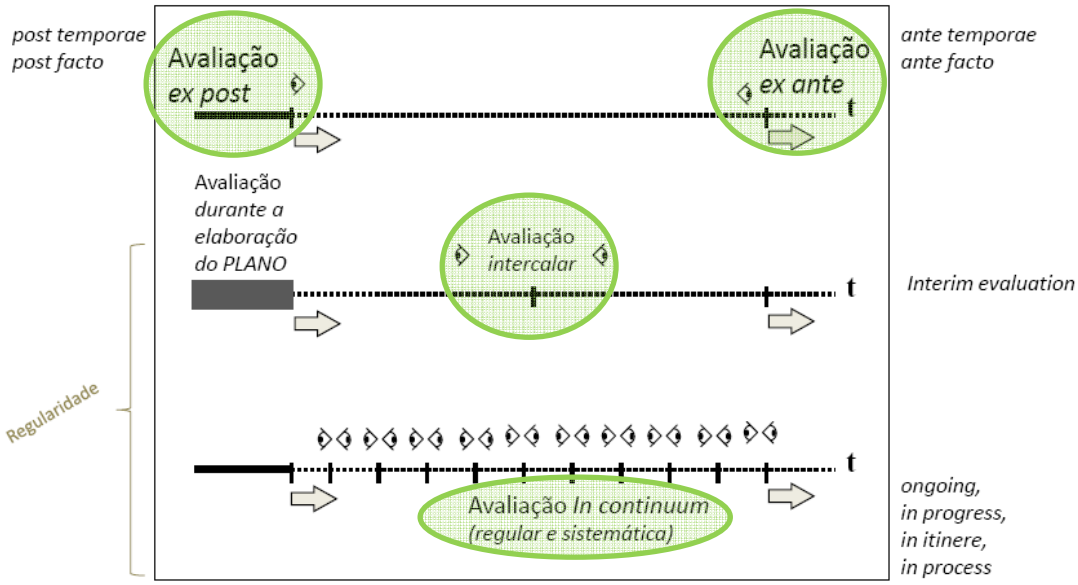
The evaluation process which occurs at different periods of the project or plan's lifecycle can be classified, according to (Voogd, 1983) and (Baptista e Silva et al., 1999), as evaluation *ex ante*, evaluation *in continuum*, and evaluation *ex post*. Recently, Baptista e Silva et al. (2009) introduced a new typology called intercalary evaluation.

In the evaluation *ex post* prevails the view about the past, focusing on what happened with the plan. It is primarily a retrospective assessment that checks whether the objectives and the actions programmed in the plan continue to make sense.

The evaluation *ex ante* has an anticipatory character related to a rational paradigm where the vision of future is dominant and the focus is on what will happen. Among the possible alternatives, the choice will go for the ones which are considered best to achieve better results and mitigate possible future shifts on the plan's implementation.

The evaluation *in continuum* is understood as an ongoing systematic process with a pre-determined frequency and which follow the entire duration of the plan. It is in fact a type of evaluation that intends to give meaning to the idea of plan-process, in view of the plan's ongoing appreciation. It equally aims to be a support for future decisions about the plan's revisions or changes.

Figure 4 – Types of evaluation: time perspective



Source: Baptista e Silva et al.

There is a set of tools that can be used for the evaluation process and much of them come from the management science. Our proposal will focus on some of these tools which we believe are applicable to the context of urban planning.

5.3 Monitoring

The notion of monitoring is not univocal: while some authors define it as a complementary method to the evaluation, others believe that it is only one type of evaluation.

For the authors, monitoring is related to the review, on an ongoing basis, of the degree to which the activities are completed and the goals achieved. This is an important tool for the planning process because it gives flexibility in face of uncertainty / risk and allows for taking corrective actions during the implementation phase.

(Baptista e Silva, 1999) indicates two basic concepts of monitoring: the perspective of compliance and performance. He argues that the first perspective corresponds to the classic monitoring vision, focusing on ex-post evaluation, means-aims reasoning,

correspondence between intentions and outcomes of planned activities, and can be subdivided into four sub-types:

a) Evaluation of the level of objectives' fulfillment: deals with the analysis of agreement between results and initial intentions;
b) Assessment of impacts: is concerned with all the results of the plan and not just those arising from the defined objectives;
c) Effectiveness evaluation: focuses on cause-effect relationship between the obtained results and the measures and actions implemented.
d) Performance evaluation: focuses only on the plan, trying to determine whether or not it is to be implemented.

Through the second perspective, the performance evaluation, results the idea that the mere compliance is not the only measure of a plan's success. In fact it is ever-more-clear that results less compliant to an original design or expectation don't necessarily entail a lower effectiveness in the achievement of the objectives and actions, and therefore a negative evaluation of the planning process.

One of the most important principles of monitoring is that by providing information for management it ensures a future benefit that will come from the changes to the process introduced based on that information.

So to collect the information referred to above it is imperative to define good indicators. The indicators must be simple, measurable, intelligible (easily understood even by those who aren't experts) and reliable. In the context of urban planning the indicators focused in the political choices must be concerted with the ones which refer to the planning solutions.

For the development of a monitoring system it is relevant that we are able to build a specific plan in which is determined: Who does what? How? What schedule is applied? What are the indicators to measure the effectiveness and the efficiency of the activities? and other elements that return important results for the planning process.

6 - Programming and management model for urban plans

After highlighting the relevant issues about programming and management of the plans, it is now time to present our proposal for a model that may contribute for a greater success of these.

This proposal intends to be applied to different PMOT (PDM; PU; PP) even though it may require some adjustments depending of the plan's scale.

The main objectives of this model's conception are to:

a) Generate a system which allows to compile, process and analyze the information regarding the progress made by the plan;
b) Provide information to the decision-makers on the compliance of the programmed activities;
c) Establish mechanisms for regular changes and reviews;
d) Create channels that allow the different actors in the implementation process to participate in the systematic process of reformulation and review.

Ahead we propose a few ideas for the programming and management phases, which represent the structure of the model.

WBS of the Plan

A work breakdown structure (WBS) is an usual project management tool which defines and groups a project's discrete work elements in a way that helps organize and define the total work scope of the project. This also provides the necessary framework for detailed cost estimating and control, along with providing guidance for schedule development and control. So from our point of view this tool can be applied and adapted to the context of urban plans.

To create a WBS for an urban plan, we identified the following fields, which are important to structure all information about the process in the beginning, and subsequently assist in the monitoring/evaluation procedure.

a) **ID** – In this field, apart from the chosen codification type, it is important to reveal clearly the hierarchical structure adopted;
b) **Name** – Must be concise and self-explanatory;
c) **Description** – Has more relevance in the levels of the WBS which have more detail (eg. tasks);
d) **Estimated duration** – Important for the scheduling all activities and its tasks;
e) **Priority** – It is relevant to allocate the available resources and means, especially the financial;
f) **Start and finish date**
g) **Status** – To understand at which stage we are and what is the volume of effort needed to implement the activity or task;
h) **% completed** – To see if the progress is on the right track and according to the programmed schedule;
i) **Monitoring dates** – Even if the monitoring is a ongoing process, a plan is much more complex than a project, and so there is the need to choose with which frequency the evaluation procedure is to be executed;
j) **Performance indicators** – They are the basis for the monitoring and evaluation procedure and for that it is relevant to collect all information about them;

k) **Risk level** – In the programming phase it is important to have an idea about the risk level of each activity or task in order to devote special attention to the higher risk level activities;
l) **Responsibility** – In any implementation process the responsibility is a key-issue because it allows to always knowing who to ask about something related to a specific activity or task.

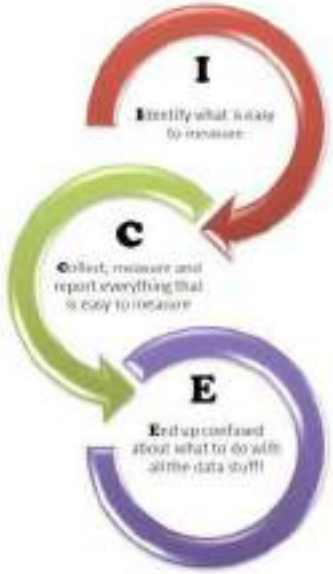
Concerning the risk level, we believe it is an added value to use a qualitative approach as NCTR Diamond Model, already exposed above, because it consists of a smart method and easy understandable for all people.

MES of the Plan

The monitoring and evaluation system (MES) of the Plan needs information and this is collect through indicators. The selection of indicators should be done responsibly and with caution, since its careless use can lead to loss of information, or on the other hand, create some "noise" and entropy in decision-making process.

In the management science there is the concept of Key Performance indicators (KPIs) which are commonly used to evaluate the organization's success or the success of some specific activity within the organization. For the specific context of the urban plans what we intend is to achieve specific indicators for each activity/task but also global indicators for the plan as a whole, characterizing the performance during its completion, and so as to allow comparisons between alternative implementation strategies.

Figure 5 – Identifying process of KPIs: ICE approach



Source: Advanced Performance Institute

Performance indicators' selection is often associated with the use of various techniques. One of these is the ICE approach presented at the Figure 5 which gives a simplified itinerary to define the best performance indicators for each case.

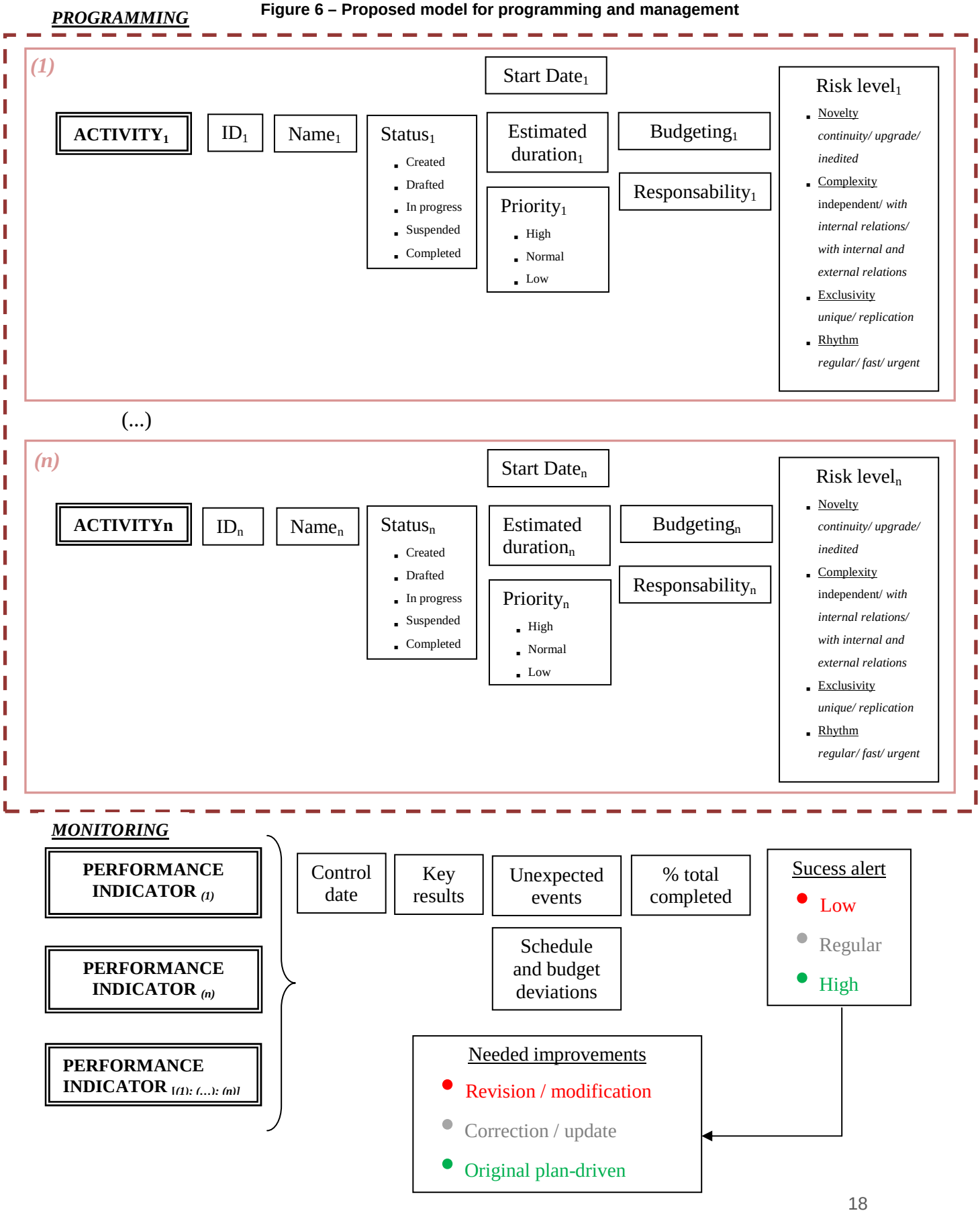
In our vision for the proposed model, after the definition of the performance indicators, an alert mechanism must be created that will allow the measuring and success rate of the initially programmed activities and tasks. This mechanism is relevant for its interpretative dimension and helps the decision-makers have an easier visual thinking capacity in the decision-making moments.

The monitoring process is many times associated to the identification of potential improvements, and as a consequence, performance indicators are routinely associated with performance improvement initiatives. So the proposed alerts mechanism intends to address the deviations from the future scenario that was built at the beginning of the plan formulation, and permit the adoption of improvement initiatives in a timely fashion. Finally it is noted that when almost all performance indicators are in red the decision-makers need to be careful about its analysis because it might mean that the scenario chosen at the beginning is no longer adjusted to the present reality and there is the need for a deep revision of the plan or even a new plan.

In our point of view, for managing the plan we can adopt the "emergent" model referred in a previous section. This takes full advantage of the monitoring and evaluation results and it remains a highly iterative process with the implementation of the activities / tasks being followed by the possible redefinition of those activities / tasks based on feedback from their implementation.

In the Figure 6 we present our global concept for the proposed model.

Figure 6 – Proposed model for programming and management



7 – Conclusions / Steps forward

To conclude the communication, we have more elements that can contribute to solve the problem of uncertainty and risk at the urban plan's implementation. In the complex context of urban planning it is impossible to generate a plan which covers all possible contingent factors; as such, the sole way to surpass this barrier is to have a flexible programming model associated to an ongoing evaluation system. Together, these will allow the adjusting of the plan to a permanently changing reality.

Our proposal intends to meet this challenge through a proactive model which does not only want to track the changes in reality but that provides an effective proactive stance for when these changes take place.

For the future, we aim to:

- Test adjustments of the model for the different type of PMOT (PDM, PU; PP);
- Develop performance indicators adapted to the urban plans;
- Study and propose the action mechanisms for needed improvements

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LAND READJUSTMENT PITFALLS IN PORTUGAL AND THE ROLE OF EQUITY

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Abstract

Planning has not always preceded the development of urban land. The rapidly increasing growth rate of urban territories can easily lead to the emergence of pieces of fragmented, unqualified and unconnected urban fabric. Land readjustment is a century old technique that is attracting growing interest worldwide as a means of achieving planned, equitable and efficient urban development. This practice has been adopted and adapted by various countries in order to accommodate differences in both legal frameworks and public-private relationships. Various levels of success and degrees of implementation have been reported as well as pitfalls and obstacles, some of the latter being common in and/or experienced by more than one country alone.

In the case of Portugal, land is predominantly privately owned and the public administration has played a passive role in the urban planning process, limiting itself to the issue of permits for isolated private operations. In the light of the principle of equity, Portuguese law establishes that urban development plans are obliged to provide land readjustment mechanisms to eliminate, or at least mitigate, the inequalities they themselves bring about.

After more than a decade of existence/practice, however, the application of these mechanisms still has not achieved a satisfactory output, and has come up against a number of obstacles and problems. These, in short, are related to property structure and records; land owners' engagement; technical expertise; availability of public funds; time consuming processes; ineffective dispute resolution instruments; and lack of reliable land evaluation mechanisms, truly embedded in the planning process, for calculation of reference values for both property and building rights in the context of the distribution of benefits and charges.

To address the latter aspect in particular, a methodology for the fair distribution of benefits and charges was developed and applied to the urban expansion of the Portuguese city of Sines. This paper will share how land value appraisal combined with property size was used as a distribution driver, together with a universal and

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free property valuation tool – the national online property tax calculator. The global market value of the proposed urban plan was estimated and to each landowner was assigned a share of this value according to the surface area of each one's property. Also, the market value was estimated for the units one had the right to build. The distribution of development costs (infrastructure, public space) was made in proportion to the latter, that is to say, the higher the value of one's building, the higher the charges to be paid. For each proprietor a balance was made between the assigned plan value, the actual value of their building units and the development fee, resulting in a lump sum payable or receivable.

This approach made it possible to achieve better communication with and understanding of landowners, bringing transparency and equity to a process locally perceived as somewhat blurry. Better understanding and grasp of the land readjustment model by private and public stakeholders can be a step forward in achieving cooperation and plan implementation.

Keywords: planning practice, land readjustment, equity, land appraisal, land evaluation

1. Introduction

Statutory planning process itself is inherently discriminatory. Land use plans contain specific proposals for development that often represent considerable restrictions to urban development and strongly affect land value in the market.

Despite the fact that most western countries in Europe have adopted the principle that constraints on urban development are not subject to public compensation (Renard, 2007), the problem of inequitable treatment between property owners still persists. As several authors argue, the diverse approaches to this problem are deeply related with different ideologies about property rights and land ownership and rooted in different planning doctrines (Linchfield, 1980; Adams et al., 2001; Louw, 2008).

Concerning planning efficiency, social equity and the guarantee of public facilities provision, two major approaches can be identified that represent opposite ideological sides: that which advocates public ownership of land for broad political and social reasons; and that which defends private property, individual rights and the operation of a free market (Kivell and McKay, 1988; Louw, 2008).

Strong arguments on both sides are discussed by several authors. Nevertheless, public and private developers commonly recognise fragmented ownership and the difficulty of assembling land as major constraints to urban development (Adams et al., 2001; Connellan, 2002; Hong, 2007, Louw, 2008).

Planning literature and practice all over the world have already demonstrated that conventional land assembly methods (voluntary exchange or public intervention in the form of expropriation) commonly produce weak outcomes in terms of efficiency

and equity, whereby this is particularly true where public funds for any form of compulsory purchase and infrastructure provision are limited. In this context, land readjustment (LR), also referred to in literature as land pooling or land consolidation, is generally regarded as an attractive alternative to the methods mentioned above.

The precise scope of LR differs from country to country and author to author and it seems to be strongly related with specific institutional, legal, social and economical contexts. There are several models, each particular to its own country, as has been shown in the literature on LR experiences in countries such as Japan; in Europe: Germany, Sweden, France, Netherlands, Turkey; and other overseas countries: India, Australia, Taiwan, amongst others (see for instance: Doebele, 1982; Larsson, 1997; Sorensen, 2000; Müller-Jökel, 2004; Lin, 2005; Davy, 2007; Hong and Needham, 2007; Souza, 2009).

Although LR is a broad term without a precise definition there is a relatively high consensus about its relevance as a technique used for both the development of new areas and the reorganisation of the structured areas in urban regions (Larsson, 1997; Sorensen, 2000; Krabben and Needham, 2008; Turk and Altes, 2010); as an efficient tool to equalise the advantages and disadvantages between landowners resulting from urban planning; and as a means of financing the development process, allowing the public sector to capture part of the land value increment created by land use plans (Connellan, 2002; Müller-Jökel, 2004; Lin, 2005; Needham, 2007; Souza, 2009).

In other words, LR is potentially an effective tool for: assembling land parcels and therefore to improve the economic use of land (in long-term land assembly processes, landowners are tempted to keep their land out of the market in order to get higher market prices); facilitating the equal sharing of the benefits and costs of the project; and relieving the financial pressure on public authorities in providing the needed infrastructure and public facilities.

Despite the specificities of each country, in most LR processes, landownership and its physical structure is transformed and the land redistributed amongst landowners in the form of serviced plots or other economic compensation (established in proportion to either the surface area or the value of land inputs), whereas land for public usage comes to public ownership. Implementation is based on private agreements and exchanges of land, formalised in legal processes. However, very often, cooperation has to be facilitated or even instigated by public authorities, public enterprises or large private entrepreneurs (Larsson, 1997; Louw, 2008; Turk, 2007).

Pursuing planning efficiency, social equity and the guarantee of the provision of public facilities, and reducing financial pressure on public governments are, therefore, the main objectives LR processes aim to achieve.

Although the planning literature acknowledges the virtues of this method of land assembly (several case studies in developed countries such as Japan, Germany and France, as well as in developing countries in Asia and Australia, have revealed how

the LR method is applied efficiently and successfully in urban development), major constraints on its application have been experienced and outlined.

Some critical success factors are identified by different authors: the presence of a robust and rising land market; a strong and sustained atmosphere of trust amongst all the parts involved; a culture of collaborative and consensual decision making; and finally, a significant proportion of public will and finance to facilitate the process (Home, 2007; Needham, 2007, Hong, 2007; Sorensen; 2007; Louw, 2008; Souza 2009).

In Portugal, after more than a decade of legal existence and practice, the achievements with the use of LR mechanisms fall well short of expectations. A weak performance in terms of the critical success factors listed above could be, in itself, a reasonable explanation. However, other causes must also be highlighted.

In the first section of this paper, we will briefly examine the present legal framework of LR in Portugal. In the light of the international literature and of the Portuguese urban planning experience in the last decade, the main drawbacks, within the institutional framework for LR, will be outlined.

In the following section we will present a LR methodology developed for a detailed plan in the Portuguese city of Sines in order to cope with some of the major constraints identified. Particular emphasis will be given to the so-called distribution stage of LR processes, considered to be fundamental, as the principles of equity, transparency and fairness take form in this stage (Turk, 2007).

In the final section, discussion of results and final conclusions will be presented. We will start by arguing that the approach followed made it possible to achieve better communication with landowners, bringing transparency, equity and efficiency to the process. Improving the understanding and grasp of the LR model by private and public stakeholders proved to be a step forward in achieving cooperation and plan implementation and emphasises the idea that the core principle of LR is to build consensus and cooperation among the parties involved in land development (Hong and Brain, 2012).

2. Equity in Portugal and *Perequação*

2.1 Legal framework

The principle of equity was only legally formalised in Portugal in late 1990s. According to the law, *perequação* was designed in order to guarantee an equitable redistribution of the costs and benefits resulting from urban planning amongst landowners. Particular emphasis was also given to its potential as a way to promote efficiency and sustainability in financing the costs of urban development, traditionally mainly assumed by the public sector. As a consequence of these first two characteristics, a third category of objectives was expected to be accomplished:

improving the low levels of execution of urban plans, which has been referred to by different authors as a major problem in Portugal. In this sense, it seems fair to classify *perequação,* a term that comes from the Latin expression *per aequere* (meaning to make an equal distribution between different parts or to deal fairly and equally with all concerned) as an LR mechanism.

Prior to this, Portugal was indeed "ill equipped to deal with the urban development processes, which accompanied the significant migration flows of the 1960s and 1970s and the economic and spatial changes in the 1980s and 1990s" (Carter and Silva, 2001). Aiming to bring new drive to the role of urban planning against an out-dated and persistent practice dominated by *ad hoc* urban development schemes led by the private sector, for the first time the principle of equity was introduced and the planning system was strengthened with a set of execution instruments that were regulated by Decree-Law no. 380/99 of 1999 (the Legal Framework for Town and Country Planning Instruments – RJIGT).

Moreover, it was established that municipal plans, because they are binding for both public administration and private property owners, have to include compensation procedures to guarantee a fair redistribution of the resulting benefits and costs amongst the property owners involved and between them and the public administration.

The development of a *perequação* model requires that some questions have to be answered during the planning process and before the legal approval of municipal plans: what are the physical boundaries where *perequação* is going to take place? To what extent will local authorities be involved directly in urban development promotion or will they act mainly as facilitators between the different parts concerned? What are the equity mechanisms or the compensation rules that will be adopted? Which execution instruments will be required? Because of their specific nature, contents and scale, it is in detailed plans that these answers can be provided.

According to the RJIGT, plan implementation should take place in specific territorial units, designated as execution units, which are defined by local authorities at their initiative or, whenever required, by private landowners. This process implies the identification on a cadastral map of the physical boundaries of the area subject to urban development and the identification of all property owners.

For each execution unit the plan should define to what extent the municipal administration will be directly involved in urban development as "regulator", "enabler" or "provider". Three different types of execution systems are defined (Table 1):

Table 1. Execution systems

Execution system	Who takes the initiative?	Who defines the execution programme?	Who executes public infrastructures and public facilities?
Compensation	Private stakeholders	Private stakeholders	Private stakeholders
Cooperation	Public administration	Public administration	Public administration and/ or Private stakeholders
Imposition	Public administration	Public administration	Public administration directly or through a concession agreement

The approaches suggested by the compensation and the cooperation systems fit very well with the concept of LR, as it is presented in this paper through the literature revision. In both cases, replotting is an efficient instrument for formalising the required transfer of ownership and property rights.

Under the imposition system, local administration undertakes urban execution directly or through a concession agreement with a private developer. As the land developer, the municipality has to assemble all the land, ensure the costs of land acquisition and infrastructure provision, and, at the end of the process, it will benefit from the income derived from selling the serviced plots. In this case, a land baking process, as it described in the international literature of land assembly (see for instance: Louw, 2008), seems to be a better portrayal of the Portuguese imposition system rather than a LR approach.

In the compensation and cooperation system, the definition of the specific mechanisms that will guarantee equity between all parties involved, and support the compensation in the form of serviced land or cash is, indeed, critical, as the principles of equity, transparency and fairness take form in this stage.
According to international practice, RJIGT law suggest some equity mechanisms, namely: Gross Average Floor Area Ratio (FAR)[5] (also includes the surface of land parcels affected to public usage) and the allocation of the urbanization costs (redistributed amongst the property owners in proportion of the correspondent gross floor area). Nevertheless, local authorities have the power to define some others mechanisms, as long as the principle of equity is respected.

Taking the FAR as reference, two different criteria can be used to redistribute the so-called *redistribution mass* amongst original landowners (Müller-Jökel, 2002): the relative size or the relative value of their former plots.

[5] $FAR = \frac{\sum F_n}{S_g}$

where ΣF_n represents the sum of the gross area of each floor of the built area in the execution unit, being F_n the area of the n^{th} floor; S_g represents the gross surface of the execution unit.

Whenever there is a difference between the abstract developments rights (in sq. m. or the correspondent monetary value) and the effective redistributed built rights to each owner, the RJIGT law imposes that compensations have to take place.

In order to make these compensations more agile and flexible, the RJIGT law also considers the option for property owners of selling their *unused* development rights. This possibility sketches the legal framework for the introduction of transferable development rights programmes (TDR) in Portugal.

2.2 Major pitfalls to *Perequação* in Portugal

After more than a decade of legal existence, however, the application of *perequação* in Portugal still has not achieved a satisfactory output. Not only the number of legally approved detail plans with equity mechanisms is scarce (compared to the witnessed urban growth), but also their level of implementation is very low (Cardeiro, 2009; Antunes, 2009).

Taking into to account the background provided by the international LR literature review and the authors' knowledge about the Portuguese urban planning reality in this last decade, major pitfalls to *perequação* concerning the institutional framework, can, therefore, be outlined as follows:

The absence of a win-win negotiation culture between public and private sector;
Since urban development is mostly dominated by private sector, the implementation of *perequação* is highly dependent on the extent to which public planning authorities can successfully encourage landowners, developers, and investors to be committed with the plan. However, lack of appropriate technical expertise in the domains of collaborative and consensual decision-making processes, weakness the potential role of local authorities as the main driving force.

The lack of efficient and effective dispute resolution mechanisms;
Traditional methods of assembly land when voluntary negations are not possible, such as expropriation, often, lead to lengthy timescales processes and to higher costs, that end up to be supported mainly by public authorities, being this particularly critical as local governments' funds in Portugal are scarce.

The lack of efficient and effective mechanisms to induce perequação;
Not only more effective dispute resolution mechanisms are needed, but also, strong incentives to urban development within *perequação* have to be created (e.g. urban, financial, or fiscal incentives). The landowners' economical and financial gains from *perequação* must be larger than if they do not take part in the process.

The inexistence of land value evaluation mechanisms reliable and truly embedded in planning process;
The knowledge of land values and land evaluation processes is critical to create a sustained atmosphere of trust amongst all the parts involved in any kind of LR

project. In Portugal, however, land use plans and, in general, the planning system, do not consider in a comprehensive way the influence that planning rules have in land value. Not only the planning system does not incorporate independent land evaluation boards, as public administration, itself, uses different land evaluation processes for diverse public purposes leading, sometimes, to very different evaluation results (e.g. land and property taxation or the definition of the fair compensation in the context of expropriation processes). This ambiguous environment, combined with ineffective mechanisms for public capture of property value increase resulting from land use plans (and its transfer to the society), very often, contributes to threaten the sense of social justice and equity in urban planning, and creates the opportunity for land speculation.

The obstacles listed above do not pretend to be exhaustive. However, in conclusion, it can be highlighted that urban planning in Portugal seems to fail to understand the critical relationship between planning making and its implementation. In this sense, a more integrated approach to *perequação* within the planning system, urban economy and governance, is considered to be critical to improve the efficiency and success of its application.

In the following section we will present a *perequação* methodology developed for a detail plan in the Portuguese city of Sines in order to cope with some of the problems identified.

3. Study area: the city of Sines and the detail plan for expansion in the north of the city

3.1 Evolution of the city of Sines

The city of Sines is located on the coast of the Portuguese region of Alentejo, roughly 150 km south of Lisbon. Thanks to its deepwater port, it is part of a geo-economic context that is of strategic importance to Portugal. A small fishing town up until the 1960s, the urban development of Sines is closely linked to its development as an industrial hub and port. From the 1970s onwards, the decision to establish in Sines an extensive area for basic/heavy industries gave rise to strong urban growth. Since then, the municipality's urban policies have been dependent above all on decisions taken at the central administration level and on important public and private investments in the port, the industrial and logistics zones and transport infrastructures.

While in 1991 the city had 11,000 inhabitants, by 2001 the number of residents had reached 12,500. At the end of the 1990s major investments were earmarked for the port and logistics platforms, justifying the population evolution scenarios, drawn up in 2003, which indicated that the city's population would almost double by 2011. However, the greater part of the planned investments was not made and the results of the Census of 2011 (14,260 inhabitants) show that, although there was indeed a considerable rise in the population, the growth fell short of what had been expected.

This context of uncertainty as to the economic and social development of Sines requires that the municipal plans have the capacity to monitor and adapt to this development. It is therefore no surprise that the process for the drawing up of the Detail Plan for the Expansion Zone North in Sines (hereinafter the "PP Norte"), in which the methodology described further below was tested, has been a particularly lengthy one.

3.2 The PP Norte elaboration process

The process for drawing up the PP Norte began in 2001 and its first proposed version was finalised in 2003. This version, which was subject to public discussion, manifested the differing expectations of the various types of property owners. The greatest resistance to the proposed design came from those who already lived in the area of intervention, as they opposed to the demolition of their dwellings. Meanwhile, the postponement of some of the main structuring investments at the industrial and logistic levels, added to the delay in the execution of the new road and railway infrastructures and the accompanying slow-down in the population growth rate, led to Sines Council requesting alterations to the proposed design. A new detail plan proposal was presented in 2008.

The alterations are most visible in the eastern part of the PP Norte, where land ownership is divided into smaller fractions, with a view to avoiding that the implementation of the main infrastructures be dependent on the initiative of small property owners or their substitution by the local council. Also, responding to the main questions raised during the public discussion, the built structures that existed in this part of the intervention area that showed good conditions of habitability were retained and the offer of detached and terraced houses was increased.

Furthermore, in the 2008 version, the PP Norte did not present a clear indication of how much the property owners would have to pay or how much they would receive, so that, in the final version approved in 2011, the *perequação* model described in section 4 below was developed.

3.3 The area of intervention

The area of intervention – 36 ha in size – covers 34 property owners, two of which are public. One should point out the exceptional situation in the national context of the public sector owning more than one half of the area of intervention (52%). Of the other landowners, six are commercial companies (holding 37% of the total area), three are small groups of two or three private citizens sharing ownership of the land (only 2% of the total area), and the remaining owners are individual citizens (9% of the total area).

The average size of the land parcels is 5,600 sq. m, but there are large discrepancies in terms of parcel size. Figure 1 shows the distribution of the land parcels by size in the original land register and the types of property owners.

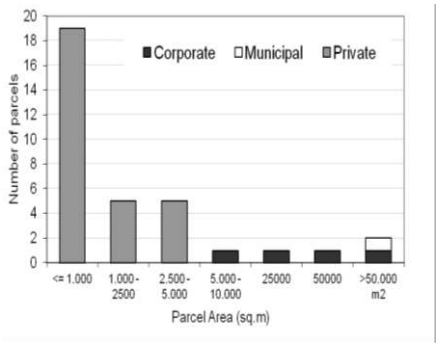


Figure 1. Distribution of the land parcels by size and the types of owners (original land register)

The final version of the plan clearly favours residential use, which takes up some 66% of the gross floor area (only residential) or 95% (including residential and commerce mixed use). The commercial and services areas (approx. 5% of the gross floor area) are located along the two main roads which are the most easily accessible and have an avenue profile. Table 2 shows the building typologies adopted in the plan.

Table 2. Building typologies

Use	Residential				Commerce & Services	Mixed Use (Res. + Com.)	*Total*
Type	Detached Houses	Semi-detached houses	Terraced single-family houses	Appartment Buildings	Buildings	Buildings	
N. of Units	22	30	76	16	3	13	160
Average lot Area [m^2]	478	310	237	1.874	1.348	1.311	---
Average Floor Area [m^2]	240	221	177	4.181	2.076	3.113	---
Total floor area [m^2]	5.272	6.640	13.427	66.898	6.226	40.472	138.935
% of Plan floor area	3,8%	4,8%	9,7%	48,2%	4,5%	29,1%	100%
Average Unit Valuation (by SIGIMI) [€]	194.463	175.381	138.037	2.926.086	1.321.967	2.168.998	---
Total valuation [€]	4.278.180	5.261.420	10.490.800	46.817.370	3.965.900	28.196.970	99.010.640
% of Detail Plan value	4,3%	5,3%	10,6%	47,3%	4,0%	28,5%	100%
Average Floor Area value (by SIGIMI) [€/m^2]	811	792	781	700	637	697	**713**

4. Methodology for distribution of benefits and charges

4.1 Objectives and assumptions

The particular characteristics of the PP Norte, namely in terms of the initial property structure – with the presence of large and small landowners, with some houses to be

demolished and others to be kept, but whose plots have characteristics that are reasonably homogeneous in terms of morphology and urbanistic situation – and in terms of final property structure – with diverse use typologies (commercial and service buildings and detached and terraced housing) with differing market prices per sq. m of floor area – led to a refinement of the most frequently used *perequação* method: the distribution of building rights.

Hence, the *perequação* process would have to incorporate other calculation mechanisms that would need to be simple and clear. The methodology we developed is based on the equitable division of the charges and benefits, based on the average valuation (in euros) introduced by the plan. The compensations to property owners are the equivalent of the difference between the average valuation and the valuation attributed to each owner. In other words, in terms of benefits, there is an equitable distribution not of the floor areas but of the value of the floor areas, given that the different typologies proposed have different market values. The distribution of the charges followed the same philosophy; they were distributed amongst all the owners based on the value of the floor area attributed to each one and not on the basis of the floor area itself.

The greatest challenge to overcome is precisely which valuation method to use to translate the benefits and charges into monetary values. It is essential that the plan's value calculation method is objective, transparent and easily accepted by the property owners.

In operative terms, the equity methodology used in the PP Norte was the result of the combined application of the following concepts: (a) the overall plan value, which is the sum of the values for each land parcel obtained by means of property appraisal; (b) an abstract value that is the equivalent to the fraction of the overall value corresponding to each owner in accordance with the surface area of the plot, given that it is assumed that there are no significant differences in value between those parcels; and (c) the concrete value, which is the equivalent of the value of the new lots attributed to each owner.

The following input data were taken from the initial plan situation (original register) and the proposed solution:

- Property owners, p_j
- Surface area of land held by each owner, s_j
- Built structures belonging to each owner, F_j
- Lots proposed by plan, i
- Building typology proposed for each lot, Tip_i
- For each proposed lot: floor area F_i; dependency surface area AD_i; lot surface area occupied by the principal building $A0_i$; lot surface area Al_i.

4.2 Methodology steps

In accordance with the objectives and assumptions identified in the preceding point, the following steps were defined for application of the methodology:

1) Defining the different types of players and the rules (benefits, charges, compensations) applicable to each player. This is followed by the classification of the owners by player type.

The description of the four player types identified and the distribution of the owners by type is summarised in Figure 2:

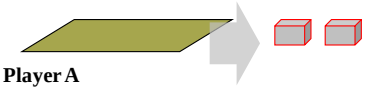
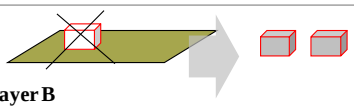
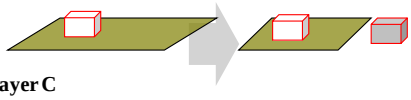
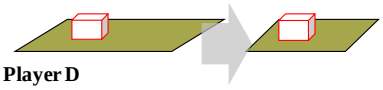
Player Types	No. of owners	% of Plan Area	Type of ownership
 **Player A** Land without construction > Lots assigned for construction (given typology)	9	67 %	Municipal (80%) Corporate (15%) Private citizens (5%)
 **Player B** Land with construction > Construction demolished Lots assigned for construction (given typology)	11	26 %	Corporate (87%) Private citizens (13%)
 **Player C** Land with construction > Construction maintained Lots assigned for construction (given typology)	8	5 %	Private citizens
 **Player D** Land with construction > Construction maintained Lots reconfigured without asssignment of new lots	6	1 %	Private citizens

Figure 2. Types of players

For each of these different player types there are corresponding reactions proposed by the plan:

- Player A

In this case there is the assignment of lots in proportion to the surface area of owner's land. The benefits result from the difference between the concrete value and the abstract value. The charges are calculated on the basis of the concrete value attributed, with no compensations to be received.

- Player B

Player B is similar to Player A, but existing structures are to be demolished. In this case, the compensation amount for demolition should be calculated on the basis of the building's registered value as given in the property registration document.

- Player C

Property owners in the Player C category keep their houses but their original property is reconfigured, with the portion of the plot that is not suitable for the design of the plan being separated. The same rights and charges as Player A are attributed to this portion of the land.

- Player D

Player D-type owners are similar to the Player C type, only with a difference in the assignments of lots, where, as the separated land surface areas are not large enough to translate to the attribution of lots, they directly translate to the attribution of benefits (in monetary units). As they are not involved in the plan's urbanisation, they are not allocated charges.

2) Calculating the net value of the plan – the value in euros of the plan proposal (total value) minus the cost of construction of the buildings.

The plan's total value is the sum of the values attributed to each lot as defined in the plan proposal. In order to value the lots, the national property tax calculator (SIGIMI) was used, which is a free Web-GIS based property valuation tool (see Figure 3). It takes into consideration a number of parameters for characterising a property, including location, floor area and typology.

Figure 3. Portuguese property tax calculator – SIGIMI
(available at http://www.e-financas.gov.pt/SIGIMI/default.jsp#)

For the valuation of each lot, the parameters to be entered in the SIGIMI include the proposed building typology (Tip_i, e.g., collective housing or single-family dwelling; shops and service buildings), the lot surface area (Al_i), the lot occupied area ($A0_i$), the floor area (F_i) and the dependency area (AD_i, which includes, for example, parking spaces or annexes within lots). One should point out that, as far as the dwelling typology, a valuation coefficient was taken into consideration for single-family homes in relation to collective housing, i.e. the coefficient was given a zero value for collective housing building typologies; 0.03 for terraced single-family houses; 0.06 for semi-detached houses; and 0.1 for detached houses.

Once the overall value of the plan is obtained one then proceeds with calculating its net value, i.e. subtracting the costs of construction of the buildings. The reference construction cost used was that taken into consideration in the SIGIMI at the time of valuation (€609/sq. m of floor area).

3) Calculating the abstract value attributed to each owner

To arrive at this value it is necessary to first quantify the value of sq. m of land before the construction, for which one divides the net value of the plan by the total area of land subject to *perequação*, resulting in a monetary expression of the construction rights to be attributed to each owner. By multiplying this land unit value by the surface area held by each owner one can calculate the abstract value in the plan for each owner.

4) Calculating the concrete value attributed to each owner

The concrete value is the sum of the value of the lots attributed to each owner minus the construction costs. The distribution of lots with capacity for construction amongst the owners is the most critical step in the whole process. With a view to, on the one hand, reducing conflicts and improving acceptance of the plan's solution by the owners and, on the other, minimising compensations amongst owners, the main concerns in this distribution process have to do with: (a) the lots attributed being located as much as possible in the original parcel of land or close to it; (b) the value of the attributed lots being as close as possible to the pre-calculated abstract value.

5) Calculating the benefits attributed to each owner

The benefits are calculated by the difference between the abstract value and the concrete value, as defined in the preceding steps, expressed as a monetary value. When the result is positive, i.e. when an owner does not realise the whole value they are entitled to, they receive monetary compensation. When the result is negative, i.e. when an owner realises greater value than that they are entitled to, a payment is necessary. The sum of the benefits attributed to each owner should be null. In other words, those who pay compensate those who receive.

6) Distribution of the urbanisation charges

Calculating the charges is based on the internal costs of the plan for infrastructures, public spaces, green spaces and proximity facilities, added to the compensations resulting from demolitions. These charges are distributed on the basis of the concrete attributed to each owner.

As already pointed out, calculating the compensation for buildings to be demolished should be based on the land register value of the properties given in the register records.

7) Calculating the final balance per owner

In the last step, the final balance, i.e. the net result of what each owner has to pay or receive on the basis of plan's proposals, is expressed in euros and represents the difference between the benefits and the charges, adding to this the value of compensations for demolitions.

The result of the application of the methodology was validated by Sines Council and that validated resulted in minor adjustments to the distribution of the lots amongst the owners. These adjustments were carried out in an easy and expedite way, given that all these calculations were based on a geographic information system.

Table 3 summarises the methodological steps described above and gives the respective calculation formulae.

Table 3. Methodological steps

Description	**Formula**
Calculation of area subject to *Perequação*, S	$S = \Sigma s_j$
Real estate valuate of each proposed lot, v_i	$v_i = f(F_i, AD_i, A0_i, Al_i, Tip_i)$
Calculation of the plan's overall value, V	$V = \Sigma v_i$
Calculation of the plan's net value, subtracting the construction costs, V'	$V' = \Sigma (v_i - 609 * F_i)$
Calculation of the value per sq. m in the plan before construction, u'	$u' = V'/ S$
Calculation of the abstract value attributed to each owner, $v'p_j$	$v'p_j = u' * s_j$
Calculation of the value of the lots attributed to each owner, v'_j	$v'_j = S (v_i - 609 * F_i)$
Calculation of the benefits attributed	$Benefits_j = v'p_j - v'_j$

Calculation of the unitary charges	Charge = (Internal costs + Compensations) / V'
Calculation of the charges per owner	$Charge_j = Charge * v'_j$
Final balance per owner	$Balance_j = Benefits_j – Charge_j$ + Compensation

5. Discussion and conclusions

One of the main achievements of the described methodology for distribution of the benefits and charges is the better communication with, and understanding of, landowners involved in the urbanisation process, bringing improved transparency to a somewhat blurry process.

One must bear in mind that the urbanisation process encompasses many different 'aspirations'. In a small/medium-sized city such as Sines the rural character is still dominant only a few meters away from the city's last buildings, both in terms of land use and way of life. Many people are out to gain from urban expansion plans, buying land and waiting for the right time either to develop it or to sell it to developers. For some the approval of the detail plan is the moment they've been waiting for, for others it is no more than a coloured printout and a list with more 'don'ts' than 'dos'. One must also consider that, in cases like this, people are to be told their land is going to be taken away from them, that their house is going to be demolished and that they will have to pay for the new roads that will be built on their land. People also are to be told they will make financial gain. Not only the professional developers will gain, but the residents also. And both will pay; and the amount of each one's potential gain and charges previously calculated is explicitly presented in a table included in the detail plan.

And that table will show 'the more you can get when you sell your land, the more you have to pay now for the plan implementation'. In other words, the more you get the more you pay, and the less the plan entitles you to, the less charges you will bear. By using the same valuation method that is used by the national tax board, which is freely available online, the property values obtained are to reflect the market values from an independent and impartial point of view.

By using this methodology it is expected that not only the communication and understanding of the urbanisation process will (desirably) be made clearer to the landowners and developers but also that it will be easier to manage from the local administration point of view. Knowing at this moment how much the benefits and charges are for each landowner within the detail plan is an urban management asset. Knowing how much they will be by the time a given landowner will develop their plot is a 'value added'. It is a 'value added' in the sense that it stands for the plan's own dynamics, allowing for the buying and selling of plots in a transparent way – the buyer will know how much they will have to pay (in addition to the land cost) to be able to pursue their building rights.

Caring for different players' 'aspirations' can be also understood as an equity measure, especially if it allows for the maintenance of the present social network – in the sense that it doesn't force the neighbours to leave, rather it grants them the right to develop their land and make a profit. But that profit comes with a cost. You can't have one without the other.

The Sines experience that is the object of this paper does not provide a full response to all the obstacles to successful plan implementation that are identified and described herein. The (non-)availability of public funds and the lack of reliable property records, to name just two, are hurdles that are not easily overcome. However, achieving the understanding and cooperation of the stakeholders is probably the most challenging issue.

One of the main problems in achieving equitable distribution of building rights and development costs is how to measure these benefits and charges. Instead of using the 'traditional' method based on land surface and floor areas, our approach relies on translating these benefit and charges into monetary values. The use of a universal and free evaluation tool for the calculation of the market value of the proposed plan proved to be very objective and was easily accepted by both public and private stakeholders.

To improve understanding of the application of equity in land use planning and how to overcome the lack of effectiveness of the instruments provided in the Portuguese legislation for achieving it, our team is now commencing a more comprehensive research project. This project – "Equity and efficiency in the urbanization process: a land readjustment execution model" – aims to contribute to proposing a more efficient land readjustment execution model with a view to addressing the problem of the conjugation of interests in the urban development process. The methodology developed and applied in the PP Norte may be considered as a first step towards that objective.

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Land Use Impacts of Turkish Migration to Europe: The German Case (Wiesbaden and Dortmund)

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1. Introduction

Identity, and to a certain extent ethnicity, has been fundamental source of meaning throughout human history. It is a basic element of social recognition as well as of social discrimination. Locally based identities, in this context, have their expressions in spatial terms too. Their recognition, on the other hand, has shown an uneasy pattern in many contemporary societies through modernisation and post-modernisation periods. The experience of migrants living in western capitalist societies since the World War II has particular importance in this regard. In the context of asserting local identity, the experience of Turkish workers in Germany starting from simple urban demands on living conditions and ends up at conquest of local enclaves, deserves a close scrutiny. Today, three generations of Turkish citizens live in Germany. Majority of them have become adapted to the life in Germany. Migration to Germany is still continues with marriages and a tiny flow of workers. Reverse migration to Turkey was popular among first generation of guest workers.

Almost all of the migrant workers were without proper knowledge of the society they were heading to in 1960s. Christian culture and open society has shaken migrant workers' cultural and religious alignments. In time, population increase of the Turkish nationals in Germany has produced neighbourhoods predominantly mixed with Turkish culture. One way contemplate that these neighbourhoods have changed in land use and activities in order to fit to the Turkish customs, social and religious institutions. This retrospective study tries to explore the underlying dynamics of land use changes mainly caused by Turkish nationals to Germany, as guest workers first and permanent residents later.

The study is conducted by interviews with open ended questions with Turkish nationals in Germany, two cities, i.e. Wiesbaden and Dortmund. By retrospective and recall questions, we tried to entangle how social institutions and social cohesion have worked in transforming the land use pattern and activities that more or less satisfies the communal needs and sustain relationships. And also find out how local and/or central authorities' responses have changed towards these demands through time. Moreover, we also try to explore the effects of land use decisions on the society too. Whether the Turkish communities start to become inward

looking and semi-open, restricting itself to its neighbourhoods after respective land use changes in Germany or not is another aspect of the study we are trying to uncover.

2. Theoretical Framework: Spatial Aspects of Identity

Discussions of identity and space have become prominent in critical geography, in recent years (Massey, 1999, Castells, 1997). Identity can be defined as people's source of meaning and experience. It is primarily shaped by awareness of distinction between 'self' and 'other' (Castells, 1997).The construction of identities is an ongoing process which is nourished by complex synthesis of history, geography, biology, collective memory, religious affection etc. However, in the last stage, it is the power relation which predominantly shapes the identity. In other words, there is no such thing as a place or an identity by itself, but these are simple constructions of discourses and practices. Nevertheless, this does not deny the existence of spatial identities, but criticises it's often essentialist character by emphasising underlying power structures (Lefebvre, 1991)).

For Castells, the social construction of identity always takes places in a context marked by power relations. He goes on to argue that there are three forms of identity formation. These are:

"*Legitimizing identity*: introduced by the dominant institutions of society to extend and rationalize their domination *vis a vis* social actors,

Resistance identity: generated by those actors who are in positions/conditions devalued and/or stigmatized by the logic of domination,

Project identity: when social actors, on the basis of whichever cultural materials are available to them, build a new identity that redefines their position in society and, by doing so, seek the transformation of overall structure.." (Castells, 1997:8).

Through the complex procedure of identity formation, identities can start as resistance identity and later turn into a project identity and finally by the enforcement of institutions of the society it becomes legitimizing identity.

For the minority/ethnic groups this process is much more complicated. Ethnicity has a spatial aspect and always been associated with discrimination. To keep and sustain identity in a given territory is not an easy task especially for the ethnic minorities formed by immigrants. There are two alternative accounts explaining the immigrants' position in an alien environment. These are spatial assimilation theory and ethnic stratification theory.

The spatial assimilation theory emphasises the importance of the length of a stay in the host country (Massey, 1985). Assuming that socially and economically better positions can be obtained by a significant period of time, in due course immigrants can therefore obtain better living conditions in spatial terms. Studies on immigrants showed that better social and economic position in society would lead to moving better neighbourhoods where native residents dominantly live, making spatial assimilation much more easier.

The ethnic stratification theory, on the other hand, brings forward the importance of discrimination in social, economic, and spatial terms. Ethnic minorities are usually excluded from labour market making them disadvantaged in housing market as well. "This is evident also from studies showing that minority ethnic groups are more or less forced to buy a substandard dwelling when they are rejected by landlords in their attempt to get access to a rental dwelling" (Özüekren, Ergöz-Karahan, 2010:359). Concentration of a certain ethnic group in a certain spatial enclave increases the level of segregation not only socially but spatially too.

In short, for ethnic minorities, complex procedure of identity formation is heavily associated with the space. The level of interaction between identity and space, on the other hand, determines the levels of representation of identities in space. This would end up either in spatial assimilation or in ethnic stratification.

3. Turks in Germany

3.1. Historical Background

Migration of Turkish citizens to Germany dates back to the late 1950s. Transformation to capital intensive production in agriculture by the introduction of Marshall Aid[1] played an important role in dramatic increase in unemployment in rural areas. Majority of those jobless peasants migrated to the big cities like Istanbul and Ankara while some others tried their chances in abroad. These pioneering workers went to Germany by the initiatives of German firms with the idea of a temporary stay. Later on "emigration agreement" signed between Turkey and Germany in 1961, and workers started to be sent officially. "Although Turkey signed similar agreements later with other European countries, immigration figures to those countries have always been lower than to Germany" (Özüekren, Ergöz-Karahan, 2010:356).

Increasing demand for migrant labour in a rapidly growing economy caused masses to migrate to Germany from Turkey and some other less developed European countries like Portugal, Spain and Italy as well. However, "1973 oil crisis" put an end to the easy migration to Germany. Before 1973, migrants can easily bring their families to Germany without any restrictions. After this time immigration issues in Germany became more and more difficult. However, the number of Turkish citizens has continued to increase no matter how hard it became. During the 1970s few of these pioneering immigrants had to return to Turkey because of redundancies. Others stayed and by the help of the relatively loose family unification regulations in 1974 the number of Turkish citizens living in Germany reached to 1 million.

[1] Marshall Aid, offered to European countries in 1947, was rooted in American interests to revive the European economy as a strong trading partner, and to strengthen Europe politically against further Soviet expansion westward. Turkey was included Marshall Aid programme in 1948 with the political intentions. Marshall Aid was used mainly modernization of agricultural sector which employed 80% of the population. Under the Plan the number of tractors increased from 2,200 in 1948 to 26,000 in early 1952, more than one for every two villages, leaving most of them jobless in their own villages.

Starting from the 1980s pattern of migration to Germany has changed. Political asylum seekers fled to Germany and to other European countries just after the 1980 Military Intervention with the hope of reaching easy citizenship rights. Similarly, in the 1990s many asylum seekers run away to Germany with ethnic reasons.

At the beginning of the 2000s, there were almost 3.8 million Turks living in the European Union making them the largest foreign population. Around 2.5 million of them were living in Germany, the largest Turkish community in Europe. In 2004, the share of foreigners living in Germany's large cities was 8.1%, while only Turkish nationals constituted the 2.1% of them alone (Table-1).

Table 1. **Foreign citizens and Turkish citizens in cities with more than 500 000 inhabitants and in large West German cities (100 000+) with at least 15 per cent foreign citizens, 2004**

City	*Population (total)*	*Foreigners (total)*	*Foreigners (share of population)*	*Turkish nationals (share of population)*
Berlin	3 387 828	454 545	13.4	3.6
Hamburg	1 715 225	244 401	14.2	3.5
München	1 273 168	282208	22.2	3.3
Köln	1 022 627	192 156	18.8	6.7
Frankfurt/M.	655 079	165 600	25.3	4.8
Stuttgart	590 657	127 560	21.6	3.8
Dortmund	**588 860**	**79842**	**13.6**	**4.8**
Essen	588 084	62 511	10.6	2.9
Düsseldorf	574 541	100 990	17.6	2.6
Hannover	515 841	75 152	14.6	3.8
Duisburg	503 664	75 194	14.9	8.3
Nürnberg	495 302	94 495	19.1	4.3
Mannheim	307 499	60 735	19.8	6.4
Wiesbaden	**272 591**	**47 837**	**17.5**	**4.2**
Mainz	184 502	32 019	17.4	3.7
Ludwigshafen	167 410	34 155	20.4	6.2
Heilbronn	121 320	24 734	20.4	7.5
Pforzheim	118 847	20 335	17.1	5.0
Ulm	120 107	19 688	16.4	4.8
Offenbach	118 233	37 084	31.4	6.1
Fürth	112 492	17 401	15.5	4.9
Germany	82 500 849	6717 115	8.1	2.1

*Source:*Schönwalder and Söhn, 2008:1445

3.2. Development of Turkish Settlement Pattern in Germany

History of Turkish people in Germany can be investigated in five periods according to their settlement patterns in Germany. The first period falls to 1960s when the Turkish were generally confined to guest houses (i.e. heim). "Turkish guestworkers (men and women) moving to Germany travelled by train from Istanbul to Munich and hence to their final destinations. As soon as they arrived, they were mostly housed in workers' hotels (*heim*) provided by employers" (Özüekren, Ergöz-Karahan, 2010:360). Their social and cultural as well as religious needs were satisfied by ad hoc solutions, generally confined to guest houses. At that time they lived in an isolated manner in a totally alien environment. In general their relations with the Germans were poor because of language deficiencies as well as hard working conditions.

In 1970s, guest worker flow to Germany slowed down. However, families began to reinstall themselves in the German soil and the number of second generation Turkish population started to increase. Families began to seek proper accommodation in the cities. This was the beginning of recognition era of Turkish ethnic population in Germany. This period marks the beginning of the German society getting to know Turkish ethnic population. And for the first time, Germans realised that they had to come to terms with living together. Turkish families, on the other hand, began to seek proper accommodation opportunities in the cities, both economically and socially. Since they still felt disadvantaged, they tried to live in a close vicinity with other Turkish fellows or if possible with their relatives. "The first generation tends to have very little education, do not have a specific profession, are classified as being labourers and tend to speak a rather poor German. Their social contribution to the German community is somewhat limited. The first generation tend to be rather ignorant about discrimination, because they do not feel the need for greater integration. Their group of comparison are their friends and family back in Turkey, who, from an economic point of view, are worse off than they are" (Kılıçlı, 2003:3).

Their vulnerable position in the society heavily affected their choice of living together with other Turkish nationals. In Berlin, for instance, many Turkish families started to live in relatively cheap rundown areas, especially in Kreuzberg. "But gradually politicians started to express their dissatisfaction about the concentration of Turks in particular neighbourhoods such as Kreuzberg, claiming that this concentration of former guestworkers in particular areas might hinder their integration into the host society. This resulted in regulation limiting the moves of foreigners into 'concentrated' boroughs, including Kreuzberg" (Özüekren, Ergöz-Karahan, 2010:363).

1980 Coup D'etat in Turkey caused a flow of Turkish immigration seeking political asylum. Unlike the guest workers of the 1960s, there were no ready jobs waiting them in industrial sector. Although started from 1970s, increasing service sector job opportunities absorbed some of the new wave of Turkish immigrants in Germany. On the other hand, 1980s marked the beginning of the increasing number of Turks getting into various businesses as employers. The closure of the heavy industries after the 1980s helped the acceleration of this process too. In spatial terms, economically strengthened Turkish immigrants started expressed their demands more explicitly. Apart from housing needs, social, commercial, educational, and religious necessities of Turks in spatial terms put the pressures on both local and central governments. "Germany began to realise that the social consequences and aspects of migration had up until the mid to late 1980s not been considered. Play-schools, schools, public authorities as well as health service facilities found that they were not equipped to handle the special needs of this part of the population" (Kılıçlı, 2003:1).

The 1990s worked in two ways. Firstly, faith based organizations increased their activities among Turkish population. The dominant Sunni sect in favour of the faith based organizations provoked the others, namely Alevis. Secondly, Germany witnessed another flow of political asylum seekers escaping from ethnic based civil war in Turkey. Turkish society in Germany began to crack on the lines of ethnicity and religion while Germany was uniting. Besides, German unification, the rebuilding of the East Germany and the collapse of the Iron Curtain

released millions of people seeking and demanding westerns ways of life and welfare in Germany too. “An important dimension of social change among the Turkish population within Germany is the development of Turkish entrepreneurs which accelerated in the 1990s. Between the period 1985 to 2000 the number of Turkish entrepreneurs went from 22,000 to 59,500. This indicates an increase of 170 % equalling an average annual growth rate of 7 %”(Kılıçlı, 2003:2).

Europeans views on Islamic ethnic populations changed during the 2000s after the 9/11terrorist attacks, and USA gave a wake-up call to all European countries for closely monitoring Islamic populations. Besides, all host societies in Europe developed “Islamophobia” in various ways; Germany was no exception to this. Besides, expansion of the European Union to the ex-communist countries increased ethnic diversities in European Union. All of these put the Turkish population in a difficult position with various outcomes in terms of land use dynamics.

4. Land Use Impacts of Turkish Migration to German Cities

4.1. Research Methodology

Field research was conducted in two German cities, Dortmund and Wiesbaden, where Turkish nationals have been living in since the early 1960s. Dortmund is one of the large cities of Germany with nearly 600 000 population. Turkish nationals constitute about 5% of this total. Dortmund has historically been an industrial area but now it is home to a number of medium-sized information technology companies. Wiesbaden is a city in southwest Germany and the capital of the federal state of Hesse. It has about 270,000 inhabitants. Wiesbaden hosts a number of international companies with its German or European headquarters. Apart from service sector there is also an industrial park specialized inpharmaceutical and chemical industry.

Empirical basis of this study are qualitative in-depth interviews carried out with different representation groups of Turkish nationals living in Dortmund and Wiesbaden. The analysis of interviews concentrates on the question of whether the Turkish communities become inward looking and semi-open, restricting itself to its neighbourhoods after respective land use changes in Germany as ethnic stratification theory suggests or they have been spatially assimilated.

Totally 30 interviews were undertaken, 16 in Dortmund, and 14 in Wiesbaden between March 28–April 4, 2012. Some of the interviewees are individuals in a family (8 in Wiesbaden) or individuals (22 individuals) at traditional Turkish coffee-shops called “kıraathane” in Turkish. Generally, interviews were conducted with groups in round table fashion. Open questions were asked in an order while conserving about life in Germany. The interviewers, the second and the third author of this paper, set the stage by providing information about the purpose of the study. In order to settle a historical reference point in time for recalling the past, a short account of coming to Germany is demanded first. The aim of the first question is to mark a

reference point in time and form a retrospective timeline into the past. When the first round ends, an interviewee whose recall is more detailed is selected for the next question: where did you stay/live when you first came to Germany? As some of the interviewees who had difficulty in recalling the past seem to remember, the answer helped them recall the details of the past.

a. Wiesbaden

b. Wiesbaden

c. Dortmund

d. Dortmund

Figure 1 Scenes from interviews.

At that point, the questioning then goes to the quest of this paper: did you move to a new location in order to be close to other compatriots? If so, can you give the details? When a common ground is formed, questioning goes in order to explore further details: how did the land use in your environs changed in order to meet your cultural, social and other needs? Commercial and cultural as well as religious activities are more thoroughly scrutinized during the conversations. Some of the following questions probe group behaviour of Turkish

immigrants in the city. Whether ethnic or cultural alignment is an important factor of moving or engaging activities in the city or not is one aspect of probing questions in the round table conversations.

The rest of the conversations try to unearth intergenerational differences between first, second and third generations of Turkish ethnic population. Some of the observations are also carried out by the interviewers in the field. Families were instrumental in this, because generally three generations can be observed in family group gatherings.

4.2. Findings of Case Study

One of the most controversial issues in Germany regarding ethnic populations is the ghettoization of ethnic groups in the cities and emerging parallel society of Turkish population in Germany (Schönwalder and Söhn, 2009). As regards ghettoization, we have found no traces of residential areas predominantly populated by Turkish. There are different explanations. The first one is economical. The first comers never thought of living close by and forming Turkish neighbourhoods, because they always maintained their contacts at their work places. Instead they were keener to economize on living conditions in Germany, and transfer whatever saved to Turkey. Turkey is abundant of building investments of the first comers. Instead Turkish development is found on non-residential activities in the later years. Of course, there are minor differences between different households. As the first comers were mostly single persons, they prefer to live in “heim” guesthouses attached to the work places. When families are formed, an appropriate housing is found relative to the work location, because most workers were bounded by agreements of working pledges.

On the other hand, widespread automobile ownership in Germany made house locations relatively less important in the city. In the later years, life of the households generally centred on the work locations too, but less intensively than before. Care of the children, schooling of them increased daily household chores. Therefore, home location decisions become more complex in time. But in always, economizing on living conditions in Germany dominated all decisions. This was mostly due to temporary nature of working in Germany; many thought that they would work for several years in Germany, and return to Turkey relatively richer. When the nature of staying in Germany turned into permanent nature, the living in Germany demanded Turkish social and cultural alignments too. This changed the land use in various ways too.

During temporary states of mind in Germany, Turks did not integrated to the German society. Besides, relatively rural origin of the Turkish families in Germany prevented them from utilizing opportunities of a modern welfare state fully. Therefore, in all conversations the second generation is generally tagged as a problematic generation in various ways. Although decreased significantly in the third generation, problems of school drop-outs, drug use, petty crimes etc. were generally associated with Turkish youngsters.

But in terms of parallel societies, there are certain indications of emerging traces of parallel societies between Turks and Germans, at least in their minds. Regarding this, a cynical view has just begun to flourish among the Germans (Schönwalder and Söhn, 2009).This is mostly

due to the permanent nature of the Turkish ethnic population in Germany. However, we have found no traces of ethnic neighbourhood formation because of parallel societies in Germany.

In fact, parallel societies are maintained in dresses, living conditions, customs and mostly in religious practices. The psychological shift in the western societies after 9/11 terrorist attacks approached all Mohammedans, whether non-religious or religious, into potential terrorist. This has generally worked well for Islamic faith organizations in Germany. They were very successful in gaining clients from all sorts of Turkish people with different backgrounds as they found these organizations as the sole supporters of their "honourable" existence in Germany. Yes, contacts of Turkish population with the German population are gradually decreasing in terms of daily activities as Turkish run businesses increase in Germany. But this does not mean parallelism similar to black-white separation in North America.

Although there are no "Turkishtowns" similar to Chinatowns, one can find Turkish enclaves, generally formed around mosques. These enclaves include a *cami* (mosque) where prayers are carried out, lodging for priest, and commercial premises that support the enclave economically. In fact, this type of organizing commercial activities around religious activities, partially supporting them, has historical roots in Turkey known as '*vakif*' (trust funds) formations. These enclaves support Turkish ethnic population in various ways, and form islands or refuge sites as little Turkeys.

Most of these enclaves visited during field work economically sustain themselves by renting its non-religious parts to commercial activities. Enclaves include Turkish cafe shops for males called as "*kıraathane*", barber shop, retail shop etc. along with a religious site, which is mostly a mosque. Especially, a barber shop is very handy for Turks with short hair and beards styled in Turkish Sunni way. *Kıraathane* is place to chatter with fellow compatriots and have religious talks with others. Imam maintains strong ties with Turkish practicing religion. Central position of imam is inherited from pre-republican era and pre-modernization era. Imams in rural areas still have central position in maintaining social order. As the first comers are predominantly from rural areas, *imam* in a Turkish enclave is a cherry on the pie that supports and feeds Turkish nationals, especially the male first comers, with all sorts of religious information.

"*Kıraathane*" in these enclaves is the place where pious Turk can find Turkish tea and have a talk with fellow Muslims too. These Turkish style rest houses in Germany were rare in the past, all Turks were employed. Instead, there were Turkish style cafes serving alcohol, populated after work shifts. The number of these cafes increased after the influx of refugees seeking political asylum from 1980 coup d'état in Turkey. Retail shops in these claves predominantly offer products of Turkey and *halal* food. Effects of this are twofold. While commercial premises attract Turkish population to a certain extent, Turkish enclave guarantees and enjoys patronage to a certain extent, at least in certain products, from the Turkish population.

Another form of Turkish land use effect in German cities might be the formation of commercial stripes. From interviews, we have found that there is an ecological process in terms of land use dynamics regarding Turkish commercial stripes (along certain streets)

mainly starting from 1990s. This trend is generally started with the closure of heavy industries employing Turks. Most blue collar Turkish workers have switched to tertiary jobs or formed their own businesses targeting their compatriots.

The development is generally initiated by a grocery store or a supermarket. Entrance of a market operated by a Turk and offering various sorts of Turkish products, e.g. tea, feta cheese, olives, signifies a potential Turkish commercial development nearby. As bilingual market attracts all kinds of people, be they fluent in German or not, the street and its close vicinity becomes a potential customer base. Streets relatively accessible by Turkish population, scattered in the city, forms a comparative advantage in becoming a Turkish commercial stripe.

a. An old “heim”

b. Turkish supermarket in a Turkish Enclave

c. Turkish commercial stripe in Wiesbaden

d. Starting point of commercial stripe

e. Supermarket in commercial stripe

f. Turkish bakery in commercial stripe

Figure 2 Examples of Turkish land use effects.

These streets with central positions and relatively with low rent levels are potential stripes for Turkish commercial development. These streets are found to be generally in the transition areas from commercial zones to residential areas of the city. Turkish commercial stripes contain carpet shops, travel agencies, call centres, coffees, doner/kebab houses, garment shops, jewellery shops, photo shops, shops offering garment for special events, e.g., circumcision, haj, marriages, etc. Composition of these stripes is affected by the composition of the Turkish population directly.

Among these commercial uses, Turkish restaurants show a certain degree of freedom from this ecological process as they serve for all of the population. Similarly, shops that offer traditional artisanal goods such as kilims and carpets are also scattered in the city. Both of these commercial uses attract customers from all ethnic origins. On the other hand, shops that offer Islamic garments predominantly locate at Turkish commercial stripes. Uses that specialize on the population such as photography studios for special events also locate on these stripes. Commercial stripes follow ecological processes such as invasion and succession, competition and accommodation. One another finding is that initiation of the stripe formation with a grocery store/supermarket offers a potential development. As other commercial uses for Turkish ethnic population comes to the vicinity, commercial uses for German population begins to lose customer base, which is an indication of moving out from the street.

5. Concluding Remarks

The experience of ethnic minorities in western capitalist societies has shown an uneasy development pattern. Turkish minorities, the largest foreign population in European Countries (almost 5 million), are no exception in this regard. Their 50 years encounter demonstrate a line starting from total alien in an unknown environment to a rooted citizens on their own rights. Turks in Germany deserve much more scrutiny since nearly 3 million Turks live in Germany today.

Identity formation and its maintenance for migrant population have different features than that of people living in home countries. As discussed earlier, the procedure of identity formation can start as resistance identity and later turn into a project identity and finally by the enforcement of institutions of the society it becomes legitimizing identity. The position of Turkish citizens can be regarded as between the project identity and legitimizing identity since the enforcement process of institutions has not been finalised yet. This is partly because of the enormous differences between two different cultures (namely Muslim and Christian) and partly because of the ignorance of German policy makers about the nature of the identity formation pattern.

Similarly, today's spatial expression of Turkish identity in Germany can be considered neither spatial assimilation nor ethnic stratification. Their location preferences have always been dominated by economic concerns. As we mentioned before, there are no "Turkishtowns" similar to Chinatowns in German cities ethically segregated from the rest of the city and the society. In spite of this, spatial assimilation cannot be applied to Turkish minority either, since

they mostly live in spatial enclaves formed around mosques. This rather peculiar land use formation prevent Turkish minority to live in a so-called "parallel society" as well. The latest development, as Turks sustain their position economically in German soil and become business investors, which reveals itself in the emergence of commercial stripes neither jeopardise their cultural, religious or national identity, nor make them ethnically segregated.

In short, Turkish presence in Germany exemplifies rather different pattern than other minorities. This is partly because of strong relationship with home country and partly because of their fortified position in German society both economic and social terms established in time. Although there is a perception among Germans that Turks are living in a "parallel society", in reality this is not the case since Turks integrated into the social and economic life intensely. However, whether the role of the religious organisations and the hostility among some Germans could change this situation in time, still remains to be seen.

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Urban improvisation – reconstructions of the interplay of private and public initiatives in spatial transformation processes

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1. Introduction

Flanders is spatially fragmented; a dispersed city (Gulinck et al, 2007). Fragments of age-old farmland border on generic villa allotments, oversized industrial areas, shopping centres surrounded by parking space, factories reconverted to garden centres, etc. The Spatial Structure Plan for Flanders (1997) considers spatial fragmentation as a negative process leading among other things to undefined leftover spaces, pressure on non-built-up areas and an increase in traffic. The Plan therefore offers concepts to halt and invert this process.

Rather than trying to invert this fragmentation, though, De Meulder et al. (1999) propose to work with it. Through meticulous reconstructions of spatial transformation processes, they set out to reveal spatial patterns and relations within the dispersed landscape. These patterns and relations are then taken as the starting point to structure this dispersion (Dehaene & Boon, 2006). What the reconstructions also reveal is that fragmentation processes are the result of numerous iterations of public and private initiatives which are hardly ever coordinated, let alone planned. Until the implementation of the Structure Plan, for instance, most decisions concerning land use were made at the level of the municipality, often without any planners being involved (Renard & Liefrink, 1995).

In this paper we argue that patterns and relations are not only found in the dispersed landscape, but also in the interactive processes between public and private initiatives which generate this landscape. We refer to these patterns and relations as *urban improvisation*. In jazz, an improvisation starts with one player setting a tune until another player decides to play along or comes up with his own tune. The result is a

complex and unpredictable interplay of action-reaction, at some moments very clear and coherent, at others totally fragmented. In this paper we will translate the concept of jazz improvisation to the context of spatial transformation by applying it to a number of cases: the construction of a neighbourhood, the transformation of a historic street and the development of a park, all situated within the city of Antwerp, Belgium. For each case, we will reconstruct the public-private interaction process and assess a series of spatial and social features by comparing it to locations where the public initiative prevailed and no improvisation took place. We will argue that urban improvisation can be considered as mode of planning in its own right and illustrate that it can lead to social and spatial quality, even while also producing fragmentation.

2. Fragmented Flanders

The Spatial Structure Plan for Flanders (1997) starts from the proposition that Flanders is spatially fragmented and that this fragmentation is increasing. Among the causes of this fragmentation, it points to a range of market mechanisms: "*For instance, the operation of the housing market results in massive suburbanisation with privately owned detached houses in its periphery, whereas changes in economic patterns lead to the (re)localisation of production and distribution facilities from the urban centres to he periphery or along international routes"* (p.44). The resulting fragmentation, it is claimed, has led to the displacement of urban dynamics, the decreased impact of planning and design, undefined leftover spaces, new typologies and programs, the development of non-spaces, strong pressure on unused spaces and increase in movements.

In other words, the Spatial Structure Plan regards fragmentation as a negative process which should urgently be neutered and replaced by "*a sustainable form of urban development which manages space in a way that benefits the present generation without endangering the needs of future generations*" (Art. 1.1.4). In order to achieve this objective, the authors of the plan propose - among other measures - to categorise urban centres on the basis of morphological and functional criteria and to define developmental options for each resulting type of urban centre, including desired density, permitted facilities and acceptable types of housing.

The principle of categorisation is reminiscent of Christaller's Central Place Theory (1933). Christaller shows in his theory that the growth and location of settlements follows a hierarchical pattern in which large centres are surrounded by smaller centres, which in their turn are surrounded by yet smaller centres. The distance between those centres is determined, among other factors, by travelling time. Up until the mid-nineteenth century, Belgium was a classic example of the Central Place

Theory. The widespread possession of cars, however, has diminished travelling time and upset Christaller's hierarchy. By limiting the developmental options of the various centres, the Structure Plan seems eager to counter the negative consequences of spatial fragmentation through a return to Christaller's original hierarchy.

The Structure Plan is now over a decade old and has partially achieved its objective. It has delineated agricultural, natural, residential and other zones and established awareness among the Flemish public that land is a finite resource. Developers have started building more compact constructions and authorities in other policy domains have adopted the principle of structural planning. However, these paradigm shifts have not succeeded in halting the process of fragmentation (Gulinck et al, 2007). Various explanations have been offered for this phenomenon, including the cumbersome hierarchical structure of the Plan, the limited resources of provincial and communal authorities, the complexity of newly emerging social problems and speculation by land owners (Voets et al, 2010).

3. From a Flemish to a regional scale

In *Patching up the Belgian Landscape* (1999), De Meulder et al describe how in the space of a century and a half Flanders has been transformed from a Christallerian geography into today's nebulous urban sprawl. The authors' central argument is that the underlying process of fragmentation is firmly anchored in cultural and socio-economic realities. The narrative starts in the mid-nineteenth century when the introduction of a dense network of regional and local railways rendered every nook and corner of Flanders accessible. One of the reasons for the development of this network was a desire to counter the explosive growth of the cities. Workers became commuters and were thus enabled to remain in their villages where they could rely on their traditional social networks in periods of crisis. This transportation policy was supported by a housing policy which aimed to enable every worker to own residential property. Land was thus transformed from an agricultural resource into an investment product, which set off a process of the allotment of land into small individual plots, a process which continues to this day. These twin policies have resulted in the very limited growth of Flemish cities in comparison with the surrounding countries and, as a consequence, a limited form of urbanisation which has mainly developed in the countryside along existing streets and routes and in close proximity of railway stations and crossroads.

This process accelerated considerably after World War II, when travelling by train became more comfortable and cars became affordable for everybody. Now the middle classes also started to commute. A law introduced by De Taye added 50,000 new detached houses in the countryside in the space of a decade. The policy was no

longer striving merely to limit urban growth, but was actively promoting an urban exodus. Thus, during the nineteen sixties and seventies, the middle classes collectively deserted the grey and polluted cities in search of a house with a garden in a natural environment, thereby slowly urbanising culture in the countryside.

As a consequence, a culture of land allotment and building one's own house has developed, characterised by small contractors, traditional construction techniques and a direct relationship linking contractors, architects and owners. This has led to a multitude of individual projects of low complexity with minimal intervention by the authorities – an effect which was further reinforced by the autonomic powers of decision held by communal authorities until the introduction of the Spatial Structure Plan for Flanders. This has meant that, for all practical purposes, there was no policy.

With each subsequent generation, the Flemish countryside was further urbanised and today the Christallerian model has completely disappeared. By introducing selective densification, the Structure Plan strives to return to the original conditions, which offered a clear distinction between built-up centres and open landscape. However, De Meulder et al stress the fact that the existing settlement patterns occupy large amounts of space and present a very specific, fine-grained and a-systemic structure which cannot be systematically densified. Moreover, as the above historic overview shows, the unit of measurement has been the individual allotment plot and there has been no intention to enter into a relationship with surrounding structures and the remaining open landscape.

In other words, the authors also recognise the disadvantages of fragmentation, but contrary to the Plan's authors, they do not believe it is possible to return to the Christallerian model. In their view, the main task imposing itself today is to transcend the logic of allotment. Individual plots cannot provide a locality or community with an identity. There is a need for structures which can generate cohesion at an intermediary scale and give common direction to a loose collection of unconnected plots. De Meulder et al state that the landscape could play this role. Thus, densification to them does not imply the increase of housing and facilities as prescribed by the Structure Plan, but rather the qualitative improvement of the remaining open space. In recent years, the authors have substantiated this view by developing concrete projects for a number of Flemish villages (cf. e.g. De Meulder & Devisch, 2002; Dehaene & Boon, 2006).

4. Fragmentation resulting from individual actions

In 1948, Weaver introduced the concept of *organised complexity* to refer to problems which seem complex when viewed on a macro-scale, but whose individual components on the micro-scale follow a set of simple rules of interaction. The

interaction of the parts thus generates a whole which is larger than their sum and which cannot be deduced from the behaviour of the individual components (‘emergence’). In other words, the components organise themselves without being managed by a central authority. With the concept of emergence, Weaver introduced the theory of complex systems. Beside organised complex problems, he also distinguished *simple problems* and *disorganised complex problems*. The latter term refers to problems which not only seem complex, but also behave in a complex way.

Following the historic reconstruction by De Meulder et al (1999), the fragmented Flemish cityscape can be considered as a system of organised complexity. From a distance it looks complex, but it actually behaves in a relatively simple way because it has a limited number of actors, namely private builders and authorities. Compared to the surrounding countries, planners, developers, investors, corporations and the like have historically played only a limited role in Flanders.

Weaver states that simple problems present a limited number of variables, which means that they can be described as mathematical equations with predictable outcomes. Disorganised complex problems, on the other hand, are characterised by a large number of variables, which means they can only be described in terms of probability theory and that predictions are virtually meaningless. Organised complex problems are the intermediate condition between these two extremes: the number of parameters is too large to describe the problem as a mathematical equation, but not so numerous as to exclude the usefulness of probability theory. Weaver proposes to use simulation models to deal with such problems, implying that the behaviour of the individual actors, rather than that of the system as a whole, can be described in equations called rules of interaction. It is the confrontation of these actors within a set of delineated conditions which structures the behaviour of the system. In order to determine the governing rules of interaction, a model made up of a number of generic rules is applied and the behaviour resulting from it is compared to the real problem and adjusted accordingly. When both are in harmony, the rules of interaction have been determined and predictions can be made concerning the future behaviour of the system within the set of delineated conditions.

De Meulder et al (1999) pose that intervention in Flanders’ fragmented urban sprawl presupposes insight into the spatial processes which have shaped this cityscape and which are propelled by regional landscape elements including topography, soil composition and water management (De Meulder & Dehaene, 2002), as well as by policy decisions and cultural and socio-economic behaviour patterns. Additionally, if this process of fragmentation is indeed an organised complex problem, intervention requires insight into the rules of interaction which govern the behaviour of actors participating in the construction of the cityscape. In this view, the governing spatial processes constitute the set of conditions within which the actors operate. Knowledge of both is therefore required for intervention to be successful.

Reconstructing the rules of interaction requires a specific analysis different from the analysis of the existing use of space which is employed in the Spatial Structure Plan for Flanders, and also different from the analysis of the evolution of spatial patterns used by De Meulder et al. It requires an analysis of the actors: what are their objectives, which are the tools they use and how do they react to each other's interventions? Such an analysis moreover requires the use of a different scale: instead of using as the unit of measurement all of Flanders, as the Structure Plan does, or regionial subdivisions, as De Meulder et al do, the analysis should be carried out at the scale on which the actors operate, which is that of the individual allotment plot. We are no longer looking at a quest for spatial structures and patterns, but at direct spatial experiences and relationships. From the bird's eye perspective, we need to descend to the level of everyday action.

The question remains, however, whether rules of interaction which can help explain the process of fragmentation actually do exist. Can we detect a certain order in the manner in which private builders react to the conditions imposed by authorities or to the behaviour of other private builders? Or will we see on the contrary that every situation is unique and no general rules apply? In other words, is the process of fragmentation in actual effect an organised complex problem or not?

5. Four case studies

In order to answer the above questions, we will briefly discuss four different cases – all of them centered on streets in the city of Antwerp: the *Milisstraat*, the *Bleekhofstraat*, the *Fruithoflaan* and the *Grote Steenweg*. In each case, we propose to reconstruct the origin and history of these streets and specifically to determine which actor (authority of private builder) has initiated a specific action and how these actions have interacted with each other. The scale for this reconstruction is that of the individual allotment plot and the individual actor. On this detailed scale, not every action has been documented and not all documents are readily available. The reconstructions should therefore be considered hypotheses. These hypotheses are of course based on historic sources, but to these are added the authors' extrapolations, associations, presuppositions etcetera. In general, the hypotheses remain within the strictly probable, but in some cases they have consciously been taken out of proportion in order to explore potentially interesting interactions. The following is a brief summary of these reconstructions.

5.1. Case 1: Milisstraat – Oedenkovenstraat (total length: 350 m)

The Milisstraat and Oedenkovenstraat are aligned streets located in the Antwerp district of Borgerhout. Both contain only terraced houses in completely closed rows. Virtually every house has a back garden. The origin and historical development of both streets is straightforward. The city of Antwerp imposes two general urban development rules: one aiming at the protection of privacy (‘the rule of lights and sights’) and one aiming to ensure visual coherence (‘the rule of harmony’). All builders have followed both rules, with the exception of just one who has built up the entire garden area.

In all, this makes for unambiguous interaction between the actors: the council determines the rules and the individual follows them. The rules are sufficiently open-ended to allow for personalisation: for instance, every house uses different building materials and presents a different building height, window distribution etcetera. Yet, because all houses are placed along a single straight building line, have the same width and similar facade compositions, the whole still presents a strong visual coherence.

This street type is promoted by the authorities as the ideal to be aspired to: a street composed of personalised terraced houses suitable for families with two children.

5.2. Case 2: Bleekhofstraat (total length 350 m)

The Bleekhofstraat runs parallel to the Milisstraat and Oedenkovenstraat, but contrary to them it is spatially fragmented. Beside terraced houses, it also contains two flat blocks, a school surrounded by green space, a number of unused plots, receding retail properties, reconverted former warehouses built perpendicular to the plot, … The use of space is equally diverse: some retail properties, for instance, have storage or parking spaces across the street, a number of buildings have windows in the side walls, others present a blind facade, …

Unsurprisingly, the origin and history of the Bleekhofstraat are not as straightforward as in Case 1 either. Although in principle the same two general rules of urban planning apply here, the street has always had a different program which has excepted it from those rules, involving bleaching meadows (hence its name), a candle manufacturer and a chocolate factory. A possible reason for this different development is the fact that the Bleekhofstraat is straddling the border between two city districts and therefore attracted a concentration of less desirable functions, which brought different building scales and construction types to the street. Both factors have remained constant throughout its history. The candle manufacturer, for instance, was replaced by the school and the flat blocks, the chocolate factory was partially broken down to make room for parking spaces, smaller industrial constructions perpendicular on the street were scheduled to be reconverted into collective housing

projects, … Recently, the city council has financed a project inspired by one of the historical construction types in the Bleekhofstraat, involving residential buildings with a patio perpendicular on the street. In this case, the authorities have introduced a new local urban norm in addition to the ideal image of the terraced house with a garden.

The interaction between the actors is more complex than in Case 1. The two general rules determined by the authorities formed the point of departure and the first residential buildings duly followed these rules. The larger non-residential program, however, departed from them and in the course of history private builders increasingly decided to ignore the rules imposed by the authorities – without, however, directly breaking them. They either chose not to build on certain plots or to reconvert existing structures to serve different purposes. Others avoided compliance by negotiating with the authorities – such as the builders of the school and the flat blocks. In the case of the most recent project, the authorities themselves, inspired by private interventions, decided not to comply with their own rules.

5.3. Fruithoflaan (total length 700 m)

The Fruithoflaan is situated in the district of Berchem. It is a relatively recent street characterised by high-rise flat blocks of between six and thirteen floors. The oldest among them include retail spaces on the ground floor level. The most recent blocks are placed perpendicular to the street and surrounded by green space. It is a relatively wide street with lanes separated by a central green space. All the surrounding streets are composed of terraced houses, which gives the Fruithoflaan an outspoken insular feel.

The origins and history of the Fruithoflaan are relatively unambiguous. The avenue was once part of a count’s estate. In the 1920s, the estate was subdivided into allotments by its owner who was inspired by similar lucrative development projects in the surrounding districts and communes. As Berchem then suffered from a pressing lack of housing, the local authorities did not object to the allotment. Both actors developed plans, but they did not reach agreement and in 1953 the count decided to sell his estate to a developer. A few years later, the latter did reach an agreement with the authorities, who allowed the developer to construct a relatively new type of housing with greater density than the surrounding construction types and presenting a relatively new urban layout. In return, the developer agreed to construct sports facilities and road infrastructure. In the following years, other developers copied this new construction mode. In the early 1960s, a second developer succeeded in convincing the council to build with an even greater density and in yet another layout, which involved merging plots, building higher, reorienting buildings and

retracting the building line. It is not entirely clear why the authorities gave their blessing to these changes, but again the model was copied by a number of other developers until the final construction phase ended in 1980 and the street was fully built up.

The interaction between the actors, then, follows an iterative pattern. Initially, as in the other cases, both rules imposed by the council apply. However, one developer wants more and negotiates with the authorities to get a tailor-made plan accepted. Other developers follow suit. Then another developer decides to renegotiate the conditions and obtain permission for yet another different model. This is again repeated until finally the avenue is built up completely.

5.4. Grote Steenweg (total length 700 m)

The Grote Steenweg connects the centre of Antwerp to the commune of Mortsel. The present case study, however, only looks at the stretch between the King Albert Park and the Binnensingel (the inner ring road) which is contained within the district of Berchem. This part of the road is mainly composed of retail properties and flat blocks, but also contains a garage, a school, a convent and a church. Building height varies between two and eight floors. The building line jumps in and out several times and is interrupted by squares and lawns.

The scale and statute of this road (a main access road) make for extremely complex origins and history. The following is a succinct summary of events happening in the last few decades. Older photographs clearly show that up until the first half of the twentieth century the road consisted mainly of terraced houses with two to four floors and retail spaces on the ground floor. A map dated 1912 shows the council's ambition to urbanise the road's statute: the road needs to be widened to accommodate the increasing traffic and the buildings need to become higher to respond to an increased demand for housing. We start from the hypothesis that the council could not just expropriate properties across the board and therefore needed to negotiate with many owners to implement its plans, which has resulted in a fragmented outcome in terms of types of construction, program, shapes, building line etcetera.

Presumably, the interaction between the actors developed along the following lines: the council imposed the two general rules and private builders complied – until the council adapted its vision on the road's statute. In order to convince private builders to accommodate this new vision, however, the council was forced to make concessions to suit their respective needs.

Each of these cases can be read as a generic script for interactions. In Case 1, for instance, all private builders comply with the framework imposed by the authorities. In Case 2, not all private builders comply entirely with the framework, but all do remain within the framework. In Case 3, private builders negotiate with the authorities and succeed in having the framework adapted. Finally, in case 4, the authorities themselves introduce a new framework. Case 1 is the most common scenario in Antwerp, but the other scripts also occur more than once, albeit sporadically. Cases 2, 3 and 4 give the impression of a spatially fragmented environment.

6. Urban improvisations

What is striking in the cases is that the spatial (planning) framework is constantly changing and that both authorities and private builders can initiate changes. Changes can be made directly through negotiations or indirectly when private builders decide not to comply with the rules or to explicitly break them. Whatever the case, the change always impacts the spatial processes which structure the cityscape.

A wide array of practices can be included under the heading of spatial planning, ranging from the development of an overall framework which private builders comply with on one end to the complete absence of such a framework and total freedom of action for private builders on the other extreme. Case 1 falls in the first category, while the other three occupy various positions between both extremes: the authorities have designed a spatial framework, but this is not unconditionally applied. Private builders have the ability to directly or indirectly modify it. This practice strongly reminds us of improvisation.

In jazz, improvisation is a term which indicates musicians interacting with each other, in a game of reaction and anticipation which does not follow a written script or score. A session starts off on an established *theme, rhythm* or *chorus.* Then one musician plays a solo part, after which the musician may return to the agreed theme and be joined by the others, or alternatively another musician may continue with a solo part inspired either by the first solo or by the established theme.

Improvisation is about interaction in the sense of people reacting to each other, but not about interaction in the sense of cooperation to create one coherent product with a consistent quality throughout. After all, players may deliberately work against each other, trick each other, choose to create their own story while disregarding the others etcetera, all while remaining guided by the established overall theme.

Santi and Illetterati (2010) distinguish three defining characteristics of improvisation. The first characteristic is the centrality of transgression (or transcendence) of the rules. The authors consider rules not merely as a prerequisite for improvisation but as the actual core around which an improvised session is constructed. Thus, a solo player will time and again challenge the established theme – turn it around, reduce it to its bare minimum etcetera – but nevertheless always return to it. Santi therefore states that the superficially opposed concepts of ‘rules’ and ‘freedom’ are in fact inextricably interlinked in improvisation.

A second characteristic is recognisability or familiarity. Improvisation is about interaction. According to Santi, this implies that each solo part must on the one hand be sufficiently surprising and innovative to challenge the other players, but simultaneously sufficiently recognisable for the other musicians to play along to it.

The third feature of improvisation is craftsmanship. Santi states that the musicians participating in an improvisation session on the one hand learn thanks to the repetitive character, but simultaneously also teach by time and again re-interpreting the existing elements. This reinterpretation presupposes craftsmanship: refining and bending the rules while preserving their identity (‘crafting and scaffolding’). Again, Santi affirms that ‘technique’ (i.e. rules) and ‘spontaneity’ (i.e. freedom) enter into a ‘mutual and inextricable relationship’.

Improvisation therefore requires training and perspicacity, insight both into one’s own playing and into that of the others. Today we observe that classically trained musicians have all but lost the ability to improvise, even though this ability has historically been an integral part of musical knowledge and musical schooling programs.

Finally, it is important to note that within jazz, there are different degrees of improvisation, ranging form one improvised solo part accompanied by the orchestra all the way to free jazz where nothing is agreed on beforehand and the process of action and reaction itself is the guiding theme.

The interactive processes as shown in the case studies could be rewritten as sessions of jazz improvisation: the authorities sketch a planning framework (cf. theme, rhythm or chorus). A private builder then initiates construction (cf. plays a solo part), whereby s/he can either stay within the framework, ignore it or modify it. Next, the authorities can decide either to allow the construction, to forbid it or just to tolerate it – or even to adapt the existing framework (cf. solo part). Then the private builder’s turn comes again. As in jazz improvisation the actors react to each other’s contributions without following a blueprint. Neither the resulting spatial product nor the evolution of the process are known beforehand.

In order to establish whether interactive processes can really be labelled ‘urban improvisations’, it is interesting to check whether they present all three characteristics identified by Santi and Illetterati.

The first characteristic focuses on the importance of rules as a precondition and calibration point for improvisation. In Case 1 - Milisstraat – Oedenkovenstraat – all private builders’ initiatives comply with the planning framework. The framework, however, is sufficiently open-ended to allow for a large amount of personalisation. As a result, each housing unit is different from the next one. In the other three cases, the planning framework is modified in the course of the process, either at the request of private builders or in response to their efforts. All cases explore or transgress the planning framework and thus comply with the first characteristic. However, the motives for the explorations and transgressions differ from those playing in jazz improvisation, in which each musician has the same motive: to collectively create a piece of music and arouse emotions. In urban improvisation, the different actors’ motives rarely coincide: private builders tend to act in their respective self-interest, while the authorities strive to serve the common interest.

The second characteristic stresses the balance between innovation and familiarity. Unlike what is the case in jazz improvisation, however, inspiring one’s fellow actors is not the main objective of builders - unless maybe in the indirect sense of offering an innovative solution to a specific problem. On the contrary, initiatives which are too innovative might cause other actors to quit, which is what happened in Case 4 - the Grote Steenweg – where broadening the road required expropriation and one private owner refused to sell his property, which forced the authorities to revise the planning framework.

The third property – craftsmanship – indicates a technique to refine and bend the rules while preserving the overall identity. The first two cases comply with this requirement: interventions do not transcend the scale of the individual plot. The perception of these streets has therefore not changed in any substantial way in the course of recent history. The other two cases, however, are harder to fit into this profile: while initiatives are also implemented incrementally, the difference between the various steps is larger. In these cases, the perception of the whole has changed to a considerable degree.

Based on these three properties, Santi and Illetterati state that jazz improvisation requires training and insight. Here, we discover a considerable difference with urban improvisation. In the case studies, actors who display spatial knowledge are rare. There is no tradition of improvisation. Another great difference is the collaboration between the actors, which is usually limited to a single construction project, after which the player disappears and a new one shows up. After all, most people only

construct one house during their lifetime and even those who build more than once are unlikely to do so in the same street. Urban improvisation sessions, then, continually change players.

Finally, as in jazz, we can distinguish various forms of urban improvisation, including those which stay within the prescribed framework and those in which the framework itself evolves. Moreover, the degree of open-endedness of the framework may vary widely. The result is an array of urban improvisations ranging from those evolving within a strictly defined framework on one end to pure free-jazz on the other extreme.

Despite the differences, however, there are sufficient resemblances to label the cases as ‘urban improvisations’. Rowan (2004) even goes so far as to state that spatial structuring cannot exist without improvisation. Thus, planning processes may start with proposals offered by a planner, but that is only the start of a long and unpredictable trajectory in which a range of actors evaluate and refine these proposals time and again – exactly as happens in a jazz session.

7. Conclusion: the quest for quality

In disciplines of art such as music, theatre or comedy, improvisation implies quality. In many other disciplines, however, improvisation is associated by many with tinkering, provisional solutions and cut-and-paste operations: in other words, it generates negative connotations. This is certainly so in the discipline of spatial planning.

However, the case studies show that urban improvisations can definitely result in (spatial) quality. On the other hand, quality is a very subjective concept. In the framework of this study, spatial quality is judged by the degree of spatial diversity and the presence of spaces for (alternative forms of) collective experiences.

In Case 1 - Milisstraat – Oedenkovenstraat – spatial diversity is limited to use of materials, building height, window distribution, application of colour, … This allows for a personalisation of the design of one’s own house. Improvisation has not here resulted in special spaces for the collective.

In Case 2 – Bleekhofstraat – a wide diversity has been achieved with respect to plot size, program, construction type, orientation, use of materials, … This variety allows for multiple functionality (e.g. a building materials retailer, an art gallery, a supermarket, …), offers breathing space for small (often immigrant) start-ups, mixes different types of housing (terraced houses, flats, high-rises, lofts) and enables a school to be surrounded by green space in the city centre. However, in between these

are many unused properties and spaces and conflict situations. The various programs, despite resulting from pure self-interest, have nevertheless in an unplanned way created special spaces for collective use. Thus, the low walls surrounding the high-rises function as seats for parents waiting for their children to finish class, the gardens of the perpendicularly oriented residential buildings provide green space for their neighbours across the street and the larger plots also serve interesting semi-public functions.

Case 3 – Fruithoflaan – also offers a large diversity. Contrary to what is the case in the Bleekhofstraat, the actors here are not individual private builders but developers and contractors. Yet we find a strong coherence, partly because of the recent construction of the buildings, partly thanks to the guiding role of the local authorities and partly because all buildings have been constructed within a relatively short period of time. By adapting the planning framework, the council has managed to respond to an increasingly pressing demand for construction. The result has been a new spatial condition, a small self-contained city with semi-public (collective) spaces to suit inhabitants. Although the building types were new, they turned out to be very popular: most of the original occupants are still there today and the facilities have adapted to the inhabitants.

In Case 4 - the Grote Steenweg – we find an equally large diversity and here too, the actors are mostly developers. However, in this case we are dealing with isolated renovation projects spread out over a relatively long period of time, which has not provided much coherence and created quite some leftover spaces and conflicting situations. The number of special collective spaces is low.

Both the measure of diversity and the presence of alternative collective spaces are the direct result of urban improvisation. In all cases we studied, however, this improvisation has come about as an ad-hoc affair without any training or insight on the part of the actors. This has created diversity but also unnecessary conflicts, which could have been prevented by the establishment of a tradition of improvisation with its own language, tactics and strategies, a platform for the exchange of knowledge, …

Substantial research has been done into the role of private builders within the framework of spatial planning (cf. a.o. Healey, 2005; Boelens & Spit, 2006; Dell & Van Vugt, 2010). Less attention has been paid, however, to the role of both private builders and authorities in the interactive process and its impact on the built-up environment. Most studies, moreover, look only at the regional or urban scale and do not descend to the scale of actors, objectives, strategies and tactics (Weaver, 1948). Yet this is the exact scale on which improvisation in Flanders takes place between small entrepreneurs, individual private builders, on individual plots and allotments. A

tradition of improvisation will only succeed in taking hold if it focuses on filling both of these gaps.

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Track 6. Urban Change: Plans, Visions and Policies

Title: A Critical Analysis of the Concept of the World's Most Liveable City. Auckland: A Case Study

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Abstract:

This paper interrogates the relationship between the concept of 'utopian fantasies' and the desire of cities to become the world's most liveable. Why do political figures paint a picture of a utopian vision for their city? This thesis challenges the reader to understand the 'fantasy' concept of the world's most liveable city.

It is argued that the global, capitalist order is producing networks of knowledge which have the same universal discourse for all western cities. Therefore, it is argued that the pursuit of the world's most liveable city is a 'sublime object of ideology' (Zizek, 1989, 1999). This is a concept which suggests that ideologies such as creating the world's most liveable city are beyond objective intelligibility. This builds on Kant's 'Critique of Judgment' written in 1790 (Kant in Bernard, 1951) which defines ideologies as not having limitations in terms of how majestic they can be, as opposed to something that has boundaries. However, this paper argues that the perception that something can be so majestic is a fallacy, because the most liveable city will mean different things to different people and will be unachievable in practice.

In the case of Auckland, the Mayor has set the Council the challenge of being recognised as the world's most liveable city. Liveability is measured by surveys such as that carried out by organisations such as Mercers. The argument advanced in this thesis, is that the Mayor's vision is a Lacanian 'utopian fantasy'. In other words, it is an unattainable, ideological, fantasy construct (Gunder and Hillier, 2009), which will not contribute towards recognising the diversity and the needs of the people of Auckland, particularly with regard to affordable living.

But is there a requirement for such a fantasy construct? On the one hand, a city can follow a vision to provide inspiration and increased certainty to residents. On the other, it can provide false hope and only serve to benefit certain sections of the community; for example the elites who dominate the overarching ideology, in this instance support for the neoliberal global order.

This paper proceeds to explore the dynamics of pursuing the vision for Auckland in three steps. One; to examine the underlying global neoliberal political order that has contributed to the push for cities to compete in terms of liveability. Two; to explore theories on creating a successful city, examining the criterion that organisations such as Mercers rely on when assessing liveability, and three; to understand the reasoning behind the pursuit of the world's most liveable city in terms of Lacan's concept of 'utopian fantasies' (1994).

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Key Words: Vision, Liveability, Utopian, Fantasy

A Critical Analysis of the Concept of the World's Most Liveable City. Auckland: A Case Study

Introduction

The concept of a city that is the 'world's most liveable' is perpetuated by surveys such as The Economist Intelligence Unit Survey and Mercers' liveability surveys. Melbourne was voted as the world's most liveable city according to the Economist in 2011 (www.economist.com), and Vienna was Mercers' choice (www.mercer.com). Western cities generally aspire to achieve this accolade. But what makes a city liveable? And is this title a positive mandate for a city? The Auckland Council's mayor is advocating this for his city (Auckland Council, September 2011), but is it something that should be supported?

The main problem with this concept is the definition of liveability. It is clear from the above that two surveys can have totally different outcomes.

Oscar Wilde (Wilde, 1891, p28) famously stated "A map of the world which does not include Utopia is not even worth glancing at, for it leaves out the country at which humanity is always landing". Wilde believed that the human spirit could only prosper and blossom in a utopian world. The writer opines that certain politicians certainly do try to land at this Utopia. This is clearly the intention of Auckland's Mayor in his pursuit of the world's most liveable city.

But where does the pursuit of this utopia come from? What are the underlying ideologies of the day? And is the model of the world's most liveable city worth pursuing?

The Underlying Ideology

Since the 1980s, and the advent of neoliberal politics, attitudes towards government have began to change. 'Whereas government had often been looked to as a problem solver, it was now viewed as the problem (Chapin, 2012, p.10). The role of the public sector was seen to be inefficient, unable to sustain social welfare programmes, and the private sector and the market economy was viewed as the means to improve the economic situation. Capitalism and neoliberalism became the dominant ideology. As Jameson (Jameson, 2003, p.73) states 'it is easier to imagine the end of the world than to imagine the end of capitalism'. Within the current, underlying neoliberal ideology, political agendas are embedded. In the case of Auckland, the Mayor's agenda is to pursue the accolade of becoming the world's most liveable city.

The writer opines that the focus of pursuing the world's most liveable city seems to be on capital accumulation, and not on affordable living, and equal access to services, for all residents. It is important to highlight the inadequacies of the neoliberal mantra of competing for most liveable city status, because it can lead to a focus away from providing affordable living options for those of lower socio-economic deciles. It can lead to a lack of social justice, and can also mislead people into believing that the pursuit of the vision of the world's most

liveable city will benefit them socially and economically. Individuals are susceptible to such visions.

This paper will argue that the concept of the world's most liveable city is a Lacanian 'utopian fantasy' and that we accept these fantasies to obscure emptiness, or a lack of certainty within ourselves (Lacan, 1994). The reader is therefore challenged to deconstruct the concept of the world's most liveable city, within the context of the dominant neoliberal ideology. This paper will analyse the concept of creating a liveable city, and will argue that this concept is pernicious. In particular, the criteria used to measure the attributes of a 'liveable' city by Mercers and The Economist will be discussed. This analysis will attempt to determine whether these criteria offer a realistic indication of a city's liveability in the case of all socio-economic groups. The paper will then develop an argument to understand Auckland's pursuit of the world's most liveable city accolade in the context of Lacan's concept of 'utopian fantasies'. The research will also look at the work of Kant, Zizek and Gunder and Hillier (2009) in terms of the possible philosophical and psychological reasons for cities pursuing these fantasies, and why residents will support this objective. The theories analysed, are Kant's 'Critique of Judgement' (In Bernard, 1951), Lacan's (1994) concept of 'utopian fantasies', and Zizek's (1989) 'sublime object of ideology'. Finally, the paper will look at the city of Auckland as a case study.

Measuring Liveability

According to the annual Mercers' World's Most Liveable City survey, a city must score highly in terms of safety, education, hygiene, healthcare, recreation, political-economic stability and public transportation (www.mercer.com). The Economist survey (www.economist.com) concentrates on very similar criteria, but also focuses on the availability of goods and services, as well as business start ups. The cities scoring highly tend to be English speaking, the exception to this being the Swiss cities of Zurich and Geneva and the Austrian city of Vienna. These cities are mid-sized, have relatively low populations, and are wealthier cities.

In the writer's view the criteria do not adequately address matters such as affordable housing and wider equality issues. The emphasis is on social stability, low crime rates, effective infrastructure, and enabling an economic environment conducive to business start ups. While these criteria have there place, it is argued, in accordance with the work of John Forester (Forester, 1989, p.4) that 'publicly orientated planners need to worry…about decent outcomes; they need to worry not only about satisfied customers but also about the food, housing and jobs the perfect market promises and the actual market fails to provide'.

The cities that scored highly in 2011 were as follows:-

Table 1 – The Economist 2011 Survey

City	Ranking
Melbourne	**1**

Vienna	**2**
Vancouver	**3**

■ **Auckland was number 10**

Table 2 – Mercers 2011 Survey

City	Ranking
Vienna	**1**
Zurich	**2**
Auckland	**3**

Vancouver had consistently scored number one in the Economist survey over the past nine years, but it has been suggested that the riots that ensued after an ice hockey game in June 2011 (www.citymayors.com) led to its score on social stability being reduced, and therefore it lost out to Melbourne for the top spot. Therefore, one incident can reduce the ranking of a city, which makes the ratings seem quite fickle.

Auckland was scored as number 10 in the Economist survey and number 3 in the Mercers.

Cost of Living

Affordable living or the 'cost of living' is taken into consideration by the Mercers survey but only in the context of a US expatriates perception of affordability. The Mercers cost of living survey examines the relative strength or weakness of a given currency against the US dollar, and compares price movements of certain items over the ensuing twelve months to a New York guideline (www.mercer.com). This, the writer argues, offers a much skewed perception of the cost of living in a given city. It would be preferable to compare the price of goods to the average salary in the country in question and calculate the average percentage of an individual's income which is spent on housing costs, rather than using a US expatriate baseline. This would provide a better idea of the liveability for those actually living in the city. Is this an indication, that despite the economic crisis in the US, it is still judged to be the benchmark against which other economies should be compared? It is argued that the US neoliberal model is the dominant underlying ideology of all western states. Subsequently, all cities are aiming to produce the same outcomes in terms of high GDP and economic growth. Planning theorists such as Susan Fainstein (2010) argue that the underlying global order is producing cities which are becoming identical. The writer opines that the global, capitalist order is producing networks of knowledge which have the universal discourse for all western cities. The lack of ideological difference in recent decades, according to Mishra, has been due to 'the collapse of the socialist alternative, the globalisation of the economy and the relative decline of the nation state' (Mishra, 1999, p.1), and it is argued that this has led to the rise of the post-political planning agenda.

The Post-Political

The post-political, as some commentators refer, seems to the writer to be a means for political figureheads struggling to make sense of the modern world, and trying to cling to an element of social justice, to modernise their political stance towards a capitalist standpoint, while appearing to hold true to their values. This post-political view, espoused by writers such as Ranciere (2006) has signalled the end of any truly democratic movements and has introduced post-democratic governmental techniques, which have reduced politics to mere social administration rather than representative involvement in the future direction of a city.

The move away from socialism has increasingly meant that the few who have control of capital have unfair access to positions of power and this 'spells a systematic distortion of the possibilities of all affected people coming to terms with events shaping their lives' (Gaventa, 1980, p.36). It is argued that capital controls the ideology of the day.

The Creative Class

Today, cities are the world are competing to be the most liveable, and they are also competing to attract key knowledge workers, or the 'creative class' as Richard Florida (Florida, 2002, p.80) refers to them, to generate wealth creation. Cities compete in this endeavour, and therefore wish to be viewed highly in terms of liveability. This, it appears, is a reaction to the uncertainty created by the neoliberal order. Due to the fact that 'multinationals are defined as being footloose, having the choice to move around the world (globalisation)…. Seems to present a policy framework of passivity, fear and insecurity' (UNCTAD, 2001, p.4).

Therefore, strategies to attract corporations and skilled migrants are high on the political agenda. But what makes a city liveable and attractive to these businesses and individuals? And, more importantly, how are existing residents, particularly those of lower socio-economic status fairing when it comes to the pursuit of these neoliberal ideologies?

Utopian Fantasies

The writer suggests that the most 'liveable' city, without equality, is surely a fallacy, or what Lacan (1994) and other writers would term a 'utopian fantasy'. Zizek would describe such a utopian fantasy as a 'sublime object of ideology' (Zizek, 1989). This is a concept which suggests that ideologies such as creating the world's most liveable city are beyond objective intelligibility. This builds on Kant's 'Critique of Judgement', written in 1790, as translated in 1951 by Bernard, which defines ideologies as not having limitations in terms of majestic they can be, as opposed to something that has boundaries. The translation of Kant's work states that 'the sublime….is associated with limitlessness' (Kant in Bernard, 1951, p.90). He also speaks of an individual's addiction or 'Eigensucht' when believing in an ideal. The writer argues that the perception that something can be so majestic is a fallacy, because the most liveable city will mean different things to different people, and be unachievable in practice. It

is argued by Lacan (1994) and Zizek (1989) that we accept utopian fantasies because they serve to obscure emptiness, or a lack of certainty within us. Zizek has built on this, in his 2006 work, and infers that we all have an inherent need to make sense of the world. He states that we try to turn "disorder into order" into a "new harmony" (Zizek, 2006, p.37).

As Stravrakakis suggests, a utopian fantasy allows us to experience a 'promise, embodied in the object-cause of desire' (Stravrakakis, 2007, p.78). This promise helps to stave off feelings of emptiness associated with Anthony Giddens' (1991) concept of 'ontological security', which is a 'desire to be safe, secure and to have control over their environment' (Gunder and Hillier, 2009, p.23). Lacan takes this concept one step further and argues that we are trying to replicate the maternal comfort that we experienced as a child, and are trying to recreate this by believing that the state has our best interests at heart and will strive to meet our needs (Lacan, 1994). Lavin presupposes that human nature is fearful of the future and states that 'our most primal fear is the unknown; of this Thing that haunts us' (Lavin, 2006, p.256). Therefore, politicians attempt to offer a guiding vision for their communities in order to provide some certainty. But does this provide residents with a false sense of security? The most liveable city is going to be the most liveable for whom? Whose interests will it serve? One utopian fantasy that individuals hold true is that the state 'can be relied on to protect us' (Gunder and Hillier, 2009, p.43). This concept can be pernicious, argues the writer. The current neoliberal global ideology which western cities pursue is based on capital accumulation and not economic redistribution. Therefore, the rich will get richer, and the poor, poorer.

Empty Signifiers

It could be said that the pursuit of liveability is a false promise or an 'empty signifier' as referred to by Laclau (Laclau, 1996, p.44). An empty signifier is a concept that is difficult to define, is not easily interpreted, and has no real meaning. Indeed, the concept of the world's most liveable city will mean different things to different people, and therefore could be described as an empty signifier. Gunder and Hillier discuss planning concepts as empty signifiers in their work *Planning in Ten Words or Less.* The 'contestable words' (Gunder and Hillier, 2009, p.17) are 'certainty, the good, risk, growth, globalisation, multiculturalism, sustainability, responsibility, rationality and planning itself'.

This paper would argue that 'liveability' could be added to this list as the eleventh key empty signifier in planning terms. Gunder and Hillier state:

> "spatial planning practice performs a dialogue between planning and urban governance that is full of signifying terms and labelling buzzwords, or 'weasel words' as Watson (2004) terms them, many of which imply innovative means to achieve desired states of urban well-being, such as deploying 'smart growth', 'new urbanism' or 'bohemian indexes' to plan for 'sustainable', 'globally competitive', and 'liveable' cities. We (Gunder and Hillier) argue that these terms, and many others, are mere 'empty signifiers', meaning everything and nothing – comfort terms – all things to all people. These desirous states of living and being, which most of us would aspire

towards, and accordingly, attempt to shape our cities to achieve, are often illusions, attained, at best, with limited success" (Gunder and Hillier, 2009, p.1).

Auckland: A Case Study

The Auckland Mayor, Len Brown, is pursuing both a utopian and ideological vision in the pursuit of the world's most liveable city for Auckland. The vision is set out as follows:

Auckland: The World's Most Liveable City – A city where quality of life means every citizen has the opportunity to reach their potential (Auckland Plan Discussion Document, March 2011, p.56)

This vision, which sounds to be egalitarian on the surface, could be viewed as a tool to gain support for his political term. The pursuit of a popular vision in the Auckland Council planning policy documentation will create a sentiment that individuals cannot argue with. It is argued that pursuing the accolade of the world's most liveable city through Auckland's planning policy documents is meaningless, as what citizen wishes to live in the world's most unliveable city. This vision therefore provides Auckland residents with a common, utopian goal.

The future of Auckland, following the amalgamation of the District Councils and the Regional Council, is unknown, but the pursuit of the world's most liveable city gives residents something to aim for, for the time being, anyway. It could be argued through the work of Mouffe and Laclau and their assessment of Gramsci's ideology that this vision would be subject to perpetual change. Mouffe and Laclau's analysis of Gramsci's concept of "the materiality of ideology', specifically the fact that ideology is 'an organic and rational whole, embodied in institutions and apparatuses' (Mouffe and Laclau, 1985, p67) is subject to Gramsci's conclusion that 'nothing in history, in social life, nothing is fixed, rigid or definitive. And nothing ever will be' (Gramsci in Mouffe and Laclau, 1985, p.31). Therefore, this vision could only be applicable to the Mayor's term in office. Another politician might favour a different direction for Auckland in future. Also, expanding on comments from Beattie (2010) shouldn't Auckland Council be concentrating on implementing its legacy visions and strategies? It is argued that it would be preferable to work with the current policy structure and implement it well, rather than creating a new policy structure. As Beattie (Beattie, 2010, p.3) states 'the biggest problem facing urban planning is not a need to create even more plans but our inability to implement the existing plans'.

The writer would like to point out potential pitfalls, incorporated in the emerging planning policy documentation, which in the writer's view are premised on fallacies. These relate to economic growth and housing projections and the affordable housing issue.

Results

The draft Auckland Plan sets an 'annual real GDP increase of between 5.1% and 6.2%' (Draft Auckland Plan, September 2011, p.80). This is when real growth for Auckland, over the past

two years, stands at around 1%. In 2010, growth of 0.93% was recorded on the Council's website (www.aucklandcity.govt.nz).

Therefore, this target would appear to be unachievable in the current economic climate, and its inclusion in the draft plan could be viewed as a way to mask the economic reality. Economic growth of 1% per annum would be more realistic. In terms of housing projections the draft plan proposes to provide 300,000 new dwellings, most within the existing metropolitan urban limit. The draft proposes to accommodate these dwellings through the intensification of only 6,000 hectares of Greenfield land (Draft Auckland Plan, September 2011, p.31), 70% within the metropolitan urban limit and 30% outside this boundary. This, in the writer's view, appears to be the utilisation of very little Greenfield land unless all of these households reside in apartments. The following table gives an idea of how the tenure of dwellings could be proportioned:-

Table 3 – Number of Hectares of Land Required to Accommodate Housing Projections in Draft Auckland Plan

Minimum Lot Size/Housing Type	Hectares Required (Ha)
1,000m2 lot size/low intensity suburban living – detached housing 10 dwellings per hectare	30,000ha
667m2 lot size/medium intensity suburban living – detached housing 15 dwellings per hectare	20,000ha
400m2 lot size/medium intensity city living – townhouses 25 dwellings per hectare	12,000ha
200m2 lot size/mid-rise apartment city living 50 dwellings per hectare	6,000ha
100m2 lot size/high-rise apartment city living 100 dwellings per hectare	3,000ha

The provision of mid-rise apartment living will do little to offer choice to residents and affordable, family housing, unless the Council adopts affordable housing policies such as those utilised in the UK and other parts of Europe. The draft Auckland Plan recognises that

there are ‘pockets of extreme deprivation’ (Draft Auckland Plan, September 2011, p.7) and goes on to state that ‘housing has become increasingly unaffordable, and many Aucklanders face significant housing stress’ (Draft Auckland Plan, September 2011, p.13). However, it is argued that the draft plan has advocated little to try to alleviate this situation.

The affordable housing problem is of high magnitude, and has been recognised by central government. The New Zealand Productivity Commission in a draft report, dated December 2011, found that house prices in Auckland were considered higher than the national average. The report states that ‘the distribution of house prices in Auckland vis-à-vis the rest of the country increased by over 260% in real terms between 1995 and 2006’ (New Zealand Productivity Commission, 2011, p.1).

The average house price in Auckland is $490,000 (taken from www.crockers.co.nz) and the national New Zealand median price index is $350,000 (taken from www.globalpropertyguide.com).

The Commission are currently undertaking an inquiry into housing affordability in New Zealand, so clearly there is a real issue that needs to be addressed. It is suggested that if Auckland is to become the world’s most liveable city, then it will require some decisive action in terms of future planning policy for affordable housing.

Summary of Results

This paper looked at the underlying neoliberal global order which supports the concept of the World’s Most Liveable City; the leading liveability surveys produced by Mercers and The Economist in 2011; and post-political theories such as Lacan’s ‘utopian fantasies’ and Laclau’s ‘empty signifiers’. The examination of the concept of the World’s Most Liveable City has found it to be a fallacy, lacking in substance. Each survey of liveability will produce a different result dependent on the assessment criteria applied. This neoliberal spatial governance model, which is being adopted by western cities, is premised on over-optimistic assumptions. This is evident in the analysis of Auckland, and in particular the emerging Council spatial plan. The writer opines that Auckland cannot be the World’s Most Liveable City if it is deficient in the provision of housing stock and has set unrealistic growth projections that the city cannot achieve.

Conclusions

In conclusion, this paper has found that the pursuit of the World’s Most Liveable City is a result of the dominance of the underlying neoliberal global order and its emphasis on wealth creation. It is a political manoeuvre to attract business and skilled migrants.

The leading liveability surveys, the Mercers and The Economist assessments, generate different results depending on the given assessment criteria. Therefore, this suggests that there is no accurate assessment of liveability.

It is therefore considered that the pursuit of the world's most liveable city is both a Lacanian, utopian fantasy construct and a Laclauian empty signifier, with no real meaning, which provides residents with false hope for the future of their city. In the case of Auckland, the Mayor's vision and the planning policy direction which the Council are pursuing through the Auckland Plan seem very ambitious, and it is considered, by the writer, that Auckland Council should adopt a more socially just vision which incorporates more realistic objectives such as more achievable economic growth and housing projections.

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PLANNING FOR CERTAINTY IN UNCERTAIN TIMES – THE STANDARDISED LOCAL PLANNING SYSTEM IN NEW SOUTH WALES, AUSTRALIA

Abstract

In March 2006 the state of New South Wales (NSW) in Australia introduced a standardised or 'template' local plan (called the Standard Instrument Local Environmental Plan) that all of its 152 local councils must now use to prepare a new local plan for their local government area. Councils were given 2, 3 or 5 years to complete new plans, depending on their strategic importance and the age of their existing planning controls – meaning that all councils were to have a new plan in place by March 2011.

Implementation of this initiative came at a time when expectations about what local plans can and should deliver were escalating, while the worsening global financial situation has meant that most governments have reduced resources to allocate to good planning that will achieve liveable, sustainable communities, and to fund the infrastructure necessary to support them.

A new state government was elected in NSW in March 2011, on a platform of returning local planning powers and decision making to local governments. Concurrently the Australian Federal Government released *"Our Cities, Our Future: A national urban policy for a productive and liveable future"*. This policy includes a set of 9 criteria for future strategic planning of cities. Federal government funding for major state infrastructure projects is linked to providing evidence that planning systems meet these criteria.

There has been resistance from local governments to implementation of the standard local plan and progress has been slow. The 2011 target for completion was not met, with only 31 councils having competed plans by March of that year. The new plans have been unpopular with local government, communities and industry/development groups alike. The Federal government continues to mark NSW poorly for its planning system as a whole, meaning that funding for important infrastructure projects is not forthcoming. In the meantime, Australia's population continues to grow rapidly, while delivery of housing in NSW falls short of targets.

This paper describes the reasons behind introduction of a standardised local plan in NSW, the measures successive governments have put in place to accelerate its implementation, and considers why, to large extent, those measures have been unsuccessful. In doing so the relationship between central control and local governments is discussed, in the NSW context. It provides a practitioner's point of view on the issues surrounding introduction of a standardised system. The role of public consultation in shaping public policy is discussed and the need for different approaches in NSW is suggested.

1. Introduction

Planning and plan-making in New South Wales (NSW) Australia is, as it is in many places around the world, a contentious issue. Expectations about what planning systems can deliver, socially, environmentally and economically speaking, are increasing.

This paper tells the story of an attempt to standardise local plan-making in NSW over the last 6 years. It describes the reasons behind introduction of a standard local planning instrument, looks at the measures successive governments have put in place to accelerate its implementation, and discusses why, to large extent, those measures have been unsuccessful. In doing so the relationship between central control and local governments is discussed, particularly the tensions created by state imperatives to increase housing supply and densities while also purporting to hand planning powers back to councils

It provides a practitioner's point of view on the issues surrounding introduction of a standardised plan-making system. The role of public consultation in shaping public policy is discussed and the need for different approaches in NSW is suggested.

2. Brief overview of the political and planning system in Australia

2.1 Australian Federal Government

Australia has a three-tier system of government comprising federal, state and local jurisdictions.

Historically the federal government has had little influence on the states' planning systems. Constitutionally, planning is a matter for the states. In recent years this has changed significantly with the federal government taking much greater interest in urban planning matters. To quote its 2011 national urban policy, *Our Cities, Our Future*:

"The Australian Government has a role in planning for, and delivering, an urban Australia that is more productive, sustainable and liveable. The development and management of our cities affects national prosperity and the wellbeing of all Australians, no matter where they live". (Department of Infrastructure and Transport, 2011).

It is worth noting here that 75% of Australians live in 18 major cities with populations over 100,000. The federal government's interest is in a more productive Australia that can compete in the global economy, and the major cities generate approximately 80% of Australia's gross domestic product.

The national urban policy includes an objective and 9 criteria for the future strategic planning of cities. State governments are 'scored' on the ability of their plans and

planning systems to meet these criteria. Federal government funding for major state infrastructure projects is linked to providing evidence that planning systems meet the 9 criteria, and are integrated across land-use and transport planning, economic and infrastructure development, environmental assessment and urban development.

Performance is also monitored in terms of delivery – specifically delivery of measures related to 'liveability' of cities.

2.2 State and local government in New South Wales

Each of the 7 states and territories has its own system of local government, and its own planning system – and these vary markedly. New South Wales (NSW) is the most populous state and its capital is Sydney, the largest city in Australia.

The population of NSW is approximately 7.5 million people. It has 152 local government areas, each run by an elected local council. Sydney, with a population of approximately 4.6 million people, has 43 separate local government areas, each with its own local planning scheme controlling development. Sydney's population is forecast to grow to 7 million people by 2056. Cities in Australia are characterised by low-density development, typically spread over large areas (Kelly, 2010, p. 8).

Land use planning in NSW is governed principally by one piece of state legislation, the *Environmental Planning and Assessment Act, 1979* (the Act). While ground-breaking when enacted, embedding the principles of environmental assessment and protection into planning legislation in the state for the first time, it has now been amended and augmented so many times that it is considered by many to be overly complex and skewed too much towards development assessment or 'statutory' planning and processes rather than strategic planning. The new state government was elected on a pledge of a complete review of the Act, and this is underway.

The Act provides that the Minster for Planning and Infrastructure (the Minister) may make environmental planning instruments to control development – and broadly speaking these can be state environmental planning policies (SEPPs) or local environmental plans (known as LEPs in NSW but hereafter referred to as 'local plans'). Importantly, while only the Minister can approve local plans, they are developed by local councils in consultation with their communities.

Local plans in NSW are generally structured around a traditional system of 'zoning' land for different purposes, with land use tables setting out what types of development are permissible without approval, permissible with approval, or prohibited in each zone. While state governments over the years have issued guidance about how local plans should be prepared and what content they should have, it left the drafting of plans largely up to councils until 2006.

In summary, the planning system in Australia has been described as having "a (federal) level that has much direct influence – including raising the bulk of the

money – but is only occasionally involved, a state level which is the main provider of planning and services, and a highly fragmented local level" (Kelly, 2010, p. 12). It is this fragmented system of local government, and the related fragmentation of planning controls over major cities like Sydney, that lead the NSW state government to develop and implement a standardised local environmental plan.

3. A standardised local plan for NSW

In March 2006, following a series of Ministerial taskforces looking at ways of improving the NSW planning system, the state government introduced a 'standard instrument local environmental plan'.

The standard local plan was introduced through numerous changes to the Act, including a requirement that the Minister can not approve a local plan that is 'inconsistent' with the prescribed standard plan. It is a very formal, legal and mandatory system that for the first time in NSW sets out the structure and content of local plans. The State government and local governments disagree about what constitutes an "inconsistency".

3.1 Why introduce a standardised local plan?

There are 152 local government areas in NSW, 43 of these in metropolitan Sydney. At the time of introduction of the standard local plan, these local government areas had between them approximately 5500 local planning instruments in place (Department of Planning, 2008). Within these 5500 instruments were:

- more than 3100 different land use zones; and
- some 1700 land use definitions. There were, for example, multiple definitions of 'gross floor area', 'building height' and the like.

This made it very difficult, even within each local government area, to determine exactly what planning controls applied to an individual parcel of land. From the developers' point of view, there were vast differences between local government areas. With different development definitions and different land use zones from one suburb to the next in Sydney, it became a complicated and costly exercise to determine if a development was permissible, let alone what development standards and controls applied to it.

Many of the existing planning schemes were very old – sometimes 30 years or more old - and were in serious need of replacement.

The intention was to introduce a consistent, modern and transparent local planning system that cut red tape, provided certainty and clarity for all stakeholders, and reduced the time and cost involved in preparing and assessing development applications.

The standard plan is a template that includes:

- a standard structure to allow ease of navigation through the plan;
- 35 standard land use zones including residential, business, industrial and environmental zones, with some land uses mandated as being permissible or prohibited by the state;
- a dictionary of standard land use definitions that every council must use in its plan;
- compulsory and optional provisions dealing with a range of matters. For example, the state government decided that development standards such as allotment size, height of buildings and floor space ratio were so important that they should be included in the statutory plan rather than in other council policies;
- electronic maps. The standard plan is map based, with land use zones and development standards such as lot size, building height and floor space ratio mapped in accordance with standard technical guidelines. The maps form part of the plan that is approved by the Minister and they appear with the plan on the NSW Legislation web page, which displays all current planning instruments. As each plan is made, a state-wide data base of planning information is being developed. This is a significant benefit of the program – publicly accessible maps showing all the local planning controls, freely available. This aspect will also assist in the government further developing the concept of 'e-planning' across NSW – including the electronic lodging and processing of development applications.

Councils can add general aims and zone objectives to the plan, as well as 'local provisions' to address local issues - but they claim the state limits their ability to do so. They can also tailor the land use tables for each zone, to suit local conditions, by adding the development types that will be permissible without consent, permissible with consent, or prohibited.

The standard local plan was to be the consistent delivery mechanism for good strategic planning in the state. In its February 2008 Fact Sheet on the benefits of the LEP template, the Department of Planning said:

"Councils can use an off-the-shelf, ready-made template when creating new plans, rather than having to draft plans from scratch. This means they will have more resources available to concentrate on developing long-term planning policies for their areas." (Department of Planning, 2008).

3.2 How far have we got?

Progress has been slow. In March 2009, 2 years after commencement of the program, and when 92 of the 152 plans should have been completed, only 4 were finalised. In March 2011, when all 152 local plans were scheduled for completion, only 31 were done.

At the time of writing, in May 2012, 58 have been finalised. A further 64 plans have been given approval, from the Department of Planning and Infrastructure, to go to public consultation. So, while a lot of work has been done, the government's completion targets have not nearly been met, and the standard local plan program remains a point of tension and disagreement between the NSW State Government and local governments across the state. Some of the reasons for this disagreement are discussed in subsequent sections of this paper.

Local government elections occur every 4 years in NSW. They are scheduled for September this year, and many councils will make no further decisions on local plans until new councillors are elected and established – meaning that many of the new, standardised local plans will now not be finalised until well into 2013 or later.

3.3 Attempts to accelerate the program

Successive state governments have seen the standardised local plan program as an important initiative to reduce red tape for developers and introduce modern, transparent controls that will be easily understood and will stimulate economic growth in NSW. Australia is one of the few OECD countries with both a rapidly increasing population and a significant housing shortage (Kelly, 2011). NSW and Sydney in particular, has a problem with a lack of housing commencements compared to the rest of Australia.

This is despite a large amount of land being identified and rezoned by the Department of Planning and Infrastructure in two major growth centres on the outskirts of the city, and despite dwelling targets being set for each local government area in Sydney through the *Metropolitan Plan for Sydney 2036* (Department of Planning 2010) and its related subregional strategies.

To attempt to accelerate finalisation of new local plans, the government has provided additional funding to the Department of Planning and Infrastructure ($2.9 million AUD over 2 years) to facilitate the program, including formation of a 'flying squad' of urban planners, lawyers and mapping experts to directly assist councils to draft plans, resolve policy and legal issues and prepare maps.

Further, the government has provided $10 million AUD over 2 years in grants to councils through the Local Environmental Plan Acceleration Fund. The grants have been provided principally to help councils draft their local plans, and sometimes to prepare strategic studies to underpin the plans, either through the councils hiring planning contractors or by direct provision of contractors to councils by the Department. 79 of the 152 NSW councils received grants between $5,600 and $274,400 AUD. Progress payments are linked to achievement of key milestones in the plan-making process, such as production of a draft plan for public consultation.

The flying squad concept works well and has resolved many issues. On the whole it would have to be said that, while the Local Environmental Plan Acceleration Fund has provided much needed resources to councils, it has not significantly fast-tracked plan production. Only 25% of funded councils have achieved their milestones, and the 2 year funding program has recently been extended for a further 12 months.

To address concerns that the standardised local plan does not provide sufficient flexibility for local government to address local issues in local plans, the Minister has established the Local Planning Panel. The Panel comprises 3 independently appointed local government planning directors, one of whom is the Chair, and 2 Department of Planning and Infrastructure representatives. I am one of the department's representatives. The Panel is currently touring the state listening to the views of councils and a wide range of other stakeholders to hear their concerns about the standard instrument local environmental plan. The views and suggestions for improvement are diverse. Local government has a different view, one could say different 'definitions', of certainty and flexibility to those of the development industry.

The recommendations of the Local Planning Panel for improvements to the local plan and its implementation are to be provided to the Minister in August 2012. While the Panel is providing an excellent vehicle for various stakeholders in the planning system to express their views about the standardised local plan, and indeed has already recommended some fundamental changes to it, the process is, if anything, slowing delivery of new plans. Local councils see that there is some chance they will get the 'certainty' and the 'flexibility' they seek in their plans if they make representations to the Panel and postpone finalisation of new plans until the Panel's recommendations are considered and adopted by the Minister.

3.4 Expectations of the planning system in NSW

The expectations about what new local plans will deliver are high.

1. The community expects certainty – that the local plan will set out the parameters for development in their localities in the future and that there won't be any development 'surprises' next door;

2. The community also expects that they will be consulted widely on development matters and that their input will be listened to and will make a difference to the outcomes. Greater environmental awareness, ease of accessing information about development proposals, and a more informed community that understands that planning decisions have a significant impact on the liveability of neighbourhoods and cities, means that there is an increasing demand for public consultation on a wider range of issues in NSW;

3. The development industry expects that there will be certainty about what can be developed on any parcel of land, that the controls will be transparent and simple,

and that infrastructure issues (such as essential services and transport) will have been sorted out when the land was zoned for its purpose – and that for these reasons there shouldn't be much public objection to their development proposals;

4. The expectations the state government has about what new local plans might deliver are perhaps the most challenging of all. The government believes the new plans are critical to delivering an adequate supply of zoned, affordable land for housing and employment that, together with simplified controls, will kick-start housing commencements, drive down housing cost, and stimulate the NSW economy as a whole. In NSW it is the planning system which is increasingly blamed for impeding growth and development.

   The government has asked the Department of Planning and Infrastructure to review the *Metropolitan Plan for Sydney 2036*. The updated metropolitan strategy for Sydney, and the subregional strategies that sit under it, will update the dwelling targets required of each region and each local government area – and the new local plans are the key delivery mechanism for this housing.

5. The government hopes that new, modern plans will reduce the need for spot zoning amendments to facilitate new development proposals and reduce the need for 'major' or 'state significant' projects to be called in by the state and determined by independent Joint Regional Planning Panels – because both of these aspects of the NSW planning system are very unpopular with communities.

6. The federal government has set its criteria for good strategic planning by the states- and consistent, transparent local controls are part of its desired solution. If the standardised local plan isn't the mechanism that can deliver good strategic plans on the ground, NSW will continue to miss out on vital infrastructure funding from the federal government.

7. Local government, other government agencies (such as the NSW Office of Environment and Heritage) and communities expect that local plans will be able to deal with emerging environmental issues such as se level rise. Much of Australia's population live close to the coast and there are many NSW communities where existing dwellings will be directly impacted by sea level rise predictions for 2050 and 2100.

3.5 Has the standard local plan delivered on expectations?

1. The standard local plan has the capacity to deliver certainty. Local plans are still the key delivery mechanism for strategic planning and land use controls in NSW. However, the issue has been that the detailed strategic planning has not been completed in many local government areas. There is a lack of context, therefore, for assessment of projects that might appear to be out of character in a

particular locality. Major projects (over $20 million in value) are dealt with by the Joint Regional Planning Panels, and spot rezonings to change the controls on individual parcels of land or precincts are determined by the state government. So communities continue to see 'unexpected' projects appear and have to comments on them in short time frames in the context of a site specific development application or rezoning application, rather than in terms of the broader outcomes and directions they wish to see for their localities

2. Communities are demanding and to some extent getting increased opportunities to comment on planning matters. Overwhelmingly, however, the community participates and comments on specific development proposals (especially proposals in their neighbourhood) to a significantly greater degree than they comment on and participate in the broader - and ultimately more important – strategic planning that state and local governments undertake.

3. A lack of agreed strategic outcomes means that local development controls are drafted very tightly and conservatively, to pre-empt and prevent any unexpected or "out of the norm' development applications. The new state government was elected on a platform of handing local controls back to local government, and so it is allowing councils to have very restrictive controls in local plans. The NSW planning system does not currently allow merits based assessment and approval of developments that are prohibited by a local plan, yet may meet existing strategic outcomes.

   The development industry wants more flexibility in local plans to allow more development to be approved on its merits. Communities and local government on the whole want local plans to be restrictive and to provide 'certainty' about development outcomes. The development industry says this stifles innovation.

   Infrastructure provision and funding is not adequately linked to land use planning. The state government has reduced the contributions that developers must pay towards such infrastructure, in an attempt to stimulate more development. This is clearly counter-productive.

   There is an expectation in some communities that local plans will be able to prohibit open cut coal mining on rich agricultural land. Coal mining is one of the major economic drivers and sources of revenue for the state of NSW. For this reason the state has a state environmental planning policy (SEPP) that over-rides local plans to permit coal mining in all areas other than those with very high ecological value.

4. NSW has a housing shortage and very expensive housing. The state government wants local plans to deliver increased amounts of serviced land for housing and employment. Increasing density in existing suburbs of Sydney is very unpopular, particularly if infrastructure is inadequate. The Department of

Planning and Infrastructure's recently released discussion paper, *Sydney over the next 20 years* says*:*

"By 2031 Sydney will have 1.4 million more people and will need 570,000 more homes and 600,000 more jobs." (Department of Planning and Infrastructure, 2012).

The state government has promised local government it can have more control over the content of its local plans. This contradiction means the local plans will not deliver these targets unless the state intervenes to force an increase in development capacity and density.

5. The number of spot rezonings or amendments to local plans has not reduced since introduction of the standardised plans. The Department of Planning and Infrastructure processes approximately 300 local plan amendments each year, and this figure is not shrinking. This is probably because many of the new local plans do not reflect new and agreed strategic planning.

6. A recent federal government COAG Reform Council report, reviewing the performance of state governments in city planning strategies, found that none were meeting all 9 criteria set in the national urban policy. The report warns that Australia will not remain competitive globally if infrastructure issues are not addressed, and criticises 'politicisation' of planning issues at the state level, which it says interferes with their ability to settle on long-term strategic plans (COAG Reform Council, 2012).

7. Global environmental issues such as sea level rise will have a significant impact on Australian settlements. A new land use zone, the Coastal Protection zone, will soon be introduced into the standard local plan to allow councils to restrict and/or prohibit new development, particularly housing, on land in the direct hazard zone for coastal erosion. The direct hazard zone is based on government predictions for sea level rise by 2050 and 2100. Local governments, however, need to undertake detailed local studies, called Coastal Hazard Management Plans, before they are able to use such a zone.

In summary, it is contended that:

- the context within which local councils develop their new standardised plans;
- the fact that the majority of State Government planning outcomes are achieved through delivery of local plans;
- increasing expectations and requirements for consultation with local communities about plans and planning decisions;
- increasing expectations that local plans will deliver outcomes that stimulate local economies while also protecting the natural environment, dealing with climate change and sea level rise and creating sustainable, liveable communities;
- the need for new plans to meet national planning criteria in this regard; and

- the new State Government's election pledge to return local planning powers to local communities;

have set up a planning system in NSW that has inherent tensions and conflicts such that it is unlikely to deliver outcomes that satisfy communities while encouraging development and attracting funding to provide necessary infrastructure.

The state government has choices available to it. Two obvious ones are:

1. directly intervene and direct local government to increase the development capacity of local plans. The Act gives the Minister this power but this is in direct contradiction with the state government's election pledge to hand planning power and planning decisions back to local government; or
2. change the planning system and the way it is funded to work collaboratively with local government and communities to develop strong, clear and agreed strategic plans that can be delivered with certainty by the standardised local plans.

4. The key issue

The key issue affecting the timely and effective delivery of new, standardised local plans is the lack of adequate strategic planning to underpin them. Put quite simply, the standard local plan program has happened the wrong way around. Significant time, money and effort have been put into standardising a delivery mechanism, without any clear agreement on what it is we want to deliver. Solid strategic planning, broad at the state level and detailed at the local level, is needed to underpin these plans. It's at the strategic level that the debates need to be had, that the consultation has to be undertaken, and the agreements have to be reached.

Without those agreements, the arguments are had at the delivery level, at the statutory instrument level. The NSW standardised plan – and I would argue any standardised local plan - is not and cannot be designed to cope with a lack of strategic planning to underpin it. This is the cause of the delays in implementation. This is the cause of the tension between the state government, local councils and the development industry in NSW.

Without good consultation leading to agreed outcomes to deliver growth, and without the resultant and necessary uplift in land for housing and employment, the hard decisions, the trade-offs (including who pays for what infrastructure), get left until the development application stage. That is too late. The development application process in NSW is an adversarial process with tight time frames and no room for negotiated outcomes. It becomes "do you want this particular development, or don't you", rather than "we need growth in this locality, how and where would you like to see it happen, what trade-offs are you willing to negotiate and agree so that we can get a plan for growth that gives everyone certainty?". Many

development applications end up being determined by the NSW Land and Environment Court, at great expense to developers and objectors.

The new government's approach of giving planning powers back to local councils and communities is commendable – but not really working. Councils don't want to prepare new plans if development outcomes will still be uncertain, and if they cannot guarantee a level of certainty to their communities.

The statutory plan making process at present, with set time frames tied to funding agreements, is not providing local government with the time and resources it needs to engage with communities. It is not empowering local government or communities. It is not providing the good, clear plans we need.

The relationship between state and local governments in NSW needs to change. It needs to become less adversarial and more collaborative. The state government has to trust that local governments and local communities can make the hard decisions that have to be made. There is certainly a role for a more regional approach, given the large number of local governments in NSW – which delivers a fragmented response to important planning issues in many cases.

4.1 Experience from elsewhere

Plenty of people have written extensively about different approaches to local planning and this paper is not about repeating or critiquing those. Some of the most resilient and successful stories are now quite old – Jim Driers and his work with the Office of Neighborhoods in Seattle in the 1990's; the "Vancouver Model" and the extensive and comprehensive consultation that was undertaken by the City of Vancouver in developing its *CityPlan*, also in the 1990's, for example.

These models continue to appear in current Australian research, as best-practice examples of how to undertake local planning and achieve the trade-offs that have to be achieved – for example in the numerous research reports on city development prepared by the independent Australian think-tank, the Grattan Institute, referenced several times in this paper.

Some of that research, for example *The housing we'd choose* (Kelly, 2011), suggests that despite our best efforts to increase housing supply the market is not providing the type of housing many Australian people actually want. And we are not even providing enough of what people don't want.

The housing market is complex, and outcomes or lack of them can be influenced by factors like the taxation system in any jurisdiction just as much as it might be impeded by local planning controls. What experiences from elsewhere consistently tell us, however, is that we won't know what sort of development to provide for through our local controls, and we won't know where to provide it, if we don't ask the right people the right questions.

And that is the problem in NSW. We have provided the solution in a standardised local plan template, without first asking ourselves and our communities, with sufficient depth and rigour, what is the problem. It has been a top down approach to finding solutions at the local level, rather than a bottom up approach, lead by local governments that have a real chance of engaging with their communities and finding workable solutions.

5. What next for the standard local plan in NSW?

The future for implementation and acceptance of a standardised local plan across all 152 councils in NSW, in my view, looks positive. The state government is reviewing the planning act, the *Environmental Planning and Assessment Act 1979.* Indications are that there will be a place for a standard local plan in the new act. Even more encouraging though, are indications that the new act will have a far greater emphasis on strategic plans, and strengthening the links between strategic plans and the local plans that deliver the desired outcomes.

A standard local plan that is the delivery mechanism for agreed, and statutorily embedded strategic plans is likely to be embraced by local government in a way that the current standard plan has not been.

The experience of trying to introduce new controls across 152 councils with diverse issues and needs has taught us all a great deal. And it has reinforced the message that it is the strategic planning, the real engagement with all stakeholders in the plan-making process, and removal of some of the adversarial aspects of the current planning system in NSW, that is the main game.

If we can recognise that we are all players in that same game, and that if we work together to negotiate the trade-offs that each and every stakeholder will have to make to deliver good planning outcomes in tough environmental and economic time, then the standard local plan will be what it was always meant to be – a consistent and transparent way to implement good strategic planning. And it will be able to deliver the social, economic and environmental outcomes we all want.

6. Conclusions

Standardising local plans across a state like NSW makes sense and has benefits for many stakeholders. Improving planning instruments, making better planning law, doesn't of its own, deliver good planning outcomes. A transparent and simple statutory system is very important. But in the end, such a system is just the delivery mechanism for good strategic planning.

Without good and agreed strategic plans to underpin them, the new, standardised local plans in NSW can not deliver the outcomes the State government needs;

outcomes that its communities want or can at least accept; nor create the conditions that the development industry needs to make it all happen.

Global financial uncertainty affects Australia along with the rest of the world. At such times citizens in NSW seem to be seeking local certainty – about the strength of the local economy to support local jobs and the ability to live in affordable, sustainable housing close to those jobs. These aspirations were reflected in the reasoning for introducing a standardised local plan in NSW – certainty, transparency, jobs close to home.

The expectations of the standard local plan were high – too high. The expectation was that its introduction would go a long way to underpinning economic growth in the state. Such expectations are based on a misunderstanding of what the statutory instrument is. It is the delivery mechanism for good planning, for the planning we want to achieve. The challenge for the NSW government, with new planning legislation about to be announced and a push to complete and improve implementation of the standard local plan across all 152 local government areas, is to agree with its communities exactly what it is they want delivered.

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Human health in *The London Plan*: How health is framed in a world city's spatial development and climate action strategy

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Abstract

Human health is among the original justifications for town planning, but it has been under-examined as one of the myriad benefits motivating cities to plan for climate change. A conceptual content analysis of the July 2011 version of *The London Plan: Spatial Development Strategy for Greater London* was performed to reveal how health was portrayed in a world class spatial development strategy that includes climate change mitigation and adaptation goals and actions. The coding of the 317 page plan resulted in eight distinct health frames and nearly 200 instances of the keyword 'health.' There are at least three conclusions that can be drawn from this analysis. First, the stated threats to health are truly localised. Second, the policies that address health acknowledge the health benefits derived from both adaptation and mitigation. Third, addressing health inequalities and creating an environment supportive of health are the most salient cross-cutting issues.

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Introduction

Planning for sustainable urban development and climate change adaptation is, at a very fundamental level, an attempt to protect ourselves and our social systems from harm. In our attempts to adapt to a changing environment, there are many inter-related elements that must be considered. One of the most indispensable is the protection of human health and well-being. Therefore, it is critical to consider human health impacts and their relationship to the many social, political, economic, and environmental considerations in sustainable spatial development and climate change plans. In contrast to the many climatic phenomena and subsequent outcomes that require great speculation on current and future climate variability, sea level rise is a measured certainty that will affect the health and lives of the billions of persons living within coastal zones worldwide (Creel, 2003). Whether from sea level rise, flooding, drought, heat, or other extremes, the health of billions of people will be greatly influenced by the quality of the physical infrastructure designed to adapt to and mitigate severity of these events. The research conducted here addresses the following questions: How is the local co-benefit of human health portrayed in a world class spatial development plan, and how is health tied to the plan's climate change mitigation and adaptation actions? Is health tied to climate mitigation and adaptation actions in the plan and not yet being addressed by research examining the health impacts of climate change? These questions are addressed through a content analysis of the 2011 *Spatial Development Strategy for Greater London* (UK). London, as the capital of a nation leading climate change planning and as a world city, can act as a model for other major urban areas preparing for climate change and aiming to prevent its deleterious effects. There are lessons that

may be learned from a city with a history of connecting urban form and public health (Ashton and Ubido, 1991; Hebbert, 1999).

The apparent solution to addressing the effects of climate change has been to 'think globally by planning locally for public health' (Coutts, 2010, 54). Much like other climate vulnerabilities, the health impacts of climate change vary by location and are often most accurately considered at smaller geographic scales. Even municipalities within the same county, district, or province might face very different health impacts from drought, flooding, and heat due to proximity to surface water and micro-climatic effects. The scales at which the Intergovenmental Panel on Climate Change (IPCC) proposed adaptation included national/regional and individual responses, but no direction is given on more localised city-level efforts (Confalonieri et al., 2007). Despite this, '…a number of urban leaders have decided to take matters into their own hands, adopting solutions that already exist or inventing new ones for limiting greenhouse gas emissions and preparing for the effects of ongoing global warming' (Rosenzweig, 2011, 70). It is cities who have taken the lead in planning for their specific climatic vulnerabilities, and it is a city plan that is examined here to determine how city residents will be protected.

Health and Planning for Climate Change

Macintyre, Ellaway, and Cummins (2002) challenge us to better conceptualise and operationalise 'place effects' on health outcomes. Their suggestion—brilliant in its simplicity and fundamental importance—is to use a framework of universal human needs to examine how place influences one's ability to meet these needs and live a healthy life. Planning has a significant influence on many of the items in a hierarchy of human needs (Maslow, 1968). At a very fundamental level is the quality of the air, water, food, and shelter needed to maintain and perpetuate life. But beyond merely subsisting, planning provides the contextual support for

meeting other needs such as public hygiene, work, and transportation. Climate change poses a unique and long-term threat to the resiliency of urban centres to meet human needs and protect health. With impending climate variability, the ability to meet many of these needs will be threatened, and it is the duty of planning to propose actions that will allow the continued satisfaction of these needs amidst a changing environment. Failing to provide an environment in which these needs can be met will result in increased morbidity and mortality. The nascent literature connecting climate change to health offers planners some guidance on the impending threats to the health of the populations they are planning to protect.

Over the past five years, there has been a small surge in the literature exploring the potential health impacts of global climate variability. Although the volume of literature has increased, it is still sparse and the outcomes examined have largely been limited to the health effects of heat waves and air pollution (Ebi et al., 2009). A number of articles have provided a litany of anticipated health effects (Frumkin, 2008; McMichael, Woodruff and Hales, 2006), environmental health indicators (English et al., 2009), and have focused on the childhood populations that are most vulnerable to anticipated events (Kisten et al., 2010; Sheffield and Landrigan, 2011). Table 1 is a synopsis of the climate change and variability events and the corresponding health effects.

[Table 1 about here]

Although we can state with relative certainty that climatic norms are changing, expert opinion is also of the mind that the level and type of disease burden in all countries and regions will progressively increase with a changing environment (Confalonieri et al., 2007). Of course, projecting the level of increase in morbidity and mortality caused by climate change is extremely complex and fraught with uncertainty. Taking this difficulty, if not futility, into account, there

have been some efforts by public health researchers to quantify the added incidence of disease burden (Watkiss et al., 2003; WHO, 2003). In the Fourth Assessment from Working Group II of the IPCC, it was noted that 'at this early stage the effects are small but are projected to progressively increase in all countries and regions' (Confalonieri et al., 2007, 393). McMichael et al. (2004) calculated that in the year 2000 increased climate variability was reported to be responsible for over 150,000 deaths worldwide. Almost 90% of this increase in the disease burden fell upon children. Based on IPCC projections, these numbers are likely to rise as more people become susceptible to more severe climatic shifts. Although a precautionary approach would lead one to take these trends seriously, there are those who note the lack of definitive evidence to support an alarmist attitude (Rohr et al., 2011).

Most European countries either have a national climate change strategy or are creating one. The US, embarrassingly, has no national adaptation strategy (Ebi, 2010). The UK released an assessment of the health threats related to climate change in 2008 (Kovats, 2008). The perceived greatest threats to the health of UK residents included heat waves, flooding, drinking water contamination, increased ground level ozone, and UV radiation. The noted effect of increased heat on water- , food-, and vector-borne diseases was less daunting.

Likely motivated in no small part by the UK's heightened susceptibility as an island nation (Ebi et al., 2006), the UK Climate Change Act of 2008 was passed as '…the first legislation of its kind in the world, establishing a long-term legal framework to underpin the UK's contribution to tackling climate change' (Kovats, 2008, iii). This Act established the Committee on Climate Change. A report by this committee in September 2010, *How Well Prepared is the UK for Climate Change*, found that while information capacity is high, its translation into action has been minimal, and failing to act was noted throughout as detrimental to human health. The

report also touched on the scale of interventions to combat climate change, concluding that climate change mitigation and adaptation should be primarily a local function with national governments playing a supporting role. London's climate change planning is an example of how a local government, a very significant one on a global scale, is planning for actions that will ultimately have local, global, and both immediate and long-term influences on human health.

There exists analyses on the potential threats to health of global climate change, but there has been little, if any, attention given to how health is approached in our spatial development and climate change adaptation and mitigation plans, the plans that guide the development of cities and influence the actions which exacerbate climate change. This paper hopes to begin to address the lack of extant literature by examining how health is framed in the spatial development and climate change strategies of a world city. As the first major world city to produce a Climate Change Adaptation Strategy and as the birthplace of contemporary planning and public health collaboration, the London case holds great promise in not only guiding plan formation elsewhere but also in exposing new areas of research.

Data and Methods

Under the rules of the Greater London Authority Act of 1999, the Mayor of London is required to produce a Spatial Development Strategy for the 32 boroughs and the Corporation of the City of London that looks ahead approximately 20 years. The first London Plan was published in 2004. Development plans in the 32 boroughs must be in general conformity with this plan, and any planning decisions within London are legally required to take the plan into account. The plan must also conform to European Union (EU) legislation including the European Spatial Development Perspective.

A conceptual content analysis of the July 2011 version of *The London Plan: Spatial*

Development Strategy for Greater London was performed to determine the prominence and context of human health throughout the plan with particular attention to London's planned response to climate change. Content analysis is often used to 'reveal the focus of individual, group, institutional, or societal attention' (Weber, 1985). In this case the content analysis was performed to reveal the attention paid to health in the Mayor of London's comprehensive planning document. The 317 page document is organised into eight chapters: 1) Context and Strategy, 2) London's Places, 3) London's People, 4) London's Economy, 5) London's Response to Climate Change, 6) London's Transport, 7) London's Living Places and Spaces, and 8) Implementation Monitoring and Review. Preceding these eight chapters is the Mayor of London's Foreword and an Overview and Introduction chapter front matter. All eight chapters including this front matter were included in the analysis.

The entire portable document format (pdf) plan was digitally searched to determine the prevalence and context of the keyword 'health.' The number of occurrences of the keyword 'health' was summed for each section. The context of each occurrence of the keyword was evaluated to determine how health was framed within the plan. A number of frames were created after determining the similarities and discrepancies in the context surrounding health. The frame coding was performed solely by the author. Therefore, threats to reliability due to varied interpretations by multiple coders were eliminated. The validity of the frames is similarly robust. Unlike some forms of content analysis which seeks to organize text around various constructed themes that are prone to varied interpretations, the health frames here were created almost exclusively using explicit language from the plan itself. Very little subjective interpretation of the context in which the keyword 'health' was found was required.

Chapter 5, London's Response to Climate Change, was examined in great detail. The

occurrence of 'health' in the 22 policies in this chapter was measured to determine which policies considered health outcomes. A complete list of these policies is displayed in Table 2.

[Table 2 about here]

Results

There were a total of 176 instances of the keyword 'health' throughout The London Plan. The coding of the plan resulted in eight distinct health frames. Table 3 displays the distribution of the health frames per plan chapter. The descriptive distribution reveals that the health inequality and healthy environment frames are found in most of the plan chapters. Other frames are not as consistently distributed. Figures 1 and 2 also display the distribution of the health frames by plan chapter (Appendix A).

[Table 3 about here]

The *Health Inequality* frame was prevalent throughout the London Plan with particular, and expected, prominence in Policy 3.2, Improving Health and Addressing Health Inequalities. Reducing economic and racial disparities in health outcomes and access to care was integral to the plan and in line with the Mayor's Health Inequalities Strategy. The *Healthy Environments* frame was also quite prevalent. In line with the London Plan being a spatial development strategy, this frame encompassed elements of the built environment put forward as affecting health. Improved housing, brownfield redevelopment, the reduction of air pollution, and the promotion of non-motorised forms of transport were all seen as ways to create an environment supportive of the health of London residents. *General Health Promotion* captured all instances where improving the health of Londoners was mentioned in general terms. For example, in phrases such as '…promoting health and welfare' unaccompanied by detailed actions or outcomes. Within this frame was language from Policy 3.2 and mentions of mental health and

the health of children. *Health Facilities Infrastructure* captured not only the infrastructure of health care centres but also the health care delivery services. Among the *Health Policies* recommended to guide health promotion among Londoners were the *Mayor's Best Practice Guidance on Health Issues in Planning*; *Healthy Lives, Healthy People: Our Strategy for Public Health in England*; and the *Health and Social Care Bill*. There was also mention of the need for coordinated planning with other existing environmental and climate change policies. The *Health and Green Space* frame captured a number of clearly stated connections between the conservation of green space and the health of city residents. The ambitious green belt designed to surround London and curb sprawl was also held up as necessary to support health. Green spaces were also integral to London becoming a city that 'delights the senses.' A *Health Impact Assessment* (HIA) is a tool used to evaluate environmental threats to health. HIA was often used in conjunction with 'health checks' performed in local communities. Finally, the *Health and Economy* frame included mention of not only the maintenance of the overall health of the economy but also the role of the health sector jobs and research in supporting a robust economy.

In addition to 'health' there were also five instances of the term 'well-being' and six instances of the term 'welfare.' Four out of the five of the instances of 'well-being' were found in conjunction with 'health.' The remaining instance was used in conjunction with 'prosperity.' All instances of 'welfare' were found in conjunction with 'health' in phrases such as '…improving Londoners' health, welfare, and development' (e.g. Greater London Authority [GLA], 2011, 210) accorded to the *General Health Promotion* frame in the analysis.

A focus on the local health benefits of climate change mitigation and adaptation

London is striving to become a '…world leader in improving the environment locally and globally, taking the lead in tackling climate change, reducing pollution, developing a low carbon

economy, consuming fewer resources and using them more effectively' (GLA, 2011, 137). With this explicit goal, London recognizes its global role as a contributor to the emissions that exacerbate climate change and as an exemplar of city planning. Although the business conducted in London certainly influences global markets and behaviors, the spatial development and climate action strategies are decidedly local.

London is looking to its own vulnerability to flooding, higher average temperatures, and drought. The probability of sea level rise, heavier winter rainfall, higher tidal surges, hotter summers, and less summer rainfall increases with climate change (GLA, 2011). The latest UK climate projections support these trends (Jenkins et al., 2009). Heat, flooding, and drought '…could seriously harm Londoners' quality of life, particularly the health and social and economic welfare of vulnerable people' (GLA, 2011, 138). This language is consistent with what is found in other chapters and what was classified under the *General Health Promotion* or *Health Inequalities* frames.

Health is tackled more specifically in seven of the 22 policies listed in the climate change chapter of the plan (full list of policies listed in Table 2). The first one of the seven climate change policies that explicitly mentions health pertains to sustainable design and construction. The 'sustainable design and construction' of buildings is intended to ensure that they are 'healthy and adaptable' (Policy 5.3). This policy recognizes that structures are important for both climate change mitigation and adaptation. Reducing emissions through more efficient interior climate control and reducing the use of natural resources in construction will aid in mitigating future climate change. Reducing the urban heat island effect through green roofs and the use of shade and also enforcing construction standards designed to withstand natural hazards are adaptation strategies. Excessive ambient heat and flooding carry with them immediate and potentially

severe health hazards. Mitigating against future effects may reduce the severity of these hazards.

The use of green infrastructure to reduce the deleterious effects of the urban heat island (Policy 5.10) is not only an adaptation to increasing temperatures, but also a mitigation strategy. Green infrastructure reduces temperatures through evapotranspiration and also traps airborne greenhouse gases that may exacerbate future climate variability (Gill, Handley, Ennos and Pauleit, 2007).

Maintaining a sustainable water supply in the face of drought (Policy 5.15) is a public health issue with severe consequences, especially in dense urban environments where the city system is the sole source of potable water.

The most unique connection between health and climate change found in the plan deals with waste management. Waste is addressed in the climate change chapter due to its potential as an energy source and in the importance of promoting recycling and recovery. In addition to encouraging the minimisation of waste, the plan states that waste processing facilities should take into account the health and safety of those working within them and also that of adjoining neighbors (Policy 5.17). A more direct threat is hazardous waste, but the plan does not deal with the health threats associated with exposure to hazardous waste but rather the public concern over health and environmental impacts of the facilities that handle the waste (Policy 5.19).

Another unique aspect of the climate change strategies chapter of the plan is that this chapter includes brownfield remediation (Policies 5.21). Preventing environmental and health threats from contaminated brownfield sites is how health and brownfields are connected in the plan, but brownfield remediation also has indirect climate change mitigation benefits in that scarce urban land unusable with brownfield status can be used for redevelopment upon remediation of contaminants. This may alleviate pressure for greenfield development that consumes green

infrastructure and creates the need to consume fuels to reach development at greater distances from existing goods and services. Lastly, health is addressed in Policy 5.22, but only in the title of a directive that should be taken into account when there is exposure to hazardous substances and installations.

There is at least one health impact of climatic change *not* noted in The London Plan policies but supported in the literature. An increase in mean temperatures causing an increase in suitable habitat for the vectors that carry infectious disease (eg. mosquitos, ticks) has been put forward as a serious health concern (Table 1). Countries where a colder climate has kept diseases like malaria at bay could eventually host a climate that could harbor disease. One explanation for the omission of vector-borne diseases in the plan is a belief that since the UK eradicated malaria once, it is unlikely to reemerge (Kovats, 2008).

Conclusions

There are at least three conclusions that can be drawn from addressing the first of the two research questions: How is the local co-benefit of human health portrayed in a world class spatial development plan, and how is health tied to the plan's climate change mitigation and adaptation actions?

First, the threats to health and actions to address these threats are truly localised, but there is explicit recognition of London's influence on the global environment. The planning policy actions promise benefits to average Londoners but also situate London in a global context. It is beyond the scope of this paper to address fully, but the fact that London, as a local municipality, has taken steps to mitigate global climate change adds to the paradox of collective action witnessed in other cities worldwide. Local municipalities, namely cities, are taking the lead in planning for climate change even though the benefits of mitigation are global in nature and

shared. London operates in a country with national level leadership, but many of the countries responsible for the highest levels of greenhouse gas emissions do not. Still, in countries without this leadership and mandate handed to local municipalities, such as the US, it is cities who have taken the lead in planning for climate change. Untested but possibly driving this apparent collective action paradox is the realisation of local benefits. Health is certainly one of these benefits, and its role in driving local action is ripe for future research. How this research might be approached is presented briefly in the Discussion section.

Second, the policies that recognize health in the plan acknowledge the health benefits derived from a balance of adaptation and mitigation strategies. London's climate change mitigation strategies include its global contribution to improving health and welfare beyond the UK, but its adaptation strategies have more immediate and local health benefits. Current estimates reveal that even with serious mitigation efforts, the next 100 years of climate change will be determined by an atmospheric composition that cannot be changed (GLA, 2011, 138). Therefore, London appears resolved to adapt to what is to come over the next century, and likely beyond, considering concerted global mitigation efforts have been slow in coming. The most notable policies that explicitly tie health to adaptation and mitigation are those which address building design and construction and green infrastructure conservation. These policies will protect London residents from the risks associated with rising temperatures and flooding by adapting to these projected conditions in the near term and mitigating against their increased severity and frequency in the longer term. Adaptation and mitigation are not two opposing alternatives and rather must be viewed as complementary (Adaptation Sub-Committee, 2010).

Third, addressing health inequality and the creation of healthy urban environments are cross cutting issues throughout The London Plan. As opposed to a specific health condition, it was

health inequalities and increased susceptibility by vulnerable populations that was granted the most attention. The health and welfare of those who already bear the burden of the poorest health will likely be at the greatest increased risk of injury and disease from climatic events. The content analysis revealed that health language was strewn throughout the document, but it typically appeared as one among many benefits of a prescribed action. Although there exists a commendable recognition of health as an outcome of changes to the built, social, and economic environment, health certainly did not crowd out other important outcomes. Health tended to appear alongside the broader outcomes or education, welfare, development, and quality of life. It most often remained as a higher level goal.

The climate change policies that address health can be tied to the framework of human needs (Macintyre, Ellaway, and Cummins, 2002) because they were essential to meeting the basic human needs for water, shelter, and hygiene. The importance of the continued delivery of potable water likely needs no explanation. Shelter delivered by green construction practices not only provides protection from the elements like other non-green practices, but green practices also have the added benefit of employing materials that can sustain the natural resources needed to meet other needs. Green infrastructure in the form of protected open space also ensures the quality of natural resources necessary to maintain life. It can also provide a forum to meet the lower order needs for recreation and play. The remaining policies of waste management, brownfield reclamation, and reducing exposure to hazardous substances are hygiene issues in that they are aimed to reduce disease through protection from environmental toxins and pollution. It is by connecting these proposed spatial development and climate action strategies to human needs that their fundamental importance is revealed and the goal of planning to protect humans from harm and deliver on these needs affirmed.

Research needs uncovered by content analysis

In answering this paper's second research question pertaining to the plan's ability to elucidate research gaps in the planning for health and climate change literature, all but one of the health outcomes recognized in London's climate change policies are supported by the nascent public health literature. The one policy yet to be examined closely for its health effects, and with significant potential to affect both mitigation and adaptation responses to climate change, is brownfield reclamation. Exposure to the toxins that define a brownfield can certainly be detrimental to health, but reusing brownfield sites can contribute to climate change induced health outcomes in at least two other ways. First, reclaiming brownfields allows infill and greater urban density. Greater density creates shorter distances between trip origins and destinations and lower greenhouse emissions expended in travel. This would help mitigate future climate variability. Second, the conversion of brownfields to greenfields could reduce the urban heat island effect and help in adapting to increasing temperatures. There is great potential in research which tests the efficacy of geoengineering techniques using land use scenarios aimed at climate change adaptation and mitigation. The reclamation of brownfields, along with land conservation and connecting residential and commercial uses, could be one of these techniques.

Additional research needs could also be addressed by extending the study performed in this paper. A larger comparative study between The London Plan and the comprehensive plans of other major metropolises could reveal the prevalence of health as a global theme, its ubiquity in lofty goals or measureable objectives, its potential usefulness in justifying contentious action, and whether it is more often associated with either climate change adaptation or mitigation strategies.

Discussion

Some important questions remain as to the role of health in spatial development and climate change plans. First, can the immediacy and localness of health benefits be used as a vehicle to make sustainable development efforts more politically tolerable? It may be easier to 'sell' concepts such as fuel efficiency, waste reduction, and reduced consumption if they are framed as health and not solely environment driven even though the reality is that they are inseparable. The greater prevalence of health in sustainability/climate action plans in the US (American Planning Association, 2011) could stem from a greater acceptance of the health and environment connection, or it could be that health is taking its rightful and significant place as a motivation for protecting the environment human welfare is dependent upon. In the US, where private property rights are vehemently defended, it was the protection of public health that provided the legal foundations for the planning and zoning of land uses (Shilling and Linton, 2005, 96).

The question remains as to how national-level climate threats made their way into the localised planning of London's future. There has been progressive national leadership on the issue in the UK, but this is not the case elsewhere. The proliferation of climate change plans around the globe and in places with rather weak national leadership suggests that this national level leadership is not necessary to spur local governments to take action. The US has no national policy, but the latest *Global Climate Change Impacts in the US* report released in 2009 includes an abundance of health language (US Global Change Research Program, 2009). National level leadership may be important to guide local efforts and encourage health to be considered uniformly across the country. If the number of early-adopter local municipalities begins to wane and a national level strategy proves necessary to drive local plans, could it be the apparently forgotten core mission of government to protect health and welfare that is the impetus to devise a national strategy?

Lastly, similar to much of the health and climate change literature, the London Plan contains no quantifiable projections of the negative health effects of climate change strategies, only general talk about health outcomes and inequalities. There is no attempt at quantifying the negative health outcomes and suffering that will be avoided if the preventive measures in the plan are heeded. Watkiss et al. (2009) boldly begin to provide some quantitative basis from which planners can begin to prepare.

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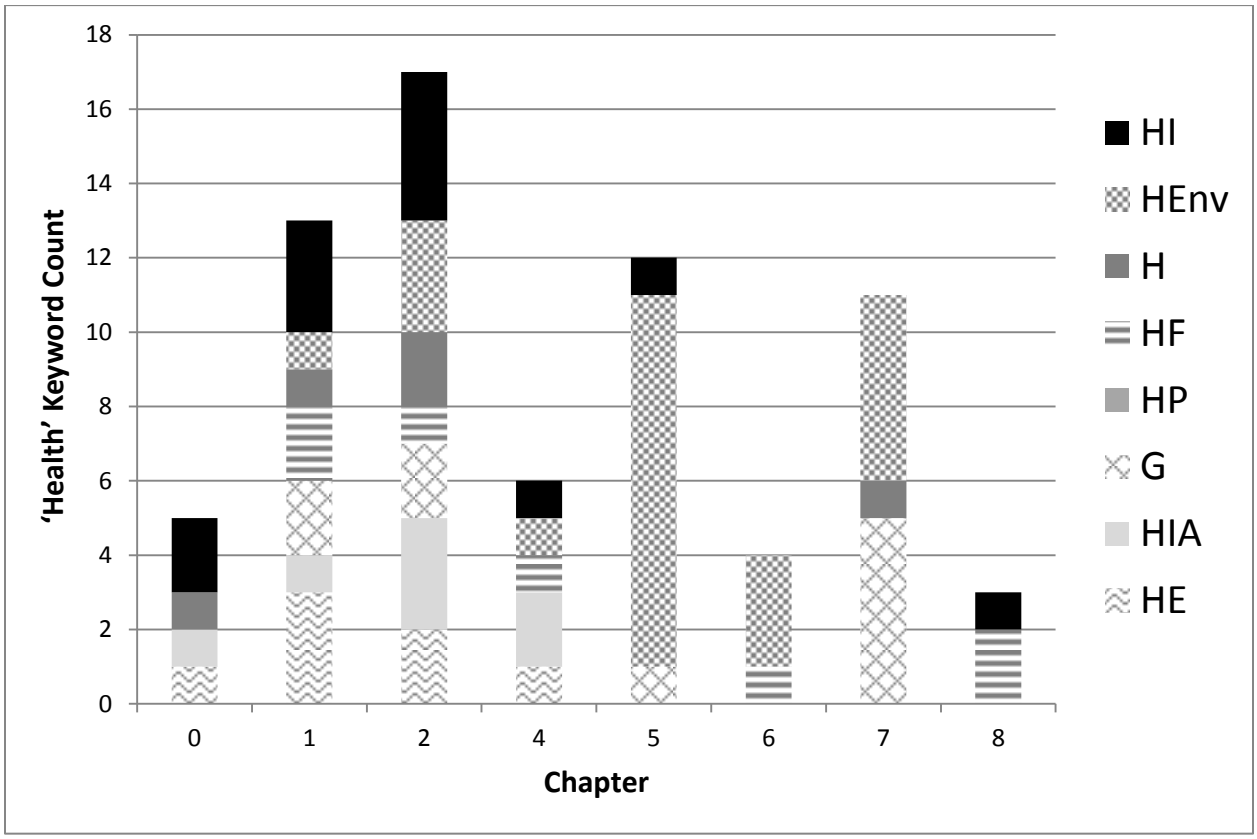
APPENDIX A

Chapter 3 is isolated in a separate figure because its range of values was much greater than that of other chapters. Including it with other chapters hindered the interpretability of the y-axis scale. The legends in both figures are ordered identical to Table 3 in that they are descending in the overall prevalence throughout the document.

Health Inequalities (HI)
Healthy environments (HEnv)
General health promotion (H)
Health facilities infrastructure (HF)
Health policies (HP)
Health and green space (G)
Health impact assessment (HIA)
Health and economy (HE)



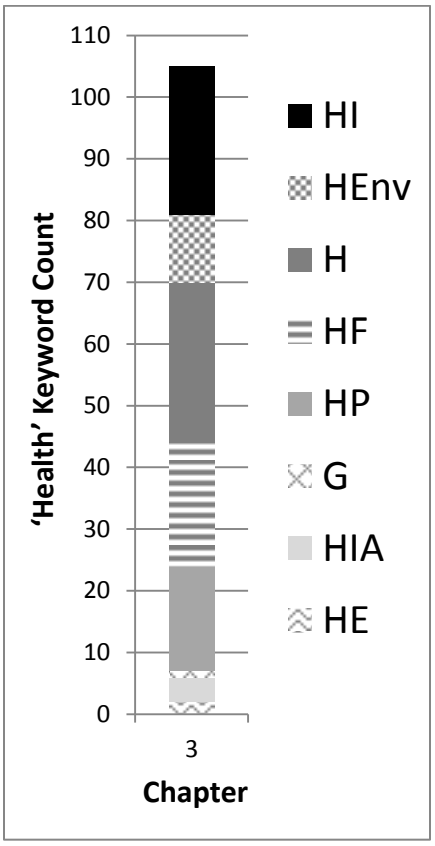

110
100
90
80
70
60
50
40
30
20
10
0
'Health' Keyword Count
3
Chapter
HI
HEnv
H
HF
HP
G
HIA
HE

Table 1. Health effects of climate change

Climatic Event	Intermediary	Health Outcome
Heat waves	direct to →	Heat stress, stroke
	Increased ground-level ozone, pollen	Respiratory disease exacerbation
Increased mean temperature	More hospitable to disease vectors (e.g. mosquito, ticks)	Vector-borne diseases (e.g. Lyme, malaria, dengue)
	More hospitable to infectious disease agents (e.g. bacteria)	Food-poisoning, infectious disease (e.g. cholera)
	direct to →	Positive: Less hypothermia
Ozone depletion	UV radiation	Skin and eye maladies
Drought	Food/water shortage	Dehydration, malnutrition
	Lack of food/water safety	Food/water-borne disease
Extreme weather event (e.g. flooding, tornado, hurricane)	direct to →	Injuries, drowning
	Population movement	Conflicts
Sea-level rise	direct to →	Injuries, drowning
	Population movement	Conflicts
	Water/soil salinization	Dehydration, malnutrition
Climate change generally	Stress	Mental health

Source: Adapted from Confalonieri et al., 2007; Frumkin 2008; McMichael, Woodruff, and Hales, 2006

Table 2. Complete List of Policies within Chapter 5, London's Response to Climate Change

Policy	Title	Policy	Title
5.1	Climate Change Mitigation	5.12	Flood Risk Management
5.2	Minimising Carbon Dioxide Emissions	5.13	Sustainable Drainage
5.3	Sustainable Design and Construction	5.14	Water Quality and Wastewater Infrastructure
5.4	Retrofitting	5.15	Water Use and Supplies
5.5	Decentralised Energy Networks	5.16	Waste Self-Sufficiency
5.6	Decentralised Energy in Development Proposals	5.17	Waste Capacity
5.7	Renewable Energy	5.18	Construction, Excavation, and Demolition Waste
5.8	Innovative Energy Technologies	5.19	Hazardous Waste
5.9	Overheating and Cooling	5.20	Aggregates
5.10	Urban Greening	5.21	Contaminated Land
5.11	Green Roofs and Development Site Environs	5.22	Hazardous Substances and Installations

Table 3. Frequency of health frames per plan chapter

	Chapter									
Frame	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**TOTAL**
Health Inequalities (HI)	2	3	4	24	1	1	0	0	1	36
Healthy Environments (HEnv)	0	1	3	11	1	10	3	5	0	34
General Health Promotion (H)	1	1	2	26	0	0	0	1	0	31
Health Facilities Infrastructure (HF)	0	2	1	20	1	0	1	0	2	27
Health Policies (HP)	0	0	0	17	0	0	0	0	0	17
Health and Green Space (G)	0	2	2	1	0	1	0	5	0	11
Health Impact Assessment (HIA)	1	1	3	4	2	0	0	0	0	11
Health and Economy (HE)	1	3	2	2	1	0	0	0	0	9
TOTAL	5	13	17	105	6	12	4	11	3	176

Note: Chapter 0 is the Foreword, Overview and Introduction to the plan.

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Full Paper Submission
AESOP 2012

The wall, the door and the key? Exploring resilience in problem and solution identification in segregated Roma communities

Abstract

Segregation in its various forms causes myriad problems in the growth of and social cohesion in cities, nations and regions. The causes and consequences of segregation are complex and, at times, difficult to distinguish. Formal and informal responses to the negative consequences of segregation can be observed from the individual to the institutional level. Two distinct spheres where formal interventions against segregation have been carried out by both governmental and non-governmental agents are via housing and education.

The concept of resilience has been increasingly used to understand and ameliorate a range of social challenges through examining how individuals, families and communities respond and adapt to stressful conditions, such as those resulting from segregation. Resilience is appealing as it accommodates the complex, dynamic and multidisciplinary nature of the fields to which it has been applied, including in efforts to understand community functioning under strained conditions. Its value in designing solutions to social problems is of growing interest and may offer a new perspective on the problems of segregation.

In Europe, one group that overwhelmingly experiences segregation in all facets of life is the Roma, who chronically live in poverty, occupy sub-standard dwellings and operate at subpar education (and subsequent employment) levels. Interventions are ongoing at the local, national, regional and European levels; simultaneously, there is regular acknowledgment of the need for new and innovative approaches to the persistent challenges of realizing Roma integration.

The motivation underpinning this paper is an interest in how the concept of resilience has or could be used to design, implement and measure interventions made to improve the conditions of urban communities, such as the European Roma, that are considered to be living (to their detriment) under long-term stressful conditions.

Introduction

Interventions[i] that aim to address segregation – particularly housing programs and policies – have often not met expectations (Bolt et al., 2010). One glaring example of sustained segregation can be found in the case of the Roma, Europe's largest and most discriminated against minority group. The persistence of segregation and social inequalities found within the European Roma serves as evidence that an ultimate solution or formula has not yet been discovered for eliminating social segregation and

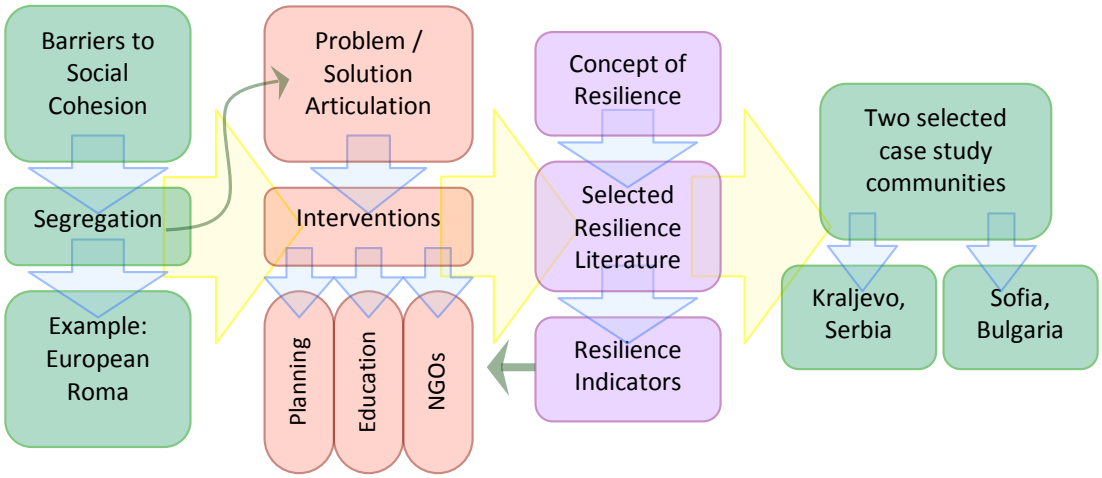
achieving cohesion. One concept that is of increasing interest for understanding and addressing social problems is that of resilience. Resilience in the social sciences refers to the ability of an individual or group to maintain their structure, cohesion and well-being despite difficult or trying situations, both traumatic incidents and long-term sustained stress.[ii]

This paper will consider the relevance of resilience in interventions related to segregation, specifically approaching resilience from three very different perspectives and scales: from the urban planning, education and non-governmental organization (NGOs) sectors. The selection of these three points of entry into the examination of resilience does not suggest their discreet compatibility; rather, the paper approaches each of them independently from each other (with some overlap seen in the case study analyses).

This effort will commence with a brief review of the literature on segregation; urban planning, education-related and NGO interventions; and the concept of resilience. This will be the basis of an attempt to examine the operational value of resilience by looking at its current and potential use in practice. In order to test the products of the literature review, the results will be examined through the lens of two case studies, both of which represent completed interventions intending to improving the living conditions in segregated Roma communities in Europe.

The purpose of this is to determine if resilience shows some potential as an innovative approach to understanding and addressing some of the core problems of segregation, which ultimately present barriers to social cohesion. Figure 1 illustrates the analytical framework developed and followed for this paper, which guides the paper from the broad issues of social cohesion and segregation to the specific case studies via specific interventions and the concept of resilience.

Figure 1. Analytical Framework



Background: Segregation, Interventions and Resilience

The Problems of Segregation

Segregation comes in many forms, including social, economic, residential and political. Segregated conditions disrupt the flow of knowledge and resources, ultimately hindering economic and societal growth. Segregation paradoxically has the ability to simultaneously constrain resilience (lack of access to information, economic opportunity, competence, social capital, and so forth) and encourage it (persistence, survival and coping) (Wang, 1995).

Just as assets, information and resources are often distributed inequitably in society, as is risk, with many of the poorest communities being exposed to excessive hazards (Norris et al., 2008). This applies to environmental conditions such as the tendency for poorer communities to live concentrated in geographical locations that are subject to more frequent natural disasters. Furthermore, the integrity of housing structures in impoverished communities is often not adequate to withstand extensive physical shocks. As a result, the damage experienced from natural disasters is frequently much more severe in poorer communities.

Taking into consideration that poorer communities experience more severe destruction, the fact that they are also often less able to access resources to recover only serves to further exacerbate this condition. Norris et al. present the “rule of relative needs” and the “rule of relative advantage”:

> Ideally, the distribution or mobilization of support follows the ‘‘rule of relative needs.’’ Simply put, the most support goes to those who need it the most. Often, however, the distribution of support follows the ‘‘rule of relative advantage’’ because one’s embeddedness in the community, political connections, and social class determine the availability and accessibility of resources (Kaniasty and Norris, 1995 and 2004, as referenced in Norris et al., 2008, p. 137).

In addition to increased risk to environmental hazards and decreased capacity to recover from them, segregation also creates conditions of long-term sustained stress. Lack of access to infrastructure such as water and electricity can result in poor families paying higher rates for essential resources (Hart, 1973). Residential segregation can result in long travel distances to places of employment. Educational segregation results in lower quality education, higher drop-outs and, ultimately, higher unemployment rates and less economic flexibility.

Articulating Problems and Solutions through Interventions

In light of the aforementioned increased vulnerability, many inhabitants of high-risk communities make independent efforts to ameliorate their situation and minimize risk. Strategies include making physical alterations to dwellings, building up stores of food and assets, diversifying income sources and developing social support networks (Jabeen et al., 2010).

Beyond community-driven or individual efforts, there are and have been efforts by external agents to address the problems of segregation. Here we will focus on those related to or implemented via urban planning, education and non-governmental organizations (NGOs). As mentioned in the introduction, the selection of these three perspectives does not propose their precise compatibility; the value and unique nature of each approach to understanding and ameliorating the negative consequences of segregation will be illustrated in the following background review.

Interventions via urban planning

In light of new trends in governance, participation and community involvement has become a high priority for planning departments worldwide (UN-HABITAT 2001), though achieving genuine participation has proven to be exquisitely challenging. Even in some of the best cases, minority groups, especially those that are segregated, are rarely engaged (Brand & Gaffkin, 2007).

Depending on the structure and guiding philosophies of a given planning agency, planning interventions are a potential tool for addressing and ameliorating social challenges. In his theories on advocacy planning, Davidoff presents the planner as an advocate that draws power on behalf of the powerless (Davidoff, 1996). Forester and Krumholz present the concept of equity planning, positing that planners are in a position to use their access to power and resource networks to influence and empower stakeholders (Forester, 1996). The theories of advocacy, equity and collaborative planning position the planner as a influential mediator with access to both resources and the communities that need them, describing the planning process as a mediating mechanism. According to Healey, if planners enter the process with this perspective, the result is a dynamic and cooperative discourse and an exchange and production of knowledge (Healey, 2003).

Relating planning interventions specifically with segregation brings us into the realm of housing policies and programs, one, if not the most implemented and examined forms of planning desegregation measures (Bolt, 2009). The following quotation speaks to the relative failure of the vast majority of housing interventions to combat residential segregation in Europe:

> "…although a wide array of desegregation and mixing policies can be found across Europe, they are united in their failure to bring about a significant drop in the level of ethnic segregation. Social class segregation also remains fairly resistant to policy interventions…mixing policies often not only fail to meet the expectations of policy makers, but they can also lead to negative effects, such as the break up of communities and constraints on housing choice." (Bolt et. al., 2010, p. 130)

If residential integration does not lead to increased social cohesion (and can actually decrease cohesion), then it can be argued that either residential segregation is not the core problem to be addressed or that there is a need for new approaches.

Education-related interventions

The education system has long been recognized as a means for class distribution and the maintenance of class divisions (Apple, 1995). "The causes of exclusion run deep in the architecture of schooling" as schools actively "reflect and refract social inequalities" (Slee, 2010, p. 102). Despite the longstanding tendency for the education system to hold people in their current levels of prosperity or poverty, some argue that the school is the ideal setting for significant social change. The classroom is where children are empowered and learn about democratic participation (Ladson-Billings, 2004; Radó, 2001; Szalai et al., 2009). The early school experience is where many social norms and rules are acquired, where students learn the "rules of the game" that become important in social functioning later in life (McDonnell et al., 2000). Condly discusses the value of the school as a vehicle for interventions due to the compulsory nature of education in most societies, the sheer number of hours that children spend there and the fact that schools simultaneously address academic, moral and health issues (Condly, 2006).

In addition to its use as a means for social development (McDonnell et al., 2000), education is often seen as a critical factor in the segregation of minorities, both in its causes and solutions. The exclusion of minorities from the education system can often been seen as a microcosm of their segregation in larger society (Szalai et al., 2009). Many of the root causes and solutions of the segregation of minorities can be traced to the quality and duration of their education (Goodenow, 1992).

Understandably, many agents working for the improvement of the lives of target populations focus on educational desegregation and eliminating unwarranted placements of minorities in special and lower quality schools and classes (Friedman et al., 2009). Indeed these efforts have shown some results (at various scales) in school desegregation, decreased drop-out rates and increased school enrollment. However, there are limitations to education in development at the regional and national scale, particularly in the absence of complementary resources.[iii]

Interventions implemented by non-governmental organizations (NGOs)

NGOs have and continue to play a significant role in community advocacy, often provide a sort of moral authority, have a sense of legitimacy and public trust and are perceived to represent the public independent of economic influence (Ghaus-Pasha, 2004). Historically, NGOs emerged as a direct result of changes in political power structures and the redistribution of power; this occurred when public funds were redirected to independent NGOs for the delivery of public services (Kaposvári et al., 1997; Powell, 1987). NGOs are also key in the production and distribution of culture and serve a "central role in molding public opinion" (Powell, 1987, p. 307). The professional advocates available through NGOs can increase formal access to resources and political power for communities. Regarding their roles in participation and governance, NGOs can serve as an organizing force in the absence of a community's capacity for self-organization.

Despite their unique positioning as an agent for positive social development, NGOs are not without their own challenges, criticisms and perceived failures. One area noted for improvement is the long-term sustainability of NGO initiatives:

> "Successful NGOs need to be both lauded for the successful extension of social capital, but also implored to work at further indigenizing it." (Buckland, 1998, p 237)

The Concept of Resilience

In terms of urban planning and development, resilience has largely been applied to disaster preparation and recovery, looking at how to minimise community vulnerability and improve response times and access to resources (Norris et al., 2008). Building on this work, persistent resilience looks at how communities survive and cope under conditions of long-term sustained stress, such as those resulting from segregation, poverty and oppression (Andres & Round, 2011).

Additionally, there has been some development of the concept that combine or supersede these two general categories. This includes 1) human agency, which differentiates between mere survival and intentional action to improve one's situation and 2) social and institutional resilience which suggests that the presence or lack of resilience at the individual, family or community scale may be symptomatic of a lack of resilience at a larger scale.

As the concept of resilience has produced new insights and a deeper understanding of social problems, the discourse has naturally led to the potential use of this understanding to prevent or minimise problems. The application of resilience in the design and implementation of interventions is naturally more developed in those disciplines that

were early adopters of the concept, namely child development and psychology (Walsh, 1996). Other areas are following suit, for example in the fight against increasing environmental vulnerabilities due to climate change (Cinner et al., 2009).
This then begs the question of how the concept of resilience is or could be translated into measurable characteristics or indicators. Figure 2 was compiled from the aforementioned literature to provide a general sense of the indicators of resilience that can be found across and between research and disciplines.

Figure 2. Summary of factors, criteria and indicators of resilience[iv]

Economics, Infrastructure & Resources
- Employment rates – diversity, flexibility and stability of economic activity
- Infrastructure – spatial (i.e. housing), social (i.e. community) and services (water, electricity, etc.)
- Distribution of power, knowledge and resources

Information, Communication, Skills & Competences
- Distribution and accuracy of information
- Language, communication, literacy and levels / equity of formal education
- Critical thinking, problem-solving and decision-making
- Collective and self-efficacy, ability to organize and take action

Social Capital, Social Networks & Relationships
- Inclusivity, exclusivity and legitimacy of as well as linkages with institutions
- Political representation and political will
- Social networks and interpersonal relations
- Presence of mediating structures and alternative spaces

History, Identity, Perspective & Other Psychosocial Factors
- Narratives, cohesion, self- and group esteem
- Sense of belonging, attachment to place and macro-belonging
- Interpretation of and approach to adversity and change
- Human agency, perception of humans as causal agents

Case Studies: Roma Integration in Europe

In order to test the potential application of the theoretical results of this paper, an analysis of two interventions aiming to improve the living conditions of segregated Roma communities was conducted. The following section provides a brief background on the European Roma and a presentation of the case study methodology and results.

The Roma in Europe

The European Roma are a population well-documented to be found to be living in poverty and segregation, suffering from discrimination and oppression at various

degrees of severity. It is generally accepted that the Roma originated from the Indian sub-continent and are thought to have been in Europe as early as the 14th century (Vajda & Dupcsik, 2008). More recent Roma migration has been attributed to conflict (e.g. in Kosovo) and European expansion (e.g. following Romania's ascension into the European Union).

Though they are classified as one ethnic group, substantial differences exist within the Roma population (Ringold et al., 2005). They do not, for example, necessarily share a common language or religion. One consistent characteristic shared by the majority of Roma is that they live in poverty and are deeply discriminated against in nearly all facets of society (Vajda & Dupcsik, 2008). Data on the various Roma populations are typically incomplete or non-existent due to such reasons as lack of formal registration and national regulations against collecting data based on ethnicity. This presents a challenge to understanding and addressing Roma-related issues; estimates on population sizes and specific cohorts can range wildly, in some cases by the hundreds of thousands (Baucal, 2008).

Many interventions to improve the situation of the Roma have been and continue to be implemented. One example of this can be found in the Decade of Roma Inclusion,[v] an international initiative to improve the situation of Roma in twelve countries.

Case Study Methodology

The data used for the selected case studies is a mix of primary and secondary, quantitative and qualitative. Background information on Case Study 1 was obtained through current and former UN-HABITAT staff, the texts and publications they provided as well as independent internet searches (predominately the UN-HABITAT[vi] and Kraljevo Municipality[vii] websites). Additional information was obtained through direct communication with the project manager via an in-person meeting in Belgrade.

Background information for Case Study 2 was obtained through documents provided by the international NGO the Roma Education Fund (REF),[viii] as the project was funded by (and thus subject to the reporting and monitoring requirements of) REF's grant program. More detailed information was acquired through participation in a routine REF grant program monitoring mission wherein the project's implementing agency and project sites were visited. Additional information was obtained through internet research and REF reports on the education system in Bulgaria.

Objectives and Methods

Following is the first of three main objectives of the full case study analyses and the corresponding method used to meet that objective. The remaining objectives and methods from the full thesis upon which this paper is based have been excluded here.[ix]

Objective 1: Determine the relevance of the identified resilience indicators in practical application.

Method 1: Review the relevant problems, solutions and outcomes and correlate with related resilience indicators.[x]

In order to compose a list of intervention-related resilience indicators, I returned to the list of indicators extracted from the literature reviewed on resilience (see Figure 2). These indicators were correlated with the literature on the three areas of focus; Table 1 summarizes the results. It should be noted that this list is not exhaustive; the aim was to produce a sufficient number of indicators for conducting exploratory case studies analyses.

Table 1. Distribution of resilience indicators by focus area

Resilience Indicators								
Agents of Resilience	Urban Planning	Empowerment & creating points of entry for participation	Education	Literacy, level/equity of formal education, training, language & effective communication	NGOs	Power (in terms of influence on pubic opinion) and distribution of information
		Distribution of knowledge, power & resources		Participation, social networks and a sense of belonging		Inclusivity/exclusivity of institutions & organizations
		Social capital, networks and relationships		Critical thinking, decision-making & problem-solving skills		NGOs as product or means of self-organization & leadership
		Distribution and accuracy of information		Mediating structures & alternative spaces		Relationships, social capital, trust & legitimacy
		Mediating structures & advocacy		Employment & economic diversity		Linkages with institutions & organizations
		Problem-solving & decision-making		Identity and esteem		Distribution of power and resources

Following this, the available documentation and interview results from the two case studies were reviewed, extracting instances where language correlating with the identified indicators emerged. A presentation of the two case studies and the results for each follows; as this analysis is being extracted from a larger text, it should be noted that only the urban planning-related resilience indicators are utilized here.[xi] A brief summary of notable findings concludes this section.

Case Study 1. Sustainable Improvement and Regularization of the Roma Settlement Grdicka Kosa 2 in Kraljevo, Serbia

Kraljevo is a city in central Serbia with 121,707 inhabitants recorded in the 2002 census.[xii] Due to historical regional conflicts, Kraljevo, like much of Serbia, is home to many refugees, Internally Displaced Persons (IDPs) and vulnerable populations. One group classified as vulnerable are the Roma.

In 2001, the Italian government committed €15 million towards a long-term settlement and integration program, to be overseen by UN-HABITAT. In 2005, implementation of the three-year Settlement and Integration of Refugees Program (SIRP)[xiii] began. SIRP aimed to achieve long-term integration through national and local policy and direct project activities. One direct activity component of SIRP was the Alternative Housing Solutions Project; Case Study 1 falls within this grouping.[xiv]

Grdicka Kosa 2, one of four Roma settlements in Kraljevo, is a five hectare site situated on the city's periphery. At the time of the project, 407 inhabitants were living in 87 houses. From 2007-2008, UN-HABITAT implemented the "Improvement and Regularization of the Roma Settlement Grdicka Kosa 2 in Kraljevo" project in partnership with the Municipality of Kraljevo and the Municipal Housing Agency (Ramirez et al. 2008). The project aimed to both improve the living conditions of the community and to fully integrate its inhabitants into the larger society.

Table 2 provides a synopsis of the analysis of the available information related to problem and solution identification and the recorded outcomes of the intervention.[xv]

Table 2. Analysis of Case Study 1

Project Name: **Sustainable Improvement and Regularization of the Roma Settlement Grdicka Kosa 2**
Problem *(as defined by UN-HABITAT)*
Distribution of knowledge, power and resources *Low income, low formal education levels, high welfare reception levels, land tenure issues, low quality housing, limited access to utilities.*
Solution
Distribution of knowledge, power & resources *Initial physical/socio-economic survey conducted, weekly project meetings, national design competition was means for developing community plan.* **Empowerment & creating points of entry for participation** *Citizen workshops, opportunities to actively participate in implementation, overall settlement improvement (including community committee that selected which families would receive housing improvements).* **Problem-solving & decision-making** *Trainings in communication and conflict management.* **Mediating structures and advocacy**

Long-term integration through policy, implemented by UN-HABITAT in partnership with Municipal Housing Agency, funded by Italian government. **Distribution & accuracy of information** *Project-specific survey generated new data, weekly project team meetings.* **Social capital, networks & relationships** *Formation of a team of municipal experts and settlement representatives, project manager encouraged direct communication (i.e. holding meetings in the settlement vs. municipality), main objective was inclusion and integration.*
Outcome
Distribution of knowledge, power and resources *Upgrading of settlement infrastructure, improvement of housing conditions for most vulnerable, construction of indoor toilets and extra rooms, completion of previously incomplete housing, creation of a draft programme for a Detailed Regulation Plan.* **Empowerment and creating points of entry for participation** *Community participated in workshops, trainings and meetings, housing upgrade recipients selected by community.* **Social capital, networks and relationships** *Framework of Cooperation to continue settlement improvements was generated, direct communication between municipality and community continued after the project ended, there was some political resistance that prevented the implementation of portions of the plan.*

Case Study 2. Equal Opportunities Initiative in the Fakulteta Community of Sofia, Bulgaria

The case of the Roma in Bulgaria is no exception to trends observed of Roma populations elsewhere – high rates of poverty, unemployment and residential and social segregation. One of the most well-known segregated Roma communities in the capital of Sofia is Fakulteta, which has an estimated 40,000 inhabitants and where low levels of educational attainment and high early school leaving rates are a significant problem.

In Bulgaria, completion of preschool and kindergarten is compulsory; a document stating completion is required for registration into the first grade. Therefore, not enrolling in and completing preschool more often than not effectively excludes students from the school system for life. In 2008, the Municipality of Sofia launched an internet-only registration process for preschool. Although this represented an advancement for the municipality, it simultaneously presented new barriers for the inhabitants of Fakulteta – lack of computer and internet access and low literacy rates make the internet registration process difficult.

It was under these conditions that the NGO Equal Opportunities Initiative Association obtained a grant from the Roma Education Fund (REF) to increase preschool and kindergarten enrollment of the Romani children in Fakulteta, primarily through assistance with the online registration process. The Equal Opportunities Initiative Association, founded in 2006, works to promote and preserve Roma culture and traditions in Bulgaria and facilitate integration of Roma in Bulgarian society through

legal and advocacy services, housing advocacy, fighting against discrimination and building the capacity of other Roma organizations.

Table 3 provides the analysis of the available information related to problem and solution identification and the actual and anticipated outcomes.

Table 3. Analysis of Case Study 2

Project Name: **Equal Opportunities Initiative in the Fakulteta Community of Sofia, Bulgaria**
Problem *(as defined by Equal Opportunities Initiative Association)*
Distribution of knowledge, power & resources *Low levels of education attainment, literacy, computer skills, access to computers/internet; high drop-out rates; inequality in all aspects of life for Roma; residential segregation, distance from most mainstream educational facilities; difficulty paying school fees.* **Distribution and accuracy of information** *Advertising campaign about electronic enrollment did not reach the community; enrollment communication and information only available through the internet; contact information obtained by school staff for Romani parents is often incorrect (school staff does not trust contact info from Health & Social Services).* **Social capital, networks and relationships** *Discrimination is high, Roma are not welcomed into mainstream schools; Romani children typically spend all of their time in the Roma community and are not well-prepared for integrated environment; tensions between school staff and parents; perception that NGOs only absorb money (there are more important investments).*
Solution
Distribution of knowledge, power and resources *Increase enrollment rates in mainstream schools, assist with school lessons, increase enrollment in the schools near to the community to prevent transportation need, provide books for additional at-home work, meet with parents about working with children using the books.* **Empowerment and creating points of entry for participation** *Regular and frequent communication with parents, enroll children in school to encourage early social integration, engage volunteers in project implementation, hold community meetings at beginning of project.* **Problem-solving and decision-making** *Visit surrounding schools, gather information about school's profile, distributed this information to parents to encourage informed decision-making.* **Distribution and accuracy of information** *Targeted information campaign about electronic enrollment process; assign a group coordinator to track registration, application, enrollment processes and attendance; hold weekly or bi-weekly meetings to monitor project implementation; meet with teachers to obtain supplementary data; develop relationships with Municipality.* **Mediating structures and advocacy** *Provide direct assistance with online enrollment process, meet with municipality and schools on behalf of Roma to identify and solve specific technical issues, monitor absenteeism to determine actual (vs. perceived) causes, addressed misunderstandings of both parents and schools.* **Social capital, networks and relationships** *Develop relationships with municipality and schools; implementing organization located adjacent to community.*

Outcome
Distribution of knowledge, power and resources *Increased understanding of parents and increased number of students enrolled.* **Empowerment and creating points of entry for participation** *Community meeting sessions and training for parents on working with children on supplementary activities.* **Mediating structures and advocacy** *Identified technical issues and negotiated solutions with municipality, worked with community to complete enrollment, maintained lists of existing enrollment profiles and required documents, monitored enrollment system weekly.* **Social capital, networks and relationships** *Obtained partnership agreement between NGO and municipality regarding project support.*

Results

Table 4 summarizes the results of the two case study analyses in terms of Objective 1.

Table 4. Synopsis of Case Studies 1 and 2 as related to Objective 1

	Case Study 1	Case Study 2
Objective 1 Determine the relevance of the identified resilience indicators in practical application.	Many observable correlations with a variety of indicators throughout the project. It is noteworthy that all of correlations identified in the problem section fit into one indicator category, that of the distribution of knowledge, power and resources. Other indicators emerged throughout the solution and outcomes sections.	Presence of resilience indicators was extensive, and likely not completely captured here as there were many. It was not difficult to identify instances of this.

Though perhaps not intentionally sought as an objective or aim as such, elements of resilience (as measured by the selected indicators) indeed emerged throughout both projects. That said, there is some variation in the profile and distribution of these interpreted indicators. In Case Study 1, the fundamental focus of the project was physical improvements to housing and infrastructure and the creation of an overall community plan. Housing and infrastructure both correlate to the distribution of and access to resources. This can be seen in the resilience indicators extracted from the problems defined in Case Study 1 – in fact, they all relate to the distribution of resources.

When looking at the solution and outcomes for the same project however, the distribution of resources as a resilience indicator carries over, but other resilience indicators emerge as well. If one were to create a resilience-based model, this case would likely show a predominant focus on just one just element of resilience in the

problem identification, i.e. access to resources, with additional elements found in the solution and outcome design, perhaps acting as a kind of added value towards the success or sustainability of the intervention, but not necessarily core to the motivation of the project or the implementing agency.

Compared to Case Study 2, one finds less of a concentration on one type of indicator in problem identification. Perhaps this reflects the nature of the implementing organization and may be explained by the mission-based nature of many NGOs – their interest is often based on an overall situation or trend perceived as unacceptable, in this case the discrimination, oppression and inequity that Roma suffer from in Bulgaria. Galvanized by this, the NGO in Case Study 2 works to solve the problem as such, subsequently revealing a full cadre of social spheres where these unacceptable conditions exist.

More may be learned from considering additional differences in circumstances between the two projects – for example, UN-HABITAT was a temporary element in the community, with their staff being involved only for the duration of the project. Perhaps this made making direct links that were not dependent on UN-HABITAT's presence essential and part of the implementation strategy. Further, the nature of the intervention should be considered; the UN-HABITAT project, while working in principal towards equality, was relatively finite and short-lived as just one component of a much larger program (SIRP). In comparison, the NGO in Case Study 2 is, to a degree, a member of the community itself, with its office located literally next to the Fakulteta community; the development of more long-term and established relationships directly with the community is perhaps more natural and appropriate as well as being an objective in itself.

Conclusions and Intended Future Research

Overall, this paper demonstrates that resilience is present in and has potential as a tool for urban interventions, though the extent of this potential is to be debated. The key hypotheses moving forward are that 1) fundamentally, examining the problems of segregation through the lens of resilience can reveal the root problems of segregation, 2) encouraging the development of elements of resilience is already innately of interest to many agents currently working to identify and solve social problems and 3) though resilience may offer common ground and complex consideration of community context, resilience and resilience-thinking still needs to be approached on a case-by-case basis and does not eliminate the unique features and nuances of any particular social problem.

Future research could work to further operationalize the concept of resilience via interventions aimed at improving conditions and participation in segregated communities, aiming to produce more precise guidance or articulate a clear formula for utilizing resilience in practice.

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[i] This includes policy, programs, projects, initiatives and so forth, generally categorized in this paper as interventions.

[ii] See endnote iv.

[iii] For one example of addressing this in practice, see Harlem Children's Zone; information available at http://www.hcz.org/ (link accessed 1 September 2011)

[iv] Based on Norris et al. 2008, Jabeen et al., 2010 Andres & Round 2011, Round et al. 2008 and 2010, Ganor & Ben-Lavy 2003, Hart 1973, Sonn & Fisher 1998, Brown & Kulig 1996, Adger 2000, Lorenz 2010, Cinner et al. 2009, Walsh 1996.

[v] http://www.romadecade.org/, accessed 23 August 2011

[vi] http://www.unhabitat.org.rs/programmes/sirp/sirp.htm, accessed 19 August 2011

[vii] http://www.kraljevo.org/OPSTINA-KRALJEVO-About-Kraljevo_112_6___eng, accessed 19 August 2011

[viii] http://www.romaeducationfund.hu/programmes/project-support-programme, accessed 8 April 2012

[ix] Following are the remaining two objectives which were excluded from this abbreviated text: Objective 2. Determine the actual and potential participatory nature of the intervention. Method 2. Identify and describe points of entry for participation. Objective 3. Determine the presence and role (if relevant) of education and NGOs in the intervention. Method 3. Review the case and extract instances (or perceived instances) where education and NGOs are referenced.

[x] The urban planning-related resilience indicators were selected for the analysis of the problem and solution identification due to the urban planning focus of the original paper. The education- and NGO-related resilience indicators were utilized in Objective 3.

[xi] Readers interested in the data for Objectives 2 and 3, the latter of which included analysis utilizing the education- and NGO-related resilience indicators, can request them from the author by email at kari.smith@yahoo.com.

[xii] http://www.kraljevo.org/OPSTINA-KRALJEVO-About-Kraljevo_112_6___eng, accessed 19 August 2011

[xiii] http://www.unhabitat.org.rs/programmes/sirp/sirp.htm, accessed 19 August 2011

[xiv] It should be noted that the project in Case Study 1 was funded by the €15 million from the Italian government, but was not the sole use of the Italian funds. Rather, it was one of many projects within and funded via SIRP.

[xv] The original table includes more detailed evidence and is available to interested readers upon request from the author.

Evaluating Urban renewal priority areas in Taiwan: a case study of Tainan

Yu Sun[1], Tzu Yuan Chao[2]

Abstract

Urban regeneration projects have been considered as the major catalyst to revitalize deprived urban areas socially and economically. Proposing area-based comprehensive urban regeneration strategies are emphasized global wide. Many researches confirmed that urban renewal priority areas should be based on physical environment and the economic, social needs of local residents (Lee and Chan,2009; Council, 2006; DETR,1999a), the sustainability of regional development (DETR, 1999b; DOE,1994), and level of improvements of living quality (DETR, 2000; ODPM,2003) in order to ensure long-term benefits for the whole area. In Taiwan, although the idea of area-based regeneration projects has been advocated by many researchers, in practical, the main considerations for designating "priority areas" regulated by the current Urban Renewal Act 1999 are still dominating the decision making process. Blight areas bigger than one-block in size with worse deprived social and physical environment, near future major public constructions, or listed historical buildings are recommended for designation. Since 1999, there has been over 300 urban renewal projects proposed in Taiwan, but most are small-scale private sector-led housing development projects located in the Taipei City. It has further resulted in issues such as gentrification, housing affordability and social conflicts between rich and poor. In 2009, the central government has announced 30 priority areas and Tainan city government has announced 26 priority areas to promote urban regeneration by investing large amount of public funding. However, the criteria for designation include large area of public lands, major facilities and historic heritages. Clearly, the government is still based on the current status and easiness of implementation to designate the priority areas without taking into account the future demands, social–economic trends, and possible benefits from the regional development perspectives. Hence, this study intends to use analytical hierarchy process to identify evaluating criteria in terms of the physical environment, social and economic development potential, the future investment returns and other factors

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for designating urban renewal priority areas. A series expert survey will be conducted to confirm designated principles and establish urban renewal priority areas weight indicators framework as an assessment tool. Finally, 26 existing priority areas in Tainan city will be examined by the indicators to further review the appropriateness of the designation. The final result of this study is expected to provide recommendations for future legal and policy amendments of urban regeneration in Taiwan.

Key words: area-based regeneration projects, priority areas, weight indicators framework

1. Introduction

Urban areas often face periods of decline, and thus require government action to regenerate them. Urban renewal plans carried out in countries such as Britain, America, Germany, and Japan, work by considering urban economic, social, and industrial factors in order to improve the lives of local residents promote urban and regional sustainable development. At the meantime, hope to enhance the environment, economic and social development and revitalize urban function by integrated urban renewal strategies to show the vitality of urban sustainable development and energy for the urban to bring long-term benefits.

Taiwan's efforts at urban renewal have mostly focused on improving the physical environment of buildings and structures in a number of small-scale projects, chosen based on the degree of environmental decay and financial benefits, with few benefits for local residents. The mail object is to reconstruct new building and redistribution of the real estate property proportion. In addition, such projects do not bring new development opportunities to the city, and can even cause more serious urban social issues, such as the problem of gentrification, housing affordability, and a widening gap between rich and poor. It is thus necessary to rethink urban renewal area selection criteria and strategies in order to improve the overall city environment and achieve sustainable development, and not only works to make buildings more aesthetically pleasing. In recent years, the central and local governments in Taiwan have chosen a number of urban renewal priority areas, hope to boost the overall urban improvement through the implementation of urban renewal, but these efforts

have had limited success, and thus this work aims to improve the selection criteria of urban renewal priority area used to achieve more beneficial outcomes.

This study is divided into two parts; the first collects the priority area selection criteria and evaluation indicators from literature review, and the second focuses on sorting out a criteria system that are more suitable for use in Tainan City.

2. Literature Review

2.1 Urban Regeneration and Area-Based Regeneration

Roberts and Sykes, (2000) defined urban renewal as a process of adopting fully integrated points of view and actions to deal with urban problems, in order to enhance the physical economic, and social environments of urban areas. Roberts (2000) reviewed the literature on urban renewal from the 1950s to the 1990s (Table 1). In the 1950s such works were based on developing master plans and suburbs to reconstruct old urban areas. This work continued in the 1960s, although efforts also began to attempt to restore the original appearance of the urban environment. With the problem of urban sprawl due to the rise of suburbs in the 1970s, attention then turned to in-situ redevelopment and neighborhood planning. In the 1980s, urban renewal efforts focuses on enhancing economic competitiveness of such areas, while in the 1990s more attention was put on the idea of sustainable development, with more comprehensive policies and the implementation of integrated programs. Today, urban renewal efforts are often used to address a number of aims at the same time, including employment, economic competitiveness, social issues, community issues, urban vacant spaces, and environmental degradation, as well as achieve the goal of sustainable development.

Taiwan’s current urban renewal policies are regulated under the Urban Renewal Act, which aims to promote better urban land development and utilization plans and the recovery of urban functions, which include improving the living environment and promoting the public interest, pursuant to the Urban Renewal Act procedures within the scope of reconstruction, renovation or maintenance measures in urban planning areas.

Table1. Urban renewal main theme evolution from 1950s to 1990s

Time	Trend
1950-1960	Main themes were reconstruction of older areas and towns and cities based on a master plan and suburban growth
1960-1970	1950s theme continued and some attempts to conduct rehabilitation
1970-1980	Focus on in-situ renewal and neighborhood schemes and suburban development continued
1980-1990	Major schemes of development and redevelopment which aimed mostly at improving the economic competitiveness of cities were developed
1990-2000	More sustainable approach and more comprehensive form of policy and practice was enhanced and more emphasis on integrated action was given
2000-now	Aim to address issues that are associated with change in the economy and employment, economic competitiveness, social exclusion, community issues, vacant and deteriorated sites in cities, new land and property requirements, environmental quality and sustainable development, etc.

Source: Roberts, 2000

The concept of area-based regeneration first arose in 1930s Britain, when it was used on a regional basis to address the problem of urban recession in a short period of time. The main factors triggers area-based regeneration is the national policy, public-private partnership, public investments in empowerment relations, community involvement and community capacity. Area-based regeneration development strategies aim to solve specific problems in a region, such as industrial land use and slums, as well as to develop an area's potential, such as with the development of a central business district and re-use of idle land. Area-based regeneration policies have long been used as a regional development strategy by central governments, and government need to looking for necessary funding to carry out the project. There have been much fewer local, bottom-up community efforts in this regard (Dobbs, and Moore, 2002). Current area-based regeneration programs often aim to reduce the unemployment rate, stimulate local economic development, reduce crime, improve the quality of the environment,

promote social integration and increase local social capital, and increase participation in cultural and sports activities (Gabrielsen, 2008). Table 2 summarizes the objectives, methods and evaluation criteria for area-based regeneration that were set out in Meyer (1998).

Table2. Objectives, methods and evaluation criteria for area-based regeneration

Objectives	Environmental objectives	Better regional environmental conditions
	Economic objectives	Improved area-wide attractiveness to capital
	Community objectives	Reduced community disamenities and specific economic improvements
	Actual consultation on local community objectives	Potentially extensive;(although development agency may listen but not act on local concern)
Methods	Leads actor	Public agencies and Quasi-public authorities
	Public site assembly, preparation	Potentially extensive to achieve area change
	Public support mechanism	Complementary investments, planning changes
Evaluation criteria	Time horizon	Lon allowing time for expected spillover effects
	Policy efficacy	New capital flows into area; increase in area economic activity, incomes, and property value
	Public efficiency	Maximum leverage on public funds
	Public effectiveness	Increase in area economic activity, household incomes; reduction in area disamenities

Source: Meyer, 1998

2.2 Priority Areas

Taiwan's criteria for the choice of priority areas for urban renewal are based on the Urban Renewal Act (1999). Under any of the following circumstances, the County (City) authority can designate an area as a priority renewal target:

1.Buildings that are deteriorated and not having a fireproof structure or the space between neighboring buildings is insufficient, and the building is hazardous to the public safety.

2.Buildings those are in a dilapidated, dangerous condition that have been badly built or roads that are curved and narrow or in any way hazardous to public safety.

3. Buildings that do not meet the urban function.
4. Buildings those are not coordinated with important development projects.
5. Buildings that have historical, cultural, artistic, or other memorable value that urgently require preserving and maintaining.
6. Buildings which have a bad living environment as to constitute a hazard to public health or peace and order in society.

In 2002, the Institute for Urban Renewal Research Foundation in Taiwan stated that the key areas for urban renewal projects should include regional transportation hubs, old residential communities, the old central business district, downtown industrial districts and military barracks, post-disaster reconstruction areas and waterfront areas. In 2009 the Central Government and in 2011 the Tainan City Government both proposed urban renewal priority areas which focus on large areas of public land, and that strategic re-development efforts should focus on spaces near railway and MRT stations or other major construction and development areas, as well as work to preserve historical areas.

The international research literature indicates that the selection criteria for urban renewal priority areas should integrate the concepts of economic, environmental and social sustainability (Chan and Lee, 2007). In addition, renewal efforts should aim to make working and living areas more attractive (DOE, 1994), and improvements to the physical environment should meet the economic and social needs of the community (DETR, 1999, 2000). From a more comprehensive perspective, not only physical environment improvement but also economic and social development are consider as a sustainable development vision trying to figure out the maximum benefit for the urban and its surrounding area. Urban renewal drives urban development and enhances the quality of living and working environment, economic development, social welfare and other.

2.3 Indicators for Evaluating Urban Regeneration Areas

Evaluation criteria are needed to select areas for urban renewal. Many urban renewal area assessment indicators have sustainable development as the major goal of such projects. Hemphill, Berry and McGreal (2004) reported that the performance indicators used to measure sustainable urban renewal include factors such as the

economy and employment, resource use, building and land use, transport and mobility, and the community benefits, and these are considered in the criteria used to evaluate the cases in United Kingdom, Ireland and Spain. Chan and Lee (2007a; 2007b), writing in Hong Kong, also proposed a system of indicators to assess the sustainability of view urban renewal areas, and these include environmental, economic, and environmental sustainability. These indicators aim to provide communities with a high degree of operating convenience, open spaces, appropriate architectural forms, efficient and safe public transport and walking environments, good public facilities, community involvement, and retention of local identity. Amna Salman and Salman Qureshi (2009) examined the metropolitan area of the city of Karachi, and considered the issues of environmental, economic, social sustainability, as well as problems associated with buildings, noise, traffic, water, air pollution, traffic safety, healthy and mobility. The literature on urban regeneration area evaluation indicators is summarized in Table 3.

Table3. Summary of the literature on urban regeneration area evaluation indicators

Author	Case Study Area	Evaluation Criteria	Evaluation Indicators
Hemphill, Berry and McGreal (2004)	Belfast, UK Dublin, Ireland Barcelona ,Spain	Economy and work	● Number of jobs and enterprises created ● Quality of jobs ● Performance of incentive mechanisms ● Leverage ratio
		Resource use	● Reclamation of building material ● Retention of environmental features ● Water disposal ● Waste minimization ● Energy efficiency ● Conservation of built heritage resources ● Incorporation of environmental design ● Performance of environmental management

		Buildings and land use	● Ratio of open spaces to build form ● Ratio of redeveloped buildings to new build ● Reclamation of contaminated land ● Density levels in relation to plot size ● Mixed use combination ● Occupancy levels ● Quality of final product ,urban design ,public space ● Usage of public space
		Transport and mobility	● Land devoted to roads ● Land dedicated to pedestrians ● Reorientation of road network ● Work traveling habits ● Leisure traveling habits ● Public transport links ● Car-parking provision ● Integration of land use and public transport
		Community benefits	● Access to open space, leisure/retail/education /medical/entertainment/cultural facilities ● Housing affordability ● Community ownership ● Community group involvement
Chan and Lee (2007)	Hong Kong	Environmental Sustainability	● Access to work ● Sense of community ● Green design ● Building form ● Provision of open space ● Rehabilitation of repairable property
		Economic	● Access to public facilities

		Sustainability	● Green design ● Provision for establishment of different business ● Community involvement ● Compatibility with neighborhood ● Convenient, efficient & safe environment for pedestrians & public transport users
		Social Sustainability	● Provision for meeting special needs of disables, elderly/children ● Green construction ● Conservation/improvement of local distinctiveness ● Availability of local employment ● Access to open space ● Adaptability of non-domestic development to the changing need
Amna Salman and Salman Qureshi (2009)	Karachi, Pakistan	Environmental	● Buildings – construction materials, energy and land use ● Noise – number of noise complaints ● Transportation – construction material ● Water – construction material use, energy use, land use, chemical usage, contaminant ● Air-number of air pollution complaints
		Economic	● Buildings-capital and operation and maintenance costs, affordability of housing, expenditures in research and development
		Social	● Transportation – capital and

			operation and maintenance costs, expenditures in research and development, choice of mode, time of travel ● Water - -capital and operation and maintenance costs, service fees, access to portable water and sanitation service, quality of water ● Safety –feeling insecurity ● Mobility – number of people injured in traffic accidents ● Buildings – supply of housing ● Health -- indoor air quality, public satisfaction

Source: Hemphill, Berry and McGreal, 2004; Chan and Lee, 2007; Amna Salman and Salman Qureshi, 2009

Hence, from the literature review, we can clearly understand in Taiwan the mechanism of choosing urban renewal priority area is still limited in a narrow scale, instead of considering a comprehensive scale of the city like other country have done. Since urban renewal in Taiwan has become a hot issue, public sector choosing priority area to lead other private-led urban regeneration move up to act is a big issue need to concern. For the reason mention above, this study is going to base on Taiwan and Tainan's overall condition and circumstance, trying to sort out a bunch of indicators to evaluate the urban renewal priority area which proposed by government. Follow up study may try to do thorough study of indicator choosing and establish a priority area assessment indicator system.

3. Methodology

This study is mainly based on a literature review of the definition of urban renewal and area-based urban regeneration, the various selection criteria and evaluation indicators used for urban renewal priority area projects research. In addition, joining field survey to observe Tainan city's designated urban

renewal priority area to clarify the physical environment conditions and the local characteristic in order to filter the urban renewal area to assess. Follow up research will adapt analytical hierarchy process and conduct expert survey to confirm designated principles and establish urban renewal priority area weight indicators frameworks as an assessment tool. Also examines how such projects are selected in Tainan City, with the aim of providing better criteria for the selection of priority areas.

4. Study Area

Tainan City (Figure 1), one of Taiwan municipalities, has nearly 400 years of the development, it's Taiwan' earliest developed area while it has a rich historical urban environment, structure and richness of culture relic, it also faces a number of problems in conservation and development. In 2011, old Tainan City and Tainan county were merged to become a municipality, with the goal of achieving better and more sustainable economic, cultural and environmental development, while still persevere its historical characteristics.

Figure1. Taiwan and Tainan area

5. Result

Due to relatively low real estate values, there have been some problems in attracting developers to Tainan, and thus there has been unbalanced development between the urban and rural areas. Also, the preference for housing type, mostly urban renewal approach emphasis on reconstruction, lack of supporting mechanism for renovation and maintenance, the public lack of related knowledge in urban renewal leads hard to handle themselves, confusion of historic city's image and modern image of the city, a large-scale reconstruction may create conflict between maintained the historical image of the ancient capital and brand new development of Tainan, since it’s often encounter difficulties in the implementation of urban renewal.

Integrated consideration of the current conditions and the implementation of urban renewal in Tainan City, to effectively vibrant city area in various aspects of

functional activation, must be led by the public sector to conduct urban regeneration, but also hope that through the means of urban renewal can promote urban sustainable development. The goal of the implementation of urban renewal in Tainan City are both the overall sustainable development areas and keep well preserve of urban history and culture, by means of area-based urban regeneration to carry out.

In examining urban renewal efforts in Tainan City, this study considers the following three objectives: environmental, economic and social sustainable development. These will be used along with the ideas of urban history and cultural maintenance to produce a set of criteria to evaluation urban renewal priority areas (Table 4). The three objectives stated above each have eight assessment indicators, giving a total of 24 indicators preliminary chosen to do assessment.

Table4. Urban regeneration priority area evaluation indicators

Sustainable development	Environmental dimension	Building form&construction material
		Open space
		Heritage conservation
		Retention of environmental features
		Public lands
		Ratio of redeveloped buildings to new build
		Mixed use
		Green design
	Economic dimension	Number of jobs created, new enterprise created
		Quality of jobs
		Availability of local employment
		Encourage local business
		Potential investment
		Unemployment rate
		Incentive mechanism for economic activities
		Leverage ratio
	Social dimension	Community involvement
		Compatibility with neighborhood
		Housing affordability
		Meeting special needs of disables, elderly/children
		Conservation/improvement of local distinctiveness
		Historical conservation
		Public transportation
		Coordinate with public policy

6. Conclusion

By the current implementation of urban renewal and physical environment situation can understand the renewal of the single building in Tainan is not much incentive to private developers, only to put the vision into the overall region of Tainan of urban renewal is more able to reach the purpose of urban regeneration. The

private sector is not making much effort and reluctant involvement in the process of urban renewal in Tainan City, and thus moves in this area must rely on the public sector. It's not only can drive urban renewal process more progressed but also can attract private sector's investment to have the city an opportunity through the urban regeneration process.

Therefore, based on the goal of sustainable development and the preservation of the Tainan's history and culture, this work presents a number of assessment indicators can implement to identify the priority of the priority areas for urban renewal. A future study will conduct an expert questionnaire and hierarchical analysis of these indicators, and construct a framework of weighted indicators.

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REDEFINING WALKING DISTANCE OF OPERATIONAL PLANNED WALKABLE NEIGHBORHOOD IN MALAYSIAN CITIES

THE CASE OF PUTRAJAYA CITY

Sabeen Qureshi[1] and Ho Chin Siong[2]

Abstract:

Urban planners, transport engineers and policy makers are emphasizing on creating environments to encourage people to walk. The concept of walkable neighborhoods is gaining prominence because evidence suggests that neighborhood socio-physical structure may affect physical activity for health and transportation purposes. It is evident that majority of our daily walk is comprised of activities such as walking for transport, work and domestic activity instead of active leisure pursuits. Understanding how people's local neighborhood environments affect their walking behavior is essential to create walkable environment. Existing literature regarding measures of perceptions of the environment related with walkability commonly depends on providing a definition of neighborhood with walking distance of 1 mile or 1.6 km around the home. Whereas traditional neighborhoods have some specific sizes which are based on walking distances which are equivalent to a quarter-mile radius or five minutes walking distance. The aim of this study is to examine the congruence between definitions used in literature review and residents own definition of walkable neighborhood. This aim will be achieved with the help of printed maps showing the neighborhood with road names and indicating places such as (Shop, Parks, Restaurant, Services, and Mosque) and the respondents were asked to draw their neighborhood walking area on the map and they have been provided three copies of the same map. For the three days, they were asked to mark areas visited on the map and later these annotated maps were scanned back into GIS software 9.3 versions for their analysis. The advent of GIS in physical activity research helps in objective measurement of the environment, linking geographical data with socio-demographic, behavioral and environmental data. When participants from residential precincts of Putrajaya were asked to draw their neighborhood boundary, the resulting areas were smaller than those calculated using GIS based on standard neighborhood definitions (1 mile or 1.6 km) Euclidean buffer area around the home. This shows a considerable variation in relative size of measured versus standard 1 mile walkable neighborhood definition. Thus it is concluded that adult's interpretation of their neighborhood area does not appear accurately to the definitions typically used 1 mile around the home into environment perception and walking related study and relate closer to estimated '5-minute walking' distances. It is also concluded that it would appear that operational definitions of neighborhood need to be smaller than those typically used.

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Key Words: thresholds, walkable Neighborhood, GIS, Euclidean buffer.

1. Introduction:

Studies on the relationship between characteristics of an adolescent's neighbourhood and physical activity are numerous (Colabianchi et al., 2007). Although, some studies have found a positive relationship (Davison and Lawson, 2006; Ferreira et al., 2007), there is still no consensus across various studies in the operational definition of one's neighbourhood. This paper examines the various theories defining neighbourhood and offers a practical approach on how to measure thresholds of walkable neighbourhoods.

(Mujahid, 2006) noted that previous studies adopted census tract as the basis upon which neighbourhoods are described. More recently researchers From United States (Frank et al., 2006) and from Australia (Mc Cormack et al., 2007; Leslie et al. 2008) have begun to explore the importance of the neighbourhood scale down to (400 m buffer around respondent's homes). However, of recent, buffers surrounding peoples home are used as a proxy for a neighbourhood (Porter et al., 2004) In literature, commonly used distances that are adopted when creating buffers in the adolescent physical activity are 0.5-0.6 miles (800-1000 meters) (Braza et al., 2004;Timperio et al 2006) or 1 mile (1500-1600mts) buffer around homes. Buffers as very small as 0.25 miles (400meters) have been used (Jago et al., 2006) and as big as 5 miles (8.05 kilometres) . The need for more research in to selection of these distances have been stressed as empirical data for their selection is lacking (Timperio, 2006) noted that one of the ways for choosing these locations is that they match an easy walking distance though there is no existing empirical standard for defining an easy walking distance(Colabianchi et al., 2007). The average walking speed of a human is at approximately 3 miles per hour, which translates to ¼ of a mile in five minutes. The ¼ mile radius circle shows the distance as the crow flies. One rationale for selecting these geographies is that they correspond to an easy walking distance though little empirical evidence exists for defining an easy walking distance. (Smith G. et al., 2010)

Studies that have been carried out on to explore the perceptions of neighbourhood boundaries with adults are few (Coulton CJ 2001). Adolescent's perception of neighbourhood boundaries is likely to be different. Again, literatures on studies that examine variation in neighbourhood boundaries across other features, such as whether the person lives in rural or an urban area are lacking.

This paper comprises of two objectives. First, it provides a general summary of theoretical frameworks defining and measuring neighborhoods. Second this study examine the congruence between definations used in literature review and residents's own definition of their neighbourhood. The case study used in this study is conducted in

Putrajaya City Malaysia. Putrajaya is a planned garden city. Fig 1 shows the location of Putrajaya.

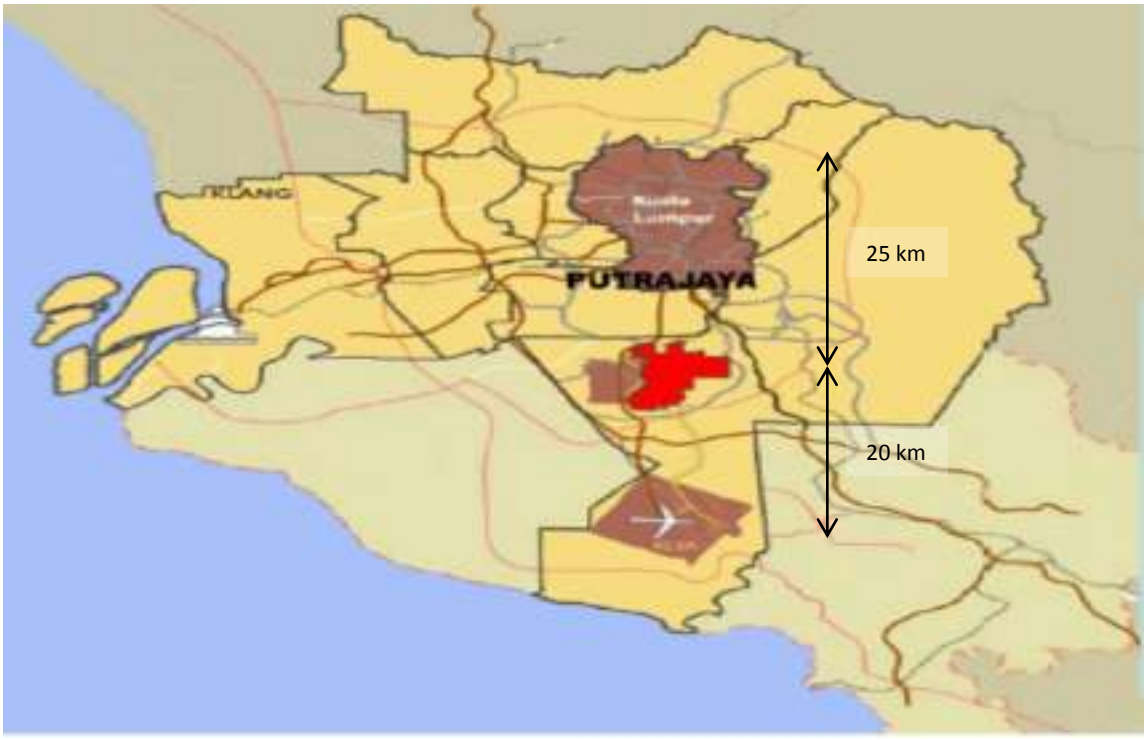

FIG.1: Location of Putrajaya (Source Draft Structure Plan Sustainable Putrajaya 2025 October 2011)

2. Theoretical Framework:

2.1Towards a Walkable Neighborhood theory:

The beginning of modern urban planning has been traced to Howard (1898) with his proposed garden cities. Howard was concerned about the over –crowded, unplanned and hostile British cities of his day, and recognized their relevance as sources of jobs and social infrastructures. Taking a cue from physics, Howard propounded the establishment of not only urban magnets that would attract workers to it but equally rural magnets that act as attraction force. He noted that doing this would involve the establishment of those human activities that can generate employment, self –containing, surrounded by all around by sphere of agricultural activities which serve as a green area to protect the establishment from external incursion.

Howard's great feat led to the launching of what became known as the new town movement. His idea was to transform urban planning from a public health exercise, to

one in which detailed spatial organizations of urban activities, housing unit, neighbourhood or as he called it the ward and town with respect to other places. Hence, neighbourhood for the first time became an essential part of urban planning activity. (Choguill, 2008).

From Ebenezer Howard Garden City theory, which modeled "new" (turn of the 19th and 20th centuries) British cities on small agglomerations of 6,000 to 30,000 people living within walkable distance to services and linked by rail transit. Today, conspicuous supporters of the New Urbanism have continued to advocate walkable neighborhoods, characterized alternatively as Traditional Neighborhood Design (TND), Transit Oriented Development (TOD), Pedestrian Pockets, Transit Villages, Urban Villages, and other sustainable models.

Following Howard garden city theory, the dawn of the 19th century saw the emergence of British cities on small agglomerations of about 6000 to 30,000 people residing within a walkable distance to services connected by rail transit. Today, many proponents of new urbanism have continued to canvass for walkable neighbourhoods characterized alternatively as Traditional Neighborhood Design (TND), Transit Oriented Development (TOD), Pedestrian Pockets, Transit Villages, Urban Villages, and other sustainable models.

In defining the walkable neighbourhood, it should go beyond pedestrian concerns as ability to move or walk freely in a neighbourhood shows not only a type of mobility and means of movement but also the kind of rapport that exist among neighbours which together affect their mental, physical , spiritual and health condition (Moudon AV et al. 2006)

Howard's concept was taken and developed by Perry (1929). (Choguill C.L. 2008) Perry propounded the concept of "neighbourhood unit" which allows children and families to move and walk safely from their dwellings to schools and recreational centres within the community. The educational and recreational facilities must be located within walking distance for all residents residing in the neighbourhood. Perry's theory is derived from social reforms that aim at growing urban population, and from Ebenezer Howard's (Moudon AV et al. 2006)

Perry was not only concern about the physical arrangements but also the involvement of the citizens in decision making about the neighbourhood. He viewed school as the right neighbourhood meeting point. Coupled with its educational function, it also serves as a community centre. He noted that school is preferable to clubhouses or churches because all members within the neighbourhood would see it as neutral.

The effect Perry's argument has on the present day urban planning is evident. Though he emphasized on the physical terms, his major concern was the building of social cohesion among residents in a well-defined neighbourhood. Most of Perry's concept was

integrated in to British public housing estates though sometimes not well incorporated, into British interwar (i.e., 1918-1939).

2.2 The Neighborhood Unit

The neighbourhood unit is defined as a physically defined unit with school, recreational areas and churches as its centre. The unit was sized to the catchment area of the typical elementary school (Kevin lynch, 1985). It is designed in such a way that residents walk not more than a quarter mile to get to these facilities and other nearby commercial areas without having to pass a major arterial street. Those streets that allow thorough traffic are not encouraged while arterial streets are located to the boundary, thereby allowing pedestrians to walk freely within the neighbourhood without any vehicular interference. Also, interior curvilinear streets characterize the neighbourhood unit's break with the traditional urban grid system. Perry proposed that that a 160 acre neighbourhood should be developed at 10 units per acre which can support between 5000-9000 residents. For more than Fifty years, it has been virtually the sole basis for formally organizing residential space (Banerjee and Baer, 1984). He even went further to suggest that 10 percent of the neighbourhood land area should be left for open spaces and parks for leisure and relaxation of residents. He equally advocated the building of schools with major play areas and community centre with various institutional uses. All these he noted, make up the physical nature concept. (Lawhon. 2009).

2.3 Principles of the Neighborhood Unit.

Perry organized the neighbourhood based on numerous physically oriented ideals. He noted that schools should be located centrally in the neighbourhood so that a child has to walk to a school only about one-quarter of a mile and no more than one-half mile without crossing any major arterial street as shown in Fig 2. Size the neighborhood to sufficiently support a school, between 5,000 to 9,000 residents, approximately 160 acres at a density of ten units per acre. Implement a wider use of the school facilities for neighborhood meetings and activities, constructing a large play area around the building for use by the entire community.

Place arterial streets along the perimeter so that they define and distinguish the "place" of the neighborhood. Bordered by arterial roads, neighbourhood units were to allow residents to do day to day activities on foot with little interference from vehicular traffic. The concept comprised pathways and internal street systems organized so as to discourage the through traffic (Pierre and Karen 2003).

FIG.2: CLARENCE PERRY'S "NEIGHBORHOOD UNIT" OF 1929

2.4 Neighborhood Concept in Putrajaya:

All residential areas within Putrajaya are developed on the 'neighborhood' concept. At the heart of this concept is that each distinct neighborhood within a larger residential precinct will be well-serviced, would have good access and vehicular and pedestrian movement routes, have ample facilities, or be well connected to such facilities, have adequate landscaped open spaces, be safe and secure, be well- maintained and equally important, have a critical mass of residents to make it livable, regardless of housing density. Each neighborhood would be defined by road ways, parks and open space or housing blocks. At the minimum, each neighborhood would have at least one neighborhood park and would be in close proximity to a larger park beyond its boundary (Review Master plan 1997). In figure (3) some of the concepts of Putrajaya master plan are depicted.

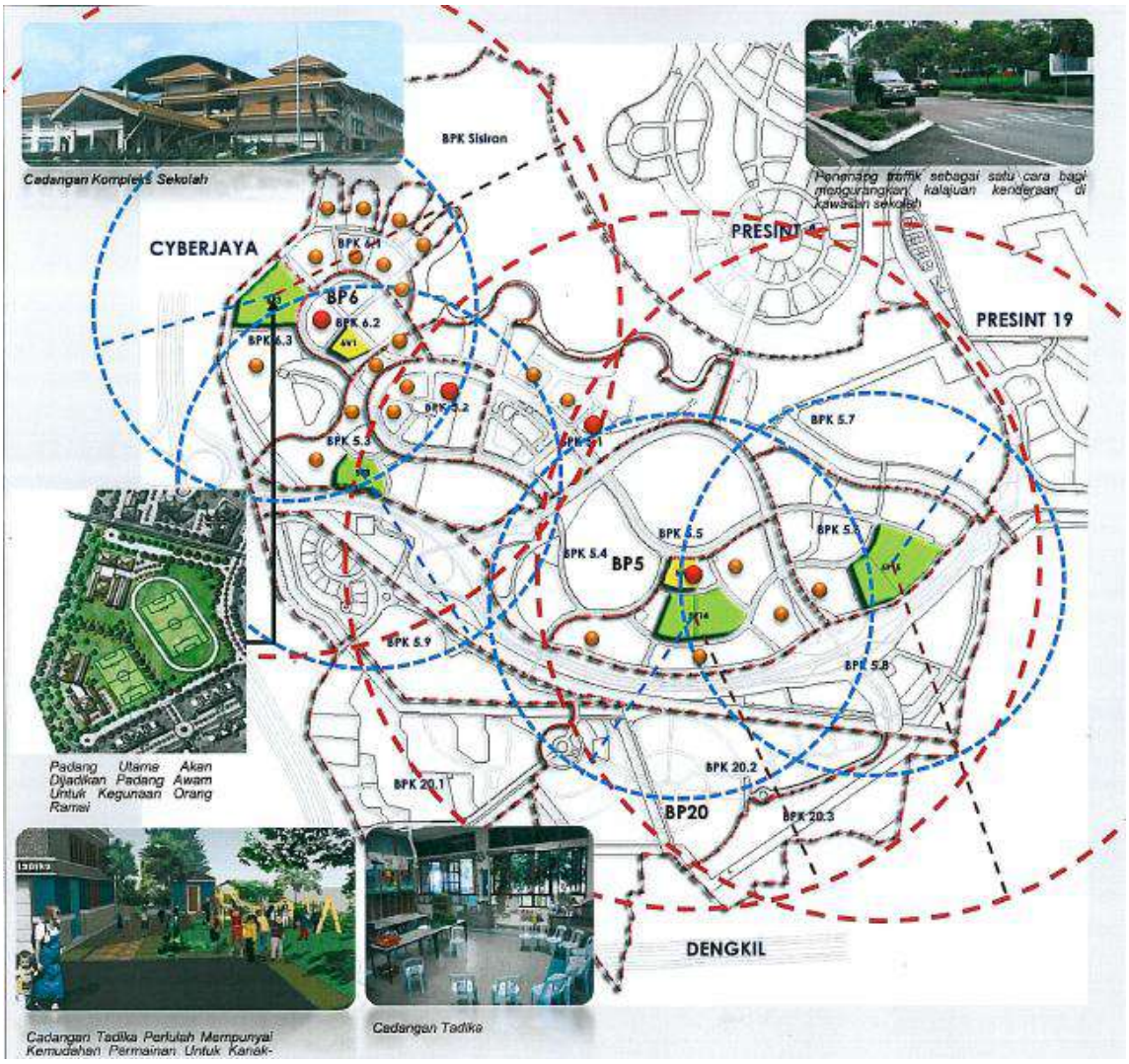

Fig. 3 School catchment area (source: local plan Putrajaya report in Malay)

800 meter buffer covering a Primary school

1600 meter buffer covering a secondary school

School complex (Primary and Secondary School)

Religious School

Kindergarten near office premises

Proposed kindergarten locations

2.5 Measurements of Neighborhood:

The urban planners measure neighborhood by considering the street pattern and land use pattern, pedestrian accessibility, connectivity and environment. Their chief methodological instruments are field observations and spatial pattern analysis using maps and are occasionally complemented with survey of residents. Street pattern includes number of cul-de-sac or grid pattern and whether they have small block or big boxes. The number of intersections within the different neighborhoods corresponds to variations in the length of the street networks. Grid network provide better connectivity between the land uses of a neighborhood than curvilinear streets, crescents, and culs-de-sacs. Planners usually assess the pedestrian accessibility potential of each neighborhood by computing the number of residential units within 500 m of three categories of facilities which are supermarkets, convenience stores, and primary schools via the road network and pathways. Psychologists use mental mapping to measure individual neighborhoods. Sociologists identify common attributes of social, economic, cultural, and physical aspects of neighborhood bringing forth indicators of cohesiveness. Homogeneity and heterogeneity. However, they recognize that relevant sociologic measure vary by behavior, domain, and outcome of interest.

3. Methods:

Face to Face interview were conducted with residents (aged 10-63) of Putrajaya lasting 15-20 minutes. GIS maps were created using the scale 1:12,500. Maps displayed an area of 1 mile around the boundary of each residents (approximately centered on participants' residents) and included road names and places of local interest such as green space, shops, services, schools and physical activity facilities.

Each participant was shown the printed GIS map for their local area. The interviewer helped to orientate them by pointing out the location of their residence, main roads and local landmarks. Using maps for reference or simply from recall, participants were asked to:

(i) Recall last day walking destinations from their home. In the event those participants belonging to the pre-teen age group were unable to identify any walking destinations from the map with the help of interview using a mind mapping techniques they were ask to recall any places they had walked from their home without using the map their destinations using major landmarks like local shopping areas, family friends, eating and drinking.

(ii) Draw their neighbourhood area on the map. Participants were also advised that their neighbourhood area could be any size or any shape.

Annotated maps from all participants were scanned back into a GIS for analysis. All recalled destinations points and neighbourhood area boundaries were digitized and the annotation from the maps recorded as feature attributes. GIS analysis was used to create a number of Euclidean buffer and network distance buffers around the address location of each participant. A Euclidean buffer is a straight line circular radius around the participant address location. Whereas the networks buffer were calculated by measuring a define distance along the pedestrian network which is like roads and pathways used by pedestrians in all possible directions away from the participant resident The end point of these routes were joined together to form an enclosed area representing the total area within a defined walking distance of the address.

For each participant we produced 5(five) different neighbourhood areas as shown in (Figure 4): 1 mile (or 1.6km) around the individual's home, Euclidean and network buffers; 1 km around the individual's home, Euclidean and network buffers; and participant perceived neighbourhood area. The areas of the perceived neighbourhoods were calculated as a proportion of the different network and Euclidean buffer to explore discrepancies in area size [i.e., area within perceived neighbourhood boundary (m^2)/area within network or Euclidean neighbourhood boundary (m^2) x 100]

Reported walking destinations were placed into eight categories retail (e.g. Shops, Supermarkets, Grocers) local services (e.g. banks, libraries); eating and drinking (e.g., cafes, restaurants); Family and friends; work/school; bus stops; green space (e.g., parks and common areas and lakes); and physical activities facilities (e.g., leisure centres, Gyms, swimming pools). These were examined for the sample as a proportion of total walking destinations.

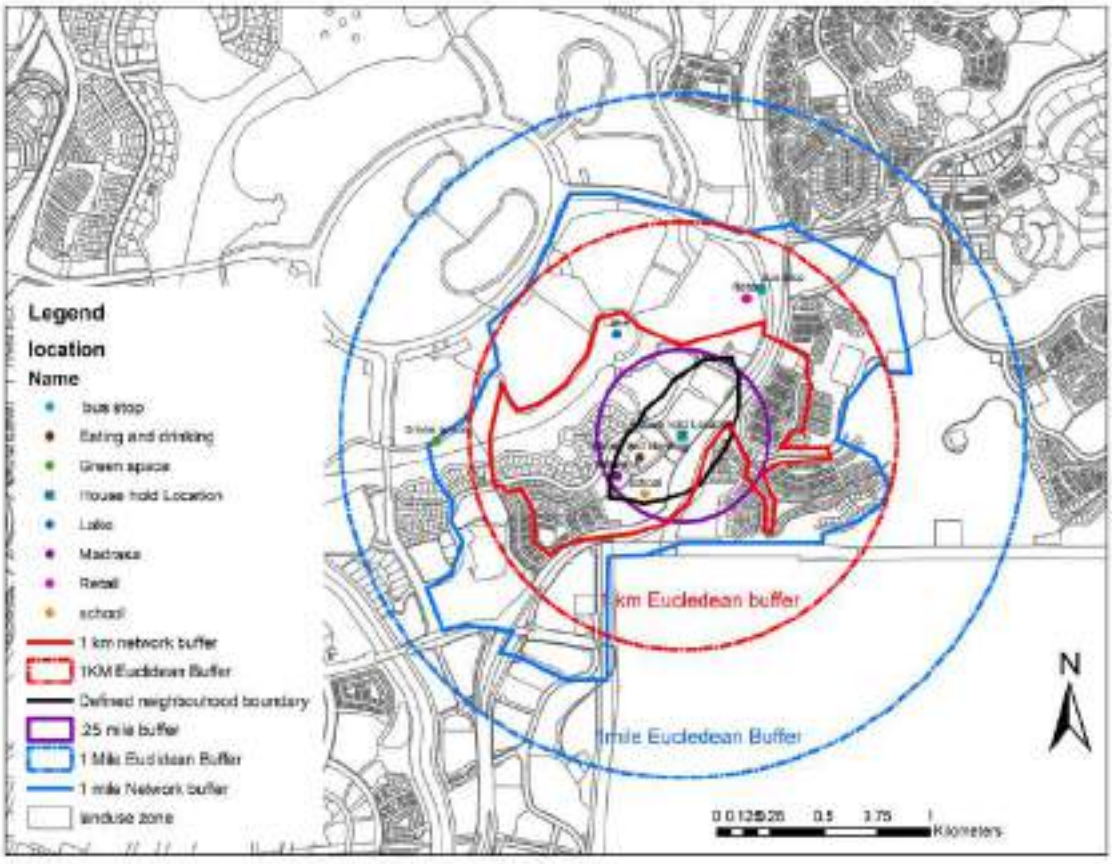

Figure 4: Illustrative figure of neighbor's perceived neighbourhood boundaries and GIS-defined boundaries and their walking destinations

4. RESULTS:

This study highlights important discrepancies among definition used in literature review and participants own definition of neighbourhood. The participants were generally conceptualizing a smaller neighbourhood area than those used in literature review.

When participants were asked to draw their 'neighbourhood' boundary, the resulting areas were smaller than those calculated using GIS based on standard neighbourhood definitions (1 mile or 1 km around the home). Perceived neighbourhood areas, on average, represented only 20 ± 25% of the commonly used 1 mile (1.6 km) Euclidean buffer area. Compared with a 1 mile network buffer area, the perceived neighbourhood area accounted for just 15±20%. This indicated a large discrepancy and considerable variation in relative size of perceived versus standard 1 mile neighbourhood definition. Analysis repeated using 1 km buffer areas revealed that, on average, the perceived neighbourhood still represented less than the 40±50% of the Euclidean buffer and 20±25

of the network buffer. This indicated a large discrepancy and considerable variation in relative size of perceived versus standard 1 mile neighbourhood definition.

Table 1 summarizes counts and proportions of the sample reporting different walking destinations. Most residents reported walking to retail destinations like supermarket, grocery approximately half walked to eating/drinking establishments and over one-third to family/friends and to local green spaces and lakes. This pattern was similar when looking at the contribution of each destination type as a proportion of the total number reported. Only 20% participants reported walking to physical activity facilities, whereas informal recreational activity through visiting green space was more frequently reported.

Table 2 indicates the discrepancies and variation between the percentages of walking destinations that fell within the variously defined neighbourhood areas. Whereas the network buffers captures relatively less. The most commonly used Euclidean buffer 1 mile area captures around 93% of destinations. The neighbourhood area calculated using definitions of 1 km around the home captures 84% of destinations.

Table 1: Percentage of participants who walked to different destinations types (n=50)

DESTINATION TYPES	n	%
Retail	42	84
Eating and drinking	30	60
Family / Friends	17	34
Green Spaces/lakes	17	34
Work /school	17	34
Bus stop	15	30
Local services	15	30
Physical Activity	10	20
Total	50	

Table2: Percentage of participants who walked to destinations types within perceived and objectively defined neighbourhood (1km and 1 mile) (n=50)

Neighbourhood definition	% of total destination	Mean Walk Time (mins)

1km buffer: *Euclidean* *Network*	 84 80	 12:50
1mile buffer: *Euclidean* *Network*	 93 90	 20.19 min
Perceived Neighbourhood	50	5.4 min

Conclusions:

It is concluded here that resident's interpretation of their neighbourhood area does not appear to relate accurately to the definitions used in research and into environmental perceptions and walking. But relate closer to Perry's definition of 5 minutes walking distance. It is also concluded that the average walkable neighbourhood area in our sample would be smaller than 0.75 miles and closer to estimated 5 minutes walking distances used elsewhere e.g., 0.25miles (Hoehner C.M. et al. 2005) 400m (Boehmer T.K. et al. 2006) this proves that operational definitions of neighbourhood needs to define smaller than those typically used particularly in hot tropical regions. This study explores that different age group interpretation of their neighbourhood area does not appear to relate accurately to the definition typically used in research into environmental perceptions and walking. The study suggests that bye laws used by Government agencies should use small buffers for walkability catchment areas and should do the Pedshed analysis for hot tropical climate of Malaysia.

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APPLICATION OF SOUNDSCAPE DESIGN ELEMENTS IN URBAN STRRETSCAPE DESIGN

Jooyoung Hong[1], Jin Yong Jeon[2]

Abstract

Due to complicate interaction between sounds and human noise perception, many approaches to evaluate sound environment have been investigated as a concept of soundscape. Recently, considerable efforts have been made on standardization of perceptual soundscape evaluation in ISO/TC 43/SC 1/WG 54 for practical application. In this study, urban streetscapes based on soundscape design elements were evaluated through laboratory experiments. Road traffic noise has been chosen as a negative sound source in urban spaces and natural sounds (water and birds sounds connected to water features and trees, respectively) have been selected as positive elements to enhance urban sound environments. The experiments consisted of three parts: 1) a visual-only condition, 2) an audio-only condition, and 3) a combined audio-visual condition. Streetscapes with soundscape design elements were evaluated by 11 point numerical scale and 12 pairs of semantic adjectives. As results, the effects of the soundscape design elements have been examined.

1. Introduction

Sound environment in urban spaces is one of the critical factors in overall comfort. In fact urban acoustic and visual experience is closely related each other (Southworth, 1969). However, in the field of landscape and architecture, visual aspects in terms of urban planning were mainly discussed. Therefore, it is necessary to examine acoustical aspects to improve urban environment. Recently, many researchers have studied soundscape qualities in urban space. Influence of natural sounds including water sounds and bird sounds on soundscape perception were investigated (Coensel et al., 2010; Coensel et al., 2011; Jeon et al., 2012). However, practical approaches of soundscape in urban spaces are essential. In the present study, soundscape design elements for enhancement of urban environment were investigated through laboratory experiments.

2. Method

2.1 Stimuli

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Individual soundwalks were performed in Seoul to assess urban soundscapes (Jeon et al., 2011). Among the evaluation locations through the soundwalk route, the site where its visual and acoustical environment was negatively evaluated by subjects was selected as a reference street view in order to investigate the effect of design elements for enhancement of streetscape. Based on the previous studies (Jeon et al., 2011; Coensel et al., 2011; Jeon et al., 2012) road traffic noise was chosen as a negative sound source in urban spaces and natural sounds (water and birds sounds) was selected as positive soundscape elements.

Audio recording of road traffic noise from the site was conducted, using a binaural microphone (Type 4101, B&K) and a digital recorder (Fostex, FR-2). For laboratory experiments, 6 sec audio road traffic noise sample was excerpted from the 3 min recordings. Two water sounds (drop and stream water sounds) were recorded from water features using binaural microphone and bird sounds (sparrow) were obtained from CD (Sony Pictures Sound). As shown in Figure 1(a), the spectral characteristics of road traffic noise and water sounds were similar presenting constant level at all frequency ranges while the bird sound was dominant at high frequency. In terms of time variability of sounds, road traffic noise and two water sounds were stationary and bird sounds were non-stationary and impulsive.

For visual stimuli, a reference street view was created using Rhino and Adobe Photoshop CS4 software. Two water features, drop (W1) water and stream (W2) water structures which are assumed to generate two water sounds respectively were constructed and an image of still water (W3) feature was created. Small (V1) and large (V2) trees connected to bird sounds were made. The image of low vegetated barriers (V3) was also constructed. A view point was fixed in order to avoid influence of different view angles. In total 16 photomontages of street views were used in the laboratory experiments as illustrated in Figure 2.

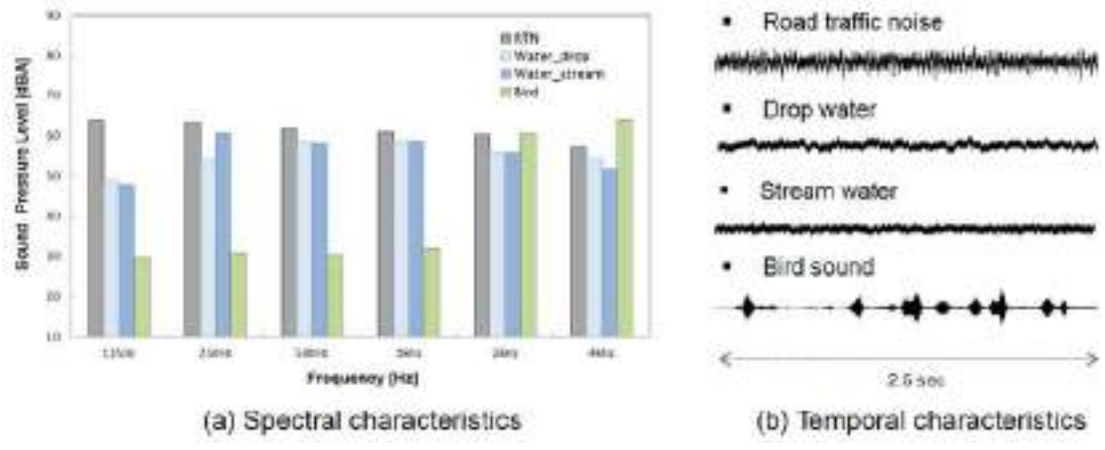

Figure 1. Spectral and temporal characteristics of acoustic stimuli

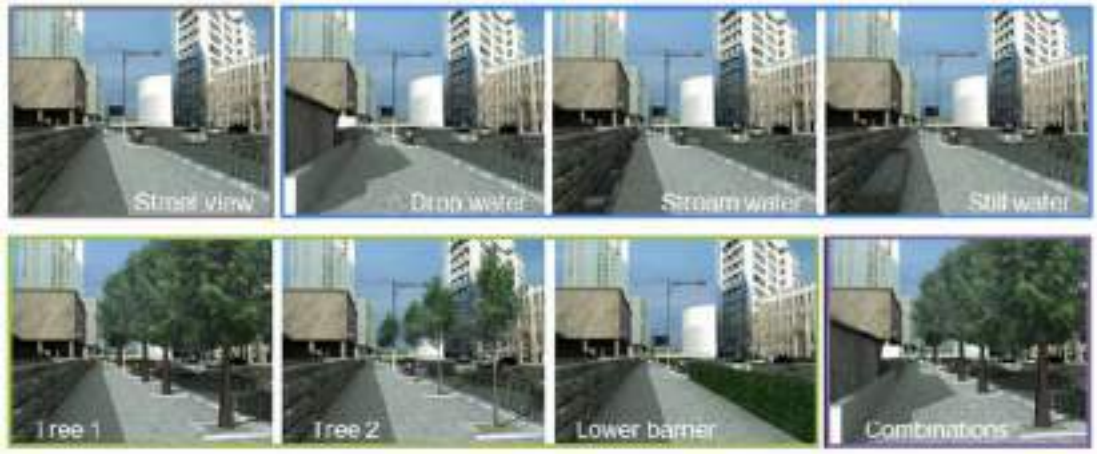

Figure 2. Samples of streetscape images

2.2 Experimental design

Laboratory experiments were performed to investigate the effect of soundscape design elements on soundscape perception of different streetscapes. The laboratory experiments consisted of three conditions: 1) a visual-only condition, 2) an audio-only condition, and 3) a combined audio-visual condition, where, images were provided along with the sound stimuli during the experiments.

A total of 9 experimental sounds were constructed: individual (road traffic noise, drop and stream water sounds and bird sounds) and combined sounds (road traffic noise combined with three natural sounds). The experiments were conducted twice with two presentation levels of road traffic noise: 55 and 70 dBA. The signal-to-noise ratios (SNR) between the water sounds and road traffic noise were set to -3 dBA so that the levels of the natural sounds were 52 and 68 dBA. Stimuli were randomly presented to subjects in order to overcome order effects. In the present study, the subjects rated their preference to each stimulus using an 11-point scale, with 0 representing ‘not at all’ and 11 as ‘extremely’. In addition, soundscape quality was assessed by using twelve pairs of adjective attributes (“open-closed”, “wide-narrow”, “quiet-noisy”, “calm-loud”, “pleasant-unpleasant”, “comfortable-uncomfortable”, “stable-unstable”, “harmonious-disharmonious”, “ordered-disordered”, “various-monotonous”, “distinct-ordinary” and “natural-artificial”).

A total of 20 subjects took part in the laboratory experiments. During the experiments, subjects were seated in a testing booth. Acoustic and visual stimuli were presented through headphones (Sennheiser HD 600) and a beam projector (Sony VPL-CX6), respectively.

3. Results

Figures 3(a) and (b) describe the preference scores in terms of stimuli from visual only and audio visual session when the level road traffic noise was fixed at 55 and 70dBA, respectively. In general, road traffic noise deteriorates the overall impression of environment. However, it was found that natural sounds contributed to an improvement in preferences under conditions with road traffic noise. In particular, stream water sound enhanced the environmental quality more than drop water did and the effect of bird sounds was most significant compared with selected water sounds. In terms of streetscape components, images of large trees improved urban streetscape quality.

The results of semantic differential test for 16 stimuli are listed in table 1. A factor analysis was conducted to classify 12 attributes and two factors were obtained in the session with 55dBA of road traffic noise while three factors were derived in the session with 70dBA of road traffic noise. For road traffic noise of 55 dBA, two factors were found: Factor 1—overall preference explained 79.5% of the total variance, Factor 2—spatial impression, explained 12.6% of the total variance. For road traffic noise of 70 dBA, three factors were: Factor 1—Harmony explained 70.1% of the total variance, Factor 2—acoustic comfort, explained 12.3% and Factor 3— spatial impression, explained 7.9% of the total variance. This indicates that when road traffic noise is louder, acoustic comfort becomes an important factor for evaluation of overall environment.

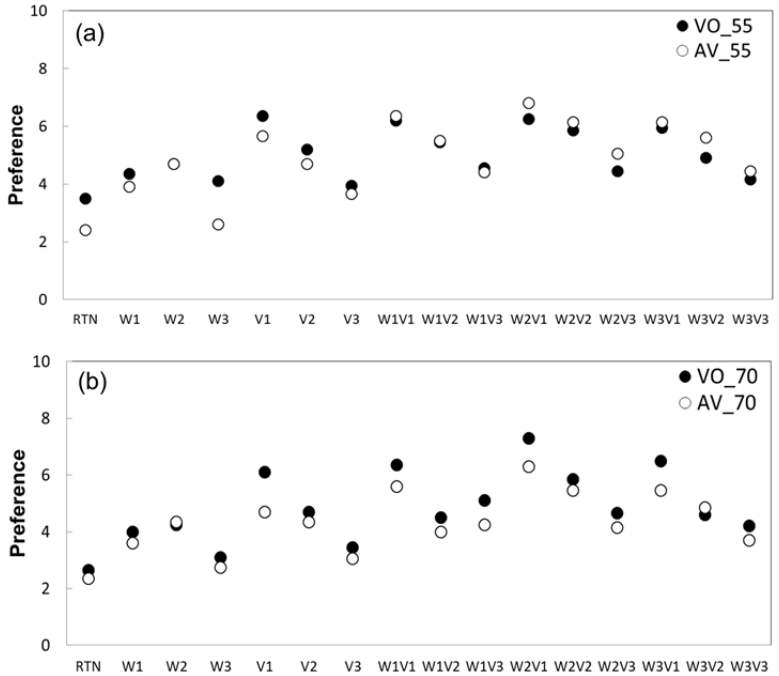

Figure 3. Experimental results for stimuli. black and white circles indicate the preference scores obtained from visual only sessions and audio-visual sessions, respectively.

Table 1. Results of factor analysis

Attributes	Component (55dBA)		Component (70dBA)		
	1	2	1	2	3
Open − Closed	-.187	-.944	-.400	-.184	-.874
Wide − Narrow	-.196	-.956	-.018	-.377	-.914
Quiet – Noisy	.938	.184	.080	.823	.303
Calm – Loud	.811	.307	.291	.914	.115
Pleasant − Unpleasant	.896	.371	.593	.738	.285
Comfortable − Uncomfortable	.947	.131	.850	.422	.208
Stable − Unstable	.862	.317	.828	.487	.116
Harmonious − Disharmonious	.885	.410	.853	.297	.273
Ordered − Disordered	.786	.035	.911	.060	.082
Various − Monotonous	.857	.481	.590	.697	.346
Distinct - Ordinary	.686	.597	.435	.617	.402
Natural − Artificial	.793	.516	.510	.687	.430

4. Conclusions

In the present study, enhancement of soundscape perception for the variation in streetscape design elements was investigated. Introduction of natural sounds including two types of water sounds and a bird sound was examined in terms of urban soundscape enhancement, when road traffic was a major noise source in urban spaces. As results, stream water sounds with image of large trees improve urban soundscape quality and acoustic comfort is a dominant factor affecting overall impression of streetscapes when road traffic noise level is 70dBA. In the future, the soundscape design elements in improving streetscape will be further investigated through multiple regression analysis.

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Festivals as a *Vehicle* for Place Promotion: A case study of the complex planning challenges inherent in the staging of the Clipsal 500 motor-racing festival in Adelaide, South Australia.

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Abstract:

In an increasingly competitive global world, urban managers are constantly seeking new and innovative ways to position cities strategically in order to enhance their identity, improve their amenity and attract capital investment. The policy directions that such endeavours spawn are diverse. However, the development and promotions of festivals has become a core strategy in city marketing and place making agendas. Festivals can be considered as a physical and temporal manifestation of policies that seek to promote places as being 'creative'. The creative city proposition, as advanced by Florida (2002), has proven highly attractive to policy makers and urban managers the world-over. Creative cities are construed to be dynamic places characterised by '…an openness to diversity and the freedom for creative people to validate their creative identities' (Miles 2010, p.44). Thus, the creative city ethos can be said to be imbued a sense of inclusion and progress. As a specific manifestation of this this ethos, festivals have been equally positioned as a positive form of '…celebration [that] can bind a community and… [act as] the instrument that keeps community a fresh and constantly renewing experience' (Derrett 2004, p.42). However, an emergent literature problematises these assertions, emphasising the potential negative stemming from festivals, from the seemingly benign general disorder and disruption to local places and their communities, to more serious issues of increased instances of anti-social behaviour and crime (see for example Peel 2005; Roberts and Eldridge 2009; Tiesdell and Slater 2006; Williams 2008). This literature reveals the complex and contested terrain that confronts policy makers and planners when considering or managing festivals as part of a wider city marketing and place making agenda.

This paper critically engages with these complexities drawing upon an Australian-based case study. Adelaide, the capital of South Australia, is marketed as Australia's 'festival city', a city of '…frenetic fun beneath an elegant exterior' (Tourism Australia 2012) that plays host to numerous festivals of local, national and international significance. However, belying this positive image, Adelaide's festival calendar brings disruption for the local community, while also heralding significant contestation between different community groups and key stakeholders, both internal and external to the city, over the uses of public space and indeed

the identity of the city itself. These disruptions and contestations are illustrated and explored through a detailed analysis of the Clipsal 500 V8 Super-Car race, which is held annually on an inner-city street circuit. Drawing upon analysis of policies pertaining to festival promotion, marketing agendas and materials, participant observation at the Clipsal 500 and interviews with key stakeholders from government and several non-government organisations and community groups, this paper presents a richly textured discussion of the opportunities and challenges facing policy makers and planners considering and managing festivals. In doing so, the paper contributes not only the literature on festivals and creative economies, but also the professional practice of festival governance.

Key Words: festivals, city marketing, creative cities, contestation, Adelaide.

Introduction

City marketing has become an important aspect of contemporary urban policy. Drawing upon the ethos of creativity, urban managers are increasingly concerned with urban identity. Cities thus are no longer viewed as just physical spaces, but as vibrant discursive spaces. Framed within the discourse of globalisation, urban identity management is now seen as a critical dimension in developing and maintaining a city's competitive advantage in an increasingly competitive urban world. As Kavaratzis and Ashworth (2005, p.507) astutely observe, '…the management of… [a] city's image [is vital] because, at its simplest, encounters between cities and their users take place through perception and images'. Urban identities are not inconsequential.

The scope of agendas and projects available to policy makers seeking to promote their 'place' are numerous and diverse. This paper is concerned with policies embedded in the creative city ethos, as espoused by Richard Florida (2003) and Charles Landry (2006). The fundamental tenant of Florida's work is that the emergence of a creative class has witnessed the development of a new geography premised on creative lifestyles as opposed to the dogma of traditional economic rationalism. As Florida (2003, p.9) argues:

> Creative people are not moving… for traditional reasons. The physical attractions that most cities focus on – sports stadiums, freeways, urban malls, and tourism-and-entertainment districts that resemble theme parks – are irrelevant, insufficient, or actually unattractive to many creative-class people. What they look for in communities are abundant high-quality experiences, an openness to diversity of all kinds and, above all else, the opportunities to validate their identities as creative people.

At face value, this challenges more 'traditional' policy agendas that place emphasis on large-scale infrastructure and urban design projects as a mechanism to drive development and spark confidence. The notion of creative places appears to be less formal and more grass-roots, flexible and organic. The notion of creativity itself is

significant here, for by its very nature it denotes new and innovative ways of perceiving, managing and experiencing the city. Creative places then need not be fixed. Rather, they may be temporary in nature and transitory in expression, such as the short-term use of derelict buildings or landscapes in innovative and unexpected ways (Stevens 2010). Consequently, the development of policies seeking to stimulate and nurture such places would appear to be extremely difficult. Regardless, the creative city ethos has been embraced with great enthusiasm. Indeed, an entire industry of place makers, and city marketers has emerged attesting to the attention and resources devoted to place promotion. This is not to scorn these undertakings, for urban identities are important. However, to blithely follow and promulgate creative city policies uncritically is naive. Rather, after Peck (2005), Atkinson and Easthope (2009) and Waitt and Gibson (2009) this paper critically engages with the opportunities, challenges and conflicts inherent in the development of temporary creative landscapes within the Australian city. Specifically, with the paper addresses the complexities inherent in 'festivals' as creative space generators and their use as vehicles for place promotion.

The term festival is extremely broad, encapsulating a range of events varying '…by size – including mega-events, hallmark events, major events and local or community events – and by form or content – including [cultural] festivals, sporting events and business events' (Allen *et al.* 2011, p.25). Regardless of their size or nature, festivals, it is asserted constitute a temporal '…celebration [that] can bind a community and… [act as] the instrument that keeps community a fresh and constantly renewing experience' (Derrett 2004, p.42). This is a contentious claim, for festivals can become the foci of conflict as various facets of the wider community struggle over space and contest the identity of place they create. Given the context of this paper and its emphasis on city marketing, we are concerned with large-scale, flag-ship events. Specifically, the paper presents a detailed case study of the Clipsal 500, a round of the Australian V8 Supercars Championship Series held in the city of Adelaide. While for some Clipsal, as it is commonly referred to, is a vibrant celebration of car culture, for others it is an inappropriate aberration within a refined city of culture.

The research presented in this paper draws upon both quantitative and qualitative methods. A multi-method approach was deemed appropriate as the juxtaposing of different methods holds promise to furnish more nuanced understandings of and insights into the phenomena under research (Johnson *et al.* 2007). In order to quantify the scale and significance of the Clipsal 500, a range of statistical data was gathered from both relevant local and state government bodies and the official Clipsal website. This material, particularly visitor numbers and revenue figures, are cited as indicators of Clipsal's popularity and value. Various government policies, most notably the *Creating our Future: City of Adelaide Strategic Plan 2008-2012* (2010), were subjected to textual analysis. This undertaking sought to not just engage with the explicit intent of these policies, but to uncover their implicit construction of Adelaide's identity as pursued through the staging of festivals. Such an undertaking is important, for discourse as communicated through texts ultimately

gives '…shape and lend[s] significance to our experience of reality' (Bignell 2002, p.30). This form of analysis is ideal for planning research as it contextualises the means through which power is exercised, as well as providing an opportunity for a critique of government policy-making and decision-making processes (Walter 2006).

Similarly, the landscape itself can be considered as a text to be 'read' (see Winchester *et al* 2003). Thus, landscape deconstruction was undertaken during the 2011 Clipsal 500. Finally, to generate deeper insights into and to contextualise the findings derived from the aforementioned methods, a series of semi-structured interviews were undertaken with 4 key-informants from 3 stake holder organisations. Interviewing is valuable as it fills 'knowledge gaps' inherent in other sampling techniques (Dunn 2011). Two interviews were conducted with staff from Adelaide City Council (ACC), specifically the Senior Manager of the Events and Festivals Portfolio and the Safer City Program Team Leader, with one interview each being conducted with a representative from the South-East City Residents Association (SECRA), the Young Women's Christian Association (YWCA). These organisations represent a diverse cross-section of the community and their specific interests. Both SECRA and YWCA have, at various times, been outspoken opponents of the Clipsal. Regrettably, the Clipsal organising committee declined several invitations to participate in this research. In the absence of their direct involvement, press releases and various comments within the media by this organisation have been supplemented to understand their position with regards to the purpose and significance of the festival.

The creative imperative:

The past decade has witnessed the ascendancy of a creativity ethos as a prime policy agenda. Spearheaded by Richard Florida (2003) and Charles Landry (2006) is the contention that 'creativity' is the driving force of contemporary, advanced economies. Arguably, this is not a fundamentally original contention and apes a well-developed literature exploring global cities and their competitive jostling at the macro-scale and local, place-based responses to these challenges, such as the regeneration of derelict industrial land as part of a post-industrial transformation at the micro-scale. Landry (2006, p.xiii) tacitly acknowledges this when asserting that the need for creative policy agendas stems has been '…brought about by the vigour of renewed globalization'. Atkinson and Easthope (2009) observe notions of creative economies nor some form of creative class, are not new (see also Peck 2005). However, with clever rebadging and astute promotion, the creative ethos has gained significant traction within policy circles. This in spite of Marcuse's (2003, p.41, cited in Peck 2005, p.746) stinging critique that Florida's work is simply a '…engaging account of the lifestyle preferences of yuppies'.

While both Florida and Landry promote creativity, they take subtly different approaches to it. Florida's (2003) emphasises the emergence of a creative class and how, in order to remain competitive places need to attract and retain them.

Espousing that creative places are those that embrace the *3Ts* of *technology*, *talent* and *tolerance*, Florida (2003, p.8) proposes that '…creative centers tend to be the economic winners of our age'. The notion of tolerance is an interesting one and would seem to resonate with other works espousing the city's scope for equity (for example Harvey 2000). However, Florida's measure of tolerance includes notions of social-mix reminiscent of a 'shake-and-bake' recipe, replete with Gay and Bohemian Indexes. Sweepingly, it is declared that '…statistical analysis on the gay population… [is] squarely in line with the creative capital theory… [as] the Gay Index is a very strong predictor of a regions high-tech industry concentration' (Florida 2003, p.12). Moreover, the '…Bohemian Index turns out to be an *amazingly strong predictor of everything* from a region's high-technology base to its overall population and employment growth' (Florida 2003, p.13) (emphases added). The solution to urban decline it seems would be to attract more '…gays, geeks and the creative class' (Bell and Jayne 2006, p.14). Landry (2006) follows a slightly different tact. He places greater emphasis on the creativity of planning, governance and policy. From this perspective, it is the '…creativity of those who… run cities [that] will determine future success' (Landry 2006, p.xiii). Developing this further, Landry (2006, p.7) contends:

> Cultural resources are the raw materials of the city and its value base, its assets replacing coal, steel or gold. Creativity is the method of exploiting these resources and helping them grow… the task of urban planners is to recognise, manage and exploit these resources responsibly. Culture, therefore, should shape the technicalities of urban planning.

As a resource culture then can be harnessed through creative policies that seek to unlock its potential in space. Thus, the notion of cultural creativity is not only highly strategic, it is equally highly spatial. Cultural events and/or festivals have been acknowledged as contributing positively to urban regeneration policies. Previously thought of as providing temporary consumption-scapes, events and festivals have been recast within the policy arena as creative clusters. Tallon *et al.* (2006, p.353) assert that such 'clusters' are '…concentrations of leisure and cultural uses... [that] combine authentic artistic and cultural activities with a variety of leisure and entertainment elements'. Kunzmann (2004) similarly asserts that festivals boost creativity for, as Alvarez (2010) argues, festivals offering moments of creative participation and engagement that contribute to the vibrant culture of the city. Herein lies the circular logic of the creative city ethos; that the fostering of creativity in place attracts creatives and creatives themselves infuse place with creativity.

Festivals; the good, the bad and the ugly:

Extremely diverse, festivals have come to be increasingly associated with place-making endeavours and as such have been identified as requiring significant and more critical policy attention (Campo and Ryan 2008; Gibson *et al.* 2010; Roberts and Eldridge 2009; Roberts and Turner 2005; Quinn 2005). Indeed, as Quinn (2005, p.928) observes that there has been a great deal of policy excitement '…about the theoretically catalytic effect that festivals can have in terms of attracting visitors, spearheading the regeneration of derelict city districts and reclaiming public time and space for communal celebrations, *hard evidence is in short supply* (Quinn 2005, p.928, emphases added). This is critical, especially as the ethos of creativity become ubiquitous within the policy landscape (Atkinson and Easthope 2009; Waitt and Gibson 2009).

At their most basic festivals may be thought of as temporary events where moments of pleasure, entertainment and leisure are offered and actively sought. Festivals transform ordinary places into energetic spaces that are alive with new possibilities and opportunities. Thus, festival spaces constitute the '…habitat where all forms of creativity – artistic and cultural, technological and economic – can take root and flourish' (Florida 2003, p.9). Within this 'habitat', groups preserve, celebrate, and develop their cultural and/or community identities (see Waterman 1998; Williams 2008; Derrett 2004; Bianchini 1995; Willems-Braun 1994). Further, festivals are said to operate in an inclusionary manner, inviting people from beyond the festival's core community to be immersed and participate in their practices and lifestyles. According to Waterman (1998, p.60), festivals thus constitute potential '…mechanisms for neutralizing social conflict'. These positive, emancipatory sentiments echo Florida's comments on creative spaces as being *tolerant*.

Another way of conceptualising festival spaces is as *other* spaces. Pløger (2010, p.851) asserts that festivals create, however fleetingly, other or liminal spaces that:

> …can *never be seen as fixed*...there must be *something distinct* about them... [that are] about *alternating spaces'* meaning and function *temporarily* - they are about avoiding them being only located within a common understanding - and this temporary meaning is made by actors by making distinct events as the *eventalisation of space* (emphases added).

This *eventalism of space* extends beyond the festival in space and encapsulates the way that festivals function as a celebration of place. Here is the crux of policy interest in festivals. It is the way in which festivals not only enliven space, but equally create a sense of place that may be *exploited*. Reflecting Landry (2006), policy makers and planners are increasingly taking advantage of festivals as, in the words of Quinn (2005, p.934), '…opportunities to challenge the status quo and push out boundaries' and so demonstrate the creative credentials of their city. In short, festivals are not just about the local, they are also about the regional, the national and the international depending upon the scale and scope of the festival.

Despite the ebullient rhetoric of creativity and the role of festivals in its nurturing and celebration, all is not as indubitable as would appear. Landry (2006, p.120) has contended that:

> City Centres… as '*neutral territory*' help creative ideas, because they are areas where people feel comfortably relaxed and simultaneously stimulated and challenged by contact with an environment that is more socially heterogeneous than normally experienced (emphases added).

The assertion that city centres are somehow a 'neutral territory' is breathtakingly naive. Places are not natural or neutral, but rather are shot through with power differentials, experiences and opportunities in a myriad of ways. Festivals spaces are not immune to this. Taking a more considered approach, Darrett (2003a) and Gibson *et al.* (2010) note the potentially exclusionary nature of festivals. This may relate to the function of the festival as a pseudo 'gatekeeper' to space and activity (Darrett, 2003b, p.38), or even the decision making process that selectively approving some festivals while rejecting others (Gibson *et al.* 2010).

Festivals, especially large-scale, flag-ship festivals bring a raft of other undesirable consequences. To return to the concept of other or liminal spaces, the literature defines a liminal space as one that is 'on the margin' (Shields 1991), within which '… everyday values and norms' (Pløger 2010, p.862) are relaxed or even suspended. The corollary is that participants within liminal space – liminars – may well embrace their place on the margin and act in ways contrary to their typical conduct. This intersects with the night-time economy literature , where issues of public nuisance, drunkenness, violence and vandalism have been reported as significant impacts upon the built environment and, more importantly, the quality of life for local communities in close proximity of these spaces feature prominently (Chatterton and Hollands 2002; Roberts and Gornostaeva 2007; Tiesdell and Slater 2006). Other facets of this literature comment on the impacts felt disproportionally by women as a consequence

of sexual harassment and assault and how this contributes adversely to the fear of crime (Lovatt and O'Connor 1995; Thomas and Bromley 2000; Roberts and Eldridge 2009; Tiesdell and Slater 2006; Williams 2008). These literatures constitute a stinging critique of and rebuke to assertions that the city is a neutral space. Further, policy approaches that unproblematically accept this assertion and take as a truism that creative policies and festivals can usher in landscapes free from conflict are certainly not creative in their thinking. This discussion alerts us to the central tension in the creative city ethos; this being balancing these policies against the needs and desires of local communities. As Roberts and Turner (2005, p.171) observe this is critical as it concerns '…the future form and management of cities'.

Adelaide, The Festival State capital:

Adelaide, founded in 1836, is Australia's fifth largest city and the capital of South Australia. With a small population, even by Australian standards, of approximately 1.2 million people, Adelaide is often derided as a city of marginal significance in comparison to other cities such as Sydney or Melbourne. Indeed Adelaide has been attacked by interstate political leaders as a 'boring' 'backwater' and even derided as a politically failed city where visions of creative development are '…masterpieces of floss and wishful thinking' (Montgomery 2008, p.13 cited in Rofe and Stein 2011). These external discourses are stinging rebukes and while motivated by readily apparent political agendas that reflect the cut-and-thrust of inter-urban competition, they are echoed to some extent by discourses internal to Adelaide. Foremost amongst these are the monikers of Adelaide as the 'city of churches' and Adelaide, despite being a state capital, as 'a big country town'. The former of these is a reflection of the centrality of religious tolerance and diversity, which underpinned much of the colonial planning and ideological foundation. The 'big country town' identity is both a reflection of the smaller population base of the city and its relative geographic isolation from other Australian capital cities. Combined, these are said to create a stable and comfortable community where social networks are deeply entrenched. Both the city of churches and big country town identities are replete with the notions of security, familiarity and stability that underpin much of the idyllic discourse that typically underpins romanticised notions of rural. However, Adelaide as constructed through these identities can alternatively be read as a conservative, stayed place at best and at worst an introspective, closed place. Recognizing the danger of this, Jory (2000, p.18) quipped:

> Come on Adelaide, hitch up your skirt and show us a bit of ankle. Give us some excitement. As a city Adelaide has become drab, grey and boring. There's no life, energy or vitality in the streets. It is a city going through the motions. It's entering middle-age without grace, style or pride. Walking through the city is a chore, not an experience.

Much political attention, albeit not necessarily in direct response to Jory's aforementioned challenge, has been directed to enlivening both Adelaide's landscape and identity. While the policy agendas pursing this are varied, the development of

flag-ship festivals is seen as critical to this undertaking. Seeking to reposition the city in the national and international marketplace more effectively, South Australia has declared itself as Australia's Festival State. Indeed, given the primacy of Adelaide within the State of South Australia, it is not incorrect to assert that Adelaide is the epicentre of the Festival State and thus is its animated heart. While Adelaide plays host to numerous small-scale events and festivals, as do all cities, there are five flag-ship festivals that constitute the core planks of the city's creative policy attention as articulated through festivals and tourism. These comprise three arts oriented festivals; the Adelaide Festival, the Adelaide Fringe and the WOMADelaide world music festival. The other two events are sporting events; one being the Tour Down Under an International Union of Cycling (UCI) World Tour event and the Clipsal 500. Of these, all but the Tour Down Under are staged during or over part of March. Colloquially, this period is referred to as Mad March. In reality, each of these is not a single event, but rather a series of events under a broader festival banner. Exemplifying this, Adelaide Fringe in 2011 comprised 759 events, the majority of which held multiple shows, with the combined sale of 3,34,000 tickets. Ironically, Adelaide Fringe (18th February - 13th March), WOMADelaide (11th - 14th March) and the *Clipsal 500* (17th - 20th March) not only co-occur temporally, but they also co-exist spatially. Figure 1 illustrates the clustering of these flag-ship festivals in the city's Eastern Parklands. Comparing Figure 1 with Figure 2, a detailed map of the fenced-off Clipsal 500 area reveals that Clipsal occupies them majority of Rundle Park 14 (*Mullawirraburka* [i]), all of Park 15 (*Ityamaiitpinna*) and the majority of Victoria Park 16 (*Bakkabakkandi*). Also worthy of note is that the Clipsal site directly borders the city's South East Corner precinct, which at the 2006 Census was home to 3623 residents. The scale and nature of these festivals are said to transform the city generally and the City East and South East Corner precincts and Eastern Parklands specifically and as emphasised by ACC (2011, p.52):

> The city's famous 'Mad March' is the time when our streets and parks fill with a carnival atmosphere, bringing culture and vitality to the capital. This season is great for the state's economy and well-loved by many, but also brings challenges for the city.

It is to a critical discussion of the opportunities, challenges and contestations over Mad March, with specific reference to the Clipsal 500 that we now turn.

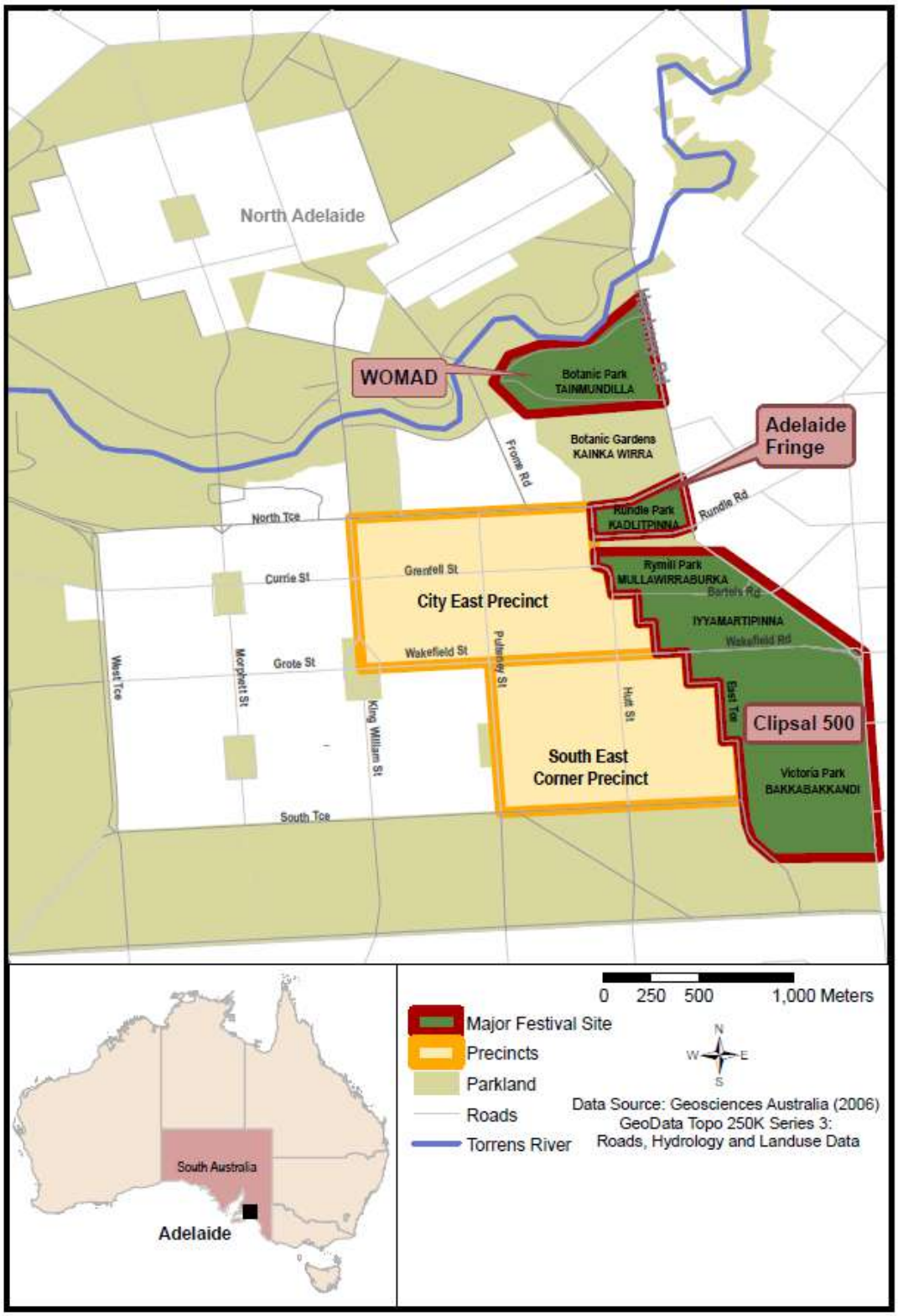

Figure 1: Study site map

Figure 2: Detail of Clipsal 500 site.

Source: Clipsal 500 Adelaide

Creativity Through Festivals. Opportunity and Issues:

Adelaide City Council's *Creating our Future Strategic Plan* 2008-2011 (2010, p.9) articulates the following vision:

> The City's vibrancy will flow from creating diverse communities that actively participate in every aspect of City life. People who work and study in the City will live and play in the City. Residents and visitors alike will enjoy the beautiful open spaces and facilities of the Park Lands, an exciting built form which respects our heritage, [and] shapes our future.

This vision posits a city moving confidentially into future. Worthy of note is the acknowledgement that this vibrant future is respectful of the city's heritage. It may be assumed that this respect if not only for the built form, but equally for the Adelaide's identity and sense of place. Furthermore, the explicit acknowledgement of diversity and participation echoes Florida's (2003) *T* for *tolerance*. It is should not be surprising then that Adelaide's creative policies promoting flag-ship festivals

as vehicles for place promotion should be equally diverse, embracing the cultures and desires of different social and sub-cultural groups. Encapsulating this, ACC's Senior Manager of the Events and Festivals Portfolio stressed the merits of promoting a diverse array of festivals, observing that:

> When you have a city that you can have a Clipsal and an arts festival, what your identity is showing is that you actually have many strengths to your bow... you have got a community that's broadly interested in many different things and I think it's actually a good positive view [to] brand Adelaide'.

As would be expected of a festival portfolio manager, the emphasis on place brand is here paramount. While the notion of nurturing and celebrating diversity in place is an important aspect of the creative city ethos, so too is its exploitation to present a vibrant, positive identity to external people and markets. However, the use of festivals in such an undertaking promises opportunities and can be bedevilled by pitfalls. Balancing these is extremely important.

By all *objective* indicators, the Clipsal 500 is a success. Since its inception in 1989, the event has never failed to attract fewer than 150,000 spectators over the festivals duration each year. In 2011, a reported 270,800 patrons attended Clipsal, with of these some 12,529 being identified as interstate or overseas visitors [ii]. In total, in the thirteen years from 1989 to 2011 the Clipsal has been attended by some three and a quarter million people. Naturally, the Clipsal represents a major economic boost for the State of Australia. Data from the Clipsal website reveals that the economic benefit derived from the event grew from A$13.7million [iii] in 1999 to A$33.76 in 2010 (see http://www.clipsal500.com.au/about_the_event/facts_and_figures/about_the_clipsal_500). The South Australian Minister for Tourism, John Rau (2011), announced that the 2011 Clipsal had attracted total earnings in the vicinity of A$55 to A$60 million, of which some A$34.03 million had been injected directly into the South Australian economy. Furthermore, the Clipsal has been reported as generating significant media benefit for the city of Adelaide specifically and the State of South Australia generally. In 2010, it was reported that the Clipsal was viewed in '…853 homes in 142 countries' (see http://www.clipsal500.com.au/files/360_history_of_clipsal_500_-_8.9.10.pdf), with an estimated media benefit in the vicinity of A$133million (see http://www.clipsal500.com.au/about_the_event/facts_and_figures/about_the_clipsal_500). The value of this cannot be underestimated and as Getz (2005, p.14) asserts, so significant can the benefits of such publicity be that '…some destinations will use this fact alone to justify great expenditures on attracting events'.

The success of Clipsal is not accidental. Like all flag-ship festivals, it is a carefully orchestrated and highly corporatized undertaking. At times criticised for being little more than a car race, the Clipsal is in fact a diversified endeavour offering a range of experiences and sub-events that augment the main spectacle of race-day. Over the four days of the festival, driver autograph sessions, aviation displays, support races and displays, a ladies day luncheon, fashion parades, a family play zone and rock concert entertainment over several nights are staged. Thus, the Clipsal is said to cater for a broad selection of the community beyond the stereotypical fans, who in Australia are referred as to revheads or bogans. As one Adelaide newspaper positively commented, Clipsal is '…not just a car race' rather it is a '…multifaceted entertainment smorgasbord' (Stoneman 2006, p.10). Internally, Clipsal's success has been recognised through its award with the Championship Series 'promoter of the year' award from 1999-2005. Further, in 2005 the festival was the first round of the series inducted into the series 'Hall of Fame', as this honour had previously been the domain of individual drivers. While internal accolades may be viewed as highly subjective, the festival has also received external recognition. Illustrating this, Clipsal has been awarded the highly prestigious Major Festivals and Events trophy at the National Australia Tourism Awards on four occasions (2003/2004, 2005, 2007 and 2008). However, with these successes have come significant challenges and problems that recur annually and cause much contention over the staging of the Clipsal 500.

A major area of contention over the staging of the Clipsal is its various disruptions to the city and how these impact upon the local and wider community. Street circuits, by their very nature require public road closures and the instillation of large-scale safety and amenities infrastructure. While Clipsal is only held over four days, the set-up and dismantling times required are considerable. In consultation with ACC, road closures are staged so as to minimise disruption. However, these inevitably result in traffic congestion and generate significant community ire. Preparations for the 2012 Clipsal, for example, began with parking restrictions as early as February 6th, lane restrictions from February 15th and the first road closures from February 22nd. Given that the 2012 Clipsal was staged from March 1st to 4th, this represents almost a month of disruptions prior to the event. All road restrictions and closures were scheduled to have been removed by 7th March.

While major road access is restored in a reasonable time-frame, access to the Eastern Parklands (see Figure 3) remains restricted for up to eight weeks post Clipsal. This is a major contention with many local community groups, in-particular with SECRA and Adelaide Parklands Preservation Association Inc. (APPA). Both of these organisations place great emphasis on the heritage and, their interpretation of, the cultural value of the Parklands. APPA's website (http://www.adelaideparklands.org/html/parklands_history.html) emphasises former Deputy Mayor of Adelaide Lewis Cohen's 1910 charge that:

The parks are the pride and glory of this city—the best and greatest asset it has, or ever can have. To every generation they are becoming more valuable. Let us, therefore, keep them inviolate, keep them intact, keep them sacred from the hands of the despoiler.

Figure 3: Restricted access to the Eastern Parklands following Clipsal

Source: Woosnam, 2011.

While the privatisation of this public 'asset' is taken to represent an erosion of their intended 'glory', environmental degradation and/or damage is another point of community contention. Concerns over damage to vegetation, both as a result of infrastructure set-up/removal and from acts of vandalism have been raised (see Figure 4). Indeed, following Clipsal sections of the Eastern Parklands needed to be restricted for public access so as to regenerate (see Figure 5).

Figure 4: Clipsal set-up in the parklands.

Source: Woosnam, 2011.

Figure 5: Remediating environmental damage.

Source: Woosnam, 2011.

Cohen's 'despoilers' are not considered to be the Clipsal alone. SECRA attributed a great deal of responsibility on The City of Adelaide for not enforcing its own environmental policies stringently enough. In the face of this, SECRA positioned itself as a public watch-dog protecting the interests of the parklands. As the SECRA respondent explained:

> …because of what people like our group have said, as well as many other groups and citizens across Adelaide, there is starting to be a bit more pressure on them [Adelaide City Council] about this [parkland destruction], but it's always seemed as though we've had to complain or point things out, rather than Council having the [appropriate] policies in place.

The position of watch-dog and public champion is a deliberate undertaking designed to legitimise the actions of SECRA. This is not to undermine their concern with the environmental condition of the Eastern Parklands. However, it should not be uncritically accepted that their motivations are entirely altruistic. Regardless, ACC's Festivals Portfolio Manager acknowledged that Council took note of such concerns, stating that '…once you start getting those warnings from your stakeholders you start to know you are getting at a tipping point and you've got to start paying attention to the impact'. However, this same respondent was equally adamant that notwithstanding the '…inconvenience… [Clipsal] cause[s]... the positive impact outweighs the inconvenience'. Ensuring Clipsal's long-term viability requires Council to manage the concerns of local groups, although tensions and conflicts are unlikely to ever be completely resolved. Indeed, such tensions would appear to be intractable, for as SECA flatly stated 'our group is not happy with the Clipsal'.

Whose City?

Issues of physical access aside, concerns over a sense of access are also discernible. While Clipsal, as indeed does Mad March, brings energy and excitement to Adelaide, it is undeniable that the festival has long been associated with overcrowded streets, rowdy anti-social behaviours and excessive noise, which have caused many tensions within the city centre. In effect operating as liminal spaces (Pløger 2010) festivals can erode social morays and so encourage participants to behave in ways contrary to accepted social morays. When combined with high levels of alcohol consumption, the spilling out of these effects beyond the margins of the festival can have

unacceptable consequences. Concerns have certainly been expressed regarding the intersection between motor-racings inherently hyper-masculine identity, alcohol consumption and the anti-social behaviours that can stem from these intersections. Exemplifying this, local journalist Amy Noonan (2009, p.22) reported that '…police were sick of dealing with the aftermath of alcohol-fuelled violence' and that a greater police presence was required to '…prevent… revelry from spiralling into violence'. SECRA was extremely forthright in their comments on this, commenting on the prevalence of public drunkenness leading to situations where '…a lot of people… were abusing us verbally... so there is an issue of safety and vandalism of property and people drunk and urinating in the front of homes during this event [Clipsal] period'. The response of many local residents according to SECRA was to leave the city during Clipsal. While this removed the threat, real or perceived, of physical danger instances of vandalism to property cannot be similarly alleviated.

Such negative outcomes are not to be unexpected. The night-time economy and entertainment precinct literature details problems associated with public drunkenness and anti-social behaviour. As Roberts and Gornostaeva (2007) suggests such issues engender a 'sense of threat' thereby reducing a 'sense of safety' in festival areas themselves and those in close proximity. Such risks, according to Valentine (1989), contribute significantly to the geography of women's fear. Echoing this, ACC's Safer City Program Team Leader recognised that '…people do not feel safer on the Clipsal weekend... and women generally feel less safe during this time'. Clipsal is, at its core, a masculine-oriented event. Clipsal's marketing explicitly positions it as such (see Figure 6) while its schedule of sub-events and *attractions* position women as passive objects for visual enjoyment and consumption (see Figure 7). While the V8 Supercar series has been seeking to build its female fan-base, the continued inclusion of scantily clad grid-girls and bikini parades as entertainment at Clipsal and other championship rounds simply perpetuates the objectification of women. Taking a philosophical approach, the YWCA observed that '…the V8 Supercar race draws a particular crowd and so there would possibly be cultural groups or minority groups that would feel [like] that event is not for them'. Notwithstanding this, the YWCA is adamant that many women do not feel '…safe in the city during that time and are not going into the city during that time'. These comments affirm to Waterman's (1998, p.67, emphasis added) concerns that festivals possess the power to '…exclude or include on the basis of ethnicity or class, *and perhaps gender*'. In turn, this refutes the notion of festivals as creative opportunities.

Figure 6: Gendering Adelaide through Clipsal

Source: Clipsal 500 Adelaide, 2011

Figure 7: Problematic representations.

Source: *Adelaide Advertiser*, 1st March 2012, pp.12-13.

Conclusion:

Adelaide's Mad March brings energy and diversity that contributes to the temporary development of creative spaces where individuals can experience new forms of pleasure and entertainment. These festival spaces may be thought of as liminal in that they are outside the norm of everyday practices. The literature endorsing creativity as a policy direction positively endorses such undertakings. This literature proposes that festivals constitute creative spectacles that are founded upon and which promotes tolerance and openness within the claimed neutral space of the inner city. This paper refutes such assertions as simplistic. The lessons derived from the Clipsal 500 motor-racing festival provide a salient example of the complexities inherent in the staging of flag-ship events as vehicles for place promotion.

While it is accurate that festivals constitute a '…celebration [that] can bind a community and… also be the instrument that keeps community a fresh and constantly renewing experience' Derrett (2003, p.53), they are not necessarily inclusionary. Festivals are inclusive of some and exclusionary of others. This is not necessarily a negative. From the perspective of Adelaide City Council, having a diverse portfolio of festivals caters to a wider cross-section of the community's needs, interests and desires, while also showcasing to the world that Adelaide is not a stayed, mono-cultural city. However, where some perceive diversity others see conflict. The Clipsal 500 certainly brings moments of conflict to Adelaide. These can be thought of as occurring along a spectrum of significance. Arguably at the more benign end are issues of traffic disruption and congestion. While inconvenient, these can be dealt with through careful planning and management. At the more concerning end of this spectrum are issues of alcohol abuse, anti-social behaviour and violence. Addressing these issues is certainly within the remit of organisations like the Clipsal 500 and ACC. However, they are complex as they involve and impinge upon wider societal attitudes and also sub-cultural practices. Responding to these challenges is a much more significant and long term undertaking.

Ultimately, flag-ship festivals promise policy makers attractive rewards with regards to economic benefits. Clipsal is a case in point and makes a significant annual economic contribution to the local and state economy. However, the research presented in this paper demand that a more holistic perspective be taken by governments with regards to flag-ship festivals specifically and creative economy approaches generally. The lesson of the Clipsal 500 demands that policy makers and communities seriously question what types of places they want to foster, what values they will encapsulate and what senses of place they encapsulate and how this contributes to the complex identity of the city. Hence, creative cities require creative governments that engage critically and openly with policy ideas and direction in partnership with the community to envisage progressive and equitable futures.

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Notes:

[i] *Mullawirraburka*, *Ityamaiitpinna* and *Bakkabakkandi* are the traditional names given to Rundle Park 14, Park 15 and Victoria Park 16 respectively by the Kaurna People. the authors wish to acknowledge the Kaurna People as the traditional owners of the land discussed in this paper.

[ii] Caution must be expressed regarding attempts to compare total festival attendance with the number of identified interstate and overseas visitors. The festival attendance figures cited are for total attendance over the four days of the festival. Thus, this figure will include persons attending more than one day and hence who are at least double-counted. The use of ticket-sales data would alleviate this issue. However, this data was note able to be obtained. Data recording total number of interstate/overseas visitors is derived from online ticket sales data and is unlikely to capture all such visitors. Further, these visitors are included in the total festival attendance figures.

[iii] All financial values reported in this paper are in Australian Dollars (A$). For reference, at 10th May 2012 A$1 = USD$1 or €0.78.

The Study of Urban Fringe Development in the Risk Perspective

Wu Juan[1] Xia Nankai[2]

Abstract

At present, China is in the rapid growth period of urbanization and urban scale. Since 2000, the level of urbanization in China has made tremendous progress. The urbanization rate increased from 36.2% in 2000 to 49.68% in 2010, and China's urban population is nearly 666 million.

With the accelerating pace of urbanization , urban fringe, with its space and land resources, has become the most concentrated and rapid area of city's project development.

Urban fringe is constantly expanding outward extension, showing a dynamic process of development, and its space is filed with a lot of kinds of projects. However, due to the urban fringe is located in the urban and rural transition zone, it features economic development lag, complicated social structure, fragile ecological environment and so on. In the process of urban development, those problems need to be solved.

Based on the study of most of China's cities' development, the article make a conclusion of urban fringe development features in the perspective of functions, space sprawl, land structure and develop mode. In this paper, shanghai is used as a study case. Three decades of urban development and data are selected to analyze the process and characteristics and research the features of current project development in urban fringe.

With the productivity and the continuous development of science and technology, risk management has been accepted and developed by the economic, financial and other businesses. And with the accelerating pace of urban development, urban management aware of the importance of risk management. Urban development risk management is with the risk manage techniques to make the response of the risk influence during the urban develop process. Based on the previous paper study,

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through the urban develop risk management system, take account of the features of urban fringe development, the article analysis its risk mechanism, identify the main risk subjects and their characteristics, then build the risk assessment system. In the last part of the paper, several risk response strategies of the urban fringe develop are suggested to the government, in order to make an explore of the risk management in the future, and Rich content of urban planning education.

1 The introduction of urban fringe

1.1 Urbanization and urban fringe

At present, China is in rapid urbanization growth period, and the urban scale is expanding very quickly. Since 2000, the urbanization of China has made great progress, urbanization rate rising from 36.2% in 2000 to 49.68% in 2010, with an average annual increase 1.13%. Now, China's urban population is nearly 666 million. At the same time, domestic urban constructed land is expanded by 50%. According to relevant statistics, China's urban constructed land from 21524.54 km2 in 1999, has grew to 39140.46 km2 in 2008.

Urban land is the foundation of city's social and economic development. Urban fringe is gradient integration region of city constructed area and the surrounding agricultural land. Urban fringe is closer to the city than suburbs, easily to continue the characteristics of urban space context. And it’s richer in land resources than city, with the convenient traffic. As a result, urbanization in urban fringe is very active.

1.2 The features of urban fringe

(1) Diversity in land type

Because of geographic features, there are city land and rural land in urban fringe. At present, land in China can be divided into two categories by the land’s ownership-urban land, which owned by the state and the rural land and suburban land which is collectively owned. At the same time, urban fringe is often used as urban prepared development land. And there are also some other types of land, such as approved land and undeveloped land, etc.

(2) Unstable in land structure

Land development in urban fringe is more rapid than central city or rural areas. It presents the unstable characteristics in land-use structure. The “unstable” refers to the land structure changes very quickly, which reflects urban fringe land development rapidly.

(3) Dynamic in land use

As the first choice of urban expansion, the land in urban fringe is often developed in a very short time. It means that the land-use structure changes very quickly, the city constructions are activity. As the words said “ Today’s fringe is tomorrow’s city”.

2 The risk research of Shanghai urban fringe development

Shanghai is located in mainland China central coast of the Yangtze estuary, which is the center city of Yangtze River Delta area. As China's first big city, Shanghai is China's economy, science and technology, industrial, financial, trade, exhibition and shipping center. It is famous of Shanghai’s style culture and international metropolis scene, and it succeeded to host the EXPO in 2010.

2.1 The definition of Shanghai urban fringe

(1) Idea definition

Urban fringe is gradient integration region of city constructed area and the surrounding agricultural land. It refers to the periphery of the concentrated constructed area. In this paper, the constructed area means the area which has been constructed is more than or equal to 50% in elemental area. And the urban fringe is the periphery of this area.

(2) Space definition

Based on the collection and processing of Shanghai historical urban construction

land use status maps and the figures, 1988-1997-2009 these three yeas are chosen as the research time node. According to the maps and figures, the article analyzes the urban fringe dynamic development process.

① The development of constructed area: automatic generating 1 km grid, the unit area ratio are classified into three categories: 80%-100%, 50%-80%, < 50%. According to the above definition, the unit whose constructed ratio no less than 50% is constructed area.

② The development of urban fringe: the people's square used as the center point, for 2 km radius to form the concentric circles which can cover the city range. Urban fringe is the periphery of the concentrated constructed area.

③ Urban fringe features analysis: the people's square used as the center point, selecting proper radius, 16 equal angle and area are divided. Then, it is superimposed with the 2km concentric circles, in order to easily get the urban fringe development features.

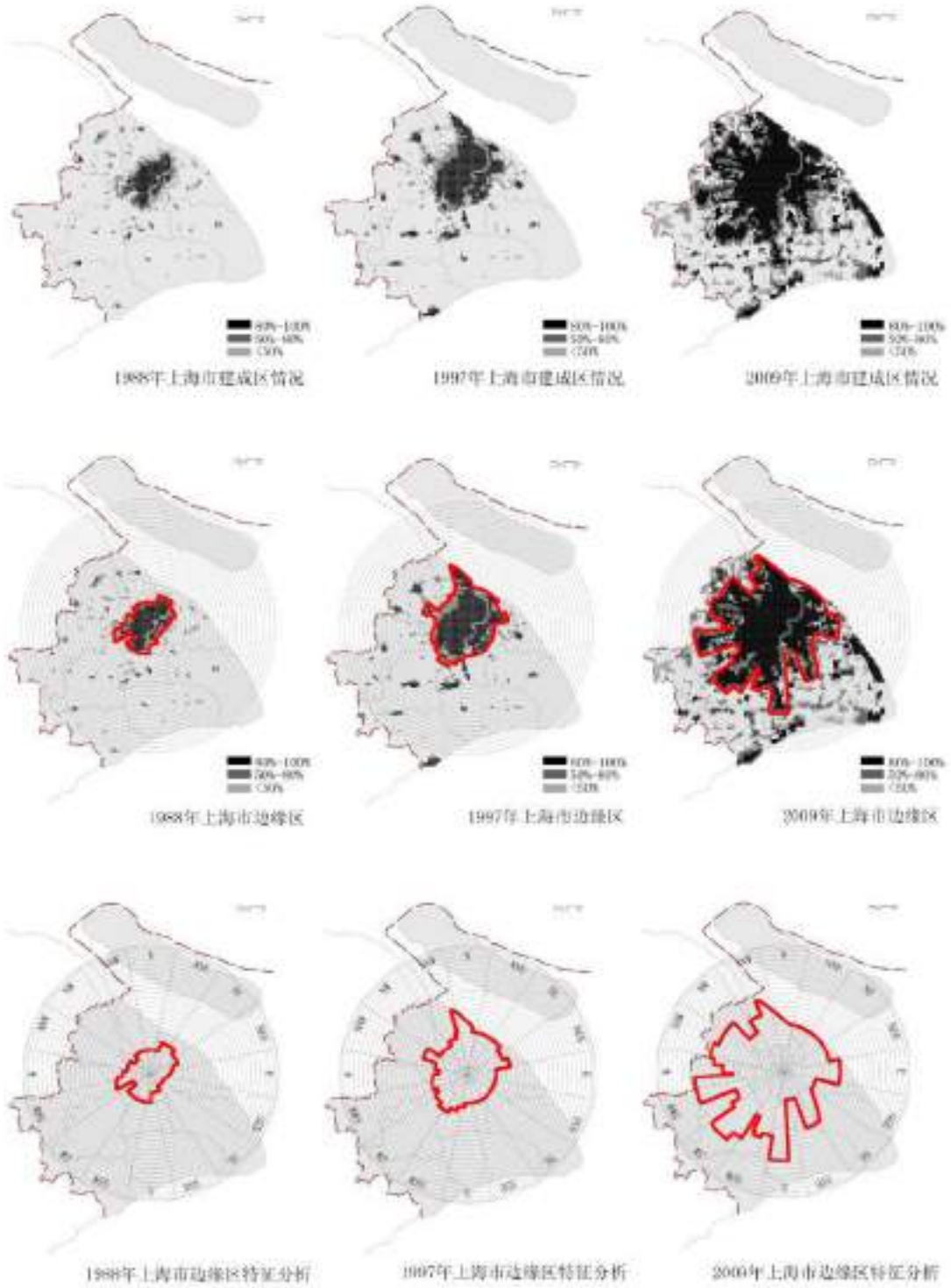

Figure 1. Shanghai urban fringe analysis

2.2 Research of Shanghai urban fringe features

(1) Space features

According to the three time nodes of urban fringe, making comparative analysis from distance to central city, length, space development direction and so on perspectives. Specific data is as the form below.

Table 1. Shanghai urban fringe space features

Time	Distance to central city（km）	Length （km）	Involved district	space development direction	Expanding style
1988	12	100	Putuo District, Zhabei District, Yangpu District, Pudong District ,Xuhui District, Minhang District, Changning District	-	-
1997	20	155	Jiading District, Baoshan District, Pudong District, Minhang District, Songjiang District	N/SW/NW	Sprawl Style
2009	30	340	Jiading District, Baoshan District, Pudong District, Nanhui District, Minhang District, Fengxian District, Songjiang District, Qingpu Distric	NW/NNW/W/SW/S/SSE/E	Axial-group style

The space features of urban fringe can be summarized up from distance, range, expanding style these three characteristics.

①Distance to central city is increasing year by year.

②The length of urban fringe is growing fast.

③The urban fringe expanding style is different. 1988-1997, it's urban sprawl without distinct directions. 1997-2009, urban fringe expands in axial directions. It's related to Shanghai "One city and nine towns" policy, promoting city track traffic construction.

(2)Land-use structure feature

Compared with 1997 and 2009 Shanghai urban land-use status map, to analyze land-use structure feature. Through all kinds of land figures study, making a summary of its feature. Specific data is as the form below.

Table 2. Shanghai urban fringe land-use features

Type	Time	Residential area	Public facilities area	Industry area	Warehouse area	urban outbound traffic area	Roads and Squares area	public utility area	Green area	Special area	Constructing area
Administrative city	1997	251.08	98.72	345.09	43.99	113.74	52.58	26.82	18.24	32.19	82.62
	2009	449.28	158.08	634.4	66.56	49.92	247.52	49.92	145.6	20.8	262.08
central city	1997	145.65	39.53	108.75	14.82	37.02	39.35	7.04	13.10	5.37	35.64
	2009	185.85	56.53	100.05	26.22	6.22	69.85	15.64	34.00	9.97	39.24

The urban fringe land-use features can be summarized up into two parts.

① Overall land trend fast growth . Urban fringe land increased by 900km^2, with an

average annual growth rate of about 7.5%

②land-use structure changed a lot. Constructing area increased by 175 km^2, reflecting fast and intensive of urban fringe development. In all kinds of urban land use type growth, the fastest growing is industrial land, followed by residential land and public facilities land

(3)Develop projects style feature

In 1997-2009 comparing urban constructed map, as the dynamic urban fringe, analyzing the develop project style features. According to the above analysis result, industrial land, residential land and public facilities land are the three increase fastest land style. So, in this part, the article will study industry park, residential district and public service facilities these three kinds of develop projects. Specific data is as the form below.

Table 3. Shanghai urban fringe projects features

	NO	Project Name	Develop Squar(km2)	Administrate district
Industry park	1	Baoshan Industry park	29.09	Baoshan district
	2	Jiading Industry park	62.55	Jiading district
	3	Jiading Auto Industry park	22.66	Jiading district
	4	Xinzhuang Industry park	16.45	Minhang district

	5	West-suburb Industry park	16.73	Qingpu district
	6	Songjiang Industry park	63.73	Songjiang district
	7	Songjiang technology Industry park	4.09	Songjiang district
Residential district	1	Jiading New Town residential district	18	Jiading district
	2	Anting New Town residential district	8	Jiading district
	3	Qingpu New Town residential district	6	Qingpu district
	4	Xujing residential district	7	Qingpu district
	5	Songjiang New Town residential district	20	Songjiang district
	6	Minhang New Town residential district	12	Minhang district
	7	Chuansha New Town residential district	5	Pudong district
	8	Baoshan New Town residential district	8	Baoshan district
public service facilities	Campus	Songjiang college town	5.33	Songjiang district
		Tongji jiading campus	1.67	Jiading district
		Jiaotong minghang campus	3.33	Minhang district
		movie artistic college	0.27	Pudong district
	Commercial	Auto trade center	0.2	Jiading

				district
		Outlets	0.40	Qingpu district
	Entertaiment	Meilan Lake golf club	2.25	Baoshan district
		Yingyi golf club	1.2	Jiading district
		Yintao golf club	1.33	Qingpu district
		Sheshan golf club	1.47	Songjiang district
		Zhongqi golf club	1.09	Minhang district
	Physical	F1 circuit	27.1	Jiading district

The urban fringe develop project features can be summarized up into two parts.

① Function feature

Shanghai urban fringe development project type mainly focus on industrial park, large residential area and city level public service facilities these three project function types. The city level public service facilities can be divided into college town, commercial facilities, entertainment facilities, sports facilities.

These city development project functions not only have large scale, but also strong functional characteristic. Its located in urban fringe area because of it has more abundant land resources, to improve the economic efficiency of the project; On the other hand, these functional project will build up large popularity in a certain time , easily to promote the whole urban fringe area develop.

② Traffic feature

Urban fringe expanding is relying on the urban transportation system. Different project's major transportation type is different. Industrial park is facility with workers' accommodation, in order to reduce commuting. Its main traffic type is freight and public transportation, and low dependency on public transportation. City large scale residential districts have to satisfy residents commuting requirements. Its main traffic type is public transport and private cars, high dependency on public transportation. Large public service facilities service wide scope area. The users income and traffic choice are very different. Its main traffic types for private cars and public transportation, relatively high dependency on public transportation.

Table 4. Shanghai urban fringe traffic features

Project function	scale	Main transportation	dependency on public transportation
Industry Park	large	freight and public transportation	low
Large scale residential district	large	public transport and private cars	high
city level public service facilities	medium	private cars and public transportation	relatively high

2.3 Risk research of shanghai urban fringe development

（1） Risk research framework

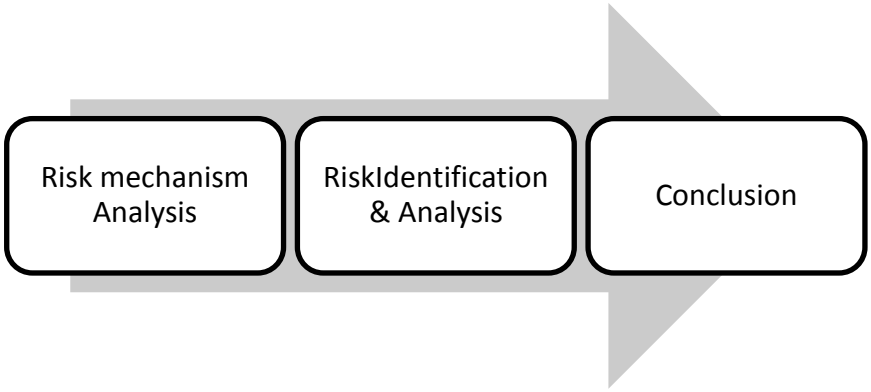

Figure 2. The risk study framework

The risk study framework can be divided into three parts:

①Risk mechanism analysis

The article analysis the develop mechanism of urban fringe area, based on urban develop risk research framework, identified risk subject and risk type, in order to set urban fringe development risk management study idea.

② Risk identification & Analysis

Risk identification & analysis is a particularly important part in risk research framework. According to the risk subjects, from different perspectives to identify and analyze the impact of the risk.

③ Conclusion

According to risk identification and analysis results, combined with the Shanghai urban fringe area feature, the article made the summary.

(2)The risk mechanism of urban fringe development

Urban development projects often involves many interest groups, the effect mechanism is also very complex. Identifying the risk subject and risk mechanism is important to making scientific risk assessment and proposing management strategies.

Urban development project risk can be divided into the original risk and consequential risk. Original risk is the risk or problem which is caused by un-considerable thought or improper disposal. Consequential risk is the harmful influences and consequences to the surrounding areas because of the project development and construction. Different types of risk, the risk subjects are different. According to the urban development risk theory, urban development risk can be divided into economic risk, social risk and ecological risk these three categories. Based on the characteristics, they belong to original risk and consequential risk in different stages of urban fringe project development. Because the involved interest groups are different, the risk subjects are urban government, project developer, urban residents, etc.

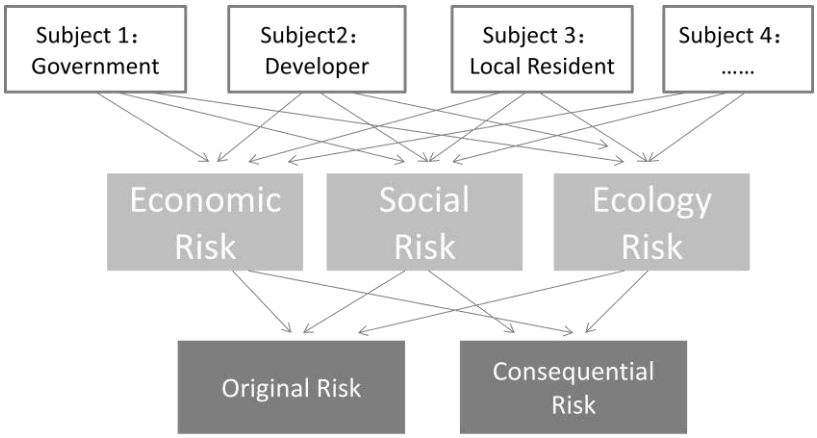

Figure 3. The risk mechanism

3 Risk Identify of Shanghai urban fringe area develop

Based on Shanghai urban fringe area development research, the article makes the risk identification of urban fringe develop projects features. The list of indicators are shown below：

Table 5. Shanghai urban fringe risk identification

Risk type	Risk categories
Economic Risk	Local Economic Standards
	Local Living Standards
Social Risk	Social safety and Harmony
	Social Culture
	Traffic Influence
	Service facilities impact
Ecological Risk	Landscape Standards

3.1 Economic Risk

The edge of the city economic structure and internal has a big difference between cities, because in agriculture to non-agricultural change, its own economy structure is relatively single, and the level of economy are weak.

(1) Local Economic Standards

With the guidance of "Shanghai Comprehensive Planning"， the projects in urban fringe area are often good to local develop. The projects construction in urban fringe area will increase the popularity and influence in short time, promoting the whole

area to develop, effects the local economic standards.

(2) Local Living Standards

Projects in urban fringe area construction and operation will provide jobs, leading the improvement of regional income. Or, it will cause negative influence to local living stands.

3.2 Social Risk

Project in urban fringe area development may lead the regional infrastructure, service facilities construction, and improve the social living quality. Because the residents living in urban fringe area is relatively complex, social sensitivity is high, and new projects will attract different kinds of people, which is very easily influent local social stability.

(1)Social safety and harmonious

City safety and harmonious is mainly evaluated from the following two aspects. Firstly, the new projects construction and operation will bring more traffic and complicated population structure, effecting regional security. Then is whether the projects cause conflict to resident. If the project safety is good and communication with local residents is well, it will promote regional security and harmonious

(2) Social Culture

Social culture is an important characteristic of city recognition, is also the key issue

in present city construction. Due to the geographical reasons, urban fringe area has both urban and rural culture features. And it formatted its own characteristics in the long time evolution process. The project construction attitude is determine the influence of social culture.

(3) Traffic Influence

Urban fringe is located in the edge area of central city and rural. It's a certain distance to central city. With the construction and operation, the projects will attract many people distribution, leading much traffic dependency. It may ascend regional road traffic conditions, enhancing public transportation.

(4) Service facilities impact

Urban fringe area project construction will promote the surrounding region as a whole to develop, complete the district public service facilities level. And the projects in urban fringe are often have a large scale, influencing local primary public service facilities system.

3.3 Ecological risk

The project in urban fringe area often marks area landscape features, become the symbol image. As the transition zone from inner city to rural area, urban fringe has the relative rich natural ecological resources. In the project construction and operation process, a great quantity people gathering will threat the ecological environment in a certain degree.

（1）Landscape Standards

Urban fringe area urbanization development will expand to the whole rural areas.

Therefore, how to manage them as a whole region to integrity development, make the image logo and driving regional landscape construction, not mechanization isolated-island effect, influence the fringe area ecosystem harmony and stability.

(2) Ecological Environment

Urban fringe area is adjacent to the vast rural areas. It has the rural ecological landscape, such as large scale greenbelt, river system and undeveloped land resource. With the construction and operation of new projects, it may generate pollution, such as: noise, waste gas, waste, etc, cause negative influence. Meanwhile, projects operation will attract abundant people, threaten local ecological environment.

4 Conclusions

As one of the most rapid urbanization area, urban fringe area has many obvious characteristics in land-use and project perspective. Through the research of Shanghai fringe area, analysis the features of space evolution, land-use structure and projects types. Combined with urban development risk research framework, making risk identification, and illustrates the economic, social and ecological three aspects risk.

Taking risk identification of urban fringe projects is good for local government to facilitate the related risk management measures, such as: risk aversion, risk and so on, in order to ensure the urban fringe healthy development.

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The Affordable Housing Policy in Taiwan and UK： A Comparative Study

Yu-Min Hwang, Tzu-Yuan Chao

Abstract

With the rapid speed of economic globalization and urbanization in the developing countries, the implementations of sustainable development tends to encounter issues such as gentrification and increasing urban poor due to the escalating property prices in the urban area. In most urban renewal projects, to re-create the sense of spaces and provide higher-quality housing that attract middle class or higher income population would be the usual case. The controversial discussions on the gentrification consequence and the delivering affordable housing hence arisen. In Taiwan, Taipei Metropolitan is the only city that has successfully promoted prosperous urban renewal markets and more than 60 urban renewal projects have been granted permissions since 2008. However, the success of urban renewal projects has resulted in both economic and social problems i.e. young professionals or newly graduates are not able to afford living in the Taipei City. Meanwhile, Price and Income Ratio in Taiwan has increased from 7.1 to 9.2 in the past three years and it implies that pressure of purchasing house gradually increased in Taiwan as a whole.

To responding to the urgent needs of affordable housing, the very first Housing Act has just been legislated in the end of 2011 and two social housing projects in Taipei have been announced by the government that will deliver more than 4000 housing units at urban fringe of Taipei through public-private partnership. However, it is believed that without the stable supply of affordable housing, housing affordability will always be a long term issue. Many studies have indicated that it is feasible to provide affordable housing through urban renewal projects in the UK and other developed countries.

Hence, in this paper, we will focus on how to integrate the affordable housing supply with the urban renewal projects in the Taipei City, Taiwan from the legal and policy perspectives. A case study of England experiences will be undertaken. The final part of the paper will include a comparative study of Taiwan and the England in

the policy, legal and mechanism context.

Keywords：affordable housing, urban renewal projects, Taiwan

1. Introduction

From 1971 to the present, the Taiwan government has proposed a number of housing policies, such as Public Housing, Social Housing, Regulations for Young People Owning Housing and Suitable Housing, to resolve the different aspects housing problems. In 2011,the government has pass Housing Act which is legislated for the targets of integrating housing market, enhancing the quality of the living, all nationals living in suitable residential and having dignified living environment. However these policies were almost proposed from the perspective of living justice, especially the Suitable Housing and Social Housing. In recent years, the price of housing has soared, in particular metropolitan areas. But the limited areas cannot tolerate endless constructions, the need of housing is large in metropolitan. Therefore, the price of housing is rising rapidly; a lot of people can't afford the price to buy a house. Although government has proposed Suitable Housing and Vacancies Using, Suitable Housing or Social Housing still is restricted by laws; price of vacancies is rising for the need of living. So the affordable housing and housing supply are more important and Taiwan will confront the issue in the future.

In comparison with other countries, the housing policies or comprehensive development strategies include housing affordability. In the United Kingdom, Planning Policy Guidance Notes (PPG3) in 2000 has included the problems of affordable housing and the need of housing, and proposed solutions from different aspects as policy, finance, etc. In 2003, the Sustainable Communities Planning is involved in affordable housing object and supplied affordable housing with urban renewal.

Now, it confronts the subject of housing affordability in Taiwan, and the need of housing is large in Taipei. To resolve this subject, Taipei has proposed a concept of obtaining affordable housing with urban renewal. And there is a case which is proceeding in Muzha District. In Taiwan, the concept of obtaining affordable housing with urban renewal is argued and there are no regulations or policies to define it. So it is the motivation of this paper.

Based on the background and motivation, there are three purpose of this study：

1. Understanding the affordable housing policies transformed and implemented; compared with Taiwan and bring up the similarities and differences as reference.

2. Discussed similarities and differences about other countries and Taiwan urban renewal mechanism and operation

3. Discussed the feasibility of supplying affordable housing with urban renewal in Taiwan.

2. Analysis

2.1 Definition and Classification of Affordable Housing

In UK, affordable housing includes social rented, affordable rented and intermediate housing, provided to eligible households whose needs are not met by the market. Affordable housing should:

– Meet the needs of eligible households including availability at a cost low enough for them to afford, determined with regard to local incomes and local house prices.

– Include provision for the home to remain at an affordable price for future eligible households or, if these restrictions are lifted, for the subsidy to be recycled for alternative affordable housing provision. ***(2011c)***

Table 1 Affordable Housing Type in UK

Housing Types	Contents	Note
Social Rented Housing	1. Guideline target rents are determined through the national rent regime. 2. Rented housing owned or managed by other persons 3. Provided under equivalent rental arrangements to the national rent regime, as agreed with the local authority or with the Homes and Communities Agency as a condition	Social rented housing is owned and managed by local authorities and registered social landlords

	of grant.	
Affordable Rented Housing	1. It is not subject to the national rent regime but is subject to other rent controls. 2. Require a rent of no more than 80 per cent of the local market rent.	Rented housing let by registered providers of social housing to households
Intermediate Affordable Housing	1. Housing at prices and rents above those of social rent, but below market price or rents. 2. Include shared equity products (e.g. HomeBuy), other low cost homes for sale and intermediate rent but does not include affordable rented housing.	Registered providers of social housing to households who are eligible for social rented housing.

References：*(2011c)*

In Taiwan, affordable housing includes public housing, social housing, parity housing and affordable housing. But there is no act to make a clear definition of affordable housing.

Table 2 Affordable Housing in Taiwan

Housing Types	Contents	Note
Public Housing	The referred public housing in this act indicates the housing projected by the government and constructed through the following forms for sale or rent to low-income families, or conducted by such families themselves with government loan, or provides the subsidy of loan interest for families who bought the house by themselves	Building ways： I. Construction conducted directly by the government. II. Construction conducted by the people themselves with government loan. III. Construction by encouraging private investment. IV. People purchase the house by themselves

		with government assistance.
Social Housing	1. It indicates the housing conducted by the government or conducted by encouraging private investment and rental specially. It should provide at least 10% houses for renting to Special cases or status. 2.It should calculate reasonable subsidy in accordance with standards of fair rent in living area, income of families receive subsidy, household with disadvantaged status and standards of affordability indicators, etc., for the purpose of limit of rental and the subsidy of loan interest for families who bought the house by themselves.	Special cases or status 1.Low-income families 2.Special-circumstances families 3.Bring up more than three minor children. 4.People who can not return and under 25-year-old after the end of the placement of correctional services or foster families. 5.Over 65 years old 6. Victims and his/her children of domestic violence or rape 7.Disabilities 8.HIV or AIDS 9.Aborigine 10.Victims of disaster 11.Vagrant 12.Other confirmed by authority
Affordable Housing(Parity Housing)	1. The property belongs to country, public or state-owned enterprise. 2.To take the way of selling by announcing building investment. 3.Requesting private to provide rent for meeting the need of tenant and having priority to take care of low-income families or families which can't afford to pay.	There are affordable housing located at Fuzhou and Airport MRT A7 station.

References：*(2011b)* 、*(2005)*、*(2011d)*

It integrates the vocabulary about affordable housing in UK and Taiwan. In UK, all housing type is operated by public and private, but the operators alter for different house type. The objects are confirmed by evaluating income and local house price in UK, but the objects are almost disadvantage groups in social and economy in Taiwan. The properties are more rental in UK, but in Taiwan the opportunity of rent is as same as sale. The definition of objects in Taiwan is narrower than UK, but the chance of sale in Taiwan is more than UK.

Table 3 Affordable Housing Comparative

Nation	Housing Type	Operator	Objects	Property
UK	Social Rented Housing	Public/Private	Evaluating income and local house price	Rent
	Affordable Rented Housing	Public/Private	Evaluating income and local house price	Rent
	Intermediate Affordable Housing	Public/Private	Evaluating income and local house price	Rent、Sale
Taiwan	Public Housing	Public	Disadvantage groups in social and economy	Rent、Sale
	Social Housing	Public/Private	Disadvantage groups in social and economy	Rent
	Affordable Housing(Parity Housing)	Private	Disadvantage groups in social and economy	Rent、Sale

References：*(Hsu, 2011, 2011c, 2005, 2011b)*

2.2 The Context of Affordable Housing

According to Delivering Affordable Housing which was published by Communities and Local Government in UK, we can understand government in UK believes everyone should have the opportunity of a decent home, which they can afford, within a sustainable mixed community. Although there is no clear definition

about affordable housing, we can find the related concept from living justice which is mentioned in Just society among eight visions in Gold Ten Year. The major policies are giving assistance of living, adjusting the housing supply and demand, improving housing market. The referred affordable housing in UK policies indicates the motivation and form(ex：mix-used communities), and in Taiwan indicates the operational ideas and models. The motivation of both is that everyone can own the house by sale or rent in a economy-affordable situation.

Next, it studies the policy evolution about affordable housing in UK and Taiwan.

2.3 The Affordable Housing Policy in the United Kingdom

Most nations make/set policies, acts, regulations about affordable housing for solving the issue of living. The evolution of affordable housing policies in UK is as follows：

1914~1949：The top priority is housing-providing for working-class and focusing on subsidy institution.

From 1914, government proposed three policies： rent control, providing housing subsidy for working-class and slum clearance. It is the first turning point in UK that introducing rent control and controlling private capital in long term. The construction was promoted by encouraging private investment in public housing for sale or rent in 1923. In 1945~1949, because of Keynesianism, a lot of public utilities become nationalization. The act removed statutory restriction of limited public housing for the working classes, at the same time, the government introduced improvement grants. In this period, the policies were almost implemented by subsidy and the objects were restricted to working-classes.

1950~1969：Slum clearance was the core policy ,and introduced the idea of urban renewal.

In this stage, the postwar construction boom ended the emphasis shifted to the removal of slum housing. In Housing Act 1957, regulated government must provide

dwelling to extended families or people with poor living conditions. Building association was brought in the housing project; government encouraged house ownership and improved old-house policy. Fair rent was introduced in 1965.

1970~1989：The rise in owner-occupation of older stock; successive governments provided grant aid to owner-occupiers and private landlords to assist them with renovation work.

Because of Free Market, it is the second turning point in 1979. Before 1979, government played the role of housing supplier, and thus transferred to the role of promoter. However, government made housing affordable by subsidies and financial mechanism; the construction was undertaken by private enterprises or semi-public housing companies. In 1980, owner-occupation of older stock was more general by introducing right-to-buy plan and mortgage market deregulation; government interfered in housing market and confirming public housing of selling or renting.

2000~present：There were a lot of mechanisms about equity shared for affordable housing.

Authorities were required to produce homelessness strategies for homeless youth. Housing affordable was an element in Sustainable Communities Plan and provided by public-private framework. Urban renewal and affordable housing were the way to achieve sustainable communities in Sustainable Communities: Affordable Housing and Socio-economic Relations. Now, the important guideline about housing is planning policy guidance notes (PPG3) in 2000. The guideline include that local authorities should meet the housing need, reuse the developed land, increase development destiny and provide affordable housing. Table below is housing policies history in UK.

Table 4 The History about Affordable Housing Policies in UK

Principle	Governing party	Year	Housing important policy	Period description
		1914	Three housing policies adopted by government：	The primary thing is providing working-class

			●Rent control ●Providing housing subsidy for working-class ●Slum clearance	housing which focusing on subsidy institution.
		1915	Turning point ●Introducing rent control ●Controlling private capital in long term	
Liberalism	Liberal Party	1919	Introducing exchequer The stage of housing increasing	
Social democracy	Labour Party	1923	Construction by encouraging private investment in public housing for sale or rent	
Keynesianism	Labour Party	1945	The nationalization of major industries and public utilities	
		1949	Removed statutory restriction that limited public housing to the working classes. Introduced improvement grants.	
	Conservative Party	1951		Slum clearance： After the postwar construction boom ended the emphasis shifted to the removal of slum housing. Renovation was mainly seen as a stop-gap measure until substandard dwellings were cleared.
		1959	Introduced building association into housing project. Encouraged house owned and improved old-house policy	
	Labour Party	1964	Established the Housing Corporation	
		1965	Introduced fair rents	

	Conservative Party	1970		Publicly funded private sector renewal：The rise in owner-occupation of older stock, growing criticism of clearance and municipal rehousing led to shift in focus to area renewal and renovation. Successive governments provided grant aid to owner-occupiers and private landlords to assist them with renovation work. ●The scope of grant aid was broadened to cover repairs as well as improvements(such as the installation of bathrooms and kitchens),and eventually to include adaptations to make dwellings suitable for people with disabilities. ●Subsides were increased to enable low-income home owners to benefit. ●Area-based focus
		1973	Conservative Party and Housing Corporation introduced four goals： ●Supported home-ownership arising ●Provided capital to private sector stably ●Stabilized housing price ●Provided a loan funding sufficiently	

	Labour Party	1974	Introduced ‘ Housing Action Areas ‘ and expanded the remit of the Housing Corporation. Emphasized interfering in housing directly and given more resources	developed through the designation of Housing Action Areas and General Improvement Areas. ●Enveloping and block repair schemes for groups of houses were stimulated by higher grant payments.
Libertariani sm	Conservative Party	1979	Second turning point： It went to privatization, personallization and non-public in the after ten years. Government transformed the role from house supply into promoter, and converted from providing funding to assisting with rent-paying when the houses supplied by government had declined in 1919.	
		1980	Introduced ‘Right to Buy’	
		1989		Means tested and targeted private renewal：A housing green paper asserted that ‘homeowners must carry the primary responsibility for keeping their property in good repair’(DETR,1985,p.1). The Local Government and Housing Act introduced mandatory grants to make

				dwellings ’fit for human habitation ’ (which increased funding demand). In 1996 mandatory grants were discontinued, apart from disabled facilities grants (DFGs). Overall grant expenditure fell and DFGs accounted for an increasing proportion of the total.
Free market	Labour Party	2000	Set direction for a number of housing reforms including option appraisals, ‘ Arm’s-Length Management Organizations and Private Finance Initiative options to meet, the Decent Homes Standard, rent restructuring, Housing Benefit reform and Choice-Based Lettings.	
		2002	Required local authorities to produce homelessness strategies. Amended priority needs groups to include 16-17 year olds. Abolished the duty to maintain housing registers. Repealed private sector grants and loans provisions, enabled local authorities to assist	Onwards public-private framework harnessing private investment in renewal：a regulatory reform order repealed the framework of grants and assistance to home owners and required all local authorities to develop strategies to improve local housing conditions and to

			housing renewal directly or through third parties such as housing associations and private sector loan finance.	invest a mixture of public grants and private funds in renewal. This led to initiatives to attract private funding. Housing Market Renewal Areas were designated (this new public investment stream was limited to seven areas nationally).The decent homes target and the health and safety hazard rating set standards for local strategies.
		2003	Gave higher profile to housing policy and responded to regional disparities. Led to the establishment of Regional Housing Boards, Regional Housing Strategies, additional investment in new homes in the South and the establishment of Housing Market Renewal Areas in parts of the Midlands and the North. Established ‘ community Right to Buy’, which enabled community bodies to purchase land from land owners.	
		2005	Set out the government’s housing priorities in the run-up to the general election. Placed strong emphasis on the promotion of home ownership. Introduced ‘ HomeBuy’ equity stakes scheme for housing association tenants and further help for first-time buyers.	

			Continued the themes of private finance for social housing and the promotion of choice through lettings and mobility schemes. Sought to reverse the growth in temporary accommodation.	

References：*(Murie, 2006, Chang, 1994)*

2.4 The Affordable Housing Policy in Taiwan

The development of housing policies in Taiwan can be divided into four periods from 1945 to present. The following sections explain the four periods.

1950~1999：It is the public housing policy stage and is promoted by four steps.

In 1950~1954, the main policy was about housing subsidy for emergency, due to the tremendous amount of housing needs resulted from Nationalist Government of the Republic of China retreatment to Taiwan. In the stage of government housing loan between 1957~1975, government drew up the Housing Subsidy Act, defined the subsidies objects and performed redevelopment after disaster. In these two stages, the policy focused on provision of houses quantities and was implemented by subsidies.

In 1975~1981, the stage was targeted to resolve the issues of housing demands, living environment and the quality of life with the Building public housing six-year plan. Government drawn up Public Housing Act and it was one of the twelve key infrastructure projects. The referred public housing in this act indicates the housing projected by the government and constructed through the following forms for sale or rent to low-income families, or conducted by such families themselves with government loan, or provides the subsidy of loan interest for families who bought the house by themselves. In this stage, the objects are not restricted to public servants and teachers but also include other low-income families. Initially this stage was guided by government.

In 1982-1989, the Public housing construction and pre–sale stage encourages private investment and includes more objects of subsidies. But the housing policies still focused on subsidy of housing loan.

In 1990~1999, the primary housing constructors are private sectors and the government only plays an assisting role. Government promoted investment in construction project to increase interest in building public housing.

2000~2006：Drew up integrated housing policy

The policies changed from housing supply control to finance management. Integrated housing policy in 2003 was aimed to improve housing market, establish fair and efficient housing subsidy institution and enhance the quality of living environment. Social housing was first brought up in this stage. Finally it was decided to focus on housing welfare in 2005.In this stage, the purpose and objects are different from previous stages, but it was still carried out by maintaining the interest subsidy.

2007~2009：Integrated housing subsidy program

The purpose is to integrate all housing subsidies of all professions and the main considerations of housing subsidy are income and all disadvantaged states of the applicant.

2010~present：Social housing implementation program

The policy in 2010 is targeted to assist youth and the disadvantaged to resolve the living issue, but there is neither act nor regulation yet. Housing Act was confirmed in 2011, and the act referred that social housing indicates the housing conducted by the government or conducted by encouraging private investment and rental specifically. It should provide at least 10% houses for renting to citizens with special needs or status. The restriction of objects is stricter; most objects are disadvantaged group, but it does not take consideration of general public who can’t afford to own houses.

The affordable housing was introduced in Housing Act Draft in 2011, but there is currently no regulation. According to the draft, it referred to ‘construction constructed by government drawn investment and given priority to homeless and less a certain income families in standard price.’ Now there are two affordable housing located at Fuzhou and Airport MRT A7 station. The affordable housing in Fuzhou has ended the application process and the other has completed the investment contract. Both of them will provide lower than market price for sale or rent and if you own the house, you can’t gift or exchange it in first five years. It is guided by government and assisted by private sector, and private sector should be responsible for the housing management.

Table 5 The History about Affordable Housing Policies in Taiwan

Background	Governing party	Year	Important Housing policy	Period description
A lot of people came into Taiwan, because Nationalist Government of the Republic of China retreated to Taiwan In 1950, economy gradually stabilized by American aid intervening	Chinese Nationalist Party	1950~ 1954	Houses were crude and most of the properties belong to public. A lot of houses were illegal. The policy was about housing subsidy for emergency.	Public housing policy stage
		1957	The first legal basis for housing subsidy：The Loan For Building Public Housing Act Beneficiary：working-class, farmers, fishermen, public servants and teachers and general citizen who need house(given priority to low-income working-class and farmers) The key point was to resolve the issue of quantity.	Public housing policy stage-conducted with government loan
		1957~		With the disaster

		1965		reconstruction
American aid stopped.		1965	Government built first house for public servants and teachers in Taipei and carried out the program of assisting army, public servants and teachers to purchase the houses	
Taiwan finance gradually stabilized		1965~ 1975		The migration plan with demolishing illegal building
		1976	Announce the building method in Public Housing Act： Construction conducted directly by the government. Construction conducted by entrusting private companies. Reconstructed military dependents' village. Construction conducted by the people themselves with government loan.	Public housing policy stage- Building public housing six-year plan
		1978	The twelve key infrastructure projects included building public housing extensively.	
Capitalistic Economy		1982	Increased building methods：Construction conducted by the people themselves with loan. Construction conducted by private investment. The duty of building public	Public housing policy stage- Building and pre – sale public housing

			housing was transferred to citizens.	
		1982~1989		The housing policies still focused on subsidy of housing loans, but the objects include various occupations.
The Privatization of Government Enterprise		1990	The way government intervened in public housing： Construction conducted directly by the government. Assisted purchasing with housing loans practice. Assisted house purchasing with government partial loan.	Public housing policy stage-New communities development plan
		1993	Promoted military dependents' village joint construction plan	
		1994	Private sector actively participated in building low-income housing.	
		1999	Promoted investments in construction project	
Liberalism	Democratic Progressive Party	2000	Discount mortgage scheme Given preference of loans interest to who buy the housing built by private and it was negotiated by the central bank and financial institutions	Integrated housing policy The purpose, implementation and objects are different from other programs

		2003	Drawn up Integrated housing policy to introduce social housing and finally social housing was changed to housing welfare.	before 1999, but the implementation was still focused on the interest subsidy.
		2005	Set and announced Goals： Improving housing market. Established fair and efficient housing subsidy institution Enhance the quality of living environment Ensured disadvantaged living and at the same time encouraged private or third part to build and increased housing choices by government's multi-subsidies	
		2007	Integrated housing subsidy implement program The purpose is to integrate all housing subsidies for all professions and the main considerations of housing subsidy are income and all disadvantaged states.	Integrated housing subsidy
	Chinese Nationalist Party	2010	Assisted the issues of youth and disadvantaged groups Integrated housing subsidy resource implement program Youth owned house program	Social housing implement program in short term

		2011	The principle of social housing implement program in short term ： Given priority in Taipei metropolitan Main part is rent subsidies, minor part is building; diverse applied methods; applied mix-use and dispersed moderately model; guided by central government, managed by local authority , given priority to reward civil building Affordable housing：according to Housing Act Draft Construction constructed by government drawn investment and given priority to homeless and less a certain income families in standard price. It is guided by government and assisted by private sector, and private sector should is responsible for the housing management. Section 3 in Housing Act defines that social housing indicates the housing conducted by the government or conducted by encouraging private	

			investment and rental specially. It should provide at least 10% houses for renting to people with Special needs or status.	

References：*(Hsu, 2011, Chen, 2008)*

3. Results

3.1 The different between Taiwan and UK in Affordable Housing Policy

At the beginning, the implementation of providing affordable housing was through subsidy institution, and the objects were restricted in UK and Taiwan. In the later period, the objects in Taiwan are mostly low-income or disadvantaged groups and few youth groups, but the objects in UK are groups with certain economy evaluation and youth group of 16~17 year-old .The provider in UK changes from government to private companies or public-private partnership over time, and the government transforms into promoter. In Taiwan, at first government guided the policies and in the later period, government guides policies, private sector assists in the policies with government drawing investment. The different between UK and Taiwan is development sector. There are public and private sectors in Taiwan, but there is also third party in UK. If Taiwan needs to refer to the cases and implementation in UK, the major concern is how Taiwan could integrate public and private to complement the duty of third party.

Table 6　Compared Affordable Housing Policy in UK and Taiwan

National	Taiwan	UK
Implement	Subsidy→Subsidy with building	Subsidy→Subsidy, building→Subsidy, building and renewal
Object	Working-class, farmers, fishermen, public servants and teachers→Low-income, youth→Low-income,	Working-class→economy evaluated group, 16~17 year-old

	disadvantage	
Provider	Public→public with private	Public→private with public
Policy development	Public housing policy stage(conducted with government loan→Building public housing six-year plan→Building and pre–sale public housing→New communities development plan) →Integrated housing policy →Integrated housing subsidy→Social housing implement program in short term	Rent control,providing housing subsidy for working-class→Slum clearance→Right to Buy, economy status evaluation, renewal by private→public-private framework
Affected concept	Liberalism	Libertarianism

References：*(Hsu, 2011, Chen, 2008, Chang, 1994)*

3.2 Case Studies in Taiwan and UK

3.2.1. Plymouth in UK

The core strategy in Plymouth from 2006 to 2021 was drawn up in 2007.In order to make Plymouth a high quality and internationalization city, the strategy includes nine visions and one of them is to provide a mix of dwelling types, size and tenure, to meet the needs of Plymouth's current and future population. Based on the vision, the housing provision is that at least 30% of the total number of dwellings should be affordable homes and at least 80% of the city's housing provision to be delivered on previously developed land, such as Sutton Harbour, East End. Both of them provided affordable housing according to Section 106 of the Town and Country Planning Act 1990.(2007)

3.2.2. Wenshan District in Taipei, Taiwan

For contributing the image in Muzha, a lot of urban renewal units were planned in hope to bring development opportunitie; either announced by government

or designate the renewal area by private. With this policy, the two blocks in the south of Mucha Second Road and Mucha Second Road 138 Lane cross section were designated the renewal area in 2009(referred as case area below). According to Urban Renewal Act, the case area was going through a public evaluation and selection procedure, accepting other organizations (institutions) as implementer to undertake the business of urban renewal. Under the activity plan about assisted program of extended urban renewal into old and low-floor building community in Taipei, the case area quotes the guide of the appropriate scale of residential and refers the regulation of rent housing ‘Upon providing certain amount of houses for renting purposes (properties should needs to be gifted to the local government), the gifted parts will be treated as public facility and not be counted towards the total capacity. The awarded capacity is limited to 15% of the total capacity.

In this case area, after renewal process, government can get almost 200 public rent housing. However, not entirely affordable housing, but it is the first case provided affordable housing by urban renewal. So we know that providing affordable housing could be conducted by the government or guided by government and conducted by private and provided affordable housing partially by urban renewal in the future.(2011a)

3.3. The Different Between Two Cases

In both cases, affordable housing is provided by the vision of local development, but the visions are referred in different perspectives. In Plymouth, the vision is brought up by the core strategy of affordable housing, but in Wenshan District, the implementation of vision focused on the local development by urban renewal, and thus affordable housing is included. About proportion of affordable housing, the strategy of affordable housing defined the proportion clearly in UK, and in Taiwan, the affordable housing proportion is according to the regulation of rights transformation. In UK, Section 106 of the Town and Country Planning Act 1990 is the main act to provide affordable housing; in Taiwan, the program is the basis for affordable housing. After comparing UK with Taiwan, the concept and regulations in provided affordable housing by urban renewal are different, and the difference will be the reference for discussing the implementation in Taiwan.

Table 7 Compared Affordable Housing Case in UK and Taiwan

Case	Wenshan District in Taipei, Taiwan	Plymouth in UK
Policy/Regulation	Activity plan about assisted program of extended urban renewal into old and low-floor building community in Taipei/ Urban Renewal Act	Core strategy in Plymouth from 2006 to 2021/ Section 106 of the Town and Country Planning Act 1990
Affordable housing proportion	According to the regulation of rights transformation	At least 30% of the total number of dwellings should be affordable homes
Relationship between renewal and affordable housing	Urban renewal is the vision and affordable housing is the implementation method.	Affordable housing is the vision and urban renewal is the implementation method.

References： (2011a, 2007)

4. Conclusion

Based on the above sections, we realize that the policies and implementation methods of affordable housing changed gradually and are defined clearly when referred in policies and acts. However, there is no act to define affordable housing, but the concept was drawn up in the policy about housing affordable. In the case study, we learned that the way to provide affordable housing could be conducted by the government or private and it can be provided by urban renewal. Based on the well use of land and living justice, it becomes a trend to provide affordable housing by urban renewal. This study will refer to the case and analysis in UK, and discuss the possibility about affordable housing supply by urban renewal.

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URBAN SPACE DESIGN IN HIGH-DENSITY CONTEXTS: PLANNING FOR SUSTAINABLE FUTURE

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Abstract

In the context of rapid urbanisation, increasing density and hybrid conditions, as well as global competitiveness in planning more iconic, yet more sustainable, more environmentally-friendly and healthier cities, the ways urban spaces are traditionally understood and designed are challenged and need to be reconceptualised both quantitatively and qualitatively. Once densities increase urban public space becomes a precious commodity, whose design and performance attributes are yet to be explored in order to fully respond to new citizens' needs and life standards.

In this paper we investigate emerging hybrid urban space typologies and their potential roles in improving conditions of high-density settings and turning them into more vibrant environmentally and socially sustainable spaces. Our main focus is on identifying critical parameters for new urban public space configurations within high-density conditions and led by holistic vision for sustainable urban future. In this paper we outline a tool that would be used to gather, classify, evaluate, analyse, speculate and guide design and planning of urban spaces, and thus ease policy and decision making processes in the context of highly dense Singapore. Drawing from the research by Gehl (1996, 2001, 2010), Carmona (2003), and Shaftoe (2008), among others, a conceptual research framework is developed. The framework recognises three key components that constitute the properties and performances of urban spaces, combining design, use and operational aspects, namely: hardware, software and orgware. As such, it is used as a basis for classifying and evaluating existing urban spaces, as well as speculating on how to generate new hybrid urban space typologies and conditions in high-density contexts. The framework challenges static and prescribed typologies, by proposing sets of positive descriptive and evaluative attributes and criteria that can be combined and compared across different typologies in order to create better urban spaces in high-density contexts.

The research method consists of three major parts, namely: (1) documentation of case studies and literature review, (2) development of classification and evaluation systems for selected cases, and (3) comparative analysis. A total of 48 local (Singaporean) and international cases in high-density contexts, including those from Beijing, Hong Kong, Tokyo, Osaka and New York, are documented, using structured first-person observational techniques, as well as on-site mapping, photography,

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interviewing and secondary sources review. A structured observational checklist - consisting of a number of descriptors and evaluators grouped into five urban space values, namely: nodal, spatial, environmental, use & socio-perceptual and operational value - is used. Selected spaces range from small-scale to large-scale developments, from relatively homogeneous (such as residential) to highly heterogeneous hybrid complexes (such as infrastructural and commercial).

This paper will discuss key findings of comparative analysis, highlighting critical attributes for the performance of particular spatial configurations, as well as their inter-relationships. Additionally, the recommendations of design measures to improve urban spaces in local and international high-density contexts will be proposed. While drawing from existing recent tendencies and transformations in urban space development, this paper aims to trace future trajectories and identify the role of urban space and urban design in future sustainable development.

1. Introduction – High-Density Environment, Urban Space and Sustainability

Due to the rise of urban development and urban population the demands for more environmentally and socially sustainable planning and design are emphasised globally. More than a half of the world's population today live in cities, of which 27% are 19 mega-cities, and 11 of which are located in Asia (Keiner, 2005). Over the last three decades Asian countries experienced the most dramatic urban transformations, which is comparable to what the western world experienced over the last two centuries. From 1900 to 2000, the world's population increased from 220 million to 2.84 billion. It has also been estimated that between 2000 and 2030, Asia's urban population will increase from 1.36 billion to 2.64 billion.[3]

However, in contemporary urban planning and design research and practice, there is a considerable agreement that higher density, compact city and "high intensity urbanism" are desirable and more sustainable urban development strategies (Sabaté Bel, 2011; Chan and Lee, 2007). Such a favourable understanding of high-density conditions is, however, relatively recent. Negative experiences in the nineteenth century's industrial cities, when high concentration of people was associated with poor hygiene, diseases, fire hazards and deaths, led to favouring of low-density urban development. Such a discouragement of high-density urban development has also been justified by sociological and psychological research, which suggested that increasing urban density causes greater physiological and psychological stress, social disorder (increasing violence, crime, suicide rate, and drug addiction), ill health conditions and violation of personal space (Newman and Hogan, 1981). However, such a trend resulted in a number of problems driven by overconsumption of resources, some of which are higher energy consumption, car dependence and higher travelling costs, long daily travelling distances and higher infrastructure costs, as

[3] On the other hand, in spite of such urban population explosion trends, Hidetoshi Ohno (2012) estimates that the cities after 2050 would experience depopulation, especially those in Asian countries with ageing and declining populations.

well as social problems in often ghettoised suburban areas. On the other hand, benefits of higher density and higher intensity may be multiple, yet it is evident that the density of urban environment is not the only and sufficient measure of the good performance, sustainability and quality of urban living.

The majority of over 70 definitions of sustainability see economy, environment and social equity as its primary and interdependent components (Boyko et al., 2005). Most common definition describes sustainability as "a development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs" (WCED, 1990). Although sustainability paradigm has recently become mainstream concept in urban planning and architectural research and practice, such research has so far been of relatively poor quality (Mostafavi, 2010). Most of the sustainable practices and mechanisms are being spread globally without taking into consideration the specificities of the particular contexts, which led to a certain level of skepticism towards the concept of sustainability. Moreover, sustainability is often superficially equated to mere technological capabilities and energy performance measured quantitatively, focusing on either (super-)micro-scale of individual buildings or (super-)macro-scale of cities and regions.

As a result, the role and potentials of micro-scale urban spaces, including existing redefining and emerging new hybrid urban developments in high-density contexts have not been fully explored. Yet, the expectations of urban space are high, demanding for such spaces that would be able to accommodate the emerging diverse, dense, intense and flexible conditions. These recent demands brought new interest in urban design as one of the key means for achieving environmental, social and economical sustainability of contemporary cities.[4]

In this research, urban space is seen as a means with potentials to successfully bridge the gap between the micro-scale of individual buildings and the macro-scale of a city and contribute to the overall sustainable living. Furthermore, we understand spatial density as inseparable from intensity of activities and users, as well as in more subjective and experiential terms. Such an approach goes in line with Uytenhaak's (2008) interpretation of density, which states that density refers to higher diversity and intensity, coming from mutual proximity of urban activities, urban dynamism, efficient land use and ways buildings are arranged and related to one another. It is also supported by research in contemporary urban ecology showing that human perception of urban density defers from the scientific one; it is rather subjective and shaped by particular context (Cheng and Steemers, 2010). Density is indeed more frequently perceived in relation to legibility, intensity of use and information available in space (mess versus order), rather than in terms of spatial density indexes, such as Floor Area Ratio, Gross Density or Weighted Density, among others.

[4] Such a recent shift in understanding the role of urban design in sustainable urban development, that goes beyond beautifying public spaces, Madanipour (2006) calls "new urban revolution".

According to Gehl (2010), it is only when people, buildings and other objects are in close proximity (within 7 meters) that people can fully use all of their senses, see and experience all details, as well as exchange the most intense feelings. However, this research does not *a priori* favour high-density and hybrid conditions. It rather attempts to respond to challenges that such conditions pose on urban development and urban living today, as well as to investigate the role and capabilities of urban spaces to foster social and environmental sustainability within high-density contexts.

2. Background – Urban Space and Hybrid Environments

As a result of new attention that has recently been given to urban design and role of public space in sustainable development, a number of concepts, tools, guidelines and methodologies have been developed to better understand, evaluate and design urban open spaces (Gehl, 1996, 2004, 2007, 2010; Gehl and Gemzoe, 2001, 2004; Carmona et al., 2003; Project for Public Spaces, 2008; Chan and Lee, 2007; DETR, 2000; Uytenhaak, 2008, etc.). A plethora of measurable and intangible attributes have been identified that shape the performance of an urban space, such as connectivity, accessibility, legibility, user density, demography, space identity, safety and amenities, many of which are interlinked and interdependent. However, the majority of past and contemporary research has been predominantly focused on familiar models of urban space, such as squares, plazas, streets, parks and arcades, without consistent and definite rules in what constitutes good urban space, nonetheless what constitutes good urban space in high-density context.

The ease in which the term 'public space' is commonly used sharply contrasts its growing complexity, including typology, use, ownership and management aspects. Public space is typically defined as an accessible space for all citizens regardless of age, gender, race, ethnicity or socio-economic status with free circulations of people and goods (Carmona et al., 2003; Shaftoe, 2008). It is also described as a space of debate and negotiation, a symbol of democracy and sociability. However, recent critiques also tend to somewhat idealise the notion of public space, emphasising on traditional and nostalgic dialectics which oppose private and public, true and false publicness, space and place, aesthetics and ethics. Major debates revolve around the loss of public space primarily due to commodification and intrusion of private market into the realm of public culture. Accordingly, emerging hybrid urban spaces are characterised as 'quasi-public' (Dovey, 1999, 2010; Pimlott, 2008-9) or even 'non-places' since they have no roots in tradition, history and culture (Augé, 1995). Such a traditional attitude towards the public realm seems to be somewhat problematic and insufficient for understanding the contemporary contexts of emerging new hybrid urbanities and modes of publicness.

As a consequence, we still know too little about the expanding and increasingly hybrid urban space typologies in highly dense contexts emerging today. Instead of adopting classical definitions of public space we use the term 'urban space' which takes into account emerging types of spaces that may not be publicly owned or managed yet increasingly act as public. Such an understanding is closer to the notion

of 'collective space', suggested by Spanish architect Manuel de Solà-Morales (1992), where different groups coexist and interact on a competitive basis. For de Solà-Morales, the richness of a contemporary city at the end of the twentieth century should be found in the collective spaces, which are neither public nor private, but rather both simultaneously. They include both public spaces used for private activities and private spaces that allow for collective use. Collective space tends to be more social in nature rather than political, with interactions occurring on experiential rather than communicational level, and as such it is more comparable to the marketplace than to the Greek agora.

Madanipour (2003, 2006) also notes that as much as the private realm influences public, the society is also the realm of the private, pointing out that there is no clear cut separation between public and private. Publicness depends on how people characterise the private, and thus there are many shades of publicity and privacy creating a fluctuating, often tense, semi-public-private or 'neo-public' continuum (Dimmer, Golani Solomon and Klinkers, 2006; ZUS, 2006; Nielsen, 2004). Van Alen Institute's exhibition "OPEN: New Designs for Public Space" held in New York in 2003 well showcased this recent trend of hybrid urban space development across the world, exploring their typological, morphological, infrastructural, programmatic and operational complexities (Gastil and Ryan, 2004).

A number of such recent hybrid developments are investigated in this study. Yet the perennial question remains: can good public space deliberately be created and how? With increasing density and hybrid urban transformations, the ways we traditionally understand, conceptualise, plan, design, re-design and utilise urban space in high-density environment need to be revisited and reconceptualised both quantitatively and qualitatively. Once densities increase space (of any form) becomes a precious commodity, charged with intense competitions, tensions and negotiations between the diverse groups of users over it. Thus, uncovering new ways to create good urban spaces that would fit well in dense urban conditions yet are vibrant and environmentally and socially sustainable would be the main challenge.

3. Objectives

The existing literature and research offers no specific values and criteria that are purposely tailored for high-density environments. The scope of this research includes discerning the relationship between density and quality of urban public spaces based on key criteria that affect the space and their inherent relationship with each other.

The main objectives of this paper are thus: to outline new urban space framework and recommend parameters for emerging new types of urban spaces within the local (Singaporean) and international contexts of high density developments; to discuss key initial findings of comparative analysis, highlighting critical attributes for the performance of particular spatial configurations in high-density contexts, and to propose a tool that would be used to gather, classify, evaluate, analyse, speculate and

guide design and planning of urban spaces, and thus ease policy and decision making processes in the context of highly dense and sustainable Singapore.

4. Research Methods and Analysis

The research approach employed in this project is cyclic, non-linear, dynamic and self-investigative. The research process was carried out in three repetitive phases:

(1) Literature Review and Documentation of Case Studies – A number of local (Singaporean) and international case studies of urban spaces have been selected and documented using on-site observational and mapping techniques.

(2) Classification and Evaluation System Development – Based on literature review, a conceptual framework has been developed recognising hardware (design), software (use) and orgware (management) as major conceptual components that shape urban space performance. The framework consists of classification and evaluation systems based on a number of urban space descriptors and evaluators to categorise and evaluate selected urban space typologies, as well as a scoring system and circular chart to visually represent their performances.

(3) Comparative Analysis and Evaluation System Refinement – Comparative analysis of urban space performances primarily involves identifying critical criteria for specific spatial typologies using matching analysis. As synthesis of initial comparative analysis an interactive computational Tool for Urban Space Analysis (TUSA) has been conceptualised, with capabilities to catalogue, classify, evaluate, compare and speculate on hybrid urban space typologies and their performances, by filtering the critical attributes/criteria and design measures, and in such a way guide the initial stage of design process. In order to preserve the objectivity and clarity of proposed criteria, the framework has been tested and refined several times, based on on-site evaluation and comments reported by collaborating teams of architects, urban designers, planners and project managers.

4.1. Documentation of Case Studies

A total of 48 local (Singaporean) and international case studies in high-density contexts, including those from Beijing, Hong Kong, Tokyo, Osaka and New York, have been selected and documented. In selecting the case studies, spaces that are hybrid in form and programme or dense in terms of both spatial density and intensity of use have been prioritised. Case studies range from well-known recreational and residential public spaces to emerging highly hybrid developments and infrastructural spaces. Some of them include: intensified residential developments (such as Shinonome Codan Court in Tokyo; Linked Hybrid and Jianwai Soho in Beijing, etc.), commercial developments (Midtown Tokyo and Roppongi Hills in Tokyo; Sanlitun in Beijing), multi-functional infrastructural spaces (such as railway stations in Tokyo and Osaka) and elevated public spaces (High Line Park in New York; Central Mid-Levels Escalator in Hong Kong; roof-top parks at Pinnacle @ Duxton and Skypark @ Vivocity, Hendeson Wave bridge in Singapore) (Figures 1 and 2).

Figure 1. Hybrid Developments: Shinonome Codan Court, Tokyo, Japan [left], Midtown Tokyo, Japan [middle], Sanlitun, Beijing, China [right]

Figure 2. Elevated Public Spaces: Henderson Wave, Singapore [left], Pinnacle @ Duxton, Singapore [middle and right]

Documentation of each case study was primarily based on structured first-person observational techniques. It involved on-site recording of spatial typologies and features and intensities of uses through mapping, photography and interviewing as well as comprehensive secondary sources review of the design parameters and planning policies, including measures to enhance sustainability capabilities of the larger urban environment, that were difficult to observe on site. (Figures 3 and 4)

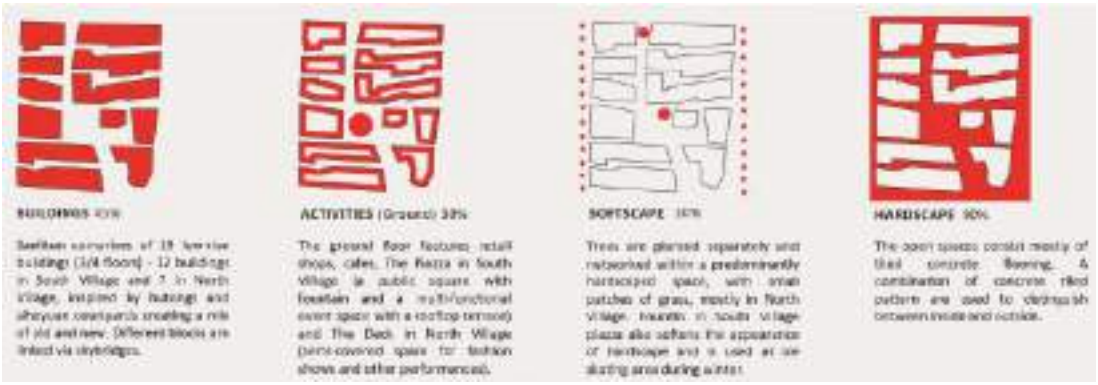

Figure 3. Initial Mapping: Sanlitun, Beijing, China

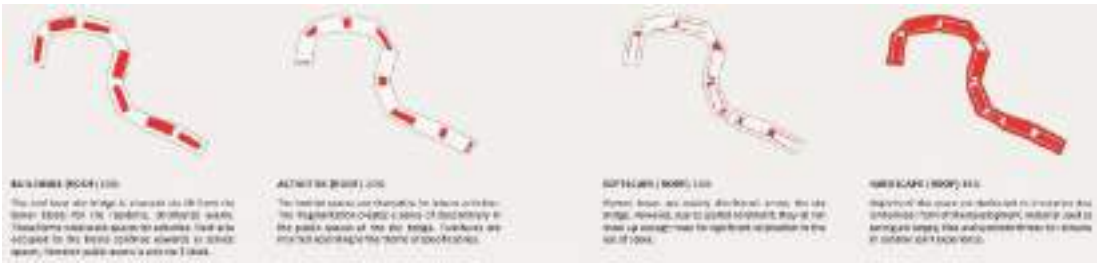

Figure 4. Initial Mapping: Pinnacle @ Duxton, Singapore

Rather than evaluating each selected urban space and recommending design measures to improve its performance, case studies primarily served as a means to test and further refine the research tool, which is the main objective of this project. Such a cycle has been repeated several times, ending with the original urban space framework.

4.2 Research Framework - Classification and Evaluation Systems

Drawing from literature review a conceptual research framework is developed, which recognises three key components that constitute the properties and performances of urban spaces, combining design, use and operational aspects, namely: hardware, software and orgware (Figure 5).

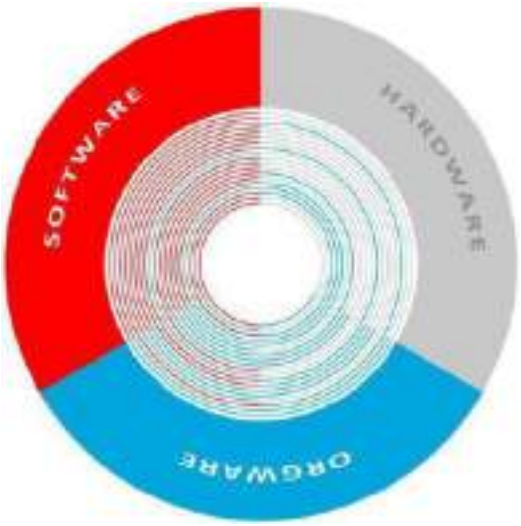

Figure 5. Urban Space Conceptual Framework: Hardware, Software & Orgware

HARDware component refers to physical and geometrical properties of space - design values, such as spatial quality, environmental design, accessibility and users' comfort. SOFTware combines activities, as well as socio-perceptual values of space, such as social interaction, character of space and diversity of uses and users. ORGware refers to operational and management aspects of public space, such as supporting services, security and regulations.

While there is a clear cut between hardware and software components, orgware in certain aspects, such as seating amenities or environmentally friendly strategies, overlaps with both hardware and software. As such, it links the two aspects focusing on how the spaces operate and perform. The research framework consists of Classification and Evaluation Systems.

Classification System

Classification System consists of a number of descriptors and tags that have neither intrinsic positive nor negative value. Their role is to describe urban spaces and classify them into key, secondary and hybrid typologies; to set the basis for in-depth qualitative analysis and comparison between spaces and their components; and to speculate on new hybrid typologies and their properties. All descriptors with their belonging tags are grouped according to hardware, software and orgware categories, some of which are: spatial density indexes, scale, elevation, enclosure (hardware), primary and secondary activities, users' age and gender profiles, subcultures (software), climate context, role, influence, time regulations, and governance (orgware).

Classification system establishes 5 default typologies defined by primary uses of space, namely: residential, recreational, urban centres, integrated mixed developments and infrastructural transit-led spaces. The default sub-typologies are further defined based on forms of urban footprint, which refer to geometry and role of urban space in urban fabric, such as: housing precincts, squares, parks, streets, promenades or bridges (Figure 6).

While the main analysis involves default types of urban spaces, classification system also provides ways to establish secondary typologies and/or their hybrids by selecting descriptors other than primary use and urban footprint. As such, it defies static conventional typologies, in response to emerging more dynamic and transformative new hybrid urban spaces, and provides basis to speculate on new urban space properties and performances.

Figure 6. Default Classification of Urban Space Typologies and Sub-Typologies

Evaluation System

Evaluation System consists of sets of evaluators and criteria that have intrinsic positive value. Their role is two-faceted - to describe and positively evaluate urban spaces. Evaluative Framework is organized hierarchically and consists of: (1) key urban space components (hardware, software & orgware); (2) components consist of 5 urban values, namely: nodal, spatial, environmental, use and socio-perceptual and operational value; (3) each urban value consists of 2 or 3 attributes (13 in total); (4) attributes are further defined by 2-5 Evaluators (46 in total); finally, each evaluator has 2 positive criteria, which makes it 92 in total (Figure 7).

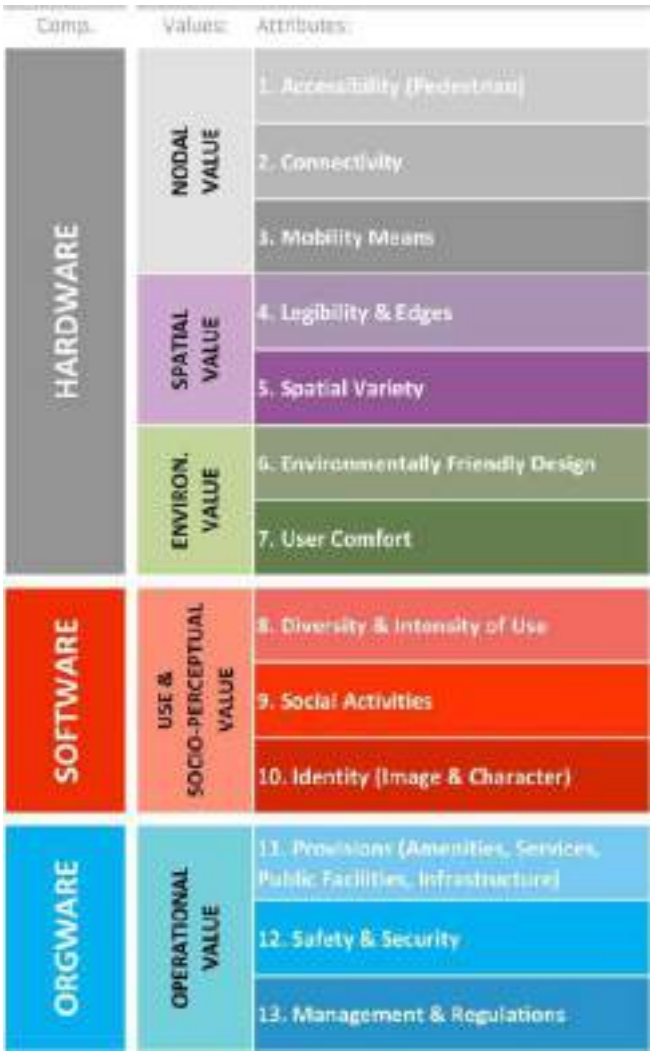

Figure 7. Evaluation Framework – Components, Values and Attributes

Some of the evaluators set by the evaluation system within hardware component are: physical accessibility, number and type of universal access, movement patterns, node connectivity, sightlines and wayfinding, cycling and public transport (nodal value); layout, landmarks, permeability, spatial variety and adaptability (spatial value); greenery and water features, bio-diversity, use of alternative energy, weather protection, shade and sunlight, air quality and noise control (environmental value). Software component and use and socio-perceptual value consist of: number and diversity of activities, number, type and condition of seating amenities, interactivity, privacy, imageability and space character. Some evaluators within orgware component and operational value are hygiene facilities, lighting and informational facilities, community services, safety and security, rules, regulations, and management.

Scoring System

Urban spaces are scored using structured evaluation check-list, which includes all criteria proposed in evaluation system. Space scores 0 if it fails to meet both positive criteria; it scores 1 if it meets one criterion; it scores 2 if it meets 2 criteria. Final scores are cumulative (sum of all met criteria) and form the overall Urban Space Value, which represents the overall performance of space shown in percentage. However, such an overall value is basic and serves for quick comparison only. Along with scoring, additional information on specific design measures that are used to meet particular criteria are also documented to provide the basis for design recommendations.

Circular Charts

To represent the evaluation process and urban space performances, a circular chart is crafted. It is an integrated device that can serve both as an evaluation sheet and a scoring chart. Circular chart is divided into three segments: hardware, software and orgware. The three segments are divided into stripes, each representing one criterion. Coloured stripes are criteria that are met by investigated space. Space's overall performance corresponds to a percentage of coloured stripe area, which is also summarised by the size and percentage of the central black circle (Figure 8).

To enhance visual communication and comparison of space hardware, software and orgware qualitative performances, another circular pie-chart is also crafted. It consists of 2 circles. Outer circle shows performance of space (in %) for each urban space value component. Inner circle (pie chart) shows to what extent each of the components take part in creation of overall Urban Space Value (Figure 8).

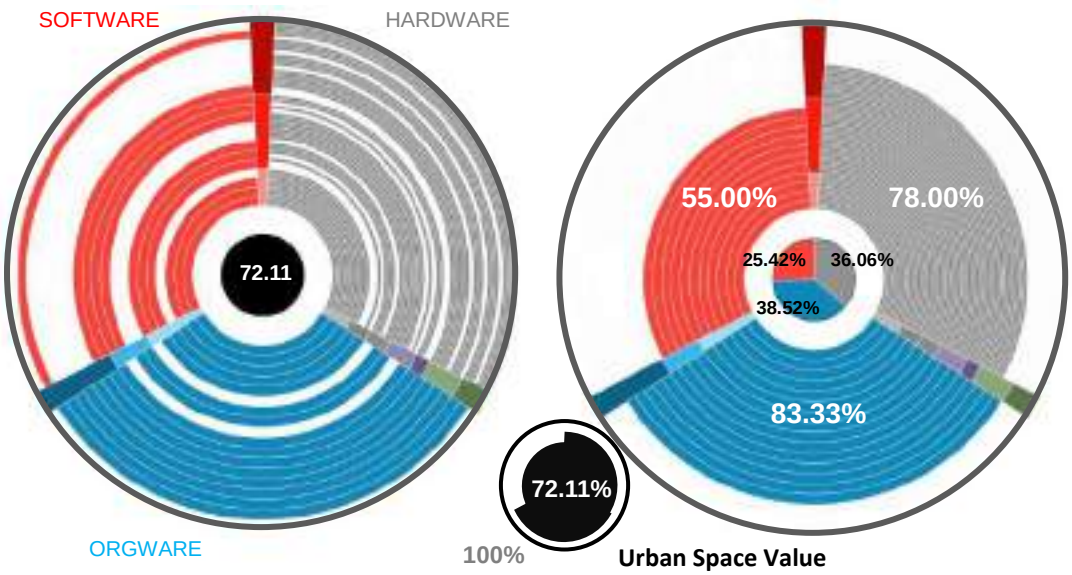

Figure 8. Examples of Circular Chart [left] and Circular Pie-Chart [right]

4.3 Comparative Analysis and Synthesis

After all selected spaces were classified and evaluated, a consistency or matching analysis has been conducted across all types of urban spaces in order to investigate the critical attributes that shape their performance. Based on such analysis a hierarchy of criteria has been established for each type of urban space. It recognises: basic, critical, desired and difficult sets of criteria.

The criteria most consistently met by all urban spaces of the same default type are considered basic or necessary criteria. Those criteria that are never met by all spaces of the same type are considered difficult criteria. Our main focus is on criteria that are most inconsistently met by the majority of spaces of the same default type. We assume that these criteria have the highest corrective factor in terms of overall space performance. The desired criteria are those which are inconsistently but often met by the majority of spaces of the same type. Accordingly, the recommendations for improvement rely primarily on critical and desired criteria, since they are the most feasible to meet by a particular type of urban space, rather than on difficult criteria.

While focusing on spaces that belong to the same default urban space typology, i.e. of the same primary uses, the matching analysis also involves spaces from other default typologies if their secondary uses correspond to that of investigated type of urban spaces. For example, when performing the analysis of primarily residential spaces, the analysis also involves spaces that are not primarily residential yet possess considerable residential activities closely linked to public spaces investigated.

5. Initial Findings – Areas for Improvement

The initial findings show that majority of investigated spaces score highest for hardware component, while software and orgware components seem to be generally weak and leave room for improvements. Yet hardware component can be the most feasibly achieved and thus the criteria belonging to design aspect also play an important role in recommending space improvements. Moreover, more hybrid environments in terms of both spatial complexity and programmes tend to gain higher scores in comparison to more spatially and programmatically homogeneous urban spaces.

Based on matching analysis and critical criteria the initial areas for improving urban space performance have been filtered for each default type of urban spaces. Schematic representation of findings across all default urban space typologies are shown in Figure 9.

Criteria and recommendations that have shown to be the most critical for most of the types of urban spaces are summarised below and illustrated drawing from good examples in data base of case studies. These examples are not limited to only one urban space typology, considering the assumption that with higher densities and intensified uses urban spaces would become more and more hybrid, less

distinguishable and would have to provide more functions for a greater number of diverse user groups.

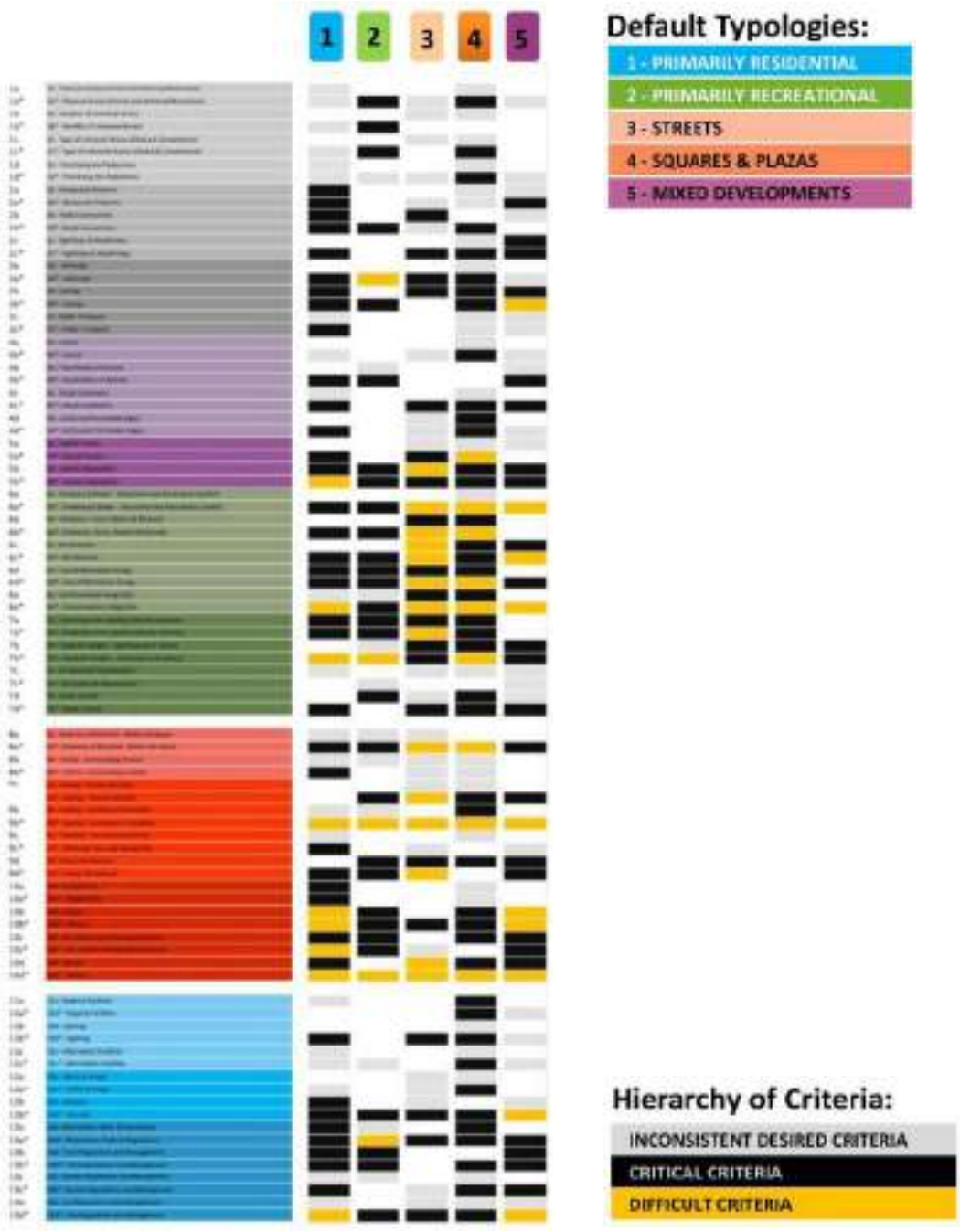

Figure 9. Critical Criteria across Different Default Urban Space Typologies

Spatial Adaptability (hardware)

One of the arias for improvement that has emerged from the analysis and applies to all types of urban spaces, is spatial adaptability within spatial value of hardware component, which refers to an ability of space to adjust to a number of different activities, to be flexible and dynamic in terms of both structure and functional programme in order to increase users' comfort and choice. The examples from New York and Tokyo include flexible and movable seating arrangements, adjustable means of shading and multi-functional spaces (Figure 10). Benefits of achieving structural and programmatic flexibility are multiple, ranging from increment of social interaction, sense of belonging and privacy to increased comfort level regardless the weather conditions, which all refer to strong links between hardware and software components.

Figure 10. Spatial Adaptability – flexible seating and multi-functional spaces: Times Square, NY, US [left], Bryant Park, NY, US [middle], Roppongi Hills, Tokyo, Japan [right]

Greenery and Water (hardware)

Another criterion critical for all default types of urban space is amount and diversity of greenery & water elements within environmentally friendly design attribute. Spaces that well integrate natural elements into physical environment provide better relationship and interaction with and within space, as well as means for users' participation, while also benefiting in better micro-climate, sensory comfort, healing environment, formal and informal community activities, and providing means for education on environmental awareness. Community gardens on the roof-top of Roppongi Hills in Tokyo and interactive water fountains are some of the good examples (Figure 11).

Figure 11. Greenery and Water – interactivity: Skypark @ Vivocity, Singapore [left], Pungol Central housing precinct, Singapore [middle], Roppongi Hills, Tokyo, Japan [right]

Image of Space (software)

Image of space is also critical attribute that seems to be important for the performance of all urban space typologies. Density is more frequently perceived on a subjective level, in terms of legibility, density of information and intensity of use (mess versus order), which can strongly contribute to character of urban space. The examples show ways to improve space character in reference to arts and culture, visual landmarks and interactivity, that have potential to incite creative use of space, users' participation, social interaction, environmental awareness, legibility and wayfinding (Figure 12).

Figure 12. Image of Space – arts and urban furniture: Sculpture Park, Singapore [left and middle], Roppongi Hills, Tokyo, Japan [right]

(Ambient) Lighting (orgware)

Finally, through better night signage and innovative use of self-producing or low-energy-consuming lighting, space may become more inviting and safe environment, with increased legibility and wayfinding, as well as more extensively used during night. This criterion is thus most critical for residential areas and urban centres. Also, this may be particularly interesting for the local context, since Singaporeans seem to use open spaces more intensively once the sun goes down, due to hot and humid tropical climate (Figure 13).

Figure 13. Ambient Lighting: Shinonome Codan Court, Tokyo, Japan [left and middle], Skypark @ Vivocity, Singapore [right]

6. Tool for Urban Space Analysis (TUSA) - Conclusion

As a result of the synthesis and integration of the documentation, evaluation and classification of urban space based on HARD-SOFT-ORG-ware conceptual framework as well as Circular Chart visualisations, an integrated computational tool is conceptualised. The Tool for Urban Space Analysis (TUSA) integrates classification and evaluation systems and has capacities to catalogue, classify, evaluate, compare and speculate on hybrid urban space typologies, their conditions and performances. The visual interface of TUSA consists of four rings, as shown in Figure 14.

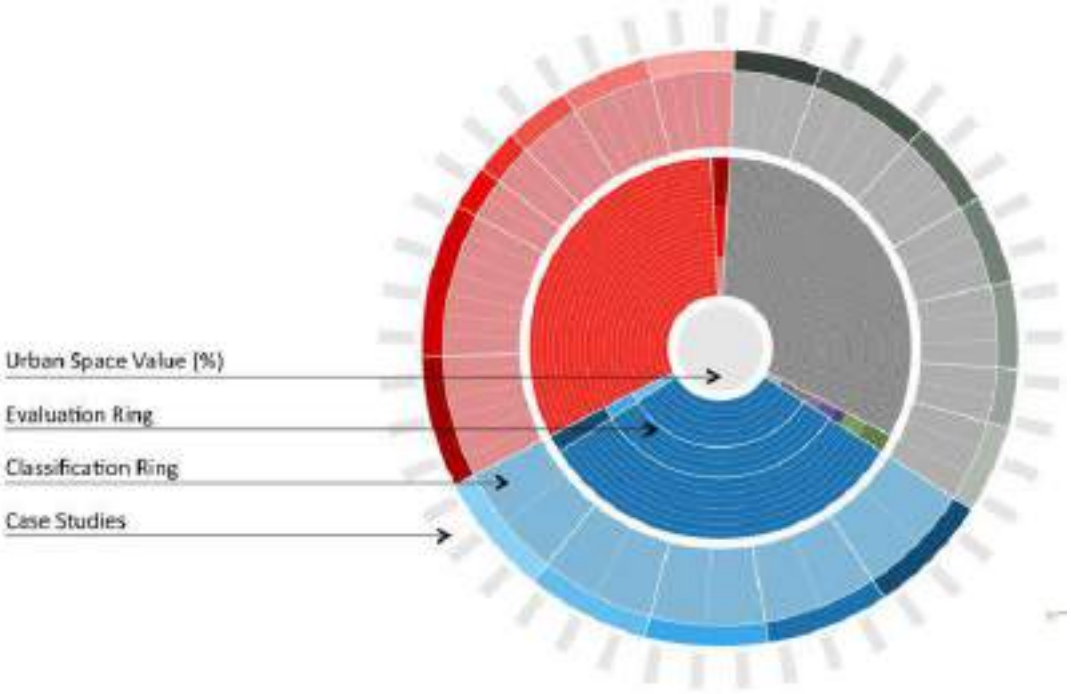

Figure 14. Tool for Urban Space Analysis (TUSA) – visual interface

While the Design Tool integrates an interactive catalogue, classification and evaluation processes, its primary role is in processes of comparison and analysis of urban space performances (as well as generating performance charts), self-evaluation (testing relations between descriptors and evaluators) and speculation on hybrid types of urban spaces and their performances. The tool would thus be helpful in both analysis and guiding the planning and design of urban spaces, drawing from the key attributes of successful urban spaces gathered by the team.

TUSA reflects the research process and analysis employed in this study of urban spaces and is self-evaluative. Additionally, it provides flexible, innovative and intuitive ways of design communication, where any user can define ways of search and analysis. With such capabilities, TUSA is a useful new tool for the study and evaluation of contemporary urban spaces in high density environments.

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Enhancing the effectiveness of spatial planning processes: the systemic interplay of analysis, visualisation and communication

Agnes Förster, Alain Thierstein

Abstract

Within the last decade, planning literature consistently reports on a gap between the activity of spatial planning and its impact on underlying planning problems. More recently spatial planning in Germany has received unsolicited attention in political circles and from the general public. Large-scale projects like Stuttgart's new underground main station provoked protest movements and calls for a mediation process even after construction had already started. At the same time the national government is cutting subsidies for urban development and demanding the municipalities increase the effectiveness and efficiency of public spending in urban planning.

The design of the planning process is regarded as crucial to the success of spatial planning. Planning theorys' core competence is to provide a knowledge base for the planning process. This paper presents the conception and provisional results of a research project dedicated to investigating the impact of planning methods on the "success" of spatial planning projects. The research project proposes a fundamental approach to the optimization of spatial planning processes' effectiveness. It hypothesises that analysis, visualisation and communication (AVC) are three basic components of planning methods which interact with each other. AVC can be understood as the basic skills set of professional planners that are as yet unequally distributed among the planning discipline's wide range of specialists. Based on the knowledge of the skills' systemic interdependency, more integrated and hence effective ways of their purposeful application in planning practice can be conceived.

The first part of the empirical work in the research project is based on a meta-analysis of multi-disciplinary planning literature between the years 2000-2010. In a multi-stage selection process, 40 international journal articles are chosen that report on the 'successful' application of planning methods that contain AVC in real case spatial planning processes. A profound computer-supported qualitative content analysis helps to identify the methods' major success factors and the associated patterns of AVC interplay. The results of the empirical work are validated in a one-day workshop with experts from planning theory and planning practice in German-speaking countries. Additional semi-structured expert interviews with practitioners help to check the relevance of the findings to today's planning practices in Germany.

The validation supports the importance of the findings to planning practice and education. Our approach is suitable for stimulating cross-disciplinary learning processes on the purposeful design of planning processes. It uncovers and connects the know-how and knowledge on planning methods of practitioners from different disciplinary backgrounds. Making implicit knowledge explicit is a precondition for productive teaching.

Workshop and expert interviews result in three major lessons to be addressed in the coming second part of the research project: 1) deepening the understanding of the 'fundamental particles' AVC and additionally examining the role of framing and conceptualising, 2) elaborating a framework of AVC's impact that also considers the time axis 3) investigating the role of context for the success of the methods, e.g. stakeholders with background knowledge and concerns, organisational structures, financial and human resources, balances of power, legal framework.

1. Introduction

There is a need to enhance the effectiveness of spatial planning. Indeed, current planning literature repeatedly refers to a gap between the activity of spatial planning and its actual impact on spatial development. The survey of planning literature over the last 15 years reveals substantial deficiencies in spatial planning that can be summarized as follows:

Spatial planning's shortfall with regard to complexity and current challenges in actual spatial development. Current challenges include growing scarcity of resources and land use conflicts, spatially significant trends such as mobility and the knowledge economy, generally accumulating complexity of spatial planning's substance, augmented importance of relations and processes in spatial development, or challenges such as the shrinkage of cities and regions (Friedmann 1998; Needham 2000; Altrock, Huning and Peters 2004; van den Berg 2005; Boelens 2006; Breckner 2006; Schönwandt 2006; Friedmann 2007; Schönwandt et al. 2007; Lendi 2008).

Spatial planning's insufficient implementation and target achievement. Planning literature criticises the diminishing steering capacity of public bodies at different spatial scales. There are a growing number of stakeholders that have to be involved. Under these circumstances spatial plans frequently lack feasibility and still await their implementation and target achievement (Archibugi 2001; Informations- und Initiativkreis Regionalplanung der ARL 2005; van den Berg 2006; Schulz 2007, 2007; ARL 2008; Jacoby 2008).

Spatial planning's insignificance, lack of political relevance and awareness. Kunzmann calls strategic spatial planning a secret science without public attention and only a few followers. He observes a growing gap between the planners – those who are professionally involved in planning – and society (Kunzmann 2000). Despite its institutional foundation spatial planning has little political value and is threatened by meaninglessness (Friedmann 1998; Kunzmann 2000; Kegel 2006; Schönwandt and Jung 2006; Lendi 2008; Tschirk 2008).

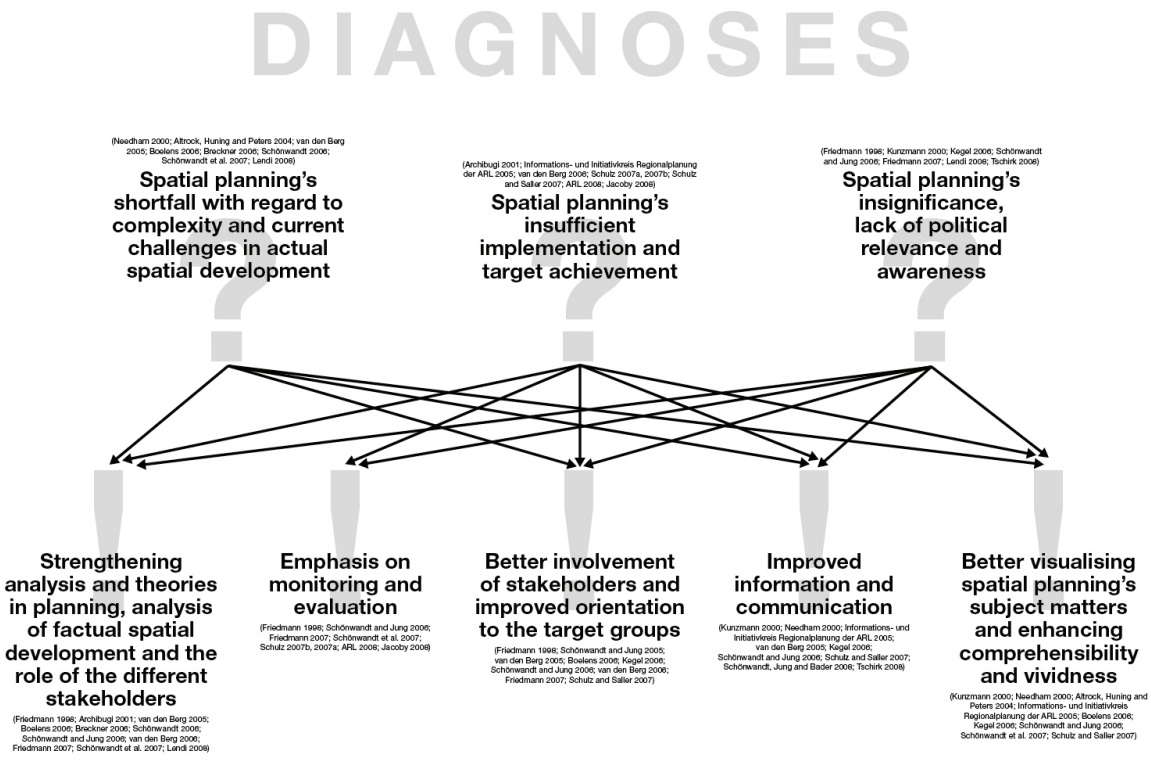

Figure 1: Comparison of diagnoses and recommendations to spatial planning.

Figure 1 shows our schematic overview of diagnoses and recommendations from the literature. Suggestions range from a stronger focus on analysing the factual spatial development and the role of the different stakeholders, to strengthening monitoring and evaluation within spatial planning, to a better involvement of stakeholders and improved orientation to the target groups; finally to better visualising spatial planning's subject matters and enhancing comprehensibility and vividness. The diagnoses open up a broad spectrum of suggestions. The crosslinks between the corresponding skills only become visible in the synopsis beyond the single articles.

"Planning, like most other professions, mobilizes a broad spectrum of skills. (...) The fact that planning calls on many different skills suggests the possibility, that each of these skills could be posited as the centre of planning. Then there would seem to be as many theories of planning as there are types of skilled professionals. This bizarre outcome can be avoided only if we can envisage how these skills work together (…)" (Harris 1999: 322).

Harris' quotation adumbrates the centre of the research project that we will outline in this paper. The project investigates the systemic interplay of three basic skills of spatial planners: analysis, visualisation and communication (AVC). It argues that there is great potential for enhancing the effectiveness of spatial planning when these three skills are knit together in an integrated way instead of further separating them into specialisation and differentiation.

When making planning skills and their effective application in planning practice an object of our investigation, we embed ourselves in an ongoing discourse on the design of planning procedures, planning methods or planning approaches. All three terms will be used synonymously in this paper. We deliberately distinguish planning methods from planning instruments. The latter point at interventions in the – natural, built, social, economic, cultural etc. – environment as the "reality" that spatial planning wants to change or preserve. This is the level of results and products of planning. Planning methods, on the other hand, operate in a preparatory stage to this kind of action. Thus we position this project in parallel to the public dispute on spatial planning in Germany that is currently dominated by themes such as Stuttgart's new underground main station ("Stuttgart 21"), cutting off national subsidies for urban development, angry citizens or energy turnaround. In each of these cases, attention is drawn much more to "how to plan" rather than on "what to plan". Planning procedures that are regulated by law are increasingly regarded as of solving the spatial planning issues at stake. From the planning practice's perspective, legal regulation provides not more than a minimum standard for the complex negotiation processes that are demanded for.

In addition, planning theory acknowledges the planning process as a determining factor in the success of spatial planning. Archibugi (2004) understands planning theory as action oriented analysis that provides a knowledge base for future planning practice. It thus supports the achievement of the goals set within the planning process (Archibugi 2004). Fürst (2006), who comes from the engineering tradition of spatial planning, claims that planning theory should contribute to enhancing the effectiveness of spatial planning in practice (Fürst 2006). Therefore the core competence of planning theory is the planning process (Needham 2000; Archibugi 2004; Fürst 2006; Keller 2006). At the same time authors recognize a lack of knowledge about the planning process that could inform the design of the planning process in practice (Fürst 2006; Keller 2006). The main deficiencies in the research on planning processes are: the predominantly normative approach, the lack of empirical work and the emphasis on single parts of the planning process instead of systems thinking (Huxley and Yiftachel 2000; Needham 2000; Archibugi 2004; Selle 2006, 2006, 2007; Newman 2008).

This research project investigates planning methods primarily from the perspective of the recipient or addressee and only secondarily from the operator or sender perspective. What makes this a useful approach? The project aims to assess the output, outcome and impact of planning methods and the way they contribute to the achievement of the goals of spatial planning projects. As planning is a human activity – carried out by human beings and directed towards human beings – the study of the impact of planning

methods has to centre on the recipients. For this reason planning procedures are intrinsically tied to matters of communication. As planning methods exist in a large, almost unmanageable variety of specifications, the research project investigates the basic skills or building blocks of planning methods. Communication, with its different characteristics, is one basic building block that is part of every planning method. We claim that additionally analysis and visualisation can be regarded as basic skills that form planning methods in their different combinations. The three components of AVC are the non-exhaustive building blocks of spatial planning methods. However, we hypothesise that AVC in their various formations significantly determine the potential impact of planning methods.

The paper firstly introduces the conceptual framework (with its basic definitions) that will be applied within the research project. The AVC approach is then linked to main lines of argument from current research. In the second paragraph we show the results of the first empirical research that is based on the meta-analysis of planning literature. The results are discussed in an expert workshop. Its main lessons are part of the third section. We conclude by outlining preliminary implications for planning research, practice and teaching as well as identifying further need for research.

2. Conceptual framework

The project is based on an exploratory and qualitative research approach. Within a tentative conceptual framework two empirical research modules explore the impact and the interplay of AVC within spatial planning processes. This approach aims to generate hypotheses that can be tested in further research. Our research is guided by a primary research question:

How and to what extent does the integrated application of analysis, visualisation and communication within spatial planning processes support the goal achievement of these processes?

In the following paragraphs we will provide a preliminary definition of our object of investigation and illustrate our understanding of spatial planning process. We base our work on Walter Schönwandt's basic scheme for planning that is part of a "Third Generation" in planning theory (Schönwandt 2002). This basic scheme conceives planning as a systemic cycle in which the "Planning World" is embedded in the "Life World". The "Planning World" includes planners as part of larger "Institutions" that use specific "Approaches" in order to solve spatial problems. The "Life World" has different issues on its "Agenda" set up by the different "Agents" that all together form the "Arena". The two worlds influence each other in a reciprocal manner through a circular process. The individual steps within the planning process split into three steps, that are directly influenced or shaped by the "Planning World", and three steps that operate outside the "Planning World" exclusively within the "Life World". The "Planning World" provides the organisational and theoretical background for the sections called "Comprehension of the Situation", "Elaboration of Instructions", and "Communication of Behaviour". The "Life World" contains the stages "Interventions", "Setting" and "Outcomes" (Schönwandt 2002) (see figure 3).

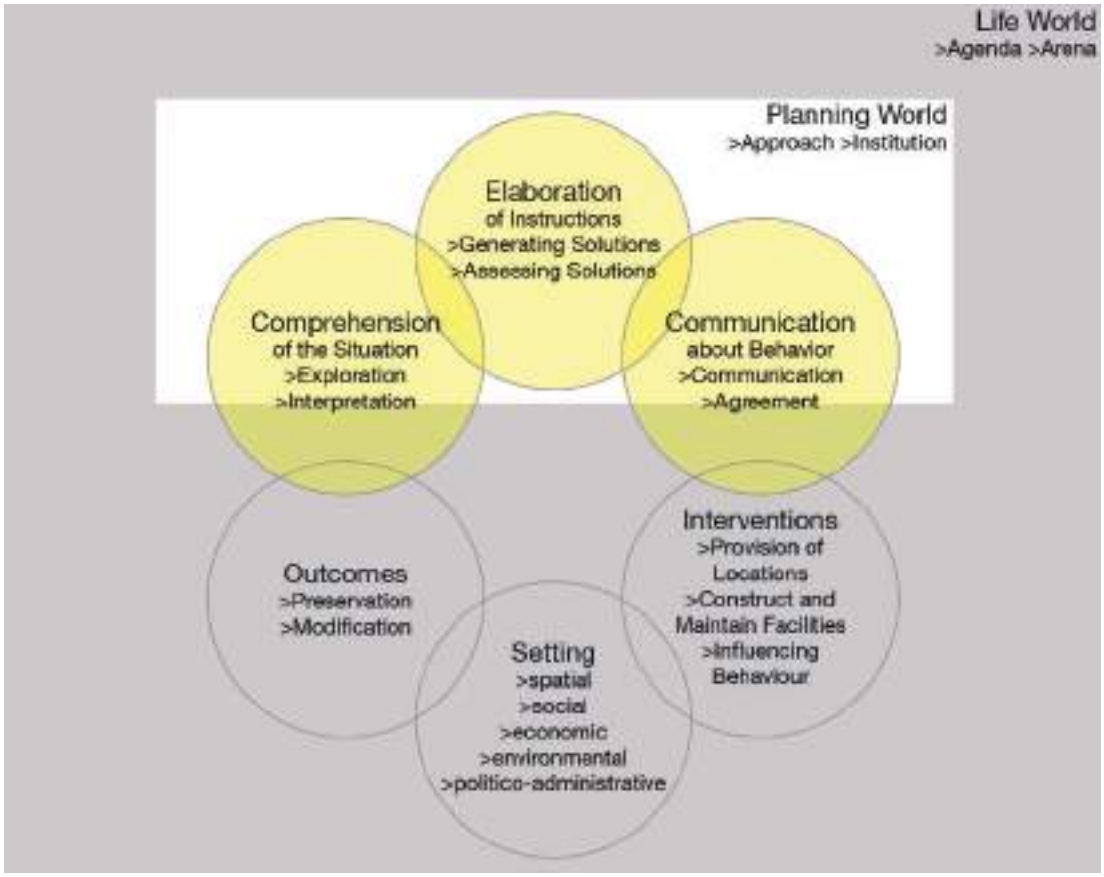

Figure 2: Walter Schönwandt's basic scheme for planning, the three stages that are directly influenced and shaped by the "Planning World" are emphasised in yellow (Schönwandt 2002, author's adaption).

Communicative planning methods

In our research project, this basic scheme for planning is a useful way to contextualize planning methods and their respective outcomes and impact within the circular planning process. We understand planning methods in a broad sense as the procedures that are applied within the three stages "Comprehension of the Situation", "Elaboration of Instructions", and "Communication of Behaviour" in order to work out the expected results of these steps. Planning methods are initiated, shaped and influenced by the "Planning World". We distinguish planning methods from planning instruments or "Interventions" that are to be implemented in the real world (Hübler 2005).

Planning methods are regarded as a "controlled sequence of purposeful operations in order to solve problems" (Schönwandt and Voigt 2005: 772). These sequences are deliberately designed; planning methods require personal, financial, and temporal resources, and an organisational and legal framework. Hence planning methods at least implicitly include an idea of their mode of operation and of desired impact. The outcome and impact of planning methods appear at different levels: shaping the results of the three stages; influencing the application of subsequent methods; modifying "Approaches" and "Institutions" of the "Planning World"; facilitating certain "Interventions" that eventually change the "Settings". In that sense planning methods only indirectly impact the "Outcomes" of planning.

This basic definition points to a broad spectrum of procedures that reaches far beyond standardized or legally regulated operations (Fürst and Scholles 2004). Planning methods are permanently enhanced in an on-going process of variation and modification in order to cope with the changing challenges of spatial planning processes.

When taking the issue of impact as a starting point for the research in planning methods, these methods necessarily comprise purposeful events of communication. On our understanding, communication is a

prerequisite to all planning methods. In our research approach we consider only those methods that are directed to a recipient and in that way exceed spontaneous informal two-person or group communication. We restrict the project to medial and public informal communication. An expertise left on the shelf or a simulation tool run only within the walls of a design office, are cut off from audience. In this respect they are incomplete planning methods. Instead these tools have to be set within more complex sequences of operations that in the end also address stakeholders.

In our research project we distinguish planning methods according to different characteristics of communication: format, recipient and degree of interactivity. Planning methods can be shaped by a single communicative event or a sequence of different communicative events that are deliberately linked to one another.

When the “Planning World” applies and carries out planning methods it simultaneously initiates individual steps of communication within the “Planning World” and between the “Planning World” and the “Life World”. Planning methods stimulate the communication process within and between the two worlds. Current communication theory conceives communication as a system that exceeds linear cause-and-effect. Instead back coupling is an important feature (Merten 1999: 114-117). When applied to our research approach, feedback that can be understood as outcome and impact of purposefully applied planning methods.

Planning methods’ analytical and visual ingredients

Beyond the basic communicative challenge, planning methods require further skills and capabilities of spatial planners. We hypothesis that analysis and visualisation make up basic buildings blocks, that in their various formations define the outcome and impact of planning methods. Analytical and visual skills can be regarded as ingredients in more complex “sequences of purposeful operations” (Schönwandt and Voigt 2005: 772).

Analysis points to a systematic search process that aims to gain new knowledge on real world planning situation. Planning methods can be regarded as analytical when they apply scientific research methods and their practical and hands-on modifications. This includes a rich repertoire of scientific research methods ranging from quantitative to qualitative empirical methods as well as non-empirical interpretative methods. By this definition, analysis is no longer restricted to the “empirical-analytical” paradigm of social sciences (Hermann, Heye and Leuthold 2004) or the “analytical philosophy of science” (Boesch 1989). Analysis as basic building block of planning methods should not be put on a level with “linear thinking“ or “scientism“ but potentially embraces further research approaches such as systems theory, phenomenology and hermeneutics (Boesch 1989). In our research project we focus on three basic criteria of analysis: methods and techniques, the connection to communication – analysis as something on-going or as a result – as well as the method of assessment of the analytical results.

Visualisation in the narrower sense applies to the utilisation of pictures as a visual exemplification of a fictional or real situation or matter within planning methods (Sachs-Hombach 2005). In spatial planning typical visual media include maps, plans, blueprints, GIS-visualisations, renderings, photographs, sketches, drawings, mock-ups or diagrams. We restrict visualisations to medial images and ignore their real and mental dimension (Förster and Thierstein 2008). Visualisations are linked to communication as an event or a result. Visualisations as a result gain their weight within planning methods from communicating visual products. In this case the act of visualising is not part of the communicative event. Visualisation as a presentation technique has the ability to – better – communicate certain planning contents. When visualisations emanate from the act of visualising within planning methods, they can be regarded as an event. The action of visualising happens simultaneously with the communicative event. The event of visualising can be both analytic and creative in nature.

The complementary nature of the three building blocks AVC

Today planning theory and practice acknowledge that spatial planning calls for a broad range of different skills and capabilities (Harris 1999; Dangschat, Frey and Hamedinger 2008). However, the evolution of planning theory in the last 60 years is characterized by a sequence of so called "turns" – each of which can be interpreted as the emphasis of certain skills to the detriment of others. The emphasis of the role of analytical or visual or communicative skills within planning theory's turns illustrates the specific capabilities and limitations of each of these skills. For this reason we hypothesise the productive combination of AVC.
Analytical skills are of central importance in the attempt to make spatial planning more scientific early in the 1960s. There is much focus on the study of cause and effect of the built and social environment (Hall 1996; Albers 2004, 2006; Davoudi 2006). When acknowledging the limitations of systems analysis and system optimisation in the 1970s, planning theory is looking for a much more differentiated integration of analytical skills in political as well as design processes (Kunz, Reuter and Rittel 1980; Kunz and Rittel 1984; Harris and Batty 1992; Salama 2008). The turn to "evidence-based planning" from early 2000 capitalizes on analyses as a means of persuasion and engaging planning actors (Böhme and Schön 2006; Faludi and Waterhout 2006). This approach is criticized as follows: the action of analysing cannot be separated from assessing and designing (Harris 1996; Davoudi 2006); therefore analyses have to be embedded in the process of interaction and communication of the different planning actors (Böhme and Schön 2006; Faludi and Waterhout 2006); the interpretation of analytical results demands a creative and iterative process in which visualisations may play an important role (Aring and Sinz 2006; Primas 2008).

Visualisations are fundamental to the understanding of planning as a design-oriented discipline. This goes back to its origins in architecture and engineering. In particular, the synthesis work of spatial planners implies a basic design component that cannot be treated scientifically (Rittel 1988; Hall 1996; Harris 1996; Albers 2004, 2006). Visualisations offer important support to the design process (Rittel 1988; Hacker 1999; Sachse 2002). The creative momentum is also necessary for creating strategies, concepts or plans; in each case the visualisation of spatial patterns and structures is of central importance (Aring and Sinz 2006; Davoudi 2006; Zonneveld 2007; Dangschat, Frey and Hamedinger 2008). The approach of "evidence-based planning" makes use of visualisations to communicate analytical results (Böhme and Schön 2006; Faludi and Waterhout 2006; Zonneveld 2007). Communicative or cooperative planning identifies pictures and visualisations as a means of fostering comprehensibility, clearness and vividness of planning contents as well as awareness among relevant actors – all of this is constitutive in activating stakeholders and players in spatial planning (Faludi 1996; Healey et al. 1999; Salet and Faludi 2000; Fürst 2005; Boelens 2006; Faludi and Waterhout 2006; van den Berg 2006; Zonneveld 2007).

The consideration of communication as a basic skill for spatial planners can be found in the argumentative planning model (Rittel and Webber 1973; Kunz, Reuter and Rittel 1980) and the approach of collaborative / communicative planning (Healey 1992). In this model, planning deals with political and design problems (Rittel and Webber 1973; Harris 1999; Zonneveld 2007). The turn to communicative issues in planning can be traced along the following keywords derived from planning theory and practice: planning is directed towards a process instead of a plan; "governance" in place of "government" as part of a cooperative approach to planning; urban development as a collective process of cooperation and coordination that includes as many players as possible. When broken down into a set of concrete skills that spatial planners need, these approaches require information, cooperation, moderation, mediation, management, bargaining (Healey et al. 1999; Faludi 2000; Salet and Faludi 2000; Knieling, Fürst and Danielzyk 2003; Fürst 2005; Boelens 2006; Heinelt 2006; Knieling 2006; Nadrowski and Wachten 2006; Reiß-Schmidt 2006; van den Berg 2006; Friedmann 2007; Selle 2007; Davoudi 2008; Dangschat, Frey and Hamedinger 2008). Criticism of the one-sided emphasis on communication points up a lack of attention to planning content, deficient expert knowledge of planners (Hall 1996; Huxley and Yiftachel 2000; Schönwandt 2006; Selle 2006) as well as the shortcomings of the creative momentum (Albers 2004, 2006).

This brief synopsis of AVC's roots in planning history shows that AVC emanates from different traditions and working cultures in planning theory and practice. Today these skills form a repertoire that can be drawn on according to the planning problems that have to be tackled – beyond one-sided preferences (Schönwandt 2002; Altrock, Huning and Peters 2004; Fürst 2005). Nevertheless, we would argue that AVC's synergies and complementarities are investigated insufficiently in today's planning research.

3. Meta-analysis of planning literature

The first empirical module of the research project is based on the meta-analysis of international planning literature of the last 10 years. This module points to the exploration of the "space of possibility" of AVC's interplay. The objective is to generate hypotheses that can be tested in real case studies. Based on the primary research question, three questions are examined within the investigation. The first question points to the outcome and impact of planning methods that comprise the skills AVC; the second question focuses on the interplay of AVC within planning methods; the third question investigates external influence on the outcome and impact of methods as well as on the interplay of AVC. The latter includes the three steps within Schönwandt's basic scheme for planning, the different spatial scales of the respective case studies, and the different disciplinary backgrounds of the authors of the scientific articles.

3.1. Meta-analysis – methodology

The meta-analysis is restricted to articles in international peer reviewed planning journals in the period 2000-2011. A systematic screening is carried out along the following criteria: 1) the articles report on the application of planning methods in a real case study; 2) the particular planning methods contain the basic skills communication and/or analysis and/or visualisation; 3) the case studies are located in the Western World; 4) the authors judge the effects – outcome and/or impact – of applied planning methods. The articles report on impact studies, arranged more or less systematically, of planning methods with AVC. The primary quality criterion is the peer review process.

The screening process started with a Boolean search in international search engines that revealed over 2400 findings. These findings were reduced stepwise to 40 articles that feed into the qualitative content analysis. The selection proceeded with 1) a rough selection of nine per cent of all articles by screening title, abstract and keywords 2) a fine selection of 35 per cent of the remaining articles by systematically perusing the abstracts 3) carrying out the content analysis with 152 remaining articles and filtering another 75 per cent that did not fit the predefined criteria. The fine selection included articles from 53 peer review journals that were reduced to 19 journals in the final selection (see table 1).

	Fine selection	**Final selection by content analysis**	
Journals	**Number of articles selected**	**Number of articles selected**	**not selected**
Futures	20	4	16
Landscape and Urban Planning	18	6	12
disP	12	5	7
Environment and Planning B: Planning and Design	9	3	6
Informationen zur Raumentwicklung	9	4	5
Environmental Impact Assessment Review	5	1	4
Journal of Planning Education and Research	5	2	3
Environment and Planning A	4		4
Archnet-IJAR, International Journal for Architectural Research	3		3
Built environment	3		3
Global Environmental Change	3		3
Integrated Assessment Journal, Bridging Sciences & Policy	3		3
Journal of Environmental Planning and Management	3	2	1
Land Use Policy	3	1	2

Planning Theory & Practice	3	2	1
CoDesign: International Journal of CoCreation in Design and the Arts	2	1	1
Computers, Environment and Urban Systems	2		2
Construction Management and Economics	2		2
Journal of Environmental Management	2		2
Journal of the American Planning Association	2		2
Landscape Research	2		2
Local Environment: The International Journal of Justice and Sustainability	2	1	1
Planning Practice and Research	2		2
Public Administration Review	2	1	1
RaumPlanung	2	2	
Society & Natural Resources: An International Journal	2		2
Agricultural Economics Revue	1	1	
Agriculture, Ecosystems and Environment	1		1
Annals of the Association of American Geographers	1	1	
Community, Work & Family	1		1
Environmental Science & Policy	1		1
European Planning Studies	1		1
Forest Ecology and Management	1		1
Georisk: Assessment and Management of Risk for Engineered Systems and Geohazards	1		1
Interdisciplinary Science Reviews	1		1
International Journal of Geographical Information Science	1		1
International Journal of Urban Sustainable Development	1		1
International Journal of Water Resources Development	1		1
Journal of Ecotourism	1		1
Journal of Flood Risk Management	1	1	
Journal of Location Based Services	1		1
Journal of Project Management	1		1
Management Decision	1		1
Planning Theory	1		1
Political Geography	1		1
Public Choice	1		1
Raumforschung und Raumordnung	1		1
Simulation and Gaming	1		1
Technological Forecasting and Social Change	1		1
Tourism Geographies: An International Journal of Tourism Space, Place and Environment	1	1	
Town planning review	1		1
Transport Planning	1	1	
Water International	1		1
Summe Artikel	**152**	**40**	**112**

Table 1: Planning journals and respective articles in the selection process from fine selection to final selection.

Learning from the omitted papers

During the screening process we evaluated the reasons for removing articles from the hit list. This provides valuable considerations for the state of research in planning methods. The fine selection by perusing the abstracts omitted 65 per cent of the initial selection of articles. The applied evaluation scheme integrated the criteria 1) presence of planning methods and 2) their application in a real case study. The evaluation produced the following results: The most important reason to leave out articles is the absence of a real case study while most of the articles are actually devoted to planning methods. In the chosen period of investigation plenty of scientific literature can be found on planning methods. Only a small part of it, however, deals with their application in planning practice. The rest of the articles presumably focus on theories, techniques, and formula of planning methods.

During the content analysis three quarters of the selected articles did not fit our criteria for delineating the effects of applied planning methods. Fundamental reasons for exclusion were:

- Planning methods lack application in a case study or, when actually applied in a real case, they lack a receptive audience. Therefore the effects and impact of planning methods cannot be observed (Affisco 2000; Anderson, Meaton and Potter 1994; Bell 2001; Carlsson-Kanyama et al. 2008; Dortmans 2005; Fenster 2009; Gertler and Wolfe 2004; Guhathakurta 2002; Hermann 2009; Janssen, Goosen and Omtzigt 2006; Lange and Hehl-Lange 2010; Lange 2001; Luz 2000; Malczewski et al. 2003; Newcombe 2003; Nye and Rydin 2008; Robinson 2003; Sanoff 2008; Sheppard 2006; Vervoort et al. 2010; Walker, Bourne and Shelley 2008; Hanewinkel 2009)
- Planning methods are derived from planning theory and respective articles focus on the development of a theoretical concept for planning methods without application in practice (Alshuwaikhat and Nkwenti 2002; Ball 2001; Beers et al. 2010; Bourne and Walker 2005; Rauschmayer and Wittmer 2006; Renn 2006; Selin 2006; Sheppard 2005).
- Authors focus on techniques and detailed procedural steps of planning methods. They are looking for optimisation and improvement of planning methods for given functions and do not examine their effects in a real case (Appleton and Lovett 2005; Bryan 2003; Dockerty et al. 2006; Jessen 2005; Jetter and Schweinfort 2010; Joerin, Thériault and Musy 2001; Konisky and T.C. 2001; Novakowski and Wellar 2008; Özkaynak and Rodríguez-Labajos 2010; Shaw et al. 2009; Talen 2000; Tansey et al. 2002; van de Kerkhof and Wieczorek 2005).
- Articles only deal with the application of methods in planning practice descriptively (Dühr 2003; Jenssen 2010; Özdemir, Basal and Aslan 2010).
- Planning methods are described in respect to their functions as ex-ante supposed impacts instead of ex-post effects (Celino and Concilio; Finn, Hopkins and Wempe 2007; Garrod 2003; Jacob 2006; Kok 2009; Lange, Schroth and Wissen 2003; Wiek, Binder and Scholz 2006)
- Authors point to the implementation and realisation of planning methods with regard to feasibility, acceptance, and comprehensibility to the addressee without assessing the effect of the methods on the planning process (Ben-Zadok 2009; Jankowski 2009; Lord and Hincks 2010; Palerm 1999; Renn 2006; Sheppard and Meitner 2005; Smith 2002).
- Planning methods are assessed from a normative perspective without looking at their effects in a real case (Bond, Palerm and Haigh 2004; Buchecker, Hunziker and Kienast 2003; Carr and Halvorsen 2001; Chilvers and Burgess 2008; Palerm 1999).

This brief summary of main reasons for omitting articles from the meta-analysis illustrates the current need for research on planning methods. In the last few years scientific literature has over-emphasised the dimensions of technique, formula, function of planning methods to the detriment of studying the actual effects and impacts of planning methods in planning practice.

Selected Database

The selected 40 articles for the meta-analysis come from a broad variety of international journals (see table 1); its authors cover a broad range of different disciplines involved in spatial planning (see table 2). The analysis of disciplines is based on the first authors' education and current field of activity as well as the journal specialism. More than half of the articles have two or more disciplinary backgrounds as indicated by the multiple mentions in table 2.

Discipline (multiple mention)	Number of journal articles
Urban and regional planning	11
Landscape planning	8
Environmental sciences and planning	8
Spatial development and planning	8
Geography	7

Hydrology / water management	5
Administrative sciences	4
Political science	4
Landscape ecology / human ecology	3
Forestry	3
Architecture	3
Geology / geo sciences	2
Transport planning	2
Social scieneces	2
Planning theory	2
Screenwriting	2
Agronomy / agricultural sciences	1
Urban design	1
Tourism	1
Agrology / soil science	1
Number of mentions	**78**
Number of disciplines	**20**

Table 2: Disciplines included in the meta-analysis.

The aggregation of theses different disciplines in the four classes 1) planning disciplines, 2) natural and engineering sciences, 3) social sciences and 4) design gives rise to the following picture: 88 per cent of all articles have a link to planning disciplines – no surprise in our research project. 45 per cent of the articles have a background in natural and engineering sciences. These disciplines seem to claim raised demand and efforts for effective planning methods in spatial planning practice. Only 15 per cent of all articles have a background in design disciplines including urban design, architecture and landscape architecture. How is this to be interpreted? The quality criterion of peer reviewed planning journals might be a significant bias for the different disciplines: design disciplines might publish in these journals less frequently than other disciplines as they have a stronger focus on planning practice. Another assumption is the minimal involvement of design disciplines in the planning issues captured in our literature review.

The case studies in the selected articles range from sector planning issues like transport, water, climate change and tourism to more comprehensive, strategic planning issues. 47 per cent of the articles engage in case studies at the spatial scale of municipalities and cities, 40 per cent tackle regional planning cases and a minority of 13 per cent of the articles report from European planning cases.

The content analysis of the chosen scientific articles is carried out along a coding scheme (see figure 3); coding and its qualitative analysis are computer-assisted. The starting point of the coding process is the identification of planning methods; secondly, these methods cause effects that can be attributed to the different stages within Schönwandt's basic scheme for planning; thirdly, the presence of the basic skills AVC within the coded methods is recorded.

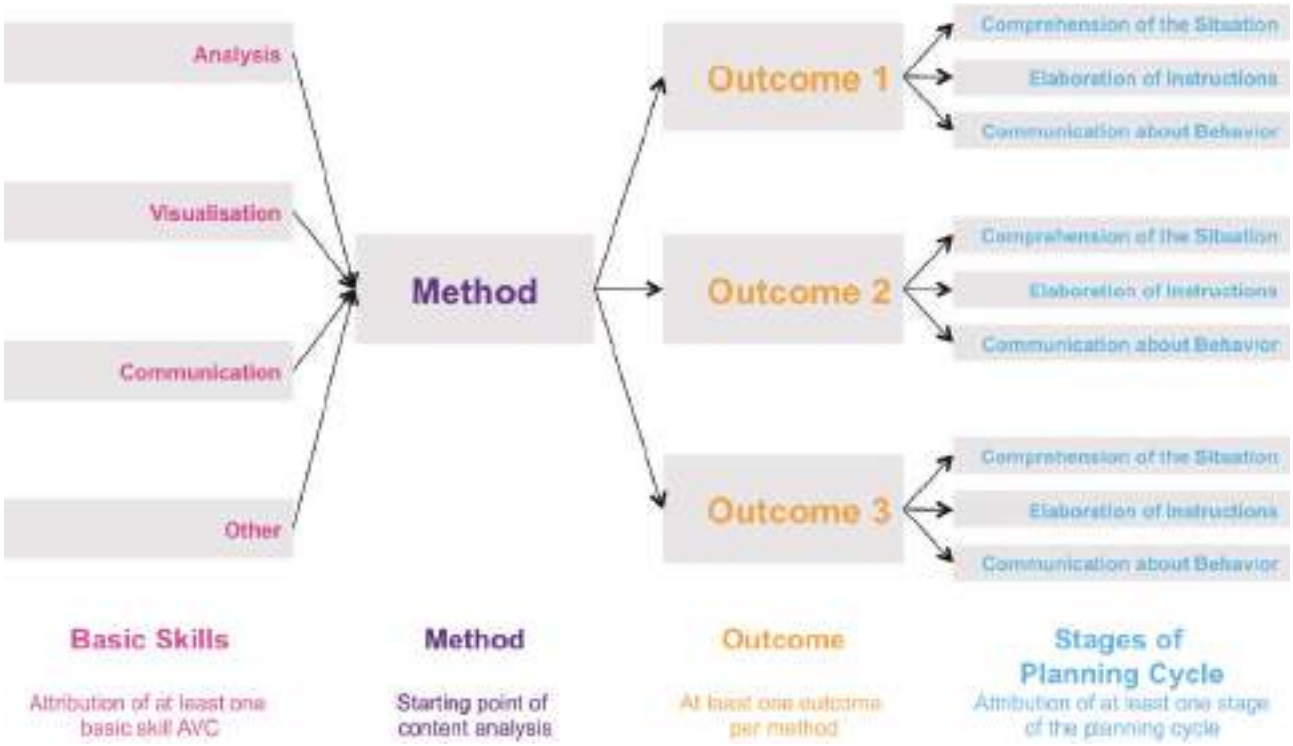

Figure 3: Coding scheme of the content analysis.

The approach of a meta-analysis based on journal articles entails the difficulty that it is not possible to verify the articles' underlying data and its assessment criteria. Moreover, scientific approaches and methods vary from article to article. Nevertheless we regard our approach as adequate to outlining a preliminary "space of opportunities" of AVC's interplay and in this way to conduct an initial test of our general hypothesis.

3.2. Meta analysis – findings

In the subsequent sections we will summarize the results of the meta-analysis. We will focus on research questions one and two. Research question one is:

What positive effects on spatial planning do planning methods that apply the skills AVC generate?

The content analysis assigns 178 codes for effects of planning methods that are subsequently categorised to 27 effects (see figure 4) in a multi-level qualitative analysis process. Effects appear in all three stages of the planning process "Comprehension of the Situation", "Elaboration of Instructions", and "Communication of Behaviour" (see figure 5) and have strong reciprocal effects (see figure 6). The meta-analysis cannot analyse the long-term impacts of these effects to the actual goal achievement of the case studies. The recorded effects should rather be interpreted as impacts that the authors' of the scientific articles perceive and suppose. With the 27 categorized effects, the meta-analysis indicates weighty expectations of spatial planners with regard to the outcomes and impacts of planning methods that apply AVC.

Figure 4: 27 individual effects of planning methods with AVC arranged according to frequency in the study sample of 40 scientific articles.

In the content analysis each of the effects is characterized by a bottom-up definition out of the journal articles. In this paper we extract five out of 27 definitions.

Involvement of laymen

→ ***Laymen and affected parties are involved***

Planning methods support the involvement of a broad range of actors from the “Life World” that are predominantly non-professionals: citizens, involved parties, residents, users, and different groups of stakeholders. These actors are integrated in the planning project at different levels of intensity: from information to active participation in the processes of data interpretation or solution finding. This integration makes use of everyday and local understanding and knowledge, of attitudes and mind-sets, issues and concerns, experience, expectations, users’ perspectives, new approaches and arguments.

(Al-Kodmany 1999; Antunes, Santos and Videira 2006; Berchtold and Krass 2009; Frittaion, Duinker and Grant 2010; Lewis and Sheppard 2006; Schroth, Wissen and Schmid 2006; Söderström and Zepf 1998; Van Herzele 2004; Van Herzele and van Woerkum 2008; van Vliet, Kok and Veldkamp 2010; Ward 2001; Wright, Duncan and Lach 2009)

Spatial context

→ ***Spatial and territorial patterns, orientation and context are incorporated***

Planning methods convey and communicate visual and spatial relationships, connections and patterns as well as invisible, hidden functionalities and correlations. They support the spatial and territorial specification

and concretisation of planning content and the relation to spatial context. They thereby strengthen the link to the everyday life situation of the planning actors and involved parties and foster the comprehensibility of spatial patterns and relations. They take into account perception of space and spatial images of the concerned actors, support spatial orientation in the planning area, and territorial awareness among the stakeholders.

(Al-Kodmany 1999; Aring and Sinz 2006; Berchtold and Krass 2009; Böhme and Schön 2006; Lewis and Sheppard 2006; Söderström and Zepf 1998; Van Herzele 2004; Van Herzele and van Woerkum 2008; Wright, Duncan and Lach 2009)

Collaborative solution finding

→ ***Solutions are developed collaboratively with the actors of the "Life World"***

Planning methods support the integration of the actors of the "Life World" into the process of generating solutions. They enable the step-by-step development of the solution in a process with different actors and support stakeholders and non-professionals of the "Life World" in proposing solutions. The methods allow for a collective authorship of solutions, improving those solutions through the integration of new perspectives and approaches and facilitating the formulation of practical solutions through affected parties.

(Al-Kodmany 1999; Berchtold and Krass 2009; Deelstra et al. 2003; Frittaion, Duinker and Grant 2010; Sandercock 2003; Schroth, Wissen and Schmid 2006; Söderström and Zepf 1998; Van Herzele 2004; Van Herzele and van Woerkum 2008; Ward 2001)

Complex relationships

→ ***Comprehension of complex relationships is fostered***

Planning methods help structuring and surveying unclear, complex relationships. They support a broad and comprehensive understanding of planning content and foster integrated thinking and system comprehension. They enable the comprehension of spatial functionalities, qualities and problems as well as cause-and-effects amongst the protagonists of the "Planning World" and "Life World".

(Antunes, Santos and Videira 2006; Berchtold and Krass 2009; Frittaion, Duinker and Grant 2010; Jensen et al. 2000; Lewis and Sheppard 2006; Mayer et al. 2005; Van Herzele 2004; van Vliet, Kok and Veldkamp 2010)

Implicit knowledge

→ ***Implicit knowledge of actors and stakeholders is integrated***

Planning methods support the integration of implicit, tacit knowledge that is linked to individuals. That includes subjective assessments, perceptions, and experience – with or without spatial reference. Actors and stakeholders contribute their implicit knowledge, make it explicit and thus support the structuring of problems, assessment of problems and solutions as well as integrated thinking. They localise need for action and potential in city quarters, cities or regions, and introduce new points of view.

(Al-Kodmany 1999; Antunes, Santos and Videira 2006; Berchtold and Krass 2009; Frittaion, Duinker and Grant 2010; Golobic and Marusic 2007; Hasse and Milne 2005; Schroth, Wissen and Schmid 2006; Söderström and Zepf 1998; Van Herzele 2004; Van Herzele and van Woerkum 2008; van Vliet, Kok and Veldkamp 2010

Interplay between the individual effects – interdependency network

Planning methods have the ability to simultaneously initiate different effects. In the study sample planning methods on average trigger 4.8 individual effects. This leads us to the interpretation that planning methods are deliberately implemented to simultaneously generate such effects that mutually depend on or reinforce one another. In this way the individual effects interact in an interdependency network. We carried out a quantitative social network analysis that looked at the inter-linkages between the 27 individual effects of the study sample. The formal network analysis helps – from the perspective of the study sample – to identify the key levers for enhancing the effectiveness of spatial planning processes.

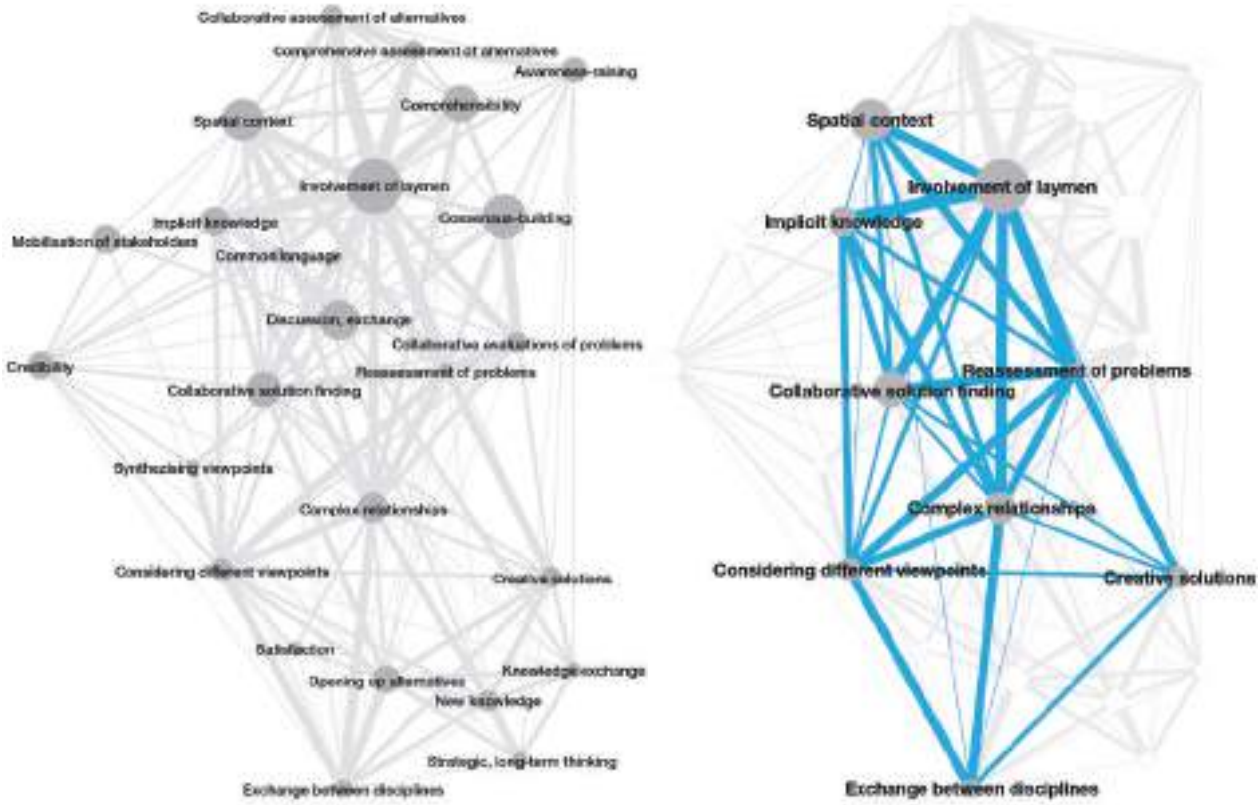

Figure 4: interdependency network of planning methods' individual effects of in the study sample, illustration of all linkages (left) and filter of the most important linkages (right).

The position and relation of an individual effect within the interdependency network demonstrates the importance of an effect for the goal achievement of the study sample's planning projects. The network features a main node "involving laymen" and a secondary node "complex relationships" that are in close exchange. The effects "spatial and territorial dimension" and "implicit knowledge" have a connecting function between these two main nodes.

Effects in the steps of the basis scheme for planning – "specialists" and "generalists"

All coded effects of the study sample feature information on the stages of the planning scheme. This attribution is based on information provided in the journal articles along a rough assessment framework. Consequently the classified 27 effects can be analysed with respect to their approximate position within the scheme of planning (see figure 5).

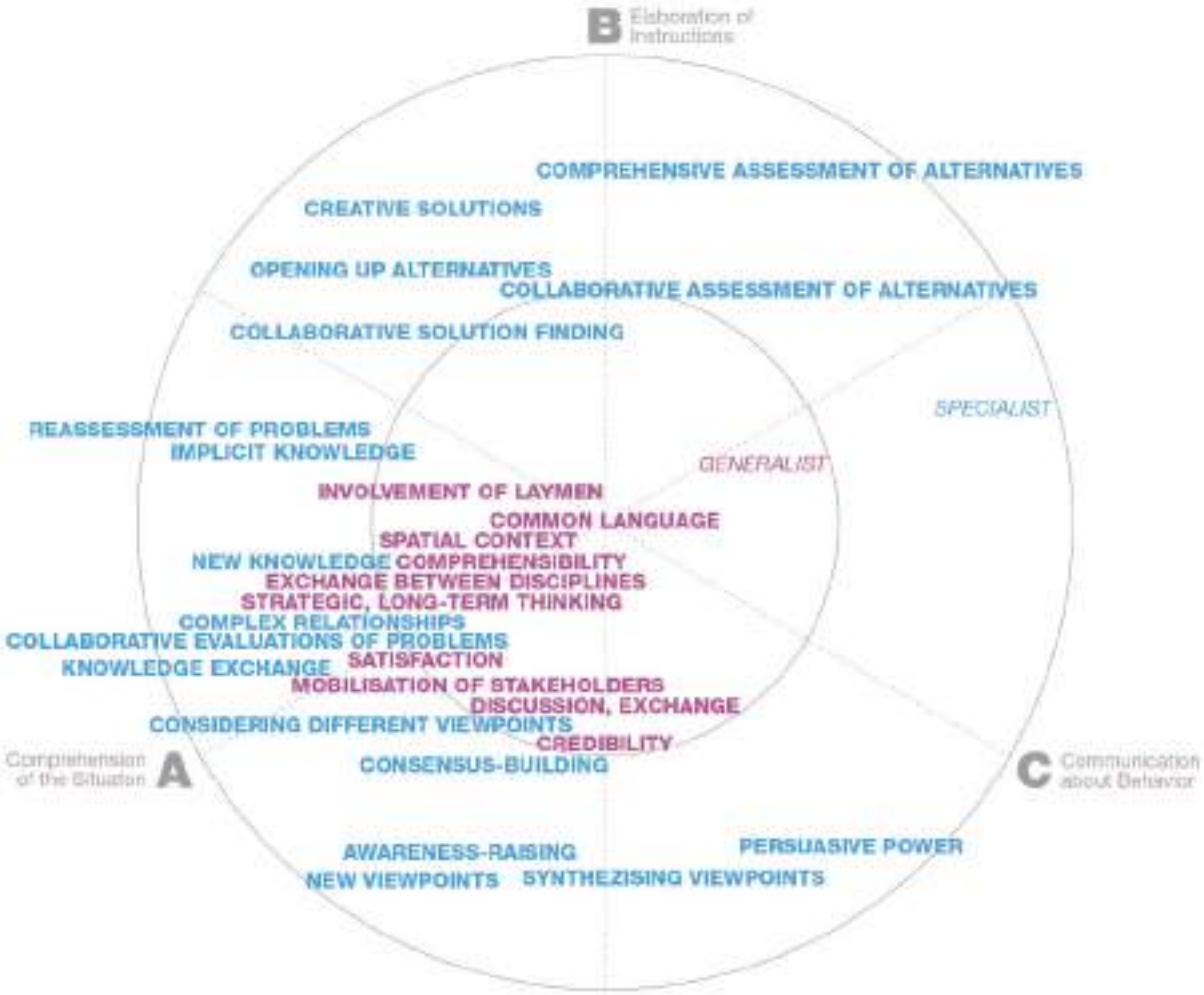

Figure 5: Classification of individual effects of planning methods within the scheme for planning – ranging from “specialist” to “generalist”.

“Specialists” are those effects that primarily operate in the individual stages of the planning process “Comprehension of the Situation”, “Elaboration of Instructions”, and “Communication of Behaviour”. “Generalists”, on the contrary, are effects occurring in all three stages of planning.

This brief and sketchy overview of the results of the meta-analysis related to research question one can be summarized as follows: planning methods with AVC form a dense network of a broad range of expected effects that apply to all three stages of the planning cycle. Although our research approach inevitably captures a diversified understanding of planning methods’ effects, outcomes and impact, we suggest that the AVC approach comprises a suitable scope of skills that significantly determine the potential impact of planning methods.

Research question 2 investigates the interplay of AVC within the planning methods:

How and to what extend does the interplay of AVC contribute to the planning methods’ positive effects?

The meta-analysis shows that the broad range of suggested effects features significantly different characteristics of the basic skills AVC and their respective interplay. The analysis leads us to postulate that the stronger AVC are linked up to one another the more effective the respective methods are. The 27 categories of presumed effects show clearly different profiles in their ACV ingredients (see figure 6). That means that the basic skills AVC, by their complementary nature, add value to spatial planning processes.

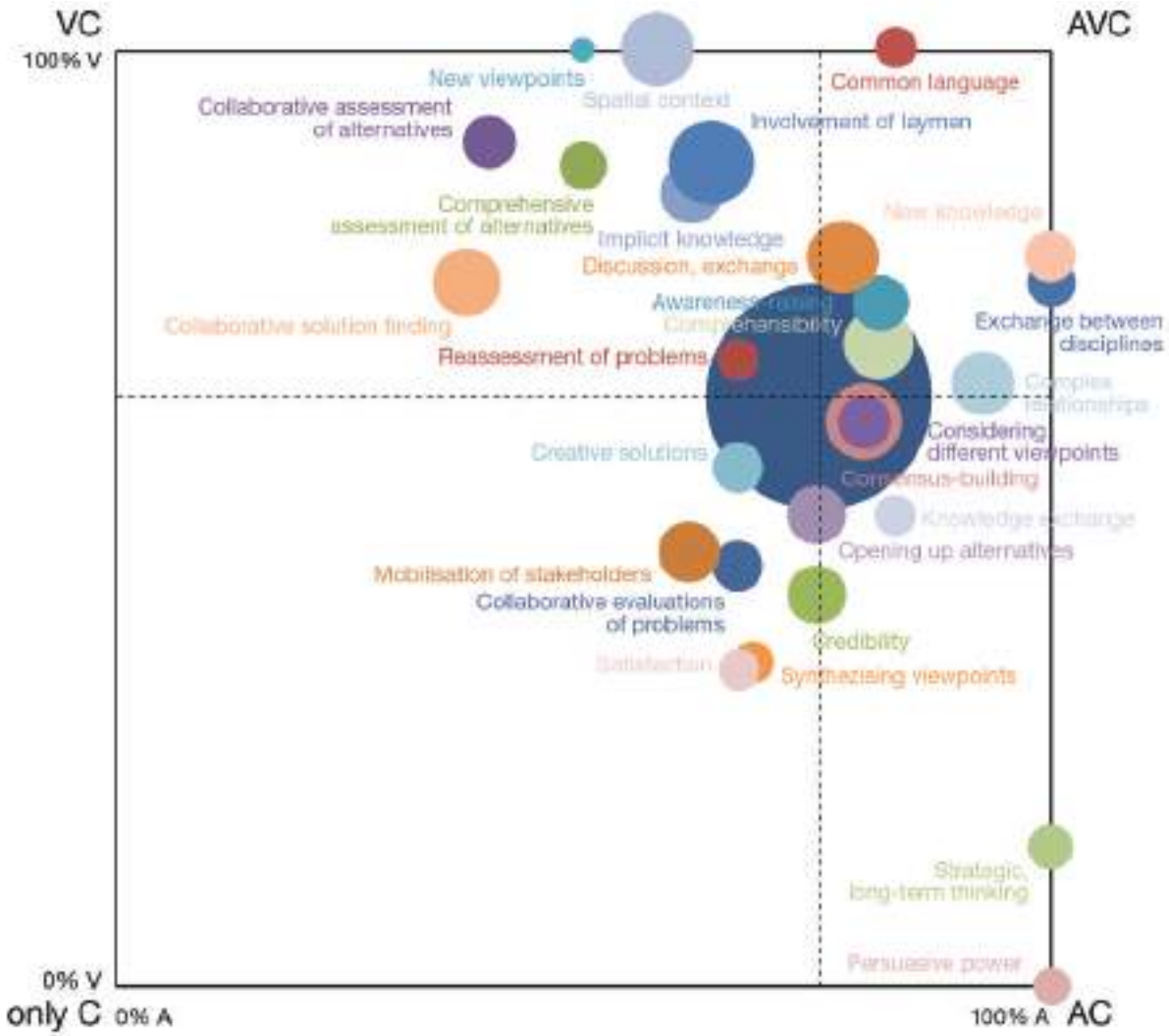

Figure 5: Characteristics of AVC interplay of the different categories of presumed effects within the study sample.

The coding scheme allows correlation of the defined effects with the basic skills AVC that are part of the applied methods. Figure 5 shows the results of the quantitative analysis of AVC ingredients within the 27 categories of effects. The size of the circles indicates the frequency of the effects within the 40 journal articles. The circles' position on the x-axis refers to the portion of analysis within the respective methods; the position on the y-axis reflects the portion of visualisation. Effects that are dominated by predominantly analytical methods, visual methods or a combination of both clearly can be depicted.

The meta-analysis further investigates the relation between the structure characteristic of AVC in planning methods and their attributed effects. Altogether eleven key findings can be drawn from this detailed qualitative study. These findings will here be listed only; further explanation about individual findings can be drawn from Förster and Thierstein 2011 (Förster and Thierstein 2011).

1. The basic skills AVC create positive effects through complementarities and synergies (see figure 5)
2. The interplay of AVC fosters the interdependency network of planning methods' positive effects
3. The interplay of all three skills AVC within planning methods is particularly effective
4. Planning methods that are exclusively based on communicative skills are less effective
5. The interplay of different communicative events within planning methods fosters their positive effects
6. Face-to-face communication is more effective than medial communication
7. The higher the methods' degree of interaction the more effective are the methods

8. Analyses show higher effectiveness when closely linked to communication events
9. Complexity and complementarity of analytical methods fosters planning methods' effectiveness
10. The deliberate design of the process of interpretation and evaluation of analytical results increases effectiveness of planning methods
11. Making use of complementary visualisation techniques improves the positive effects within planning methods.

The analysis reveals clear correspondence between input of AVC and the effects of the methods applied. Despite a number of limitations of our meta-analysis and the study sample, AVC obviously affects the impact of planning methods on the goal achievement of the planning projects. We worked out structure characteristics of analysis, visualisation and communication as well as of their interplay that seem to play an important role for effectiveness of planning methods.

4. Discussion and conclusions

There are a number of important limitations within the meta-analysis: 1) the selection of scientific articles exclusively from peer-reviewed journals entails the bias of considered disciplines and case studies; 2) the meta-analysis focuses only on positive effects of planning methods, their unintentional side-effects are not analyzed; 3) the articles report on the positive effects of planning methods; however, the empirical basis of the authors' findings cannot be assessed; 4) the latter is especially critical when some articles report on effects of planning methods with low priority because the articles focus on other issues.

4.1. Expert workshop and interviews

In order to validate our findings from the meta-analysis we carried out an expert workshop in October 2011 as well as a series of expert interviews with planning practitioners from Munich. The aim was firstly to discuss individual findings from the meta-analysis; secondly to assess the conceptual foundations of our research project and thirdly to check the relevance of our approach and overarching hypothesis from planning research and practice. The participants in the expert workshop and expert interviews were chosen from academia as well as from planning practice from German-speaking countries; a number of planning practitioners from the Munich metropolitan region were included.

The content analysis of the group discussion in the expert workshop reveals four central perspectives on the intermediate results of our research project. These perspectives are based on clusters of arguments closely used together during the discussion. In each perspective the need for further research is indicated.

Specifying our understanding of planning and planning process

The presentation of the concept and intermediate results of our project evoked a lively debate about our underlying understanding of the notion and concept of planning. With Schönwandt's basic scheme for planning we introduced a broad understanding of planning that is not restricted to a particular application – concerning scale, topic area, time horizon or institutional context. Correspondingly, we used multi-faceted case studies in our meta-analysis. In the group discussion participants argued that this broad understanding was too vague and that we therefore cannot learn much from this variety of very different case studies. Some experts point to the great importance of the institutional context on spatial planning that restrains cross-case learning in our study sample. One participant argues that our level of abstraction with regard to spatial planning is too high and hence useless. Another contribution to the discussion favors a restriction of the research project to the comparison of similar and hence more comparable planning cases. A group of participants questions the separation of the three preparatory stages "Comprehension of the Situation", "Elaboration of Instructions", and " Communication of Behaviour" that involve the "Planning World" from the sections "Interventions", "Setting" and "Outcomes" of the "Life World". The contribution of

professional planners should not be restricted to these three stages as outcome and impact of planning projects are substantially determined by its implementation in the “Life World”. The conception of our project deliberately distinguishes the thought process – i.e. the three preparatory stages – from the implementation process. There is still conceptual work to be done in order to specify our understanding of planning process in respect of the applications of the methods on the one hand and their outcome and impact on the other hand.

Deepening the understanding of AVC and examining the role of framing and conceptualising

A number of participants found it difficult to clearly understand the concept of the basic skills AVC. We use the three terms in a specialized sense. On the one hand, participants’ spontaneous reactions to the term visualisation expand the concept to mental images and symbols as well as to all kind of methods that appeal to the senses such as excursions, mobile workshops, literature or sounds. On the other hand, the definition of visualisation is regarded as too extensive as it includes very different kind of phenomena. A central point in the discussion on the basic skills relates to activities such as framing, conceiving or conceptualising. Participants and interviewees argue that the triad AVC should be expanded to these kinds of skills. This remark points to a conceptual problem which we still have to tackle. Firstly we consider AVC as basic skills in order to frame, conceive or to conceptualize alternative solutions. Of course, some additional competencies are needed, such as creative skills. Some of the articles in our study sample refer to collective creative techniques. On the other hand we conceive planning methods as closely linked to media or group communication. In this regard, we neglect those creative techniques that are related only to one person or an internal work group and do not directly address the recipients of the methods.

Elaborating a framework of AVC’s impact that also considers the time axis

The third view of the results of the first research module concerns the analyzed effects of the planning methods. One participant argues that with our database of scientific articles we have collected only impacts that the authors assume instead of factual impacts of planning methods. Zech refers to the fact that many planning practitioners with expertise in the evaluation of planning methods are not used to publishing in peer-reviewed journals. Hence our database is biased. This is certainly true and the interpretation of the results must take account of the logic and rules of scientific publication practice. In addition there is a conceptual problem when assessing the effects of planning methods from a literature review. Each author – at least implicitly – has a different understanding of output, outcome and impact of the methods that she describes. The question is, to what extent does our meta-analysis really capture the impact of planning methods? To clarify this question we need to further conceptualize the idea of the output, outcome, and impact of planning methods on the time axis and with regard to the basic scheme for planning.

Investigating the role of context for the success of planning methods

When further elaborating a concept of impact we also have to specify the role of the context of this impact. Despite the correlation between AVC interplay and the effects of planning methods as shown in figure 5, the meta-analysis cannot elaborate on cause-and-effect between the skills and their respective impact. All workshop participants clearly recognize the importance of the context within which planning methods are applied. The context includes the different stakeholders with respective background knowledge and concerns, organisational structures, financial and human resources, balances of power, legal framework, etc. In order to choose case studies for our second research module we still have to refine the idea of context. The context varies in each planning case and it is important to be aware of the dependent and the independent variables that influence the impact of AVC within spatial planning methods.

4.2. Conclusions

In our paper we presented the intermediate results of an ongoing research project. Based on a conceptual framework, we carried out a first empirical research module and validated the results in an expert

discussion and expert interviews. Although significant need for further research is identified and important conceptual as well as empirical work still has to be done, we consider our approach and our preliminary results as highly relevant for current spatial planning research and practice.

The activity of spatial planning is often regarded as a black box. Beyond the single planning case there is little transferable knowledge on how to effectively design and apply planning methods. This kind of knowledge is most likely found with experienced practitioners. With its empirical orientation, the research project aims to learn systematically from current planning practice. A broad cross-case perspective has been applied in the literature review of the first empirical research module; the second research module will deepen its findings in three focused case studies based on the analysis of primary documents and in-depth interviews.

With the expected results we hope to stimulate the discussion on the financial, temporal and personal resources of planning methods as well as their legal framework. Furthermore, the consequences for planning education will be outlined.

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MEASURING PERFORMANCE OF KNOWLEDGE TECHNOLOGIES THAT AIM TO SUPPORT STRATEGY MAKING

Case of Urban Strategy

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1. INTRODUCTION

There are a large number of computer based systems that aim to support integrated land use and transport planning; more than 100 in the Netherlands alone (Al 2005). These so-called Planning Support Systems (PSS) have been developed since the 1970s and are still continuously improved. In a recent survey among land use and transport planners in the Netherlands we found that, just as in almost all planning fields, these instrument fail to support an important phase of planning where land use and transport should come together; the strategic planning phase (Te Brömmelstroet 2010). Figure 1 lists the reasons that were found to block the widespread use of these tools in daily practice of integrated land use and transport strategy making.

Figure 1 Bottlenecks for PSS in integrated land use and transport strategy making (% of respondents (124) that think it is a (highly) problematic.

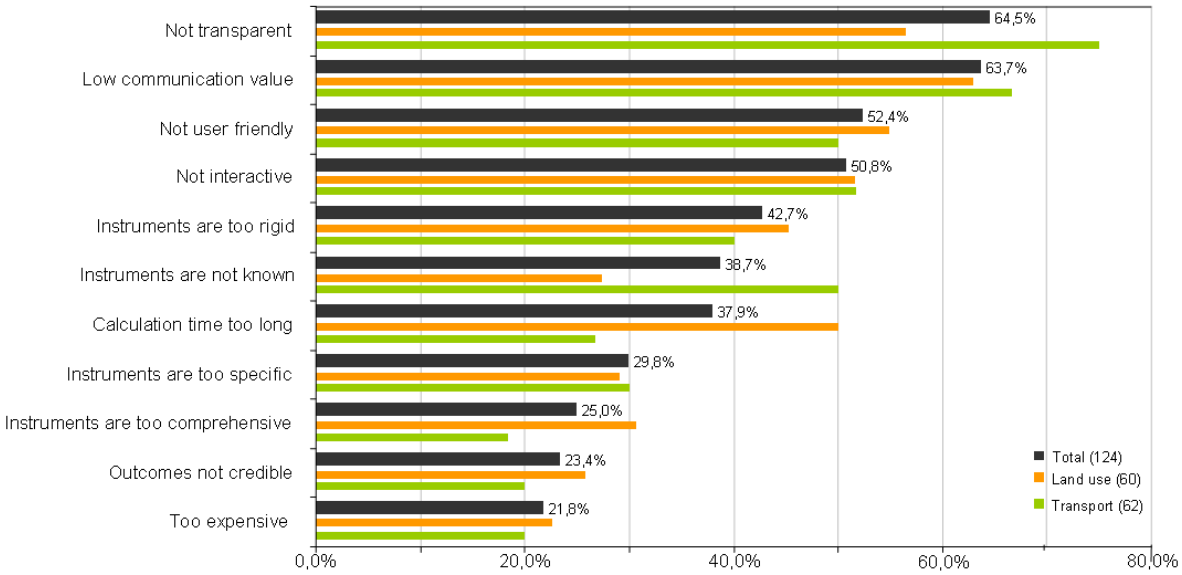


Figure 1 shows that it are mainly soft characteristics that hamper widespread use of PSS. Transparency, low communication value, user friendliness and interactiveness are seen as (highly) problematic by more than half of the respondents. There is no shortage of ideas to bridge what has been coined the implementation gap. Some of these focus on improving PSS software by adding new functionality: PSS that are more integrated (i.e. What If developed by Klosterman 1999), more interactive (i.e. Urban Strategy developed by TNO 2011) or more user-friendly (i.e. UrbanSim developed by Waddell 2002, 2011). Others focus more on the hardware, such as Maptables (see Vonk & Ligtenberg 2009) and other visual gadgets. Then there is the process-oriented line that focuses on bridging the human gap between the potential end-users and the PSS developers with more participative, iterative PSS development structures (i.e. Lee 1973; 1994; Te Brömmelstroet & Schrijnen 2010; Vonk 2006).

In this publication we report on the first family of solution strategies; a more interactive PSS software package. We have experimented with a state-of-the-art PSS called Urban Strategy that has been developed in the Netherlands in recent years. The goal of this experiment was to find out if urban Strategy enabled a bridge over the PSS implementation gap. To do so, we first need to define how we measure usability or use of a PSS (section 2). Then, we describe the set up of the experiment (section 3). Before concluding the report and discussing implications of our findings in section 5, we report the outcomes of the experiment (Section 4).

2. ASSESSING USABILITY OF PSS

Recently we have developed a instrument that enables us to structurally test if improvement strategies for PSS are successful (Te Brömmelstroet, 2011). It is based on the idea that PSS have (one of) two main goals: First, improving planning *processes* by structuring them better and/or making them more interactive, integrative and participatory. Next to that PSS aim to improve the *outcomes* of these processes (e.g. strategies, plans and projects) by providing relevant knowledge and facilitating a design-analysis loop: 'linking knowledge to actions in the public domain' (Friedmann 1987). Especially in strategic planning this link is particularly problematic. Couclelis asserted that strategic planning

> "is a hopelessly complex human endeavour. It involves actions taken by some to affect the use of land controlled by others, following decisions taken by third parties based on values not shared by all concerned, regarding issues no one fully comprehends, in an attempt to guide events and processes that very likely will not unfold in the time, place, and manner anticipated" (Couclelis, 2005; p. 1355).

The subject of strategic planning is often referred to as 'wicked problems' (Rittel and Webber, 1984), for which there are no clear-cut answers or solutions. It is the development of the capacity to deal with these problems, rather than final solutions that is the general aim of strategic planning. Planners here (should) aim to become aware and learn to cope with complexity and the "unknown unknowns" (Taleb, 2007) instead of collecting knowledge to reduce it/them.

Both aims of PSS are being translated into a multidimensional framework. Based on academic literature on ideational output (e.g. Dean et al. 2006) we operationalise the quality of the outcome in the dimensions *novelty*, *workability*, *relevance* and *specificity*: i.e. a good planning outcome is novel, workable, relevant and specific. Based on academic work on Group Model Building (Rouwette et al. 2002) we operationalise the quality of the process in the dimensions *reactions*, *insight*, *commitment*, *behavioural change*, *communication*, *shared language*, *consensus*, *system changes*, *further use of modelling* and *efficiency*.

The dimensions are then translated into statements. The once for process are presented in table 1 and are rated by the participants themselves. The once for outcome are presented in table 2 and are rated by external raters.

Table 1 Dimensions of outcome and their operationalisation

Dimension	Operationalization	Measure statements (9-point Likert scale, asked to external raters)
1. Novelty	1a. Originality	The strategy is ingenious. The strategy is imaginative. The strategy is surprising. The strategy is novel
	1b. Paradigm relatedness	The strategy is radical. The strategy is transformational.
2. Workability	2a. Implementability	The strategy can be easily implemented.
	2b. Acceptability	The strategy is socially acceptable. The strategy is legally acceptable. The strategy is politically acceptable.
3. Relevance	3a. Applicability	The strategy clearly applies to the stated problem.
	3b. Effectiveness	The strategy will solve the problem. This is an effective strategy

4. Specificity	4a. Completeness	The strategy can be decomposed into independent subcomponents. The strategy covers who The strategy covers what The strategy covers where The strategy covers when The strategy covers why The strategy covers how
	4b. Implicational explicitness	There is a clear relationship between the recommended action and the expected outcome.
	4c. Clarity	The strategy is clearly communicated with regard to grammar and word usage. The strategy is easy to understand

Table 2 Dimensions of process and their operationalisation

Dimension	Operationalization	Measure (statements on Liker scale; asked to participants)
5. Reaction (I)	5a. Enthusiasm	I have a good feeling about the session The session resulted in valuable results
	5b. Satisfaction	The session was successful. I am satisfied with this session. I am confident that the group solution is correct
	5c. Credibility	The results of the session offer real solutions for the problem The results of the session are based on correct assumptions on the underlying system
6. Insight (I)	6a. Insight in problem	My insight into the problem has increased. The session has given me more insight into the relations between the elements that compose the problem. It is clear to me what the causes of the problem are. I now have more insight into the processes that play a role in the problem. The session has given me insight into the possibilities that my organisation has in 'steering' the problem. The session resulted in new insights.
	6b. Insight in assumptions	My understanding of the opinions of the other participants about the problem has increased. I understand how other participants in the session perceive the problem. I better understand the proposed solutions of other participants in the session.
7. Commitment (I)		I support most of the results that were drawn during the session. I will communicate the results of the meeting in front of other members of my organisation. I will try to convince others in my organisation of the importance of the results.
8. Behaviour (I)		I will use insights from the session in my daily planning practice
9. Perception of Communication (G)		The process has given me insight into the opinions and ideas about the problem of other participants.
10.Perception of development of shared language (G)		During the sessions we have developed a shared professional language During the sessions a platform emerged that supported the sharing of ideas
11. Perception of consensus (G)	11a. On problem	We have reached a shared vision of the problem. The results integrated diverse opinions and ideas of the

		participants. We were able to reach a consensus on the problem.
	11b. On goals	We have reached a shared vision on the goals
	11c. On strategies	We have reached a shared vision on the possible solutions
12. Perception of cohesion (G)		I had a strong sense of being part of a group The session brought me closer to the other participants We experienced conflict during the session There was conflict about the task we had in the session
13. Efficiency gains over traditional method		The session was time efficient We were able to perform the work with less effort than in regular sessions We were able to perform the work in less time than in regular sessions We were able to do more in the same time compared to regular sessions

3. SETUP OF THE EXPERIMENT

3.1 Intervention: Urban Strategy PSS

TNO started around 2005 with the development of a PSS – Urban Strategy (Borst et al. 2007; 2009a; 2009b) – specifically aiming to bridge the existing flexibility- and communication bottlenecks. Urban Strategy aims to improve complex spatial planning processes on the urban- and regional level. To do this, different computer models are linked to a central database and interface to provide insights in a wide area of urban indicators and maps. The effects of interventions in infrastructure, land use, build objects and their functions can be calculated and visualized. Because the PSS is able to calculate fast and present the results in an attractive 1D, 2D and 3D visualisation this can be used in interactive sessions with planning actors.

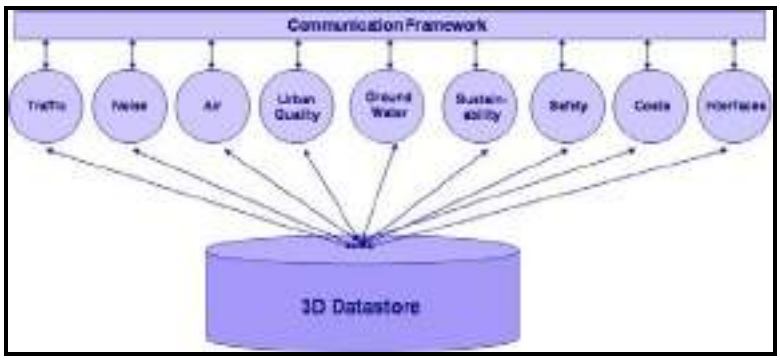
Starting point for Urban Strategy is the use of existing state-of-the-art and legally accepted models. To link these existing models a number of new elements were developed:
- a database with an uniform datamodel;
- interfaces that show a 3D image of the modeled situation, indicators and that offer functionality to add interventions;
- a framework that structures the communication between the models and the interfaces.

3.2 Mechanisms: how does Urban Strategy bridge the PSS implementation gap?

The goal of Urban Strategy is to enable planning actors in workshop sessions to communicate their ideas and strategies to the PSS and to learn from the effects that are shown. This interactivity calls for fast calculations of all the model and fast communication between all elements. For this, the models were enabled to respond on *events* (urban interventions from the participants in the workshops. A new software architecture was developed to have all these elements communicate (figure 2).

Through this increases speed and the wide variety of models that are linked together, the PSS aims to be highly flexible in offering answers to a large number of questions that a group of urban planning actors can have.

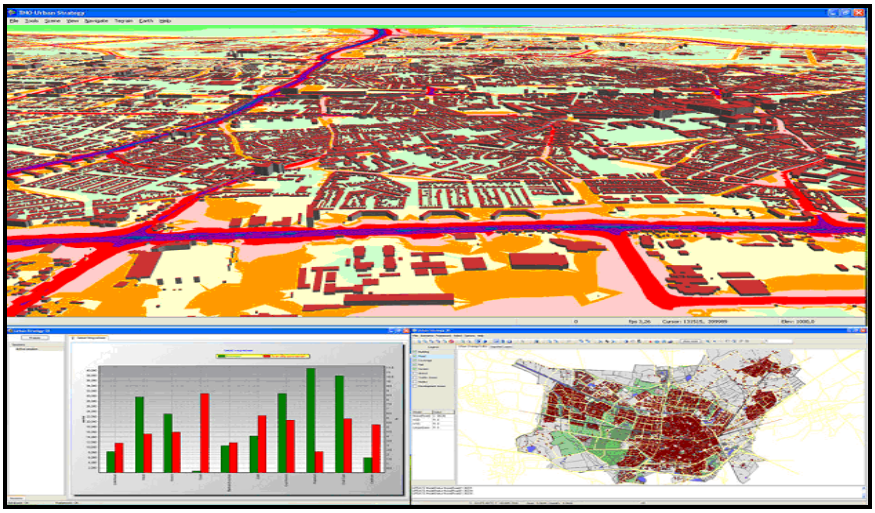
Figure 2 Schematic overview of communication architecture of Urban Strategy.



The 3D interface generates, based on objects in the database, a 3D digital *maquette* of the urban environment. To this, different information layers can be addes, such as air quality contours, noise contours and groundwater levels. Also, the objects can be colored according to their characteristics (function, energy use, CO2 emissions, number of inhabitants, etc). The 2D interface can be used by the end user (or operator) to add changes to the database. Objects can be added or removed, their location can be changed and the characteristics of the object can be changed. The 1D interface shows

indicators that are calculated by all the models that are included. Examples are the percentage of noise hindrance, group risk in an area or the contribution of types of objects to CO2 emission.

Figure 3 The three interfaces of Urban Strategy



3.3 A two group treatment experiment

Together with TNO we organized two sessions in which the usability of Urban was tested. For this we set up a typical urban planning problem: where to allocate a large number of new houses and jobs from an accessibility point of view in the western part of Rotterdam (appendix I). The groups were told that their results would be assessed on novelty, workability, relevance and specificity (the dimensions of table 1).

We invited seven second year Urban Planning students from the University of Amsterdam based on their excellent performance in the course '*Planning voor Ruimte en Mobiliteit*' in 2010. They represented future planning practitioners that deal with planning challenges such as the abovementioned. The seven students were randomly split into two small groups. Each group was then asked to find the best solution for the proposed urban planning problem.

Both groups were treated in a similar way. They each got 70 minutes to process the information n on the problem, get acquainted with Urban Strategy and then come up with a solution for the planning problem. First they were asked to individually read the assignment. After they signaled that they read it, Ralph Klerkx started to introduce Urban Strategy to the group. In 10 minutes, he showed the functionality of the instrument and what can and cannot be done with it. After this introduction Ralph guided the groups in finding solutions for the planning problem. A TNO colleague did the hands-on work of translating the interventions of the students into Urban Strategy and starting the calculations to show the effects of certain interventions.

After a small number of iterations (planning interventions and seeing their effects) both groups had to draw up an integrated land use and mobility strategy for the region

Next to the support by Urban Strategy (the PSS and the support by Ralph and his TNO colleague) the groups had pens and paper to their disposal. Also, a number of maps of the area were printed on A3 size and positioned on the table. Both groups used these maps to present their strategy and added a written explanation to it.

4. TWO SESSIONS OF STRATEGY MAKING

The two groups applied a different strategy making style. In this section we will shortly describe the most notable differences and similarities

4.1 Group 1 (4 persons)

The first group consisted of four male urban planning students with a background in land use and mobility studies. The group started with an introduction to Urban Strategy by Ralph. 1 of the participants asked questions about the OD matrix and the network that is used to calculate effects.

The strategy making started from a bottleneck point of view (the bridges are congested, this needs to be solved). There is one person that takes the lead in the process while another responds to the ideas of this person. The response is mostly done based on information in the maps (by pointing to them). When the group wants to start testing the first idea of a housing strategy they ask if they can see the zones that are used to calculate the effects because they want to use this as their scale of reference (i.e. 25.000 new houses in one zone, more detailed allocation not a question in these kinds of strategic questions). Urban Strategy is adapted to show these zones. The group then asks many questions about what they exactly see in the maps. They keep a very analytical stance in the process. They keep asking questions about the limits of the models behind the results. Although they test some of their assumptions and share their tacit knowledge, they are showing a lack of confidence in the results. They only used Urban Strategy to look at traffic intensities (mainly on the bridges) and stayed on a very abstract level of detail. In general this group followed a design – evaluate – design – evaluate approach.

4.2 Group 2 (3 persons)

The second group consisted of three male urban planning students with a background in land use and mobility studies. During the introduction of Urban Strategy one participants asks clarification on the legend that is used in the traffic intensity map. Another participant asks questions relating to the borders of the model: what can(‘t) it do?

The strategy making is started as an individual exercise. The participants started to individually think, look and draw. The first idea that is put to the test is the extension of the road network to connect the new tunnel. With this, the group hopes to solve some of the congestion and externalities of the east-west corridor through the city. During the drawing of this new road in Urban Strategy, the system created several errors. In the end, the system had to go back to the starting position, because the network was not functioning properly any longer.

5. OUTCOMES

5.1 Quality of outcome

The total number of participants (7) and groups (2) are too small to make significant statements about the effects of Urban Strategy. We also did not have a control group of students that dealt with the planning problem in a business-as-usual scenario (i.e. no support from a PSS). However, the results are still offering valuable insights.

Three experts (PhD students in the area of integrated land use and transport planning) were asked to rate the outcomes of the two groups (the two integrated land use and transport strategies). They were asked to rate the statements in table 1 on a seven point Likert scale. Table 3 shows the average of the six scores (three raters times two strategies) on all statements and on the four dimensions.

Table 3: Quality of the outcome

	Score	**Group 1 (4p)**	**Group 2 (3p)**	**N**
Novelty	**3,6**	**3,4**	**3,7**	
Originality	**3,0**	**2,5**	**3,6**	
The strategy is ingenious	*2,8*	*2,5*	*3,0*	*4*
The strategy is imaginative	*3,5*	*3,0*	*4,0*	*4*
The strategy is surprising	*3,2*	*2,7*	*3,7*	*6*
The strategy is novel	*2,7*	*1,7*	*3,7*	*6*
Paradigm relatedness	**4,2**	**4,3**	**4,0**	
The strategy is radical	*3,7*	*4,0*	*3,3*	*6*
The strategy is transformational	*4,7*	*4,7*	*4,7*	*6*
Workability	**3,9**	**2,9**	**4,2**	
Implementability	**3,4**	**3,0**	**3,7**	
The strategy can be easily implemented	*3,4*	*3,0*	*3,7*	*5*
Acceptability	**4,1**	**2,8**	**4,3**	

The strategy is socially acceptable	~~*3,0*~~	~~*1,0*~~	~~*4,0*~~	*3*
The strategy is legally acceptable	*4,3*	*3,5*	*5,0*	*4*
The strategy is politically acceptable	*4,0*	*4,0*	*4,0*	*4*
Relevance	**3,1**	**2,5**	**3,8**	
Applicability	**3,4**	**3,3**	**3,5**	
The strategy applies to the stated problem	*3,4*	*3,3*	*3,5*	*5*
Effectiveness	**2,9**	**1,8**	**4,0**	
The strategy will solve the problem	*3,0*	*2,0*	*4,0*	*4*
This is an effective strategy	*2,8*	*1,5*	*4,0*	*4*
Specificity	**2,9**	**2,5**	**3,4**	
Completeness	**2,9**	**2,6**	**3,2**	
The strategy can be decomposed.	*4,8*	*4,0*	*5,5*	*4*
The strategy covers who	*1,0*	*1,0*	*1,0*	*6*
The strategy covers what	*4,3*	*3,7*	*5,0*	*6*
The strategy covers where	*5,3*	*5,3*	*5,3*	*6*
The strategy covers when	*1,2*	*1,3*	*1,0*	*6*
The strategy covers why	*1,7*	*1,0*	*2,3*	*6*
The strategy covers how	*1,8*	*1,7*	*2,0*	*6*
Implicational explicitness	**2,5**	**1,3**	**3,7**	
There is a clear relationship between the recommended action and the expected outcome.	*2,5*	*1,3*	*3,7*	*6*
Clarity	**3,3**	**2,7**	**3,8**	
The strategy is clearly communicated	*2,8*	*2,0*	*3,7*	*6*
The strategy is easy to understand	*3,7*	*3,3*	*4,0*	*6*

* The statements that were rated by half of the (less than) raters (*grey*) are excluded from the calculations.

In a lack of a control group the only reference point that we have is an expected average. Following this, we could state that each score under 3,5 is relatively bad and above 3,5 is relatively good. The average aggregated score for the quality of the outcome is 3,3. However, there is a large difference between the two groups (resp. 2.8 and 3.8).

The dimensions novelty and workability are rated as good, although only slightly above average (resp. 3,6 and 3,9). There are also a very limited number of statements that score relatively good. On average the two strategies are rated as relatively radical (3,7) and transformational (4,7) legally and politically acceptable (4,3 and 4,0) and decomposable (4,8), especially into what (4,3) and where (5,3)

The lowest scores are related to the sub dimensions originality (3,0), effectiveness (2,9), completeness (2,9) and explicitness (2,5). The expert raters have low rates on the statements for ingeniousness (2,8), novelty (2,7) and effectiveness (2,8). They also think that there is too little information in the strategies on who (1,0), when (1,2), why (1,7) and how (1,8).

5.2 Quality of process

To assess the quality of the process the seven participants were asked to rate the statements from table 2 on a seven point Likert scale. This again means that an average score above 3,5 equals a relatively good score and below 3,5 a relatively bad one. Although the number of participants is too

low to show significant patterns, all dimensions show a positive result. The overall aggregated average for the quality of the process is 4,0.

Table 4: Quality of the process

	Score	Group 1 (4p)	Group 2 (3p)	N
Reaction	**3,6**	**3,1**	**4,3**	
I have a good feeling about the session	5,3	4,5	6,3	*7*
The session resulted in valuable results	2,7	1,8	4,0	*7*
The session was successful	4,3	3,3	5,7	*7*
I am satisfied with this session.	4,6	4,3	5,0	*7*
I am confident that the group solution is correct	3,1	1,5	5,3	*7*
The results of the session offer real solutions for the problem	2,3	2,0	2,7	*6*
The results of the session are based on correct assumptions on the underlying system	2,6	2,8	2,3	*7*
Insight	**4,2**	**4,2**	**4,3**	
My insight into the problem has increased	4,7	4,8	4,7	*7*
The session has given me insight into the possibilities that my organisation has in 'steering' the problem	5,0	5,0	NoData	*1*
It is clear to me what the causes of the problem are.	4,0	3,3	5,0	*7*
I now have more insight into the processes that play a role in the problem	4,5	5,0	4,0	*6*
The session has given me more insight into the relations between the elements that compose the problem.	4,3	4,5	4,0	*7*
The session resulted in new insights	4,7	5,0	4,3	*7*
My understanding of the opinions of the other participants about the problem has increased	3,8	3,7	4,0	*6*
I understand how other participants in the session perceive the problem	4,3	4,0	4,7	*6*
I better understand the proposed solutions of other participants in the session.	3,6	3,0	4,0	*5*
Commitment	**4,4**	**3,3**	**5,0**	
I support most of the results that were drawn during the session	4,4	4,0	5,0	*7*
I will communicate the results of the meeting in front of other members of my organisation	4,5	4,5	NoData	*2*
I will try to convince others in my organisation of the importance of the results	1,5	1,5	NoData	*2*
Behaviour	**5,0**	**5,0**	**5,0**	
I will use insights from the session in my daily planning practice	5,0	5,0	5,0	*6*
Perception of communication	**4,0**	**3,3**	**4,7**	
The process has given me insight into other people's opinions and ideas about the problem	4,0	3,3	4,7	*6*
Perception of development of shared language	**4,1**	**4,1**	**4,2**	
During the sessions we have developed a shared professional language	3,9	3,8	4,0	*7*
During the sessions a platform emerged that supported the sharing of ideas	4,4	4,5	4,3	*7*
Perception of consensus	**5,1**	**4,5**	**5,8**	
We have reached a shared vision of the problem	5,3	5,0	5,7	*6*

The results integrated diverse opinions and ideas of the participants	4,4	4,0	5,0	*7*
We were able to reach a consensus on the problem	5,3	5,0	5,7	*7*
We have reached a shared vision on the strategic goals	5,1	4,3	6,3	*7*
We have reached a shared vision on the possible solutions	5,1	4,3	6,3	*7*
Perception of cohesion	**4,9**	**3,7**	**4,1**	
I had a strong sense of being part of a group	5,7	5,3	6,3	*7*
The session brought me closer to the other participants	4,7	4,0	5,7	*7*
We experienced conflict during the session	(-) 2,6**	(-)2,5	(-)2,7	*5*
There was conflict about the task we had in the session	(-) 2,4	(-)3,0	(-)1,7	*7*
Perception of efficiency gains	**3,9**	**4,6**	**4,3**	
The session was time efficient	3,9	4,3	3,3	*7*
We were able to perform the work with less effort than in regular sessions	*3,3*	*6,0*	*2,0*	*3*
We were able to perform the work in less time than in regular sessions	*5,0*	*4,0*	*6,0*	*2*
We were able to do more in the same time compared to regular sessions	*4,7*	*4,0*	*6,0*	*3*

* The statements that were rated by less than half of the participants (*grey*) are excluded from the calculations.

** The statements with a minus are negative statements (the lower the rate, the better the score).

Of the dimensions, the perception of consensus has the highest score of 5,1. However, there are large differences between the two groups. In the first group of four persons this was rated with 4,4 and in the second 5,8 The participants were especially content with the shared vision (5,3) and consensus (5,3) on the problem. If we look to the separate statement, it is noteworthy that the participants rate the "sense of being part of a group" highly (5,7).

On the negative side, the participants think that the sessions do not offer real solutions for the problem, rate the value of the results fairly low and also doubt if the results are based on correct assumptions about the land use and transport system.

6. CONCLUSIONS AND IMPLICATIONS

Although these two treatment groups only give us some first insights, we can already identify some interesting directions. It seems that Urban Strategy in its current form has difficulties in supporting integrated land use and transport strategy making on the urban scale.

6.1 Conclusions relating to the measurement framework

In this report we have operationalized the goals of PSS (to improve planning) into a measurement framework of two multidimensional concepts: the quality of the outcome (rated by external experts) and the quality of the process (rated by the participants). All parameters were measured on a 7-point Likert scale.

Since we have not yet measured a control group, it is difficult to state what the value of the framework is. The differences that occur between the two groups (both underwent the same treatment) might hint to the fact that the reliability of the indicators is weak. It can also indicate that the composition of the group of participants has a strong influence on the measured indicators.

Especially in some of the statements that were rated by the external experts, a high standard deviation was found, indicating that measurement validity can be weak. We will have to do a more in-debt analysis on these specific indicators and see where this lack of agreement comes from.

6.2 Conclusions relating to Urban Strategy

From the first results of this experiment, it seems that Urban Strategy in its current form has very little positive effect on the quality of the outcome (3.3) and quality of the process (4,0) of integrated land use and transport strategy making. Observations of the sessions strengthened this finding. It seemed that the scale and level of detail are currently not well tuned to the demands of the land use and transport strategy makers. Also, the kind of indicators used (IC maps, noise areas) are not well suited for the kind of questions that are asked in this planning domain.

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APPENDIX I

Vervoersplanologische uitdaging

Rotterdam West (zie kaart 1) kent tot 2030 een grote ruimtelijke- en mobiliteitsopgave. Zo moeten er in het gebied ruimte worden gevonden voor een groot aantal nieuwe inwoners en banen. Ook de omgeving van het gebied is vol in ontwikkeling, met als voornaamste verandering de aanleg van de Tweede Maasvlakte in het westen. Deze opgave resulteert in een enorme druk op het wegennetwerk van de stad, omdat goederen moeten worden afgevoerd en tegelijkertijd de inwoners en arbeidsplaatsen bereikbaar moeten blijven.

Strategie rondom nieuwe oeververbinding

De Stadsregio Rotterdam denkt momenteel aan het creëren van een nieuwe oeververbinding in het gebied als oplossingsrichting voor dit complexe vraagstuk, waarbij er 2 mogelijke varianten worden onderzocht (zie kaarten 2 (verkeer), 3 (lucht) en 4 (geluid)). Dit is ook het startpunt van jullie opdracht. Jullie worden als vervoersplanologisch team gevraagd om een integrale ruimte- en mobiliteitstrategie te maken voor het gebied. De opgave dient met de volgende zaken rekening te houden:

- Er moeten 25.000 nieuwe inwoners en 25.000 nieuwe banen worden toegevoegd aan het gebied
- De strategie moet ervoor zorgen dat het mobiliteitssysteem goed blijft functioneren, ook na uw interventies.
- Bij het maken van de strategie moeten jullie rekening houden met leefbaarheidsaspecten (met name geluid en luchtkwaliteit)

The Intention of Residents in Urban Renovation

-A case study in Tainan, Taiwan

Hsiang-Leng CHEN[1], Wei-Ju CHANG[2], Ko-Wan Tsou[3]

Abstract

Recently, urban Renovation became one of the most important strategies for the government to implement urban regeneration. It more focuses on improving community environment or buildings. The government had tried many different ways to encourage people to participate in urban renovation projects, such as tax exemption, floor area incentive, and subsidies. However, despite of its great promotional effort, the government had not seen results. Thus, this research set out to reveal the key factors which can influence the intention of residents in urban renovation.

A conceptual model of this study was built in two steps. First, social cognitive theory, theory of planned behavior, and technology acceptance model were applied to analyze residents' behavior in urban renovation. Second, key impact factors which influence the intention of residents were revealed through literature review and pilot text. Once the theoretical model was built, a questionnaire was designed based on the model to understand the intention of Tainan residents. Structural equation modeling was then applied to survey result to modify the conceptual model in order to estimate the most likely relationships between the variables.

There are two major accomplishments in this research. First, a conceptual model of resident's intention in urban renovation was built. The key impact factors are personal attitude, perceived usefulness, neighbors, residential dissatisfaction and perceived ease of use. Researchers can apply this model in different studies to reveal residents' intention in urban renovation. Second, the results of the structural coefficients show

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that residential dissatisfaction and personal attitude were identified as the most important factors to influence Tainan residents' intention. In addition, people are more concerned about the quality of community environment than the buildings themselves. Thus, Tainan city government should implement projects from a neighborhood or local community. Furthermore, not only tell residents how many subsidies the government can provide but also show them how much the urban renovation project can improve their environment.

1. Introduction

In the context of urban regeneration (UR), governments generally seek to implement policies aimed at improving the social and physical environment. Moreover, it is an important issue for promoting a sustainable city (Roberts& Sykes (*2000*) ; Wallbaum .et al , 2011) Unfortunately, these policies usually fail, or have unsatisfying results (Mathers .et al,2010). Many studies have tried to explore the reasons behind the unsatisfactory results of such policies, most of past studies focused on improving the policy or providing more incentives. However, residents play a more and more important role in urban regeneration affairs. A UR project cannot be succeed without resident's support (Gullino, 2009; Chen, 2009). However, the factors that influence residents' intention in urban regeneration still remain relatively unclear. Thus, this research set out to reveal the key factors which can influence the intention of residents in UR.

In Taiwan, urban renovation became one of the most important strategies to implement urban regeneration since 2009. It more focuses on improving community environment or buildings. The government had tried many different ways to encourage people to participate in urban renovation projects, such as tax exemption, floor area incentive, and subsidies. However, despite of its great promotional effort, the government had not seen results. Comparing with other UR policies, local residents play the most important role in urban renovation project. Residents can be the main developer, and implement the project without any other private sectors. Thus, it is an appropriate example to understand the intention of the resident.

2. Model development

This part will start from reviewing the theories utilized in this study and then outlines the model development. Finally, the hypotheses and conceptual model was built to reveal resident's intention in urban regeneration

2.1 Theoretical background

In the literature that utilizes psychological behavior theory in modal choice research, the theory of planned behavior (TPB, Ajzen, 1985) has been widely used in predicting and explaining intended behavior across a variety of disciplines. Moreover, the technology acceptance model (TAM) is among the most commonly employed theories for examining the new technology acceptance (Davis, 1989). Recently, it applied to exam people's intention for the new policies. Below are some details of above three theories.

Theory of Planned Behavior (TPB)

The TPB provides a useful conceptual framework for dealing with the complexities of human social behavior. Ajzen (1991) proposed the TPB to improve the explanatory power of Theory of Reasoned Action (TRA) by adding the construct of perceived behavioural control, in order to address the limited when TRA dealing with behaviours over which people have incomplete volitional control. The TPB is based on the proposition that an individual's behavior is a direct function of behavioral intention and perceived behavioral control. Intentions are themselves shaped by attitude (toward the behavior), subjective norms and perceived behavioral control (Ajzen, 1991). The three determinants of behavioral intentions are each based on an underlying belief structure: behavioral, normative, and control beliefs. In their respective aggregates, behavioral beliefs produce a favorable or unfavorable attitude toward the behavior; normative beliefs result in a perceived social pressure or subjective norm; and control beliefs give rise to perceived behavioral control with regard to performing the behavior (Fishbein & Ajzen, 1975). Taken together, attitude toward the behavior, subjective norm, and perceived behavioral control translate to the formation of a behavioral intention which is the immediate determinant of actual behavior (Heberlein & Black, 1976). In keeping with Ajzen's model of the TPB, Figure 1 shows how attitude toward using a self-issue and return

system, the subjective norm, and perceived behavioral control affect users' intention to use it. Over the years, support for TPB as a model of general social behaviour came from many studies. Recently, it has been applied to predict and explain people's intention of public policies.

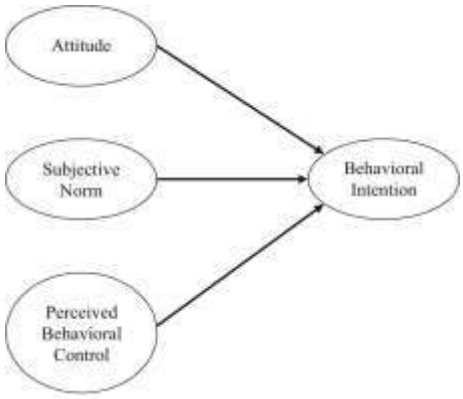

Figure 1. TPB model (source: Ajzen, 1991)

Social Cognitive Theory (SCT)

SCT explains how people acquire and maintain certain behavioral patterns, while also providing the basis for intervention strategies (Bandura, 1997). Evaluating behavioral change depends on the factors environment, people and behavior. SCT provides a framework for designing, implementing and evaluating programs (figure 2).

Environment refers to the factors that can affect a person's behavior. There are social and physical environments. Social environment include family members, friends and colleagues. Physical environment is the size of a room, the ambient temperature or the availability of certain foods. Environment and situation provide the framework for understanding behavior (Parraga, 1990). The situation refers to the cognitive or mental representations of the environment that may affect a person's behavior. The situation is a person's perception of the lace, time, physical features and activity (Glanz et al, 2002). The three factors environment, people and behavior are constantly influencing each other.

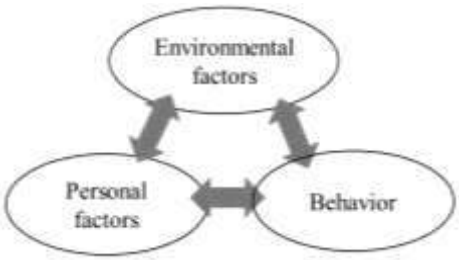

Figure 2. SCT model

Technology acceptance model (TAM)

In the technology adoption context, the technology acceptance model (TAM) is among the most commonly employed theories for examining technology acceptance (Davis, 1989). The appeal of TAM lies in that it is both specific and parsimonious, and displays a high level of predictive power with regard to technology use. TAM suggests that perceived ease of use (PEOU) and perceived usefulness (PU) are the two most important factors in explaining technology use. PEOU is the perception that a particular system or technology is easy to use, whereas PU is the degree to which an individual believes that using a technology will enhance his or her performance (Davis, 1989; Ajzen,1986; Ajzen & Madden, 1986; Chen & Chao,2010). The introduction of an urban renovation strategy in urban regeneration can be viewed as a new policy from the residents' perspective. Therefore, this study also applied TAM to build up a theoretical model.

2.1 Conceptual model

TAM and TPB are social psychology theories and applied to predict people's behaviour. The reason for including TAM and TPB is that both models are extended from the theory of reasoned action (TRA), but have different foci, making the inclusion theoretically compatible and potentially complementary(Fishbein & Ajzen, 1975). Comparing with the SCT, these two theories more focus on the personal and social factor, but not deeply consider the physical environment factor which is an important issue in urban regeneration (urban renovation). In order to provide an suitable model to reveal resident's behavior in urban regeneration policies, above three theories are applied to build up a theoretical model as figure 3.

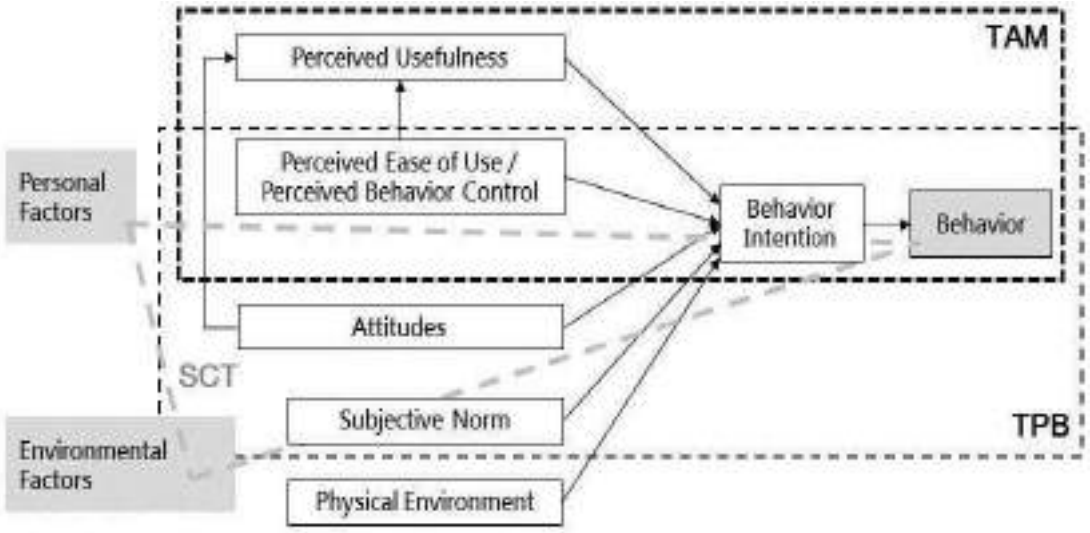

Figure 3. Theoretical model

2.2 Hypotheses and conceptual model

Based on the theoretical model, the conceptual model (figure 4) and hypotheses (H0~H7) were established to reveal the relationship between the key factors and resident's intention. Intentions capture the motivational factors that drive a person to perform a behavior (Ajzen, 1991).H0 was omitted from this model because urban regeneration is at very beginning stage and difficult to find enough sample who had moved into the implement stage. Moreover, the role of intentions on actual performance has been reported to be a strong predictor of actual usage (Ajzen,1991；Venkatesh et al., 2003).

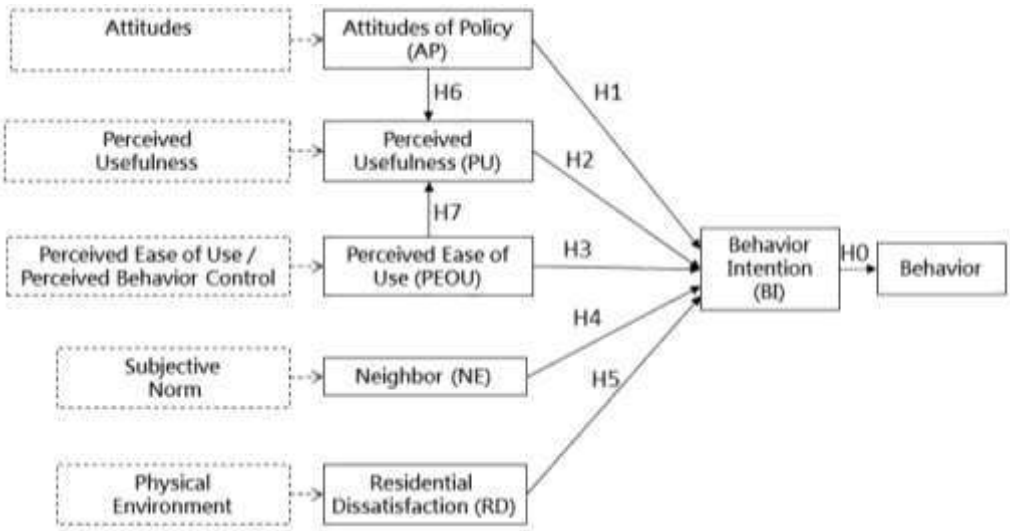

Figure 4. Conceptual model

H0. Behavior intention (BI) has a positive effect on behavior.
H1. Attitudes of policy (AP) has a positive effect on behavior intention
H2. Perceived Usefulness (PU) has a positive effect on behavior intention
H3. Perceived Ease of Use (PEOU) has a positive effect on behavior intention
H4. Neighbors' intention (NE)) has a positive effect on behavior intention
H5. Residential dissatisfaction (RD) has a positive effect on behavior intention
H6. Attitudes of Policy (AP) has a positive effect on perceived usefulness (PU)
H7. Perceived ease of use (PEOU) has a positive effect on perceived usefulness (PU)

3. Analysis and Results

3.1 Data collection

The questionnaire survey was conducted to collect data from residents who live in the regeneration area[4] in Tainan during April to June of 2011. A total of 216 questionnaires were distributed and 181 useful samples yielding an effective response rate of 83.7%.Out of all respondents 42.0% were female, 58.0% male. A majority of the respondents were the 3~5 people family (70.1%). While 8.8% of the respondents indicated their annual household income was less than NT$240,000 (around US$8,000), 83.4% reported their annual income was within the range of NT$240,001–NT$350,000 (around US$11,667), and 7.7% reported annual income of more than NT$1,350,000 (around US$45,000).50.3% response live in business district and 49.7% in residential district. A majority of the respondents' house has been built over 21 years (79.2%) so it is reasonable to implement urban renovation in these areas.

3.2 Measurement development

A survey questionnaire with all the measures was developed using items that were validated from previous studies. A pre-test was carried out with randomly selected residents in Tainan regeneration area. Based upon feedback from a pilot sample of 102 residents, the questionnaire was revised to improve clarity and reliability. Moreover, the Kaiser-Meyer-Olkin (KMO) of variables under 0.6 was eliminated from the questionnaire. According to the hypothesis model, the questionnaire is designed in six main parts in order to collect the data for RD, PEOU, NE, PU, BI, and

[4] Regeneration area is pointed by the Tainan government which normally are the older or poorer area in the city.

AP. Likert scale was applied to measure the first 4 parts and nominal scale was applied to measure resident's behavior intention of urban regeneration.

3.3 Reliability and Factory analysis

Reliability refers to the consistency of a measure and Cronbach's alpha is often applied to test whether it produces consistent results under consistent conditions. The higher the score, the more reliable the generated scale is. Nunnaly (1978) has indicated 0.7 to be an acceptable reliability coefficient. Most of the coefficients are over 0.8 (table 1) and it indicated that internal consistency is acceptable. Only the coefficient of PEOU is lower 0.7 which meaning its two questions are not consistency. However, both urban regeneration knowledge and economical ability are very important in urban regeneration issues. Thus, the two questions are still applied in the questionnaire.

Table 1. Cronbach's alpha values for all measures

Measures	Cronbach's alpha
Attitudes of policy	0.831
Perceived Usefulness	0.863
Perceived Ease of Use	0.384
Neighbours	-
Residential dissatisfaction	0.816
Behaviours Intention	0.921
whole	0.837

Factor analysis

Factor analysis is a collection of methods used to examine how underlying constructs influence the responses on a number of measured variables. The KMO measures the sampling adequacy which should be greater than 0.5 for a satisfactory factor analysis to proceed. According to the test results, the KMO measure is 0.809 and the Bartlett's test of sphericity is significant which indicate that it is appropriate to apply a factor analysis for the data.

A preliminary CFA was then conducted. As all factor loadings in table 2 are over 0.5 and the variance explained of each factor is over 50%, it indicate the factors can explain the data and analysis the latent variable (Hair et al., 1992).

Table 2. Exploratory factors analysis results

Factor	Question	Eigenvalue (factor loadings)	Variance explained (%)
RD	Neighborhood conveniences	0.62	58.105
	Neighborhood safety	0.66	
	Neighborhood appearance	0.78	
	Housing appearance	0.72	
	Housing safety	0.68	
AP	Idea of urban regeneration	0.83	85.544
	Government's urban regeneration policies	0.86	
PEOU	Urban regeneration knowledge	0.46	61.908
	Economical ability	0.52	
BI	Barrier-free facility improvement	0.84	76.621
	Public infrastructure improvement	0.88	
	Neighborhood appearance improvement	0.92	
	Housing appearance improvement	0.85	
	Housing structure improvement	0.75	
NE		_	_
PU	Housing interest	0.90	78.949
	Neighborhood interest	0.81	
	Economical interest	0.78	

3.4 Structural model and hypothesis tests

According to Table 3, error variance are positive, T-test are significant, most of the factor loadings are between 0.5 to 0.95, and the standard error is low. All above test result shows that the fitness of model is acceptable.

Table 3 Fitness judgments

Test	Result	Fitness
Error variance	All positive numbers	Yes
T-test	Significant (over 1.96)	Yes
Factor loadings	Most of the factor loadings are between 0.5 and 0.95. Only urban regeneration knowledge of PEOU is only 0.46.	acceptable
Standard error	low	Yes

Discriminant validity, which assesses whether individual indicators can adequately distinguish between different constructs, is ensured if the square root of Average Variance Extracted (AVE) for each construct is greater than the correlation between that and all other constructs in the model (Fornell & Larcker, 1981). The correlation matrix in Table 4 indicates that the square root of AVE (shown in gray background along the diagonal) of each construct was higher than corresponding correlation values for that variable in all cases, thereby assuring discriminant validity.

Table 4. Result for the test of Discriminant Validity

	AP	PEOU	NE	PU	RD	BI
AP	.878					
PEOU	.000	.180				
NE	.000	.000	.947			
PU	.370	.107	.000	.578		
RD	.000	.000	.000	.000	.374	
BI	BI	.056	.115	.207	.173	.379

3.5 Hypotheses testing

Based on the previous test, the initial model was modified as figure 5 in order to improve the fit. Compare with the initial model, the PEOU only has a directly positive effect on PU and has an indirectly positive effect on BI through PEOU.

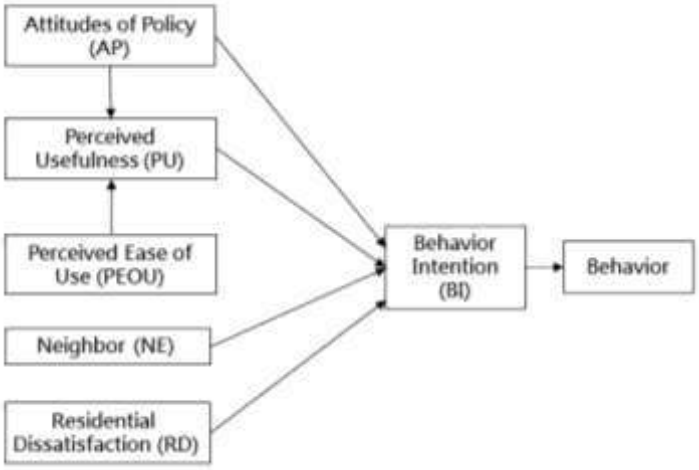

Figure 5.Modified mode

The modified mode was text by SEM and the result of T-test is significant. Figure 6 is the result of path analysis. Only the coefficient of PEOU and NE is lower but others are acceptable.

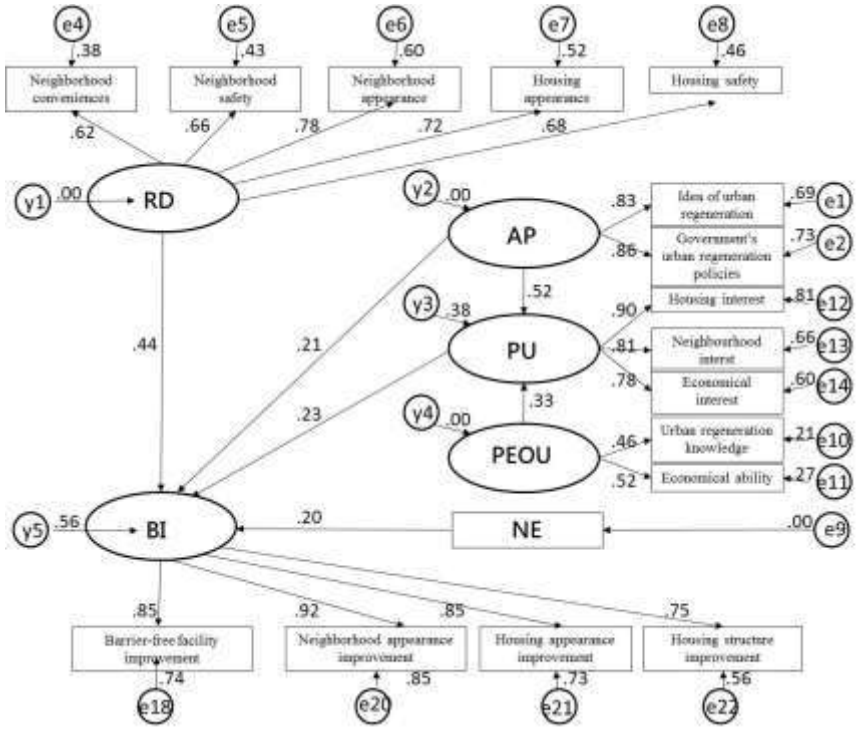

Figure 6. Path diagram of the modified model

Table 5 is the result of the path analysis. AP, PU, NE, and RD have direct effect on BI. RD has a highest effect on BI (0.44), follow are AP (0.41), PU (0.23), and NE (0.20). Moreover, AP and PEOU have indirect effect on BI and the result is 0.52 and 0.33. It indicates that AP and PEOU have direct effect on PU, and effect BI through PU.

Table 5 Path analysis

Path relationship					Direct	indirect	whole
AP	→	BI			.401		.522
	→	PU	→	BI		.121	
PU	→	BI			.232		.232
PEOU	→	PU	→	BI		.078	.078
NE	→	BI			.206		.206
RD	→	BI			.445		.445

5. Discussion and conclusions

There are two major accomplishments in this research. First, a conceptual model of resident's intention in urban renovation was built. Second, the results indicate the important factors to influence resident's intention in urban regeneration.

A conceptual model of residents' intention in urban renovation was established

The key impact factors are personal attitude, perceived usefulness, neighbors, residential dissatisfaction and perceived ease of use. Also, the questions for measuring each factor were sieved out by literature review and pre-test. Furthermore, the modified conceptual model (figure 5) indicates the fitness relationship between the factors. Researchers can apply this model in different studies to reveal residents' intention in urban renovation. The government officers can utilize the model to test the new urban regeneration policies before implement.

The results of SEM indicate the key factors to influence Tainan residents' intention

The results of the structural coefficients show that residential dissatisfaction and personal attitude were identified as the most important factors to influence Tainan residents' intention. In addition, people are more concerned about the quality of community environment than the buildings themselves. Thus, Tainan city government should implement projects from a neighborhood or local community. Furthermore, not only tell residents how many subsidies the government can provide but also show them how much the urban renovation project can improve their environment.

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Territorial effects of climate change on Europe's regions

Johannes Lückenkötter, Stefan Greiving, Christian Lindner[1]

Abstract

Climate change and its effects on Europe's regions are highly political issues. The European Commission and its member states, as well as regional and local governments and civil society organizations are exploring and debating how to adapt to the projected climatic changes. It is clear that Europe's regions will be affected differently and will also have different means available for adapting to climate change. Thus territorially differentiated adaptation strategies are necessary. However, there are hardly any studies that employ a territorial perspective to the issue of climate change impacts and adaptation in Europe. Most studies are strictly sectoral in outlook. But what is needed, from a policy-making perspective, is a cross-sectoral assessment that provides an evidence base for regionally differentiated, tailor-made adaptation strategies.

The paper presents the methodology and key findings of the recently concluded research project ESPON Climate.[2] The project conducted an integrated climate change vulnerability assessment with a prime territorial focus. Building on a widely accepted conceptual framework the study used ten climate change variables based on the CCLM climate model, 19 sensitivity indicators and 15 adaptive capacity indicators to calculate the climate change vulnerability of 1,350 European regions. The results are presented as maps and discussed from a pan-European perspective.

One of the core findings is that Europe's climate change vulnerability runs counter to territorial cohesion. The assessment indicates that climate change would deepen the existing socio-economic imbalances between the core of Europe and its Southern and South-Eastern parts because many economically lagging regions also are the most vulnerable to climate change.

Finally, implications and options for EU and regional policy making are discussed. For example, the project's findings could inform the allocation of EU funds that would provide targeted financial assistance to regions that are projected to be severely affected by climate change and also have low adaptive capacity. This would ultimately contribute to a more balanced territorial development of European regions. The paper concludes with methodological reflections and a careful outlook.

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[2] The project was conducted within the framework of the ESPON 2013 Programme and was partly financed by the European Regional Development Fund. This paper does not necessarily reflect the opinion of the members of the ESPON Monitoring Committee.

1. Introduction

Climate change is a high profile political issue in Europe with a distinct territorial dimension. For example, in the "Europe 2020 Strategy for smart, sustainable and inclusive growth" (COM 2010) the EU took up the challenge of climate change and set ambitious targets for greenhouse gas emissions, renewable energy use and energy efficiency. Likewise the Territorial Agenda 2020 (EU 2007) regarded climate change and environmental risks as very important and as containing both challenges and potentials for territorial development. Finally, the EU White Paper "Adapting to climate change: Towards a European framework for action" (EC 2009) explicitly related climate change to territorial development in Europe and called for a planned response.

But such a systematic response to the development challenges of climate change requires an appropriate evidence base. Many European studies have until now focused on different types of impacts of climate change. The focus has usually been on very specific impacts or on particular sectors. While these studies contributed to the overall understanding of climate change mechanisms in Europe, their findings have seldom been transferable or comparable between sectors or between regions. What was missing was an overall, cross-sectoral assessment of climate change that would allow European policy-makers to understand the diversity of climate change impacts and develop territorially differentiated adaptation strategies at the European, national and regional level.

Taking up this challenge, this paper presents findings of the EU financed research project ESPON Climate, which conducted an innovative, integrated and pan-European climate change vulnerability assessment with an explicit territorial focus.

2. Concepts and methodology

2.1 Conceptual framework

The ESPON Climate project is based on a conceptual framework that is widely used in the climate change and impact research community (see Figure 1). According to this framework rising anthropogenic greenhouse gas emissions contribute to global warming and thus to *climate change*. This anthropogenic contribution runs parallel to natural climate variability. The resulting climate changes differ between regions, i.e. each region has a different *exposure* to climate change. In addition, each region has distinct physical, environmental, social, cultural and economic characteristics that result in different *sensitivities* to climate change. Together exposure and sensitivity determine the possible impact that climatic changes may have on a region. However, a region might in the long run be able to adjust, e.g. by increasing its dikes. This *adaptive capacity* enhances or counteracts the climate change impacts and thus leads to a region's overall *vulnerability* to climate change.

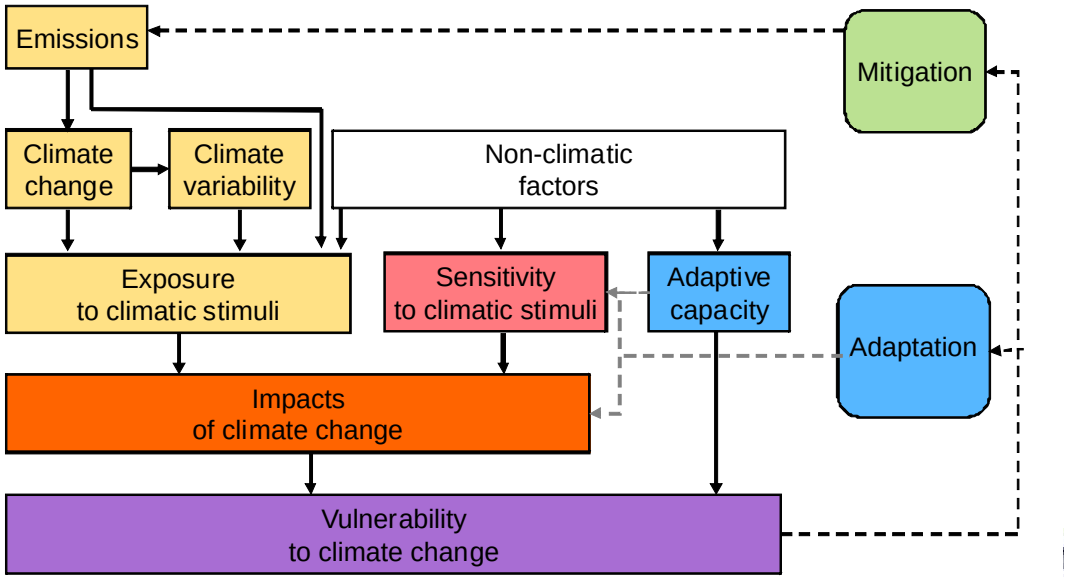

Figure 1: Conceptual framework (adapted from Füssel & Klein, 2002, p. 54)

In order to provide a clear basis of understanding these key concepts are further defined below:

Table 1: Definitions according to Füssel & Klein (2002) and IPCC (2007)

***Exposure*:** The nature and degree to which a system is exposed to significant climatic variations.
Sensitivity: The degree to which a system is affected, either adversely or beneficially, by climate related stimuli. The effect may be direct or indirect.
***Impacts*:** Consequences of climate change on natural and human systems. Depending on the consideration of adaptation, one can distinguish between potential and residual impacts.
Adaptive capacity (or adaptability): The ability of a natural or human system to adjust to climate change (including climate variability and extremes) to moderate potential damages, to take advantage of opportunities, or to cope with the consequences.
Vulnerability: The degree to which a system is susceptible to, or unable to cope with, adverse effects of climate change, including climate variability and extremes. Vulnerability is a function of the character, magnitude, and rate of climate variation to which a system is exposed, its sensitivity, and its adaptive capacity.
Mitigation: Climate change mitigation refers to all human attempts to mitigate the effects of climate change.

2.2 Methodology

Following this framework the ESPON project's methodology consisted of five main components (see Figure 2 for a graphical overview).

The *exposure analysis* focused on the climatic changes as such. It made use of existing projections on climate change and climate variability from the CCLM climate model, whose results have been used, among others, by the 4th IPCC assessment report on climate change. Using the IPCC climate scenario A1B (Nakicenovic et al. 2000) the ESPON Climate project aggregated data for two time periods (1961-1990 and 2071-2100) for eight climate stimuli.[3] River flooding and sea level rise were added as two immediate 'triggered effects' of these climate stimuli.

Each region was then assessed in regard to its climate change *sensitivity*. For each sensitivity dimension (physical, environmental, social, economic and cultural) several sensitivity indicators were developed. Each of the 19 sensitivity indicators[4] was calculated in absolute and relative terms and then combined. This integrates two equally valid perspectives on sensitivity: While relative sensitivity (e.g. density of sensitive population) is advantageous from a comparative point of view, the absolute sensitivity (e.g. absolute number of sensitive inhabitants) is more relevant from a policy/action point of view.

Exposure and sensitivity were then combined to determine the potential *impacts* of climate change. The analysis thus focused on what would be the result if climate change took place unrestrictedly and impacted on the regions without further preparation. For determining impacts each sensitivity indicator was related to one or more specific exposure indicator(s). For example, heat sensitive population (persons older than 65 years living in urban heat islands) were related to changes in the number of summer days (above 25°C), while forests sensitive to fire were related to summer days and summer precipitation. After determining the individual impacts, all impacts of one dimension were aggregated. The impact values of the five sensitivity dimensions were finally combined to one overall sensitivity value.

This aggregation of the various impact dimensions (and later the integration of exposure, sensitivity and adaptive capacity) raises normative issues induced by the theoretical framework. At these stages of the assessment process weighting takes place, for even if no weighting is deliberately performed, this then amounts to simply giving equal weights to each object. This weighting ultimately refers to cultural

[3] Exposure indicators used by ESPON Climate related to change in annual mean temperature, frost days, summer days, winter precipitation, summer precipitation, heavy rainfall days, snow cover days and evaporation.

[4] Sensitivity indicators used by ESPON Climate related to roads, railways, airports, harbours, thermal power stations, refineries, settlements, coastal population, population in river valleys, heat sensitive population in urban heat islands, NATURA 2000 protected areas, occurrence of forest fires, soil organic carbon, soil erosion, museums, cultural World Heritage Sites, energy supply and demand, agriculture and forestry employment and GDP, tourism comfort index and tourist beds.

beliefs and political preferences, e.g. how one values human lives in comparison to economic damages. The ESPON Climate project decided to address these normative issues openly and conducted a Delphi survey among the members of the ESPON Monitoring Committee, which represented the European Commission, 27 European countries and four Partner States. Committee members were asked to propose individual weights for all relevant stages and dimensions of the assessment (see results in Table 2).[5]

Table 2: Weights resulting from the Delphi-based assessment

Sensitivity		*Adaptive capacity*	
Cultural sensitivity	0.1	Economic resources	0.21
Economic sensitivity	0.24	Knowledge and awareness	0.23
Environmental sensitivity	0.31	Infrastructure	0.16
Physical sensitivity	0.19	Institutions	0.17
Social sensitivity	0.16	Technology	0.23

A third major component of the project was the assessment of *adaptive capacity* in regard to climate change, i.e. the economic, socio-cultural, institutional and technological ability of a region to adapt to the impacts of a changing regional climate. This could mean preventing or moderating potential damages but also taking advantage of new opportunities. Several indicators were developed for each of the five major dimensions of adaptive capacity. The 15 individual indicators were subsequently combined for each dimension and finally aggregated to an overall adaptive capacity. This aggregation was again conducted on the basis of the Delphi survey results.

To determine the overall *vulnerability* of regions to climate change the impacts and the adaptive capacity to climate change were combined for each region. The underlying rationale is that a region with a high climate change impact may still be moderately vulnerable if it is well adapted to the anticipated climate changes. On the other hand, high impacts would result in high vulnerability to climate change if a region has a low adaptive capacity.

Mitigation is also highly relevant for territorial development and cohesion since climate policy implementation and the transition to a low-carbon society will have differential effects on sectors and regions. Mitigation measures, even implemented at the regional level, will not have significant effects on regional climate but only contribute to an overall reduction of global climate change. Therefore the project's mitigation analysis could only determine the mitigation capacity of each region but cannot determine what effect this would have locally or regionally.

Finally seven *case studies* at the trans-national, regional and local level cross-checked and deepened the findings of the pan-European assessment and explored the diversity of response approaches to climate change.

[5] The survey yielded equal weights for exposure and sensitivity as well impact and adaptive capacity.

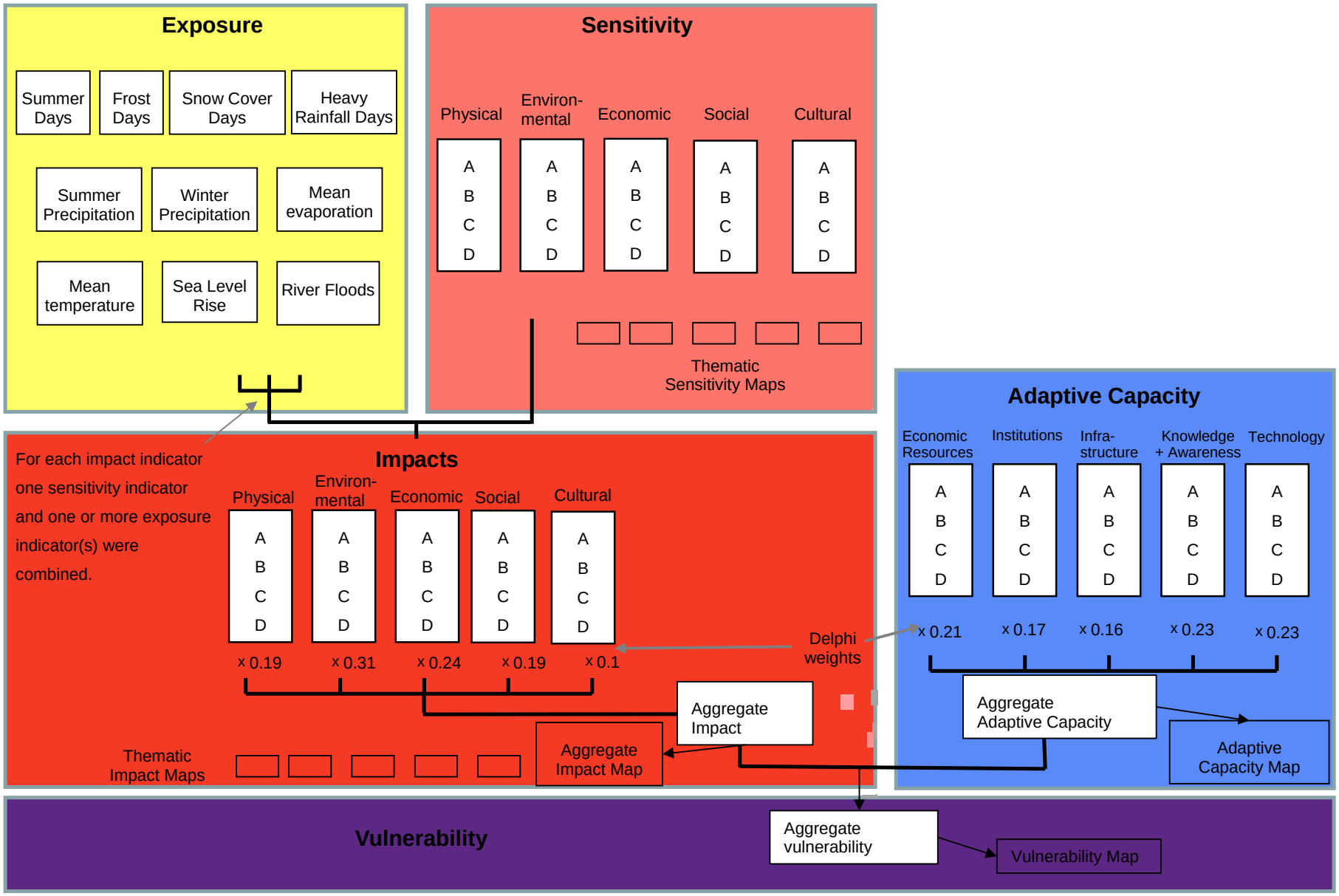

Figure 2: Overview of the ESPON Climate vulnerability assessment methodology (Greiving et al. 2011)

3. Main results

This section presents key outcomes of applying the methodology described above. For a full presentation and discussion of individual exposure, sensitivity and impact indicators one may refer to the Scientific Report of the ESPON Climate project (Greiving et al. 2011). Instead this paper focuses only on aggregated results regarding impacts, adaptive capacity and vulnerability to climate change.

The project's findings regarding impacts of climate change may be grouped into impacts primarily caused by extreme events (flooding and heat) and those caused by changes of average climate conditions. The former group consists of potential physical, cultural and social impacts (see maps in Figure 3).

Potential **physical impacts** relate to physical structures such as settlements, roads, railways, airports, harbours, thermal power plants and refineries. These structures are especially sensitive to flood events. Consequently, the adjustment of coastal storm surge heights with the projected sea level rise accounts for most of the high impacts in north-western European regions bordering the Atlantic Ocean (sometimes exacerbated by fluvial and pluvial flooding). Projected increases in river flood heights are responsible for regional 'hot spots' in Italy, Slovenia and Hungary. However, large parts of Europe may not expect significant impacts on their infrastructure resulting from climate change. In fact, physical structures in some central and southern European regions may even experience less climate-related impacts due to decreasing precipitation in these regions.

The potential **cultural impacts** of climate change focused on tangible cultural assets, because intangibles like norms and attitudes were considered part of the adaptive capacity of a region. More precisely ESPON Climate analysed what impact the projected climatic changes may have on the 350 UNESCO World Heritage Sites and ca. 20,000 museums in Europe. Not surprisingly the impact patterns for these cultural assets resemble those for infrastructures and settlements: The high impacts in Italy, Slovenia, Slovakia, Hungary and northern France, Belgium, the Netherlands, parts of Denmark and Finland are a consequence of the projected increase of flood hazards and the density of cultural sites in these regions. On the other hand, cultural assets in some Central European regions, especially in Poland, would benefit from decreasing flood hazards.

The potential **social impacts** of climate change relate to Europe's population, which is also mainly sensitive to extreme events that are driven by climate change: coastal storm surges exacerbated by sea level rise, increases in river flood heights, increasing flash floods, but also increasing heat events. Sensitivity to these changes is a matter of location, age group distribution, but also the density and size of urban areas that create urban heat island effects. Hence the social impact patterns again largely resemble those of physical impacts, because population centres are also concentrations of buildings and infrastructures. The highest impacts are primarily flood related and are projected for urban agglomerations on the Belgium, Dutch and Norwegian coasts as well as the city regions around Barcelona, Venice and

Ljubljana. In addition, southern Europe would be more affected because of the more compact urban form of its cities and greater increases in hot summer days. In contrast, the population of most non-coastal areas of Europe is potentially not or only marginally affected by climate change and some regions are even projected to have positive impacts due to declining flood hazards, e.g. in Poland and Portugal.

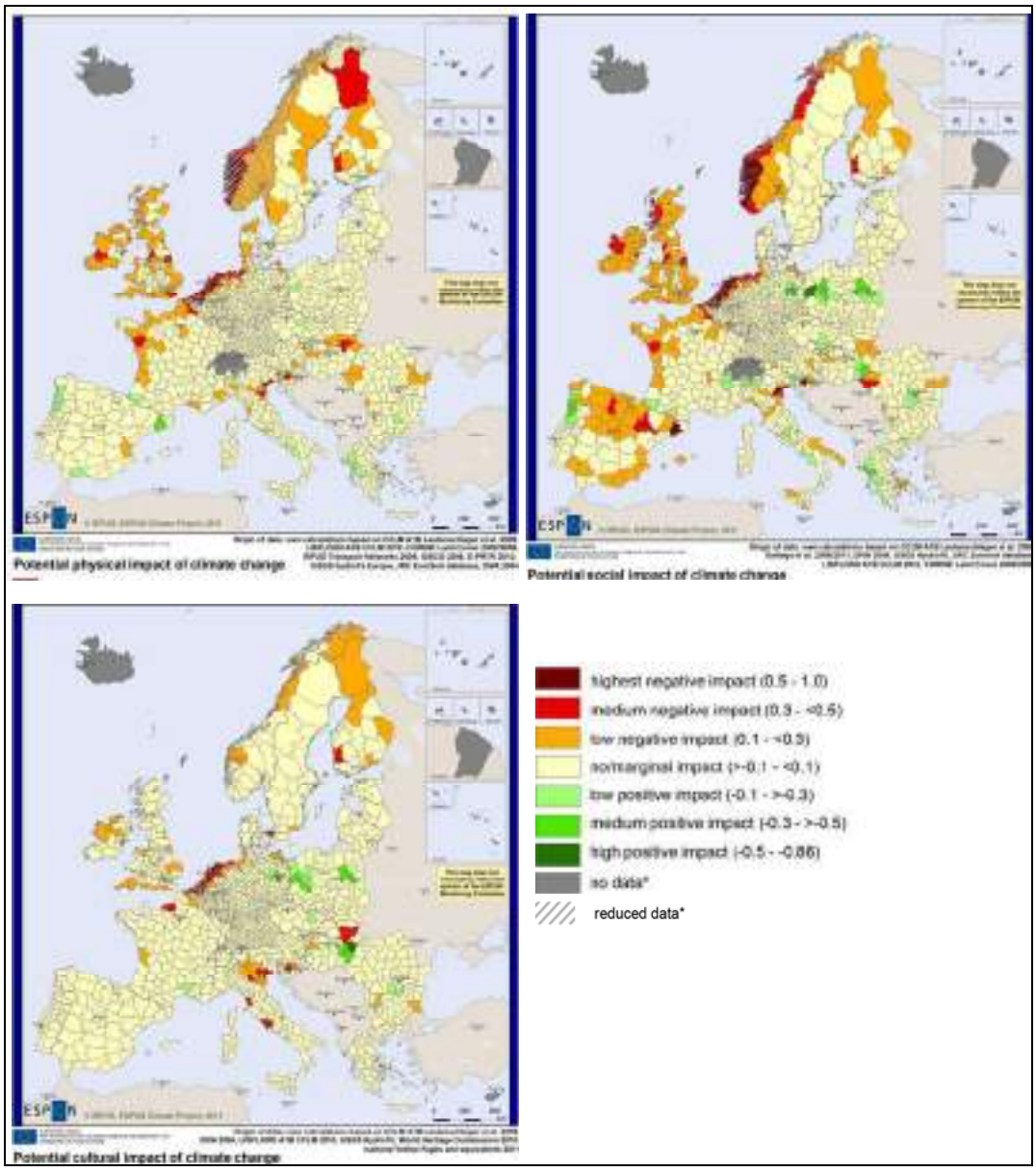

Figure 3: Potential physical, cultural and social impact (Greiving et al. 2011)

The second group of climate change impacts relate to changes of average climate conditions. In contrast to more robust sub-systems that are primarily affected by extreme events like e.g. floods, the economic and environmental sub-systems are sensitive even to creeping climatic changes (see Figure 4).

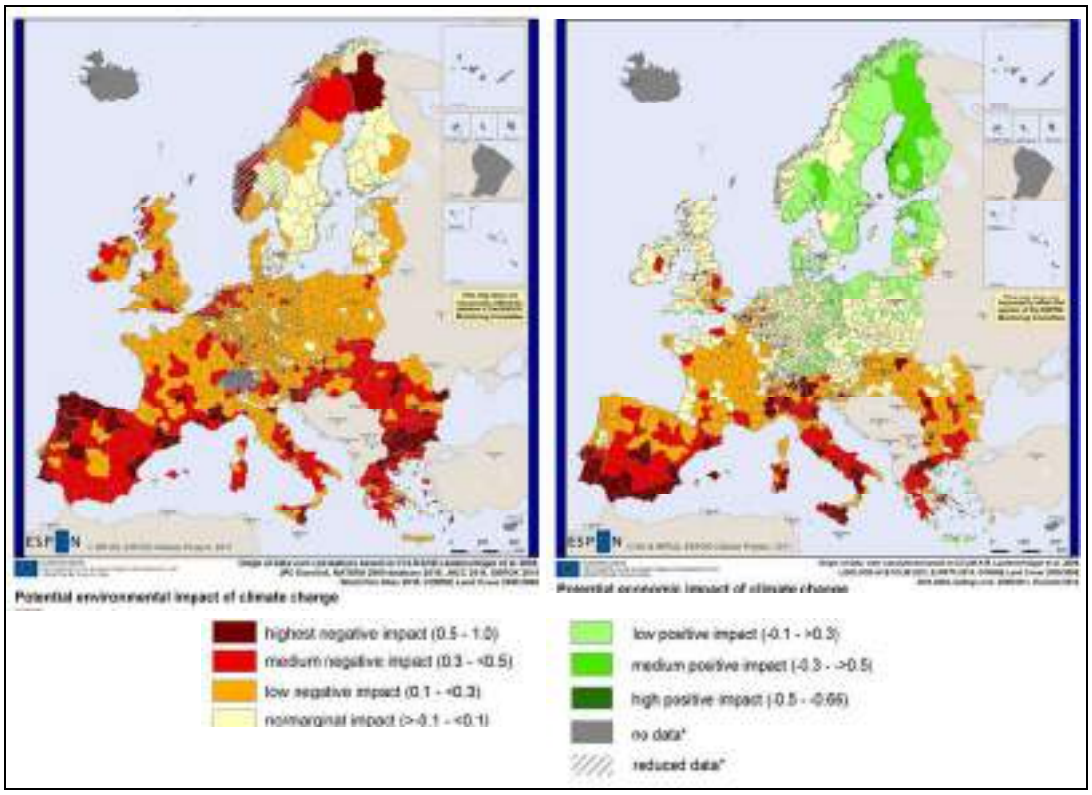

Figure 4: Potential environmental and economic impact (Greiving et al. 2011)

The potential **economic impacts** of climate change were analysed in regard to especially climate-sensitive economic sectors, namely agriculture and forestry, energy production and consumption as well as summer and winter tourism. Overall the economic impacts of climate change show a clear south-north gradient: many Central European regions and almost all Scandinavian regions are projected to have positive impacts, while almost all southern European regions would experience negative impacts. This is largely due to the economic dependency of large parts of southern Europe on (summer) tourism and agriculture. Both sectors are projected to be negatively impacted by increasing temperatures and decreases in precipitation, whereas the environmental conditions for agriculture in north-eastern Europe tend to improve. In addition, energy demands would rise in the south for cooling purposes and decrease in the north due to less heating. Finally, the Alps as a premier tourist dependent region can be identified as an impact 'hotspot', which mainly results from the projected decrease in snow cover days.

The potential **environmental impacts** that were analysed relate to protected natural areas, soil organic carbon content and the propensity of soil erosion and forest fires.

The overall findings show that for these environmental variables negative impacts are projected for almost all European regions. But the highest negative environmental impacts are expected in the north and south of Europe. In southern European regions the drier and hotter climate is projected to increase the likelihood of forest fires and to also degrade soil conditions in mountainous and coastal areas. The severe environmental impacts in northern Scandinavia are mainly due to very large protected areas where any climatic change (in this case warmer and wetter climate) is considered as negatively affecting the specific ecosystems under protection.

Moving beyond sectoral impact assessments was a defining feature of the ESPON Climate project. In a first step the sectoral impacts were aggregated and then combined with the capacity to adapt to climate change, which yielded the potential vulnerability (see maps in Figure 5).

ESPON Climate's cross-sectoral **aggregate potential impact** results exhibit the following general patterns: coastal regions are projected to be negatively affected, because their high concentrations of physical, economic, social and cultural assets would face increasing flood hazards. Southern European regions are expected to be negatively impacted because their hotter and drier climates severely worsen conditions for their populations, economies and natural environments. Highly negative impacts are therefore projected for southern Europe's agglomerations and tourist resorts along the coasts. But inland mountain regions that are dependent on agriculture, forestry and winter and/or summer tourism would also be highly affected. In contrast, many central, eastern and northern European regions would face virtually no negative impacts or would even experience positive impacts of climate change – mainly due to marginal climatic changes or projected decreases in river and flash floods.

The **adaptive capacity** was defined by indicators on knowledge and awareness, economic resources as well as technological, infrastructural and institutional capacity to adapt to climate change. For example, national and regional governments may or may not have developed climate change adaptation strategies that serve as the basis for sectoral and cross-sectoral development policies (cf. Greiving and Fleischhauer, 2012). Interestingly, mapping the overall adaptive capacity yields an almost inverted pattern compared to the impact map: Most regions for which climate change impacts are expected to be the most severe (mainly in the South) are in fact the least aware and capable to adapt to these impacts.

Finally, combining impacts and adaptive capacity leads to the **potential vulnerability** to climate change in Europe. The vulnerability map seems to mirror the territorial pattern of potential impacts, but with an even more pronounced South-North gradient. This is due to the high adaptive capacity in Scandinavian and Western European regions, which partly compensates for the potential impacts projected for these regions. On the other hand, in the Mediterranean region and in South-East Europe, where medium to high negative impacts are expected, the ability to adapt to climate change is generally lower thus resulting in even higher levels of vulnerability. The overall most vulnerable types of regions are: (1) Coastal regions

with high population and high dependency on summer tourism, (2) mountain regions with high dependence on winter and summer tourism, and (3) agglomerations with high population density, where *inter alia* the problem of urban heat is more severe.

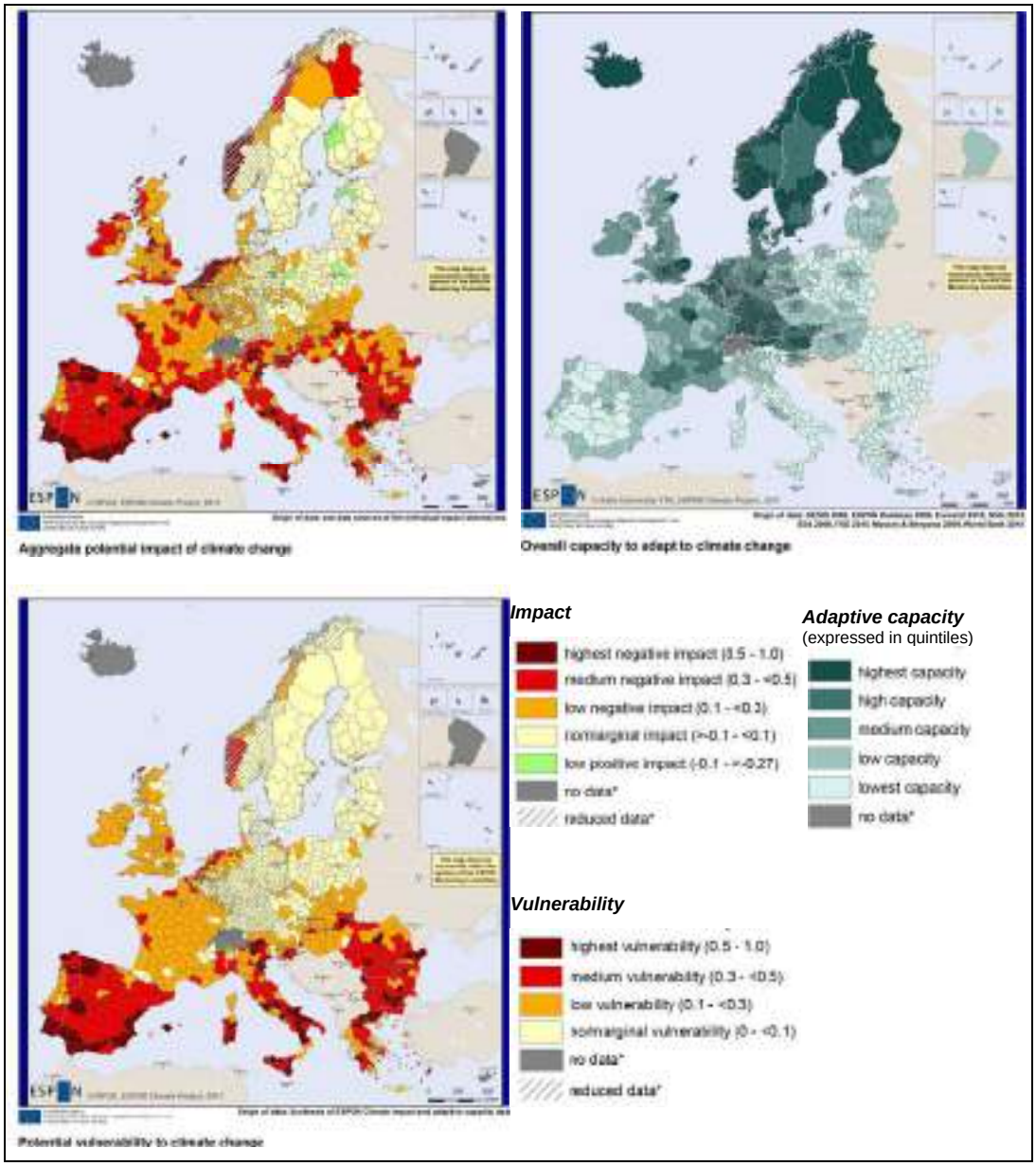

Figure 5: Potential aggregate impact, adaptive capacity and vulnerability (Greiving et al. 2011)

4. Conclusions

The ESPON Climate project constitutes the most comprehensive pan-European climate change vulnerability assessment to date. The project provides not only regionally specific results but also aggregated, cross-sectoral findings that lend themselves to high-level European policy-making. In contrast, most existing vulnerability studies have a sectoral focus and lack a clear territorial focus. However, several new EU-funded research projects are currently being conducted that also employ an integrated methodology for assessing climate change impacts, adaptation and vulnerability. But these projects (e.g. ClimSAVE, RESPONSES and MEDIATION) will only conclude and deliver their final results by the end of 2012 and 2013 respectively.

4.1 Climate change and EU development policies

ESPON Climate created a comprehensive pan-European evidence base needed for a climate change responsive European territorial development policy. For example, ESPON Climate demonstrated that Europe's climate change vulnerability exacerbates territorial differences and poses additional challenges to ensuring cohesion. The assessment indicated that climate change will probably deepen the existing socio-economic disparities between the core of Europe and its southern and southeastern parts because many economically lagging regions there are also the most vulnerable to climate change. Most likely these imbalances will even increase in the future: the current economic and financial crises in Greece, Italy, Spain and Portugal are reducing both individual and collective adaptive capacities. And in eastern Europe severe demographic changes like massive outmigration and ageing are projected to continue, which would further increase regional climate change sensitivity and decrease adaptive capacity levels (e.g. an older regional population is more sensitive to heat and less able to adapt to climate change).

ESPON Climate's methodologies and results could possibly become part of an evolving policy support tool that would enable policy-makers at European, national and regional level to (a) identify regional 'hot spots' with projected high impacts and weak capacity and devise appropriate support and response mechanisms, (b) develop a more strategic and climate change responsive approach to territorial cohesion, (c) identify especially vulnerable (sub)sectors and then mainstream climate change adaptation in the respective sectoral policies, (d) develop territorially differentiated adaptation strategies that take into account the regional variations in regard to climate change exposure, sensitivity, impact and adaptive capacity and (e) coordinate and integrate sectoral policies with a view to preventing potential negative climate change impacts and capitalising on positive development opportunities.

4.2 Critical reflection and outlook

It has to be kept in mind, however, that the ESPON Climate project is based on only one climate forcing scenario (A1B), one global circulation model (ECHAM5/MPI-OM) and one regional circulation model (CCLM) due to time and financial constraints and the fact that Europe as a whole needed to be covered. Furthermore, long-term socio-economic development trends that influence future regional sensitivities to climate change could hardly be integrated in the assessment (only some demographic scenarios could be tested based on data from the ESPON project DEMIFER). Thus the project's results have to be seen as a vulnerability scenario, which shows what Europe's future in the wake of climate change *may* look like (based on current knowledge, data and particularly assumptions), and not as a clear-cut forecast.

Reflecting on the project's methodology a number of key features and challenges are apparent. First of all the project used a generally accepted conceptual framework and on this basis was able to operationalise a coherent vulnerability assessment methodology. Nevertheless, the selection, calculation and aggregation of the individual indicators involves not only scientific knowledge, but also normative decisions on what aspects of such concepts as climate change, sensitivity or adaptive capacity are to be captured and assessed. In addition the choices of indicators are also shaped by the availability and quality of statistical data. Lastly, most of the indicators finally used in the project are made up of several input variables. The construction of such composite indicators is challenging as it involves different choices on selection of data, normalisation procedures, weighting schemes and aggregation methods (cf. Saltelli, Nardo et al. 2004).

Despite these inevitable challenges the prospects for major advances in the field of integrated vulnerability assessments in Europe are encouraging. The European projects mentioned above (ClimSAVE, RESPONSES and MEDIATION) will soon conclude their research and it will be interesting to analyse how their results will compare to the results of the ESPON Climate project: whether they will reinforce, complement or contradict each other. But also comparing and learning from the comprehensive methodologies that these projects are currently developing will cross-fertilize the scientific research in this field. Furthermore, ENSEMBLE datasets that combine climate projections based on several climate models are now available and can be used to drive assessment models like the one presented in this paper. This makes impact and vulnerability assessments less dependent on one climate model and thus makes their results more robust. As regards data availability the new online platform CLIMATE-ADAPT provided by DG Climate Action (http://climate-adapt.eea.europa.eu) facilitates sharing of research results and data on climate adaptation and enables further integration and dissemination of climate change focused research.

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VULNERABILITY ACROSS SPACE: A FOCUS ON THE UNDERLYING MECHANISMS

Galderisi A.[1], Ferrara F.F.[2]

Abstract

Vulnerability is widely recognized, both in scientific literature and institutional documents, as a key-component of risk, crucial for improving risk knowledge, assessment and management. In the last decades, vulnerability has been largely investigated according to different aims and disciplinary perspectives: nevertheless, the challenge for integrating current approaches has to be still faced and many gaps related to vulnerability understanding and measuring have still to be bridged.

Despite some scholars have clearly outlined that "vulnerability rests in a multi-faceted coupled system with connections operating at different spatio-temporal scales" (Turner et al. 2003), till now vulnerability is often represented as a static and crystallized feature of elements/systems or, according to Roberts et al. (2009), "as a static factor" rather than a process, neglecting in such a way the significant changes affecting both its facets and the relationships among them over time and across space. Hence, a clear idea of the path to be followed for analyzing and measuring the time and spatial dependency of vulnerability (Birkmann, 2006) and for grasping its dynamic nature is still missing.

For long, vulnerability has been associated, up to an absolute identification, to the concept of damage even though, according to a shared interpretation, it can be more precisely defined as "the characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a hazard" (UNISDR, 2009). The UNISDR glossary (2009) highlights that vulnerability concept includes numerous aspects - arising from physical, social, economic and environmental factors - and that it significantly varies over time, but does not emphasize the variability of vulnerability, and of its different aspects, across space despite the entity and the far-reaching dimensions of the consequences produced by such a variability, as largely shown by recent disasters.

Even if different from each other, the concepts of vulnerability and damage are closely related and the recognition of damage patterns may represent one of the key-tool for in-depth analyzing some aspects of vulnerability not sufficiently investigated up to now. Accordingly, Cochrane (2004) states that "damages are displaced geographically and temporally". Therefore, looking at the different phases following the impact of a hazardous event, might the analysis of the spatial distribution of damage help us to better understand factors and mechanisms able to induce a displacement of vulnerabilities across space?

The present work aims at answering this question; in detail, grounding on some case studies, an overview of the main spatial mechanisms that can favor the displacement

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and the change of vulnerability across space and some hints devoted to an in-depth conceptualization of the spatial dynamics of vulnerabilities will be provided.

1. The dynamics of vulnerability

Hazards are generally recognized as spatial phenomena: spatial patterns of hazardous events as well as damage distribution in space have been an important concern of scientific literature in the disaster field. On the opposite, despite some scholars have clearly outlined that "vulnerability rests in a multi-faceted coupled system with connections operating at different spatio-temporal scales" (Turner et al. 2003), the dependency of vulnerability on time and space seems to be still hard to grasp.
Nowadays, vulnerability is widely recognized as an intrinsic feature of elements and systems: the UNISDR glossary provides a definition of vulnerability as "the characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a hazard" (UNISDR, 2009), emphasizing that the concept includes numerous aspects, arising from physical, social, economic, and environmental factors and that it may significantly vary over time. Nevertheless, the UNISDR definition does not lay stress on the variability of vulnerability and of its different aspects across space, despite the entity and the far-reaching dimensions of the consequences produced by such a variability, as largely demonstrated by recent disasters.
Moreover, although at present territorial, social, economic systems are widely recognized as complex systems, continuously varying over time and across space, and vulnerability interpreted as an intrinsic feature of such systems, the latter is still now, surprisingly, often considered "as a static factor that modifies the amount of loss caused by threats" (Roberts et al. 2009) and approached as a state, rather than as a dynamic process developing over time and across space.
Due to such a prevailing approach, factors and mechanisms that may induce or contribute to the displacement of vulnerability across space have not been exhaustively investigated.
As an example, "risk transfer" processes have been up to now analyzed mainly in respect to the financial mechanisms (Benson and Clay, 2004; Arnold, 2008), such as insurances, and defined as "the process of formally or informally shifting the financial consequences of particular risks from one party to another whereby a household, community, enterprise or state authority will obtain resources from the other party after a disaster occurs, in exchange for ongoing or compensatory social or financial benefits provided to that other party" (UNISDR, 2009).
In some cases, risk transfer processes have been also investigated in relation to the "time" factor (Etkin, 1999). On the opposite, an effective conceptualization able to explain the displacement of vulnerability in space is still missing.
In detail, what has to be in-depth investigated are factors and mechanisms that, by acting as "drivers" of vulnerabilities across the space, can lead to different damage distribution.
As it will be better highlighted through the following case studies, factors and mechanisms inducing a displacement of vulnerability across space vary according to the type of vulnerability at stake in that, for example, the ones that may induce a

transfer of physical vulnerability across space can be different from those which may determine a transfer of other aspects or facets of vulnerability.
Therefore, for our purposes, two "facets" of vulnerability will be mainly considered: physical vulnerability, which can be referred to "the fragilities that can lead to physical disruption and harm when facing the stress provoked by a given hazard" and systemic vulnerability, which can be referred to the susceptibility of elements and systems to be indirectly damaged, as a consequences of their functional or economic relationships with the hit elements and systems (Ensure Consortium, 2011). According to such definitions, it is possible to state that physical vulnerability is strongly hazard-related ("vulnerability to hazard" as a form of stress) whereas systemic vulnerability, weakly or indirectly dependent on hazard, can be interpreted as a "vulnerability to losses". The stronger the interdependencies among systems and system components are, the more relevant the "systemic vulnerability" is. Therefore, by a scale perspective, physical vulnerability can be analyzed on the hazard scale, according to its distribution across space, whereas systemic vulnerability has to be investigated on different geographical scales, depending on the functional and economic linkages between elements and systems (Polsky et al., 2007; Bonadonna et al., 2011).
Grounding on these considerations, two main mechanisms able to induce a displacement and in many cases a change of physical and systemic vulnerabilities across space will be here investigated: propagation and transfer.
Both the mentioned mechanisms can be referred to the shift across space of physical vulnerability due to the propagation or transfer of hazard factors. Furthermore, transfer mechanism is also useful to understand how systemic vulnerability, due to the interdependencies among elements and systems which characterize the hit territorial system, reveals itself at different geographical scales, moving from a local up to a regional or a global level. It is worth noting that the dynamics of vulnerability across space largely depend on the context, which is always crucial in vulnerability analysis (Anderson-Barry and King, 2005; Roberts et al. 2009). Social, economic, environmental as well as spatial and functional organization of the hit territorial systems, indeed, not only characterize the different facets of vulnerability but will also influence their dynamism across space.
Propagation and transfer mechanisms may develop very quickly or in a long time span, giving rise to huge and unexpected effects over areas significantly wider, sometimes very far from the one directly hit by the hazardous phenomenon. In other words, such mechanisms might determine a final distribution of vulnerabilities and, consequently, of damages significantly different from the one resulting in the immediate aftermath of the hazardous event.
The term "propagation" suggests, for analogy to some physical phenomena (e.g. sound, light), the existence of a "mean" allowing the spread across space of vulnerability or, better, of the factors that determine vulnerability. Therefore, the term propagation may be referred to the spread of a given phenomenon from an element or an area to a contiguous/adjacent element or area "by contact" or, even, from an element/area to another element/area, although not contiguous, thanks to the "connecting" action of a specific mean (e.g. air, water).

The spread of vulnerability, and namely of physical vulnerability across space, is very often a direct consequence of hazard propagation. Such consideration is not surprising, since, as mentioned above, this aspect of vulnerability is strongly hazard-related.
Hazards can propagate through different means, involving elements and/or systems not directly hit by the hazardous event and, consequently, determining new vulnerabilities, increasing the overall damage and influencing spatial distribution of both vulnerability and damage. Nevertheless, even though spatial distribution of hazards is generally investigated, the potential propagation of hazards, despite its relevance into vulnerability analysis, is often neglected mainly in case of na-tech hazardous events (Galderisi et al, 2008).
On the opposite, the identification of potential elements or factors able to spread hazards across space may allow us to recognize new or different exposed targets, highlighting the need for investigating their vulnerability and for singling out the most appropriate scale for developing vulnerability analysis.
The concept of transfer differs from the propagation one in that while the latter is generally referred to the widening in space of the impacts of a given hazardous event, capable to affect areas or elements characterized by spatial continuity (in that elements or areas are contiguous or linked to each other through a mean), transfer can be the result of reverberation effects and can involve elements or areas not contiguous or spatially linked to the place of occurrence of the hazardous phenomenon.
Transfer mechanisms overcome the concept of spatial proximity, in that the presence and the continuity of a mean does not represent a key-requirement as in case of propagation mechanisms.
As mentioned before, transfer mechanisms can be referred both to physical and to systemic vulnerability. The displacement of physical vulnerability is generally due to a transfer of hazard factors across space, whereas the shift of systemic vulnerability from one area to another is generally due to functional and economic interdependencies among elements and systems located in the hit territorial context and other placed in other contexts, not directly hit by the hazardous events.
It is worth noting that propagation and transfer mechanisms do not exclude each other: they can occur contemporarily and, according to the well accepted idea that vulnerability is a “multifaceted” concept, they can also turn one “facet” of vulnerability into another, qualitatively and quantitatively different from the previous one.
The above mentioned mechanisms will be more in-depth analyzed in the following paragraphs through different case studies, focusing on the occurred damages interpreted as the result of hazards and vulnerabilities of exposed elements and systems. In detail, the Baia Mare (2000) and the Katrina (2005) disasters will be shortly described for clarifying how hazard propagation and transfer mechanisms may induce a displacement of physical vulnerability across space. More attention will be devoted to the transfer mechanisms due to the interdependencies among elements and systems, looking at the earthquake occurred in 2009 in the Abruzzo region (Italy) and at the eruption occurred in 2010 in Iceland: both of them largely emphasize how pre-existing functional and economic relationships among elements

and systems located at different geographical scales may induce a displacement and a change of vulnerability across space, turning in many case physical vulnerability at local scale into systemic vulnerability at upper scales.

2. Transfer and change of vulnerability across space: case studies

2.1 Hazard propagation and transfer: effects on dynamism of vulnerability

The Baia Mare accident

The disaster occurred in Romania, near to Baia Mare village, in 2000 represents a clear example of hazard propagation through a "mean", capable of extending the effects of hazard to a wider area as well as to involve new, and potentially vulnerable, elements located in areas far from the hazard source, inducing an increase in the overall vulnerability to the hazardous event.

In the mentioned case, toxic substances, namely the cyanide used by the Aurul company to remove precious metals from the tailing, were released into the Lapus River; then these substances travelled downstream into the Somes and Tisza rivers into Hungary, before entering the Danube. The cyanide was carried out by the river waters from the source placed in Romania, to Yugoslavia and Hungary, putting at risk the water supply of more than 2 million of Hungarian citizens. The concentration of toxic substances was supposed to significantly decrease along the path from Romania to Hungary, with less and less impacts on environment and population. Unfortunately, conversely to what was more likely, the presence of "ice on the rivers and low water levels in Hungary delayed the dilution of the cyanide, increasing the risk of municipal water supplies" (UNEP/OCHA, 2000).

Only the prompt action of the local authorities avoided serious damage to the water supply of the two largest cities along the Tisza river, Szolnok (120.000 inhabitants) and Szeged (206.000 inhabitants).

In such a situation, river water was the "mean" responsible for hazard propagation: hence, new vulnerable targets were involved and the consequences of a supposed localized event, in terms both of direct and indirect impacts, extended over areas very far from the one directly hit, affecting natural resources (such as the flora and fauna of the central Tisza river), population, economic activities and organization of the emergency response (involving different national States, different organization and so on) of different countries too. Therefore, the propagation of hazard through the river water has induced a propagation of physical vulnerability across space and, in the meanwhile, it has also determined a change of vulnerability, from the physical vulnerability of the heterogeneous targets directly or indirectly affected to the social and institutional vulnerability arising from the threat to the water supply and to the need for local authorities in different States to deal with such a threat.

Figure 1 - Vulnerability propagation due to hazard propagation. (Source: own elaboration)

The Katrina Hurricane

Although rare, a displacement of physical vulnerability may occur also as a consequence of hazard transfer. A paradigmatic example in this line of thought is the Katrina Hurricane which hit the city of New Orleans in 2005. After the hurricane broke the levees of the Mississippi river, the immediate task for National and Federal Authorities was to drain out flood water from the city. The latter indeed, being placed below the sea level, was characterized by a not fully effective natural water drainage. The amount of flood water to be removed was accounted for about 114 billion liters. In the immediate aftermath of the event, also due to the accident to the Murphy Oil, flood water rapidly become a mixture of toxic and organic substances (Sheikh, 2005). Therefore, the water drainage presented a number of significant concerns. Lake Pontchartrain and Mississippi river were the two potential receptors of the flood water. Due to the fact that the latter was the main source for drinking water supply of the city, Local Authorities decided to pump waters into the Lake Pontchartrain. Furthermore, the treatment of flood waters before pumping them was not possible, due to the lack of full treatment technologies in place and the need for a quick drainage of the water from the urban area. Thus, Local Authorities decided to pump flood waters from the city towards the mentioned Lake that is a water body relatively close to the city itself and connected through the Lake Borgne to the Gulf of Mexico (Fig. 2).

Figure 2 – The area around New Orleans affected by hazard transfer. (Source: National Academies Press, 2009)

Due to the importance of the Lake and of its surrounding as natural ecosystems, the Lake – highly polluted as a consequence of the numerous sources of chemicals and organic substances – had been already interested since 2000 by recovery interventions, under the responsibility of the Environmental Protection Agency (EPA) and Pontchartrain Basin Restoration Act Program. Thus, before Katrina, fisheries and touristic activities were largely developing on and around the Lake.
According to the Congress Report (Sheikh, 2005), after the operations of pumping-in, the Lake, despite the relevant efforts for its environmental recovery, had received in few days the equivalent of several years of urban runoff. Kilic and Aral (2006) estimated that the Lake would have required about 80 years to recover from the stress created by the pumping of polluted waters after Katrina.
Summing up, the release of toxic substances into the Lake Pontchartrain and the consequent pollution of the Lake itself can be considered a "man-made" phenomenon of hazard transfer: by involving new targets, namely the natural ecosystem of the Lake, a transfer of physical vulnerabilities occurred accordingly to hazard transfer which, as in the previous case, has turn into other facets of vulnerability (for example the economic one, due to the loss of economic activities which were largely developed around the Lake).

2.2 Functional and economic interdependencies: effects on dynamism of vulnerability

The Abruzzo earthquake
The Abruzzo earthquake, occurred in central Italy, with a 5.8 local magnitude (APAT, 2009), on the 6th of April 2009. It caused the death of 298 people, 1600 injured, the destruction of the historical centre of L'Aquila – the main city of the Abruzzo region –and severe physical damages in other minor centers located in an area identified as "the crater" (PCM, 2009) for a total toll of over €10 billion.

Looking at the earthquakes experienced by Italy over the last century, after Messina (1908), L'Aquila has been the first big urban center[3] severely hit by a seismic event.
By an engineering perspective, L'Aquila was characterized by a high level of physical vulnerability to earthquake, due to a prevailing stock of ancient masonry buildings.
By an urban planning perspective, even if the city core of L'Aquila is a medieval center, its development has been quite atypical. The growth of the city has not occurred, according to a traditional "core-periphery" model, around the historical city but according to the model of a modern "city region", even if concentrate in a quite small territory. This means that urban growth has occurred through the development of numerous hamlets and villages, quite distant from the city center but strongly related to it from a functional and economic point of view (Fig. 3). In some cases, these small villages are formally recognized as districts of the city. More precisely, the growth of the city mainly occurred after the Sixties, when the Highway A24 connecting L'Aquila with Rome was built up. In the Master Plan approved in 1975, and still in force at the time of the earthquake, 4.200 ha of new residential and industrial settlements were included and all of them have been realized. Thus, between the 1951 and the 2001, the population grew from 54.633 to 68.503 inhabitants, while the urbanized areas from 500 ha (the area of the city core) to 3.100. Thus, the urban development has entailed the establishment of a monocentric urban model characterized by a strong dependency of the new developments on the city core, the historical city, where most of the institutional, administrative, commercial activities and an important university pole were concentrated.

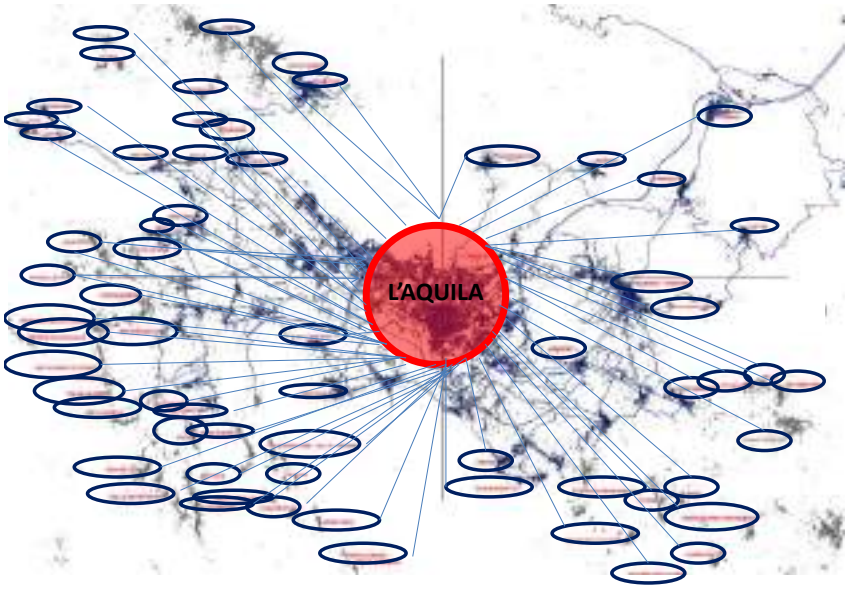

Figure 3 – The city-core and the near villages and hamlets which form the L'Aquila City Region. (Source: own elaboration)

3 72.988 inhabitants in 2008. Source: http://www.comuni-italiani.it/066/049/statistiche/recenti.html

Thus, the historical city, which represented the most physically vulnerable area to a seismic event, played a primary role in functional and economic terms for a significantly wider geographical area.
In detail, in terms of institutional and administrative activities L'Aquila was home to the Court of Law, the Cadastre, the Prison, the Regional Council. These buildings, mostly placed in the historical city, have suffered severe structural damages or collapsed, as in the case of the Palace of Government, head office of the Prefecture that is also the public body in charge of coordinating activities during an emergency phase. As a consequence, the prefecture was prevented from meeting these specific commitments included in its institutional competences.
Moreover, in the historical center of L'Aquila, numerous commercial and touristic activities (bars, hotels, restaurants, accommodation facilities), also due to its touristic attractiveness at regional and national level, were placed. After the earthquake, such area, due to safety problems related to the risk of collapse for parts of heavily damaged buildings, was declared as "red zone" (Fig. 4). Such a declaration has induced the interdiction to access for all citizens and, in turn, the paralysis of the incomes of all people having their source of livelihood in the red zone.

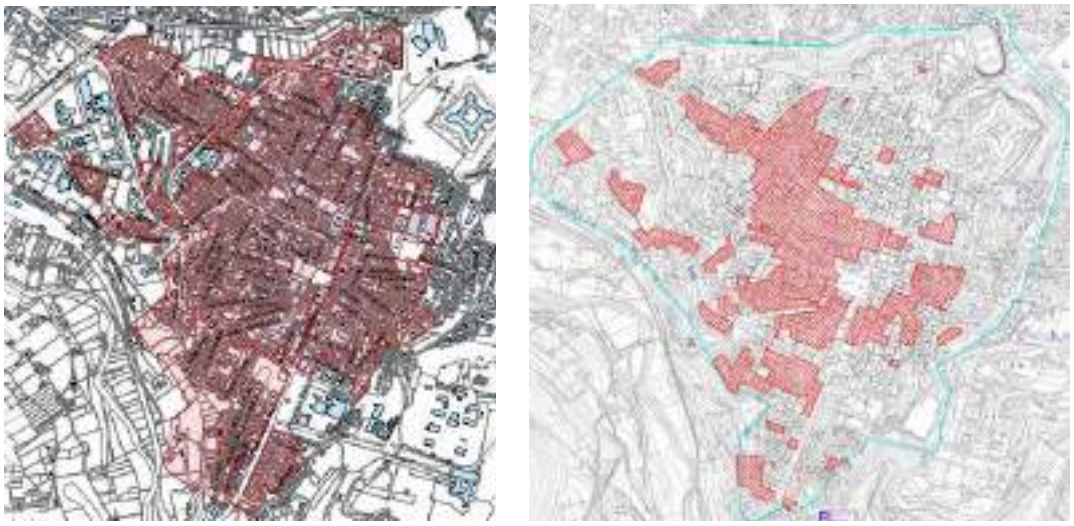

Fig. 4 – Boundaries of the red zone (December 2009 – August 2011) (Source: http://www.comune.laquila.gov.it/pagina52_zona-rossa-della-citta.html)

Apart from commerce and tourism, before the earthquake, economic activities in L'Aquila were mainly related to building sector, real estate, ITC, manufacturing that provided goods and services to other small Municipalities of the crater whose economy was, on the contrary, mainly based on agricultural activity, hunt and forestry (CRESA, 2009).
Lastly, L'Aquila was famous for being an important university pole. University was very important for the city both in terms of identity - being the most ancient University in the Abruzzo Region and also one of the most important in Italy - and for its economic significance. About half of the 27.000 students enrolled at the

L'Aquila University before the earthquake were non-residents (CRESA, 2009), which means that they were the main users of numerous services and economic urban activities, such as local transport, accommodation facilities, commercial activities and so on.
After the earthquake, the registrations at university have decreased and only some adopted contingency measures, such as the promotion of free public transport and free fees for students, have prevented the collapse of a well-established economic activity. Nevertheless, the identity of the city, by this perspective, has been seriously jeopardized.
Furthermore, relevant damages to tourism and to private small enterprises have been recorded in the city core, with ripple effects reverberating from the local scale up to the regional one. As mentioned before, functional and economic damages represent an indirect consequence of the hazard itself, in that rather than related to a "vulnerability to hazard", namely to the earthquake, which generally reveals itself at the hazard scale, they are generally related to interdependencies among elements and systems which pave the way to a "vulnerability to losses" at wider geographical scales.

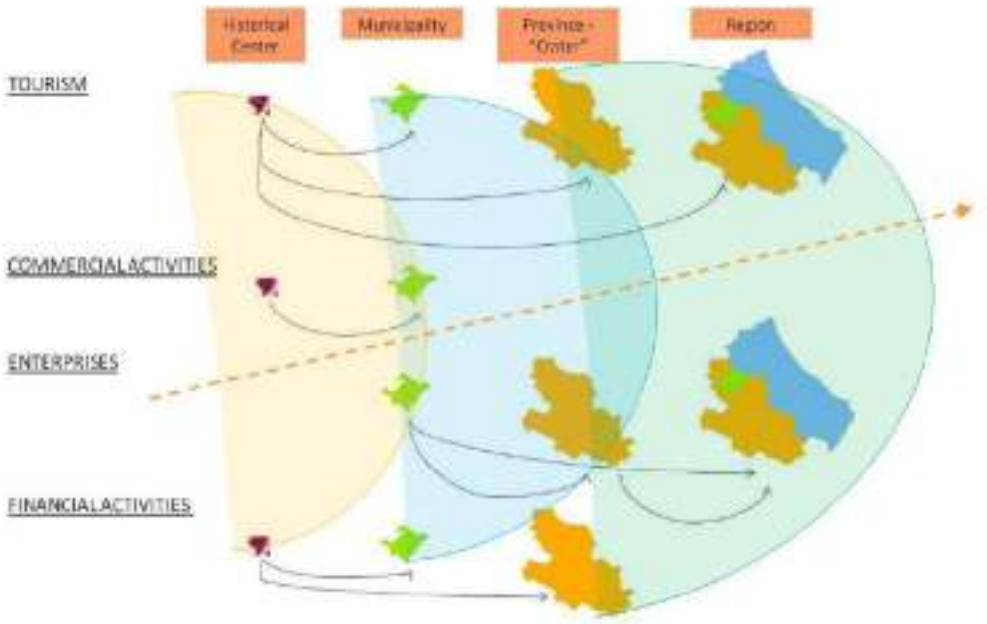

Figure 5 - Transfer of vulnerability across space due to functional and economic interdependencies. (Source: own elaboration)

To sum up, the important functional and economic role of a (small) physically vulnerable area to earthquake (the historical center), due to the concentration of numerous and important activities, and to the interdependencies between the city center and wider geographical areas, has induced a transfer of vulnerability from a sub-municipal, municipal level up to the regional one and, in the meanwhile, has determined a change in the prevailing facet of vulnerability, in that physical

vulnerability at local scale has been turned into a systemic and economic vulnerability at wider geographical scales (Fig. 5).
Furthermore, it is worth stressing that the persistence of an interdicted "red zone" in the historical center of L'Aquila induces also an extension of the time needed for an effective recovery and a likely worsening of the conditions which have determined the vulnerability to losses, with the effective threat of widening vulnerability factors far beyond the involved area.

The 2010 Eyjafjallajökull eruption
Iceland is a well-known volcanic area, with about 130 volcanoes. The last significant eruption of the *Eyjafjallajökull* happened on the 14th of April 2010, after a previous and less intensive episode occurred some days before. The eruption was characterized by a high explosiveness index coupled with a significant production of ashes. Chester et al. (2001) underline that the scale of the potential consequences of a local hazardous event mainly depends on "the strategic position of the threatened city within the economy of a country and/or region". This is not the case of Iceland that has neither a "core" position nor an important economic role in the European and in the global context. Nevertheless, the impacts of the hazardous event have been very relevant because a strategic activity in the globalized world economy, namely the air transport of freights and people, has been affected as a consequence of the propagation of hazard through the air space (Galderisi et al., 2011).
According to a physical analysis of the phenomenon, in the immediate aftermath of the eruption and in the following days, a cloud of exceptionally fine-grained ashes was driven toward Central Europe. Ash particles may induce relevant failures in engines, in essential systems of aircrafts (e.g. sensor systems, hydraulics) and external aircraft components such as pilot windscreens that may become largely non-transparent. Concerns about safety condition led to the closure of large portions of European air space, including some strategic airport as London and Paris over the week 15-21 April. So, on the one hand, the air traffic of some important hubs, connected to each other, were suspended, interrupting in this way the provision of important services at global level; on the other hand, the use of a "global shared" resource, the air space, used as a physical mean for covering the distance from one city to another, was interdicted.
The cancellation of flights across Europe affected about seven million passengers (Oxford Economics, 2010) and has entailed, only for European flights companies, economic losses for $2.6 billion in GDP. What initially seemed to be only an inconvenience for passengers (e.g. tourists, businessmen) and commercial activities soon showed the dimension of a planetary trouble especially by an economic point of view. The effects of the crisis extended indeed far beyond the direct impact on the air transport industry (Oxford Economics, 2010). Due to the closure of air space, significant secondary impacts have been recorded too, so that a "butterfly effect" for the Icelandic eruption has been largely mentioned.
One of the most severely damaged sectors by the air space restriction has been the import-export one. In Europe, most of the export "made in Italy" of fresh fruits (mainly strawberry), mozzarella cheese and flowers was interrupted, whereas in

Africa, relevant repercussions on exports have been reported in Kenya due to the fact that this country normally exports up to 500 tonnes of flowers daily, the 97% of which is delivered to Europe. Therefore, Kenyan farmers have been forced to dump stocks of fresh food and flowers destined for European consumers and, according to Kenya's Fresh Produce Exporters Association Daily Nation, the loss for local producers of flowers, fruit and vegetables has been US$ 3 millions a day as a result of flight cancellations to Europe (Oxford Economics, 2010). The same amount has been estimated for market losses related to flower export to the EU from Latin America and mainly from Ecuador and Argentina. Referred to the import-export sector, the Japanese carmaker Nissan announced a one-day suspension of production of three of its models too, because of the impossibility to import relevant components from the Irish Republic (BBC, 2010).
Other relevant failures, with consequent further economic losses, have been determined by the cancellation of political and business meetings, of relevant cultural and sporting events and also by the delays to services of air mail companies.
As comprehensive data, the total impact on global GDP caused by the first week's disruption amounts to approximately US$ 4.7 billions (Oxford Economics, 2010).

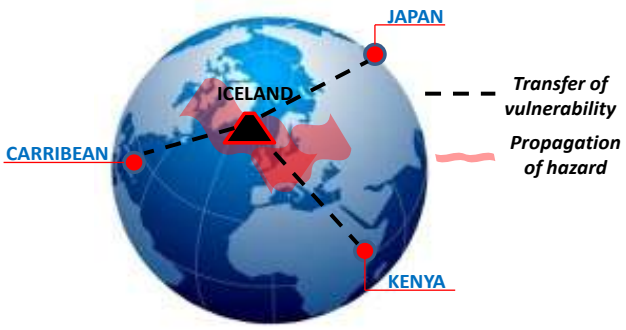

Figure 6 - Transfer of vulnerability across space due to hazard propagation combined with functional and economic interdependencies. (Source: own elaboration)

The Icelandic eruption has clearly demonstrate that the consequences of local hazardous events occurring in places which hold a strategic position within a wider economic context or which affect activities characterized by a key role in the global economy may induce damage which reverberate on areas very far from the hazard source, also at a global scale.
In detail, the propagation of the volcanic ashes - due to the features of the eruptions and to the meteorological conditions - has triggered a transfer and a change of vulnerability: physical vulnerability of airplanes to ashes has been turned into a systemic vulnerability of all the activities (airline industry, people mobility, commercial activities, business, etc.) depending on air flights. The latter vulnerability has been turned again into an economic vulnerability of enterprises or national economies depending on those activities (Fig. 6). The transfer of vulnerability has been clearly favored not only by the hazard propagation but, mainly, by the existence

of well-established functional and economic interdependencies, which allow to overcome the boundaries of any physical contiguity.

3. Conclusions

Hazardous events generally induce significant multi-scale and cross-scale effects: thus, an effective vulnerability analysis has to look far beyond the area directly hit by a hazard, taking into account factors and mechanism which may favor the displacement across space of the different facets of vulnerability.
Up to now, spatial patterns of hazardous events as well as damage distribution in space have been largely investigated. On the opposite, factors and mechanisms inducing a displacement of vulnerability across space are still hard to understand and foreseen.
In this paper, some hints for a conceptualization of the spatial dynamics of different facets of vulnerability have been provided, focusing on propagation and transfer mechanisms, interpreted as "drivers" of physical and systemic vulnerability across space. Propagation mechanisms can be referred to the spread of a given phenomenon from an element or an area to a contiguous/adjacent element or area "by contact" or, even, from an element or an area to another element or another area, although not contiguous, through a specific mean (e.g. air, water). Transfer mechanisms can be referred to effects of reverberation, able to involve elements or areas not contiguous or spatially linked to the place of occurrence of the hazardous phenomenon.
Moreover, according to the Ensure Project, physical vulnerability has been defined as a "vulnerability to hazard", whereas systemic vulnerability has been interpreted as a "vulnerability to losses". Such a difference has allowed us to deepen the discussion on propagation and transfer mechanisms, highlighting how dynamics of physical vulnerability are mainly related to propagation and transfer of hazard across space; whereas dynamics of systemic vulnerability largely depend on interdependencies among elements and systems. These mechanisms may develop very quickly or in a long time span and may occur separately or contemporarily; furthermore, they can turn one "facet" of vulnerability into another, qualitatively and quantitatively different from the previous one.
In detail, the Baia Mare (2000) and the Katrina (2005) disasters have clearly highlighted how hazard propagation and transfer mechanisms may induce a displacement of physical vulnerability across space; the Abruzzo earthquake (2009) and the Iceland eruption (2010) have allowed us to explain how pre-existing functional and economic relationships among elements and systems located at different geographical scales may induce a displacement and a change of vulnerability across space, turning in many case physical vulnerability at local scale into a systemic one at upper scales.
All case studies have been analyzed grounding on damage distribution which, being the result of hazards and vulnerability of exposed elements and systems, has contributed to a better understanding of spatial dynamics of vulnerability. Case studies have clearly shown how, as a consequence of propagation and transfer mechanisms of the different facets of vulnerability, physical as well as functional or

economic damage may affect areas even very far from the hazard source and significantly wider than the one directly hit by hazard itself. Involved areas cannot be confined to the areas immediately surrounding the hit one and they are not necessarily contiguous to it; they can be very wide, depending on the existence of a mean able to propagate hazard, to the role of the affected area or the affected element/system in a wider geographical context, and on the interdependencies among vulnerable elements and systems. These findings open the way to the matter of the appropriate scale for carrying out vulnerability analysis, in that the focus on the hazard scale may lead us to underestimate important aspects of vulnerability and of its dynamics across space: systemic vulnerability, indeed, largely depends on the interdependencies among systems and their components and, as a consequence, the width of the related investigation area has to be determined according to the specific context.

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Permeability of Low Income Neighbourhoods

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Key words: Permeability, networks, Turkish homeowners, deprived neighbourhoods

One of the major debates in the context of urban cohesion focuses on so-called context effects: Living in deprived areas can have negative effects on the life chances of inhabitants (Galster et al., 2010). Empirically, however, it is still unclear *to what extent* the spatial context (the neighbourhood) influences the economic and social prospects of local residents. The degree of permeability of a neighbourhood, in terms of residents' access to external resources, therefore seems to be an important clue to the power of neighbourhood-related contextual effects. The context or *foci* of interaction outside the neighbourhood might be an important resource to strengthen the functional, social and symbolic integration of the local population. Nevertheless, the bridging potential of networks of residents outside their neighbourhood is still insufficiently explored in urban research. Nor do approaches to neighbourhood renewal focus appropriately on such external or inter-neighbourhood linkages.

The underlying research question is: Which linkages outside disadvantaged neighbourhoods (looking at the context of the city and beyond) have such a bridging power? Interactions and institutions governing trans-neighbourhood movements or interactions are discussed at three different levels. First, we look at individual or group networks within the city, second, the bridging power of local institutions such as schools is discussed, and finally, discourses on the neighbourhood which contribute to either the strengthening or weakening of existing boundaries are explored.

Introduction and outline of the problem

Various studies, especially in the US-American context, indicate the disadvantaging effects of disadvantaged neighbourhoods (Galster, 2008). Although empirical findings suggest neighbourhood effects in the USA (see for an overview Dietz, 2002), equivalent effects in Europe are to date unclear and are thought to be slight (Schönwälder, 2007; Doff, 2010; see for critical discussion: Farwick, 2009; van Ham et al., 2012). What is, however, clear, is that particularly disadvantaged districts are usually characterised by a high proportion of immigrants (Friedrichs and Triemer, 2008; Doff, 2010). Thus immigrants are especially affected by spatially concentrated poverty.

The influence of place of residence on the likelihood of inclusion forms an important background to neighbourhood-based renewal in European cities. The need for spatially focused policies is also confirmed in the fifth cohesion report of the European Commission (EC, 2010b, p.187). In Germany as in other countries (e.g. the

Netherlands, France and the USA), the social mixing of disadvantaged neighbourhoods is a programme objective (Münch, 2009; Beauftragte der Bundesregierung, 2007, p.113; Doff, 2010, p.4). It is thought that the presence of middle-class households in these neighbourhoods will have a "healing" effect.

But why are the results of investigations into context effects in European and also in American cities not always clear-cut and, indeed, at times even contradictory? Lupton (2003) mentions a number of factors that complicate measurements and evaluations in this field. First, the measurement of neighbourhood-related contextual effects is influenced by the choice of spatial investigative unit: the results of analysis can be expected to vary with the choice of spatial scale (e.g. the block, the neighbourhood, the district). Farwick (2009) emphasises, for instance, the significance of the immediate neighbourhood for the effective measurement of the formation of networks and intercultural contacts. Second, the effects are more or less pronounced according to the group being observed, particularly the social positions and ethnic origins of residents are of relevance here (Galster et al., 2010). The "sensitivity" of individuals and groups to the parameters of the neighbourhood thus varies.

Particularly households of higher social position are less restricted to their proximities in the structuring of their everyday life (Savage et al., 2005). Such spatial differentiations in practices have been empirically proven in the work of Wellman (1979) using the example of individual networks. It can thus be assumed that residents use individual "bridges" into other spatial contexts to access resources and to compensate for the disadvantaging effects of the neighbourhood. In the US-American context, Zelinsky and Lee (1998) discuss the "heterolocalism" of migrants, expressed in social and spatial multi-situatedness.

In addition to these processes of boundary crossing and bridging *out* of the neighbourhood, various pieces of research show that residents construct small-scale boundaries and practise processes of social distinction *within* the neighbourhood. Empirical studies have thus contributed to a "disenchantment" with mixing strategies by demonstrating the existence within neighbourhoods of these small-scale separate worlds of residents of differing social positions (Atkinson, 2006; Watt, 2009). These small-scale dissociation processes can mean that even when households of higher social position reside in a neighbourhood they do not necessarily compensate for neighbourhood effects.

In addition to the composition of the population of a neighbourhood and the "granularity" of the mixture there are thus other factors to consider when evaluating context effects. In this paper we argue that residents' bridging to the outside and their construction of boundaries within are important indications of the permeability of neighbourhoods and thus the strength of neighbourhood effects.

Permeability of neighbourhoods: constructing boundaries and bridges

The concept of the **permeability** of neighbourhood boundaries refers to the simultaneousness of **boundaries** and **bridges**. The permeability of neighbourhood

boundaries can vary with direction, point in time, individual or group of individuals. The construction of boundaries on the one hand, and boundary crossing using bridges out of the neighbourhood (or, alternatively, into the neighbourhood) on the other hand, can provide indications of the "permeability" of neighbourhood boundaries. This perspective can creatively augment the analysis of neighbourhood-related contextual effects.

The proportion of disadvantaged residents in an urban district thus only provides limited information about the chances of integration for its inhabitants. Neighbourhoods with comparable proportions of immigrants and disadvantaged population groups (measured according to the proportion of recipients of transfer payments) can take on quite different functions in the urban context. They may be an arrival and orientation space, a transit space for the mobile, or a place to stay for the mobile and immobile. The resources available to the residents of a neighbourhood are, we argue, significantly influenced by the degree of permeability of a neighbourhood. We therefore supplement and broaden the analysis of neighbourhood effects with discourses on physical, social or symbolic boundaries and bridging.

Boundaries and the construction of boundaries

"Neighbourhoods often have sharp boundaries, either physical or atmospheric, but the layers of neighbourhood life are like an onion with a tight core and a loose outer skin" (Power and Wilson, 2000, p.1)

Of interest for our research is the perception of boundaries and the process by which the boundaries are produced and reproduced (bordering) or changed (boundary change: Tilly, 2004a). Individuals move around in a complex web of "hierarchical borders" (Newman, 2003, p.22) and play with numerous group affiliations and identities. In the context of boundary studies Newman (2003, p.20) recommends examining "bottom up" processes in the sense of the everyday practices of residents of neighbourhoods and "top down" processes focusing on the role of institutional actors. Newman draws attention to various levels of analysis for boundaries. As well as examining physical boundaries and the perception of boundaries from the residents' perspective, he suggests considering the significance of semantics (discourses, representations, images, story-telling). Finally he mentions the so-called "management mechanisms" that structure boundaries through forms of governance and institutions and distributions of power.

The production and reproduction of boundaries is thus based on the attitudes and actions of different actors, networks, institutions and media discourse (Lamont and Molnár, 2002; Zerubavel, 1991, 1996; Newman, 2003). These are included in our research design in the dimensions *institutional*, *social* and *symbolic* bordering and further developed with reference to their respective physical-spatial dimensions.

Boundaries, however, have two sides. Thus in line with the perspective taken, they do not always act in a limiting fashion. Boundaries simplify the overall view and aid orientation. In the same way, social boundaries are also drawn by individuals, helping them to orientate themselves in urban space. Simmel (1995/1903) points out

that the blasé and distant attitude typical of city dwellers enable them to live together in a heterogenic urban space. Bordering is thus particularly important for individuals in heterogenic contexts. A broadly based investigation from the Netherlands also indicates the significance of small-scale boundaries *within* neighbourhoods for the explanation of middle-classes remaining in disadvantaged neighbourhoods (Wittebrood and Permentier, 2011).

Living in such districts thus seems to be possible for many middle-class households because they develop an emotional distance to the local problems and demonstrate little loyalty to the neighbourhood. The study from the Netherlands mentioned above establishes that the importance of upwardly social mobile and middle-class households for districts needing renewal should not be overestimated. Interestingly, the investigation discovered differing trends. Considering residents of Netherlands origin, it was primarily middle and higher income households that moved out of neighbourhoods needing renewal, while middle income households with an immigration background moved into these neighbourhoods (following appropriate urban renewal measures).

Boundaries can also create space for interactions. At boundaries transition zones and borderlands can develop, offering opportunities for contact and forums for exchange and interaction. This dimension should also be taken into account.

Bridges out of the neighbourhood context

Decisions by households on where to locate emerge from the interaction between external framework conditions (the housing market is especially relevant here), and the resources and preferences of the household itself. That an individual resides in one particular neighbourhood does not, however, necessarily mean that the action spaces of that individual are primarily oriented on the neighbourhood space (Pinkster, 2007). As early as 1935 the psychologist couple Muchow and Muchow used the differentiation between "spaces of action" and "spaces of possibility" to draw attention to the difference between the space *in which* a person *lives* (the allocated space of possibilities), the space that the person *experiences* (the space of actual experiences, influenced by the individual's biography) and the space *that* the person *lives* (in the sense of behavioural use dependent on range of movement). These multiple "spaces of possibility" are differently formed by individuals according to their resources, preferences and external restrictions (Muchow and Muchow, 1998).

In particular, people in higher social positions find themselves interacting in multiple spatial contexts (from inner-city to transcontinental) (Savage et al., 2005). Savage et al. differentiate between, on the one hand, situative belonging in the context of daily routines and everyday practices and, on the other hand, closer bridging linkages, for instance to "best friends", that may also be located outside the individual's neighbourhood. These linkages of inhabitants beyond the neighbourhood boundaries are also important for explaining their local sense of belonging: "Most residents talk about their local belonging in terms of the connections which it allows with other places and its convenience for everyday life" (Savage et al., 2005, p.204).

Based on the understanding of bridging and bordering described here, the following section focuses on the refinement of possible research questions and discusses dimensions of analysis for the permeability of neighbourhoods.

Initial considerations for the investigation of permeability

The significance of boundaries within neighbourhoods and bridges leading outside them brings us to the question of the *permeability* of neighbourhoods. We assume that households of higher social position remain particularly in disadvantaged neighbourhoods that are characterised by permeability to the outside.

The permeabilities and boundaries of a neighbourhood can be observed and investigated from various perspectives. Alba and Nee (2004, p.29) point out that boundaries gain significance only through the perceptions and everyday practices of individuals and groups: "The effect of a social boundary is to mark a categorical distinction that the members of a society take into account in their everyday activities and on which they align their orientations and behaviour (...) Such boundary constructions aid orientation and at the same time contribute to the ignorance of each group about the real living conditions of the others". It thus seems worthwhile examining the permeability of a neighbourhood from the perspective of the individual, his or her everyday practices and affiliations. This shows which boundaries are relevant for the structuring of the everyday life of residents of the neighbourhood, for their social mobility and also for their group affiliations and spatial belonging.

It seems important to capture in more detail the spheres of action and multiple situatedness of individuals both outside and within the neighbourhood. Our line of argument is thus based on an understanding of space in which space emerges "as the result of the human capacity for synthesis, as a kind of synopsis of the individual 'places' through which the locally divided is brought together in a simultaneous connection, in a spatial framework" (Läpple, 1991, p.37).

In the first place, the intention is to empirically investigate, from the perspective of individuals/households, which bridging and bordering is undertaken by people of higher social position in disadvantaged neighbourhoods.

Our thesis is: The continued presence of middle-class households is distinguished by characteristics of bridging *out* of the neighbourhood and bordering *within* the neighbourhood.

- Households of higher social position that remain in disadvantaged neighbourhoods exploit resources outside the neighbourhood and so can individually compensate for the disadvantaging effects of the neighbourhood. Their bridging and also their experience of boundaries give important indications to the permeability of the neighbourhood.
- The continued presence of households of higher social position in disadvantaged neighbourhoods is accompanied by small-scale processes of dissociation from other social groups. In this way their individual resources

> are of little benefit to other residents and the extent to which neighbourhood effects are cushioned by their continued presence is limited.

Expressed in somewhat exaggerated terms, this could be said to mean that only the dissociation within and the bridging out of the neighbourhood can explain the continued local presence of middle-class households. How though are pertinent findings on the practice and perception of individuals to be gathered so as to give indications about the permeability of neighbourhood boundaries? In our opinion it is worthwhile considering three different analytical levels. The permeability of neighbourhoods can:

- be institutionally anchored (e.g. through an international school, through a firm's network, through the accessibility of various submarkets on the housing market),
- be individual in nature (in the form of action spaces, networks of friends or family), or also
- be symbolic or discursive, acting upon groups and spaces in the form of boundary constructions.

These three aspects are further differentiated and specified in the following discussion.

Institutional contexts

Institutional contexts can significantly promote the social upwards mobility of residents of disadvantaged neighbourhoods. In particular, educational institutions with their accessibility and quality influence the systemic integration and social inclusion of residents. Thus the international studies of PISA (Programme for International Student Assessment) and PIRLS (Progress in International Reading Literacy Study) reveal that academic success in Germany is more closely associated with social origin than in all other participating countries (Konsortium Bildungsberichterstattung, 2010). Especially students with immigration backgrounds from socio-economically disadvantaged circumstances, who often live in disadvantaged neighbourhoods, are impacted by these deficits (Baur and Häussermann, 2009).

Educational institutions thus support residents in their social participation and functional integration – or through their structures and mechanisms can exclude groups or individuals. Indications for the permeability of neighbourhood boundaries can therefore also be captured through institutionalised forms of bridging or, indeed, exclusion. The accessibility of such structures is influenced not only by spatial accessibility but also by knowledge about such facilities and the "felt" permeability.

Educational institutions as institutional contexts play a key role not only for permeability in the functional sphere (individual social mobility). They are also significant for social interactions. Educational institutions play an important part in the process of communitisation of children and parents. Empirical work by Savage et al. (2005) shows that in the course of starting a family new coalitions and groups are formed and that educational institutions can take on a binding or a dividing function

here. Watt (2009, p.18) demonstrates that the educational orientation of family households is a key driver for removing to suburban districts. How then do middle-class households that remain in the neighbourhood choose the appropriate educational institution?

Wellman and Wortley (1990) also confirm the significance of contacts made in the context of school, work and free-time. These contexts have a particular quality for contact-making because they enable regularity, so that a routine can develop in the meetings or exchanges. Such contacts are more than occasional chance encounters, and they also offer an important basis for testing images of the other, and thus for the symbolic construction of boundaries or permeabilities (see further discussion below).

In addition to the institutional accesses that neighbourhood residents exploit outside their neighbourhood, it is also important to discover how accessible and attractive institutions such as schools or also other infrastructure/meeting places *in* the neighbourhood are for visitors from the outside. Which institutions in disadvantaged neighbourhoods are regularly sought out by actors that live outside the urban district in question?

Social networks

A further factor influencing the context effects of disadvantaged neighbourhoods is the form of the social networks of its residents. In particular, the significance of networks that extend beyond the boundaries of the neighbourhood should be more closely investigated. Wacquant (1998, p.27) points out that a concentration of social networks *in* disadvantaged neighbourhoods can hinder or even prevent the upward social mobility of residents: "Ties that bind and keep you down". Filsinger (2010, p.23) also observes the danger for inhabitants of segregated districts of a long-term limitation of social circles to their place of residence: "It is decisive whether enough exchange relations exist to allow linkages to be made".

Granovetter (1973) draws attention to the particular strength of "weak ties" that offer residents of disadvantaged neighbourhoods important support, allowing them to access information that is outside the reach of their own peer group. These networks extend beyond the boundaries of the neighbourhood and are associated with bridging capital: "They are wide ranging and are likely to serve as bridges across social boundaries" (Blokland and Noordhoff, 2008, p.107). Bridging is also in this context dynamic. The production or change of social boundaries is a central part of social interactions: "People everywhere organize a significant part of their social interaction around the formation, transformation, activation, and suppression of social boundaries" (Tilly, 2004a, p.213).

It is thus meaningful to investigate the bridging and/or bordering strength of individual networks in disadvantaged districts. Middle-class households are judged to possess particular strength in this context. The bridging character of such social networks can also create social corridors between places and spaces: "Just as places are connected to other places through the organisation of a network of the imaginary, so one´s network of best friends connects you to other places" (Savage, 2005, p.151).

Early network analyses (see Wellmann, 1979) already confirmed the increasing differentiation of the spatial and social relations of households, a differentiation that went hand in hand with developments in communication and transport. Nauck (1988) argues, for instance, that ethnic concentrations and close access to family networks has little significance for the choice of place of residence for migrants to German cities. Farwick (2009, p.225) similarly draws attention to the declining coherence of local social community. This thus opens up the possibility that the importance of spatial proximity to ethnic neighbourhoods with their infrastructure, sites of crystallisation and chances of contact may be disappearing.

Schnur also refers to forms of individual networks that cross neighbourhood boundaries. He calls neighbourhoods "Fuzzy Places" in recognition of their indistinctness: networks are both "a bit inside" - in the form of neighbourhood contacts - and at the same time "a bit outside" - in the form of, for instance, transnational social networks (Schnur, 2008, p.41). From a network perspective neighbourhoods can thus be described as "clusters in the rather sparse, loosely bounded structures of urbanites' total networks" (Wellman and Leighton, 1979, p.385).

Network theory is a good way to approach the question of which contacts a person maintains, how these are shaped, and where they are spatially located. The significance of neighbourhood for social relationships is discussed in three polarised models (see Wellman and Wortley, 1990; Hennig, 2007). Thus the "decline of community" thesis argues that neighbourhood has limited significance for the existence or creation of social contacts. In contrast, the "community saved" thesis states that the neighbourhood is still of great value for social contacts. The wish for social control and the self-selection of households into certain neighbourhoods leads to the survival of "community" (see Pahl, 1991). Finally, the "community liberated" thesis suggests that primary relationships are still of great significance but that these are no longer embedded in localised "communities". Wellman and Wortley find proof for this third thesis: "Routine contact at work and the widespread use of automobiles and public transit mean that people do not have to live nearby to see each other often" (Wellman and Wortley, 1990, p.568).

Symbolic bordering and permeabilities

The third analysis dimension that can provide indications of the permeability of neighbourhood boundaries is symbolic bordering and bridging. People define "self" and "other" in order to draw up categories that reduce the complexity of everyday life. "The essence of a border is to separate the 'self' from the 'other'. As such, one of the major functions of a border is to act as a barrier, 'protecting' the 'us insiders' from the 'them outsiders' (…)" (Newman, 2003, p.14). Only through the process of bordering are we able to develop activity routines and to enter into social relations with others (Jenkins, 2008, p.27).

Reuber (1995, p.63) draws attention to the importance of boundary construction that results in a better "readability" of neighbourhoods and that thus functions as an framework for orientation in daily activities and also as a memorable space for

residents: "Easily perceived boundaries at the edges of a district as well as between homogeneous, closed subareas promote the small-scale and the transparency of the physiognomy".

The extent to which a space is determined by the power of one group also influences encounters between individuals and groups. Savage et al. (2005) argue that it is not enough to reduce understandings of dissociation mechanisms to the old-established residents of a neighbourhood on the one hand and the newcomers on the other hand (see also Elias and Scotson, 1994, on the established/the outsiders). Rather these dissociation mechanisms are related to different groups, contexts and also concrete places according to individual residential biographies and worlds of experience.

Atkinson (2006) uses the example of the middle-classes to discuss the deeply anchored quest for like-with-like spatial association and the accompanying process of symbolic dissociation from the "others". The negative image of the urban district (re-)produced by media and discourses in the city does not, however, match the social position of the middle-classes that remain there. Thus small-scale dissociation processes become highly significant in positioning a household in comparison to other social groups. Watt (2009) uses the concept of "selective belonging" to draw attention to these many small-scale contexts of local belonging. Based on their own empirical investigations, Blokland and Van Eijk (2010) confirm the limited interaction between different social and ethnic groups.

Tilly (2004b) discusses the significance of "stories", the telling of which contributes to the communalities of "us" and constituting of "the others". This can express itself through the "badmouthing" of particular spatial subareas of an urban district. Verbal constructions of boundaries ("power of naming") were discussed early on by Bourdieu (1991) as a mechanism for safeguarding status, and were illustrated by Watt (2009, pp.14f) using the example of a suburban residential area. Watt draws attention to the reproduced discourse of fear and uncertainty that divides the small residential area perceived as being safe and status-worthy from its surroundings. In this way households of higher status seeking to belong, dissociate themselves from the surrounding stigmatised urban district and thus save their image ("managing the spoiled identity", see Goffman, 1986). Wittebrood/Permentier (2011, p.104) also draw attention to the strategy of small-scale dissociation by middle-classes who remain in disadvantaged districts.

As well as using small-scale processes of dissociation middle-class households can also position themselves in relation to symbolically important locations outside the neighbourhood by using bridges. Such bridging processes provide indications about the permeability of a neighbourhood and its "external image".

Planned research project

Building upon the arguments outlined above, we plan in 2012-2013 to conduct an empirical study on the permeability of segregated neighbourhoods. The study should investigate more closely the linkages, including those that extend beyond the neighbourhood, used by middle-class households both with and without immigration

backgrounds. The aim of the research is to trace down these bridges out of the neighbourhood, so that conclusions can be drawn about the permeability of the neighbourhoods and the power of context effects. In addition, indications about networks or about social and spatial boundary construction *inside* the neighbourhood should be gained.

The empirical work is planned in two steps. In 2012 an explorative investigative research design will empirically test and modify the research assumptions. In a further step the aim is to conduct a larger comparative study in an international context. Case-studies should investigate segregated inner-city districts in various conurbations.

The explorative investigation will be conducted in a German city with a research focus on the German and Turkish middle-class. A qualitative survey of a total of ca. 30 middle-class households of German and Turkish origin is planned.

Key research questions:

- What is the significance of the neighbourhood in the perceptions of residents, which other linkages and also boundaries do they experience?
- Which **bridges** out of the neighbourhood are formed by middle-class households of higher social position that remain in segregated districts? How are these spatially manifested?
    - Individual social linkages (e.g. friends)
    - Institutionalised linkages (e.g. attending school outside the neighbourhood)
    - Belonging to groups and spaces, (re)production of media discourse (dissociation from the "bad areas")
- Which differences between German and Turkish households can be observed? What is the significance of linkages back into the neighbourhood of those that have moved out?
- Which social, institutional and symbolic **boundary constructions** by Turkish and German households within the neighbourhood can be observed? How are these spatially manifested?
- What are the implications of the identified bridges and boundaries for the assumption that middle-class households have a positive effect on "the neighbourhood", that is in terms of social cohesion, role-models, stigma, etc.

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AESOP 2012: Planning to achieve – planning to avoid

Decisions in time of climate change: The CLUC-model as a tool for spatial planning

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Abstract

The urban climate effect already poses a challenge in several cities as it leads to the formation of heat islands and therefore to an increase of the morbidity and mortality rate. Due to climatic changes, these effects are expected to increase. However, the consequences of climate change may be reduced by introducing appropriate adaptation measures to cities.

Spatial planning is regarded to play an important role in adapting cities to climate change as it influences the spatial configuration, type and degree of development of buildings and land use, as well as landscapes and green spaces. But especially the uncertainty and the complexity of climate change confront spatial planning with growing challenges and the difficulty to make and justify decisions. Therefore, local experts from Stockholm (Sweden) and Rostock (Germany) lack a basis for decision-making within spatial planning.

The Climate and Land Use Change-model (CLUC-model) can support spatial planning when making decisions with regard to climate change. The model focuses on the interactions between land use and surface temperatures and on the specific air conditions within cities. It allows to project urban temperature differences with regard to different assumptions of (future or planned) land use/land cover and its specific characteristics. Analysing the input parameters of the CLUC-model, spatial planning mainly can influence five parameters: the specific heat of concrete, the average mass of concrete, the building mass per unit of built land, the roughness length and the evaporating fraction at surface. Being aware of the relevance of these five parameters, spatial planning can contribute to the future temperature conditions.

Summarizing, the CLUC-model can support spatial planning in projecting and evaluating adaptation measures by assessing different future land uses and spatial patterns. Therefore, it can serve as a decision-support tool for spatial planning with regard to climate change.

1. Introduction

The average annual air temperature in large cities is 1 to 2 °C higher than in the immediate surrounding area – in mega cities differences of more than 10 °C can be determined at certain times (Oke, 1973). In the context of climate change, this could present a growing problem for mankind since rising temperatures may also increase the intensity and frequency of the formation of heat islands. Since over half of the world's population was city-dwellers in 2010 and this tendency is growing (Crossette, 2010), the urban climate effect may impact on an increasing number of people worldwide in the 21st century. More severe consequences can be expected concerning future climate change in metropolitan areas than in their surrounding areas (Früh *et al.*, 2011). If societies are not prepared for such changes, morbidity and the mortality rate will increase due to the consequences of a higher heat load (Souch and Grimmond, 2004), an example of which occurred in France in the summer of 2003 (Filleul *et al.*, 2006). It is assumed that the number of summer days (days with maximum temperature $\geq$ 25 °C) and hot days (days with maximum temperature $\geq$ 30 °C) will increase in many regions (Früh *et al.*, 2011), and hence in the areas where people suffer from thermal stress (Souch and Grimmond, 2004).

However, these consequences of climate change may be reduced by introducing appropriate adaptation measures to cities. Spatial planning is regarded to play an important role in adapting cities to climate change as it influences the spatial configuration, type and degree of development of buildings and land use, as well as landscapes and green spaces. Especially the uncertainty and the complexity of climate change confront spatial planning with growing challenges and the difficulty to make and justify decisions.

The article is based on the evaluation of literature and interviews with local experts in the City and Region of Stockholm (Sweden) and the City and Region of Rostock (Germany). In both regions, semi-structured interviews were carried out with local representatives of the departments for spatial planning, landscape planning and environment as well as of the regional planning administration.

As one possible approach to support decision-making within spatial planning, this contribution introduces the Climate and Land Use Change-model (CLUC-model). The model explores the impacts of climate change and land use on surface temperatures as well as the interrelations between them. It is examined in which way the model can support spatial planning when taking decisions and it is planned to evaluate it for Rostock and Stockholm.

First, the focus is on the topic of adaptation to climate change within spatial planning (chapter 2). In chapter 3, the functionality of the CLUC-model is presented. Following this, we discuss how the application of the CLUC-model in planning processes could support spatial planning decisions to influence the future temperature conditions in cities (chapter 4). The contribution concludes with the possibilities as well as the limitations of the model with regard to spatial planning.

2. Adaptation to climate change within spatial planning

There is a broad consensus that both mitigation and adaptation to climate change are needed with regard to climate change (e.g. Davoudi *et al.*, 2009; Alberti and Blanco, 2009; Intergovernmental Panel on Climate Change (IPCC), 2007). Within spatial planning, both tasks are considered to be parts of the broader task of climate change planning (Wheeler *et al.*, 2009). Whereas mitigation has long played an important role, adaptation to the impacts of climate change is attracting increasing attention within spatial planning only for some years. In the European Union, the 2001 report by the Intergovernmental Panel on Climate Change (IPCC) is considered providing an important impetus for tackling the topic of adaptation to climate change (Termeer *et al.*, 2009).

The role of spatial planning in adapting to climate change is based on the spatial relevance of both the impacts of climate change and potential adaptation measures (Biesbroek *et al.*, 2009; Fleischhauer and Bornefeld, 2006). For example, a rise in sea level or increasing temperatures could affect cities, necessitating changes in the current land use or influencing decisions on future land use. Since spatial planning influences the spatial configuration, type and degree of development of buildings and land use, as well as landscapes and green spaces, it has an important role to play in adapting to climate change impacts.

However, adapting to climate change confronts spatial planning with growing challenges. These challenges are mainly attributed to the high level of uncertainty, to the dynamic and the long-time horizon of climate change and to the high complexity of cities and regions (Reese, 2011; Hallegatte, 2009).

The uncertainty of climate change is seen as a pivotal challenge for spatial planning (Hall, 2009). Results from empirical studies in Stockholm region (Sweden) and Rostock region (Germany) reveal that local experts assess uncertainty being one of the most important challenges for spatial planning with regard to climate change. Even if planning always had and still has to deal with uncertainty, local experts confirm that climate change seems to exacerbate this problem. In their opinion, climatic changes are more difficult to predict than other future developments. As climate scenarios contain a wide range of potential climatic changes, they are considered to be too vague and imprecise to develop adaptation strategies and measures. Thus, uncertainty is not only about climatic changes, but also about measures and strategies for spatial planning (i.a. Davoudi *et al.*, 2009; Hallegatte, 2009). Otherwise, spatial planners in Stockholm and Rostock are aware that

uncertainty cannot be completely eliminated and that they have to find possibilities to integrate uncertain impacts of climate change within spatial planning.

Another challenge can be seen in the dynamic and the long-time horizon of climate change. On the one hand, climate change exceeds the traditional planning horizon that often focuses on the next ten or 15 years (Ritter, 2007). Nevertheless, spatial planning has to consider climatic changes already now as planning decisions influence the spatial structure over a long period of time. Local experts from Stockholm and Rostock emphasise that this is not a completely new challenge as planning always had and has to deal with long-time developments. Within the fields of landscape planning or flood protection, the time horizon is up to 200 years.

On the other hand, climatic changes are characterized by high dynamics (Hallegatte, 2009; Schuchardt and Schirmer, 2005). Local experts in Rostock point out that the dynamic of climatic changes is even more challenging than the long-time horizon. Decisions made today have to be compatible with the current as well as the future climatic conditions: „For an architect, it is not more difficult (nor more expensive) to design a building adapted to the climate of Cordoba than to the climate of Paris. But it may be more difficult (and more expensive) to design a building adapted to both" (Hallegatte, 2009, p. 241).

Furthermore, spatial planning has to deal with the complexity of cities and regions. Interventions such as adaptation measures have manifold impacts that have to be considered while designing adaptation measures and strategies (Aerts *et al.*, 2012). Local experts in Stockholm and Rostock are aware of this complexity and consider climate change as a "very complex and complicated phenomenon".

Despite these challenges, spatial planning has to decide on future developments. This raises the question how adaptation measures and strategies can be justified. Due to the uncertainty and the long-time horizon of climate change, local experts lack a basis for decision-making as they estimate the existing climate scenarios being too weak and imprecise. Taking for granted that climate scenarios will remain uncertain (Hallegatte, 2009), the question arises which methods and processes can serve for decision-making within spatial planning (i.a. Hallegatte 2009; Overbeck et al. 2008).

In the following, we present a model that could support spatial planning in decision-making.

3. The CLUC-model

The Climate and Land Use Change-model (CLUC-model) focuses on the interactions between land use and surface temperatures and on the specific air conditions within cities that differ from those in the surrounding countryside. The so-called urban heat island (UHI) effect describes the phenomenon of differing temperature between urban areas and their immediate surrounding rural areas. These differences are

primarily generated in urban areas due to large-scale building structures, sealing and emissions from transport and industry.

The CLUC-model explores the impacts of climate and land-use change scenarios on surface temperatures. While causes for temperature differences within urban areas are well understood, it is difficult to map and quantify the spatial configuration of these (Smith *et al.*, 2011).The model allows to project urban temperature differences arising from specific land covers and their specific properties (for instance rate of vegetation cover, impervious surfaces or building height). To do so, the model combines two elements: Climate change scenarios and different types of land use. The climate change scenarios are based on global and regional climate models (downscaled to the city scale). By using different types of land use as input to the model their specific effects on the surface temperature can be compared. There are similar spatial and temporal patterns between air and surface temperatures, although most of the time they do not have exactly the same values (Arnfield, 2003). Surface temperatures vary more (Lowry, 1988) whereas air temperatures are nearly identical across an immediate landscape due to mixing of air (Brown and Gillespie, 1995). The correlation with microscale site characteristics like sky view factor is stronger (Eliasson, 1996) and surface temperatures are less dependent on the unpredictability of wind speed and direction (Whitford *et al.*, 2001). It can serve as a measure of mean radiant temperature and therefore is a significant factor in determining human comfort (Matzarakis *et al.*, 1999).

The surface temperatures are quantified using an energy exchange model previously developed (Whitford *et al.*, 2001) from the urban climate model of Tso *et al.* (1991) and adopted for example for Manchester (Gill, 2006). It is based on following energy balance equation (Figure 1):

$$R = H + LE + G + M$$

R...net radiation flux; balance between incoming and outgoing energy at the surface
H...sensible heat flux due to convection; transfer of heat energy from surface to atmosphere by air movement
LE...latent heat flux due to evaporation; quantity of heat energy released by the surface due to change of state (evaporation)
G...Conductive heat flux into the soil; quantity of heat energy transferred within and between bodies of matter (soil)
M...heat flux to storage in the built environment; quantity of heat energy stored in the built environment

The model solves equations for the terms in the energy balance simultaneous and expresses the balance in terms of the surface and soil temperature (T_o and T_s).

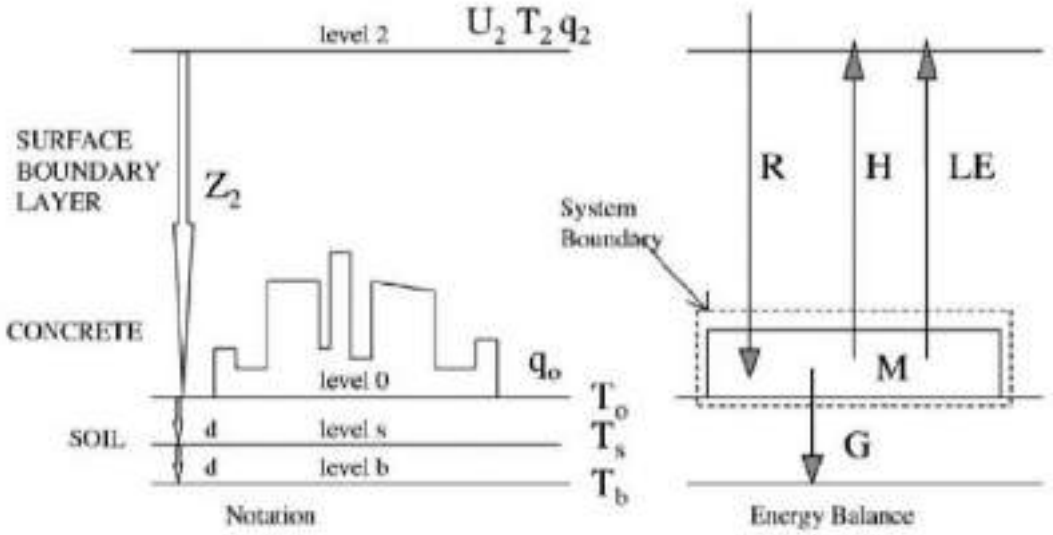

Figure 1. Framework of the energy balance model (Whitford et al. 2001, Tso et al. 1991)

For further explanation of the differential equations see for example Gill (2006) and Tso *et al.* (1991). The process of solving the differential equations during the different time steps is as follows (Gill, 2006):

1. Initial estimate for dawn air and soil temperatures
2. Dawn temperatures as initial conditions for differential equations over the sunny period and simultaneous equations are solved, solutions are taken as sunset air and soil temperatures
3. Sunset temperatures become initial conditions for differential equations over night and simultaneous equations are solved, solutions are taken as midnight air and soil temperatures
4. Midnight temperatures become initial conditions for differential equations over pre-dawn period and simultaneous equations are solved, solutions are taken as the next dawn air and soil temperatures
5. Dawn temperatures from previous day (1.) are compared with new dawn temperatures (4.), if results are unchanged to 3 decimal places no further iterations are carried out, otherwise new dawn temperatures (4.) become initial conditions for 2. and another iteration follows

The surface and soil temperatures are plotted over time and the maximum and minimum temperatures are provided by the model (Gill, 2006). Some input parameters for the model, like air density and specific heat of air, are adopted from previous studies (Table 1). Others are adapted to specific conditions in the case studies of Rostock and Stockholm. Meteorological parameters have to be changed for the assessment of a hot, cloud-free summer day in present and future climate and will vary with different climate scenarios.

Table 1. Input parameters for the energy exchange model (after Gill, 2006).

Parameter & notation	**Unit**
Specific heat of air	J/kg/°C
Density of air	kg/m^3
Thermal conductivity of soil	W/m/°C
Specific heat of soil	J/kg/°C
Density of soil	kg/m³
Specific heat of concrete	J/kg/°C
Latent heat of evaporation	J/kg
Average mass of concrete	kg/m²
Building mass/unit of built land	kg/m²
Roughness length	m
Height of surface boundary layer (SBL)	m
Wind velocity at SBL	m/s
Air temperature at SBL	°C
Specific humidity at SBL	-
Evaporating fraction at surface	-
Soil depth	cm
Soil temperature at depth 2d	°C
Reference temperature	°C
Hours of daylight	h
Sunrise time	h
Sunset time	h
Peak insolation	W/m²
Night radiation	W/m²

Referring on these input parameters, the CLUC-model allows to project urban temperature differences with regard to different assumptions of (future or planned) land use/land cover and its specific characteristics. By changing the input parameters, it is possible to model the impact of different land use scenarios on surface temperature.

4. The CLUC-model as decision-tool for spatial planning

With regard to spatial planning, the crucial question is how the application of the CLUC-model in planning processes could support spatial planning decisions to influence the future surface temperature in cities. To do so, two major questions arise: First, which parameters can be influenced through spatial planning? And second, what can spatial planning do to influence these parameters and therefore the surface temperature within cities?

Looking at the input parameters of the CLUC-model (Tab. 1), spatial planning mainly can influence five parameters:

(1) The parameter ‘specific heat of concrete’ can be changed by using other materials for buildings, streets or places. The higher the specific heat of the materials is, the higher is the capacity to store or carry heat.
(2) Another factor is the ‘average mass of concrete’ that also varies according to the building materials. The temperature is influenced by the specific heat storage mass.
(3) Spatial planning can also influence the ‘building mass per unit of built land’. It mainly depends on the height of a building and the building materials. Higher buildings have a higher building mass and therefore contribute more strongly to increase the temperature.
(4) The ‘roughness length’ describes the surface structure of a city that includes the height of the buildings, the density of an area and the spatial configuration. The lower the buildings and the density, the lower the roughness length and the increase of temperature.
(5) Finally, the temperature is determined by the ‘evaporating fraction at surface’. A lower degree of sealed surface, and therefore a higher evaporative fraction, results in a lower heat effect on the surrounding area.

Being aware of the relevance of these five parameters, spatial planning can contribute to the future temperature conditions. As the urban temperature depends on several other parameters that cannot be influenced by spatial planning (as for example the specific heat of the air or the hours of daylight), there are no generally appropriate measures or strategies to decrease the surface temperature. Therefore, it is very important to take into account the local conditions and their development. By projecting the surface temperature for different land uses, the CLUC-model can support spatial planning in order to make well-founded decisions.

With the help of the CLUC-model, different spatial developments could be compared. Suppose an inner-city area that should be redeveloped: The alternatives are either some flat but extensive buildings or one high building and a small park. By entering the specific data (as well as all the other parameters) into the CLUC-model, the temperature rise for this area can be calculated and the two developments can be compared. Against the background of the uncertainty and the complexity of climate change, the CLUC-model can serve as a decision-support tool for spatial planning.

5. Conclusion

Summarizing, the CLUC-model can help to project the effects of changes in land use and building patterns – and therefore of potential adaptation measures – with regard to climate change. The particular added-value of the model is that it integrates future climatic changes as well as potential changes in land use and building patterns. Therefore, it can support spatial planning in several respects:

(1) The model reveals the complex and manifold effects of planning decisions on the future surface temperature.

(2) As the model considers both future land uses and future temperature conditions, it facilitates spatial planning to analyse the interactions between these two components.
(3) By integrating different future temperature conditions, the model provides an opportunity to take into account the whole range of potential climatic changes.
(4) Furthermore, the model allows projecting the effects of different land uses and spatial patterns on the surface temperature. The comparison of different spatial developments can support spatial planners when taking decisions.

Obviously, modelling the effects of planning measures cannot release spatial planning from its duty to define objectives and set priorities with regard to future developments. In addition, the model cannot show differences in air temperatures due to for example inner-urban wind corridors and shading by trees. However, the CLUC-model can support spatial planning in projecting and evaluating adaptation measures by assessing different future land uses and spatial patterns. Therefore, it can serve as a decision-support tool for spatial planning with regard to climate change.

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THE CONCEPT OF INTEGRATION IN SPATIAL PLANNING : AN EXPLORATION

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Keywords: Integration, Spatial Planning, The Netherlands

Integration has become a central standpoint in planning practices in Europe. Several researchers (e.g. Nadin,2007; Vigar, 2009) incorporate the notion of integration in spatial planning. Nadin (2007) distinguishes spatial planning for traditional land use planning by its ability to encourage long term strategic visions, bring together and integrate policies, support sustainable development and improve cooperation between stakeholders and society. Vigar (2009) even argues in his article on integrated spatial planning that integration and spatial planning can be considered tautological concepts.

In the Netherlands the concept of integration has taken shape via the ambitions of the national government, in the 2006 spatial memorandum (Ministry of Housing, Spatial Planning and the Environment et al., 2006). To operate the ambition 'integrated spatial development' was introduced as a new planning process, a process designed to deal with several planning issues at the time, including integration (see Louw et al, 2003; Boelens and Spit, 2006). As a result of the economic set-back, many of the integrated spatial development projects in the Netherlands have come to a standstill, mainly due to their integrative, large-scale, and therefor costly character. As a result, discussion amongst professionals arises whether or not such (regional) development projects will be possible in the (near) future, and how these projects can be completed in integrative ways.

Although integration is a key concept in spatial planning, the actual meanings of the concept in relation to different planning processes and in different views of stakeholders are still vague. This paper explores the different meanings of integration in spatial planning / spatial development processes. Previous designed frameworks for integration (e.g. Healey, 2006; Kidd, 2007; Vigar, 2009) will be used to conceptualize the meanings of integration in spatial planning. Furthermore, and based on the frameworks for integration, the paper assesses the comprehensiveness of the integration concept in spatial planning, thereby taken into account that not all planning objectivesrequire integrative planning processes. The Dutch integrated planning practice will be used as exemplifying case study.

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1. Introduction

Integration has become a central standpoint in planning practices in Europe. Multi-functionality, complexity, coordination, and partnership are concepts often mentioned in connection with integration in planning processes. Although these concepts do not automatically reflect an integrated planning practice, they are used as signifiers to show the necessity of integration in planning projects. To have integrated planning practices is considered to be natural, sometimes even fashionable, obligatory, and the road to successful planning practices. The apparent role of integration in planning is revealed in studies of several researchers. Vigar (2009) argues that integration and spatial planning can be considered tautological concepts. A thought reflected in the definition of spatial planning of Nadin (2007, p. 43), who distinguishes spatial planning from traditional land use planning 'by its ability to encourage long term strategic visions, bring together and integrate policies, support sustainable development and improve cooperation between stakeholders and society'. A definition filled with the signifiers of integration: integrated policy, cooperation between stakeholders, strategic visions, etc. Vigar adds that spatial planning can be considered a holistic form of land use planning.

Although different researchers (e.g. Scharpf, 1996; Eggenberger and Partidário, 2000; Healey, 2006; Kidd, 2007; Vigar, 2009) have studied the concept of integration, there is no universal definition of the concept of integration. When looking at integration in planning practice, different stakeholders give different meanings to the concept and use different signifiers to point out integration in planning processes (cooperation, policy integration, complexity, partnership, synchronisation, etc.). Furthermore, different Dutch stakeholders questioned the role and necessity of integration in planning projects during interviews, pointing out the complex and time consuming character of integrated planning processes.

This paper explores the concept of integration in both planning literature and practice. The paper addresses different meanings of integration in spatial planning, the ability of integration to function as umbrella-term (Healey, 2006) for several other concepts related to planning, and the necessity of integration in planning processes. Central questions in this paper are: what is integrated spatial planning and is the umbrella-term integration comprehensible in planning practice? Previous designed frameworks for integration (e.g. Healey, 2006; Kidd, 2007; Vigar, 2009) acted as setting to conceptualize the different meanings of integration in spatial planning. Furthermore the frameworks helped to form signifiers for the analysis of planning practice. The paper subsequently assesses the ability of integration to function as an umbrella for several planning concepts, such as coordination, participation, etc.; thereby taken into account that not all planning objectives might require integrative planning processes. The Dutch regional planning practice is used as exemplifying case. Via a series of interviews with stakeholders in Dutch integrated planning processes and officers of regional governmental authorities, integration in planning processes was studied. In the final sections of this paper the necessity and implications of integration in spatial planning will be discussed.

2. Integration and spatial planning

Although integration has become a key concept in planning, the meaning of the concept varies. In different planning processes, stakeholder use different definitions and formats integrative planning practices. Furthermore different researchers, who studied the concept of integration in planning, have composed different frameworks for the concept, and its forms, aspects, dimensions or types (e.g. Healey, 2006; Kidd, 2007; Vigar, 2009). Healey (2006) studied policy statements in the English planning system and divides the policy statements in types of integration and their meanings. Kidd (2007) has drawn on the relation between health and planning, and created a detailed framework of different forms of integration in spatial planning. Vigar (2009) focused on the evolution of integrated spatial planning in UK territories. He chose to analyse spatial planning via the notion of governance lines, a form of horizontal and vertical integration. Although the different researchers have made different frameworks, elements of their frames overlap (see figure 1 and 2 for the frames of Healey and Kidd). The notion of horizontal and vertical integration, for instance, is found in the studies of all researchers. Vigar took this dimension of integration as basic grid, while in the framework of Kidd horizontal and vertical integration are part of the subdivision of territorial integration, the same applies to the frame of Healey where horizontal and vertical integration are part of co-ordination. One could argue that Vigar focuses on a specific dimension of integration, related to governance, coordination and the integration of policy and action.

Table 2. A framework of integration in spatial planning

Sectoral	Cross-sectoral Integration	Integration of different public policy domains within a territory.
	Inter-agency Integration	Integration of public, private and voluntary sector activity within a territory.
Territorial	Vertical Integration	Integration between different spatial scales of spatial planning activity.
	Horizontal Integration	Integration of spatial planning activity between adjoining areas or areas with some shared interest.
Organisational	Strategic Integration	Integration of spatial planning with other strategies, programmes and initiatives within a territory.
	Operational Integration	Integration of spatial planning with the delivery mechanisms in all relevant agencies within a territory.
	Disciplinary/Stakeholder Integration	Integration of different disciplines and stakeholders within a territory.

Figure 1. Kidd's framework for integration in planning (2007)

Table 5.1 Meanings of 'integration' in recent policy statements about the English planning system

		Type of integration	Meaning of integration
A		Co-ordination	
	A1	Aligning	Fitting in to other policies and strategies
	A2	Co-aligning	Mutual adjustment among diverse strategies
	A3	Multilevel co-aligning	Mutual adjustment both vertically and horizontally
B		Framing	
	B1	Widening a policy frame	Extending an existing frame to encompass a new dimension
	B2	Creating a new frame or vision	Developing a new policy focus and discourse
	B3	Creating a place-focused policy frame	Focus specifically on place qualities and spatial organisation
C		Linking policy and action	
	C1	Policy and delivery	Connecting policy assertions to specific delivery mechanisms
	C2	Regulation and investment	Linking principles governing land use regulation to those governing development investment
D		Linking multiple actors	
	D1	Involving	Drawing the community and key stakeholders into plan-making processes
	D2	Sharing knowledge and ideas	Drawing on and developing knowledge with stakeholders
	D3	Sharing ownership	Developing a shared commitment to the content and legitimacy of a plan/strategy

Figure 2. Healey's framework for integration (2006)

Both Healey (2006) and Kidd (2007) have created a detailed framework to define integration and specify its signifiers. Healey distinguished four main types of integration: co-ordination, framing, linking policy and action, and linking multiple actors. The framework focuses on specific actions to be taken to integrate policies in planning practices. Kidd distinguished three main types of integration: sectoral, territorial, and organisational integration (or co-operation). This framework focuses on the different sectors or places in which integration can take place. Although both researchers took a different viewpoint on integration in spatial planning, their frames partly overlap in terms of signifiers, focussed either on input (actors, organisations) or output (policy, implementation):

- Participation and cooperation (integration of stakeholders and initiatives)
- Spatial scales (vertical integration, redistribution of power, decentralisation)
- Adjoining areas (horizontal integration)
- Policy design (integration of disciplines, programs, policies, and strategies)
- Policy implementation (integration of sectoral activity)
- Policy design to implementation (integration of policy and action)

Both Healey (2006) and Kidd (2007), as well as Vigar (2009), view the signifiers as concepts important to successful spatial planning processes, joint under the umbrella of integration. While the researchers urge the necessity of integration in planning processes, they emphasize the need to be specific with the form of integration sought for in a planning process. Vigar (2009) questions how far integration can be pursued in the contemporary governance landscape. In relation to integration, Vigar refers to the principle of meta-governance and bottom-up planning. This has allowed for a wider variety of stakeholders in planning processes and has redistributed power in planning practices via processes of bottom-up planning and decentralization. Over all, planning processes have become more complex and fuzzy, making it more difficult to be integrative in planning practices. Vigar also points out the positive of this situation. New planning issues such as sustainability and renewable energy are more easily plugged in, and meta-governance allows for flexible alliances of stakeholders and planning processes. Healey (2006) concludes that different actors in planning processes first need to be able to identify their own objectives and their need for cooperation, before integrative projects can commence. Kidd (2007) argues the different facets of integration might more easily be understood in planning practice, than the actual use of integration as key concept. Although Kidd adds that integration only takes place if different sectoral policies are combined in spatial planning, and spatial planning adds to different sectoral policies.

To summarize, planning has become more holistic and complex. To deal with different issues in planning practice, integration has emerged as a concept to be able to organize successful planning processes with multiple stakeholders, different (level) planning authorities, and different views, strategies and policies of stakeholders. Although integration is important, to be able to grasp the meaning of integration in planning practice, the integration-umbrella has to be split in different, more easily understood, concepts regarding policy and stakeholders in planning processes. Furthermore, stakeholders have to identify their objectives for integration as specific as possible in the beginning of planning processes, to be able to reach an integrative planning process.

In the next sections of the paper the Dutch planning practice in explored, to assess whether or not the meanings of integration in planning processes were defined in the beginning of projects, and whether or not integration is understood as an important part of a more holistic and complex planning practice. The signifiers, as specified in this section, helped to identify integration in planning practice and have been used to analyse policy documents and interviews with stakeholders in integrative planning processes and officers of regional planning authorities.

3. The Dutch regional planning authorities in context

The regions discussed in this paper, the provinces, are the middle level governmental bodies in the Netherlands. The Netherlands have twelve provinces, which are considered institutionalized planning authorities. Because the Netherlands is a relatively small country, the Dutch provinces are also small in comparison to, for example, the German or Spanish regions. Although they are small, they face similar problems concerning governance as larger regions in Europe. In order to reach their objectives and mobilize their resources, they have to overcome divisions between different levels of government and public and private stakeholders. Regions have to 'formulate and mediate their interests in the intergovernmental arena' (Benz and Eberlein (1999).

The Dutch provinces have played a role in planning processes since the 1920s (Bosma, 1993), when regional infrastructure became a planning objective. In the 1950s the role of the provincial planning authorities increased when land consolidation was added as regional planning objective, although the national government was a dominant actor in preparation and implementation of land consolidation schemes. During the 1990s the role of provinces in policy-making and planning projects increased due to decentralisation of responsibilities and tasks from the national to provincial governmental level. The provinces started acting as mediator between national policy design and local policy implementation and gained a permanent role in planning projects crossing municipal border. Besides realizing desired land uses, landscape quality and effective policy implementation became provincial planning objectives. In 2004 the national investment fund for rural areas (*Investeringsbudget Landelijk Gebied*) was decentralized to the provinces, making the provinces accountable for the implementation of the National Ecological Network and the related land consolidations. As a result provincial planning authorities became active participating stakeholders in planning processes. Besides regulation and coordination of policies and projects, they were actively involved in integrated planning processes, including (strategic) acquisition of land and risk full investment in projects. (Van Straalen et al., in review)

4. Dutch integrative regional spatial planning

Although integration or integrative projects have been part of the Dutch planning tradition for a longer period of time, the concept of integration was formally introduced as objective of the national government in the 2006 spatial memorandum (Ministry of Housing, Spatial Planning and the Environment et al., 2006). To implement the objective, 'integrated spatial development' was introduced as a new planning process. Integrated spatial development had to deal with several different planning issues, including integration, transparency, openness, and participation (see Louw et al, 2003; Boelens and Spit, 2006). The concept might be best understood in relation to the explanation of new emerging patterns of governance, as referred to by Kidd (2007, p.163): *"... an emphasis on openness and transparency, broad*

stakeholder engagement and consensus building in policy development and delivery. The potential benefits to public policy of a discursive approach, bringing multiple perspectives together, are of course reflected in the extensive collaborative planning literature (e.g. Healey, 1997)". The concept of integrated spatial development as such, was seen as cure to many planning issues, although the content of the concept unclear. Different reports, such as a guide to integrated spatial development *(reiswijzer gebiedsontwikkeling,* e.g. Ministry of Housing, Spatial Planning and the Environment, et al., 2007), had to provide for and facilitate new integrated planning projects.

As selected planning level for optimum integrated planning, the Dutch regional planning authorities – eager to prove themselves as mediator between national and local planning levels – started many integrated spatial planning projects in which integration was expressed as objective to guaranty the success of the projects. In many of these (cross-municipal) projects, cooperation was sought between province, municipalities, and private stakeholders, in some projects even national government became involved as stakeholder. Furthermore different land-uses where combined in these projects and cost-recovery schemes where set up to redirect funds from profitable to non-profitable parts of the projects (see De Wolff and Spaans, 2010).

As a result of the economic set-back, many of the integrated spatial development projects in the Netherlands have come to a standstill, mainly due to their integrative, large-scale, time-consuming, risky, and therefore costly character. Discussion amongst professionals arose whether or not such (regional) development projects will be possible in the (near) future, how these projects can be completed, and if integration of objectives, policies, and stakeholders in projects is still possible (see for instance Ministry of Interior and Kingdom Relations, et al., 2011).

5. Integration in Dutch regional spatial planning, a stakeholder perspective

As shown above, the economic set-back, and its unwinding, has influenced planning practices. As a result planners and governmental officers have taken a reflexive attitude towards the planning practices started before the crisis when, in the words of an interviewee, 'everything seemed possible'. As part of a larger project concerning spatial planning and land policy in the Netherlands, interviews took place with different stakeholders in integrative planning processes and different officers of regional planning authorities (the provinces), in the period 2009 to 2012. One of the topics addressed in these interviews was integration in planning projects, sometimes introduced by the interviewer, sometimes brought up by the interviewee before a question was asked on this topic. In this paper the analysis of these interviews is used to explore the meanings and roles of integration in Dutch regional planning processes, according to planning practice. The signifiers mentioned in section 2 of this paper were used as framework for analysis of the interviews:

- Participation and cooperation (integration of stakeholders and initiatives)
- Spatial scales (vertical integration, redistribution of power, decentralisation)
- Adjoining areas (horizontal integration)
- Policy design (integration of disciplines, programs, policies, and strategies)
- Policy implementation (integration of sectoral activity)
- Policy design to implementation (integration of policy and action)

The different interviewees all had different ideas of integration in spatial planning. Some of the interviewees asked for a clarification or definition of the concept before addressing the question, others explained their idea of the concept, still others referred to the concept without explaining their ideas, using integration as general concept. In all interviews the interviewees where given the opportunity to explain their ideas of the concept, before the interviewer would address the concept (as umbrella-term).
Most used terms in relation to integration where complexity, participation, and integrated implementation of different land uses. Officers of the regional planning authorities often mentioned the relation to landscape quality, as 'glue' between different land uses, the possibility to integrate land uses and planning projects on a cross-municipal scale, and cost recovery within projects as additional perceptions.

One interviewee emphasized the possibility of regional planners to choose an area oriented viewpoint, as meaning of integrated policy implementation. The ability to look through a lens of planning processes, instead of having a sectoral lens. This gave the interviewee the advantage to combine funds, planning tools, and planning objectives of different stakeholders involved in the planning process. In the view of this interviewee integration or integrated spatial development was a tool to implement planning objectives such as the objectives of the investment fund for rural areas. Some of the other stakeholders had the same notion of integrated spatial development as tool, while other interviewees had a different view. In the view of this second group of interviewees integration was an objective to be met in planning processes. As a consequence some interviewees viewed integration as opportunity to improve processes, while other viewed it as an obligation, sometimes interfering with other planning objectives.

One interviewee referred to the a phrase of national government from the 2006 spatial memorandum (Ministry of Housing, Spatial Planning and the Environment, et al. 2006), "*decentralised if possible, centralised in necessary*", in which decentralised planning processes are preferred. The interviewee stated '*sectoral if possible, integrative if necessary'*, relating to the complexity of integrative planning processes and favouring straight forward land use planning. One interviewee adds to this statement by highlighting the possibility to overrule municipalities via a regional zoning plan, possible since the new Spatial Planning Act of 2008. This offers the provinces the possibility to implement national or regional planning objectives without the cooperation from or by excluding a municipality opposing the implementation. Although most interviewees would opt for cooperation with

municipalities and state this form of planning would damage the relationship between municipalities and provinces, this would simplify planning processes.

In relation to the previous point, different interviewees relate to the complexity of integrative planning processes in which several stakeholders are involved. Often these processes are time consuming, because all stakeholders have a voice in the design and implementation of the project. In some planning projects private stakeholders or different ministries involved in a project of national importance, cooperate and are represented as a group by one person. According to an interviewee the advantage of this form of cooperation in the simplification of complex processes with multiple stakeholders. However, the different representatives have to spare more time for consultation with the other members of the group, not necessarily speeding up the process. Although a high number of stakeholders might lengthen processes, the involvement of many stakeholders in planning processes is seen as a natural occurrence of more integrative or governance oriented planning projects. One interviewee refers to the concept of depillarization in the Netherlands, resulting in smaller groups of stakeholders, more groups of stakeholders and individuals, and more independent voices. According to this interviewee we should not confuse the involvement of multiple stakeholders in planning processes and the concept of integration in planning. The first is a (no-stoppable) natural occurrence, the latter being something to actively strive for in processes or to use as a tool to improve the effectiveness of planning processes.

6. Discussion and conclusion

Overall interviewees did not have a straightforward definition of integration in planning processes, but referred to the same signifiers as the frameworks of Healey (2006) and Kidd (2007); although integration was mentioned more often in relation to policy implementation and the involvement of multiple stakeholders, than in relation to the integration of policies. Furthermore, in relation to horizontal and vertical integration, the regional planning officers often referred to policy integration within the own organisation and in cross-municipal projects, but the synchronisation of policies between provinces is less often mentioned. In relation to the aim of Dutch national government - although the national government recently collapsed and elections will be held in September 2012 - to decentralise the responsibility for spatial planning and the development of nature to the provinces, the synchronisation of policies related to planning becomes more important. Linked to the reasoning that borders are merely social constructs and expressions of power relations (Allen et al., 1998; Paasi, 2010), provinces or in general stakeholders integrating policies should be aware of these power relations and if possible redistribute power to be able to integrate policy design and implementation.

When assessing the meaning of integration in spatial planning, there is a deficiency between planning literature and practice. In relation to the observation of Kidd (2007), the fuzziness of the notion of integration, planning practice might benefit

from a clear separation of different form, dimensions, or aspects of integration. Interviews have shown that the meaning of integration differs between stakeholders involved in the same planning process or at the same planning level, making it harder for them to cooperate, integrate policies, or implement policies in an integrative manner. Concepts such as coordination, cooperation, cross-border projects, synchronization of policies speak to the mind of interviewees and might more easily spark integrative planning processes, than the vague, or rich, concept of integration.

As for the (future) role of integration in planning processes, integration is there to stay. From the perspective of planning literature, integration is a natural part of a more holistic spatial planning. From the perspective of planning practice, integration is not a necessity when opting for traditional (land use) planning projects and integration complicates planning processes. However, interviewees have shown the dedication of planning practitioners to integration and integrative planning processes. The interviewees point out the strengthening role of integration and participation in integrative planning processes, leading to stakeholders who understand each other, share interests and might more easily seek cooperation in future planning projects. Interviewees also hint at the necessity of policy integration to benefit effective planning projects; although future integrative projects would be of a smaller scale, compared to those prior to the economic setback.

7. Future research

After studying the meanings and role of integration in planning processes, and concluding integration is a viable part of planning practice, a new research aim emerges. This paper mainly viewed integration in planning practice from the perspective of planning output and input from stakeholders. Future research could focus on the conditions for integrative planning processes. This research should not only focus on the resources of stakeholders and the power distribution between stakeholders, but should also focus on laws and regulations enabling or disabling integrative planning processes.

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HOW TO MAKE DEVELOPMENT PLANS SUITABLE FOR VOLATILE CONTEXTS

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Abstract

A Complex Adaptive System (CAS) approach enables a dynamic view of how spatial systems evolve, considering spatial development to be a product of multiple and interrelated drivers for change. These processes typically have a remote causality and progress in a non-linear fashion. Those promoting CAS within the realm of spatial planning suggest it can help planners to gain an enhanced understanding of spatial change and find alternative ways of guiding spatial development. However, little attention has been given to the implications of remote causality and non-linearity on planning practices in general and development plans in particular. While development planning is a dynamic process, development plans have been criticised for exhibiting increasing rigidity during their lifetime and therefore offer limited utility to effective spatial planning. From a CAS perspective, this rigidity is particularly problematic since it requires planning strategies that are flexible enough to productively co-evolve with spatial dynamics. Meanwhile, development plans are widely recognized for their capacity to set direction, unite initiatives around a shared vision and the certainty they provide for landowners, project developers and citizens. Therefore, this paper explores with help of a case study some of the issues and tensions which may arise if the CAS approach is promulgated further and leads to significant changes in the design and implementation of development plans. It shows how CAS-based principles for developments plans may enhance the adaptive capacity of urban environments, but can also undermine other features of development plans. Additionally, some alternative skills are requested from planners when strengthening the adaptive capacity becomes a central aim.

Key words: adaptive capacity, complex adaptive systems, flexibility, development plans, Blauwestad

1. Introduction

Complexity science is now viewed by a number of authors to provide considerable utility in understanding and planning the spatial (e.g. Allen 1997, Batty 2005, Portugali, 1999; Webster, 2010). Portrayed as complex adaptive systems (CAS), spatial dynamics are understood to evolve in response to changes in their context, e.g. a city in response to a financial crisis or to environmental changes. However, a

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CAS's evolutionary behaviour is dynamic and difficult to predict as responses to changes in context are non-linear and emergent (Holland, 1992). Seen in this way, spatial development is discontinuous and often involves unforeseen change, rather than smooth progression (Portugali, 2006). Therefore a CAS approach describes dynamic processes of spatial development and highlights a situational perspective; spatial issues cannot be seen as unchanging, a-temporal and independent of their context (De Roo, 2012).

While for a number of years complexity science has been drawn upon to theoretically understand and artificially model spatial dynamics, only recently has it been used to suggest alternate spatial planning practices (see Alfasi & Portugali, 2007; Portugali, 2010, Rauws & De Roo, 2011; chapters from De Roo & Silva, 2010). This paper seeks to contribute to this growing body of research by exploring the implications of understanding spatial dynamics as CAS on spatial planning practices with particular reference to development plans.

Development plans are a well established, central tool of current planning practices; they are official documents produced by local and regional authorities to guide and regulate land use change (Healey & Shaw,1993; Kaiser and Godschalk, 1995). However, development plans are known to exhibit increasing rigidity during their lifetime and therefore are flawed for effective spatial planning under circumstances with a high degree of uncertainty (see e.g. Booth, 1996; Staley & Cleays, 2005; Larsson, 2006). Underlying drivers of spatial development, such as technological innovation, socio-economic and lifestyle trends, and also local demands and capacities frequently transform spatial configurations faster than development plans are able to deal with.

Development plans are often not sufficiently responsive as they set out a predefined trajectory of change. While the aim of planning is to support the making of better future places, most development plan designing processes take the current physical, economical and institutional configuration as fundament. As this configuration can considered to be fluid, it results in development plans that do only partly match the dynamic 'reality'. Some argue they often exhibit increasing rigidity as they are formalized and are consequently ill prepared for societal, economic or ecologic change experienced during their implementation and/ or completion. According to Alfasi, (2006) and Staley & Claeys (2005) the rigidity of development plans can discourage further spatial innovation and obstruct bottom-up development initiatives. In addition, Larsson (2006) and Van der Valk (2002) argue that the strong determining power of development plans can lead to bureaucratic situations in which matching the dynamic reality and the rigid plan is time-consuming. In other words, it is argued developments plans tend to lack the flexibility to co-evolve with emerging changes.

From a CAS perspective, such rigidity of development plans is particularly problematic. A CAS approaches requires flexible development plans that have capacity to productively co-evolve with spatial dynamics, to effectively mediate and respond to contextual changes and evolutionary dynamics as they emerge. However, also and importantly, development plans are widely recognized for the certainty they provide for landowners, project developers and citizens (Neuman, 1998). Indeed,

they are important as they stimulate and direct spatial developments and engender investor confidence.

Therefore this paper considers what the CAS perspective may mean for development plans. Although the production of development plans include various dimensions (Conroy & Berke, 2004), we concentrate on the visionary product − the design – as an effective instrument to spark urban change (Neuman, 1998). We focus on development plans for district level (5-15 years) since they incorporate the challenges of variety of actors involved due to their size an high level of uncertainty, due to their time span, while often incorporating concrete implementations measures next to strategic goals. It is asked how the capacity of these particular development plans to incorporate the temporality and dynamics of spatial relations and functions might be enhanced while the certainty current development plans provide to engender investor confidence can be retained. Additionally, we question how such plans may help to improve the adaptive capacity of areas in development. This way, the paper explores some of the issues and tensions which may arise if the CAS approach is promulgated further and leads to insight in the required changes in development plans and indeed planning practices more generally.

This paper is divided into five sections. First, the key concepts of CAS are briefly discussed, exploring how CAS portrays reality and subsequently what kind of consequences this perspective could have for planning and governing the spatial. The second section contains a review of a development plan in the Dutch planning practice. We analyse in what sense the rigidity of a development plan can be problematic and what sources for rigidity in this particular plan can be identified. The third section discusses what consequences a CAS approach might have for drafting and implementing development plans aiming for more flexibility. It is concerned with the fundamental questions can be raised when the structuring capacity of plans and the aim for adaptive capacity promoted by a CAS approach a brought together. Taking this one step further, section four identifies possible lessons for planning practitioners on how CAS-based principles for designing and implementing development plans may increase the flexibility of these plans and the adaptive capacity of areas in development. The paper concludes with carefully exploring the considerations and challenges that planners could be confronted with when the CAS approach would further penetrate planning theory and practice.

2. Complex Adaptive Systems and a Perspective of Becoming

Already some time ago planners moved beyond the idea that they can design en shape spatial development through solely technical rational approaches. Due to the work of amongst others Simon (1957), Lindblom (1959) and Davidov (1965), the limitations of these approaches became apparent, showing the incompleteness and selectivity of information and the influence of political or power-driven motivations on decision making next to rational ones. With the communicative turn in the 1990s, increasing attention is given to the context dependency of spatial issues and the plurality of perceptions, preferences and values of actors involved in planning processes (Healey, 1996, 2003; Innes, 1995). Moreover, the idea of spatial issues being embedded in a multiple and overlapping networks gained momentum inspired by Castells work on the Network Society (1996). Due to these various factors highlighting the context dependency and multiplicity of spatial issues alternative

perspectives are explored to enhance our understanding of spatial change in attempt to support planning innovation.

Various scholars suggest complexity adaptive system (CAS) thinking may provide planners with an interesting set of concepts which could help to further develop a dynamic perspective on spatial developments. During the 1990s Batty and Longley (1994), Allen (1997) and Portugali (1999) showed the relevance of mechanisms of change based on CAS is discovering new patterns of emergence in cities. In the years that followed, this research has been refined and also extended for example consensus building (Innes & Booher, 2010), city development and property rights (Webster 2003, 2010), transitions in urban-rural integration (Rauws & De Roo, 2011) and, governance and decision making (Gerrits, 2008; Portugali, 2010, De Roo & Rauws 2012,). A central argument to all of them is that a CAS approach helps understanding unexpected transformations as the heart of spatial issues, instead of seeing them as exceptions or failures. Below we discuss the CAS approach and explore how it may cast the design of development plans.

Those inspired by CAS argue it provides a straightforward critique on the Newtonian world, assuming a world of knowable entities independent of time. CAS are embedded in and contributing to non-linear processes of change producing out-of-equilibrium states (Wolfram 2002). From a CAS perspective the world is considered to be in a state of constant flux. It provides a perspective on spatial dynamics being time and space related resulting in continuously evolving realities.

CAS are open systems, evolving through interacting contextual and internal processes (Portugali, 2006; Wolfram, 2002). It is argued that their continuous adaptation is on one hand the result of contextual interferences triggering reconfiguration in the attempt to create the best possible 'fit' with its environment. At the other hand, CAS are suggested to have internal mechanisms of adaptation referred to as self-organisation. These are processes in which the constituents of a system (individuals actors, informal coalition and organisations) alter their behaviour, undertaking actions that result in a jointed efforts to change frameworks that constitute their behaviour. The self-organising aspect is that new structures, patterns and organisations that may arise, altering these frameworks, from actions between various actors in the system without external coordination (Heylighen, 2008). In sum, the evolution of CAS can be understand as mixture of top-down and bottom-up processes, including planned an unplanned actions, which continuously create feedback and feed forward loops (Lewin, 1992) influencing one another.

This mixture of top-down and bottom-up processes creating feedback and feed forward loops results in emergence. This behaviour is not limited to a system itself, since a system is considered to be open. Therefore the process of continuous adaptation effects other systems as well. This phenomenon of interrelated systems is known as 'nested systems'- "cases are in themselves complex systems which are nested in, have nested within them, and intersect with other complex systems (Byrne, 2005 p. 105)". It does not necessarily mean they are ordered in an hierarchical way, as spheres of influence can go across such categorisations. The concept of nested systems emphasizes the interdependency of processes of change and the dynamics CAS cause while being infused by others.

The CAS approach portraits a dynamic reality that evolves to a large extent autonomously as a result of interrelated processes. Both planned and unplanned actions are considered to be part these processes, the path of development, however, presumed to progress in a non-linear way. The CAS approach puts forward a perspective of 'becoming', in which visioning, designing and decision making on planning situations should not only be sought in 'being' but should be considered as a part of on-going trajectories of change. It suggests in many situations predictability is low and uncertainty high, and challenges planners to accept remote causality between planned interventions and their outcomes.

What kind of consequences would CAS imply for planning in dealing with this fundamental uncertainty? According to Bertolini (2010, p.93) planning needs to 'seeks a solution through the identification of robust measures – to enhance the resilience of the system – and options which can and should be left open – to enhance the adaptability of the system'. De Roo & Rauws (2012) suggest planning should move to more adaptive strategies based on a 'situational understanding' of socio-spatial phenomena, taking into account how planned an unplanned developments meet, intersect and overlap together becoming manifest in a certain time a place influencing (perceived) possibilities and limitations for planning interventions.

If such views on planning would be implied, what then would be the consequences for development plans? Although exploratory, applying a CAS approach seems to suggest that development plans should incorporate mechanisms that enable the spatial system under concern to co-evolve successfully with a transitioning spaces and places, including permanently redefined demands over time and space. Seen this way, rigidity is a serious treat to productive planning and development plans may have to improve their flexibility.
The next section explores the issue of rigidity and its consequences on a more practical level analyzing a development plan in Dutch planning practice.

3. Rigidity pitfalls for development plans – challenges in practice

In this section we draw on development plan Blauwestad to explore the possible implications for development plans when rethought in the light of a CAS approach. Blauwestad, located in the Northern part of the Netherlands, is a comprehensive development including a diversity of functions to be realised. Although it does not represent all development plans in Dutch planning practice, similar kind of plans, such as 'Meerstad' (Van den Brink et al. 2006) and 'Wieringerrandmeer' (Woltjer & Al, 2007; Woltjer, 2008), have been designed. More importantly, it is part of a category of development plans that may not be pursued it its current form if a CAS approach gains more influence on planning.

Before analysing Blauwestad in-depth, we first briefly explain some key aspects of the Dutch planning system to provide insights in the function of development plans in Dutch planning practice. The Dutch planning system is foremost a legislative rather than a political system and heavily emphasizes protection and legal security (Janssen-Jansen & Woltjer, 2010). In this system development plans have an important role as they are a central tool in guiding future development. Development plans are intensively prepared by public planners, including participation of private

and civil actors as there is a deep rooted believed in consensus building (Van de Valk, 2002), often leading to a comprehensive designs which are then formalize and carefully followed during completion. As a consequence, the potential to negotiate the scope and substance of developments is limited (Janssen-Jansen & Woltjer, 2010).

3.1 Blauwestad

The development plan for Blauwestad (Blue city) was designed to give a new boost to a region that experienced both demographic and economic decline. The plan comprised an area of 1450 hectares with dominantly rural activities. It is part of a region that has a rich and economically successful argicultural history (Hidding, 2002). During the 1980s, however, the vitality of the region was declining. A part of the agricultural plots remain unused due to EU policies, industrial sites closed down and as a consequence unemployment was increasing, causing young and highly educated people to leave the region (Dammers et al., 2004;Bekkers & Moody, 2006).

A broadly shared sense of urgency raised support for a large scale spatial intervention, resulting in development plan Blauwestad. Development plan Blauwestad has emerged from the initial ideas of two local actors they displayed in 1989 and is eventually developed by PPP (public-private partnership) that planned to invest in total 82 million Euros (NRK, 2010)[4]. It is a grand vision and has been lauded on its integral approach combining economic development, housing, nature and leisure development, and water management measures (winner "Gouden Piramide 2005", national prize for 'inspiring commissioning'; nominated World Architecture Festival 2008 category 'Nature').

The heart of the plan is a man-made lake (800 hectares) on former agricultural land. In and around this lake, the construction of about 1200 luxury mansions (later on this was raised to 1480) with a minimum price of 300.000 Euros was planned (NRK, 2010). It was expected that building these high end properties, by making developers investing a share of the profit in the common structures, would largely cover the costs for creating the lake. This way, building houses would generate both the funds for the lake, the nature development. And at the same time it was expected to stop the outmigration of highly educated people and invite wealthy families from other regions of the Netherlands to migrate to this area giving a boost to the regional economy (Stichting Blauwestad, 1997; NRK, 2010). The project was expected to deliver 400 temporal jobs and 400 structural new jobs (Dammers et al, 2004) The lake would also make the region a touristic center for the North of the Netherlands as well as help solve some serious water management difficulties in the region (Roggema, 2010). The realisation of the plan started in 2004.

[4] Including acquisition of the land. In 2010 the total costs were increased to a total amount of 785 million Euros (NRC, 2010)

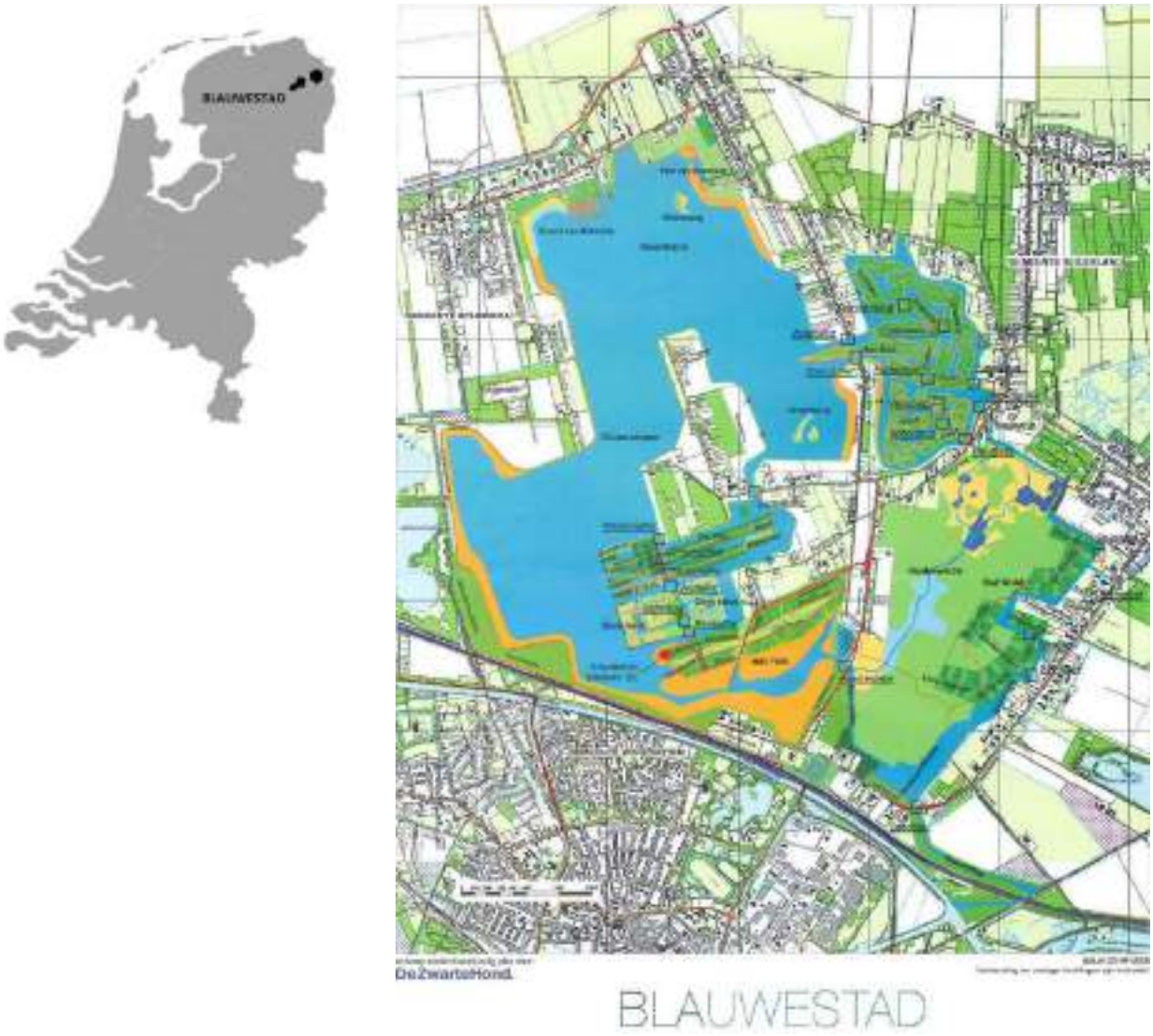

Figure 1: Development plan Blauwestad including an artificial lake on former agricultural land (800 hectares) and several thematic neighbourhoods for the construction of 1480 luxury mansions.

However, things evolved rather different than originally planned. The investments needed for completion of the plan were higher than expected (NRK, 2010). Therefore, the private project developers have been granted permission to build an additional 280 houses and to use the profits of this extra quota to address the financial shortfall (NRK, 2010). More serious is that the estimated demand for luxury houses appeared far above the real demand. Planners expected an inflow of house buyers from outside the region, presuming much higher prices and low supply elsewhere and ICT to make people footloose, enabling them to even run their business in the Randstad region, 200 kilometres away. These expectations did not materialise – not in the years before the financial crises and certainly not after.

Initiatives to loosen the strict design regulations were not accepted by the regional authorities as they would damage the desired image of luxury living in a high quality environment (NRK, 2010). However, the reputation of the project with its peripheral location was increasingly becoming one of failure and the sale of plots for private

housing construction almost came to a full halt. “The idea of moving to Blauwestad is almost similar to emigrating to another country” was the general tendency (NRK, 2010 p.110). Aggravating this, the few potential buyers could not move in because they had difficulties selling their current house due the stagnation of the national real estate market as a consequence of the financial crisis. This in turn caused the heart of the plan, a district called ‘the village’ designed to include local shops and other community services, to remain unconstructed as the lagging development around it caused neither the funds to be available, nor the residents to spend their money there.

In 2007 two of the three participating private developers quit and the financial risks to the public parties involved have increased substantially. In 2009, the PPP was dissolved and the regional government had to take the financial loss (28,8 million Euros) and full reasonability and financial risks for completing the plan (NRK, 2010). In 2010, with only 183 of the eventual 1480 plots are sold (Provincie Groningen, 2010), the development plan was adjusted, extending the duration of implementation and rescheduling the expected number of plots sold each year from 150 to 40 (Provincie Groningen, 2010).

3.2 Sources of rigidity in Blauwestad

Surely, the development plan for Blauwestad can be considered as a powerful vision. It was able to bring together a diverse set of stakeholders around an innovative and inspiring new future for an area in decline. Meanwhile, the recent progress that shows the difficulties that can arise when the initial development strategy needs to be adjusted due to changing circumstances. We will review development plan Blauwestad to find the essence of its rigidity.

Why was Blauwestad so vulnerable to various types of changes? Primarily, the plan included an integral development strategy that first required upgrading the spatial qualities of the site, before rest of the plan could commence. Therefore, high upfront investments had to be made (118 million Euros by public actors, NRK,2010) for acquiring the land, constructing the road infrastructure to the building plots, and constructing the artificial lake. This was considered necessary to put the area on the map, before a single plot would be sold and the first house could be built. The upfront investment, and the interest rate making this amount grow, was to be recouped later on by developing houses.

A sound balance sheet demanded a minimum amount of plots to be developed yearly and a certain final number to cover the at least the public investments. The balance was tight - raising 73 million[5] Euros from the profits of 1480 houses means collecting 50,000 Euros per house on average, when leaving out interest rates on the investment and excluding 32 miljoen of subsides (NRK, 2010). Slower development, other types of land use or lower final numbers would automatically result in a financial loss. Moreover, the full construction of the lake, street grid and even the street-lighting in advance set the spatial design for a long period.

This resulted in a rather prescriptive real estate program, focused on attracted wealthy people from both regional as national market. Especially the group from outside the region was expected to give a boost to the region’s economy. The

[5] In 2009 this was already increased to 118 million (NRK, 2010)

feasibility of this strategy was soon considered to be doubtful. The projected 1480 high end plots was massive compared to the limited national demand on luxury housing (RIGO, 1995). Moreover, only 28% of the plots sold until 2007 in Blauwestad was bought by people from outside the Northern part of the Netherlands (Companen, 2006 p.65). The other plots are obtained by regional house owners, who could afford high investments and of which a part delayed their investment anticipating on the construction of the Blauwestad (Companen, 2006). Thus, the supply was exceeding the demand and part of the investments in the region were redistributed instead of new investments were attracted.

It led to a financial lock-in that caused the development's rigidity. It might have been a master plan, with room for reconsideration of parts of it. But the high investments made it impossible to reconsider the remainder of the plan – future choices were taken hostage as they had to recoup the investments. The financial burden and, in addition the set spatial design, dramatically constrains the range of choice, causing high vulnerability to changes in context.

4. Discussion: are flexible development plans desirable?

In exploring the possible relevance of a CAS approach for the design of development plans, we have assessed the Blauwestad development plan. It has illustrated when a development path can become rigid, the development plan's contribution to this process, and, accordingly, what challenges can arise. The question we concentrate on in this section is whether more flexible plans, as a CAS approach seems to suggest, would help to prevent these situations and could strengthen the adaptive capacity of a development area.

4.1 Tensions between making plans and seeking adaptiveness

However, we first need to critical asks ourselves what tensions could emerge when one would argue to increase the flexibility of development plans. A CAS approach, how appealing and elegant in a theoretical sense, can raise a number of rather fundamental questions when it is tried to apply in planning practices. Complexity thinkers implicitly draw the use of planning into question, in the very logic of their argument (Portugali, 2012, p.55). Therefore we pose three counter questions to a CAS-approach for development plans below.

Question 1 would be: *How flexible can a plan be, without ceasing to be a plan?* In the flight from the rigidity of plans, a CAS approach would opt for maximum flexibility. But a 'flexible plan', in its ultimate consequence, is an oxymoron. When all future actions are possible, open to consideration on points in time to come, by definition that means we don't have a plan. We can't set out a course of action and at the same time declare that course completely relative and open for reconsideration at any time.

Not only would it be semantically impossible, it would also discard all benefits from agreeing on a course of action. Despite the downsides of rigidity, we cannot ignore the structuring, stabilizing and synergizing role of development plans enhancing the robustness to overcome external pushes and internal stresses. In general plans are designed to represent current strategic choices with regard to possible futures (Hopkins, 2001). Thus, in order to steer spatial change, planners have to organise a

coherent set of actions across a range of interdependent actors. That is the purpose and right of existence of plans: they align interests and actions in situations of dispersed power. As Hoch (2009) explains 'plans offer provisional accounts of future outcomes that users intend to accomplish by changing the relationships represented in the current urban situation' (p.236). Making plans flexible may equal re-inviting uncertainty and mistrust, resulting in loss of performative power.

Hence, a balance must me struck between the adaptive capacity and the certainty development plans contribute to. In CAS metaphors: there is a tension between the degree of flexibility and robustness. Therefore, discussing flexible plans has to consider the loss of being able to unite across actors and mobilise concerted action. How flexible can we be without loosing all?

Question 2 would be: *Is it possible to foresee all alternative trajectories?* A consequence of adopting a CAS approach can be that planners should aim for flexible plans so unexpected future situations can be accommodated without costly redesign and rebuilding. Although a potentially valuable intention, given the need for efficiency and the dynamics of contexts for plans, a complication arises.

Is the implicit assumption that we need to anticipate on changes with high degree of unpredictability in context not fundamentally a paradox? When we make spaces in such a way that alternative uses may be already considered in the design, it implies that we foresee and define these alternative uses already. At the same time, we dismiss the possibility of planners being able to predict the future, so this would be a contradiction. We cannot design in such a way that *any* no matter how unthinkable future need would be accommodated, because every design will accommodate some uses and render space unsuitable for others. So, on what basis is decided what particular range of flexibility is aimed to achieve in designing a development plan?

Question 3 would be: *On what scale do planners want adaptive capacity and where not?*
In urban landscapes the capacity to adapt is never absent. And neither is structure and planning. Even in highly regulated planning systems, room to self-organize exists on the scale of people's daily walking patterns. People together create new routes, reconfiguring the urban fabric (see Helbing, 2001). At the same time, also highly chaotic spatial processes produce rules. The formal and informal rules that come into existence in illegal settlements and refugee camps are illustrations.Such processes can be explained as enslavement; due to information compression order parameters emerge, enslaving other directions of progress (Haken, 1983; 2000).

Does adaptive capacity in the context of development plans, then, mean we just wait what the joint result of individual or small-group actions will amount to? Or is the production of plans a spontaneous result of self-organization already? There will always be openings for diversity and alternative paths of development, within a certain web of regulations that pose boundaries to that freedom. Every planning system, as well as every plan, is a temporary agreement on where these limits are. Therefore, we consider regulating structures, such as development plans, to be to some extent *a product of* self-organisation, and for sure *a precondition for* self-organisation, rather than the opposite of self-organisation. Structures are a precondition because although they may be blamed for setting limits, they by doing

just so, also define spaces allowing freedom of action - structures and actions are countermoulds (Giddens, 1984).

Conclusively, spatial change is self-organised and self-structuring at the same time - on different levels and moments. We cannot, and do not need to, choose on which particular level planners should remove all planning barriers for self-organisation and which not. In the context of design postulating specific futures Marshall (2012) rejects the choice between designing or not, stating that '…any settlement or built environment will feature design somewhere, at some level: and so the question becomes an argument of scale.' (p.204). Key to this paper is how combinations of structuring aspects and room of self-organisation can be integrated in development plans on district level to strengthen the adaptive capacity of these environments.

4.2 A framework for development plans

What kind of framework for development plans would allow combinations of structuring aspects and room of self-organisation in development plans? Let us start by stating development plans do have a vital role in inducing desirable spatial change. They can have both a persuasive and prescriptive role. While the latter potentially limit the flexibility of the plan and could be reformulated with help of CAS-based principles, the first has to be safeguarded.

Captivating grand visions remain crucial to reveal shared values and devise innovative ideas that blend seemingly contradictory demands and as such trigger initiatives (Rauws en Van Dijk, forthcoming). However, planners may need to relinquish ambitions for comprehensive large scale designs. In an attempt to retain the persuasive capacity of a plan while increasing its flexibility during implementation, we suggest both can co-existence. Though, on different levels of planning. The visionary elements should be considered on strategic level. Converting a persuasive vision into concrete implementation measures needs to be done on operational level. Here the CAS-based principles are required to guarantee the adaptive capacity.

Operational decisions should not have the same level of ambition as the vision has. This does not mean to separate plans a created, but the persuasive and prescriptive elements are valued on different levels. Of course, the two levels are intertwined, strategic and operational elements of the plan feed into each other. Nevertheless, distinguishing the two within a plan may help the actors involved to acknowledge the implications of the unknown futures they are confronted with realizing a development, despite its possible synergizing and mobilizing effects and innovative ideas. In the next section is discussed how CAS based principles can connect both level and respectively their visionary elements and implementation measures.

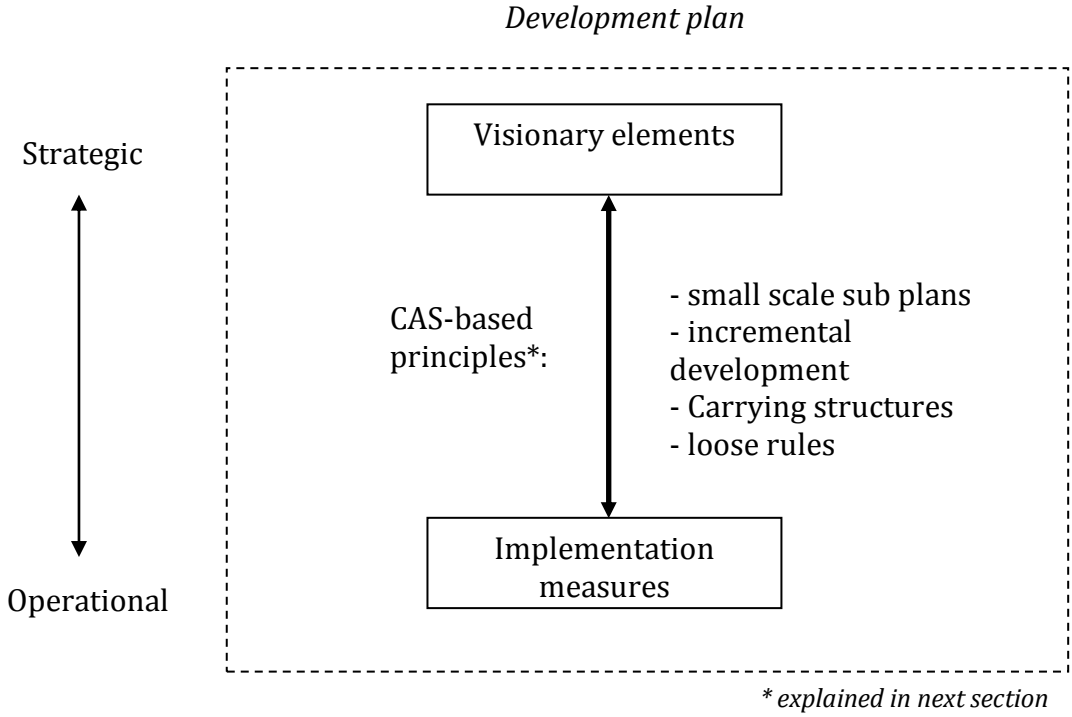

Figure 2: A framework for flexible development plans. CAS-based principles can help to link the visionary elements and concrete implementation measures in such a way the adaptive capacity is strengthened.

5. Practical design principles for flexible development plans

When we focus on strategic decisions are made operational and how CAS-based principles may help to strengthen the adaptive capacity of an area, several preliminary lessons for planners can be deducted. The example of the Blauwestad development plan reveals the essential pitfalls of rigidity. Backed up by practical implications found in current literature, this is what CAS may mean for development plans.

First of all, the main flaw of the Blauwestad was not its visionary ambition or its end-state image that it pursued. Uncertainty does not mean we should stop making plans. On the contrary, plans help create sense of urgency, direction and agreement (Rosenhead, 2001, Albrechts, 2004). Blauwestad might have made it just one of many plans that turned out not to be viable, unrealistic under altering circumstances, necessitating it to change plans and try other ways. But in the case, unviability has led to serious implications.

The pitfall of the Blauwestad plan was not drafting an ambitious plan *on paper*, rather it was the massive pre-investments *physically and financially*. Making a plan is an innocent act. But embarking on an overambitious operational program of investments resulted in serious challenges later on. Doing these investments made it difficult to (i) develop in a much slower pace, (ii) change the future land use, (iii) refrain from implementing part of the plan. Dramatic changes in context of Blauwestad, showed the necessity of a combination of these three measures.

Concretely, adaptive capacity, on the specific level of scale of development plans on district level, is best secured when they meet the following principles:

- The overall plan, in its implementation phase, is composed of multiple independent smaller scale plans. From a CAS approach a mosaic of self-sufficient small plans would be preferred over large scale plans (see also Alfasi & Portugali, 2004). Large scale plans have a long time span due to their size, making contextual changes (political, economic, societal) very likely. The small scale plans cover a relatively short time period, making them less susceptible to change. In addition, aiming for a degree of self-sufficiency of these small scale plans causes them to be less dependent on the success of other developments in the area.
  In case of the Blauwestad a division into in a number of sub-plans would have meant an increased functionality of compartments in future situations were other sub-plans are developed with a delay or even aborted. The risk of high upfront costs would have been limited.
- Incremental development Related to the first principle, integrating an incremental development strategy in development plans could be suggested from a CAS approach. It means evaluating former steps (i.c. small scale plans) to enhance next steps, building on successes. At the same time incremental development creates opportunities to include newly emerge contextual trends and self-organised initiatives.
  With respect to the Blauwestad an explicit incremental strategy may have led to an approach with more attention to learning and adjustment. As such failures of one sub-plan would not have impeded the reconsideration of initial choices made for the next sub-plan.
- The development plan may need to install carrying structures required to make the small scale projects possible. These are frameworks that support and connect the, to a large extent considered, autonomously emerging initiatives for further development (see also Hartman et al. 2011). The notion of 'carrying structures' originates from ecology and expresses the population level of a certain species supported by the life infrastructure present conditions of the ecosystem, e.g. quantity of food, habitat and other (Xu, 2008). In a similar way we can refer to carrying structures in urban settings, such as road and public transport networks, blue-green networks, or data networks. These can function as frameworks self-organised initiatives can easily link-in to, increasing opportunities for initiatives to emerge and therefore contribute to a vital urban system. When these structures are expensive (as the lake in Blauwestad was), the carrying structure can be divided in independent parts, so that pre-investment comes in stages.
- For the smaller projects define loose rules based on core objectives instead of detailed regulations. A set of basic, general and often qualitative rules defined within a development plan, such as 'mixed use' or 'energy neutral', is meant to guide development of an area. This is in contrast with detailed, quantitative and narrow defined rules on how objective are supposed to be met, as from a CAS perspective this may undermine or not recognise the opportunities created by self-organised initiatives. Initiatives which include ideas that do contribute the area's potential but cannot be realized within existing set of rules as they are, following a CAS approach, derived from the 'being' insufficiently taking into account the 'becoming'. In contrast, loose rules do not try to cover all possible

urban forms, not do they advocate any particular way of living (for similar kind of discussion see Alfasi & Portugali, 2007). Loose rules guide future development paths and embrace diversity in further evolution instead of regarding it as a risk which needs to be reduced as much as possible.
The tight financial balance and a predetermined group of future inhabitants, causing strict standards, defied flexibility to co-evolve effectively with a changing context Blauwestad was embedded in. In constrast, loose rules possibilities to adjust to and make use of the opportunities that arise fitting with the general aim of the development are widened. In case of Blauwestad loose rules such as 'low dense living in open space' and 'water-oriented development' could have been defined while leaving options open for multifunctional land use, architectural variations and flexible plots sizes increasing the adaptability of the development plan.

The introduced principles can help in designing more flexible development plans that strengthen the adaptive capacity of an development area. However, one could argue that a principle such as a incremental development strategy may undermine the inviting capacity of the plan. In case of Blauwestad the construction the lake at once, the future living environment for potential house buyers becomes real. Also at major sites that need newly installed highway access or public transit, this problem occurs. Some investment may be inevitable to spark the development at all. Still, when risks are so large, a phased gradual installation should be considered. With regard to the Blauwestad this could for example have meant the smaller access roads were only constructed or upgraded after a minimum level of traffic has been reached and the location for and scale of shops and other services was not predetermined, but tuned on the speed and scale of housing developments.

When major pre-investments are nonetheless considered to be inevitable, massive investments such as the creation of a big artificial lake can still done when actors agree this the only way forward. However, they need to accept the risk of the limited futures paths this investment might fit in with or the unexpected effects it may have. Therefore investments may not return in the form of planned profits and adjusted without doing new investments again. Thus, doing such investments should be guaranteed losses can be taken. Put differently, the degree of flexibility in development planning is a choice and therefore attached risks should be presented as a choice as well.

However, not only the financial viability, but also the political approval to development plans is likely to be compromised by loose rules. As Sager en Ravlum (2005) showed, politicians have difficulty limiting political authorisation processes to a strategic level, that focus on the general outline of plans instead of their details. Questions raised by their electoral body often leads politicians to feel the need to engage in discussions about details to secure the interests of their voters. Therefore, loose rules would at least require efforts of planners in convincing politicians to stick to strategic level decision making in particular. In addition, when developments are guided by loose rules, what uncertainties arise for investors and who is responsible for deciding whether proposed initiatives fit the development plan? The starting point should be maximum transparency in advance about the requirements initiatives need to meet. This should avoid that initiatives are frustrated by requirements faced later on in the development process.

Hence, some practical lessons about how the adaptive capacity of the Blauwestad could have been strengthened are identified. Taking a CAS approach have resulted in a set of criteria that allow planners to create flexible development plans without disregarding their visionary power.

6. Conclusion

To conclude, reviewing the development plan of Blauwestad from a CAS perspective learns us about the 'why' and 'how' of flexibility of plans. Strategies have to be included to design development plans that enable an area to co-evolve successfully with changing contexts.

The Blauwestad development is an innovative and persuasive design postulating a new future for a region in decline. A design that was apparently able to unit numerous actors around a shared vision and motivated them to work jointly on a more regional transition. This capacity can, at least partly, be ascribed to the comprehensive design. However, this comprehensive design turned out to have limitations when the implementation of the Blauwestad plan evolved differently than expected. As those adopting a CAS approach would argue, a situation that by planners should be considered as rather normal instead of exceptional due to dynamics behaviour of spatial systems and their environment.

A CAS approach presents a way of understanding of spatial development that steps away from the Newtonian world view that still seems to dominate today's planning practice. Planning scholars exploring the implications of CAS thinking, argue it provides interesting concepts that help to further develop a dynamic perspective on spatial developments and their underlying processes. Moreover, it is suggested a CAS approach would require a shift of attention from the 'being' to the 'becoming', meaning planning issues have to be considered as part of on-going trajectories of (non-linear) change.

What that means to the design of development plans we explored in our paper. Complexity theorists that address planning take a number of positions toward reality and the role of plans, that can easily be misunderstood or exaggerated, as if planning has no function at all. And CAS thinking does imply a number of internal tensions, as we saw in Section 4. However, by applying a CAS approach we can learn that incorporating a degree of flexibility in the design of development plans may help to strengthen the adaptive capacity of environments.

Three main lessons can be derived from this paper. First, designing a development plan requires a distinction between visionary elements and implementation measures incorporated in the plan. A development plan contains both, as the first refers to the capacity of development plans to provide an appealing, uniting and mobilizing future image while the latter contains concrete designs for realizing this future. Each of the aspects requires attentions from planners and although they are interrelated different qualities can be attached to them. The overall idea is that visionary elements are needed to set direction and inspire actors, while implementation measures are needed to ensure initiatives in line with the vision can be realized but also that alternative development paths remains open.

If a distinction between these two main components of a development plan is not made properly, rigidity is a serious risk. This turned out to be the case in the Blauwestad, as in the development plan visionary elements of the plan were insufficiently linked to implementation measures that would guarantee a degree of flexibility while appreciating the desired future the plan puts forward.

Second, CAS-based principles can help to link the visionary elements and implementation measures within a development plan. The principles provide a set of strategies by which visionary ideas can be translated into operational strategies while strengthening the adaptive capacity of an area. We have distinguished five principles: small sub-plans, incremental development, carrying structure and loose rules. The combination of these principles results in development plans the do provide a direction of development and, in addition a degree of certainty, while enlarging opportunities for incorporating unexpected change. Therefore, CAS-based principles can assist in making a successful link between the two aspects.

Third, when major pre-investments that reduce the flexibility of a plan are nonetheless considered to be inevitable, these can still done when actors agree this is the only way forward. However, they need to accept the risk of the limited futures paths this investment might fit in with or the unexpected effects it may have. Put differently, the degree of flexibility in development planning is a choice and therefore attached risks should be presented as a choice as well.

As illustrated with the principles above, a CAS approach to development plans should respect the values of making plans, but focuses on implementation mechanisms that allow reconsiderations in the future. They enable the plan under concern to co-evolve successfully with a transitioning spaces and places, strengthening the adaptive capacity of the development area. Acknowledging planning is part of world in constant change, the crucial task for the planner becomes to balance flexibility and robustness taken in the account the both space- and time-related conditions. This paper has shown development plans can become a helpful tool in this process.

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Dwellings and generational change in owner communities

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Abstract

The ecological, social and demographic change is a major challenge for suburban residents. Within a research project titled "Residential Property for Generations" a specific form of suburban area with privately owned homes in owner communities was analysed. By means of organised group self-help, the future homeowners took part in the building of their homes with thousands of working hours each. Most of these settlements were founded in the 1950th and 60th and are characterized by small houses, huge gardens for self-supporters and small stables for chickens, rabbits or pigs. The families created strong neighbourhoods and tight communication structures, bundled in clubs and associations.

The objective of the research project was to investigate if these owner communities may easier cope with urgent future tasks than other suburban residential areas, although inhabitants grew significantly older. The question is how neighbourly help, the modernisation of buildings to meet modern standards, or the generation change is managed. Within the research project inhabitants of five owner communities in Rhineland-Palatinate were analysed and advised in terms of the solution of future tasks. A survey on housing conditions, neighbourhood, and social activities as well as a participative processes "Zukunftswerkstatt" (foresight) were conducted.

Results show that inhabitants of these dwellings have strong bonds towards their homes, strong neighbourhoods still exist, and help is given to single handed elderlies. On the other hand investments in buildings are deferred to future generations. Two thirds would like to pass on the dwelling to their offspring, but in fact houses are sold on the market, because parents, children and grandchildren live in different places.

Rhineland-Palatine as a rural state in Germany focuses on home owners as actor to preserve resources and save energy. The project was funded to analyze to which degree these owners show a higher affinity towards energetic modernization than typical single home owners. Despite information, guidance and advice in the context of the research project, the constellation of the single family remained in the centre of decisions. In the same time participation processes supplied evidence that these seniors engage very actively in their neighborhood. Still these seniors (61 years old in average) take matters into their own hands and form an active part in their city – unfortunately this potential often is unrealized. In this regard the examples are good examples that could be regarded as a role model.

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1. Introduction

In the postwar decades with their increasing affluence for the population, residential property developed particularly on the outskirts of cities, in the communities surrounding towns or in rural areas. These small expansions of communities happened in several stages by adding detached one family houses and are regarded as the prototype for urban development of owner-occupied homes in the Federal Republic. (Jessen, Simon, 2001, p. 353). With the increasing age of the residents and the homes, these homeowner communities are currently facing great challenges. As the Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR) points out in a study, the quarters of the 1960s and 1970s with their high percentage of single family homes is not as such problematic. But due to the quality of this kind of urban housing with its poor infrastructure and the expected demographic development, this type of dwelling will be facing various challenges in the years to come (BBSR, 2009, p. 18). Current challenges and future tasks of areas dominated by detached family homes include energy conservation, adjusting the buildings to modern needs, ensuring that seniors are adequately provided for, plus coping with the generation change.
This essay will present the results of the practice-based research project "Residential Property for Generations. Sustainable Development for Owner Communities", in which a particular kind of residential community was studied. In those communities, the future residents organized mutual support groups to construct their homes. Five of these homeowner communities organized in the Verband Wohneigentum (homeownership association) Rhineland-Palatinate were observed in detail and counseled regarding the solution of future tasks.

1.1 Owner Communities in Transition

The movement for single-family home ownership goes back to the year 1918. In order to improve the living conditions of the poorer population and low middle class, the state passed a number of laws (e.g. Reichsheimstättengesetz - Reich homestead law of 1920) thus providing the prerequisites for the construction of small residential estates and small residences. During the early years of the homestead and small holding movement veterans, people disabled or damaged by the war, war widows as well as families with many children were the target group for establishing healthier living conditions. Apart from participating in the construction of homes, self-subsistence through cultivating gardens and keeping small domestic animals was an important issue of the residential movement. The communities are therefore characterized by comparatively small houses, annexes to the buildings and large gardens (Hafner, 1996, pp. 559-561; Kuhn, 2001, p. 195; Rauch, 2010, p. 21). During the Weimar Republic, however, only about 20,000 such properties were realized (Hafner, 1996, p. 559).

Even during the reign of the National Socialists, such small communities were established. However, the focus of construction activities shifted from large cites to small and middle sized communities in sparsely populated areas or regions close to borders. Gardening and keeping small animals played an important role in terms of subsistence economy. In general, the housing policy of the National Socialists aimed at (re-)rooting the people. In contrast to the propaganda (100,000 privately owned homes annually), only a total of 140,000 such homes were built (Harlander, 2001, p. 261). In the "Third Reich", these small housing estates and homesteads became an important part of the Nazi family ideology and they were placed in the context of the national socialist blood and soil ideology. During this period, the small estate and homestead movement opened up towards the middle class in order to raise private funds. In addition, racial issues and party membership played a role in the selection the future homeowners (Hafner, 1996, pp. 584-585; Harlander, 2001, pp. 258-259).

During the times of housing shortages in the 1950s and 1960s, the construction of small suburban residential areas boomed, building on the traditions of the Weimar Republic. After the war, organized mutual support was a prerequisite for lower and middle-income groups to be able to afford homeownership. For setting up the usually standardized, compact homes in the suburbs, the future owners had to make a personal contribution, which often amounted to 1,500 to 2,500 hours of construction work. The planning and construction of the suburban residences was handled by a builder, frequently a residents associations or nonprofit building societies. Through mutual support, the future residents often established close contacts before even moving in, resulting in strong ties with the place and close neighborhood relationships (Hafner, 1996, pp. 567-568; Jessen, Simon, 2001, p. 356; Szypulski, 2008, pp. 117-118).

In 1935, the "Deutsche Siedlerbund" (German Settler association) was recognized as the sole representative of all homeowners. In 2005, it was renamed Verband Wohneigentum (homeownership society), as the term "Siedler" (settler) had almost vanished in spoken German – at least in the context of living in the Federal Republic. It now focused on the future. The Verband Wohneigentum currently has 370,00 members, making it the largest association of homeowners in Germany, and it supports the funding for constructing and acquiring homes and ensures that owner occupied homeownership is preserved.

As in other areas dominated by single-family homes, the owner communities organized in the Verband Wohneigentum are facing major challenges. The one and two family homes of its members are for the most part only insufficiently equipped with amenities for the needs of their aging residents. When the homes were built, the speedy creation of living quarters had top priority; living standards appropriate for old age were not an issue. Therefore, many of the existing homes in these residential communities have an increased need for modernization if one wants to meet standards appropriate for seniors (Szubin, 2009). In addition, the homes need to be adapted to modern energy standards.

In many homeowner communities, a generation change will take place shortly or has already begun.
As there are currently no new communities built on organized mutual support, local residents associations and owner communities are facing new tasks. The percentage of first time home owners will dwindle steadily due to age, and new home owners, without the experience of mutual support groups during the construction phase, will have to be integrated into existing communities. In addition, there is a trend that owner communities regard themselves as institutions for consumer rights. They provide legal and financial counseling, and give advice on gardening, energy efficiency and barrier-free living. Other important future tasks of residents associations are (Uertz, 2010, p. 17): preventing vacancies, improving the living quality in the residential areas, strengthening local networks, as well as joint economizing (e.g. purchasing cooperatives or sharing equipment and facilities).

2. Background and rationale

As in more typical suburban areas, the owner communities, organized in the association "Verband Wohneigentum", are facing major challenges. Many inhabitants of the first generation live in their houses for decades – people and houses, both grew older, resulting in a homogenous, quite old age structure of residents. Offsprings themselves count about 50 years of age and live in their own houses and in different areas. And second-hand single-family-homes exceed the number of households which are likely to buy them, because in Germany the fertility of the population dropped far below replacement level. These kinds of dwellings probably are not accepted any longer. In most cases they were enlarged, but many require investments, need reconfigurations and reconstructions. Time consuming garden maintenance may be an obstacle as well.
The key question of the project was, if this kind of living – very traditional on one hand but very modern on the other hand – can be a role-model to solve problems of "normal" suburban areas, such as social engagement, overcoming lack of services or energetic modernization. We analyzed these settlements from a variety of viewpoints, including ecologic, economic, social and urban development considerations.

- Social aspects: The percentage of first time home owners will decrease steadily due to cohort effects. New home owners, without the experience of mutual support and construction will have to be integrated into existing communities. Are neighborhoods negatively affected? Are residents able to interact adequately and integrate new population groups, new households in different stages in their lifecycle, different values and lifestyles?

- Economic viewpoint: Are the settlements at risk of abandonment, deterioration and devaluation? Do the owner communities face problems like vacancies?
- Urban development: Political actors and spatial planners try to reduce land consumption and strengthen existing settlements. We wanted to know if these quite homogenously built houses, as well as compact and green quarters can be preserved - despite generation change, problems of infrastructure and possibilities for redensification.
- Ecological viewpoint: The project was funded to analyze to which degree these owners show a higher affinity towards energetic modernization than typical single home owners. Finally, they are used to collaborative construction work - maybe residents think about economy of scale.

The aim was to work on concepts and strategies for future development of these owner communities together with the inhabitants. Active participation and willingness to act during the process were crucial for success in this applied research project. It was conducted by a team of sociologists, ecologists and urban planners from the University of Kaiserslautern. [2] Social aspects are in the focus of this paper.

2.1 Methods

The project concentrated on five communities (Figure 1), located in the cities Boppard, Lahnstein, Wittlich and Worms as well as in the smaller village Waldböckelheim (county Bad Kreuznach).

Figure 1. Pictures of owner communities:

Public Green in Wittlich

Original structures in Boppard

Missing infrastructure in Lahnstein

In the empirical research, mixes methods were combined: In December 2009 a standardized survey on housing, satisfaction with housing conditions, neighborhood, activities and generation change was conducted. In Lahnstein oral interviews were added. Needs, potentials and deficits within the

[2] We are indebted to the Ministry of Finance and Ministry of Environment of Rhineland-Palatinate who financed the project. Thanks a lot also to the head of the association "Verband Wohneigentum", working as gatekeeper in the project.

settlements could be identified. Furthermore, a workshop in each community took place: "How shall our neighborhood look like in20 years?" in order to develop projects according to specific needs (Spring 2010). In a third step expert talks with local politicians and planning departments were conducted, in order to get information on the municipal perspective (Autumn 2010). And finally, we collected data on a fine-grained regional or municipal basis. Here, I will concentrate on the survey and some impressions of the participation processes.

3. Results

3.1 Survey on housing, neighborhood, and social activities

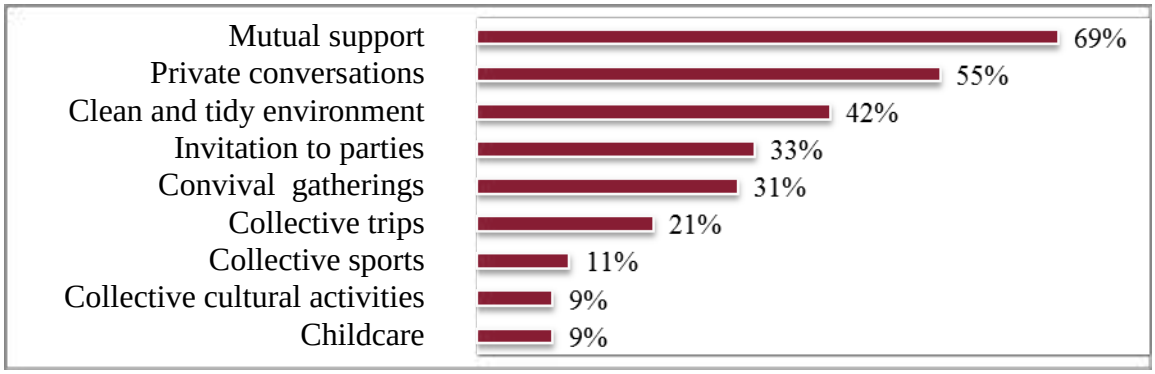
All of the households (n=528) got an information sheet in advance, followed by a standardized questionnaire "Living in owner communities". 233 persons participated in the survey, which means a satisfying return rate of 44 %. In Worms 33 % sent the questionnaire back, whereas in Lahnstein 74 % did so, reflecting different interest levels.
The average age of respondents was 61 years, with a range from 27 to 90 years. These home owners are much older than the average of the population (43 years). According to the higher age groups, most of the respondents live alone (14 %) or as a couple (57 %) in their homes. Dependent children live only in one out of five households (average in Germany). More men (63 %) then women (37 %) answered, who eventually felt as head of the household more often. The educational and income levels are quite disperse, 39 % finished school with a lower degree and 36 % with the highest level "Abitur". Within older persons lower levels dominate, whereas in younger age groups higher levels can be found. This result can be interpreted as a first indicator for the attractiveness of these settlements for the middle classes.
According to the age structure a generation change takes place, depending on construction age, having reached the oldest of settlements. New inhabitants move in with different lifestyles, habits and experiences. This may affect the neighborhood, common activities, and civil engagement. The question "Did you buy, inherit or built your house yourself?" aimed towards generation change (Table 1).

Table 1. How did you or your family get your house?

	Total	In single settlements
Built myself	51 %	Boppard: 46 %; Lahnstein: 89 %; Waldböckelheim: 82 %; Wittlich 17 %; Worms 32 %
Bought	36 %	
Inherited	13 %	

Still, half of the residents built their homes by themselves. One third bought it and 13 % got it by heritage. In Lahnstein nearly each respondent is member of the first generation of owners, whereas in Wittlich, which was founded in the 1930s, the generation change took place already. Only five out of 23 built the house themselves. Two thirds would like to pass on the dwelling to their offspring, but in fact houses more often are sold on the market, because children and grandchildren live in different places. This is a crucial factor, why investments in buildings are deferred to future residents.

Table 2. Activities with neighbors

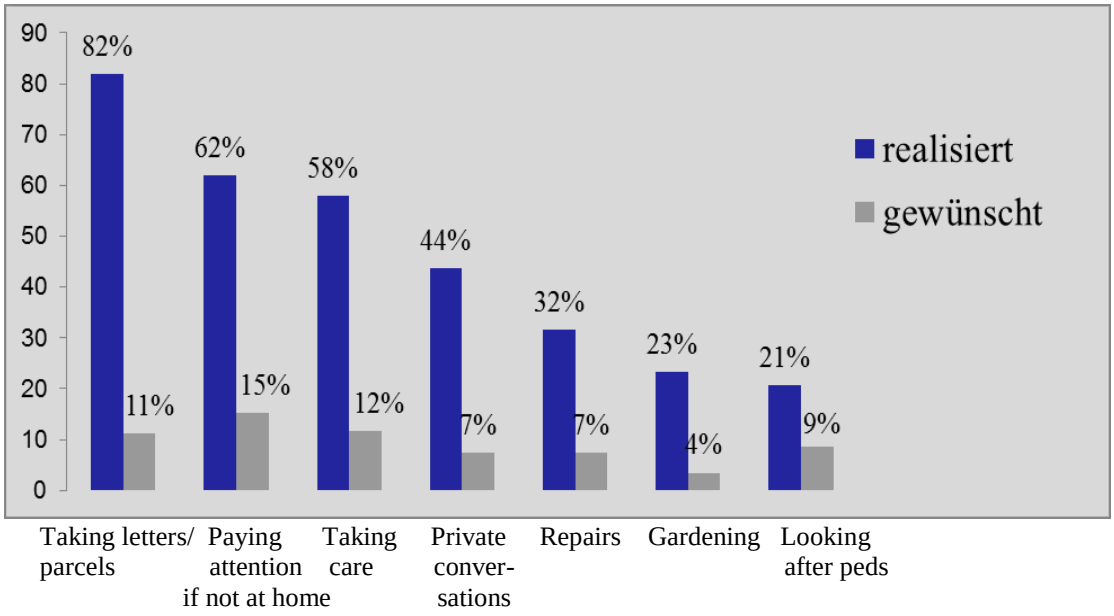


Neighborhood and community are an important potential for mutual support (Table 2). Strong neighborhoods are very much demanded because of the ageing population and lack of services in cities and villages. On the individual level good neighborhoods are regarded as central for individual integration and social cohesion.

More than half of the residents see their neighbors daily or several times a week. Three quarters say, neighborhood is as vital as it was decades ago, which is seen as an important factor for quality of life. These bonds support neighborly help, as the figure shows. More than two thirds pronounce mutual help, more than 50 % talk to each other on a very personal basis, four persons out of five look for secure and proper environments.

But if you ask people, which support they like from their neighbors, you face the situation that normally they do not want to depend on their direct neighbors (Table 3). Most people in Germany like a friendly, helpful, but more distant neighborhood. Professional services are preferred more often, because they don't violate the principle of reciprocity and help to avoid the feeling of shame, when people can't give back what they get from neighbors.

Table 3. Neighborly support: What they do and what they like



These settlements organize themselves in clubs. Nowadays, only one third of the residents are active member of the "settlers' club" – the typical form of community in these suburbs. Half of the respondents support the opinion that these clubs are important, but one third is only a passive member or no member at all. The importance of these clubs is higher in neighborhoods with first owners and accordingly in higher age groups (40 % of the older respondents are active member, but only 20 % of the younger ones).
This kind of suburb has a long lasting tradition, but modernization has taken place. Leisure activities highlight the modernization of these suburbs. Most frequently the homeowners spend their time with computers, 47 % use them on a daily basis, followed by visits of relatives, friends or neighbors. Handicraft, doing arts or visiting theaters are quite uncommon.
Facing the pluralization of life styles and leisure activities, it is more difficult to organize activities suitable for many. The association "Verband Wohneigentum" is facing the task of having to recruit new members who are less interested in existing communities than in individual benefits and "elective affinities". Accordingly, company, fun, doing something together and personal activity are the main motives to participate in active engagement for the settlers' club. Altruistic motives like solving problems or felt responsibility for the community are not mentioned.

First Conclusion:
The five communities studied are characterized by active neighborhood support and diverse communal activities. However, it can be observed that neighborhoods, due to the generation change, are now frequently understood in a neutral and pragmatic manner, similar to other suburban residential areas. It

is therefore not surprising that younger people are less interested in an owner community than older people. Community is often perceived as something you share with other individual residents who have similar interests, i.e. activities are more likely to take place with individuals or small groups. In larger residential areas it is generally not easy to maintain the social cohesion. Civil engagement in clubs can be found if people like companionship and recognize an increase in personal happiness and subjective wellbeing.

3.2 Participation processes: Perspectives of owner communities

Figure 2. Participation process

This form of participation process, called "Zukunftswerkstatt" (foresight) is divided in three parts, a phase of critique on actual living conditions, a utopian phase and a phase, in which concrete projects are developed. Residents of the owner communities discussed weaknesses and chances of the suburbs under the motto “How shall our neighborhood look like in twenty years?”.
In one community a roofed place came to the fore, in another a meeting point with café was discussed, in a third traffic problems came up, in a fourth, communication and information were seen as weak points. And in Lahnstein – the oldest but most active community mobile services, a place to play boule and a citizens’ bus or dial a bus service shall be installed. The community got in contact with nexus-institute (Berlin; cooperation supported by the Ministry of Economy RLP to implement citizens‘ buses). They spread out information and organized a meeting and a discussion with the city council. Despite all efforts, politicians rejected the plans – for unknown reasons besides expected disturbance and disorder.
In May 2012 the author and the team of researches evaluate the ongoing processes and the effect of the project. Besides we include three more settlements to compare those communities with others that got no input from academics.

4. Conclusion

Owner communities were created at a time of need to provide the poorer classes with family friendly housing. Joining them entailed considerable

personal contributions towards the construction of the homes and a commitment to self-subsistence by operating kitchen gardens and keeping small animals. Many of the floor plans have been adapted to the changed needs and the gardens are now considered a hobby, in keeping with their initial concept of providing a place for self-fulfillment, physical activity, as well as shaping and expressing esthetic concepts.

The high standard of quality of life in the owner communities studied here results in a high degree of satisfaction with the living conditions. Vacancies are thus quickly filled because of the way the communities were planned with their open private and public spaces, which in turn are associated with opportunities for personal development, so that, despite the relative age of the houses, there are no sustained vacancies to be observed. An aging population and having to cope with the generation change is a key challenge for many owner communities but so far this has not been a central issue in the residents associations.

Workshops for developing ideas for the future have shown that particularly the older owners are very active in developing new ideas and realizing them. Older people in communities have a potential that can inspire communities – if there is organizational support. Experts rate the feasibility of project ideas developed in those workshops as high. In addition, the representatives of local administrations und local politics have promised to support the realization of various projects.

Raising the awareness of various communal and statewide political actors for the owner communities was among the objectives of the ExWoSt-Project „Wohneigentum für Generationen“ (homeownership for generations). On a state and federal level, the project made an impact with a final symposium where experts lectured on suburbanization and energetic sanitizing and presented their own project findings. The relevance of the topic was underlined with the minister of Rhineland-Palatinate in charge of financing and construction (Dr. Carsten Kühl) and the mayor of Koblenz (Marie-Theres Hammes-Rosenstein) who both gave brief welcoming speeches. The entire board of the Verband Wohneigentum was present as well as city representatives for the owner communities and owners.

The special case of “owner communities“ exemplifies that practical and political actors on different levels are dealing with the project’s issues, especially with the sustainable development of individual properties and certain suburban residential areas, as well as the future of honorary volunteer work. Rhineland-Palatinate, characterized by its rural environment, focuses on owner occupied homes as an energetically sustainable housing stock. The project was funded with the aim of finding out whether organized owners were more likely to carry out energetic sanitation work than owners in classic residential areas. As it turned out, despite the information, counseling and help provided in the framework of the research project, the owners’ personal situation, even in owner communities, is of greatest importance. Despite favorable conditions in the communities, such as mutual support in the neighborhood, organizations

and associations, the individual financial scope as well as the age and the family circumstances determine the concrete willingness to act, and only to a lesser degree the life in a comparatively homogenous community. The project also demonstrated that owners of homes - even at a higher age – are very active and committed to supporting their area of residence. This potential includes a large, hardly called upon potential for new ideas and their realization. Thus the selected case studies might function as a role model.

Lessons learned looking at sustainability:

- Inhabitants of these dwellings have strong bonds towards their homes, strong neighborhoods still exist, and help is given to single handed elderlies.
- An aging population and generation change is a key challenge for many owner communities but so far this has not been a central issue in the residents associations.
- Foresight workshops have shown that the older owners are very active in developing new ideas and realizing them. Older people in communities have a potential that can inspire communities – if there is organizational support. These seniors (61 years old in average) take matters into their own hands and form an active part in their city – unfortunately this potential often is unrealized.
- In the same time, the association and clubs are changing: More and more owner communities regard themselves as institutions for consumer rights, not as active neighborhoods. They provide legal and financial counseling and give advice on gardening. Some communities fall apart and change into a usual suburb. Larger communities face the biggest problems and those with very old-fashioned actors.
- Because of place identity and place building the residents want to pass over their dwellings, but in fact that are unrealistic plans. At least they maintain family capital by selling the property.
- On some roofs we find solar panels, new heating systems were installed, old windows replaced, etc., but only a few owners started energetic modernization.
- To sum up, place making, place identity and strong social bonds are the main assets of these settlements. It takes some time, financial support and some effort, until owner occupied homes form a substantial part of an energetically sustainable housing stock.

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FROM CULTURE OF THE PLAN TO THE CULTURE OF PLANNING: THE RELEVANCE OF THE STRATEGIC PROCESS IN THE DEVELOPMENT OF SPATIAL PLANS. THE EXPERIENCE OF THE MUNICIPAL MASTER PLAN FOR ALMADA.

José Antunes Ferreira[1] Jorge Gonçalves[2]

Keywords: Territorial change, Spatial Plan, Municipal Master Plan, Strategic approach

Abstract

The shortcomings of functionalist planning in an economic and social context as volatile as today's have been recognised for some time now. This volatility does not fit well with rigid spatial planning standards, particularly with relation to the uses attributed to land. In some cases the planning tools are rendered obsolete by reality, meaning that plans have to be suspended, altered or even completely revised. The arrogance of thinking a plan can unilaterally determine the future is supplanted by the constantly changeable and uncertain reality, affected, as it is, by many other variables and not only the decisions imposed by the Plan.

The failure of this more rationalist/positivist paradigm is reflected not only in the limitations of formal plans but also in the emergence of informality, with varying degrees of legality, as an alternative strategy, seeking a renewed capacity of anticipation of the future (through greater understanding) and flexibility (through more open planning tools and new governance modalities).

The recognition of the existence of life cycles in cities and territories and the need to prolong more favourable periods and combat periods of depression constitutes a huge challenge for classic planning, all the more so in the context of acute national financial crisis, with all the turmoil, uncertainty and vulnerability that brings for the cities and territories.

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A significant contribution to this change in paradigm would seem to be the incorporation of more robust strategic thinking on land management tools, with a view to giving them more quality and efficiency.

As an illustration of this renewed look at planning we propose the process for the Revision of the Master Municipal Plan for Almada (Portugal) and, in particular, the description of the strategic reflection that took place, with the ultimate goal of furthering the development of proposals for a more intelligent plan with a successful future.

By articulating political principles expressed by the local council in various documents, the orientations by the planning instruments approved at the national, regional or local level, the various diagnostics carried out (namely, for the revision of the Municipal Master Plan itself) and more strategic or sectorial plans, it was possible to outline a set of anchor resources, challenges, supra-local strategic guidelines and municipal development lines. All this information, which was not always convergent in terms of options, was condensed into dimensions of concern that gave rise to strategic lines and pro-positive vectors of action.

From this initial work of observation and systematisation of trends and orientations one then advanced to establishing objectives that are two-fold: end objectives (the desired end results) and intermediate objectives (intermediate goals contributing to the end objectives). Land management planning is thus changed from being an end in itself to an instrument that will help create the appropriate matrix for achieving the objectives that are essential for local development.

1. Territorial management instruments dimensions from absence to inevitability

Territorial organization form, either agricultural or urban, evoking only the most common dichotomy present in land planning practice, comprise the spatial expression of the societies that embrace them. Even when the image we come across is not the most pleasant or corresponds to our current stadium of development.

In our understanding another certainty is equally challenging for consideration, is that as western societies, got internally more complex, by means of hierarchy power build up, of new regulatory mechanism and new lobby groups, that are always searching for minor adjustments or profound changes, many times appealing to ideologies as a support stick, territory was also being "produced" with an equal complexity degree. This new reality, demands adequate control instruments, that where barely, or almost never achieved.

Pressure management striking upon the territory, as in other collective life situations, end up by historically revealing existing conditions dependency, instead of appearing as a proposal for a new relation chart amongst existing spatial dynamics.

Thus, the absence of autonomy, the excess of dependencies and the time rapture between the problem´s arousing and its confrontation by land planning policies, as we can nowadays observe, has ended by having consequences in the territory global image quality.

Another two indispensable ingredients for a better interpretation of territory dynamics can be joined: on one hand, the geographic conditions that, in the Portuguese case, register an overwhelming internal difference.

It would be fastidious to enumerate, all the multitude of differences affecting the territory, but that can easily understand the limitations of a legal, generalized and normative chart, to be applied on a mass scale, with everything benchmarked and simplified;

On the other hand, the cultural-historic conditions, in many cases, in intense collaboration with previous topic, that ended up by dragging a distinctive image into the territory, self revealing of its equal singularity of how societies see the world and themselves. Once again the legal chart shows inflexibility that worsens their differences assumption, or even, their identity assertion.

All these reality faces, combination, visible in the space ends up by expressing different ways in different spaces, but with some common points, amongst others: huge urbanized area, services infra-structures deficiencies, and problems in equipment offer and supply.

"*Hard-planning*" understood as a central administration answer to urban planning problems, privileged the present moment in time in generating an answer, that is, the objective solution for the "here" and "now". It proposes a barely negotiated future, with very little changes for different places.

We can then understand, within this spirit that, in pioneer legislation on urban planning instruments in Portugal (Law-Decree 208 of 26th may 1982 and Law-Decree 69 of 2nd March 1990), the future is an absent idea.

In current legislation (Law-Decree 380 of 22.09.1999, altered by Law-Decree 316 of 19.09.2007, with current text, given by Law-Decree 46 from 20.02.2009), the same expression appears over two dozen times, which is revealing of the paradigm change that occurred in the past 3 decades. In order to adequately illustrate this change, it is worthwhile to do a contents analysis exercise of the 3 referred decrees.

Fig. 1 | Law-Decree 208/82:Textual analysis

Fig. 2 | Law-Decree 69/90: Textual analysis

Fig. 3 | Law-Decree 316/2007: Textual analysis

The evolution is clear and it suggests a path that goes from a protagonist placed upon the Plan and in Plans, to another in which Plans overcome the Plan, and finally it starts to appear land planning, territorial management instruments (No sense here?). It appears that a new type of speech emerges with new legislation.

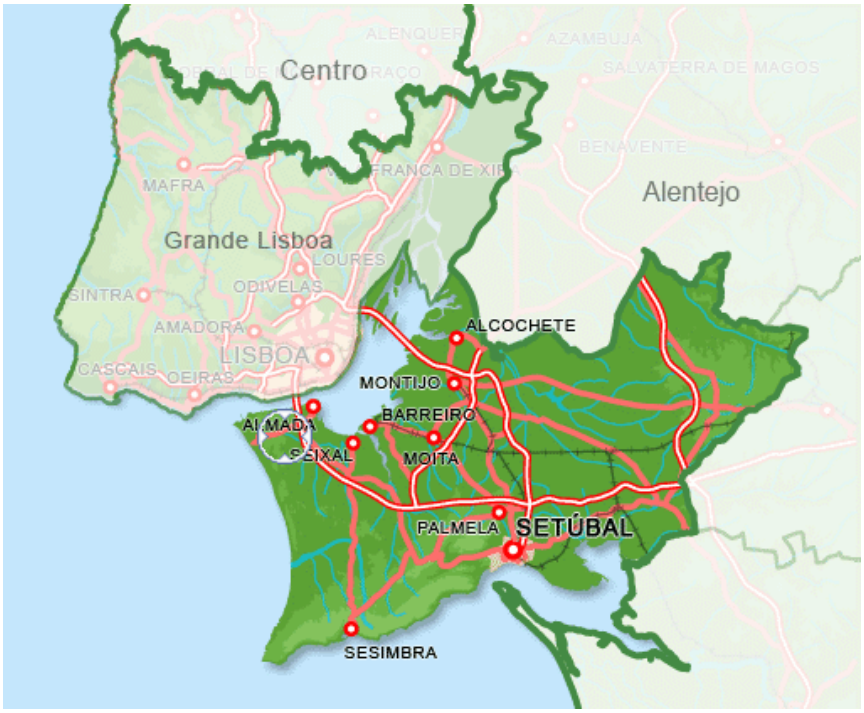
All this change reveals a particular attention with the future and a compromise with communities and activities, in a tendency for *soft-planning* exercise. To reflect over the future, to equate available resources, to select a desirable scenario and programming necessary measures to attained its goals, started to legitimate the manner for planning, mobilizing its actors.

2. Almada's Municipal Master Plan (PDM) revision: short chronicle on ongoing changes

2.1. Regional changes

In the almost two decades that occurred, since the first Almada's municipal master plan, many were the transformations that occurred, both in the municipality, as well as, in Lisbon´s metropolitan region. They reflected in the territory occupancy, in its relationship with surrounding areas, and in its standing relative position to Lisbon´s metropolitan area (AML) context, and especially with Setubal's Peninsula.

Fig. 4 | Almada in Setubal Peninsula



As a matter of fact, we have not only assisted to a profound change in the economical grounds of the municipality and of the peninsula – where the large heavy industry, which attained its identity since the fifties to the seventies, gave way to new modern and technological more advanced industry plants, as well as the speedy development of the services sector -, but also, many of the long discussed proposals were accomplished, namely in the areas of territorial infra-structures, in its endowment of public services and collective facilities, in its accessibility and transportation, at the same time that urban and suburban areas were developed, which benefited from the meanwhile achieved improved accessibility

From the development of a new logistics and industrial area, enhanced by "Auto-Europa" facilities compound, to the consolidation and reinforcement of the tourism and leisure vocation, of significant parts of the Setubal Peninsula – such as Sesimbra, Aroeira and Arrábida -, to the construction of Vasco da Gama Bridge, the railway crossing over the river Tagus, the South of Tagus Tramway system, or by the upcoming of new secondary cores, associated to the main Peninsula's urban centres. Many were the changes verified in this south side of Lisbon´s Metropolitan Area.

Even if in relation to the recent past, it is not difficult to identify the occurred changes, and which impact they had on the territory and its inhabitants, on the other hand, the prospective exercise associated to its own urban planning practice, demands a bigger reflection and framing, in relation to its main factors – endogenous but most of all exogenous. This have influenced the social systems, economics and urban planning evolution, that in itself, conditioned and explained the territorial occupancy, as well as, influenced the strategic

options, that the Municipality in a willingly exercise decides to assume for an orientation of the council's future.

In this context, it's important above all, to explicit which were the main changes that occurred, and which developments can be expected at AML and Setubal's Peninsula level, which might have decisive impact in Almada's council, whether in reference to the exogenous conditions of its own changes, and as to its positioning and relative weight amidst this metropolitan system.

At the structural changes level, it is necessary to enhance those that, in the economic sector scope, have obtain a motor role for the Peninsula's economy – with its consequent change of workplaces location, and its interchange with the exterior – as the ones that resulted from accessibility improvement, that were observed meanwhile, in certain areas of this peninsula territory, at the same time as degradation of these access condition developed in these areas where historically had begun the urban occupancy of the sixties and seventies from last century.

Thus, while old industrial riverside locations rotted, and ended up by disappearing – launching into unemployment tens of thousands of labours, as well as a myriad of middle and small subsidiary firms -, we watched the strengthening of the logistics sector, of the big commercial trade surfaces, and the implementation of new, more advanced technologic based industry.

The production concept of "*just in time*" were adopted, and the aim moved into exporting, immediately transferring outside AML a large amount of supplies and manufactured products – demanding therefore, bettered and more regional and international accessibilities -, as well as inducing a close location of part of its national components production. Hence the fast and accentuated location transfer that was verified in locations of the main Peninsula's industrial activities, which are currently dwelling mainly in the Coina, Paio Pires and Mitrena's areas, in disadvantage to verified in precedent locations as Almada, Seixal, Barreiro and Montijo.

On the other hand and more recently, with the possibility of construction of a new road-train Tagus crossing between Beato and Montijo, it will not only, transfer the gravity centre relationship of both river shores to the eastern side of Almada, as well as it will create new urban expansion areas. Taking advantage of new accessibility conditions to Lisbon´s centres – example of which, is the Parque das Nações- and for the remaining north area of AML – as such as the services and technologic campus, located along the Cascais motorway accesses -, and of the new building products offer. It is believed that new building fronts will be able to channel for themselves a significant part of the demographic growth and the migration moves amidst the AML.

In a similar way, if the opening of the railroad service in 25th April bridge, enhanced the capturing of new residents for the stations nearby influence areas - despite many times needing to complement with the automobile -, its extension to the Pinhal Novo and Setúbal,

opened new possibilities of residential inhabit for those who work in the new services job centres of Lisbon city.

2.2. Local dynamics

Resulting from the combination and overlapping of these change factors, Almada's council lost part of its foremost role, in Setúbal's Peninsula relationship with Lisbon, whirling into its interior and its direct area of influence - above all noticeable throughout the axis defined by the EN 10 route -, and at the same time would strengthen its secondary centrality functions in the AML context, thanks to its equipment and services offer development, and to the strengthening of innovation and university educational cores, that got fixed in the north side of the council, between Pragal and Monte da Caparica

On the other hand profiting from its extensive Atlantic beach front, the municipality equally reinforced its role in the AML leisure area, which explains to a certain extent, the consolidation of illegal genesis urban areas, and its progressive transformation in first residence urban areas, in association with tourist and leisure developments, of which the Aroeira area is an example.

However if the if the movement of urban occupation gravity centre from the Tagus river south shore moved towards east – due to the new entrepreneur locations with bigger workmanship contingency, and the new Lisbon accessibility made available by the Vasco da Gama bridge, and its accesses network – the inertia associated to the historic legacy at territorial urban occupancy level, throughout the route EN 10 axis, is still determinant in the geography and daily travel intensity between the two Tagus shores; albeit as far as pendulum travelling manner, its proportional importance has diminished faster that it could be expected.

The automobile traffic steadiness on 25th April bridge, of approximate 170 thousand vehicles per day, along with the continuous growth crossing the Vasco d agama bridge- currently around 65 thousand vehicles per day and per direction – it's a tendency clear sign.

This trend will for be sure endorsed, by the new Lisbon airport sited southwest of the Alcochete shooting range, by the development of the great AML logistic hub at Poceirão, and by the suburban railway service expansion, between Lisbon and Tagus south side to the town of Bareiro.

They are all factors that will accentuate the economic weight of the eastern side of Setúbal's peninsula, and potentiate there the urban obsolete and unqualified industrial spaces renovation, as well as the capture population and jobs. As a result it constitutes a true challenge to Almada's traditional role in AML context that, oblige the re-equation of its future as a metropolitan secondary centrality.

In this scope, it assumes particular importance the approved PROTAM strategy, in re-centring the AML around the Tagus estuary and promoting a true two shore city, multi-cored and diversified in its urban offer trend.

Indeed, if the new transport and logistics infra-structures, as well as the location of more dynamic economic activities, and more qualified job – that will naturally follow the new accessibility and the new foreseen structuring locations – pointing towards the eastside Peninsula area, role reinforcement amidst the AML. The territorial vision entrusted in the AML's Territorial Regional Master Plan (PROTAML), restates the necessity of relationship endeavour between the two Tagus riversides, there where they are more intense today and where they were historically strengthened.

Almada, whilst one of the main Setúbal Peninsula Council in demographic terms, in its offering of high hierarchy facilities and qualified employment, is currently in a structuring turning point, relative to its AML role, especially in the Setúbal Penisula.

To do this, the gains already obtained must be counted upon, in terms of centrality, of its urban environment qualifications, in the offering diversity that it has in its leisure area, and in the modernization of its local governance, leveraging these differentiating factors and relative advantage in relation to other Peninsula councils.

This has to be achieved, through some blockages and shortcomings resolutions, that currently exist in accessibility, identity and social cohesion, and qualification of leisure and tourism areas of, as well as, decisively betting in the development of its University Innovation Campus, and in deepening administrative efficiency and proactive attitude of the municipality.

3. Drawing Almada's Master Plan Startegy

3.1. Inspiration sources for the Municipality strategy

Planning strategy do not differ much from the usage of the same concept in the fields from where it was imported, heartening the fact that the strategy should be above all be, in the starting conditions of the thinking and reflective act – intrinsically and environmental -, and conceiving a acting form in a variable tempo horizon, but mostly in middle/long run. With identical understanding Chandler (1962), Hax and Majluf (1988), state that a strategy, is the determination of the basic, long run objectives of an entity, the adoption of adequate actions and the resources provisions to meet those aims.

But the strategy conception process, for raw-material can be found in various fields, more unstable or more stabilized, from whom it derives the inspiration for conceiving preparation of the future. This is naturally by definition uncertain. It's triggered by powerful forces, that nobody even those involved can be totally controlled. It is also true that for organizations, it is given the chance, the possibility of in-loco moulding those dynamics, from their internal past resources and dynamics. The above mentioned authors enhanced the relevance, of aims, means and resources provision.

Thus it's necessary to underline the close relationship between territory and its external context, close or farther, in one which one contains the controllable difficulty forces, from the current standing-point in which are, and another, containing available forces to condition

and re-orientate them. In this case, it will be the territory planning, and the territorial management tools to promote that reorientation that it is desirable to define.

We are not dealing with the future or at least with its determination. As Inneraty states (2010), “a good society must be unpredictable, respectful of its own limitations” (p.221). It also does not mean to aspire to a future for which it certainly lacks the conditions for it to be achieved, but to aspire to an uncertain plausible future

Here at stake, so it seems, is the territorial positioning and its actors, against the identified dynamics, which can be translated in a strategic vision, where choices of future direction paths are made.

In Almada’s municipality case, many are the contributions to be considered as “inspirational source”, deriving from work widely developed in several fronts – political, urban, economical -, and what it matters now, is to make it directional compatible, into a converging and mobilizing idea. It is demanded, then, in first instance, its systemization, and form detail to evidence them, and make them useful, for a clarification work of a strategic thinking.

Anchorage resources, constitute identified elements in different Almada’s territorial incident documents (plans, studies, as built), as potentially interesting to development mobilizing strategies. They can already participate in existing dynamics or yet to explore, since their aim is to rethink its integration form in the drawing processes in such a way as to increment synergies produced among all. We have to remember that in economics, resources are designated by those factors that combine are able to generate value in the production of goods and services. These, in a classical economic perspective, are assets, land and work.

They can be physical aspects, such as the extensive low and sandy seaside front or the accessibilities, or cultural and social such as demography dynamics, metropolitan centrality or the value of the landscape.

Anchorage resources

Immaterial resources

- metropolitan centrality
- Human resources
- Landscape
- Life quality
- Cultural and associativety dynamics
- Citizenship

Phisical resources

- Sea and river front
- Higher education facilities
- Enviromental resources
- Culture, sports and leisure

- Touristic projects
- Inovation and technology activities
- Accessibilities and transports systems

The challenges, being still nevertheless an essence problem, demand for its overcoming the mobilization of efforts and several resources, but also an expectation that this overcoming will produce gains for local or urban development. On the contrary, failure in its straight dealing will bring negative consequences, of a bigger or lesser magnitude.

Challenges are present in all fields of reality, but have differentiated levels of attainment difficulty, translated in organizational, financial and timing demands. The before mentioned resources, constitutes, also as catalytic for these challenges answers, which can be organized in four fundamental dimensions:

Territorial

- Supra-regional structering projects
- Climatic alterations adaptation
- Inter-council reinforcement ties, through public transports
- Inter-council mobility / road system structuring
- Urban system requalification
- Public spaces qualification

Social

- Population keepingness
- Empty habitation park utilization
- social-culture integration

Economic

- Job promotion
- Economical base diversification
- Activity innovation and knowledgement technology reinforcement
- Tourism activity broadening and qualification

Governability

- Natural and technologic risk prevention
- Illegal genesis Urban Areas requalification and resolution
- Municipal environmental structure execution and management
- Governability /Management adaptivety

Between the two presented levels – anchorage resources and challenges – one needs to consider another political nature contribution body, that emerge from team program, with leading responsibility on council territorial management. All in all, this program's contents,

aware of existing conditions, both in the internal and external level, proposes a way, or willingly, **development axis.** This nevertheless will constitute answers to its "negative".

Development Axis (Council's guidelines)

"More Almada"

- Urban renovation and social-economic development
- Environment, biodiversity and energy
- Urban mobility, accessibilities and public areas
- Education, learning, qualification, knowledge and youth
- Culture, sports, solidarity and safety
- Information, participation and governability
- Public service modernization and improvement

PDM's starting aims

- Strengthening balance of Council's role in the Region
- broadening Council's economic basis
- Natural and built environment improvement
- Social-cultural development and professional learning
- Council's image development

Inicio de segunda parte da tradução

Se estes elementos fazem parte do reconhecimento alargado da matriz territorial que pode suscitar o posicionamento de Almada perante o horizonte de vigência do Plano Director Municipal revisto não podem deixar de ser consideradas as orientações de âmbito supra-municipal que emanam de Instrumentos de gestão territorial legalmente aprovados e em vigor, e que directa ou indirectamente têm de ser integradas na análise nesta análise prévia.

If these elements are part of territorial matrix enhanced acknowledgement, that can incite Almada's positioning in face of the revised Municipal Master Plan valance reviewed horizon, can not be

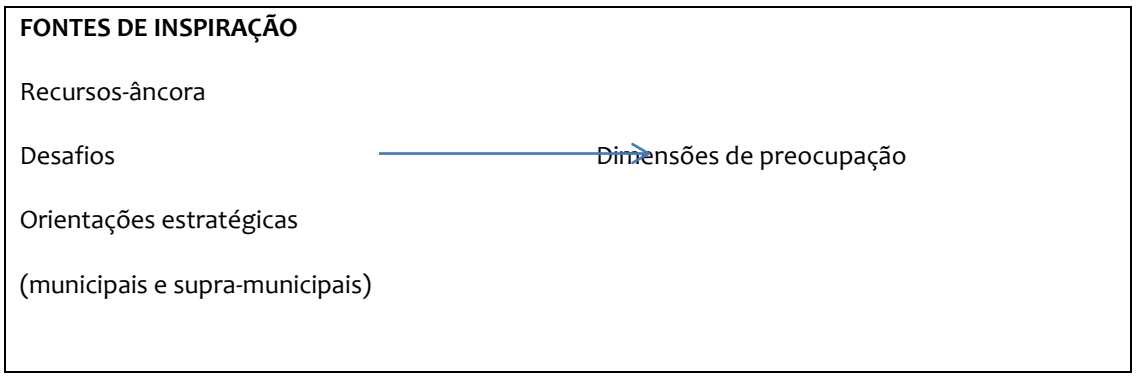
- Conectividade, Competitividade e Cosmopolitismo;
- Polinucleação e Compactação;
- Sustentabilidade Ambiental e Sintonia com a Natureza;
- Dinâmica de Coesão Social e de Qualificação;
- Governabilidade e Governança;
- Reorganização do sistema metropolitano de transportes;
- Ordenamento dos diferentes usos e actividades especificas da orla costeira;
- Valorização e qualificação das praias;
- Desenvolvimento de actividades específicas da orla costeira;
- Defesa e valorização dos recursos naturais e do património histórico e cultural.

Como se pode observar ver a informação é extensa, desigual na sua natureza e nos seus propósitos, mas relevante para a estabilização de um quadro de preocupações-chave que estabeleça o pano de fundo para o desenvolvimento de um espaço estruturado de enfrentamento e onde o território tenha o natural destaque pelo instrumento em que tudo isto está integrado. As designadas dimensões de preocupação acabam por ser a condensação operacional do trabalho de levantamento feito nesta fase.

Dimensões de Preocupação

- Potencial Humano
- Dinâmica Económica
- Afirmação Regional
- Qualificação Ambiental
- Qualificação Territorial

Assim, o processo até aqui percorrido pode apresentar-se esquematicamente do seguinte modo:



3.2. From concerns to strategies

The condensation process that resulted in the dimensions of concern resembles a tree structure that we will see, will evolve into a double-arborescenc estructure, upstream and downstream of the process. As it turned out, these concerns are generally consistent with the political and technical issues raised above but also with the locative resources, initiative, human and institutional.
This articulation is intended to strengthen the idea that attention should focus on topics for which there were only identified resources are sufficient reasons as well able to support their understanding and coping. In other words, the formulation found seems to be able to achieve the desired objective and cover the field of possibilities, not excluding any significant area. Apart from this lack hindsight now realize what to do with it. This is not a strategic plan but "only" a plan that admittedly meant to emphasize this strategic dimension to frame a comfortable and credible framework for the development of this instrument.

Thus, these dimensions of concern came into direct connection to the strategic lines without the mediation of a vision as this is well formalized in the frameworkof the Municipal Plan (Decree-Law 380/99 republished by Decree-Law no. 46th/ 2009 of 20 February): "Art 69th., 2 - Plans municipal planning lay down rules on land use, defining models forecast development of human settlement and organization of urban systems and networks and, in appropriate scaleparameters of land use and ensuring environmental quality. Article 84, 1 - themunicipal master plan establishes a strategy of territorial development, themunicipal policy on spatial planning and urban and other urban policies,integrates and articulates the guidelines established by the instruments ofterritorial management national and regional level and establishing a model of spatial organization of the municipal territory. ".

The following strategic lines that give the dimensions of concern are:

· More businesses and jobs. Seizing new opportunities

· More people, better integration

· Better public transport, better mobility

· Improved urban environment, rehabilitating and structuring the built environment

· promotion of environmental values and landscape

The difference between concerns and strategies are in fact the first to exalt the problem and said a second approach to address this assertion. Understandingthe strategic line would be enough to "feed" the work of operation necessary todisaggregate into strategic vectors that point to specific issues where it isimperative to act and is still advancing with the end-objectives that match what you would like to have in order for each of problems:

- More businesses and jobs. Seizing new opportunities
entrepreneurship| Objectives purpose: To promote employment, promote the creation and support of business

Locate economic activities | Objectives-end: Boosting the economy, ensureterritorial competitiveness

Leverage local resources | Objective-end: Valuing indigenous resources

- More people, better integration
Education, Training, Qualifying | Objective-end: Raise the level of qualificationsof the resident population

Attracting new residents | Objectives-end: Increase the resident population

Integrating classes and generations | Objectives Worm: Enhancing the social integration

- Better public transport, better mobility
Develop inter-district council accessibility | Objective-end: Improving theinfrastructure and public transport service

Improving mobility intra-district council | Objective-end: Improving mobility and connections

- Improved urban environment, rehabilitating and structuring the built environment
Urban centres structuring | End-means: to promote urban areas re-qualification

Urban space rehabilitation| End-means: to promote historic centres rehabilitation and revitalization

- Better environment and landscape framing

Endorse the municipal ecologic structure | Aims-end: endorsing the municipal ecologic structural consolidation

Improve and protect views | Aims-end: endorsing the minimization of environmental impacts, improving views and focal points

3.3. Process procedure

The land management instrument – Municipal Master Plan – shows as documental contain "Article 86th , 1 – the municipal master plan is constituted by: a) Regulation; b) Urban plan representing the organizational area model of the council's territory, in accordance, with structuring systems, and land qualification, and yet planning operative units and defined management; c) Restrictions plan, identifying passages and current public utility restrictions that can constitute limitations or impeachments to any specific usage form." (Law-Decree 380/99, of the 22nd September, republish by Law-Decree 46/2006, of 20th February). Such demands end up by giving a especial delicacy, to the work in obtaining the strategic lines, in such a way that, it can be unveiled in credible and concrete actions to be participated, in a stimulating way in the remaining steps of the Plan elaboration.

As this process is still far from its conclusion, being still in a developing stage, there are limitations to be taken into account, namely the current actions that are not yet possible to safely define. The action/project demands a timing detail level, amidst hierarchy, governability, financing, articulation, and so on, that in the current phase it is impossible to define.

However, understanding that strategic lines though mobilizing and well intentioned, would be excessively vague to instigate a substantive discussion in the form of a procedure of enlarged participation, one should, without compromising any of the aims, to find a formula, that would help to deepened the reflection process, and helped in the identification and construction actions exercise.

This formula ended up in the definition of aims that have the merit of having sufficient detail, instigate discussion without yet stating actions, but that are sufficiently near to them.

The “Aim” figure encloses a large complexity, but it is generally accepted that it is about a end or finality that was determined by the process ambit, that should be obtained or achieved by means of an integrated project. In the particular case of the Almada´s Municipal Master Plan revision, it was considered useful its segmentation in two types (to which it is necessary to add the means-end, dealt in previous paragraphs):

Starting aims

Are those who permitted to sustain the beginning of the RPDMA process, and which will be recalled at the process finish, in order to evaluate the obtained answer levels. They are thus programmed aims in the sense that they will constitute guidelines for the Plan’s elaboration.

- Reinforce Almada’s role while a AML secondary centre and a main Setúbal’s Peninsula urban site within de “two riversides city” context.
- To create the necessary conditions for university campus, and council’s innovation development, promoting new trades land fixing and the inter-relationship with developer’s fabric and supporting its internationalization.
- Upgrading the leisure and tourism offer, of which the “Costa Polis” is a fundamental element and enhancer of new initiatives in this domain – in the sense of deepening the council’s vocation as a big area for leisure within the AML context.
- Consolidation and upgrading of the council’s ecologic net, in order to, guarantee its sustainability, in such a way that it will contribute for the environmental improvement of the urban spaces that is crosses.
- To better neighbourhoods urban environment, as well as, its lesser valued urban centres, in order to strengthen or giving them, their own identity, enabling their development in a close-by urbanism, and a more coherent and solidarity social livelihood.
- To contribute to the main problems resolution of existing accessibilities, both in relation to the AML’s north riverside – in particular with Lisbon -, as with several of the council’s areas, and its immediate surroundings, in a sustainable mobility perspective, that focus not only in accessibilities and transportation systems, but also in those urban aspects that will condition urban mobility.
- To deepen council’s urban management capacity, in the sense of increasing its efficiency, and municipal’s competence to guide the urban development process, and establishing structuring partnerships with the State and private enterprise for action and project achievements for the municipality, bearing in mind the acquired experience with the current PDM, and its innovating aspects at urban balance and private participation level, in territorial infra-structures and in its contribution for provisioning the municipality with collective facilities.

Aims - means

They are instrumental to obtain its end aims (referred previously), willing to participate in their various success. It was possible to organize all the universe of aims-means, in five

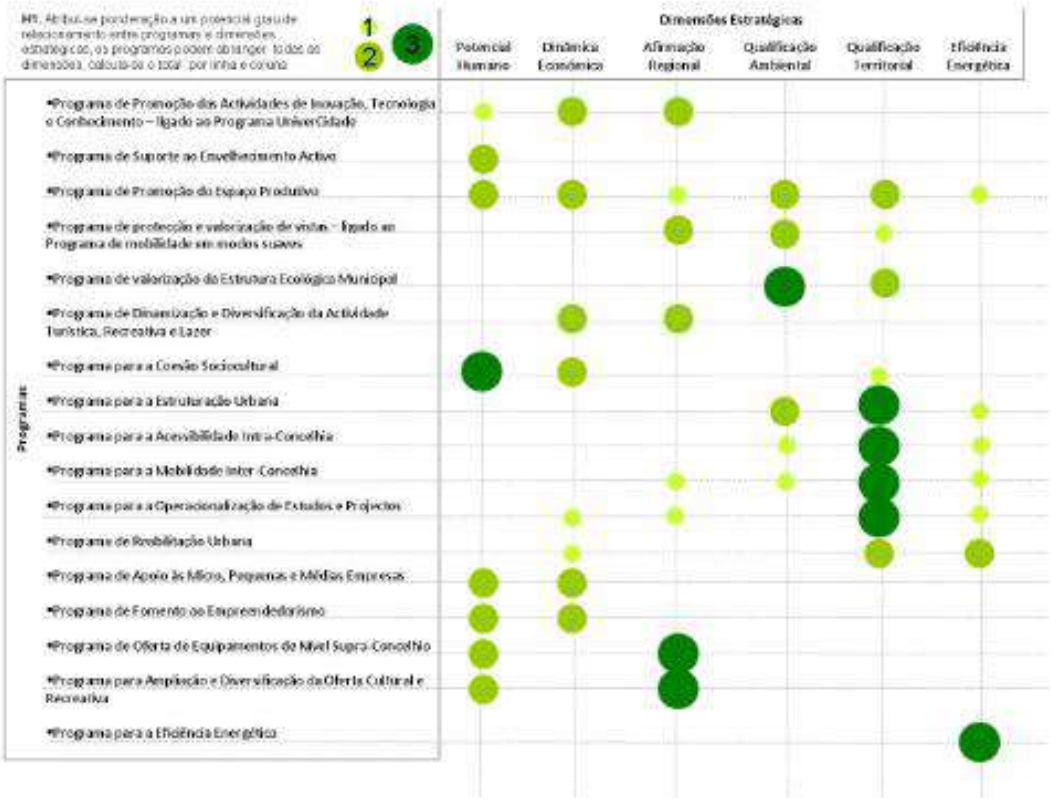
dimensions (related with strategic lines): Economic Endeavour, Mobility Structuring, Social Cohesion, Urban Spatial Structuring, and Landscape Environment Improvement.

Each of these aims can participate in one, two, three or even four programmes simultaneously as it can be seen in the below figure.

Fig. 5 | Methodology of general structure

It totals, 17 programmes, which cover all considered central areas for social territory qualification, inter-acting them with defined strategic dimensions as we can see below:

Fig. 6 | Matrix of strategic dimensions and programs



4. Conclusion

Producing a territorial strategy it is a complex exercise, which should be done tailor made, with should take into account its resources, actors, and existing problems. Not however withstanding its pertinence for a planning process, and above all for a planning that tries to surpass the here and now, unprepared for a future full of uncertainties.

Obviously the followed path could be different, investing in scenarios, and debating more ambitious plausible futures with the community. However, the process is not yet closed, and it can now, after the scheduled public discussion, verify its necessities of deepening, enlarge or only to adjust.

What matters is that planning is not anymore an end in itself, becoming through this methodology, a potent tool ensuring a future that musters everybody for its daily construction

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Effect of introduction of fire prevention facilities on fires in Ottoman Istanbul

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Abstract

Many fire incidents and urban-fires occurred in Ottoman Istanbul, but today we no longer face such kind of disasters.

This research analyzed records of 151 fire incidents and urban-fires from the year 1478 to 1918 in Ottoman Istanbul, paying attention to start points, burnt areas, damaged scales and calendar date of each fires with the help of GIS database in order to clarify factors that had reduced fire incidents. Subject area is set inside of the zone surrounded by the Golden Horn Inlet, Theodosian Walls and Marmara Sea.

Reduction of the numbers of fires should be attributed to enhancement of either 1) fire proof ability of each buildings through rebuilding following destruction by fires or decay by time, operated by building codes (e.g. the 1848 building code), or 2) fire fighting ability depending on both fire fighting organization (e.g. establishment of autonomous fire fighting section in 1868) and fire fighting equipments (e.g. Real Davud's introduction of fire pump to the Ottoman Empire around 1720 or installment of fire ponds in the city started from 1794).

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So, paying attention to such epoch making years as 1720 (i.e. introduction of fire pump), 1795 (i.e. the next year of the start of installation of fire pond) we counted the numbers of fire incidents per annum before and after each epoch making years.

The numbers of fire incidents occurred in all over the subject area (151 fires recorded) had not been reduced after the installation of fire ponds mentioned above. Regarding fire incidents started in or around the Grand Bazaar (in Turkish, Bedesten, 13 fires recorded), the numbers per annum declined to 1/5 after 1795, when they had started to install fire ponds in the grounds of Beyazid- and Nuruosmaniye- Mosques which are just next to the Grand Bazaar. Also those started in or around the district of Odun Gate, infamous for its vulnerability (30 fires recorded), declined to 60% per annum after 1795 compared with before.

So, those fire ponds installed in the premises of large mosques in the center of the city prevented fire from growing larger to some extent, but, as the urban fire streams proceeding through the vicinity of those fire-ponds-installed mosques was not reduced, fire fighting ability at that time seemed to be inadequate to settle down large scaled fires.

Of course we should conclude that such reduction of fire incidents can not be attributed only to the installments of fire ponds but also to other reasons combined together, but at least we can say that it was the biggest effect to reduce the numbers of fire incidents concerning those area which could protect themselves with extinguisher facilities, composed of fire pumps, fire ponds and fire fighters.

Keywords: fires, Ottoman Istanbul, fire proof ability, fire fighting ability, planning history

1 Introduction

1.1Background and purpose of the paper

Istanbul is a prominent mega-city embracing around 9 million population and 13.1 million including its suburbs in 2010. The city, suffering from its 256 fires during the years 1478-1918 according to the description by Mustafa Cezar, 2002 (the 11th Chapter, pp.354-445), has developped contemporary urban spaces after repeated destructions and constructions like Edo (old name for Tokyo). This paper aimed to 1) organize the information on the history of fires in Istanbul, 2) grasp characters of each fire and 3) consider historical background of the change of those characters, based on the above-mentioned book.

1.2 Method of the research and accuracy of data

The subject area (Fig.1) is the historic peninsula of Istanbul, that is, the area enclosed by the Theodosian Walls, the Golden Horn Inlet and the Marmara Sea. Within the 256 fires mentioned above, fires broke out in this area were 151 and 25 of them were recorded with the information how they spread out gradually.

We built up GIS database of these fires with the help of the Google-Map and the Mapinfo (GIS application soft) and considered characters of fires and their (characters') change referring to other books appropriately.

Cezar described location information of each fire with the names of city wall gates, localities, large-scaled buildings or streets. In case there were few information

Fig. 1 Subject Area (source:Baedeker)

Tab.1 Historic Events concerning fire fighting and fire-proof structure

Year	Event
1701	Reconstruction of the Grand Bazaar into masonry structure
ca.1720	Introduction of hand-pump extinguisher
1794	Installation of fire ponds (first phase)
1811	Installation of fire ponds (second phase)
1826	Independence of fire fighting organization from military power
1848	First building regulation system introduced
1864	Complete prohibition of wooden structure

to identify the location of ancient localities or streets exactly (pinpoint) (but at least got some hints), we assumed their mid-section to be the starting-points or spreading-routes of fires.

And, we drew spreading-routes with polyline style linking each building or locality said to be destroyed by fires. Even in case Cezar did not describe plural spreading-routes respectively, we drew those routes separately when we judged rationally that there should have been existing plural routes.

Thus, this database standing on Cezar's description is NOT SO accurate enough to measure burnt-areas or length of spreading-routes, we mainly have done qualitative analysis (location information).

The analysis was undertaken according to the 3 eras set by two epoch-making events; introduction of fire-pump by Real Davud (French-born Naval Engineer served for Ottoman Navy, introduced hand-pump extinguisher. Cezar, 2002. pp.356-357.) around 1720 and the first time installation of fire ponds starting from 1794 (Cezar, 2002, p.416) (Tab.1).

2 Analysis

2.1 Overview of outbreak of fires

2.1.1 Transition of the numbers of fires

Tab.2 Fires broke out in Istanbul in each era

	Period (year)	Years	Population (thousand)	Numbers of Fires	(among which spreading route identified)	Average fires per annum
First Era	1478–1718	241	620	36	8	0.15
Second Era	1720–1784	74	640	72	15	0.97
Third Era	1788–1918	122	820	44	10	0.36
Total	1478–1918	440	N/A	151	25	0.34

Tab.2 shows round numbers of population of Istanbul (Chandler , 1987.) and numbers of fires in each era. Average numbers of fires per annum occured during the second era (0.97) is more then 6 times as many as the first era (0.15). Behind this phenomenon, there must have existed concentration of population and commercial- and industrial-functions to urban space, but at the same time we should presume that such records from newer period should outlive easier (securely) than those from older period.

And, in spite of such presumption, the average fires broke out in the third era (0.36) is less than half of the second (0.97). It depicts certain reasons restrained fires to break out, for sure.

2.1.2 Transition of outbreaks of fires by months

Fig. 2 shows numbers of fires broke down by months. Comparing the proportion of the numbers of fires occurred in each era by months, we may describe that during the first era, the proportions of such months as August, September, April, May, and March are high in descending order, but during the second, that of July, March and June rise (position of April and May stay similar to the former era) and instead August and September fall. During the third era, July and June continue to have large proportion, but on the other hand April and May used to be prominent during the first and second fall.

Thus, “fire concentration season” differs in each era; during the first era, it is from spring through high summer till late summer; during the second, spring till

early summer; the third, early summer till high summer.

According to the meteorological data (provided by the research assistant F. Korhan Yelkenci, belonging to the General Astronomy Division of the Astronomy Department of the University of Istanbul) observed in 2010 just below the Beyazid Tower (Former Fire-Watch-Tower under Ottoman period, located in the site of the so-called “Former Palace”, later turned into the Ministry of Army and then to the University today), the average relative-humidity (Fig.3) records the lowest in May and the second lowest in August, so the high proportion of May in the first and second eras and that of August in the first and third eras are convincing, but the falls of that of May in the third era and that of August in the second are not. There must

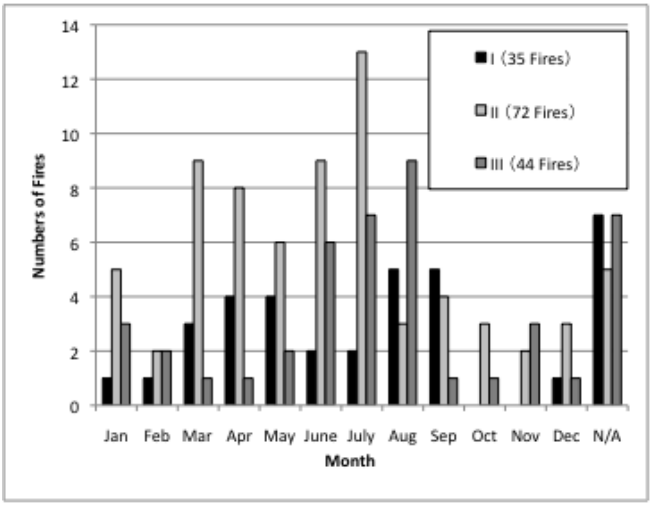

Fig.2 Numbers of Fires broke down by Months

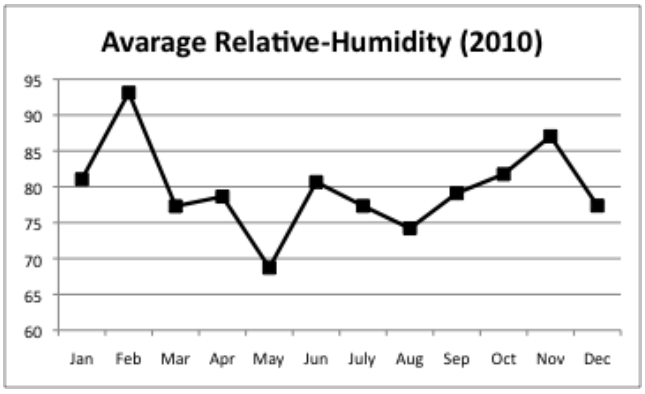

Fig.3 Average Relative-Humidity observed in Istanbul in 2010, (source: original data courtesy of Mr. Yelkenci)

be some other reason which cannot be explained by the actual meteorological data.

2.2 Onsite analysis of outbreak of fires

2.2.1 Outbreak locations

Fig.4-6 shows outbreak location of fires.

During the first era (Fig.4), fires broke out in Topkapi Palace and in its vicinity (the First Hill, "**A**" in the following sentences), the Grand Bazaar and the Old Palace together with its vicinity (the Second and the Third Hill, "**B**"), the commercial sea port facing to the Golden Horn Inlet (Eminonu, "**C**") and such residential districts also facing to the Inlet as Cibali, Fener and Balat inhabited by Greek, Armenian and Jewish people ("**D**"). Only one fire broke out on the Seventh Hill ("**E**").

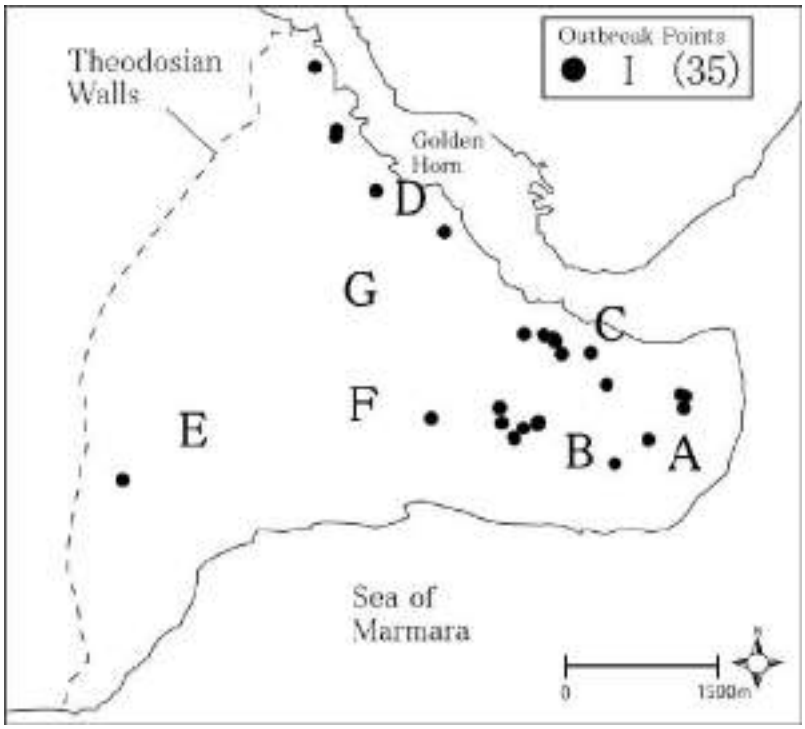

Fig.4 Outbreak Points of Fires during the first era (1478-1719)

The contrast between **D** and **E** may be attributed to the facts that 1) Non-Muslim people were restricted to live in smaller house than that of Muslim people (Kuban, p.355.,), 2) **E** was occupied by Muslim people and their houses were composed of several buildings scattered around in premises (Kuban, 2010. p.240.) and 3) large area of **E** was occupied by the so-called Kulliye, that is, a complex of buildings for various benevolent services for local community (Kuban, 2010. pp.313-314.).

During the second era (Fig.5) , more than 6 times as many fires per annum broke out as during the first. The occurrence status of fires around **A** did not change, but numbers broke out around **B**, **C** and **D** increased. Among them, Balat District in **D** gained population density more because of absorbing those Jewish people eventually being forced to move out from **C** for the construction of New-Mosque (Yeni Camii) at the end of the 16th century (Kuban, 2010. p.69.). And, fires broke out to the west of **B** (in the vicinity of the saddle-point formed by the Third and the Forth Hills over to the sea of Marmara, "**F**"), in the vicinity of Conqueror's Mosque (Fatih-Camii) (the Fifth Hill, "**G**") or in the Marmara side of **E** (Samatya District) came to be

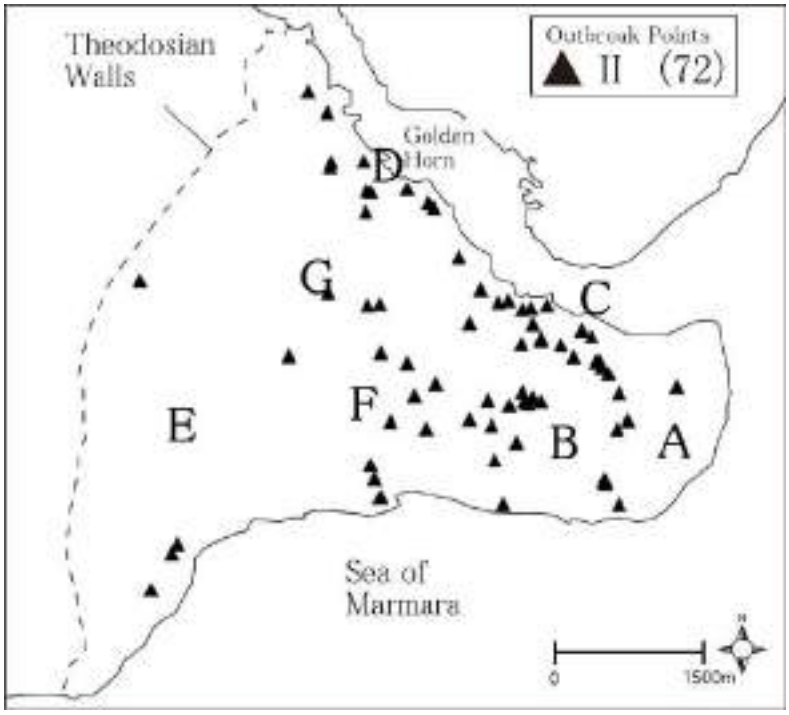

Fig.5 Outbreak Points of Fires during the second era (1720-1794)

observed. In this era, in **F** and **G**, such markets founded by Ottoman Sultan Mehmet II (the Conqueror) as Sultan pazari Market and Sarachane Market were thriving because of the trade expansion between Balkan Peninsula and Istanbul (Kuban, 2010. p.281.).

During the third era (Fig.6) , the numbers of fires per annum decreased by less than half of the former. Fires occurred similarly in **A**, **B** and **D**, but less occurred in **C** and **F**. In 1794, authority installed fire ponds in **B** (in the premises of the Beyazid and the Nuruosmaniye Mosques), **C** (in the premises of the New and the Suleymaniye Mosques) and **F** (in the premises of the Laleli Mosque). In 1810 they installed fire ponds again in **C** (in the premises of the Suleymaniye Mosque) and **F** (in the premises of the Sehzade Mosque) and newly in **A** (in the premises of Sultanahmet Mosque) and **G** (in the premises of the Conqueror's Mosque) (Kuban, 2010. p.418.). Regarding **C** and **F** equipped with fire ponds dropped frequency of fires, but on the other hand, **B** also equipped with fire ponds could not drop the frequency.

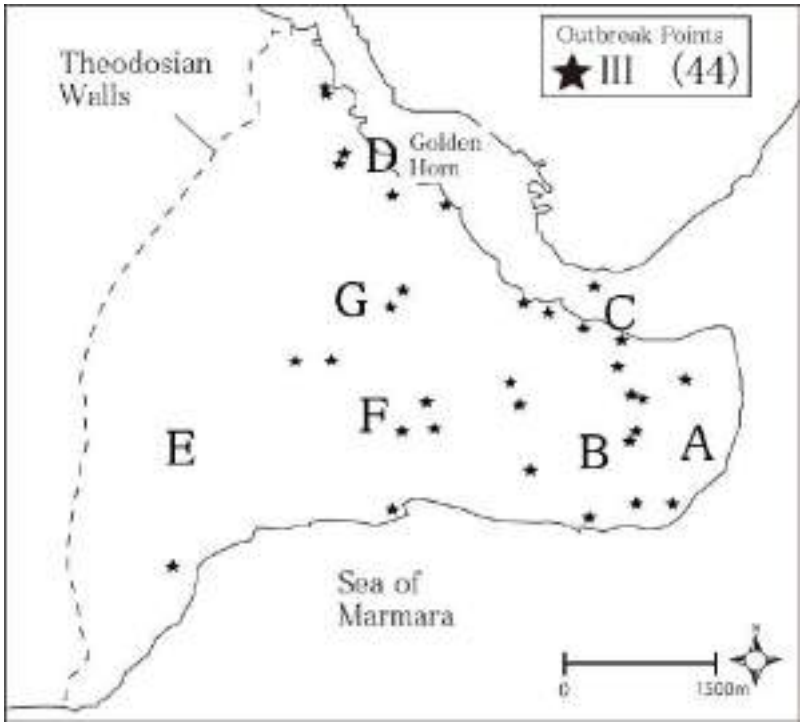

Fig.6 Outbreak Points of Fires during the third era (1795-1918)

2.2.2 Spreading route

Fig.7-9 shows spreading routes of fires recorded in each era. Triangle- or Star-shaped points depict start of each fire and polylines extending out from those points show spreading routes.

No spreading route is recorded during the first era (Fig.7).

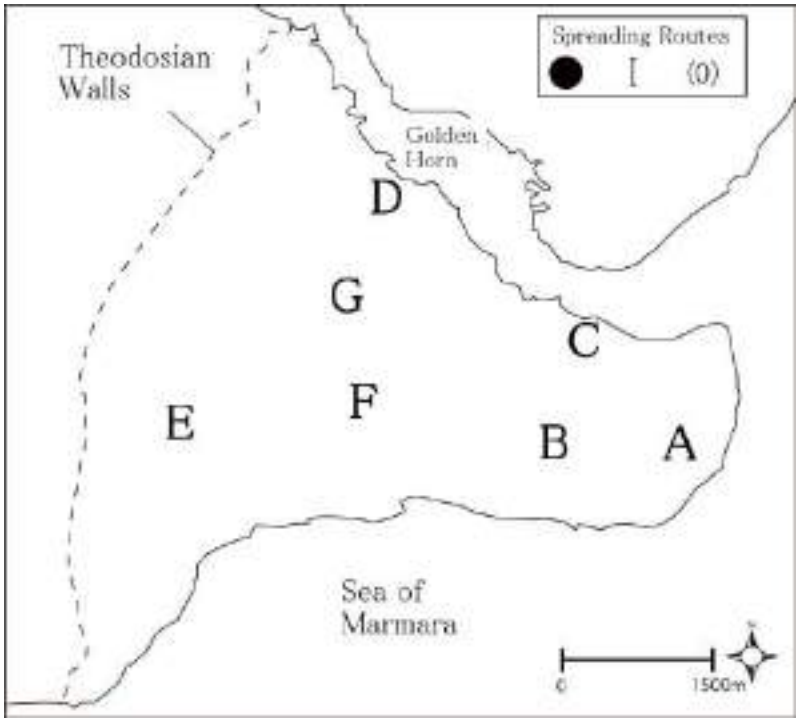

Fig.7 Spreading Routes of Fires during the first era (1478-1719)

During the second era (Fig.8), half of the fires recorded with spreading routes were generated in **C** and **D** facing to the Golden Horn Inlet. This may be attributed to such facts as 1) **C** and **D** were densely inhabited and flourishing for their commercial and industrial functions, 2) **D** was not equipped with fire ponds and 3) the prevailing wind observed in almost all months comes from the Golden Horn Inlet (Fig.10 shows wind-rose chart, made from the meteorological data mentioned above).

During the third era (Fig.9), the numbers of fires with long-spreading-routes

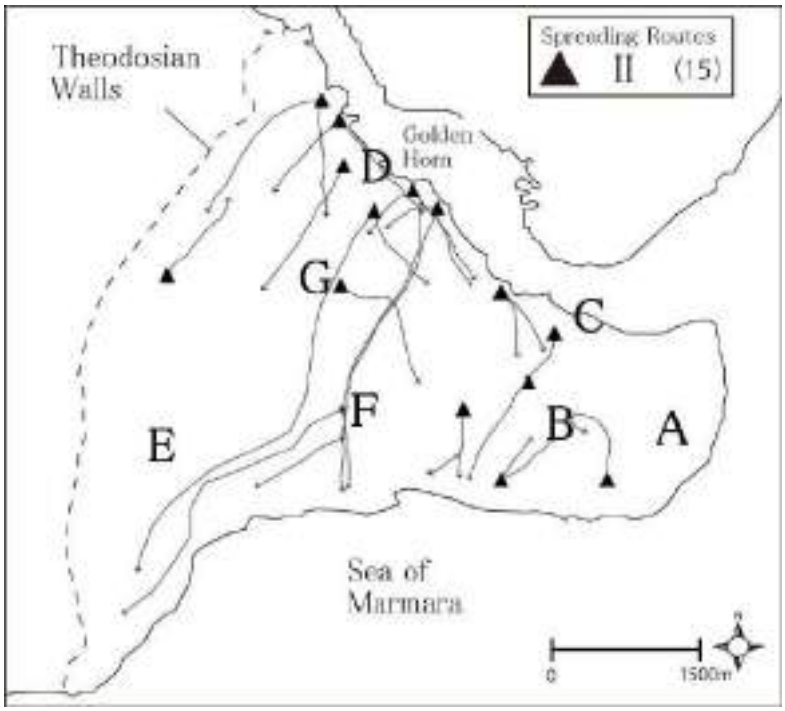

Fig.8 Spreading Routes of Fires during the second era (1720-1794)

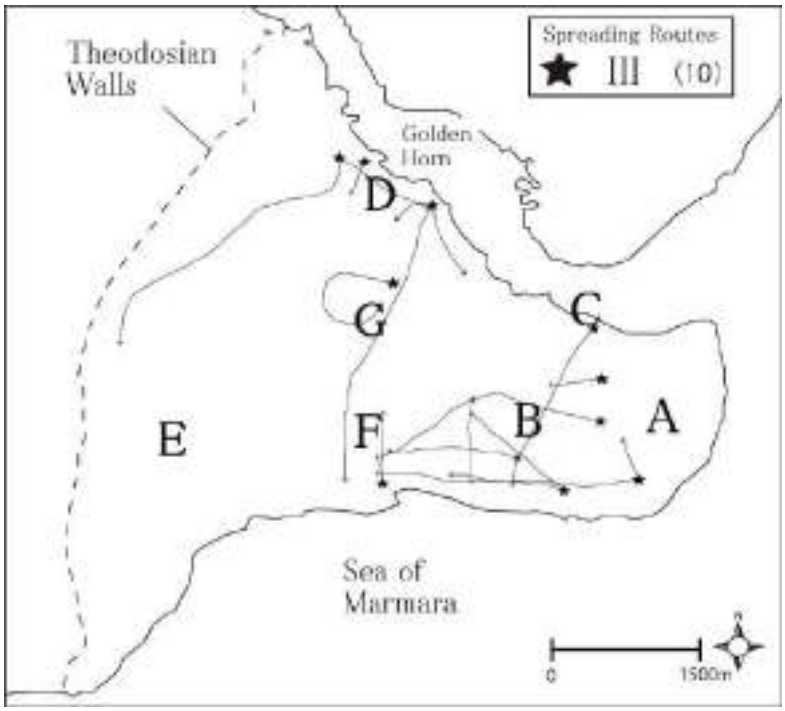

Fig.9 Spreading Routes of Fires during the third era (1795-1918)

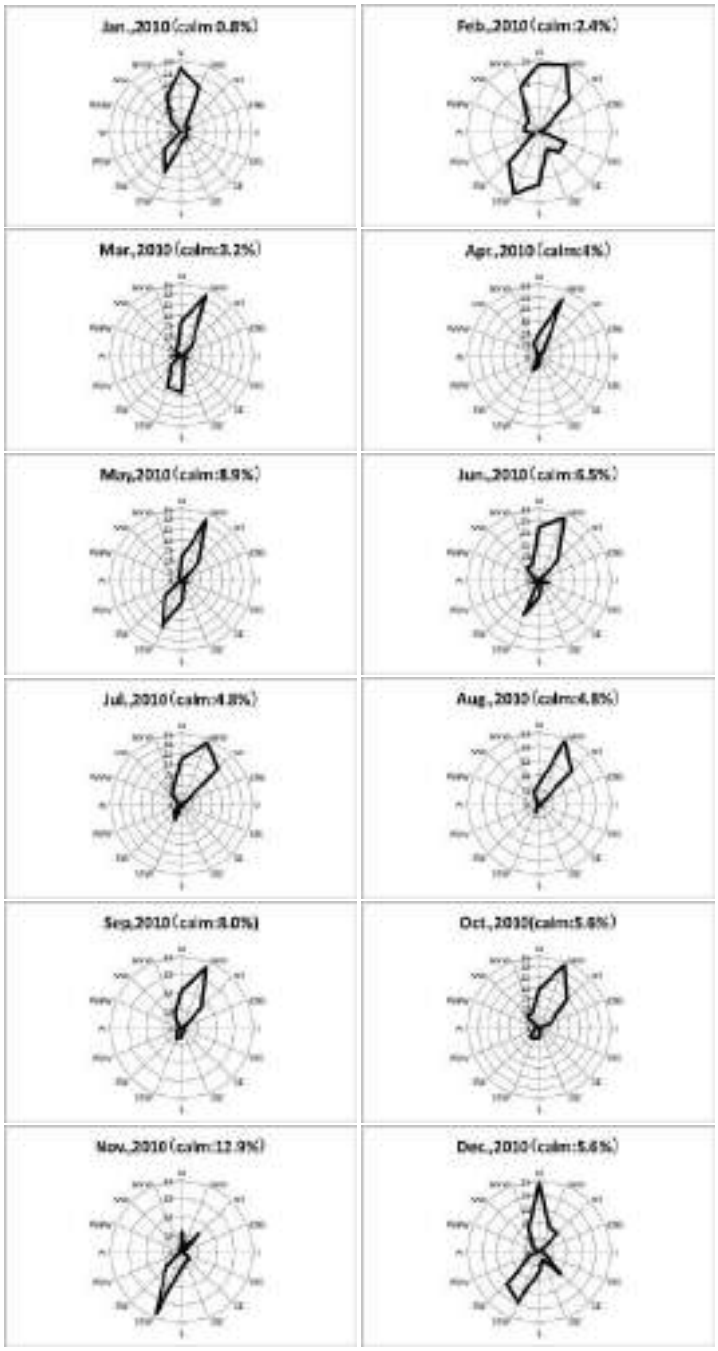

Fig.10 Wind-Rose Chart in 2010 (data: courtesy of Mr. Yelkenci)

derived from the minority district facing to the Golden Horn Inlet declined (though still occurring).

E, less suffered from outbreaks of fires, also less damaged by those spreading

fires (though, Samatya District inhabited by Armenians and Greeks burnt). This may be interpreted as the result of being low building-coverage ratio mentioned above, similar to the fact that those fires broke out in the premises of Topkapi Palace tend not to grow larger.

2.3 Start of Building Regulation and its Effect

2.3.1 Development of Building Regulation

According to the description by Celik (Celik, 1986. pp.51-54) (Tab.3), the first systematic Building Regulation (Ebniye nizamnamesi) together with Building Declaration (Ebniye beyannamesi) were issued in 1848. They defined “Kargir” or masonry structure and started to control height of building in accordance with whether it hwas to be built in masonry (less than 22m) or wooden (less than 16m) structure.

Then, in 1864 Government issued a decree saying that henceforth they

Tab.3 Development process of building regulation after 1848

	Concerning fire-proof construction	Concerning height	Concerning street classification	Concerning (improvement) of infrastructure	Acknowledgement
1848 Regulations (Ebniye Nizamnamesi) and Declaration (Ebniye beyannamesi) for Buildings	Introduction of definition of Kargir (masonry)	Kargir structure, less than 22m; wooden structure, less than 16m	3 classes	Large vacant land area, small building lots, development permission for plots or open fields	
1856	Urban redevelopment of Beyoğlu after the Great Fire of Pera				
1863 Street and Building Regulation (Turuk ve Ebniye Nizamnamesi)			5 classes		
1864 Government Decree	Prohibition of wooden structure within the territory of the Capital City, except for those installed with Kargir Fire Wall				
1865	Establishment of the Commission for Street Improvement, commencement of street-widening projects and urban redevelopment of Beyoğlu after the Great Fire of Beyoğlu				
1868	Planning of the New Street Network				
1875 Regulations on Construction Methods in Istanbul (Istanbul ve Belde-I Sebsede Yapılacak Ebniyenin Sureti-I Inşaiyesine dair Nizamnamo)	Complete prohibition of wooden structure in the Inner Zone and prohibition of them in the Outer Zone, except for those equipped with Fire Wall				Part of the area linking Aksaray-Unkapanı-Azapkapı-Galata-Pera-Ortaköy was the Inner Zone, West, the Outer Zone
1882 Building Law (Ebniye Kanunu)		Introduction of the regulation for height of building in accordance with width of street	5 classes	Introduction of the Torla Rule (Infrastructure reorganization in case of fire causing damage of more than 10 buildings)	

source: Celik, Zeynep. 1986. The remaking of Istanbul: Portrait of an Ottoman City in the Nineteenth Century. University of Washington Press. pp.51-54

prohibited wooden structure except for those buildings installed with Kargir firewalls. This prohibition developed into another phase in 1875 ; 1) wooden structure was completely prohibited in the inner part of the capital city (eastwards from the axis connecting Aksaray- Unkapani- Azapkapi- Sisli/Pera- Ortakoy till Bosphorus Strait) and 2) prohibited unless it equipped itself with masonry firewalls in the outer part (westwards from the axis mentioned above).

As for height-control, Building Law (Ebniye kanunu) issued in 1882 introduced regulation for height in accordance with width of streets running in front of those buildings.

Thus, gradually Ottoman capital gained ways to regulate the size and volume of buildings composed of flammable materials for the sake of suppress fires.

2.3.2 Fires after the enforcement of masonry structure

Now focusing on those fires occurred after the definition of Kargir structure in 1848. In the subject area, 22 fires broke out after 1848 and interestingly enough most fires came out from the same or neighboring places as the former ones.

Tab.4 shows fires I) occurred in the same district (premises) as the precedents and II) occurred (possibly) in the neighboring area or in the same point of the precedents, after 1848.

Among the former ones Samatya (No.1 of Case I) was destroyed before the enforcement of Kargir obligation in 1864 and again in 1882. Hocapasa (No.2 of Case I) and Sublime-Porte (No.3 of Case I) caught fire after 1864 and, as for Hocapasa, the name never came out to the history of fire henceforth, but Sublime-Porte again (Feb., 1911), though it is not a good case to study more because of its special characteristics.

Tab.4 Places suffered from fire after 1848 more than twice

I) Fires occurred in the same district (premises) as the precedents after the 1848 Regulation

	Name of place	Month/Year	Note
1	Samatya District	Aug.,1852 and Jul.,1882	After the fire in1852, Obligation enforced.
2	Hocapasa District	Aug.,1865 and 1865 (no further info.)	After the enforcement of Obligation Fire occurred.
3	Sublime Porte (Babiali or Grand Vizier's Office)	May,1878 and Feb.,1911	After the enforcement of Obligation Fire occurred and another one occurred later.

II) Fires occurred (possibly) in the neighboring area or in the same point of the precedents after the 1848 Regulation

	Name of place	Month/Year	Note
1	Sultanahmet	1852 (no further info.)	After the fires in1852 and 1880, Obligation enforced and another one occurred later.
	Ahirkapi	Jun.,1860	
	Ishakpasa	1912 (no further info.)	
2	Koska and Laleli	Jun.,1855	After the fires in1855 and 1856 Obligation enforced and an other one occurred later.
	Aksaray	Nov.,1856	
	Uzunsarsi (spread over from)	Jul.,1911	
3	Fener and Kiremit	Apr.,1881	After the fire in1861 Obligation enforced and another one occurred later.
	Balat	Jul.,1911	
4	Fener and Kiremit (double-count)	Apr.,1881	After the fires in1881 and 1883 Obligation enforced and another two occurred later.
	Halicilar	Dec.,1883	
	Circir (spread over from)	Aug.,1908	
	Sultansolin	Jun.,1918	
5	Gedikpasa	Sep.,1865	After the enforcement of Obligation fire occurred and another one occurred later.
	Uzunsarsi (spread over from) (double-count)	Jul.,1911	

Among the latter ones, there are some cases which seem to be interesting; chatching fires more than twice after the enforcement of Kargir structure. It implies the possibility that even reconstructed buildings with Kargir structure might not to be able to stop fires to occur, as the vicinity of Sultanahmet (No.1 of Case II) and Gedikpasa (No.5 of Case II) in which people were obliged to rebuilt their buildings with full-Kargir structure (another possible interpretation is that the precedent did not touch the places which followers burnt down, or, Ottoman officials were not so keen to let people keep the regulations).

2.3.3. Historical tendency and the effect of regulation

Another question is whether such new regulations set by Ottoman officials had

clear effects on stopping the tendency of fire till then, or not.

Tab.5 shows fire history in the areas shown on Tab.4.

As for Hocapasa (No.2 of Case I) , though many high officials serving for Sultan lived in at that time, it was caught fires 7 times and destroyed every 10-20 years until the third quarter of the 18th century and twice let Sublime-Porte burn down (No.3 of Case I), but as we saw above after the fire in 1865 it never caught fire. This fact may be attributed to the effect of regulation for structure, but also to the possibility that high officials followed Sultan's move to Galata/Pera side of the city (Celik,pp.38-39) and so population and building densities might go down.

In the vicinity of Uzuncarsi, Gedikpasa and Grand Bazaar (No.3 of Case II), that of Fener and Balat (No.4 of Case II) and that of Laleli, Koska, Aksaray and Langa (No.5 of Case II), though in deed they each occupy vast territory of the city, people experienced several fires .

About the vicinity of Uzuncarsi, Gedikpasa and Grand Bazaar (No.3 of Case II), 5 fires occurred with interval of 30 years in the 18th century. Though installed with fire pond in the premises of Nuruosmaniye Mosque in 1794, the quarter suffer 3 fires and one after the enforcement of Kargir in 1864. So, as we saw macro-scope study at 2.2.1, frequency of fire seems not to decline.

But, in the vicinity of Fener and Balat (No.4 of Case II) and that of Laleli, Koska, Aksaray and Langa (No.5 of Case II), the numbers of fire decline clearly around the end of the 18th century. The former suffered 9 fires till the end of the 18th century and never to be equipped with fire pond and after the turn of the century 4 (during the 18th century 6 with interval of ranging from 2 to 30 years, and during the 19th century 3 with interval ranging from 13 to 50 years). The latter, though just next to barracks of Jannisary Troops obliged for fire fighting till 1826, suffered from 9 fires

Tab.5 Fire history in the areas shown on Tab.4

Fire history in the Areas shown as Case I)		
	Name of Place	Month/Year (spacial info.)
1	in the vicinity of Samatya	Nov. 1747
		1756 (no further info.)
2	in the vicinity of Hocapasa	Aug.1701
		Jul.1725
		Jan.1746
		Oct.1755 (reached to Sublime-Porte)
		Jan.1767
		Jul.1800
		Aug.1826 (reached to Gedikpasa, Kadirga, Beyazid, etc)
3	in the vicinity of Sublime-Porte	Oct.1755 (came over from Hocapasa)
		Jul.1808 (came over from Hocapasa)
		Nov.1808
		Jan.1839
Fire history in the Areas shown as Case II)		
	Name of Place	Month/Year (spacial info.)
1	in the vicinity of Sultanahmet	Jul.1741 (Sultanahmet)
		1802 (no further info.) (Sultanahmet)
		Oct.1826 (Ahirkapi)
2	in the vicinity of Fatih and Saltanselim	May.1725 (Halicilar)
		Jul.1728 (Sultanselim)
		Jun.1752 (Sultanselim)
		Aug.1833 (southwestwards from Cibali)
3	in the vicinity of Uzuncarsi, Gedikpasa and Grand Bazaar	May. 1725 (Gedikpasa)
		Jun.1752 (Gedikpasa)
		Dec.1754 (Uzuncarsi)
		1790 (no further info.) (Uzuncarsi)
		Sep.1792 (from Odunkapi to Uzuncarsi)
		Aug.1826 (Gedikpasa)
4	in the vicinity of Fener and Balat	May. 1600 (from Balat to Eminonu)
		Aug.1640 (from Balat to Sultanselim)
		Apr.1679 (Fener)
		Sep.1701 (from Aywansaray to Balat)
		Jul.1729 (southwestwards and southeastwards from Balat)
		Mar.1739 (Fener)
		Dec.1745 (Fener and Kiremit)
		Jul.1782 (Fener)
		Aug.1784 (Fener and Kiremit)
		1815 (no further info.) (Balat)
		Feb.1828 (Balat)
5	in the vicinity of Laleli, Koska, Aksaray and Langa	Jun.1645 (from Beyazid to Langa)
		Apr. 1722 (Koska)
		Mar.1752 (Langa)
		Jun.1752 (Koska)
		Mar.1754 (Langa)
		Jun.1754 (Aksaray)
		Jul.1756 (Kadirga)
		1778 (no further info.) (Langa)
		Aug.1782 (from Ayakapi to Langa)
		Jul.1811 (Langa)
		Aug.1833 (from Cibali to Langa)

till the end of the 18th century and after being equipped with fire pond at Laleli Mosque, 5 (during the 18th century 7, and during the 19th century 4, though both periods show similar range of interval).

It is hard to distinguish the possible effect of building regulation over fire-prevention from that of installation of fire pond, but in the vicinity of Fener and Balat, fire pond was never installed.

3 Conclusion

This paper reveals such facts as 1) the numbers of fires once increased till the end of the 18th century and then started to decrease around the same time as the installation of fire ponds, 2) originally, spring to summer seasons being short of rainfall occupied larger proportion of months in which fires broke out, but after the period of installation fire ponds the proportion of spring season fell, 3) as population and commercial- and industrial-functions were being concentrated on gradually, fire risk had risen, but the numbers of fire broke out decreased after the installation of fire ponds in such densely-inhabited or thriving commercial- and industrial- districts, 4) half of those fires recorded with their spreading-routes started from the Non-Muslim Districts in which space of living inevitably condensed, 5) even after the enforcement of masonry and fire proof structure called Kargir within the city territory in 1864.

Still, we should pursuit accuracy of consideration with the combination of fire, calendar, wind-rose chart and relative-humidity as well as concrete density of population and implementation of building regulation at that time.

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Climate regulation provided by street trees - examples from Gothenburg, Sweden

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Trees has shown to be an effective measure for reducing heat stress in high latitude cities in summer, especially in dense urban areas (e.g. Lindberg and Grimmond 2011). During the day the cooling effect provided by trees is foremost due to shading, i.e. evaporative cooling is of less importance. In summer deciduous trees (foliated) block 95-98% of the direct solar radiation and in winter (un-foliated) 45-53% of the direct solar radiation (Larsson 2011, unpublished results). This means that trees provide significant shading both in summer (desired) and in winter (undesired) (Thorsson 2012). In order to design better cities and mitigate heat problems, quantitative information on the shading effect of street trees is required. This paper presents the influence of street trees (amount, location, size etc.) on the outdoor thermal comfort in the high latitude city of Gothenburg, Sweden. The shading effect of street trees on a neighborhood scale is analyzed using the SOLWEIG-model (2.2 version) (Lindberg et al. 2008, Lindberg and Grimmond 2011). The model simulates spatial variations of 3D radiation fluxes and mean radiant temperature (Tmrt) as well as shadow patterns in complex urban settings. Model evaluation shows good agreement between modelled and observed values of Tmrt as well as shadow patterns (Lindberg and Grimmond 2011), which shows that the SOLWEIG model is an appropriate tool to quantify the influence of vegetation on Tmrt and shadow patterns within the urban environment. The SOLWEIG model is designed to run using a user friendly interface which makes it possible for practitioners and planners as well as researchers to make use of the model in a climate planning perspective. The results presented in this paper highlight a number of possible climate sensitive planning practices for urban areas at the local scale.

Keywords: Mean radiant temperature, SOLWEIG, urban vegetation, shadow patterns

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User perspectives in housing: the relevance of 'habitus'

Barry Goodchild [1]

Abstract

During the past few years, the implementation of national carbon reduction targets in the UK has led to an enormous amount of research has been undertaken on the design and use of the home in relation to energy consumption, especially in relation to low energy homes. The aim of this paper is to show the relevance of concepts of habitus to sustainable (and unsustainable) patterns of consumption and in doing to call for more qualitative, interpretative research in this field. It is acknowledged that different approaches have different strengths and weaknesses and the demands of methodological pluralism requires that these be mixed together. However, a full understanding is only likely to arise if priority is given to qualitative understandings, at the very least as a framing device for subsequent quantitative studies.

The aim of this presentation is to show that a pragmatic interpretation of 'habitus', albeit one grounded in the history of the concept, can provide a way into understanding energy use in the home and other related aspects of sustainable housing and by extension sustainable planning. In particular, the aim is to show how habitus can help bridge the gap between different methodological approaches, for example those based on the individual and society and those based on quantitative and qualitative sources.

Planning is concerned, as we are repeatedly told, with sustainable development. However, sustainable development is unlikely to get very far without a parallel concern with sustainable consumption, that is to say, how people use the environment in which they live. Habitus starts with processes of consumption, though it has implications for development. Developers work on the basis of habit in organising their work (Binder 2012). In relation to consumption patters, however, habitus has the merit above all of dealing with the obvious characteristic of sustainable homes- their novelty. The scale of carbon reduction envisaged by current targets implies a new relation between people and

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This paper draws on work undertaken with Aimee Walshaw and Fin O'Flaherty. However, the present author takes responsibility for the contents. The paper is also work in progress and is likely to be modified in the future.

the homes they live. Carbon reduction implies investment in the older housing stock, the adoption of new types of dwelling with new types of heating and ventilation systems and, in most cases a more self-conscious relationship between the occupants and their home so that they understand how best to manage these new systems

As a result, the promotion of low energy/ low carbon housing represents a departure in the conventional way in which people think about and act in relation to their homes. It involves a break with old habits. What then does the theory of social habits and habitus say about strategies to promote sustainable consumption?

1. Routinisation and habit

Habitus is a mainstream concept in sociology, though one that is open to more than one interpretation. A common assumption in sociology is that, without shared, stable and generally taken for granted assumptions, our sense of social and personal identity begins to break down. Routines emerge from the every day life and from work and give a sense of structure to the world. Giddens (1984b xxiii) comments, for example: 'Routinization is vital to the psychological mechanisms whereby a sense of trust or ontological security is maintained in the daily activities of social life.' (xxiii) Ontological security means a sense that the world is as it should be on the basis of expectations. Routinization also involves taking reality for granted and therefore as unproblematic and unquestioned. It represents reality under normal circumstances (Schutz 1962, 220, 273).

Routines and routinization in turn imply habits and 'habitus', a bundle of habits. The term itself requires a brief explanation. Habitus, as understood in in social theory in Britain is associated with Bourdieu and is considered predominantly as a theory that seeks to understand the impact of society on the individual. The term predates Bourdieu, however. It goes back at least to the late 19th and early 20th centuries and emerged from a specific school of philosophy called phenomenology- the study of phenomena as encountered. Phenomenology is literally the application of 'logos' (thoughtfulness and language) to any phenomenon (object, person or environment) precisely as it is given (encountered) or experienced (Giorgi 1997, 237: Van Manen, 1984 4). Put like this, phenomenology looks obvious, even trite. It is not. Whereas conventional Western philosophy separates the subject from the object and, in doing so, implicitly endorses a positivist philosophy of science, phenomenology insists on the unity of human experience as encompassing both the subject and the object.

As such, habitus has a more ambiguous, richer meaning than is offered merely by Bourdieu. Habitus encompasses both the individual, the concern of phenomenology and social structure, the concern of sociology

2. Habitus as biography and structure

Phenomenology is concerned with human experience and how this interacts with the lived world, the world of everyday life. For Husserl ([1948] 1973, 122), the founder of phenomenology, previous experience does not disappear without trace. It continues '*in the form of a habitus*, ready at any time to be awakened anew by an active association' (italics in the original). Habitus as conceived by Husserl is therefore a product of a person's biography, their previous experience (Frère 2005). Bachelard ([1958] 1994, 14) uses similar language in analysing the house, above all the childhood house as a 'group of organic habits'. Equally, however, most interpretation of phenomenology do not exclude the possibility of conscious thinking reflecting on and either refining or changing habits and routines. Bachelard (1994, 67) comments, for example, 'consciousness rejuvenates everything, giving a quality of beginning to the most everyday actions'. Finally, The treatment of perception by Merleau Ponty ([1945] 2002, 39) is similar. 'Perception is a "hypothesis" that the mind evolves to 'explain its impressions to itself….. It is an interpretation apparently immediate, but in reality gained from habit corrected by reasoning.' The crucial words are 'corrected by reasoning'. Habit, as the routine performance of actions influences perception but this is always also influenced by conscious decisions.

Later, the concept of habitus was taken up by Bourdieu to refer to the likely persistence of similar practices (or patterns of behaviour) amongst people in a similar socio-economic situation. Habitus, according to this latter definition, is 'a set of acquired characteristics which are the product of social conditions and which, for that reason, may be totally or partially common to people who have been the product of similar social conditions' (Bourdieu 2005, 45). Habitus so defined is a form of social space, moulded by the social conditions of which it is a product. It is based on a combination of cultural capital (for example educational levels) and economic capital, including status in the labour market and, in this latter respect, is generally considered an aspect of class. In addition, habitus is a 'classificatory device' (Bourdieu 1998: 8) that enables the identification of different groups according to different tastes and life-styles and that can be mapped in terms of 'real' physical space, for example through spatial variations.

Habitus as social space is distinct from habitat, an aspect of physical space, but in the work of Bourdieu ([1993] 1999, 128), habitat and habitus are assumed to reinforce one

another, for example through patterns of residential segregation. In this context, habitus has been understood, perhaps misleadingly as defining 'sense of place' (Hillier and Rooksby 2005). Habitus, the routines that people follow in their daily lives, define their sense of place and *vice versa*. Places and social practices interact with one another. Further different groups tend to live and congregate in different parts of a city, either because of constraints or of active choices within the market. Those with choice seek out places that best meets their aspirations and requirements for cultural capital, as reflected in the twin and sometimes conflicting aspects of an attractive urban amenities and good schools (Bridge 2006)

If, however, habitat and habitus are mutually reinforcing, where is the individual? In some interpretations, the answer is nowhere. The individual disappears, except as the performer of a set of previously determined behaviour patterns. Habitus involves no apparent conscious intention, as in the following paragraph, and change in habitus is likely to be slow. It is a 'system of dispositions …. or a system of *long-lasting* (rather than permanent) …. structures of perception, conception and action' (Bourdieu, 2005, 43) (italics in the original). In other interpretations, in contrast, individual consciousness reappears. In the words of Bourdieu (1990, 64 and 81) 'if one is to adapt to .. indefinitely varied and never completely identical situations' .. habitus must be 'a source of invention, but only within certain limits.' Habitus can never be static, because society is not static. In any case, the multiplicity of different situations in contemporary society leads to the individual experiencing different social worlds at different stages in their life and multiple identities.

In other words, the earlier biographical concept of habitus, of habitus as being modified by experience and learning, remains, embedded within the socio-economic situation that the individual finds himself or herself (Frère 2005).

3. Understanding variations in consumption

These two meanings of habitus, biographical habitus on one hand and structural habitus do not coexist with one another easily in terms of theoretical consistency. Full integration of the two meanings is probably impossible. Their value is to express the ambiguities of 'real life' situations and to offer alternative, complementary explanations and understandings of how people use buildings, spaces and places and of whether their use in sustainable or not.

Studies of energy use provide an example. Different people vary considerably in their use of energy in the home, even when building standards are similar. How might this be explained and understood?

A full answer would draw on both biographical and structural habitus. A biographical explanation and understanding would look at how expectations and routines have been developed over time, from the personal experience of particular users. It would also explore the processes through which individuals are able to learn routines and learn how to change those routines. Learning implies the potential for change. A structural explanation and understanding would point to the way in which different groups and types of individual, classified notably by age, income and life-style (ethnicity and educational level, for example) have different tastes, different ways of interacting with the world and, most importantly, differential access to good quality, easily heated housing. A structural explanation would also suggest that social distinctions are an essential part of consumption and life-styles, even if these change over time, for example as a result of technological innovation.

The distinction applies equally to theories of change in relation pro-environmental behaviour (or change in favour of sustainable consumption to use the language of practice theory). Biographical habitus is consistent with those theories of change that seek to prioritise the individual- through so-called nudging, manipulating the situation in which people find themselves and so changing the assumptions of daily life (Thaler and Sunstein 2008: Allcott and Mullainathan 2010). Nudging means using a series of behavioural levers or 'cues' to encourage consumers to consider sustainable life-styles and patterns of consumption. The 'cues' are potentially diverse and include the energy labelling of products; changing the default settings in domestic equipment and the introduction of smart meters for energy and water. (By definition, nudging excludes compulsion, and measures that involve significant changes in economic incentives.)

In contrast, structural habitus implies a concern with the range of products and technologies available in society at any given time and the historical evolution of those products in relation to mass consumption. It means the state driving forward promising energy saving products out of their specialist, experimental niches into the mainstream. Zero carbon homes provide the best example. Zero carbon homes were initially developed by innovative individuals and communities and then promoted in the mainstream by government through a mixture of experimental subsidies and the threat of regulation. Mainstreaming has not been completely successful, mainly owing to the cost implications, however (Goodchild and Walshaw 2011).

Finally, both individual and structural habitus imply a concern with an intermediate level of communities and voluntary work by communities. In this context, two further theories of change are available; namely

- community marketing, involving an assessment of which particular changes are most likely to be accepted, the identification of barriers that mitigate against their take-up and the use of moral pressure, personal contacts and promotion of personal and community targets (McKenzie-Mohr et al 2012)
- community development, involving individuals in voluntary activities on the assumption that this increases understanding of environmental issues, generates a commitment to local environmental campaigns and 'spills over' into other innovative action (Seyfang & Smith 2007).

Of these three levels of intervention, measures targeting the individual are the easiest to implement from a political viewpoint, as there are no apparent losers. Change proceeds through persuasion and a so-called 'feelgood' factor that is supported by an attitudes, behaviour choice or 'ABC paradigm'. If only governments could change consumer preferences, sustainable patterns of consumption would emerge spontaneously. In the usual sociological approach, represented, for example by Shove 2010, views consumption patterns as being locked into a persistent socio-technical system involving relationships between life-styles, routines and dominant cultural assumptions.

The criticism is probably correct. A focus on the individual alone overestimates the ease of change, ignores the way in which the most obvious forms of consumer education have already been undertaken and also ignores historical precedents. historical studies of life-styles and technologies suggest that patterns of consumption change relatively slowly, over decades and are conditioned by a mutually supportive interaction between daily routines, largely taken-for-granted technology and infrastructure and dominant cultural conceptions of what is desirable and undesirable (Shove 2003: Owens and Driffill 2006). The replacement of horse drawn urban transport by motor vehicles (Geels 2005) or the replacement of open fires by central heating provide examples. In both cases, technology and life-styles changed together in a process of 'coevolution'. The implication is that innovation has to incorporate both the users and the producers of goods, services and infrastructure (Geels 2004) and that, as a result, policies have to be long term and ambitious. Indeed, in some ways, policies for sustainable development involve more substantial change than those associated with the growth of motor vehicles or central heating, both of which emerged along with the grain of modernity- more speed of movement and more comfort in the home. Sustainable consumption in contrast seeks at least to reverse or qualify these tendencies.

However, it is wrong to suggest that the advocates of the ABC approach are unaware of the limitations. For example, P. Stern (2000), an advocate of psychological approaches, notes that the ABC approach only works when contextual factors are not too strong to override personal choices. Contextual factors include habits and routines, household economic constraints and the available infrastructure.

4. Conclusions: Habitus and method

Whatever the broad strategy, the choice of measures presupposes some process of selection and evaluation. In this a combination of quantitative and qualitative methods is necessary. Habitus as a classificatory device implies statistical techniques to establish the main lines of division. Likewise studies of domestic energy consumption require the identification of variations in energy consumption for specific types of property. In this, research can draw on conventional surveys already undertaken, so long as these enable the identification of specific properties and households. Quantitative methods, subject to the availability of data, are also relevant in tracing progress over time.

However, the most distinctive aspect of habitus, irrespectuve of whether biographical or structural, is its use of qualitative methods. Habitus rests on routines and often taken for granted assumptions. Exactly for this reason, the assumptions of practice are not always revealed in the context of a conventional questionnaire, capable of simple quantifiable answers. Direct questioning risks generating misleading answers, 'don't knows' or incredulity (Allen 2005: Flint 2011, 81-2). Extended discussion, for example in a focus group, indirect methods such as diary keeping and visual methods (using photographs to stimulate responses or giving respondents a camera may, nevertheless, be more fruitful in generating insights (Walshaw, Goodchild and O'Flaherty 2012). Visual methods are, in any case, particularly valuable in helping people express their views and feelings about places and landscapes (Knowles. & Sweetman 2004).

Further, habitus and by implication other similar approaches based on phenomenology (even indirectly) have another implication that requires qualitative interpretations to be given priority. The concept of habitus applies as much to researchers and planners as to the subjects of a research project or initiative. No-one escapes the tendency to think or to act according to routines and habits. This background of routines and habits cannot be ignored, but it can be controlled through an exposition of the traditions and theories within which the research and the researcher is operating.

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PUBLIC PLANNING IN THE ENTREPRENEURIAL CITY – THE BO01, MALMÖ, AND BRUNNSHÖG, LUND, IN SWEDEN

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Abstract

Recent research has argued that due to a turn in urban policy towards entrepreneurial forms of urban governance, the scope and influence of urban planning conducted by public actors is changing and even decreasing. Entrepreneurial City approaches are employed by the municipality to promote local economic development through improvements on place attractiveness, and often rely on urban renewal and design, associated with businesses approaches such as branding, marketing, speculation and risk taking. The goal is to create neighborhoods that will attract companies and specific types of inhabitants (creative, young urban, entrepreneurial) to reside and work in the city or neighborhood. Business approaches are thus invading the field of public sector urban planning, and setting the context within which it occurs. The group of people involved in the planning project is fragmented and multifaceted. However, although the influence of public planning might be apparently watered down with the involvement of different stakeholders in the planning project, this paper will argue that instead, in practice, public authorities and planners remain influential and crucial actors in urban development projects as initiators of (re)development projects, when they bring in financial incentives or lease out the plots for development, or when they add to the project political legitimacy and bring around the table different actors that would otherwise be less likely to join forces.

This paper discusses this turn towards entrepreneurial urban governance approaches and its influence over the practice of public planning, from an urban governance perspective. It looks at one urban renewal project in the city of Malmö, and one project of urban expansion in the city of Lund, in Sweden. A case study approach is followed, using official documentation and expert interviews with developers, public planners and other municipal officials. The paper indicates that the setting in which public planning occurs

is marked by fragmentation (in actors involved, goals, and financial means) and decentralization. These Entrepreneurial cities are managed as companies, trying to promote an image, develop a brand or sell a neighborhood. This influences how public planning can work with public spaces and in conceiving a city for "the public". The projects' goals find parallel in the aims of other planning projects occurring throughout the city, but can this be a coincidence of the type of landscapes that planning projects are looking for, or is it a sign that there is still a comprehensive overview of urban planning for the city? It concludes with a discussion on how public planning is adjusting to the changes in urban policy and governance. The paper contributes to the discussions on how the practice of planning is influenced by the influence of neoliberalism and a turn towards entrepreneurial urban governance.

1. Introduction

The term "Entrepreneurial", in the concept of "Entrepreneurial City", is borrowed from the field of Business Administration and Economics, and is linked to an approach to urban policy and local economic development that is inspired by practices of the Corporative and Business Administration worlds. This approach is considered to represent a shift (Harvey, 1989; Swyngedouw, 2005; Cochrane, 2007), whereby local governments are steering away from traditional activities linked with the local provision on welfare and services, and adopting a more proactive and outward-oriented approach to promote local economic development, characterized by risk-taking, inventiveness, promotion-seeking, and profit motivation as guiding local policy-making (Hubbard and Hall, 1998. The case of Malmö, in Sweden, was analyzed by Dannestam, 2009). The city is entrepreneurial because the actors involved in urban policy adopt businesses approaches such as branding, marketing, speculation and risk taking to urban policy-making. The city is developed as a brand and a product that can serve as a setting for creative and innovative companies to invest in, for new inhabitants, especially the highly skilled and educated ones, to reside in, and for private investors to invest in real-estate or to create new businesses. The municipality is regarded as a firm and the city its product for sale, and policy makers as managers looking for new business opportunities, ways of promoting its own product, new business partners willing to invest and develop the product.

The term was first coined to describe urban policies pursued within a context of neoliberalization of urban policy in the US and the UK, and following the critics and dismiss of the Keynesian Welfare State (Cochrane, 2007). It is not related to a decline of the role of public authorities in urban policy and development, or to the simple replacement of the role of the public by the private sector. Instead, what is pointed out is a change in how public and private sectors interact within urban development projects and policies, particularly within a context of inter-urban competition (Shimomura & Matsumoto, 2010; Jessop, 1998).

Entrepreneurial cities are also a result of institutional reforms that go beyond the global scale of economic transformation, and the adoption of discursive practices that promote entrepreneurship and an entrepreneurial-oriented position by a wide range of social actors, from policy makers and private investors, to workers and ordinary citizens (Painter, 1998; Jessop, 1998; Hubbard, 1996; Brenner & Theodore 2002a and b; Smith 2002).

Much has been written about the implications of this turn towards entrepreneurial forms of urban governance for urban policy making (Hubbard and Hall, 1998; Cochrane, 2007; Healey, 2006) and the public sector (Montin, 2000; Elander & Strömberg, 2001; Swyngedouw et. al. 2002, Hohn & Neuer, 2006; MacCleod, 2011). However, the strong

emphasis of these strategies on interventions over the physical landscape of a city or neighborhood implies greater attention to what is being done by public planning, as the field that formally takes charge over urban planning in the city. Studies focusing on the implications of this turn for the practice of public planning are fewer (although see McGuirk & MacLaran, 2001; Gualini & Major, 2007; Tasan-Kok, 2010) and tend to approach these implications from the stand point that this turn signifies a decrease in the scope of influence of public planning (McGuirk & MacLaran, 2001, Elander & Strömberg, 2001).

This paper will discuss this entrepreneurial urban governance approach and its influence over public planning, by focusing on the characteristics of this turn from a governance perspective, and how public planning is adjusting to the changes in urban policy and governance. It emphasizes that although the influence of public planning might be apparently watered down with the involvement of so many stakeholders in the project, in practice public authorities remain influential actors in urban development projects as initiators of the projects, when they bring in financial incentives or lease out the plots for development, or when they add political legitimacy and bring around the table different actors that would otherwise be less likely to join forces in the project.

The paper is informed by a series of expert interviews and analysis of documentary evidence, plans and reports, in order to build a review of the urban governance structure built around the projects and what tasks and responsibilities planning had within this structure.

The cases selected represent most-likely cases (George & Bennett, 2005) of large-scale urban development projects influenced by an entrepreneurial approach to urban planning. Municipalities in Sweden are taken as cases, as there is a heritage of planning involved in delivering public welfare that might alter the perspective of the planners involved in the project and/or strengthen their negotiate position with regards to the private sector positions.

The Bo01 is a most-likely case because it is the site of an international housing exhibition held in Malmö, in 2001. The old harbor area was reconverted into an exhibition stage, in a case of urban renewal used to create a new image for the city, from industrial city in decline, to Knowledge-industry city. Nowadays, the area includes residential and office spaces, public parks and recreational areas, and hosts a new Media and IT profiled university and several knowledge-intensive companies.

Brunnshög is an urban expansion project currently under way in Lund. The location of the National Electron Accelerator Laboratory for Synchrotron Radiation Research (MaxIV) and of a European Spallation Source (ESS) facility in the area gave the impetus for the municipality and developers to turn their attention to Brunnshög. The aim is to create a new district for the city that combines the characteristics of the medieval city

center with an environment that attracts new companies and investments, and contributes for ideas to be shared between the professionals that will work and reside in the area.

In both cases external events are the engine behind the area transformation – a housing exhibition, and the establishment of research facilities. Urban development is used to create a district of the city where knowledge-intensive companies, entrepreneurial activity, and the creative class (Florida, 2002) are key goals. The municipal planning department is a key actor, which would be expected of planning projects in Sweden.

The following section introduces the main characteristics of an entrepreneurial approach to urban policy and what this might imply to the practice of planning in the public sector. Potential challenges posed by this entrepreneurial approach to public planning are discussed. The subsequent section outlines and analyses the cases in light of the governance approach taken. A final conclusion and discussion will highlight challenges of an entrepreneurial turn to urban governance for public planning.

2. Public planning in the Entrepreneurial City

Entrepreneurial city approaches to urban policy are frequently portrayed as representing a turn in urban policy-making "from government to governance" (Harvey, 1989; Hubbard & Hall, 1998) meaning that, in Western countries especially after WW2 policy-making and implementation were done by strong publicly elected bodies, while nowadays governance structures bring together public and private actors to the field of policy making and implementation.

By governance, it is understood here inter-organizational networks (Rhodes, 1997), where a wide range of actors, from the private, non-profit and public sectors, come together to participate in the development and implementation of a project. This network of actors creates the capacity to act, by pulling together resources towards a commonly defined goal (Hill & Hupe, 2002). These resources can also include the definition of framework conditions and ordered rules for collective action, and focus on governing mechanisms such as grants, contracts and agreements that do not rest solely on government authority and sanctions (Milward & Provan, 1999: 3).

The turn from government to governance is discussed by scholars as developing to the decentralization in public administration and government (Montin, 2000), and resulting of an ideological (Jessop, 2002) or opportunistic (Swyngedouw et al. 2002) turn in policy-making towards neoliberalism (Harvey, 2005). For Khakee and Barbanente this governance approach is characterized as a turn "*from unidirectional, hierarchical control to control through networks … [where local politics] to a larger extent than previously, tries to create premises for development by attempting to coordinate various*

resources" (Khakee & Barbanente, 2003: 185) This derives in a greater complexity - of levels of intervention, players, funding sources, goals, accountability.

In a context of urban governance, Harvey understands that nowadays decisions about interventions over different spheres of the city are made in a multi-actor context. For Harvey, urban government is not the appropriate expression to classify the processes surrounding the management of the urban area and the relations between the actors involved in this management. Instead, urban governance is a more suitable expression, as *"the real power to reorganise urban life so often lies elsewhere [that not the government] or at least within a broader coalition of forces within which urban government and administration have only a facilitative and coordinating role to* play. *The power to organize space derives from a whole complex of forces mobilised by diverse social agents."* (Harvey, 1989: 6).

Public sector urban planning is faced with the dilemma of working with the tools and representatives of the private sector, in public-private teams that do not, necessarily, have in mind the needs of the city inhabitants, and are instead focused on specific project goals (Campbell & Fainstein, 2003. Burkitt & Whyman, 1994). The change in the direction of planning practice is also discuss by Montin (2000), who points out that traditional local planning used to be responsible for the regulating land-use, while nowadays its role is focusing on providing the means for development opportunities. From a regulator, planning has transformed into an enabler of pro-growth strategies. The public planner not only plans for the location of housing and workplaces, but also for houses and work environments with an image that attracts specific types of inhabitants and companies.

Policy-making and implementation under an Entrepreneurial city approach took a turn towards focusing primarily on single projects. Swyngedouw et al. (2002) discussed the turn from a comprehensive approach to planning (that they called the plan) to a more time, space and resources constrained approach (that they called the project). These planning projects captured a segment of the city and worked with that segment in view of the socio-economic and political objectives of the multi-actors governance structure that was created around the project. Often poorly integrated within the wider urban processes of the city and its planning systems, these types of projects are characterized as one-off ventures decoupled from their context and from the planning projects of the wider municipality – a piece-meal approach to urban development. One could also see this turn as an unavoidable consequence of the growing importance of Public-Private Partnerships and negotiative planning (Cars, 1992). A project based-approach would be more easily tuned to comply with the interests of the stakeholders involved and to deal with the necessary time and financial constraints imposed. Additionally, it allowed urban planning to develop through several individual projects with inter-project coordination developing through a series of adjustments and agreements between various actors (Khakee & Barbanente, 2003: 187).

The challenge for entrepreneurial urban governance is how to create integration within this fragmented landscape of projects, actors, goals and sources of funding. Is it possible for such a heterogeneous project team to develop a unified image for the neighborhood/ city that is to be renovated? One could also argue that the strength of the current landscape of urban projects lies exactly on the fragmented character of the coalitions of actors behind these projects. A fragmented and temporary set of actors cooperating within a project opens up possibilities for learning and exchange of knowledge and experiences to occur across interest groups that might not, in other situations, meet and cooperate. This fragmented style of governance is also supportive of a growing attention to the characteristics of place, as the territory is the common denominator behind these partnerships.

Figure 1 summarizes the main characteristics of this turn in urban policy making, emphasizing its potential influence over planning.

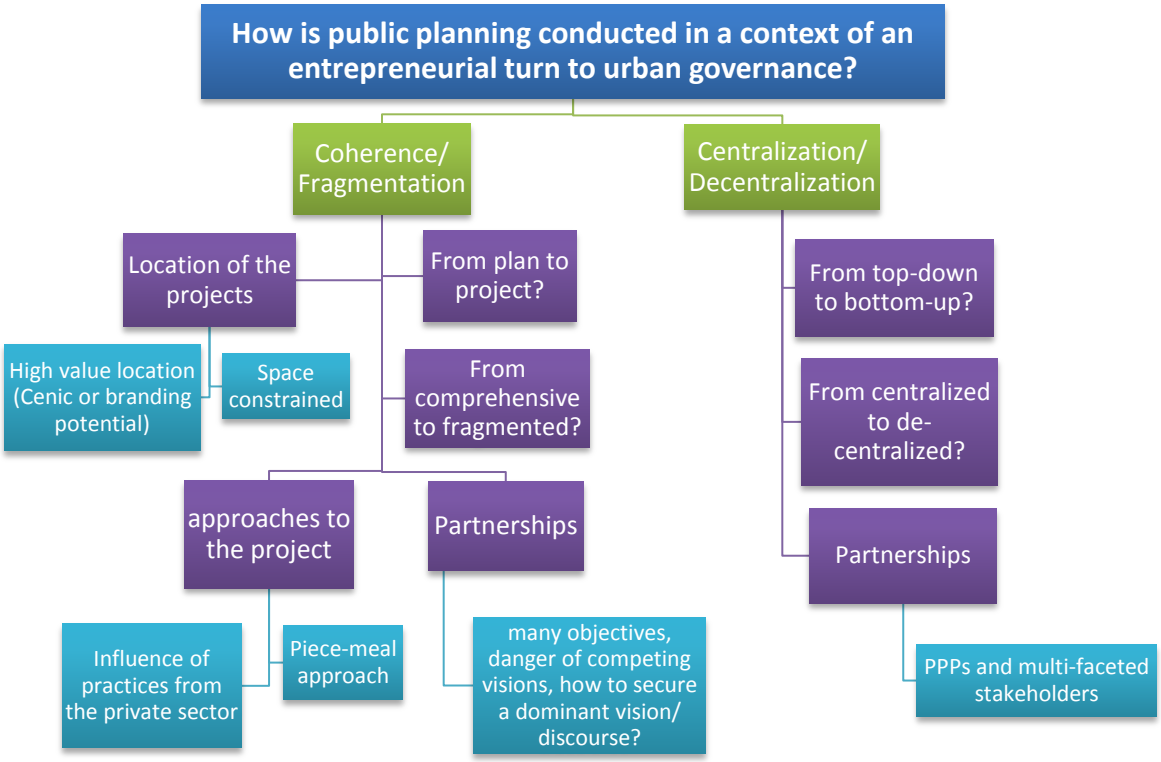

Figure 1

In recent years, scholars have focused on challenges for public planning practice, derived from this entrepreneurial approach. Tasan-Kok (2010) discussed how the complexities of multi-actor governance influenced the implementation of urban regeneration projects. She highlights that, in a multi-actor context, there are conflicting interests and competing aims coinciding in the project, not necessarily limited to differences between public and private actors' objectives, but also between different private actors. There are also limitations posed by the persistence of hierarchical relations that hinder the emergence of plural forms of leadership, while simultaneously area-based agencies are set up to oversee the projects, replacing or shadowing the traditional tasks of the planning department (Tasan-Kok, 2010; McGuirk & MacLaran, 2001). The need for coordinated action and quick responses is jeopardized in such hierarchical structures.

There is a general lack of overview of how the project fits or is complemented by other projects happening throughout the city (Swyngedow et al 2002). As McGuirk and MacLaran state "because the greater part of the development activity is led by the private sector and remains dependent on its profitability criteria, such a reliance inevitably emphasizes the imperative of maintaining a corporate ethos and adopting modes of planning practice which continue to be appropriately supportive of property capital." (McGuirk & MacLaran, 2001: 439) This also justifies why aims and goals change according to market conditions.

Tasan-Kok (2010) and Gospodini (2010) stressed the design-oriented character of these Entrepreneurial City projects, with urban design emerging as an added tool to promote the new district and the city.

The corporate imperative, the fragmented governance structure, and changing goals frame some of the challenges for planning under this entrepreneurial approach - how to ensure continuity and interconnectivity between different projects or within the same project across time?

3. Case studies

The Bo01 was an International Housing exhibition under the motto of "*City of Tomorrow"*. The exhibition was held in Western Harbor, a former industrial area, scarred by the presence of shipyards gone bankrupted, and a SAAB industrial complex, shut down during the 1980s. To host an international exhibition in a location where the industrial tradition of the city was most visible served the dual purpose of renovating an abandoned area, and build a new image of the city, associated with Innovation, Creativity and Sustainability, instead of the traditional image of a blue-collar city of heavy industrial production, hit by severe unemployment and decline.

Parallel to this project, the city center was being renovated and a new university college had been established in the city, also located on Western Harbor. The Öresund Bridge opened in 2000, representing the physical connection between southwest Sweden and mainland Europe, and there were plans to build a city tunnel that would further strengthen the role of Malmö as a regional center and extend its commuting area. The residential district of Augustenborg was also focus of a project to become a more attractive, sustainable and multi-cultural living environment. Three of Bo01's overarching goals - sustainable living, to strengthen the image of Malmö as a place to live and to invest in, and the redevelopment of a new district of the city - were supported by parallel projects throughout the city.

Brunnshög is located in the NE of Lund, in an area that has been pinpointed for expansion since the Comprehensive Plan of 1991. It is bordered by the neighborhood that hosts Ericsson, the highway E22 and to where the labs MAXIV and ESS will be built in the near future. To the east there is a large park and to the south, the mainly residential neighborhood of Östra Torn. Location is a fundamental problem with the urban development in Brunnshög, as it is physically cut off from the city by the E22, the IDEON Science Park, and Lund Tekniska Högskola (LTH). The idea to expand the city towards the NE has existed since the mid-90's and plots had already been allocated to some of the larger developers (Interview Dalman). However, the disadvantage of being "first movers" in an area that is not particularly attractive for investment had detracted the interest of developers (Interview Flycht). There was also lack of clear political vision to what would become of this area. It took an external actor – the decision to locate the ESS and MaxIV labs in the area – to re-start the process. Suddenly the project gained political importance: "The whole world will have some expectations about Lund, will have their eyes on Lund, and nothing is happening in Brunnshög. So we have to make sure that we have something there." (Interview Dalman).

Other planned projects directly support the goal of creating a lively and attractive district in Brunnshög. A tram connection (Lundalänken) has been under discussion and is considered an important element for the image of urbanity to be created in the district (Interviews Dalman and Flycht); an energy vision is being developed by Lunds energy in partnership with the municipality, ESS, MaxIV and VaSyd, to capture the heat produced by research facilities and use it as district heating for the city, thus contributing for the sustainability emphasis of the project; Brunnshög is placed in the continuation of the "Road of Science", an initiative to brand a corridor that comprises the university area, IDEON, the university-hospital, Brunnshög, ESS and MaxIV as a knowledge-intensive area. The university and IDEON are also discussing the possibility to add more diversity of uses to the area now occupied by LTH and IDEON, adding other services, commerce and housing. The rehabilitation of the central station area, including the connection with Lundalänken, is also planned, as is the construction of a congress center next to the central station, to operate in partnership with the one in Malmö (Interviews Dalman and Flycht).

Table 1 illustrates the governance structure of each project, highlighting the position of the planning department.

Table 1- Governance structure of projects

	Bo01	**Brunnshög**
Main Stakeholders	Municipality, (Departments of City Planning, Real Estates, and Parks and Streets) SVEBO (Boverket + 10 Swedish municipalities) Developers' group	Municipality Project group Lund North-East *Developers
Responsibility of planning department	Quality Programme Detailed and comprehensive plans Communicating with developers Preparation of master plan, together with head architect of Bo01AB Solutions for soil decontamination, eco-cycle, green structure and traffic	Plan Program Detailed and comprehensive plans Project overview and management Contact with developers and politicians
Responsibility of developers	Buildings and interior architecture and design Individual sustainability solutions Keep standards from Quality Programme	Buildings and interior architecture and design (Unclear as the detailed plan has not yet been adopted)
Input from other stakeholders/ consultants	LTH –environmental standards and techniques Sydkraft –local renewable energy	ESS and MAX IV – demands over traffic, physical structure, equipments Lunds Energi and Vad Syd – energy vision
Main investment sources	Local Investment Programme (LIP) Malmö Municipality SVEBO Developers European Union	Lund Municipality (attempts for State financing of tram) Developers

Between Coherence and Fragmentation

Fragmentation as discussed in Entrepreneurial City literature, was a result of the public-private partnerships that meant a wider diversity of funding sources, actors putting claims on the project, and of ways of working (Khakee & Barbanente, 2003; Swyngedouw et. al. 2002), with the municipality striving to coordinate various resources (Khakee & Barbanente, 2003; Tasan-Kok, 2010)

In the case of Brunnshög and Bo01, public-private partnerships are also the norm, and inevitably there were conflicting and even antagonist perspectives on how the two districts should develop. The most frequently mentioned example in the interviews was traffic and limits to parking in the areas. In the case of these two projects, public planning kept a key position in the negotiation table, by inviting other stakeholders to join in the processes early on, in order to have time to build a common approach and aim for the neighborhood. It also tried to ensure a coherence of the aims of the individual project with the visions for the city and other planning projects happening in parallel (Interviews Reepalu, Dalman).

One such example of how public planning tried to build a common platform of understanding between the different stakeholders was the elaboration of the Quality Programme for the Bo01, which set the environmental standards for the area. The task was the responsibility of the municipal planning department, but they invited the developers and the architect from Bo01AB to partake in the process: "The interested developers have been invited to participate in the work of the Quality Programme. This was ready before the purchase of land and was a part of the agreement for land purchase. However, at the end of the exhibition it was concluded that the developers that had actively been involved in the preparation of the Quality Programme were more aware of its role to guarantee the environmental standards, while those developers that had not been involved in the preparation of the Quality Programme considered the document useful for the aesthetic and marketing of the area". (Person, 2005: 48)

From the public planning perspective, there is no turn from comprehensive planning towards fragmented projects (Swyngedouw et. al. 2002; Khakee & Barbanente, 2003). In the case of Bo01, the project did step out from the standard process of public planning (interview Johansson and Blucher) but this was related to the existing specific time constraints, and to the demands of an International Housing Exhibition. Additionally many of the environmental standards pioneered with Bo01 and the procedures developed for it were later extended to other planning projects in Malmö (Interviews Johansson and Andersson). The Bo01 project was fully in line with the vision of the Municipality to build a new image for Malmö, associated with knowledge economy activities and sustainable living (Interviews Johansson, Blucher). "[Bo01] reached out to be a part of the city. It's a wonderful meeting place for people from all over Malmö (…). This created a very good example for changing the image of the city "(Interview Reepalu)

In the case of Brunnshög, the project gets renewed attention at a time when other projects are developing across the city with similar goals. "So many things coincide. (…) now plans are being made to develop the city central station and increase its capacity and link it to the tram. [There are other plans] for a new congress center [and the university hospital] wants to open up their area to the adjoining city. (…) So everything is happening at the same time and this is very rare when it comes to planning". (Interview Dalman)

Regarding the project location, Bo01 grew in a high scenic value area, with branding potential. "[this area] is connected with the green and beach areas and the housing area to [the south] which was also seen as a higher status area. The Bo01 was to become part of this corridor "(Interview Johansson). "The location was attractive because it was close to the city center, in a peninsula and close to the sea (…) had the sight of the newly built Öresund Bridge" (Interview Blucher). "The use of small plots and many developers introduced diversity and small scale to the neighborhood, in order to give an image of a more central urban neighborhood. (Interview Reepalu).

In the case of Brunnshög the connection to the city center is being shaped by the urban design of the area. Instead of the larger plots and wide streets and squares of the initial plan, the current proposal introduces a structure that resemble the medieval urban pattern of the city center. Also emphasized is Lundalänken, to overcome the idea that Brunnshög is far from the center.

Regarding the approaches to projects, the influence of the private sector is poorly seen during the planning process due to two factors: first, the slow housing market situation in both cases led the developers to assume a reserved position. For Bo01, Malmö Stad had to convince developers to participate by waving them with favorable lease contracts for the municipally owned land: "[Malmö Stad] said 'if you [the developers] don't take part in this then you won't take part in the development of this city when we [get our city back on its feet]. We own most of the land for building in this city, so they knew that they must be in good relations with us" (Interview Reepalu). In the case of Brunnshög, the developers are still hesitant to engage in the process because it is not yet clear whether the lundalänken will be built, and which plots will be assigned to which developer. Also the area does not have the same initial potential as Bo01. (Interview Flycht)

Secondly, the use of small plots and a wide variety of architects and developers was an idea originating from the Bo01AB architect and the municipality, in the case of Bo01, and from the municipality, in the case of Brunnshög. Developers are usually working with larger plots and one developer per plot. This approach was thus in both cases municipally-driven. This was made possible due to the specific demands of the housing exhibition – experimenting with new ways of creating a sustainable urban area – and with the demands of Brunnshög – bridge the character of isolation and distance from the center, and create an environment where people meet and interact in the public sphere. These approaches have been difficult to replicate in other projects (Interview Johansson). The singularity of the approaches pioneered in these projects enforces the idea of a piece-meal approach to the planning projects, but not of a private actor influence over how planning is conducted.

The vocabulary used by public planning to discuss the approaches followed during the project often derives from the business and private sector world: "Bo01 also helped to create quite an innovative **"toolkit"** for development and planning. This toolkit was based on the quality programme, which endeavored to employ a holistic approach but also gave **criteria**, detailed **objectives** and directions for more sustainable solutions, e.g. concerning energy efficiency, source separation of waste, greenery and biodiversity, but also for the more elusive quality of human sustainability." (Person, 2005:20. Emphasis added)

Between Centralization and Decentralization

In the process of directing responsibilities at local level, and of extending public-private partnerships, some authors noted the emergence of area-based agencies replacing or overshadowing the public planning agencies (McGuirk & MacLaran, 2001). In the case of Bo01, the creation of the Bo01AB allowed informal procedures and networks to be developed parallel to the action of the planning department. It was an organization focused on the exhibition area, where different actors came together to define what was best for the exhibition, but where the city officials also had a voice. The agency was not formally responsible for the planning of the neighborhood, as formal licenses were the responsibility of the planning department (Interview Reepalu). However, Bo01AB acted as an influential consultant – its main architect designed the layout of the neighborhood, discussed the public spaces with municipal officials, was consulted for the Quality Programme, chose the architects and building projects. Thus, although legally the planning tasks were kept with the municipality, informally the frequent meetings with the agency and the coincidence of the demands of the exhibition with the needs of the urban development made the agency an influential actor in the planning process.

The municipality, in both cases, was also the one taking the initiative for projects and for inviting other stakeholders to participate. Therefore, one cannot talk about a turn from a top-down process towards a bottom-up, as the municipal planning monopoly is still maintained.

Nevertheless, the decentralization of responsibilities towards area-based agencies such as Bo01AB, and to developers for compliance in implementing environmental standards, the financing limitations imposed by the State, and the coexistence of multiple sources of funding within the same project means an increasingly complex setting within which public planning operates. Even though it remains in a leading role, the tasks of mediating, facilitating and coordinating between the multi-faceted actors of the partnership become increasingly important.

Reactions in the practice of planning in the entrepreneurial city

The context in which these two projects happen provides public planning with a degree of freedom of experimentation. In the case of Bo01, planners could experiment with a different process of involvement with stakeholders that joined in the negotiations at a much earlier state. It was also possible to push forward environmental standards and regulations, and urban design proposals that would not otherwise be accepted by developers. The context of a housing exhibition, time constrains, the existence of a specific exhibition theme, made way for experimenting with ideas and practices. In the case of Brunnshög, the international attention and willingness to show something daring and new are allowing the group of planners involved in the project to also be more daring and creative in their proposals for the design of the neighborhood, and for how to involve the citizens and other stakeholders. This unusual setting also means there are no fixed practices and instead the group of stakeholders is exploring new ways of acting as they go along (Interviews Blucher, Johansson, Larsson, Dalman).

The interviewees were asked about how the project stakeholders had reacted to the challenges posed by the project itself, be it through implementing new practices, routines, images, developing bridging concepts, etc. In the case of Bo01, one of the new aspects was the establishment of Bo01AB, set up to ensure that the exhibition was ready in time and that its standards and aims were met. This agency included only public actors, was leading the process of organizing the exhibition, and was a key consultant in the urban development project itself. (Interviews Reepalu, Blucher)

Bo01AB consisted of people sharing a planning background and/ or interest. This is probably one of the reasons why the layout proposed to the area was different from what was the standard at the time for city planning in Malmö and in Sweden. This was something innovative at the time, only possible due to the particular momentum created by the housing exhibition, the interest of developers in working in such a high visibility project and to try to recover from a string of bad years for the housing market; and because those involved in the project shared a common language – that of planning and urban development. (Interviews Larsson, Rosberg, Blucher)

The existence of a core-project group in Bo01AB ensured that the goals of the housing exhibition were met and that there were no divided loyalties. However, from the side of the municipality, the organizational set-up was more complicated, with the heads of the main departments involved having to decide together on issues related to Bo01 and Malmö Stad. This meant that sometimes the politicians were called in to make a decision, or that the issue had to be extensively debated until a decision was made. This absence of a clear head taking decisions in Bo01, from the municipality side, was one of the problems highlighted (Interview Dalman). Nevertheless, Bo01AB, the developers and the municipality met frequently, in formal and informal meetings, to discuss the progress of the project.

For Brunnshög, the organizational setting was different. Learning from the experience of Bo01, but also from other projects, there was a core-project group set-up within the municipality, led by Eva Dalman, who is the ultimate decision maker within the group, and is also part of the steering committee where politicians are involved. The project group sits in a common office, in a different building from the rest of the municipality. There are no divided loyalties and it makes the informal meetings and conversations easier to happen (Interviews Dalman Abrahamsson). However, it does have the disadvantage that the project appears disconnected from other planning projects happening in Lund, as there is a single project team, as opposed to different people involved in various projects simultaneously. Additionally, the interaction between projects and sharing experiences becomes harder (Interview Abrahamsson).

For the Bo01 project, the developers were grouped in a developer's group, led by the then Head of planning department – Mats Olsson. This meant the group of private interests and investors had a voice in the project organization through the person of a public officer and planner. The idea of inviting Mats Olsson to be head of the developer's group came from Ilmar Reepalu. Until recently, Mats Olsson had worked in the private sector and had good connections with the developers. This was considered an advantage in a time when the housing market was insecure and the developers were hesitant to being involved in high risk projects (Interview Reepalu). These were also the reasons why, in Bo01, the developers were invited to join in during the early stages of the project design. (Interview Dalman).

In Brunnshög, the developers are not yet cooperating as a group of similar interests, although the project group has already approached the developers to form a single group and discuss among themselves (Interview Flycht). However, the planning process is still in the beginning, with no detail plan approved. Additionally there are reservations regarding the economic viability of investing in Brunnshög, which makes the developers hesitant to commit when it comes to dates and standards for the development. What is clear is that the involvement of the developers so far has been standard - they have been kept informed of the status and development of the project, but have not been involved in the design of the project. (Interview Flycht).

At Bo01 the Quality Programme was developed as a tool to secure the environmental standards for the housing and the public areas, and the compliance of the developers. The Quality programmes are not new to the municipality. Although the Quality Programme was a responsibility of the Planning Department, the developers and Bo01AB were also involved, together with other external consultants. The Quality Programme was included as a compromise in the land-allocation contracts, and functioned as a concrete guideline for the sustainability vision for Bo01. *À posteriori* it was concluded that those developers that had been actively involved in the definition of the quality programme, were also more aware of its importance as a safeguard of

environmental standards and regulations, an assurance that their competitors, other developers, were also subject to the same standards. (Persson, 2005)

The perspective that Brunnshög is developing for researchers and highly educated people is not shared by the project group, although they recognize that there is a special attention placed over how this group of users might use the neighborhood (Interview Dalman and Abrahamsson). For the developers, however, it is the presence of the research facilities, and consequently the type of users that might use the neighborhood - researchers, students, university people – that brings the special character to the area. This is the unknown card that for developers, if well exploited, will contribute to the attractiveness of Brunnshög as a district to live and invest in. The emphasis on sustainability is important, but what is truly innovative with Brunnshög is not the sustainability emphasis, as was the case in Bo01, but the closeness to the ESS and MaxIV. (Interview Flycht)

4. Conclusions

This paper started from a premise that has been widespread in literature that there is a turn in how urban policy is conducted. In the process, a new entrepreneurial governance setting is framing the conditions in which public planning is conducted. A question for debate is whether there is a turn under way in how public planning is conducted under an entrepreneurial approach towards urban development. A second question would be how public planning is adapting to it.

In the cases analyzed here, the role of the public actor remains central. It is the backbone of the project, getting it off the ground collecting the necessary partners for the project to come through. The developer's influence is different from that in the 1960s. What has changed is the importance given to how the market will react, what the market expects from the development. In that sense, one could say that it is not the developers' taking over the projects, but the expected market needs and demands taking over it. The market is an abstraction of the demands over what housing and office spaces should offer.

In Sweden, the public sector has traditionally held a monopoly over housing provision and planning matters, so it would be expected that this role remains strong nowadays, despite being changed by financial constrains from the municipality that push public planning to think on return-on-investment issues and on how best to secure that there are indeed investors for the housing developments. The public is essential as a middle-man between developers. Developers are competitors amongst themselves. Public planning is expected to lay concrete rules and standards that developers have to follow, visions for the district, and ensure that everyone involved keeps up with their end of the bargain – create a level playing field.

In the projects analyzed here, there were competing ambitions for the neighborhoods from the different stakeholders. However, there is a dominant vision, centered on sustainability, innovation and the knowledge economy, emerging in both cases. The discourse is politically supported and materialized in the initiatives taken throughout the city. The sustainability discourse is particularly interesting, as it encloses a paradox. On the one hand, studies have shown that in the implementation of sustainability strategies a broad community involvement is essential to guarantee the success of the strategy. On the other hand, the projects in discussion here exclude the wider community, through the justification that there actually was no one living in the neighborhood prior to the urban development (Bo01) or by arguing that the inclusion of inhabitants would add too much confusion to the organization of the project (Brunnshög). Nevertheless, sustainability opens up an opportunity for developers to see a business opportunity (especially in Bo01), it offers a back-bone against which to try informal or not regulated approaches to citizens involvement (Brunnshög) and can be what grants a holistic perspective to the development and keeps the perspective of what is the "public good", a base-stone in the practice of public planning, and that should be kept even in an Entrepreneurial City project.

It is the challenge of how to include the "public" in the Entrepreneurial city projects that deserves further attention by researchers concerned with the practices of public planning under conditions of neoliberalism and entrepreneurial approaches to policy and planning. This challenge raises issues of how these projects might be contributing to the development of segregated cities, and how public planning is supporting the dominant socio-economic groups and ideologies against socio-economic groups and economic and cultural activities that become excluded from these entrepreneurial cities and neighborhoods.

List of interviewees

Tobias **Abrahamsson** – Project coordinator for citizens involvement at Brunnshög. 12.03. 2012

Pernilla **Andersson** – Project Manager at Malmö City Hall. 18.05.2011

Gösta **Blucher** – former head of Bo01AB. 22.02.2011 and 20.09.2011

Eva **Dalman** - Project Manager of Brunnshög. 20.01.2012

Staffan **Flycht** – Business Development at Skanska. 14.03.2012.

Bertil **Johansson**- Senior planner at Malmö City Hall. 07.03 2011

Christer **Larsson** – Head of Planning department at Malmö City Hall. 27.02.2012

Ilmar **Reepalu** - Malmö mayor and member of board of Bo01AB. 20.03.2012

Göran **Rosberg**- Information Officer at Malmö City Hall. 03.03.2011

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HistoriCity: PRESERVATION OR REVITALIZATION PLANNING TOOLS?

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Abstract

Presently, cities continue to focus most of their concerns in territory qualification and have enhanced their role in promoting social and economic development of the territories in which they exist.

Therefore, it is urgent to address the challenges related to the preservation of fundamental heritage values and the need to revitalize historic centers, by giving them new features and repopulating them. As a consequence we require policies that are able to preserve and manage the pre-existing while adapting it to the present time, and, even harder, to future times.

The concept of heritage, in its connection with the historic centers, has been changing over time, as has been the social perception of the value of this resource. The heritage policies of urban renewal have been also adapted to such changes. International charts and documents reveal the conceptual diversity that justifies the interventions in these places regarding their role of contemporary architecture and urbanism. So, at a time when everyone looks with anxiety and concern to the future, it is important to reflect on the past and the received heritage, seeking the most appropriate answers to the planning and to a creative and integrated strategic management of the historic centers in the contemporary city.

Historic centers are reference places in the urban space, because they have a double role of memorial testimony and of generators of cultural, economic and social dynamics which are determinant to the cohesion and qualification of the contemporary city. However, often times inherited urban fabrics are affected by the limitations of the heritage policies which, for being too general and based on theoretical and abstract conceptual frameworks, have difficulty incorporating the specifics of each area of intervention and neglect the formulation of criteria and specific intervention methods to each case.

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The purpose of this communication is to provide a comparative reading of the levels of urban renewal allowed by the planning and management tools in the present in selected historic centers, and trying to evaluate the different policies adopted for the preservation of this heritage, especially with regard to their ability to adapt to a sustainable future.

Consistent with these principles the allowed actions of renewal are typified, which enabled the construction of a matrix that relates the impact of interventions in the historic urban landscape to the degree of adaptation to the demands of contemporary buildings. This allowed to deduce, then, the expected level of urban renewal in the historic centers selected for analysis.

This conceptual and methodological body was the support for the analysis of the current situation of four reference historic centers of in Portugal. The historic centers of Évora, Porto and Guimarães, which are World Heritage Site since 1986, 1996 and 2001, respectively, were selected for this study. It was also considered Baixa Pombalina in Lisbon, whose candidacy was submitted as World Heritage Sites in 2004. These historic centers register different ways of thinking and intervene on the built heritage, realized in the differences in their planning and management tools.
This reflection is a contribution not only to interpret the effects of different planning tools in the architectural interventions in the historic centers in study, but also to peer trends and results and thus raise the discussion on the role that the different heritage policies assume to the reanimation of these places which have strong identity valences.

In the background plays the challenge of combining heritage preservation with a greater capacity for change through the integration of new urban heritage policies.

Keywords: Historical Center | Planning Tool | Urban Renewal | Heritage | Urban Planning

1. Introduction

Cities are still concentrating within, territory qualifications worries, and have seen their role reinforced, on the social and economical development promotion of themselves.

It is urgent to tackle the challenges related to the safeguard of heritage fundamental values, along with the need for revitalization of historic centres, giving them new functionalities and residential attractions.

Consequently it is demanded that pre-existence management policies capable of their preservation, are at the same time, adequate for present and future challenges. Heritage policies dictated by current planning instruments, represent the conservation strategy adopted by each historic centre.

The aim of this paper is to provide a comparative reading of urban renovation levels, made available by current management and planning instruments, in emblematic Portuguese historical centres classified by UNESCO, as World Heritage Sites.

We will be looking to evaluate the different policies adopted for this heritage preservation, especially concerning its adaptability capacity for a sustainable future. Namely what measures in which historic centres urban conservation is seen as a site historicism maintenance process (spatial relationships, traditions, memory), and simultaneously designed to catalyze new spaces upgrading its palimpsest value, that the city is.

2. Historic centres: conceptual evolution and heritage policies

2.1. Concept developed up to 1st World War

The urban heritage concept was altered with time in its articulation with historical centres, in accordance to this resource of social perception value.

Urban renovation policies adjusted to its own herded heritage evolution in accordance with its respective era, social characteristics, culture, economics and policies.

In this evolution we can emphasize three distinctive phases (Ashworth, 1994): preservation, conservation and heritage. Preservation was the first phase for these policies and incided on buildings looked upon as monuments, selected by beauty or age criteria. The constructions were preserved by legal imposed protection from specialists, which identified its relevance as cultural goods (Tiesdel et al, 1996).

2.2. Concept developed between World Wars

20th century modern movement upholds a radical approach for the intervention and resolution of historical city's problems. Its destruction and reconstruction according to modern principles was then proposed, not giving especial importance to the pre-existences, as exemplified by Voisin Plan (1925) conceived for Paris city by Le Corbusier.

However, simultaneously radically opposed concepts started to emerge to this approach of facing the inherited city. We underline the works of Gustavo Guiovanni who developed the *minor architecture* concept, meaning, a monument conception, viewed not anymore as an isolated spatial piece, but with a surrounding essential for its understanding (Choay, 1982). In his vision the historic city was a monument, because of its topography, landscape character, and the set of built typologies.

It is after the 1st world war that the historical centres intervention considerations intensify, because it became imperative, a fast answer for the rebuilding of the destroyed cities. The Italian Giovannoni gave an important contribution, for this reflexion, in formulating the *urban heritage* concept, considering the historical city as a density of relevant values. One asset that should be preserved through protection laws as it already existed for isolated monuments (Aguiar, 2007).

2.3.Concept developed after the 2nd World War

It is only in the sixties, a strong economical recuperation period after the 2nd world war, that renovation methodologies in historical centres were implemented for the first time in Europe, such as the *Plan de Sauvegarde et Mise en Valeur do Marais* (1969) in Paris, and Bolonha's Historical Centre Regulating Plan (1969) (Tung, 2001).

These places were degraded both physically, and at a social, cultural and economic level, enabling the change for a second phase of urban conservation policies, *the conservation*, magnifying its attention aim to urban sets (Ashworth, 1994). Its goal was to better the physical environment, such as housing, and at the same time, solve the social problems of the resident population.

General heritage safeguard international documents show us a diversity of conceptual evolution that justified in these places, the intervention as to the role of contemporary architecture and urban planning.

Thus, when everybody anxiously looks with preoccupation to the cities future, it is important to reflect over the received heritance of the past, searching the most adequate answers for planning and strategic integrated management and creative of the historic centres in the set of the contemporary city. This international orientations mirror the worries and distinctive attitudes towards the preservation and conservation of historic centres as a resource and legacy for future generations.

Five relevant international documents can be identified.

i) Nairobi's recommendation (UNESCO, 1976) determines that the historical set and its surrounding are a coherent hole, but identifies new constructions as a threat that could destroy the set's character (* consulted in (Lopes e Correia, 2004);

ii) Resolution 813* (CE, 1983) assumes as a guide rule the need to integrate contemporary constructions in historic sets, in order to give continuity to the architectural tradition and building a future European heritage (* consulted in (Lopes e Correia, 2004);

iii) Washington's Charter* (ICOMOS, 1987) identifies as a guide rule that the historical sets safeguard, should be carried out through social and economical coherent development policies, and defends the preservation of urban forms, of the built and empty spaces relationship, building's form and function(* consulted in (Lopes e Correia, 2004);

iv) Burra's charter (ICOMOS, 1999) for the first time identifies a larger conservation concept, "*Conservation* means all the processes of looking after a place so as to retain its *cultural significance*" (art.1.4) which "means aesthetic, historic, scientific, social or spiritual value for past, present or future generations." (art.1.2).

v) Vienna's memorandum (UNESCO, 2005), which is not a final chart or document for urban development, but a consensual transition element amongst world entities, identifying as guide line the acceptance of the city's building process as an integrated part, defending the heritage conservation and simultaneously its modernization strengthening its identity and social cohesion. Hence, contemporary architecture should complement the existing urban historical landscape as a fundamental strategy.

Historical centres today are treated by the third phase of urban renovation policies, *the heritage*, which occurred when they came under a market orientation (Ashworth, 1994). The architectural legacy started to be looked as a consumer selected product, and managed by current market demands. The past is molded to answer contemporary needs (Nasser, 2003). It has become an urgent necessity that conservation and urban planning have a symbiotic relationship that will bring harmonious cities development (Cohen, 2001).

Historic centres are becoming reference places in the urban space, as they carry a double achievement of being a memorial witness, as well as, a generator of cultural, economic and social dynamics, crucial for the cohesion and qualification of the contemporary city.

However the urban net legacy is many times penalized by the heritage policies limitations, that by being too general, and established by abstract conceptual theoretical tables, have difficulty in incorporating each intervention area singularities, not caring for the formulation of criteria and adjusted methodologies for each case.

Planning in historical sites resides nowadays in the dictum between preserving the past by its intrinsic value, and the transformation necessity, answering to the values of a restless for innovation, inclusion and culture seeking society. As such, if urban areas do not have the ability to change, they will end up stagnating in the set of the urban fabric (Larkham, 1996).

"Conservation is a complex process of managing the tensions between continuity and change in the city, and its main aim is to manage the cultural character and identity of the city" (Liu, 2011, pp.23). Hence urban conservation is a political decision; it is the management of urban change.

3. Evaluation of clearness and renovation levels capacity of planning instruments in emblematic Portuguese historical centres.

The fact of having explicit rules minimize bureaucracy and maximizes margin of interest in the projects, thus boosting economies, population flows, services and cultural programs to these historic centers through a clear and objective management of urban renewal, i.e. of the process of change.. That can result in a gradual and rigorous transformation that leads to the preservation, revitalization and sustainable development of these heritage tissues.

The following conceptual and methodological body constitutes, a situation analysis matrix, of four reference historic centres in Portugal. The Évora, Oporto and Guimarães historical centres, World Heritage respectively since 1986, 1996 and 2001, have been selected. Lisbon's Downtown (Baixa Pombalina), whose World Heritage request was delivered in 2004, was also considered.

The current planning and management instruments for these historical centres, reflect different ways of thinking and intervention on built heritage enabling us to understand the different policies adopted for the conservation and renewal of these world heritage urban places.

For the comparative analysis of these planning instruments, were defined as parameters the rules that represent the urban renewal actions allowed on historic fabric buildings.

With this set of parameters a matrix can be built that enables to evaluate the urban renewal levels established by planning instruments in each historic centre, and it enables a comparison amongst them afterwards.

Factors were defined:

i) direct impact in the historic centre image:

- in elevations to preserve:
  (1) original design,
  (2) traditional technologies and materials,
  (3) colours.

- in roofs to preserve:
  (1) geometry/original volumes,
  (2) traditional technologies and materials.

ii) buildings adaptation levels to new necessities:

- in internal typology to preserve:
  (1) original typology
  (2) forbide joining of territory
  (3) maintain the use of traditional technologies and materials
  (4) forbide car parking provision
  (5) regulation of structural reinforcement.

3.1.Évora's Historic Centre

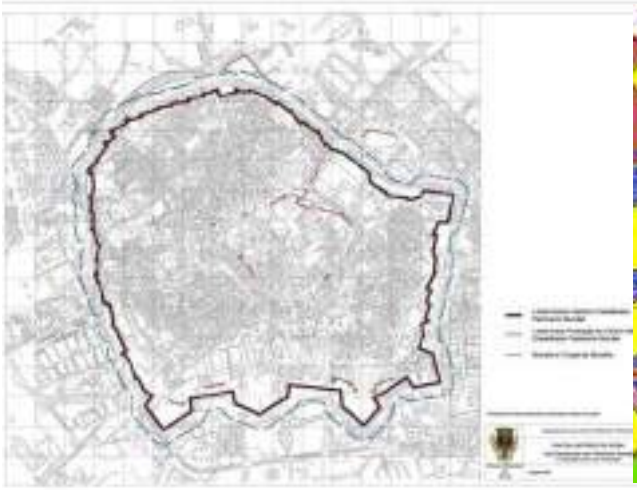


Figure 1: Plan with the delimitation of Évora historic centre classified as World Heritage. The historic center protection zone is not still legally defined, only the walls protection zone is defined. Source: Évora City Council.

Figure 2: Localization of the areas where is permitted new constructions in Évora historic centre. Source: Part of the PUE zoning plan.

3.1.1. Plan Type and Management Entity

In this historic centre, the planning instrument that regulates urban renewal is the "Évora's Urban Plan (PUE, 2000), produced by Évora's City Council (Figure 1).

3.1.2. Criteria and Levels of Intervention

This plan does not establish intervention categories in historic centre buildings, that is, a building intervention strategy with different levels of freedom. Évora's Urban Plan (PUE), identifies the sites were new construction is foreseen or allowed (Figure 2).

The new constructions range from, green spaces (landscape) support facilities, kindergartens, facilities next to exterior of the city's wall, to four building groups for housing or hotel use. In these later buildings, the adopted rules are the same applied to expansion housing areas, sited outside the historic centre. Parameters such as, usage, number of apartments and storeys, net usage ratio, internal clear-height, plot dimension, distance to neighbour buildings, and number of parking places to be created, are defined.

In new constructions as well as in alteration or expansion works, restrictions are implemented only on elevation and roof design:

- in **elevations**: imposition is made on the composition of finishes material usage, and the color range possibilities to be used – the traditionals. Color and material for window and door frames is also imposed, whilst imposition for technical support equipment such as, solar panels and air conditioning equipment is withdrawn;

- in **roofs:** the materials allowed to be applied are imposed.

Demolition here is not seen as an option. New construction replacing demolition is only applicable, when the existing building's advanced state of decay, enables its recovery, or when location is identified as being for new construction, regulated by the Urban Plan. As an urbanistic instrument it has aspects that end up being emphasized – urban regulations and external finishes - lacking references to issues such as internal changes in built spaces (Table 1).

Table 1: Évora's Historical Centre Urban Renovation

ANALYSIS PARAMETERS									
Elevation			Roof		Internal typology				other criteria
Analysis criteria			Analysis criteria		Analysis criteria				
Original design	Traditional materials and tecnologies	Colours	Geometry/ original volumes	Traditional materials and tecnologies	Original Typology	Traditional materials and tecnologies	Forbidden car parking provision	Regulation of structural reinforcement	Forbiben joining of territory
-	+	+	-	+	-	-	-	-	-

Legend: + : regulatory enforcement
- : not a enforcement

3.2. Oporto Historic Centre

Figure 3: Plan with the delimitation of Porto historic centre classified as World Heritage and its protection zone. Source: www.igespar.pt [04/04/2011].

3.2.1. Plan Type and Management Entity

In Oporto's historic centre the built heritage intervention management is run by *Porto Vivo – Urban Rehabilitation Society* (SRU), whom since 2004 produced strategic documents for each block, assuming each of these as an intervention unit (Figure 3).

These strategic documents (DE) establish the foreseen and authorized works in each building, safeguarding the minimum sanitarian and habitability conditions.

The DE has law enforcement power over the building, and has to be followed both by public and private dwellers. The foreseen interventions were produced by the joint work of *Porto Vivo – SRU* with *Instituto de Gestão do Património Arquitectónico e Arqueológico* (IGESPAR).

3.2.2. Criteria and Levels of Intervention

Porto Vivo – SRU's strategy covers an extended range of worries placed both on the survey and diagnosis of the existing condition, and in the procedures for the intervention management, as well as in the rights of each involved entity in the urban rehabilitation process and the construction quality (quality and sanitarian environment, energy efficiency, construction and functional security) (Table 2).

Table 2: Intervention criteria in Oporto's historic centre.

1. Intervention thecnological aspects	- understand and respect existing building, the primitive technologies, and if not possible assure that new technologies are compatible with the old ones; - intelligent exploitation of the existing elements: re-use them to reduce cost and obtain more sustained solutions.
2. Urban Elevations	- maintain and qualify, through consolidating operations, repair and cleaning (reposition of original elements by withdrawing unfitting elements.
3.General typological resolution	- in profound or deep interventions, maintain elevation, and main building side walls, renewed threshold at the same level of existing, in order to maintain relationship between external openings and internal spaces; - in deep interventions there are typological reformulation operations, in the scope of plot definition, internal spatial room alteration, horizontal and vertical distribution common areas alteration, with the introduction of lifts, equipments and services demanded by current legislation.
4. General criteria for technical interventions	Aims to whatever level of intervention: - respect as much as possible for building's insertion environment ; - general rehabilitation and anomalies correction, by means of building's quality increment, with focus on structural safety and fire risk; - abide current demands for new construction whenever possible; - Primitive elements upgrading, with authenticity, safeguarding their compatibility with new intervention elements.
5. Securing of main demands	a) structural safety: - new structures (reinforced concrete, metal or steel) creation of new vertical communications; - traditional timber structures (ensure fire safety, acoustic insulation and waterproofing in water areas); - reinforce foundations and seismic resistance; - balance choices in economic aspects, base on the buildings state.
	b) safety against fire risk: - risk reduction measures of fire starters and fire spreading (established or to be established by the Firemen's Office) - ensure fire partition barriers and stable levels to fire.

	c) hygrometric thermal comfort: - (new construction or deep intervention) uphold thermal comfort passive systems , to reduce heating thermal charge, through good insulation and minimize cooling active systems (air conditioning); - (existing construction rehabilitation or light interventions) reinforce roof thermal insulation, renewal of degraded opening's frames (thermal bridges); - insulation reinforcement (roof, opening frames, double glazing, lowering thermal bridges, bettering night ventilation systems).
	d) acoustical comfort - (new construction or deep intervention) fulfillment of current demands; - (existing constructions), sound insulation between storeys (ceilings and/or roofs) and between plots, reinforcement and insulation of opening frames; - intervention on buildings private or common noisy equipment.
	e) healthcare of conveniences and kitchens - employment of ventilation, water supply and drainage, necessary equipment; - washable, waterproof and resistant finishes
	f) services and infra-structures: - application of rainwater drainage, telecommunications, active security and gas systems, as well as other services imposed on new constructions
	g) durability and economics: - pragmatic attitude in solutions choices, as to cost and acceptable durability, through control and critical continuous assistance in all project phases.

Source: *Ponte Nova*, PBDE, Annexe II

These interventions criteria definitions to which urban renewal projects have to comply, try to conduct the various intervention aspects, in an efficient manner, for a global satisfaction of the pretended aims in Oporto's historic centre rehabilitation process.

The *Porto Vivo-SRU*, with a deep knowledge of its intervention area, and in order to clarify its intervention criteria in the historic centre buildings, has also established three building intervention categories: light, medium and deep (Table 3 and Figure 4).

Table 3: Intervention levels in Oporto's historic centre

Light Intervention	- Reasonable Building's conservation state; - intervention is not allowed, unless certain point in time, in the main constructive solutions and systems; - repair and/or rehabilitation works on buildings do not require relocation of users, and does not interfere with inresidents daily life;
Medium Intervention	- light intervention works; - repair or substitution of timber works and opening frames; - repair and eventual reinforcement of some structural elements, mainly floorings; - general repair on roofs, internal and external walls, internal and external finishes; - substitution of electrics and hydraulics services and improve the common parts; - upgrading formal environmental and functioning conditions of spaces (kitchen, bathrooms (ventilation systems, water supply/drainage and equipment)) in accordance to current legislation.
Deep Intervention	- includes light and medium intervention works; - need to intervene deeply in the construction system, in the typologic organization and distribution (may alter number of plots, and the building's function); - implies demolition and reconstruction. Intervention on: structural level, vertical and horizontal circulation areas, building's materials and finishes, forcing the coexistence of different systems and materials; - Can imply temporary relocation for the building's residents

Source: *Ponte Nova* Strategic Document Base Plan, Annexe I.

Figure 4: Elevation of proposed intervention, Mouzinho da Silveira Street.
Source: Strategic Document to Ponte's Nova Intervention Unit.

From the intervention criteria analysis established by *Porto Vivo – SRU*, we can apprehend that (Table 4):

-in **elevations** the original design is to be maintained.
-in **roof**, the maintenance of its geometry/volumetry is imposed.
-as for **internal typology**: the structural reinforcement, that is, the intervention method on building structures is regulated.

Table 4: Urban Renovation in Oporto's Historic Centre

ANALYSIS PARAMETERS									
Elevation			Roof		Internal typology				other criteria
Analysis criteria			Analysis criteria		Analysis criteria				
Original design	Traditional materials and tecnologies	Colours	Geometry/ original volumes	Traditional materials and tecnologies	Original Typology	Traditional materials and tecnologies	Forbidden car parking provision	Regulation of structural reinforcement	Fordiben joining of territory
+	-	-	+	-	-	-	-	+	-

Legend:
+ regulatory enforcement
- not a enforcement

3.3. Guimarães Historic Centre

Figure 5: Plan with the delimitation of Guimarães historic centre classified as World Heritage and its protection zone. Source: Guimarães City Council.

3.3.1. Plan Type and Management Entity

In the historic area of Guimarães is the Local Technical Office (GTL) the responsible for managing the interventions in buildings (Figure 5). This entity has a threefold objective of maintaining the population, provide better living conditions and preserve / restore the heritage values of authenticity. The GTL advocates a logical maintenance and minimal impact through the use of skilled local labor, materials and traditional techniques.

3.3.2. Criteria and Levels of Intervention

This office classifies interventions according to two categories (Table 5).

Table 5: Intervention levels in the historic centre of Guimarães.

Light Works	Deep Works
Repairing the roof, eaves, window frames, painting elevations or introduction of sanitary facilities.	Interventions in the structure and interior organization.

Source: Guimarães City Council.

This office elaborated the Regulation for Intervention in the Urban Center and History of Guimarães (RICUH, 1994), which requires multiple constraints for urban renewal. The RICUH requires:

- in **elevations** have to keep: the design and original materials. It is imposed that they have to be towed, or stone, at the level of finishes. The window frames have their own taxes, as well as the stone, sills and railings, paint and color - always replacing the traditional design and colors, with restrictions on materials allowed in each of these elements.

-in **roofs**: are prohibited slabs of concrete and changing the number of waters. Structured roofs are permitted only wood and covered with tile. The type of tile is chosen depending on the time of construction of the building and must be maintained according to the eaves original design. The downpipes and guttering must be of galvanized sheet metal, painted and equipped.

-concerning **internal typology**: the inside walls should be preserved whenever possible. Tax is to be towed, or stone, at the level of finishes. The floors should be in line with the remaining balance of the building and under the guidance of IGESPAR. Only in cases where there is extensive restructuring of buildings is that it allows the creation of firewalls and the double walls, including a fire resistant material in its air-box.

From this document emerges that the historical center of Guimarães is no place for the introduction of contemporary architectural values (Table 6).

Table 6: Urban Renovation in Guimarães Historic Centre.

ANALYSIS PARAMETERS									
Elevation			Roof		Internal typology				other criteria
Analysis criteria			Analysis criteria		Analysis criteria				
Original design	Traditional materials and tecnologies	Colours	Geometry/ original volumes	Traditional materials and tecnologies	*Original Typology*	Traditional materials and tecnologies	*Forbidden car parking provision*	Regulation of structural reinforcement	*Forbiden joining of territory*
+	+	+	+	+	+	+	-	-	+

Legend: + regulatory enforcement
- not a enforcement

3.4 Baixa Pombalina, Lisbon

Figure 6: Plan with demarcation of the area proposed for World Heritage and its protection zone. Source: Candidacy File of Baixa Pombalina to World Heritage.

Figure 7: Plan with the demarcation of the area of intervention of the PPBP. Source: PPBP.

3.4.1 Plan Type and Management Entity

For the Baixa Pombalina specifically, entered into effect, in 2011, the Detailed Plan for the Safeguard of the Baixa Pombalina (PPBP), the foreground of this nature to come into effect in Portugal, prepared by Lisbon's City Council (Figure 6 and 7).

This plan aims to protect the urban area that resulted from the implementation of the innovative plan, at urban, architectural, cultural and social level, undertaken as a consequence of the great earthquake of 1755.

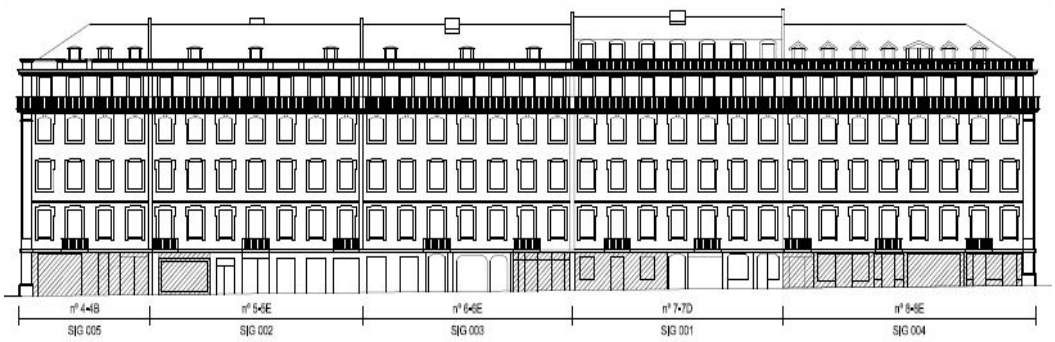
With a strong abstraction in the geometric design and against the nobility and clergy taste who saw their social position disfavored with the metric uniformity induced by Eugénio dos Santos' Plan, "... the Baixa Pombalina open the way for the introduction of modernity in Lisbon with high quality of design and sense of the future" (Costa and Lobo, 2010, pp. 33). "The Baixa Pombalina inaugurated the systematic application of measures arising from a hygienist concern, being striker of the hygienist ideal of the eight hundred. Similarly, the concern to build a city for all, where the formal and conceptual concerns of the elites do not take primacy also makes this plan a precursor of the ideas that have permeated the work of almost all pre-planners and urban designers of the XIX century" (Costa and Lobo, 2010, pp.36).

3.4.2 Criteria and Levels of Intervention

Thus, the PPBP to preserve this heritage as a strategy adopts four distinct ways of acting on the buildings (Table 7).

Table 7: Ways to intervene in buildings.

To remove	To replace the metric of openings	To reformulate	Possible increase of volumetry
Removal of elements and / or harmful floors in terms of structural and conceptual;	In situations in which are relevant to maintain the rhythm of the facade, this has been distorted both by the closure of openings, or by their tampering, so it requires the replacement of the metric;	Volumetric change in form or material of the elements highlighted, in particular the removal of floors when the existent volumetry is a factor of formal or structural imbalance of the block in which it operates;	When the existent volumetry is a factor of structural or formal imbalance in the block in which it operates.



Figueira's Square

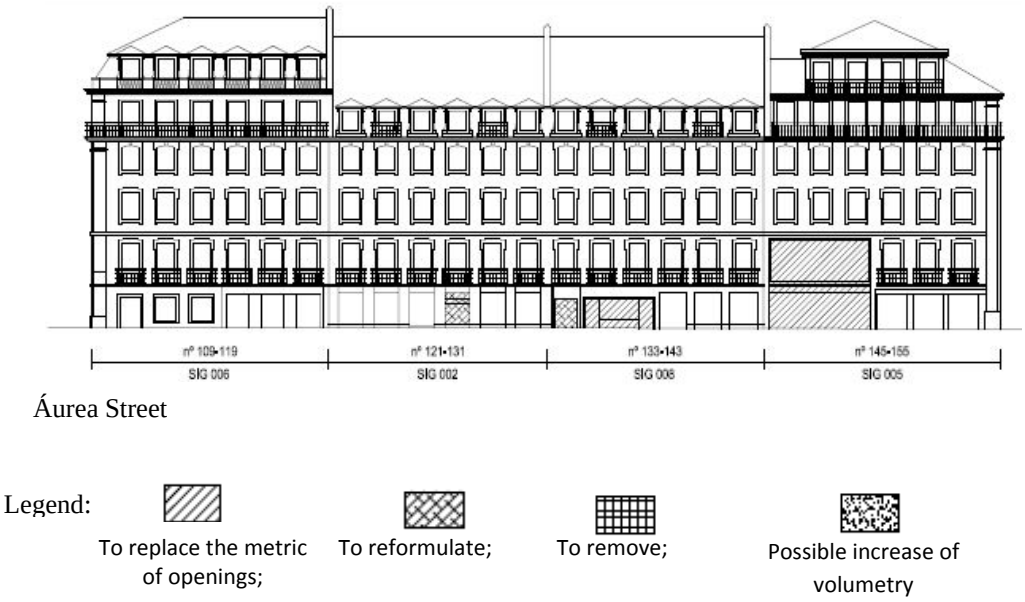


Figure 8: Interventions permitted on the elevations of Figueira's Square and Áurea Street. Source: Annex I, Regulation of the PPBP, Block Q6.

The PPBP regulates in detail the possible interventions in the buildings at the level of the elevations, roofs, structural elements, interiors and the demolition work, providing reconstruction works with or without preservation of the façade.

In the **elevations** only is allowed changes to improve the structural behavior of the building, to replace metrics, rhythms, and original materials, to strengthen the structure, in terms of seismic safety of the building, and it is permitted the removal of inadequate coatings or without cultural value.

In **roofs** only are allowed interventions that do not change the geometry, the form and original materials. These can only be changed when in an advanced state of degradation, to correct anomalies, take dissonant elements and materials, improve living conditions in the attic and to do small changes in building's height under this Regulation. To these modifications it is imposed that the roof respects the characteristics of adjoining properties and preserve the elements of historical or artistic value. Are not allowed new flat roofs and it is imposed the use of red clay in pitched roofs, among other impositions as equipment installations for the harnessing of solar energy, for example.

For the **structural system** is required a previous report when the intervention involves the structural elements, which must review the parts that matter to the proposed work such as foundations, main walls of masonry, the front walls, floors and roof. In the PPBP is also proposed a classification of the structural condition of

the building (good, fair, poor). The art.25 of the Regulation specifies the rules for the intervention in structural elements according to the state of conservation of the structural system of the building obtained in the previous report.

Are also included in the regulation of PPBP rules on the **typology**, and is authorized its total change when buildings don't present historic and artistic values, but when they hold these values, whatever the time of construction (Pombaline, Neoclassical, or previous) only are allowed partial works, with the aim of improving functional and housing conditions (introduction of toilets, kitchens and elevators). It is not allowed to do basements, unless they are bound to keep equipment and technical means necessary for functional rehabilitation and safety of the buildings (Table 8).

Table 8: Baixa Pombalina Urban Renewal.

ANALYSIS PARAMETERS									
Elevation			Roof		Internal typology				other criteria
Analysis criteria			Analysis criteria		Analysis criteria				
Original design	Traditional materials and technologies	Colours	Geometry/ original volumes	Traditional materials and technologies	Original Typology	Traditional materials and technologies	Forbidden car parking provision	Regulation of structural reinforcement	Forbiden joining of territory
+	+	-	+	+	-	-	+	+	-

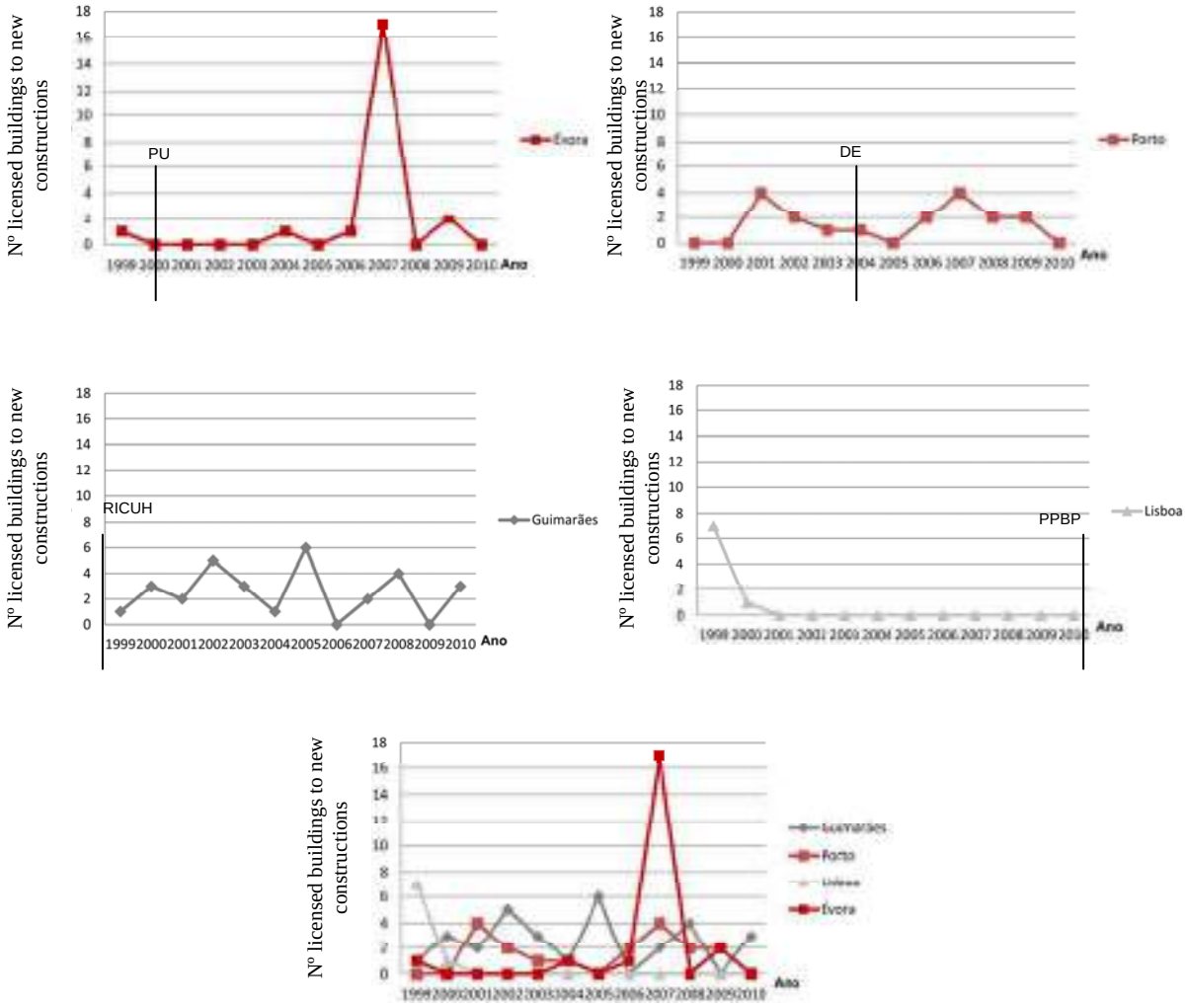
Legend: + regulatory enforcement
- not a enforcement

4. The Practice – Statistic Data

To understand the link between the theoretical plans into effect and its practical application, it was collected the statistic data regarding the *Licensed buildings (No.) by Geographic localization, Type of project (new construction and extensions / alterations and reconstructions) and destination of the work (family housing and other); Annual* for the period between 1999 and 2010, available on the National Statistics Institute (INE).

It was possible to obtain this information to the area of the historic centers in study because the delimitation of the World Heritage Area encompasses and coincides with the boundaries of the administrative districts. Thus: Historic Centre of Évora (parishes: Sé, S. Pedro, S. Antão, S. Mamede), Historic Centre of Guimarães (parish: Oliveira do Castelo), Historic Centre of Porto (parishes: Sé, S. Nicolau, Victoria, Miragaia), Baixa (parishes: S. Nicolau, Madalena, Mártires, Sacramento (St. Justa and S. Paulo are bordering parishes to the area candidate for World Heritage, but they are not representative because they have few buildings within that perimeter)) (Figure 9).

Figure 9: Licensed building in the historic centers under study. Source: *Licensed buildings (No.) by Geographic localization, Type of project (new construction, and extensions / alterations and reconstructions) and Destination of the work (family housing and other); Annual* National Statistics Institute (www.ine.pt [02.23.2012]).

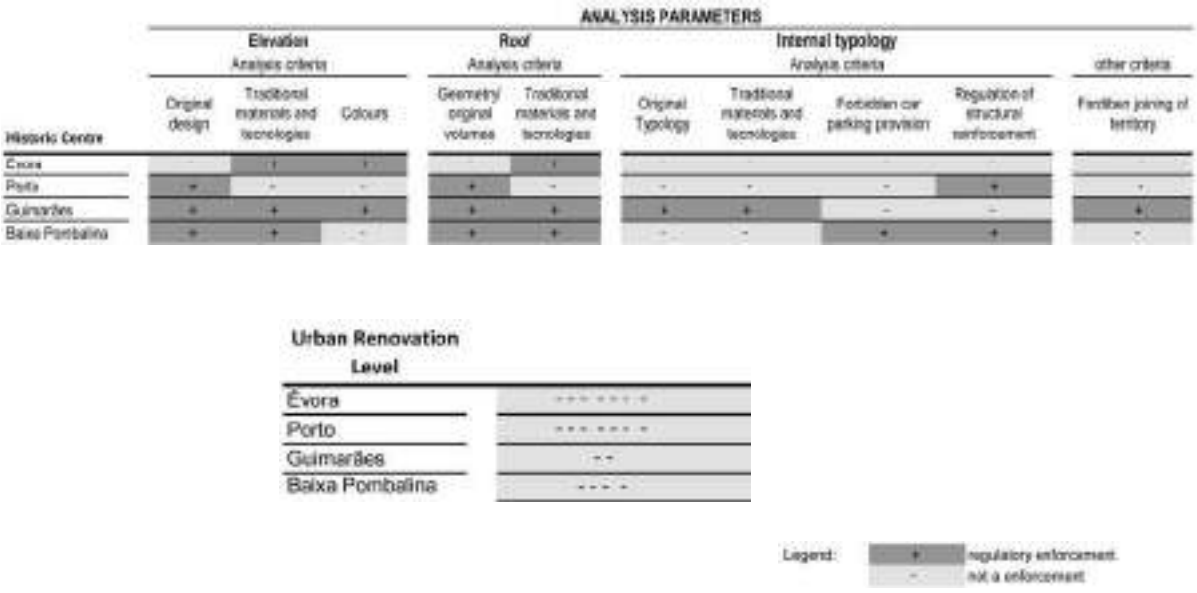


Analyzing the available information and crossing it with the date of entry into effect of the planning instruments in each case study we can see that these documents did not have a consequence on the renewal dynamics of historic centers. The number of licenses for renovation of buildings was almost always close to zero in all the centers studied historical centers, whether its planning tools has been approved before or during the studied period. Thus we can realize the long way to go with additional measures, incentives and more effective strategies in urban renewal planning for the revitalization of these urban fabrics.

5. Conclusion

This reflection is a contribution not only to interpret the effects of the different planning tools in the architectural interventions in historic centers, but also to peer results and trends. Thus it raises the discussion about the role that these various policies assume through the planning tools to the urban conservation and renewal, i.e. in the revitalization of these places which possess strong identity valences.

Table 9: Comparative Urban Renewal Matrix.



Comparatively we can see that (Tables 9):

- the planning tools that allow greater urban renewal are the strategic documents in Porto and the PPBP in Lisbon.

- In the historic center of Porto the strategy developed by *Porto Vivo - SRU* is based on the deep knowledge of the buildings, preserving in its exterior the original design and aesthetic, but allowing contemporary interventions that benefit the whole. The strategy followed by *Porto Vivo - SRU* allows a deeper intervention inside the buildings, with the aim to provide the standard

conditions of habitability for contemporary people that want to live in these places without losing comfort.

- Although the PU in Évora conveys the same level of urban renewal of the historic center of Porto, we are not facing the same situation. The PUE does not present a strategy with different categories of intervention in the buildings. This happens in other historical centers: Porto - light intervention, medium intervention, deep intervention; Guimarães - light works and deep works; Baixa Pombalina- to maintain, to reformulate, to replace the metric of openings and possible increase of volumetry. In the historic center of Évora there are no systematic rules of intervention for the various urban renewal factors identified in this study. The fact that there is only a Plan of Urbanization (PU) to regulate the operations of buildings in the historic center does not help the existence of specific rules for intervention in buildings, because by nature the PU has a inadequate scale to the planning of the historic areas;

- In the PPBP, we can see that it allows a large urban renewal, and its application strategy is thought to regulate the various factors of urban renewal identified in this study. It has an approach similar to the one developed by *Porto Vivo - SRU* with the strategic documents.

- The RICUH in Guimarães reflects a reduced possibility of intervention with contemporary values. Almost all parameters must remain as the original features of the buildings. In our interpretation this shows that the strategy of perpetuating the past values, believing that contemporary architectural values would reduce the artistic, social, cultural values and the economic development acquired by the place so far.

- Through this study we can understand that the latest Portuguese planning tools, the strategic documents in Porto and the PPBP in Lisbon, are the most complete. They cover, for example, how to intervene on the building's structural system and they also point out objectively the constraints relating to the factors of façade design, roof and internal typology.

- We can say that the relationship between the intervention policies explicit in the planning tools and the real transformations are not direct. This may be seen by the number of licenses given to the renewal of buildings in period after its planning tools entry into force (section 4).

As suggested by the Vienna Memorandum (UNESCO, 2005) in the management of political intervention in the historic centers must exist as a principle the acceptance of change as part of the construction of the city, not only advocating the preservation of heritage, but also and at the same time, the upgrading in order to strengthen the identity and social cohesion. After the analysis of the mentioned planning tools it can be seen that are the strategy documents in Porto and the PPBP in Lisbon, those who best embody the idea of conservation and modernization explained by the Vienna Memorandum.

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SUCCESSFUL INITIATION AND COORDINATION OF MOBILITY MANAGEMENT – EXPERIENCE OF THE GERMAN ACTION PROGRAMME "EFFICIENT MOBIL"

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Abstract

Even though Mobility Management is more and more seen as a suitable approach to meet the challenges of mobility and transport, a nationwide and top down strategy has been missing in Germany so far. The action programme "effizient.mobil" of the German Energy Agency (dena) (runtime 01/2009 – 12/2010) funded by the Federal Ministry for the Environment (BMU) is the first attempt to go a more systematic way to foster Mobility Management strategies and implementations. So far more than 100 municipalities and companies got free of charge consulting that led to a specific concept taking the framework conditions into account. The ILS-Research Institutes for Regional and Urban Development and the ISB-Institute for Urban and Transport Planning are assigned with both the evaluation of processes and the estimation of effects.

The evaluation concentrated on all relevant processes in both of the action levels of the program, namely the level of regional initiation, application and coordination of mobility management measures and the level of individual consulted cases. A mix of qualitative and quantitative methods was used for this. Firstly, ongoing project activities could be documented and analysed. Though it was possible to follow developments and to discuss them with all stakeholders in the current process. This offered the possibility to optimize certain parts of the program. Secondly, success and inhibition factors could be derived for the different programme levels.

An assessment tool for effectiveness of the internal mobility management concept was developed to estimate the CO_2 reduction of the planned measures based on extensive surveys and concepts. The programme offered the possibility to display the traffic-related benefits of mobility management to the consulted cases for consulting the traffic-related cases for the benefits of internal mobility management by uniformly collected basic data.

So the motives for a confrontation with the issue of mobility management can be explained better. For example it can be stated that the worse the quality of location,

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the more specific mobility related motives lead to participate in the programme "effizient mobil". Otherwise the car share at the journey to work is lower, the greater the prior experience with the subject of mobility management is. Based on these results evidence for action and influence factors for implementation of mobility management in companies can be derived. The results show that e.g. especially cycling and public transport are considered because here the enterprises have the largest existing knowledge and experience. Measures that affect the working time regulations were rarely observed and not internally designated. Especially in combination with the location of the sites and the existing accessibility the question is, what does this mean for the willingness of implementation.

1. Introduction

Even though Mobility Management is more and more seen as a suitable approach to meet the challenges of mobility and transport, a nationwide and top down strategy has been missing in Germany so far. The action programme "effizient.mobil" of the German Energy Agency (dena) (present runtime 01/2009 – 12/2010) is the first attempt to go a more systematic way to foster Mobility Management strategies and implementations.

It is funded by the Federal Ministry for the Environment (BMU). It aims for a further dissemination of Mobility Management, as this concept is so far mainly implemented on an ad hoc basis. The programme supports the uptake and the effective implementation of Mobility Management, both within the municipalities and for different sites and organisations. Effective structures shall be established which support a better institutional anchoring and a better integration into suitable strategies and programmes. So far more than 100 municipalities and companies got free of charge consulting that leads to a specific concept taking the framework conditions into account.

As examples prove, Mobility Management is effective. To help this instrument to its breakthrough, however resilient and comparable data is needed. Therefore an important aim of the Action Programme was, to accurately evaluate the effects. On the one hand, the outcomes of as much of the 100 Mobility Consultations as possible were to be analysed quantitatively: Which potentials for traffic relocation and CO_2 reduction do the drafted measures hold? Realistic description after all influences the counseled company's and municipalities' willingness to implement the concepts. As the whole Action Programme also Mobility Management is based essentially on communication, coordination and networking between relevant actors, on the other hand it was important to study the quality of the corresponding processes: which steps had been taken to activate multiplicators and possible users of Mobility Management and how did it work?

Table 1. Definition of Mobility Management

Definition Mobility Management

Mobility Management (MM) is a concept to promote sustainable transport and manage the demand for car use by changing travellers' attitudes and behaviour. At the core of Mobility Management are "soft" measures like information and communication, organising services and coordinating activities of different partners. "Soft" measures most often enhance the effectiveness of "hard" measures within urban transport (e.g., new tram lines, new roads and new bike lanes). Mobility Management measures (in comparison to "hard" measures) do not necessarily require large financial investments and may have a high benefit-cost ratio.

Source: European Platform on Mobility Management (EPOMM), developed by the EU Project MAX: Successful Travel Awareness Campaigns and Mobility Management Strategies

A special focus is laid on possible CO_2-reduction of these measures. It is estimated by analyzing the mobility concepts and data about the staff's mobility behaviour and the current site characteristics and quality of available mobility options.

In detail the programme aims at the following:

- Initialisation and encouragement of conceptual design and implementation in order to support concrete Mobility Management strategies and measures on the municipalities' level as well as on the site level.
- Creation of a nationwide network of stakeholders to concentrate the knowledge and to use it for an area-wide implementation of Mobility Management.
- Anchoring of the subject in politics and the public
- Evaluation of the effects on a structural and organisational level and development of a standardised method and tools to estimate the excepted CO_2-reduction of the programme.

The ISB-Institute for Urban and Transport Planning and the ILS-Research Institutes for Regional and Urban Development are assigned with both the evaluation of processes (mainly ILS) and the estimation of effects (mainly ISB). The evaluation concentrated on all relevant processes in both of the action levels of the program, namely the level of regional initiation, application and coordination of mobility management measures and the level of individual consulted cases. A mix of qualitative and quantitative methods was used for this. Firstly, ongoing project activities could be documented and analysed. Though it was possible to follow developments and to discuss them with all stakeholders in the current process. This offered the possibility to optimize certain parts of the program. Secondly, success and inhibition factors could be derived for the different programme levels.

2. General Approach of the Evaluation of the processes

The main subject of the evaluation which takes place throughout the whole project duration are the processes on the scale of regional coordination and individual consultation. The aim is to analyse and document the according activities in the Action Programme as well as the anchoring on-site. Building on that, success and inhibition factors for a successful implementation, promotion and distribution of Mobility Mangagement have to be derived and clues for the transfer into permanent structures have to be developed. A mix of qualitative and quantitative methods was used for the evaluation of the counseling. On the scale of the 15 regional networks, the effectiveness of the coordination offices for the regional networks in regards to their networking capabilities and the dissemination of the concept of Mobility Management is analysed. On the scale of the 100 consultations an emphasis lies on the analysis of the collaboration between counselors and counseled companies. A survey of all mobility advisors and beneficiaries will generate findings about factors of success in the consultation processes.

On several events for information potential Mobility Management actors could be approached and activated. In total about 2,200 actors could be reached on 80 events during the action period. Particularly city councils, transportation companies and chambers of industry and trade turned out to be important supporters.

As other important subjects for a promotion of internal Mobility Management the companies name their employee's mobility as the most important field of work, followed by business trips. Regarding municipal Mobility Management the priority lies at the intra-administrative anchoring.

3. Motivation of companies for taking part in the Action Programme "*effizient mobil*"

The recipients are asked to provide information about their most important reasons or their motives for an application for „effizient mobil". The response categories were derived from the previous guided interviews. Additionally further motives could be named in the category „Other" (see Fig.1).

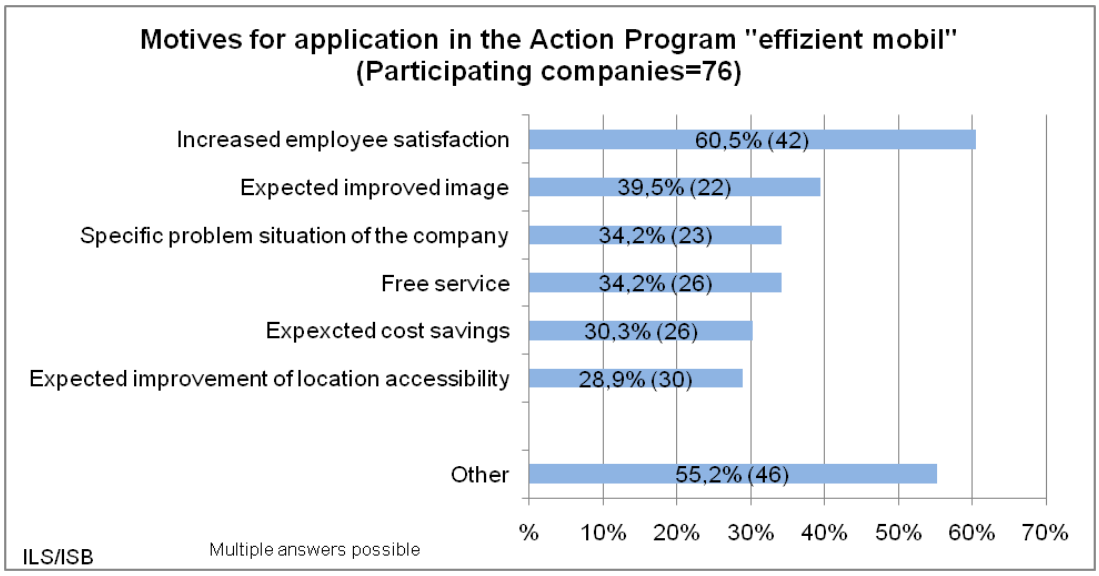

Figure 1. Motives for the application in the Action Programme “effizient mobil”

The most common answer is the increase of employee satisfaction. Of altogether 76 recipients 46 companies or organisations name this motive. This is a result, that can be retrieved from other studies as well (ILS et. al 2007: 11 f.). Second comes the expected improvement of the image. So companies focus on two motives that are not directly in connection to the subject of mobility. Another important role belongs to the specific problem situation of the company and hereby indicates a mobility-related motivation. In more than 55 % of the cases further motives were named in the category „Other“. It turned out that Mobility Management is a contribution to the protection of climate and environment – and with it also CO_2 – are further important aspects. In the municipalities mobility-related motives like specific problem situations and a positive influence on modal split clearly dominate the answers.

3.1 Estimation of need for action

Looking at the question how high the need for action regarding Mobility Management in the companies is estimated, it becomes clear that consulters estimate the need for action explicitly higher than the recipients.

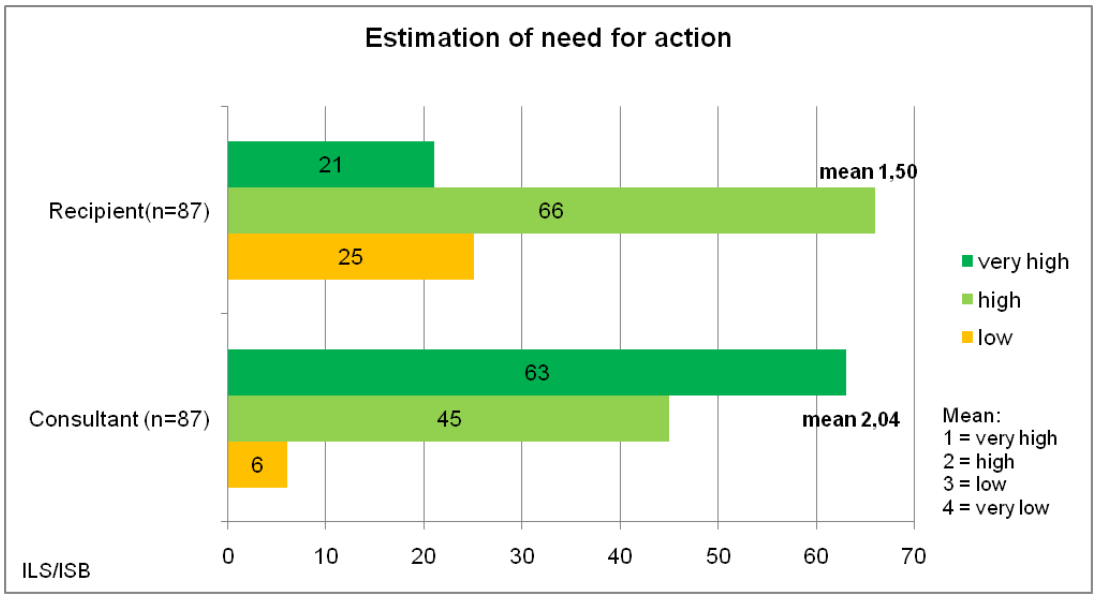

Figure 2. Estimation of need for action

Thereby generally need for action is seen in multiple fields of action. In particular cycling and public transport are named quite often by the consultants as well as the recipients. They consider the introduction of a jobticket as a particularly important task. The consultants consider the subjects parking space, employee traffic and optimising service trips as fields with a high need for action (see Fig. 2).

This different estimation can be also explained by the low or even non existing experience of many companies regarding Mobility Management at the beginning of the Action Programme „*effizient mobil*“. So 29 % of the companies said that they were widely unfamilar with Mobility Management. In 58 % of the cases at least a basic understanding existed.

A standardised survey addressed the companies as the receivers of initial consultation. 82 % of the addressed evaluated the quality of consultations as very good (1) or good (2). The average result was at 1,97 which meant „good“.

Even though the majority of the recipients – according to their own statement - had already taken single measures before the beginning of “*effizient mobil*”. Mostly named here were measures regarding public transport. Especially jobtickets were widely spread among the companies. But also measures in cycling like building parking areas played an important role.

Asked for the willingness for implementation of the suggested measures, more than 60 % of the answering companies named a very high or a high willingness. In connection to that, 71 % - among them every single municipality – that also during implementing the concept additional consultation is needed.

4. Estimation of the potential of CO_2 reduction

Mobility management is a concept to promote sustainable transport by the use of "soft" measures like information, communication, organisation and coordination, as well as an accompanying marketing. Thereby different fields are distinguished. Mobility management for cities and regions is mainly strategically. At this level measures aim to create the basis for further mobility management measures, linking the policy level with the management level in order to ensure the support of the responsible authorities or management and create new offers like car sharing or new public transport tickets. Mobility centres offer intermodal information about travel options. Mobility management for target groups or locations develops concepts based on the individual demands and conditions of the group or location, e.g. mobility packages for new citizens. Accordingly mobility management in companies focuses mainly on employees. Measures aim at the promotion of environment friendly transport modes such as adjusting the public transport schedules to the working time at companies, establishing job tickets or participate in action programmes such as "Cycling to work"[3].

Within the framework of the project the development of a method to estimate the CO_2 reduction focuses on mobility management in companies, because most of the mobility management concepts within the programme are made for companies. Due to the strategically focus of mobility management for cities and regions the benefit of these concepts cannot be estimated by the reduction of CO_2.

The base for the development of a standardized assessment of soft measures and the estimation of CO_2 reduction for these measures is complex. On one hand mobility management combines many different measures, which have different effects and can be combined in different ways in concepts in order to adapt the services to the specific individual needs and demands. On the other hand there are just a few mobility management measures or concepts which have been verified due to their effect on modal shift. Examples for scientific evaluated measures are the Dialogue Marketing Campaigns for New Citizens[4] or the mobility management for companies at Infineon in Dresden[5].

Mobility management measures have effects on different target fields (see Fig. 3). With the aim to promote the environment friendly transport modes and an efficient use of the existing transport systems mobility management provides an important effect on the environment. By shifting trips from cars to environment friendly transport modes noise exposure, pollutant emission, land consumption and separating effects on people´s living space can be reduced. Also health serves as another target field of mobility management. The modal shift from car use to non-motorized transport leads to more exercise and therefore to a better health. By the number of

[3] ILS, ISB (2000)
[4] ISB (2009)
[5] PGN, BiP (2003)

accidents due to transport modes it is possible to describe the safety of transport. As each mode has a different accident rate modal shift has an impact on safety. In addition mobility management has an influence on costs. If trips are shifted from car to environment friendly transport modes, on the one hand the measures can lead to decrease mobility costs of people. On the other hand companies or authorities need to carry the costs of the measures.

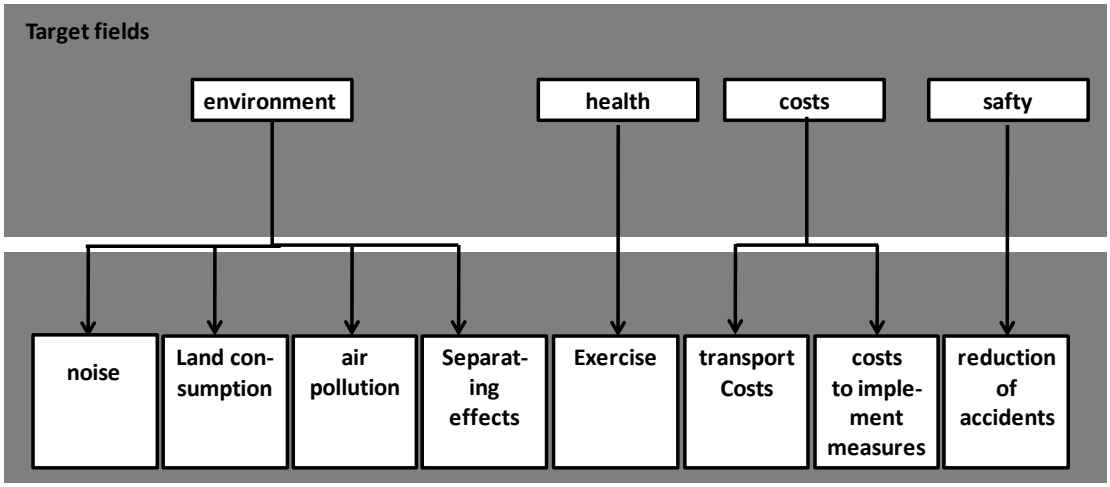

Figure 3. Target fields of Mobility management

In order to point out the positive outcome of mobility management on the climate within the framework of the project the focus is on the estimation of CO_2 reduction.

4.1 Method to estimate the CO_2 reduction of mobility management measures

The estimation of the potential of CO_2 reduction of trips to and from work is based on the reduced distance travelled by motorized private transport. The kilometres of motorized private transport are calculated by today's distance travelled and the estimated distance travelled after the implementation of the measures proposed in the concept. The change in CO_2 emissions by public transport is more difficult to calculate because there is no information about the occupancy rate in public transport in the different regions. Therefore it has been neglected in this method.

Today's distance travelled by motorized private transport is calculated by the distance between residence and workplace of the employees and their use of motorized private transport. The estimation of the distance travelled made by motorized private transport after the implementation of mobility management measures is based on the collected data of conditions of location and surroundings and the travel behaviour and opportunities of the employees. Figure 4 shows an overview of the steps of the estimation. In a first step a theoretical potential is determined. This is defined by the proportion of car-users that could be shifted to different modes of transport, based on their personal conditions. The conditions of

the location determine the level of this potential which can be obtained by the measures proposed in the concept.

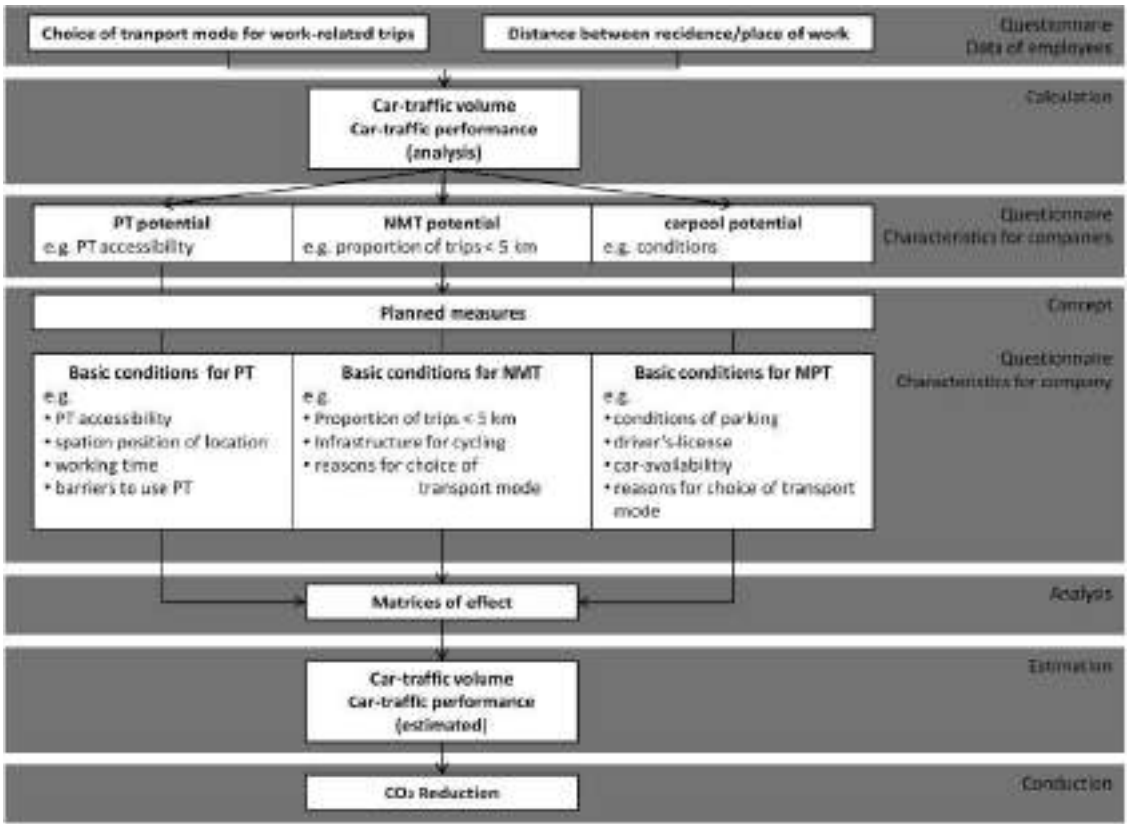

Figure 4. Overview of the estimation

5. Results of the theoretical potential

Based on the employee survey about 53,000 people can be identified, who use a car for their trip to and from work each day. About 28% of these people cannot be shifted to either environment friendly transport modes or car pooling due to their individual circumstances. The majority of the remaining car users, 33%, could be shifted to public transport. In addition about 13% could be shifted to public transport if the travel time with public transport could be reduced due to measures improving the public transport supply (additional PT potential). The theoretical potential of non-motorized transport is about 6%, this seems to be relatively low compared to today's car-users (cf. Fig. 5). But it shall be taken into account that the potential of non-motorized transport is based on a distance of max. 5 kilometres between residence and workplace. This distance may be considered to be, manageable by bike especially for those who are used to go by car to and from work each day.

The theoretical potential of those people, who use a car between one and three times a week for their trips to work, is rather similar. But in comparison to the high proportion of daily car users only a small number of people drive to work 1-3 times a week by car, therefore only daily car users are depict in the following analysis.

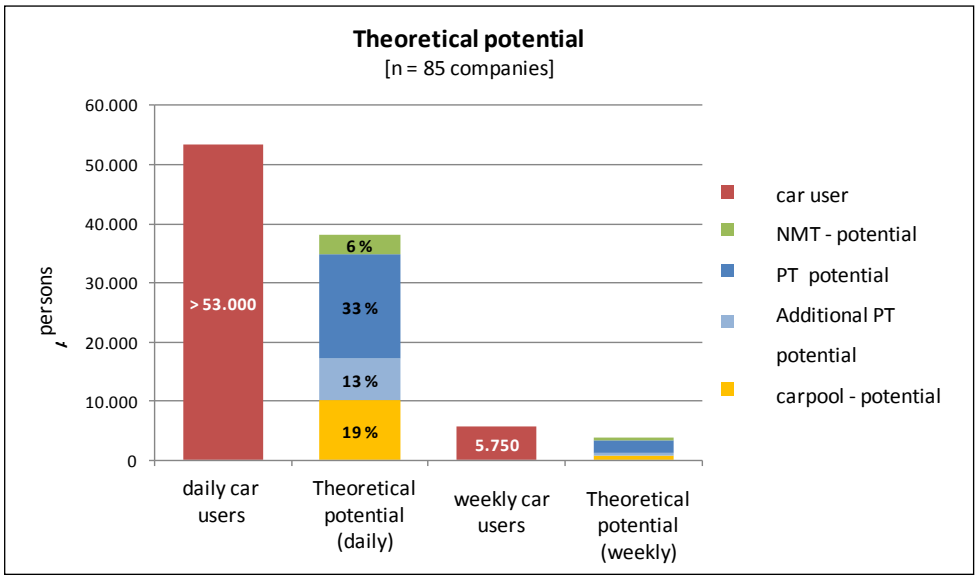

Figure 5. Results of the theoretical potential

Car-drivers who are employed at a company in an urban area or in the periphery could be easier shifted to non-motorized transport than those who are employed in rural areas. Due to the lack of public transport offer, in rural areas only few car-users could be shifted to public transport, however they could be shifted to car pooling (cf. Fig. 6).

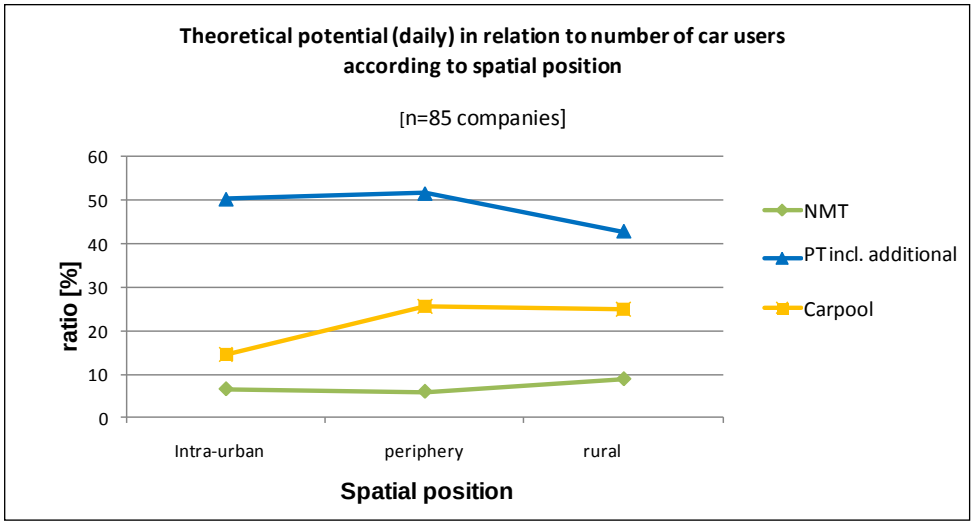

Figure 6. Results of the theoretical potential – acc. to the location

The level of the theoretical potential which can be obtained by the proposed measures depends on the quality of location for each transport mode. The better the public transport quality of a location and the higher the restriction of motorized private transport is, the higher is the proportion of the theoretical potential that can be obtained. The calibration of this method is made on basis of evaluated examples.

Since there are just few examples available which have been evaluated it is necessary that the calibration continues with further empirical data.
The analysis of the 85 concepts shows that on an average 26% of the theoretical potential can be obtained (see Fig.7). Averaged 119 daily and 17 weekly car users of each type of location are shifted.

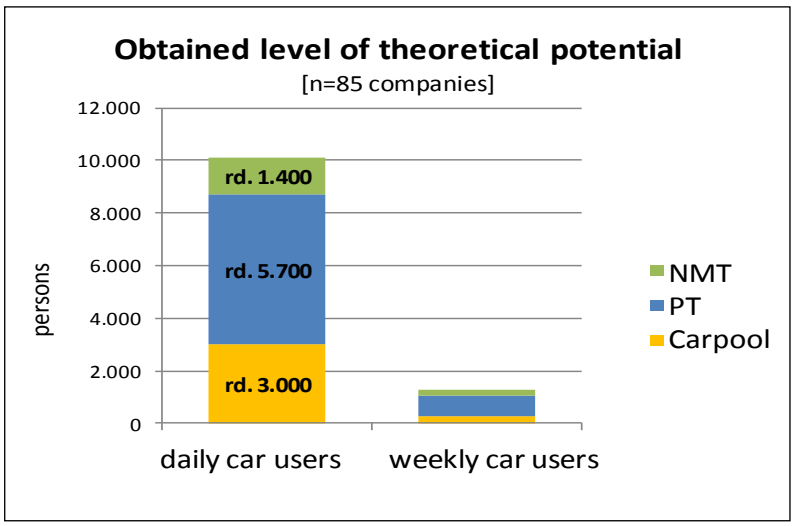

Figure 7. Part of the theoretical potential which can be obtained

To determine the reduction of CO_2 the estimated reduction of car distance travelled is multiplied by an average CO_2 value for cars (177 g/km).

A full implementation of the concepts of these 85 evaluated companies would lead to an average CO_2 reduction of 0.19 t/a for each employee and an average reduction of 248 t/a for each company. The total CO_2 reduction of these 45 companies is about 23.000 t/a (see Fig. 8).

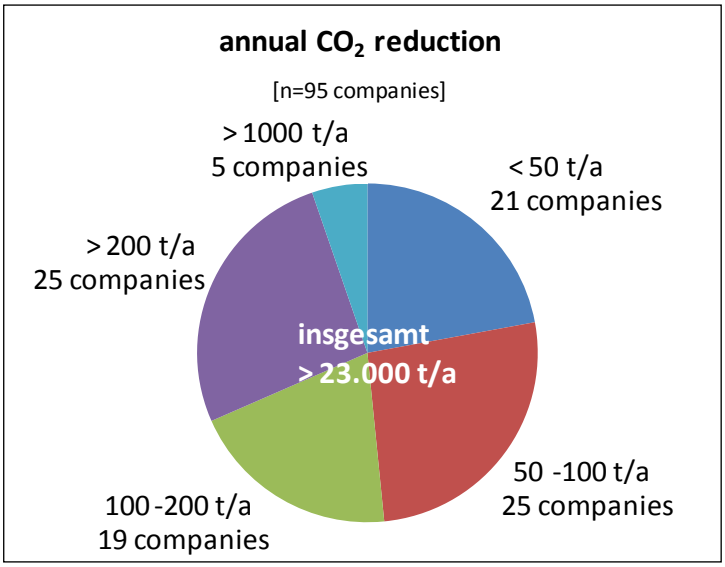

Figure 8. Annual CO_2 reduction

More than half of the recipients declare a high willingness to implement the measures proposed in the concept (see Fig. 9). Because among them are companies with a high potential of cutting down CO_2, 70 % of the cumulative CO_2-reduction potential (which means over 16.000 t) could be achieved with a "very high" or "high" possibility according to the recipients' data. In about 22% of the cases (according to the recipients) the willingness for implementation is "low" to "very low". In these companies there is a reduction potential of a little less than 3.000 t. Anyway attention should be paid to the fact that almost one quarter of the recipients did not provide any data to this topic.

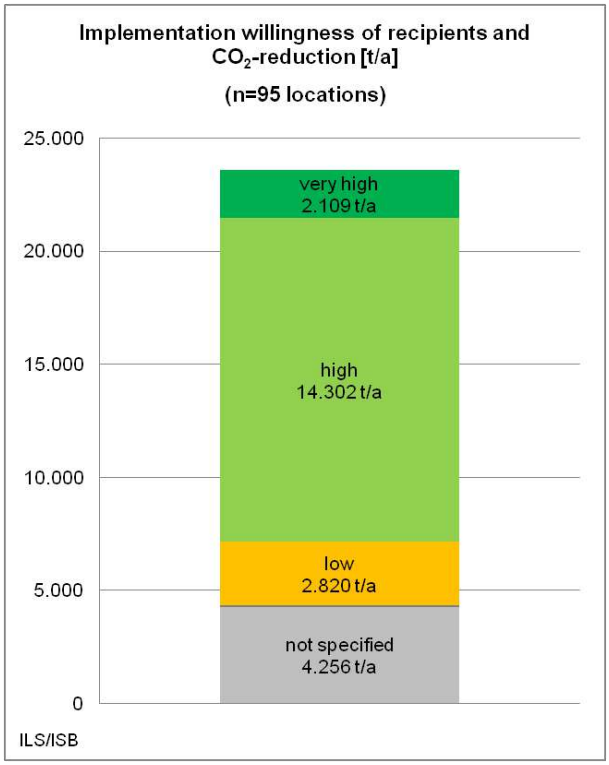

Figure 9. Implementation willingness of recipients and CO_2-reduction

6. Conclusion and Perspective

By extrapolating the data obtained it can be seen that there are, in the companies surveyed, in all some 53.000 people driving to work by car. Some 28 % of these cannot use other forms (public transport / car pools) due to their individual circumstances. However, 72 % could, at least in theory, shift to other means of transport. To what extent this potential is tapped is dependent on the proposed measures and on the locational quality of the alternative means of transport. An analysis of the 85 concepts showed that on average 26 % of the theoretical potential is being tapped.

As mentioned at the beginning it is not possible to calibrate all possible combinations of locations and measures with existing examples, since there is only little

knowledge about the effects of mobility management measures so far. Therefore the different combinations of measures may, with regard to their potential of shift, only be classified roughly. In general it may be said that there is only little empirical data available, so that the presented method needs to be developed with additional data. This data needs to be generated.

As a result it can be stated, that through the Action Programme „effizient mobil" a number of actors could be activated, regional structures were successfully initiated or rather strengthened and new incentives for Mobility Management in Germany were given. Anyhow at stabilising and implementing support is still needed.

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NEW SOCIAL HOUSING POLICY IN URBAN CHINA: EVIDENCE FROM CHONGQING, NANJING AND CHANGZHOU

Mingye LI

Abstract

Launched in the 1980s, China's urban housing reform sparked considerable interest and gave rise to a burgeoning literature. Thirty years later, in spite of improved living conditions of urban inhabitants, soaring house prices have made affordability an imperative problem, especially for middle-and low-income households. In response, the central government began to promote social housing program by establishing ambitious housing development schemes in the late 2010s. This paper aims to examine the role of the new social housing policy at both a national and local level. Adopting a theoretical framework based on productivist welfare capitalism in East Asia, we argue that the new social housing policy in urban China fits into the framework of the productivist model in which social policy is subordinate to the overriding policy objective of economic growth. The pertinence of this integration is supported by the pro-growth urban governance patterns under China's transitional economy. This argument is then verified by the investigation at both a national and local level. At a national level, the social housing policy is closely related to the economic circumstance, especially the situation of real estate market. At a local level, the investigation in three representative cities-Chongqing, Nanjing and Changzhou indicates that besides taking care of a limited number of the poorest urban households, newly built social homes are largely used to ensure the smooth running of urbanization and urban renovation, and to attract both migrant labor and a highly qualified workforce, with the objective of maintaining economic growth and stimulating local competitiveness.

Key words: social housing urban China social equity economic growth

1. Introduction

Launched in the 1980s, China's urban housing reform sparked considerable interest and gave rise to a burgeoning literature (Wu, 1996; Wang & Murie, 1996, 1999; Wang, 2000; Huang & Clark, 2002; Zhao & Bourassa, 2003). According to these accounts, the reform was carried out progressively and a transitional period between the socialist public housing system and the market-oriented housing system can be identified. During this period, transitional compensation policies, such as the sale of

public-sector housing at a low price and issuing housing coupons, the assignment of social housing were adopted in order to promote the housing reform and improved the housing conditions of urban households. Alongside with these policies, two major types of social housing were introduced to Chinese cities-affordable housing (*jingji shiyong fang*) and low-rent housing (*lianzu fang*) in the 1990s. From 1998 to 2002, the floor space of newly constructed affordable housing represented more than 20% of the total floor space of residential buildings started in the same period (China statistical yearbook 1999-2003). Although the initial objective of covering 70-80% of urban households was not achieved, the investment in affordable housing reached a peak in this period (Stephens, 2010; Wang & Murie, 2010).

The circular letter[1] of the State Council issued in 2003 marked a turning point in social housing development in China. It announced that the real estate sector constituted 'the pillar industry of the national economy' and 'commercial housing rather than affordable housing was designated as the housing type of the majority of urban households'. This policy rapidly had impacts on the investment in affordable housing. Between 2005 and 2008, the development of affordable housing sharply declined, which represented less than 7% of the total floor space of residential buildings (China statistical yearbook 2006-2009). As for the low-rent housing, its target group remained very small and in cities implementing this policy fewer than 5 per cent of households benefited (Wang & Murie, 2011). Till 2011, households who benefited social housing system were estimated to only 7-8 per cent of the total urban population (National Bureau of Statistics of China). At the same time, commercial housing prices have been soaring. The average price of commercial housing increased by 103.6 per cent from 1997 to 2007 (National Bureau of Statistics of China). Taking into consideration location factors, the housing price in some regions increased several times (Ye et al, 2010). Housing unaffordability, combined with the increasing income gap, has become an acute problem in Chinese society.

To make amends, the central government declared its intention to promote a social housing policy in the circular letter[2] issued in 2007. At the end of 2008, in order to cope with the global crisis, the Chinese government announced a 4-trillion-yuan stimulus package[3], including the investment dedicated to social housing development.

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[1] Circular letter on Promoting a Continuous and Healthy Development of the Real estate Market

[2] Several opinions of the State Council on solving the housing difficulties of urban low-income households

[3] A decision of stimulus package estimated at 4 trillion yuan (about 570 billion U.S. dollars) was announced by the State Council on November 9, 2008. It would be spent over the next two years to finance programs in 10 major areas, such as low-income housing, rural infrastructure, water, electricity, transportation, the environment, technological innovation and rebuilding from several disasters, most notably the May 12 earthquake. Source: http://news.xinhuanet.com/english/2008-11/09/content_10331324.htm

In the following years, the objective of social housing development has become more and more ambitious; from a programme aiming to protect 7.5 million low-income urban households with housing difficulties in 2009[4] to a scheme to build 10 million social housing units in 2011[5], culminating in the five-year-plan of a total of 36 million social housing units between 2011 and 2015 and the objective to cover 20% of the urban population by social housing by 2015. This change in the Chinese government's attitude towards social housing policy has attracted the attention of scholars in the housing field (Ye et al, 2010; Chen et al, 2010; Deng et al, 2011; Wang & Murie, 2011). Some contributions provided a global view of housing policy evolution at a national level, and several studies focused on the example of large cities as Beijing and Shanghai (Ye et al, 2010; Wang & Murie, 2011; Chen et al, 2010). Yet, very few empirical studies have been conducted to examine the evidence from different regions of the country.

This paper attempts to reach a better understanding of the role that the new social housing policy has played at both a national and local level. Following the introduction briefly presenting the context of the new social housing policy, section 2 discusses the conceptual framework based on the idea of productivist welfare capitalism in East Asia and its application to Chinese experience considering the pro-growth urban governance pattern under China's transitional economy. Section 3 examines the objectives and principles of social housing policy at a national level as well as the position taken by the central government facing the changing economic circumstances. In section 4, the implementation of social housing policy at local level is examined through the examples of three representative cities-Chongqing, Nanjing and Changzhou, which suggests that social housing policies carried out by municipal governments are closely linked with local industrial and urban development strategies.

2. A conceptual framework based on productivist welfare capitalism

Social housing studies are underpinned by theories developed for welfare state and social policies. Esping-Andersen (1990), based on the Western experiences, classically identified three welfare models i.e.: liberal, corporatist and social democratic systems. This analysis has dominated the contemporary understanding of welfare capitalism in advanced capitalist societies (Ronald, 2007) and provides a powerful framework for a comparative analysis (Holliday, 2000). Barlow & Ducan (1994) and Kemeny (1995) extended this approach to housing policy research, which to some extent compensated Esping-Andersen's failure to pay attention to housing (Malpass, 2008). The identification of typology forms a mainstream approach to comparative housing research, which provides a means of understanding the different

[4] Source: The government annual report (2009)

[5] Source: Ministry of Housing and Urban-Rural Development

housing systems and major economic and social factors that shape them.

In the 1990s, capitalist East Asia, emerging as major economic powers, attracted scientific community's interest in the field of social policy, which gave rise to a burgeoning literature (Castell, 1992; Deyo, 1992; Jones, 1990, 1993; Kwon, 1997; White & Goodman, 1998; Doling, 1999; Holliday, 2000). Their aim was to complete the theoretical framework originally based on Western capitalism. Most of these works deal with the example of Japan and the *little tigers*: South Korea, Hong Kong, Singapore and Taiwan, and introduced a distinctive welfare model called "East Asian welfare model". Roughly speaking, there are two explanations supporting this idea. The first is a cultural explanation which emphasized on the 'oriental culture' or Confucianism based on strong kinship tie (Jones, 1990, 1993). The second explanation focuses on the 'productivist' feature of social policies which are subordinate to country's economic development (Holliday, 2000). In accounting for the evolution of family pattern and relationship under the rapid economic growth and urbanization in these countries, the 'productivist' explanation rather than the cultural explanation is more relevant.

Holliday (2000) developed the productivist model by following Esping-Andersen (1990)'s approach. He added a fourth criterion to Esping-Anderson's three criteria ('the quality of social rights, social stratification, and the relationship between state, market, and family') used to classify the three systems. That is the 'subordination to other policy objective'. By applying this criterion, Holliday considers that a productivist world with social policy subordinated to growth-oriented economic policy is distinguished from the liberal, corporatist and social democratic systems. Other accounts based on experience in East Asian countries (Deyo, 1992; Ku, 1995; Doling,1999) hold similar opinions- in general the role of social policies as with all other parts of the corporate plan, is to further the economic goals of the nations.

However, most of research focusing on East Asia was reluctant to include Chinese experience. This was probably due to China's socialist regime and the economic gap with other industrialized countries. Nevertheless, on the one hand, China's fully-fledged marketization led its economy to a capitalist system; and on the other, the country's rapid economic growth during the last thirty years has narrowed the gap with other industrialized countries in terms of economic development.

Indeed, a few recent works attempt to fill the gap by placing the Chinese housing system in a theoretical framework and in an international context. Considering China's hybrid status as a developing country as well as a transition country, Stephens (2010) used the European transition countries as comparators against which to assess China's evolving urban housing system. In view of this, the conceptual framework of the market-housing model was adopted as part of broad framework of transition. Nevertheless, although China and the European transition countries initially had a similar starting point in the housing system i.e. the state enterprise or

east European model of housing; they have experienced different transition after 1989. The different political and economic contexts make the comparison less convincing. Wang & Murie (2011) provides a comprehensive picture of the new social housing provision system in China since the housing reform in the early 1980s. After comparing it with both former socialist countries and East Asian systems, the authors conclude that China is neither following the pattern of change experienced by former socialist state systems in Europe nor those in other East Asian countries or rapidly developing economies, but a distinctive system experiencing with alternative ways of complementing housing market provision. They believe that the recent introduction of the concept called 'basic housing right' and the government's backing in basic housing provision indicate that the government supported housing might again become accessible to a wide range of social and economic groups. However, the concept of 'housing right' adopted by Western welfare states focusing on citizenship might be difficultly to put into be practice by Chinese officials who tend to privilege pragmatic policies oriented to economic growth. Besides, Wang and Murie's analysis of the practice of the new social housing provision system in China is mainly based on the example of Beijing. As it is under central government pressure, and has more political and economic resource than other parts of the country, the capital is a special case in the implementation of social housing policy.

In this paper, we argue that Chinese experience is not a distinctive system but fits into the framework of the productivist model of East Asia. The pertinence of this integration is supported by the urban governance patterns under China's transitional economy. The concept of 'developmental state' which was initially used to refer to the East Asian's newly industrialized countries (Deyo, 1992; Kwon, 1997; Goodmen & Peng, 1996) has been widely applied to urban studies in China. At a national level, the state legitimizes itself by prioritizing development (Wu et al, 2007); and it is more than a market regulator, but market builder and market actor (Wu et al, 2007; Wu, 2010). In particular, the state's intervention is strong in the real estate market with the objective of maintaining its stability and prosperity. Considering the decentralization in the course of China's economic reform, some scholars have applied the concept of 'developmental state' to the local level. Zhu (2004, 2005) describes China's local governments as economic interest groups with their own policy agenda, and thus the local developmental state. Wu (2002) argues the transformation of China's urban governance towards entrepreneurialism. In order to stimulate economic growth, local governments are zealous in promoting urban and industrial development which are seen as two major drive forces of Chinese cities, while tend to put social policy in second place. In terms of social housing policy, we can also identify its subordination to both urban and industrial strategies designed by local decision-makers. On the one hand, newly built social homes are largely used to ensure the smooth running of urbanization and urban renovation; on the other hand,

social housing schemes in some cities aims to attract migrant labor or a highly qualified workforce according to the demands of local industrial strategy and so that to stimulate economic growth and enhance local competitiveness.

3. Social housing policy at a national level

In 2003, the real estate sector was said to be the pillar industry of the national economy, since then its status has never been modified. This sector contributed approximately 1-2% to the GDP growth rate of the nation which varied between 8-11% in recent years (Zhang & Xuan, 2011). Its importance to national economy lies not only in the increasing value of real estate which reached 1185.43 billion yuan in 2007, but also in its driving force in the industries of steel, building materials, as well as in the development of financial industries(Ye et al, 2010). In view of this, to combat the soaring housing price, the central government had to face a dilemma. On the one hand, it sought to deflate the real estate bubble and to reduce social conflicts caused by soaring housing prices; on the other hand, the state is concerned about the stability of the flourishing real estate sector which constitutes the driving force of the national economy.

The central government's dilemma was reflected by the sudden shift of housing price regulations issued between 2005 and 2008. The state began to take measures to slow down the rise in housing prices in 2005. Since then, a series of housing price regulation policies[6] were issued. Nevertheless, the shift occurred when the real estate market was hit by the global crisis in second half of 2008. The central government came to the "rescue" of the market by lowering the interest rate of mortgage loan, reducing transaction tax, and requiring smaller down-payments. These measures deviated from previous policies aiming to cool down overheating market, and finally led to another wave of housing price inflation.

In the following years, soaring housing prices continued to be an acute problem. In this context, the central government embarked on social housing development in 2007 by launching a series of huge development schemes. This actually provides a way to resolve the dilemma. According to the Ministry of Housing and Urban-rural, the social housing policy intends to achieve several economic and social objectives[7]: firstly, to expand domestic demand and to maintain a steady economic growth; secondly, to improve people's living condition and to share the achievements of the Reform and Opening-up; thirdly, to promote social equality and political stability. In

[6] Opinions of the State Council on stabilizing the real estate price issued in 2005, Opinions of the State Council on the adaption of the structure of housing provision and the stabilization of the real estate price issued in 2006

[7] Source: Report on Theories and Practices of Housing Security published by the Ministry of Housing and Urban-rural Development in 2011

the Annual Reports of the Government (2009-2011), the policy concerning social housing development has been included in the measures to promote the healthy and steady development of real estate market. This means that the provision of social housing is deemed to be a housing price regulation tool to cool down the overheating residential property markets. At the same time, the ambitious social housing development scheme could be a new driving force to further economic growth, especially in the context of the global crisis. This explains one of the reasons why bricks and mortar subsidies rather than housing allowance have been chosen at a national level. Moreover, since 2010, the central government has taken tough action to cool down the overheating real estate market. As a result, price growth has been slowing down and the volume of transactions has been falling since early 2010. The substantial investment in social housing development could compensate for the decline on the property market. The floor space of 10 million of social housing units announced to start in 2011 (supposing the average floor space of social housing units is 50 m²) would be equal to 38.7% of the total floor space of housing started in 2010 which reached 1 293 million m² (China Statistical Yearbook 2011). Finally, the aim to reduce housing inequalities is related to the government's concern to make the state more legitimate, stable and supportive, rather than to incorporate the ideology of 'housing right' prevailing in western welfare states. Indeed, for a state which has adopted the productivist concept, the continuous economic growth is the best way to maintain social stability, since a slowdown in economic growth is more likely to hit the most vulnerable population and to arouse social discontent.

Concerning the typology of social housing and the corresponding target group, three types of housing have been designated at a national level: low-rent housing targeted for low-income urban households, affordable housing for low-and middle-income urban households and the newly established public rental housing for the lower-middle-income urban households as well as for the migrant workers and young graduates providing the local financial situation allows to do it. It should be noted that urban household means households with local family registration (*Hukou*). Besides, there are other social housing types which are not strictly stipulated by the state, for instance, commercial housing at moderate price (*Xianjia fang*) and housing for renewal of shanty area. The former one was introduced in 2006[8], aiming to make housing more affordable, and has been carried out mainly in large cities as Beijing, Guangzhou, etc. where high housing price is combined with strong housing demand. The latter one concerns the housing units used to host original residents after

[8] There is no exact definition of commercial housing at moderate price. It was introduced after the promulgation of the Circular Letter related to adjust the housing supply structure and stabilize the housing price in May 2006, which advocated building size-controlled and price-controlled commercial housing. Source: Ding & Chen, Housing system of middle income group and study on price-controlled housing policy, Reform, No.167, 2008(1)

demolishing squatter settlements and old dilapidated houses in old city. Regarding the conditions of application, such as household income, housing floor space, each local government determines the qualifying conditions according to the local situation.

Table 1 Scheme of different type of social housing in 2011

Types of social housing	Low-rent housing	Affordable housing	Public rental housing	Housing for renewal of shanty area	Commercial housing at moderate prices	Social housing in Total
Scheme	1 650 000 units	1 100 000 units	2 270 000 units	4 150 000 units	830 000 units	10 000 000 units
Percentage	16.5%	11%	22.7%	41.5%	8.3%	100%

Source: compiled by author according to the discourse of M. Jiang Weixin Minister of Housing and Urban-rural Development in the 23th session of the eleventh Standing Committee of the National People's Congress (NPCSC)

As shown in the Table 1, in the social housing development scheme in 2011 announced by the Ministry of housing and urban-rural development, the most housing units lie in the housing for renewal of shanty area, followed by the public rental housing; while the previous principal type, affordable housing, accounts for only 11% of the total scheme and the low-rent housing for the most vulnerable people accounts for only 16.5%. This implies that the 'social housing' is actually a broad term which contains a considerable number of housing units for renewal of shanty area, including housing used to relocate expropriated households in the process of urban renewal. This should be understood in the context of a rapid urbanization and vigorous urban renewal in China which constitutes a very important context of social housing policies in urban China. The large number of rural population moving to cities has resulted in substantial housing demand. Yet in the urban-rural dualistic structure of Chinese society, rural migrants have been excluded for a longtime from the urban social security, including social housing. Moreover, in the process of urbanization and urban renewal, local governments use expropriation[9] tools to expand or restructure urban space. Consequently, large numbers of land-expropriated rural and urban households need to be rehoused and paid damages.

[9] China adopted a dual land tenure system under which land ownership is independent of land use rights. The urban land is owned by the state, called 'State Land', while the rural land is owed by rural collectivities, called 'Collective Land'. The municipal government holds the power of expropriation of collective land and state land as well as the attached objects (above-ground buildings, crops, etc.)

4. Social housing policy at a local level: evidence from Chongqing, Nanjing and Changzhou

We assess in this section the different measures taken by three representative municipal governments in implementing social housing policies.

Since China is such a large country with considerable disparities between regions, it is not quite feasible to conduct an exhaustive investigation. Thus, we have chosen three cities-Chongqing, Nanjing and Changzhou- in our analysis at local level. These three cities, each with a different administrative status, different demographic size, and respectively located in the foreland and hinterland of the country provide a relatively complete picture in terms of social housing policy practice (see Figure 1, Table 2). In addition, the first-tier cities like Beijing and Shanghai have not been chosen in our study, since they have been addressed by most of urban research in China, yet their special status cannot represent the general situation of the country.

Figure 1 Location of Chongqing, Nanjing and Changzhou

Source: drawn by author

Table 2 Principal indicators of Chongqing, Nanjing and Changzhou

	Administrative Status	Population in 2010	Percentage of urban population in 2009	Area (km m²)	Average income per capita of urban population in 2009 (yuan	GDP in 2010 (billion yuan

					RMB)	RMB)
Chongqing	Direct-controlled municipality	28,8 million	51,6%	82 300	18 729	585
Nanjing	Sub-provincial city, capital of Jiangsu Province	7,7 million	77 ,2%	6 598	28 278	417
Changzhou	Prefectural level city	4,5 million	61,2%	4 385	26 350	243

Source: compiled by Mingye LI according to the yearbooks of Chongqing, Nanjing and Changzhou (2009-2011)

Chongqing

Chongqing is considered as a model city in implementing social housing policies. It introduced affordable housing in 1998 and low-rent housing in 2002. In 2009, the municipal government announced the aim to achieve the largest public rental housing stock in the country. In 2010, this objective started to take shape by the announcement of an ambitious scheme to build 40 million m² of public rental housing in three years. One year later, approximately 30 000 households were protected by this scheme. At the same time, according to the municipal social housing policy introduced in 2011, the other two systems: low-rent housing and affordable housing were to be integrated into the public rental housing system by setting different rent levels.

Active public rental housing development corresponds to the propaganda of the municipal government to restore the socialist color of the Communist Party. This policy is actually one of the pillars of the 'Chongqing model' aimed at a common prosperity enshrined in socialist ideology, which seems contradictory with the productivist concept.

The public rental housing system in Chongqing is characterized by its broader target compared to the national criteria. The former covers not only urban households with local *Hukou* but also the migrant population with housing difficulties. Precisely, all inhabitants over 18 years of age working in the urban area of Chongqing, with no housing or with housing which has a floor area per person less than 10 m² are eligible to apply for social housing. Recent graduates, migrant workers who have no accommodation in the city are also eligible to public rental housing. The municipal government has set the quotas for each type of population in which migrant workers represent 50% of the target group (see table 3). And a survey[10] conducted on 26,127

[10] Source: Information published by the department of communication of the municipality of Chongqing on the website www.people.com referred in August 2011.

beneficiaries of public rental housing in Chongqing in 2011 shows that these quotas were basically achieved with 43% urban households, 41.3% migrant workers and 15.7% recent graduates.

Table 3 Proportion of different targeted groups of public rental housing set by the municipal government of Chongqing

Groups	Urban residents	Recent graduates	Migrant workers, including migrant farmers
Proportion	30-40%	10-20%	50%

Source: Liu, 2010

In terms of the income ceiling, the criterion has been removed in 2011 in order to achieve a broader social objective of the policy. Since then, housing difficulties has constituted the major condition of applying for public rental housing rather than the income level[11]. Yet for migrant population, an employment contract is necessary for the application. In this case, the criteria could be simplified to 'having job, with no accommodation'.

Based on the investigation carried out in Chongqing, we can identify two types of public rental housing in Chongqing: the first one is the residential area open to all of the three groups of applicants; the second one is the public rental housing located in industrial parks, dedicated to migrant workers.

Kangzhuang meidi and *Minxin jiayuan* are two public rental housing residential areas of the first type. Built in 2010, both are characterized by large size of community (about 50 000 dwellers for each residence), moderate apartment size (between 30 to 80 m²) and high density (high-rises with over 20 floors).

Xiyong microelectronics industrial park, located 30 kilometers west of the city center, provides the public rental housing dedicated to migrant workers. In 2011, 1.2 million m² of public rental housing were built in the park. At the end of 2012 it will host a total of 100 000 employees[12]. It is actually a collection of dormitories rather than a real residential area. Four employees share one room. And each room is equipped with two bunk beds, cabinets and an air conditioner, which means a relatively low level of comfort and a lack of privacy. Yet its proximity to workplace allows the employers to better manage their staff who often work long.

As we can see, the social housing policy in Chongqing emphasized the accommodation for migrant workers who had been excluded from the urban security

[11] Source: http://finance.chinanews.com/house/2012/02-17/3675490.shtml

[12] Source: http://www.chinanews.com/estate/2012/01-05/3582728.shtml, referred in January 2012

system for a long time. On the one hand, this policy does reduce the housing inequality, since most migrant workers have housing difficulties in the city; on the other hand, the social housing programme aims to attract migrant workers who constitute the major labor force of Chongqing. This consideration is related to the city's industrial development strategy.

In 1997, following to the National Western Development Plan, the city of Chongqing was separated from Sichuan province and became the fourth direct-controlled municipality of the country (the other three are Beijing, Shanghai and Tianjin). In this context, Chongqing has become the growth pole in central and western regions of China. However, with a large rural population and a tradition of heavy industry, the per capita GDP of Chongqing amounts to only 40% of that of Nanjing and Changzhou and the average per capita income for urban households in Chongqing is only 66 % of that of Nanjing (see Table 2). In order to narrow the gap with the economic level of coastal cities, the municipal government adopted an industrial upgrade strategy whose aim is to move away from the traditional heavy industry to the modern light industry following consumer demand, such as, the production of electronic devices. This strategy takes advantage of the opportunity that manufacturers initially located in the coastal area of the country are looking for lower cost of land and labor force in hinterland. The provision of public rental housing to migrant workers in industrial parks together with other preferential local policies intended to encourage these companies to move to Chongqing. As a result, several electronic component makers, including Foxconn Electronics (*Hon Hai*), the world's largest maker of electronic components, built their new plants in Xiyong microelectronics industrial park in Chongqing in 2009. To such an extent that the social housing policy plays a role which goes beyond the basic sense of social security, but contributes to the local industrial development.

Nanjing

The city of Nanjing introduced the social housing policy in 2002. Today a multi-target and multi-system housing policy has been developing with the provision of low-rent housing, affordable housing, public rental housing and commercial housing at moderate prices[13]. In 2010, the municipal government launched four mixed social housing schemes with a total floor space of 10 million m², including 76 000 units of social housing. It is composed of 61 000 units of affordable housing, 10 000 units of public rental housing and 5 000 units of low-rent housing. Moreover, in the following five years, the government aims to build 90 000 units of public rental housing and 80 000 units of affordable housing. From these programmes, we can see

[13] In Nanjing, the commercial housing at moderate price is designated for expropriated households.

that affordable housing and public rental housing are the major types of social housing in the provision.

The low-rent housing system is designated for the poorest households in Nanjing. To target this population, the national system of urban minimum subsistence allowance was used. In 2009, there were 2.9% of urban households in Nanjing that received the urban minimum subsistence allowance. Among these households, those who have housing difficulties are eligible for low-rent housing. However, till 2009, there have been only 2200 dwellings in low-rent housing, which was far from being sufficient. As a result, housing allowance was adopted to complete the system. In 2010, from 22,000 households eligible for low-rent housing, approximately 90% received housing assistance instead of accessing low-rent dwelling. Even so, the total households covered by the system accounts for only 2.2% of urban households in the main city (*shiqu*) of Nanjing in 2010.

Affordable housing has been the dominant social housing type in Nanjing. Till 2010, in total 106 437 affordable apartments have been provided, which was fifty times as many as the provision of low-rent housing units (not including the housing allowance). Yet we need to analyze this system by examining the beneficiaries.

Indeed, since 2004, a large part of affordable housing has been assigned to land-expropriated rural households and house-expropriated urban households (see table 4). However, the non-expropriated low-and middle-income beneficiaries accounted for a very small share. According to statistics from the Municipal Bureau of Social Protection and Home Ownership of Nanjing, the proportion of affordable housing granted to land-expropriated households amounted to 73.2% in 2004 and stabilized at around 70-90% between 2004 and 2008. The percentage of those granted to house-expropriated urban households represents approximately 15%. In spite of a slight increase since 2007, the proportion of those granted to low-and middle-income households reached only 8.7% in 2008.

Table 4 Assignment of affordable housing in Nanjing (2002-2008)

Year	Quantity of affordable housing assigned to low-and middle-income households		Quantity of affordable housing assigned to house-expropriated urban households		Quantity of affordable housing assigned to land-expropriated rural households		Total	
2002	1539	52.0%	386	13.0%	1033	34.9%	2958	100%
2003	2511	40.4%	1301	20.9%	2407	38.7%	6219	100%
2004	803	12.8%	883	14.0%	4601	73.2%	6287	100%
2005	269	2.4%	1486	13.3%	9453	84.3%	11208	100%
2006	175	1.2%	2259	15.3%	12285	83.5%	14719	100%
2007	296	1.8%	1946	11.6%	14558	86.7%	16800	100%

2008	1905	8.7%	3447	15.7%	16647	75.7%	21999	100%
Total	8244	9.2%	13460	14.9%	68346	75.9%	90050	100%

Source: Municipal Bureau of Social Protection and Home Ownership of Nanjing

Moreover, among the 61 000 units of affordable housing programmed in the four projects of social housing, 35 000 units were designated for land-expropriated rural households, 16 000 units for house-expropriated urban households and only 10 000 for low-and middle-income households.

The priority given to land-expropriated rural households could be explained by the rapid expansion of the urban area of Nanjing. In the process of urbanization, expanding the urban areas has become the principal means of obtaining factors of production for local governments by reorganizing spatial resources (Wu, 2006). Municipal governments have been zealous in transforming the vast rural areas into industrial parks and new towns. Thus, expropriation of farmlands and homes of rural households constitutes a precondition of such projects. Yet in the urban-rural dualistic structure of Chinese society farmland has been considered as the most important social security of the rural population. In order to promote the urban development and to avoid social conflicts, the municipal government of Nanjing took the task of rehousing the land-expropriated rural households.

As for expropriation in urban areas, it is driven by urban renewal and development. In Nanjing, as in many other Chinese cities, a large number of urban renewal projects are underway. Municipal governments, who have gained instruments of urban planning and expropriation, effectively hold the power of urban renewal planning. Subordinate to the local development strategy, renewal projects have led to a transformation of urban space. Old dilapidated houses downtown are being expropriated and original residents are relocated to the peripheral areas where land is much cheaper. Land use rights of downtown areas are transferred to real estate developers for more profitable projects, such as office buildings or high-quality residences, which provided the municipal government with substantial transfer income[14], one of greatest sources of revenues for the local exchequer. The local government uses this revenue to invest in the development of urban infrastructure, as well as facilities for education and healthcare, so as to increase the city's competitiveness. In Nanjing, many affordable housing schemes located in the periphery were used to rehouse expropriated households. As shown in Figure 2, the inner city has been almost encircled by affordable housing schemes, except for the

[14] Municipal governments, delegating the ownership the State land, assign the land use rights to land users, who shall in turn pay fees for the assignment thereof to the State. Source: Interim regulation of the People's Republic of China concerning the assignment and transfer of the right to the use of the state-owned land in the urban areas, 1990

western part which crosses the Yangtze River. The four newly started schemes followed the existent urban spatial structure, which tend to lead to higher level of social polarization.

Figure 2 Location of social housing residential areas in Nanjing in 2010

Source: The managing committee of social housing development in Nanjing

Xingxian Jianyuan and *Jingming Jiayuan* are two typical affordable housing residential areas in Nanjing. Located in the peripheral areas, each of them hosts around 6500 expropriated (rural or urban) households, approximately 20 000 dwellers. Built in 2006, the residential areas have already showed some signs of deterioration. This is due to the non-payment of maintenance fee. Many dwellers refuse to pay the maintenance, since they are not satisfied with the expropriation and the relocation process in which they had no say in terms of the relocated destination and the levels of indemnity. As for rehoused rural households, although they have gained an urban status, they still have difficulties in integrating into urban society. With no job, many of them let their affordable housing in order to get a rental income. As a result, despite of the rules prohibiting leasing affordable housing, approximately one third of dwellers in *Xinxian Jiayuan* residential area are tenants.

The municipal government included the public rental housing in the local social housing system in 2010. In terms of the target group, besides lower-middle-income urban households, the groups called 'highly qualified professionals', 'young talents' and migrants were introduced. For the 90 000 units of public rental housing programmed in the next five years, 10 000 units were designated for 'highly qualified professional' and 50 000 for recent graduates (including young talents) and migrants workers. The redefinition of target group of public rental housing also corresponds to the local development strategy of Nanjing.

According to the 12th five-year plan in Nanjing, the city aims to become a National Innovation City by 2015 and to transform 'made in Nanjing' into 'innovated in Nanjing'. One of the measures is to promote high-tech industries, such as pharmaceutical chemistry, information & communication, etc. To do this, the municipal government made five human resource plans[15] supporting this strategy. An aim to attract more than 220 000 highly qualified individuals by 2015 was fixed in the 12th five-year plan of the city. Nanjing, as the educational center in southern China, possesses a large number of universities and colleges, and is a potential city of innovation. However, each year many promising graduates decide to start their career in first-tier cities such as Beijing and Shanghai which are considered to provide more opportunities for young talent. Faced with this situation, Nanjing prompted greater investment in 'human capital', including the investment in public rental housing for the young talented population in the hope of reinforcing its competitiveness.

Changzhou

Despite its medium size, Changzhou is a pioneer in social housing policies in China. In 2007, it was one of the first cities to put the public rental housing system into practice; in 2009, it replaced the provision of affordable housing by giving housing allowances for the purchase of a dwelling. The experimental approach is probably due to its location in coastal parts of the country where the policy makers are more open-minded than those of the hinterland. Accordingly, a market oriented ideology in favor of homeownership is reflected in the social housing policy in Changzhou.

[15] *Zijin* Human Resource Programme provides funding for 10 top talented persons (and their teams), 100 leading talented persons (and their teams) and 1000 much-needed talented individuals. *Zhongshan* Young Talent Programme aims to build 20 bases for 500 young talents to start undertakings each year and provides them with funding. *Jinling* famous Artist Programme aims to provide funding for 100 talented artists. Modern Service Industry Programme aims to introduce 5000 talented persons. Highly Qualified Technician Programme aims to train 15 000-20 000 innovative technicians. Source: 12th five-year plan of Nanjing

At present, the city possesses three types of social housing systems: low-rent housing, affordable housing (with housing allowance for the purchase of a dwelling) and public rental housing.

In Changzhou, the low-rent housing system is also intended for the poorest urban households who have housing difficulties. Between 2000 and 2010, 7 212 households benefited from this policy, of which 1 444 households accessed low-rent dwelling, 5 768 households received housing allowance. The coverage rate (including beneficiaries of housing allowance) is approximately 2.3% of the total urban households in the main city (*shiqu*) of Changzhou.

Affordable housing had been the principal social housing type in Changzhou. Till 2010, approximately 12 000 households enjoyed this system. The shift from the provision of affordable housing to housing purchase allowances occurred in the context of economic crisis of 2008. The crisis had a significant impact in the local real estate market: the sales of commercial housing decreased by more than 20%, the stock of new commercial housing for sale reached more than 13 million m². Meanwhile, the income of households tended to decline. Consequently, about 40% of eligible households for affordable housing gave up their right to purchase due to financial difficulties. To overcome this problem, the municipal government phased out the provision of affordable housing and introduced the housing purchase allowance in early 2009. Each eligible household was provided with an allowance of 80 000 yuan for the purchase of their dwelling on the market. In 2011, the allowance reached 100 000 yuan per household. As a result, more than 6 000 households applied for the allowance during the first six months after the introduction of the system, which was five times as many as those in previous years. The statistics collected by the municipal government from 3 120 beneficiaries show that the average floor space of the dwelling purchased by these households reached 94.5 m² and the average purchase price of per dwelling reached 378 000 yuan. In the following phase, the sales of commercial housing have increased by 65%. This means that the measure effectively tackled the decline of housing consumption during the period of crisis. Nevertheless, this policy caused controversies. Mostly because it actually ‘rescued’ the local real estate market during the crisis and prevented housing prices from declining which has made housing more unaffordable for the poorest households.

In 2007, Changzhou was the leader in introducing the public rental housing policy. It also developed two types of public rental housing: one type is the public rental apartment designated for low-and lower-middle income households with local urban *Hukou* as well as households called ‘new urban citizens’ (*xinshimin*) with housing difficulties; the other type is the dormitory designated for recent graduates and migrant workers with housing difficulties. Here, households of ‘new urban citizens’ refer to those without local *Hukou* but who worked in Changzhou for more than three

years under a formal employment contract. This population is considered as more likely to become permanent residents of the city. For this reason, the term ‘new urban citizen’ replaced the pejorative term ‘migrant’.

The public rental housing residences in Changzhou are characterized by their moderate size and lower density compared to those of Chongqing and Nanjing. The two investigated residential areas *Huakang jiayuan* and *Huasheng jiayuan* host about 700 dwellers for each. Compared to the social programmes of Chongqing and Nanjing mentioned before, the social residential areas are integrated into a mature residential zone and have a lower density (building six stories high), thus posing less risk of social polarization. Nevertheless, recently, due to budget cuts, the municipal government is considering replacing the property subsidies for public rental housing (apartment type) by housing allowance.

Public rental housing in industrial parks is mainly used to host migrant workers. In addition of the dormitories dedicated for migrant workers here called ‘blue collar dormitory’, another form of public rental housing, the so-called ‘white collar apartment’, was introduced in the Exportation and Processing Park of Changzhou (see Figure 3). In contrast to the ‘blue collar dormitory’, the ‘white collar apartment’ has more comfortable facilities: larger surface, the rooms are fully furnished and equipped. It is used to host managers who work regularly in the park. The provision of this kind of apartments helps to reduce the companies’ budget used for hotel expense for managers thus making the industrial park more attractive.

Figure 3 Public rental housing in the Exportation and Processing Park in Changzhou

‘White collar apartment’

‘Blue collar dormitory’

Source: author’s photograph, 2011

In recent years, with the acceleration of industrialization in hinterland cities, Changzhou, as other cities in the Yangtze Delta region, has been experiencing a shortage of migrant workers. Unlike the migrants in the previous generation,

nowadays, young migrant workers have more choice in terms of their working destination. They began to ‘vote with feet’. Instead of leaving their family and working in coastal regions, more and more of them choose to work in factories in their own regions or other regions in the hinterland. Although the salary is lower than that in coastal regions, the cost of living is lower as well. This change may have an impact on the local industry in coastal cities such as Changzhou whose economy is still based on the manufacturing industry. In view of this, the local government of Changzhou is favorable for improving the living conditions of migrant workers in industrial parks. Meanwhile, many companies are motivated to develop dormitories for their employees so as to attract low-cost labor force. As a result, the local government and the companies jointly contribute to investing in these projects.

5. Conclusion

This paper has attempted to reach a better understanding of the new social housing policy in urban China by placing it in a framework of productivist capitalism welfare in East Asia. This integration is supported by the ‘developmental’ urban governance patterns under China’s transitional economy in which both the central and local governments place a top priority to economic development, productivity and competitiveness. By using this framework, we can identify the productivist features of the new social housing policy which can be summarized in three aspects: first, being subordinate to economic growth; second, investment-oriented social welfare; third, ‘workfare’ (work-for-your-welfare) policy.

These features are reflected at both a national and local level. At a national level, the social housing policy closely related to economic circumstances It has been given a regulatory role for the residential property market; and been used to stimulate national economic growth during the global crisis. It is undeniable that the new social housing policy has some security elements and the massive development of social housing will improve the housing conditions of part of urban households with housing difficulties. To some extent, it helps to reduce housing inequality in response to the adoption of an idea of ‘harmonious society’ by the Communist Party in 2006. However, the aim is to establish legitimacy, stability and support for the political regime, rather than to ensure citizenship as is the principle of social housing policy in western welfare states.

At a local level, besides taking care of a limited number of the urban households with the lowest income, social housing policy is subordinate to local urban and industrial development which constitutes two principal driving forces of local economy in the context of China’s transitional economy. In order to ensure the smooth running of urbanization and urban renewal, social housing units are used to relocate expropriated urban and rural households. By doing this, local governments seek to

restructure urban space and to obtain more productive resources. Moreover, social housing schemes of some cities have included migrants, young graduates, even highly qualified professionals into the targeted groups, because these groups constitute the productive working class of the Chinese urban society. This is a kind of human capital investment related to local industrial strategies: the local governments have identified the industrial sectors which are essential to local interest and then ensure high levels of investment and preferential supporting policies, including the provision of social housing.

Finally, several questions are raised about the future of social housing development in China: the intense schemes in peripheral areas could result in social polarization and segregation; the targeting determined by the productivist concept is not always consistent with a social objective, and this could produce social injustice; the budget cuts of local governments could eventually hold back social housing development.

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SMART USE OF SPACE
How to deal with the growing pressure of urbanization in Flanders

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Keywords
smart use of space, spatial policy, reuse of space, previously developed land (PDL)

Abstract
Due to urbanization, Flanders, the northern part of Belgium, is one of the most densely built and inhabited regions in Europe. The growing pressure of urbanization is expressed by an increasing built-up surface. Projections indicate that 30 to 50 per cent of the area of Flanders will be built-up in 2050 (Poelmans, Van Rompaey & Batelaan, 2010). To slow down this urbanization trend, a more sustainable spatial development with less use of undeveloped land has to be considered. In the framework of the Spatial Policy Plan Flanders 2020-2050 this principle is translated into the concepts of 'smart' and 'careful' use of space, related to the 'Three R principle' of waste management: reduce, reuse and recycle. Translated to spatial planning objectives, the growing pressure on greenfield areas should be reduced and existing structures should be reused and recycled by constantly reusing them.

This article presents the results of a research for the Flemish Spatial Planning Department and focuses on the localization of reusable space, the stimulating and obstructing factors, its potentials and the integrated implementation in spatial policy. Currently, there is no 'tool' to locate reusable space and the majority of new developments still focus on greenfields. Firstly, the study introduces the idea of 'reuse of space' in Flemish spatial planning. Contrary to the restricted definition of the concept in the field of brownfield development, in this research reuse of space is defined broader than merely the development of contaminated sites. The concept has more resemblance with the term previously developed land (PDL): "land or premises which have been previously used or developed and are available for use with or without intervention" (Ganser & Williams, 2007, p.603). Secondly, the potentials of reusing space are analyzed through different case studies and the amount of reusable space in Flanders is quantified in a GIS-analysis. Finally, in order to implement reuse of space in spatial policy, the resulting data are used to construct different spatial typologies in Flanders, based on the potential reusable space.

The research shows that focusing on previously developed land can be a method to reduce the growing pressure on greenfield sites, resulting in less use of space.

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1. Introduction: Sustainable spatial planning in Flanders

Flanders, the northern part of Belgium, is coping with a growing urbanization. A large transformation in land use from open space (agriculture) to urbanized land takes place, which makes it one of the most urbanized regions in Europa. This transformation results in a fragmented urbanizing pattern and an increasing built-up surface. The proportion of built-up land is significantly higher in Flanders than in the neighboring countries (Poelmans and Van Rompaey, 2009; Poelmans et al., 2010). Today, more than 25 per cent of the Flemish area is developed and according to the different scenarios, this will increase up to 30 to 50 per cent towards 2050.[2] This leads to a growing pressure on undeveloped areas.

If we want to find an answer to this increasing pressure, we should learn to cope in a sustainable way, with the available space in Flanders. In the Spatial Structure Plan for Flanders[3], the concept of sustainable spatial planning has already been introduced: *"a development that meets the needs of the current generation without compromising the ability of future generations to meet their own needs"* (Vlaamse Overheid, 2011 - own translation). As a follow-up for this structure plan, the department of Spatial Planning of Flanders is now preparing the new Spatial Policy Plan Flanders 2020-2050[4] (BRV). In this policy plan, the concept of sustainable spatial planning is translated into the concepts 'smart' and 'careful' use of space. The preparation of the Green Paper for this BRV proposes to let Flanders evolve into a region in which the total amount of built-up land won't increase. With this proposal, they take part in the ambitious objective of the European Commission to run down the additional use of undeveloped land in the European region to zero. At the same time, Flanders has to cope with a population growth from 6.3 million people in 2010 to 7.5 million people in 2050. Consequently, one of the main challenges in spatial policy in the coming years will be to tackle the expected growing pressure on undeveloped land in a sensible way.

Although different studies on the theoretical concept of reuse have been carried out, less attention has been paid to the implementation of reuse in practice. The objective of the study at hand on reuse of space[5], subject of this article, was to provide inspiration to introduce and translate the concepts 'reuse of space' and 'reversible space' into the future spatial policy (BRV) (van Acker et al., 2012). The reuse of space (in addition to intensive and reversible use of space) can be one of the main thoughts for offering living and working space in Flanders in the future.

[2] Percentage of built-up land in surrounding countries: The Netherlands 11.5%, France 5%, United Kingdom 7.5%, Germany 8%
[3] Ruimtelijk Structuurplan Vlaanderen (RSV).
[4] Beleidsplan Ruimte Vlaanderen (BRV).
[5] The study 'Slim Ruimtegebruik door hergebruik en omkeerbaar ruimtegebruik' (Smart use of space by reuse and reversible use of space) was conducted by TRITEL and the Center for Mobility and Spatial Planning of Ghent University, under the supervision of the Flemish Department of Spatial Planning, Housing Policy and Immovable Heritage.

In this article a theoretical framework for 'reuse' as a part of 'smart use of space' is explored. Furthermore, in order to implement reuse of space in the Flemish spatial planning policy, a tool to locate and quantify the amount of reusable space in Flanders is proposed and the categorization of different spatial typologies of reusable areas with a selection of 'hotspots' is introduced.

2. Theoretical framework: Reuse of space within the context of smart use of space

The translation of a more sustainable spatial development into the concept of smart use of space with a focus on reuse of space, asks for a further exploration of the different concepts.

Smart and careful use of space

Careful use of space is defined by Van Den Broeck et al. (2010) as the active and critical use of space to prevent wastage (economical use of space) and to solve wastage (reuse, joint use and new use of space, with renewable sources and materials). It takes into account the carrying capacity of an area and its context and goes beyond individual needs in order to create public added value. This definition is related to the principle of 'reduce - reuse - recycle' as will be described later.

Literally, reuse is described in the Oxford Dictionary as "*use again or more than once; the action of using something again for the second or further time"*. It is not possible to translate this definition unambiguously into a context of spatial planning. Therefore, the next paragraphs try to explain related words and definitions.

Reduce - reuse - recycle

The conceptual framework and the principles of sustainable spatial development have strong parallels with the sustainability principles that were created for waste disposal. By analogy with the principles of waste management, the 'Three R-principle' (reduce-reuse-recycle), also known as 'the ladder of Lansink'[6], may be utilized to reduce pressure on greenfields. If we apply the 3R-principle in the context of smart use of space, in order to do more with the existing built-up space and consequently stop further urbanization, we can describe the basic principles as follows. In the first place (reduce), additional activities should always find a place within the existing and available urban area. By bringing activities in close proximity to each other or even interweave them, possibilities arise for multiple use of the same space. As a result, the demand for space, which leads to a pressure on new undeveloped areas or greenfields, is reduced. Secondly, the reuse opportunities of well-located but insufficiently used space should be maximally utilized (reuse). This is not an easy task, because of the many practical difficulties that are involved with the transformation of existing buildings or decontamination of soils. Nevertheless, through a consistent policy in terms of reuse, brownfield development could be made

[6] The ladder of Lansink is named after the Dutch Politician Ad Lansink, who introduced this method of working in 1979 in the Netherlands.

more competitive compared to greenfield development. Thirdly, we must encourage forms of reversible space (recycle), especially in cases where new open space will be developed. This means that space is conceived as recyclable, with future possibilities to return to an original condition.

Adaptive Reuse and Previously Developed land

In the context of architecture and urbanism, the concept 'adaptive reuse' is used for reuse of industrial heritage. Peter Suzuki defines it as follows:

> *"Adaptive reuse, […] refers to the rehabilitation of a building/set of buildings or district for a use, or uses, different from what the original purpose(s) of the structure/structures or neighborhood had been."* (Suzuki, 1996, p.562)

He describes adaptive reuse as the counterpart of 'demolition in the name of urban renewal', one of the two options for 'previously-developed land' (PDL). In the Planning Policy Statement of London on Housing, following definition is used for PDL:

> *"Previously-developed land is that which is or was occupied by a permanent structure, including the curtilage of the developed land and any associated fixed surface infrastructure."* (Communities and local Government: London, 2006, p.26)

The initial use of this definition has often led to confusion. Although not intended, agricultural land and private gardens were part of the description. This is the reason why the definition is revised in more recent policy documents. In this way, a better definition is given by Ganser and Williams (2007): *"land or premises which have been previously used or developed and are available for use with or without intervention".* To extend this definition, the authors emphasize that the focus is on built-up space.

Brownfield - Greenfield

Reuse is often named in combination with brownfield development. During the last decade, the definition of brownfields has evolved from contaminated areas to a broader definition of underutilized, sometimes contaminated, formerly developed areas.

> *"In common usage brownfields refer to previously developed land or derelict, encompassing a range of sites in terms of size and location."* (CABERNET, 2010)

In this way, the concept has resemblance with the previously-developed land defined by Ganser and Williams. The definition in the Flemish policy documents is similar to the definition of CABERNET. The decree on brownfield development of the Flemish Government states that these wastelands or brownfields have a potential to reuse, but it involves considerable development costs. For this reason, investors and project developers prefer greenfields to brownfields (Vlaamse Overheid, 2007). In the

broadest sense of the Flemish brownfield policy document, brownfields are thus ‘reusable areas’.

Reuse

In the context of sustainable spatial development in Flanders, reuse is one of the methods to cope with the available (free) space. Complementary to reducing the demand for space, it is another method to decrease the development of new (undeveloped) space. The term reuse as used in the study 'Smart use of Space', therefore encompasses more than just the development of contaminated sites, but refers to the broadest definition of brownfields as reusable areas.

Reuse can therefore be defined as using existing built elements, structures or buildings for new or similar functions or destinations, mainly in built-up or developed areas. It is essential that by reusing space, no new (greenfield) areas are used and that it remains possible to reuse space again in the future (reversible use of space). From this point of view, reuse is one of the strategies to achieve a smart or careful use of space.

3. Localization and quantification of the amount of reusable space

Despite several studies on sustainable spatial development and reuse, today, the majority of new developments in Flanders are still focused on undeveloped space or greenfields. If we want to change this policy, it is necessary to be able to indicate and locate reusable space. The remaining part of this article focuses on a tool to locate and quantify reusable space in Flanders and on a way to implement reuse of space in spatial policy. Besides indicating reusable locations, we also try to indicate the reuse potentials. How likely is it that reuse will function at this location? What are the preconditions? This will result in a reuse potential map for Flanders.

Adaptive reuse potential

Shen and Langston (2010) present an interesting study on the reuse potential, introducing the concept ‘adaptive reuse potential’ (ARP) to measure the reusability of buildings. They make a difference between the useful and physical life of the building stock and propose an integrated model to predict the potential reusability of buildings on a micro scale and to advise policymakers on how to deal with it.

To give an ARP score to a building, a number of data (building age, any refurbishment, prediction of physical life of the building, ...) have to be available, which makes this mapping impossible on the scale of Flanders. However, the application of the ARP score could help with assigning a priority to the different buildings with high reuse possibilities that should be taken into account by the policymakers. Thus, when the reusable space is located, in particular the reusable buildings, calculating the ARP score could be a next step.

Localization and quantification of reusable space in Flanders

In order to develop a method to identify reusable space in Flanders, the hot-cold method of Eric Frijters and Atelier Verborgen Land, introduced in the publication 'Tussenland' (2004), can give inspiration. In their research, a list of indicators that indicate the occurrence of one type of wasteland, intermediate land[7], is compiled. These indicators are included in 'condition maps' reflecting conditions which stimulate intermediate land (warm conditions) or hinder the emergence of it (cold conditions). If these 'warm' and 'cold' maps lay on top of each other, an overall picture of 'hot areas' and 'cold fronts' emerges. These maps show the possibility of existence of intermediate land in gradations from white to red. The redder, the more possibilities for intermediate land to emerge. The methodology used in this book is intended to track intermediate land, but with the right adjustments it can be used to locate reusable land.

Screening: hot-cold analysis

The hot-cold analysis in the study at hand on reuse of space is a cartographic tool to locate and quantify interesting reusable areas in Flanders based on GIS analysis. Similar to the methodology described in the publication 'Tussenland', different condition maps are the result. The selection of areas eligible for reuse is formed by several steps.

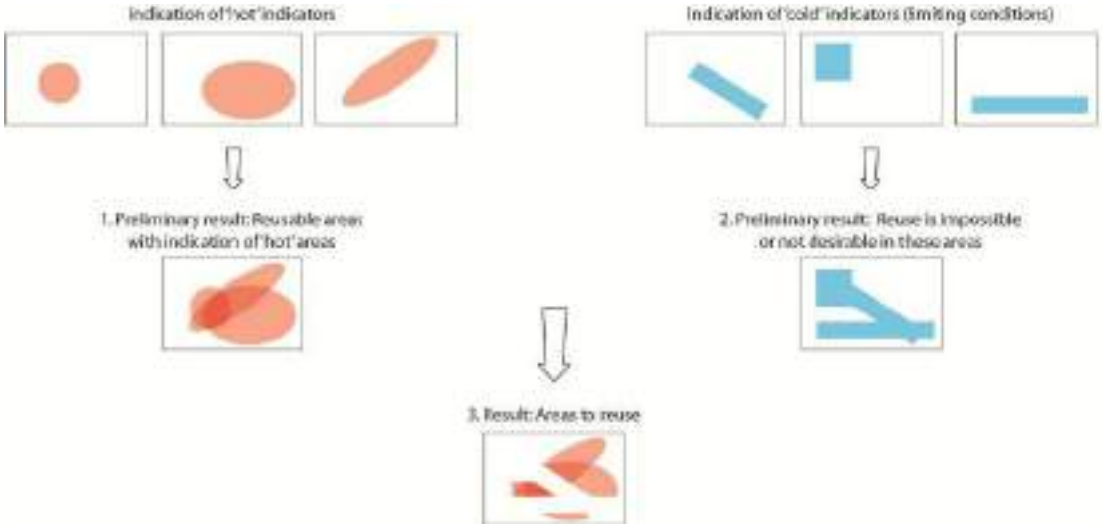

Figure 1. Hot-cold analysis: diagram

At first the hot indicators are presented, an indication of all areas that may be reused (figure 1 - point 1). In a GIS environment, several data layers were collected and represented. By giving a certain transparency to the layers, those places with different 'hot' indicators on top of each other are represented darker. In this way, 'hot areas' appear in which different indicators point to high reusability potentials. Examples of these data layers are empty buildings, contaminated land, architectural

[7] Intermediate land is a kind of wasteland, lying between city and countryside. It has characteristics of both, but cannot be reduced to one of them (Frijters, 2004).

heritage, mining areas, etc. Then, cold indicators provide limiting conditions: in these areas, reuse is impossible or not desirable (figure 1 - point 2). The related GIS data are merely based on nature conservation and development, flood risk, ... A part of the area that was first marked as reusable (point 1), is therefore excluded (figure 1 - point 3). We can illustrate this way of working with an example: in the first phase all contaminated sites are selected as reusable and form a 'hot' layer. Then nature reserves are designated as non-reusable areas; new developments for which nature must yield, are -in accordance with the spatial policy- not desirable. The contaminated areas lying in a nature reserve will therefore not be part of the areas to reuse.[8]

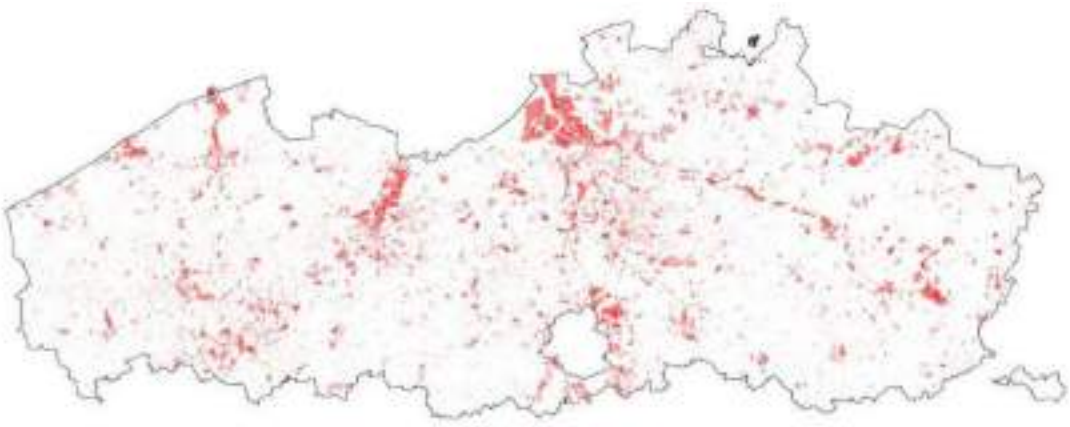

Figure 2. Areas with a high reuse potential in Flanders

The result of the hot-cold analysis is a map of Flanders, with an indication of the areas in which reuse is possible. A distinction is made between areas without opportunities to reuse and areas with a low or high reuse potential. Figure 2 shows the areas with a high potential for reuse. This is about 10 per cent of Flanders. The darker the area, the more factors that indicate potential reuse. The zone that isn't filled in in figure 2 has a lower or even no reuse potential.

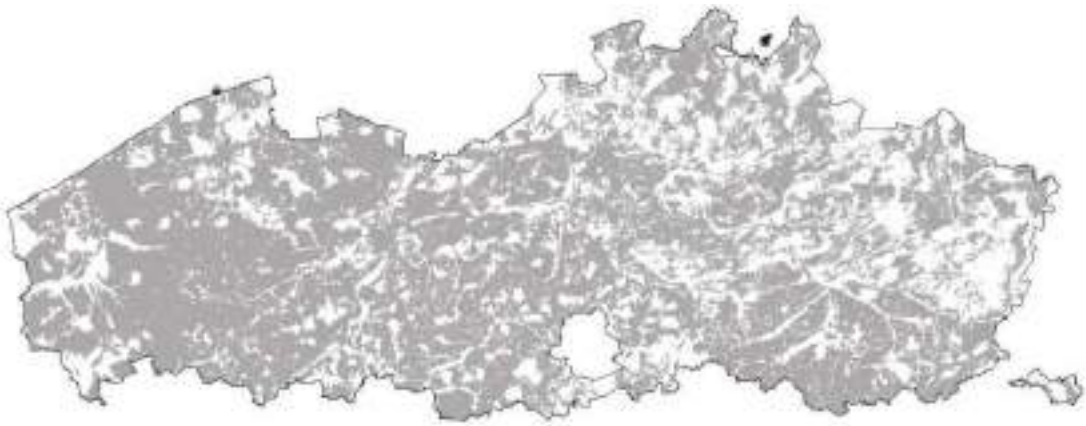

Figure 3. Areas with a lower/no reuse potential in Flanders (gray/white)

[8] This is in line with the reuse definition: reuse is situated in built-up areas.

The distinction between low and no reuse potential is made in figure 3. The gray-colored areas (approx. 63 per cent of Flanders) on this map have a reuse potential, but this potential is lower than for the colored zones on figure 2. The white colored zone in figure 3 was identified as 'cold indicator' (figure 1) and is therefore not reusable. Table 1 shows the reuse potential in Flanders, with a distinction between areas without potential to reuse and areas with a low or high reuse potential. We can conclude that 72.5 per cent of Flanders is reusable in a certain way.

Table 1. Reuse potential in Flanders in hectares and in proportion to the total area

Reuse potential	**Area**	**% of Flanders**
Reuse is impossible or not desirable it these areas (white on figure 3)	373.691 ha	27,50 %
Areas with a low reuse potential (gray on figure 3)	850.900 ha	62,63 %
Areas with a high reuse potential (figure 2)	134.174 ha	9,87 %

Analysis on a micro-level: potentials of reusing space

This screening with a hot-cold analysis indicates reuse possibilities in varying degrees. In a second step, nine case studies were analyzed at the micro level in order to check the screening.[9] The reversibility and reusability profiles were examined, in order to start a research by design (with the desired development in the framework of smart use of space). We do not discuss this analysis on a micro-level in this paper, but focus immediately on the conclusions. Are the areas, indicated as reusable on the Flemish level, also reusable in reality? In most cases they were. If the selection in the general screening was not successful and as a consequence reuse was not appropriate, this could be reduced to three reasons: missing data, opposing factors from the context and terrains that were not immediately available. The case study makes clear that the localization and quantification of reusable area by means of a hot-cold analysis on a scale of Flanders is valuable, but that not all potentially reusable space is (immediately) reusable.

4. Implementation in spatial policy

Ganser and Williams describe that

> *"Urban brownfield sites are a major planning concern across Europe, and most European countries have strategies to reuse them. […] However, approaches developed to tackle these sites vary considerably."* (Ganser and Williams, 2007, p.603)

They admit that the definitions of brownfields are progressive, but in reality the national policies just focus on restricting pollution and decontamination. Integrated

[9] Three cases at a regional level (the 19th century developments of Ghent, the region of Kortrijk-Waregem and the basin of the Rupel) were selected, with three micro-cases in each regional case.

strategies are rather the exception. Schulze Baing compares different policies and admits that

> *"only for a few countries, namely the UK, France, Germany and Belgium, brownfield land and brownfield regeneration has been identified as a national issue, […]."*(Schulze Baing, 2010, p.25)

Flanders, as a part of Belgium, has indeed a brownfield policy, but the sites that are dealt with are merely contaminated sites. Reuse of space, broader then only contaminated areas, is still not adopted in Flemish Spatial policy. After localization and quantification of reusable space in Flanders, it is thus necessary to make some suggestions how to use these results in spatial policy.

Flanders aims at a more sustainable spatial planning with less use of undeveloped land or greenfields. Reuse is one of the strategies to achieve this target. With the current spatial instruments, nothing obstructs a broad implementation of reuse. However, it is evident that not the total amount of reusable area (as mentioned in table 1) can be considered now. Therefore, the study categorizes the areas in Flanders with a high potential on reuse (figure 2) in different spatial typologies, with specific reuse potentials, and selects some 'hotspots' for reuse to stimulate reuse of space (figure 4).

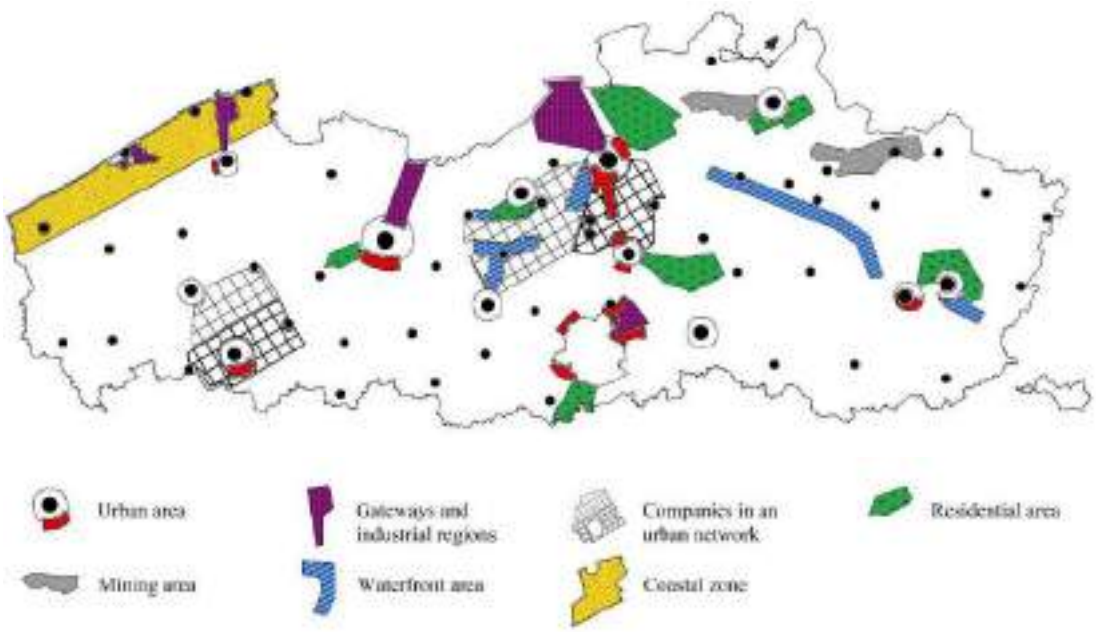

Figure 4. Different spatial typologies of reusable space in Flanders

By categorizing the reusable area, the findings and outcomes can be put together more easily. For example in urban areas (and especially in the city center), reuse is particularly applicable to the level of buildings. Cultural heritage plays an important role in this typology. Typical elements are churches, chapels and monuments, mainly (re)usable for public functions (library, museum,…). In this category, reuse is already a common phenomenon. One city learns from another and some realizations in one city can trigger other cities.

Next to the categorization of different typologies of reusable space, the study offers the possibility to select ‘hotspots’ of reuse to transform the theoretical analysis into realization. Hotspots were defined as areas with the highest reuse potential and with policy priority. This concept of selecting hotspots is in line with the ‘brownfield covenants’ in Flanders. These covenants are used by the government to make agreements with developers and investors (with some juridical, administrative and financial advantages) in order to promote the development of brownfield areas. Similar to these covenants, we suggest the development of charters between the Flemish government and the different actors to promote reuse of space in important reusable areas (hotspots). To determine which reusable areas are eligible to be selected as a hotspot, a yearly updated list can be set up. This list can be linked to the action program of the new spatial policy plan as mentioned before.

5. Conclusion

With the expected population growth in Flanders, the growing pressure on greenfields will not decrease. At the same time Flanders wants to evolve towards a region in which the built-up area no longer increases. Reuse is one of the crucial keys to keep offering space in this context.

The study reveals that by focusing on reuse, it is possible to reduce the extra demand of space without letting it form a threat on societal developments. From the hot-cold analysis we can deduce that there are many reusable places in Flanders. Moreover, the analysis shows that only 27.50 per cent of Flanders certainly cannot be reused (table 1).

To what extent can we reduce or even stop the use of greenfields in Flanders with the principle of reuse of previously developed land? More than 25 per cent of the Flemish space is built-up and projections indicate that without a specific spatial policy, 30 to 50 per cent of Flanders would be built-up by 2050. This means an increase in built-up surface of about 5 to 25 per cent of the Flemish area. By focusing on reuse in the approximately 10 per cent of space with a high potential for reuse, in theory it is possible to limit the increasing hardening at 15 per cent instead of 25 per cent. In the most ideal scenario, it would even be possible to reduce the existing built-up space with 5 per cent by 2050 (instead of an increase of 5 per cent).

This assumption should be nuanced; most likely this scenario can’t be achieved just by applying reuse. This paper is therefore primarily an argument to deal more carefully with the available space and to change the state of mind. The results of the GIS analysis should be understood as a support of this idea instead of exact calculations. The main lesson that can be learned from the analysis is that we can do more with less use of undeveloped space in Flanders, .if we deal ‘smarter’ with the available space.

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EUROPEAN LANDSCAPE CONVENTION. POLICY AND PLANNING INNOVATIONS

Angioletta Voghera [1]

Abstract

The landscape valorisation is a central objective in Europe, since the approvation of the European Landscape Convention (Council of Europe, ELC, 2000). ELC gives centrality to the sustainability strategy, stimulated the development of an innovative system of policies aimed at protecting natural and cultural heritage of the landscape, managing and planning the landscape as a framework of the population lifestyles, as an expression of regional and local identity and diversity, and as an important resource of social-economic and territorial development. The Convention introduces in the pan-European context a reference strategy for action in order to disseminate a common approach in different landscape planning traditions, aimed at valorizing the landscapes for the sustainability of the territories.
The paper discusses the legislative innovations, policies, plans, design methodologies which were developed by various countries during the ten-year period following the approval of the ELC. The recent landscape policies and implementation approaches can be traced to the interaction between European guidelines and historical tradition of heritage protection, planning and management of each Country. In this direction, the paper analyzes the approach, the criticity and the recent results of policies, programs and projects for the valorisation of landscape identity and quality of some countries (as The Netherlands, Great Britain, Germany, Austria, Denmark, France, Spain and Italy). This comparison outlines the role of the different landscape cultures in respect of their tradition of protection of the natural and cultural heritage and with reference to the spatial planning, highlighting the role of heritage for the socio-economic development. The analysis will also evidences: the individual track of each planning culture developed to implement the Convention; the relation among landscape planning and other planning; the role of participation to define policies and projects to enhance identity; the interrelation among different levels of landscape planning; the relation between landscape planning and the projects. It will also describe participative landscape governance and urban design tools aimed at valorize the local identity integrating development and conservation especially in small towns.

1. Introduction

The European Landscape Convention (ELC, 2000) has been ratified by 31 member countries of the Council of Europe (by 23 member countries of the EU). The ELC stimulates development of a set of integrated landscape protection, planning and management policies as a framework embracing the life of the populations, an expression of identity and diversity, a resource for sustainable

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development (Déjeant-Pons, 2006; Jones et al., 2007). It introduces a pan-European reference framework for actions aimed at: basing recognition of identity and landscape values on the populations (art.6c, ELC, 2000; Jones, 2007; Jones and Stenseke, 2011); constructing new values, moving from the protection of significant sites to participation of local municipalities in valorising all types of landscapes (art.5 c, ELC, 2000); integrating landscape valorisation in territorial, economic and social policies (art. 5d, ELC, 2000).

In Europe over the last decade, actions have been taken to support social, cultural, political and economic identity as developed also according to the European Landscape Convention (ELC, 2000).

Many initiatives, international researches and policies in Europe have followed, stressing different aspects of European landscape (Antrop, 2006). Natural (Wascher, 2000), rural (Dramstad and Sogge 2003; Parris 2004; Claval 2004), multifunctional land use (Brandt and Vejre 2004; Mander and Antrop 2003), historical and archaeological (Fairclough and Rippon 2002; Van der Knaap, Van der Valk, 2006) issues has been addressed in many studies and researches, but a transdisciplinary consideration of landscape is caused by the ELC in order to define protection, management and planning policies for the heterogeneity and complexity changes and thus also processes and functions in the landscape.

In this view the paper will try to discuss:

1. What are the influences of the European policies on the landscape? How and if the European level, that has not competence on landscape, could contribute to ELC territorial applications? How to square the system of landscape planning introduced by the ELC with European territorial policies?

2. What are the major innovations of the ELC as compared to national and regional legislation in the countries represented in the study? How do the ideal types of the southern European sectorial system of landscape planning and management and the northwestern European system compare?

3. Which are the major innovative approaches in landscape systems that can be traced to the ELC?

2. ELC and European policies

The innovative scope of the ELC is however hampered by the absence of a European Union landscape policy that, today, is an aspect that undermines its application.

The strong importance of landscape in Europe was already given in the First (Dobríš) Assessment of Europe's Environment: "The richness and diversity of rural landscapes in Europe is a distinctive feature of the continent. There is

probably nowhere else where the signs of human interaction with nature in landscape are so varied, contrasting and localised. Despite the immense scale of socio-economic changes that have accompanied this century's wave of industrialisation and urbanisation in many parts of Europe, much of this diversity remains, giving distinctive character to countries, regions and local areas" (Stanners and Bourdeau 1995). So in the EU the need of a specific landscape policy is strongly evidenced.

Although the EU is not competent for landscape matters, the concept of landscape introduced by the ELC is considered only in part in EU strategies and Laws. The art. 191 of the European Union Treaty affirms the objective of "prudent and rational utilisation of natural resources" which is common to European Landscape Convention and the principles of precaution and prevention prescribed should also apply to landscape policies (Cartei, 2011). In the absence of a specific policy, in the European policies landscape is considered prevalently in terms of effects and impacts (such as transport sector policy, measures for energy, …), that should be controlled and contrasted by specific actions. Only recently landscape is considered a development factor, but landscape importance and value was identified in general in relation to specific aspects (economic, ecological, aesthetic, social, …) in a sectorial way.

The landscape is influenced to a major extent by Community territorial policies, which influence localisation of activities in the territory and generating transformations of the landscape. Community actions with more direct fall-out on the landscape include: the policy of socioeconomic cohesion; transport sector policy; environmental policy; common agricultural policies (CAP); measures for energy; measures for tourism.

The cohesion policy aims to monitor socio-economic imbalances that could be exasperated by completion of the single market, addressing the territory with targeted plans, actions and structural funds. The structural funds for the 2007-2013 planning period are directed towards enhancing competitiveness and developing the local economy, generating long-term effects on landscapes. So far, the EU has dedicated very little attention to these effects. The relationships between the new infrastructures, territory and landscape are, in fact, observed considering the critical issues they generate, reflected in environmental assessments that analyse the positive effects in terms of accessibility, and their negative repercussions on the environment and the landscape.

Adopting various strategic instruments and measures, the policy for the environment, directed towards sustainable development, focuses on management of natural resources and of biodiversity that are important landscape values (reflected mainly in Directives for the protection of natural habitats and of migratory species). In fact, the VI European Program for the Environment (2001, 2007) identifies measures for establishing new relationships between the environment, and government of the territory includes the landscape on the axis of "biodiversity" actions, intended to valorize functioning of the ecological systems.

From the market liberalization with the decoupling of subsidies, the CAP was promoting overproduction and causing – directly or indirectly – severe impacts on European agricultural landscapes (Potter & Tilzey 2005), such as: intensification, pollution, erosion, overuse of water resources, and the loss of natural habitats and value cultural landscapes especially in northern Europe. From the 1999, common agricultural policy tried to reflect an integrated concept of rural development, considered to be an "instrument for establishing a coherent, long-lasting context for the socioeconomic and environmental future of rural areas". From this perspective, the landscape is deemed to be a development factor, necessary to guarantee the multi-functionality and the modernisation of agricultural economy through diversification of activities. The rural policy contributes to consolidate the conceptualization of multifunctional landscapes evolved recently in Europe around the recognition that agriculture produces commodity outputs (e.g. food, fiber and fuel) as well as various non-commodity outputs for society (habitat, scenic values, recreational opportunity, jobs, regional identity). So in this view we can define such landscapes as "providing multiple environmental, social, and economic functions in a given area of land, taking into account the interests of landowners and users" (Lovell and Johnston 2009, p. 214) and social needs.

The European Spatial Development Perspective (ESDP, 1999) expresses an innovative consideration of landscape, proposing a strategy for Europe inserted in a framework of sustainability and linking European spatial policies for infrastructurisation of the territory to urban development, safeguarding and management of the landscape, the protection of nature and of biodiversity.

Considerable stress is laid on European landscapes and on the more representative and sensitive areas to be managed with integrated policies. The concept of landscape that emerges from the ESDP is undeniably interesting and pro-active as it does not simply view the landscape as an "object" influenced by the effects and impacts of territorial policies but considers this to be the basis of a European and local collective identity (Pedrazzini, 2005; Röhring, 2011).

Although a separation remains between "natural" and "cultural" landscapes, the dynamic vision of the landscape that seeks to weave new relationships with planning and government of the territory is interesting.

However, two scarcely integrated concepts of landscape can be still observed in Community strategies:

— The landscape as an eco-mosaic, i.e. as the connective tissue of natural or para-natural habitats, able to promote systems of useful connections for combating the fragmentation of the landscape that threatens biodiversity (IUCN, 2003).

— The "socio-cultural" dimension of the landscape (Gambino, 2008) in policies for rural development and cohesion. In accordance with the latest UNESCO strategies (ICCROM, 1998; UNESCO, 2005), these policies are considerably

broadening the categories of excellent "cultural landscapes" to also include systems able to attract tourists, investments and inhabitants.

These two different concepts also influence national policies, especially in the countries that have a not integrated way to manage territory and natural and cultural landscape (such as the Mediterranean countries as Italy, Spain, France, see p. 3). In the absence of competencies, strategies, and ad hoc financing, activation of the ELC is now assigned to countries that are setting up initial experiments in a diversified and as yet fragmented framework.

In this view the research is focusing on the landscape culture in each country so that the results achieved by activating the ELC can be interpreted, and EU wide visions and strategies developed out of shared knowledge and the methods of acting on and in the landscape.

3. European visions for the landscape

The application of the ELC on the territory, in the various national approaches and results, is the expression of a new social recognition of landscape values and correlated administrative commitment. Furthermore, it is also the effect of a process of "Europeanization" of landscape policies, in two directions: as a top-down effect of European strategies that produce regulatory indications or policies on a national scale (Knill and Lehmkuhl, 1999) or as an influence for the mobilization of states in the construction of international strategies ("bottom up approach"; Börzel and Risse, 2000). The ELC is in fact a soft law (Bulmer and Radaelli, 2004), proposing a common model of governance for CoE member states – adhesion to which is "voluntary" - defined by discussing and exchanging experiences (Prieur, 2004).

There are the following requirements needed to give territorial application to the ELC:

— Legislative innovations inspired by the ELC and/or national strategies to define goals for reinforcing the landscape resource and cooperation between stakeholders, promoting and/or monitoring quality (such as established national and/or regional observatories);

— Actions for community involvement and empowerment in order to create public projects to promote social awareness;

— Developing new projects for landscape based on assessment to analyse the dynamics, characteristics, values and negative values and to establish common goals for enhancement;

— Landscape coherence in territorial policies and the sector at various administrative levels (vertical and horizontal integration);

— Subsidiarity, which requires the definition and implementation of actions starting with the local perception of landscape (bottom-up), in accordance with the European Charter of Local Self-Government (CoE, 1985).

The ELC envisages two interwoven levels of application: the adhesion of the states, and the construction of a common national policy in regional contexts (top-down), with strategies and practices shared by the population (bottom-up).

So the following paragraphs describe the landscape cultures and systems identifying the specific evolution aspects in some study cases relating them to the above key aspect of the ELC application.

States	Signature	Ratification	Entry into force	Notes	R.	D.	A.	T.	C.	O.
Albania										
Andorra	23/3/2011									
Armenia	14/5/2003	23/3/2004	1/7/2004							
Austria										
Azerbaijan	22/10/2003	30/8/2011	1/12/2011							
Belgium	20/10/2000	28/10/2004	1/2/2005							
Bosnia and Herzegovina	9/4/2010	31/1/2012	1/5/2012							
Bulgaria	20/10/2000	24/11/2004	1/3/2005							
Croatia	20/10/2000	15/1/2003	1/3/2004							
Cyprus	21/11/2001	21/6/2006	1/10/2006							
Czech Republic	28/11/2002	3/6/2004	1/10/2004							
Denmark	20/10/2000	20/3/2003	1/3/2004					X		
Estonia										
Finland	20/10/2000	16/12/2005	1/4/2006							
France	20/10/2000	17/3/2006	1/7/2006							

Georgia	11/5/2010	15/9/2010	1/1/2011							
Germany										
Greece	13/12/2000	17/5/2010	1/9/2010							
Hungary	28/9/2005	26/10/2007	1/2/2008							
Iceland										
Ireland	22/3/2002	22/3/2002	1/3/2004							
Italy	20/10/2000	4/5/2006	1/9/2006							
Latvia	29/11/2006	5/6/2007	1/10/2007							
Liechtenstein										
Lithuania	20/10/2000	13/11/2002	1/3/2004							
Luxembourg	20/10/2000	20/9/2006	1/1/2007							
Malta	20/10/2000									
Moldova	20/10/2000	14/3/2002	1/3/2004							
Monaco										
Montenegro	8/12/2008	22/1/2009	1/5/2009							
Netherlands	27/7/2005	27/7/2005	1/11/2005					X		
Norway	20/10/2000	23/10/2001	1/3/2004							
Poland	21/12/2001	27/9/2004	1/1/2005							
Portugal	20/10/2000	29/3/2005	1/7/2005							
Romania	20/10/2000	7/11/2002	1/3/2004							
Russia										

San Marino	20/10/2000	26/11/2003	1/3/2004							
Serbia	21/9/2007	28/6/2011	1/10/2011							
Slovakia	30/5/2005	9/8/2005	1/12/2005							
Slovenia	7/3/2001	25/9/2003	1/3/2004							
Spain	20/10/2000	26/11/2007	1/3/2008							
Sweden	22/2/2001	5/1/2011	1/5/2011							
Switzerland	20/10/2000									
The former Yugoslav Republic of Macedonia	15/1/2003	18/11/2003	1/3/2004							
Turkey	20/10/2000	13/10/2003	1/3/2004							
Ukraine	17/6/2004	10/3/2006	1/7/2006							
United Kingdom	21/2/2006	21/11/2006	1/3/2007					X		

Notes:

a: Accession - s: Signature without reservation as to ratification - su: Succession - r: Signature "ad referendum".

R.: Reservations - D.: Declarations - A.: Authorities - T.: Territorial Application - C.: Communication - O.: Objection.

Table 1 – Ratification (source: CoE, 2011, http://conventions.coe.int/Treaty/Commun/ChercheSig.asp?NT=176&CM=8&DF=&CL=ENG)

Table 1 – Ratification

4. Cultural landscape approaches

This paragraph discusses the landscape culture in the study cases, referring it to some ideal types models, such as the southern European sectorial system of landscape planning and management and the northwestern European system.

Today, landscape is a central theme of international cultural, social and political innovation (IUCN, 2004), inspired by ELC. The ELC has in fact inspired recent innovations in the legislative framework, strategies, plans and projects for landscape of many countries, integrated with "landscape traditions" reinforcing the historical-cultural roots relevant to protection, planning and management, as well as providing guidelines for experimentation in ways sometimes far from the cultural origins. The roads taken by the counties are the result of participation and the reciprocal fertilization between countries discussing the ELC innovations.

North European countries of Germanic-Anglo-Saxon origin (Voghera, 2004, 2006) such as Austria, Germany, the Netherlands, Denmark and Great Britain have been developing actions for the protection of landscape heritage with territorial policies since last century; while France, Spain and Italy - countries with Central-Mediterranean historical-cultural root (Voghera, 2004, 2006) – have drawn up landscape protection policies separated from territorial development and planning. These last nations in fact created, through the development of their legislative framework, a separation between the management of land uses for settlements and landscape conservation. This separation has produced distinct and non-interrelated management tools: territorial planning and safeguard restrictions.

The root also has its own particular terminology.

In the Germanic-Anglo-Saxon world, the term landscape (Landschap in the Netherlands, Landschaft in Germany and Austria, Landscape in Great Britain, …) means cultivated land. In Germany the term also indicates a close relation between the rural territory and local political-institutional and social culture; in fact in these countries "landscape referred both to the conditions and character of the land as well as to the policy within which the people's shaping of the land occurred" (Jones, Howard, Olwig, Primdahl & Sarlöv Herlin, 2007). Venturi Ferriolo (2003, p.24) mentions that the term was used as far back as the 9th century to indicate a juridical-administrative system based on the common identity of those living in the Landschaft. The idea of Landschaft corresponds to the Aristotelian idea of Polis, a territorial area of cultivated land and settlements, in view of the resident population, and visited daily.

In Central-Mediterranean culture however, the term paysage, paisaje, paesaggio (landscape) derives from paese (land-town). The Latin root of paese is pagus, the boundary stone sunken in the ground to mark a limes, the boundary between two properties and systems. From pagus derives pagensis – the root of paese (land or town) – a built-up settlement, which can be distinguished in its structure, form and function from the rest of the territory.

In this sense, landscape refers to the way man inhabited and organized the land (Jackson, 2003).

The terminological roots of Landschaft and pagensis, correspond to opposite interpretations of territory and landscape as a social representation (Turri, 2006), as well as different management models.

If landscape is a selective process with which a society demonstrates how it meets its needs (Morris, 1954), the Germanic and Anglo-Saxon world puts the emphasis on the environmental and territorial resources that the population makes sparing use of in order to live, while the Mediterranean interpretations put the focus on man.

In this sense, landscape is an excellent window for interpreting the culture of a society and understanding the way in which it defends its resources today.

The ELC places landscape at the centre of territorial government, with regulations, strategies, plans and projects on the basis of these cultural roots. Today, the different historical roots correspond to more operative governmental actions in the Anglo-Saxon world and more conservative actions in the Central-Mediterranean culture, as described in the following paragraphs that compare the study cases to the ELC application key aspects (see 2.2.); many cultural and operational indications of the ELC are a traditional feature of the Austria or Germany landscape approaches. Although they have not ratified the ELC yet, they work in the landscape according to the ELC aims.

In fact the Council of Europe has identified The Netherlands and Great Britain as countries in the forefront of its activation by the Council of Europe, (CoE, 2010, Table 1 and 3). Dealing with the ideal type of landscape culture they are (such as in the paragraphs 3):

— Interpreting the approaches taken by legislative, procedural, and planning tradition in guiding the landscape project;

— Identifying innovative instruments to evaluate, finance, and plan the landscape in order to help the EU and other countries to activate a process of landscape policy reform in line with the ELC.

4.2.**The ELC application**

This paragraph will compare the major ELC innovations to national and regional legislation in the countries represented in the study. The declinations and the different speeds with which countries implement the ELC are due to the diversity of European landscapes, all of which cannot be planned and managed in the same way at the various administrative levels involved in landscape government (starting with national and local responsibility), and the tradition of management

(See Table 3). It may be useful to consider some questions that represent useful "windows" for interpreting different cultural roads and results:

— The ratification of the ELC;

— The historical origin of landscape policies;

— The legislative, strategic and operative competence for the implementation of quality goals;

— The definition of "ad hoc" laws, created and/or revised in accordance with the ELC;

— The definition of new analytical tools and tools for action;

— The integration at various governmental levels of landscape and territorial policies;

— The consideration of landscape quality as the goal of territorial and sector policies;

— The social perception and participation in establishing goals and scenarios.

4.2.1. **Ratifications**

The ratification of the ELC is the first step in the experimentation of innovative actions, chiefly aimed at defining synergies for collaboration between public and private stakeholders for the promotion of awareness and the development of new landscape tools. These actions are necessary to reinforce the landscape quality of the territories and to promote reciprocal fertilization between the demand of the territories and the societies concerned (bottom-up), creating a national (top-down) vision, to obtain common and shared results from strategies and policies.

Ratification should be followed by programmatic and legislative innovations from the countries, with the corresponding differentiation in the cultural approach of the regions, adapting and integrating decisions taken at a higher level. The objective of the ELC and the states is to develop and consolidate relations between the various levels. The differentiation between the regions helps explain the "formal" non-adhesion to the ELC of Austria and Germany, who have been working for landscape on the basis of the ELC since the 1960's, but have not ratified the same at a federal level. The ratification of the ELC in fact, requires considerable national and/or federal powers, with legislative competence and/or competence in the management of territory and landscape.

4.2.2. Competencies

Different administrative fields of competence can be some of the most useful elements for interpreting recent experimentation with the ELC.

In Great Britain, the Department for Environment, Food, and Rural Affairs (Defra) ratified the ELC in 2006. Defra, Natural England and English Heritage are the principal institutional stakeholders who, with the Countryside Agency, lay down the guidelines for implementation (2007). They have promoted landscape strategy based on new relations with: strategic tools for governing landscape and spatial planning, to define land use which is compatible with the requirements of enhancement, and on which to base policies for an inclusive approach of social stakeholders. These actions aim to:

— Coordinate the implementation of the ELC on a national scale;

— Promote the public distribution of information and best practices;

— Integrate landscape in planning, the SEA and the local projects.

In the Netherlands two ministries have traditionally competence over landscape action: the Netherlands' Ministry of Housing, Physical Planning and Environment (VROM) – responsible for guaranteeing the integration of landscape strategies in physical planning at all governmental levels (national, provincial and local) – and the Ministry of Agriculture, management of nature and fisheries (LNV) – which controls the effects on landscape of rural development actions, biodiversity and planning open spaces. The Ministry VROM was merged with the Ministry of Transport, Public Works and Water Management into the new Ministry of Infrastructure and the Environment (MIE) on 14 October 2010, integrating much more urban and infrastructure policy and quality living actions. In fact, starting to the National Spatial Strategy 2011 the spatial policy tries to balance urban, rural and water management, environmental and safety actions, defining basic quality standards for landscape, water areas, buffer zones and green spaces in and around urban areas. The Ministry LNV was merged with the Dutch Ministry of Economic Affairs to form the new Ministry of Economic Affairs, Agriculture and Innovation (MEL&I) on 14 October 2010, contributing to reinforce the integration among economic, social and development of the quality of open territory and landscape.

The ministries worked in close collaboration and, since the 90's, have been the co-authors of national strategies for quality (such as the Landschap Agenda, 2008), the result of a process based on the assessment of social landscape perception.

In Germany and Austria, in the federal regulatory framework, the Lander are responsible for legislative, programmatic and operative landscape matters. These are characterised by a consolidated tradition in landscape planning and management, dating back to the common law of 1935 (Reichsnaturschutzgesetz, 1935), which laid foundations for the protection of nature and landscape in the post-war period (Ferry, 1994), although today this is no longer the case. In Austria, federal law requires that landscape plans and territorial government must correspond to various administrative levels, with subsequent national laws making the two tools independent. The landscape plan is a tool of protection, for the

functional and managerial organization of protected landscape-environmental areas and/or areas subject to considerable anthropic pressure, but it is an independent tool of territorial government and does not include urban areas.

In Germany however, since the 1970's the national Bundesnaturschutzgesetz (1976 and subsequent amendments) defines a common policy for the eco-compatible transformation and use of the territory. It lays the foundations for: going beyond the dichotomous vision of anthropic and natural environment, which characterized the origins of measures for protection; an evolution after establishing protected parts of landscape with significant value, to the definition of a specific discipline on use and transformation; establishing plans of action for landscapes. For this purpose, a system of landscape plans are envisaged – integrated at all levels of territorial government (federal, state, local) with territorial planning – and projects for including and/or limiting impact.

France and Italy are characterized by the separation of the protection of excellent landscape assets and the enhancement of the same.

In France – the paysage law of 08/01/1993 and decree no. 94.283-11/04/1994 directives de protection et de mise en valeur des paysages – gives the state the task of passing directives for the protection and enhancement of landscapes (excellent landscapes, art. 1), while local bodies draw up guidelines for the daily management – in the planning and project.

In addition to applying the Cultural Heritage and Landscape Code (2004 and subsequent amendments), the state in Italy protects the assets and values of the territory using Regional Superintendencies (Soprintendenze Regionali, responsible for the conservation of heritage and landscape), while the regional authorities implement policies for the enhancement and orientation of the transformation processes with the landscape plan. The Code introduces the action of protection with the creation of new values, disregarding the role of landscape in favour of economic development. There is the possibility that the regional landscape plan may be more effective on ordinary processes of territorial transformation (Peano, 2009b), in cases where the Code envisages the following contents of the plan: the limitation of land consumption, establishing guidelines for urban development, focus on rural landscapes and Unesco sites, the possibility of establishing guidelines and incentives for the project.

In Spain the competence, the approaches to landscape and the methods with which funds are made available vary notably from one comunidad autonoma (region) to another. The establishment of Landscape Observatories on a regional scale (such as in Andalusia, Cataluña, etc.) to promote awareness provides guidelines for implementation and integrates development and landscape policies, is an experiment worthy of note. The case of Cataluña is particularly interesting which, through the Observatory, set up in accordance with law 8 - 2005 (Ley de protecció, gestió the ordenació del paisatge), draws up a "catalogue" of

landscapes and develops a method of assessment for the integration of landscape goals in territorial strategies with the participation of social stakeholders.

4.2.3. Regulations

One of the main problems with the implementation of the ELC is the need to extend the action of landscape policies to include the entire territory. This requirement has obliged some countries – such as Italy – to reform the legislatory framework and the characteristics of governmental tools; in fact the approval of the Cultural Heritage and Landscape Code (2004 and subsequent amendments), extends the planning action to the entire territory including excellent, ordinary and degraded landscapes.

The new season of planning is very much focused on landscape (innovation in Sardinia, Piedmont, Veneto, Liguria, Tuscany, Umbria, Abruzzo, Molise, Apulia). In fact in the regions, starting with "the analysis of landscape characteristics, dictated by nature, history and the interrelations of the same" (art.143a) the positive and negative values of landscape are represented to provide guidelines for protection, planning and management.

Landscape planning, for the protection and enhancement of landscape assets, is organized in descriptive, constructive and prescriptive terms (art. 143); the historical, natural and aesthetic values of landscapes and their interrelations are established through knowledge of the same, to: identify the "ambits" (135, 2) and draw up regulations for landscape use and quality goals. The Code – interpreted in different ways by the various regional authorities – is subject to discussion and experimentation to: define State-regional agreements and establish new relations between the regional authorities and the Superintendencies for the relevant competence in the construction of the plan and procedures for authorization; the form of the plan and its relationship with territorial and local planning, responsibility for interventions; the form and contents of the regulatory framework of landscape plans.

Great Britain, the Netherlands, Spain and Denmark have failed to approve a specific law for governing landscape, with reference to various legislative documents and for the orientation of policies for the protection of nature, monuments and territorial governance. In 1993 France passed a landscape law (Law of 08/01/1993 for the protection and enhancement of landscapes, the so-called Loi Paysage), integrated by Decree no. 2006-1643 – 20/12/2006. The law of 2006, while partly implementing the ELC, makes a distinction between territory and landscape. Territory is "an administrative entity, and dealt with as such", to be managed and organized along common lines, although for individuals and the society living in the territory however "a landscape can be, and will be perceived subjectively, by an individual or social category". In comparison with the law of 1993, which made no clear distinction between territory and landscape, the new law provides an aesthetic-perceptive view of landscape. Furthermore, it

requires that the SCOT (regional plans) and PLU (local plans) must be compatible with the "directives for the protection and enhancement of landscapes", establishing indications for excellent landscapes. The most important part of the law concerns the management of rural environments and gives prefects extensive decision-making powers.

These innovations give institutional bodies more powers (top-down) in Central-Mediterranean countries, partly contradicting the spirit of the ELC, which promotes the involvement of the populations.

4.2.4. **Historical roots**

Landscape is in continuous transformation; it is a "metamorphic entity" (Pesci, 2004, page 13), which lets us interpret the culture of places or non-places and the historical evolution of the same. By interpreting the function and role of landscape, we can see the change in cultures and their ethical and social structures in the 20th century.

The origin of landscape theory, as well as regulatory and planning action, is the way in which a society has learned to acknowledge and reinvent lost "wilderness" (Zanzi, 2004, page 24). The origin of social sensitivity for landscape for the most part dates back to the middle of the 19th-century, as a reaction to major changes associated with processes of industrialization and urbanization as a consequence of poetry, literature and paintings created thanks to new possibilities for travelling (Bonesio, 2007, page 101). This sensitivity, then as now, has manifested itself in various forms in different countries.

In many cultures (such as in the Germanic-Anglo-Saxon world – the Netherlands, Great Britain, Germany and Austria) landscape policies aimed at promoting productivity and preserving diversity and quality stem from the conservation and management of agricultural land. In rural management – which can be found also in the terminological root of landscape – there is specific focus on protection and planning through a multi-scale project (on a vast and local scale). This project has influenced territorial government, generating regulations, plans and implementory tools (financial and managerial) with strategies for the organization and management of rural landscape. The rural root of the policies refers to a distinctly operational approach; the original operativeness can be seen in integrated policies for protection, planning and management, and in the complementary actions of the project (the creation of databases, guidelines, and in the study of economic resources).

From this common root- which developed by a different cultural, political-institutional, and procedural history- emerged the environmental issue, which gave birth to the search for interaction between the safeguarding natural and cultural contexts and the transformation of territory adapted to economic development. Territory and environment in the political-cultural and regulatory

histories are closely linked. This link is evident in the ecological-functional analysis of: the environment as a place from which man extracts the fundamental resources necessary for his own survival (Scazzosi, 1999, p. 18); nature and landscape as social and economic resources. These concepts explain the interrelation between territorial use and natural processes in sustainability policies. The integration between socio-economic and territorial development and the safeguarding of natural and landscape contexts is therefore the characterizing element of the Germanic-Anglo-Saxon tradition.

In Central-Mediterranean culture, the terminological root of paese (a land or town considered as a built-up area) corresponds in Italy and France to an action on the landscape to protect historical-cultural assets, and in Spain to conserve the physical, natural and "material" resources, necessary for the survival of man (see cultural movement of regeracionismo; Gòmez Mendoza, Ortega Cantero, 1999, p. 137). The principle of stock-taking assets, including new categories in time (from monuments to principal ecological-environmental values and systems), is still a characterizing element of the protective action, for which today landscape is a parallel/superimposed element of functional, perceptive and symbolic integration between the "systems of assets and values" in the/of the territory.

In Central-Mediterranean countries the cultural approach, created through the development of their legislative framework, a separation between the management of land uses for settlements and the conservation of the territories of exceptional ecologic, aesthetic, and historical-cultural value. In fact, even if by means of different cultural and technical paths, this separation has produced distinct and non-interrelated management tools: territorial planning and safeguard restrictions. However, in both cases, limitations characterized the conservation efforts that found, until recent years, some interaction with territorial planning, aimed essentially at the transformation of territory for socio-economic development.

4.2.5. Identification and assessment

The first result in the implementation of the ELC is the processes for the identification and assessment of landscape (art. 6c). In fact "landscape, in other words the relation in terms of aesthetic sense and investment, does not exist unless the relation with natural space is perceived, interpreted and produced by a specific culture, which in turn is the recipient of an image" (Bonesio, 2007, page 24). Interpretation and assessment of landscape are the first operations in the selection process to define landscape guidelines and projects. Landscape assessment goes in this essential direction, and must be an argumentative process for the identification of positive and negative values for planning policies, to be created thanks to dialogue with the stakeholders and populations concerned (Brunetta and Voghera, 2008). The shared perception and representation of a landscape, through the social legitimation of values and criticalities, can only be guaranteed through a process of assessment. Despite the diffusion of good practices to identify landscapes (such as the International ECOVAST), a clear

methodology is required to define a structured program of actions for sustainability – starting from the legitimation of "values".

The assessment of landscapes must become the tool on which decisions are made and for communicating quality goals of landscape and territorial planning (CoE, 2008, Recommendation for the implementation of the ELC). In this direction, the most consolidated experiences are represented by Landscape Atlases (Peano, 2009a) or Landscape inventories set up years ago in many national contexts to identify landscapes on a vast scale (national or regional), through landscape units as in France, the Netherlands, Slovenia, France, Great Britain, Denmark and Germany. These methods of analysis attempt to integrate the objective and subjective descriptions associated with collective imagination and sensitivity for the places in question.

Jacobs (2002) on this subject mentions that there are two main approaches to research for the interpretation of landscape: "the descriptions in and of the landscape" (Tress B., Tress G., Fry, 2006, page 15). The first approach hails to the methods established by natural sciences from Descartes on, and makes a distinction between the subjective and objective dimension, separating the populations from the landscape as the context in which they live their daily life. The second "constructivist" approach is related to social sciences and acknowledges that landscape is constructed through daily interaction with society; this second approach puts greater focus on the values associated with the sphere of subjectivity such as sustainability, livability, beauty, utilization value and the potential value connected with possible future transformations.

The descriptive experiences, developed in European countries, are based too often on the first approach. In fact, we are still far from a real and effective involvement of the local social and economic stakeholders.

Furthermore, while these experiences appear to be effective in describing landscapes, they do not however represent the dynamics and trends associated with socioeconomic and territorial processes and are therefore all but ineffective for outlining prospects for action.

The most interesting methods have been developed in north European countries with a more consolidated landscape tradition. In Norway, Denmark, England and Wales there is widespread use of fact-finding GIS database systems to describe and distribute information on landscape as a "cultural environment", which constitutes a spatially delimited area the characteristics of which depend on the society that created and continues to use and transform the same (Etting and Møller, 1997). These methods have a similar approach as they develop a repeatable system of analysis, consistent in the quantity of data and qualitative type assessments, characterized by the focus on the relations between the historical-cultural characters of the places and landscape from an ecological-environmental point of view (Møller, Stenak, 2006). There is need for greater

integration with the planning tools used for the territory and landscape, and with those used to support the assessment processes (in particular the EIA).

Germany, Austria, Great Britain and the Netherlands base action for landscape on description and assessment. Guidelines and projects, coherent with the expectations for development of the socioeconomic stakeholders, are based on knowledge of the landscape. The result is landscape planning used as a concerted tool for the quality of landscapes. In these countries, the process of assessment is based on techniques that attribute judgments and degrees of value to the landscape units or ambits and – through the association of qualitative criteria and quantitative parameters – define strategies and interventions (Landscape and Historic Character Assessment in Great Britain, assessments on a Land scale for German landscape plans, Wardewolle Cultuurlandschap or the monitoring of perception and landscape appreciation in the Netherlands). Landscape guidelines are a strategic tool for the orientation of policies and projects in Great Britain, and are the source of the process of negotiations between public and private stakeholders to define common actions (such as the Village Design Statement).

There are also interesting attempts at innovation in France. The Atlases and the Charte Paysagère interpret current landscapes characters, the dynamics of socio-economic and territorial transformation, the pressures to define operational indications, based on paysage directives (for the transformation of excellent landscapes) and the territory plans of government.

In Germany however, the contents of landscape planning, coordinated on all administrative levels with territorial programs and plans, are defined by a complex mechanism of inter-institutional cooperation and, on the local scale, with social participation. Landscape assessment at every level of planning develops in the following phases (Brunetta and Voghera, 2008): description of the characters and state of use; qualitative and quantitative definition of goals for protection and enhancement; assessment of the state of use in relation to the goals; establishing criteria for action.

From the construction of analytical and interpretative landscape tools, landscape planning provides a framework of planning, economic-managerial lines and indications for the enhancement of landscapes, which involve local subjects in actions of sustainability, defining a territory and landscape project for biodiversity, the use and mitigation of anthropic pressures.

In Spain there has also been some experience in the assessment of landscapes with reference to the National landscape atlas Atlas de los paisajes de España (2002) and the Plan nacional por los paisajes culturales (Salamanca2002), for the long-term transformation and enhancement of cultural landscapes, through measures for the management of natural, rural and urban territories.

The Atlas divides the territory into characterizing landscape units, landscape types and associations starting with the interpretation of land use, dynamics, values and

perception. Furthermore, to support landscape planning, the Spanish Ministerio de Medio Ambiente has drawn up a Guide for the assessment of natural, ecological-perceptive characters and land use of the territorial landscapes; the assessment methodology interprets the value of landscape using qualitative and quantitative type indicators. Some significant components of the landscape such as the ecological fragility and visual quality are evaluated, integrating the vision of the experts with that of the population in different phases. The intention is to describe the landscapes using the more qualitatively interesting and integral values and aspects to the best effect in the construction of policies for protection and/or enhancement.

4.2.6. Integration and participation

Landscape studies are based on three major systems (Jacobs, 2006, page 11): Matterscape, Powerscape and Mindscape. Initially based on a reworking of the theory of Habermas (1984), the focus in each case is on:

— The real or objective world (Matterscape);

— The regulatory sphere (Powerscape), which depends on the indications, regulations and policies as a whole;

— The system of perception and thought, which derives from the expectations and emotions of the populations living in and visiting a certain landscape (Mindscape).

The ELC on the other hand indicates that the landscape derives from:

— Its objective characters, the ecological-environmental, historical-cultural and settlement aspects, land and economic use;

– The regulatory and political processes as a whole, which contribute to its continuous re-construction;

— The social perception of positive and negative values and policies.

Landscape studies and policies must both integrate these systems. It is only through integration on all levels of territorial government between materiality, rules and perception of the landscape that we can draw up plans and projects to establish shared visions for the daily management of landscapes.

Nevertheless, the landscape object is all too often interpreted as the passive effect of policies and processes based on plans and strategies that do not give due consideration to the populations. An important step in this direction can be the assessment for the explicit definition of values and criteria for selection, to identify quality goals for planning and management (Brunetta and Voghera, 2008). Participation plays a central role in the process of assessment because it is

a tool of communication and support to integrate decisions and policies, as well as acknowledge shared values and identify possible planning scenarios.

The integration of policies and the participation of populations (CoE, 2006) are in fact key aspects in the implementation of the ELC. The integration of policies must be interpreted as: integration of European recommendations in national strategies, inclusion of landscape in sector planning and policies (art. 5d).

Integration must envisage the construction of strategies and actions, which are coherent on various levels and allow for different landscape and territorial contexts, as well as also economic goals and resources, and the processes regulated by the plans. This integration requires also a different model for the construction of decisions, through extensive social participation.

In this sense the Dutch model is in line with the idea of the integration of policies indicated by the ELC. In fact, in the Netherlands the latest landscape policies are drawn up with a significant amount of information gathered on the social perception and appreciation of landscapes. To assess the social perception and appreciation of landscapes, a GIS model was developed to combine the data on the physical-morphological characteristics, land use, and historical-cultural information with data on appreciation of the aesthetic qualities obtained in interviews carried out in 2006 on a sample of 4,500 people (Farjon, 2007). This method made it possible to test the effective representation of landscapes with a national value, subject to actions of enhancement, to define shared strategies as in the Agenda Landschap (2008); this is a strategy for the enhancement of landscape, structured on the basis of types of action (rural environments, urban landscapes, green and protected areas, etc.), based on a programmatic-operational model which associates economic resources and responsibilities for implementation on the various scales of government with the actions - in accordance with the budget-programming system (Faludi, 1994). Landscape policies are therefore the result of a shared process, starting on a local scale, and implemented in the project.

In Germany, integration between landscape choices is guaranteed by construction in mutual coherence of strategies and goals for landscape and territory plans, from the national to the local scale. The planning and management of the English landscape is also characterized by a system of coherent strategies at various administrative levels; through the assessment, methodologically consolidated and based on participation, shared guidelines are defined, to be implemented in plans and projects.

Also in Denmark there is an interesting example of participative approach for defining landscape visions; the study combined scenario technique, photorealistic visualisation and stakeholder participation to identify the interests of stakeholders in the future countryside (Tress & Tress, 2003). Scenario visualisation by photorealistic design techniques proved to be a helpful tool for researchers in communicating the proposed landscape changes to stakeholders.

While research into the integration of policies for landscapes and for the development of the territory is a common element of Germanic-Anglo-Saxon tradition, there are significant differences in terms of social participation.

The Aarhus Convention (UNECE, 1998) identifies three occasions in which participation is necessary for:

— Decisions concerning specific activities,

— The construction of plans, programs and policies,

— The preparation of laws and regulations.

It indicates that the "public" must be informed effectively and in good time, to be able to analyse the proposals and express an opinion in verbal and/or written form, and exercise their own influence; it is only through a process such as this, with interesting applications in Great Britain, that the decisions taken can be considered the result of a process of public participation.

There are different forms of participation for making shared choices (CoE, 2006):

— Public discussions to assess studies on landscape impact (as in Belgium);

— Public communication of the results of the studies on impact or on scenarios of transformation (as in France);

— Written public observations on plans or scenarios for the transformation of landscape (as in Spain, Italy, Austria, ...);

— Discussions with the population for the construction of landscape scenarios (The Netherlands, Germany, Great Britain);

— The organization of a public referendum on landscape choices (in Turkey and France).

Great Britain, the Netherlands and Germany have consolidated experience in the promotion of awareness and the education of economic operators and the population, more frequently involved in maintenance and management (especially farmers). It is only in the Netherlands that landscape strategies, implemented in physical planning, are based on the negotiated construction of decisions taken with institutions, economic and social stakeholders from the phase for the identification of the values of landscape identity and appreciation, to the operational phase. However there is greater focus in both the Netherlands and Great Britain on the "strategic" dimension in the vast area of landscape policies, from which also actions on a local scale derive. On a local scale, actions for protection, enhancement and planning concern the ecological, aesthetic-perceptive and physical quality of small town centres or rural territories (UK Village Design Statement), where it is easier to involve the populations. The town and its private

and public spaces are in fact too marginally involved in landscape enhancement and innovation processes.

5. The Dutch and United Kingdom study case

5.1. Policies for landscape and the Agenda Landschap

Without a national physical planning document until after the Second World War, strategies for rural development were used to define action to be taken for landscape. Because measures for protection and fruition of the territory are intimately related to the agricultural-productive exploitation of the territory, the Law for development of agricultural territory (1924, revised in 1938) promoted largely innovative improvement programs and land reorganization.

Conservation of the historic-cultural character of agricultural landscapes by including production has become the central aim of agricultural economic diversification projects that play an important role in the ecology and identity of the territory. Local landscape plans (Advieslandschapsbouw) for rural landscapes have been experimented with and are co-ordinated by provincial Structural Plans for Landscape (Landschapsstruktuurplannen). Both of these instruments are "voluntary" and are used to solve specific problems (ecological, aesthetic, fruition, production) and are activated through local urban plans (bestemmingsplans).

During the 1970s the policy for landscape quality became an integral part of the all-inclusive territorial and environmental valorisation strategy and were included in physical planning at the various levels of territorial government. In fact, the policies are applied in:

— Ministry of Economic Affairs, Agriculture and Innovation (MEL&I) (MEL&I) strategies to rationalise agriculture;

— Ministry of Infrastructure and the Environment (MIE) action on the government of the territory;

— Specific measures to protect historic-cultural monuments by the Ministry of Education, Culture, and Science;

— Valorisation and transformation projects defined by physical planning (national, provincial, and local).

Each ministry published its own policies through "memorandum documents" for decades. Each document defined partially co-ordinated strategies identifying their own management and protection categories.

Moreover, an ad hoc law for the landscape has never been passed while theoretical references and objectives for its valorisation are found in the

Conservation of Nature Act, the Land Redevelopment Act, and in the Physical Planning laws (1965, 1985, revised 2008).

Landscape objectives are expressed in various documents, programs, and economic resources contributing to:

— The construction and development of landscape including through reclamation in order to satisfy demand for land for residential and economic-productive uses.

— Maintaining and valorising existing landscapes from the ecological-environmental and historical-cultural points of view.

These needs are reflected in the physical planning (at local and provincial levels), responsible for co-ordinating the landscape policies. The rules, planning choices, financial conditions, and the responsibilities for putting the policies into practice are defined in the physical planning.

The Agenda Landschap (2008) is an innovative national strategy promoting policies and transformations to protect, plan, and manage both excellent and ordinary rural and urban landscapes, starting from the study of social appreciation of the landscape (see section 1.2). This document follows the ratification of the European Landscape Convention (2002), and integrates the sectorial landscape policies and identifies financial resources, instruments, and responsibilities in order to guarantee their implementation. In applying the Agenda Landschap, The Netherlands reinforces the interesting experimentation with policies and operating methods (such as the Dutch Landscape Funding Task Force) initiated in part in the 1990s.

5.1.2. From the Appreciation index to a landscape strategy

Evaluation of the social appreciation of landscapes forms an essential preliminary study used by the Agenda Landschap. A GIS model that combines data for the physical-morphological features with data for appreciation of the aesthetic quality was used to evaluate perception and social appreciation of landscapes. Perception of the physical features was evaluated by interviews carried out in 2006 on a sample of 4500 people (representative by age, income, education, interests, etc. who had already replied to the SPEL questionnaire for social evaluation of landscape answered every twenty years; Coeterier, 2001). The study sample was invited to vote for the landscape in 300 areas identified in 15 photographs, selected because they represent the physical aspects that condition social perception.

Since appreciation decreases the further away from home the landscape is, the study shows the degree to which Dutch society appreciates the landscape of their place of residence. Furthermore, the high-income earners sampled evaluate the landscape of their residence positively: the naturalness, rurality, peace and quiet, and visual coherence of flat landscapes.

Social factors influencing perception are: age, income, and origin. The elderly appreciate the landscape quality more while natives attribute greater value to the landscape of residence with which they have a fruitful relationship every day, frequenting it for recreational purposes too. In addition, the promotion of the landscapes in the media influences appreciation, especially the rural and natural ones.

The relationship between physical features in the landscape and attractions was studied using a GIS system according to the following formula (Farjon, 2007):

ATTRACTION = 1.129 + 0.4 (quantity of natural areas) + 0.09 ("spontaneity" of nature) + 0.11 (historic identity) + 0.06 (height of the relief) + 0.07 (quantity of water) + 0.17 (unity)

The calculation shows that the physical factors influencing landscape appreciation are: naturalness, unity, historic identity (recognized by protective measures), and absence of urbanisation or rurality correlated with naturalness. These indicators have made it possible to map the influence of physical factors on landscape perception nationally.

This analysis is useful also to read the role of changes in landscape (such as fragmentation, urbanization increment, pressures in rural areas, changes in farming). In fact they are affecting people that derive a large part of their identity from the landscape in which they grew up, but numerous developments have steadily weakened their ties with that landscape.

From the appreciation index the government knows that the state of the landscape quality has a score of 7.3 in a 10 scale. The Government's aim with the Landscape Agenda (2008) is to raise that score to 8.0 by 2020. The objective is to achieve an attractive and varied landscape in which people are able to carry out their living activities was at the same time enjoying the landscape. The following three tasks are intended to give direction to this goal:

-"Careful use of space", in order to consider the scarcity of space in decision-making, in spatial planning and in building activities. The accessibility of and a recreational opportunities offered by the landscape need to be increased to develop green spaces for people and preventing and remedying the cluttering of the landscape. Also a set of clear rules to transform landscape is needed (such as innovative solutions in the landscape),

- "A landscape of and for everyone" that has a role to play in thinking about the landscape, taking action for the landscape, and paying for the landscape. Particularly the business community that can also do a great deal about the landscape, reducing the distance with/to citizens, investing in the (green) living environment and ensuring it is well maintained and managed will make it more attractive for everyone.

- "Sustainable funding of the landscape", integrating private donations, gifts and contributions. However, the government funds far and away the largest part of the expenditure on landscape consolidation and management. New ways of funding at regional level are being explored in four pilot areas and at national level, the government has installed a Task Force which has issued recommendations on the sustainable funding of landscape consolidation and management.

This strategy could innovate the landscape policy, responding to the actual landscape problems and weaknesses in ELC policy implementation.

OBJECTIVE	TASK	ACTION	When	By whom *
Careful use of space	Clear rules for maintaining city/countryside balance	Start pilots detailing core qualities at area level	2009	MIE/ MEL&I , provinces and municipalities
		Symposium on building in National Landscapes	2009	MIE
		Restoration management by Staatsbosbeheer in National Landscapes	2009-2013	Staatsbosbeheer/ MEL&I
		Complete the study of simplification of area categories.	2010	MIE, provinces and municipalities
		A spatial framework for areas with a green recreational function	2009	MIE/ MEL&I
		Integral policy evaluation for National Landscapes	2010	MEL&I /MIE
	More green space for people	Decision to expand National Buffer Zones and initiate public-private implementation partnership	2008	MIE/ MEL&I, provinces, business community
		Exploration of green key projects	2009	MIE
		Include connecting nature with landscape in the brief for *IBO on nature	2009	MEL&I
	Promote innovation, design and quality	Subsidise innovation and specific projects to improve green space near the cities via the Attractive Netherlands innovation programme	2009-2012	MIE
		Introduce landscape protocols	2010	MEL&I /OCW
		Last use of LOP by municipalities.	March 2009	Municipalities
		New landscape quality incentive scheme for municipalities, focused more on implementation and integration	2010	MEL&I, municipalities
		Explore landscape impact analysis		MEL&I, provinces, municipalities and civil-society organisations
		Encourage integration of landscape quality in area development	2011	MEL&I, MIE, provinces
		Cleanup programme for unwonted buildings	2010	MIE, MEL&I, provinces
		Buildings in local style	2009	Chief Government Architect, National Advisor for the Landscape

	Strengthen heritage	Compile heritage asset map	2009	OCW/RACM
		Modernisation of monument conservation from building to environment	2009	OCW/RACM
Landscape of and for everyone	Partnership in thinking	Promote involvement of citizens in policy formulation with an experiment	2009-2010	MEL&I, MIE, provinces Dutch Landscape Management, municipalities, citizens
	Partnership in action	Support ten pilot projects for social initiatives	2009-2010	MEL&I, provinces, municipalities, civil-society organisations, citizens, farmers, other entrepreneurs
		Involve young people more in the landscape	2010	MEL&I, NME
		Increased scope for community internships aimed at landscape maintenance	2009	MEL&I, OCW, civil-society organisations
		Set up Recreation and Space innovation programme, make research capacity available	2009	MEL&I, MIE, EZ, recreation entrepreneurs
		Map out contribution of more accessible landscape in current projects and consultation of citizens on the accessibility of these areas	2009	MEL&I, MIE, citizens, provinces, municipalities, water authorities
		Encourage multifunctional agriculture by linking the work of the Multifunctional Agriculture Task Force to objectives from the Landscape Agenda		MEL&I, provinces, farmers
		Strengthen (functional) agrobiodiversity. This will restore economic significance to arable field edges, for example		MEL&I, farmers
		Implement at least 42 pilots in the area of sustainable enterprise		MEL&I, MIE, provinces, farmers, recreation entrepreneurs
	Contact with citizen	Start communication campaign aimed at making citizens and businesses aware of how they can influence the landscape and at prompting them into action.	2009	MEL&I /MIE, provinces, civil-society organisations
		Communication campaign aimed at informing residents, businesses and recreationalists about National Landscapes	2008	MEL&I /MIE, provinces
Sustainable funding of the landscape: investing in happiness and euros	Clarify funding requirements for the landscape (working up of Task Force proposals)	Map out funding requirement for maintaining or where necessary restoring the landscape	2009	Provinces, MEL&I /MIE
		Investigate possibilities for creating (provincial) landscape funds	2009	Provinces, MEL&I /MIE
		Investigate possibilities for management of area funds.	2009	National Fund for Rural Areas, MEL&I
		Set up national co-funding construction	2009	National Fund for Rural Areas, MEL&I, MIE
		Advice on optimum mix of instruments	2009	MEL&I /MIE, Netherlands Bureau for Economic Policy Analysis (CPB)
		Investigate possibilities for giving provinces the power to prevent minorities from blocking projects	2009	MIE, MEL&I, provinces
		Dissemination of knowledge on investing in the landscape		MEL&I /MIE, provinces

	Have citizens and businesses help pay for the landscape	Seriously consider extending existing fiscal instruments for the landscape	2009	MEL&I /Fin
		Broad study of planning levies	2009	MIE, Fin, MEL&I
	Explore new and adapt existing (CAP, Nature Management Programme) constructions for investments in the landscape.	Further detailing of value of landscape as set out in the Outline Sketch on the Future of European Agriculture Policy up to 2020	2009	MEL&I
		Take decision on broadening landscape management in new provincial regulations for nature and landscape management	2010	Provinces
		Pilot areas to produce results on the new funding constructions for the landscape	2008-2011	MEL&I, MIE, pilot areas
		Share knowledge and experience gained with the submitted projects through a Community of Practice	2008-2011	MEL&I, pilot areas

Table 2. Actions from the Agenda Landschap (2008), updated and integrated by the author.

5.1.3. Implementation of the landscape policies

The Dutch experience is distinguished by the defining of action programs for landscapes in line with the strengthened.

Convention in which social, economic, ecological, and aesthetic aims converge. This integration is mainly the result of participation of social, economic, and institutional actors in defining the programs and projects for developing new landscape values that correspond to a precise subdivision of responsibility between the actors involved in their activation and management:

— Institutional actors, especially the provinces, who co-ordinate the negotiated development of valorization policy and provide up to 75% of the finance required, with the balance being made up by central government;

— The economic operators who must invest in the landscape and co-finance projects as environmental compensation;

— The social actors prepared to pay local and national taxes (Landschap Taxxes of 2% of the local tax and 0.2% of the national tax are set aside for landscape projects, 60 Euro per person, 2008) that are used to valorise landscapes, factors of identity, and quality of life.

Social participation is essential in the Agenda Landschap in order to initiate landscape action not only through the campaign to evaluate social appreciation and sensitisation, but also in the methods used to define plans and projects.

This approach is strictly related to the Dutch planning culture. Innes and Booher (1997, page 7) talk of "a process of constructing a consensus is required in order to allow the society and national policies to adapt and respond effectively to transformation of collective needs". An efficient participative process must construct networks and a feedback system that makes it possible to understand the landscape and environmental changes. The failure arises out of agreements between local actors based on inadequate discussion or consideration of the relationships and values on which the collective identity or processes in which the participants use their dominant position to divide the parties affected and maximize their own benefits. Unfortunately, this is also what has happened in the Netherlands in recent years, as social participation in construction of policies and projects has too often been a formal requirement but not a substantive part of the process. The provinces and the economic actors (large companies) have operated independently, guiding the negotiation process and controlling the choice of local actors (local authority and people) with evident effects on the effectiveness of landscape policies.

In spite of the strategies for improving its quality, landscape is becoming increasingly fragmented (Landscape Cluttering) as the pressure from suburbs and motorways has increased in recent years in the form of separate projects (individual transformations or groups of microurban transformations) according to an apparently casual model. Landscape Cluttering is the unintentional result of the objectives of various uncoordinated bestemmingsplan (local plans) in addition to expansion of the suburbs and poor integration of rural development programmes and landscape planning (Landscape Development plans). These have produced new building, greenhouses, windmills, motocross sites, camping sites, plant nurseries, and fish-breeding ponds causing the traditional open landscape to disappear and compromise the historic landscape of polders, protected by The Belvedere Memorandum.

The Landscape Perception Monitoring Program has also studied this phenomenon and has identified the areas affected, which are largely composed of the northern part of the province of Noord-Holland, Noord-Brabant, and Limberg in Randstad Holland in addition to the provinces of Overijssel and Gelderland (characterised by protected historic landscapes). In fact, between 1990 and 2000, 31,000 hectares of open space were swallowed up by urban development and periurbanisation in rural areas relating to the new composition of the family (singles, the elderly) and the growing demand for housing in open spaces.

Today climate change has resulted in the need to rethink methods and techniques of water drainage, dyking, and flood protection and this provides new opportunities to make the landscape "more attractive" but this needs the co-ordination of protection and creation of landscapes provided for in the physical plan to be strengthened. The current reform of the Physical Planning Act (2008) follows in this direction by assigning specific jobs in checking the landscape quality at provincial level, for example, co-ordination and checking of the sustainability of local plans and projects. In fact, notwithstanding that the

bestemmingsplan refer to national and provincial directions in valorisation, it is at the local level of the bestemmingsplan, responsible for controlling the landscape project, that the greatest criticalities are found, which have initiated territorial transformations including some near "protected landscapes" and above all in the fringes bordering the Randstad and Green Heart that lack landscape placement and preliminary evaluation of their sustainability.

Agenda for a living contryside (2006) also follows in this direction. This is promoted by the ex Ministry of Agriculture, Nature, and Food Quality (LNV) to help Provinces activate landscape policies. In particular, the government has decided to allocate 3.2 million Euros to strengthen the structure of the landscape and in particular to guide landscape placement of motorways (Motorway route design programme) as well as transformations of the Green Heart and protected national landscapes. The document dwells on protecting the view along the motorway in suburban areas between city and countryside (involving the ex VROM, Ministry of Transport, Ministry of Public Works and Water Management, Ministry of Economic Affairs, and the Ministry of Education, Culture and Science). The Provinces are responsible for protecting the views and are behind in reviewing and revising their plans and in controlling local planning (Netherland Environmental Assessment Agency, Nature Balance, 2007). In fact, the Provinces should have proceeded with the redefinition of the boundaries of protected landscapes identified at national level from the The Belvedere and the V Note (2001) so that urban areas are excluded from prevalently rural tracts of territory susceptible to future expansion (20 landscapes selected). This choice arose out of two interrelated questions: the aim of keeping the structural features, the integrity of the values, and the views present in the protected landscapes; negotiating "neutral borders" with the Provinces, that is, flexible areas shared by the Local Authorities to be developed in the provincial plans by planning at local level in order to guarantee "sustainable" management. However, this aspect is now strongly criticised, because in the absence of appropriate recognizable development and appropriate information and advice for planning and managing this landscape at the provincial level, the local authorities have been and are promoting transformation projects in border areas of many of the National Landscapes due to the natural growth of the population and commercial enterprises with a resulting impact on the value and openness of the views "from ordinary territory".

Tribunal has suspended some bestemmingsplan for the absence of criteria to guide the projects of new buildings in the boundary areas and for the lack of local and regional planning regulations (Sources: Provinces of Utrecht, Zuid-Holland, Zeeland, and Noord-Brabant, 2007; Statistics The Netherlands, 2003).

From this point of view improved integration between physical planning and government of the landscape is required, especially at provincial level. As seen in several case studies, the provincial governments play a crucial role in integrating and co-ordinating policies.

In fact, poor integration of development and protection of the landscapes is seen in the National Landscape of Arkemheen-Eemland where new residential developments have been provided for to balance a fall in the number of dwellings and lack of financing by getting other public organisations on board through negotiation between national and provincial governments. The only effect has been the decision to keep expansion outside the boundaries of the national landscape, but this has allowed radical transformation of the views and quality features in this "extremely open" territory. Not only has planning information of large areas not been activated in Arkemheen-Eemland but conflicts have also arisen between the decision-making processes with inevitableconsequences on the planning of the objectives and resources (case programmes, National Landscape, disposal of materials).

Planning paying attention to landscape can be seen in the integrated plan for the regions of Ijssel and Veluwe, Gelderland for which the Provincial Government studied options for the transfer of companies in the recreation-tourist sectors that affect the wild fauna in less sensitive areas.

The public and private actors in both the IJssel delta and Veluwe, involved in the process of defining the local plan, have initiated experiments to improve the integration of territorial and sectorial planning. The integrated planning of the territory (functions and uses) has brought about a coherent plan with individual elements/values. On the one hand, the territorial and landscape restraints and on the other the construction of significant infrastructure (such as Hanzelijn, a new motorway and railway connection) have proved to be important incentives in adopting an integrated approach. Furthermore, the "protected River space" provided for by V Note prohibits building in the IJssel delta and Nature 2000 also limited expansion of recreational activities in the Veluwe region.

The development of a general strategy at provincial level co-ordinating local choices has made it possible to activate national directions to the benefit of the landscape.

Although an integrated approach is able to provide added value, this occurs at the expense of sectorial objectives. The cases demonstrate the strategic role of the provincial governments in evaluating the conflict between the planned objectives of valorisation of the landscape quality and the uses of the territory provided for in the local plans.

The new Territorial Planning law being developed strengthens the role of the central and provincial government in landscape policy. The conditions for expansion of settlement in National Landscapes and in their border areas need to be attached to the plans, compensation provided, and the building of new housing and commercial sites limited. The initiative strengthens the provincial level by obliging the local authorities to take the preparation of local plans into consideration.

The Beautiful Netherlands2 project is also one of the current priority policies of the ex VROM Ministry (2008).

It promotes actions to oppose landscape fragmentation. Landscape fragmentation can be opposed through specific actions but above all by using knowledge of the value and disvalue of landscapes. The Ministry intends to use the project to stimulate public debate on this topic and involve the population in perceiving the landscape, as required by the ELC, and in creating new landscape values (dissemination of information, identification of possible scenarios involving local actors). By using the shared knowledge of the values diffused among the population, the ex VROM Ministry feels it can activate local control of landscape transformations and stimulate opposition to local plans and actions that may cause irreversible damage to the landscape.

5.2. Evaluation to participative planning in Great Britain

5.2.1. Historical roots of landscape protection

Landscape protection in England originated in the first half of the 19th century in policies for the countryside that aimed at promoting interaction between technical-agricultural development and protection of the natural and historic-cultural environment. This interaction permeates the national history of the protection movement that, influenced by romantic ideas, addresses the planning of new urban settlements in equilibrium with the countryside that finds reference in the garden-city projects of Howard and in the protection and management of public use of historic rural landscapes. In fact, the movement to protect rural landscape developed under the guidance of Ruskin who tried to find an appropriate equilibrium between economic needs, modernisation of production techniques, and the safeguarding and management of the ecological-landscape integrity of the countryside in order to promote its public enjoyment. At the same time the most significant experiments, integrating urban settlement and the simultaneous protection of nature and the agrarian landscape, lie in the garden city projects of Howard. In fact, the garden-city concept is connected with the need to plan new urban nuclei – to control the disorderly growth of the industrial city and to guarantee better living conditions for the workers – defending green spaces and peri-urban agriculture (Howard, 1898). The conservation of rural and natural landscape is strictly integrated with the design of the built city while simultaneously meeting the need to contain urban development, self-sufficiency in food production in the city, and improve the quality of the environment and life.

The integration of technical-agricultural use and enjoyment compatible with the ecological and aesthetic equilibrium of the natural, rural, and urban environment has therefore been the most important characteristic in the English tradition from the very beginning.

Conservation is always included in the landscape valorisation project.

This cultural tradition found its first institutional regulation in the Town and Country Planning Act (1947), in the Scott Report of the Committee on Land Utilisation in Rural Areas (1942), and in the National Park and Access to the Countryside Act (1949) that were the first legislative framework to protect nature. These laws activated experiments with innovative national programs that assigned the local development plans with the job of guaranteeing compatibility between initiatives to protect and manage protected areas and conservation policies of agricultural land use and the system of farms, essential for the care of the landscape and local economic development.

With the setting up of the Department of Environment (DoE) (1970), now replaced by the Department of the Environment, Food, and Rural Affairs (Defra), and by the Countryside Commission, the need to strengthen interaction between economic growth and attractivity in the local rural context by protecting the landscape became priority, which has favored diversification, combating the growing phenomenon of depopulation and an aging population. Policies provided with economic resources have been closely co-ordinated: helping the local community to provide services for public enjoyment and reorganise accessibility to protected rural landscapes (Countryside Act, 1968); setting up experiments of agricultural practice compatible with the ecological equilibrium of the fragile natural environments; and projects to diversify the companies in the hospitality sector (New Agricultural Landscape, 1977). This is the context in which strategic planning in the landscape sector was conceived in order to orient transformation projects eco-compatible with landscapes and to diversify the economy of rural territories: the landscape guidelines, developed by processing identification and evaluation of landscape (landscape assessments; Countryside Commission, 1987).

The guidelines are based on the dynamic dimension of landscapes that accompany the evolution of rural landscape in social, economic, and environmental transformations.

5.2.2. Evaluation and planning

In anticipation of the ELC, strategic planning in the landscape sector has extended protection to the entire territory and makes it an integral part of the complex project of managing sustainable use of environmental resources.

In fact, sustainable use of environmental resources and of the landscape in the countryside has been at the centre of national policy for territorial protection and development since the end of the 1980s. Indeed, it is the central government, co-ordinated by the British Government Panel on Sustainable Development and by the UK Round Table on Sustainable Development that provides the impulse to produce strategies and directions for sustainable development in the territory and landscape. Since 1997 the National Planning Policy Guidance (PPGs) notes, recently replaced by the National Planning Policy Statement and the Regional Spatial Strategies (Planning and Compulsory Purchase Act of 2004), has through a process of participation of institutional actors defined environmental, landscape,

and life quality strategies by valorising nature and landscape as a condition for regional development.

These strategies are the outcome of consultation with institutional actors and associations with responsibility for government of the territory and have been strengthened – by approval of the Planning White Paper (2007), the programs being defined more clearly, more effectively, and able to operate at local (Local Development Frameworks) and regional level (Regional Spatial Strategy).

The definition of the Planning Policy Statement (from 2007; for example in 2007 especially action strategy no.7 – Sustainable Development in Rural Areas) has oriented valorization of the landscape in this direction by basing it on national evaluation of the landscape (Landscape Character Assessment, LCA) that is characterised by an ample process of social participation, co-ordinated by the English Countryside Agency and by Scottish Natural Heritage. Today this activity is the first effect resulting from activating the ELC. Through knowledge of the features and values of the landscape, directions for planning the development and managing the use of the territory are defined, which help strengthen the quality and features in the landscape. The strategies now required are the substitution of the institutional procedures of new protected areas with criteria for the protection, use, and valorisation of the landscape founded on identification of its value and features using the LCA.

5.2.3 Instruments and methods

The evaluation and resulting strategies for the landscape are considered to be the most effective method of conservation and valorisation of the territory. In fact, in measuring landscape capacity and sensitivity, the aim of LCA Guidance (Swanwick, 2002) is to contribute to finding solutions to organising the territory not only compatible with the ability to support the various types of transformation but also capable of creating a new identity.

The evaluation provides the knowledge required to identify and define measures to evaluate the landscape at different territorial levels (local/district, regional, and national). On the large scale the geographical and morphological structure of the territory can be catalogued while on the local scale transformation measures and plans can be defined. The common goal at each territorial level is to define landscape protection and management policies in order to promote ecological and aesthetic quality. In fact, the evaluation subdivides the national territory into patterns (landscape units), recognisable and distinct in the colors and progressive numeration used. The patterns are then subject to further examination in the process of analysis (classification) at smaller scale (county or district) with character types being identified by combining the morphological, natural, and historic-settlement aspects. Initial indication emerge from the evaluation of very large areas for the succeeding process of qualification and legitimation of the values and development of guidelines that are put into practice in the local plans, in the transformations contained in the Village Design Statements, in the Countryside Character Programs, and in the projects.

The method used refers to national criteria: an initial phase of knowledge gathering and classification of the landscape unit known as landscape description, followed by a second phase of evaluation of the condition of the landscape and environmental structure known as landscape evaluation, and thirdly the knowledge acquired is used to define measures to safeguard, manage, and plan projects for the landscape known as landscape guidelines. The Landscape guidelines refer to planning at different scales and are a strategic instrument orienting the landscape transformations (Swanwick, 2002):

— Conservation of areas of particular historic, landscape, or ecological importance in what is known as conservancy strategy;

— Valorisation of degraded or abandoned landscapes in what is called enhancement strategy using restoration, reconstruction, and creation projects for new landscape forms that respond to functional and aesthetic needs.

The approach to landscape evaluation is based on conservation and strengthening of historic, ecological, perceptive, and economic values of various types and areas of landscape, through direct survey and written description. The current state of the landscape is examined (condition and integrity of the elements) and the processes, dynamics, trends, and potential pressures caused by development scenarios are evaluated.

This process passes from the determination of ability to support and respond to transformation in the long term (Landscape Capacity – LC) for each type of landscape by improving the ecological and visual quality and the economic use of landscape resources. Landscape capacity is the ability of every landscape type or area to support the pressure associated with processes of territorial transformation (such as development of settlements and infrastructure, changes in land use, introduction of new ecological elements such as areas designated for planting, rows of crops and trees, etc.).

An aspect correlated with the process of landscape evaluation is landscape sensitivity, stability of the landscape values and features, and ability to recover from any losses and/or damage. High sensitivity values, which if compromised are difficult to recover, correspond to the need for a specific policy.

This indicator is used in the Landscape and Visual Impact Assessment (LVIA), an essential component of Environmental Impact Assessment, useful in checking, evaluating, mitigating, and/or compensating the impacts on the landscape produced by the transformations. Evaluation of the sensitivity involves various methodological considerations:

— Some values have greater weight in certain types of landscape that must be expressed in the process of evaluation and identification (landscape characterisation);

— Some features and elements are more vulnerable than other;

— The ability to support the anthropic pressure and/or react/recover from notably varied stimuli and demands in each type of landscape.

Sensitivity makes it possible to evaluate the relationship between pressure generated by the policies of transformation and development, and various features of the landscape such as: the significance, vulnerability, substitutability, stability, and resilience of the landscape compared to the planning choices (Swanwick, 2002). The techniques used for the evaluation must of necessity be in proportion to the scale and type of planning (strategic, landscape, land use) with which the landscape is evaluated.

From this point of view three methodologies are used to evaluate landscape and orient decision-making in governing the territory:

— Determination of the overall landscape sensitivity, which is a function of the characteristic sensitivity of each individual landscape resource and the visual ones independent of the type of transformation planned. It is usually used to prepare strategies for large regional or sub-regional territorial areas or for LVIA;

— Identification of the sensitivity to a specific type of development or transformation. This is given by the interaction of the landscape, its values and features, and the way in which the population perceives the proposed transformations;

— Measurement of the Landscape Capacity (LC), ability to respond to different processes of territorial government. LC depends on the sensitivity to visual, general, and specific transformation of the individual elements in the landscape. The LC is used to evaluate the effects of relevant anthropic transformation policies in the territory such as introducing wind farms, infrastructure, and development of settlements (such as the building of at least 1000 new dwellings).

5.2.4. Instruments used to activate the Convention

Great Britain led the process of preparing for the ELC through Michael Dower, Director General of the Countryside Commission (1992-1996). Since its reception in Great Britain in March 2007, the ELC has caused serious reflection on the policies and methods in protecting, planning, and managing the landscape in order to adopt the new ideas, strengthen the subsidiarity of the landscape choices and develop methodologies to interpret the “subjective” component of the perception of the population. Characterized by a very decentralised territorial planning and management system, Great Britain based the activation of the Convention on the interaction of DEFRA, English Heritage (EH), and Natural England (NE) in the framework provided by the England Project Group (EPG) who drew up a

document: European Landscape Convention – A Framework for Implementation (2007, 2009).

The document responds to the need to conserve the value of landscape in its current condition, especially rural ones (91% of the sample interviewed by the Countryside Agency) by applying planning actions by 2020 (Countryside Agency, Scottish Natural Heritage, Landscape character Assessment guidance for England and Scotland). These actions are the result of work by the commission composed of DEFRA, NE, and EH, and define possible scenarios for the activation of ELC through gradual progressive innovations such as: the strengthening of current landscape policies oriented by Action Plans, improved knowledge of the features, dynamics, and both historic and current processes affecting the landscape in order to develop plans and projects shared by the population.

5.2.5. Participative Planning and the Landscape

Of great interest among the instruments used to activate the ELC is the Village Design Statement (VDS) introduced by the Countryside Commission in 1996 as a local planning landscape instrument to oppose the process of standardisation towards urban territorial models in rural areas. Focusing on ideas of regional diversity, local identity, harmony between settlements, individual buildings, open countryside, and introducing a new method for understanding and directing landscape projects in rural centres and small urban settlements, the VDS was put forward by the Countryside Commission in 1996 (Village Design –

Making local character count in new development) as an experimental project piloted in four areas, namely, Cottenham (South Cambridgeshire District Council), Cartmel (South Lakeland District Council), Elstead (Waverley Borough Council), and Down Ampney (Cotswold District Council) – for the purpose of making the urbanism and development plans compatible with the values and identity of the local territory. In doing this, the VDS is an instrument that influences the methodology used in territorial planning at the local level by approving Supplementary Planning Guidance, an instrument to govern socio-economic and territorial transformations, beneficial to the landscape, environment, and territory (Moseley, 2000).

The VDS is a process of direct involvement of the population in identifying and defining shared landscape policies (Nadin, 2007). This participation makes it possible to recognize the social perception and appreciation of places, effect a campaign of sensitisation to the importance of and role played by landscape in addition to using shared strategies to recognise and strengthen the "unique and subjective" value of landscape in terms of "materials, scale, form, and dimension" (Countryside Commission, 1996).

It is an instrument of social and community interpretation of the landscape that makes it possible to perceive the local and collective importance of places, spaces,

and symbols on which uniqueness and identity are based, resulting in the past and current processes being interpreted through collective perception of the territory in order to guide sustainable transformation.

In finding a balance between memory and development, between a feeling of belonging and innovation, landscape strategies to be incorporated into the instruments of local landscape governance can be defined.

For the participative landscape project, the VDS:

— Describes the identity of the rural centre and its contextual landscape;

— Interprets the landscape features and values through "the eyes" of the population by identifying three levels: the rural landscape, the form of settlement, and the type and character of the buildings; — develop planning principles based on local identity, allowing the population to "feel part of the planning and decision making process" (Countryside Commission, 1996, page 8);

— Work in partnership with other government actors in the landscape and in the territory in order to interpret the present and develop evolutionary scenarios.

Therefore, it is a local consultative and voluntary planning instrument directed at the ELC distinguished by its great flexibility and adaptability in its contextual form and objectives, and in the expectations of the population (Countryside Commission, 1996) that support the policy and institutional choices and decisions.

After approval by the County Council following a request from the Local Authority, the VDS is applied in the Local Development Framework as a Supplementary Planning Document, providing a shared transformation scenario, based on planning principles and directions for sustainable local development that is initiated by evaluating social perception of the landscape.

	ORIGIN	COMPETENCE	ELC RATIFICATION	SPECIFIC LAWS	ANALYSIS	POLICIES	VERTICAL INTEGRATION	HORIZONTAL INTEGRATION	PARTICIPATION	APPROACH
AUSTRIA	**Protection of landscape resources from anthropic pressures**	**NO**	**LANDER**	**NO** **Landscape is embodied in various other laws, e.g. nature protection laws, spatial planning laws, forest law, etc.** **Autonomous Lander laws**	**ECOVAST** **- ethod to help population identify the landscape unit and of the identity** **- construction and diffusion of a good practices manual**	**Landscape plans with different content and characters for the various Lander Landscape and territorial policies are integrated at regional level by Laws on Spatial Planning of the Federal States (Raumordnungs gesetze der Länder)**	**NO**	**NO**	**On trial**	**ANALYTICAL to define policies and projects**

FRANCE	**Conservation of exceptional values**	**Ministry for Ecology and Sustainable Development** **Municipalities, Departments and Regions.** **Inter-municipal level**	**YES (2006)** **In force since 1/4/2006**	**Loi Paysage, 1993**	**ATLAS**	**Directive paysagère** **Plan de paysage** **Charte** **For knowledge: photographic observation of the landscape**	**On trial**	**On trial**	**On trial**	**ATTEMPTS TO INTEGRATE PROTECTION AND DEVELOPMENT**
GERMANY	**Movement for the protection of the homeland and landscapes (in the 30's)**	**- Bund** **- Land** **- Gemeinde**	**NO**	**Bundesnaturschutz gesetz, 1976 and subsequent amendments**	**In landscape plans on different scales**	**Landscape plans integrated with territorial plans**	**YES**	**YES**	**YES** **on the local scale**	**OPERATIONAL**
DENMARK	**Protection of historical-cultural heritage**	**Counties**	**YES (2003)** **In force since** **1/3/2004**	**NO** **General references in Protection of Nature Act (Actno. 9, 3 January 1992) and in Planning Act (Act no.551, 28 June 1999).**	**ATLAS**	**Landscape plans for historical-cultural aspects**	**On trial**	**On trial**	**On trial**	**CONSERVATIVE/** **DEVELOPMENT** **- centrality of** **the protected** **landscape in** **policies**
ITALY	**Protection of historical-cultural, natural and landscape phenomena (laws of the 1939)**	**State and Regional Authorities**	**YES (2005)**	**Constitution's Article 9 (the Republic safeguards the landscape and the** **historical and artistic heritage)** **Cultural Heritage and Landscape Code, 2004, and subsequent amendments**	**Studies for the assessment of landscapes and the adjustment of landscape plans**	**New landscape plans (Veneto, Piemonte, Ligura, Tuscany, Lazio, Abruzzo, Umbria, Molise, Apulia, Sardinia)**	**On trial in some regions**	**On trial in some regions**	**On trial in some regions**	**ATTEMPTS TO INTEGRATE PROTECTION AND DEVELOPMENT**
THE NETHERLANDS	**Rural development (in the 20's)**	**The Netherlands' Ministry of Infrastructure and the Environment (MIE) and Ministry of Economic Affairs, Agriculture and Innovation (MEL&I)** **Operative role:** **provinces and municipalities**	**YES (2006)** **In force since** **1/11/2005**	**NO** **General laws dealing with landscape are: Nature Conservation Act,** **Land Redevelopment Act and Spatial Planning Act**	**Monitoring landscape perception and appreciation through interviews with the population**	**AGENDA LANSCHAP (2008) = NATIONAL GUIDELINES to be implemented in physical planning**	**YES**	**YES**	**YES**	**PROGRAMMATIC - OPERATIONAL**
GREAT BRITAIN	**Protection of the Countryside (1850)**	**DEFRA, Countryside Commission, Nature England, English Heritage**	**YES (2006)** **In force since 1/3/2007**	**NO, several provisions embodied in laws for environmental nature, such as National Parks** **and Access to the Countryside Act 1949; Environment Act 1995, Countryside and Rights of** **Way Act 2000 and Natural Environment and**	**Landscape Character Assessment**	**Landscape strategies (NPG's and RPG's) to be implemented in local plans,** **New landscape planning tools: Countryside Character Programme and Village Design Statement** **Researches to guide ELC implementation: establishment of**	**YES**	**YES**	**YES**	**STRATEGIC**

				Rural Communities Act 2006. **Implementation of the ELC, 2007**		**a baseline for monitoring policy change in relation to the ELC (commitment: Defra); Research to Support the Implementation of the European Landscape Convention in England (commitment: Natural England)**				
SPAIN	**Protection of natural resources from development (1985, regeneracionismo)**	**Ministry of Environment is the competent authority in such environmental policy issues (water, coasts, and biodiversity) having landscape influence on the whole of the state; it support regions with specific programmes.** **Land Act 8/2007, May 28th seeks to improve the operative rules aimed at sustainable territorial and urban development (Art. 2; "public policies concerning land regulation, planning (…) must support conservation measures for cultural heritage and landscape)** **Regional authorities are responsible for environmental and heritage management, and arte the exclusive authority over spatial planning issues (art.148.1.3ª, Constitution).**	**YES (2000)** **In force since** **1/3/2008**	**Various sectorial laws, such as for the environment, spatial planning and cultural heritage both at a national and a regional level.** **L4/1989 (Conservación de los Espacios Naturales y de la Flora e de la Fauna Silvestres)** **L. 13/1985 (Spanish Historical Heritage)** **Two regions has a Landscape law (Valencia, 2004, and Catalonia, 2005)**	**Observatories set up (Cataluña, Andalusia, ...)**	**Integration of the landscape in territorial and sector planning**	**Diversity in the regions**	**Diversity in the regions**	**On trial with a wide range of diversity in the various regions**	**ATTEMPTS TO INTEGRATE PROTECTION AND DEVELOPMENT**

Table 3. Comparison of the ELC application in some countries.

6. Conclusion

The implementation of the ELC helps creating interest in landscape, in its ecological-environmental, historical-cultural, perceptive, economic dimension and in the physical characterization of spaces, throughout territorial government – on the basis of various interpretations. In fact the ELC defines a common approach

and establishes programmatic indications to meet the growing demand to acknowledge landscape as one of the foundations of identity and the basis of territorial roots that let “man to renew his bond with the earth” and/or territory of the past, present and future “that modern times have dissolved” (Berque, 1995).

The need for landscape quality in European society therefore corresponds to the process of re-appropriation by the populations of the living environment, so the local community can structure elements and symbols that characterise landscape for common development.

Landscape is therefore the common representation of a territory (Raffestin, 2005) to be governed with shared policies and projects for sustainability.

Today, landscape and sustainability are two closely related requirements, referred to the ELC, which requires to review policies at European and at the state level for protection starting from the acknowledge of the landscape essence, inherent in local territories, and to the landscape enhancement with actions for the protection, management and planning of the same.

In this view a first key aspect to stress is the need of a joint pan-European landscape policy (Wascher, 2000) in order to integrate and coordinate EU sectorial policies and to control their effects on landscape, but also for stimulating directly the 23 EU member countries that had ratified the ELC in order to implement its innovative issues on their territories. A European landscape specific policy is necessary because:

— Many landscapes of European importance are the offshoot of natural and cultural processes that require transnational strategies;

— In recent years, many transformations in uses of the territory and of the landscape have been triggered by Community strategies;

— Landscape policies may play a strategic role in the sustainable future of Europe.

In this light, the EU must undertake to promote a framework of action for the landscape, starting from ratification of the ELC, in order to improve the quality of the territory through:

— Wide-scale coordinated actions for the landscape defined at Community level with reference to the national and trans-border dimension;

— “Special” actions intended to address and finance protection, planning and management actions of sensitive, unstable and downgraded environments of the regions of Europe;

— The development of new synergies between Community planning of policies, territorial strategies and the project of the regions and territorial communities who identify themselves in the same landscape values (bottom-up approach);

— Urban policies able to exert a strong influence on the aesthetic-perceptive and physical qualities of public and private spaces, and EU programs for urban regeneration that take social and economic effects in consideration have in fact made a very limited contribution to landscape valorisation in the urban environment.

Therefore the European states are taking actions, differently within the landscape cultures, on various timescales and with varying effects to study new forms of sustainable landscape development, with reference to (ELC, 2000, art. 6):

- Establishing landscape as one of the foundations of identity;

- Indicating landscape quality as the goal of planning actions on all governmental levels;

- The acknowledgement that the enhancement and creation of landscapes is based on institutional and social planning;

- The conviction that the quality of the landscape is based on a project of physical, economic and social spaces;

- The awareness of the institutional and socio-economic stakeholders and training specialists in the sector of landscape information and intervention;

- The landscapes identification and assessment to analyse the characteristics and define landscape quality goals.

Nevertheless, while each countries is establishing landscape goals in territorial and sectorial policies, the implementation of landscape policies is not so simple.

The result in landscape policies and ELC implementation is different in countries. Using the interpretative metaphors, the Germanic-Anglo-Saxon root (Voghera, 2004, 2006) corresponds to an integrated approach between actions for the protection and development of territory and landscape that guarantees the operational implementation of policies and projects. In the Netherlands, landscape action is dictated by a programmatic-operational approach closely related to planning the actions for the project and establishing responsibilities and economic resources. In Great Britain, common strategies and scenarios for the enhancement of landscape on a local scale are defined through shared assessment, an important legitimisation of policies and project for implementation.

In Germany the full-scale integration between plans for territory and landscape helps reinforce the operational character of policies and projects.

In Austria and Denmark the analytical approach, based on methods of interpretation and the legitimation of landscape values, makes it possible to draw up policies and projects. In these countries the central-national institutional role is strategic to define coordinated landscape policies, to individuate actions and economic resources to implement the landscape interventions. These policies find also references in plans at regional and local level.

Instead the Central-Mediterranean root (Voghera, 2004, 2006) corresponds to a more conservative approach for landscape values, although recently there has been an experimental and fragmentary attempt to integrate actions for protection and development. The role of Regions in Italy and Spain contributes also to make many diverse approaches and results in the ELC territorial implementation.

The countries are also trying to experiment participatory landscape plans and projects. People's participation has a key role for the identification of values through the comparison and contrasts that they make among the many potential meanings, interests, and expectations (as the UK and Dutch experiences demonstrate). In fact, participation promotes, supports, and directs a great number of actions that—because they are not produced by the institutions alone—generate a substantial reinforcement of the results of the strategies, communicating and legitimizing shared decisions and values that could reinforce human, social, and landscape capital (Brunetta and Voghera, 2008) and guarantee implementation.

In the diverse cultures and planning practices, the key features of ELC implementation are:

- The definition of protection measures aimed at conservation of the excellent landscape and collective identity values;

− The construction of new management methods, declined in relation to the institutional and social actor responsibilities;

− The definition of strategies, criteria, rules and economic resources, in order to implement the actions.

In this direction the countries are developing a landscape planning as follow:

- Strategies and vaste scale policies for the transformation of the landscapes, legitimized through social evaluation processes and aimed at development of landscape and life quality (Landschap Agenda, Landscape guidelines in Great Britain,…);

- Strategies and sectorial plans - like those for the development of agriculture, of mobility, for the energetic grids or those for water management, etc. - in which the landscape is an objective for the sustainability

- Strategies and sectorial plans - like those for the development of agriculture, of mobility, for the energetic grids or those for water management,… - in which the landscape is an objective for the sustainability.

They are trying to develop plans, policies and project for the landscape aimed at sustainability, integrating actions at different levels and linking territorial and landscape aims.

The innovative influence of the ELC has not been able to fully "transform" the territory and landscape project to date. While this is partly a reality on a territorial scale, it is to a lesser extent for the local urban dimension. Experimentation refers to the dimension of the territorial project (in a vast national and regional area), acting on a local level, with shared actions that mainly concern projects for small villages and rural centres, often popular with tourists. There is still no real and effective consideration of the urban dimension of the project. In fact, the many experiences in urban regeneration, supported also by EEC policies and programs, have contributed to socio-economic recovery and the integration of resources, but with scarce consideration of the physical and aesthetic dimension of the landscape (the form, structure and organization of common and relational spaces). This is one of the dimensions of the landscape project, which should be relaunched by the ELC.

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Abstract

Keywords: *Light, Perception, Humanization, Color, "Troisieme-paysage"*

This intervention is a "light" redevelopment, made for the public administration of Terni (Italy), to valorise, in a "low cost" way, a series of public "junk-spaces" (Koolhaas, 2008). It's a series of painted walls realized from 2008 to 2011 and a project of a square, not yet realized (construction starts from October 2012 and will finish in June 2013).
Public commitment requirements:
This kind of urban public spaces (like green areas in between roads and railway lines, residual spaces of public infrastructures, etc...) are, generally, not important for public Administrators, because their marginal position (in respect, also, to the perception of these places) maintains the requirements of their re-qualification in a secondary point in all the electoral campaigns.
Anyway, they decide to redevelop these places in a very "low cost" way!
A "low cost" strategy is not only a "cheap" strategy (in the sense of money), but also in Social Terms: generally rapid changes of an urban area are not ever take in good consideration from the citizens because they don't feel a part of these interventions and they don't feel any civic sense for that.
Concept:
"Pink Landscape" is a project that qualified the perception of these "junk-spaces", with a low cost impact in economical and social terms: a series of wall painted in pink shocking colour forms a path of artificial landscape that the citizens can personalize with their overwriting.
In-fact, in these walls, you can overwrite your feelings, your thinking and also other information for the other citizens in a sort of "Memory Theatre" (Delminio, 1563) that contribute to humanize our public spaces.
This is a change of our vision (and perception) of these "public junk-space": a sort of artificial cave that we must humanize again, for a social sustainable living, giving to that a new civic approach, a new sense of appropriation of the public "things".
In these walls you can find your memories and your old feelings to learn, from your past and from the other people's pasts, the way of living, in peace and respect for all the different point of view.
Sustainability:
An important aspect of this project is to give attention to these places maintaining the characteristics of the "3rd landscape" (Clement, 2010): the biological diversity is a peculiarity of these new-natural spaces; we have to maintain that, giving their right to the lightness of this interventions.
Another important sustainable aspect is the Social Sustainability (the most important): the particular way of creation can satisfies all request about the customization and humanization of the public spaces, increasing the civic sense of appurtenance to their places in a long "heritage path" that speaks about our new Urban Culture!

1. Introduction

From the period of the *International Style,* where the discussion about architecture became a discussion about volume, regularity and abolition of decoration (Hitchcock,H.R., Johnson,P., 1932) , the core problem of architecture design has begun to move towards a 'generic box'.
Consequently the aim of the design (that has to maintain the maximum volume of construction) focused his attention in the surfaces of these boxes: these frames has the function to separate and communicate with 'the exterior'.
With the *Post-modern* movement, these boxes were made on decorated and communicating shed. For Robert Venturi (Venturi, Scott Brown, Izenour, 1972) there is two ways for communicate: with their form (the famous *Duck*) or with the decoration of the exterior surfaces (the *decorated shed*).
After Venturi, Rem Koolhaas, evolves this principle: the box, became a wrap for a functional program in a 'quantitative' sense. 'Qualitative' aspects became something of independent from the exterior (Koolhaas, 2004). In this kind of box we can change the interior functions without changing the outer appearance (or vice versa changing the external appearance without changing any function).
The most important part of our attention is concentrated on the technological systems integrated in the skin of the building, but we must not lose the side of the communicative aspect because this is also one of the key factors that determine the social sustainability of the intervention. Participation in the creation of our city is an important thing: *the image of* [our] *city* (Lynch, 1960) can be participated by our cityzens for to create a unique collective environment.

2. Analysis

This is, in the fact, an intervention of a “light” redevelopment made with acrylic paint, for the public administration of Terni (Italy). The idea is to exploit in a 'low cost' way, a series of public *junk-spaces* where the people can add other signs to participate, with their creativity, in the aesthetical creation of their city.
A “low cost” strategy is not only a “cheap” strategy (in the sense of money), but also in Social Terms: generally rapid changes of an urban area are not ever take in good consideration from the citizens because they don't feel a part of these interventions and they don't feel any civic sense for that. So, in this sense, *'Pink Landscape'* is a project that qualified the perception of these 'junk-spaces', in a low cost impact: a series of wall painted in pink shocking colour forms a path of artificial landscape that the citizens can personalize with their overwriting.
If you can overwrite your feelings and your thinking, you are creating, in fact, a sort of “Memory Theatre” (Delminio, 1563) that contribute to humanize our public spaces.
This is a change of our vision (and perception) of these “public junk-space”: a sort of artificial cave that we must humanize again, for a social sustainable living, giving to that a new civic approach, a new sense of appropriation of the public “things”. Like a new soviet *proun* we can participate all together to the aesthetic of our cities.

2.1 Analysis of perception

Another problem emerge from this point: how people can see these 'new places'? there is a 'speed reading' of these interventions? Certainly the answer is 'yes'!
These interventions are subdivided in three sections depending on the observation speed reading: *fast*, *slow* and *participated.*
Fast: these places are positioned in highway ramps (or similar) and the observer has only few seconds to read the interventions (generally from 4 to 8 seconds);
Slow: these places are positioned in the streets or in places where the observer can use more seconds to see well, generally there is a sidewalk or other facilities that permit another kind of observation;
Participated: these places are so quite and accessible from other people that can accommodate other overwriting, creating a wall customized by people.

3. Results

An important aspect of this project is to give attention to these places maintaining the characteristics of the “3rd landscape” (Clement, 2010): the spontaneous biological diversity is a peculiarity of these new-natural spaces.
After these experimental interventions, we can maintain that: the particular lightness of these changes (only in the aesthetics aspect) can show these places like a restyled places without feel the need of another modification.
Another important sustainable result is about the Social Sustainability (the most important): the particular way of creation satisfied (not in all cases) all request about the customization and humanization of the public spaces, increasing the civic sense of appurtenance.
In the following images, there is the picture of these walls and a table with an index.

Table 1. index of images and speed reading

Fast (from 4 to 6 secs)	Via del mandorlo	Figure 1
Fast (from 5 to 8 secs)	Via dei monti martani	Figure 2
Fast (from 6 to 9 secs)	Via tito oro nobili (entr.)	Figure 3
Fast (from 6 to 9 secs)	Via tito oro nobili (exit)	Figure 4
Fast (from 4 to 6 secs)	Via montefiorino	Figure 5
Slow (from 5 to 30 secs)	Via bramante	Figure 6
Slow (from 4 to 30 secs)	Via del germano	Figure 7
Slow (from 10 to 30 secs)	Via dell'abete	Figure 8
Slow (from 4 to 30 secs)	Via bramante/brunelleschi	Figure 9
Participated	Liberation wall	Figure 10
Participated	The writer's labirint	Figure 11

Participated	The fairy tale and the scale	Figure 12

Figure 1. Via del mandorlo, ramp for entrance in 'Campitello' neighborhood

Figure 2. via dei monti martani. Undercrossing.

Figure 3. via tito oro nobili. Ramp for the entrance in highway

Figure 4. via tito oro nobili. Ramp exit from highway

Figure 5. via montefiorino. Undercrossing.

Figure 6. via bramante. Undercrossing railway and highway

Figure 7. via del germano

Figure 8. via dell'abete

Figure 9. crossing with via bramante and via brunelleschi

Figure 10. The celebration wall for liberation from nazi-fascism

Figure 11. the writer's labyrinth. A wall that contains an urban park

Figure 12. the fairy tale and the stair. New entrance in the primary school.

4. Conclusions

A new way of thinking the surfaces of the public spaces it's possible: from the skin of the buildings to the walls of the infrastructures the participation of our citizens with their artistical contribution, can be another value to add to our cities and not another problem to solve again!

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THE PLAN REVIEW
A NEW APPROACH TO URBAN PROJECT ASSESSMENT

David Hamers [1], Like Bijlsma [2] and Anton van Hoorn [3]

Abstract

Decision-makers experience problems with assessing urban investment plans. Because of the increasing complexity of our contemporary cities and the growing number of stakeholders involved in the planning process, a large variety of aspects of new plans have to be taken into account. This paper introduces a new instrument that can help stakeholders take stock of the most important spatial aspects of urban projects and improve and assess plans in a systematic and transparent way. We call this instrument the Plan Review.

In planning research as well as in actual practice, cost–benefit analysis (CBA) has been promoted as an instrument that makes project assessment more transparent and increases objectivity and accountability in decision-making. For a number of reasons, in the Netherlands (as well as abroad) CBA is currently heavily debated in (policy) research and spatial planning practice. If national public funding is involved, CBA is a mandatory component of the Dutch decision-making process with regard to large-scale spatial investments. However, the current CBA approach does not fit well with the ambiguous and multi-level policy goals that are common practice in our contemporary urbanised regions. Stakeholders have expressed a need for an assessment instrument that is better able to cope with these aspects of urban planning.

This paper introduces such an instrument: the Plan Review. It turns away from the dominant economic logic of CBA and puts the knowledge developed by spatial disciplines such as geography, urban planning and urban design at centre stage. The Plan Review takes the form of a matrix that helps reviewers to structure key spatial qualities of a project and acts as a checklist for stakeholder discourse. The matrix has two entrances: the scale of the plan (from urban region to project) and the nature of the available information (from generic to specific). Depending on the spatial scale of the plan and the available information about various plan characteristics, different matrix cells can be considered in the Plan Review.

Contrary to CBA, the Plan Review does not focus on the ultimate effects and efficiency of urban projects. Instead, it enables planners and reviewers to first take a

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step back. The Plan Review matrix brings together a variety of spatial conditions (16 in total) that must be met for a plan to effectively contribute to the achievement of policy goals. Think of accessibility by different modes of transport, and a local

public space design that fits with higher level project objectives. By opening the black box of relevant spatial conditions and explicitly addressing the line of reasoning in a project plan, the Plan Review matrix helps stakeholders discuss possible plan improvements (early in the planning process) and assess the project (in a later phase).

1. Introduction

1.1 Motivation and objective: improvement of spatial assessment of urban development plans

The decision-making process around spatial investment projects is faced with a number of problems related to the assessment of urban development plans. For example, there are misunderstandings between administrators and assessors about the relationship between policy targets and development plans. In addition, there is little unity amongst the various disciplines involved in such assessments; economists have an entirely different view on cities than urban planners and designers. This paper is intended to clarify the communication on urban projects, in order to contribute to the improvement of the process around urban investment planning and decision-making . It presents an analysis and assessment instrument that may be used by urban planners and administrators, to give them more insight into the main spatial characteristics of urban projects. In this way, they may be able to assess such projects more effectively, while taking into account certain policy objectives. We have called this instrument the Plan Review and have shaped it to the benefit of the dialogue between assessors and stakeholders. In actual practice, this involves assembling a list of themes (so-called spatial conditions) in aid of objectifying the analysis of the plan and structuring the dialogue with stakeholders. The Plan Review is intended for the improvement of urban development plans, or parts thereof, and to contribute to their spatial assessment.

1.2 Demarcation and set up

Although urban projects may serve a variety of purposes, this paper centres around physical spatial projects. The following section provides a brief description of the current debate on the assessment of such projects in the Netherlands, followed by the Plan Review instrument which was developed in response to the issues involved in this debate. A series of relevant spatial conditions is introduced in a matrix, each of these conditions is explained, and one of them has been further elaborated as an example. The paper closes with a synthesis and a brief discussion of the steps that could be undertaken to further develop the Plan Review, so that this instrument can be applied in actual practice.

2. Three issues around current planning assessment

In the Netherlands, the debate on planning assessment, to date, has been focused on the role of cost-benefit analyses (CBAs) in the decision-making process. In planning

research and practice, CBA has been promoted as an instrument that makes project assessment more transparent and increases objectivity and accountability in decision-making. In fact, in the Netherlands, CBA is a mandatory component of the decision-making process of large-scale spatial investments, whenever national public funding is involved. However, academics and practitioners across a wide range of disciplines have criticised these claims (e.g. Bebbington *et al*., 2007; Tribe, 1972); for instance, with regard to efficiency as the basic criterion of acceptability and the over-reliance on monetisation.

In addition, various parties in the processes around planning and decision-making have pointed to problems related to the way CBAs fit in with the planning of spatial projects in contemporary urban regions (e.g. Municipality of Almere and the Ministry of Infrastructure and the Environment, 2011; Renes *et al*., 2011). This paper considers three of these problems as main issues, in this regard.

The first issue relates to the multivalency of objectives of urban projects. These projects often have to contribute to very diverse objectives, such as in economic and environmental areas, as well as those relating to culture and landscape. In order to create a support base for such combined policy objectives, often, in the political arena more general terms are used that could be interpreted in multiple ways. Examples of such terms are 'attractive cities' and 'international business environment'. The aspects that make these expressions attractive for administrators to use, are the same aspects that create difficulties in the planning assessment that precedes decision-making, as objectives that are described with these expressions are difficult to operationalise. The translation of such expressions for the purpose of a CBA leads to a 'confusion of tongues' between the various parties involved in the planning and decision-making process.[4]

The second issue is one that is related to the various spatial scales on which contemporary urbanisation occurs, and the governance processes involved. Over the past decades, urbanisation – in the Netherlands as well as globally – has increasingly become a regional affair, in a morphological, functional and governance sense. This has led to the formation of urban agglomerations and daily urban systems, and has brought urban planning to the level of the metropolitan region. Moreover, central government also looks to urban regions in realisation of their objectives. The large Dutch cities, thus, are considered to be drivers of the economy; the current Cabinet considers a good international business environment a matter of national interest. Policy objectives of various administrative divisions may be in line, but may just as easily have opposing interests. This causes problems in the assessment of urban projects. After all, an assessment of a plan from a national perspective may look entirely different from one that is based on regional or local objectives. CBAs, in the Netherlands, only apply to the national scale, causing objectives on smaller scales to

[4] This problem is even increased by the large uncertainties that have characterised the planning practice over the last years. Plans that present a concrete ultimate goal, more and more, are being replaced by plans based on much more general guidelines and a phased realisation. This also poses problems for the traditional assessment of plans that precedes decision-making.

be ignored in planning assessments. Therefore, various parties have asked for additional assessment methods.

The third issue around the assessment of urban projects concerns the different types of knowledge required in competent decision-making. Because of the complexity of urban projects, knowledge is needed in various fields, such as traffic, economy, planning, geography and urban design. These fields of knowledge are sometimes difficult to unite. There may be differences of opinion, for instance, on the relationship between contributions of 'scientific' knowledge and those of 'crafts'[5], and misunderstandings caused by the use of different definitions could easily occur. Currently, the terminology of welfare economics as used in CBAs is leading. Several parties, however, have indicated that they require additions to this vocabulary from various spatial disciplines.

This paper introduces an instrument of analysis and assessment that would address the issues as described above. This instrument is the Plan Review; it does not follow the dominant logic of CBAs, but places the knowledge developed within spatial disciplines, such as geography, urban planning, and urban design, at centre stage.

3. Foundations of the Plan Review instrument

3.1 Plan Review positioning in relation to CBA

The Plan Review instrument has a different function than the CBA in the process around planning and decision-making. CBA primarily focuses on the effects and efficiency of a project. However, before a project has any effect, it must comply with several spatial conditions. Does it work? Does the project produce the spatial conditions under which it may have the desired effect, thus contributing to the aspired policy objectives.

In its current form, the CBA is not very well-suited to portray these conditions. This may lead to situations whereby the effectiveness of a project cannot be assessed properly. Moreover, in earlier phases of the decision-making process, options for stakeholders to improve on the project are sometimes overlooked. The Plan Review is intended to improve on the flow of information in the decision-making process in both areas (plan optimisation and assessment). In doing so, the Plan Review, unlike the CBA, does not focus on the effectiveness and efficiency of urban projects, but analyses the spatial conditions that projects must comply with in order to even achieve the desired effects.

A number of questions related to these issues are paramount: What are the spatial conditions that a project must comply with in order to realise the desired objectives? Which developments may facilitate a project and which would not do so; for example, compared to other, related projects? Which unwanted effects may present

[5] Sennett (2008) speaks of 'the craft of experience'.

themselves? And finally: Which conditions could be improved on, in order to achieve the objectives?

3.2 Connecting to available and desired information in the planning and decision-making process

The objective of the Plan Review is to improve on the decision-making process around urban projects. Therefore, the foundations for the instrument are to fit in with and connect as closely as possible to the informational requirements of policymakers and government administrators at various phases of the planning and decision-making process. In the Dutch situation, very many different plans are being assessed, and the relationship between policy objectives and the desired effects of urban projects differs from case to case. In certain cases, administrators have rather generally formulated ambitions that are difficult to translate to concrete, operationalised objectives and assessment criteria. This applies, for example, to the early stages of projects (ones that have not been worked out in great detail). Other projects, mostly those in later stages of decision-making, already have a much more concrete form.

Furthermore, projects also differ in size. From large-scale urbanisation projects with infrastructural improvements on a regional scale, to inner city projects with issues and opportunities centred on a smaller scale, such as a train station or part of the city centre. Often, several scales play a role, simultaneously, and the coherency between them calls for specific attention.

The Plan Review is intended to be applicable in all these cases. This implies that it must provide spatial information on scale (large to small) and measure of detail (generic to specific), befitting the nature of the project and the phase of planning and decision-making. These principles together form the entry points of the Plan Review matrix (Figure 1).

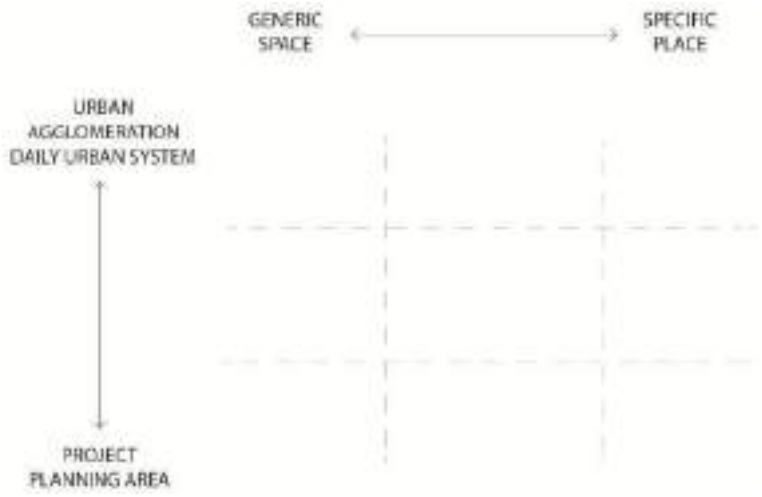

Figure 1. The rows and columns of the Plan Review matrix.

The rows of the matrix distinguish between the scales involved in urban projects; from regional to the planning area of an individual project. These scales relate to the policy objectives that the project is to contribute to – objectives that, mostly simultaneously, are set at various levels of governance. The matrix columns distinguish between the available or required types of information or knowledge, from generic to specific.[6] The types of knowledge depend on the particular phase of the planning and decision-making process, varying from the earliest to the latest stages.

A number of spatial conditions can be spread over the matrix. These are elaborated in the following section. To present the conditions in an orderly manner, the matrix has been divided into nine cells (three rows, three columns). The conditions have been distributed over the cells.[7] In this way, depending on the plan to be assessed, the dialogue between the parties involved can be focused on the relevant conditions. For example, a discussion on a regional project that is still in an early stage of planning is likely to be focused on the cells in the left-hand top corner of the matrix. In cases of much smaller scale projects and for which more details already have been established, the cells in the right-hand bottom corner would feature more predominantly.

In addition, if necessary, conditions in cells spread over the entire matrix can be discussed; for instance, in cases of urban projects that involve various scales (e.g. local business locations near national motorway slip roads). Talks between stakeholders and plan assessors may follow a certain 'route' over the matrix.

4. The Plan Review matrix

4.1 The cells: diverging spatial conditions

On the basis of literature research (e.g. on urban development, architecture, planning, geography, urban sociology and spatial economy), planning and map analyses, field studies and expert interviews, we assembled a series of 16 conditions that regularly feature in spatial research and design.[8]

The matrix needs to contain various conditions, as objectives of urban projects also differ, and because projects are realised within cities that differ in characteristics as well as for different target groups (context sensitivity). This must involve both

[6] In geographic terms, this would be space and place. Experience has shown that more abstract knowledge often is of a quantitative nature, whereas concrete knowledge can be labelled as qualitative. However, the reverse may also be true.

[7] The division in rows and columns is heuristic, for the purpose of easy applicability in assessments. Because the two axes of the matrix both represent a continuum, this division in rows and columns may seem somewhat contrived. Conditions cannot always be easily allocated to any particular cell. Therefore, cell boundaries are represented by dotted lines.

[8] There may be considerable differences between traditions directly related to various types of knowledge and know-how. For research that is based more on the classic (beta) science, the emphasis is on legalities and constants, whereas design research focuses more on options and possibilities within specific contexts. In addition to theory, also practical experience may form a valuable source of knowledge. Although some scientific researchers are less inclined to award appropriate value to such physical rather than scientific knowledge, the necessity of 'thinking through making', 'knowing-in-action' and 'reflection-in-action' have a solid basis in scientific theory (e.g. see Schön, 1984, 1987; Sennett, 2008).

physical and functional aspects of the urban environment, as well as the manner in which city dwellers experience their surroundings. These separate elements are important in isolation, but also their interconnection is significant; together, they determine how cities are used and experienced.

In addition to these dimensions of use and experience, also the time dimension is of great importance in project analysis. After all, analyses of urban investments do not represent one moment in time, but need to consider long-term developments. They must assess the degree to which these projects may adapt to changes, both expected and unforeseen.[9] Furthermore, also the short term is of interest, in relation to a project's planning and execution. This includes the circumstances under which a project can be realised and how the speed with which this happens could be increased (e.g. catalysed).

In order to address these issues in a planning assessment, we included a number of variables related to the planning process in the matrix. However, these process variables (e.g. flexibility, resilience, catalysts, phasing) have not been separately entered into the matrix, but may be addressed in all cells.

The chosen series of conditions is not exhaustive. It was constructed to fit a broad range of projects, while being sufficiently ordered and accessible to function as a checklist in actual practice. Figure 2 shows this series of conditions, as they are distributed over the matrix.

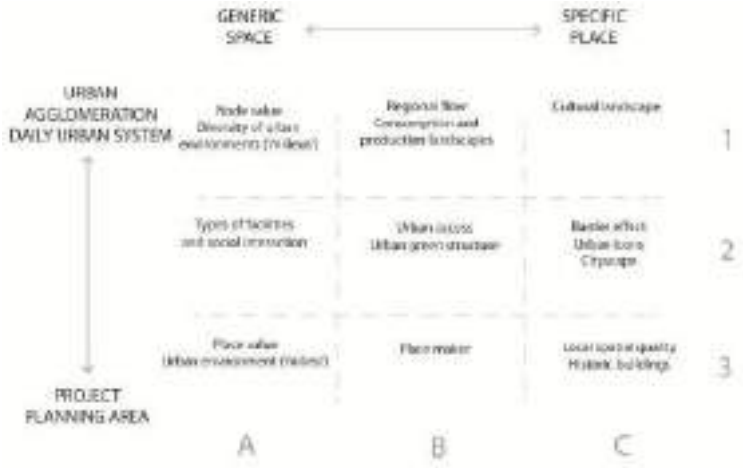

Figure 2. The Plan Review matrix

The following section provides a characterisation of all conditions, centred around certain questions that are subsequently elaborated on. Section 5 describes one of the conditions in greater detail, to provide an example of how conditions may be used in

[9] Flexibility and resilience are very important in Dutch contemporary planning practice, as urban development currently is struggling with large financial difficulties (short term) and sizeable uncertainties (long term) about, for example, economic and demographic developments.

discussions during the planning and decision-making process, to objectify the planning analysis and to structure the communication with stakeholders. In addition, attention is given to certain theoretical backgrounds and methods that enable the use of the Plan Review in the planning and decision-making process.

4.2 Node and place values (1A and 3A)

Are node value and place value sufficiently balanced? The node and place value concept (Bertolini, 1999) offers starting points for the analysis of development options for mobility in connection with those for the functions of an infrastructural node, related to visiting and accommodation. Certain questions are important, such as whether the transport capacity of a node is being used fully, in view of its position within the network, and whether this node value is balanced with the place value – the facilities in the direct vicinity of the node, such as numbers of shops, offices and/or residential homes.

4.3 Diversity of urban environments ('milieus') (1A)

What would the project contribute to the existing variety of environments within an urban region? In order to meet the needs of a variety of users (dwellers, workers, visitors), urban regions must contain various types of places and functions, together described as 'urban environments' (or 'urban milieus') (for elaboration of this concept, see Ritsema van Eck *et al*., 2009; PBL, 2010; Hamers, 2011). By considering the regional-urban diversity of environments, arguments can be found for possible changes (additions, restructuring, transformations) required in the light of the particular objectives. Here, regional coherence is especially important. Consideration of a project on that scale may indicate the relationship between both competitive and complementary environments (within as well as outside the municipality where the project is being realised).

4.4 Regional flow (1B)

Would the infrastructure on a regional scale be sufficiently robust and/or resilient to manage passenger and freight traffic in the long term, and would it be able to adapt to possible changes in traffic flows, such as increasing cross-traffic in a polycentric region, or decreases due to regional population decline? This includes parallel infrastructure on connecting routes, connections between suburban centres and choice options for either public transport or passenger vehicles. Another issue is whether measures that could be implemented in the short term to create flexibility (e.g. changes in timetables or by the construction of rush-hour lanes) would offer the required solutions.

4.5 Consumption and production landscapes (1B)

How does regional urbanisation relate to landscapes and nature (biodiversity, ecological passages)? Does the landscape in the urban region offer any possibilities

for water storage, in view of climate change? And is it able to meet urban demands related to regional and local food and energy supply, as well as recreation? In addition to existing and inherent natural qualities, this also relates to planned and still to be designed conditions in the consumption and production landscape.

4.6 Cultural landscape (1C)

To which extent have possible particular and unique area characteristics been taken into account? Does the project protect such characteristics or even use them by awarding them a visible position within the project? Depending on the situation, both conservation and development may offer possibilities. If the cultural landscape stretches over a large area, harmonisation between project plans on a regional scale may offer opportunities for making complementary choices in various different locations within the region. For example, if historic patterns at a certain location become unrecognisable due to the realisation of a plan, their conservation elsewhere could be guaranteed.

4.7 Types of facilities and social interaction (2A)

Do cities and neighbourhoods have appropriate facilities, and are these sufficiently accessible? Facilities, including social facilities, together with the public space, form the social-spatial infrastructure of a city. This may connect people. Also, people may feel at home in an environment if they feel connected to it. This may cause them to feel more responsible for maintaining the environmental qualities of the public space. Facilities do need to be easily accessible and fit with the environmental identity (visibility, fitting atmosphere), in order for people to feel involved (see Bromm et al., 2011).

4.8 Urban access (2B)

Are entry and exit roads and light rail or rail connections, on an urban scale, sufficiently robust and/or resilient to continue to process passenger and freight traffic, in the long term, and to adapt to possible changes in traffic flows? Are there any options for separating through traffic from local traffic on urban ring roads (see also 1B)? And will there be sufficient flexibility in the short term? These questions play a role, specifically, for plans relating to housing and business development within the existing city and along the urban fringe. Further urbanisation within existing urban areas mostly makes demands on infrastructure that are different from those of new housing in expansion areas.

4.9 Urban green structure (2B)

How do built-up areas relate to green areas in and around the city? How easy is it for city dwellers to reach these areas of urban green? These questions have different answers in different urban environments (see 3A). Various types of urban dwellers have varying preferences with respect to functionalities and types of greenery (e.g.

recreation, urban agriculture) . The ratio between ‘red’ and ‘green’ also not only refers to magnitude, but also to characteristics. The size of a park, for example, is not automatically an indication of its quality.

4.10 Barrier effect (2C)

What are the options for clearing spatial (and functional, socio-economic and mental) obstacles within a plan? Barriers come is all shapes and sizes; for example, in the form of an infrastructural bundle that separates city areas, or a long and closed front of buildings that forces pedestrians to take a detour. This may cause locations that are physically very close to appear very far away, both in travel time and in perception. Such characteristics can have a large effect on the particular meaning of a place, and, thus, on its value. Clearing such barriers can be a project’s main objective, but it may also be a side effect of developments that primarily serve a different purpose.

4.11 Urban icons (2C)

What could an icon contribute, in comparison to a plan with a fairly plain character? Although icons, by nature, possess a certain uniqueness, there are ways to analyse them. For example, they are rarely realised within a vacuum, but rather are adapted to their existing surroundings, in which often additional investments take place. This connection offers starting points for an analysis of the planned icon, and concerns the convincing logic of the plan as a whole. In addition to its functional value, especially its perceptional value needs to be substantiated. For example, will the icon evoke feelings of pride or identification, or will it mark the entrance of a certain area or connect two areas?

4.12 Cityscape (2C)

To which degree does the plan take into account the presence of a possible historic cityscape? Does the project protect such characteristics or even use them by awarding them a recognisable position within the project? Local historic characteristics of a city district or neighbourhood may offer starting points for creating a visible identity in a plan. This may enhance a project’s attractiveness to residents, businesses and visitors (depending on the planned programme) and offers possibilities for branding.

4.13 Urban environment (‘milieu’) (3A)

Which spatial and functional conditions are offered by the planned environment (‘urban milieu’) in order to achieve the related policy objectives? When changes to the range of environments within an urban region would contribute to achieving a certain policy objective (see 1A), the focus can be turned to the type of environment that would be needed to realise this change. The main question, here, would be that of which conditions are offered within the planned environment for realising the policy objective, taking into account possible tensions between objectives in different

fields of policy, of different municipalities in the region, and of different layers of governance. This also applies to options for urban milieu development contributing to a mutual enhancement of policy objectives.

4.14 Place maker (3B)

How can the transformation of a space into a place in locations with multiple problems be encouraged? We distinguish between three options. Firstly, the so-called 'golden key': could the plan be altered in such a way that qualities that are difficult to unify can be developed with a certain connection? Changes may affect both the programme and the spatial design. In some cases, a breakthrough in routine thinking can create space for new solutions with a broad support base. In these cases, puzzles are not pieced together again, but the puzzle itself is altered. Secondly, could pioneers give an extra impulse to the (re)development of an area? Plans may become stalled for various reasons in certain parts of a city, causing some areas to remain undeveloped for long periods of time, and resulting in the postponement of desired changes. Quite often, these 'interim' periods last for many years. Pre-investments in programmes and buildings (e.g. events, studios and workshops, and meeting places), as well as temporary permissions for unconventional use of space (e.g. urban agriculture) or unconventional urban development (e.g. experimental, organic architecture) may be catalysts for change or accelerate changes. Thirdly, could the project be carried out in phases (in consecutive steps)? In the current Dutch debate on uncertainties around projects, phasing is considered as a way of reducing financial risks. However, projects cannot simply be cut into several pieces. It is vital that an estimation be carried out first, concerning the practicality and relevance of such a part-project in the eventuality that the rest of the project is abandoned. In other words, would the first phase of the project have an independent functional-spatial logic, on the basis of which it would contribute to the city?

4.15 Local spatial quality (3C)

Does the plan's organisation of public space match the planned urban environment (see 3A) and the target audience? Local spatial quality – for lack of a better term – cannot be described in general terms but must be related to, for instance, location, existing functions, density and building heights. For a square, for example, sun and lighting would be important, in addition to shelter from the wind and a certain degree of enclosure. Furthermore, also information on the main users would be important; after all, they would make different demands on the location. For example, visitors to a certain place would look for entertainment, while residents may seek rest and quiet at the same location. In addition to a pleasant outside space, also local conditions for traffic circulation, as well as social safety and road safety may play a role.

4.16 Historic buildings (3C)

How does the plan deal with cultural heritage, on building level? Are choices being made solely with respect to preservation of protected historic monuments, or do such

historically valuable and characteristic buildings offer starting points for new development? Could they provide a project with some *coleur locale*, or even serve as centrepieces for the development of a recognisable, local identity for the surrounding areas (see also 2C)?

4.17 Various functions of the matrix in the dialogue with stakeholders

This list, as indicated above, may be used as a checklist in the dialogue with stakeholders. Depending on the phase of the planning en decision-making process, this checklist could have various functions. Planners could use the list throughout the development of a project, and subsequently it could also be used in discussions about possible improvement options. Towards the end of the planning and decision-making process, the checklist could become part of the assessment process, as a prelude to the assessment of expected effects and project efficiency, for example (as is current Dutch practice) in the form of a CBA.

The brief explanation of the conditions, as provided above, places the emphasis on the desired spatial development within a project. However, in addition, possible unwanted effects must also be considered. For example, the construction of a new exit/entry road may unwittingly create a barrier between two, previously well-connected areas, within or outside the planning area. Because such effects may create conditions that could hamper the achievement of policy objectives, they must be brought to light early enough to be considered when improvement options are discussed.

5. An example: local spatial quality (3C)

This paper only provides one example: local spatial quality (3C), seeing the limitations to the length of the paper. We provide a concise example of the application of the Plan Review instrument with regard to this particular spatial condition and briefly refer to the theoretic and methodological background. In order to provide a certain context, we have related the spatial quality condition to a current example from Dutch planning practice: the knowledge campus. In the example, a 'route' over the matrix is followed, as could be done in the discussions during such a project; from discussing the range of urban environments (1A), via the chosen environment (the campus) (3A), to a discussion on the fitting local spatial quality (3C) (see Figure 3).[10]

[10] The first two steps have not been described here. They are merely mentioned to present the workings of an analysis of the coherency between various conditions.

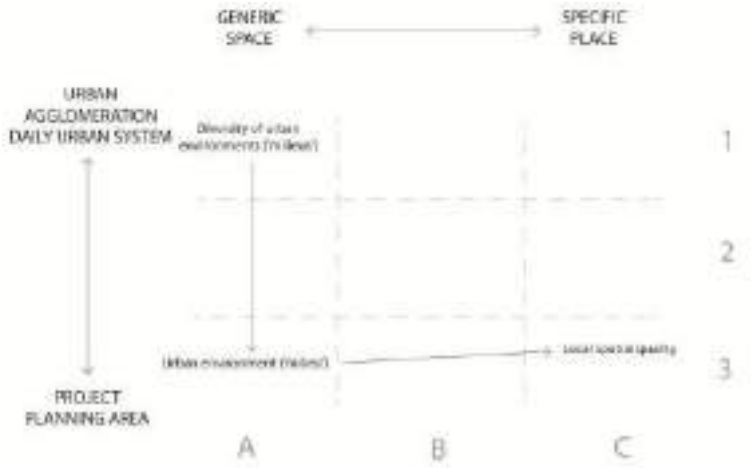

Figure 3. 'Route' over the Plan Review matrix

5.1 High Tech Campus Eindhoven

Imagine an urban region that wishes to develop an internationally competitive business climate, as well as realise knowledge development (e.g. by so-called knowledge spillovers). In addition, imagine that this region could demonstrate that a knowledge campus would be a suitable urban environment to achieve such policy objectives (3A). Now assume that this region could prove that such a campus would be a valuable addition to the existing range of urban milieus and that there will be no inefficient competition with other such milieus in the region (1A). This then leads to the relevant question of which type of local spatial quality would be required for the realisation of the desired knowledge development (3C).

The Dutch city of Eindhoven, the centre of the so-called Brainport region of the Netherlands, is home to the High Tech Campus. This campus houses dozens of knowledge-intensive businesses. This concentration of such businesses fits with the strong tradition in R&D in the Eindhoven region, and with regional and national ambitions in the field of knowledge development.

The campus set up gives shape to the chosen principle of 'open innovation', which centres around cooperation. Businesses on the campus all focus on their particular specialism, but they are expected to inspire each other by sharing knowledge and experience and by making use of the same facilities. The underlying thought is that, in this way, innovation not only occurs at a faster and cheaper rate, but also will be of better quality (www.hightechcampus.nl).

5.2 Shared facilities

The main question in relation to the local spatial quality on campus could be whether the public space is organised in such a way that it meets the needs of the knowledge workers (the campus target group) and achieves the objective of stimulating the

exchange of knowledge. One of the principles of the campus is that knowledge workers must be able meet in a casual manner and in a comfortable environment. To facilitate this principle, the campus has a centrally located, shared boulevard, along which a number of bars and restaurants are situated, as well as a conference centre, a wellness centre and some shops ('The Strip', see Figure 4). Although this boulevard with its facilities is no guarantee that people will meet, it does provide the conditions that encourage such encounters. In order to achieve these, facilities need to be inviting, which may be achieved by the shop windows' seductive and transparent exterior, and by the clever positioning of entrances in relation to the public space and passage ways.

Figure 4. High Tech Campus Eindhoven: shared facilities and lounge chairs on The Strip

5.3 Organisation and materialisation of public space

Public space design (spatial organisation and materialisation) also contributes to the conditions that encourage encounters. This includes benches, lighting and other street furnishings, pavement types and the presence of grass and trees. Local spatial quality must correspond with the needs of the main user groups. The High Tech Campus knows only one type of user: knowledge workers, national and international, with a technical background. They visit The Strip during their lunch breaks or for meetings, and particularly seek out environments that differ from their workplace. In the designing of the public space, the fact that these researchers usually like greenery and comfort was taken into account. Therefore, The Strip was not shaped to reflect a

historic European inner-city style, but rather accentuates the natural aspects of the surroundings. The pond takes up a central position in the design and offers a broad view from the lounge chairs placed around it. There are also wooden jetties, benches and bridges, creating a variety of places to sit and wander around (see Figure 5).

Figure 5. High Tech Campus Eindhoven: The Strip and walking route around the pond

In addition to a pleasant public space (due to walking routes, greenery and meeting places), the security of campus laboratories is, of course, also important. This requires a focus on the effects from the various design elements on their surroundings. For example, a high steel fence would have a very different effect on passers-by than would a glass door that is electronically secured.

5.4 Traffic access

Finally, there are local conditions which are important for traffic circulation.[11] The park-like campus contains many paths for walking or cycling. All around campus, bicycles have been placed for people to travel quickly from building to building. Moreover, this system of paths is connected to bicycle paths that lead to green areas outside the campus, and motorised traffic is efficiently routed to and from a separate motorway slip road towards the ring road along the outside boundary of the campus. All car parks are located directly off this ring road.

5.5 Guidelines and reference projects

Theoretical and empirical knowledge about the spatial quality of public spaces has been documented in handbooks. A number of urban designers and sociologists have

[11] In addition, also traffic safety and social safety could be named. In this example, these aspects have been ignored..

studied a variety of squares, parks and streets, and documented their main aspects (e.g. see Cullen, 1961; Gehl, 2001; Jacobs, 1961; Jacobs, 1993; Lynch, 1960, 1988). Notable fact is that these studies name best practices but do not formulate rules for constructing what could be seen as 'good' public spaces. This may be explained by the fact that each location, function and user target group is different; every situation requires its own approach.

However, this does not mean that projects cannot be compared. Although the appropriate spatial quality of a certain area cannot be determined using a general formula, this could be determined from reference projects; a comparison between the planned project and related, already finished projects elsewhere. Questions related to which actions were successful and which were not (ex-post analysis) are important to ask, as well as making certain that the reference projects match the planned project in type of urban milieu, magnitude and situation within the urban region.

Another notable fact is that a large part of available knowledge on attractive public spaces is related to a specific type of urban environment: the pedestrian areas in typical European cities. Examples are the historic Parisian boulevards, Italian renaissance cities and contemporary gentrified neighbourhoods, such as the London mews. Diversity and being small-scaled are important characteristics of these prototypes of urban environments. To date, is has been difficult to find handbooks that offer an alternative for these singular (cliché-like) references of spatial quality and urban identity. Complementary documentation of innovative examples of the spatial quality of other types of environments would contribute to the improvement of analyses and assessments of urban projects.

6. Synthesis

By introducing the Plan Review instrument, the communication on urban projects could be made more transparent, and thus contribute to improvements in planning and decision-making processes around urban investments.

Insight into the specific environment of a project location is vital to the assessment of urban plans (context sensitivity). In addition, there is a need for a system of analysis that would be widely applicable (scope, repeatability), and uses clear considerations (transparency) that are comprehensible to the wide variety of stakeholders (communication beyond the boundaries of individual disciplines).

The Plan Review meets the combined needs for context-specific knowledge and a system. It features a series of 16 spatial conditions that a project has to meet in order to achieve policy objectives (possibly at various governance levels and in different fields). This series is presented in a matrix, from which relevant conditions can be chosen, per case. This matrix may help to structure the dialogue with stakeholders, and maximise the objectification of plan analysis. Depending on the phase of the planning and decision-making process, the Plan Review may improve urban planning

and contribute to the related spatial assessment, in light of the particular policy objectives.

7. Discussion

The Plan Review has been developed on the basis of knowledge and know-how from various spatial disciplines. It deviates from the welfare economics approach of CBA – the instrument most used in the Dutch assessment process. The Plan Review is not intended as an alternative to CBA, but rather as a complementary instrument. Because of its deviating theoretic and methodical basis, a successful application of the Plan Review would require a team with a different composition of disciplines than present in the teams that currently mostly assess project plans. The application of this instrument requires a multidisciplinary team that represents both knowledge and experience in spatial research and design.

This new instrument as presented in this introduction, probably has not yet reached its definite form. In the coming period, practical application will test its usefulness, and further discussions with a wide variety of users may help to fine-tune the instrument. Initially, attention should be paid to the relationship between plan optimisation and plan assessment; looking at which aspects are focused on in which phase of the planning and decision-making process. Another area of attention should be the relationship between the Plan Review and the CBA. Because of the CBA's focus on effectiveness and efficiency of a project, and the Plan Review's focus on the conditions under which a plan could be most effective, we recommend that application of the Plan Review would precede the CBA. Actual practice will show whether this approach indeed delivers positive results. A third aspect that deserves particular attention is the weighing of the conditions as entered into the matrix. In its current form, the matrix does not provide any ranking. The parties involved choose the most relevant conditions, depending on the nature of the project. Further research as well as practical experience could indicate whether the possible incommensurability of various conditions would stand in the way of clear decision-making, and if there is a risk of cherry picking.

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Multistakeholder Networking towards Circular Flow Land Use Management

Dagmar Petríková[1]

Abstract

This paper will address multistakeholder networking as an innovative approach in regional development. Networking will be organised as a platform collecting the land management data needed for innovations and development, bringing knowledge on the future trends affecting the region in order to take care of the shared strategic processes, cooperation and leadership. Municipalities in the microregion of Trnava have successfully started networking in order to prevent the use of greenfields for attracting new development projects, when brownfields are available in other parts of the micro-region and ready for redevelopment. The issue of brownfield redevelopment is pressing in central European countries. Shared understanding and joint vision and multistakeholder microregional cooperation contributes to the development of local industry and to cooperation and competitiveness within the micro-region, following the objective of sustainable spatial development.

Circular flow land use management is a concept applicable at regional and municipal levels, supported by networking to help the sharing of joined development and the decision-making in large municipal and regional networks. In the on-going study, the concept of networking is applied in a network structure, consisting of 12 small municipalities around the regional city of Trnava in western Slovakia, EU. The municipalities created a micro-regional platform in order to network and manage efficiently land use and other essential functions for better spatial and temporal qualities of the micro-region. Involvement of the Slovak University of Technology in the issues of brownfield redevelopment is bringing know-how to the strategy of redevelopment based on joint participation in the ERDF project, operational programme Central Europe "Circular Flow Land Use Management" No. 2CE174P4. The project started in Feb 2010 and will end in Feb 2013 and the first results of cooperation in the frame of networking are presented at the AESOP 2012 Congress.

1. Introduction

Circular flow land use management is a vital concept applicable at regional and municipal levels, supported by networking to help the sharing of joined development

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and the decision-making in large municipal and regional networks. Circular land use and management represents an integrative policy and governance approach that presupposes a changed land use philosophy with regard to land utilization. Such modified land use philosophy can be expressed with the slogan “avoid – recycle – compensate”.

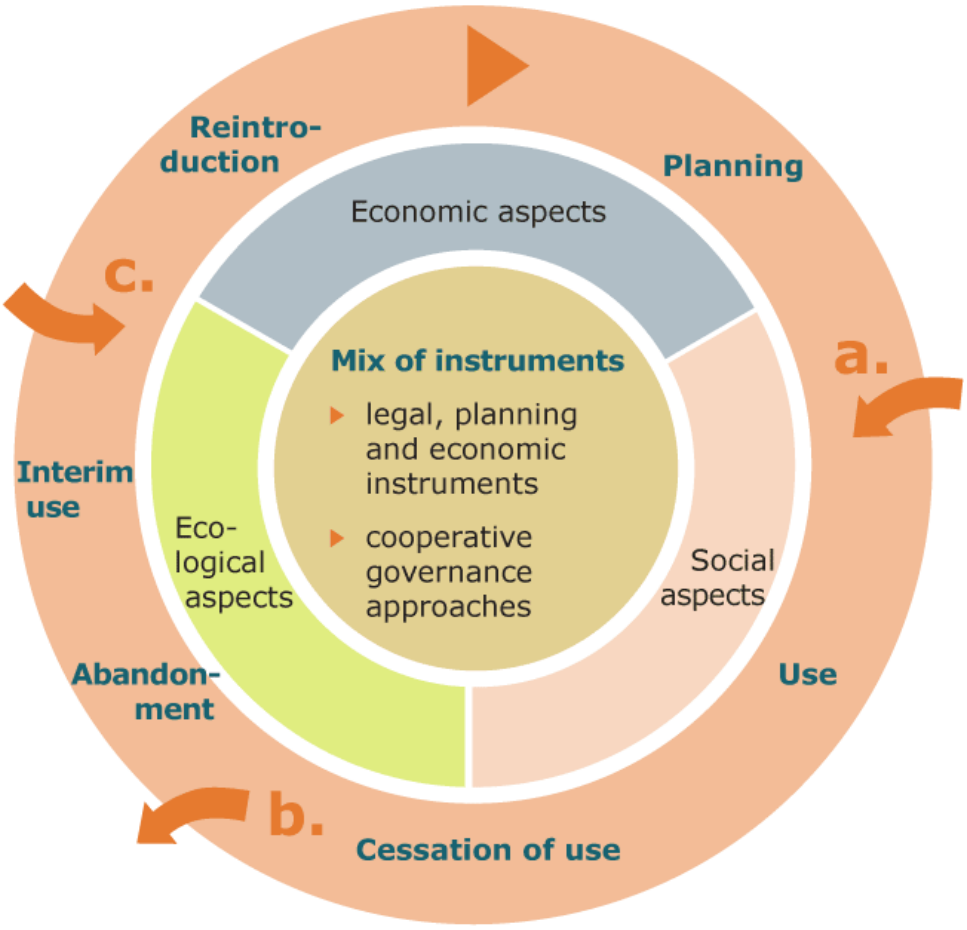
Similarly to the recycling-based principles, which have become commonplace in recent years in areas such as waste and water management, the concept “circular land use management” should become an established policy in sustainable land utilization. Materials cycles can serve as a model for circular land use management

The project CircUse “Circular Flow Land Use Management” No. 2CE174P4 is running under the ERDF operational programme Central Europe, where 12 partners are preparing the concept of Circular Land Management in 6 countries (PL, SK, CZ, DE, AT, I) under the leadership of the Institute for Ecology of Industrial Areas in Katowice, Poland. Involvement of the Slovak University of Technology is bringing know-how to the strategy of redevelopment based on participation in previous projects dealing with the issues of brownfield redevelopment. The project started in February 2010 and will end in February 2013 and the first results of cooperation in the frame of networking are presented.

Limitation of land consumption has become one of major spatial development policy tasks in across all EU member states. One of possible answers to the question how to minimise the land consumption and at the same time not to limit social and economic development is the reutilization of brownfields sites as crucial element of sustainable spatial development management.

Multistakeholder networking is an innovative approach in regional development. Networking is organised as a platform collecting the land management data needed for innovations and development, bringing knowledge on the future trends affecting the region in order to take care of the shared strategic processes, cooperation and leadership in order to avoid urban sprawl. Shared understanding of joint vision and multistakeholder micro-regional cooperation contribute to the development of local industry and to cooperation and competitiveness within the region, following the objective of sustainable spatial development.

Figure 1. Circular land use management (DIFU Berlin, 2008)



The philosophy visualised in the above figure shows the phases of land use resulting in a cycle. At the end respectively at the beginning of certain phases – see a, b and c – decisions concerning the further utilisation of land have to be made.

a. Zoning new “green belt” land for development
b. Rejection of land not suitable for subsequent use
c. Activating land potentials
- brownfields (industrial, commercial, military),
- gaps between buildings in internal areas,
- urban renewal sites,
- sites undergoing planning.

The end and the beginning of each phase are crucial decision points.

2. Analysis

In the Slovak Republic the Trnava microregion, located in west Slovakia, has been chosen as the case study in the CircUse project. Municipalities in the microregion of Trnava have successfully started networking in order to prevent the use of greenfields for attracting new development projects, when brownfields are available in other parts of the micro-region and ready for redevelopment. The issue of brownfield redevelopment is pressing in all central European countries and in the Trnava microregion in particular. The vision is the development of functioning, efficient and flexible cooperation structure and interlinks between different aspects of micro-regional development, different actors and interests in one interlinked strategy as a reaction to existing problems with brownfields areas, abandoned buildings and growing requirements concerning new capacities of public services and land for private investments.

Microregion of Trnava consists of 12 municipalities that create a microregion as a platform for cooperation and networking that will lead to new innovations in the development strategy of microregion. The aim is to integrate multi-task actions to re-use derelict areas in the city and municipalities in its suburban area, involving various stakeholders into the planning, decision making and implementation of joint strategy as a new chance to improve the quality of life in Trnava and other municipalities in the microregion.

This network platform is an organizational concept that helps the sharing of joined understanding and the decision making in large network structures by:

- Inviting the major actors of local development together around the table to discuss on land uses in the networking area of the microregion,
- Creating and sharing joint vision of the development and division of functions of the municipalities in this development,
- Promoting common values in the area of the microregion and developing trust and cooperation in reaching the targets,
- Preparing the joint development agenda,
- Developing the common innovation environment,
- Monitoring the implementation of the targets,
- Evaluating the results.

In terms of sustainable development it is necessary to create networks, alliances, elaborate joint strategies for several municipalities, which allow the division of labour, and make use of common potential. Each community has unique potential, each has different resources available. Cooperation and networking to achieve synergies and increase their attractiveness for investors to bring jobs, development and tax incentives, but also for people, which will be in the context of demographic change much more important. The cooperation of municipalities in the micro-region supports the diversification of the economic base of rural settlements, intensive use of specific human potential, innovation and local potentials.

Innovativeness of local development micro-region is based on:

- Increasing knowledge and skills about possible solutions and functions in the territory of the micro-region,
- Development of cooperation and networking relationships built on trust,
- Development of an innovative environment that allows an increase in the local economy,
- Development of ability for regeneration of microregion territory,
- Increasing the competitiveness of micro-region at regional and national scale,
- Using of marketing tools for creating a common brand (branding) of the territory, which re-uses the old areas (brownfields).

For the development of other economic activities and community facilities in the microregion the key role is played by the inclusion of the communities among the cohesion growth poles in the interest area of innovative growth pole of the city of Trnava. Municipalities also lie in the core belt of settlement zone first level. A major impetus for the development of micro-region was the establishment of the automotive group PSA Peugeot Citroen in the municipality of Zavar (2/3 of the factory area) and in the city of Trnava (1/3 of the factory area) in 2003.

An important factor for the development of transport infrastructure is the immediate proximity of the D1 motorway, linking the cities of Bratislava and Trnava. The advantage of geographical proximity of the villages of microregion is the exit from the motorway D1. The motorway passes through the village Zeleneč, at which it was built a new motorway feeder "Voderady" built, in connection with the construction of industrial premises Samsung. This goes directly to the village of Hrnčiarovce Parnou, which thus provides an excellent transport accessibility, but also serves to the surrounding villages of the microregion.

Also railway No.120 Zilina-Bratislava, which has undergone renovation in recent years. These two important transport elements become not only a significant positive solution to the territory, but somehow at the same time are also limits to the territory of the micro-region. In connection with the construction of the company Samsung that has taken place in the municipality of Voderady, the construction of a new motorway junction was finished, which significantly changed traffic conditions, eg. in the cadastral territory of Hrnčiarovce nad Parnou.

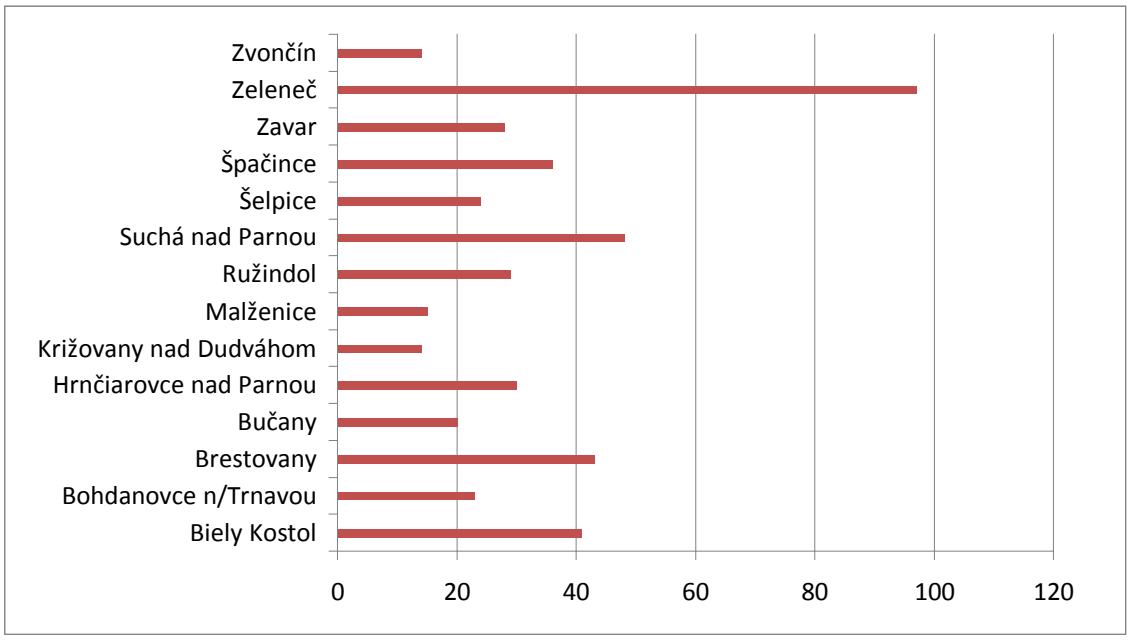
City of Trnava in Slovakia is among the cities hit by the suburbanisation tendencies. While even the late 90's, over 70-thousand people lived in Trnava, after 2000 the demographic characteristics of the city begins to fall. Causes of population decline not only in Trnava, but this process is taking place in almost all major cities not only in Slovakia but also in Europe. This is very similar: decrease in fertility, fewer children on average per family but especially moving into the new satellites in the countryside and villages near cities, that means suburbanisation.

Interesting is also the view of decades back: the greatest increase in population experienced Trnava in the seventies and eighties. The average annual increase amounted between 1970- 1980 enormous increase of 1529 people, in the years 1981 to 1991 the increase in Trnava per year on average was about 800 new residents. In the first half of the 90's, the annual growth fell to less than 300 in the second half of the 90's even dropped below a hundred.

The overall decline in population of Trnava is the independence of the municipality of Biely Kostol and Hrnčiarovce nad Parnou in 1993 and 1994. In recent years, the population decline has not stopped, on the contrary, continues. In 2001, in Trnava lived 69 563 inhabitants, a year later, 69 868 inhabitants, in 2003 68 588 inhabitants, in 2004 68 500 inhabitants. Five years ago there was still in Trnava 68 292 inhabitants, in 2006 67 878 inhabitants and at the end of 2010 only 67 368 inhabitants.

Number of emigrants from Trnava to various neighbouring municipalities for the period 1/2011-12/2011, according to the data by the Local Government of Trnava is directed largely to the municipalities of the territory of the reference micro-region (to 9 villages out of the 13 municipalities of the micro-region).

Table 1. Number of residents moved from Trnava to neighbouring municipalities in 2011



3. Results

In all municipalities a pilot survey of the area and communities was carried out, following the issues:

- Topography and landscape characteristics of the municipality
- Settlement structure, housing
- Population and social climate
- Transport, social and technical infrastructure
- Green areas / Settlement Greenery
- Public spaces
- Underused areas

The results are presented in the SWOT analysis:

Strong aspects of Trnava microregion development:

- infrastructure - proximity to the superior technical infrastructure,
- availability of superior amenities (retail and services) accessible in the regional and superior regional centres,
- investor interest for the development of housing construction and by microregion development induced demand for housing,
- good access centres to microregion and region (Trnava), followed by a multi-modal transportation centre of Bratislava - Vienna
- the availability of jobs,
- the dynamics of economic growth
- relatively good business environment,
- the development of demand-induced population growth,
- demographic increase.

Weak aspects of Trnava microregion development:

- lack of vacant land owned by municipalities,
- in many villages a little outdated building stock of individual housing,
- missing local streets and paths in many villages,
- the lack of barrier-free access solution,
- existing wild dumping sites,
- poor quality of public recreational areas, playgrounds,
- low quality of public transport,
- in many villages no parking and garaging facilities of cars,
- in many villages dust due to transport, lack of windbreaks and soil erosion,
- in many villages the poor state of historic buildings and a problem of their recovery realistic strategies and funding sources,
- in some villages lack local of social infrastructure (education, health, culture, sport),
- connotations associated with the existence of complex nuclear power plants.

Opportunities of Trnava microregion development:

- the use of PPP and structural funds to complete the reconstruction of technical, transport and social infrastructure,
- development of micro-regional cooperation involving common infrastructure building, cycling paths, building micro-regional collection yards,
- regional programmes and land consolidation implementation in order to access land to create building sites for various types of housing areas and infrastructure,
- use of the Environmental Fund and other EU funds for planting greenery outside built-up areas of municipalities,
- microregional cooperation intended to regulate the migration trends and investors in the most suitable locations in terms of sustainable development,
- microregional cooperation for more efficient and better public transport,
- cooperation with the universities close centres to support the micro-regional development.

Threats of Trnava microregion development:

- increase of unemployment,
- decrease in real estate prices,
- increase of the cost of living (energy, food, services),
- reduction in the level of employment in agriculture,
- nuclear safety and threat to environmental components,
- reduction in quality of life by the existence of nuclear facilities and radio waste,
- emergence of industrial and logistics parks,
- population migration,
- coming of problem causing population groups,
- an increase of the temporary present and temporary resident population,
- lack of interest to cooperate.

4. Conclusions

As it is clear from the summary of the outcomes of the SWOT analysis, the Trnava microregion is a typical representative of a core of urban metropolitan region. Good transport accessibility and availability of facilities makes it attractive for investors in the industry segment as well as in housing, services and benefiting from social infrastructure and the cumulative advantages of the core city - Trnava. The dynamic development of economy of the region induces demographic growth influenced by migration and the demand for quality forms of housing and services both for the production services as well as for the services to the population.

Despite the core common competitive advantages which include location, area availability, accessibility, infrastructure and transport facilities, each community due

to its location, the specific natural conditions and existing development have different potential for participation in the development of the region. A key factor in the competitiveness of microregion as a whole and the individual municipalities, including the core centre appears to be the exploitation of these specific potentials. This is only possible in a coordinated development strategy and cooperation enabling more efficient use of specific potential and division of labour. Microregion therefore has a unique potential to gain a competitive advantage from the development of inter-communal cooperation. By developing the intercommunal cooperation it is possible to respond to the need to optimize the structure and location of facilities covering the internally derived demand - it is primarily about leisure time activities, recreation and relax, and specific forms of housing and services, and in the external investment demand - it is especially locating the business of manufacturing services, small production , logistics services and transport. By optimizing the localization from the miroregional perspective it could both maximize use of existing potential of individual communities, as well as to minimize the take of un-built territory reflecting thus the limiting factor for extensive development throughout the region TSK – high quality of agricultural land and environmental protection. Optimising the location of functions on microregional level could also make the movement of population within the microregion more efficient and it could be effective also for the operation of services, with particular emphasis on services provided by public sector and thus contribute to saving municipal finances. Given the considerable similarity of the range of problems perceived by population (lack of green spaces, low services by public transport, incomplete services, long-term unemployment) it opens the possibility for using the cooperation within the Trnava microregion also for the associated projects financed by EU structural funds.

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Between Energy of People and Vacuum of Institutions! Grassroots Planning in Albania: The case of Co-PLAN Institute for Habitat Development in the Informal Settlements of Tirana!

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Abstract

This article addresses to professionals involved in community-based urban planning and development processes and particularly those working in the non-governmental sector. Those working in the local governments and who are engaged in dialogue and programs with community actors will find the experiences described in this study useful. The main objective of the study is to map institution-building processes, as well as to disclose the various actors and motivations during the way collaboration was established for policy reforms and institutional changes in a country in transition towards market economy as Albania. Until 1990 Albania experienced one of the most severe and orthodox communist system in the entire Eastern European bloc. Indeed, Albanians suffered for more than 40 years negation of the freedom of speech. Consequently, the citizens were not invited in no case to influence decision making, which was very centralized. It can be said that there was no tradition in the participation of community, also because the system abused with the "collective" approach. In the 1990 Albania too was influenced by the political, social and economic changes that brought down the iron curtain in Eastern Europe. Thus, Albania started on the difficult and new road of transition, but rather in a very chaotic manner and even with severe setbacks such as the 1997 social unrest caused by the collapse of the fraudulent pyramid schemes, or consequences of 1999 of the war in Kosovo and refugee crisis. Interestingly enough, a local NGO initiative called Co-PLAN, Institute for habitat development, started its activity as a professional organization in the difficult year of 1997. Formerly a Dutch social program in one of the most irregularly developed areas in the outskirts of the capital city of Tirana; Co-PLAN would be soon distinguished as one a pioneering organization committed to contribute in the difficult transition process. The first steps that were taken in the muddy and poor areas of the periphery aimed to organize the community in addressing problems like public spaces, social disarray and health education. It was very unusual in the Albanian context to approach the community, even more so in the irregular settlements. All too often, there has been an opposition from small

[1] *The article recognizes the contributions of the colleagues of Co-PLAN Institute for habitat development, Tirana Albania, and concretely the contribution of D.Shutina, S.Dhamo, F.Kuci and C.Acioly, Jr, etc.*

groups from these communities thus forming a strong and very conservative stream, backed up by the government and the "old-fashioned" professionals. In several cases as well as in the back stage, Co-PLAN was accused as "the protectors of the illegality".

Albania in Transition of 90-s: Co-PLAN, Institute for Habitat Development

In fact Co-PLAN stayed firm on its views of advocacy for the groups in need, vulnerable groups, the part of the community that would never get access and had no chances to influence decision making, even those decisions directly affecting them. Yet Co-PLAN has never acted as "charitable" organization. This in fact made the work in field more difficult. "Due to the persistent crisis often organizations, usually known as "shadow" organizations with their own "hidden" agendas, started to emerge in these areas with a philosophy of emergency in the background." In the beginning, it was nearly impossible to negotiate with the newcomers to give up their own land for the broader interest of public use, due to the fact that land often entailed a hard-earned asset for them. Even more difficult it became when residents were used with organizations distributing food without claiming any contribution from them for a public cause. In this transition period, also peoples' attitude shifted rapidly from "collective" into a highly "individual" oriented. The change in mentality has proven to be difficult and usually takes time. But it is probably due to this fact that it became a challenge that "co-planners" liked to embrace. However, the toughest battle was to be fought in a different environment; at the "sophisticated" level of professionals and authorities. Advocating for the formalization of "informal" was considered a heresy. Co-PLAN's important objective of bringing together the community (not necessarily those of the illegal settlements) with policy makers called for another level, which is professionalism. Therefore, Co-PLAN undertook several initiatives to establish networks and most importantly forums where different actors and stakeholders could forward, defend and confront different views and interests. On the other hand, in several cases Co-PLAN shifted to the role of intermediary between communities and authorities (local and central), by introducing comprehensive tools to cope with the challenges of the new urban dynamics of the transitional period. This required a comprehensive level of capacities as well as strong willingness to be a driver force in the entire process. Co-PLAN had to face new challenges. This shift to professionalism necessitated the broader view of neighborhood-to-city scale.

Kamza: From Informality to Municipal Autonomy

1. “The Municipality of Kamza was formed only in 1996 out of the need to cope with new unprecedented growing developments in the area. Kamza inherited a strong agricultural background and in the past fifteen years or so, the population has seen at least twenty-fold increase of 7,000 to 140,000 inhabitants, and losing almost all the agricultural potential as result of the conversion of land from agricultural-rural to urban” (Aliaj, B.,1995). It is not hard to imagine the burden and scale of problems this municipality is confronted with in coping with an alarming rate of 90% illegal constructions, while it totally lacks any institutional memory or capacity. This has all happened while support from central government was missing or inexistent, since the area was not in its own agenda of priorities, and is regarded as a “dirty dish”. “One should also take in consideration the country’s context of decentralization where transference of problems rather than powers to the local administration prevails. What’s more, political elections continue to cause waves of unjustified layoffs to the local administration staff. In the election of 2001, or 2004 in the Municipality of Kamza, with political changes 95% of the municipal staff was fired, creating a complete blackout in the local administration and transfer of knowledge” (Aliaj, B., 1996). On the other hand, Co-PLAN tried to emphasize the big potential lying in these areas.” In several surveys of the time, Co-PLAN estimated an incredibly large amount of 110,000,000 USD investment in housing made by residents (by contrast, the most successful privatization case in Albania at that time reached the amount of 80,000,000 USD), whereas the municipal budget spent for public investment reached the ridiculous amount of 100,000 USD in the best year.” (Co-PLAN, 2003)
Unfortunately, in several cases this potential has resulted in violent conflicts with government representatives. In 1995, the government tried to relocate by force the settlers, which braced themselves for an open confrontation that resulted in ferocious conflict between people and police. In fact this was not the only case. The government lacked for a decade the vision for coping with the situation and that has resulted in a misuse of the area for political purposes, making such unrealistic promises during electoral campaigns as legalization of settlements (an option that was never elaborated professionally by the government up to 2005) and hence never took off at that time. This caused other revolts since government has not been capable of finding the proper way of how to handle the situation, so long as bridges of communication between government and community had still a long way to go.

Building Invisible Bridges and Mutual Trust: Disclosing Actors and their Motivations

Co-PLAN has taken several initiatives with the financial support by foreign donors like CORDAID Holland (formerly known as Bilance, Mensen in Nood) and latter by NOVIB, or other Dutch governmental sources, trying to establish communication between government and communities that would eventually serve to address the issues, but also to identify the potentials of joining forces to overcome the problems. In the very beginning, Co-PLAN worked at a neighborhood scale in two very specific areas: i) Breglumasi, an illegally developed area with more than 250 families; and ii) Bathore, which has seen a very rapid expansion from 13-200 hectares, also illegally developed (part of the Municipality of Kamza) with more than 4,000 households; iii) a third case is in Keneta neighborhood in the main port city of

Albania Durres. "The newcomers in these areas originally come from the remote and mountainous areas of the country, where, especially after the 1990s, chances for a decent life were practically zero. Many people became unemployed after the collapse of the heavy industry that was the main source of employment for these areas." (Co-PLAN, 2004)

Working in these areas it was very important to look at the stages of the process, which the residents go through in order to gain access in the neighborhood:

2. *Step 1*: **Decision to migrate** - In the places of origin, life is still organized around the clan, which is usually an extended family. Basically this means that to a certain extent the family economy is common, therefore decisions are taken jointly in a group. Take a family of 4-5 brothers (usually these families have a high average number per households) that after it realizes that life in their village is becoming almost impossible, makes the decision to move to urban areas with greater chances for a better life. "*In the past ten years, the central part of Albania has attracted newcomers from all over the country, especially those from the northern parts of the country, which remain the most backward one*" (Aliaj, B., Lulo, K., Myftiu, G., 2003) There are few implications to this decision. In order to afford such an important and financially costly decision, the clan decides about the "sharing of responsibilities" among brothers. One of them (usually the youngest and possibly the single one) gets the mandate of clan to search for the most appropriate and affordable location for the entire clan, while one or two others are responsible for securing the financial means to afford the move and shelter. In many cases this implies that someone has even to emigrate and work abroad. There is always usually the oldest brother, or the grandfather, who remains and looks after the remainder of the family.

Step 2. **Identifying location** - This step is taken in a very discreet way. The basic criteria are the vicinity with the urban area, affordability, but also the land and property titles. This is a very delicate process. The newcomers are well informed about the tenure of the location they identify as appropriate. This means that if government is the owner of the parcel, the chances are to meet less difficulty for settling in there. Such an attitude stems from the peoples' belief that "collective property is nobody's property". Nevertheless, there is a "fee" to enter the area. It happened that the first newcomers in the area became also "middlemen" (not necessarily the real owners) subdividing the land and selling it out to other new comers. Needless to say the transactions are informal. In reality the new residents know that they do not actually buy the land, indeed they gain the "right" to settle in the neighborhood. This is reflected in the verbal agreement according to which "the deal would be invalid if the government or the real owners would step in the process".

Step 3. **Testing the firmness of the government** - The "purchase" of the plot is not immediately followed by the building of the house. In the very beginning, the residents build a shack or they just put building materials on the site as a sign for

later construction. This step is taken for two reasons. In so doing, they can test the reaction of authorities toward the area while at the same time it sends a signal to the neighbors to prevent the land from any sudden invasion from other newcomers. Sometimes, it happened that they had to deal with police as the latter tried to relocate them. This is probably also one of the reasons why in the beginning only one of the family members is dealing with the first stage.

Step 4. **Starting the investment** - Having gained a little security the investment on housing starts. What is interesting about this step is that the phases of investment follow the cycles of a financial flow. This means that the progress of the investment is very much relying on the income generated mainly from either emigration, or selling out old properties, or generating income from working in the urban area. Residents appear to be very creative in decreasing the costs of building. The tools used range from using cheap materials to decreasing labor costs by involving relatives in the house-building process. As the household economy grows one can realize how this effects the investment. Better materials are used and roofs replace terraces.

Step 5. **Moving in** - Usually the family moves into the house when the investment is complete. What is interesting in this step is that the family still lives around a common economy. They keep this system until housing for each family is secured. This is a solidarity system that stimulates the assistance among clan members.

Step 6. **Improve the surroundings** - Noticeably, until this stage infrastructure provision was not a priority. In fact once the plot is bought the buyer is supposed to have the right of access, but this is not always the case, and it becomes sometimes a source of conflict. The reason is that there is no layout whatsoever of the area to guide the land occupation process. But interestingly enough, there still is a natural order in the way the residents build. At this point, the process meets with the difficult task of mobilizing joint efforts and contributions for building and financing of the infrastructure.

Community as an Asset of Planning and Development:

The main focus of the work in these areas was to mobilize community efforts to identify and secure public space indispensable for the urban development of the area. It takes a lot of efforts to convince people who work hard to take out a living to buy the plot of land on which they sit, and who struggled with the police to live where they do, to push back fences and to allow some space for the public purpose and planning sake. However enthusiastic a small group of young professionals could be, it could not be much more done without having first established human relationships with the residents. It is understood that trust building is a lengthy process. It takes time and efforts. It cannot be achieved without trying to understand the real human side that exists behind the entire process. The gravel, for example, offered in return to square meters of public space, was just an instrument of bargaining and building trust with the community. The idea was to start a “snowballing” process, meaning that at a certain point in time someone had to break the ice, and as this process went

on, to have more and more people on the side of the development process. This also means that we wanted the process to take place and more people to accept it through a "social community pressure". In practice there were the community residents, which had to convince their fellows and neighbors to embrace the rules of the process. A very meaningful indicator is the fact that in three years a network of 6km public space was secured and modestly improved without the involvement of the police or other government authorities. Since the beginning therefore it was very important to identify the so-called "key persons", which are people that have a good reputation in the area and can be representatives of the community interests. Getting the community organized implied also to have an institutional representation of the area. Since the beginning, special regard was paid to the process of creating a community organization (CBO) named "Rilindja" (Revival). In the beginning, the challenge was to have people grasp such an idea. But soon, as the influence of the organization extended in the area, the challenge shifted to securing the wide representation of the organization. The only way to secure this was through fair, open and democratic elections. One can imagine that Albania did not inherit a strong democratic tradition; hence the task was tough.

Building Partnerships for Development:

After Dutch/foreign aid and development organizations also the World Bank joined the process later thanks to the "Urban Land Management Project" inspired by Co-PLAN work. In fact the World Bank and the Albanian Government financially supported the project jointly, but at that point the Albanian authorities could not yet grasp the importance and the philosophy of the project. With time the project was given the Albanian ownership and supported the upgrading process as first step towards a formalization reform. An important stage of the process was the negotiation between the community and the authorities for the details of the project. Co-PLAN had a key role in intermediating between the community represented by "Rilindja" and the authorities of local and central government. All kinds of issues, ranging from the cost sharing rates to steps of the process and technicalities of the project, were to be discussed and negotiated. After several months of meetings, discussions and negotiations, the process resulted in an official and institutional agreement between the community represented by "Rilindja" and the County officials as representative of the Local Government at the time. However, the Partnership Agreement was covering only a small part in the wide range of the problems the area faces. Co-PLAN remained concerned with the democratic and full-wide representation of the community interests. One of the election periods of the council of the CBO coincided with the local elections of "aldermen" (formerly official representatives of the neighborhoods). It was impressive to see how the "informal" elections of the association of the residents were given even more importance than the local elections and they had a high turnout. Thus, the transparency increased the residents' trust in the association. Indeed, "Rilindja" was taking on a big and important responsibility, that is, an honest and fair representation of the interests of community on the one hand, and to convey the philosophy of cooperation and collaboration in the urban development process in favor of the public interests most important issue and probably the most difficult one; change the

mentality from “expect the state do...” to “let’s get together take some action and after seek for some support”.

Prioritizing Developments and Consolidating Community via Gender Balance:
Nevertheless, easier said than done, the main difficulty to get the process going were money, though implicitly accepted. That is why Co-PLAN undertook a very interesting consultative process with the community. The approach used was ‘Participatory Analysis for Community Action’. The aim was to get the residents thinking about their own responsibilities and taking the respective actions overcoming the belief that nothing can be done without first having the money. The process resulted in an increasing interaction between residents or group of residents trying to come up with common and acceptable solutions. The questions put forward by the organizers were simple. Say, the question was to identify an appropriate and sizable plot to build a school assuming that the funding of this initiative was in place. In first place, the question was simple to be dealt with. In reality, the process was tough and residents found that it was not easy at all to conclude in a commonly agreed solution. Thus, after difficult negotiations amongst the different groups of residents, an appropriate plot for a health care center was identified and given as community contribution to the initiative of improving the access to health care. As a result, at least 300 families were reached. The entire process was very interesting to the team. Co-PLAN had a fantastic chance to observe from inside the decision making process. In first place, one can get the idea that the pattern of decision-making process is very gender imbalanced. Unfortunately, this is matter-of-factly true. The husband (man) is in charge to generate the income therefore is supposed to have a stronger say on the household expenditures. After a more accurate analysis, Co-PLAN found out that when facing issues like infrastructure the decision would eventually shift towards *water supply* or *sewerage* rather than say *roads*. This probably to banks or projects, focused only on disbursing money, means nothing but Co-PLAN tried to look deeper into that. The implicit assumption was that women were mainly dealing with housing maintenance (*although according to surveys conducted by Co-PLAN a lot of women were also involved in income generation activities by, for instance, assembling shoes at home for an underpaid salary* - Vejsiu, Y., and Misja, V., 1996), while men are more interested in mobility. This argument could be supported by the observed fact in the area that mainly women carry the arduous task of fetching water from often far away distances, by manual labor. Therefore, women mainly influenced the choice of water, while men mainly supported the choice for road network. In fact the women did influence decisions as far as they have probably the bigger stake in family responsibilities. However, the man remains, by an archaic tradition, the one and only articulator of the decisions. A similar effect could be observed in the case of the health care center. At first place, men, who at the time were main counterpart contacts, were not very enthusiastic about the idea. But when the issue was broadly discussed the situation changed. It is understandable; for the women accessing primary health care in the area was incomparably more efficient than say driving more then 10 km (*the distance to the nearest hospital*) to get a simple assistance. The close consultative process with the

community, in fact, later appeared to be crucial especially compared with another initiative of an organization oriented toward “cost-disbursement approach”, which failed to meet the need, and was illegally occupied without serving a single day to its purpose of health care. The accurate observation on the real influence of women in decision-making encouraged Co-PLAN to establish a better contact with the female part of the population. The process gained increasing importance as the involvement of women turned out to be very much relevant to the entire urban development of the area. A women organization was established and probably the most essential social activities were carried out in close collaboration with this group. They succeeded in carrying out the most interesting, traditional and inspiring aspect of the community living in the area, through fairs, social gathering, and other social activities.

Building a Future by Investing of Children and Youth:

In the frequent surveys conducted in the area by Co-PLAN, it was easy to understand that the majority of the population was very young. This has always been regarded as strength for the area, showing the vitality of this population. However, in the threat of sometime cruel reality of the pupils dropping the schools in order to generate income through selling cigarettes on the streets, this obviously becomes an issue of concern. Therefore, Co-PLAN put even more efforts in establishing youth groups that would undertake social as well as education activities (such *as language courses, sports etc*.). Even more specific became the objective of relating a sustainable future with the youth, the future of the population. Several initiatives were taken in having youths planting trees and taking care of them. The limitation of these initiatives was that community does not yet see public green spaces as a priority for the area. Of course the team met all kinds of difficulties. None of the initiatives was easy. In fact some of them were very difficult, while some others even failed. This was for instance the case of a program of waste collection, where a system of collection was introduced and residents were asked to contribute in order to carry on the process. Due to the efforts and energy of the social workers, this system kept running, and even well for some time. However, it could rely neither on the unlimited assistance of Co-PLAN, nor on the self co-ordination of the residents. The project failed to transfer the system to the local administration. Though it was a failure, this case was very interesting to draw some valuable lessons. Of course Co-PLAN neither aimed nor was able to individually focus in all aspects. Having identified several other NGOs operating in the area in different fields, Co-PLAN in collaboration with the Municipality of Kamza initiated the set up of a network of NGOs that would eventually exchange information, co-ordinate and also enter in joint initiatives to sharing the responsibilities. Definitely, the democratization issue of the area through information remained the top priority for Co-PLAN. We could not expect people to influence the governance without sharing information. Amongst the successful attempts in this direction was definitely the publication of the Newsletter of Bathore. This was a good chance for all residents to share their concerns and views on urban development, social, health and education issues.

Replicating Neighborhood Development Agenda at City Scale:

"When discussing about bridges, it would be simplistic to narrow down the issue to the neighborhood level. A constant concern of Co-PLAN was building bridges between community and authorities, between different levels of public administration, between different actors that have a stake in the urban development process including the professionals and more importantly building the main bridge toward the public opinion."(Co-PLAN & ENHR 2003) Such an important yet difficult process would have little or no effect without a series of Urban Forums or TV programs and debates, where Co-PLAN found itself not just as a participant but on most occasions as organizer and facilitator too. Indeed the Open Public Debate "*Managing Tirana's rapid growth*" in 1998 was the yearly event that still continues nowadays via so called Open Forum. Until then, the open debate in professional circles about problems to meet the real priorities of people was inexistent in the Albanian society. The echo of this event lasted for a long period of time. The event has come to be a good tradition with Urban Forum organized annually. This is a good chance for professionals, authorities, NGOs, CBOs and communities to join in and exchange views and ideas on urban development and related issues. Co-PLAN succeeded to make the issue a concern also at regional level, which have now carried on Urban Forum in several other cities, and have even established a regional network of professionals (in the Balkans) to address issues of similar content. An important milestone in the process was the ENHR International Conference *Making Cities Work* held in Tirana 2003, and AESOP Heads of School Meeting in Tirana 2011. The Albanian case in these conferences has been very relevant. Publications have also been supportive tools to bring together the professionals and students. "*City Made by People"* initially and Forum A+P nowadays are already a tradition. The aim of this book is to bring the most relevant experiences on urban development contributing in this way to create institutional bridges in the debate amongst professionals.

Building Capacities of Local Authorities towards Good Governance:

For several years, Co-PLAN was a chief advocate of formulating in a participatory way a model that would cater for the reality in the irregularly developed areas. Considerable efforts were put in preparing the community to take actions to improve the social and physical conditions. However, the authorities were far from being responsive to the initiatives of the community. Often this slowed down the process of integration of these communities with the rest of the city. On the other hand, Co-PLAN always tried to position itself as an organization that facilitates the communication between community and government rather than taking over the government duties. This differed quite a lot from what most organizations were doing. Building infrastructure, schools or other facilities were none of Co-PLAN's business, which was rather trying to bring together different actors to find the appropriate means and suitable solutions through multi-lateral contributions.

However, as Co-PLAN and "Rilindja" gained the trust and the mandate of community to spell out their needs, the government was still lagging behind. This was a crucial moment to realize that there was no longer a need to work closer with the local government in order to make them understand the real issues, and also to

increase the trust of the residents on local authorities as well as their capacities to deal with the situation. It was upon this basis that a new initiative named "Empowering the local government and community based initiatives in the Municipality of Kamza" would take off. The initiative was a joint effort between the Municipality of Kamza, Co-PLAN Institute for Habitat Development and IHS Institute for Housing and Urban Development Studies, Rotterdam Holland. In order to cater better for the needs of the local government, a priority needs assessment was undertaken. For this reason, a joint group of municipal representatives and professionals of Co-PLAN organized a workshop which concluded in an operational plan. "The main approach used was the Objective Oriented Participatory Planning. In fact, no one anticipated that the project was about to be strongly shaken by the local elections of that year. The sudden layoffs of 95% of the staff was a big lesson for the young team, which had to get used with the up and downs of the political climate of the Albanian reality. The only thing left when almost everything you built is ruined is to start anew. Hence, the immediate action was to re-establish contacts with the new political representatives of the Municipality of Kamza. At the end of the day, professionals must face reality, and the reality is that for good or bad the new administration represented the people of the municipality." (Aliaj, B., Dhamo, S., Shutina, D., 2009)

The Process of Making a Strategic Urban Development Plan:

A new process of carrying out the priorities of the local administration started. After a difficult consultative process the priorities were identified. However, it was difficult for some time for the project team to come to a full understanding with the municipal staff on the as often what they meant was different from what they said. For instance, they were wondering if something could be done about the "chaos". To our understanding (which latter proved to be right) the chaos was standing for the irregular urban development process. It is clear that the question whether something could be done about the urban chaos was a much talked-about issue. The "what" did take time and efforts to identify. In fact, the "what" was followed by the "how" and so on… During the process almost all these issues had to be reviewed according to the dynamics. What was important to be maintained was the close contact with the ground and community, which helped the team in not losing the realistic view on what we were doing. The project finally could identify: (i) urban development; (ii) infrastructure; (iii) economic development which indeed meant to them employment, as the priorities of the local administration of the Municipality of Kamza to cope with the very difficult reality. On the other hand, the project team had its limitations in terms of finance as well as knowledge and experience.

However, the experience accumulated through years of working with the grassroots level appeared later to be crucial for the success of the entire process. In order to respond to these needs we formulated the following objectives: (i) a vision for urban development; (ii) building capacities; and (iii) investment in public service. "Why a plan?" or "another plan" was the first question to come up and which needed an immediate answer. In the transitional period there were other planning initiatives that failed to meet the real needs of peoples. The traditional planning methodology in

Albania was a narrow physical one, without considering the involvement of different actors. To the project team it was clear that the process was going to make the difference. Another factor that would eventually make the difference was the fact that in the view of the project, the plan was never seen as an end, but rather a means in the hands of the local administration to foster the development of the area. Being a pioneer organization, Co-PLAN aimed to introduce comprehensive methods of urban planning and urban management. Hence, the assistance of IHS Rotterdam was estimated to be crucial especially in this process. "Capacity building" was a crucial component. One could not expect any comprehensive strategy to translate into actions by people that lacked first hand experience in dealing with urban management issues. Besides, the level of education of the local administration was low (this is common in such level of municipalities across the country and we had to deal with this sad reality). For this reason, the aim was limited to on-the-job assistance. "Investments" is the last but not least component. Given the project's financial constraints, the investments were not meant to meet the huge needs for infrastructure of the municipality. In addition, since they were limited this necessitated that choice to be well thought to addressing specific issues and models. In the end, Co-PLAN wanted to use these investments to assist the municipality rather than taking over its duties to meet the needs for public infrastructure and services. During the process, all the three-abovementioned components were combined together to complement each other and above all to serve the purpose of the process of empowering the local government.

Citizen Participation: tools, methods and results!

At the start of the project, the notion of citizen participation all but known and accepted. The notion was even strongly rejected by a considerable number of professionals. To a certain extent, the notion is not so welcome nowadays either. Such opposite views by them can be justified on the grounds of their former education in a society where the basic elements of democracy were lacking. Hence, the very first challenge was to build and support a cogent argument on why the citizen participation was important. Co-PLAN team came from a very interesting experience of work with the grassroots level, which in fact focused on organizing the community for joint actions. The terms of discussion and negotiations were simple and clear. You were dealing with sharing contributions to improve infrastructure, the steps, and stages of betterment of the area. All these topics were perfectly understood by residents. The move to a higher scale along with the shift from an action- oriented experience to policy formulation implied that also the terms of discussion with the residents needed to change. In the beginning this created few difficulties, as far as nobody was expected to address to the community issues like "How do you expect the improvement of urban management in Municipality of Kamza (MoK)?", or "Could you feedback on the vision formulation of the MoK?" Therefore, the team understood that he document that was going to be prepared should be easily translatable into actions, and phases expressed in operational terms. The same problem the team encountered with the municipal staff too. In different meetings with the municipal administration, we realized that the amount of feedback on the expectations of the plan was very low. This was only showing the scale of difficulty

that awaited us in the long process of formulating the strategy. The implication was that more efforts had to be put in conceiving a plan that would cater for the people's real needs. Moreover, this was a tough task especially when references to similar experiences in Albania were missing. It took several months (December 2000 – July 2001) of discussions and negotiations, brainstorming amongst the team members of the project as well as with the IHS Rotterdam consultants to come up with the an elaborated idea of how the plan was to look like. Building the argument of "why participatory approach" was only a small part of the picture. In order to ensure participation the team had to think about the tools and the infrastructure of participation. The same question Co-PLAN staff was making at time was: How citizens can reach us?

In order to expect any kind of feedback, the community ought to be informed about the process and about the expected product. The project team therefore launched a campaign of information about the project and the preparation process of the urban development plan. The campaign involved several ways of communication. Some of the most important national and local newspapers were involved in the coverage of the plan. In addition, in collaboration with the main national private radio in Albania the project team experimented a creative way of information. In the morning program (which has the biggest audience, due to the singular way of involving music, humor, phone calls and discussions on the real daily problems) the experience of the Municipality of Kamza, which to many in the capital was unknown, was brought in. Thus, the information was conveyed to both sides: the citizens of Tirana heard the new and peculiar situation in Kamza, while the residents of the newly created municipality of Kamza received the views and opinions of the city where they want to integrate to. Other means of information were used, including banners on the main road of the Municipality to announce the plan preparation, and give clues about contacts (the project office in the municipality was the point of contact). In addition, an announcement board served to communicate the progress of the process. However, this was only part of the communication process, to get the message through. The objective of the participatory process was not only to inform the community on the proposal of the draft strategy but also to receive feedback from the residents. Therefore, other means were employed to serve this purpose. A questionnaire was distributed to 10,000 households. The questionnaire contained an explanatory notes on the plan as well several questions to receive their feedback on the strategy. The return of the questionnaires was not optional, but special personnel were devoted to collect the questionnaires door to door, few days after they were distributed. Thus the residents were given enough time to for the answers. Time and efforts were devoted to the elaboration of the entire amount of questionnaires. The results of the questionnaires are included in the urban development strategy. Furthermore, in order to increase the transparency of the process, the result of the survey were attached to the strategic document. In the process of community participation in policy formulation, it is very important to look at the events and results from different angles. For instance, the process of questionnaires was very important. However, Co-PLAN staff was aware of the fact that in the questionnaires were received feedbacks at an individual or family level. But what about the

feedback at a higher community level? A series of meetings with the community were organized. What is interesting about these meetings is that regardless of what "conventional architects" might expect, residents are very sensitive in the proposals put forward. The secret of the process is to translate 'complicated topics" in simpler language so that the ordinary people can understand and react. For instance, instead of addressing broad issues on urban management theory, we simply aimed to collect feedback on the proposal of cost-sharing approach to build infrastructure. During these meetings, we also tried to bring other issues like education, health and economic development, to residents' attention and not to limit their thinking only about infrastructure. In fact, these meetings served to make a step forward in the process of changing the community attitude, from a passive and complaining (claiming state support) to a more proactive (initiative to take actions).

The Role of Media for Participatory Planning:

However the wishes of the community have to be confronted with the possibility of the government as well as with the wishes of the rest of the public opinion. Therefore going upper in the levels of participation was very important. To that end, Co-PLAN prepared other TV programs, with the aim to involve the general opinion in the difficult discussion of facing up such phenomenon like irregular land development. In addition, the Mayor of Kamza was present on TV answering to the online questions of the residents, as well as other representatives from the central government that took part in the online debate. The TV program appeared to be e very efficient mean to target greater audiences. In the way long of the process, the involvement of actors in a continuous debate on the strategic urban development plan became very important. A series of urban forums, specifically devoted to the discussion on the urban development strategy, was prepared. In the early stages of the project, the first forum aimed to set up, with different actors involved, a calendar of activities for the preparation, discussion, and approval of the urban development strategy. What makes the case different was is that the strategic thinking in the Albanian urban management methodology is almost inexistent. Hence, a common understanding on the stages of the process ought to be agreed upon. Once a certain progress was achieved with the design of the plan, such consultations and discussions were came be held on a regular basis. One of the most significant forums was organized when the first integrated draft of the plan was designed. In order to facilitate a sound and productive discussion, the draft was given beforehand to all actors involved, to give them the necessary time for reflection. It is worth mentioning the tough debate that discussions in those forums generated. In addition, the case in Albania is such that not all actors are interested in a sound development of the urban management system. "The central government is not willing to give its powers to local government or other sectors. In addition, several public/state intuitions would prefer to retain their exclusive powers, although this does not go in line with efficiency and development issues. The strategic plan, therefore, along with the entire process, had to cope with such diverse and sometimes odd interests and positions." (Aliaj, B., 2008) To create conditions that are more conducive for the different actors to receive comments and feedback, also other means were employed. All actors were expected to submit comments in a written form. However, the lack of

culture in writing reports was somehow an obstacle to the process. Instead, bilateral meeting resulted to be even more interesting for the actors to submit comments. Even more so to ensure the involvement of actors who are still reluctant to accept comprehensive approaches of urban planning, for them special activities were organized. They were even invited in workshops that included site visits in order to bring them closer to the reality. As mentioned above, there was a cycle of forums organized at different stages of the process. The strategic urban development plan draft reflected the comments made by different actors in the forums. Forums were open to the participation of whoever had the interest to join in. However, Co-PLAN took the responsibility of guaranteeing the presence of key institutions, government representatives, professionals, and NGOs/CBOs. In order to maintain the open-forum idea and bring the topics to the attention of the public, some of the forums were even broadcasted on television. *"It is interesting to look at a very simple fact; the distribution of the draft plan to different actors. Co-PLAN considered a success the fact that more and more actors were aware about the content of the strategic urban development plan. Grotesquely enough, the attitude of the public institutions differs very much in this respect. Still official regulatory plans are kept in shelves like they were classified."* (LMTF 1995)

Formulating new Urban Development Strategies:

In the process of formulating the urban development strategy, the involvement the donors' community is considered to be very important. The interaction with such community appeared to be very relevant to the process. Despite how it might look in first place, the relation with the donor was not focusing on possibilities of funding. This was only one of the issues. The donor community was present in Albania to assist the Albanian society in coping with the social, political and economic changes in the transition period. The technical expertise they provided has been very relevant to the Municipality of Kamza. The interaction appeared to result in a productive exchange of views on the urbanization process and ways and means to cope with it. In order to fully understand the process a look into the Albanian institutional set up is needed. In this way comparisons with other different cases might be a little simpler.

Different schemes have been designed in Kamza case to support the explanation:

(i) The governance scheme; aims to illustrate the governance set up. The governance in Albania is organized in two levels; local and central. Local government in urban areas is organized in *municipalities*, while in rural areas is organized in *communes*. The local government also is structured in two levels. Different municipalities and communes are joined together to establish the *second* level of the local government; the *county*. The system was introduced only recently, and to a certain degree has worked. However, the central government has its own system extended also locally; the *prefecture*. Municipalities and communes are elected in local elections. The county is established through indirect elections, while prefecture is an entity that is appointed. The prefectures are still used as instruments of central government to "control" the local government.

(ii) The decision making process on urban management aims to pave the way for the process of approving urban plans. The system reflects somehow the poor level of decentralization at that time in Albanian experience. In principle, the final approval/rejection of urban plans is always done by the central government! Oddly enough, the central government does not see itself committed in the urban development process through planning initiatives or policy formulating. This only reflects that; in the policymaking level a *controlling* attitude rather than *leading* still dominates. Moreover the Albanian concoction of Committees for Territorial Adjustment (read Development) only deteriorated the decision making process in that it does not ensure the necessary transparency and representation of the public opinion.

Some Findings and Conclusions:

The practice of Co-PLAN shows the actors involved in the process, aims to explain the extended environment the project team targeted in order to design the strategic document. Albanian society has progressed in the process of getting organized. However, the transition period is very short to result in having all groups of interest organized. Especially in the reality of Kamza, a recently created urban area, it was nearly impossible to have different groups represented. The process met such a difficulty while trying to contact and properly involve the private sector, which appears to be disorganized and scattered. Therefore the project could not but contact on an individual basis the members of this community. A special questionnaire was prepared for the private sector in order to attract its feedback on the urban development strategy. Many efforts were put in communicating with community, public opinion, professionals, and authorities. Since the early stages of the project, the team came to realize that the situation within the municipality needed to be carefully analyzed. At a certain point, Co-PLAN realized that the information flow within the municipality did not ensure the involvement of all necessary departments of the municipality. In the Albanian context, this was the praxis. Usually, what happens is that the levels of the municipality, especially the higher ones, prefer not to share the information. The challenge is how to improve the hierarchic interaction without a *telling* and imposing attitude. Therefore the project team suggested the expansion of the group and the creation of (municipal and Co-PLAN) Task Force. The idea was to allow the Municipality to have a greater say on the process and product, and at the same time to guarantee a better flow of information through removing the “monopoly” situation in information at the authorities’ level. The set up of the task force resulted in a better orientation of the rest of the activities of the project.

For instance, the Task Force found very useful the building of a geographic information system. Indeed, the municipal staff lacked the basic working tools. Because Kamza was a municipality without an institutional memory, the administration lacked basic geographic information. The training and workshops tried also to reflect the needs of the Task Force. Several trainings were done, ranging form Institutional Development and Organizational Strengthening, to information systems for Tax collection. The trainings never were an objective per se. “The

preparation process of the Strategic Urban Development Plan (SUD) served as a good chance for the on-the-job training. The approach resulted to be more efficient due to two factors: (i) municipal staff could not devote much time to conventional training; (ii) the topics were oriented towards the needs of the members of the Task Force. Each chapter of the SUD was discussed and commented in the weekly meetings of the Task Force." (Driscoll, J., 1995)

Co-PLAN has since then the strong conviction that participation should be included not only to influence the decision-making but also to share and take responsibilities. In fact, participation was a crucial argument behind different initiatives at the neighborhood scale. Participation was also when residents gave land in favor of public space, financial contribution to build public infrastructure as well as taking collective actions to improve the future education of the children. In addition, the investment component of the project served as a good chance to ensure participation of the municipality in different actions. Each initiative had its own specific purpose. The very first one was the initiative to improve the only public space in the center of the municipality. For several years, it was prone to illegal kiosks and gambling activities. Also an informal marketplace was using the green space. The demolition of the illegal kiosks was a clear message of the willingness of the Municipality of Kamza to improve the image of the city. In contrast with what happened in other cities, where the debris from the demolition of illegal buildings took some time to clear, the Municipality of Kamza and the project were looking forward to restore the public space and make it attractive for residents. After the space was renewed, we realized that the quality of the leisure time of the residents of the neighborhood was higher. The second initiative started in a different perspective. There is a considerable distance from the neighborhood of Bathore and the Town Hall, which implies that residents had to walk a long distance for the various stamp duties such as birth certificates, social assistance, etc. The local authorities agreed to join Co-PLAN' and donors' initiative to build a new complex building with municipal offices for that particular neighborhood. This proved to be a very suitable solution for the residents as well as for the administration. The project also offered possibilities for a kindergarten, which was missing in the area. From case to case, also the idea of participation and cost sharing developed ever further. Co-PLAN succeeded in implementing initiatives by sharing costs either with the municipality or with the community. In the last experiences also the attempt to bring together local government and community-based initiatives, was successful. In a package of intervention, the local administration entered in joint actions with the community by offering basic materials for the sewerage network, whereas the community offered its free labor force. In three years the management of the investment changed. In the beginning, Co-PLAN was leading the process and ensuring a safe implementation of the investment, while in the second part of the project the municipality took even more responsibilities in implementing the investments under pre-defined monitoring rules.

The performance of the Municipality of Kamza evolved in several aspects. In the process of preparation and defense the SUD in front of authorities, Co-PLAN put

even more efforts and energy, particularly in the first part of the project. The local administration was more reluctant to face a political and professional discussion with the central government on the urban development strategy for the region. However, as they got more involved in the process, they became more confident in the approval process. The Mayor of Kamza also presented and defended the SUD Plan in front of the highest national authority. Although Co-PLAN is a modest pioneering organization, the experience accumulated in different project has been meaningful to all members of the organization, but what is more important to the public opinion, professionals and authorities. Constantly Co-PLAN has been willing to share its experience with professionals, university, and civil servants especially through a series of public lectures. The most important lesson learnt from the experience in different projects and initiatives is that the process makes the difference. Indeed there have been different planning initiatives that from the technical point of view met high standards. However, these initiatives lacked a very important element, communication. Despite the fact that this is only the beginning in the field of urban planning in Albania, however, the experience of these years during two decades is a valuable lesson for the future of Urban Management in Albania. Co-PLAN has always stressed the motto of learning by doing, while government authorities and organizations are not in the same position to afford. Therefore, they can easily learn from others' experiences, so that the same mistakes are not repeated again. As far as participation is concerned, identifying the right actors and stakeholders for the process has been yet another task which required some degree of thinking. As a matter of fact, the Task Force set out to possibly reach all those interested in and relevant to the process. This was however something dependent also on the degree of organization of the actors themselves. Admittedly, the Task Force could reach even a greater number of participants, if better organization were possible.

The experience of Co-PLAN during 90-s and early 2000-s has been crucial for the platform this organization submitted to Albanian Parliament in 2004 for better handling territorial planning, environmental issues, and formalization of informal economy. As result of that since 2005 considerable changes happened in the mentality of urban governance in Albania, including new law of territorial planning and legalization of informal settlements. In addition Co-PLAN established POLIS University as an instrument of developing a critical mass of expertise that would hopefully provoke further reforming of planning in Albania.

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USER PERCEPTION OF SOUNDSCAPES OF URBAN PARKS IN ANKARA

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Abstract

The concept of soundscape has recently gained attention of planning and design disciplines where focus is generally on the visual, rather than the acoustic, aspect. On the other hand, sound is an important element of a place which affects individual's perception and understanding of an environment. Urban acoustic environments are complex and involve a broad diversity of sound resources. Evaluation of urban soundscapes is crucial not only for noise mitigation but also to assess acoustic comfort which is integral to overall environmental quality.

This study presents user-perceived acoustic comfort and characteristics of urban parks in Ankara, Turkey. The research was carried out through face-to-face questionnaire surveys and sound level measurements in five urban parks (Altinpark, Botanik Park, Gençlik Park, Güvenpark and Segmenler Park) of Ankara between June and September 2011. The parks were chosen to represent different physical attributes and users with varying socioeconomic backgrounds. The questionnaire form consisted of 24 questions relating to demographic characteristics, park use, sound perception and sound preferences. A total of 200 users participated in the survey. Data were analyzed using SPSS version 15.0. Sound level measurements were conducted during questionnaire surveys for 1 minute. For further assessment another series of sound level measurements were conducted at 27 locations in five parks twice for a week (one weekday and one day on the weekend and twice between 09:00-12:00 and 17:00-20:00).

No statistical significance was found between acoustic comfort evaluations and gender, age and educational background. Natural sounds were found to be preferred to artificial sounds. Furthermore, user identifications of general soundscapes of the urban parks seem to have a strong relationship to physical attributes of the parks and visitor expectations. The results of this study are expected to raise awareness on the role of soundscape in context of urban environmental quality amongst planners and designers and assist them in soundscape planning and design.

1. Introduction

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Noise pollution is a growing environmental problem, especially in urban environments, which might cause serious health effects on living organisms. Governments and global institutions have been developing measures to prevent noise pollution and to reduce noise levels. However, reducing noise levels does not always lead to more pleasant environments (Zhang and Kang, 2007; Cain et al., 2011) or increase life quality. In his book "Tuning of the World" (1977, p.4), Schafer points out that noise abatement is a negative approach and we need to seek positive ways to study environmental acoustics in order to understand which sounds must be eliminated from our surroundings. In fact, it is now well known that sound quality cannot be determined by evaluating sound merely in physical terms and ignoring psychological dimension (Raimbault and Dubois, 2005). On the other hand, in soundscape studies both physiological and psychological dimensions are taken into account and they aim to understand the relationship between people and their acoustic environment by joining together physical and psychological aspects.

Salvador (2010) defines a soundscape as "*a temporal and typological organization of sound objects, related to a certain geo-cultural context, in relation to which a listener can apply a spatial and semiotic transformation*". Since the concept of soundscape was first introduced by R.Murray Schafer in late 1960s, it has become a research area for many disciplines, acoustics in particular. However, it is very recent that it has gained attention by planning and design disciplines. Generally planning and design goals do not involve acoustic dimension of the environment, except noise control. This is mainly because sound is generally perceived and considered as a negative element within an environment and often misused as a synonym for "noise".

There are many inputs and outputs in urban environments due to the high variety of human activity. As a result, designing and management of urban environments are considerably complex in many aspects. These environments are constantly moulded by the spatial, and both social and cultural characteristics of the community. Consequently, the soundscape of an urban environment becomes fairly complex as well, due to physical, psychological and social factors (Cain et al., 2011). But how are people and their quality of life affected by the acoustic environment of an urban surrounding? In order to integrate sound as a resource for urban design and planning, first we need to understand how people perceive their sonic environments and how they react to them. There is a perceptual dimension of a soundscape which is influenced by both explicit attributes of the physical place and implicit attributes of social and cultural factors (Yu and Kang, 2010). Perception is an active process where perceiver selects information from its environment through senses; then organizes and interprets it. Although vision is the dominant sense for human's perception of his environment, sound –as second most dominant sense- also plays an important role in sensing and understanding our environments. Preference studies are common in environmental psychology to evaluate people's perception of their surroundings. Hence, evaluating sound preference is very important in order to determine the quality of soundscape in a specific space (Yu and Kang, 2010).

Urban open spaces contribute to overall quality of an urban environment in many aspects (aesthetics, ecology, leisure and recreation etc.). They are comprised of natural and cultural features which provide urban citizens with opportunities to refresh and enjoy themselves within the fast paced urban life. Although most soundscape studies focus on relatively large rural and urban areas, there is a limited number of research on urban open public spaces (Kang and Zhang, 2010; Yu and Kang, 2010). Similar to other design and planning disciplines, landscape design and planning have traditionally focused on mitigation of unwanted noise and its effects so far. McHarg (1969) defined landscape planning process as the overlay and synthesis of land data in his famous work "Design with Nature". He also included sound data as a resource for noise. However, sound is more than an element that generates noise but also a potential resource for the designer and planner. On the other hand, while digital visualizing tools allow us to see how a proposed project might actually look like, it is much more difficult to contemplate or visualize possible outcome in terms of acoustic environment. Hence, there is a certain need for theoretical background and research methodologies for evaluating sound in landscape design and planning (Hedfords, 2003).

The concept of "soundscape" (*işitsel peyzaj* in Turkish) is very little known in Turkey. The first soundscape research has been conducted by Özçevik (ongoing PhD dissertation) on soundscape in covered spaces (Özçevik and Can, 2011). However, there wasn't any soundscape research in urban open spaces; furthermore researchers were unfamiliar with the concept and its context. In 2010, our proposed research project titled "Evaluation of Soundscape Perception and User Preferences in Urban Parks in Frame of Life Quality: Case Study Ankara – Turkey**"** was accepted by TÜBİTAK (The Scientific and Technological research Council of Turkey) within the COST (European Cooperation in Science and Technology) Action "Soundscape of European Cities and Landscapes" (TD0804). In this paper, preliminary results of the project are presented. The research project aims to:

- integrate soundscape concept with urban parks,
- provide data on subjective sound perception and soundscape overall using qualitative and quantitative measurement and assessment techniques, and
- interpret urban parks' soundscape, acoustic comfort and life quality in the context of perception and preferences.

2. Materials and Methodology

2.1. Spatial Data

In this study, 5 urban parks (namely Altınpark, Botanik Park, Gençlik Park, Güvenpark and Seğmenler Park) which are located on the north-south axis of Ankara city have been selected (Figure 1). The selection criteria are; (i) parks that represent different types of parks in the city, (ii) parks that are preferred by users, (iii) high diversity of activities, and (iv) high diversity of different sound resources. The characteristic features of the selected parks are shown in Table 1.

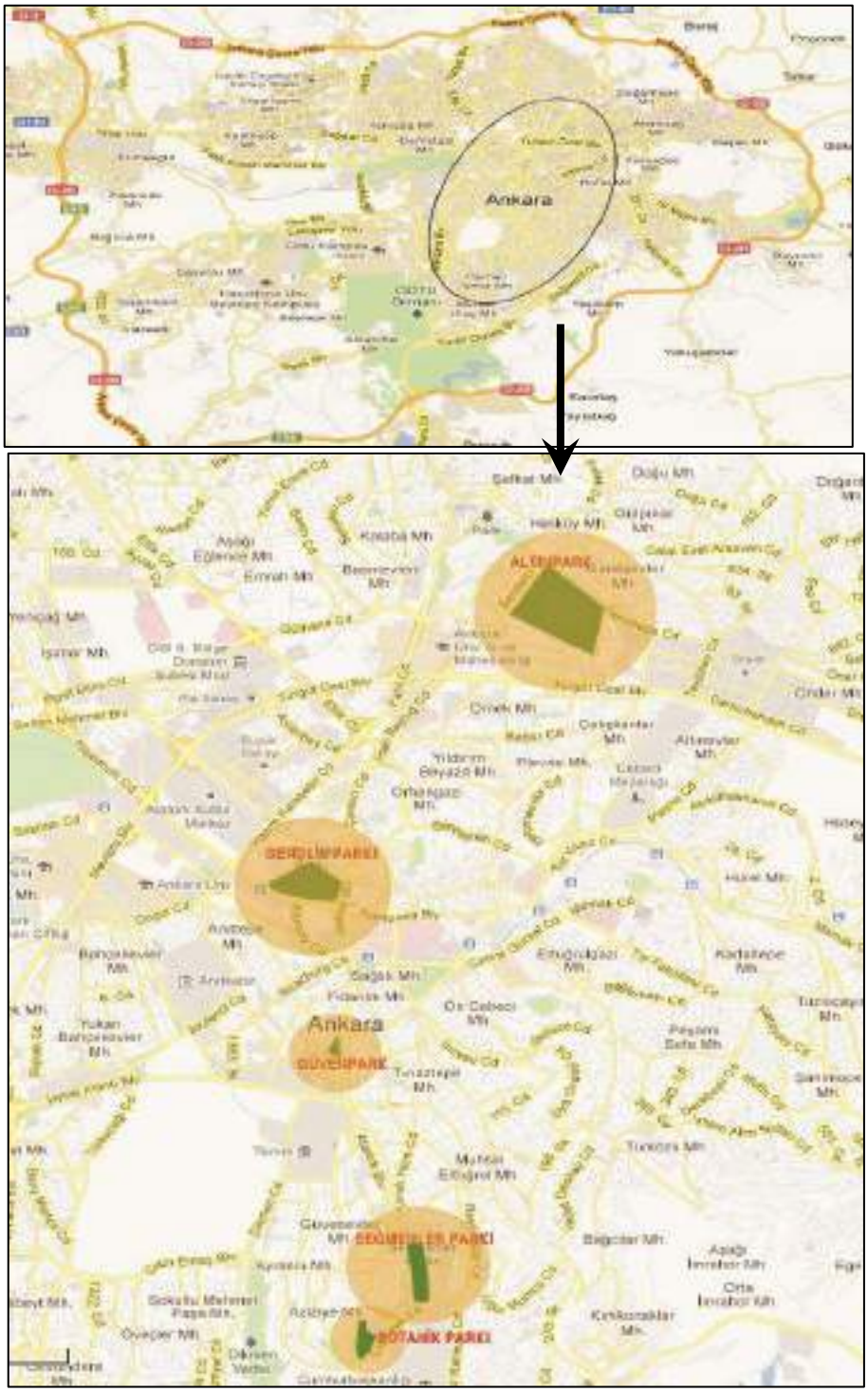


Figure 1. Selected Parks for The Research

Table 1. Characteristics of The Selected Parks

PARK	**Size (m^2)**	**Main Features and Facilities**	**Established**
Altınpark (Google Maps, 2012)	640.000	Green areas Water surfaces Exhibition hall Amphitheatre Playgrounds Cafés Restaurants Rollerblade and skate ring	1993
Botanik Parkı(Google Maps, 2012)	63.085	Green areas Water surfaces Playground	1970
Gençlik Park (Google Maps, 2012)	275.000	Green areas Water surfaces Cafés Fairground Playground Theatre complex Parking lots	1940 (Reopened in 2009 after revision of the master plan.)
Güvenpark (Google Maps, 2012)	22.000	Green areas Water surfaces Playground Famous for Güven Monument	1936

Seğmenler (Google Maps, 2012)	67.200	Green areas Water surfaces Amphitheatre Playground Café	1983

2.2 Questionnaire Surveys

A questionnaire survey consisting of 24 questions has been prepared to investigate the user perception of soundscapes in urban parks. The questionnaire items are a mixture of open-ended, multiple choice and Likert type questions. The questionnaire forms have been divided into four sections: (i) demographic characteristics, (ii) park use pattern, (iii) satisfaction level of physical environment and (iv) sound perception and preferences. Between June and September 2011, questionnaires were administered to randomly selected 200 park users (40 at each park) face to face. The data have been evaluated using frequency analysis, factor analysis and chi-square test in SPSS version 15.0. One minute sound pressure level (SPL) measurements were also made during the interviews.

2.3 Field surveys

For further assessment of soundscape perception and preferences of users, another series of sound level measurements were conducted at 27 locations in five parks twice for a week (one weekday and one day on the weekend and twice between 09:00-12:00 and 17:00-20:00). SPL for each location was measured for 15 minutes in terms of L_{eq} values, with a sound level meter. The locations where the measurements took place have been selected to represent various user activities such as playgrounds, open air cafes, surrounding roads etc. Finally, the data have been transferred to the SoundPLAN® software in order to generate sound maps of the parks.

3. Results

Of 200 participants 62% were male and 38% female. Other personal and demographic characteristics of the participants are shown in Table 2. Most of the participants (80%) live in apartment buildings.

The results show that visiting parks on a daily basis is not common among the users. Most participants (25%) visit parks for a few times a week. They mostly (28%) spend 2 hours at most in a park. The parks are least used between hours 12 and 14. This might be due to the fact that the questionnaire surveys were conducted during

summer time when the temperature can be quite high during the day in Ankara. The highest temperature recorded during the questionnaire surveys was 37°C on 1st of August, 2011.

The participants were asked to identify the aspects of the parks which they were most and least satisfied with. The results for each park were shown in Table 3. General appearance and air quality are two significant aspects which the users are most satisfied with. On the other hand, most participants complained about the inadequate site furnishing and lack of variety of activities in the parks. None of the participants mentioned about acoustic environment quality within the parks. However, 31% of the participants stated that "silence and tranquility" was the first reason for their preference of visiting a park. The other significant motives include "to have contact with nature" (35%) and "transport accessibility" (20%).

Table 2. User Characteristics

User characteristics	**Percent (%)**
Age	
15-20	25
21-30	24
31-40	16
41-50	14
51-60	6
>60	15
Level of education	
Elementary	11
Secondary	13
High school	38
Higher education	36
Other	2
Employment	
Working	41
Student	25
Unemployed	6
Retired	18
No answer	10

Table 3. Users Satisfaction with The Parks

Park	**Most satisfied with**	**Least satisfied with**
Altınpark	General appearance (aesthetics)	Site furnishing
Botanik Park	Air quality	Children playgrounds
Gençlik Park	General appearance (aesthetics)	Function of activities
Güvenpark	Accesibility	Walking paths

Seğmenler Park	Air quality	Site furnishing

Only 7% of the participants indicated that they were hard of hearing. On the other hand, 31% of the participants stated that they had sensitive hearing. Except Botanik Park and Seğmenler Park, participants defined the general sound level of the environment as "moderate" (Table 4). Although Güvenpark is located in the "core" of the city centre where vehicle traffic and pedestrian density are quite high, only 22% of users defined the sound level as high and 5% as very high. On the other hand Botanik Park and Seğmenler Park are located in a valley which provides a significant reduction in vehicle traffic noise from the main roads which surround both parks. Furthermore these parks have a dense vegetation cover, mainly a mixture of both deciduous and evergreen trees.

Table 4. Users' Evaluation of Sound Levels of The Parks (%)

Park	**Very low**	**Low**	**Moderate**	**High**	**Very high**
Altınpark	10	31	**54**	5	-
Botanik Park	3	**57**	37	3	-
Gençlik Park	-	12	**65**	20	3
Güvenpark	2	5	**66**	22	5
Seğmenler Park	5	**47**	**47**	-	1

Acoustic comfort of the parks was evaluated as the satisfaction with perceived sound levels of the acoustic environment. In general, most of the participants (75%) were pleased about the sound level of the parks. However, while only 51% were pleased with Güvenpark's ambient sound level, Botanik Park's ambient sound level was found to be pleasant by 89% of its users. These results have been expected by the researchers because of the explanations given in the previous paragraph. Similarly, while Gençlik Park, where hard surface is dominant within the park's landscape, was found pleasant by 67% of its users, more users in Altınpark (85%) and Seğmenler Park (82%), where vegetation cover is more dense, defined ambient sound level as pleasant. The sound level measurements during the questionnaire survey show that SPL varies between 48 dBA and 75 dBA for the interviewees who were pleased with the ambient sound levels. Therefore, it is not possible to draw a conclusion on the relationship between measured sound levels and satisfaction of ambient sound level.

The participants were then asked to identify which sounds they hear at that moment. The responses were a mixture of both natural and cultural sound types which were shown in Table 5. Although different activities in the parks generate different types of sound, the participants in all parks identified similar sound types.

Tablo 5. Sound Types Heard in The Parks

Altınpark	**Botanik Park**	**Gençlik Park**	**Güvenpark**	**Seğmenler Park**

Bird Water People Plane Vehicle traffic Children Music Plants Other animals Wind Phaeton	Bird Water People Plane Vehicle traffic Children Plants Other animals Wind Construction	Bird Water People Vehicle traffic Children Music Wind Construction Screaming	Bird Water People Vehicle traffic Children Music Plants Screaming Adhan	Bird Water People Plane Vehicle traffic Children Plants Other animals Wind Construction

In all parks bird and water sounds were defined as pleasant. The participants stated that the most annoying sound types were screaming, vehicle traffic and people talking on mobile phones. Furthermore, the participants perceived the vehicle traffic noise as the most dominant sound type in the parks except in Gençlik Park. In Gençlik Park screaming was the perceived most dominant sound type. This might be as a result of the fairground which is located within the park. However, it is no surprise that people preferred natural sound types over artificial sounds. Various research also showed that people tend to prefer natural sounds more (Carles, Barrio and de Lucio, 1999; Reiter, 2004; Kang and Zhang, 2010).

In the final part of the questionnaire, participants were given 17 bipolar adjective scales and asked to define how they felt about the acoustic environment. The adjective list was given in Table 6.

Table 6. Adjective List for Acoustic Environment Evaluation

Acoustic aspects	**Adjectives**
Sound power	Quiet-loud
Spatial organization	Organized-disorganized
Clarity	Clear-unclear
Diversity	Similar-diverse
Activity	Calm-lively Slow-fast Monotonous-varied
Rhythm	Orderly-disorderly
Tone	Soft-hard
Sound assessment	Interesting-uninteresting Pleasant-unpleasant Meaningful-meaningless Relaxing- annoying

	Happy-sad
	Emotional-apathetic

Factor analysis was made for all the data using varimax rotated principal component analysis. Four factors (with Eigenvalue > 1) were determined and the cumulative variance was 59%. Kang and Zhang (2010) found a similar value (53%) in their research and suggested that such low values might be due to the significant variations in number and type of the sound sources in urban public spaces. Factor 1 (%32) was found to be associated with power, activity and tone of sound, as well as with pleasantness, interestingness, and relaxation. Sound power was also found to be a significant factor in satisfaction of ambient sound levels ($p<0.05$). Participants who were "very pleased" and "pleased" about the acoustic environment also evaluated the ambient as "quiet". Likewise, participants who found ambient sound level as "annoying", defined the acoustic environment as "very noisy". Factor 2 (10%) was related to sound activity and Factor 3 (10%) to spatial organization of the sound. Finally Factor 4 (7%) was associated with sound diversity.

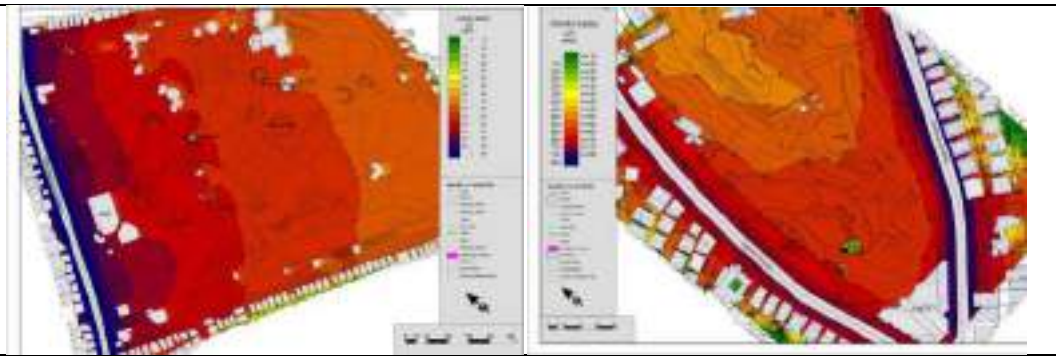
The participants were unfamiliar with the concept of soundscape and they had difficulties in understanding the last question and expressing their perception of the acoustic environment. However, in the reliability analysis Cronbach's alpha was found higher than the expected; 0.7 for Botanik Park and Gençlik Park, and 0.8 for other parks. The significant characteristics of the soundscapes perceived by the participants for each park are presented in Table 7.

Table7. User Perception of The Soundscapes

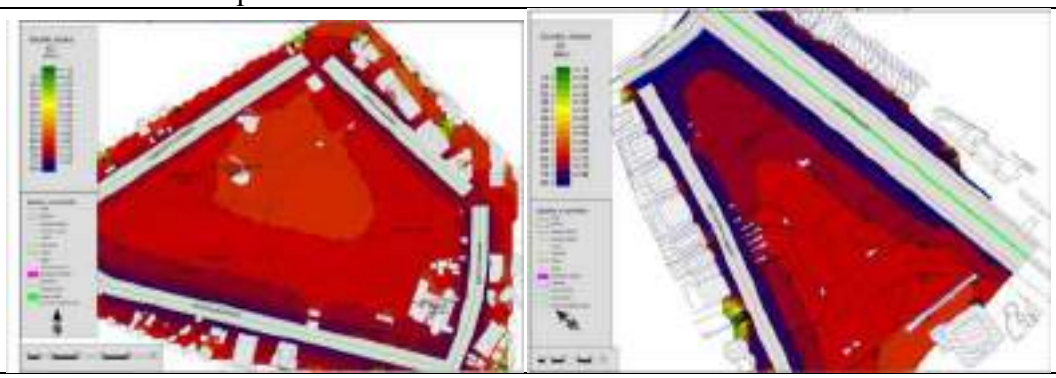
Park	**Characteristics of the soundscape**
Altınpark	Diverse
	Neither quiet nor loud
	Neither happy nor sad
	Neither emotional nor apathetic
Botanik Park	Quiet
	Calm
	Diverse
	Soft
	Neither happy nor sad
	Neither emotional nor apathetic
Gençlik Park	Neither happy nor sad
	Neither emotional nor apathetic
Güvenpark	Very diverse
	Neither happy nor sad
	Neither emotional nor apathetic
Seğmenler park	Neither emotional nor apathetic
	Quiet
	Calm
	Neither happy nor sad
	Soft

There was no correlation found between demographic characteristics (gender, age, and level of education) and sound level evaluations or satisfaction with ambient sound levels. Similarly, there was no statistical significance found ($p>0.05$) between participants with sensitive hearing and others in ambient sound level satisfaction or sound level evaluations. However, preference for different types of sounds was found to be related to age. While younger participants tend to prefer rather cultural sounds such as music, middle aged and elder participants preferred natural sounds such as bird and water.

The sound maps of the parks which were created by using sound level measurements show that there is an obvious influence of vehicle traffic noise nearby (Figure 2). The SPL decreases as the distance from roads increases. Although a majority of participants in Altınpark, Gençlik Park and Güvenpark evaluated the ambient sound level as "moderate", it can be seen that actual sound levels show difference from one park to another. Especially SPL is quite higher in Güvenpark than the other parks. Hence we can assume that visitor expectations from the environment can also affect user judgments. As mentioned before, Güvenpark is located in an area where vehicle and pedestrian traffic is heaviest. Therefore, people might already expect higher ambient sound level and perceive it as "moderate".



Altınpark Botanik Park



Gençlik Park Güvenpark

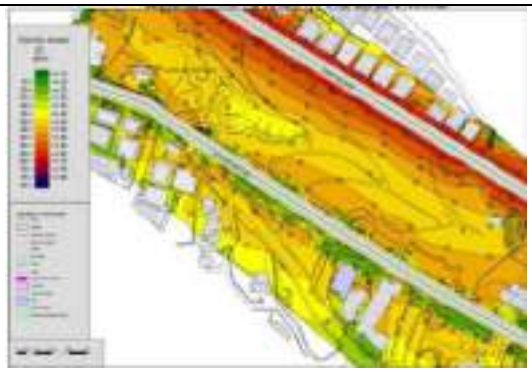

Seğmenler Park

Figure 2. Sound Maps (Highest sound levels are shown in navy while lowest shown in green)

Furthermore, the ambient sound level of Seğmenler Park defined as “moderate” and “low” by the same percent of users. Yet, sound maps show that the SPL is much lower in Seğmenler Park compared to other parks. Besides, despite the fact that factor analysis revealed that sound power is an influencing factor; quietness is not always associated with high levels of user satisfaction. Although Seğmenler Park has the lowest SPL, it was ranked third in terms of satisfaction from the ambient sound levels. It can also be suggested that overall satisfaction from urban parks has an influence on ambient sound level satisfaction. Research data show that as the satisfaction level with the physical environment increases, users tend to perceive soundscapes in the parks more pleasant.

It is also observed that physical characteristics of the parks play a significant role in user evaluations of soundscapes. In this study, topography and vegetation cover are found to be the two main factors that affect user perceptions and actual sound levels. Ambient sound levels of the parks with most vegetation cover (Botanik Park, Altınpark and Seğmenler Park) were most pleasant for their visitors. Topography also helps with reducing sound levels, especially in Seğmenler Park and Botanik Park which are located within the valleys. However, it should be noted that this paper only presents the analysis of the data which was obtained in summer time. Since climatic conditions were quite steady during the field work and questionnaire surveys, it is not possible to interpret the role of climatic variables.

4. Conclusions

In this paper, preliminary results of research on user soundscape perception of Ankara’s urban parks have been presented. Physical environment characteristics and user expectations have been found to be influencing on the visitor perception of urban parks’ soundscapes in terms of acoustic comfort evaluation. People tend to tolerate higher levels of sound if they are content with their physical surrounding or if they already expect an environment to be noisy. Furthermore the quietest environment is not necessarily the most preferred.

People visit urban green spaces mainly for having contact with nature. It is also a well known fact that people prefer environments with natural contents such as all forms of vegetation and water. This study has concluded that they also tend to prefer natural sounds over artificial sounds. Hence, creating places with natural elements in urban open spaces might help to mitigate uncomfortable effects of unwanted or least preferred sounds in an urban environment such as traffic sound. The data has shown that there are a wide range of sound types perceived by users in an urban park. Designers should realize that diversity of activities in urban open space is directly linked to the diversity of the soundscape. On the other hand, existence of unpleasant sound types does not necessarily have adverse effect on overall satisfaction with the soundscape. Meanwhile it should also be noted that silence and tranquility are amongst the driving motives for people visiting urban parks where sound levels are relatively lower than other urban areas.

In an era of increased environmental awareness, open and green public spaces play a significant role in developing sustainable societies. Urban parks are important assets that contribute to the quality of life in many aspects. They provide community and urban environment with ecological, psychological, sociological and various health benefits. As planners and designers, we should more focus on how people perceive and what they expect from their physical surroundings. Furthermore, the European Landscape Convention emphasizes the concept of "landscape quality" and acknowledges that "*landscape is a key element of individual and social well-being*" (Council of Europe, 2000). Sound, in this sense, is an important resource in planning and design which has been neglected so far. Hopefully, more research on urban open space soundscapes will help professionals and authorities to include sound as a key element in their projects and understand sound can be a vital and guiding resource in open and green space design. We expect the outcomes of this project to contribute to the field of urban design when the research is completed.

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THE COMPACT CITY: PLANNING STRATEGIES, RECENT DEVELOPMENTS AND FUTURE PROSPECTS IN THE NETHERLANDS

Kersten Nabielek[1]

ABSTRACT: The concept of the compact city is a key strategy to limit suburban sprawl and to obtain a more sustainable urban development. In the Netherlands, concepts for compact forms of urbanization have played a major role since more than half a century.

In various Dutch national spatial policy documents different concepts for urban compaction and urban densification have taken a prominent position. The Second and Third National Policy Document on Spatial Planning (1966 and 1973) introduced the concept of 'clustered dispersal' and 'growth centres', whereas the Forth National Policy Document on Spatial Planning (1988) was based on the concept of the 'compact city'. More recently, the National Spatial Strategy (2004) set specific goals for so-called 'concentration areas' around greater urban conurbations and 'urban densification' in existing built-up areas.

However, recently ambitions concerning spatial planning and urban compaction have been decentralized to the regional and municipal level and national funds supporting urban regeneration projects are about to face substantial cuts. Moreover, a number of recent studies and publications claim that urban densification is reaching its limits in several Dutch cities because of complex constellations of ownership, increasing costs and complicated legal procedures.

This paper gives insight into recent developments of dwellings, inhabitants and jobs in Dutch cities and their surroundings. It raises the question if the recent developments can be described as compact urban developments. Furthermore, future possibilities for compact urban developments in the Netherlands are discussed.

KEYWORDS: compact city, urban densification, urban compaction, sustainable urban development, density, spatial quality, spatial planning

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1. Introduction

Since more than half a century concepts for compact forms of urbanization have played a major role in the Netherlands. In various Dutch national spatial policy documents different concepts for urban compaction and urban densification, strategies to achieve compact urban developments, have taken a prominent position. The Second and Third National Policy Document on Spatial Planning (1966 and 1973) introduced the concept of 'clustered dispersal' and 'growth centres', whereas the Forth National Policy Document on Spatial Planning (1988) was based on the concept of the 'compact city'. More recently, the National Spatial Strategy (2004) set specific goals for so-called 'compaction areas' around greater urban conurbations and 'urban densification' in existing urban areas. Although each time in a different form, all of these concepts for compaction and densification were guided by the same aims: the protection of the surrounding landscape, the limitation of private car use and the ambition to sustain vital urban facilities and public transport. In order to achieve these aims and to promote urban densification in Dutch cities, urban regeneration projects have been supported by national funds throughout the past decennia.

However, a number of recent studies and publications (i.e. Ecorys, 2005) claim that urban densification is reaching its limits in several Dutch cities because of complex constellations of ownership, increasing costs and complicated legal procedures. Moreover, national funds supporting urban regeneration projects are about to face substantial cuts. Furthermore, recent publications question how the ambitions for urban densification match with the prevailing preferences for suburban living environments in the Netherlands. After all, the population within the existing urban areas of most Dutch cities continues to decline as affluent households and households with children keep moving to suburban areas.

1.1 International debate on the compact city and sustainability

The objectives of the Dutch national spatial policy documents are strongly related to the concept of the compact city and the general aim to create sustainable urban areas. In international research, the concern with sustainable urban development has grown enormously in the past 25 years. Following the publication *Our Common Future* (WCED, 1987), which introduced the idea of sustainable development, a great number of publications have been dedicated to the environmental impacts of urban developments and the improvement of life in the city. A couple of years later, the *Green Paper* of the Commission of the European Communities (CEC, 1990) and the United Nations *Earth Summit Agenda 21* (United Nations 1993) emphasized the role of compact forms of urbanization as a basis for a more sustainable urban development. More recently, the *Charter of Leipzig* (European Urban Knowledge Network, 2007) and the publication *Cities of Tomorrow* (European Commission, 2011) emphasize the importance of compact urban developments as an important sustainable strategy for the future development of European cities.

Since the publication of the CEC's *Green Paper*, a central debate focuses around the

Compact City idea. Many researchers and planners argue that a contained, well-connected city is the most sustainable form. They suggest that a compact city reduces energy, makes investments in public infrastructure more viable, reduces land usage thereby preserving agricultural land and natural areas, and is positively associated with social diversity and with cultural and economic development. The main supporters of the concept of the compact city include the CEC (1990), Jacobs (1961), Newman and Kenworthy (1989) and Elkin *et al.* (1991).

However, there is also a considerable group of researchers who argue that the case of the compact city is not proven and that there is evidence which suggests that the claims of the supporters do not reflect the hard reality of economic demands, environmental sustainability and social expectations. Some of the main arguments opposed to the compact city are that the concept contradicts the profound fondness of suburban living (Breheny, 1992), that the concept of the green city (also promoted by the CEC, 1990) is in contradiction to that of the compact city and that the compact city would cause congestion, with increased pollution, on the local scale (Knights, 1996). The relationship between transport, urban form and energy consumption has been investigated in several international research projects, but unfortunately the results are inconclusive. There is evidence that fuel consumption per capita is highest in more rural areas, but there are indications that the largest cities (e.g. London) are likely to be less efficient than medium-sized and smaller towns (Bannister, 1992).

The different arguments supporting and opposing the concept of the compact city show the complexity of the discussion. Unfortunately for the proponents of the compact city model, in-depth research has shown that simply employing policies to stimulate compact city style development will not necessarily always lead to sustainability of the urban environment. However, in general there seems to be an agreement that the compact city model is necessary, but not sufficient for sustainable urban development.

1.2 Recent research related to compact urban development

In recent years the PBL Netherlands Environmental Assessment Agency has conducted several research projects related to urbanisation, densification and the effects of urban density. A study on the changes of the urban area 2000-2006 has shown that the density of dwellings, shops and jobs has significantly increased around InterCity-train stations (Ritsema van Eck *et al.*, 2009). Furthermore, the areas around motorway exits are characterized by a relatively low overall density, but that that density has strongly increased over the last years. Also in general, the density has increased stronger in areas outside of the city centre, i.e. in subcentres and peripheral commercial zones. A research project on mobility has shown that work-related car-use around InterCity-train stations is more than half compared to car-use in areas around motorway exits. Moreover, a study on housing and segregation has concluded that urban renewal contributes to a reduction ethnic and socio-economic segregation, whereas suburban developments lead to higher segregation in most cases (van Dam *et al.*, 2010). Finally, a study on economic development in the Netherlands concludes

that a higher degree of urbanisation leads to higher economic productivity and a stronger growth in jobs (Raspe *et al.*, 2010). Although the researched topics show a high degree of complexity and results are not always conclusive, the general outcome of the mentioned studies supports the concept of the compact city. However, it can be argued if the recent urbanisation in the Netherlands actually can be called compact. In the period 2002-2008 most urban development took place in suburban areas adjacent to the existing urban areas. More than 60 per cent of the new dwellings and about 75 per cent of the new jobs were created outside the existing urban areas (Ritsema van Eck en Farjon, 2008). In comparison with other European countries, the suburban developments are rather compact and concentrated in surrounding of existing urban agglomerations. However, they still are suburban developments and have led to a significant growth of urbanized area.

2. Empirical research on urban densification 1996-2008

To get a more detailed insight into developments within the existing urban areas, the PBL Netherlands Environmental Assessment Agency has recently conducted a study on urban densification analysing developments of dwellings, inhabitants and jobs in the period from 1996 to 2008 (Nabielek *et al.*, 2012). Furthermore, this period is subdivided, the first period covering 1996-2002 and the second period covering 2002-2008. The study focuses on the developments within the boundaries of the existing urban areas. Moreover, the study consists of quantitative and qualitative analyses. The quantitative part of the study analyses how much densification (of dwellings, inhabitants and jobs) has taken place in the Netherlands. On the local scale, the development of density has been analysed within postcode 6 areas[2]. The qualitative part of the research describes at which locations densification has taken place within the urban area, looking at a selection of Dutch cities.

2.1 Quantitative analysis: developments within the urban area 1996-2008

From quantitative analysis of the study the following developments are notable:

- Within the urban area of the Netherlands the number of added new dwellings has decreased in the second period (2002-2008). The densification of dwellings has slowed down (see Fig. 1). Moreover, the total number of inhabitants within the existing urban area has decreased in the second period leading to a lower density of inhabitants (see Fig. 2). Furthermore, the number of added jobs is much lower than in the first period (see Fig. 3).
- Divergent developments can be observed comparing different cities. In all of the four biggest cities (Amsterdam, The Hague, Utrecht and Rotterdam) the net-production of dwellings within the existing urban area has declined significantly in the second period. In The Hague and Rotterdam the figures even show a loss of dwellings due to demolishment of houses. Looking at the development of inhabitants, Amsterdam and Utrecht show an increase, whereas the number of inhabitants is decreasing in The Hague and Rotterdam.

[2] A postcode 6 area is an administrative classification representing the scale of an urban block.

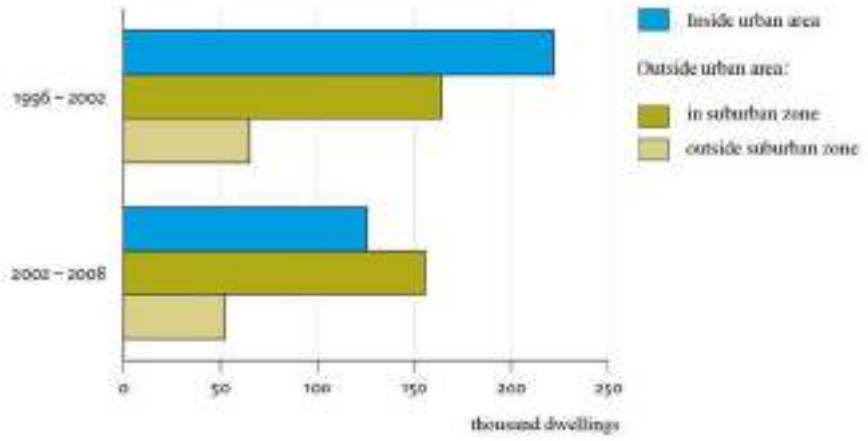

Figure 1 Development of dwellings in the Netherlands 1996-2008 (PBL)

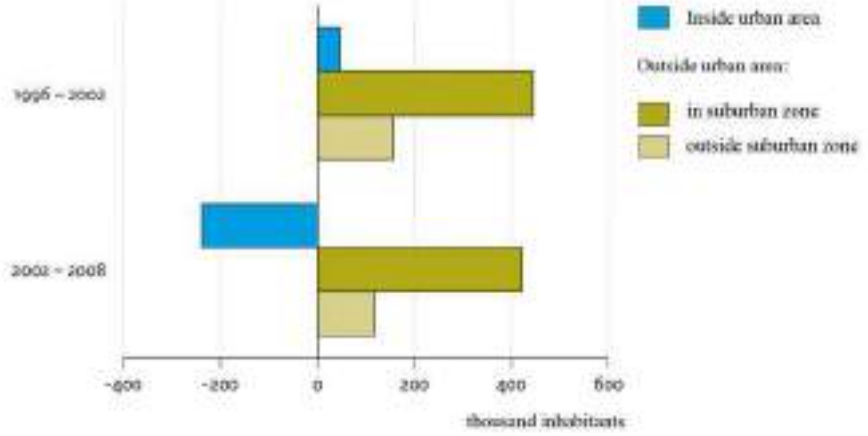

Figure 2 Development of inhabitants in the Netherlands 1996-2008 (PBL)

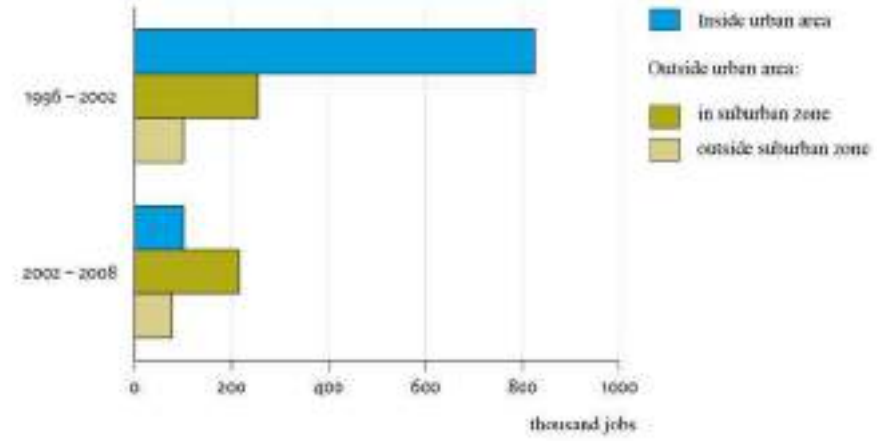

Figure 3 Development of jobs in the Netherlands 1996-2008 (PBL)

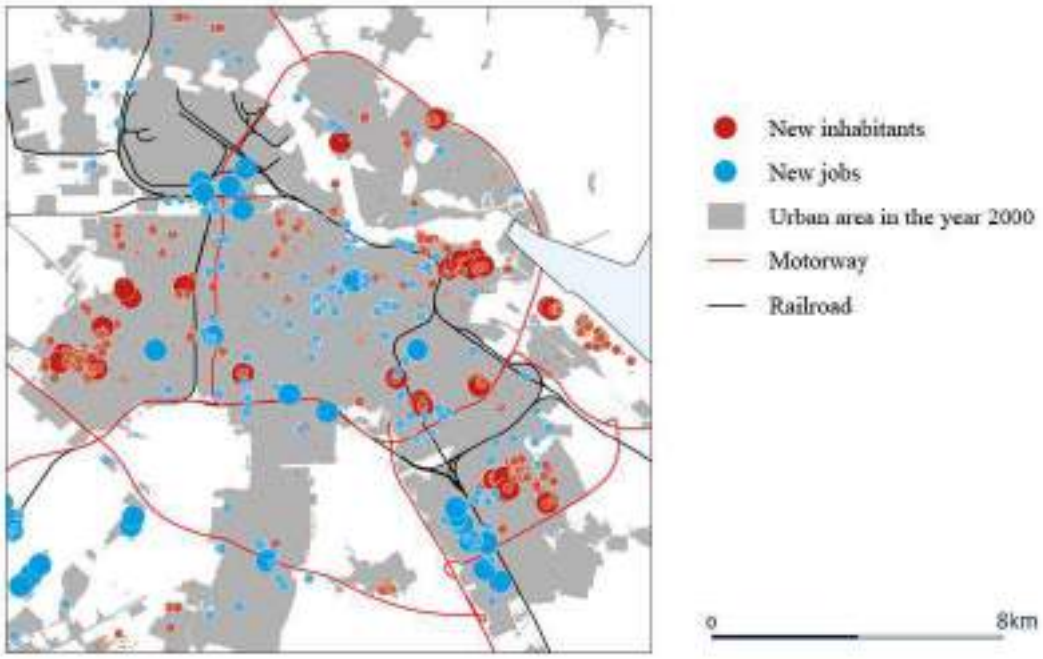

Figure 4 Densification areas in Amsterdam 1996-2008 (PBL)

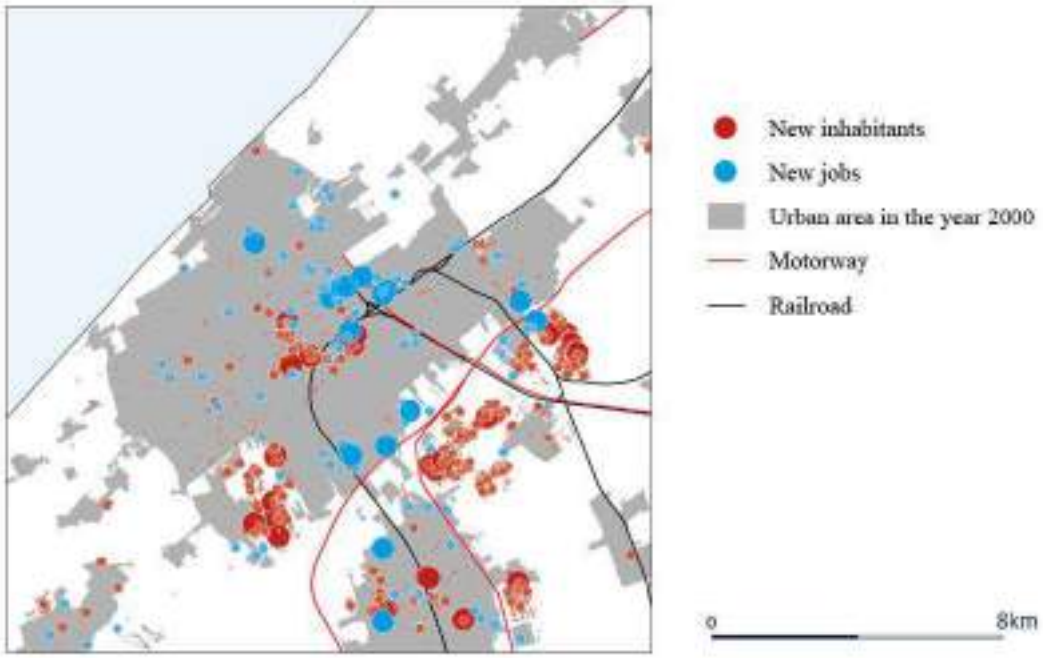

Figure 5 Densification areas in The Hague 1996-2008 (PBL)

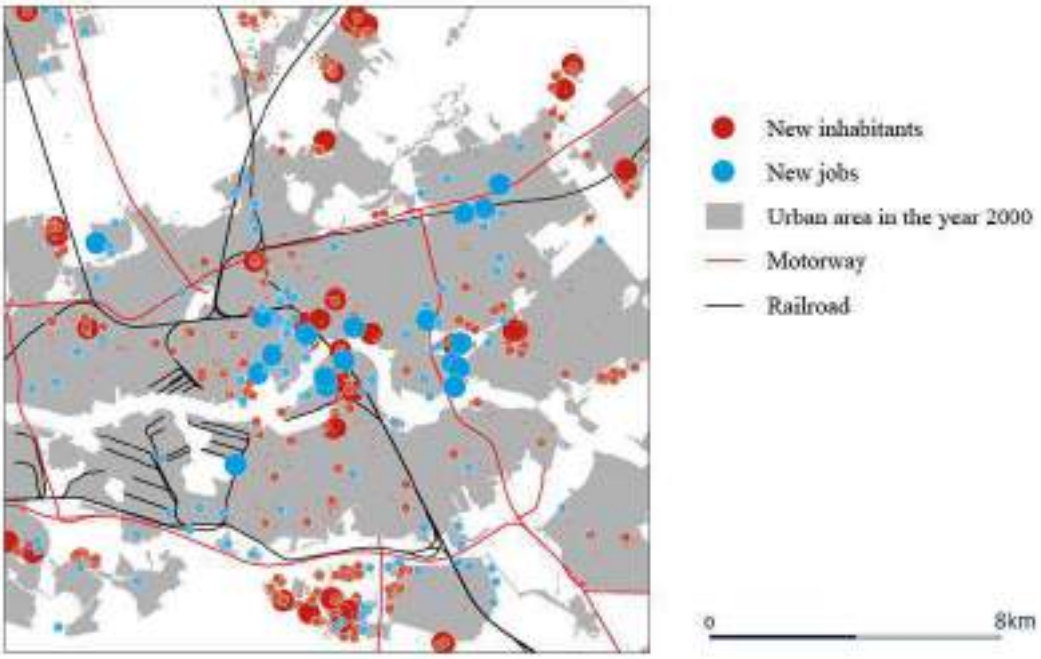

Figure 6 Densification areas in Rotterdam 1996-2008 (PBL)

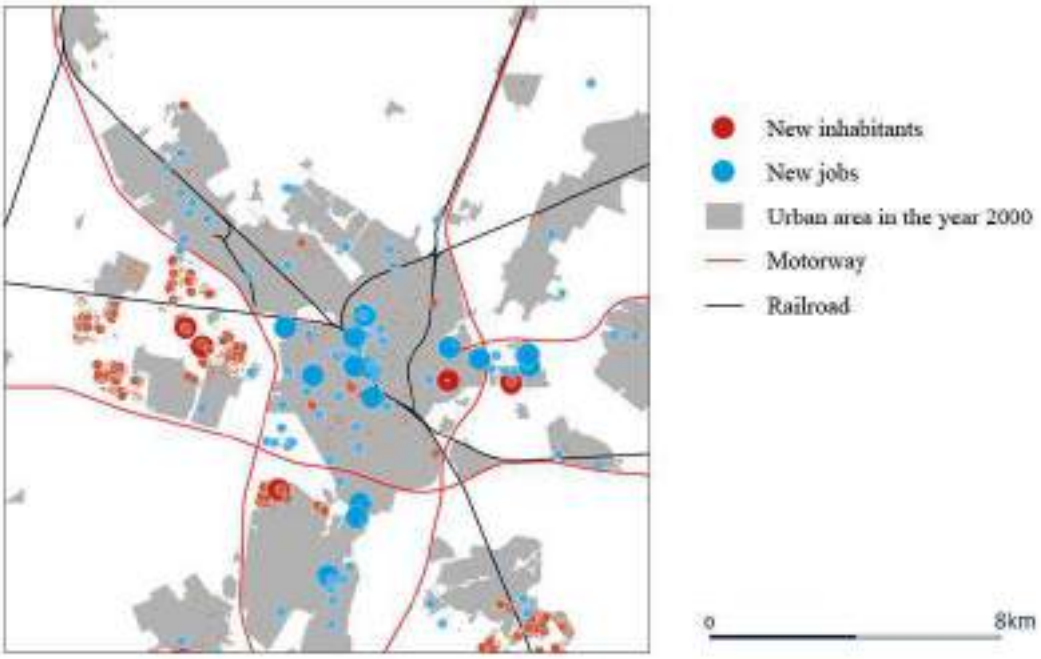

Figure 7 Densification areas in Utrecht 1996-2008 (PBL)

2.2 Qualitative analysis: spatial patterns of densification areas in Dutch cities

The maps of densification areas in different Dutch cities show different spatial patterns for the densification of inhabitants and jobs (see Figures 4-7). In this paragraph the main developments in Amsterdam, The Hague, Utrecht and Rotterdam are described.

In Amsterdam (see Fig. 4) major densification areas of inhabitants can be found in the former harbour areas in the vicinity of the central city area. Moreover, densification areas of inhabitants are located in peripheral areas where urban renewal has taken place. Development areas of jobs can be found in the central city area and along the motorway ring. There is little overlap between the densification areas of inhabitants and jobs.

In The Hague (see Fig. 5) the developments take place in a ring around the central city area, nearby the two central railway stations. Densification areas of jobs are mainly located north of the city centre and densification areas of inhabitants to the south of the city centre. Large developments can be seen outside of the existing urban area, in the urban fringe.

In Rotterdam (see Fig. 6) the development areas of inhabitants and jobs are less separated than in the three described cities and can be found in the central city area. This can be explained by the lack of an historic centre and the location of urban renewal areas in the city centre of Rotterdam. As in Amsterdam, a number of large development areas of jobs are situated along the motorway ring.

The map of Utrecht (see Fig. 7) shows predominantly densification areas of jobs within the city boundaries. In existing urban area the densification areas of inhabitants are very small. As in The Hague, major developments can be found in the urban fringe.

Looking at the maps of the four described cities, it can be concluded that every city shows a different spatial pattern of densification areas. Generally, we can observe that densification areas of inhabitants can be found at the edge of the city centre, around train stations and in urban regeneration areas, whereas densification areas of jobs predominantly are located in central city areas and at more peripheral sites along motorways. With the exception of Rotterdam, the maps show a clear functional separation between development areas for inhabitants and development areas for jobs.

2.3 Results

The study on densification has shown that the density of dwellings and jobs has increased in the period 1996-2008 but that the growth has slowed down between 2002-2008. At the same time, a strong shift towards suburban areas can be noted in recent years and the density of inhabitants within the existing urban areas has decreased in de period 2002-2008. In this period more than 60 per cent of the new dwellings and about 75 per cent of the new jobs were created outside the existing urban areas. Therefore, it can be argued if the national policy of the compact city has

been successful or not. The answer to this question obviously depends on the definition of the compact urbanisation and densification. However, it can be assumed that without a national policy the urban development would have been even more dispersed than it is now. Furthermore, the quality of the urban areas has improved strongly in the past decennia. Urban renewal, transformation of industrial sites and improvement of public and green spaces has had a positive effect on the quality of living in the Dutch cities.

3. Conclusions

Strategies for compact urban structures and urban densification face many challenges on the local scale, such as complex ownership, functional transformation and environmental regulations. Furthermore, factors as built-in parking facilities, the development of public space and ambitions to realize social housing make inner city projects expensive. However, it has to be noted that suburban locations also are costly. Especially, if long term maintenance, infrastructural and environmental costs are taken into account. Furthermore, the international debate on the compact city model has brought forth significant arguments questioning the concept of compact urbanisation, such as preferences for suburban living and possible social, economic and environmental disadvantages of compact cities. However, recent research of the PBL Netherlands Environmental Assessment Agency has shown that a higher degree of densification supports the development of economic productivity and the emergence of new jobs on a regional scale. Moreover, the concentration of functions around multi-modal infrastructural nodes reduces car-use significantly and can help to limit the growth of mobility. Additionally, PBL research has underpinned that inner city developments help to reduce ethnical and social-economic segregation, leading to a more mixed city. The results of these studies support the concept of the compact city.

The results of the empirical analysis of developments within the existing urban area 1996-2008 show that there has been a significant decline in densification of dwellings, inhabitants and jobs within the urban areas in the period 2002-2008 compared to the period 1996-2002. This decline can be explained by the substantial production of suburban areas around the existing urban cores and an increase of the amount of demolished houses within the existing urban areas in this period. However, there will be no alternative other than to focus on the possibilities of urban densification in Dutch cities since there are no plans for large suburban developments in the near future. Important points of attention for future urban densification are to differentiate ambitions according regional development prospects (with different strategies for shrinking and growing regions) and to focus on urban developments around existing multi-modal infrastructural nodes on the regional level. It should be noted that potential development areas around infrastructural nodes are not only located in central but also in peripheral urban areas, i.e. in the vicinity of smaller train stations. Furthermore, it will be important to improve the development of multi-functional areas with high quality public spaces on the local level. Medium and high density developments will have to be combined with sufficient open and green spaces to create attractive and sustainable urban environments. Moreover, it will be vital that housing

types match the preferences of (future) inhabitants and are flexible enough to be adjusted for prospective demands. On basis of the conducted research we can conclude that urban densification will stay a necessary tool to sustain and develop urban areas in the Netherlands regarding environmental challenges, economic viability and the quality of urban life.

The future success of compact urban developments will strongly depend on decisions of local and regional authorities since the national government has recently decided not to continue with the ambitions for compact urbanisation and has given more responsibilities to municipalities and provinces. At the moment the economic crises has led to a slowing down of urban developments inside and in the surrounding cities and there are no new plans for large suburban residential areas. However, municipalities have more possibilities to allow small scale developments outside the existing urban areas. Depending on local decisions, this could lead to a more dispersed and less sustainable urban structure in the future.

4. Acknowledgements

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Improving Adaptation of Coastal Communities through Self Initiated Bottom-Up Approaches: A Case Study of the Cardwell Community, Australia

Serrao-Neumann[1], S., Crick[1], F. and Low Choy[1], D.

Abstract

During the 20th century there has been a dramatic development of the coastline leading to substantial population growth in coastal areas worldwide. Given that this trend is expected to continue in the future it raises critical challenges as climate change is likely to exacerbate the exposure of coastal populations to extreme weather events. While the severity of extreme events affecting those areas may lead to widespread damage and disasters, they might generate opportunities for change to occur in their socioeconomic, political and organisational systems improving their adaptation to climate change. For example, opportunities might be created to review how those areas are planned and managed as well as to gather lessons from past extreme events.

This paper investigates how those opportunities emerge and are optimised by focusing on the Cardwell community in Far North Queensland, Australia. Like many other coastal locations worldwide, Cardwell is particularly vulnerable to sea level rise and tropical cyclones leading to severe storm surges and intense rainfall events. Cardwell's vulnerability to extreme weather events was confirmed in February 2011 when category five tropical cyclone Yasi affected the town causing widespread damage to its coastal community. Nonetheless, this community has begun a distinctive recovery phase by initiating the preparation of a long term strategy for its future independent of official planning processes of State and local governments.

The paper focuses on this distinctive recovery phase in which the Cardwell community took the initiative of developing a long term strategy to maximise the opportunities presented in the post Yasi reconstruction phase and beyond. The paper describes the collaborative process involved in developing this strategic planning initiative which culminated in the proposition of a long term vision as well as a set of priority actions to improve adaptation of the Cardwell community. We also discuss how this bottom-up, community initiated and led, visioning and strategic planning initiative, may contribute to inform the planning process for climate change adaptation in urbanised coastal areas.

Key words: adaptation, community recovery, strategic planning, coastal settlements

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1. Introduction

Urbanisation of coastal areas has increased significantly during the last century (Nicholls et al, 2007). As a result, coastal areas host significant populations and provide important socio-economic activities for regions worldwide (Birkmann et al, 2010). For example, it is estimated that they are now home for 10% of the world's population (McGranahan et al, 2007) and have an average population density 3 times higher than the global average (Small and Nicholls, 2003). The combination of increased population growth in coastal areas and forecasted climate change impacts is likely to exacerbated the vulnerability of many coastal communities (Nicholls et al, 2007). In the face of climate change urbanised coastal areas are likely to be vulnerable to coastal and riverine flooding, sea level rise and storm surge (Brooks et al, 2006; Nicholls et al, 2007; Solomon et al, 2007; Hunt and Watkiss, 2011).

The fact that climate change impacts are expected to be spatially non-uniform across the world (Füssel, 2007) indicates that cities and regions will need to adapt to climate change in different ways. While there is strong evidence that climate change is already happening (Solomon et al, 2007), many communities worldwide have experience in dealing with extreme weather events such as tropical cyclones and therefore provide important knowledge based on experience that can inform future climate adaptation. Consequently, it is important to capture the idiosyncrasies of different communities across the world in their efforts to adapt to extreme weather events. This paper focuses on the example provided by the town of Cardwell, Queensland, Australia, where category five Tropical Cyclone Yasi made landfall in February 2011 causing widespread damage to this coastal community.

Coastal areas in Australia followed the worldwide trend of coastal urbanisation and about half of the current country's population lives along the coast (Chen and McAneney, 2006). For example, the east coast of Australia hosts major urban centres and many smaller townships such as Cardwell that will need to adapt to climate change. Specifically, the north east coast of Australia is particularly vulnerable to tropical cyclones and associated impacts. While climate change is likely to decrease the frequency of tropical cyclones affecting this area of Australia, the intensity of such storms is likely to increase (Suppiah et al, 2010). Coastal communities such as Cardwell, because of the uncertainty related to global environmental change, increased population growth and trend in development are likely to have increased exposure to extreme weather events in the future (Nicholls et al, 2007).

Further, economic damages associated with extreme weather events have increased through time due to both social vulnerabilities and change to physical hazards (Adger et al, 2005). For example, the economic impact associated with cyclone Yasi in terms of damage costs is estimated to be three times higher than previous category four

cyclone Larry's half billion dollars (O'Brien and Howells, 2011; Australian Bureau of Meteorology, 2007). While natural hazards are an ongoing part of human history, a changing climate coupled with coastal development and population growth may exacerbate the exposure of coastal communities to their impacts (Nicholls et al, 2007) and continue to challenge their ability to respond appropriately as well as their economic recovery (Gunderson, 2010). Extreme weather events resulting in disasters also lead to a range of intangible social costs such as trauma which is likely to affect 95% of people in the early aftermath of the disaster and continue to affect 10-25% of people after the immediate recovery period (Gordon, 2007). Consequently, there is an urgent need to build resilience of coastal communities given their vulnerability to extreme weather events and future climate change impacts (Adger et al. 2005).

It is argued that planning plays an important role in safeguarding communities against future climate change impacts, particularly through adaptation (Bulkeley, 2006). Adapting to climate change thus is challenging and demands a rethink in the way in which our cities and towns are planned and built (Leitch et al, 2010). Such rethink will need to take place in partnership with those communities which are vulnerable to extreme weather events as they are at the forefront of impacts when those events occur. Coupled events such as sea level rise and tropical cyclones leading to severe storm surges and intense rainfall events will posit significant challenges to how coastal areas are managed as well as testing the strength of the communities inhabiting those areas. While the severity of extreme weather events affecting those areas may lead to widespread damage and disasters, they might also generate opportunities for change to occur in their socioeconomic, political and organisational systems (Pelling and Manuel-Navarrete, 2011). This paper explores how those opportunities emerge and are optimised by focusing on the recovery process of the Cardwell community which initiated a process to develop a long term strategy for its future independent of official planning processes of state and local governments.

To this end, the paper is structured in three parts following this brief introduction. In the first part, we present the research approach which includes elements of participatory intervention research. In the second part, we describe the collaborative process involved in developing this strategic planning initiative which culminated in the proposition of a long term vision as well as a set of priority actions to improve adaptation of the Cardwell community. Last, we discuss how this bottom-up, community initiated and led, visioning and strategic planning initiative, may contribute to inform the planning process for climate change adaptation in urbanised coastal areas.

2. Research Approach

This study adopted a research-intervention methodology (Hatchuel, 2001). This type of research methodology, also called participatory intervention research (Daniel et al, 2011), has gained momentum over the last decades amongst sciences which deal

with collective action processes (Hatchuel, 2001). It is an approach that builds on elements of action research (Hatchuel, 2001) first developed by Kurt Lewis in the 1940s (*cf.* Halkup et al, 2004). Widely used in the fields of human health where it is referred to as community-base participatory research (Halkup et al, 2004; Wallerstein and Duran, 2011) and management research (Hatchuel, 2009), it comprises a type of research which allows collaboration/interaction between actors and researchers to generate the means for collective action (Daniel et al, 2011). Midgley (2008) defines intervention related to research methodology as a "purposeful action by an agent to create change" (pp. 56).

Advantages of adopting this type of research methodology include its contribution to aid decision-making processes as well as the fact that researchers play a dual role of investigators and stakeholders in the process which can increase its path to impact (Daniel et al, 2011). Furthermore, intervention-research is conducive to bring about positive change (Midgley, 2008).

In adopting research-intervention as our methodology we created a broader scope for the collaborative component of the study. Advantages of establishing collaborative approaches in the planning context are well discussed in the literature and extensively represented by the work of Patsy Healey (2006, 2008). Specifically, collaborative planning provides opportunities for the argumentation and debate of critical issues in the policy-making practices (Healey, 2008, pp. 285). In this collaborative process, negotiations between stakeholders assist in defining which focal issues are included or discarded as well as responsibilities and accountabilities further down the track when implementation takes place (Daniel et al, 2011).

In our context, the research comprises a partnership between the Cardwell community and the research team established to conceptualise and develop a long term strategy for the community's future. The research was complemented by a three-pronged approach related to data collection which involved:

a) Literature review and background research ;
b) Semi-structured interviews (Hay, 2005) with community members focused on disaster preparation, response and recovery; and
c) Participant observation (Hammersley and Atkinson, 1983; Tedlock, 1991) during workshops with the community.

The literature review and background research involved assembling and analysing background planning data and documents and climate change data; confirming key existing and potential planning initiatives for ongoing engagement by the Cardwell community (including planning process opportunities and initiatives); and identifying potential natural and socio-economic triggers for the area.

The semi-structured interviews and participant observation during the workshops and strategic action planning process enabled the investigation of the critical community attributes, community networks and essential steps of successful community bottom-

up approaches that may lead to improved community resilience and adaptation to natural hazards and climate change, particularly in coastal areas.

3. The Collaborative Process

Located in Far North Queensland, Australia, the broader Cardwell has a population of approximately 9,500 (Australian Bureau of Statistics, 2006). The township itself is located more than 1,500km from the State capital Brisbane and halfway between two regional centres, Townsville and Cairns (see Figure 1). The area is known to be vulnerable to extreme weather events such as cyclones (see Figure 2) which often cause widespread floods and wind destruction (Australian Bureau of Meteorology, 2011).

Figure 1. Location map for Cardwell, Australia (source: Google Earth)

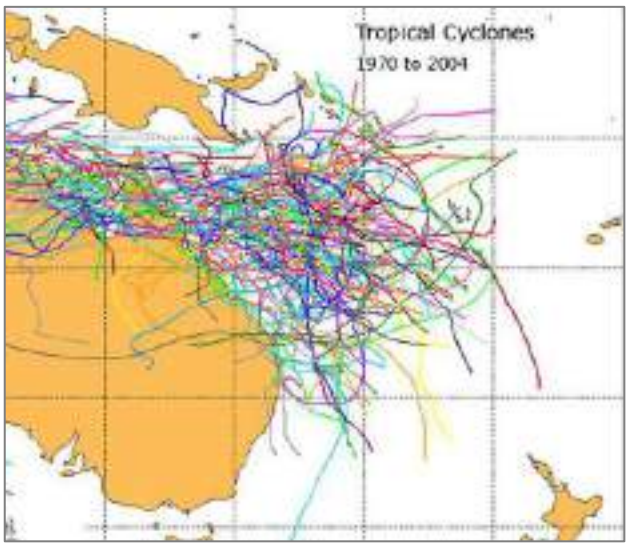

Figure 2. Tropical cyclones affecting the Australian East Coast (source: BOM)

The collaborative process of developing a long-term strategy for the Cardwell community was initiated by the Cardwell Chamber of Commerce in the aftermath of cyclone Yasi in March 2011. A partnership was then established between the

Cardwell community (facilitated by the Cardwell Chamber of Commerce) and the research team.

The research to date has involved the conduct of five community workshops which included community members representing 24 community groups (see Figure 3 for

Workshop 1- a preliminary scoping workshop with the Chamber of Commerce (CCoC) to define a Cardwell 'Community of Interest'; and develop a long term vision for Cardwell.

Workshop 2 - a community workshop with a broad representation from the Cardwell community to confirm the Cardwell Community of Interest; identify community networks; confirm the long term Vision for Cardwell; completed a SWOT analysis to identify the strengths, weaknesses, opportunities and threats that may influence post-Yasi Cardwell development; define community priorities; and scope options for community responses to future natural hazards and disasters. As an outcome of this workshop, a number of factsheets was produced that summarised information on a range of relevant topics to further enhance an understanding of the key issues involved.

Workshop 3 - a community workshop to identify the key drivers of change influencing the community of Cardwell over the next 25 years; identify key strategic initiatives and proposals; and identify preliminary strategic actions (responsibilities/timings/priorities/resources etc.).

Workshop 4 - a community workshop to develop and assess a set of initial 'Future Options' for consideration in the Cardwell small Strategic Action Plan.

Workshop 5 - a community workshop to assess and confirm preliminary Future Options to be included in the small Strategic Action Plan.

Figure 3. Outline of workshops

an outline of each workshop). As a result of these workshops, the Cardwell community in partnership with the research team has developed and confirmed a vision for the future of the community (see Figure 4); identified a series of future options for the community; and composed a draft action plan which contains a series of prioritised actions that will have to be implemented over the life of the action plan in order to achieve its vision and strategic intents.

Vision Statement

Cardwell – *a future community of eco-living* will be noted for its embrace of a high standard of ecologically sustainable living, energy efficient buildings and its town location and design that provides maximum safety and security from natural hazards.

With its permanent population capped at sustainable levels of 3000-4000 persons, its urban centre will comprise three low rise nodes, each with a distinctive core function. The polycentric urban centre will focus on and support five core regional businesses, namely: agriculture, aquaculture, eco-tourism, aged-care, and services.

The community will maximise its diverse tourist opportunities afforded by its location in proximity to World Heritage areas and national parks.

Figure 4. Community vision

The remaining step in the process is to disseminate the action plan to the wider community as well as authorities from both local and state governments. Ultimately, it is expected that the proposed future options put forward by the Cardwell community will be integrated and incorporated as part of the review of official plans and strategies that have direct implications for Cardwell.

The compilation of future options for the community involved an iterative process in which community members were given the opportunity to submit a selection of options to be assessed by the whole group during the workshops. These future options were accompanied by the following descriptors: the source of the idea; the relevant area or location for its applicability; main mechanisms for its implementation; identified responsibility for its implementation; identified anticipated benefits; identified undesirable or unintended impacts; and priority relative to other options.

Initially, a total of 25 preliminary future options were proposed to be included in the action plan. These options were tested against a set of five 'What If' questions during workshop 4 which sought to evaluate:

i. the extent to which the option would enable the community to deal with future major natural hazards;
ii. the extent to which the option would enable the community deal with future shocks and surprises (e.g. economic downturn, collapse of the international and national tourism industry, dramatic changes to oil availability);
iii. the extent to which the option would represent the best use of public money;
iv. the extent to which the option would have a negative impact on the community; and
v. the extent to which the option assisted in achieving the proposed vision for the future of the community.

Future options were then reviewed by the research team and re-confirmed by community members before being reassessed during workshop 5.

The major themes under which those future options were grouped include: planned retreat (with provision of cyclone shelter); economic development (by fostering and enhancing existing industries); sustained population growth; town development and promotion; improved infrastructure provision; opportunities for youth development; strengthening its cultural policy; supporting its Indigenous community; and improved skills base.

4. A Way Forward

Understanding how communities function to recover in the long term from the impacts of natural hazards and what are the necessary attributes that can lead to resilient communities is of critical importance, especially to government agencies from all levels, as they seek to support and meet the needs of these communities. The research sought to improve this understanding by relying on primary data obtained through both workshops and interviews.

Drawing on workshop outputs, two characteristics were identified in the Cardwell community that are understood in the literature to be important elements that assist the community recovery process after disasters (Airriess et al, 2008; Colton and Samper, 2008). These include place attachment and strong social networks. These two characteristics became evident during workshop 2, when participants undertook a SWOT analysis to identify the community's strengths, weakness, opportunities and threats. In doing so, participants were able to indirectly reflect on the actual impact of Tropical Cyclone Yasi upon their community and identify key characteristics of their community that enabled them to overcome/deal with such impact. Specifically, a strong sense of belonging and identity was identified to be one of the key strengths of their community. This was exemplified by the high valorisation of their lifestyle which is enabled by the attributes of the surrounding landscape, e.g. located between the boundaries of two World Heritage areas and micro climate; and by the high level of voluntary participation and involvement of community members in the town and district's affairs through multiple memberships across community groups.

Interviews also confirmed the strong place attachment and strength of social networks that characterise this community. In particular, they highlighted the strong commitment and involvement community members have in doing voluntary work across a range of fields, including amongst others charity work, sport and cultural activities, training and advice, assistance to elderly people and voluntary rescue services. Additionally, they demonstrated the level of social networks in place exemplified by the mutual assistance that was provided during cyclone Yasi. A few qualitative explanations of these characteristics are provided on Table 1.

With regard to the collaborative process described in section 3, the community was able to identify and deliberate on focal issues perceived to affect their community and therefore requiring attention by relevant government bodies. Specifically, there was a clear call for increasing the involvement of the community in the decision-making process concerning their area. Specific issues included the lack of political support and weak political representation of the community's interests and needs and overregulation. The need to rehabilitate communication channels between the community and local authorities was also noted and articulated. These issues are particularly relevant to the planning process currently in place in the area as they indicate fractures in current community engagement initiatives.

While, one of the key challenges related to establishing effective public engagement initiatives relates to the difficulties to involve and motivate the community to participate (Head, 2007), the circumstances exemplified by the Cardwell community

also indicate that in some cases the community is willing to participate but appropriate channels are not provided by authorities to do so. Scholars have pointed out that there are limitations associated with establishing community engagement initiatives at larger scales in terms of the number and representativeness of social

Table 1. Evidence from interviews supporting key community characteristics

Key characteristic	Qualitative explanation
	"*I would say I volunteer three to probably about four to five hours a week."* (Full-time employed female community member) "*I volunteer one day a week at our* (organisation 1*) *I'm also the secretary of* (organisation 2), *which is pretty involved because you do have a lot of paperwork; you have to deal with that and you actually have to run the whole thing. So that would take up, I don't know, probably a day a week. I'm on the committee,* (organisation 3), *I was the secretary. I just got rid of that job and so I do a bit of work for the* (organisation 4) *and the* (organisation 5)." (Retired female community member)
Place attachment and Social networks	(on cyclone Yasi) "*We also had some local people who were being told to leave their home, and we just took as many people that wanted to come and stay. We basically all sat in the dining room so that we had a couple of walls between us, and I also had my two kids here. So, you know, there was probably about 10 or 12 of us here or something that night*" (Full-time employed female community member) (on cyclone Yasi) "*We had people ringing up saying, "Can we come out?" And that was the same with our neighbours. Everyone knows ... Road is well above sea level and we had nine in our house. The neighbours had, I think they had, they'd left but they let people use their house. I think there was about eight people in that house. There was about 30 something in – 20 something in the house two up from us. 30 something in the house above that. We didn't know this until the next morning, but that many people."* (Full-time employed male community member)

* Names were omitted for privacy reasons

groups that can be involved, specially the hard to reach groups (Few et al, 2007; Wiseman et al, 2010). Another potential reason for this lack of involvement of the Cardwell community in official decision-making process could be related to episodic/tokenistic approaches in public engagement initiatives (Head, 2007). Both barriers certainly need to be further investigated to determine the extent to which

they are engrained in the planning practices and hindering the establishment of broader community engagement initiatives in the Cardwell area.

Furthermore, complex and highly contested issues such as climate change demand the adoption of better collaborative approaches in planning practices to aid decision-making (Head & Ryan, 2003; Innes & Booher, 2004; Horlick-Jones et al, 2006). The collaborative process, the subject of this study, demonstrates that there are critical issues that the community would like to see discussed/incorporated in future official plans concerning their local area. These were identified through the iterative process of developing and assessing future options for their community which ultimately would enable the Cardwell community to deal with future extreme weather events. The extent to which these issues will be incorporated in future official plans is yet to be determined however efforts are already in place to improve the communication channels between the community and government authorities. These efforts can be mostly attributed to the Cardwell community itself further demonstrating the strength and will of its members to bring about positive changes.

Lastly, there are two key aspects of the partnership established between the Cardwell community and the research team that enabled the success of this collaborative process thus far. These are related to the reputation of the research team in undertaking collaborative research elsewhere in partnership with other stakeholders and the existence of community champions. Both aspects are understood to be critical for the success of intervention-research as indicated by Daniel et al (2011). According to the authors, on the one hand, reputation of the participants in this type of research model is seen as a crucial because it brings trust to the process. On the other hand, while involving community champions requires clear protocols to avoid the dominance of individual interests in the outputs of process, it is an essential aspect to ensure ongoing participation of other community members throughout the process.

Nevertheless, collaborative process through intervention-research such as the one outlined in this study need to be continuously evaluated to ensure its legitimacy and robustness. These would involve some key criteria such as the ones proposed Holkup et al (2004), including: credibility, transferability, fairness, level of participant involvement, community voice, acceptable problem solution and feasibility of project sustainability.

5. Conclusion

Intervention-research is perceived to be a useful research model to generate the means for collective action. This study confirms its usefulness as it generates important information related to the community's values and interests that should be discussed and potentially incorporated in future plans for their area. Additionally, the collaborative process between the community and research team, implemented through this intervention-research, is fostering the re-establishment of communication channels between the community and government authorities.

However, the real effectiveness of this collaborative process will continue to be tested in the years to come as the action plan is widely disseminated to both the broader community and government officials.

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THE RECURRENCE OF HEALTH IN URBAN PLANNING: TOWARDS AN INTEGRATION OF ENVIRONMENTAL HEALTH ASPECTS

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Abstract

While urban planning and health were initially interlinked, in the twentieth century planning practice slowly moved away from its public health origins. In recent years however there is a growing interest in the health effects of our spatial organization. Although the direct impact of the physical environment on health has decreased – due to better standards of living, sanitary developments, improved housing – environmental quality still deserves our attention. First, the focus has shifted from life expectancy to health expectancy and quality of life. Public health impact no longer predominantly involves clear mortality risks, but rather comprises aspects of human well-being in a broad sense. Several direct impacts, like noise or air pollution, do not immediately kill people, but cause physical or mental disorders on the long term or severely reduce the quality of life of people. Second, the physical environment has many indirect effects on lifestyle and health, for example a reduced physical activity caused by a lack of walkable neighborhoods. A final important reason to justify this research is the aspect of environmental justice. The spatial characteristics responsible for direct and indirect health effects are spatially heterogeneously distributed, causing important differences in health status and healthy life expectancy between various residential neighborhoods.

Today a lot of research exists on different health impacts caused by aspects of the physical environment. Most of this research focuses on one single impact (e.g. noise) or one spatial aspect (e.g. a road). An integrated approach, in which all the impacts and aspects are combined, seems to be lacking. However, there is a giant need for a better understanding of this issue, to inform community leaders and spatial planners about which community design and land-use choices are most effective in improving the physical, mental and social well-being of people.

In this paper an attempt is made to give an overview of the main environmental characteristics with an effect on people's health and well-being. The aim is to evaluate the evidence of the existing research output and to explore the relevance for spatial planning.

Finally the results are discussed and recommendations for urban planning policy are formulated. Here the aspect of environmental justice comes into view, the right on a healthy living environment for every citizen regardless of social and economic status.

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1. Introduction

Health and urban planning are historical allies. In the mid-19th century a tremendous population drift from the countryside to larger industrial cities took place, causing overpopulation in cities with an underdeveloped public hygiene. Modern planning originated expressly in order to combat these unsanitary, overcrowded and inhumane urban conditions. Endemic problems of poor water supply, sanitation, light and air triggered a response in terms of not only infrastructure engineering but also urban design (de Hollander and Staatsen, 2003; Galea and Vlahov, 2005; Barton, 2010).
In the mid-to-late 20th century planning practice moved away from its public health origins. Original objectives of clean air and water are still deeply entrenched in planning and building control systems, but contemporary diseases have been ignored in many ways. Planning policies have facilitated if not actually fostered the powerful trend towards car-dependent, sedentary and privatized lifestyles, with their negative effects on health and well-being. We have been literally building unhealthy conditions into our local human habitat (Barton and Grant, 2006; Barton et al., 2009).
At the beginning of the 21st century a resurgence of interest in the relationship between 'place' and 'health and well-being' can be noted. Recent concerns about levels of physical activity, asthma, sleep disturbance, stress and increasing environmental inequality have put the aspect of health back on the spatial planning agenda. We now realize that how we design the built environment may hold tremendous potential for addressing many of the greatest current public health concerns (Jackson, 2003a; Barton and Grant, 2006).

The development and significance of environmental health can be analyzed using a conceptual model (Ruwaard and Kramers, 1998). This model (figure 1) shows that health status can be regarded as a function of a variety of determinants. Up until the 20th century the physical environment was the largest source of avoidable disease burden in the Western world, with an attributable fraction of 70-80% (de Hollander and Staatsen, 2003). Since the public health revolution from the 19th and 20th century, this factor is only directly responsible for minor health loss, while life-style is responsible for the bulk of the current avoidable disease burden (de Hollander et al., 1999; Smith et al., 1999; Melse and de Hollander, 2001). Especially among young people and lower socio-economic classes trends in unhealthy behavior are alarming (smoking, dietary habits, sedentary life-styles) (van Oers, 2003).

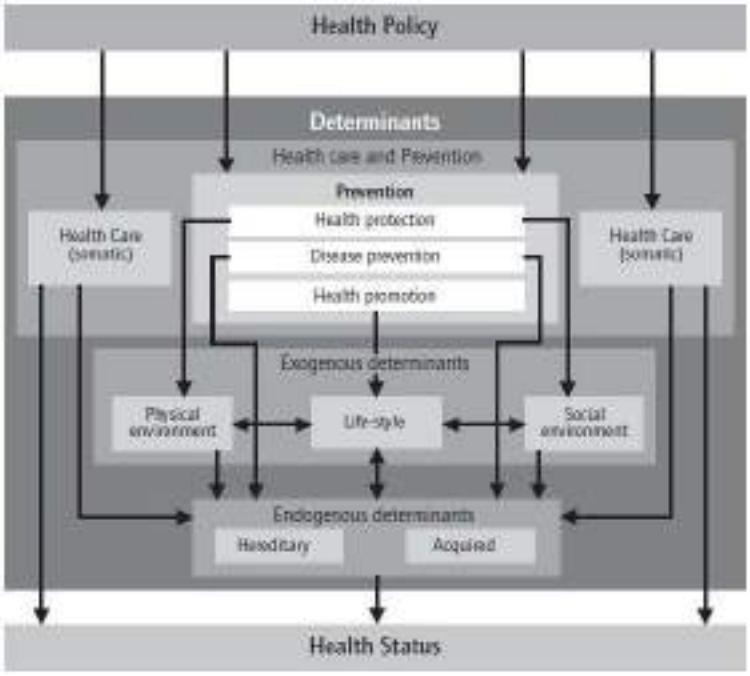

Figure 1. Conceptual model - determinants of public health status (Ruwaard and Kramers, 1998)

The increasing importance of life-style in the public health status of Western countries is a consequence of the growing control over other determinants. In fact, modern post-industrial people have become very healthy people, thanks to public hygiene, vaccination programs, antibiotics, a general improvement in standards of living and a comprehensive system of health protection (de Hollander and Staatsen, 2003). Today, the health loss due to exposure from the physical environment is much higher in low-income countries compared with Western countries (lack of access to clean water, inappropriate housing, infectious diseases, indoor air pollution, malnutrition …). Further, the health risks associated with industrialization, such as large scale air (and noise) pollution generated by transport and energy production, do now receive a lot of attention, but in fact these problems did make many more victims in the past (Lomborg, 2001). Many of the impacts of environmental factors have been annihilated or reduced to be 1/10 or 1/20 of their original impact (de Hollander and Bol, 2004).
Because of this conclusion, one can wonder whether the physical environment still deserves our attention when it comes to public health. Three reasons can be given why this focus is still useful.

From quantity of life to quality of life
The main reason why environmental quality is still a valuable research theme is the shift from quantity of life to quality of life. Public health impact no longer predominantly involves clear mortality risks or loss of life expectancy, but rather comprises aspects of well-being and quality of life in a broad sense (de Hollander and Staatsen, 2003; de Hollander and Bol, 2004). Firstly, this includes the

aggravation of pre-existing disease symptoms, e.g. asthma, chronic bronchitis, cardiovascular disorder. Secondly severe annoyance, like sleep disturbance or a reduced ability to concentrate and communicate, is comprised. A third category consists of feelings of insecurity or alienation, unfavorable health perception and stress in relation to poor environmental quality. Environmental annoyances, like noise pollution, do not lead to many supplementary deaths, but do affect the quality of life of people and cause stress and concentration and communication problems.
The World Health Organization (WHO) already adopted this broad definition in 1946, stating that health is "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (WHO, 1946). Also in research the concept of health has expanded beyond a mere absence of illness and objective indicators of health, to address well-being and quality of life (O'Neill and Simard, 2006).

Indirect effects of the physical environment on lifestyles and health
The physical environment also has important indirect (and complex) effects on health, through impacting life-styles (Barton and Grant, 2006). This can easily be illustrated by Barton's settlement health map, depicting the ecosystem of a human settlement (figure 2). Each outer sphere (natural environment, built environment, activities) affects the health and well-being of people, represented by the inmost sphere, directly or through an effect on local economy, community or lifestyle – the intermediate spheres. The built environment can for example provide attractive walkable neighborhoods with mixed land use, thus stimulating a physically more active lifestyle and consequently a better health status.
Because of these clear links between environmental quality and life-style (see also Pickett and Pearl, 2001; Roux et al., 2001), a study remains useful, but one has to be aware of selection processes that can have more impact than actual causal relationships.

Environmental justice
The spatial characteristics responsible for direct and indirect health effects are spatially heterogeneously distributed, causing problems of environmental inequality. It has been recognized that environmental hazards in urban areas disproportionately affect low-income people and members of minority groups (Brulle and Pellow, 2006). This is due to a social polarization of opportunity, which ties some people to locality, making them increasingly vulnerable (Barton et al., 2009). These people often cannot afford to live in relatively healthier neighborhoods and bear a greater burden of risk (Dannenberg et al., 2003; Moudon, 2009).
There exists empirical evidence that low income is associated with higher noise exposures (e.g. Seto et al., 2007) and higher air pollution exposures (e.g. Laurent et al., 2007). Moreover, members of minority groups are relatively more exposed to air pollutants than whites, independent of income and urbanization (e.g. Perlin et al., 1999). Kohlhuber et al. (2006) add that not only the perceived exposure differs but also the generation of environmental problems may be distributed unequally. Poor people are less likely to own a car than wealthier people, they contribute less to environmental pollution but suffer disproportionately more often from it.

These three arguments show that the relation between urban planning and health or well-being still deserves our attention. The main line of thought is that every citizen has the right on a living environment that stimulates health and well-being, regardless of his or her social and economic status. This basic principle of the right on well-being and environmental quality connects an ecocentric with an anthropocentric view, clearly illustrated by Barton's settlement health map (Barton, 2005, 2009) (figure 2). On the one hand this diagram expresses an ecocentric view on human settlements, by depicting an ecosystem with different spheres, that are interconnected in different ways and have to be in a good balance to ensure healthy settlements. On the other hand people are placed at the heart of the map, reflecting the anthropocentric definition of sustainable development, aimed at improving the livability and the quality of life (e.g. IUCN, 1980; Newman, 1999).

Figure 2. Human ecology model of a settlement (Barton and Grant, 2006)

To include the health aspect in spatial planning and design, a good scientific basis is needed. We need to know which impacts are important, what health effects they bring about, and how these impacts can be spatially influenced (Jackson, 2003b).
Today a lot of research exists on different health impacts caused by aspects of the physical environment. Most of this research however focuses on one single impact (e.g. noise) or one spatial aspect (e.g. a road), and results are typically not widely shared across disciplines (Dannenberg et al., 2003).
The spatial planning discipline should strive to this integration of the different associations between aspects of the built environment and impacts on health and well-being. Starting from this concern for an integrative approach, a PhD research project has been started up focusing on the combination of impacts and the modeling

of environmental health. The remaining part of this paper presents the results of an exploratory literature study, carried out to discern the main environmental impacts, originating in aspects of the built environment, and relevant for spatial planning and design decisions.

2. Framework

To guide the literature study, two important choices were made, concerning the range of impacts included and the spatial scale of the effects. To discern the environmental characteristics that are relevant for spatial planning, the analysis was focused on impacts caused by the physical environment, and not the social environment, and on impacts that generate differences at a local neighborhood level, and not the building or regional level (for an analysis of impacts on other scales, see Jackson, 2003a).

As a framework for the assessment of the different impacts, a scheme was used that consists of three parts (figure 3): 1) spatial conditions, 2) impacts and 3) effects on health and well-being.

Figure 3. Framework

A simple example is the spatial configuration of a highway (1), generating traffic noise (2) with an effect on sleep quality of neighbors (3).
The aim was to characterize the different impacts following this scheme. The linking parts, the ‘impacts’, will be considered as the steppingstones of the research project. This is partly due to the aim of the further research steps, modeling the environmental quality based on a combination of the most relevant impacts.

The literature study was carried out on an exploratory basis. It was not the aim to be exhaustive and complete, nor to give the most recent insights in the domain. The purpose was to get a broad view of the different impacts, their importance, the scope of their effects and the value of the existing empirical evidence. Nevertheless it was attempted to select primarily those sources that are cited regularly and that incorporate possible confounding variables. One of the main lacunas is the primary reliance on cross-sectional studies, because of the limited availability of longitudinal studies.
Notwithstanding several shortcomings, the literature review should give a broad view on the relation between the built environment and health or well-being and set the scene for further research. Based on this analysis it should be possible to select the most important impacts for further modeling.

3. Impacts

Based on the literature review, four important impacts could be discerned, with sufficient scientific evidence. These are: air pollution, noise, the absence of green space as a restorative environment and the lack of physical activity.
For other impacts the effects on health and well-being have limited evidence, the spatial component is less pronounced or the spatial differentiation at a neighborhood scale is unsure. Among these non-included impacts are the lack of social interaction (e.g. Leyden, 2003), soil pollution (e.g. Vrijheid, 2000), electromagnetic fields (e.g. Röösli, 2008), the urban heat island effect (e.g. Tan et al., 2010) and unhealthy food environments (e.g. Rose and Richards, 2004).

3.1. Air pollution

Figure 4. Environmental impact scheme: air pollution

Air pollution is definitely one of the most important environmental impacts at a local scale. The local differentiation is mainly due to the spatial organization of roads and the accompanying traffic. Also industry can contribute to local air pollution but few research focuses on this aspect.

The relation between air pollution levels and roads has been investigated extensively. A lot of studies show that traffic intensity and/or distance to major streets or highways are important predictors of differences in measured pollutant concentrations, for NO_2 (Roorda-Knape et al., 1998), $PM_{2.5}$[3] (Fischer et al., 2000; Janssen et al., 2001), (ultra)fine particles (Hitchins et al., 2000; Zhu et al., 2002), elemental carbon or 'soot' (Roorda-Knape et al., 1998; Kinney et al., 2000), CO (Zhu et al., 2002), benzene (Fischer et al., 2000) and ozone (Kuhler et al., 1994). These relations indicate that the measured pollutants are related to vehicle exhaust emissions.
For most traffic volumes and pollutants, the major decrease in traffic-based pollutants occurs in the first 100 meters and then levels off somewhat after 150 meters (Zhu et al., 2002). However, until 1000 m of a highway a contribution of the road to local air pollution can be measured (Fischer et al., 2007).

[3] Particulate Matter (PM) with a diameter of 2.5 micrometers or less.

Today there is sufficient scientific evidence to conclude that living alongside busy roads is less healthy than situations with a bigger distance between the home and major roads.
The most important and most described health effects are in the field of the respiratory system, with increased *respiratory symptoms, lung growth deficits* and *allergy development* in children.
Many studies show an association between high vehicle traffic and chronic respiratory symptoms like cough and wheeze in children (e.g. Wjst et al., 1993; Oosterlee et al., 1996; Van Vliet et al., 1997; Hirsch et al., 1999; Venn et al., 2001; Nicolai et al., 2003; Shima et al., 2003; Andersen et al., 2008), or asthmatic symptoms and/or asthma hospitalizations (e.g. English et al., 1999; Lin et al., 2002; Brauer et al., 2007; Morgenstern et al., 2008; Nordling et al., 2008). A recent research by Gehring et al. (2010) provides further evidence that traffic-related air pollution exposure may contribute to the development of asthma in children, and not only aggravates existing symptoms.
Some cross-sectional studies in Europe have shown that deficits in lung function growth in children – associated with morbidity and mortality in adulthood (e.g. Knuiman et al., 1999) – are related to residential exposure to high (truck) traffic (Brunekreef et al., 1997; Sugiri et al., 2006). A highly cited research of Gauderman et al. (2007) showed that pronounced deficits in attained lung function at age 18 years were recorded for those living within 500 m of a freeway, for both asthmatic and non-asthmatic children, thus giving evidence for adverse effects of traffic exposure on otherwise healthy children.
Associations between distance to the nearest main road and the risk of allergy development and exacerbation of allergic reactions have also been demonstrated (e.g. Krämer et al., 2000; Brauer et al., 2007; Morgenstern et al., 2008; Nordling et al., 2008).

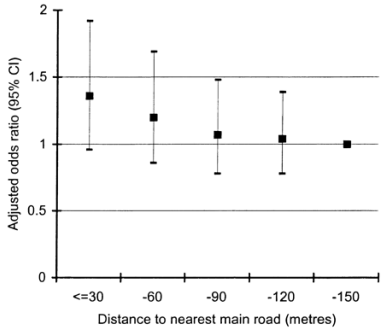

Figure 5. Exposure-response relationship between distance of the home from nearest main road and parent-reported wheeze in primary schoolchildren (Venn et al., 2001)

Further, chronic exposure to air pollution from traffic is associated with *increased mortality risks*. Several studies show that individuals who live close to major roads have an increased risk of mortality, although relative risks are generally small (e.g. Roemer and van Wijnen, 2001; Hoek et al., 2002; Finkelstein et al., 2004; Gehring et al., 2006; Beelen et al., 2008).

The assumption that increased mortality is primarily associated with a higher prevalence of *atherosclerosis* (the hardening of arteries) and *coronary disease* is supported by the research of Hoffman et al. (2007), who found that long-term residential exposure to high traffic is associated with the degree of coronary atherosclerosis, and Gan et al. (2011), who observed an association between exposure to road traffic and adverse cardiovascular outcomes.

In terms of proximity, most studies use distances of 50 to 300 meters to indicate exposure to traffic-related air pollution, but adverse effects on health have been observed in people living up to 1000 m from a busy road.
It is clear that the closer to a road people live, the higher the increase in adverse health effects, but there are no studies available that give evidence about an acceptable distance or a mathematical relationship. Each choice for an 'acceptable' distance between residential location and major roads or highways is not based on thresholds of health, but on the societal acceptability (Fischer et al., 2007).

3.2. Noise

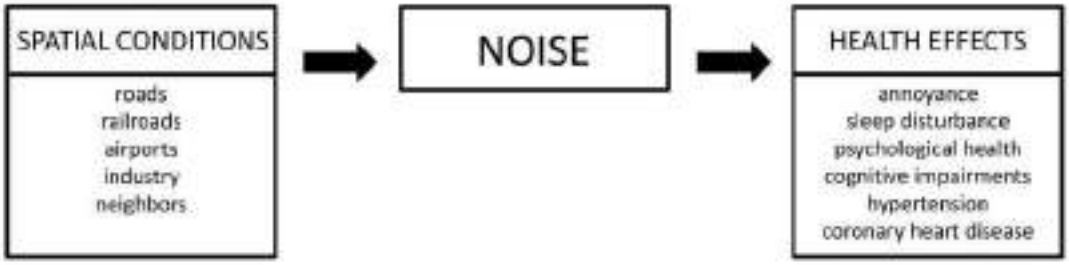

Figure 6. Environmental impact scheme: noise

Noise, defined as 'unwanted sound', is perceived as an environmental stressor and nuisance. It is an increasingly prominent feature of the urban environment and is being seen as an important environmental public health issue (Clark and Stansfeld, 2007). Noise is a phenomenon that is sensed and evaluated by everybody, and this is why noise exposure is one of the most frequent complaints of populations living in large cities (Muzet, 2007).

The direct auditory effects of noise on humans – like hearing loss – are well established. The corresponding sound levels and effects however do not occur in normal urban settings. Non-auditory effects, on the other hand, cannot be explained as a consequence of sound energy, but are the result of noise as a general stressor (Clark and Stansfeld, 2007).
Annoyance is the most reported problem caused by noise exposure and is often the primary outcome used to evaluate the effect of noise on communities (Ouis, 2001). Noise annoyance is a feeling of resentment, displeasure, discomfort, dissatisfaction, or offense when noise interferes with someone's thoughts, feelings or actual activities (Passchier-Vermeer and Passchier, 2000). Of all health effects associated

with noise, the dose-response relationship between community noise and annoyance is the most developed (Seto et al., 2007).
Associated with annoyance, there is both objective and subjective evidence for *sleep disturbance* by noise. Exposure to night-time noise can potentially interfere with the ability to fall asleep, shorten sleep duration, cause awakenings and reduce quality of sleep (Michaud et al., 2007). Sleep disturbance can have an important impact on well-being, causing after-effects during the day: annoyance, irritation, low mood, fatigue, low vigilance and impaired task performance (Stansfeld and Matheson, 2003; Muzet, 2007). Community studies of traffic noise exposure have found consistent evidence for a direct effect on sleep disturbance (e.g. Öhrström, 2002; Miedema and Vos, 2007).
Given the effect of chronic noise exposure on annoyance responses, it has been hypothesized that also *psychological health* might be affected. Studies of adults have confirmed that noise exposure relates to an increase in the number of reported psychological symptoms, such as anxiety and depression, higher levels of psychological distress and a higher prevalence of hyperactivity (e.g. Jones et al., 1981; Stansfeld et al., 1993; Haines et al., 2001a).
Further, strong evidence is available for a direct effect of noise on the *cognitive development of children*. Several studies have established that children exposed to noise experience some cognitive impairments – especially impaired reading comprehension and sustained attention – with the suggestion that the children's further cognitive development may be affected (e.g. Haines et al., 2001a; Haines et al., 2001b; Stansfeld et al., 2005). A highly cited field study was the naturally occurring longitudinal quasi-experiment reported by Evans and colleagues, examining the effect of the relocation of Munich airport on children's health and cognition (Evans et al., 1998; Hygge et al., 2002), demonstrating a causal link between noise exposure and cognitive effects.

There is also consistent and strengthening evidence for a small but significant effect of transport noise on *hypertension and coronary heart disease* (Babisch, 2006; Clark et al., 2007). One of the most striking results comes from Jarup et al. (2008), who found an increased risk of hypertension related to long-term aircraft and road traffic noise exposure. Other studies demonstrated an effect of transport noise exposure on the use of anti-hypertensive drugs (Greiser et al., 2007), self-reported hypertension (Rosenlund et al., 2001; Bluhm et al., 2007), heart attack (Babisch et al., 2005; Selander et al., 2009) and heart disease (Babisch et al., 2003; Babisch, 2006). Recently, findings of Gan et al. (2012) made clear that there are independent effects of traffic-related noise and air pollution on cardiovascular disease and mortality.

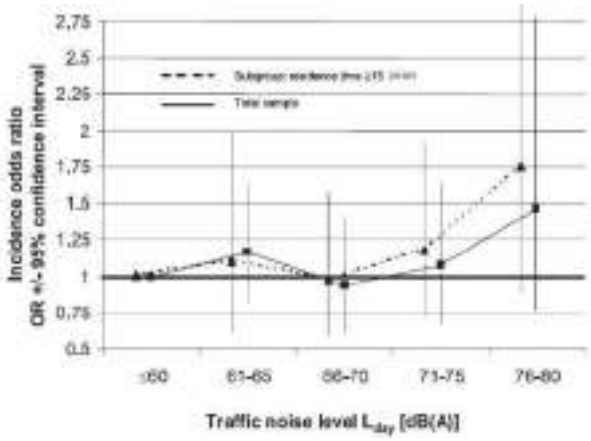

Figure 7. Association between road traffic noise level and incidence of heart attack (total sample vs. subgroup with minimum 15 years of residence time) (Babisch et al., 2005)

This overview shows that effects of noise are strongest for those outcomes – like annoyance and sleep disturbance – that can be classified under 'quality of life' rather than illness (Stansfeld and Matheson, 2003). What these effects lack in severity is made up for in numbers of people affected, as these responses are very widespread, and the chronic nature of exposure.

3.3. Absence of green space as a restorative environment

Figure 8. Environmental impact scheme: absence of a restorative environment

Since the beginning of the 21st century, a new research field has been set up, concerning the relation between the availability of green space in a neighborhood, associations with several health outcomes and the restorative effect as the mechanism behind. In this point of view, green space has to been seen as "open, undeveloped land with natural vegetation", including parks, forests, playing fields, and river corridors (Mitchell and Popham, 2008).

Today, evidence has been found for a positive relation between the amount of green space in the neighborhood and *self-perceived health* (de Vries et al., 2003; Maas et al., 2006; Mitchell and Popham, 2007; Sugiyama et al., 2008), a measure that

coincides very good with actual health and well-being (Jylhä, 2009). In these studies the relations are usually stronger for people with a lower social-economic status, and for youth and elderly. Further these studies suggest that quality of green spaces also plays an important role (Mitchell and Popham, 2007).
A recent study of Maas et al. (2009) showed that 15 of 24 assessed types of disease were less prevalent in living environments with more green space in a 1 km radius. The found relation between green space and physician-assessed morbidity was comparable with the relation between age and morbidity. The strongest association was found for *anxiety disorder and depression*, suggesting that mental health in particular might be affected by the amount of local green space. Also Nielsen and Hansen (2007) found a relation between access to green space around the dwelling and prevalence of *stress*.

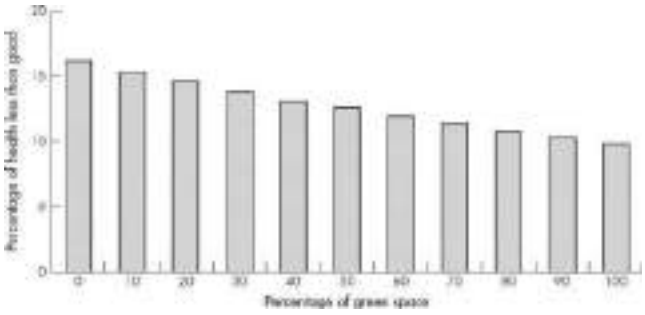

Figure 9. Relation between amount of green space (in a 3 km radius) and self-perceived health (Maas et al., 2006)

Further, the availability of green space seems to have a *moderating effect*. It was demonstrated that inequality in all-cause and circulatory mortality related to income deprivation is lower in populations who live in the greenest areas than in those who have less exposure to green space (Mitchell and Popham, 2008) and that the relationships of stressful life events with the number of health complaints, were significantly moderated by the amount of green space in the neighborhood (Wells and Evans, 2003; van den Berg et al., 2010). Other studies found a moderating effect of availability of green space on stress-related psychosocial symptoms from noise exposure (Gidlöf-Gunnarsson and Öhrström, 2007) and on the damage of traffic stress on individual's well-being (Song et al., 2007). These results support the notion that green space can provide a buffer against the negative health impacts of a lower social economic status, stressful life events or environmental stress factors.

Despite the growing amount of empirical evidence on the relation between availability of green space and human (mental) health, the way in which green space exerts a beneficial effect on health is uncertain. However, strong scientific evidence has been found for the positive effects of nature on recovery from stress and attention fatigue, the so-called Attention Restoration Theory (Kaplan and Kaplan, 1989; Verheij et al., 2008). Most of the evidence for the restorative effect comes from laboratory experiments that exposed participants to photographic simulations of various types of natural environments (van den Berg et al., 2003; van den Berg et al.,

2007), or controlled field studies that compared residents with natural elements in their view from the window to residents without such view (Kaplan, 2001). Several experimental studies have suggested that exposure to green spaces (either physical or visual) can also reduce blood pressure (Hartig et al., 2003; Pretty et al., 2005).

It can be concluded that the absence of green space in residential neighborhoods can have serious impacts on the health and especially the well-being of people. Probably the restorative quality of these small nature areas is the most important mechanism for this effect. Policy makers however tend to view green space more as a luxury good than as a basic necessity, and appear to overlook its potentially important effects on health and well-being (Groenewegen et al., 2006).

3.4. Lack of physical activity

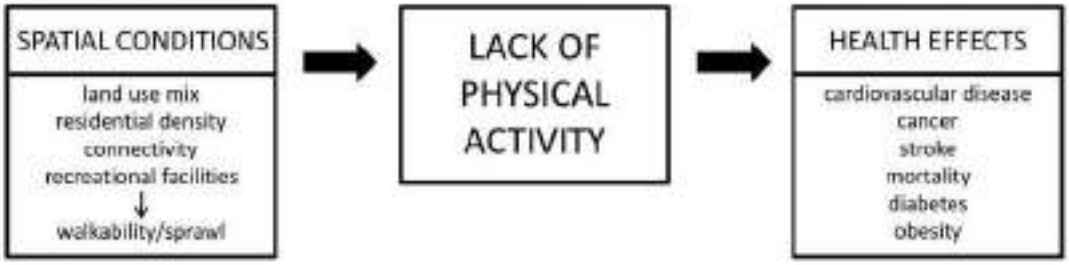

Figure 10. Environmental impact scheme: lack of physical activity

In recent years the relation between the built environment and physical activity has gained a lot of research interest. The idea is that low residential density, single-use zoning and low connectivity are associated with less walking and cycling (Frank, 2000; Frumkin, 2002).

Low levels of physical activity threaten health both directly and indirectly. The direct effects of a sedentary lifestyle consist of a higher risk on cardiovascular disease, stroke and all-cause mortality (e.g. Wannamethee et al., 1998; Sesso et al., 1999; Wannamethee and Shaper, 1999; Wei et al., 1999; Lee et al., 2000; Lee et al., 2003) and some cancers (e.g. Oliveria and Christos, 1997; Lee et al., 1999). Today, it is the second leading modifiable risk factor for chronic disease after smoking and it contributes significantly to total mortality in Western countries (Mathers et al., 2000).
In addition, lack of physical activity contributes significantly to the risk of being overweight, which in itself is a well-established risk factor for a number of diseases: heart disease, hypertension, stroke, osteoarthritis, gall bladder disease, some cancers and diabetes (e.g. Must et al., 1999; Mokdad et al., 2000). Also mortality is associated with obesity (e.g. Adams et al., 2006).
Obesity prevalence has risen steadily over the past decades. It is recognized as a major threat to public health, accounting for substantial disability and costs (e.g. Flegal et al., 2005; Olshansky et al., 2005; Caballero, 2007). Research has recently

expanded from a focus on individual determinants of obesity to investigating upstream influences in a social ecological model, including how the environment in which people live influences their lifestyle and weight. Of course, urban design does not fully account for increasingly sedentary lives, and physical inactivity does not tell the entire story of the epidemic of being overweight, but today there is a growing consensus on the environmental contribution to obesity (e.g. Hill et al., 2000; Frumkin, 2002).

Empirical research into the effects of the built environment on physical activity and obesity has increased dramatically in recent years (Day and Cardinal, 2007). Several recent review papers discuss the evidence to date (Saelens et al., 2003a; Booth et al., 2005; Duncan et al., 2005; Davison and Lawson, 2006; Kaczynski and Henderson, 2007; Papas et al., 2007; Wendel-Vos et al., 2007; Black and Macinko, 2008; Lee and Moudon, 2008; Feng et al., 2010; Renalds et al., 2010; Durand et al., 2011; Ding and Gebel, 2012). The concluding part of this subsection will go more deeply into the different measures that have been shown to be related to physical activity and obesity. The focus is on spatial characteristics that can be modified through urban policies and planning initiatives, not on simple design interventions.

Many reviews approve the relation between physical activity and the concept of *walkability* of a neighborhood, a measure mostly based on a combination of at least residential density, street connectivity and land use mix (Saelens et al., 2003b; Frank et al., 2007). A large amount of studies show that adults who live in walkable neighborhoods walk and cycle more for transportation and are more physically active (e.g. Takano et al., 2002; Berke et al., 2007; Frank et al., 2007; Handy et al., 2008; Lee and Moudon, 2008). Also the county *sprawl* index of Ewing et al. (2003), based on measures of low residential density and poor street accessibility, is related to physical activity, with residents of sprawling counties walking significantly less.
The variables used to form these two measures are also individually associated with physical activity levels. *Land use mix*, notably mixed commercial-residential land use, is associated with higher levels of physical (walking) activity (e.g. Doyle et al., 2006; Frank et al., 2006; Li et al., 2008). Also the related characteristic of proximity to retail stores and commercial establishments appears to increase physical activity levels (e.g. Berke et al., 2007; Nagel et al., 2008). Some studies confirm the association of *residential density* with physical activity, for example using measures based on population density (Frank et al., 2005) or compactness of urban settings (Frank et al., 2006). Also *connectivity* of the local transport network is associated with physical activity levels, with positive relations found for bike lane connectivity (Titze et al., 2008), intersection density (Frank et al., 2006) or size of neighborhood blocks (Wood et al., 2008).
Finally there is substantial evidence that proximity to a *variety of accessible recreational facilities* (such as parks, playgrounds, sports grounds, recreation areas) is associated with higher physical activity levels. The relation has been found for all ages (e.g. Giles-Corti and Donovan, 2002; Wendel-Vos et al., 2004) as well as for specific target groups like children (Roemmich et al., 2006), adolescents (Babey et al., 2008), and elderly (Kemperman and Timmerman, 2009).

Concerning obesity, in general the available reviews conclude that there is a lot of evidence available about a relation with the built environment, but much uncertainty about the specific associations. Given the large-range factors which affect weight status and potential time-lags between exposure and change in bodyweight, the lack of a strong association with weight outcomes found in cross-sectional studies is however unsurprising (Durand et al., 2011).
Based on the selected reviews obesity or increased body mass index can be linked to *walkability* (e.g. Frank et al., 2004; Frank et al., 2007; Rundle et al., 2008), *sprawl* (e.g. Kelly-Schwartz et al., 2004; Ewing et al., 2006; Joshu et al., 2008), *mixed land use* (e.g. Frank et al., 2004; Mobley et al., 2006; Bodea et al., 2008; Rundle et al., 2008), *population density* (e.g. Lopez-Zetina et al., 2006; Rundle et al., 2007; Stafford et al., 2007) and *access to recreational facilities* (e.g. Giles-Corti et al., 2003; Burdette and Whitaker, 2004).

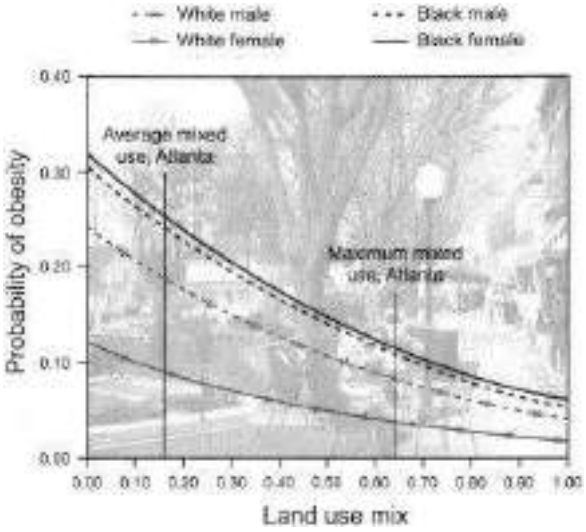

Figure 11. Probability of obesity in relation to land use mix, for different gender and race (Frank et al., 2004)

Although the importance of several urban design measures is evident, there is no agreement about which factors would be the most effective or efficient targets for intervention. It is however clear that (a combination) of the discussed measures can be used to support urban design choices and to evaluate neighborhood suitability for physical activity.

4. Discussion

Without having the ambition to give a complete overview of the state of the art knowledge, the exploratory literature study in this paper shows that the relation between urban planning and health definitely needs our attention. The health relevance of the four described impacts is founded by a considerable amount of empirical evidence, of which only a part is mentioned in this paper. Although no firm

conclusions can be provided on the quantification of these impacts, it is very likely that for each impact a comparable impact-effect relation exists, with higher negative impacts leading to more serious health and well-being consequences.
These four impacts are of high relevance for urban planning, because they can be acted on by urban planners and designers. The location of infrastructures like roads and railroads and the traffic intensity can have an effect on air pollution and noise, the planning of green space in cities can create restorative environments and increase the mental health and well-being of nearby residents, the residential density and mixed land use of neighborhoods can contribute to higher levels of physical activity. These examples show that it is important that the results from environmental research are incorporated in spatial planning policy and design. Despite planning concern for the 'quality of life', a conspicuous lack of integration of disciplines in relation to settlement planning remains (Barton, 2005). There is definitely a need for more collaboration between environmental scientists and urban planners and designers, in order to know more about which community design and land-use choices are most effective in improving the physical, mental and social well-being of people (Dannenberg et al., 2003).

The four discussed impacts create differences in health and well-being at a neighborhood scale and thus contribute greatly to environmental inequality. This supports the idea of implementing environmental justice as a generic rule in urban planning, based on the idea of well-being and living quality as a universal right for every citizen. In realizing this objective, interventions at the neighborhood level are needed, to come to equity at a city level. These spatial planning interventions can be very diverse. To influence the impacts of air pollution and noise, both measures to limit the emissions as measures to limit the exposure are possible. An example of the former is an urban transport policy aimed at lowering private car use in the city. An example of the latter is the avoidance of construction of certain buildings (schools, hospitals, houses) within a certain distance from major roads, by setting out setbacks (Hitchins et al., 2000). Some legislations (e.g. British Columbia Ministry of Environment, 2006) already implement such distance measures. To influence the impacts of absence of green space and absence of environments stimulating physical activity, interventions apply most to the urban design process. For example, urban designers can take care of the availability of green and the realization of a mixed residential and commercial land use in urban renewal processes.
It is however impossible to create a perfect living environment with the ideal conditions for human health. On the one hand, the spatial conditions of the four concerned impacts are often interfering with each other. For example, the higher the population density and mixed residential and commercial land use in a neighborhood, the more physically active people will be, but also the more people will complain about neighbor and activity noise, and vice versa (see Gauderman et al., 2007; Moudon, 2009). On the other hand, the financial means of cities and planning departments are usually restricted, making it necessary to make choices.

To support a health promoting planning policy, insight is needed in the effects of a combination of different impacts and in the amount of people that are positively or

negatively affected in their health and well-being by planning decisions. To the best of our knowledge, today no studies can be found where the combined effect of different impacts is assessed. Thus there is definitely need for a more integrative approach, in which different health impacts are combined into one framework, to make an integral assessment of environmental quality (The Health Council of the Netherlands, 2008).
The research project at hand, in which this paper forms a first step, can substantially contribute to this aim. The project wants to create a spatial geographical model (with GIS software) in which the different impacts with an effect on health and well-being can be presented layer by layer, and be combined in a final 'environmental health map' of an urban region. This model would start from the discerned impacts in this literature study and available quantification methods. If the modeling is successful, a tool will be available that can be used by spatial planners to evaluate the combined environmental quality of a spatial location. This tool would make it easier to understand spatial variations in environmental impacts and health effects and city planners may use it to better balance the health effects of spatial interventions. Also, this tool would make it possible to track the health of a community as it develops, and to suggest spatial interventions where the most people would benefit. In this way the tool can help urban planning in the pursuit of fulfilling the universal right of well-being and living quality for every citizen.

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Housing Rights of Women in Former Socialist Countries in Eastern Europe.

An Analysis of Human Rights Discourses under ICESCR and CEDAW.

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The well known metaphor "My home is my castle" describes with very simple words multifaceted humane needs associated with a home. A home keeps us grounded, gives us a place to live, allows us to feel safe and protected, embeds us in social networks and influences living conditions by empowerment and participation in political, economic, social, and cultural spheres of life. But what happens to a home in a country where housing reforms change the whole housing sector? The transformation of the socialist systems in the early 1990s has caused enormous impacts on national housing policies and housing rights as many research studies about the effects of transition show (for example in Struyk; Telgarsky 1991; Kingsley, Struyk 1992; Clapham et al. 1996; Weesep 1997).

The ten Eastern European States Bulgaria, Czech Republic, Hungary, Republic of Moldova, Poland, Romania, Russian Federation, Belarus, Slovakia, and Ukraine[1] have ratified human rights instruments providing the right to housing and commit themselves to report about the provision and fulfillment of housing periodically. The documents, called States Parties Reports, refer to the availability of housing, its quality and the accessibility to housing. The States Parties give an overview about the housing situation of their citizens, their housing policies and developments influencing housing in their countries like the economic and social changes in the 1990s.

Taken the findings from the former Special Rapporteur on Adequate Housing who is a key figure in the universal housing discourse, women still constitute one of the most disadvantaged subgroup of all vulnerable persons faced with the violation of their housing rights in many aspects (Kothari 2003, 2005 and 2006; see also UN Habitat 1999). In order to deal with restrictions and limitations of women's housing rights, he advertises to reflect the invisibility of specific constraints and vulnerabilities of women in relation to the right to housing and the access to housing (Kothari 2003: para. 21)[2], because "gender-neutral laws were interpreted and implemented in ways that discriminate and disadvantage women" by de facto discrimination (Kothari 2006: para. 9; see also Zetu 2010: p. 26). He also points out that the States Parties should provide access to housing for women in need as well as access to housing benefits in order to provide adequate housing (Kothari 2003: para 39-41). Further he is of the opinion that inadequate housing (conditions) like a lack of sanitation, water, electricity and inadequate building materials "affect women in particular", because they do mainly the reproduction work and spend more time at home than men (Kothari 2003: para. 25). From his studies he found that changes in the political, social, or economic system like the transformation and privatization in Eastern Europe has influence on women's housing situation:

"… privatization on women's access to housing and essential civic services such as water and sanitation, domestic violence, forced eviction, affirmative action and special measures for women." (Kothari 2003: para. 61).

Against this background it is not surprising that women's housing rights are an elementary part of the global housing discourse and have been on the agenda of the Commission on Human Rights as a key topic since 1997[3].

[1] The classification of those countries belonging to Eastern Europe is based on the classification of the UN region system.
[2] See also Moller Okin 1998 who argues about considering the needs and vulnerabilities of women in the human rights in general (Moller Okin 1998: 313-321).
[3] Recent relevant resolutions include 2000/13, 2001/34 and 2002/49 of the Commission on Human Rights; 1997/19, 1998/15 and 1999/15 of the Sub-Commission on the Promotion and Protection of Human Rights; and 42/1 of the Commission on the Status of Women

The existence of those States Parties Reports makes thus the analysis of those self-descriptions very attractive in order to reconstruct the position of women in the global housing discourse in these countries and helps – of course just to certain extend - to fill the blind spot of research analysis on women's housing rights in Eastern European Countries especially in the context of the transformation processes in the early 1990s.

Before presenting the results, I will explain why spatial planners are vicarious agents in the realization of human rights on the one hand and what is regarded as adequate housing on the global level on the other hand. Linking planners to human rights helps to understand why analyzing self-descriptions of those ten countries from a discourse analytical perspective is important for planners, too.

1. Housing Rights and Spatial Planners

Basic living conditions like housing, food, and water provide a minimum of livelihood and are elements of global human rights discourses as well as of local planning discourses. Planners as well as stakeholders in human rights discourses are engaged in developing policies and measures to provide housing. It is thus not surprising that spatial planners can be titled as vicarious agents in realizing human rights, although it can be assumed that they would not associate human rights with their work directly when for instance, they develop a legally binding land-use plan.

In order to find out if, and to what extend spatial planning with a focus on land policy plays a role in the human rights in general, the research project "*Socio-ecological Land Policy*" (principal investigator: Professor Dr. Benjamin Davy; TU Dortmund), funded by the DFG[4], was developed. It analyzes land policies, land as common and private property as well as the "spatiality of poverty and wealth" in the human rights in order to find out if a global understanding of a minimal access to land can be identified (Davy 2009, 2012: p. 170). Although the distribution of human rights is not equal to all humans and specific groups experience higher human rights' violations than others, the project does not focus on persons with special needs and interests. For that reason I will add this aspect by writing my doctoral thesis. The project of Professor Benjamin Day is part of FLOOR (Financial Assistance, Land Policy, and Global Social Rights), an interdisciplinary research group that examines social security as a human right from a spatial, legal and sociological perspective (principal investigators: Benjamin Davy, Ulrike Davy, Lutz Leisering; www.floorgroup.de).

[4] German Research Council (Deutsche Forschungsgemeinschaft)

2. Adequate Housing in ICESCR and CEDAW

In the universal human rights system two treaty bodies have been established which focus among other human rights specifically on the right to housing as being part of the adequate standard of living and adequate living conditions (Davy 2012). Whereas ICESCR[5] guarantees the right to housing, CEDAW[6] monitors the living conditions of women and promote women's rights like "... housing ..." (Art. 14 para. 2 [e], CEDAW). Both base on the UDHR[7] upon which the current system of human rights has been built.

The right to housing is not only related to the home as a building. Neither the language of ICESCR nor of CEDAW defines the meaning of "*adequate*" as a form of a consensus. For that reason the Committee on Economic, Social and Cultural Rights points out in its General Comment No. 4 that "adequate is partly determined by social, economic, cultural, climatic, ecological and other factors" which should be reflected as a complex construct in the descriptions of the national situation of housing and property rights in a member state (Committee on Economic, Social and Cultural Rights 1991: para. 8).

Housing rights as the committee argues imply some key issues which can be identified as minimal criteria or benchmarks for monitoring the adequacy of housing:

- a legal security of tenure,
- availability of services, materials, facilities and infrastructure,
- affordability of housing
- habitability
- accessibility
- location[8] and the
- cultural adequacy of homes

  (Committee on Economic, Social and Cultural Rights 1991: para. 8 [a-e]).

In addition to the General Comment, the States Parties should orientate their contents towards the reporting guidelines. These guidelines include specifications about housing related topics that should be integrated into the reports like (inter)national legal housing instruments and political measures to fully realization of housing rights. Knowing that external and/or internal factors have a positive or negative impact on

[5] International Covenant on Economic, Social and Cultural Rights, adopted on 16.12.1966 by General Assembly Resolution 2200 (XXI), 21st Session.
[6] Convention on the Elimination of All Forms of Discrimination Against Women, adopted on 18.12.1979 by General Assembly Resolution 34/180, 34th Session.
[7] Universal Declaration of Human Rights, adopted on 10.12.1948 by General Assembly Resolution 217 A (III), UN GAOR, 3rd Session.
[8] Location includes the distance to social infrastructure like schools, jobs, medical care or the provision of public transportation for example (Zetu 2010: p. 11-19).

housing rights and its effects on "disadvantaged and marginalized individuals and families" as the actual guidelines from 2009 postulate (Committee on Economic, Social and Cultural Rights 2009: para. 51 [b]), the States Parties also take such factors into account.

3. Women's Housing Situation in Former Socialist Countries – Selected Research Results

After explaining the relationship between spatial planners and human rights and the understanding of adequate housing, the following chapter provides information about women's housing rights described by former Socialist European Countries in the human rights instruments ICESCR and CEDAW. The data source consists of the States Parties Reports and Concluding Observations of the member States Bulgaria, Czech Republic, Hungary, Republic of Moldova, Poland, Romania, Russian Federation, Belarus, Slovakia, and Ukraine[9]. The States Parties Reports and the Concluding Observations (ICESCR) were collected and prepared by Professor Ulrike Davy and her team from the Chair of Constitutional and Comparative Law (University Bielefeld) in the context of FLOOR[10]. The data material of CEDAW was collected and prepared by Professor Benjamin Davy and his team from the Chair of Land Policy, Land Management, Municipal Geoinformation (TU Dortmund University). Following a discourse analytical approach of Reiner Keller (2008, 2011a, 2011b), this paper includes the self-descriptions of the member States of ICESCR and CEDAW and the reactions on those reports of the associated Committees. This leads to an analysis which topics are discussed and not on the global level. It reflects a need for further discussion and action, because the States Parties do not refer to all specific parameters of the guidelines and requirements for adequate housing. Referring to the statements of Kothari in the first section, I am analyzing the following selected aspects from a gender perspective in the context of the transformation processes in the 1990s[11]:

1. Legal equality of housing rights

[9] In the following passages of the article acronyms for the country names are used to facilitate the readability of the text: Bulgaria (BGR), Czech Republic (CZE), Hungary (HUN), Republic of Republic of Moldova (MVA), Poland (POL), Romania (ROU) Russian Federation (RUS), Belarus (BLR), Slovakia (SVK) and Ukraine (UKR). Although some States like RUS etc. had other country names before 1990, the actual ones that are used in the UN reporting system are applied instead of the old country names. In order to differ between reports from CEDAW or ICESCR, the reports under CEDAW get an asterisk behind the country name (for example HUN*2006 is the sixth periodic States Party Report submitted by Hungary under CEDAW).

[10] Thank you for sharing! Special thanks go to Luise Buschmann.

[11] The effects of Chernobyl and wars have not been considered, although both events have had enormous impacts on housing till today. Thus the article includes only selected aspects of the housing discourse in the context of human rights.

2. Women in selected national housing measures
3. Adequate housing

3.1. Legal Equality of Housing Rights

This section deals with housing related topics from a legal perspective found in the States Parties Reports and the Concluding Observations. From the analysis of the human rights' documents the following aspects play a role for the States Parties and both Committees referring to legal law:

- Provision of the right to housing
- Free choice of the residence
- Access and availability of housing benefits, bank loans, mortgages and other forms of financial credit

ICESCR provides the **right to housing** (Art.11.1, ICESCR); in contrary to the covenant, the States Parties under CEDAW argue describe potential discrimination in joy of this right under Article 14.2. All States promise to realize this goal for their citizens in general in both reporting systems (see table 1). Seven CEDAW member States[12] and four ICESCR member States[13] mention equal access to the right to housing especially for women in their reports (see table 1).

Table 1: States Parties Reports under ICESCR and CEDAW mention the right to housing

Topic	Right to housing (in general)		Right to housing (for women)	
Treaty Body	**ICESCR**	**CEDAW**	**ICESCR**	**CEDAW**
BGR	X	X		
BLR	X	X		X
CZE	X	X	X	X
HUN	X	X	X	
MVA	X	X	X	
POL	X	X	X	X
ROU	X	X		
RUS	X	X		X
SVK	X	X		X
UKR	X	X		X

Source: States Parties Reports under ICESCR and CEDAW, author's analysis

[12] BLR*, CZE*, HUN*, POL*, RUS*, SVK*, UKR*
[13] CZE, HUN, POL, MVA

Following the self-descriptions legal law does not include restrictions for women (constitution, civil code, family code) or the language of national housing instruments implemented after 1990 like the cadastral register (BGR 1996: para. 7 [d]), housing programs like "Your own home" (RUS 2001: para. 293), or National Housing Funds (POL 1996: para. 426), and land/agrarian reforms (for example BGR* 1994: para.12 [e]; RUS* 1991: para 275 [g]; BGR 1996: para. 3; RUS 1995, para. 213). Although housing laws have been renewed or implemented like State Privatization Acts for example in the Ukraine since 1990, detailed information about the effects of those rights on the housing situation does not exist in general, as well as there is a lack of specific information on women's housing situation as the Committee on Economic, Social and Cultural Rights criticizes (UKR 1995 CO, para. 27)[14]. Only Russia explains in its fourth States Party Report under ICESCR that "violations of the housing laws have multiplied" since 1990 (RUS 2001: para. 43), without naming affected groups of persons. But it documents restrictions for their citizens in the housing sector as an effect of the transition:

> "A large proportion of cases concern the issuance of unlawful legal documents imposing restrictions on people's rights to receive housing or housing subsidies, housing privatization, and the housing of minors and of citizens unable to look after themselves." (RUS 2001: para. 43)

All member states of CEDAW admit women **to choose the residence and domicile** as Article 15.4 CEDAW demands. On the contrary, the language of ICESCR as well as the guidelines do not include such a request with the result that the States do not take the stand if women are allowed to decide where they want to live in the reporting system under ICESCR. If cultural norms or traditions exists that deprive women from their freedom of choice as the Special Rapporteur on Adequate Housing Kothari highlights (2006: para. 37f.) is not documented either in the reports of the convention or the covenant, nor being requested from by both committees.

The language of the Covenant on Economic, Social and Cultural Rights as well as the guidelines do not include a request to describe the **availability and accessibility of housing benefits, bank loans, mortgages and other forms of financial credit** as the Article 13 (a) and (b), CEDAW, does. For this reason only the States Parties Reports in the CEDAW reporting system can be consulted. Here, all ten countries agree in the equality approach of CEDAW that there are no gender based causes why women should be limited or restricted in getting financial support in order to realize their right to housing. If access to housing benefits is limited for women in reality

[14] The Concluding Observations are published by the Committees under CEDAW and ICESCR. In order to show to which States Party Report a Concluding Observations belongs, the Concluding Observations are titled as follows: UKR 1995 CO. This means the Concluding Observations belong to Ukraine and was published in 1995.After the country name of Concluding Observations published by the Committee on the Elimination of Discrimination against Women an asterisk is attached to differ between the Concluding Observations of both Committees.

cannot be inferred from the self-descriptions of the States, although the Committee complains 2010 about limited access to social benefits of housing for Roma women in the Ukraine (UKR* 2010 CO: para. 29).

The findings collected from the descriptions of the States and the Committees imply that women are not categorized as disadvantaged or discriminated by legal law. But that does not indicate that women are not faced with discrimination in the housing context from a legal perspective, because the Committees ask for more details in the descriptions of the States and further research on housing rights of women in order to assess the effects of gender neutral law. The existence of a lack of information about the effects of law on women's housing rights can be derived from the Concluding Observations of both Committees. General housing statistics are requested from five member States of ICESCR in order to get a better overview about the housing situation without a gender perspective[15]. Seven States should provide specific information about women's housing situation in the CEDAW reporting system[16]. The Committee on the Elimination of All Forms of Discrimination against Women advises to collect statistical data for specific situations which affect housing rights of women directly like general multiple forms of discrimination (BLR* 2011 CO: para. 41). It has also comments in its Concluding Observations to the Czech Republic that "domestic violence deprives from safe accommodation" and demanded thus the Czech Republic, but also the Russian Federation to provide measures against violence as well as statistics (CZE* 2002 CO: para 81; RUS* 2010 CO: para. 48). Although "serious changes in the national housing policies have occurred since 1990" as Bulgaria summarizes the transition effects (BGR 1996, para. 222), the States do not inform about restrictions or limitations on women based on the legal texts on the one hand. They also do not describe if they have taken specific needs and vulnerabilities of women in law into account.

3.2. Women in Selected National's Housing Measures

In order to realize adequate housing, living space must be available and accessible and should be provided for women, because on the global level it is common sense that women face discrimination in practice, even national legal frameworks provide equal access and availability to housing (Kothari 2003: para. 42-49). Thus this section deals with following housing aspects:

- Improvement of housing
- Housing construction
- Housing benefits

[15] HUN CO, POL CO, ROU CO, SVK CO and UKR CO
[16] BLR* CO, BGR* CO, CZE*CO, HUN* CO, MVA* CO, RUS* CO, UKR* CO

One aspect of the improvement of living conditions is the **improvement of housing** in general as six CEDAW member States[17] and nine ICESCR member States postulate[18]. For the States, this task is "one of the basic targets of economic and social policy" as Poland already explains in the 1980s for the other countries representatively (POL 1980: p. 18). Only few reasons for the improvement differ before and after the 1990s. Inadequate housing conditions play a role since the first reports in the late 1970s (see 3.3). Housing needs of young married couples or families (for example HUN 1985: para. 7; POL 1980: p. 19; ROU 1979: para. 20-21; UKR 1985: para. 17), housing needs of low-income families (POL 1986: para. 19 [a]; RUS 1980: p. 15), and unsatisfied housing demands (HUN 1985: para. 47) are listed before 1990. As a consequence of the changes in the housing sector since 1990, the States argue with ineffective housing distribution (BGR 1996: para. 216) and deteriorated basic structure of buildings (MDA 2003: para. 492) in order to legitimate the improvement of housing.

Seven member States of CEDAW[19] and four member States of ICESCR[20] point out housing improvement especially for women in their reports. Reasons are focused on women in need in cases of domestic violence (POL*2004: para. 104) or "for basic target groups like […], pregnant women, women with underage children…." (RUS* 2009: para. 16). Unemployment or lower wages are not listed as reasons for targeted housing improvement, although the States Parties describe in their reports under CEDAW[21] that the transformation processes cause instability and job problems especially for women like Moldova:

"The unstable social-economic situation in the country and the increase in unemployment and in the number of persons socially vulnerable affects the micro-climate of the family and women." (MDA* 1998: para. 63)

In the ICESCR reporting system only the Ukraine reveals the connection between the transformation process and the lack of women's jobs (UKR* 1991: para. 7). Neither under the covenant nor the convention, the member States do not connect negative effects in the economic sphere as well as the failing living conditions resulting from the reforms in the 1990s to the housing situation of women.

The **construction of housing**[22] is provided firstly in form of nationalized social housing or private housing offerings; secondly, citizens can receive financial subsi-

[17] BLR*, CZE*,HUN*, MDA*, RUS*, UKR*
[18] BLR, BGR, CZS, HUN, POL, MDA, RUS, SVK, UKR
[19] BLR*, CZE*, HUN*, POL*, RUS*, SVK*, UKR*
[20] CZE, HUN, POL, MDA
[21] CZE*, HUN*, POL*, MDA*, UKR*
[22] The construction of housing is a measure to ensure available housing.

dies for housing consumption. Six member States under ICESCR[23] and five member States under CEDAW[24] have housing construction on their agendas, but do not consider distribution problems (see table 2).

[23] BGR, HUN, POL, ROU, RUS, UKR
[24] BGR*, POL*, RUS*, SVK*, UKR*

Table 2: States Parties Reports under ICESCR and CEDAW mention housing construction

Topic	Construction of housing (in general)		Construction of housing (for women)	
Treaty Body	**ICESCR**	**CEDAW**	**ICESCR**	**CEDAW**
BGR	X	X		X
BLR			X	X
CZE			X	
HUN	X			X
MVA				
POL	X	X	X	X
ROU	X			
RUS	X	X		X
SVK		X		
UKR	X	X		X

Source: States Parties Reports under ICESCR and CEDAW, author's analysis

Housing construction for women has been established in Poland for women affected by domestic violence (POL* 2004: para. 104) as well as for "incomplete families" in Belarus (BLR* 2002: p. 56). The Czech Republic also organizes homes for mothers with children (CZE 1980: p. 10). Bulgaria and Ukraine provide shelters or housing help for victims of trafficking (BGR* 2011: para. 57; UKR* 2008: p. 37). For invalids like the "Heroine Mothers" in Belarus and women with children who do not overcome life damages housing is also provided (BLR* 1987: p. 21; CZE 2000: para. 423-424). Female refugees in Russia were resettled (RUS* 2009: para. 88). Hungary and Poland report about the provision of shelters for homeless women with children, housing help, mother-child homes, crisis homes and women's houses (HUN* 1995: para. 128; POL 1996: para. 286 (v); POL 2001: para. 259; POL 2007: para. 574-582), although most of the shelters in Poland were run by nongovernmental organizations (POL* 2004: para. 109). Housing construction was reduced in some countries before the collapse of the socialist system as Hungary 1985 explains. There, the

"…volume of state-financed housing constructed diminished and priority was given to the construction of dwellings in housing property held by citizens" (HUN 1985: para. 48).

Although privatization had existed before the transformation processes, it was seen as an option to improve the offering of living space after 1990. In how far this approach combined with political activities has helped to increase private housing property has been successful or implies housing problems, has been documented by the Republic of Moldova just picking up one example. It says that:

"…the home construction sector reached its highest point, but beginning in 1991 it has seen a continuous decline both in the public and private sectors. Construction decreased from 20,200 units in 1990 to 2,900 in 1999; many dwellings were left unfinished." (MVA 2003: para. 486)

For housing consumption – irrespective of being used for ownership or rent – **housing subsidies** are offered for different target groups with different needs in order to guarantee them economic access to housing for rent or ownership. Credits and housing benefits as well as long-term loans are granted by States for housing consumption especially to young married couples or families as target groups as seven States document in their ICESCR reports[25] (see table 3). Since the fundamental changes of the former socialist systems, credits for residence or mortgage credits have been developed as Russia 2009 for example informs (RUS* 2009: para. 19, 33). In how far similar credits, tax benefits or adequate benefits for rent for women have been introduced or further developed for other target groups rather families, are documented only in a few countries. The Russian Federation informs in its actual CEDAW report that single mothers are also allowed to get financial support (RUS* 2009: para. 404). In addition, in its combined sixth and seventh States Party Report submitted to CEDAW, the State bring up the extension of housing benefits for single parents in general (RUS* 2009: para. 89). In order to monitor this development, the Committee on the Elimination of Discrimination against Women asks for further information (RUS* 2010 CO: para. 42).

Table 3: States Parties Reports under ICESCR and CEDAW mention housing subsidies

Topic	Housing Subsidies (in general)		Housing subsidies for women	
Treaty Body	**ICESCR**	**CEDAW**	**ICESCR**	**CEDAW**
BGR	X			
BLR				
CZE	X			
HUN	X			
MVA				
POL	X			
ROU	X			
RUS	X			X
SVK	X			
UKR				

Source: States Parties Reports under ICESCR and CEDAW, author's analysis

[25] BGR, CZE, HUN, POL, ROU, RUS and SVK

If the provision of housing benefits in general or housing benefits for women have been influenced by the transformation processes is only described by Bulgaria. Under the covenant it points out 1996, that a

- "discontinuation of States subsidies for housing",
- "a reduced solvency of the greater part of the population and a sharp rise in prices" as well as a
- "high interest rate on house loans" lead to great problems for its citizens."
  (BGR 1996: para. 222)

The existence of problems to get access to housing as a consequence of the transition can be assumed from the following statements, because the Committee on Economic, Social and Cultural Rights is

"**...** deeply concerned about the acute shortage of housing and the privatization of some public housing stocks which have resulted in a sharp rise in rents, forced evictions and homelessness." (CZE 2002 CO: para.19)

It also criticizes the Republic of Moldova because "… rising real estate prices have negatively affected the accessibility and affordability of housing …" (MVA 2003 CO: para. 23)

3.3. Adequate Housing

The Committee on Economic, Social and Cultural Rights published their global understanding of adequate housing in 1991. In this context three questions arise that should be embedded in the changes of the economic and social systems: First, which countries report about the lack of adequate housing; secondly which reasons are listed and third are women affected by that.

Only Poland uses the term of inadequate housing in its fourth periodic States Party Report from (POL 2001: para. 238); other terms are a substandard housing (POL 2001: para. 238) or inappropriate housing (CZE 2000: para. 419). But most of the States do not evaluate housing as inadequate, although the criteria for adequate housing are not fulfilled as the following example of the Russian Federation shows:

"Owing to the shortage of good-quality drinking water, the majority of rural areas are at risk of an epidemic. Many rural inhabitants use water from wells, rivers and natural reservoirs for cooking and other domestic purposes. Only 28 per cent of rural settlements have running water." (RUS 2001: para. 286)

Eight States under ICESCR[26] describe that shortcomings with the provision of adequate housing are mainly based on a lack of infrastructure (water supplies and sani-

[26] BLR, BGR, CZE, HUN, POL, MVA, RUS, UKR

tary conditions[27], electricity[28]). Other reasons are: illegal or inhabitable housing (HUN 2005: para. 416; MVA 2008: para. 624), and overcrowding (BGR 1999 CO: para. 18). Under the covenant, the States Parties do not explain if and how inadequate housing conditions influence women particularly. In contrast to ICESCR, all member States of CEDAW document a reduced adequacy of housing in general (see table 4). In those reports, too, infrastructural problems are identified as the primary cause for substandard housing. With the exception of Roma women in Hungary and the Czech Republic, women are not mentioned or specified as vulnerable or limited in the context of inadequate housing conditions. Hungary names unhygienic standards as a result of bad housing in this context (HUN* 2000: p. 10); both States correlate the appearance of diseases with bad housing (HUN* 2006: p.40; CZE* 2004: para. 258).

Table 4: States Parties Reports under ICESCR and CEDAW mention inadequate housing conditions

Topic	Inadequate housing conditions (in general)		Inadequate housing conditions for women	
Treaty Body	**ICESCR**	**CEDAW**	**ICESCR**	**CEDAW**
BGR	X	X		
BLR	X	X		
CZE	X	X		X
HUN	X	X		X
MVA	X	X		
POL	X	X		
ROU		X		
RUS	X	X		
SVK		X		
UKR	X	X		

Source: States Parties Reports under ICESCR and CEDAW, author's analysis

The essence of the reports shows that problems referred to inadequate housing have been existing for a long period of time or are elements of the actual housing problems of the citizens in Eastern European Countries, although the States invest in collective water and utility and sanitation like Hungary after the reforms of 1990 (HUN 2005: para. 374).

In both reporting systems the States Parties do not express in how far the radical change of laws, privatization and changes of the economic system influence the pro-

[27] for example CZE 1980: p. 30; CZE 2000: para. 523; HUN 1984: para. 129; HUN 2005: para. 348; POL 1996: para. 402; RUS 2001: para. 277

[28] MVA 2008: para. 669; RUS 2001: para. 277

vision of adequate housing positively or negatively in their reports. But after those changes, the States Parties focus more on the seven criteria of the Committee on Economic, Social and Cultural Rights linked with adequate housing.

4. Conclusion

The analysis of the States Parties Reports with regard to women's housing rights expose two results. Firstly: the analysis of the self-descriptions of the States shows a lack of detailed information about women's housing rights in both human rights treaties, although the former Special Rapporteur on Adequate Housing highlights that women are faced with multiple discrimination in their housing rights and the guidelines recommend the States Parties to document the influence of housing measures and policies on their citizens as well as discrimination should be described under CEDAW. Secondly the analysis makes clear that the blind spot in scientific research referring to women's housing rights in the context of the collapse of the socialist system cannot be filled, but is a first step to illustrate the need for further analysis. Following Tsenkova and French, "gender inequalities in housing in Europe […] may not be as problematic compared to other regions of the world" (2011: p. 55), the reports and the Concluding Observations include some hints that the housing situation of women is influenced negatively by the radical changes in the 1990s.

All States document that housing laws and policies are gender-neutral and that women are not excluded from enjoying a free choice of residence or housing benefits, and other forms of financial measures to guarantee adequate housing. This neutrality, seen as progressive policy, in connection with a reappraisal of old gender stereotypes and the primary view on women as the Committee on the Elimination of Discrimination against Women have observed (RUS* 1995 CO: para. 530; BLR* 2000 CO: para. 361; POL* 1991 CO: para. 170), are potential causes for de facto discrimination and disadvantage following the argumentation of Kothari (2003, 2005, 2006). Gender-neutral law or gender-neutral housing policies do not prevent women from traditional or customary practices that restrict housing rights or the access to financial support of women (Kothari 2003: para. 21). Although this knowledge is part of the global housing discourse, the States did not seize the chance to take women's interests and vulnerabilities into account in the renewing of housing laws in order to harmonize national law and the global housing approaches.

Worldwide observations of Kothari also show that few women are able "to pursue claims for their rights against male relatives" in cases of divorce, inheritance or domestic violence (Kothari 2003: para. 44-45). Violence and unsafe accommodation plays a role in both reporting systems, because it can lead to eviction, homelessness and other forms of discrimination. Some States document that they improve housing

for women in need (see 3.2), but they do not describe whether the transformation processes have had influences on those offerings as well as they do not describe whether women are affected by eviction and thus unsafe or uninhabitable housing (Kothari 2006: para. 66-70). In how far housing help is implemented in national housing policies to abolish an existing lack of awareness of legal rights has not been reported. This is in the context of legal security of tenure important, because low income groups or persons "who are not able to buy or rent a formal house" are affected by that particularly (Zetu 2010: p.17).

The elaboration of gender-sensitive housing policies as Kothari 2006 requested has been established by providing housing for women in need (see 3.2), but not for women in unstable economic situations. Through the economic changes in those countries, especially women have been affected by unemployment, lower wages, and failing living conditions (see 3.2). This facts together with increasing rents, housing shortage, eviction, and homelessness as a consequence of the transition (see 3.2) implies that women's housing rights are affected by that, too. This is in so far speculative, because only few States Parties refer to negative effects like restrictions to the access to housing, housing subsidies, or housing privatization and do not name affected groups. In order to monitor this adoption, statistics and information are needed especially referring to the economic situation of women and access to housing.

A lack of information can also be identified in the descriptions of adequate housing. Only few criteria are mentioned like technical infrastructure and the affordability of housing. With exception of Roma women, effects of substandard living conditions on women or other groups are not mentioned, although most States inform about problems with inadequate housing. From the actuality of the findings can be concluded that it is still part of ongoing housing policies in those ten States. The connection between the transformation processes (including privatization) and its consequences for adequate housing-related aspects like the availability and accessibility of safe water, energy, sanitation etc. have had not been liaised from the States. Privatization and liberalization of those services lead to increased costs, bureaucratic barriers and finally to access limitations (Kothari 2005: p. 2). Thus detailed data should be collected in order to find out whether this global observation from Kothari can be transferred on the housing situation of women in these Eastern European Countries, too.

Till now many questions have not been answered yet; for instance the availability and accessibility of housing in the context of privatization, the development of a housing market, and not least the effects on property under a gender-sensitive perspective. Therefore we as spatial planners, as experts for adequate housing conditions, can resume the discussion of what is not mentioned in the reports and where

our experts’ opinion and survey is requested in order to focus more on people rather than places.

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Quotations from the States Parties Reports and the Concluding Observations

The States Parties Reports and the Concluding Observations under ICESCR have been collected and prepared by Professor Ulrike Davy and her team in the context of the FLOOR project (see p. 4 and 6). The quotations and concrete examples in this article reference on the list of the following documents, mostly available at the United Nations Bibliographic Information system (UNBISNET, http://unbisnet.un.org) or on the Committee on Economic, Social and Cultural Rights (http://www2.ohchr.org/english/bodies/cescr/sessions.htm). On both homepages, the other States Parties Reports from these member States and Concluding Observations of the Committees can be downloaded.

States Parties Reports

ICESCR	CEDAW
BGR 1996: Third periodic reports. E/1994/104/Add.16	BGR* 1994: Combined second and third periodic reports. CEDAW/C/BGR/2-3
CZE 1980: Initial periodic reports. E/1980/6/Add.21	BGR* 2011: Combined fourth, fifth, sixth and seventh periodic reports. CEDAW/C/BGR/4-7
CZE 2000: Initial periodic reports. E/1990/5/Add.47	BLR* 1987: Second periodic reports. CEDAW/C/13/Add.5
HUN 1984: Initial periodic reports. Rights covered by articles 10 to 12. E/1980/6/Add.37	BLR* 2002: Combined fourth, fifth and sixth periodic reports. CEDAW/C/BLR/4-6
HUN 1985: Second periodic reports. E/1986/4/Add.1	BLR* 2010: Seventh periodic reports. CEDAW/C/BLR/7
HUN 2005: Third periodic reports. E/C.12/HUN/3	CZE* 2000: Second periodic reports. CEDAW/C/CZE/2
MVA 2003: Initial periodic reports. E/1990/5/Add.52	CZE* 2004: Third periodic reports. CEDAW/C/CZE/3
MVA 2008: Second periodic reports. E/C.12/MDA/2	HUN* 1995: Third periodic reports. CEDAW/C/HUN/Add.1
POL 1980: Initial report. E/1980/6/Add.12	HUN* 2000: Combined fourth and fifth periodic reports. CEDAW/C/HUN/4-5
POL 1986: Second periodic report. E/1986/4/Add.12	HUN* 2006: Sixth periodic reports. CEDAW/C/HUN/6
POL 1996: Third periodic report. E/1994/104/Add.13	MDA* 1998: Initial periodic reports. CEDAW/C/MDA/1
POL 2001: Fourth periodic reports. E/C.12/4/Add.9	POL* 2004: Fourth and fifth periodic reports. CEDAW/C/POL/4-5
POL 2007: Fifth periodic reports. E/C.12/POL/5	POL* 2004: Sixth periodic reports. CEDAW/C/POL/6
ROU 1979: Initial periodic reports. E/1980/6/Add.1	RUS* 1991: Third periodic reports. CEDAW/C/USR/3
RUS 1980: Initial periodic reports. E/1980/6/Add.17	RUS* 2009: Combined sixth and seventh periodic reports. CEDAW/C/USR/7
RUS 1995: Third periodic reports. E/1994/104/Add.8	UKR* 1991: Third periodic reports. CEDAW/C/UKR/3
RUS 2001: Fourth periodic reports. E/C.12/4/Add.10	UKR* 2008: Combined sixth and seventh reports. CEDAW/C/UKR/7
UKR 1985: Second periodic reports. E/1986/4/Add.5	

Conclusion Observations

ICESCR	CEDAW
BGR 1999 CO: Concluding Observations of the third periodic reports. E/C.12/1/Add.37	BLR* 2000 CO: Concluding Observations of the third periodic reports. Contained in document A/55/38
CZE 2002 CO: Concluding Observations of the initial periodic reports. E/C.12/1/Add.76	BLR* 2011 CO: Concluding Observations of the seventh periodic reports. CEDAW/C/BLR/CO/7
MVA 2003 CO: Concluding Observations of the initial reports. E/C.12/1/Add.91	CZE* 2002 CO: Concluding Observations of the second periodic reports. Contained in document A/57/38
UKR 1995 CO: Concluding Observations of the third periodic reports. E/C.12/1995/15	POL* 1991 CO: Concluding Observations of the second and third periodic reports. Contained in document A/46/38
	RUS* 1995 CO: Concluding Observations of the third and fourth periodic reports.
	RUS* 2010 CO: Concluding Observations of the combined sixth and seventh periodic reports. CEDAW/C/USR/CO/7
	UKR* 2010 CO: Concluding Observations of the combined sixth and seventh periodic reports. CEDAW/C/UKR/CO/7

FROM RAPID URBANISATION TO RAPID VERTICAL GROWTH: PLANNING POLICIES IN LIMA, PERU

Ana María Fernández-Maldonado[1]

Abstract

Lima, the capital of Peru, is a city of more than 8 million residents which has the typical urban issues associated to rapid urbanisation: large areas of informal developments, and a clear socio-spatial divide between the 'formal' and 'informal' parts of the city. Planning has been unable to tackle the troubles of rural-urban migration. Recently, new housing policies have produced a housing boom and the densification of central (formal) areas. What has been the role of planning in these processes? Focusing on the link between local political processes, planning policies and their spatial implications in the city of Lima during the periods of rapid urbanisation and political-economic change, this study provides a first scan to spatial planning trends in the fifth largest Latin American metropolis.

1. Introduction

Planning and policies to tackle the effects of rapid urbanisation in cities of Latin America have been in many cases characterised by laissez-faire attitudes. Growth management issues have been generally neglected, in front of the urgent problems brought about by rapid urbanisation, such as housing and employment for thousands of newcomers to the city. This is also the case in Lima, the capital of Peru. The city expanded swiftly during a period of high demographic growth and industrial expansion (mid-1950s - late 1970s), in a process which transformed the country from an eminently rural into an eminently urban country in few decades. These processes gradually modified the city's structure into one characterized by a centre-periphery pattern, which at the same time represents a clear socio-spatial divide between the 'formal' and 'informal' parts of the city.

In the frame of large neo-liberal political and economic transformations, new housing policies have begun to deliver affordable new homes to middle and low-middle income groups since 2002. This process has worked as an economic catalyser and produced a remarkable construction boom in Lima and other large Peruvian cities. This, in combination with a huge housing demand and the lack of appropriate land for new expansions have led to a process of rapid vertical growth in central districts of Lima, in what may be seen as a process of 'return to the centre'.

What has been the role of planning in the above-mentioned processes? The objective of this paper is to explore the spatial implications of (national and local) planning policies in the city of Lima during the periods of rapid urbanisation and political-economic change. The main question refer to the roles of metropolitan development planning and of national housing policies on urban growth and sustainable

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development. To answer the question the study uses evidence from analysis of data gathered through local and international literature, legal document and regulations, internal reports, websites, articles in the media and qualitative interviews with local researchers.

To understand the main features of the planning context the following section positions Lima within the planning circumstances of Latin American cities. Section 3 pays attention to the role of growth management in metropolitan planning in Lima. Housing policies and their effects on city growth are the focus of section 4. The last section discusses the results and presents some preliminary conclusions.

2. Planning policies and horizontal expansion in Latin America

In 1900 Latin America one out of four inhabitants lived in urban centres of more than 2000 people, while at the end of the century three out of four were living in cities. This has made Latin America the most urbanised region of the developing world and the second highest after North America. In front of such an explosive rate of urbanisation, governments have been unable to regulate and guide land development, or to provide housing, employment, urban infrastructures and services for the huge amount of rural migrants settling in the cities. Migrants eventually managed to get land, housing and employment in informal ways, generally invading peripheral or unsuitable land and building vast squatter settlements. The results have been massive informal urban sprawl, together with growing urban poverty and informality. Spatially, the result was a "clear-cut spatial differentiation between the rich (city centre) and poor (urban periphery)" (Verkoren a al., 2009), in what has been called the polarized city (Borsdorf and Hidalgo, 2010). A great proportion of the self-built neighbourhoods that settles in the 1960s and 1970s – the period of faster expansion – has consolidated and has been provided of urban services and property titles, but the "informal city" continues growing in many cases.

During the 1990s, a new wave of horizontal expansion was observed (De Mattos, 2002). This time the spatial transformations have not been driven by demographic processes, but linked to the economic and cultural pressures coming from globalizing processes. The construction and improvement of motorways and rings in the periphery have greatly contributed to the expansion of the cities. The peripheries, which before were the exclusive domain of informal neighbourhoods, had a huge transformation due to the emergence of gated communities, and the construction of housing projects for the middle classes and social-housing projects for lower-income groups. Furthermore, a significant proportion of jobs and service activities also moved outwards, and shopping malls were built for different sectors of the population at the intersections of transport networks. New industrial areas also appeared in the periphery, some of them in the form of formal clusters, but also as informal production clusters (Verkoren et al., 2009). Figure 1 illustrates the schemes of the evolution of the Latin American city from the compact colonial city until the current fragmented agglomeration.

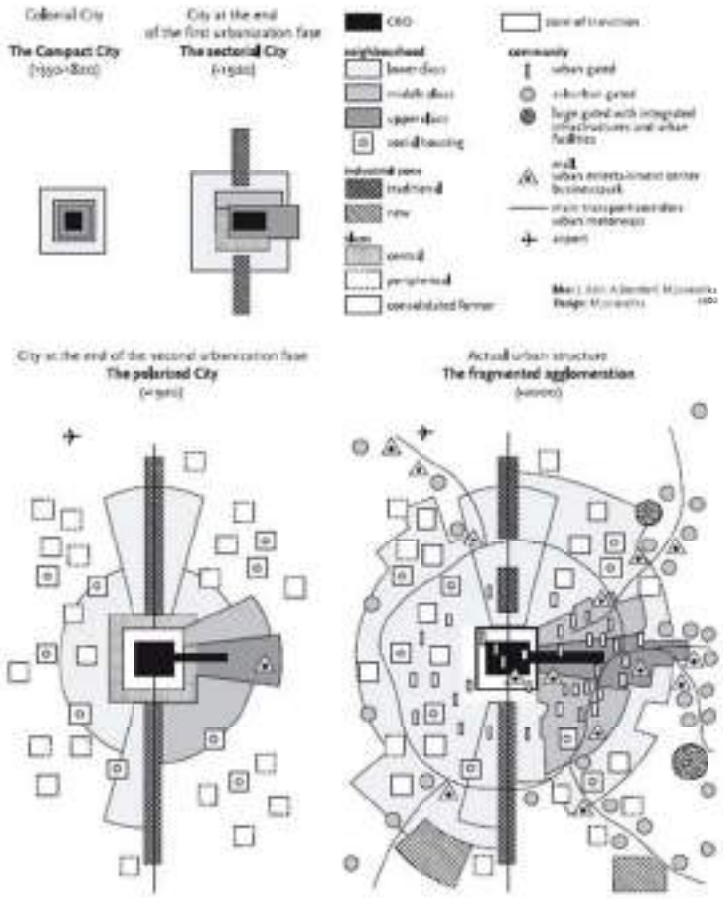

Figure 1. Evolution of the urban structure of the Latin American city (Source: Borsdorf and Hidalgo, 2010)

The last two waves of growth have meant a substantial horizontal expansion in the form of urban sprawl, which is basically the result of weak planning and development control rather than a deliberate strategy. This horizontal growth has brought about serious environmental and management problems: "the way that cities have grown by swallowing up neighbouring towns outside their jurisdiction has created difficulties in making decisions on investment and regulation. It has also caused tensions between mayors and governors who frequently compete with each other using tax incentives and other regulatory tools to shift business from one town to another. This destabilizes the long-term financial stability and governance of these large cities." (Cadena et al., 2011, p. 30).

In spite of the slower rates of growth, the fate of the Latin American cities far from easy. Latin American large cities are world known by their pressing problems: traffic congestion, housing shortages, air pollution, The lack of urban planning or deficient planning is frequently mentioned as one of their main problems. De Mattos (1987) mentions three issues of Latin American urban planning in the 1980s: economic reductionism, formalism and "utopian voluntarism", by which planners tended to set their own ideology above the one of the decision-makers. This resulted in an ineffective planning system, centralised in planning agencies isolated from

other public offices and agencies, and with a clear separation between plan elaboration and implementation. The state had the leading role formulating and implementing development plans. This traditional conception of planning was spread by the UN's Economic Commission for Latin America and the Caribbean (ECLAC) since the 1960s, which sent planning consultants to different countries of Latin America and run several schools and courses to educate planners.

Despite the lack of effectiveness, these traditional planning systems were perpetuated by local bureaucracies and educational and job training institutions. "The rational, technocratic planning model, master or comprehensive planning and zoning have been common approaches to planning in LAC that have not been adjusted much in decades, except for exceptional cases." (Irazábal, 2009: p. 52). Unsurprisingly, during the rapid urbanisation process of the second half of the 20th century, planners were unable to face the urban challenges, which eventually led to housing shortages, congestion, pollution, insecurity and socio-spatial segregation in the largest cities. "Urban planning in LAC has often been thwarted by changes in governing bodies, lack of constituency involvement, financial constraints, natural disasters and other challenges, resulting in failed implementation of plans." (Irazábal, 2009: p. 22).

Despite their reputation, Latin American cities have produced significant urban innovations that have been exported to other cities in the region but also to developed economies. Santiago's policy of housing through subsidies to the demand, Porto Alegre's participative budgeting, Bogota's process of civic renaissance and Curitiba's transit oriented development have proved to work successfully in other realities too.

To compare the overall planning performance of the eight largest Latin American cities against the McKinsey Institute elaborated a benchmark study – using a benchmark defined as the average of Helsinki, New York, Singapore, and Toronto – with four criteria: (1) economic performance; (2) social conditions; (3) sustainable resource use; and (4) finance and governance (Cadena et al., 2011). The report concludes that Latin American cities perform poorly against international benchmarks and that despite a reasonable economic performance, "… their institutional, social and environmental support structures have not kept up with their expanding populations." (see Figure 2). Lima is the worst-off of the eight cities evaluated in terms of overall planning performance, and the only one which is below the regional average in all four benchmark criteria.

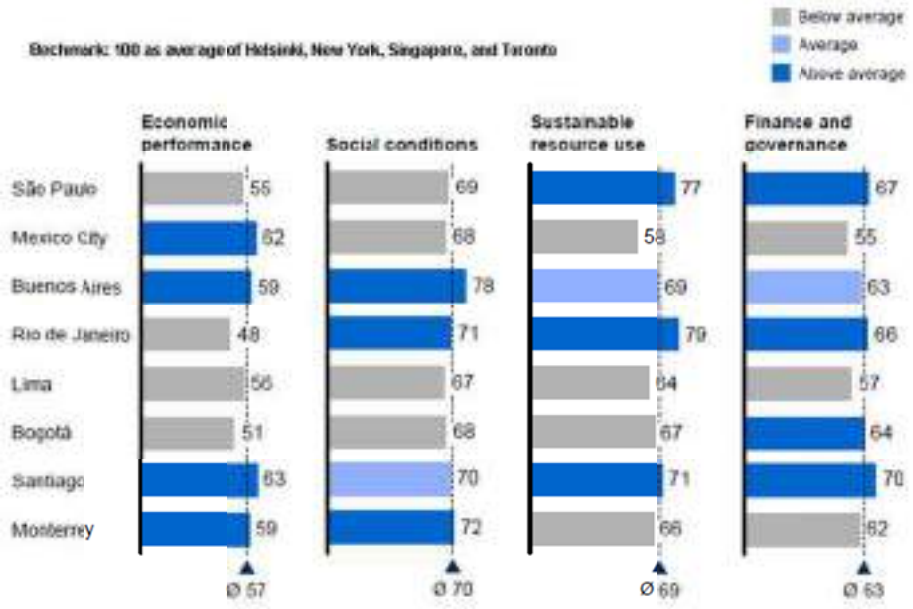

Figure 2. Performance of the eight top Latin American cities (Source: Cadena et al., 2011).

3. Metropolitan planning and urban expansion in Lima

Lima ranks well below the average of large Latin American cities in criteria related to land use, a conclusion that has been drawn after examining its below-average population density, its extremely low number square metres of green spaces per person, its severe housing shortage and the lack of land use policies for curtailing the environmental impacts of urban development (The Economist Intelligence Unit, 2010). This evaluation coincides with the empirical evidence gathered in Lima: the city does not have a well-established land use policy, and sectoral housing policies are not coordinated with the local government at both metropolitan and district level.

The most frequently mentioned metropolitan planning challenge in Lima is the huge fragmentation in terms of political decision-making, which leads to a management conundrum. Lima and its port, Callao are two different (provincial) municipalities conforming a vast conurbation, which in spite of their common problems have not managed to coordinate plans for the development of their shared metropolitan area. Lima has 42 district administrations, plus one for the province, while Callao has 8 more districts and one provincial administration which in total make up for 51 government bodies. "… the (district) government is quite absurd: 42 pieces of a puzzle that no one knows how to assemble and that do not mean much. Districts mean very little, no one knows what the members of the council do, they do not represent tangible territories, and their competences and responsibilities are completely lost in space." (Interview to Augusto Ortiz de Zevallos in Paredes, 2006, p. 64).

Besides, there is a prevalent confusion in the identification of the competences at every level of government (national, regional and local), evident in important urban sectors as transport and housing (García, 2009), whose policies and regulations have

a great impact in the spatial expansion and functioning of the city. What finally occurs is that the national level takes the lead and implements sectoral policies and programmes without consulting the lower government levels. For example, "the Ministry of Housing has exercised pressure on local governments to allow many building permits for projects subsidised by the Mivivienda Fund, without the existence of previous studies or even against the same municipality's urban plans." (Riofrío, 2010a, p.76).

Riofrío (2010a) comments that there is a tradition of presidents that act as mayors of Lima that dates back to the 19th century and is explained by the Peruvian centralism. But the imposition of national decision-making over city plans worsened since 1990. "In Lima, for instance, it can be argued that the city's fate has been primarily led by national policies, following the alienation of the municipal districts' autonomy by the Fujimori administration in 1990. While the districts regained their autonomy after Alejandro Toledo's election in 2001, the ten previous years of uncoordinated spatial policies and nonexistent metropolitan agenda have frustrated urban planning and become engraved onto the city's territorial organization." (Crot, 2006, p.244).

As in many other Latin American cities, the Peruvian planning system is very formalistic and normative, and exhibits high implementation problems. Local governments pass many legal norms, ordinances and strict building codes, but there is very little concrete results of the achievement of the proposed aims and objectives (García, 2009). City authorities do not have enough capacity to control the observance of the local regulations. Ploger (2010) provides an example of this, describing the case of ordinance 690, passed by the metropolitan council in 2004 to respond to the Peruvian ombudsman's requests regarding the spread of gates and barriers obstructing the free access to public streets in Lima, that emerged during the 1990s. "The ordinance has however been implemented very slowly by the district authorities. Only a few consolidated districts have made serious efforts to enforce the legal guidelines, while the informal status quo persists elsewhere."(Ploger, 2010, p.42).

These problems are associated to the institutional weakness and the features of planning in the Peruvian context. The former has been abundantly debated at local level and is widely considered as the product of an incomplete process of nation building. A World Bank report (2001) that deals with the institutional roots of poor governance in Peru mentions, among other issues, the institutional disorder created by a confusing administrative structure that weakens transparency and accountability, incoherent policy-making, weak checks and balances on the central government, and even weaker checks and balances on the local government. These processes were deepened by "the progressive decomposition of Peruvian democratic institutions (occurred) between the presidential inauguration of Alberto Fujimori in July 1990 and the announcement of his leave on 16 September 2000." (Crot, 2002).

Admittedly, there have been great improvements in terms of institutional capacity since 2001, but many of these problems are still part of the local culture and as such are difficult to eradicate. The weaknesses and low legitimacy of Peruvian institutions help to explain important urban issues, such as the widespread process of informal

appropriation of peripheral land by lower-income groups, as well as the negligible influence of planning on guiding and regulating urban growth (Ploger, 2010).

The particularities of the local spatial planning culture is, as in most other Hispanic American countries, highly related to the Spanish tradition of spatial planning (the so-called Urbanism tradition). This has been characterised as having "a narrow scope in terms of methods of intervention through zoning instruments, design codes, building control and development projects… Private actions tend to dominate. There is recognition of the relationship between physical environmental change and wider societal objectives. The model has a strong bias to design and professional solutions with only limited mechanisms for citizen involvement and managing conflicts." (Duhr et al., 2010, p. 182). Because of this difference between aim and outcomes, it is considered an immature kind of spatial planning.

Another important challenge of planning Lima's future refers to the limitations of its public finances. Metropolitan Lima's annual metropolitan budget was about US$ 100 per inhabitant (in 2010), an amount which included with the budgets of the metropolitan and all local (district) governments. As a comparison, Medellin has five times and Bogotá ten times that amount per inhabitant. While in the two latter more than 80% of the budget is addressed to investments, in Lima, due to the huge administrative personnel of so many districts, the investment budget is only 30% of the total budget (Fernández-Dávila, 2010). Despite the reduced budget, mayors have been generally almost exclusively concerned with the realization of public works. The disregard of long term planning in favour of short term interventions is evidently linked to political opportunism, because mayors have generally tried to use the mayor's post as a trampoline to the presidency of the country. Concerns for strategies for future growth have been neglected, as many other important urban issues that do not clearly belong to the realm of the four year period of the mayor.

With these serious limitations, it becomes clear that the problems of spatial planning in Lima are not so much of a technical but of a political-administrative nature (Fernández-Dávila, 2010). A report assessing the economic losses due to the lack of urban planning in Peru (Sociedad de Urbanistas del Perú, 2011) states that only 3% of municipalities in Peru has a valid Urban Development Plan, and 30% of them have never elaborated one, even if it is mandated by law. "The few existing Urban Plans are not used by city authorities due to their excessive technicalities, or the weak appropriation of the plans by the local civil society" (Sociedad de Urbanistas del Perú, 2011, p. 3).

Even in the capital city there is no valid Metropolitan Plan for its development. The previous plan – the so-called PLAN MET – was elaborated at the end of the 1980s and was valid up to 2010. PLAN MET ended during the last mayor administration without minimally achieving its goals (García, 2009). Former mayor Luis Castaneda (2006-2011) focused his government almost exclusively on the construction of roads and transport works, some of which improved traffic flow, but since they were built in an uncoordinated with other sectors and local governments, they also produced many urban conflicts. His administration was hardly interested in local economic development or human development issues, up to the extent that knowing that the

Metropolitan Plan would expire in 2010, it made no provision to update it (DESCO, 2012).

This verifies that "The state – central government and municipalities alike – has in practice abandoned its role of planning and guiding urban expansion." (Ramírez Corzo and Riofrío, 2006, p.54). The absence of a sound regulatory framework for land use planning is more a rule than an exception in Latin American cities, as the examples of Buenos Aires (Crot, 2006) or Mexican cities (Azuela, 2002) have shown. What is singular in Lima, however, is the negligence of (former) city authorities toward metropolitan planning, as suggested by the absence of metropolitan planning to guide the overall urban development.

In November 2011, however, the new major has appointed a commission chaired by an expert in governance with the mission to elaborate a Participative Regional Development Plan for 2012-2025, which is expected to be ready in October 2012. It is being elaborated in consultation with different organisations of the civil society, which gather around topics in each of the main zones of Lima: Lima Centro, Lima Norte, Lima Sur, Lima Este and Callao. The consultations have already began. One of the ten thematic groups discusses Urban Growth, Housing and Urban Services. This group will work during six months to identify a shared and strategic vision for urban growth, housing and services by means of 56 Dialogue Meetings (Mesas de Diálogo) in districts, four inter-district events, surveys and focus groups (Municipalidad de Lima, 2012).

4. Housing policies and urban expansion in Lima

The expedition of the Peruvian Law of Marginal Settlements and Popular Neighbourhoods in February 1961 marked the beginning of the official housing policy to tackle the effects of rapid urbanisation in Peruvian cities. Recognizing the legal status of the expanding informal neighbourhoods at the periphery, it aimed at integrating them to the city by coupling physical upgrading and legal regularization processes. But the planned social housing projects were never implemented and the land reserved for them was delivered without basic services producing a massive horizontal and informal expansion of the city. The housing policy developed into a land delivery policy, which was carried out for 30 years until the available land was exhausted. In such way, informal land occupation became institutionalized as housing for the poor (Fernández-Maldonado, 2007).

This has produced an enormous strain in the internal structure and urban functioning of the city, in which socio-spatial segregation has become a typical feature. It has also produced a city of low density that is difficult to manage and extremely expensive to provide with adequate services. Currently, Lima has an estimated 300 inhab./ha^2, which is a low density compared with the average of 450 inhab./ha^2 of the 18 largest cities in Latin America (The Economist Intelligence Unit, 2010). Lima's huge horizontal expansion is illustrated in Figure 3 in the 1910-2000 period.

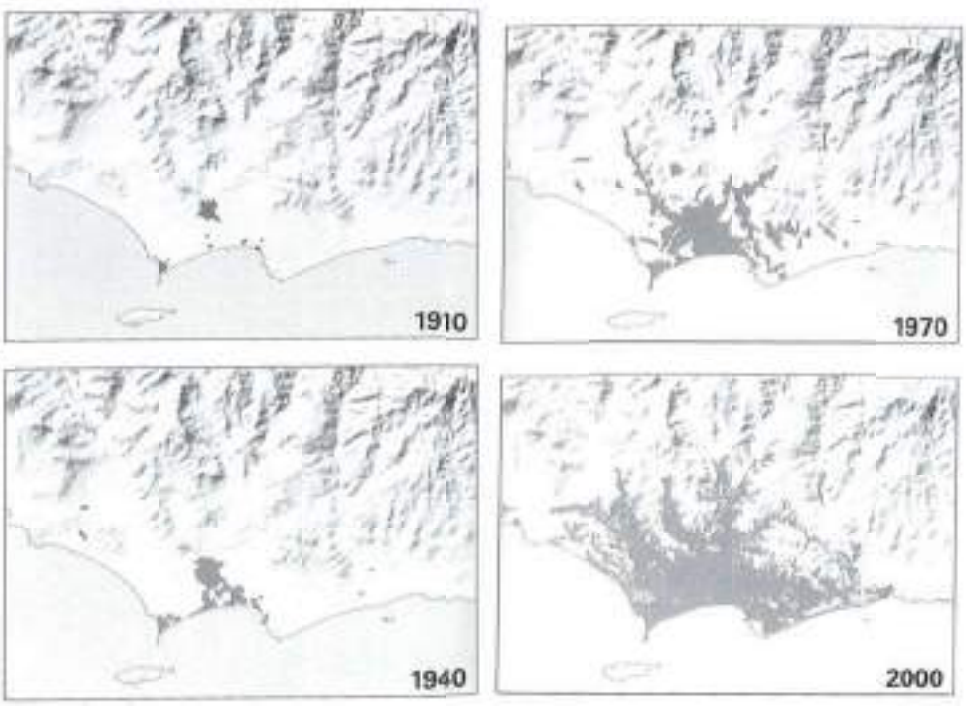

Figure 3. Evolution of Lima during the 20th century (Source: Hays-Mitchell and Godfrey, 2005)

As in other large Latin American cities, Lima's rate of growth diminished greatly after the 1970s, although in a lesser extent than in other countries. However, demographic processes have also led to a very high demand of housing, since there is a vast number of young people at the age of forming new households. This, mainly unsatisfied demand, has resulted in the continuous occupation of land in the outskirts.

The Peruvian housing sector was profoundly reformed in the 1990s in the frame of national political and economic transformations. The constitution of 1993 annulled the right to housing, while the government neglected planning and the housing sector and closed the Ministry of Housing, the National Planning Institute, the Central Mortgage Bank, the Housing Bank, and housing cooperatives. All this produced the stagnation of formal housing construction and the city continued growing only by the way of informal settlements.

After many years of crisis and recession, Peru's economy began to grow rapidly after 2001 and its average rate of growth (as percentage of the GDP) has been more than 4%, and since 2005, 2% more than the average of Latin American countries. Poverty rates began to decline moderately, and somewhat more rapidly during Garcia administration (2006-2011).

The housing sector underwent significant changes after 2002. Following recommendations of international agencies, new housing policies that began to be implemented during the Toledo administration (2001-2006). Housing programmes were initiated promoting housing through subsidies and easier access to credit. To implement the policies the government launched a National Housing Plan (PNV) for

2003-2007, establishing different programmes to promote the construction of affordable new homes for different socio-economic sectors. Direct housing subsidies were created – the Bono Familiar Habitacional (Housing Family Subsidy) – to support the demand of lower-income groups (Fernández-Maldonado & Bredenoord, 2010).

These processes – economic growth, clear housing policies and programmes, increased availability of credits, and available funds for subsidies – gave an unquestionable impulse to the housing construction activities, in the context of the contained demand. In turn, this contributed to the dynamism of the whole construction sector. The construction sector is now one of the pillars of the economy, whose growth increased the availability of public and private resources. A virtuous economic circle was created through the housing policies.

The number of new homes built through these policies is still low in relation to the huge housing deficit, and has mainly targeted middle-income groups (Fernández-Maldonado & Bredenoord, 2010). However, the process has produced a "rebound effect'' and become a catalyser of overall building activities, pushing downward the property prices and allowing the redirection of private construction capital to income segments previously considered unprofitable. Calderón (2009) mentions as main effects of these policies: (a) an increased housing supply; (b) the reduction of property prices; (c) the growth of mortgage market; and (d) the 'repopulation' of central Lima as an additional residential space of the middle class.

The housing construction boom has led to the densification of Lima's central areas, in view of the increasing scarcity of accessible urban land (see section 6). The subsidised housing projects were initially located in the traditional middle-class districts in central Lima. Later, the locations changed towards more peripheral areas or working-class central districts due to the higher costs of land. In front of the new housing possibilities, the traditional middle class has kept its preference for central areas while the emerging middle class stays in the periphery or ventures into older central areas, working class districts or even old industrial areas and military terrains (Fernández-Maldonado and Bredenoord, 2010). In a city with a horizontal pattern of urban growth – by the way of one-family houses in an own piece of land – these trends toward densification seem very auspicious. Instead of suburban homes, 98 per cent of new homes are apartments in central areas (Vera, 2009) and the need to lower the housing costs has made land consumption moderate. This change of preference towards multi-family housing is a step in the right direction for sustainability.

However, there are also heavy local criticisms to this housing policy. Some authors argue that this new housing policy was not designed to meet lower-income groups housing needs, but had a broader economic logic, as the core of an economic programme addressed to support the financial and construction sectors, which were still suffering from the 1998 economic crisis. Supporting the construction industry was considered a tool to reduce unemployment and to reactivate the local economy. The fact that the policy was designed in close consultation with the CONFIEP (Peruvian Federation of Entrepreneurs) and CAPECO (Peruvian Chamber of Construction), who represent the large construction firms, and not with the

metropolitan and local authorities, who have jurisdiction over the territory and have to deal with building and land use permits, gives a strong suggestion that it is indeed more and economic than a housing policy.

Through CONFIEP and CAPECO, the private sector made several demands to guarantee enough profitability for the construction sector, and lesser risks for the financial sector. In the need to activate the whole economy, many of these demands were met and building standards were relaxed to allow a reduction in the production costs of the new homes (Calderón, 2009) in 'acceptable' (central) areas of the city. The government also waived the payment of the General Sales Tax (VAT) for homes of up to US$ 30,000 (at the time around 18 percent) in 2001.

Data from the last two population censuses (2005 and 2007) confirm that the new social housing programmes have promoted the re-population of central areas, especially those of the traditional middle-class. In 2005, 15 of the 21 central districts of Lima had lost population, while the whole central area lost population in absolute terms. But in 2007 there was a recovery of the population loss in 13 districts. Thanks to the new projects, central districts of Modern Lima recovered 84% of its population. In contrast, working-class central districts had only recovered 22.5% of the previous losses (Calderón, 2009).

Local empirical studies of informal urban growth show that the trends have drastically changed in the last decades. Trends toward densification have also been observed in informal areas, and are the reason why local researchers highlight that Lima currently grows on the space that it already occupies (Riofrío, 2010b). The locations of recently-formed informal neighbourhoods are not any more flat lands or with a soft slope, but steep hills and dangerous places which will be almost impossible or too expensive to provide with urban services (Ramírez-Corzo and Riofrío, 2006).

The localisation of these recently-built areas can be seen in Figure 4, which illustrates Lima's growth evolution. The areas occupied by recent developments (2004-2010) are showed in dark red, and their location confirm what is argued in the empirical studies. Except from (formal) developments at the north part of Lima, most of them constitute piecemeal developments located uphill from the existing hills occupied by informal neighbourhoods. This shows that the recent trends toward densification of formal areas have not greatly modified the usual pattern of land consumption in Lima: the city keeps on expanding without control.

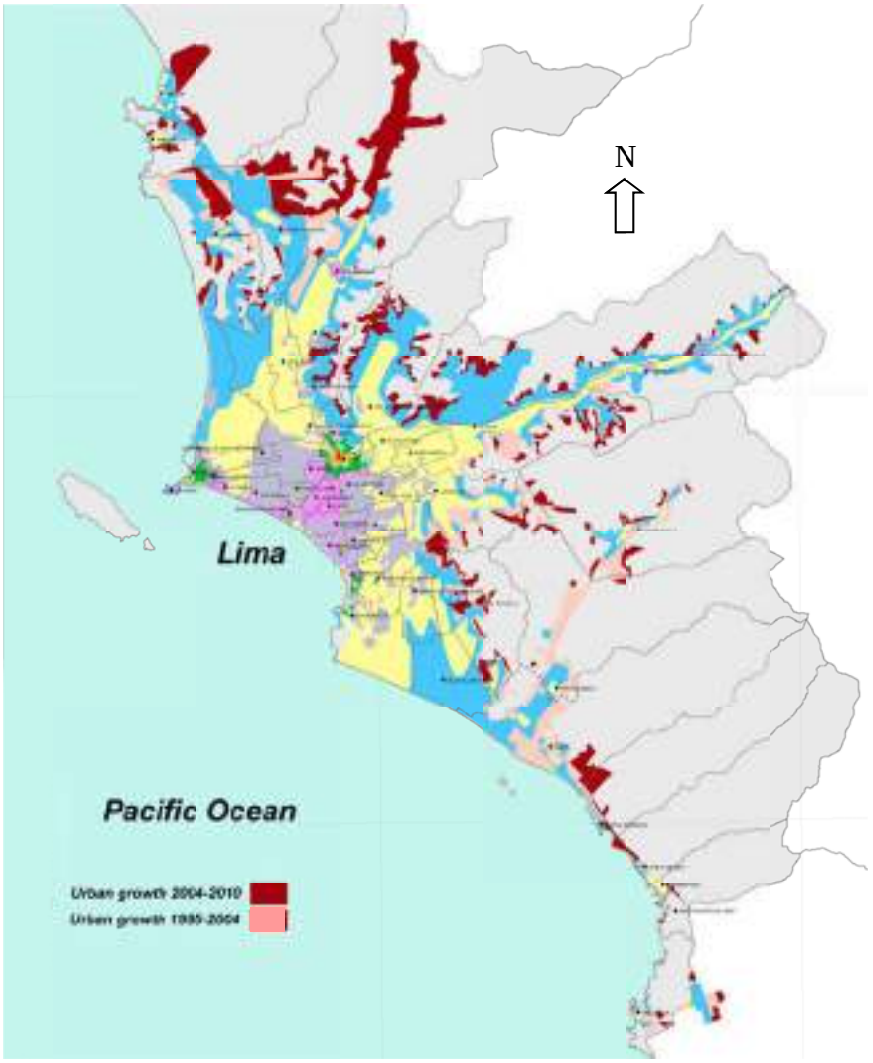

Figure 4. Urban evolution of Lima 1995-2010 (Source: Municipalidad de Lima, 2011)

The unplanned vertical expansion has produced an evident deficit of public spaces, which acquires a higher importance due to the higher densities and the smaller areas of the new homes (Riofrío, 2010a). Representatives of the professional association of architects have argued that, under the justification of supporting local investors, the state's approach to urban growth has been the deregulation of urban practices, instead of regulating and organising the densification process (Sota, 2011). Riofrío (2010a) comments that the housing policy constitutes a simple housing delivery scheme without attention to the surrounding urban space, without creating a city. Indeed, the exclusively commercial character and lack of urbanity of the new projects is widely discussed in the media by architects and urban professionals.

Since the densification of central areas has occurred without enough control from the local authorities, it is increasingly producing conflicts among the residents. Zoning and building codes are not always followed or are later arranged through fines or 'administrative silence', and developers build 12 storey building where there should

be 8, or plan less parking places than the norm (Sota, 2011), what increases congestion at street level. Better-off districts have been more efficient in controlling the densification process, modifying their regulations to demand stricter measures in criteria such as the number of parking places and square metres per apartment. But in general, the densification of central areas has developed according to the rules of a completely free market: the higher profits possible for the developers, without attention to issues of general welfare.

The housing boom resulting from the housing policies has produced a strong intensification of land use in central areas, but this process is not sustainable since 'the business of densification' is ending in central districts and the large construction firms have not found a way to extend it to low-income areas (Riofrío, 2010a), which are the ones who are more in need of affordable housing. Without solving this issue, there is no possibility of sustainable growth.

5. Results and Conclusion

The previous sections have examined how, as a result of the several limitations of the Peruvian planning system, the laissez-faire political attitudes toward urban growth seem to remain. The absence of regulatory framework for land use planning has produced a city that keeps on growing without control by means of informal land occupation. There has been a neglect of metropolitan planning since 1990, which has produced the absence of a long-term vision for the development of the metropolis and a clientelistic attitude to carry out opportunistic short-term projects to get fast political dividends.

The metropolitan government installed in 2011 seems eager to correct many of these serious troubles, but to reverse 20 years of nonexisting spatial planning seems an immense task. The participative character of the regional development plan in the making is an auspicious development and a step in the right direction, but it still has to pass the test of implementation.

In the absence of metropolitan growth policies, national housing policies have been traditionally the drivers of urban growth in Lima. Since 2003, Lima has experienced an acute intensification of real-estate led urban development that has rapidly densified its central districts. Remarkably, this process of 'return to the centre' has been the result of a sectoral policy without any links with the planning of the development of the whole city.

The unplanned horizontal growth has given way to unplanned vertical growth. The unregulated character of the densification process is bringing about serious conflicts and problems of urban space. The trends of social housing delivery – attending mainly the demand of middle income groups – suggest that it is, as local researchers claim, more an economic than a housing policy.

Lima has serious internal problems that demand proper attention: high housing demand, huge congestion and chaos in the roads, high levels of air pollution, lack of green areas, socio-spatial segregation, etc. But these problems should not be the reason to neglect growth management and other long-term issues. Lima is far behind

in terms of urban planning performance compared to other Latin American cities and has to do its homework to catch-up with them.

This first approach to the topic of spatial planning in Metropolitan Lima has found good ideas and stakeholders willing to improve Lima's urban situation. The fact that most stakeholders are demanding a more important role for spatial planning in Metropolitan Lima is a good step forward but, on the other hand, the fact that there is such a small body of research on the topic indicates a serious neglect to the subject for a long time. The good intentions will have to show an extraordinary ability to harmonise the different economic, environmental and socio-cultural assets of all important stakeholders involved in urban development for the sake of a more sustainable and inclusive city.

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Making Sustainability Operational;

Coping with Contextual Circumstances

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Abstract

Sustainability became popular through Brundtland Commission's report published in 1987 and has subsequently been introduced as a key planning guideline in urban governance. To make the abstract and fuzzy notion of sustainability palpable, various governments are using a list of Sustainability Indicators (SIs). Common sets of Sis, for example those form the UN, help compare the sustainability of urban areas all over the world, whilst they inspire the development of national and local initiatives to measure and monitor sustainable performance. Using SIs should, however, not be isolated from the different geographical, socio-economic, political and institutional circumstances that exist in various towns and cities. Instead, in this paper we argue that for SIs to be well integrated in the local policy process, SIs should be adapted to different contextual circumstances. We discuss this argument based on a desk study of key policy documents and research reports on cases in four clearly different regions: the UK (London), China (Hong Kong), South Africa (Johannesburg) and Singapore. One the one hand, we will explain that sustainability is indeed defined differently in different contexts and, also, that it makes sense to do so as priorities and contextual circumstances do matter for integrating Sis in local governance. Hence, indicators should also be tailored to the existing policies and local policy priorities so as to function as a bridge between various disciplines both within urban governments and between governments and non-governmental stakeholders. Secondly though, we will also explain that improving the fit between SIs and existing policies and local policy priorities does not discard the importance of a common set of SIs. To avoid skewing definitions of sustainability to whatever 'fits' in a local context, we will argue that a common set of SIs can function as a benchmark for reflecting on existing sustainability plans and policies and, as such, inspire innovation. We will thus conclude that making sustainability operational is a two way process of using a common set of generic principles and of adapting them to local circumstances, which should be reflected in the design and use of SIs.

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1. Introduction

At the beginning of the 21st century the world is faced with the tremendous challenge to pursue a transition towards sustainable development. It is a challenge that was brought to the forefront of the political and social debates by the 1987 Brundtland Commission. During the 1990s many governments on all levels of authority responded by starting to experiment with new policies and instruments to translate sustainable development ambitions into practical plans and programmes (e.g. Miller & De Roo 2000, O'Riordan & Voisey 1998, Selman 1996). Also at the local level, sustainable development gradually got cited as an ultimate urban planning tool (Briassoulis 1999). Nowadays, sustainable development is a common part of the policies and plans in towns and cities throughout the world. Nevertheless, sustainable development lacks a clear definition and no universal consensus has yet emerged upon how best to make sustainable development operational. Implementing sustainable development and translating it into policies that make a real impact on the ground is therefore still one of the main challenges of our time, also when it comes to urban planning.

One of the prime means used to both operationalize and measure sustainable development is the use of sustainability indicators (SIs). The importance of SIs for advancing sustainable development was already highlighted by the United Nations Conference on Environment and Development in 1992. Various governments all over the world subsequently started using SIs, showing that SIs could be very useful for quantifying change, for identifying problems and also, for providing governments with a framework for setting targets and monitoring performance. Many governments were inspired by the pioneering work of the United Nations. In 1995 the United Nations Commission on Sustainable Development presented a first draft framework of 134 common SIs, which after testing was eventually adopted in 2001 (UN 2001). Although the common set of indicators issued by the UN created awareness of the value and importance of SIs, it was also noted that we should not expect the emergence of a universal set of indicators that is equally applicable to all localities (e.g. Dhakal & Imura, 2003). Rather, the relevance of different SIs depends on the contextual circumstances, such as socio-economic, geographical, cultural and political circumstances and priorities. This is especially prompt when it comes to the use of SIs in a local realm, where unique local circumstances often have a major impact on both the causes and effects of the problems to address and on the policy objectives that are prioritized.

In this paper we address the role of SIs in assisting local governance for sustainable development. We begin by explaining why sustainable development is so hard to make operational and address how SIs might be of assistance in doing so. On the one hand, we will argue that SIs need to be well integrated in the local policy process and should be adapted to different contextual circumstances. On the other hand, we will also argue that improving the fit between SIs and existing policies and local policy priorities does not discard the importance of a common set of SIs. To avoid skewing definitions of sustainability to whatever 'fits' in a local context, we will argue that such a common set can function as a benchmark for reflecting on existing

sustainability plans and policies and, as such, inspire innovation. To support our argument, we conducted a research on the use of SIs in cases in four clearly different regions: the UK (London), China (Hong Kong), South Africa (Johannesburg) and Singapore. In this paper we report on the first phase of our research, which was largely explorative so as to assess whether cities indeed use SIs in accordance with our idea of a 'two way process', or, whether this might add value to the use of SIs in these cities. Hence, our study is mainly meant to be illustrative and to indicate whether subsequent research is needed to further substantiate our argument. We will report on the results in sections four and five, where we discuss whether and how SIs can help make sustainable development operational without causing undesired biases. The conclusions of our research are presented in section six, where we also explain how these conclusions can be used for improving the role of SIs as an appropriate tool for local authorities.

2. Delivering Sustainable Development

Sustainable development is a fairly recent concept that evolved during the past four to five decades. It largely emerged out of an ecological sustainability concern during the 1960s and 1970s (e.g. Baker 1997), such as revealed in the report 'Limits to Growth' by the 'Club of Rome' (Meadows et al. 1972). Gradually, this idea of ecological sustainability was confronted with ideas that some degree of economic growth and especially, social development is needed next to sound ecological and environmental management (e.g. Beder 2006). Eventually, sustainable development emerged as a compromise that seeks to combine three key objectives; i.e. economic growth, social welfare and environmental quality (also see Connely 2007, Jordan 2008).

Commitment to sustainable development gained momentum after the publication of the 1987 report 'Our Common Future' (Brundtland 1987), which defined sustainable development as "development, which meets the needs of the present without compromising the ability of future generations to meet their own needs" (1987; p. 43). Its rhetoric power became visible in the widespread use of sustainable development in policy documents on all levels of authority and in all regions of the world. Nevertheless, more than two decades since its rise as a general policy guideline, our current world society is arguably still far removed from a condition of sustainability. Rather, we face ongoing unsustainable trends in relation to for example climate change and energy use, environmental threats to public health, poverty and social exclusion, poor management of natural resources, biodiversity loss, etc. (for discussions see Global Footprint Network 2010). It is illustrative of the difficulties of putting sustainable development into practice. Indeed, popular initiatives such as Local Agenda 21 and the EU Sustainable Cities Campaign often only met limited successes (e.g. CEC 2004, EEB 2006).

Disappointing results in practice have led to criticism on sustainable development and, especially, its rather vague and abstract nature. In being a compromise,

sustainable development remains a fairly abstract concept. This abstract nature does make sustainable development an attractive concept as it is hard to 'oppose' to it. After all, in remaining rather abstract and vague, conflicts are avoided regarding the exact choices between economic, social and environmental interests and objectives (e.g. De Roo & Porter 2007, Mitlin & Satterthwaite 1996). Remaining abstract and vague can, however, also be regarded a drawback, which Richardson makes clear when he considers sustainable development "a political fudge: a convenient form of words, promoted, though not invented, by the Brundtland Commission, which is sufficiently vague to allow conflicting parties, factions and interests to adhere to it without losing credibility" (1997; 43). The abstract notion of sustainable development only covers a basic and mutually accepted 'core of understanding' (also Creedy & Zuidema 2012). Once this core gets taken apart, a whole array of different interests and interpretations gets uncovered (e.g. Campbell 1996, Connelly 2004, Richardson 1997, Rydin 1997). The result is that struggles emerge between parties concerning what sustainable development actually means..

2.1 Sensitivity to local conditions

Over the years, none of the many hundreds of attempts to redefine sustainable development have resulted in more operational clarity regarding how to put sustainable development to practice. Instead of searching for better or more detailed definitions, many authors nowadays suggest that sustainable development can best be given meaning in direct relation to its specific context (i.e. social, political, environmental etc.) in which the concept is discussed (also see Baker et al. 1997, Connely 2007). After all, as Selman explains, "the local 'patch' is the crucial arena in which progress towards sustainability must be made. It is where conflicts arise, attitudes are changed and actions are instigated" (Selman 1996; p.3). Consequently, Kemp et al. (2005; p.15) conclude that "what is most needed, appropriate and workable always depends heavily on the context. One could say that sustainability is about locally suited options that are globally sustainable. But it is also about local awareness and behavior that shares the larger agenda".

In response, Rydin explains that "the notion of top-down implementation of a sustainable development strategy at the urban level is inappropriate" (1997; 153). Instead she calls for debate on a local scale where interactive processes based on (following Lindblom) 'mutual adjustment' can result in linking sustainability to the "distinctive characteristics of the local area, (…) [and] the ambiguities of local policy to sustainable development" (1997; p.154). So instead of making sustainability more concrete through a more detailed definition (i.e. uncovering a 'second layer' of conflicting interpretations and interests), the concept gets more substance through connecting its abstract claims to the specific context (also see Healey 2007). It is based on the idea that "the social, economic and political contexts are very much local in nature" (Dhakal & Imura 2003; p.116). Clearly, then, this context is not just made up of specific spatial or environmental circumstances. It involves the local policy network, society and related objectives and interest as well. Discussing

sustainability in its local context therefore also involves the integration of different interests and objectives. Within government this can result in cooperation between different policy fields. This can, however, also involve deliberative processes in which both governmental and non-governmental bring their specific interests, knowledge and means to the table. As both these processes involve the typical local policy networks, the outcomes will ideally constitute solutions to local issues as well. In this they can be considered typically area-specific solutions to local problems.

2.2 Can indicators help?

While struggling to implement sustainable development, many academics and practitioners have put their hopes in the development of SIs to make sustainable development more tangible. The 1992 United Nations Conference on Environment and Development in Rio de Janeiro was the start of a worldwide effort to promote the use of SIs. In 1995, the Commission on Sustainable Development (CSD) was established, which meant to make SIs more accessible to decision-makers. This was further emphasized during the 2002 World Summit on Sustainable Development in Johannesburg, which showed that SIs had become key instruments for measuring and inspiring sustainable development policies at all levels of government from the international down to the local (The Pastille Consortium 2002)

As Rydin et al. (2003) also note, the early days of developing SIs was largely a 'technical' endeavour, focused on measuring aspects and degrees of sustainability. To some degree, it resembled efforts to (re)define sustainable development by identifying a set of criteria to be measured. As Rydin et al. (2003) discuss, this work largely failed to assess links between SIs and the actual process of planning and policy making. In response, later academic and practical work in SIs was more focused on integrating SIs with planning and policy making processes (also see Dhakal and Imura 2003, The Pastille Consortium 2002, and Shen et al. 2011). Often, SIs are meant to play a role in all stages of policy cycle, which include policy making, implementation, evaluation, learning and policy adjustment. SIs are then not meant to be a stand-alone policy effort, but instead, should be well connected to local policies. Indeed, the final report of the Pastille Consortium (2002) also indicates that "creating successful indicators relies far more on focusing on how they are integrated into the processes of urban governance and far less of devising, designing, and tuning particular indicator sets".

Integrating SIs with planning and policy making processes does have some important consequences. Rydin et al. (2003) identify three interrelated consequences of doing so that we will also address here. The first follows the idea that implementing sustainable development should be sensitive to local contextual circumstances. As Dhakal and Imura (2003) also show, SIs should therefore be related to their local contexts where they can developed and combined given the relevant local priorities and circumstances. Recent literature on SIs also clearly embraced the idea that SIs should be tailor-made to local contextual circumstances. Consequently, it is now

increasingly accepted that “there is no universal set of indicators equally applicable to all those places. Economic, social, natural and political situations, and the priorities/values based on these situations vary considerably from place to place, which would mean a common set of indicators would have difficulty in addressing the sustainability issues without many compromises in each place” (Dhakal and Imura 2003; 116). In response, indicators at local level have in more recent years also been designed to show the result of local action on sustainability issues (The Pastille Consortium, 2002). Increasingly, then, the local is the level where the application of sustainability indicators can be best appreciated and compared (Shen et al. 2011). After all, as Salvaris notes, “community indicators and benchmarks are necessarily context-specific” and hence, “need to derive their own indicators of progress to assist local decision-making” (2000; 7, also see Rogers and Ryan 2001).

The second consequence Rydin et al. (2003) identify is that integrating SIs with processes of planning and policy making, highlights the role of SIs in communication. If well designed, SIs has the potential to bridge gaps between laymen and experts, between community representatives and policy officers, between policy practitioner and technician, and between consultant and academic. Consequently, SIs becomes the instrument that can help to bring multiple actors and perspectives together. This cannot only expand the local capacity to govern, but it also shows how SIs can help to develop and adjust existing policies in a more collaborative process. This also directly brings us to the third consequence.

The third consequence that Rydin et al. (2003) identify is closely related to the first two. It follows the idea that an indicator is more than just measuring tool of sustainability. Instead, the process of devising and using indicators fuels and is based on debates and conflicts over what constitutes sustainable development. In other words, developing locally relevant SIs is a means to allow stakeholders with conflicting interpretations and interests to mutually ‘make sense’ of what they consider as sustainable development in their localities. In other words, developing SIs forces local actors to translate the abstract notion of sustainable development into locally meaningful indicators by respecting local issues and priorities and are influenced by multiple actors with their own interests and resources.

2.3 A two way process?

Linking SIs to the local process of policy making and planning highlights the importance of making SIs tailor made to local circumstances, including local stakeholders, their interests and perceptions and locally relevant issues and priorities. While this has important benefits for making sustainable development meaningful in different local contexts, it also holds a risk. After all, as Shen et al. (2011) show, each local practice has its own drivers and goals for developing indicators. Consequently, different local practices focus to a different degree on the dimensions they connect to sustainable development: environmental, economic, social and governance. It follows the idea that each town and city is different in terms of the

economic situation, geography, culture, social values, influencing its specific local policy priorities. The study of Dhakal and Imura (2003), for example, shows that developed countries tend to be more interested in the notion of the eco-city, a recycling based society, the reduction of consumption and the changing of life styles, while developing countries are still struggling with basic sanitary needs and public health issues. When taken into its extremes, biases in policies can be such that cities no longer focus on a balanced effort to promote economic development, social welfare and environmental quality, but instead, focus rather solely on only one or two of these. When adjusting SIs to local circumstances, there is thus a risk that they will merely reflect these different biases in monitoring performance and inspiring policy development and hence, reinforce the status quo.

We argue that SIs should be designed in such a way that they can help to reflect on existing local policies and prevent a strong bias to only one or two dimensions of sustainable development. To do so, we argue for a combination of using a set of common or generic SIs, often inspired top-down by for example the UN or national governments, and adjusting these to the local specific circumstances. It indeed allows for a process of 'mutual adjustment' between common or generic SIs and local circumstances. Ideally, this will be an ongoing and iterative process of constantly improving and expanding existing policies, inspired by a common set of indicators. SIs can now function as a benchmark for reflecting on existing sustainability plans and policies and, as such, inspire innovation and avoid the skewing of definitions of sustainability to whatever 'fits' in a local context.

In the next section we will continue by reflecting on four cases where SIs have been developed and used in the past decades. Our ambition is to first address the contents of the SIs used and to assess the kind of bias that exists in relation to different local circumstances. We will subsequently reflect on how SIs are integrated into policy process and will critically assess missing gaps in SIs and sustainable development policies in these localities. In doing so, we will explain how SIs are used to inspire improvements in sustainable development policies and, possibly, to highlight missing gaps in these policies.

3. Four cases

In selecting cities we looked at both cities that currently work with extensive SD plans and SIs, which are written and presented in English and have clearly different problems, priority issues and policy objectives. We therefore chose to select cities in different regions with quite serious differences in their geographical, political, social and economic backgrounds.

The first city is London, which is world-leading financial centre with the largest GDP in Europe. Key issues are social in nature. A rising number of high-income residents are contrasted by an also large group of low-income groups and unemployed residents (GLA, 2011). As a result, the incidence of poverty has increased and the polarization is associated with a range of social problems such

as ill health, substance abuse and crime. In addition, almost 30 percent of London's population belongs to a black, Asian or minority ethnic (BAME) groups that are typically among the least prosperous.

The next two cities are the Asian city-states of Hong Kong and Singapore. The problems that these cities have in common are an escalating overcrowding, scarcity of land, an intensification of land-use activities and the absence of raw materials and natural resources. Hong Kong was developed as a British colony and became a Special Administrative Region of the People's Republic of China (PRC) in 1997. Over 150 years of colonial rule caused a westernized society and a unique social-economic structure. The population in Hong Kong is mainly of Chinese origin, but their manners, behaviour, mentality, and even work attitude are different from the Mainlanders. Hong Kong balances a modernized way of life with traditional Chinese practices. In terms of economics, Hong Kong is one of the key financial centres of Asia, which is also associated with its rather open market and western-style society (HKPDR, 2007). Singapore has many similarities in also being highly urbanized and a key economic hub in Asia. Unlike Hong Kong that sets its goal to be an Asia's world city with good quality of life and wealthy economy, Singapore pays much attention to reserve environmental resources and calls their plan the 'Green Plan' (MEWR, 2006).

The last city is Johannesburg, a capital of South Africa where the low level of education and income inequality are major concerns. Johannesburg is one of the most progressive commercial cities on the African continent and attracts many migrants seeking economic opportunities, access to services, political safety and shelter (COJ, 2011). The city subsequently has becomes a multi-cultural city, with a rich diversity as the migration brings cultural, political and social plurality, both creating opportunities and challenges to an already-stretched resource pool.

Table 1: Key policy documents and their focus in the cities studied

	London (UK)	**Hong Kong (China)**	**Singapore**	**Johannesburg (South Africa)**
Area (sq.km.)	1,572	1,095	710	1,644
Population	7,825,200	6,900,000	5,183,700	3,888,180
Density per sq.km.	4,978	6,301	7,315	2,400
Program name	London Plan 2011; Spatial Development Strategy for Greater London, 2011	Hong Kong 2030; (HK2030 study)	Singapore Sustainable Blueprint (SSB)	Joburg(GDS) 2040; (Joburg 2040); The Johannesburg's Growth and Development Strategy 2040
Main actor	Greater London Authority GLA	Hong Kong Government	Inter-Ministerial Committee on Sustainable Development IMCSD	City of Johannesburg

Start Planning	1999	Start in 1997	Start in 2008 (Supersede the SGP2012 started in 1992)	2000
Launched Plan	1st edition in 2004 2nd edition in 2008 3rd edition in 2011	1st edition in 2005 2nd edition in 2007	1st edition in 2009	1st edition in 2006 2nd edition in 2011
Duration	20 years (2030)	30 years (2030)	20 years (2030)	30 years (2040)
Update monitoring	Annual	Annual	Annual	Annual
Vision	Making London the best big city in the world *from Mayor of London, Boris Johnson	Asia's world city	To make Singapore a livable and lively city state, one that Singaporeans love and are proud to call home	A World Class African City
Focus Area / Objectives	-Meets the challenges of economic and population growth -An internationally competitive and successful city -A city of diverse, strong, secure and accessible neighborhoods -A city that delights the senses -A city that becomes a world leader in improving the environment -A city where it is easy, safe and convenient for everyone to access jobs, opportunities and facilities	-The desired living environment -The national dimension -The changing economy -Population dynamics	-Improve resource efficiency in water, waste and energy, -Maintain a clean environment with good air quality, green and blue spaces -Effective public transport	-Eradicating poverty -Building and growing and inclusive economy -Building sustainable human settlements -Ensuring resource security and environmental sustainability -Achieving social inclusion through support and enablement -Promoting good governance

As our ambition was to address our cases so as to assess whether cities indeed use SIs in accordance with our idea of a 'two way process', or, whether this might add value to the use of SIs in these cities. Our study was therefore largely explorative and based on an extensive desk-study of key policy documents. It was focused on the use of strategic policy documents, documents conveying the choice of indicators and the ambition levels connected to them and, finally, the links between these (also see Table 1). In addition, our desk-study was supported by several academic studies closely linked to our interests (Dhakal and Imura 2003, Hezri 2004 and Shen et al. 2011). Our first question was to assess how these circumstances affected the use and development of SIs, which we will report on in section 4. Our second question was to assess whether SIs, possibly based on

existing common sets of SIs, function as a benchmark for reflecting on existing sustainability plans and policies and, while doing so, also stimulate policy innovation. We will address this question in section 5, where we thus reflect on the use of SIs in addressing missing gaps, both regarding the contents of the indicators and the existing governance capacity and instruments.

4. Local circumstances and the tailor-made Sis

4.1 Priorities and indicators

Differences in local circumstances are first of all reflected in different priority issues that cities identify. These priority issues have also influenced the choice and use of SIs, most notably in several specifically designed indicators that cities use. Examples can be found in all the cities studied. To begin with, the Greater London Authority uses two SIs that directly follow from the high degree of social inequality between different social groups in London. The first indicator refers to inequalities related to health and measures the inequalities in life expectancy between those living in the most and least deprived areas of London. The second indicator addresses whether London is successful in reducing the employment rate gap between both BAME groups and the white population. As such, it measures whether there are increased employment opportunities for those who are suffering from disadvantages in the employment market. A final example from London is the choice to measure 'fuel poverty', which is related to increase travelling by car from house to work and (LSDC, 2009).

Hong Kong is a good example of a city facing rather specific problems, fuelled by its physical geography, climate and extreme (population) density. The SARS epidemic in 2003 was the motive for Hong Kong to pay more attention to health-conscious living environment. This is reflected in indicators that measure the effects of development layout and building design on air circulation and pollutant dissipation. In addition, it specifically measures issues such as public satisfaction of the cleanliness, the living space per person. In the meantime, both Hong Kong and Singapore face a strong scarcity of land and the absence of raw materials and natural resources. This is also reflected in the cities policies and choice of SIs. Singapore designed policies to make optimum use of the available land and, more specifically, to increase green space per habitant and to increase greenery in high-rise building. It also focuses specifically on an intelligent use of energy and water. Each of these topics is directly reflected in its key indicators as these issues are given a high degree of priority. In Hong Kong, similar policies exist. It therefore also specifically measures the consumption of energy per unit of output and the percentage of population living in districts with a shortfall of open space and/or recreation facilities.

Policies in Johannesburg specifically focus on issues related to migration into the city, poverty, access to food and jobs and poor levels of public health and low life expectancy. Hence, their indicators indeed focus specifically on the existing poverty rate, HIV prevalence, social cohesion, levels of literacy and a food security and public safety index. Related to issues such as poverty and an increased population size, Johannesburg also prioritises economic growth. Currently, though, Johannesburg does face a strong, but also unequal economic growth. It therefore aims for a more resilient economy, which is reflected in specifically created indicators measuring whether the city has a job-intensive economic growth, sees a growth of the desired small businesses and an the increased competitiveness of its economy.

4.2 Bias or balance?

Differences in local circumstances are also reflected in the degree in which cities focus on the three main dimensions of sustainable development (economy, social, and environment). On the one hand, this can be seen when assessing the number of indicators that cities use on each of these dimensions. London clearly has a focus on social issues and environmental sustainability. Out of its 24 key performance indicators, only 3 address economic growth and development. Social issues are better represented, with 8 indicators, while most indicators (13) are focussed on environmental issues. In Hong Kong and Singapore a similar situation can be witnessed, as they focus mainly on environmental issues. Hong Kong has 21 out of 27 while Singapore has 41 from 46 environmental indicators and the rest of the indicators are on social issues. Johannesburg is clearly different; the three dimensions are almost equally taken into account. Out of 24 indicators, there are 5 in social, 6 economic, 9 environmental. Interestingly, the remaining 4 indicators are directly linked to measure the quality of its governance capacity.

On the other hand, the number of indicators on the three dimensions need not say much. It is also important to look at the ambitions levels reflected in these indicators; i.e. what is measured? In doing so, some important differences can again be witnessed. Good examples can be found when addressing environmental issues. London for example aims at encouraging the use of public transport and a decreased use of the private car. Johannesburg is not that far yet. It does aim for developing a mass transit system. In the meantime, it however also aims for eco-mobility (non-motorized transport such as walking, cycling and light electric vehicles), which is also directly measured. In term of natural resources, Singapore and Hong Kong concentrate on resource efficiency. Especially for Singapore, a lack of water resources is a main issues, reflected in indicators that show whether Singapore can ensure adequate water supply for future generations; e.g. by reducing water consumption. Additionally, Hong Kong focuses strongly on issues related to health and hygiene, while London tries to take things a few steps further by focusing on reducing its ecological footprint. When it comes to social issues,

the contrast between Johannesburg and London is again a striking example. Johannesburg focuses on issues such as food supply, literacy, HIV and on lifelong learning and increasing practical skills of its citizens. In London the focus is on increasing equality regarding health and job accessibility and on issues such as increasing new affordable homes.

5. Linking Sis to policy innovation

5.1 SIs in the local policy process

A strong integration of SIs into the local policy process has important benefits for both developing new policies and improving the existing set of SIs. First of all, it allows for improving existing policies or the development of new policies based on measuring degrees of success or failure by using SIs. Secondly, results from monitoring and measuring can also help to continuously update the set of SIs. They can be (re)calibrated to become more effective or efficient in measuring those aspects considered most relevant, while new indicators can be developed to measure the effects of new policies. Ideally, then, a progressive learning process can be created where SIs are constantly improved and help to fuel the development of new or more effective policies.

Our case studies indeed show how SIs are well linked to existing policies and, in doing so, help to fuel policy innovation. They are most telling in the cases of Hong Kong and London. In Hong Kong SIs are indeed explicitly designed to serve as a support-tool in the policy-making process. In the HK2030 study, Hong Kong used a so called sustainability assessment (SA), which is built upon eight guiding principles and a total of 42 indicators that align with the principles. It is supported by a computer-aided sustainability evaluation tool (CASET) that guides users to complete the SA process through a structured and step-by-step framework. The system comprises a set of baseline data for the indicators and supporting maps to assist users in the assessment process (SDU, 2006). The SDU is committed to keep the SA system and the CASET effective and up-to-date. For instance, the data updating in July 2005, they have taken the opportunity to add a new indicator on landscape value as recommended in Planning Department's consultancy study on 'Landscape Value Mapping of Hong Kong'. The indicators are now used to revise the existing policy and adjust the future one.

In London we also find examples where indicators are altered based on progressive learning. The London Annual Monitoring Report (AMR) shows several changes in the key performance indicators (KPIs) used in 2010 and 2011. The KPIs that are considered ineffective were ejected and a new set was developed. The link of the KPIs to the policy process is also made explicit, by the so-called London Development Database (LDD). It is a live system monitoring

planning permission and completion, which provides good quality and comprehensive data. It allows both the development and implementation of London's plans and policies in accordance to the KPIs.

5.2 Identifying gaps

Integrating SIs into the local policy process runs the risk of updating and improving policies and indictors in a process of mutual adjustment that further increases a bias into one or two of the dimensions of sustainable development. To prevent such a bias, we have argued for a mutual adjustment to occur also between local SIs and common sustainable development principles and indicators. Our study revealed that most cities gave no explicit means to do so, although especially Singapore and Hong Kong have implicitly done so.

To begin with, the Singapore Green Plan (SGP) was inspired by the result of a preliminary study commissioned by the World Economic Forum (WEF) in late 2000, which rated Singapore among the worst 10 in a ranking of the environmental sustainability of 122 countries. Its poor ranking on the World Economic Forum inspired the 2002 SGP to promote their vision on 'green and clean'. Consequently, the targets indicators in the SGP were mostly linked to the urban environment dimension, with some on social welfare and none on economic development. Links between these three main dimensions of sustainable development were therefore largely missing. More recently, Singapore has updated its plans and has issued Singapore Sustainable Blueprint (SSB). The SSB does try to link economic growth with pursuing a good living environment. Following the SBB, new indicators have been developed and also reflect the need to combine environmental quality with economic issues. For example, one of the key priorities is to improve resource efficiency, so the cost is reduced, helping economic growth in the long run.

Another good example is Hong Kong; the guiding principles of SUSDEV21 were based on its use of Local Agenda 21 policies. The Local Agenda 21 process was conducted in Hong Kong and highlighted that 13 of the 27 guiding principles were of high relevance for Hong Kong to address: i.e. economy, health and hygiene, natural resources, social, biodiversity, cultural vibrancy, environmental quality and mobility. These key principles have subsequently been translated into a set of performance indicators, taking the local contexts into account. In the meantime, the latest Hong Kong plan, the HK2030, has taken the recommendations of the Commission on Strategic Development into account, which was re-affirmed by the community through public consultations. It allowed for the development of the new future road map, focussed on three broad and interlocking planning directions: providing a quality of living environment, enhancing economic competitiveness and strengthening links with the mainland (HKPDR, 2007).

Finally, the example of Johannesburg also shows evidence of altering policies so as to prevent biases. The first GDS plan (Joburg 2030) was developed to stimulate economic growth and competitiveness. The main purpose was to compensate economic growth imperatives with a focus on pro-poor interventions, to reduce poverty. In the new Joburg 2040 plan, the main intention has been somewhat changed and now also focuses on the context of climate change and natural resources scarcity, which are also reflected in its use of SIs. Importantly, though, it seems that this innovation is less based on the existing set of SIs, but more on reflecting city policies by following the international sustainable development discourse.

6. Conclusion

In this paper we argued that SIs need to be well integrated in the local policy process and should be adapted to different contextual circumstances. In doing so, however, we also warned against creating a strong bias to only one or two dimensions of sustainable development. Our proposal was using a set of common or generic Sis and adjusting these to the local specific circumstances. It would then allow for a two way process of mutual adjustment between common or generic SIs and local circumstances. Ideally, SIs would inspire policy innovation and help to avoid the skewing of definitions of sustainability to whatever 'fits' in a local context. In this paper we reported on the first explorative phase of our research. It meant to assess whether cities use SIs in accordance with our idea of a 'two way process'.

Our first conclusion is that, in the cities studied, SIs are rather well integrated into the local policy process. They indeed help to inspire adjustments to existing policies and the development of new policies. In the meantime, SIs are also improved based upon newly emerging policy themes, changing local conditions and learning regarding how best to measure aspects considered relevant. Secondly, by well integrating them into local policy processes, SIs are indeed used to translate the 'fuzzy' and abstract notion of sustainable development into locally relevant policies.

Thirdly, however, evidence is less convincing is indicating that common sets of SIs can help to avoid a biased focus on sustainable development that simply 'fits' the local context. Our findings do show that policies are gradually adjusted so as to better reflect a balanced pursuit of economic, social and environmental objectives. Also, our findings suggest that SIs help to do so. Cities such as Singapore and Hong Kong have used common sets of SIs to inspire their own sets of indicators. Our findings are, however, not suggesting that such common sets of SIs function as a benchmark to continuously inspire policy development in accordance with the desired balanced pursuit. A real 'two way process' of combining common sustainable development principles and SIs with local developments of SIs to inspire new policy development was not found explicitly. Importantly, reflection of a city's SIs to common sets of SIs might also occur in a more informal way. This can for

example be done while developing or renewing existing sets of SIs, or by embedding this process of (re)development in the wider global sustainable development discourse. It is a question that would require further research, which explicitly addresses the process of developing and renewing SIs. It is indeed the focus of a second, and more elaborate, study into the role of SIs in urban governance we aim to conduct.

Concluding then, our findings suggest that SIs help to translate the 'fuzzy' and abstract notion of sustainable development into locally relevant policies. How such a process of translation might be improved by also reflecting back to common sets of sustainable development principles and of SIs is, however, a question we aim to pursue in more detail in the next phases of our research.

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Negotiating multi-scalar conservation: the case of England

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Abstract

The activity and process of conservation-planning occurs at multiple spatial and governance scales. In the English context there is, on the one hand, the obligation to respond to an international infrastructure around the inscription and management of world heritage sites and, on the other, a deeply embedded sense of the passionate protection of local neighbourhoods by their communities.

This paper will seek to unpack the multi-scalar levels of English conservation-planning practice with reference to the theoretical formulation of "Authorised Heritage Discourse" (Smith, 2006). It will examine the various scales of practice and governance from the international (through the World Heritage Convention), through the national system of legislation, policy and regulation, the local state and the very local as represented by non-state civic action. The paper will start with a brief analysis of the historical evolution of conservation-planning practice and the important legacies this has for perceptions of the role of governance levels today. So for example, the development of national laws and policy, and the willingness of government to use them to override the local state, are often considered a pivotal part of the success of conservation-planning in becoming a central and important planning policy.

It will then focus on the contemporary planning context. British planning is currently dominated by an agenda of localism, introduced by the coalition Government through the Localism Act. This legislation ostensibly aims to shift power from central and local government to local communities. The planning provisions include, for example, various provisions on community-generated neighbourhood planning. When draft legislation was introduced the overall goals of the legislation were warmly welcomed by much of the heritage sector, but tempered by reference to the enduring importance of national systems of regulation. This new context will give a new dimension to the contestations and multi-scalar perspectives that frequently exist with urban conservation

The paper will explore these issues through two case studies. First, it will look at the fierce contestation that has occurred in recent years over development proposals in world heritage sites and the complex multi-scalar politics this has involved, with, for example, very local bodies seeking to mobilise international organisations due to their lack of faith in the local and national state. Second, it will look at the emerging localism agenda and the role conservation-planning is playing in some of the pilot areas for neighbourhood plans. How much weight is heritage given when plans are formulated in this way? Is there a danger heritage will be deprioritised in favour of economic development goals?

> ‘The locality where we belong…is the centre of reassurance (identifiable) more by the tenacity of its users than by its architecture: it may even be ugly, will generally be shabby, will invariably be overcrowded. British planners call it the “historic core”, note its tiny extent in relation to the built-up area as a whole, mark it a Conservation Area and hope for the best. Civic societies passionately defend its every cobblestone’ (Brett 1970: 142)
>
> ‘The Heritage Alliance welcomes the Coalition Government’s intention to shift the balance of policy-making more towards the communities who care about them…..
>
> We welcome the Coalition Government’s intention that there should be no lessening in the level of protection for national heritage assets….
>
> Although local interests are important and we do not underestimate the quality of expertise available in many communities, there is also significant knowledge and expert advice in our national civil society, outside central and local government (extracts from The Heritage Alliance consultation response to Localism Bill, 2010).

Introduction

British planning is currently dominated by an agenda of localism, introduced by the coalition Government through the Localism Act, 2011. This legislation ostensibly aims to shift power from central to local government and from local government to local communities. The planning provisions include, for example, various provisions on community-generated neighbourhood planning. At first sight this has strong positive resonations with the heritage sector. As the first quote above by Lionel Brett (Lord Esher) illustrates; deep within the identity of the heritage movement is a sense of heritage as something to be fought over and protected by local groups and local people in opposition to external forces, whether the state or capital. Surely the Localism Act, therefore, is to be warmly embraced; devolving powers and giving control to local people to define what is important about their place and ensure that those qualities are sustained.

However, as the second quote illustrates, it is not quite that simple. Here, *The Heritage Alliance*, an umbrella body for national extra-state heritage organisations, is reminding government that heritage is not just a local concern. National laws and national bodies are important too. In practice the British heritage protection system, and its administration, that has developed over the last century or more, and that in recent years has been so successful in limiting the destruction of protected heritage (Pendlebury, 2009), is in practice a complex “assemblage” (Pendlebury, 2012) that includes actants within and outside the state, at international, national, local and very local levels, underpinned by laws, regulations and policies, which again operate at a variety of spatial scales.

This paper will seek to unpack the multi-scalar levels of English conservation-planning practice. It will examine the various scales of practice and governance from the international (through the World Heritage Convention), through the national system of legislation, policy and regulation, the local state and the very local as represented by non-state civic action. The paper will start with a brief analysis of the historical evolution of conservation-planning practice and the important legacies this has had for perceptions of the role of governance levels today.

It will then focus on the contemporary planning context. The paper will explore this through two case studies. First, it will look at the fierce contestation that has occurred in recent years over development proposals in world heritage sites and the complex multi-scalar politics this has involved, with, for example, very local bodies seeking to mobilise international organisations due to their lack of faith in the local and national state. Second, it will look at the emerging localism agenda and the role conservation-planning is playing in one of the pilot areas for neighbourhood plans.

The evolution of conservation-planning

An important part of the identity of the British heritage movement is its evolution outside the state, as part of wider civil society, responding to, and opposing, changes to buildings and places. This history is generally traced to the nineteenth century. The seminal national figures are John Ruskin and William Morris, famous in particular for opposing the treatment ('restoration') of medieval churches and cathedrals and, in the case of Morris, for the formation of the first national amenity society for historic buildings, the Society for the Protection of Ancient Buildings in 1877, a body that is still very much with us today. In the same period local bodies were being formed that were the antecedents of the local civic movement, which perhaps reached its height in the 1970s, but again remains of huge significance today. So, what was arguably the first such local body was formed in Sidmouth in 1846 and then definite civic groups were formed in 1897 in the rather different and contrasting locales of the leafy and wealthy Surrey town of Guildford and the big industrial city of Glasgow.

The key part of conservation history I wish to briefly focus on in this paper, however, is the late 1960s and early 1970s. Throughout the course of the twentieth century the focus of conservationists had often been focused on achieving conservation goals through the development of a comprehensive planning system and securing conservation objectives as part of this. In principle this had been achieved with the post-war planning acts culminating in the 1947 Town and Country Planning Act., which contained provision for the "listing" of buildings. In practice, however, the conservation provisions were weak and tended to be marginal in the implementation of the system. As the post-war economy finally began to accelerate in the 1960s, and the amount of redevelopment grew apace, the consequences of this became very evident as even the relatively small numbers of buildings listed were being rapidly

lost. Opposition to such redevelopment grew. Ultimately one outcome of this was a significantly enhanced legislative framework for heritage protection, developed in the period 1967-1974 (and spanning two changes of government). The 1967 Amenities Act introduced conservation areas and the 1968 Town and Country Planning Act introduced systematic controls on listed buildings and legal rights of consultation on applications to demolish list buildings for a group of national amenity societies. Other legislation in the early 1970s stiffened the system further with, for example, the 1974 Town and Country Amenities Act extending demolition control to all conservation areas. Legislative change was accompanied by a welter of government guidance with, for example, Circular 61/68 introducing a presumption in favour of retaining listed buildings. This circular also introduced Conservation Area Advisory Committees - recognition of the lack of conservation expertise within local authorities and designed to connect to local amenity movements and give public voice into conservation-planning decision-making.

Thus one of the most important outcomes (perhaps ultimately the most important) of the mobilisation of opposition to redevelopment in the 1960s and 1970s was a much more robust system for protecting historic buildings, a new system for protecting historic areas and an acknowledgement of the importance and legitimacy of voices in decision-making, beyond the professionals (typically in local planning authorities) usually charged with such matters. Having achieved these goals, an important way to fight local development struggles was to use this legislative framework. Perhaps the emblematic case of this in the early 1970s was the Covent Garden area in central London. The possibilities for major development in the area became apparent with the decision in the mid-1960s to relocate the fruit and vegetable market, eventually executed in 1974. From its creation in 1965 the Greater London Council (GLC) formulated ambitious proposals for comprehensive redevelopment, involving demolition of two-thirds of the buildings in the area. In the early 1970s the heterogeneous communities of residents, small traders and so on in the area mobilised to oppose the GLC plan. What ultimately killed the GLC plan was the decision by central government to list 245 buildings in the area. Subsequently the Covent Garden Conservation Area was designated in 1972 and extended in 1974; the Seven Dials Conservation Area immediately to the north was also designated. The Action Plan of 1978 (GLC 1978) was of a very different character, encompassing a much more sensitive attitude to both place and process. The GLC had not been removed as planning authority, but was forced by a combination of local opposition and central government intervention (through use of heritage protection powers) to take a very different planning approach to the area.

Using Covent Garden as an example, we can begin to see the importance of scale in British conservation practice. Redevelopment was resisted by the very local groups of residents and businesses mobilising against the local state and succeeding in their aims by persuading the central government Minister to use his powers set out in national legislation. In terms of the evolving planning framework for Covent Garden, once the approach to its planning was reversed the local state (the GLC) became important is developing a new strategic future for the area through first using its

powers to designate conservation areas and with its subsequent Action Plan for the area.

Conservation-planning today: Urban World Heritage Sites

The 1972 World Heritage Convention introduced a further, international, scale to conservation-planning, most specifically in relation to World Heritage sites. This is particularly so with those WHS that are not *sites* as such; but are urban WHS that effectively cover significant parts of cities. The UK ratified the World Heritage Convention in 1984 and between 1986 and 1988 the first eleven cultural sites within the UK were inscribed. By 2011 there were twenty-three cultural or mixed WHS in the UK with a significant number of these being located within cities or are themselves a significant part of a city.

All WHS have a particularly complex set of governance arrangements and in the case of urban WHS this complexity is magnified. This has been evident in urban WHS such as Bath, Edinburgh and Liverpool. Until relatively recently, the booming economy and rising property market brought intense development pressures to each of these cities. Whilst different development cultures exist in the three cities – for example, between economically deprived Liverpool desperate for development, more affluent and conservative Bath and the political and financial capital Edinburgh - in each place there have been strong voices arguing for vigorous modernisation. In each of the three cities this has led to development schemes and proposals that have concerned UNESCO sufficiently to send missions to inspect on the ground.

In the case of Liverpool it was apparent at the time of the nomination in 2004 that extensive development was both anticipated and seen as desirable by the various UK authorities - within the site, its buffer zone and its wider setting. Concerned about the impact of this intended development, UNESCO imposed conditions relating to the height of new construction and expressed anxiety about development proposals at the symbolic heart of the site at Pier Head. The inscription of the WHS attracted the general support of the many agencies and government bodies involved in regenerating Liverpool, yet there has been concern within the business community that the tightly drawn boundaries are stifling investment. Conversely, some conservation bodies have been intensely critical with what they perceive as a poor track-record on maintaining historic buildings and a laissez-faire approach to development within the city (e.g. see Merseyside Civic Society website, http://www.liv.ac.uk/mcs/mcshome.html, Hradsky, 2009); a critique that has been mirrored in the local and national press (e.g. Hunt, 2008).

It is in this context that, following the World Heritage Committee's main annual meeting in 2006, a reactive monitoring mission was dispatched to the city in the October of that year. Reporting to the World Heritage Committee in mid-2007 the mission team indicated that they did not consider the integrity of the site to be under imminent danger but foresaw potential threats to the future functional and integrity

of the site (UNESCO-ICOMOS, 2007). They expressed concerns over developments on the waterfront and were also concerned that the 'world heritage perspective' has not been effectively communicated and 'sold' to local stakeholders. However, perhaps their most powerful conclusion was over the inadequacy of the planning framework for appraising development proposals. This led in due course to a new Supplementary Planning Document for the WHS (Liverpool City Council 2009).

More recently there was another reactive monitoring mission in November 2011. The desirability of this mission was noted at the World Heritage Committee in Paris earlier in 2011, followed by, as protocol requires, a letter of invitation from the UK government. The mission looked at the overall state of conservation of the site and was generally positive in its conclusions. However, the particular prompt for this mission was an enormous development proposal known as 'Liverpool Waters'. The Liverpool Waters scheme is a massive proposed development by the private UK developer, Peel Holdings. The mixed-use scheme (of offices, residential units and port infrastructure) comprises a redevelopment of the historic docklands north of the city centre, with significant consequences for altering the skyline and profile of the World Heritage site. Not surprisingly the proposal has been hugely contentious within the city and beyond. Separate heritage impact appraisals have been undertaken by Peel Holdings, Liverpool City Council and English Heritage (the statutory advisors to government on heritage matters). All reached a different conclusion. Perhaps not surprisingly the study by Peel concluding the scheme would not be detrimental to the 'outstanding universal value (OUV) of the site', whereas English Heritage have concluded that there would be a very serious impact on OUV. Liverpool City Council have been broadly supportive of the scheme and granted outline planning consent. The relevant central government department, the Department for Communities and Local Government are, at the time of writing, deciding whether to let that decision stand or to 'call-in' the application for determination at a public inquiry chaired by a central government-appointed planning inspector. The UNESCO mission concluded that the proposed Liverpool Waters scheme would irreversibly damage the WHS (UNESCO-ICOMOS, 2011)..

In reading the appendix to the monitoring mission report, the diversity of stakeholders who were involved in the visit is notable, with the three-person mission meeting with some 55 people in Liverpool. This included representatives from the national Department of Media, Culture and Sport and English Heritage, politicians and officers from the local authorities, developers and industry representatives (not just Peel Holdings), other bodies linked to the local state, such as the economic development-company Liverpool Vision and amenity bodies such as the Merseyside Civic Society.

This example gives some sense of the governance complexity in managing an urban WHS such as Liverpool. There is clear potential for conflict between the international regulatory bodies and local decision-makers. An added layer to this, demonstrated by the situation in the UK, is the role of national government. As the state party, the UK government is responsible not only for nominating sites but for

implementing the convention and reporting back to UNESCO. It has had to become, as a result, far more involved than is usual in local decision-making about particular development as a result of intense interest and pressure from UNESCO and ICOMOS and has therefore had to mediate between competing, and often hostile, interests. The level of complexity and difficulty in making meaningful decisions about conservation, management and development within this context results in friction between different scales of governance. In the UK this tends to mean powerful local interests pursuing pro-development strategies within the context of an often relatively weak regulatory regime. Weaker local conservation interests resist perceived threats to the integrity and authenticity of place, calling in UNESCO as an ally with their infrequently used, but politically powerfully, potential sanction to classify a site as 'in danger' or, in extremis, to remove sites from the list.

Conservation-planning today: Neighbourhood planning

The 2011 Localism Act in England is ostensibly intended to shift power in various spheres of activity "downwards", from the centre to a more local level. It is, in the words of the Government,

> "the Government's revolution to hand power back to local communities… Local people, businesses and councils are at the heart of communities and the Government is determined to put them back in control with the choices and chances to shape the future of their local area… wiping away unpopular bureaucratic interferences and cutting red tape that locked out communities, slowed progress and stifled innovation" (http://www.communities.gov.uk/news/corporate/2126182).

The Localism Act is not exclusively concerned with the planning system, but planning is a major focus in the legislation. Focus on the local has been accompanied by the stripping out of other layers of planning strategy, such as the abolition of regional planning policy. Amongst the various planning provisions the most eye-catching has been the provision for Neighbourhood Development Plans. These provisions effectively enable local neighbourhoods to assume the responsibility for statutory plan-making. The development of these powers raised many contentious issues. So, for example, and immediate question is who has the right to propose and prepare a plan? – an issue that cuts right to the heart of the difficulties of how we think about the nature of communities. Historically most rural areas are divided into "parishes" with parish councils, relating to the territory under the care of a particular church, but most urban areas do not have an equivalent and a variety of new groups will need to be evolved to undertake this work. It is also clear that, despite the localist rhetoric from the Government, there is a firm view that the purpose of neighbourhood planning should be to enable development, not to prevent it. This is not supposed to be a "NIMBY charter"; yet history suggests community mobilisation most frequently occurs in affluent areas seeking to safeguard the existing qualities of place. Linking these issues of representation and strategy together, one of the most

contentious elements of the Neighbourhood Development Plan provisions is the possibility this has created for plan-production to be a business-led process.

During the period that the legislation was being drafted and subject to consultation there was much anxiety in the conservation-planning sector about proposed clauses that would have allowed Neighbourhood Plans to effectively ignore some of national statutes on conservation; the quotes at the beginning of this paper from *The Heritage Alliance* were addressed to these concerns. The legislation that was ultimately introduced responded to these issues and Neighbourhood Plans are now expected to be in general conformity with a range of other plans and planning policy, including the recently introduced National Planning Policy Framework. Nevertheless, there is much interest in what Neighbourhood Plans will comprise of in practice and what the process will be to get there and, in relation to this paper, what implications this might have for the definition of, protection and management of the historic environment.

As a prelude to the introduction of the legislation the Government committed a modest amount of resource to supporting a number of pilot or "frontrunner" Neighbourhood Plans. There have been several waves of frontrunners and, at the time of writing, there is significantly in excess of 100 plans under development. One of the very first wave of 17 frontrunner plans was North Shield Fish Quay, an historic but somewhat run-down area close to the mouth of the River Tyne, with a mix of commercial and residential land-uses. Like many of the front runner proposals, the impetus for a community planning process did not arise out of a vacuum. A variety of community planning processes have in recent years preceded the rather more formal provisions of Neighbourhood Plans; such as, parish plans, village appraisals, Placecheck, Planning for Real and so on. Community planning processes started up in Fish Quay in 2002, linked to the evolution of conservation and regeneration plans for the area. Previous outcomes have included a community-generated conservation area character appraisal and a community design project. Thus when frontrunner projects were being sought, the combination of an active community engaged in processes of planning and regeneration and a market interest from developers made it an obvious candidate for frontrunner status. Fish Quay was proposed as a bid for frontrunner status by the local Mayor and this was met with cautious enthusiasm by the existing community partnership in the area and less reservedly by development interests.

Having been successful in the bidding process, the first difficult stage was the need to create a group with the locus to produce the Plan. As a non-parished area there is no Parish Council and the existing FISH community group was not considered to be constituted correctly to take on this role. The creation of a new group, the Fish Quay Heritage Partnership, was a difficult and contentious process and there has been a change in the dynamic of community representation in the area. So there is now, for example, a more overt business representation and a number of people from outside the area are an active part of the process – something allowed for under the legislation.

At the time of the writing the plan is around half-way through an 18 month plan production process, which will lead in due course to a local referendum on the plan proposals, and it is too early to be clear what the outcomes will be. However, discussions with the independent planning facilitator reveal some interesting trends in the way the plan is evolving. There seems to be significantly less focus on traditional conceptions of heritage and conservation-planning goals in developing the plan than in previous planning initiatives. Instead there is an increased emphasis on other concepts, such as amenity. So, for example, there is a site in the area currently empty of buildings but that has been up to now earmarked for development. Analysis of the historic morphology and the townscape has supported this as the "correct" approach. However, as part of the neighbourhood planning process different perspectives have arisen and greater stress placed upon the amenity of residents in a nearby building. This has led to this site being proposed as a "village green" and left as an open space in the area. Thus, whilst it is too early to come to clear conclusions about how the plan for Fish Quay may evolve, it seems as though the new neighbourhood planning process has created a different dynamic and interaction of interests in the area. One outcome of this might be a modified conception of place with different values given emphasis in its future management.

Discussion and Conclusion

The activity and process of conservation-planning occurs at multiple spatial and governance scales. In the English context there is, on the one hand, the obligation to respond to an international infrastructure around the inscription and management of world heritage sites and, on the other, a deeply embedded sense of the passionate protection of local neighbourhoods by their communities. One of the principal theoretical contributions to the study of heritage studies in recent years has been Laurajane Smith's concept of the Authorised Heritage Discourse (AHD) (Smith, 2006).

The AHD is considered a self-referential discourse that 'privileges monumentality and grand scale, innate artefact/ site significance tied to time depth, scientific/aesthetic expert judgement, social consensus and nation building' (p 11). The AHD can seek to control fundamental questions about why material objects from the past should be considered valuable and extend this to what in practice should be protected and to how that protection should take place, what constitutes acceptable conservation practice. Furthermore, critical to Smith's concept are the power relations it embodies, and the way that the AHD is used to close-down other possible heritages, or subaltern heritages and as such is seen as a regressive process, a point that subsequent writings by Smith (e.g. 2010) and others (e.g. Waterton, 2010, 2011) reinforce.

A simplistic reading of AHD might see the extension of planning powers to neighbourhoods through the Localism Act as a straightforwardly positive development. Such a reading would see the possibility of the wresting of the

hegemonic control over heritage definition and management away from the centre, away from experts, away from the state towards the local, and towards community and civil society. As such it would open up more inclusive, more diverse, more democratic readings of heritage and how these might be planned for. The neighbourhood plans could, from a heritage perspective, develop more holistic conceptions of place and place-value, with less emphasis placed upon locally applied expert-led judgements of national criteria. And indeed, this may be one outcome of the localism legislation.

Yet the examples in this paper illustrate some of the complexities and problems from taking such a straightforward interpretation. Specifically, we can see this around issues of scale. So, for example, the binaries of expert vs. community or state vs. civil society do not map easily on to issues of scale. Deep within the history of British conservation-planning are conflicts between national civil groups vs. the local state. National and local amenity bodies have consistently seen, and used, national legislation as a key element in achieving their aims. In the conflicts over World Heritage Sites we can see local amenity groups appealing to the expertise and authority of international expert organisations in their conflicts over their local place that is also freighted with WHS status.

I have previously written about how remarkably successful conservationists have been in moving conservation from the margins of planning objective. Conservation goals have been successfully positioned such that they have become a central and rarely challenged objective of modern British planning practice (Pendlebury, 2009). This achievement has been the result of a complex multi-scalar interaction encompassing local amenity groups, local authorities, national amenity bodies, national conservation agencies and governments of different political persuasions. Indeed, one of the mechanisms that has been important in creating and sustaining this position has been the creation of a powerful AHD, existing in competition not only with subaltern discourses of heritage but equally if not more so with other elite discourses over the future of place and specifically processes of capital accumulation.

It is too early to say how the Localism Act and Neighbourhood Development Plans impact upon this position. However, in bringing new “voices” to the process of place and heritage management new and unintended consequences may arise. We might see new, subaltern and more holistic conceptions of place and heritage structuring the discourse of planning, albeit in tension with conceptions of the historic environment held within the AHD across all spatial scales from the international to the very local. We might see subversions of the process; the status of locally valued places put under challenge by commercial or other interests directly through the plan-making process. Indeed, we may see both.

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MEGACITIES AT NATURAL DISASTER RISK FOCUSING ON TRANSPORTATION ON LONDON AND ISTANBUL CASES

Funda Atun [1]

Abstract

The city is a composite of interrelated systems; each performing its own functions and each of them is strongly connected to one another. Therefore, the city can be defined as a complex system or a network in which human activities emerge from the interaction among multiple spatial, temporal, economic, social and organizational levels. When such a complex system is struck by a natural hazard, it turns into a disaster that creates serious human causality, economic and moral lost due to damages and discontinuity of functions. In this paper, London and Istanbul Megacities are introduced to reveal the advantages of complex systems and to solve the problems that lead to damage. The data gathered from various institutions, organizations and individuals are analysed to give a general framework about the situation in the case study areas in terms of identification of possible structural, functional and organizational failures.

This paper covers "disaster risk management", "complexity science" and "transportation system" research areas within a theoretical framework that enables the researcher to adopt a methodology to solve the critical problems of the transportation system in case of a natural disaster. Transportation system has been chosen as the core subject of this paper, because it is one of the sub-systems in a city, and it is broadly interdependent to other subsystems, such as water, gas, sewage, electricity, telecommunication, fuel supply, fire fighting. Moreover, transportation infrastructure often requires long repair times than other lifeline systems and having failures in the system could serve to stress pre-existing conditions of the entire city's vulnerability. Besides, it has long-term economic impacts because of long restoration times in comparison with the other lifelines. The hypothesis of this paper is that with an understanding of the complex nature of transportation system and interdependent character to its own components and to other subsystems a strong and sustainable transportation system could contribute the resilience of a city.

In particular this paper provides a way forward to handle the complex problems in a city system by focusing on transportation system on the one hand, and decisions and solutions taken by decision makers on the other hand. Thus, for engineers and urban planners the question is "what should be the methodology to solve the problems in the transportation system due to being hit by a disaster before its occurrence?" On the other hand, for decision makers, or governmental authorities, the questions of

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"how to use the expert knowledge and implement it?" can be answered more easily by identifying the hidden connections in the system between vulnerable parts that affect the entire system.

Keywords: Disaster Risk Management, Transportation System, Flood Hazard, Earthquake Hazard

1. Introduction

Cities are not separated from their environment and having a problem in one of them could rapidly affect the other. Regarding to two specific examples London and Istanbul, these two cities are interconnected globally and an unexpected event in these cities could create a shock effect on the global financial market. However, their consequences could be different, as they are interconnected at different levels. For example, London is the main financial centre with Tokyo and New York. Having these three cities in three different time zones keeps financial market working 24 hours without stopping. An unexpected flooding in London could have global effects and aid could come from the all connections of London to recover the city and to keep it functioning. Besides, the economy of London is growing and they have enough resources to be used during emergency. As Istanbul is not interconnected as much as London, the aid would be less than the one offering to London, and due to competitiveness, if the recovery process takes long time, the city can be easily replaced with another developing city in the global arena. In the case of London, complex nature of the city could be an opportunity to recover immediately after a disaster, whereas in the Istanbul case complexity could lead to long term economic, structural, organizational and functional failures. So, the situation in these two cities clearly states that being complex could be either a problem or an advantage.

2. Problem definition

First of all, in case of a disaster cities stop operating as in normal conditions due to altering elements and interrupted connections among the layers, such as infrastructures and artefacts. Vulnerability analysis could help to indicate which elements are vulnerable to disasters and how they can be affected by hazards; however, how interaction affects the number of variables and consequently the number of dimensions cannot be foreseen clearly before its occurrence.

Chang and Nojima (2001) state that while much attention has been paid to understanding and predicting the performance of individual bridge structures under seismic loading, only recently researchers have begun to evaluate performance of the transportation system as a whole. There are studies focusing on the bridge damage modelling (Rojahn et al. 1997; Werner et al. 1997), the cost associated with travel times (Werner et al. 1997), network traffic flows (Werner et al. 1997; Nojima, 1997), transport cost and regional production losses (Shinozuka et al. 1998). However, the problem is that none of these studies deal with the disaster problem by considering

the relation of individual transportation problems (mainly structural) with regard to function and organization of the entire transportation system.
Secondly, one cannot be sure the reaction of humans, whether they follow orders and/or join the evacuation process properly. There are many examples to human failures. For instance, after occurrence of a hazard not shutting down the main gas valves by the operator immediately, and waiting for a while just to be sure, could lead to a big fire which would increase the death toll of the event. Moreover, not having an evacuation plan which responds to people's needs can be ended up with many failures. Furthermore, not forecasting the hazard in time could lead to un-sufficient warning lead-time, and this would be ended up with a huge traffic jam as it is seen in the Rita Hurricane.

3. Transportation system as the core subject

Transportation system has been chosen as the core subject of this paper. The reasons are:
• Transportation infrastructure often requires long repair times than other lifeline systems and having failures in the system could serve to stress pre-existing conditions of the entire city's vulnerability.
• It is one of the sub-systems of a city, and it is broadly interdependent to other subsystems, such as water, gas, sewerage, electricity, telecommunication, fuel supply, fire fighting, structurally and/or functionally (Figure 1).
• During an emergency the transportation system is one of the most important systems to keep the city system functioning and respond rapidly to emergencies. Any mistakes done on the transportation system or any other mistakes done on another subs-system affect the functions of the transportation system, and consequently could lead to increase the death toll.

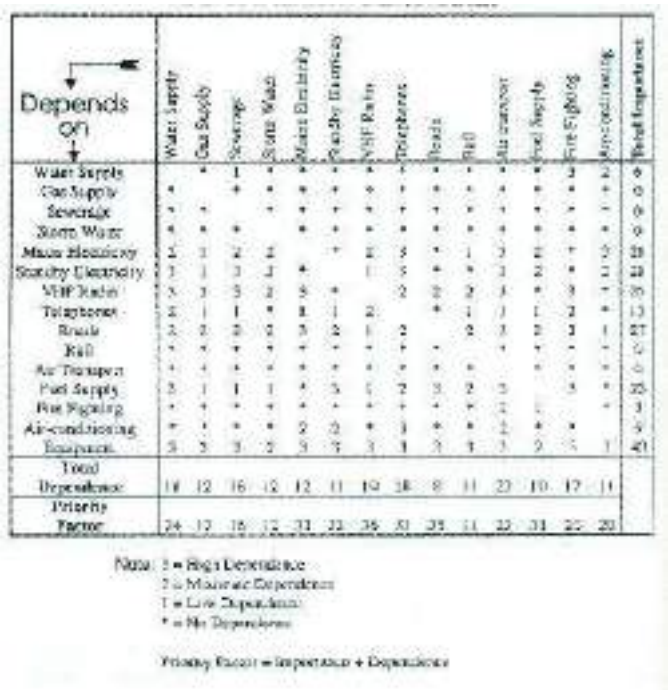

Figure 1. Interdependence matrix. Source: Paton and Johnston, 2006, p.62.

The transportation system is represented as a network of routes, railways linked by cars, trains etc. To connect the idea of networks with a study related with transportation system that is prone to natural hazards, the first step could be characterizing the structure of the transportation system, and understanding how it is spread. To be short how the transportation network works in its local and regional environment, responds to failures, and evolves depending on the needs should be understood clearly to find the short paths while improving it against natural disasters.

Last but not least, when humans are considered as one of the component, and may be the most leading one (Geoffrey West, talk in ECCS'11, 12-16 September, 2011), of a complex city system. Consequently, preparing "what if scenarios" could be the best way to deal with uncertain behaviour of human beings to simulate the actions and interactions of autonomous individual and collective entities.

4. Aim and objectives

The aim of this paper is to focus on the structural, functional and organizational connections among the elements as well as the elements itself. By achieving the defined aim this paper intends

- to consider transportation system as a whole within the entire city system by indicating nodes and edges
- to consider possible human behaviours

To have better understanding how a complex city system work and how agents react during an emergency and evacuation of people in case of an emergency, a "what if

scenario" is given as an example at the end of the paper by taking into account mega-cities, such as London and Istanbul.

5. London

Today London is ranked 28th in size by the year 2006 in the world's cities ranking. Although it is consisting of around 7.6 million population, it is not the world's largest city anymore. However, with its 300.000 employees inside the borders of the Greater London Authority, and 800.000 employees across these borders, London is one of the global centres for international banking and financial services by leading in foreign exchange turnover, trading of international bonds, trading overseas equities and fixing the gold prices. London precedes the other cities in all areas of competitiveness, and it is closely followed by New York and Tokyo in the world and by Paris, Frankfurt and Zurich in Europe (The Global Financial Centre Index, March 2009, p.7). By being one of the global centres, having an unexpected disaster could affect not only the city itself but also others that are strongly connected to London. On the other hand, increasing economy of London could help to recover and reconstruct the city in a short period. Rapid population growth, major economic transformation and rapidly changing urban environment are the three leading topics considered in mega cities.

Rapid Population Growth

After 80s by the changing economic policy, London attracted millions of population ones more in its history. As it's seen in Figure 2, London's population is increasing steadily since the late 80s and it is projected that the population increase would continue. As the industrialization has changed its shape and financial sector had gained importance more than manufacturing, the industrial and dock areas became vacant. The new coming population have settled in these old industrial new residential locations especially in the London Boroughs of Newham, Tower Hamlet, Lewisham and Southwark. For example, the population of Tower Hamlet was 140,000 in 1981, and this number has increased to 234,828 people in 2009. "The resident population of Greater London at mid-year 2009 was projected to be 7.75 million, an increase of 85,000 or 1.1% from 7.67 million in 2008. Between 2001 and 2009 London's population increased by 5.9% or more than 430,000 people" (Tfl, 2011, p.15).

Figure 2. Greater London Population, millions. Source: Tfl, 2011, p.127

Major Economic Transformation

Moreover, economic activities has transformed from manufacturing to business and financial services, construction, retail, tourism and leisure activities (Figure 3). The areas of the economic transformation overlap with the areas, which experienced the rapid population growth.

Rapidly changing urban environments

In a place where it has experienced population growth and changes on the major economic activity, it is inevitable to have major changes on the urban environment. Old docks transformed into residential buildings, commercial areas, governmental buildings and the City Airport.

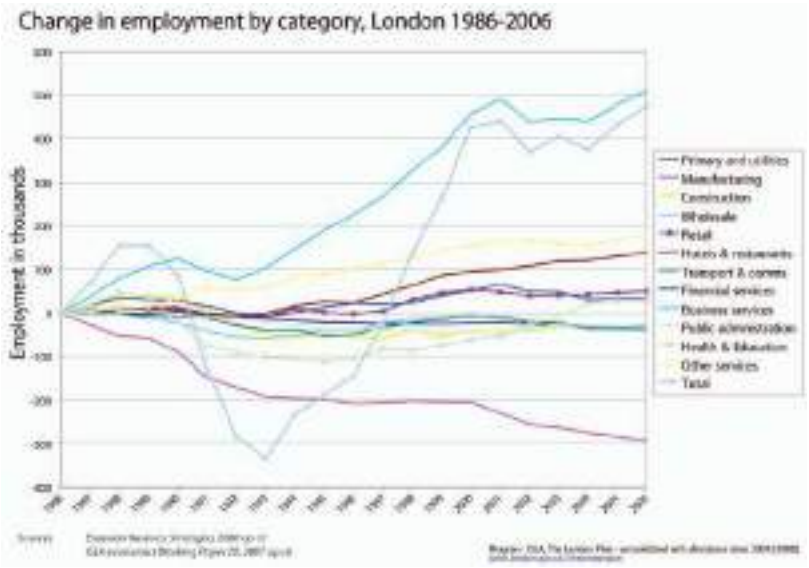

Figure 3. Change in employment by category

Source: GLA, 2007, cited in the London Plan, 2008, p.29

5.1 Changing flood hazard risk concept

Although flood hazard probability is changing due to climate change and sea level rise, the main reason of increasing flood risk in London is the *post-defence development* (Parker 1995, p.341) and increased ownership of goods and property in the floodplain (Parker et al. 1897; Green and Penning-Rowsell, 1989, cited in Parker 1995, p. 342). Consequently, the post-defence development after the construction of the Thames Barrier in the 80s, such as increasing number of population, buildings, companies and firms, and extended infrastructure in the floodplain, led to increase exposure to hazards. This means that there are more people living in the floodplain. Moreover, more businesses has been established and more infrastructure has been constructed in the area. However, not only direct damages but also indirect damages have increased due to increasing number of businesses, infrastructure and demand on traffic in the area (Parker, 1995, p.342). Having a low probability hazard could affect the area tremendously and lead to high consequences in terms of human causality and economic lost. As London is the heart of the finance and business in the UK, the effect of the economic lost in the area could be also financial.

The photo in Figure 4 was taken at the Thames Barrier. A part of the barrier is seen on the left side of the photo. On the right, there are the areas, which were developed by the construction of the barrier. The photo clearly shows the changing urban geography of London by the construction of the barrier.

Figure 4. Thames Barrier and Canary Wharf, Source: Author, August 2011

5.2 Existing risk of flooding in London

Approximately 15% of all the properties in London are in the floodplain – that is just over half a million properties, and around one million people. Approximately, 70% of them are at risk of tidal flooding, 29% of them are at risk of fluvial flooding, and 1% of them is at risk of both of them (Source: Environment Agency). As the tides in the Thames Estuary raise 60cm every hundred year, the risk of flooding in London is

increasing. There are number of reasons defined by the Environment agency to explain this fact. These are:

- *"The weather becoming stormier*
- *The south eastern corner of the British Isles tilting downwards*
- *Sea level rise*
- *London settling into its clay bed*" (EA)

The worst scenario would be a high surge that occurs at the same time with "spring" tides, which occur twice a month. Surge tides occur when low pressure comes towards British Isles by increasing the sea and creating "hump" of water, which moves the low pressure. Dangerous conditions could occur if this low depression goes through Scotland into the North Sea. Besides, strong northerly winds could increase the severity of the situation (EA).

Consequently, a severe flooding could affect first the transportation system. Underground system would stop functioning in the central London and this would affect the whole city. Moreover, a severe event could cause damage to all (sub)systems, such as water, sewer systems, electricity, gas, telephone etc. One million people can be affected directly in case of a severe flooding event in the central London. Additionally, millions of people can be affected indirectly, due to not functioning businesses, factories, and supply and chain network. The financial cost could be tremendous. Environment agency stated that it could take months to get London functioning as in normal conditions again (EA).

5.3 Tools to response to flooding

There are two types of tools to respond to flooding in London: structural and non-structural. Structural tools are the walls and embankments along the Thames and the other rivers, and indeed, the Thames Barrier and the Barking Barrier. The non-structural tools are the Flood forecasting, warning and response systems, flood plain development, insurances and the emergency management system, which is highly developed and hierarchical.

5.4 Transportation system in London

According to the report of Tfl published in 2011, the demand for travel has increased 8% more in 2009/10 than in 2000/01, as a result of 7.1% population and 5.5% occupation increase. Moreover, mode of transportation in London has shifted from car to sustainable public transport, such as walking and cycling (*5% points at the trip level*), which makes about 1 million trips. Furthermore, bus kilometres have increased with 32% and unground kilometres with 9% more in 2009/10 than in 2000/01, because of development in the docklands and DLR (Tfl, 2011, p.1). Regarding to road traffic volumes (Table 1), there were 6% fewer vehicle kilometres in London in 2009 than in 2000. Volumes of road traffic in London decreased by 3% between 2008 and 2009, having reduced by 2% between 2007 and 2008 and by 1.4%

between 2000 and 2007 (Table 1). The main reason of the steady decrease between 2008 and 2009 was economic recession in 2008. Consequently, there was an increasing shift towards public transportation modes, especially within central and inner London (Tfl, 2011, pp.2-8).

Table 1. Index of London road traffic in central, Inner and Outer London: major and minor roads, all motor vehicles. Index: year 2000=100, Source: Tfl, 2011, p.52

Year	Central London	Inner London	Outer London	Greater London - major roads	Greater London - minor roads	Greater London - all roads	Great Britain
2000	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2001	101.7	101.2	99.8	100.7	99.5	100.3	101.6
2002	98.2	99.0	100.5	100.3	99.5	100.0	104.2
2003	90.0	98.3	101.3	100.3	99.4	100.0	105.0
2004	88.8	94.6	100.6	99.4	96.8	98.5	106.7
2005	87.0	94.3	98.4	96.0	98.2	96.8	106.9
2006	86.5	96.8	98.9	97.4	98.6	97.8	108.6
2007	86.2	95.4	100.6	99.2	97.7	98.6	109.8
2008	83.8	92.7	98.9	97.4	95.2	96.6	108.9
2009	81.2	89.7	96.0	95.1	91.2	93.7	107.9

Source: Tfl. Planning.

5.5 Transportation system prone to flooding

The map of transportation system merged with 1 in 1000-year flood hazard map prepared by the Environment Agency[2]. In the Figure 5, only the flood hazard maps of London Borough of Newham and London Borough of Tower Hamlet have been merged with that part of the transportation network. In this limited area 28 tube and DLR stations, 4 railway stations, an airport and two hospitals have the risk of flooding. Having flooded stations in the tube network could affect not only that part of the city, but also all the other connected tube networks. Merging the transportation network and flood hazard map indicate the areas which has to be given the priority, such as providing evacuation plans to the hospitals that are in the middle of the floodplain. Besides, this way of combining diverse maps could also help to improve tube network and see the vulnerable parts of the network and act accordingly.

[2] http://www.environment-agency.gov.uk/

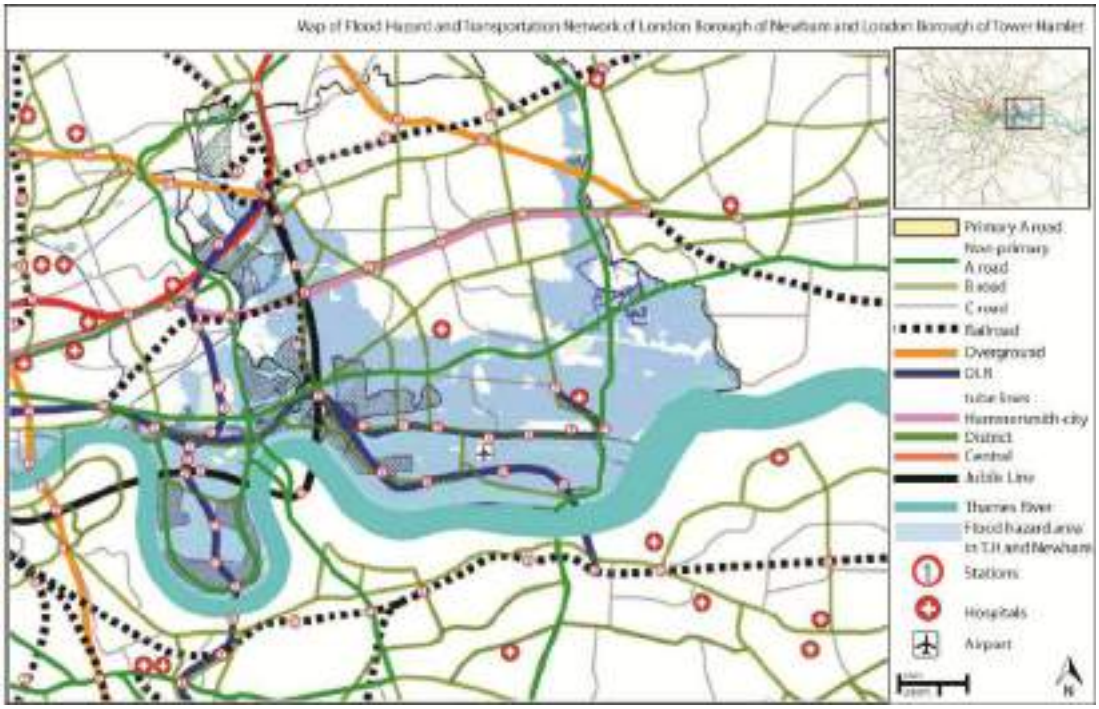

Figure 5. London borough of Newham and London Borough of Tower Hamlet: Map of flood hazard, transportation network and hospitals, Source: Author

5.6 Survey to public

Public survey carried out on the both sides of the Thames River in Lewisham and in Canary Wharf by aiming to have representative sample of people from different classes, ages, genders and backgrounds. In total carried out 61 valid questionnaires. Albeit the number of the questionnaires is not sufficient to represent the entire population in these two boroughs, the result of the questionnaires provided significant insights into the understanding of the present conditions in terms of perception and awareness of public on risk and existing information, and consequently social vulnerability. The questionnaire is made up of six parts. First there is the introduction part for understanding the respondents' profile and consists of 8 questions. The following five parts have 21 questions in total and these parts are:

- Part 1: Perception and awareness of risk condition
- Part 2: Awareness of the flood warning
- Part 3: Awareness of the access of information
- Part 4: Awareness of the information programmes
- Part 5: Population's individual preparation

During the questionnaire flood warning signs (Figure 6), which one can find in the environment agency's website, had been showed to the respondents and asked them whether they have seen them before or not. Correspondingly, 82% of the respondents said no and they do not know the meanings of the signs, and 18% answered yes. They have seen them mainly in the driving exam. Moreover, one person said that he

had seen it while driving on the county, and another one said that he had seen them abroad.

Figure 6. Flood warning signs (Source: Environment Agency)

Furthermore, the respondents had been asked whether they know what to do during an emergency, and if do they have a plan. The vast majority of the respondents (%87) said that they do not know what to do during an emergency. The other 13% said that they would call emergency line to learn what to do and to get some help. Besides, 59 respondents (97%) said that they have never informed about any evacuation plan by the authorities, 2 people (3%) said that they had informed by their workplaces (Figure 7).

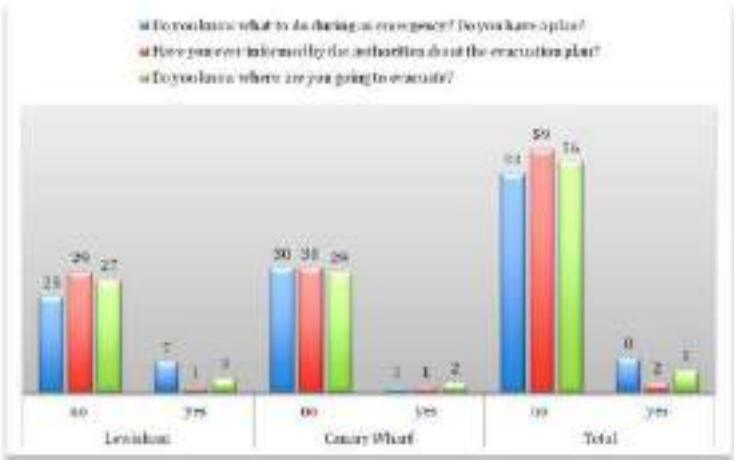

Figure 7. Preparedness to emergencies (Source: Author)

Another result of the survey is that people do not know where to go if they need to evacuate. The vast majority of responses (92%) were negative and they said that they do not know where to evacuate if they need to do so. Others who are in the 8% said that they would go to the Borough's main building to ask help, some of them said that they would go to other family members' homes that are living outside London. Regarding to the evacuation vehicle, the answers can be grouped into four: their own car, neighbour's/friend's car, public bus/train/boat, and a vehicle provided by the government. Mainly the respondents (46%) chose their own car for evacuation. Moreover, 29% said that they would use public bus/train/boat. This is followed by the vehicle provided by the government (15%) (Figure 8).

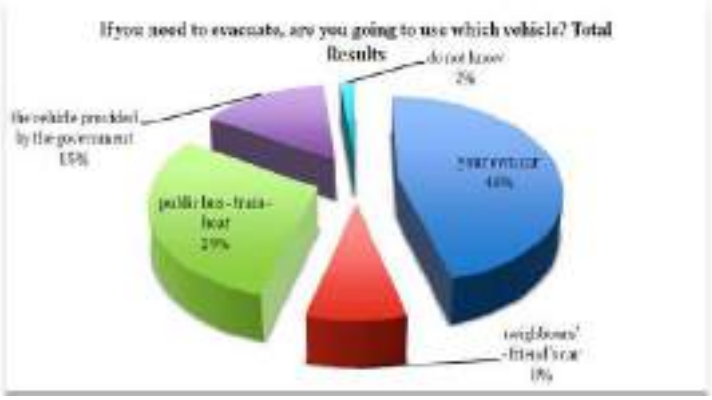

Figure 8. Modes of transportation for evacuation (Source: Author)

According to the insights coming from this survey, although there is information available online about emergency responses and flood warnings, it is not reasonable to expect all people know what to do during an emergency and follow those websites to gather information. Not sharing the information face to face with people especially make elder people more vulnerable, as most of them do not know how to use internet and most dramatically not able to read messages coming to their mobile phones. So, all possible reactions coming from public shall be considered in every phase of disaster management.

6. Istanbul

By the foundation of the Turkish Republic in 1923, during the 30s and the 40s, the city had been enlarged beyond the former districts to provide room for the growing population. The most rapid and recognizable population growth is seen in the 50s with a high migration rate from rural to urban. Today Istanbul is the primary city of Turkey by covering 5 512 km and by having 13% of Turkey's population (12 573 836) and 23% GDP of Turkey (IMM, 2008[3]). In 1945 the population of Istanbul was 1 078 000, due to the given dominant economic role to Istanbul this number had reached to 1 533 000 during the 50s. According to the census in 2000, the population of the city has reached more than 10 million and today it is 12 573 836 (SIS, 2008).

6.1 Changing vulnerabilities

Vulnerability is a dynamic concept that can be formed by policies and trends over time and across spatial scales (Menoni et al. 2012). The changes on the vulnerability due to dynamic structure of cities are seen clearly both in London and Istanbul megacities. Like London, Istanbul has also experienced the global trends in urban vulnerabilities, such as rapid population growth, rapid urbanization, major economic transformation, and increasing gap between socio-economic classes. Additionally,

[3] http://www.ibb.gov.tr/en-US/Pages/Home_Page.aspx

Istanbul has experienced also increased illegal housing supply starting by the 50s. After the 50s central government had left the regional policies and focused on the economic improvement of the Istanbul region. As a result, the city itself and the Marmara region had developed rapidly. Furthermore, by aiming to modernize the city, Henry Prost has prepared a plan for Istanbul between 1936 and 1950. By this plan, a part of the existing housing stock had demolished by aiming to open new roads, and industrial facilities located in the centre of the city.

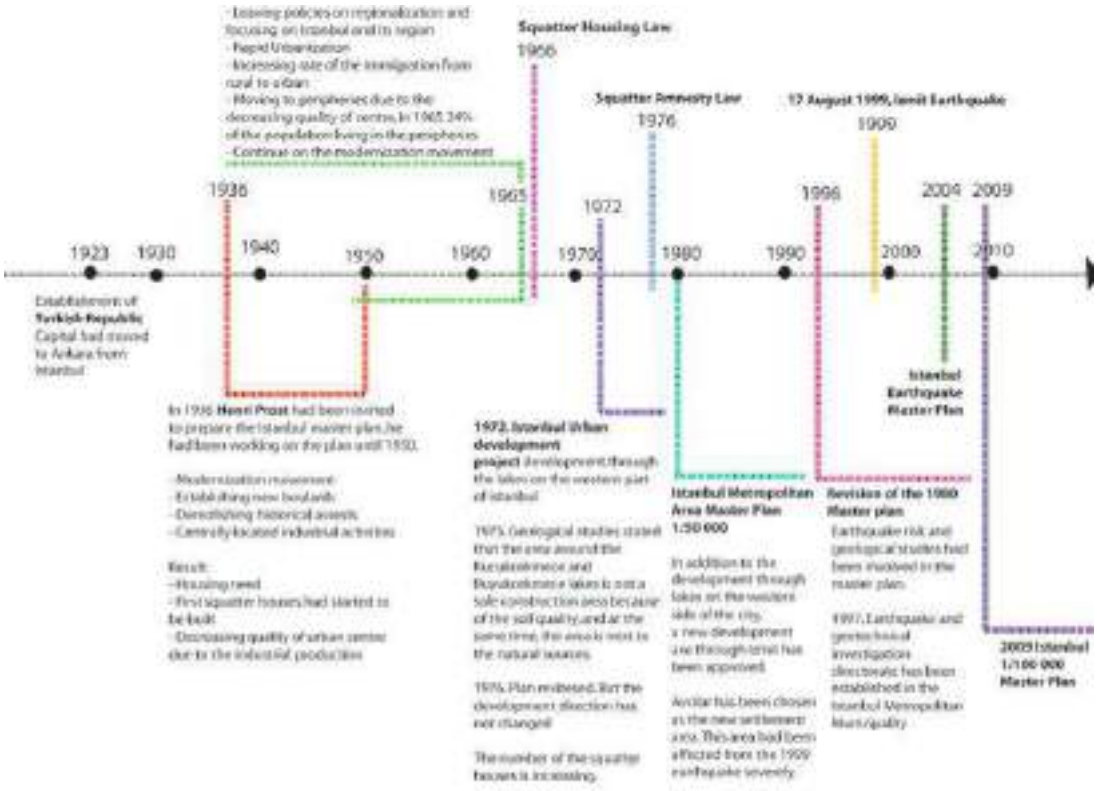

Figure 9. Retrospective view of changing vulnerability of Istanbul (Sources: Compiled from data in Tekeli, 1994; Keskinok, 2001; Şengezer, 1993; Türksoy, 1993; Görgülü et al. 1993; Angel, 1993; Gencer, 2007; Gedikli, 2001)

By the 50s, the city started attracting population from the entire country. Existing residents of Istanbul moved to the peripheries of the city, as the housing stock in the city centre were deteriorated. Moreover, new immigrated population moved in the emptied old urban fabric that is located in the hearth of the city. Besides, some of them built their own houses illegally and mostly situated on risky zones, because central and local governments were unable to fulfil the residential needs of large number of immigrants. By the 80s, by the new regionalization policies, industry started to move to Kocaeli and Adapazarı in the eastern part and to Küçükçekmece in the western part of the region, which are the areas prone to earthquake hazard more than the other parts of the city. As a result of these trends, the city become more vulnerable to hazards, because of the low quality dwellings, increased density and the industrial production in between residential areas. To have more detailed information on retrospective view of changing vulnerabilities please see Figure 9.

6.2 Changing hazard concept

Before the 1999 Marmara Earthquake, Istanbul was accepted as the second priority earthquake hazard zone. After the event it has became the first priority earthquake zone, because now it is expected another major event with the probability of 62% within the next 30 years in the Marmara Region, as a result of the tension created by this earthquake on the fault line (Figure 10).

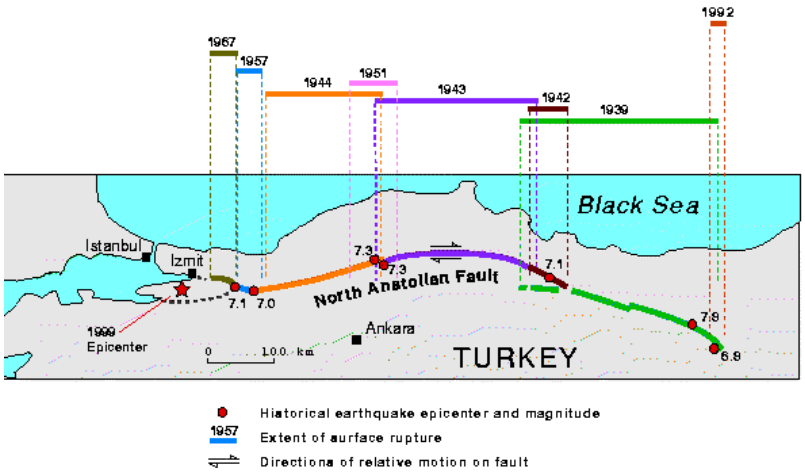

Figure 10. Historic progression of earthquakes on North Anatolian Fault line, Source: http://neic.usgs.gov/neis/eq_depot/1999/eq_990817/T990817000138.html

6.3 Existing risk of earthquake

In the IMM and JICA research (JICA and IBB, 2002), four earthquake scenarios were prepared, and they were compared to estimate the damage due to their distribution of peak ground acceleration (PGA), the damage distribution pattern and damage amount.

Building damage

Building hazard estimation was calculated for every type of the building included in the building census year 2000 by the JICA and IMM team (JICA and IBB, 2002). Building damaged is examined into three main topics; heavily, moderately, partly and four models (A, B, C and D) had prepared. According to model A, the total number of the damaged buildings is 252.000, which makes 35% of the total building stock. In addition, 1.116.000 households would be affected by the event. In the model C, the damage distribution is almost the same as that of model A. The total number of the damaged buildings is 300.000, 38% of the building stock and affected number of households is 1.300.000. In the models, southern west coast of the Istanbul is the most affected area due to the location of the epicentre. The less affected areas are located along the Bosporus and northern part of the Istanbul.

Human casualties

Human casualties are defined considering with collapsed buildings and have been done according to the night-time. These scenarios just give a framework to understand the growth of the event. Model A is estimated 73.000 deaths and 120.000 severely injured. According to model C the number of deaths is 87.000 and the number of severely injured is 135.000. In both of the models islands have the biggest ratio of death, which is 8.4% according to model A and 9.3%.according to model C.

6.4 Earthquake risk and transportation system

To have better understanding on the existing situation Figure 11 is prepared by combining 4 different maps: the map of existing road network, vulnerable buildings, vulnerable infrastructure and medical capacity. When these maps merged in one map, south-western part is indicated as the most vulnerable part of the city, because of having narrow roads, the vulnerable and aged infrastructure, and vulnerable housing supply.

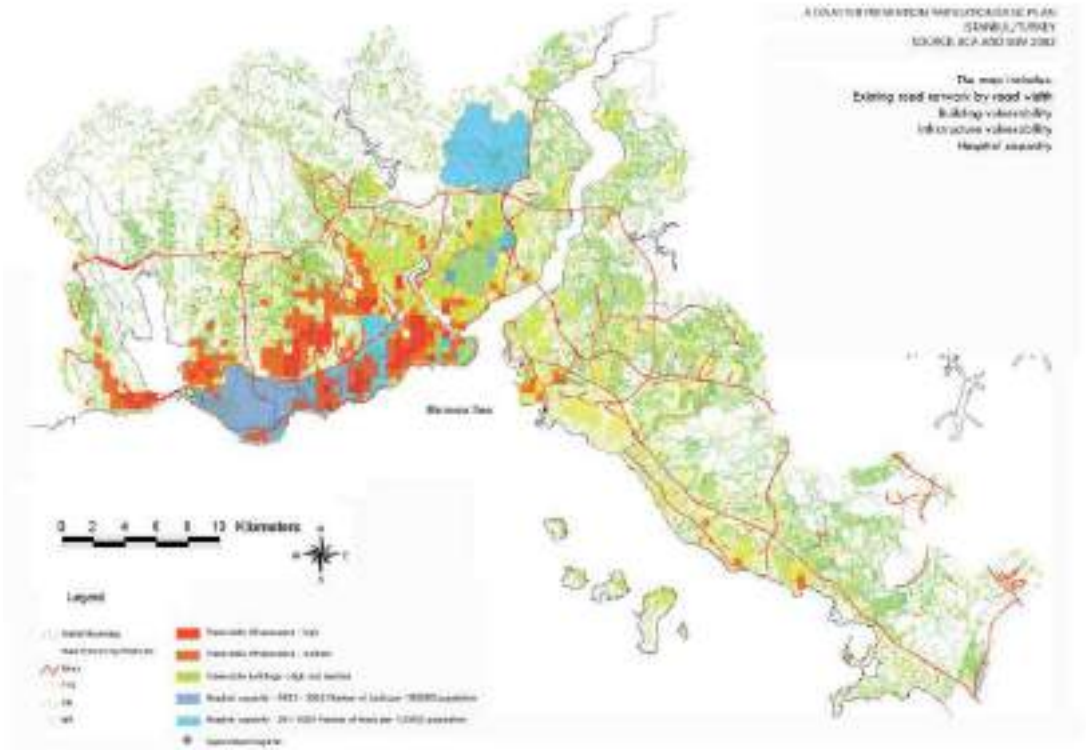

Figure 11. Vulnerability of infrastructure, buildings and medical facilities, (Produced by the author by combining the maps in the JICA and IBB, 2002 report)

As the main hospitals are located in this part of the city, it would be needed to reach that part from the other parts. However, due to vulnerability of the infrastructure and artefacts, it could be difficult to reach there during an emergency. Moreover, medical supply in the other part of the city would not be sufficient for the entire city.

7. “What if Scenario” – Evacuation

A “What if Scenario” can be defined as a simulation which aims to investigate the possible behaviour of a complex system (Golfarelli and Rizzi, 2008, p.1). Experiences, such as 2005 Katrina and Rita Hurricanes and most recently 2011 Tohoku earthquake and Tsunami, show that there are domains of people acting differently especially during evacuation phases. The unforeseen behaviour of people affects the emergency procedure negatively. In the first part of this paper, not being able to forecast human behaviour was indicated as one of the problems. Preparing a “what if scenario” provides a simplified representation to understand the way that people react and their effect on the transportation system. An evacuation starts by giving the decision of evacuation and ends when all these people turned back to their families and homes. In the scenario (Figure 12), it is expected that not all the people follow the evacuation order properly, the reasons and possible human reactions schematized by asking some questions whether they have received the evacuation warning, and whether they follow the rules etc.

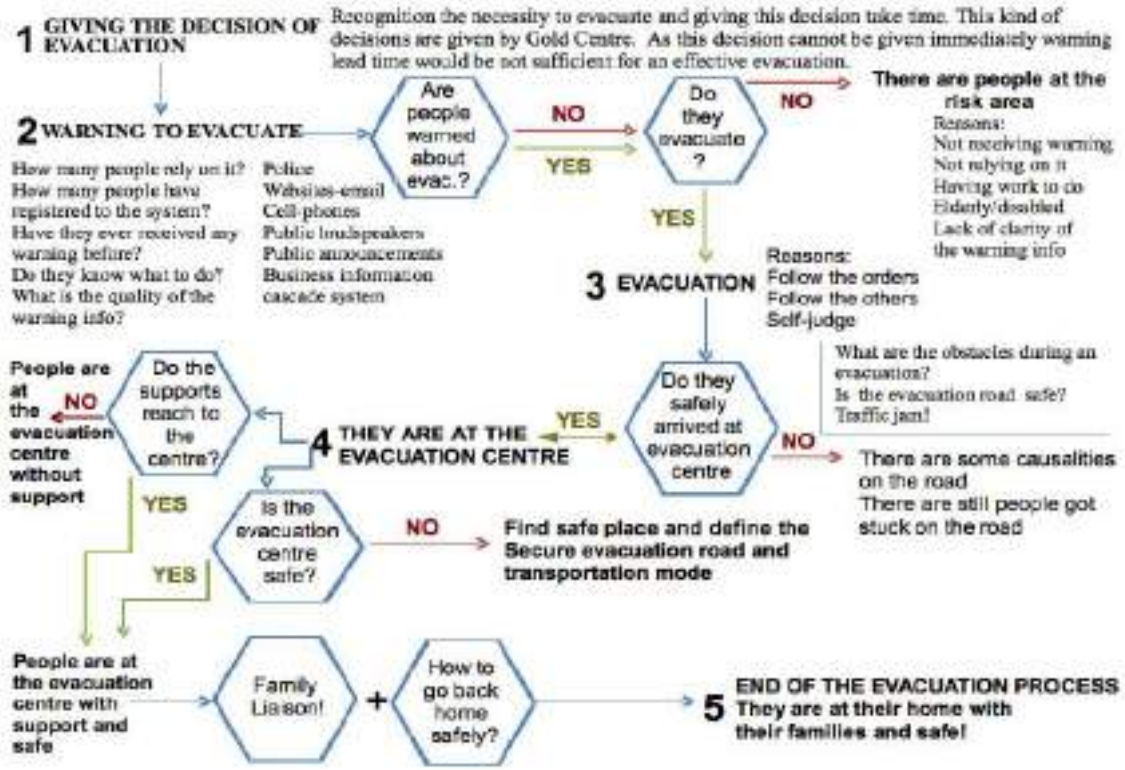

Figure 12. A scenario for evacuation, Source: Author

8. Conclusion

In the beginning of the paper two problems have been identified, the first problem was not considering the entire city while providing policies or tools for solving the existing problem. For this reason, both for London and Istanbul different maps have merged to identify the most vulnerable part of the city in case of a disaster. The

second problem was being unable to forecast the human behaviour. To have more simplified picture on this issue, a survey has been conducted in London to gather some insights and several real cases (such as Rita and Katrina Hurricanes in 2005, Northridge Earthquake in 1994 and Tohoku Earthquake and Tsunami in 2011) have studied to achieve a scenario on evacuation and possible behavioural domains of people.

The methodology to solve the problems in transportation system in case of a disaster should consider hidden connections between elements of the city. The relation between vulnerable buildings and vulnerable parts of the roads has to be studied before concentrating on a single part of the transportation system. The fact that reaction of people could contribute into the resilience of a structural system either negatively or positively should also be considered in all kind of emergency plan. Moreover, having information on hazard and emergencies in the online platform does not mean that people know about the existence of this information, or even if they know that it exists, they might be not interested in acquiring this information. There is a need to have face-to-face interaction with public to provide them the information on hazard and emergency. On the other hand, if decision makers, or governmental authorities, have the simplified and completed picture of the situation in case of a disaster, it can be more effective for them to use the expert knowledge and implement it. The reaction of a complex city system to a disaster depends on the initial conditions. The initial condition includes both vulnerabilities and strengths of a city. Having small changes in the initial conditions would affect the results tremendously.

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Establishing Mixed Method Research Design Guidelines in Health Impact Assessment (HIA) Investigations

John Gaber and Tammy Overaker[1]

Introduction

In the last decade planers have become more aware of the possible health impacts of existing and proposed plans and projects. The most common strategy planners use to assess the health impacts of their planning decisions is through a Health Impact Assessment (HIAs) strategy. HIAs are founded on "the ethical use of evidence, emphasizing the use of quantitative and qualitative evidence … to get as comprehensive assessment as possible of the expected impacts" (European Centere for Health Policy, 1999, p.4). As much as HIAs are based on a mixed method research design strategy (quantitative and qualitative data sets combined in one research project), the HIA literature since the Gothenberg Consensus Papers in 1999 has yet to provide any guidelines on how planers should conduct a mixed method HIA research project. Research methodology has become the Achilles heal of HIAs, in turn, limiting their planning and policy impact.

In this paper we conducted a content analysis of 149 HIAs conducted around the world starting from 1999 to 2011 and analyzed their research methodologies. Observations generated from the analyzed HIAs are used to establish a series of mixed method design guidelines to help planners improve the analytical capabilities in future HIA investigations.

The paper is organized into four sections. The paper begins with a simple overview about HIAs. Here, we discuss it's assumptions and the different approaches they are applied. This is followed with a brief discussion about mixed method research design. In our discussion about mixed method design, we identify the most common applications ("reasons") when planners typical use a mixed method research design. The third section is a discussion of our HIA data. This session concludes with an analysis of the mixed method HIAs to develop a working "HIA model for mixed method research design." The paper concludes with a discussion on next-steps planners can take to be improve their future HIA investigations via a mixed method research design approach.

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The World of HIAs

Health Impact Assessments (HIAs) are assessment strategies used by planners that combine community input with a series of data sets to evaluate the health impact of proposed and existing projects. In 1999, the World Health Organization European Regional Office in collaboration with the European Health Policy Centre developed the "Gothenberg Consensus Papers" that established an international framework by which planners and policy makers can operate from a common understanding in the application of HIAs.

An HIA is a community-based approach to addressing local health issues. It:

- provides a broad definition of health that includes economic, environmental, social and psychological factors
- particularly concerned with disadvantaged populations
- takes a multi-disciplinary approach to "evidence" that includes quantitative and qualitative data slices to inform decision-making

The act of conducting an HIA is very much like going through the rational planning process. It is in part the similarity between the HIA process and the plan making process that draws planners to HIAs. The HIA process is divided into five sequential steps. They are:

1.) Screening -- The selection process that determines whether a particular policy, plan, or project has a potential health impact. Is an HIA needed?

2.) Scoping -- If the screening has determined that an HIA is to be carried out, this is the process that identifies the steering group and establishes a work plan for the HIA.

3.) Assessment (research) is -- The "engine" of the HIA where impacts are considered, evidenced gathered, and recommendations are framed.

4.) Report -- Formal identification of recommendations and production of the final report.

5.) Monitoring -- relevance of Assessment of the HIA process: 1.) impact of the process, and 2.) research.

Before any research is conducted in an HIA, an extensive screening process takes place to determine if an HIA is needed. (See Figure 1 below.)

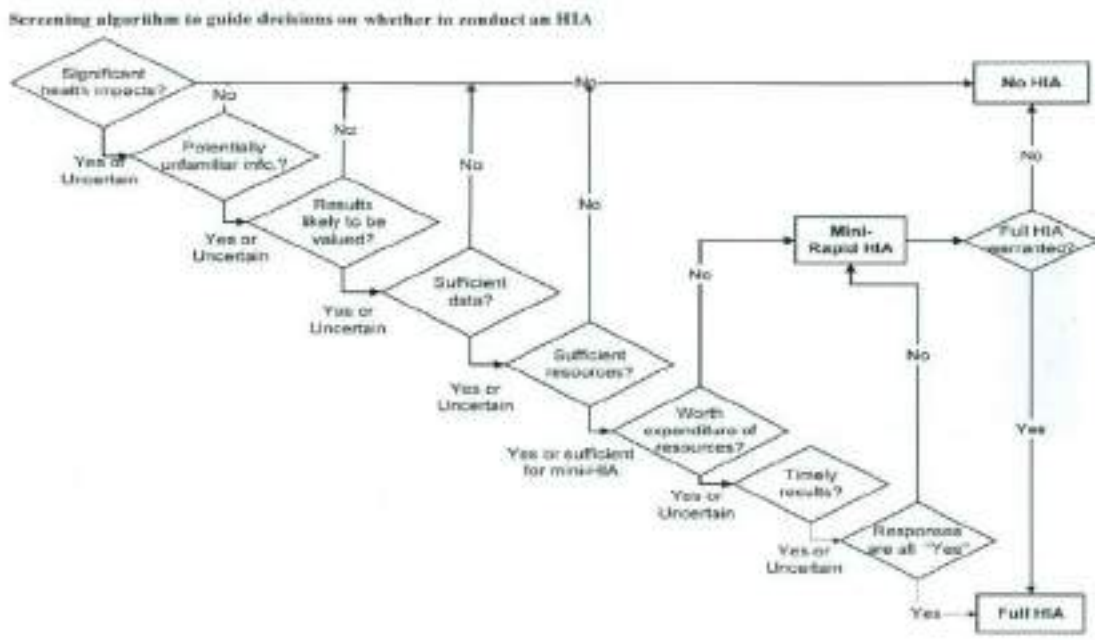

Figure 1. Source, UCLA, (2004) Health Impact Assessment, p.4.

There are three types of HIAs depending on the amount of time needed to execute the process: *rapid* (also called "tabletop") --the shortest study (one to two days), *intermediate* – a more detailed investigation (several weeks), and *comprehensive* -- an intensive investigation (several months up to a year).

Mixed Method Research Design

Mixed method research designs help planners better understand the complexities of life. In most situations, there is not one singular perspective. There are multiple perspectives. In working in a mixed method investigation, the planner is required to combine more than one research method to generate multiple data slices that are organized into a single research project. Mixed method research projects involve the integration of quantitative methods (the collection of numbers) and qualitative methods (the collection of words and images). An example would be the combination of census data with participant observation field research data to learn more about a particular community.

Mixed method research design is further broken down into two kinds of strategies: *within-method* and *between-method* triangulation. In a within-method investigation, the planner takes one method and use different strategies within it, such as using a survey that asks closed-ended questions for quantitative data and open-ended questions for qualitative data. Between-method

investigation combines dissimilar methods to examine a particular situation, such as using census data research and a focus group investigation to figure out the best location for a new neighborhood park. Between-method designs are the most common mixed method approach used with HIAs.

The mixed method literature five identifies "purposes" (more easily understood as *reasons* why researchers use this technique) for a planner to employ a mixed method research design. They are: convergence (triangulation), development, complementarity, expansion, and initiation. *Convergence*, also known in the literature as triangulation, is the most sought after process in mixed method research. The goal is to use several different methods to analyze a single phenomenon in order to increase the validity and credibility of the results (Cook 1985, p. 46, Bryman 1992, p. 131).

Mixed method research strategies can be classified as simultaneous or parallel/sequential Greswell, 1994, p. 182). A simultaneous mixed method investigation uses multiple research methods at the same time. In sequential mixed method research, the results of one method are essential for developing the next. Mixing methods for the purpose of *development* involves the sequential use of quantitative and qualitative strategies where results from the first method are used to inform the second method. The goal of development is to increase the strength and sensitivity of additional research methods.

Complementarity combines methods to measure overlapping, as well as different aspects of a situation, in order to get an enriched enhancement of that situation. The goal of complementarity differs from the goal of convergence in that the focus of convergence requires that different methods assess the same conceptual phenomenon, while the methods used in complementarity address *different* phenomena (Greene, et. al. 1989, p. 258).

Expansion combines the processes of complementarity and development to extend the range of understanding about a situation by using different methods targeting different components of the situation (Greene, et. al. 1989, p. 259). Expansion has two goals. First, similar to the development process, expansion focuses on applying research methods particularly strong in analyzing specific situations. Information generated from one method is not used to help another method in its assigned tasks. The second goal is similar to the complementarity process—the planner applies the images of reality generated by one method to help analyze other sets of images generated by different research methods.

Initiation is at the opposite end of the mixed method spectrum from convergence. It looks for situations where research findings do *not* converge. The goal of initiation is "to initiate new interpretations, suggest areas for further exploration, or recast the entire research question" (Rossman and Wilson, 1985, p. 635, Jick, 1983, p. 149).

HIA Investigation

We conducted a fairly exhaustive internet investigation of all published HIAs (in English) from 1999 to 2011. A total of 149 HIAs were obtained and analyzed. The countries represented in the HIA sample include: Australia, Canada, Germany, India, Italy, Netherlands, New Zealand, Russia, Slovenia, Sweden, UK (England, Ireland, Scotland, Wales), and the US. The HIAs were first found through international collecting HIA websites (e.g. "The HIA Gateway," maintained by the West Midlands Public Health Observatory). After exhausting these collecting HIA websites, we then looked at specific agencies / organizations that have published HIAs found in the collecting HIA websites to see if they have any more HIAs in their archives. Two examples of this secondary search would be our looking at the US HIA organization "Health Impact Partners (HIP)" and the UK HIA Organization "Impact" at the University of Liverpool to see if they had any additional HIAs.

The HIAs were catalogued and analyzed first by latent content analysis and afterwards by a manifest analysis (Gaber and Gaber, 2007, pp.103-134). The HIAs were read twice through a latent content analysis to obtain comparable bits of information. In the first reading of the HIAs, we collected information on the following variables: date, author, topic (e.g. land use or social services), type of HIA conducted (Rapid, Intermediate, or Comprehensive), location in the planning process (Prospective, Retrospective, or Concurrent), type of research design. In the second reading, we focused on only the research design section of the HIA to determine what type of research design was used (mono method vs. mixed method), and if a mixed method research strategy was used, what type of mixed method research design was carried out. Once all of the comparable data was collected, they were in dropped into a spread sheet, the HIAs were then analyzed via a manifest content analysis to determine thematic trends.

Mixed Method HIA Investigation

The most surprising observation among the analyzed HIAs was that only 68% of them used mixed method research strategies. As outlined in the *EPHIA HIA Methods Guide (A Guide)*, mixed method research is the foundational research design for all HIAs , so this number should be closer to 100%. A little over quarter of the reviewed HIAs (26%) used a single method investigation. 5% of the HIAs did not even have a methodology. Lastly, less than 1% (0.6%) of the HIAs recognized that they conducted a mixed method investigation. From this overall assessment of the HIAs methodologies, it is very clear that much more work is needed in bolstering the rigor and improving the explanatory capacity in HIAs mixed method research projects.

By looking more closely at the HIAs that actually completed a mixed method research design, we can discover where best to apply mixed method guidelines that generates the easiest and

quickest results for future HIAs. The HIA cohort that clearly executed a mixed method research project are for all extensive purposes are representative to the total population of surveyed HIAs.[i]

Within the mixed method HIAs themselves, they are fairly evenly distributed in terms of the level of detail in their investigations. The largest third (36%) of the HIAs are Rapid investigations, with the middle third (33%) being for Intermediate projects, and the smallest third (31%) are Comprehensive HIAs (Table 1). In an earlier study (Gaber and Overacker, 2011), it appears there is a trend away from more time consuming and expensive comprehensive HIAs and a move to shorter and more affordable HIAs.

Table 1. HIA's by Level

Level	Mixed Method HIA Population
Rapid	36%
Intermediate	33%
Comprehensive	31%
Not Identified	
Total	100%

What dramatically stands out about the mixed method HIA population was the Type of HIA that was conducted (Table 2). More than 60% of the mixed method HIAs were conducted within a Prospective planning calendar. This highlights that mixed method research strategies are actively

used in the HIA process as a way to get as much diverse bits of information as possible to access "possible" health impacts. A little over a third (33%) of the mixed method HIAs focused on Concurrent HIA research.

Table 2. HIAs by Type

Type	Mixed Method HIA Population
Prospective	61%
Concurrent	33%
Retrospective	6%
Total	100%

As seen in Table 3, it is very clear that Mixed Method HIAs are more focused on Human Services and Land Use topics. Topically, the mixed method HIAs were fairly evenly split between Human Services assessments at 48% and Land Use assessments at 44%.

Table 3. HIA's by Topic

Topic	Mixed Method Population
Human Services	48%
Land Use	44%
Environmental	8%
Total	100%

The authors to the Mixed Method HIA cohort are fairly representative of all the organizations that would normally be interested in assessing the health impact of identified projects. None of the authors are from the private sector. Over half of the authored mixed method HIAs are from the public sector with 33% of them being written by government agencies and 30% by university organizations (all are public universities), or some combination of government, university, or non-government agency at 19%. (See Table 4.) The remaining 18% of the HIAs were conducted by non government agencies.

Table 4. HIA's by Author

Author	Mixed Method Population
Government	33%
University	30%
Non-Govt. Org. (NGO)	18%
Combination	19%
Total	100%

In looking more closely at how the HIAs conducted their investigations, a very clear image of the HIA model to mixed method research design becomes very distinct. Let us go into more detail on what we discovered in this profile of HIA mixed method design. Straight of out of the gates, the way HIAs approach mixed method research design is very different from what is considered "common" mixed method investigation. Two (out of three) defining aspects to the HIA's model to mixed method research are shown in Table Y1. First, HIA mixed method research strategies significantly lean to the "expansion" purpose of mixed method investigations. Expansion mixed method investigations are when the researcher uses different research methods to obtain different data sets. This makes sense since HIA investigation are required to obtain very disparate data slices (e.g. health, demographic, traffic, economics) in a single HIA study. What is particular interesting with the HIA model is that an overwhelming majority of them using Expansion mixed method investigation, while in the mixed method literature Triangulation is the

most common use of mixed method investigation. (Source this) As discussed earlier, the primary reason and benefit to a triangulation mixed method design is the added confirmation in internal validity with different research projects converging on the same observation. Only 2% of the reviewed HIA's utilized a mixed method investigation for triangulation. It is very clear among HIA researchers that they are more concerned with the breadth of research observations (the main reason to expansion mixed method projects) than in shoring-up depth in confidence of their research observations with a strong argument for internal validity.

Table 5. Strategy Mixed Method Type and HIA Type

	Prospective	Concurrent	Retrospective
Expansion	69% (42)	88% (29)	50% (3)
Complementarity	5% (3)	0	0
Triangulation	3% (2)	0	17% (1)
Initiation	2 (2)	0	0
Development	0	0	0
Hybrid	20% (12)	12% (4)	33% (2)
Total	100% (61)	100% (33)	100% (6)

The second distinct characteristics to the HIA model to mixed method research is also the second most popular purpose in why HIA researchers used mixed method investigations: Hybrid. The Hybrid purpose for mixed method investigations is when a researcher uses two or more investigative techniques (e.g. survey and focus group investigations) for more than one of the 5 major purposes for mixed method investigations. The Hybrid mixed method approach is the most complicated mixed method purpose because it requires the investigator to be acutely aware of the different purposes for mixed method investigations and that they are combining two (or more) purposes to either achieve a more detailed analysis or greater depth of confidence. In this case of HIA investigations, a more accurate explanation is that the HIA formula to research requires a multi-purpose for their mixed method investigations and that they are executing a Hybrid mixed method study more out of functionality of the investigation than out of other understandings about the basic application of mixed method investigations. Properly grounded in mixed method research strategies, HIA investigators will be better able to take on more Hybrid mixed method projects and be able to expand on the explanatory value of their hybrid mixed method investigations.

As shown in Table 6, Hybrid mixed methods are gaining popularity in the last ten years. 67% of all the Hybrid HIAs were conducted between 2007 and 2011.

Table 6. HIA Mixed Method Research Strategy from 1999 to 2011

	'99	'00	'01	'02	'03	'04	'05	'06	'07	'08	'09	'10	'11
Expansion	1	3	5	7	3	2	3	11	11	12	8	5	3
Complementarity	0	0	0	0	0	1	0	1	0	0	0	1	0
Triangulation	0	0	0	0	0	1	1	0	0	1	0	0	0
Initiation	0	0	0	0	0	0	0	1	0	0	1	0	0
Development	0	0	0	0	0	0	0	0	0	0	0	0	0
Hybrid	0	0	2	0	0	4	0	0	2	4	2	4	0
Total	1	3	7	7	3	8	4	13	13	17	11	10	3

In looking at the type of mixed method research study was applied in relation to the size of the HIA study, the third characteristic of HIAs becomes apparent. (See Table 7.) While Rapid and Intermediate HIAs mostly focus on the Expansion mixed method approach (80%), Comprehensive HIAs are more evenly split between Expansion (46%) and Hybrid (32%) mixed method approaches. Stated differently, more than half (55%) of all Hybrid mixed method HIA studies are conducted within the Comprehensive HIA format. A partial explanation for this can be that the Hybrid mixed method project are particular adept at analyzing complex problems which is the focus of Comprehensive HIAs. In addition, Hybrid mixed method research projects, with their added layer of complexity, tend to require added attention which is made possible through the long-term Comprehensive HIA process.

Table 7. HIA Mixed Method Research Strategy and HIA Level

	Rapid	Intermediate	Comprehensive
Expansion	81% (29)	85% (28)	55% (17)
Complementarity	0	0	10% (3)
Triangulation	5% (2)	3% (1)	0
Initiation	3% (1)	0	3% (1)
Development	0	0	0
Hybrid	11% (4)	12% (4)	32% (10)
Total	100% (36)	100% (33)	100% (31)

At first sight it appears three are very little differentiation in the type of mixed method research used in the substantive topics of the HIAs (Human Services, Land Use, Environmental). (See Table 8.) All three of the substantive HIAs use Expansion mixed method research approach at least 70% of the time (77%, Land Use, 75%, Environmental, and 71%, Human Services). What is important to point out here is that 67% of the Hybrid HIAs (Table Y4) have focused on Human Service issues.

Table 8. HIA Mixed Method Research Strategy and HIA Topic:

	Human Services	Land Use	Environmental
Expansion	71% (34)	78% (34)	75% (6)
Complementarity	0	7% (3)	0
Triangulation	4% (2)	2% (1)	0
Initiation	0	4% (2)	0
Development	0	0	0
Hybrid	25% (12)	9% (4)	25% (2)
Total	100% (48)	100% (44)	100% (8)

When breaking down the mixed method HIAs by author, it is very clear that Expansion investigations are heavily used by government, university, and NGOs. (See Table 9.) Interestingly, although university authored HIAs primary focus are in Expansion mixed method strategies, they did have the second largest number of Hybrid HIAs after Combination authored HIAs. It is not surprisingly that the combination of University and Combined authored HIAs account for 72% of the Hybrid HIAs. In fact, within the Combined authored Hybrid HIAs, University co-authored 100% of the Hybrid authorships. It is fairly safe to assume that more complex and integrated mixed method HIA projects are conducted by or with university researchers.

Table 9. HIA Mixed Method Research Strategy by HIA Author

	Government	University	NGO	Combination
Expansion	79% (26)	77% (23)	83% (15)	53% (10)
Complementarity	6% (2)	3% (1)	0	0
Triangulation	6% (2)	0	0	5% (1)
Initiation	3% (1)	0	0	5% (1)
Development	0	0	0	0
Hybrid	6% (2)	20% (6)	17% (3)	37% (7)
Total	100% (33)	100% (30)	100% (18)	100% (19)

In looking more closer at the Hybrid HIAs (Table 10), it becomes very clear that Universities play a significant role in authoring this type of mixed method investigation. As a single author, University accounts only for 31% of all of the Hybrid HIAs. However, when the single University authorship is combined with joint authorship with other organizations (Government, NGOs, and Government/NGOs), over 70% of the Hybrid HIAs are authored by University.

Table 10. Hybrid Mixed Method by HIA Author

Author	Hybrid Mixed Method HIA

University		31% (6)
Government		12% (2)
NGO		17% (3)
Combination		40% (7)
University/Government	17% (3)	
University/NGO	17% (3)	
University/Government/NGO	6% (1)	
Total		100% (18)

The Hybrid HIAs focus primarily on two very different mixed method combinations. (See Table 11.) The largest combination at 39% of the mixed method Hybrid HIAs used the Complimentarity/ Expansion Hybrid model. This makes sense that given that Complimentarity and Expansion are very much sister mixed method research strategies and combine different investigations in a very similar fashion. The way the authors apply this particular HIA mixed method approach is that they first start out the investigation according to an Expansion strategy and use the different methods to access different data sets. Once all the data is collected, the authors then jump over to the Complementarity investigation and use the data obtained from one method to then analyze the data generated by a different method. For example, in the "29th Street San Pedro Street Health Impact Assessment" conducted by Human Impact Partners (2009), they used "(d)ata from specific survey questions … alongside census and other data sources to provide additional information about existing health conditions in the community" (HIP, 2009, p. Intro. 5).

Table 11. Most Common Hybrid Mixed Method Combination

Type of Mixed Method Combination	Total
Complimentarity / Expansion	39% (7)
Expansion / Initiation	31% (6)
Expansion / Triangulation	12% (2)
Development /	12% (2)

Expansion		
Complimentarity / Initiation	6%	(1)
	100%	(18)

The second popular Hybrid mixed method approach strategy was in the mixture of Expansion/ Initiation. This is somewhat unique in that Expansion mixed method investigations are not closely aligned with Initiation as would it would be with Expansion to Triangulation where different methods generate observations that can share on a shared observation. In the Expansion / Initiation Hybird mixed method investigations, the researchers start off the study in an Expansion strategy and are using different methods to obtain and analyze very different data sets. Once a set of observations are generated from the first round of data gathering work, the authors then analyze the data and discover new realities and take these discoveries and take to a new research project (Initiation) to explore this new empirical path. An example of this Hybrid approach is the "Stopping the Out Case Study," HIA investigation project conducted by the University of Liverpool in their study of vulnerable young women in South Sefton. In this study, one researcher conducted two additional focus group investigations with "other key informants and stakeholders who are not directly associated with the project as either employees or users" to get a sense of what "people outside of the organization" thinks (University of Liverpool, 2001, p. 18).

Piecing Together the HIA Mixed Method Profile

Through the piecing together of the more dramatic characteristics among the mixed method HIAs, a "HIA Mixed Method Model" can be delineated that stands out from the typical HIA population. Our analysis is able identify four very clear mixed method HIA characteristics. First, mixed method HIAs are much more likely to be for a Prospective application (61%) than either Concurrent (33%) or Retrospective (6%) . Second, mixed method HIAs are less focused on Environmental topics than Human Services and Land Use topics. Methodologically, mixed method HIAs are more commonly based on an Expansion mixed method design. Expansion HIA investigations are more commonly applied in Rapid and Intermediate investigations than in Comprehensive projects. Lastly, and very unanticipated, mixed method HIAs are actively using Hybrid mixed method strategies. Interestingly, the inverse is true with Hybrid mixed method HIAs that are more commonly found in Comprehensive HIA projects than in Rapid and Intermediate studies. Hybrid mixed method HIAs are more likely to be authored or co-authored

by a university and tend to be evenly split between an Expansion / Complimentarity approach or an Expansion / Initiation approach.

Next-steps in HIA Mixed Method Research Strategies and Planning

I will finish this last paragraph by the end of the month. Thank you, John Gaber

PLANNING FOR A RESILIENT OPEN SPACE. A COMPARATIVE STUDY ON THE DRIVING FORCES AND SPATIAL EFFECTS OF URBANIZATION IN FLANDERS

Barbara Tempels[1], Thomas Verbeek[1], Ann Pisman[1], Georges Allaert[1]

Keywords

open space, urbanization, spatial transformations, regional differences, driving forces

Abstract

Open space is scarce and under pressure in the highly urbanized region of Flanders, the northern part of Belgium. Due to urbanization and fragmentation, the former countryside has disintegrated into a complex spatial structure of open space fragments with different densities and functions, such as housing, work and recreation. The built-up density of the open space – defined as all space outside of residential areas, such as village and city centers – is increasing, while the predominance of agriculture as the traditional manager of open space is decreasing.

The question arises to what extent open space is resilient to urbanization and at what point the morphological transformations and new functions exceed the carrying capacity of open space. This is especially relevant since there is little coherent and effective spatial policy for some of these functions. Therefore, this research aims to gain insight into the current state and structure of open space in Flanders through a spatially coherent analysis based on a system approach.

The article focuses on four uses of open space, which are largely responsible for its increasing building density and changing morphology. These are (a) the residential use, with a growing household density, (b) the diverse economic use, altering the formerly agricultural rural economy, (c) the private use for gardens and hobby farming as an extension of the home environment, and (d) the use for public recreational purposes. The first two are 'hard' functions, taking place in buildings, whereas the other two are 'soft' activities, oriented towards the unbuilt space. While hard functions seem to be a threat to open space, soft functions are potential managers of open space, keeping the open space open. These new functions are mapped and analyzed through a comparative study in nine case municipalities with different spatial characteristics. In the paper, their region-specific or spatially heterogeneous patterns are examined. Since understanding the drivers that push open

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space into a new regime is key to resilience management, these are also analyzed through literature review.

The study shows that within Flanders, some open space areas are more resistent to urbanization than others. In more peripheral parts, production agriculture is strong enough and urbanization is only possible when space is available. In suburban parts, the open space serves urban needs and is highly fragmented by roads and buildings. These areas have passed a certain threshold and moved on to a different regime. The drivers for this process are very diverse, both in scale and type. Generally, we can conclude that the importance of these new users is substantial for the resilience of open space.

The insights presented in this article can contribute to a policy that is better adapted to the regional differences and current dynamics in open space. Since open space is a product of activities and lifestyles, reflecting a society that is subject to change, these transformations cannot be reversed, but can be steered towards a desired regime.

1. Introduction

Under the influence of urbanization, the open space in Western Europe is undergoing a number of fundamental changes. In this study, ‘open space’ is defined as all areas outside of cities or town centres. This was archetypically an open, monofunctional area used for production agriculture, forests and nature. Due to an external urbanization pressure, in combination with internal changes, the agricultural front seems to be losing power in the political struggle for land (Kühn, 2003; Busck et al., 2008). This allows urban centres to expand into open space and urban fragments to be scattered across the open space, systematically decreasing open space and fundamentally changing the structure of the remaining open space. This creates a complex, fragmented structure with besides the traditional open space users, several non-archetypical functions (such as housing, work and recreation).

Antrop (2004: 10) defines urbanization as a ‘complex process of change of rural lifestyles into urban ones’. Also Madsen et al. (2010: 48) indicate that ‘urbanization is not only a matter of land use change, but also a matter of functional and lifestyle changes, which may or may not manifest themselves as physical changes in built-up areas and land use.’ These definitions indicate that research on urbanization should not merely focus on spatial patterns, but also on functional changes - the driving forces behind morphological transformations -, which are fundamental to the analysis and the understanding of the urbanization process.

The condition of the Flemish countryside has been discussed a lot in recent years, in particular concerning the disappearing contrast between city and countryside. Many authors agree that ‘city’ and ‘countryside’ are archetypes that no longer exist in Flanders (De Meulder et al., 1999; Xaveer De Geyter Architecten, 2002; Van Eetvelde en Antrop, 2005; Thomas et al., 2008). Elements of these two archetypes can be found scattered and fragmented across the Flemish landscape.

The article addresses four functional transformations in Flanders' open space: (a) the increasing residential use, (b) the economic diversification, (c) the increasing private use, and (d) the increasing recreational (shared) use. These functional transformations introduce new, non-archetypical functions in open space, reflecting its urbanization. Most of these transformations are widely recognized and have (recently) been studied individually and independently (Leinfelder, 2007; Bomans et al., 2009; Verbeek et al., 2011; Dewaelheyns et al, 2008; Verhoeve et al , 2012). However, a spatially integrated approach, that considers not just one individual phenomenon, but focuses on open space as a whole, is missing. Given the scarcity of open space in Flanders, its limited carrying capacity and the high pressure on open space for further urbanization, insights into the current state of open space as a whole are nevertheless relevant.

In order to assess at what point this carrying capacity is exceeded, it is important to have an insight into the different aspects of the combined impact of these transformations on open space. This is especially relevant in the context of a policy oriented toward preserving and protecting the remaining open space. This article argues that the non-archetypical uses of open space have a fundamental impact on the morphology, the use and the meaning of open space. Their strongly individual, demand-oriented and autonomous character strengthens their spatial impact. In most cases, these new functions mark the transition of the archetype of open space to a new kind of (urbanized) open space.

The article first places the four selected transformations in their socio-cultural context, followed by a mapping of the new land uses via a terrain study in 27 case areas across nine municipalities with different characteristics, which allows an estimation of how much open space they take up. Through the terrain study results and map analysis, complemented by literature review, the impact of these new land uses on open space is assessed. More specifically, the effects on the morphology (physical), the dynamics (functional) and the symbolical meaning (the cultural values) of open space are considered. These form the core of the transition open space is undergoing due to urbanization. Finally, some reflections are made on the state and future of open space in an urbanized context.

2. Analysis

2.1 Study area Flanders

Flanders, the northern administrative region of federal Belgium and a small part of polycentric North-West Europe, is one of the larger urban regions in Western Europe with the most visible impact of urban sprawl[2] (Albrechts and Lievois, 2004; EEA,

[2] The other urbanized regions are London (United Kingdom), Paris (France), Milan (Italy), Rhine-Mainz and Rhine-Ruhr (Germany), and Randstad (the Netherlands).

2006). With a population density of 447 inhabitants per km² in 2007, it is one of the most densely built and inhabited, and economically active regions in Europe.

Within Flanders, the traditional boundaries between city center and suburbs, city and countryside, and residential and rural areas have faded. Only 10% of Flanders is defined as rural according to the OECD criterion (150 inhabitants per km² at basis district level (municipalities)). Kesteloot (2003) has determined that approximately 70% of the Flemish population resides in an 'urban complex' - an area characterized by suburbanization and by inhabitants commuting to and from urban agglomerations. In contrast, only 10% of the Flemish population lives in truly urban centers. Although the majority resides in a suburban environment, Cabus (2001) estimates that 76% of Flanders still remains open.

2.2 Literature review

Based on a literature review of current dynamics in Flanders' open space and reoccurring themes in research, in combination with previous research experiences, four functional transformations are selected, defined and placed in their sociocultural context. This analysis of driving forces contributes to a better insight into the current dynamics in Flanders' open space.

2.3 Case study, terrain mapping and impact analysis

For the majority of the selected phenomena, reliable and directly usable data on a Flemish scale are lacking. Dewaelheyns et al. (2008), Bomans et al. (2010) and Verhoeve et al. (2012) also emphasize this lack of data. This makes it impossible to study these phenomena on a generalized Flemish scale or to map evolutions over time. Therefore, it is chosen to detect these phenomena through an empirical terrain study in 27 study areas, across nine municipalities.

2.3.1 Open space

As mentioned before, open space is defined on a macro scale as all areas outside of cities or town centers. According to the definition by the National Institute for Statistics[3], 25.5% of Flanders consists of residential centers and 74.5% is open space, while according to TeleAtlas' definition of the built-up centres[4], 84.5% of Flanders can be considered open space.

2.3.2 Case study area

Nine municipalities, spatially distributed over Flanders, were examined. These were selected based on an earlier research project on mixed land use in Flanders,

[3] The statistical sectors are the base unit for the compilation and distribution of statistics. Their delineation is based on social, economic, urbanistic or morphological structural characteristics.
[4] TeleAtlas is a private digital mapping and navigation company. Their definition of the built-up centres is based on aerial photography.

distinguishing different spatial typologies (Leinfelder and Pisman, 2008). Eight of the selected municipalities form pairs with similar open space and urbanization characteristics. A ninth, little urbanized municipality was added as a reference[5].

Figure 1 shows their location on a building density map of Flanders.

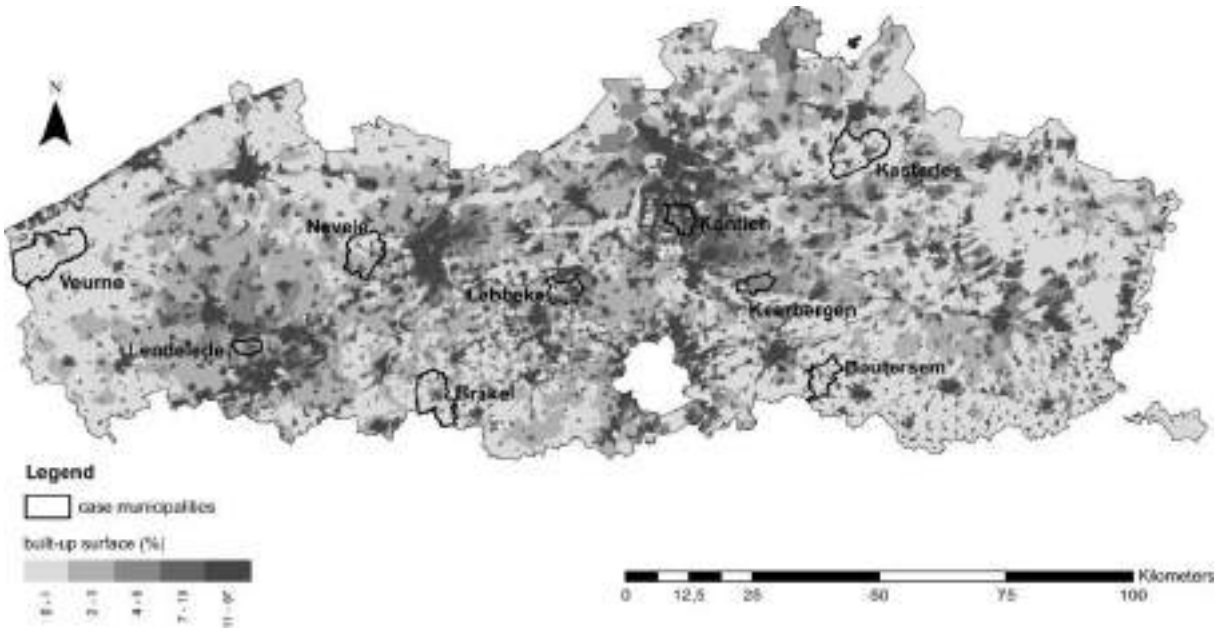


Figure 1. Location case municipalities on a building density map of Flanders (data: cadastral plan (CADMAP), 2009)

Per municipality three strongly different study areas were selected, to make the diversity of phenomena as big as possible:

- an area with a (possible) privatization pressure,
- an area with a (possible) recreation pressure, and
- a reference area, where production agriculture is still dominant.

Their selection was based - as far as possible - on the information in the respective municipal spatial structure plan.

The precise demarcation of the study areas was made by infrastructure lines, mostly roads and railways, to enable a clear parcel wise registration of the phenomena. The assumed size of a study area is approximately 200 ha, so that on average 600 ha is studied in each municipality. In smaller, highly urbanized municipalities the selected micro study areas are smaller (approx. 150 ha).

[5] The nine selected municipalities are (1) Veurne (low-dynamic open space under specific coastal recreational pressure); (2) Boutersem and (3) Nevele (low-dynamic open space under commuting pressure); (4) Brakel and (5) Kasterlee (dynamic open space under recreational pressure); (6) Keerbergen and (7) Lebbeke (dynamic open space in a suburban field); and (8) Kontich and (9) Lendelede (high-dynamic open space in an urban network).

2.3.3 Mapping methodology: terrain registrations

In these study areas terrain registrations were executed in the period 2008-2011. These consisted in the onsite registration of the selected phenomena, as far as possible at parcel level. For residential use (housing), non-agrarian economic activities and private use, the individual phenomena could be registered directly at parcel level. Recreational use on the other hand is mostly a form of shared use of space and volatile in nature, making it impossible to register the recreational use itself. Therefore, this phenomenon was operationalized by mapping recreational infrastructure elements as indications of recreational use. This resulted in the following categories and subdivisions of non-archetypical open space users which were mapped in the terrain study (see also Table 1):

- non-agrarian buildings: all buildings that have no link with productive agriculture and are thus 'new' users of open space, including their plot (buildings that are part of recreational attraction poles (such as restaurants and cafeterias and changing rooms of sports facilities) are not included here):
    - houses (a);
    - non-agrarian businesses (including associated housing facilities) (b): small and large scale commercial and manufacturing companies;
    - other (x): e.g. schools, public community centers, care homes, …
- non-archetypically used unbuilt space
    - privately used land (unbuilt) (c):
        - hobby pastures: all pastures that are used for hobby farming (mostly horses);
        - other privately used land: all other phenomena of private land use, like private woods, fishponds and scattered vegetable gardens;
    - indications of recreational use (d):
        - signposts: all forms of recreational signposting, generally linked to recreational networks;
        - recreational tracks: line-shaped structures that are clearly set up for or adapted to the needs of recreational users, like mountain bike and horse riding trails;
        - recreational attraction poles: all kinds of establishments that have a crowd pulling, recreational character, like restaurants, sports fields and riding schools;
        - public small-scale infrastructural elements: e.g. benches, information panels, bins.
    - other (x): e.g. utilities, …

If there was no clear indication of a certain activity, these activities were not registered, simply because these activities were 'invisible'. Therefore, the terrain registrations are an underestimation of reality. The invisibility of some activities (e.g. empty hobby pastures) may be related to the limiations of a one-time registration. In other cases (e.g. small businesses without signes), the activities taking place are

latent. In the context of a study on the spatial extent and impact however, these latent activities are less relevant, because they don't have a (significant) impact (yet). Nevertheless, they can grow out to be manifest activities, with a visible spatial impact.

Table 1. Overview of the elements that were registered in the terrain mapping

FUNCTION	REGISTERED ELEMENTS
(a) residential use	houses (+ parcel)
(b) non-agrarian businesses	non-agrarian businesses (+ parcel)
(c) private use	hobby pastures other privately used land
(d) recreational use	signposts recreational tracks recreational attraction poles public small-scale infrastructure elements
(x) other	other non-agrarian buildings other non-archetypical use (unbuilt)

Figure 2. Example of a digitalized terrain mapping in Brakel

Further processing of the terrain mappings took place in a GIS environment, making further analysis and calculations possible, as well as a convenient cartographic representation. For the digitalization of the terrain registration in GIS, digital aerial views[6] and cadastral plans[7] were used. This facilitated a detailed digitalization and made it possible to add some cases that were not visible on the terrain.

[6] OC_Gis Vlaanderen, 2003 and Google Maps, 2009
[7] Kadvec, 2005 and CADMAP, 2009

2.3.4 Extent and impact analysis

The different new uses were analyzed both quantitatively and qualitatively. Based on the terrain study mappings in GIS, a quantitative assessment of the spatial extent of the four new land uses was made. The qualitative evaluation of the spatial impact[8] was based on the fieldwork, map analysis and literature study.

3. Results

3.1 Four functional transformations in Flanders' open space

The increase in built-up density is generally seen as the core of the urbanization process and the main indicator for urbanization. However, literature review has indicated that there are also a number of transformations which are related to a different use of the existing structure, both built and unbuilt. These do not cause an increase in built-up density, but are nevertheless an expression of an urban lifestyle.

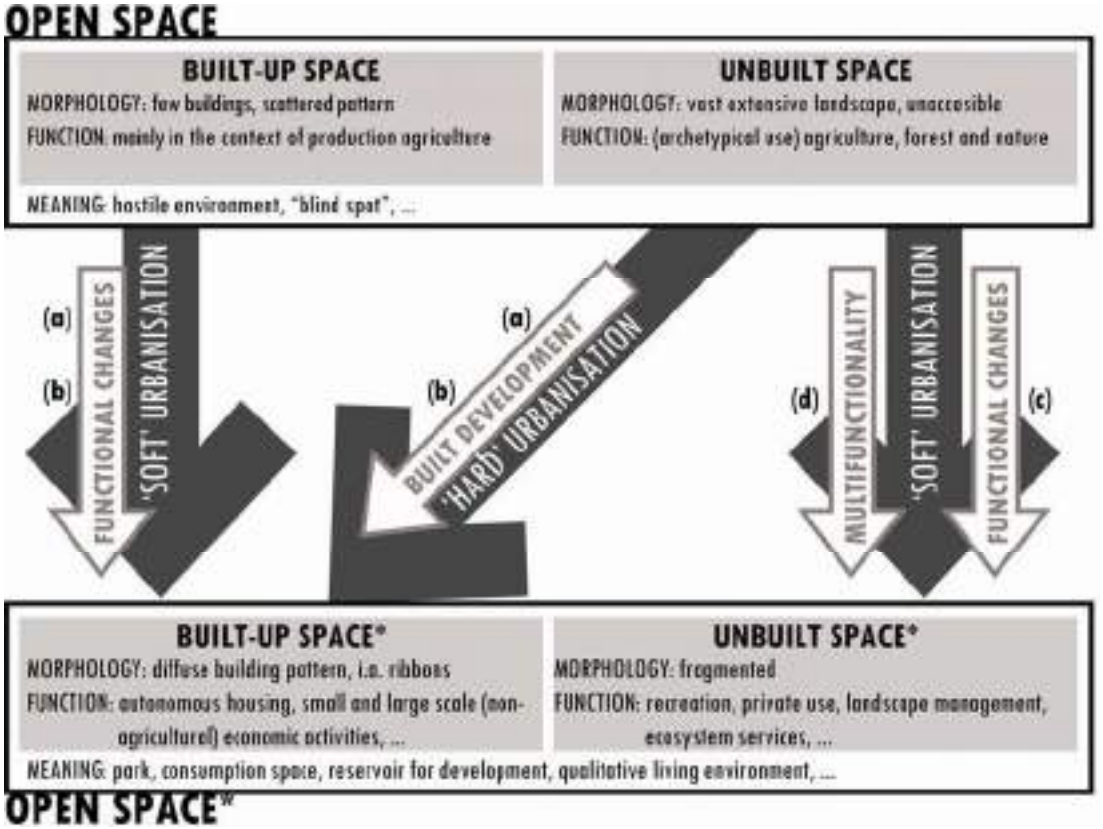


Figure 3. Schematic representation of the spatial transition open space is undergoing due to urbanization, with the indication of (a) residential use, (b) non-agrarian businesses, (c) private use and (d) recreational use

[8] Undoubtedly, these phenomena also have a certain ecological, economic, ... impact. However, these aspects are beyond the scope of this study.

Therefore, two types of spatial transformations can be distinguished within the urbanization process (Figure 3): hard urbanization, increasing the built-up density, and soft urbanization, functionally changing the existing built-up and unbuilt space from within. These are characteristic to the spatial transition that open space is undergoing due to urbanization.

3.1.1 Increasing residential use

One of the most important functional shifts in open space is the increasing use for housing. Flanders has a fragmented settlement pattern, with a lot of small housing concentrations spread out in its open space. Due to demographic growth, but also the shrinking size of families, the demand for housing is still high. Also the individual living space has grown dramatically as a result of increasing prosperity. Due to the creation of free time and the trend toward individualization, people spend more time in their home environment and more money on its design.

Figure 4. Examples of living in open space

On the other hand, there is a general preference for rural residential areas in Flanders (Verhetsel et al., 2003; Vanneste et al., 2007). This is linked to the rural idyll, the positive image of the countryside that urbanites have (Cloke and Milbourne, 1992). Also, higher travel speeds and lower travel costs have made living in open space technically and organizationally easier. Therefore, living on the countryside has evolved from a necessity to a choice.

Under the influence of a housing policy that is (historically) focused on dispersion and individual, detached housing, and a tolerant spatial policy, one tenth of the new households ends up in open space. Nevertheless, the household density in (residential) centers still increases relatively faster than in open space[9].

3.1.2 Economic diversification

As a part of the urbanization process, the agricultural production area has transformed into a diffuse field of different types of economic activities. Because of the decrease of the economic importance of production agriculture throughout the

[9] 6.8% increase of the household density in open space versus 9.1% in residential centers (period 1997-2007, based on the definition of residential centers by the Directorate General Statistics and Economic Information).

last century, space was created for other types of activities (Van den Bout and Ziegler, 2003; van der Wouden en van Dam, 2006). On the other hand, companies are becoming more and more footloose due to tertiarization and the knowledge economy, in combination with an increasing mobility, telecommunication and virtualization, also known as the emergence of the network society (Boudry et al., 2003). Furthermore, an integrated spatial policy for (small) economic activities is lacking, allowing these activities to settle in open space.

Figure 5. Examples of economic diversification in open space

This diversification of economic activities in rural areas is an irreversible dynamic with strong spatial and economic consequences (Verhoeve et al., 2012). Research has shown that most of these non-agrarian companies are active in the tertiary sector (mainly professions and other services) and are relatively young, indicating that this is a very recent dynamic. However, there is little known about the spatial reality of this economic diversification, both scientifically and politically.

3.1.3 Increasing private use

As a consequence of residential development, the surrounding (unbuilt) space is more and more incorporated in the private sphere, in the form of garden extensions, hobby pastures, weekend houses, private fishponds, private forests, etc. These types of land use are more private than the archetypical functions, such as agriculture and nature, in the sense that they no longer serve society, but an individual. They are also visually, physically and mentally linked with the private sphere because of their restricted accessibility and often strong enclosure. Because of this evolution, open space no longer has the character of a common place, but is becoming a patchwork of private enclaves.

Dewaelheyns et al. (2008) state that 8.2% of the Flemish territory consists of private gardens, and most of these gardens occupy former agricultural land. Bomans et al. (2009) conclude that 5.1% of Flanders, or 40% of all pastures, is occupied by horse pastures. These numbers illustrate the importance of this widespread phenomenon and the pressure it exerts on production agriculture.

These new land uses are part of the broad societal evolution towards individualization, which can be spatially translated into the concepts of privatization

and capsularization (De Cauter, 2005). Human activity moves from public to private space, which is isolated and directed inward. This use of open space is driven by lifestyle preferences instead of production needs, annexing open space as an extension of the living environment (Madsen et al., 2010).

Figure 6. Examples of private use in open space

3.1.4 Increasing recreational use

Opposed to the increasing private appropriation of open space, there are a number of processes that make the open space more accessible, introduce new meeting places and supply a multiple land use, mainly in the field of recreation (Leinfelder, 2007). In the past open space was situated only in cities and public space policy was mainly oriented towards central urban locations. Due to a scaling-up of urbanization processes, changes in leisure spending and fundamental transformations in the social-economic relations, public space is not exclusively an urban phenomenon anymore (Hemel and Van Uum, 1999) and the central public space loses its prominent role as meeting place and place of exchange (Sennet, 1997). A new (thinner) form of public life is emerging, giving public space a new meaning and making it appear at new places (Nio, 2001). Open space gradually fulfils a role as 'new' public space, an 'urban park'. It is more and more a shared space, consumed and experienced as a leisure space for urbanites (Van der Ploeg, 2001).

Figure 7. Examples of recreational (shared) use of open space

3.2 The extent of new uses of open space

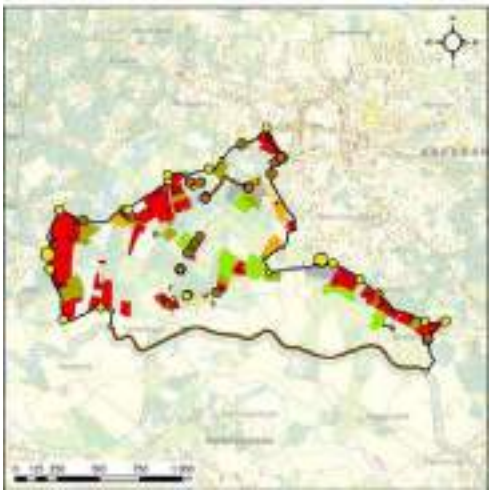
Table 2 gives an overview of the portions of the study areas used for the different non-archetypical land uses that were mapped in the terrain study. More than a fifth of

the whole study area is occupied by non-archetypical open space functions[10], of which the vast majority consists of the four selected functions. Of the total area of non-archetypical open space uses, about half consists of unbuilt parcels. Residential and private use are the most important non-archetypical open space uses in terms of surface, with each a surface of about 10% of the total study area. Non-agrarian businesses and recreational use each take up about 1% of the study area.

Table 2. Overview of the portion of the study area that is occupied by the different non-archetypical functions in open space for (a) the least urbanized study area (Veurne, Lovaart), (b) all 27 study areas, and (c) the most urbanized study area (Kontich, Broekbos)

SURFACE (%)	(A) LEAST URBANIZED	(B) ALL STUDY AREAS	(C) MOST URBANIZED
TOTAL	1,2%	22,4%	57,7%
built-up parcels	**0,7**	**11,3**	**24,5**
(a) residential use	0,5	10,3	21,5
(b) non-agrarian businesses	0,2	0,9	3,0
(x) other	0,0	0,1	0,0
unbuilt parcels	**0,5**	**11,1**	**33,2**
(c) private use	0,5	10,2	30,1
- hobby pastures	0,5	6,3	13,2
- other privately used parcels	0,0	3,8	16,9
(d) recreational use	0,0	0,7	3,1
(x) other	0,0	0,2	0,0

(a)



(b)

[10] For comparison, 10% of Flanders is taken up by forests (VBV, 2009), 2,5% by nature and forest reserves (INBO, 2007) and 46% by agriculture (AGIV, 2008). However, an overlap between these classes of archetypical land use and the non-archetypical land use classes of the case study is possible (e.g. a private forest).

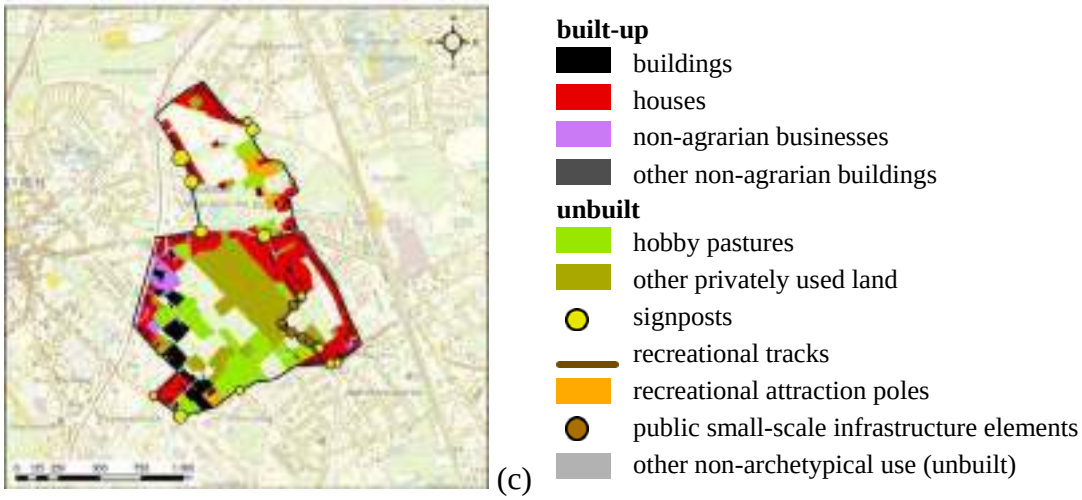


Figure 8. Terrain study results in three micro study areas: (a) the least urbanized study area (Veurne, Lovaart), (b) an average urbanized study area (Keerbergen, Broekelei), and (c) the most urbanized study area (Kontich, Broekbos)

The figures of the least and the most urbanized study area indicate that there are strong variations within Flanders regarding urbanization[11]. It is striking that almost all phenomena are found in each study area, even the least urbanized ones. This confirms that the new uses occur very widespread in the Flemish open space.

3.3 Spatial effects of new uses of open space

The discussed new land uses have an impact on the morphology, the function and the meaning of open space. In what follows, the combined impact of the four functional transformations is described.

3.3.1 Morphology

The physical-morphological impact of the new uses of open space covers many aspects. First of all, residential use and the non-agrarian businesses are the main driving factors for the increasing built-up density in open space, a classic indicator for urbanization. The growing claim of the various new functions of open space creates an expansion pressure, at the expense of archetypical open space uses. Moreover, the presence of buildings is a pull factor for new built development. This may lead to the conversion of open space into (residential) developments with a low density, and thus the loss of open space.

The urbanization process also has a morphological impact on the unbuilt space. This concerns not only gardens around houses or the space directly surrounding non-

[11] The spatial differentiation is - among other things - related to the spatial distribution of a number of factors of attraction. However, this is not addressed in this article. For this aspect we refer to the final report of the research (Tempels et al., 2012).

agrarian businesses, but also completely unbuilt parcels, such as garden extensions, vegetable gardens and hobby pastures. The morphological impact of this unbuilt urbanized space is limited, but not non-existent. Although no buildings are added, all other morphological aspects (parcel size, enclosure, vegetation, …) undergo major changes.

Figure 9. Built-up and unbuilt non-archetypical uses of open space: (a) non-agrarian business (metal trade) in Lendelede (Spoelewielen), (b) private use (isolated vegetable garden) in Kasterlee (Tielenbroek)

The diversity and the individual character of the new uses lead to changes in the open space design. Due to the lack of a (legal) framework, the urbanized open space follows its own logic, which is fundamentally different than that of agricultural land or nature areas. This logic is based on a unilateral (consumption) relationship, where the new users benefit from the qualities of a rural environment, but create little added value for that environment themselves. For example, many houses are private enclaves that are poorly integrated into the landscape, privately used parcels often have hard borders (both physically and visually) and non-agrarian companies sometimes pay little attention to the design of their plot. As a result, regional landscape characteristics are lost. It is however impossible to define a general rule. The visual impact is different for each individual case, ranging from virtually no to a very strong impact, both positive and negative.

Figure 10. Strongly individual and private character of the non-archetypical uses of open space: (a) private use (garden extension) in Boutersem (Kerkom), (b) residential use (houses and gardens) in Boutersem (Kerkom) and (c) private use (horse pasture) in Keerbergen (Heikant)

For soft urbanization, the morphological impact is rather limited, because no greenfields are developed. Recreation for example mainly uses existing infrastructure, with the addition of a number of small infrastructural elements, such as paths, benches and trash cans. Also for functional changes, such as the conversion of farms into housing or non-agrarian businesses, the intervention is limited to modifications to the building in the surrounding space, although the impact of these interventions can be important.

The increasing number of functions and uses requires an increasingly better physical accessibility of open space. The combination of a dense infrastructure network, a high building density and a small average parcel size with strongly defined and demarcated boundaries lead to a highly fragmented open space. From an ecological, economic and spatial perspective, this is often seen as a negative evolution.

Figure 11. Fragmentation due to ribbon development: (a) Lebbeke (Poelstraat), (b) Boutersem (Velperbos)

3.3.2 Function

This research focuses on four new, non-archetypical uses of open space. Obviously, the introduction of these functions themselves, and the dynamics they cause, are the most fundamental impact on the functioning of open space. These functions are in fact connected within a larger structure, each adding a new layer to open space in which goods and people move. For recreational use for example, this impact is much more important than the physical-morphological impact.

Figure 12. New layers of use in open space: (a) recreational shared use in Veurne (Lovaart), (b) non-agrarian business (insurance office) in Lendelede (Spoelewielen)

Also a number of secondary effects can be noticed, that originate from the relation between the transformations. Non-agrarian businesses, private use and

recreational use are inherently connected to the residential function, making living in open space an important catalyst for the whole urbanization process. Further, living, working and recreating in open space induce a diffuse movement pattern, which may lead to further spatial distribution of (urban) functions.

3.3.3 Meaning

As a result of the functional changes in open space, also its significance and meaning change. While the archetypical open space serves the common interest, these new functions each project their own individual desires on open space, nourishing the perception that open space is a reservoir of 'empty', developable space. Open space is seen as a qualitative living environment, as available space for (economic) development and production, as an attractive landscape for consumption, … Its significance is each time different, from an inaccessible, private space that can be individually appropriated, to a common place with a strong public character, from a series of private enclaves to a public attraction pole, and from a production space to a place for consumption. Because of these strong diversity of functions and meanings, open space is no longer complementary to the city, but rather a diluted version of the city.

Figure 13. Image of the (a) least urbanized study area (Veurne, Lovaart), and (b) the most urbanized study area (Kontich, Broekbos)

3.4 Typology of urbanized open space

The case study also shows that within the defined types of spatial transformations (hard and soft urbanization), the non-archetypical uses often occur together (Table 3). The economic diversification is strongly related to residential use, given that non-agrarian businesses often operate from the home environment. Although private and recreational (public) use appear to be contradictory, also a spatial relation can be noted. Where privatization uses whole parcels, closing them off, public use uses the (road) infrastructure between them. In this respect they are spatially complementary.

Table 3. Extent of the different non-archetypical functions[12] in open space for the different case municipalities.

	Veurne	Nevele	Brakel	Kaster-lee	Lende-lede	Bouter-sem	Keer-bergen	Lebbe-ke	Kon-tich
(a) residential used (%)	1,2% --	6,7% --	11,9% -	6,1% --	7,7% -	12,2% +	24,6% ++	14,6% ++	12,7% +
(b) non-agrarian businesses (number/km²)	0,5 --	1,3 --	2,2 -	1,2 --	8,0 ++	4,9 +	3,3 +	7,4 ++	2,7 -
(c) private use (%)	1,6% --	9,2% -	7,3% --	16,3% ++	7,3% --	8,3% -	14,1% +	10,3% +	21,1% ++
(d) recreational use (indicator)	11,5 --	18,3 --	40,4 ++	29,7 -	22,3 --	37,6 +	41,5 ++	33,9 +	25,6 -

The extent of the different non-archetypical uses of open space is determinant for the new regime open space is shifting into. Throughout the different case municipalities, it appears that there are four types of open space in respect to the urbanization phenomena. These originate from the varying relationship between hard and soft urbanization.

The two extremes are the highly urbanized regions (hard and soft urbanization; Keerbergen, Lebbeke, Kontich and Boutersem) and archetypical open space (little urbanization; Veurne and Nevele). In addition to these two obvious types, two different types in the middle spectrum can be distinguished: areas with only hard urbanization (Lendelede) and areas with only soft urbanization (Brakel and Kasterlee). In the areas with only hard urbanization, a high building density is combined with the use of the remaining open space for production agriculture. The open space with only soft urbanization on the other hand, is mainly used by visitors of urban space further away.

4. Conclusions

This paper has demonstrated the diversity and the great extent of urbanization in Flanders. The four selected non-archetypical uses of open space (residential use, non-agrarian businesses, private use and recreational use) take place in both the built and the unbuilt parts of open space and are all current and important phenomena in Flanders' open space. These phenomena take up more than a fifth of the case study area and even in the least urbanized areas, virtually all of these phenomena are present. These developments are on the edge or outside of the policy framework, causing them to be strongly autonomous. The fact that these phenomena are structured by supply (availability of open space, for example due to the decline of

[12] Since the recreational use could not fully be expressed by a surface, an indicator was used. This indicator represents the number of elements (signposts, recreational tracks, recreational attraction poles and public small-scale infrastructural elements), weighed in accordance to their importance (respectively the factors 1, 3, 3, 2) and divided by the surface of the study area (in km²).

agriculture) and demand (driving forces) contributes to their wide distribution and great extent.

The impact of the four new uses fundamentally affects all aspects of open space: its morphology, its functioning and its meaning. Although some new functions are less important in terms of land use, they can cause important dynamics. Therefore, these also have an impact on open space.

It is clear that attention is needed for these widespread but underrated new uses of open space, especially from a policy perspective. The transition described in this article proves that in large parts of Flanders archetypical open space no longer exists. In these areas, quality can only be generated if policy is no longer aimed at the protection and preservation of archetypical open space, but acknowledges this new context and responds to these new needs, new perceptions, …

Monitoring is in this respect an important first step. The lack of knowledge about these changes is an obstacle in the development of a vision on these changes. Monitoring however is not evident, since many of these changes are latent and are hard or impossible to map on a large scale. In addition, their impact on for example the functioning of open space is very difficult to capture (quantitatively).

Subsequently the question arises whether these changes are desirable. This is a difficult discussion and opinions will differ. The carrying capacity of open space cannot be defined universally, but depends on the capacities and characteristics of open space in relation to the specific functions it needs to fulfil. In order to estimate this carrying capacity, it must be determined what is expected of open space and according to which priorities.

Hereby a comparative assesment should be made of the individual demand (housing, gardens, ...) and the public interest (water management, nature preservation, ...). Most new developments in open space have a very strong individual and private character. Given the high pressure on open space, ways of combining these two seemingly opposite interests should be found. Due to the lack of embedding of for example the economic diversification, the open space often doesn’t benefit from the advantages and a certain potential remains untapped. This contributes to the conservative attitude toward these new developments.

Anyhow, these transformations reflect a societal change that is irreversible and seems unstoppable. Therefore, the question might not be whether these transformations are good or bad, but rather how they can be controlled and be integrated in open space in a suitable, judicious way. This assessment should deal positively and creatively with the urbanized context. Urbanization is often seen as a negative evolution, especially from the open space perspective. However, it should be taken into account that this evolution is the expression of a rapidly changing society. The type of open space that often spontaneously develops in Flanders - multifunctional, dynamic and versatile - resembles in some respects very much

visionary urban greenbelt models from the last century (in which this belt was sometimes even seen as a field). Consequently, the observed evolution can also be seen as a natural and necessary adaptation to a new context, since the archetypical open space cannot survive in an urbanized society.

Strategies are needed that start from the qualities and the potential of open space. In an urbanized context, where production agriculture stands little chance, private and recreational use can for example be used to protect open space for built development. Also the economic diversification brings about investment dynamics, of which open space does not (yet) benefit. From this perspective, the changes in open space are not seen as a threat, but rather as an opportunity. In this context the issues in open space are not so much related to the strong change per se, but rather the fact that it is happening unnoticed and strongly autonomous, causing opportunities to be missed.

5. Acknowledgements

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CAPITALIZING ON SPACE PLACE AND LOCATION
THE CASE OF REGENERATING NUREMBERG WEST

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Abstract

Numerous cities, in which industrialization had been the main stimulus for urban agglomeration, are experiencing urban decline. As the tide of industrial urbanization is ebbing, Nuremberg West (NW) is one such area in the State of Bavaria, Germany. Once the birthplace of Germany's first railroad between Nuremberg and Fürth, NW features today an oversupply of abandoned industrial space, which is coupled with low demand. The area features a disconnected and fractured urban fabric; it is a set aside and increasingly stigmatized area in transition. If the situation is kept unaddressed, the urban transformation process will likely bring redundancy and economic obsolescence to NW.

As public funds are diminishing, public authorities have an interest in sustaining the capital stock of cities. NW with its sunk-capital intensive infrastructure can surely be of added value if it is properly utilized than if it is left to decay. However, while the physical transformation is the most visual and, perhaps, apparently immediate task, the challenge for cities like Nuremberg is far greater than merely restoring the left behind debris of de-industrialization. Rather, the challenge is to find new rationale(s) for "being" and to set up mechanisms that work to replace the economic rationale that has been lost. This task is not simple, on the one hand, the success of cities today presumes connectivity to global networks of economic activities, in which bits and piece of goods and services are produced, assembled and consumed globally. On the other hand, cities continue to have a regional and everyday life dimension in which people are grounded as they socialize, study, and play, grow old, and get sick, etcetera. Area-based regeneration approaches often get lost within this two-tiered expectation, one emanating from local considerations and expectations and the other from considerations that are outside of the area proper. Frequently one expectation is addressed to the detriment of the other.

This paper presents the research methodology that the Chair for Spatial Development has devised to propose innovative, creative, politically unrestrained and impact oriented transformation possibilities for NW, set purposefully at the sufficient temporal distance of the year 2050.

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We propose a framework for identifying way(s) forward in area-based-approaches. Our framework takes into consideration (1) the different scales at which NW contributes in terms of functions and in return is exposed to impacts in terms of trends, namely local, metropolitan, regional and global, and (2) different perceptions of NW, as an object of analysis, which is simultaneously a *place* with meaning and socio-cultural attributes, a *location* anchored in a particular geographic setting and part of *spaces* of flows that transcend its administrative and morphological boundaries. We elaborate on our notion of impact-oriented interventions. We argue that area-based interventions and their associated impact might not necessarily be congruent in time and scale.

1. Introduction

Numerous cities, in which industrialization had been the main stimulus for urban agglomeration, are experiencing urban decline. As the tide of industrial urbanization is ebbing, Nuremberg West (NW) is one such area in the State of Bavaria, Germany (Figure 1). Once the birthplace of Germany's first railroad between Nuremberg and Fürth, NW features today an oversupply of abandoned industrial space, which is coupled with low demand. The area features a disconnected and fractured urban fabric; it is a set aside and increasingly stigmatized area in transition. If the situation is kept unaddressed, the structural transformation process will likely bring redundancy and decay to NW, a situation in which the externalities of decay would have far reaching impacts on Nuremberg at large.

The Municipality of Nuremberg has acknowledged the precariousness of the situation and has commissioned a number of studies with the purpose of identifying intervention possibilities. In a parallel track, the municipality has commissioned the Centre for Energy Efficient and Sustainable Design and Building (ENPB) of TUM with a research project, titled, "Stadtlabor Nuernberger Weststadt", whose mission is to propose ideas for the transformation of NW under the guiding theme of sustainable urban development. The ENPB has assembled an interdisciplinary team at the TUM, to work on this task. Among the interdisciplinary team, is the Chair for Spatial Development, where the authors of this paper work.

Figure 1. Location of Nuremberg in Germany

This paper presents the research methodology that the Chair for Spatial Development has devised in order to address structural transformation of NW. We define structural transformation

as the visible, profound and severe change of the share of the different sectors in the economy;– As opposed to a smooth, continuous change, this type of change alters the structure of the economy, the locational behaviour of firms and the workforce, and has widespread effects on the structure of society. Structural transformation is propelled by technological development, increased global competition, financial deregulation and the growing deregulation of global labour markets. As foreign labour markets become more competitive, NW as a location for industries has lost competitive advantage. Industries located in NW have been either forced to close or to move elsewhere where the conditions for industrial production are more favorable.

Our methodology is based on the premise that as *spatial* transformation lags behind *structural* transformation, NW today captures a mismatch between, on the one hand, the spatial capacities of NW based on what NW once was and, on the other hand, the role that NW is playing today[i]. In the context of role vacuum and lack of alternative futures, this mismatch cements associations of loss and nostalgia. Such a context demands interventions of strategic nature that look forward towards the future rather than lament the past. Interventions that are not committed to steering change fall into the trap of becoming city beautification. Palliative interventions are assumed to be preparing NW to many potential futures while, indeed, these interventions are just stalling the process of structural change. Our methodology is based on the belief that while the future is uncertain, proactive steps can and must be taken to shape it. Hence, we argue that the goal of interventions is to steer *spatial* transformation rather than an all-sweep "cleaning up" of the area. Selectivity, prioritization and specificity of interventions are crucial in this regard. We define spatial transformation as one that goes beyond the physical/morphological transformation of space to encompass also aspects related to functions and processes. Indeed, spatial transformation is about the transformation of the intricate multi-scalar workings of morphologies, functions and processes. .

In what follows, we first discuss the different conceptions of NW as an object of analysis and intervention that is as an area *of* and *in* transformation. Second, we lay down the working definitions of key concepts of space, place and location. Third, we elaborate on the challenges of planning in the context of change and highlight the peculiarity of area-based regeneration. We then elaborate on the notion of impact-oriented interventions. We argue that area-based interventions and their associated impact might not necessarily be congruent in time and scale. Fourth, we propose our methodology for identifying way(s) forward in area-based-approaches. Identifying evidence-based future alternatives for NW based on SWOT analysis is the keystone of our methodology. Our SWOT analysis is disciplined by the different perspectives of NW and includes various scales. We show how OT's can be derived from the analysis of trends.

Finally, we conclude that in order to steer the transformation process, spatial interventions must surpass addressing the negative symptoms of structural transformation as manifested through fragmented urban fabrics and decayed architecture. Rather spatial interventions must be geared at addressing the *spatial* transformation of the area in question.

2. Conceptions of NW as an area *of* and *in* transformation

A newspaper headline in the local Nuremberger Abendzeitung (2012) titles "Deputy mayor for economic affairs dreams of Masdar city in Abu Dhabi as a role model for NW".[ii] The Masdar

city allegory is ill conceived for many reasons, disproportionality of financial capacities of the municipality, investors, intuitional context, social context etc…. However, this reference to Masdar city is an indication of the potential view at NW as an object that can emulate an *other* object, one that can be packaged for development, marketing, commodification and other purposes. This view is frequently the case, when an area is *declared*, usually by a plan-making agency, as fit for regeneration; the term area-based regeneration, carries such connotation. Indeed, the declaration of an area, such as NW, as a base for regeneration focuses the attention of analysis and restricts intervention.

The objectification of NW is a hypothetical exercise and useful only for the purposes of temporarily drawing attention to a certain area in the city. Indeed, NW, as an object, is only conceived as such within the confines of this study. NW is neither an administrative entity, nor is it perceived or lived as such- to use Lefebvre's well-known triad of lived, perceived and conceived space (Lefebvre, 1991). The acknowledgement that NW is a temporarily and artificially conceived object, one that is not congruent with a perceived and lived dimension, forms the basis of our methodology. In addition, we distinguish between two conceptions of NW, as a hypothetical object, namely, first as an object of analysis and second as an object/area of intervention (Figure 2).

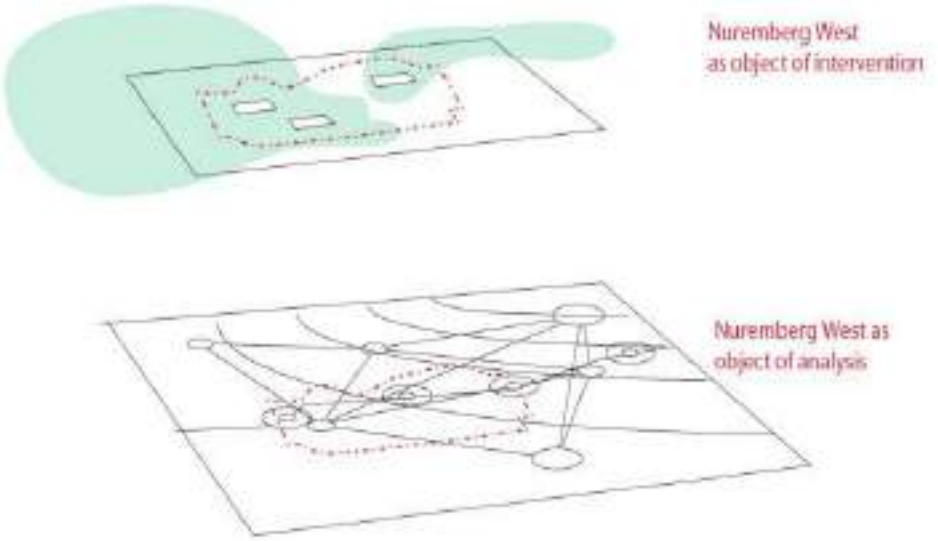

Figure 2. Nuremberg West as an object *of* and *in* transformation

First, as an object of analysis, NW is an area *of* structural transformation whose drivers emanate elsewhere. Globalization, ICT's, economic restructuring etc… are all factors onto which stakeholders of NW have no immediate agency. Nevertheless, as we analyze the problematics of NW it is precisely these outside factors that are identified as the root causes of structural transformation. Lest, the artificiality of conceived NW and the mismatch between its objectification and the lived and perceived reality haunts us we analyze NW by taking into consideration (1) its contribution and impact, at different scales, and (2) the different perceptions of NW, namely, as a *place* with meaning and socio-cultural attributes, a *location* anchored in a particular geographic setting and part of *spaces* of flows that transcend its administrative and morphological boundaries. The objective of analysis in classical spatial planning is to identify

change-induced spatial problems, in order to assess intervention requirements to alleviate spatial problems. The objective of our analysis is to identify the levers for steering change through spatial interventions. We hence shift focus from the spatial outcome of change associated with loss to the spatial prerequisite of change associated with the promise of gain.

Second, as an area of intervention, NW is an area *in* transformation. Spatial transformation lags behind structural transformation. Industrial production has ceased to exist in NW while the physical and functional spatial structure is still fit for such an activity. A mismatch exists between the capacity of NW as enabled by its physical spatial structure and the economic function of NW that is disabled by outside economic factors to which stakeholders of NW have no immediate agency. As intervention is restricted to the confines of NW, the objective of intervention is to push spatial transformation along a desired and possible direction. The possibility of this direction is confirmed through trend analysis. The intended effects of the interventions within NW radiate beyond its confines. Therefore a multi-scalar and systemic analytical understanding of NW is necessary (Thierstein et al., 2012). Hence, spatial transformation goes beyond addressing the left-behind debris of de-industrialization. Rather spatial transformation repositions NW within the metropolitan urban hierarchy in sync with the process of acquiring a new economic role.

3. Perspective and scale of spatial analysis: The concepts of space, place & location

A main argument that we make in this paper is that *spatial* transformation can be steered through strategic spatial interventions. We use the term *strategic* to describe interventions that are selective and specific; they are prioritized along an impact chain and sequenced along a time line.

Laying down what we mean with spatial transformation is a more complex affair and calls for a lengthier discussion linked to the complex definitions and concepts of space. Since it is beyond the scope of this paper to unflesh the broad spectrum of the definitions of space, we restrict ourselves to adapting the existent definition of Boesch and Weichhart (Boesch, 1989, Weichhart, 2008). In addition, we highlight the differences between the three seemingly similar terms, namely, space, place and location.

Boesch identifies three concepts of space, namely, Distance space (d-space), Function-space (f-space) and Process-space (p-space). Boesch explains the difference between these three different concepts as follows. D-space focuses on the physical and morphological aspect of space. Space here is conceived of as a container as a stage set. F-space focuses on the functionalities that space acquires. Space here is not just a container of activities, but has the props that enable actors to function in certain ways. P-space focuses on the processes that occur in space and on the interaction between the different actors. Actors on the stage set whose role-play is facilitated by stage props are the focus here. Boesch, however, does not make the important distinction between the static aspect of d-space and the dynamic nature of f-space and p-space. This is an important distinction. When we operationalize these three different concepts in the analysis, we discover that d-space can be bound geographically while f-space and p-space flow due to their dynamic and relational components. Last but not least, for analytic purposes it is convenient to

unbundle the different concepts of space, however, it is important to keep in mind that the intricate working of space is only understood as these different concepts are bundled back together again. Indeed, space that "works" is space in which the three concepts of d-, f-, and p-space "work" together, it is space in which actors, find the relevant props and relevant container to perform *their* act.

The notion of place is related to meaning, sense of belonging and collectivity emerging out of physical constellations that are geographically located, spatially related and lived in. To start with almost everybody has a *place* of birth that s/he relates to willingly or unwillingly. But place is more than that, place is what happens to a chunk of space when people inhabit it and acquire it as their own. Place evokes memories and emotions; stories get stuck in building facades, sidewalks and alleyways. Graffiti on walls make voices visible, however, the silent messages that place transmits are multifold. Place spawns collective action. People are brought together in place. The boundaries of place are flexible; a place can be a neighborhood a park, a street, a piazza, a playground or a building entrance. A place records histories, personal and collective ones. Places can therefore have symbolic significance. A place gets old and instigates good/old memories or ones that need to be forgotten. Place has also character, it can be boring or fun. Hence, place brings the emotional and social element of the physical to the foreground.

Location is related to geographical proximity vis-à-vis other areas. While the geographical location of a certain area cannot be altered, its connectivity and accessibility can. Distance is related to geographical distance measured metrically, and to travel distance measured in time. Cost of travel and environmental impact of travel are criteria that can also be considered to further sensitize this concept of location. Location is affected by political and psychologically constructed territorialities. NW is located adjacent to the town of Fürth; however, the psychological boundary between Fürth and Nuremberg expands this distance beyond the actual metric reality. Whether in NW such psychological boundaries are carried into the future through tradition and senses of belonging is questionable. Political and administrative boundaries such as those of NMR squeeze distances as the pressure to compact growth accentuates. Location is a given while accessibility of a location can be altered.

Space, place and location can be perceived at different scales. Analyzing NW at the scale of the city quarter scale along the different concepts of space, place and location, yields different findings than analyzing NW at the municipal or metropolitan scale. Hence it is important to superimpose also the notion of scale as an additional organizing structure of analysis (Figure 3).

Areas undergoing structural transformation exhibit an operational mismatch between the three different concepts of space. D-space and f-space are capable of operating but deficiencies in p-space inhibit the capacity to operate. To use the theater allegory, a functional stage and functional props are paired with actors of a different play. Areas undergoing structural transformation are prone to loose on the place dimension. The transformation process is accompanied by a high turnover of people. Decline or rapid increase of people translates in fewer or fewer proportion of people with claim to place. Dialectic develops between saving/keeping old places versus bulldozing the old to make room for inventing new places. Interestingly, it is only location that is a constant; therefore the locational aspects in terms of competitiveness and specificities of areas in transformation becomes one of the guiding factors that are taken into consideration in both analysis and intervention proposals.

Scale	Concept				
	Space			**Place**	**Location**
	D-	F-	P-		
City quarter					
City					
Metropolitan					

Figure 3. Matrix of the different perspectives and scales of spatial analysis

The above matrix is useful for organizing our analysis and focusing our investigation. However, it is important to keep in mind that the different concepts are not mutually exclusive but they overlap. Indeed it is the workings of these different concepts together and their overlaps that provide richness to analysis. Hence, in the matrix we isolate the various concepts only temporarily for the sake of clarity. Figure 4 visualizes these overlaps .The important role of visualization in capturing these complex overlaps on maps and diagrams is highlighted.

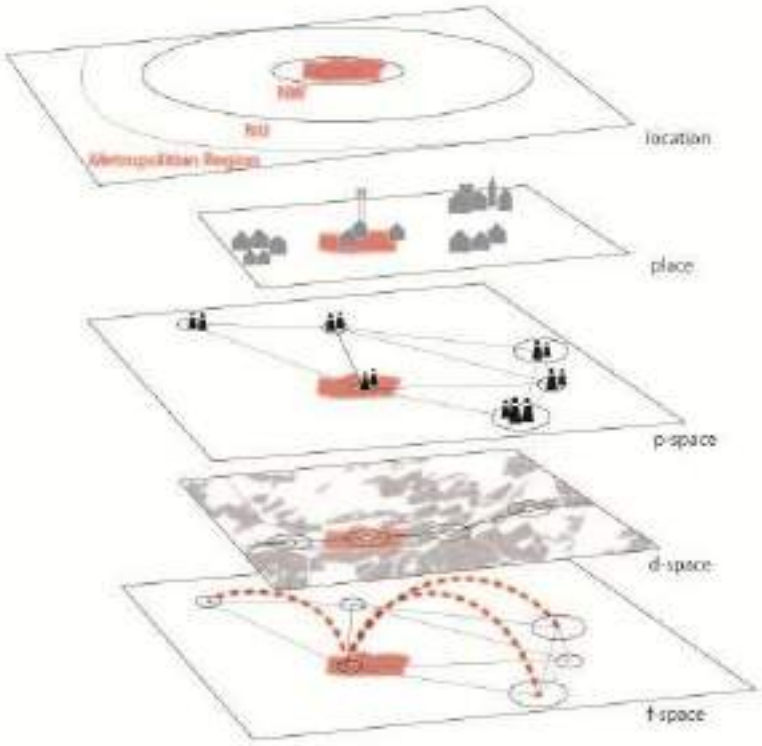

Figure 4. Visualization of the different perspectives and scales of spatial analysis

In the previous section we have highlighted the dual *conception* of NW as an object of analysis and as an object of intervention. In this section we have unbundled the different *perceptions* of these objects of analysis/intervention aided by the various concepts of space, place and location. In the next section we superimpose the different *perceptions* of NW - on top of the conception of NW as an object of intervention. This helps in organizing our understanding of the relationship

between intervention and associated impact. This is particularly important in contexts where change has a “hyper-dynamic” nature.

4. Planning in the context of “rapid change”: Formulating the problem is half the solution

Structural transformation is associated with change. Change can be related to growth, decline or stagnation. In addition change can be experienced at various speeds, intensities, scopes, scales and certainties. Growth can be fast paced but volatile, isolated, local and fluctuating. Decline can be slow, but widespread, global, intense and certain. In the case of NW, structural transformation is related to economic decline related to the loss of economic base. This decline has been intense, covering various sectors and certain.

Within the context of rapid change, political pressure builds up to devise equally rapid responses. In fast growing industries, such as China, we can identify a planning paradigm built around panicking; one that relents to the pressure of fast paced change and becomes enslaved to it. Pressured by the influx of population movements, demography, economic growth and the need to deliver, ad hoc spatial planning becomes the order of the day. However, matching the speed of response to the speed of change is not an appropriate approach. Institutional mechanisms within democratic regimes circumvent adhocracy by working their in-built valves that introduce patience into the system. Citizen consultation is one such example; constant negotiation within institutions is another.

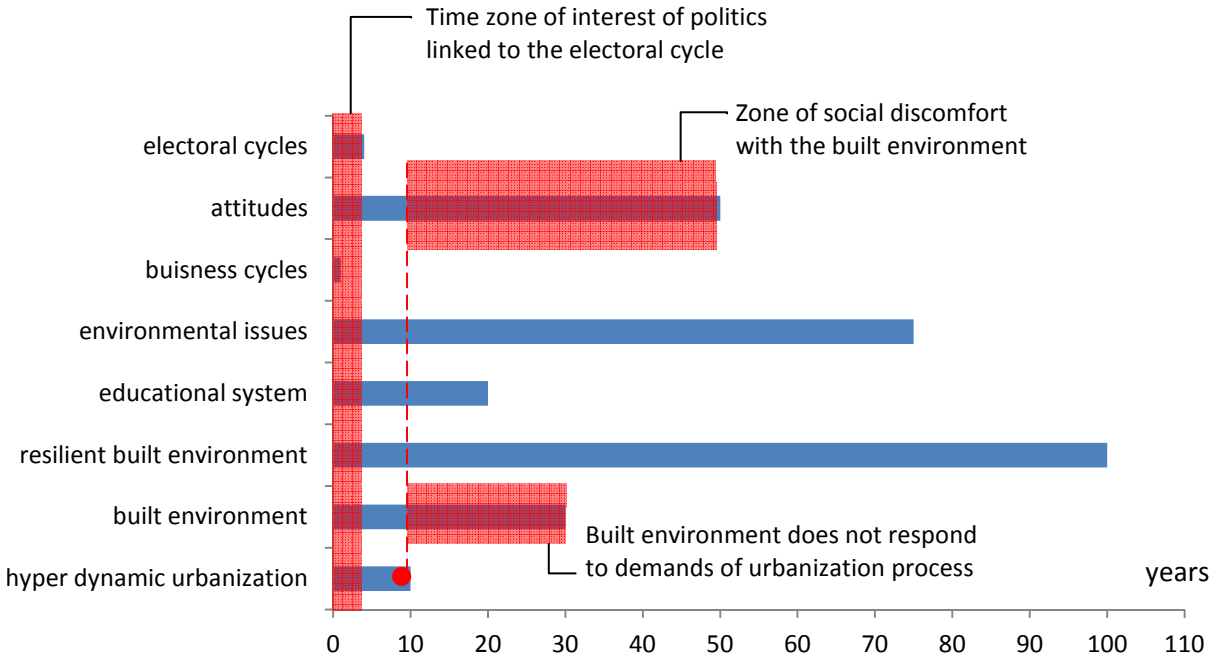

Figure 5. The speed of change of some driving factors of spatial transformation

However, the issue is not stalling response or buffering it. Rather, the issue is to analyze the various driving factors of change, relational and stock factors, in order to identify different rhythms of urgency and thus necessity to cater for in planning. Figure 5 illustrates how a hyper dynamic context of change within the urban environment, set at 10 years, supersedes changes in social attitudes, educational systems and even the life cycle of built environments. Hence, within hyper dynamic contexts of change, we frequently witness the bulldozing of functional buildings to give way to new ones; changes within social attitudes on average lag behind, frequently resulting in severe social problems as societies cannot cope fast enough along the speed of change. Figure 5 also illustrates how political actors have high stakes in changes occurring within their electoral cycles. This helps explain the disinterest among politicians in kick starting changes whose results are manifested way after their political cycles have been completed. As a result, it does not surprise that issues, such as environmental ones, which beg for a long-term approach are addressed within a short-term perspective for fast results.

However, if we consider change as an evolving process that occurs within cycles, it is possible to identify the intersections of cycles of change as windows of opportunity. For example, Figure 6 depicts a hypothetical situation in which the urban fabric has reached an end of a cycle, where refurbishment is necessary. This end of cycle coincides with the need to address pressing environmental concerns and the beginning of change in societal attitudes. To make things even more opportune all of this happens within an electoral cycle. Hence, in our figure all the factors of change have come happily together. We can also add the fact that the different cycles can support each other positively, for example, it is possible achieve faster cycles of environmental change if societal attitudes change in a way that support this. Hence, as we consider the intersection of different cycles of change and the possible mutual reinforcements, we become able to identify historic coincidences as such. As a result, it becomes possible to utilize all the available levers for steering change within a intended direction.

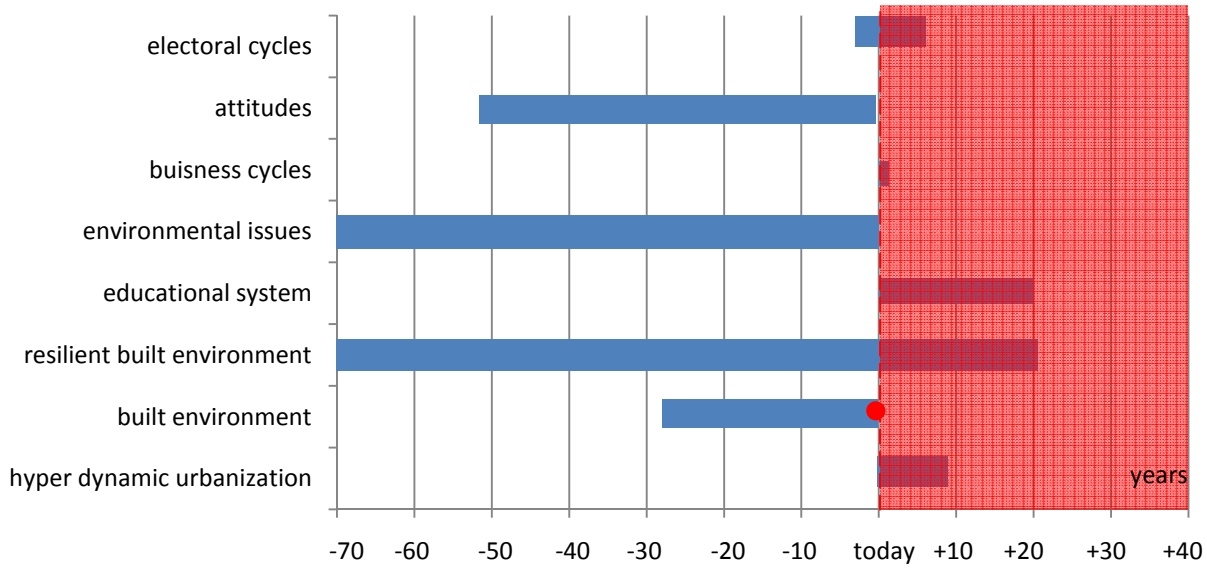

Figure 6. The intersection of cycles of change open windows of opportunity for spatial transformation

Formulating the problem in areas undergoing structural transformation around the element of change, the nature, scope, scale and speed of change and ways to deal with it, rather than restricting the view to spatial problems induced by change, is literally half the solution for tackling structural transformation in urban areas. In NW we have started from an area delineated as fit for regeneration by the municipality. However, NW is one site in Nuremberg in which the negative externalities of change are concentrated. To identify the opportunities presented by change it is vital to zoom out to larger scales in order to understand the capacities of the functional urban area to which NW geographically belongs.

As we take into consideration the temporal and multi-scalar aspects of the impact of spatial interventions, it becomes evident that area-based spatial interventions and their associated impact are not necessarily congruent in time, scale or scope (Figure 7). For example, proposed interventions might target the function space of NW. Such proposed interventions could result in an impact onto the function space of Nuremberg Metropolitan Region, but have only a minor impact on the physical space of NW. Also, intervention proposals can be bundled or unbundled. For example, in the NW project, intervention on all spatial levels can be proposed only within the confines of NW – the mandate of the project – hence, area-based. However, the associated impact of interventions spills over; some of this impact might not even happen or be felt in NW itself.

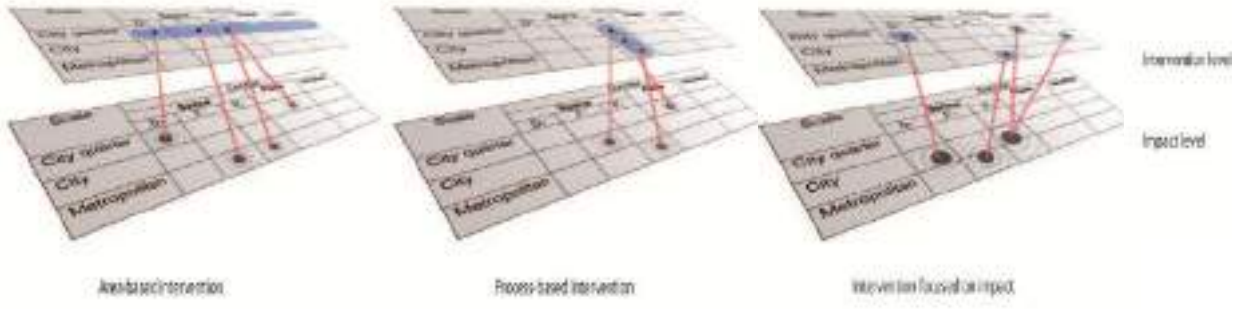

Figure 7. Interventions and associated impacts

Hence, spatial restriction of interventions by area-based mandates impedes the consideration of the full potential of space. Conversely if intervention can be proposed throughout the city, planners could start by deciding what kind of impact they want to achieve. Do they want to have an impact only on NW, if yes where should intervention occur? It can be the case that intervening in the process-space at the level of Nuremberg city can have a positive impact on the distance-space of NW.

This calls for putting the consideration of the impact of spatial interventions at the very forefront of any proposal for addressing structural transformation of areas in transition. Not doing so, risks moving problems from one part of the city to the other at best; at worst, the identification of good solutions to structural urban problems is severely restricted. For example, starting from the

consideration of the impact of spatial interventions, it is possible to conceive of a strategic concerted effort throughout the functional urban area of Nuremberg to address structural transformation in NW (Figure 7). It is equally possible to consider the impact of spatial interventions in NW on the town of Nuremberg.

Hence, we conclude, that if formulating the problem around the element of change is half of the solution, then the other half is formulating intervention proposals along the capacity to steer change at various scales, speeds and scopes rather than respond to it. Steering change through impact oriented spatial interventions is an approach that clearly diverges from approaches that put physical transformation at the fore.

5. A framework for Way(s) forward for NW: Methodology

Our previous discussion highlights that NW has a double handicap. Economic restructuring inhibits NW from assuming its old functions that its spatial structure enabled it to perform quite well in the past. Simultaneously, NW is inhibited from assuming new functions sustainably as its spatial structure has not yet adapted to new functions. This is precisely what characterizes areas in transition everywhere. The old [function] is dead while the new [structure to contain new functions] cannot be born yet. In the case of NW, structural transformation is associated with economic decline. In areas of transition experiencing rapid growth the new function is born while the old structure has not adapted yet. It is within this context that we propose our methodology for identifying way(s) forward for NW. The objective of our methodology is to enable the birth of the new. This we argue can be done by identifying possible future alternatives that become goals that selective impact-oriented interventions could aim to realize.

4.1 SWOT analysis

Our SWOT analysis of NW takes the different perspectives and scales of NW into consideration. By utilizing the conceptual structure of space, place and location, we organize analysis and discipline synthesis. As a result we identify the linkages between the different perceptions of NW. Since the scope of this paper does not allow a wide elaboration on our findings, we show the SWOT findings in an exemplary form to highlight our methodology.

To start with we analyzed the strengths and weaknesses (SW's) of NW. We focused on the functions of housing, economy and social cultural networks. The conceptual frame of space, place and location provided an organizing structure to our analysis. One of the key strengths identified for NW is its strategic location within the municipality of Nuremberg, that is, at close proximity to both, the centre and to transportation nodes that connect it to high-speed roads, high speed trains and to the airport. This strategic location is a strength that the future of NW can build on. In addition, the location of Nuremberg within Europe at close proximity to Eastern Europe is also a strength that NW can capitalize on. The Metropolitan Region of Nuremberg might well become the receiving end of waves of population migrations. Already today NW is home to a diverse population. The current social diversity means that NW is well experienced and trained in mediating between diverse socio-cultural groups. Hence, the current social diversity within NW is also a strength. Within another perspective of analysis, the rich history of

NW, its associated tradition linked to industrial pride – with brands like AEG, Triumph-Adler, Quelle – leaves places within NW laden with value, pride and meaning that radiate at the scale of Nuremberg at large. These places are distinctive of NW. They provide a strength that can be built upon. On the other hand, fragmentation, spatial discontinuity, noise, physical barriers and quality of the existing housing stock were identified as weaknesses of NW. Interestingly; most identified weaknesses are linked to the physical urban fabric of NW. These SW's were listed along a scalar hierarchy (Figure 8).

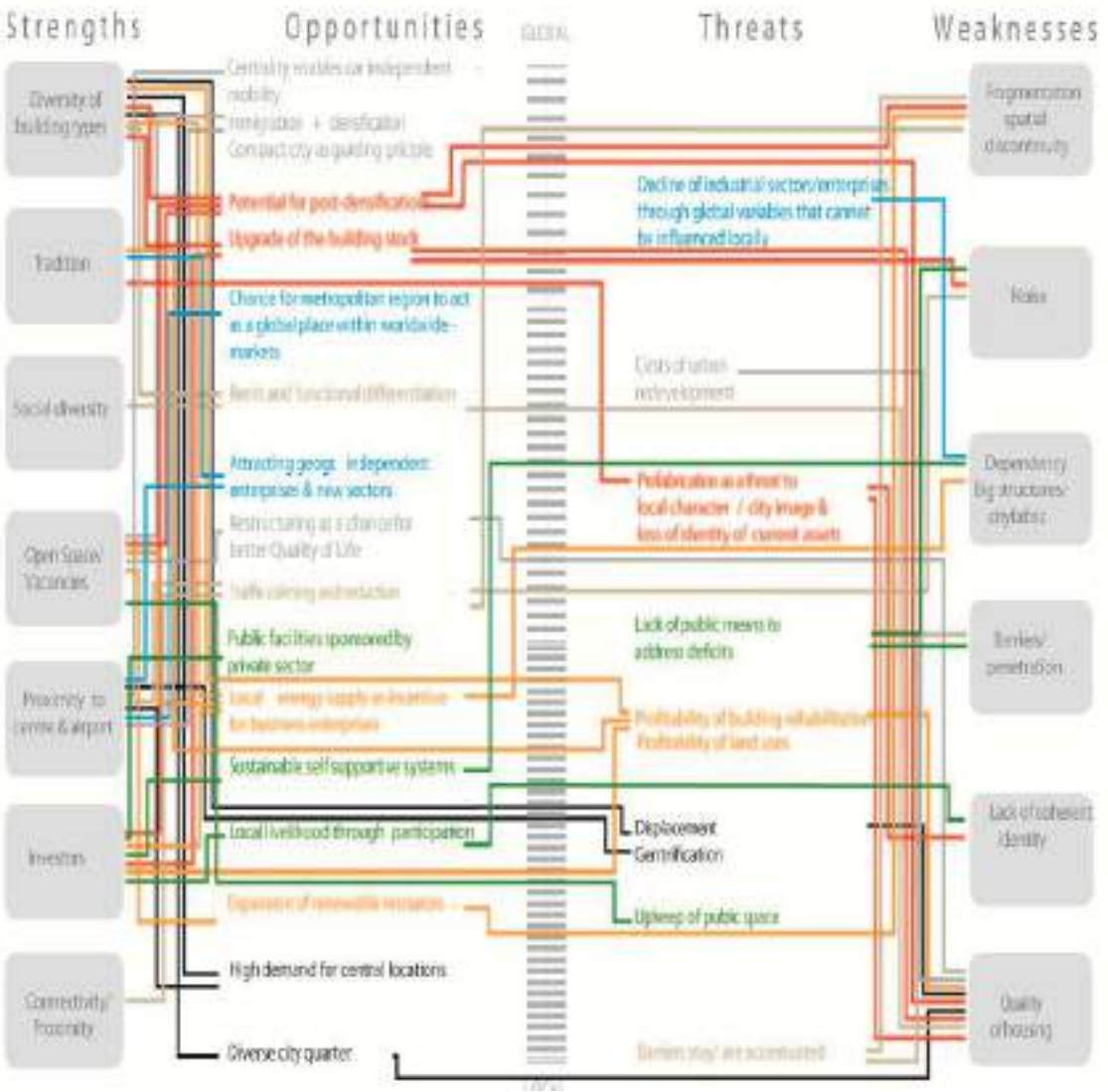

Figure 8. SWOT's of NW (Source: Student work)

In order to identify the opportunities and threats (OT's) we selected a number of trends from the trend document of the consultancy of Ernst Basler Partners Ltd (EBP, 2010). These selected trends were clustered thematically (Figure 9).

Figure 9. The clustering of trends

We applied these trend clusters onto NW with a view at the Strengths and Weaknesses of NW. The idea was to identify how Strengths and Weaknesses transform into Opportunities and Threats and how different trends reinforce each other (Figure 10). As the different OT's were identified they were listed again along a scalar hierarchy alongside the SW's (Figure 8).

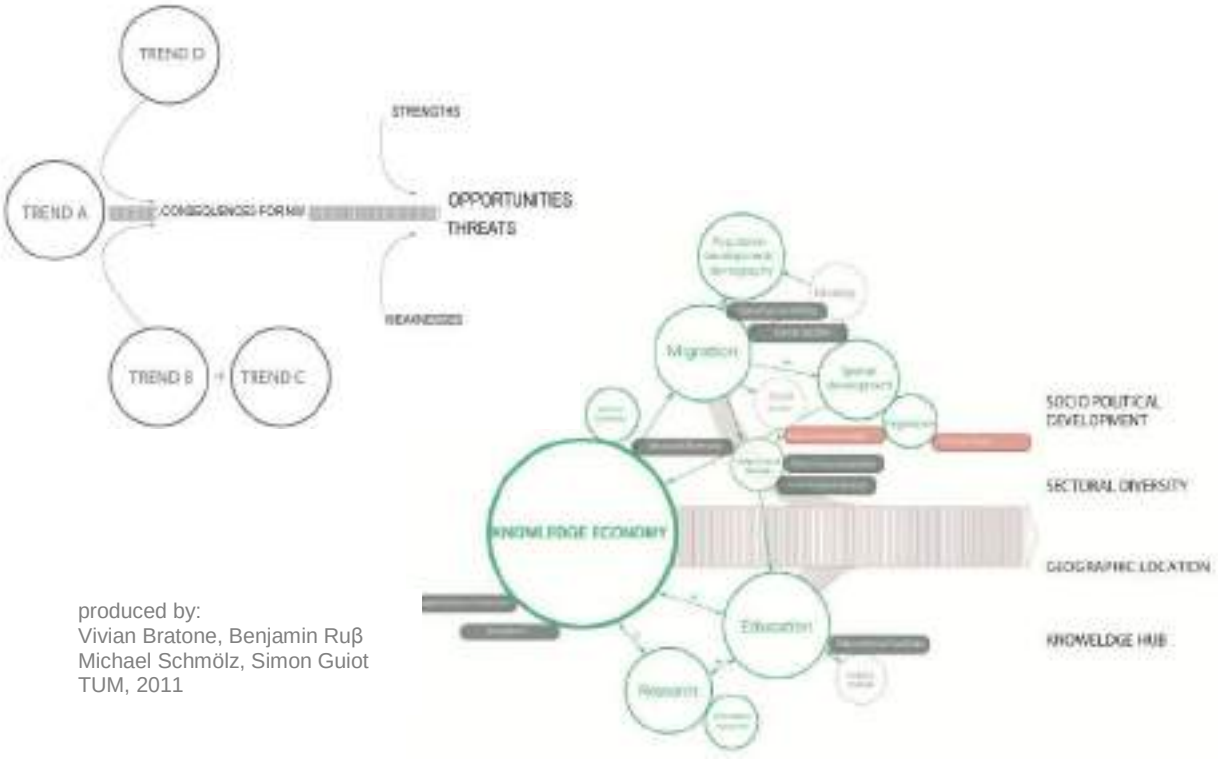

Figure 10. Applying the trends onto NW to identify OT's (Source: student work)

In addition, on hand of Frederic Vester's model of the paper computer, (Vester, 2002) we assessed these selected trends in terms of their role within the overall systemic context (Figure 11). The selected trends were listed on the horizontal and vertical axis of the paper computer. The effect of each trend listed on the horizontal axis on a trend that is listed on the vertical axis was assessed. This assessment was quantified at a value of 0 to 3, whereby 0 denotes no effect and 3 denotes a maximum effect. For example, does the trend of "changing lifestyles and values" have an effect on the trend of "mobility"? If yes, is this effect major or rather minor? As each trend is assessed against all others, the paper computer becomes complete. The values were then summed up for each trend on the horizontal axis and the vertical axis. The summations on the horizontal axis thus denote the active nature of a trend, summations on the vertical axis denote passivity.

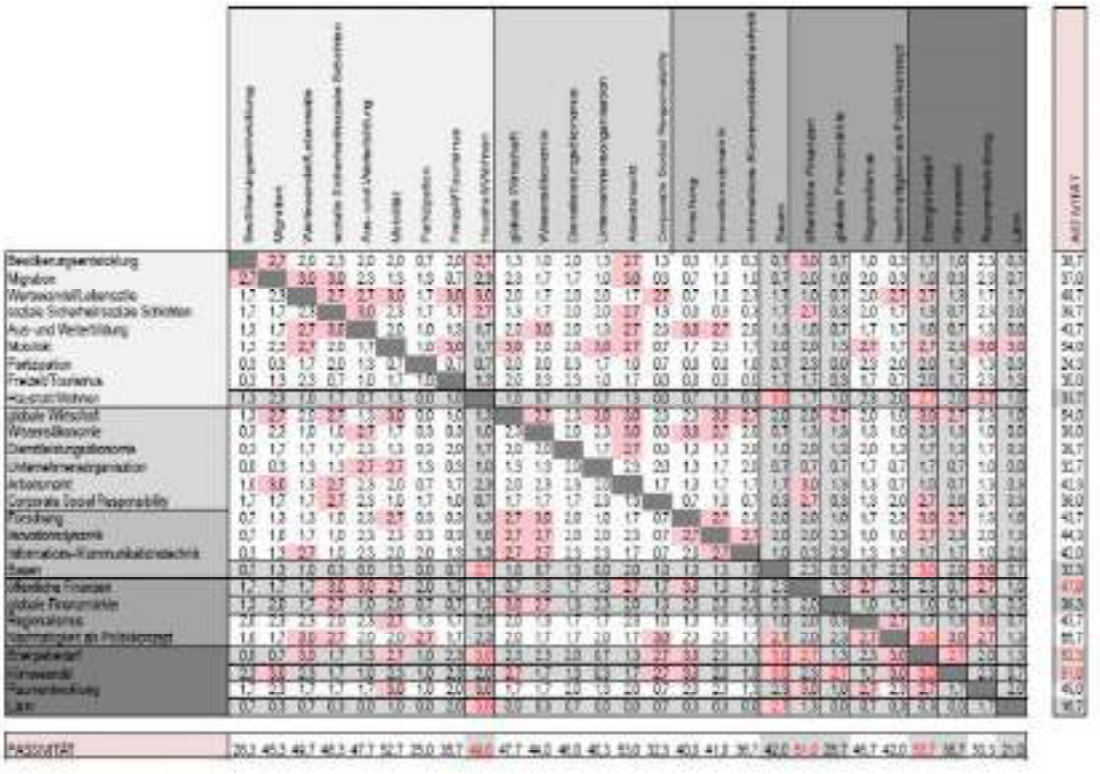

Figure 11. Paper computer

The idea of the paper computer is to identify reciprocal effects, levers of control and fields of action (Thierstein et al., 2008). Given the position of the different trends regarding their active or passive nature we classified their role in the overall system as active, critical, reactive or buffering. "Active trends have a strong influence of other trends and are influenced only minimally by the latter. Critical trends are heavily influenced by other trends and, in turn, exert an equally strong influence on the latter. Reactive elements are heavily influenced by other trends and only have a minimal influence on the latter. Buffering trends only exert a minimal influence on other trends and, in turn, are influenced only minimally by the latter. Reciprocal effects are significant with regard to political intervention. Without a sound knowledge of the

overall systemic context, isolated measures soon run “out of control” and have non-intended effects in other fields of policy ” (Thierstein et al., 2008).

The trend of global economy has transformed the process and function space of NW; as a result this has had an impact on d-space and NW as a place. NW is however still a well connected location. Is it possible to address such a trend and redirect its impact in NW? This is what we asked ourselves as we analyzed each trend. For example, identifying the physical fragmentation of the urban fabric of NW as a weakness impedes certain functionalities and processes to evolve. Hence, even if the municipality would intervene through, for example, tax incentives to encourage certain functionalities, deficiencies of d-space would still be a counter force.

Based on the SWOT analysis and our clustering of trends we were able to identify the possibility of three future alternative developments of NW.

4.2 Alternative futures

The keystone of our methodology is proposing evidence-based, possible future alternatives of NW based on a SWOT analysis that takes into consideration the various perspectives of NW. We propose innovative, creative, politically unrestrained and impact oriented transformation possibilities for NW, set purposefully at the sufficient temporal distance of the year 2050.

The year 2050 has been chosen, in order to break free from the short-run where almost all handles/levers to intervene are fixed and sticky. The temporal distance of a generation makes almost everything become fluid and flexible. At the same time 2050 is not too far in the distance. Trends of today can be used to help predict the shape of the future. Hence, the view to the next generation creates a condition, in which liberation from today’s constraints is experienced simultaneously to the engagement with today’s identified trends. This condition begs for an understanding of the inter-relatedness of factors and assessing of the relative speed of change in planning. As we elaborated previously, identifying the relative speed of change is the key for identifying windows of opportunity for planning.

These alternative futures are assumptions of the potentiality of a positive transformation of NW in 2050. Positive is judged by the fact that NW is *sustained* and recognizable as a *place* that contributes value to the city and region of Nuremberg. Our proposals of future alternatives are based on our belief that it is possible to negotiate in NW, future conditions proactively. As a result our proposals are (1) evidence-based, (2) positive, problem solving and impact oriented and (3) function oriented.

The future alternatives are evidence-based, because they emanate from the findings of the SWOT analysis. Future alternatives are not impulsive or spontaneous visions; they are systematic-conceptually drawn analysis (SW’s) of the current condition of NW and systematically developed-assessment (OT’s). Future alternatives are developed with a view at the opportunity presented by the municipality with regard to intervening in a proactive way today, in order, to address the threats posed by challenges and steer the transformation process in a way that conforms to current values (e.g. sustainability). Hence, future

alternatives are proposed based on the belief that a positive future for NW is possible and desired impacts are achievable.

These proposals for alternative futures of NW in 2050 provide the direction and incentive for "way(s) forward". They organize intervention proposals of various disciplines along aggregated desired impact. Hence, we do not propose one alternative future, but rather a number of ones. In the case of NW we propose three future alternatives. These future proposals have been useful in structuring the work within our multi-disciplinary team at the TUM (Figure 12). At the onset of this research project, the common ground in our inter disciplinary team was the aim to follow the guidelines of sustainability. However, sustainability as a value leaves out many grey areas. In addition, the pace and scope of sustainability transitions proposed by the various disciplines vary. The three alternative futures emerged as a good container to sort out various proposals of the different chairs involved in this project.

Alternative future 1	Economy	Housing	Social cultural	Open space	Transport	Energy	…
Role NW vis-à-vis NMR							
Functional Transformation							
Spatial Transformation							
Process of transformation							

Figure 12. Detailing of alternative futures

Proposing a number of future alternatives rather than just one can serve the political process as a platform for debate, as stakeholders ask themselves, where to, which way forward? As discussed in section 4 of this paper, in the context of hyper-dynamic change, it becomes difficult for public authorities to assess the impact of the decisions they take. In deed different decisions, which at first glance seem to be consistent, are frequently counter productive and end up pulling development in contradictory directions. Hence, proposals of alternative futures serve as goals, against which public authorities can continuously check the effectiveness of their decisions.

Of course, we are aware of the fact that the life cycles of cities transcend a future goal that is set today. The objective of setting a future goal is not actually reaching the goal but rather to sort out and organize interventions. In deed alternative futures are developed with the underlying idea of "Der Weg ist das Ziel".

As decision is taken for a direction and commitment is taken for one alternative future, strategic plans can be developed to get there. Committing to one future alternative demands a political process. Lack of commitment in the short run in order to leave out all options open stalls the process of achieving desired change. Such a reactive approach is likely to be adopted by risk avert municipalities. Future alternative proposals in this instance are not goals but rather are used as assessment tools for interventions.

4.3.Application on NW

We have identified three alternative futures as to the potential positive transformations of NW in 2050. Proposals identify the potential roles of NW within the metropolitan urban hierarchy and the associated functionality of the space of NW. We term the first proposal "NW sustains through managed care", the second, "NW transforms into a hub for the Knowledge Economy", the third, "NW transforms into the birthplace for the Subsistence Economy".

In the first proposal, NW sustains along a process of what we term "managed care". NW does not become a popular site for a particular sector of the economy nor does it assume a particular function within the metropolitan urban hierarchy. Rather NW sustains by responding to a plurality of demands that emanate from the Nuremberg Metropolitan Region (NMR). With NMR we are referring to the functional urban region of Nuremberg and not to the administrative metropolitan region. This proposal is one that acknowledges the "downgrading" of the role of NW, namely, from a site in which activities and production contributed to the economy of NMR, to a site of tertiary activities. Within this proposal the restructuring of space will play a crucial role. The configuration of space at present reflects the previous citywide role that NW has played. Its future "downgraded" role demands a reconfiguration of space that focuses on local connectivity in which housing and the local economy are important drivers of sustainability. It is within such a context that we talk of "managed care". The process of enabling a successful "downgrade" of the status of NW should be carefully managed to ensure that NW does not slip into decay and obsolescence but continues to provide value to Nuremberg albeit at a secondary level.

In the second proposal, NW is transformed as a hub for the Knowledge Economy (KE). The beginning of such a process is under way already; the objective of this proposal is to support this process. Within this proposal NW continues to have an active role at the citywide scale, although this role has transformed from activities linked to industrial production, to activities linked to the KE. Assuming a role at the city wide level means spatial connectivity and locational advantages must be bolstered. However, this is not enough. In deed, for NW to successfully acquire such a role, the local spatial fabric of NW has to respond to the changed clientele of people involved in the KE. The lifestyles of KE workers are different than that of people involved in industrial production. Different lifestyles are associated with changed demands on space. Hence, in this proposal, two important considerations are citywide spatial connectivity as well as the restructuring of the local spatial fabric to respond to new demands.

In the third proposal, NW is transformed into a hub for the Subsistence Economy (SE). NW becomes in 2050 what is envisaged in retrospect as the "birthplace" of the SE in Nuremberg. In

other words, the “sparks” for the evolution of SE in Nuremberg are set along a process starting in 2012 in NW. The acquisition of functions related to the operation, maintenance and management of a subsistence economy builds on the availability in NW of vacant land for development.

Each of the three future alternatives proposes a different pace and scope of “sustainability transition”. In “Managed care” transition would be slow; its scope narrow, especially in the short term. In “KE hub”, transition could be fast, but its scope not really dramatic. In “birthplace of SE”, sustainability transition would be slow but the scope vast.

5. Conclusion: Steering the transformation process through spatial interventions

In this paper we have elaborated on the role of space in addressing the challenges of structural transformation. We have provided a conceptual framework for both (a) analyzing areas in transition as hypothetically conceived objects of analysis and (b) for proposing impact-oriented spatial interventions that address change induced spatial problems.

Our conceptual framework helps shift the focus of planners from the spatial outcome of change associated with loss to the spatial prerequisite of change associated with the promise of gain. As we described the methodology that we have developed for addressing spatial transformation of areas undergoing structural transformation, we have focused on the importance of formulating proposals of future alternatives based on SWOT analyses. SWOT analyses take into consideration the different perspectives and scales of spatial analysis and development trends.

Anticipating the future and identifying how it can be shaped today in a proactive way is not a visionary exercise; it can be arrived at through systematic analysis of the current situation and the factors of change. Assessing the speed of change, considering the intersection of different cycles of change and possible mutual reinforcements, it becomes possible to identify windows of opportunity; those historic coincidences, which if seized become transformative. As a result, it becomes possible to utilize all the available levers for steering change within a desired direction. Based on this approach, we have argued for a spatial transformation that addresses structural transformation in a forward-looking rather than a submissive way. The objective of identifying future alternatives is to organize and assess spatial interventions along desired aggregated impact. Doing so helps planners to move away from proposing palliative interventions that seize the moment to searching for transformative spatial interventions that pave the way to the future.

While we have not in any way been dreaming of Masdar, which translates from the Arabic language into ‘source’, we conclude that space is the very source of sustainability transition. Spatial transformation is the purposeful transformation of space, one that takes into consideration the intricate working of space in all its aspects and scales of impact.

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Windschall, S., 2012. Wirtschaftsreferent Fraas traeumt von Abu Dhabi. Abendzeitung Nuernberg.

[i] NW seems like an old muscle-packed wrestler. The muscles are all there, capable of function. However, as the days of wrestling contests are over the muscles cannot be put in use for wrestling anymore.

[ii] „Wirtschaftsreferent Fraas träumt von Abu Dhabi: Der Nürnberger Westen soll in den nächsten 50 Jahren umgekrempelt werden- Vorbild: ein Projekt in der Wüste“ Windschall, S., (2012). Wirtschaftsreferent Fraas traeumt von Abu Dhabi. Abendzeitung Nuernberg,) The newspaper article quotes deputy mayor for economic affairs, Fraas, for looking to Masdar city in Abu Dhabi for inspiration. Masdar city is an emerging urban development project designed to be built on a tabula rasa in the desert of the UAE. This planned city is currently being built by Abu Dhabi Future Energy Company, a subsidiary of Mubadala Development Company. Designed by the British architectural firm Foster and Partners, this city is planned to rely entirely on solar energy and other renewable energy sources (Source: http://www.masdarcity.ae/en).

Flexibility, Justification and Financial Results of Land Development Projects by Local Governments

Vitnarae Kang[1]

Abstract

Land development projects undertaken by local authorities in the Netherlands appear to be an exception to the general rule of cost-underestimation with benefit-overestimation frequently observed in large public projects (Flyvbjerg et al., 2002). In the case of the Netherlands, the profits from municipal land development are larger than the estimated (Korthals Altes, 2010). The exception deserves to be studied, as it may provide with explanations for the budget overruns of other kinds of large projects and inform about their solutions.

In this paper, land development projects are looked at from the perspective of 'flexibility, justification and financial results'. Though public land development projects are seemingly well managed in the Netherlands, local authorities are struggling to make their projects financially and qualitatively feasible, especially in changing market conditions; for example with reduced housing transaction and decreasing building land prices due to the 2007-2008 global financial crisis. In that sense, the following points are shed light on by a case analysis of 'Midden-Delfland's practices from 2008 to 2012; how to incorporate uncertainties and emerging information flexibly in the plan considering its financial implications, how decisions are justified in the process, and how all those points are influencing on the financial end (Faludi and Korthals Altes, 1994).

1. Introduction

Land development projects undertaken by local authorities in the Netherlands appear to be an exception to the general observation in the planning of large public projects that costs are underestimated while benefits are overestimated (Flyvbjerg et al., 2002). In the case of the Netherlands, incomes from municipal land development have been larger than the estimated (Korthals Altes, 2010). This happens in the planning environment where costs and benefits are generally underestimated, however, realized benefits are much higher than actually incurred costs (Korthals Altes, 2010). During the period of 1999 to 2007, the realized annual surplus from land development projects was minimum 1.22 and maximum 2.92 bigger than the budgeted (Korthals Altes, 2010). Besides, the income from land development projects is a relatively important revenue source for local governments in the Netherlands, which accounts for approximately 12% of the whole local government income (Korthals Altes 2008, Allers 2011). While more than 80% of local

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government income depends on grants from the national government (Needham 2007a), either general or earmarked (Figee et al. 2008), municipal land development gives a room for local governments to exercise their discretion in a way that tailor-made financing mechanisms are made possible in response to local needs.

The recent estimation by Deloitte (2011a), however, presents a different picture. An expected yield on the land development portfolio of all Dutch municipalities in total can be 2.9 billion euro less than what was estimated in the budget of 2010. This loss of 2.9 billion euro is composed of the direct loss of 1.8 billion euro from financially negative plans and the indirect loss of 1.1 billion euro from financially positive plans. This dramatic turn is attributable to the global credit crunch; reduced housing transaction, falling housing construction, decreasing housing prices and subsequently decreasing building land prices (Priemus 2010). Yet, Dutch municipalities are struggling to make their land development projects financially and qualitatively still feasible in the midst of changing market conditions by adopting various micro-adjustments in their project-management(Deloitte 2010). Policies such as the Decree on Budgeting and Financial Reporting (BBV) and Municipal Memorandum Land Policy also provide a municipality with frameworks to manage financial arrangements of land development projects. Those policy-guidelines were formulated before the credit crunch, not necessarily in the prediction of the credit crunch but still relevant to responding resiliently to changing conditions. Those policy-guidelines stand path-dependent on traditional Dutch land development practices.

The Dutch exception with respect to the relation between budgets and realized results of public land development projects deserves to be studied further; why, how and what kind of discrepancies between the budget and the result takes place, and how land development project is managed by the municipality. Since it may provide with explanations for the budget overruns of other kinds of public projects and inspirations for their solutions (Flyvbjerg et al. 2002). Furthermore, it would present more realistic lessons to look at the post-credit-crunch practices of municipal land development, as the post-credit-crunch practices are expected to partly be in the continuation with the ex-credit-crunch practices and partly be innovative. They would reveal more dynamics of changing conditions in which land development projects are operated and of decisions taken by municipalities.

In this paper, municipal land development projects are looked at from the perspective of flexibility, justification and financial results. First, I discuss the concepts of flexibility, justification and financial results used in this paper for analyzing municipal land development based on literature review. Factors that the municipality can influence regarding costs and incomes are briefly explained. Suggested explanations for why municipal land development projects in the Netherlands usually generate surplus over the estimated costs and benefits are also discussed with the introduction to the municipal planning and monitoring cycle of land development projects according to the task division within the municipality. Second, research questions are proposed based on the foresaid concepts with a purpose of a case-study method and an introduction to a selected case. Findings from the case-study are

presented according to the proposed research questions. Third, further discussion points and considerable lessons are suggested based on the case-study findings. What needs to be notified here is that the case-study in this paper is a pilot-study to explore possible research directions further based on collected data and to sharpen the asked research questions for subsequent study based on an identified gap between the questions and what collected data show.

2. Literature Review: Flexibility, Justification and Financial Results of Land Development Projects

2.1 Flexibility

The relation between plan and its implemented result has been an issue in planning studies for a long time (Alexander 1998, Faludi and Korthals Altes 1994, Faludi 1987, Thomas et al. 1983); how much the realized result deviates from the initial plan, what are the reasons for it and how positively or negatively the deviation can be interpreted. One of the main lessons from accumulated case studies is that the initial plan can better be situated in the process of plan implementation as a guideline for further improvements of the plan and its project itself in order to accommodate emerging information and changing conditions (Alexander 1998, Faludi and Korthals Altes 1994, Faludi 1987, Thomas et al. 1983). Thus, flexibility can be defined according to Faludi and Korthals Altes (1994, p.405) as allowing institutional room in the process of project implementation for a possibility of further learning and to reflect newly acquired information on the project, based on the view that 'the plan can be reconsidered'. Tasan-Kok (2008) distinguishes the use of the concept 'flexibility' in the planning literature into three categories; 'changing decision-making approaches and urban government system' with such keywords as complexity, multi-actor governance and non-linear decision-making, 'shifts in urban development traditions and attitude of planning practice' with such keywords as project-led development, incrementalism and opportunism, and 'the recognition of diversity, multiculturalism, and heterogeneity as positive aspects of urban society by the planning profession' with such keywords as diversity and sustainability. Muñoz-Gielen and Tasan-Kok (2010, p.1103) define 'flexibility' in their research on public value capturing in urban regeneration projects as a degree of certainty about future building possibilities i.e. what, where and how the landowner is allowed to build and about future contributions i.e. what and when the landowner has to give in kind or in the form of a financial contribution to the concerned planning authority. In this paper, it is meant by flexibility that an initial plan for land development projects can be changing till the completion of the projects. The questions related to flexibility here are why and how changes in the plan were brought about, how those changes in the plan actually improved the project in terms of spatial quality and financial feasibility and what are their consequences on incomes and costs of the projects.

2.2 Justification

The foresaid leads to the following keyword; justification. By justification it is meant what decision makers of public land development projects who bring and approve changes to the plan propose as arguments for such changes to a municipal council which takes ultimate responsibility for its constituency; why those changes are necessary and more beneficial for public interests than without them, as a way of guaranteeing accountability in public policy implementation. Arguments used for justifying decisions show how technical expertise within a project executive body contemplates market conditions, physical constraints or local sentiments. Justifying decisions involved in public land development projects is about choice made on the goal, the design, the contents, the phasing, and the spatial quality of the projects. It is about to find out a balance between the spatial quality to achieve via the project and the financial consequences through the process. Justifications for such decisions are presented in municipal budgets and financial reports which hold the decisions subject to the public debate.

2.3 Financial results

Flexibility is also strongly related to financial results. Needham (2007b) and Korthals Altes (2007, pp.1506) identified the most important financial variables influencing the financial end of a municipal land development project and the possible decision-making areas in the project. Main financial variables are (a) land acquisition costs, (b) costs of site-preparation, (c) interest charges and (d) incomes from land disposals.

Verhage and Needham (1997) identified the cost side and the income side from the point of view of the municipality in more details.
Costs: land acquisition; primary and secondary services; making and supervising the plan; interest costs; possible contribution towards other residential development (for a more extended list of costs, see Muñoz-Gielen, 2010, pp.229-230)
Incomes: revenues from selling serviced plots; possible subsidies from other governmental funds; possible contribution out of local taxes; and possible contribution out of surplus from other projects

Based on the identified financial variables, the scope of choice to the municipality is more elaborated hereunder.

Variable a: the municipality can choose an acquisition strategy;

- Using pre-emption right to acquire future development sites.
- Pursuing an amicable acquisition, using the possibility of compulsory purchase as a big stick (Buitelaar 2010).
- At what price level land acquisition cost would be determined, depending on land ownership situation in the concerned plan area and the bargaining power of the municipality: the price is usually set to be higher than existing use value but same with or less than double existing use value (Needham 1997). In the compulsory purchase law, compensation for expropriation ought to be according to the market price and the market price is likely to be double existing use value (Needham 1997).

- What kind of cooperation-form the municipality chooses with private developers.

Variable b: the municipality can choose the quality and the quantity of services and public facilities delivered within the plan area, and outside of the plan area in relation to needs created by development.
Variable c: the municipality can control or influence the speed and phases of development, determining when to make what kind of costs. The longer a project takes to finish, the more interests are incurred in general. Thus, inflow of incomes can better be expedited as possible and costs can better be incurred later, closer to inflow of incomes. For example, postponement of costs-incurring activities according to actual land disposal schedule can be one of the ways to improve the financial result when acquired land is not likely to be sold soon.
Variable d: the municipality can make a choice on the mix of land uses, cross-subsidizing unprofitable land uses from profitable ones within the plan area. 'More commercial houses' means more profits and 'more social houses' means less profits. By adjusting a development programme, such as types of houses and maximum density, the municipality can influence incomes from land disposal, even though it can hardly influence prices of end-products since the prices are highly determined in the real estate market.

Therefore, decisions made by the municipality influence the financial result of a land development project. How the municipality perceives risks involved in the project, how it interprets the financial status of the project and why and how it chooses to respond to recognized problems in such a way in the process of development; they are to be found in public justifications for such decisions by the municipality.

2.4 Institutional settings: municipal land policy in the Netherlands

There are some starting points to analyse the financial result of municipal land development when looking at it from the viewpoint of flexibility, justification and financial results. From discussion of the financial estimates and results of servicing land by Korthals Altes (2010), it is possible to extract the following explanations for why land development projects by local planning authorities in the Netherlands usually generate surplus over the estimated expenses and revenues.

1) Because of flexibility in planning, to adapt to changing conditions by realising the project incrementally in subdivided units and by accommodating emerging information to piecemeal decisions (Korthals Altes, 2010, pp.936 and pp.938).
2) Because of conservative accounting rules (BBV) that losses must be recorded in anticipation and profits may only be recorded after realisation so that the principle of prudence in business is encouraged while it is discouraged to justify a cost-overrunning project without making provision for expected losses (Korthals Altes, 2010, pp.934 and pp.938).
3) Because of no institutional inducement for land development agencies to show figures that are too positive; in other words, institutional incentives for those

agencies to budget conservatively in order to prevent local authorities from reducing their funding (Korthals Altes, 2010, pp.937-938).

4) Because of buoyant housing market which leads to the option value of future actions, which is especially relevant to the period before the credit crunch, and specific characteristics of local residential market (Korthals Altes, 2010, pp.937-938).

The first point is related to internal factor of the municipal management, namely flexibility in the decision-making process. Here, a budget based on land development plan functions as a financial framework for further manoeuvre in which the project may proceed, focusing on the final quality of the project and not merely on the costs or revenues of the project. Thus, decision-points in one project are not concentrated into a single moment but are spread over time (Korthals Altes, 2010, pp.931 and pp.939). In that way, political influence is to be constantly exercised by checks and balances in the decision-making cycle, rather than decisions are solidified after a certain moment out of the political reach.

The second and the third are related to the way the municipal cabinet presents the budget and the financial result of executed land development projects to the municipal council and the way the municipal council interprets and judges them in order to control and steer development. The fourth point is rather an external factor. The way the municipality is responding to such an external factor is yet determined largely by the first three points. Because the extent that municipalities are affected by the credit crunch may vary from a municipality to a municipality and local scarcity of houses is also different from location to location, it is worth looking at how the municipality perceives the impact of the credit crunch and the status of the local housing market, which would lead to specific adjustments in the project implementation.

Since the first three points are all related to task-division and communication between the municipal council and the municipal cabinet, and also to the administrative cycle of planning and control within the municipality, it is worth mentioning the Dualism in Local Government Act enforced in 2002 and the Decree on Budgeting and Financial reporting enforced in 2004.

The Dualism in Local Government Act gives municipalities a framework in which the distinction between the local council and the cabinet of mayor and aldermen is made clearer. The local council now plays a more independent role in checking and scrutinizing the policy implementation by the cabinet than before. The cabinet consists of mayor and aldermen. They become more professional in local policy formulation and execution because alderman who had formed a member of the local councilors before 2002 become separate from the council and they can now be recruited from outside the municipality according to required expertise in his/her policy field (Severijnen and Bovenkamp Ba 2007).

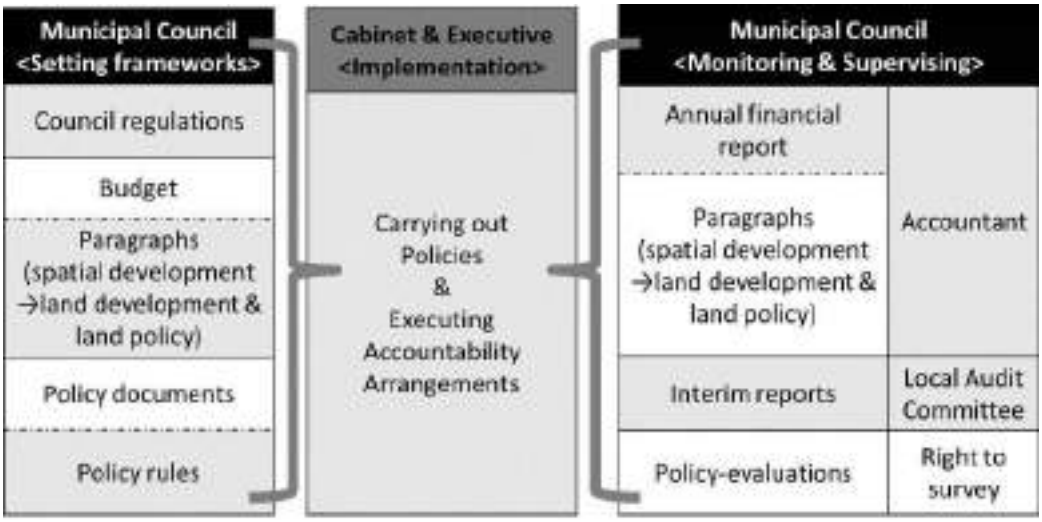

Figure 1: the municipal task division between the council and the cabinet (Deloitte, 2009, pp.10)

The council sets policy-frameworks and the cabinet carries out its policy within the designed frameworks (See figure 1). One of the examples of such policy-frameworks is a 'Memorandum Land policy' (Nota grondbeleid), which is tailor-made by each municipality. Main contents of the memorandum land policy are as follows; the aim of land policy, the forms of land policy pursued by the municipality, possible cooperation models for land development with other parties, land acquisition strategies, disposal methods of serviced land, use of reserves for covering possible losses and public procurement principles. The memorandum land policy works in combination with other municipal planning documents such as Strategic Vision (Structuurvisie) and Land Use Plan (Bestemmingplan)[2] which are mandatory for each municipality to produce, update and conform with, according to the revised Spatial Planning Act.

Based on those planning documents, the cabinet drafts the budget of municipal land development both at a project level and at a municipal level of all projects, carries out the municipal land policy and annually reports the result of its implementation. Annual budgets and annual financial reports drafted by the municipal cabinet are approved by the municipal council (See figure 2). Since 2004, the Decree on Budgeting and Financial Reporting have mandated municipalities to establish a programme-plan or justifiable grounds for the municipal land policy in both annual budgets and annual financial reports.

[2] Strategic Vision (Structuurvisie) is not legally binding but an indicative plan which globally guides future spatial development, translating other policies of a municipality into spatially-relevant arrangements. Contrary, land use plan is legally binding and contains more detail than the strategic vision.

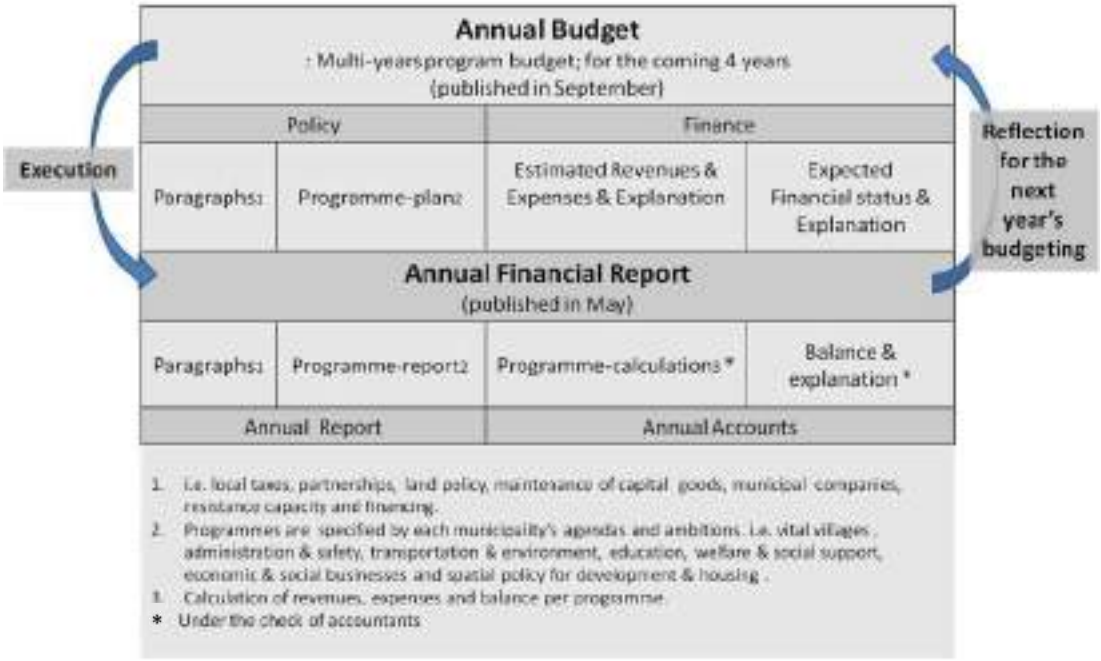

Figure 2: the cycle of planning, execution and monitoring of municipal land development projects and contents of municipal annual budget and financial report (Deloitte, 2009, pp.13)

In the annual budget, the cabinet should state what kind of land policy will be carried out in the next year in order to realize the spatial plan based on the Strategic Vision. Article 16 BBV requires the following items to be explicitly stated in the budget; an integrative vision of the land policy in relation to the realization of the objectives of the programmes which are recorded in the budget, an indication of the way the municipality implements its land policy (active land policy or facilitating land policy), an up-dated forecast of the financial results of the whole land development projects within the municipal boundary with each project's detailed programmes monitored, explanations for estimated incomes and policy principles to run a reserve fund for land development to save generated surplus or to cover possible losses in order to manage risks of land development. Besides, the reasons for a specific policy choice in a specific project should also be stated, since a suitable policy approach can vary from project to project due to each different ownership situation of area in question or available budget.

The annual financial report basically gives an account for the result of how the approved budget is actually spent on, as a reflection on the annual budget. As actual budget execution is carried out at the executive's daily management level, special attention from the council is called for to revisions of land development plans and substantial deviations from the plans. Not all the decisions proposed by the executive require the sanction of the councilors. Still, the councillors are reported of the progress of land development projects, not only by the annual financial report, but

also by the interim communications in a form of either formal or informal hearings and with confidential reports.

3. Case: Midden-Delfland

3.1 Research questions and method

A pilot case study is performed to test the possible research directions based on collected data and to sharpen the asked research questions based on an identified gap between the questions and what data show for subsequent study. Midden-Delfland was chosen for the convenience of access to information and for a relatively small municipal size with dynamic land development, which makes the pilot study possible for a given time; January, February and April 2012 .

Questions are asked as follows.
For the aspect of flexibility:
1) How are uncertainties with emerging information flexibly incorporated in the planning and realization process of land development projects within a municipality considering its financial implications?
For the aspect of justification:
2) How are decisions justified in the process and what are the justifications used?
For the aspect of financial results:
3) How do all the discussed points in the previous questions influence the financial end?

Annual municipal budget documents (Multiyear-programme budget; Meerjarig Programmabegroting in Dutch) published for the year 2009, 2010, 2011 and 2012 and annual municipal financial report documents (Annual report and annual accounts; Jaarverslag en Jaarrekening) published for the year 2008, 2009, 2010 were used to collect data. Except the specified years' documents, it was difficult to get other year's documents in the similar kind when contacting the communication department of the municipality. The contents of the mentioned documents were compared to each other with respect to land development projects and land policy in order to trace back the progress of land development projects and to identify the gradual tendency that the municipality responds to changing conditions such as the credit crunch if there is any mention. Other municipal planning documents such as the Memorandum Land Policy (Nota grondbeleid gemeente Midden-Delfland), Strategic Vision (Structuurvisie), Municipal Housing Policy (Woonvisie; Vitale Dorpen Midden-Delfland 2025), Analysis of the housing market in Midden-Delfland (Wonen in Midden-Delfland 2009-2025; Analyse van de woningmarkt) and interim reports on revisions of land development projects were also referred to. Besides, a semi-structured interview was carried out in February with a planning coordinator who is working for the land development department of the municipality.

3.2 General introduction to Midden-Delfland

Midden-Delfland (hereafter, MD) has a population of 18,225 residents in a relatively spacious area of approximately 50km^2. Being located next to Delft, and between Rotterdam and The Hague, MD strives to preserve its unique landscape of green pasture in the middle of highly urbanized region. There are three villages, 'Den Hoorn'(7,156 residents), 'Schipluiden'(4,534 residents) and 'Maasland'(6,535 residents), and two neighbourhoods, 'de Zweth' and ''t Woudt'. MD aims to provide recreational green space for people living in highly urbanized adjacent areas and to stay attractive for people who want to live there enjoying high quality of life (Gemeente Midden-Delfland 2009b, Gemeente Midden-Delfland 2011f). Faced development pressure in the highly urbanised region, MD has long been active in preserving green landscape by land banking and relocation of glasshouses (van Rij and Korthals Altes 2010, Gemeente Midden-Delfland 2011f). The municipality also tries to balance preservation and development by limiting housing development in the key villages (van Rij and Korthals Altes 2010). Such strategy is called as 'Preservation through development' and its image as 'Vision of Vital towns'. Comparing to other municipalities with a similar population, the municipality has a relatively big scale of land development in terms of a number of projects and capital investment involved.

3.3 Active land policy of MD

Active land policy, in which the municipality acquires land, services and subsequently sell to developers, is called for in order to induce the kind of spatial use desired by the municipality as stated above. The memorandum land policy states the objectives of municipal land policy as follows (Gemeente Midden-Delfland 2009b).
1) In order to influence the spatial use.
2) In order to influence the spatial quality.
3) In order to ensure legitimate distribution of costs and benefits involved in land development.

Those objectives leads to the adoption of active land policy in most projects for the reasons stated in the memorandum land policy as follows (Gemeente Midden-Delfland 2009b).
1) In order to ensure cost-recovery by charging costs of site-acquisition and preparation to land disposal prices.
2) In order to realise municipal land use plan in an optimized way by the municipality's legitimate rights over land which are derived from holding legal ownership of land.
3) In order to use discretionary power when servicing and disposing land to achieve public objectives that cannot be realised by mere application of statutory rules and regulations.

Besides the main use of active land policy, the municipality also uses various forms of cooperation with other private parties, namely, land owners or market developers. Among them are building claim, joint venture, concession, and private self-realisation. The degree of municipal direct influence in servicing land is the highest

in traditional active land policy entailing municipal land acquisition and disposal, and the lowest in private self-realisation. The rest can be classified in between as we see the municipal influence vary in degree.

3.4 Key projects in MD and their relevant features

In order to answer the research questions, relevant points in the course of key projects were reorganized based on the municipal documents of annual budget and financial report (see 3.1 Research questions and method). The following projects are identified as key projects due to their relatively big size or their recurrently emphasized meaning for the municipality. There are far more projects on a smaller scale to be found but the focus will be on the key projects in Den Hoorn and in Schipluiden.

Village Den Hoorn: Look-West, Lookwest-Noord and Kreekzone
Look-West, Lookwest-Noord and Kreekzone are large projects respectively for about 500 houses, 290 houses and an unknown number of houses in Kreekzone. Den Hoorn borders Delft. Thus, the location is regarded relatively more attractive due to the approximation to Delft. At the same time, it is regarded more sensitive to market-competition in the period of the economic crisis since development in the jurisdiction of Delft also generates housing supply.

Village Schipluiden: Keenenburg III and Keenenburg V
Keenenburg III is a project for a new municipality hall of Midden-Delfland and new houses around it. Keenenburg V is a project for development of the area where the current municipality hall is situated. Keenenburg III as mostly green field development and Keenenburg V as redevelopment are related to each other since the planning of Keenenburg V is to fit in with the relocation schedule of the municipality hall.

Table 1: summary of identified key land development projects in MD

	Changed conditions (Key-responding decisions)	Justification used for the key-decisions	Financial result
Look-West In Den Hoorn	a) Technical problems in site preparation (Separation of the problematic subunit) b) Presumably, due to low sales rate of housing in general influenced by the credit crunch (Delay of land disposal and building schedule) c) Extra revenues such as subsidy for public transport connection & tax reimbursement	a) To remove bottlenecks in proceeding the project b) (Description. No justification explicitly stated) c) (Description. No other specific justification)	Positive with an expected profit of approximately 2 million euro

Lookwest-Noord In Den Hoorn	a) One unyielding landowner against land acquisition (Application for an expropriation procedure and finally reaching an agreement) b) The economic crisis and bottlenecks in negotiations with developers on house-types and land disposal prices c) Less costs of site preparation	a) (Description. No other specific justification) b) (Description. No other specific justification) c) (Description. No other specific justification)	Negative with an expected loss of approximately 0.37 million euro
Kreekzone In Den Hoorn	a) Technical problems in site preparation (Separation of problematic subunits from Look-West and Lookwest-Noord and establishment of a separate project) b) Delay in servicing the site and diminished financial result (programme-adjustment from 60% social housing to 30%)	a) To remove bottlenecks in proceeding the projects b) To diminish an expected loss. Because the original plan of 60% social housing has not formally been approved (A strong financial justification. No other options suggested)	Negative with an expected loss of approximately 1.4 million euro
Keenenburg III In Schipluiden	a) Fragmented ownership among the municipality and a group of developers (adoption of building-claim model. Transfer of land from developers to the municipality) b) Technical problems related to peat dikes (re-planning of residential parts of the plan area) c) Extra needs for soil remediation and relocation of public utilities (extra budget-allocation and rescheduling of required work to later)	a) (Description. No other specific justification) b) (Description. Explanation for extra planning costs. No further specific justification) c) (Description. Explanation for extra site-preparation costs. No further specific justification)	Negative with an expected loss of approximately 1.5 million euro
Keenenburg V In Schipluiden	a) Municipal land become vacant and available (developing a residential area and acquisition of the adjacent parcels) b) Insufficient number of social housing in other projects (Increasing a number of social housing)	a) (Description and explanation) b) To compensate a lack of social housing in Keenenburg III	Positive with an expected profit of 0.1 million euro

Figure 3 (left): Look-West project and its sub-plan-units

Figure 4 (right): Subunit 1b, Plan Victoria (Gemeente Midden-Delfland 2011d)

3.4.1 Lookwest: Phasing and parcerlization

The project Look-West is physically close to Lookwest-Noord and related to the latter in terms of the development schedule. After the Look-West had entered into a significant progress, the development of Lookwest-Noord followed to start. Due to its big scale, the Look-West project is composed of several sub-plans. In 2008, a part of Look-west and a part of Lookwest-Noord were consolidated into a separate unit of project, called 'Kreekzone' due to technical problems for servicing the land (Gemeente Midden-Delfland 2008). By separating a difficult subpart of the plan, Kreekzone, it was possible to improve the net present value of the project in 2008 (Gemeente Midden-Delfland, 2008). However, delay in disposing land and subsequently in building from 2009 to 2010 incurred extra planning costs, which is not an insignificant amount contributing to less positive financial result. There was an external subsidy from a regional governmental body, 'Haaglanden', for connecting public transport and reimbursement of value added tax from the national government. The Look-West project is about to finish in a couple of years.

3.4.2 Lookwest-Noord: Difficulties in negotiations and influence of the economic crisis

At the beginning of 2007, a big part of the plan area in Lookwest-Noord was purchased by the municipality (Gemeente Midden-Delfland 2008). There was still one house remaining which needed to be acquired. However, the owner was not willing to sell it to the municipal (Gemeente Midden-Delfland 2008, Gemeente Midden-Delfland 2009c). As a result, the project was impeded. In the end, the expropriation procedure had begun in 2009 (Gemeente Midden-Delfland 2009c) and has not stopped until an amicable agreement was reached in 2010 (Gemeente

Midden-Delfland 2011b). Originally, Lookwest-Noord was expected to yield a positive result with the strategy to diversify house-types. However, negotiations with two project developers starting in 2009 were brought to a deadlock due to disagreement on house-types and land disposal prices. The difficulties are attributable to the impact of economic crisis (Gemeente Midden-Delfland 2009c). In 2010, the impasse in negotiations led to further reduction of the expected result. At the end of 2009, the expected shortage of approximately 0.5 million euro was charged to the reserve of land development (Gemeente Midden-Delfland 2011b, Gemeente Midden-Delfland 2010b) Then, the new calculation in 2011 became positive with 0.13 million euro (Gemeente Midden-Delfland 2011b). Costs of site preparation slightly went down in 2011 due to the more favourable results of public procurement than the estimated.

3.4.3 Kreekzone: Programme-adjustment and plan-optimization

Kreekzone is a deliberately separated unit of project from Look-West and Lookwest-Noord. It was created as a different unit of project, due to technical problems against site preparation found during the development of Look-West and Lookwest-Noord; especially the presence of a 150 kv high-voltage electricity connection (Gemeente Midden-Delfland 2008). It was decided to remove the connection, which would delay in servicing affected areas. In order to avoid the delay of those two projects, the problematic area only was cut from Look-West and Lookwest-Noord, letting the majority of those original plan-areas be steadily developed. Due to the expected negative result of approximately 3 million euro, the plan optimization was proposed in 2010 that the negative result could be reduced to approximately 1.4 million euro by decreasing the initial 60% social housing to 30% in the development programme. (Gemeente Midden-Delfland 2010a, Gemeente Midden-Delfland 2010b). The expected loss of 1.4 million euro was charged to the reserve of land development in 2010 (Gemeente Midden-Delfland 2009a, Gemeente Midden-Delfland 2010a).

3.4.4 Keenenburg III: Increasing losses due to technical problems and subsequent delays

The most of Keenenburg III was owned by the municipality and a group of developers in 2008. In 2008, it was decided to designate a part of the plan area for realizing a new municipality hall. In 2009, the group of developers transferred their land to the municipality and gained the rights to build houses on serviced land. Thus, Keenenburg III is developed in the building claim model (For the building claim model, refer to Needham 2007a, pp. 194). However, technical problems related to peat dikes discovered in the plan area caused substantial delay in further planning in 2008. As a result, parts for residential use had to be re-planned. Accordingly, the historical costs increased so that the project has been expected to yield a negative result since 2009. Extra required work such as soil remediation and relocation of public utilities also worsened the negative result. The expected shortage was charged to the reserve of land development in the annual financial report of 2009 and that of 2010 (Gemeente Midden-Delfland, 2010a, Gemeente Midden-Delfland 2010b). Even

though houses developed in Keenenburg III are targeted at a more expensive price range to increase incomes, the budget-neutral development is not possible.

3.4.5 Keenenburg V: Seizing the opportunity for compensating lacks from other plans

A part of the plan area is a municipal land. The site is currently used for the municipality hall. When it is relocated to the new building in Keenenburg III, the municipal site in Keenenburg V becomes vacant. The municipality is planning to develop the original municipality hall and the adjacent parcels for residential use. In 2010, the percentage of social housing increased compared to an earlier plan in order to compensate a lack of social housing in Keenenburg III (Gemeente Midden-Delfland 2010a, Gemeente Midden-Delfland 2010b). As a result, the expected financial result diminished but still shows a positive amount of 0.1 million euro. An agreement was reached in 2010 on the acquisition of a parcel from other governmental organisation, Service for Rural Areas (Dienst Landelijk Gebied) (Gemeente Midden-Delfland 2010b). Including this, all other planned acquisition has not actually taken place yet (Gemeente Midden-Delfland 2010b, Gemeente Midden-Delfland 2011e).

3.5 Findings

Based on the reorganized course of the key development projects and collected data from a semi-structured interview with a planning coordinator, answers to the research questions are as follows.

3.5.1 How are uncertainties with emerging information flexibly incorporated in the planning and realization process of land development projects within a municipality considering its financial implications?

In the key-projects, information emerged as the projects proceeded. One of the most frequently encountered problems was a technical impediment related to site-preparation which required extra planning and costs (in the cases of Look-West, Look-west Noord, Kreekzone and Keenenburg III). Bottlenecks encountered in negotiations with a landowner and developers and subsequent delays also incurred costs exceeding an initial financial budget (in the case of Lookwest-Noord). Those unexpected events which had negative implications on the financial results in general could not be tackled necessarily in advance but were translated into financial terms as soon as found in order to make fund available for covering any expected losses.

The financial estimation of extra expected costs is required by the Degree on Budgeting and Financial Reporting (BBV). According to the BBV, MD set the rule that an expected loss is charged to the reserve of land development as immediately as the loss is foreseen and that an expected profit can be taken from an original project to the reserve of land development when incomes are greater than remaining expenses to be paid and when it is highly certain to secure expected incomes. Thus,

the reserve of land development functions as a financial buffer for whole land development projects in the municipality in order to cross-subsidize unprofitable land development projects from profitable ones.

In this condition, an initial financial budget based on an initial concept plan functions as a framework for the further progress of the project. It does not necessarily prevent the project from being changed or tried in different directions in response to changed conditions. There is no specific rule to prevent a project from yielding a financially negative result. Aimed spatial quality is sometimes more important than financial result itself. More costs necessary for achieving desirable spatial quality are allowed. Thus, extra incurred costs are tolerated as long as the reserve of land development can cope with expected losses and as long as the municipal council politically declares that the project is necessary and meaningful for the municipality.

With respect to the economic crisis, its negative impact on financial results of land development projects was reflected in general by lowering the annual increase rate of land disposal prices from 3% to 2% for the coming years in the budget of 2012 (Gemeente Midden-Delfland 2011c). For the year of 2010, The annual increase rate of land disposal prices was even fixed as 0%.

3.5.2 How are decisions justified in the process and what are the justifications used?

There are two kinds of decisions in terms of justifications. One requires the sanction of the municipal council in advance. The other is taken by the municipal executive while the municipal council afterwards checks and approves the decisions made. It falls into the former category to establish a new land development project such as Kreekzone as a separate unit of project or to make a new land use plan. Changing details in the boundary of the already approved land use plan falls into the latter category. After the council gives the executive an approval for working on a project, annual plan revision of each land development project is presented to and approved by the council.

The degree of detail in the land use plan is not specified by law so that the land use plan processed in detail can be made and implemented by the executive without asking an approval of the municipal council as long as it fits the overall land use plan (Needham 2007a, p.132-133). Since the land use plan contains what are ‘spatially relevant’, the financial factors such as the type of houses in the plan and the composition of market and affordable houses in the plan are not necessarily specified in the land use plan. Thus, those financial factors can be adjusted in the process without making a new land use plan which requires the sanction of the municipal council (Needham 2007a, p.155). If the detailed land use plan has already been formally approved, any change of those details specified in the approved land use plan should be referred to the council again. It is one of the reasons why the executive are not likely to have financially-sensitive factors such as the composition of different house types already specified from an initial stage of a project. These

aspects can be found in the case of Kreekzone. As a justification for suggested programme adjustment from 60% social housing to 30%, the executive states as follows.

> "The plan optimization is still possible because an original plan of the 60% social housing has not been approved formally."(Gemeente Midden-Delfland 2010a, Gemeente Midden-Delfland 2011a).

For changes in expected costs and incomes which are highly subject to planning officials' discretion, the executive does not provide specific justification except illustration of kinds of costs and incomes. In general, there is no explanation for why certain costs amount to a specific sum and why certain arrangements of a project are formulated in such a way. For example, justifications for the use of building claim model in the case of Keenenburg III are not found. The arrangements of the building claim model are highly influential on the financial result of the project in general because the arrangements concern at what price range the developers transferred their land to the municipality, on what kind of conditions the developers would get back serviced land including the matter of land prices and allowed house types. They can be commercially sensitive information, of which public availability might damage the bargaining position of the municipality against initial land owners or developers so that the information can better be kept confidential. Yet, it can be questioned why any background information for the adoption of the building claim model are not told which is a crucial factor guiding the financial result of the project in the remaining phases, while other deviations from the previous budget are described in more detail of which the influence is relatively limited on the financial end.

In that vein, it can be questioned about not only what are told for justification, but also not told. For example, only one option was suggested by planning officials to the council, excluding other possible solutions, in the case of Kreekzone when justifying the reduction of social housing from 60% to 30%.

> "In this report, we assume that the land development plan will be established in 2010 and that the foreseen loss will be charged to the reserve of land development. Considering the expected loss and the fact that the plan has not been formally established, it was considered if a loss should already be taken in the annual settlement of 2009. For this, possible plan optimizations were sought for. Political and juridical considerations, wills and decision are not taken into consideration when looking for possible plan optimizations." (Gemeente Midden-Delfland, 2010a, pp.72, Gemeente Midden-Delfland, 2010b, pp.91).

Presentation of one option excluding other possibilities could form cognitive closure for municipal councillors who are supposed to compare possible options and make a political decision as politicians (Hanssen and Saglie, 2010).

The most noticeable justification for the suggested change is financial feasibility. Other solutions such as incorporating more social housing for sale than that for rent or affordable housing targeting at low-middle incomes are excluded here.

Background explanation for the initial scenario of 60% social housing is also missed; why 60% target was set and how it is now justifiable to change it. The original target of 60% social housing was perhaps for compensating a relatively small number of social housing in Look-West and Lookwest-Noord (Gemeente Midden-Delfland, 2009a, pp.90) and for satisfying 30% of social housing at the municipal level based on the municipal housing policy 'Woonvisie; Vitale Dorpen Midden-Delfland 2025' (2010). The municipal housing policy provides a testing framework for determining on house types and residential programmes but its scope is limited to what needs to be realised at a whole municipal level without specifications. Thus, the municipal housing policy states that it is possible to deviate from the criteria of 30% social housing at a project level depending on financial feasibility. That provides planning officials with flexible room to choose a different strategy from project to project. According to the interviewee, it is conventional for the executive to be allowed to deviate from the municipal housing policy if there is a financial reason, given that the council approved the plan.

As explained above, justifications for decisions in land development projects are not all stated in formal municipal documents such as annual budget and financial report. In that sense, the role of elected council members becomes important to ask the executive for accountability. Room for citizens to directly ask accountability or to involve in decisions is relatively limited in terms of access to information and available participation opportunities, except voting and submitting opinions (inspraak procedures). What are not told in formal municipal documents in open access are primarily discussed between the executive and the council. The department of spatial development in the executive takes care of all building projects in the municipality. They suggest or present development initiatives first to the cabinet, the head of the executive, then to the council. Ultimately, those initiatives lead to development programme. The planning officials in the department negotiate with market parties, process the land use plan and translate the plan into financial calculation which is brought to the council. The council confirms the financial and spatial framework of the development. Amendments of the confirmed framework should be referred to the council. Amendments within the confirmed framework can be decided by the cabinet itself. In the described process, the council and more specifically the land policy committee of the council hold several meetings with the executive. The planning officials from the spatial development department explain the progress of projects and answer to questions of the councillors. It is possible to trace back what kind of subjects in the development process they discussed via recorded agendas of the meetings but crucial numbers or detailed information are not usually available in public access.

3.5.3 How do all the discussed points in the previous questions influence the financial end?

Three of the five key projects currently present financially negative results. Delays caused by difficult negotiations with market parties or technical problems in site-preparation mostly resulted in worsened and even negative results than the expected.

However, it was justifiable at the whole municipal level due to the reserve of land development. As long as the reserve of land development could cover an expected loss, it was generously tolerated to exceed an initial budget if necessary. On the other hand, efforts were not necessarily spared to diminish the gap between expected costs and incomes as much as possible, seizing the opportunity to generate more incomes. Thus, dealing with an expected loss is not only depending on the reserve of land development. An internal plan optimization in terms of a balance between financial feasibility and aimed spatial quality should be sought for first. In the case of Keenenburg V, newly available municipal land becomes developed for residential use with the adjacent plots, resulting in a positive result. It is limited with an amount of 0.1 million euro but it is at least helpful to create an extra revenue which would compensate a shortage in its related project, Keenenburg III via the reserve of land development. In the case of Kreekzone, it is expected to diminish an expected loss by reducing a number of social houses.

Expected losses from projects can generously be accepted and allowed because of financial resilience created by the reserve of land development. Thus, available amount of fund from the reserve of land development should be in line with the actual status of land development projects, namely, the amount of losses required to be covered in order to keep the degree of financial resilience at an acceptable level. In the current status, the reserve of land development is decreasing in its size (See figure 5). At the same time, worsening of expected losses from several projects is often observed in the documents of annual budget and financial report, not alone from the identified key projects. If the reserve of land development is not sufficient to cover expected losses, it is possible to make a use of municipal ‘resistance fund’ (weerstandvermogen) as an exceptional case. The municipal resistance fund is for general use and not dedicated to land development projects. According to the interviewee, it is not expected yet that they have to cover losses from the municipal resistance fund. The currently available fund from the reserve of land development seems to be accumulated mostly before the economic crisis, when a considerable amount of serviced land in Look-West and other projects were sold (See figure 5). However, the historical evolution of the reserve volume and the relation between the reserve and the tendency to more generously accept financially negative projects cannot be analysed here due to limited data.

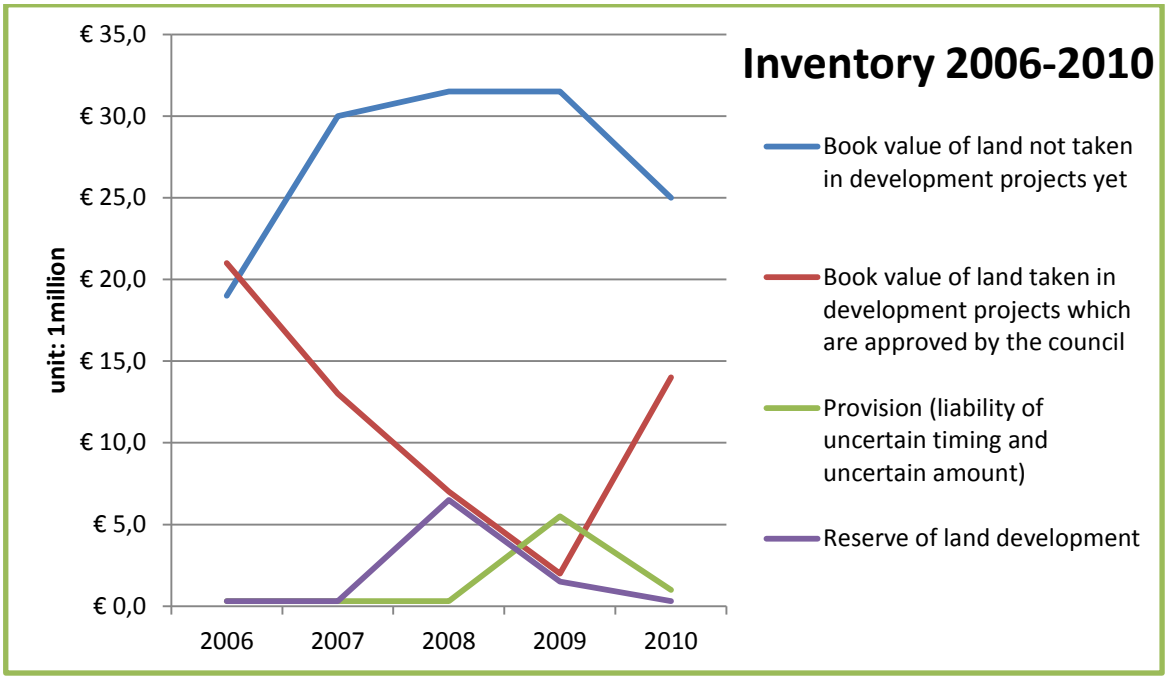

Figure 5: land development inventory 2006-2010 (Deloitte 2011b)

4. Further discussion

Since a pilot case study was intended to test the possible research directions and to sharpen the asked research questions based on the identified gap between the asked questions and what collected data show, some generalizable lessons and further discussion points are presented here based on the findings of the pilot case study.

Flexible decision making is institutionally made possible to improve a project in terms of spatial quality and its financial consequence because an initial plan functions as a framework for further guiding the project. It is made possible by a financial buffer created by the municipal reserve of land development. Even though efforts to improve the project are clearly observed in the identified key projects, those efforts do not necessarily result in a financially positive result but in a less negative result. Unavoidable losses which could not be prevented by plan-optimization are covered by the municipal reserve of land development. The use of the reserve gives the executive flexible room to manoeuvre the project within discretion and also the municipality as a whole to manage several projects related to each other simultaneously. In that sense, the use of the municipal reserve of land development needs to be given extra attention to better understand municipal management of land development projects. It requires more skills and data to analyse the evolution of the reserve of land development as a whole with the status of other projects. An analysis at an individual project level only is not sufficient to understand institutional settings relevant for explaining why certain costs-exceeding is so easily allowed. In order to accommodate emerging new information for adjusting an initial plan which has a financial consequence and to create a financial buffer, the municipal

reserve of land development can be recommended to be applied elsewhere. However, from the perspective of justification, there are some issues to be improved when operating the reserve of land development. No explicit framework for the allocation of fund from the reserve of land development could be observed in the case of MD. The municipal council can better set up principles to prioritize the allocation of the reserve of land development in order to clarify why more losses are allowed for certain projects than others and to set a limit of costs-exceeding so that the executive does not let costs just be accumulated without making possible efforts to tackle them.

The process of justifying decisions regarding land development projects is deeply embedded in ultimate responsibilities of the municipal council to hold the executive accountable. Ordinary citizens are not much involved in such process. In that sense, communication between the municipal executive and the municipal council on municipal land development projects, especially on risks of land development projects seems worth further studying. Even though the results of key negotiations are informed to the municipal council via confidential meetings and reports, a doubt arises whether a confidential form of reporting and communication would be a good way for the municipal council to hold the municipal executive accountable for the best possible performance in reaching their targets in negotiations. The contents of annual budget documents and financial report documents by themselves which are available to the public seem hard to provide enough insights on each land development project since each land development project are not described well as a story of a project from the beginning to the end but more as a collection of annual financial mutations in realizing the project. Then, original intentions to initiate a project and political justifications for such an initiation can easily be missed out from the public discussion on the project. Because each project is discussed annually based on financial mutations taking place in an relevant year, a judgement becomes difficult to be made on whether the project as a whole has been fully optimized or not, as long as there is no description of the full course of the development. If an estimated loss is once covered by the funding from the reserve of land development, the project becomes budget-neutral again in the case of MD. This is a specific way of making a provision for an expected loss among two ways to recognize losses (Commissie BBV, 2012, pp.22). In the case of MD, historical records of loss-covering or revenue-taking are not emphasized much when making a choice on future decisions as long as there is no deliberate reference to those historical records. Reporting is by its nature a retrospective way to ask public responsibilities afterwards. Those historical records are not necessarily to be repeated every time since what happened are not to be reversed anyway. However, it would still be important to trace back the financial records of a project, not only on an annual basis but also on a project basis with its full history in order to accumulate municipal knowledge and lessons for better project operations in the future. At the moment, those knowledge and lessons may be in hands of planning officials in the executive body, but seemingly not in the hands of the municipal council members.

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FROM GOVERNMENT TO GOVERNANCE A NEW PARADIGM OF TERRITORIAL MANAGEMENT

Francisco Serdoura[1], Helena Almeida[2]

Abstract

Western world is changing to a new Era, where there is global accessibility to information which is permanently updated: the 'Feedback Society'. Now, people can work and live anywhere, so each city has to prove it's the ideal choice to live, visit, invest and work (Morgan, Pritchard & Pride, 2011; Ascher, 2010; Allan, 2007:3; Winfield-Pfefferkorn, 2005:11).

Also, social mobility increase is changing people's reality (Freire, 2005). In reaction to globalization and Information and Communication Technologies (ICT) evolution, there's no need to integrate a group anymore, leading to a sense of '*dislocation*' and '*unspontaneousness*' and, therefore, to a fragmented society. Today, democracy, government and decision making processes have to be reinvented, due to the disappearance of the common sense of public interest (Ascher, 2010).

Complementarily, people are getting more conscious on equity and political decisions, and consequently, theirs opinions are getting more consistent. As the society is fragmented, no longer homogeneous, decision-making processes need a real involvement of the largest possible number of representatives of society (van Gelder, 2008a).

Traditionally, decision-making was centered on public administration ('top-down' process). Ongoing changes have opposite values, empowering people on decision-making process and reducing hierarchic relations, but also sharing responsibilities with all agents ('bottom-up'). It is necessary to ensure a constant motivation from the agents and decision-making focusing on developing life quality and civic pride, but also place's position on global markets. The objective is to enhance democratic processes with impact on communities, to involve people with community's problems and other larger scope issues, as well as to engage them with public administration and all the head-agents (van Gelder, 2008a).

The study discusses some cases that have already begun the changing of the paradigm and discusses about experienced good practices and problems.

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The key-question is: how to manage territories and improve them towards a better productivity, success, attractiveness and equity in the third modernity context?

The aim is at contributing to the development of a theoretical and methodological framework to optimize democracy and trust relations between all agents of urban development, considering that the best way is to elaborate equitable, sustainable and inclusive socio-economic and urban solutions.

Keywords: Globalization, Governance, Democracy, Society, Territorial Management.

1. Introduction

Western world is changing to a place where information is permanently spread and updated and where global accessibility is increasingly easier. In consequence of globalization and ICT development, nowadays it's possible to work and live 500km away, which results in an increasing of competitiveness between cities.

People are now able to share, analyze and use information over time and space, which strongly influences performance and growth of economies. (Yigitcanlar, 2009:6). However, there is a common posture of not being part of a group anymore, which leads to a sense of '*dislocation*' and '*unspontaneousness*' and to the fragmentation of society. Nowadays, democracy, government and decision making processes have to be reinvented, as there is no more sense of common good, or public interest (Ascher, 2010).

In order to reflect the deepness of the changes society is facing, the concepts of 'public space', 'place' and 'common good' are now redefined, in line to what François Ascher calls the third modernity Era.

Cities are the incubators for technological innovation, as they have always attracted urban 'in-migrants', which caused an increased stress both on the urban labour and housing market and on the urban environment (Cohen, Geenhuizen & Nijkamp, 2001:1). 'Smart Cities' is a concept that emerged as an answer to problems of overpopulated places, meeting their challenges through the strategic application of ICTs to provide new services to citizens or to manage its existing infrastructure (The Climate Group, 2011:7). 'Smart Growth' is another concept which emerges with the aim at giving new uses to vacant and underutilized land left in older communities by decades of disinvestment and real estate speculation, therefore creating compact development patterns with efficient transportation links. More than anything else, smart growth is about a more deliberate and sensible allocation of land and development (Benfield, 2012).

Globalization and Governance concepts are then analyzed, as well as explained and illustrated with several ongoing examples. Next, a critical analysis is made about

ways of implementing and the probable consequences of it, as well as a discussion on how to avoid the negative ones.

2. The new Glocal Era

The use of ICT on spatial development is one the most responsible factors for the ongoing changing meaning of space, place, distance and time. Distance and time are no longer problems, since wireless communications allow connection independently of place and time. The so-called death of distance or end of space and virtualizing everything can be an opportunity to reorganise inhabited space for diverse human purposes, as the peculiar attributes of locations play an increasingly important role in choosing location for people and companies (Talvitie, 2003:8).

However, once it's not needed physical proximity to social and economic exchanges, society is heading to its fragmentation and individualism is quickly increasing. This process is turning society's perception as a whole or by their classic sectors more difficult, because it is building extremely complex and diverse aggregations, which are still impossible to categorize or simplify. Ascher (2010:47) calls this the 'hypertext', networked, society.

Freire (2005:352) states that increasing spatial, temporal and social mobility is directly related to the way people experience the world. Each place is a freely chosen destination, increasing competitiveness between places to afford the best life quality to their users (Almeida, 2012).

Development of ICT and transportation of people, information and goods eased acculturation between exotic societies. Its impact on world evolution of social values, production and diplomatic relations has been increasingly strong. Nowadays, it can be observed deep society mutations on ways of thinking and acting, as well as on sciences, technology, social relations, economy and, in consequence, on the forms of democracy (Serdoura & Almeida, 2012). Consequently, post-industrial societies learned to valorise knowledge and information development, instead of material goods production. It's a knowledge-based society. However, local identities positioning have been hampered, influencing democratic systems with the emergence of the new 'public space' and 'common good' definition (Innerarity, 2006:9).

The new knowledge-economy Era is based on production, appropriation, selling and using knowledge, information and processes. Western industry tends to a dependency on its capacity to understand markets using science, techniques; developing creative solutions and managing the immediate; and reacting instantaneously, in order to keep its attractiveness in a mutating world.

The growth of the open-data movement has taught general population they can enhance local government, identify and solve civic problems. Therefore, the relationship between city governments and residents has been shifting.

Social media, the internet, 'cloud' computing, sensors and mobile phones are creating an increasing powerful digital infrastructure, allowing people to do everything from communicating with one another, to solve problems collectively, to making electricity grids more efficient, or providing new options for services such as using video conference (The Climate Group, 2011:7).

The complexity of contemporary society is the responsible for the shift in relationships between people, society, knowledge and places. The MIT Media Lab elaborated a chart (see Fig. 1) to illustrate the relationship between information and organizations (Ito, 2012). The power of networks and permeable organizations is not only applied to innovation, but especially to promote collaboration on shared ideas generation, to communicate theories and strategies and to civilly debate with the public (Bernholz, 2012).

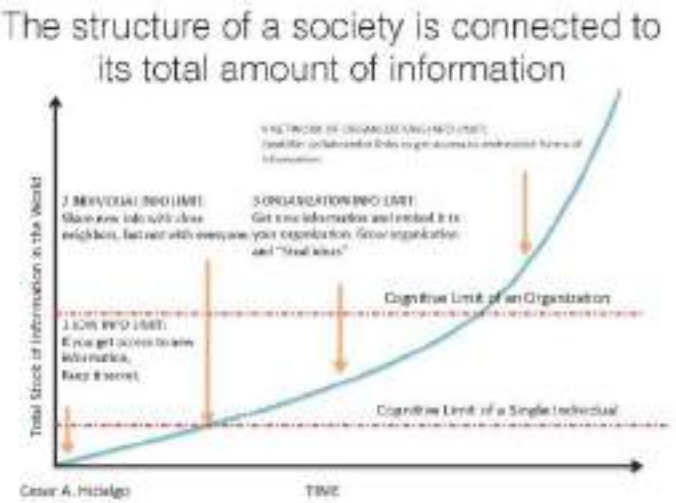

Fig. 1 – Analysis of the cognitive limits of individuals and organizations
Source: Ito, 2012

Cities shall now be able to access benefits from economies of scale, combining resources across projects, promoting their international competitiveness, improving existing services, mitigating risk through better planning and prediction, and engaging citizens in the process (The Climate Group, 2011:8). However, while there has been a tendency to cultural and social values homogenization, pressing places to enter the competition for economic and human capital (Morgan, Pritchard & Pride, 2011:7; Allan, 2007:3; Winfield-Pfefferkorn, 2005:11), competitiveness also led to a valorisation of affording the best life quality possible and of building a common civic culture (Innerarity, 2006:11-12), therefore seeking to recover local values against other society's domination, which is heading to an urban development based on the efficiency of decision-making systems.

On the other side of the globalization, acting as a reaction, information-intensive nature of technological activities leads, unexpectedly, to a need for face-to-face communication, favouring places that offer a high level of competence, many fields

of academic and cultural activity, excellent possibilities for communications, a widely shared perception among interest groups of particular, underused opportunities, and a general business environment facilitating a synergistic development. It is an emergent need for the materiality of relationships, at a local level. The condition for promising urban opportunities is life quality. In general, an attractive urban climate is a *sine qua non* factor for life quality (Cohen, Geenhuizen & Nijkamp, 2001:3) and locals are aiming at playing a fundamental role in their communities.

So, these times' phenomenon can be called 'Glocalization', as a seek for balance between a global economic society, making some pressure for social values acculturation, and a development of local identities, communities, revitalization of traditional activities and an increasing involvement of locals in decision making processes.

'Smart Cities', as an urban answer to the new Era, is an unfinished concept. It's about technologies to improve public services, but also civic empowerment enabling technologies when to new forms of digital intervention in the collective creation of the city. This vision is on street level, whether the first one sees the city from above as the generic idea, allowing to recognize some needs (energy distribution networks, traffic flows, etc.), but doesn't achieve real life and its citizens.

Life takes place on street scale, where we can understand what are the real needs to use more public transport, what real obstacles exist to creating viable business models for automated real-time parking information systems. The street is a dynamic space where we can find more justifications to use the full potential of the city in its interaction between the physical and the digital (Fernandez, 2012).

ICT and social positive evolutions promoted a more conscious and critic view of decision-making from the population. Better qualifications of middle class gave people a more realistic view of society's course. The new paradigm and its new concepts of 'reflexive society' and 'public space' have the aim at long term implementing an open policy culture, as well as a constant assessment and reviewing of the practices (Ascher, 2010:33), so that it can be built the new 'common good'. Today's governance and society complexity demand more stakeholders involvement in decision-making process; it is no longer possible to decide the future with only public realm and some private partners involved, but with representatives of all society (van Gelder, 2008b:3).

The counterpoint to place global positioning is local development through the promotion of active participation, thus increasing civic pride. These are the necessary tools to deal with an increasingly aggressive global competition and to create defensive plans to avoid annulation of the identity of people and places as an investment, residential and tourism destinations (Rainisto, 2003:234). On the other hand, digital revolution brought co-responsibility of decisions to local population, Public-Private Partnerships (PPP) and the municipality. Therefore, risks that

population used to delegate only to public administration and economic groups are now distributed by all sectors of society.

Humanity innovates and switches to new rule sets in times of transition, creatively finding new ways of being. Whichever they will be, Being requires always face to face contact, randomness, unplanned encounter, interaction of groups.

3. Governance

Cities have long since adopted the internet. However, the rise of the web 2.0 is again requiring updates. Today, there are two categories of web services public administration that can be used for local development: websites, which provide useful information for general population and visitants and customizable tools for collecting resident ideas and opinions. Both of them can be tremendously empowering, but can also complicate things, as the sense of easiness for self-expression can be distractive. City project websites have to take into account the ABCs: applicability, brevity, and clarity, to avoid that effort for transparency end up obscuring the process (Doyon, 2012a).

François Ascher's third modernity Era promoted a greater role for population in local communities and neighbourhoods for enhancing sustainable urban development, through public advisory boards, task forces and round tables, and implementing other forms of participatory democracy. Sustainable development can only be achieved through active partnership between all stakeholders and by capacitating communities to direct change. It's a process of managing change by making training and resources available to different communities. It involves developing and organizing local constituencies to take part in community involvement programmes. Local governments and a variety of volunteers can play key roles in supporting capacity building, driving communities to a more mature state by being able to establish commitments for the common good. These processes involve meeting community needs, merging natural resources, linking interest groups, creating investment opportunities and connecting social and economic priorities. The basic schema is presented in Fig. 2. The top three elements represent the main focus. Community-oriented planning projects are regarded as central to the planning process. The three rectangular boxes at the bottom represent key components of development plans (Yigitcanlar, 2009:8-9).

Figure 2. Community-oriented planning process
Source: King *et.al*., 2000 *in* Yigitlancar, 2009:9

Community-based territorial decision making is a holistic and collaborative approach that brings together public and private stakeholders to identify concerns, set priorities, and forge comprehensive solutions. This is a place-based ecosystem approach, where stakeholders consider environmental protection along with social needs, working towards achieving long term ecosystem health, economic prosperity and well being (Yigitcanlar, 2009:9).

4. Solutions to improve civic empowerment in a sustainable urban development framework

One example of Smart City project is the 'Connected Urban Development' (CUD). It will support the development of data, voice, video and mobile communication platforms to be used in local and national policy and other efforts to enable anywhere/anytime work. It will also be created an IP-enabled framework for commercial and business real estate and IP-enabled civil infrastructure that connects roads, railways, gas / electricity / water utility networks, and other city assets such as traffic lights (CUD, 2011). These technological improvements are believed to to promote innovative practices for an environmental improvement, such as:

- Developing broadband-based urban communication and services infrastructures;
- Making use of these infrastructures for congestion charging;
- Developing intelligent, IP-based solutions for dynamic traffic management and rerouting for private transport and highly responsive, on-demand public transport practices;

- New uses of public sector data, enabling more creative thinking and action by key players to survey staff and students (CUD, 2011).

In December 1999, North Denmark decided to become a national IT Lighthouse. The objective was to create the future networked society (Larsen, 2003:2). The project "The Digital Municipality" was a democracy project and educational/skill developing project. It focused on three goals:

- Involving citizens in democracy on a community level;
- Developing the IT skills of the citizens;
- Obtaining new knowledge of IT potentials and limitations in relation to democracy.

Several initiatives has been put into action in order to pursue these goals, like giving computers to the senior citizens followed up by courses in how to use the computers and construction of discussion forums on the internet. As a secondary objective a digital version of the local municipality plan was under development (2003), in order to obtain a higher level of information amongst the citizens and to support the discussions in cyberspace (Larsen, 2003:5).

An example more focused on governance and civic empowerment is Neighborland, a collective online urban planning platform. Neighborland allows the kind of organic conversations started by the stickers to happen online, where they can build group ideas and facilitate connections. Neighborland users post what they want for the city overall or for a specific neighbourhood, and others can click "me too" or comment. Ideas can be sorted by most recent or most popular. (Thompson, 2012).

In result, people are feeling their voices can be easily heard by public officials, because Neighborland shows what people want and their priorities. It provides a concrete, but continuously evolving, record of the needs and desires of the residents. Neighborland also recognizes public spaces are important venues for communication, especially for E-illiterate citizens. So, there were installed physical posters at New Orleans' streets, distributing stickers with the web address on the bottom (Thompson, 2012).

It is important to remember that there can be some practical and ethical problems associated this kind of civic empowerment webbased networks. Community life can be harmed if electronic communication replaces face to face contact and if difficulties on accessing ICT contribute to a different type of social segregation. Moreover, the conflict between privacy and data availability is concerned with public access without discrimination (Yigitcanlar, 2009:18). It is also important to realize that these platforms might confuse people about knowing the difference between collecting ideas and building consensus. Questions posed like ´What would you like to see?´, can lead people to naturally assume that anything is possible, allowing appealing but unrealistic ideas to rise to the top, subsequently disappointing people and leading to the judgement that "government isn't listening to the people".

Constructive ideas are those held to standards of viability, not wishful thinking (Doyon, 2012a).

Another example of the power of social media in community-based urban development is the creation of crowdfunding platforms like 'Kickstarter', 'Indiegogo', 'Ioby' or 'Brickstarter'. These are spaces created to let people expose what they want to make and how much money they need to implement their idea. The goal is to spread the word and be supported in several ways: voting "me too", which is a kind of "like" button of 'Facebook and expresses approval and shared purpose for the same space; commenting in the project page; collaborating and discussing constructive ideas to improve the project; and micro-funding it. The goal of micro-funding is to share responsibilities, risk and involvement on ideas' implementation. 'Kickstarter' and 'Indiegogo' are focused on several areas of innovation, but 'Brickstarter' has as its only focus the territory.

Crowdfunding has been so successful because it solves the problem of taking a big risk on investing on a project which it is not certain whether there is market demand for it. These platforms give a trustful and rapid answer, cheaply and quickly. The public enjoy it as well, as they know their money is going straight to the people who deserve it (Hon, 2012).

In the UK it's been suggested that they should even eliminate all public funding of TV, movies, arts, products, and services, and let the market sort it out. However, it is not going to happen, but a hybrid version of public/crowdfunding system, which means that, if organizations set aside, for example, 1 per cent of their budgets, to matched funding or prizes to qualifying crowdfunded projects in specific areas of interest this would combine the best of public funding and crowdfunding, distributing risk amongst more parties, providing more choice to the public, saving money from wrong investments. This could be a genuinely democratic boost for the new Era; and it would also be a very direct form of economic stimulus. Funding would go directly to the producers as decided by the market, bypassing middlemen, would allow to build a bridge between public and private worlds and to give the public a say in what they want for the future of society (Hon, 2012).

Also crowdfunding platforms have their limits and problems to solve, in spite its potential. As Lange (2012) notes, this is a great first step, but it may cause an illusionary sense that everything is possible to implement on public space, as long as its supported by an important part of the community. However, the bureaucracy involved in realizing such a dream usually becomes a nightmare, leading to frustration and difficulties on implementing supported ideas, which can run against public administration.

An example is the idea for the LowLine to take a 1.5 acre abandoned trolley terminal on the Lower East Side of New York and to turn it into what co-founders were initially calling a park. They raised those funds with a visually attractive idea, first shown in New York Magazine in September 2011. When the LowLine launched on

Kickstarter in February 2012, it proved to be unfeasible as their dream was years, thousands of dollars and bureaucracies away (Lange, 2012).

More recently, Seisdedos (2008:7) verified a new obstacle to sustainable urban development, emerged in 2007: the 'surprise' before the turbulence and subsequent accelerated changes that begun to happen, after the collapse of Lehman Brothers Inc. Suddenly, ongoing mega-plans to promote cities, trying to repeat the 'Bilbao Effect' gone (Rybczynski, 2002).

In consequence, population started to believe in less ambitious development models. Seisdedos (2008:10) states that, due to this sudden political, social and economic change, it is important to create a new development model which establishes how leaders will meet citizens' expectations. Municipal stakeholders have to promote a real and effective involvement with each citizen. The idea of an active and decisive public administration, serving passive and dependent citizens is already outdated, as society is even more made by unique citizens (Seisdedos, 2008:13).

Seisdedos (2008) identified five trends in spanish cities reactions to the ongoing paradigm changing:

- Assuming a radical change in citizens' needs;
- Establish a monitoring system to observe citizens' needs and compare their city with the other competing cities, in order to direct a territorial development and reputation management;
- Change policies towards the new paradigm, avoiding investments in heavy infrastructures, but implementing social and care policies, more focused on a professional recycle of citizens and on local jobs active policies, in order to attract specific clusters investments (Winfield-Pfefferkorn, 2005:14). To achieve success in these policies implementation, local organizations have to establish partnerships, and to avoid traditional territorial marketing, which is about generic and massive approaches, based on public diplomacy and on the creation and integration in strategic alliances networks;
- Combine ICT's utility to urban planning and management and digital marketing;
- Work on the necessary policies changes (Seisdedos, 2008:14-16).

Stakeholders and population knowledge fusion is the basis for developing a strategic plan, in order to better meet the needs set out by all the actors. Such a plan can lead to a place identity redirecting, justified by combining stakeholders and locals' development goals and, additionally, with international markets' objectives (Laurenson, 2002).

The model Seisdedos (2008) proposed is called 'Estrategia de Desarrollo Urbano' (EDU) and it is already considered a positive evolution of Territorial Management Instruments (TMI), because it converges a deep and objective urban analysis with the

recognized needs of general population, stakeholders and the markets, towards a serious commitment (see Fig. 3).

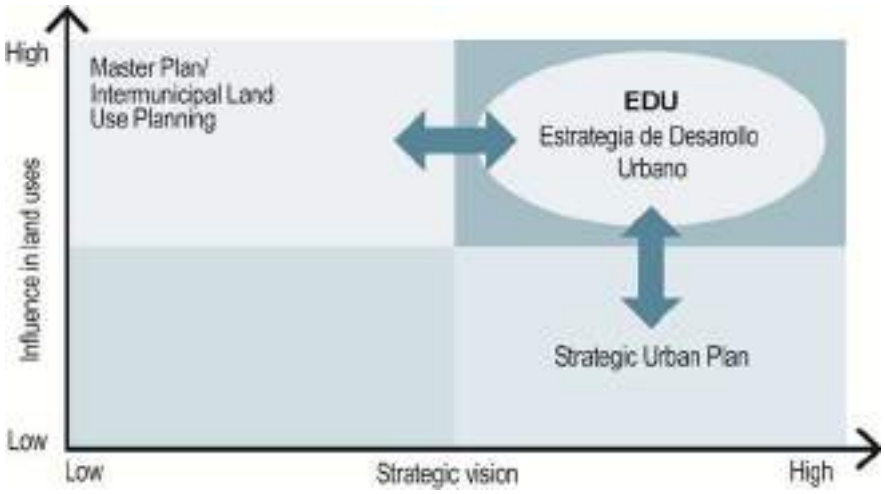

Fig. 3 – EDU tools and TMI convergence
Source – adapted from Seisdedos (2008:17)

Seisdedos (2008) states that the current separation of these two instruments (strategic plan *vs.* Master Plan is due to the inconsistency between urban strategy and land uses planning. A new instrument aiming at connecting both vision and action would redefine more properly the municipal strategic positioning and transform automatically strategic vision into concrete actions, objectively selected in order to achieve strategic success.

This model defends a holistic approach in order to widely meet the identified needs. Urban planning actions would lead to structuring projects, integrating both strategy and reality. Their effects should go beyond physical space. Therefore, EDU would be a main instrument for territorial management and municipal policies, providing the graphic and systemic structure for actions coordination from the most diverse fields, which would then be useful as a communication tool with citizens and investors Seisdedos (2008).

In a bottom-up development process, communities are questioned about their expectations and requests on defined spaces in order to propose solutions to decisions makers. 'Lively Cities' (2011-2014) is a European project which aims at turning misused, underused or unused public spaces into new destinations where people choose to spend their spare time. The project has three working steps, in order to achieve a successful bottom-up approach in improving public space quality:

- **Define** - partners observed, analysed the spaces and sensitised communities involved in the public space;
- **Test** - From all the observations, analyses & work with communities, partners have pointed out what to test on the public space. All the tests shall be evaluated about their users acceptance;

- **Implement** - Final actions of place making will be set up as well as long term structures to manage these new destinations on a daily basis (Bouakaz, 2012).

The practice of good urban governance calls for local authorities to direct their actions toward efficiency, effectiveness, accountability and fairness (Yaakup, Sulaiman & Bakar, 2006:3).

Nowadays, municipalities have the task of strengthening relationships with local population and users, in order to ease active sessions of civic participation in decision making processes and avoiding hostile postures from less happy social groups. So, Lindstedt (2011:42) establishes four (4) dimensions that municipalities should develop in order to approach locals and public administration towards better commitments, co-responsible decisions and better partnerships for effective implementation:

- Ability to manage place demand;
- Continuity 'related' to the place and 'congruent' with the place. This means that there is the need to maintain identitary references of local population, as well as to maintain generic physical characteristics of the place, which is recognized by locals as an integrant part of place's identity;
- Support in achieving the goals – by providing enough resources to achieve individual goals, people feel identified, supported and understood by the place, thus forming affective relationships with the place (Lindstedt, 2011:47);
- Distinction – sometimes people feel so identified to their places that use them to manifest belonging to a social group and to distinguish from other groups. In spite of the inherent segregation that subsists in this reaction, this is crucial as an element of human identity construction, as nobody feels identified with a place that reflects everyone /no one.

Some cities, like San Francisco, USA, are working on an urban model that identifies some areas of the city which welcome prototyping, ephemeral interventions and innovations. Like Apple's ready-made platform created to let anyone build an iPhone app, San Francisco is creating platforms of public space experimentation (Badger, 2012).

5. 5. Conclusion

ICT possess the potential to provide tremendous support to public by empowering them with information and web-based decision making environments can mould today's society, by providing efficient public access, supporting empowerment of the public's capacity to work with data and to participate in the discussion of community development initiatives, environmental problems and decision making. Developing virtual decision making tools may also encourage community involvement and provide focus for a community's discussion of diverse ideas as well as guiding them through the planning and design process (Yigitcanlar, 2009:18). In fact, ICT is

proved to be a powerful tool to improve democratic processes of decision making and civic empowerment; by elaborating technologically advanced solutions that can serve as a platform to lead society to a higher level. In another words, ICT are a mean, not an end, to develop a sustainable urban environment.

The first key-factor to complete the third modernity transformation is still underdeveloped, as population is only reactive to decisions come from the top decision-makers. The turning point will happen when all society representatives are truly involved, proactive and co-responsible for the decisions made together. (van Gelder, 2008b:4).

The second is related to globalization combined with deindustrialization, which transformed territory, life quality standards and economic fabric health, as they are dependent on a growing competition for human and economic resources, in order to provide any distinctive character to places and a relatively balanced location of production lines (van Gelder, 2008a:1). The co-responsibility of every sector of the society has an added onus of maintaining and growing the investment and economic activities on the respective place, in order to satisfy the life quality needs of the population and to avoid loss of competitiveness and consequent social and economic fabric exodus (van Gelder, 2008b:4).

The third factor is providing e-learning tools to share knowledge and information among collaborators and raise awareness in environmental problem solving process. This could enable effective web-based decision support systems through which individuals could express directly to the decision makers. It should provide equal access to data and information for all sectors of the community. A high degree of trust and transparency needs to be established and maintained within the public realm to give the process legitimacy and accountability (Yigitcanlar, 2009:19).

Government gives place to Governance, understanding it as a devices and methodologies system associated to civil society representatives, with the aim at implementing policies and public decisions, in order to strengthen representative democracy, through new consultation and decision-making processes (Ascher, 2010:94).

Social media is the attempt of public administration to engage with citizens in a new forum through which the public sector relationship with citizens can play out in plain sight. Then, if city leadership has built strong and trusting relationships with residents, social media can make them even stronger and help on the development of wider support. However, if the community has little or no trust in governance, then it can promote unhealthy and unbalanced discussions (Doyon, 2012b), as these platforms are also able to empower networks of discontent. It has also to be taken into account the limits of engagement systems like social media and crowdfunding platforms in particular, and try to find solutions to soften bureaucracies and effectively engage all the interested parts and authorities.

New decision-making processes needs to focus on the following objectives:

- Transparent policies, directly related to place values;
- True messages and promises;
- Creativity and innovative solutions;
- Accountability, in order to promote trust between all agents;
- Turning urban development and branding a sole strategic management, focused on enhancing governance and leadership (Anholt, 2009).

Municipalities have the role of strengthening relationships with local, by developing conditions to make better commitments, co-responsible decisions and better partnerships for effective implementation.

The objective of this new civil society is to discuss points of view, decisions, and share goals. To achieve this, it is required the constitution and skills of city management and civic representatives staffs, boards, and advisors, the way they provide access to their key decision makers, and the ways they engage with critics and supporters in the real context in which those things will happen (Bernholz, 2012).

Empowering local population by involving all sectors of the society in this plan construction and actions implementation has the aim at achieving more adequate strategies to the real needs of the population, leading on the other hand towards more cohesive and confident communities, increasing civic pride and therefore willing to contribute to place's good evolution (van Gelder, 2008b:5).

The current challenge for territorial management is how to deal with contradictory goals of such a diverse population, and how to manage the new people-led interventions in the city, in order to unlock bureaucratic barriers and boost co-responsible urban development and distribution of risks (Badger, 2012).

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ECONOMIC GROWTH, URBAN DEVELOPMENT AND ENVIRONMENTAL SUSTAINABILITY

Petter Næss[1]

Abstract

The paper discusses the prospects of decoupling growth in the urban building stock and in the availability of options for jobs and service facilities from negative environmental consequences. Compact and dense urban development combined with improved public transport is often conceived as conducive to that end. Using the Norwegian capital of Oslo as an example, the paper shows some of the achievements but also limitations of this approach. Oslo has since the mid-1980s followed a clear urban containment policy. Still, growth in the building stock has only been partially decoupled from traffic growth and land consumption for urban development, and the densification has increased the number of people living in areas exposed to noise, air pollution and traffic accidents. Area reserves where densification can take place with small environmental effects will gradually be exhausted. Climate change adaptation may pose further limits to densification. Full decoupling between building stock growth and negative environmental impacts over a long period of time thus seems implausible. In a longer term, environmental sustainability might involve removal of the least environmentally friendly buildings, urban districts and infrastructure to compensate for new construction, and in some cities even shrinkage of the total building stock.

1. The urban decoupling agenda

Nearly 25 years have passed since the UN World Commission on Environment and Development put the issue of sustainable development on the international agenda as a common challenge for all nations. According to the Commission, the key tenet of a sustainable development is to meet basic human needs – especially the needs among the world's poor – in a way that sustains the possibilities for future generations to meet their own needs (WCED, 1987:43). Based on this understanding of the concept, important challenges of a sustainable urban development in wealthy nations are to mitigate climate change, limit energy consumption, reduce pollution, protect natural areas and arable land, and provide a safe and healthy environment for its citizens, in particular the most vulnerable groups. There is, however, a clear tension

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between these concerns and the widespread goals of city authorities of enhancing economic growth.

Cities – and the urban regions to which they belong – are large spatial concentrations of dwellings, other buildings, and infrastructure. Contemporary economic growth of cities is closely associated with growth in the volume of all these elements. The growth entails a process of urbanization (migration to major urban regions, where the most growth-generating businesses usually prefer to locate) as well as per capita growth in the size of the built environment. In the poor countries of the world, urban economic growth may still play such a progressive role (although the ways in which the benefits are distributed is often highly skewed). However, with increasing affluence levels, the costs of growth have become more and more evident, compared to its benefits (Mishan, 1967; Jackson, 2009). In the 1970s, the report Limits to Growth published by the Club of Rome (Meadows et al., 1972) triggered a wave of skepticism and criticism against growth.

In the 1980s, this growth criticism receded while a belief in green technological inventions as the key to sustainable economic growth won through, supported by the theory of ecological modernization (Huber, 1985; Mol & Spargaaren, 2000). In the dominating debates on sustainable development, decoupling economic growth from negative environmental impacts has thus been highlighted as a main avenue to achieve environmental sustainability. (OECD, 2002). For urban development, a main challenge of decoupling is to find ways of accommodating growth in the building stock and ensuring accessibility to facilities while reducing negative environmental impacts resulting from the construction and use of buildings and infrastructure.

In the recent few years, the assumptions of the ecological modernization paradigm have, however, been increasingly challenged by critics who from different perspectives argue that the quest for economic growth in affluent countries should be replaced by policies aiming at zero-growth or even de-growth (Jackson, 2009; Spangenberg, 2009; Martinez-Alier et al., 2010). This literature has, however, generally not paid much attention to the relationships between economic growth, urban development and environmental sustainability.

2. Densification as decoupling

According to the European Environmental Agency (2006), the urban population in Europe grew by 33% between the mid-1950s and 2000. During the same period, the area covered by European cities grew by 78%, corresponding to an increase in urbanized land per capita by 34% on average. In most cities the growth in the volume of the building stock has been higher than the growth in the area covered by the city. Higher buildings have replaced lower ones, and in-

fill development has taken place on vacant sites within existing urban area demarcations. However, in most cities, there has also been considerable outward urban expansion where previously undeveloped land in the surroundings of the city has been converted into sites for urban development.

The stronger growth in the volume of the urban building stock than in the number of inhabitants is partly due to a substantial reduction in the average household size. For example, in Denmark, the average number of household members was nearly 3.5 in the 1950s, dropping to 2.51 in 1981 and further down to 2.16 in 2009. Thus, today there are considerably more households – and hence also dwellings – per 1000 inhabitants than there used to be 'in the old days'. Instead of becoming on average smaller, as one might expect from the decreasing number of household members, the average dwelling size has grown. There has been a substantial increase in the per capita housing consumption, measured in floor area. This growth has to a very limited extent been problematized in the debates on sustainable consumption.

As can be seen in Figure 1, floor area per capita in Denmark and Norway has increased to nearly twice and a half times as much as in 1960 (second homes not included). The growth in the total building stock is even higher than the growth in residential floor area. A similar development has been seen in many other European countries.

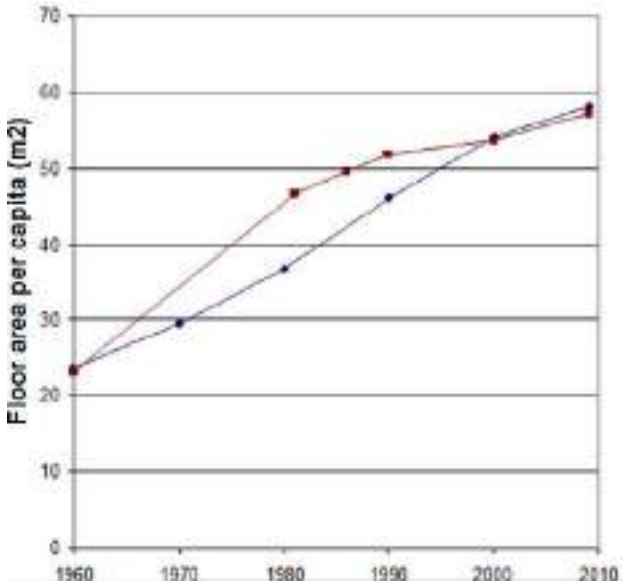

Figure 1: Changes in Residential Floor Area per Inhabitant Since 1960 in Denmark (red) and Norway (blue)[2]

[2] Sources: Røpke (2000), Statistics Denmark (2010) and Statistics Norway (2010a).

During the recent 15-20 years, urban sprawl has stagnated in many West European countries (Kasanko, 2006). Some North European countries, notably Norway and Sweden, have witnessed a clear change from urban sprawl to urban densification during the most recent decades (Statistics Norway, 2011a; Statistics Sweden, 2009). It should be noted that urban densities were at the outset not very high in these countries, so the physical opportunities for densification have therefore been larger than in the more compact south European cities.

A number of studies have shown that low-density suburban development increases the need for motorized travel (Newman & Kenworthy, 1999; Næss, 1993; Næss, Sandberg & Røe, 1996; Næss, 2006). It is difficult and expensive to provide high-class public transport services in low density urban districts. Combined with road construction in the advent of future demands for road capacity, urban sprawl has contributed to the creation of highly car-dependent cities.

Compared to urban sprawl, densification can bring important benefits in terms of the protection of natural landscapes, arable land and biodiversity, in particular if the densification can be channeled to 'brownfield' sites such as derelict or under-utilized industrial areas, obsolete harbor areas and parking space. Multifamily houses require less energy for space heating and cooling per square meter than detached single-family houses (Høyer & Holden, 2001; Mark & Wolfe, 2007), and less material for the construction of the buildings themselves, sewers, cables and access roads (Burchell et al., 1998). And not the least, compact urban development can provide accessibility to facilities through proximity instead of by means of high mobility, thus combining important environmental and social aspects of sustainability. In particular, densification in the inner and central parts of a city or metropolitan area is favorable, seen from the perspective of reducing energy use and emissions from transport (for an overview of evidence from Nordic urban contexts, see Næss, 2012). For the above reasons, densification is considered by many urban planners as a key strategy for decoupling and 'smart growth' (Commission of the European Communities, 1990, Smart Growth Network, 2012).

Some planners have believed that decentralization of jobs to the suburbs would reduce commuting distances, since suburbanites could then be employed at workplaces close to their residential neighborhood. However, in contemporary specialized and high-mobility societies, people do not choose jobs (or recruit workers) mainly from within their local district. For example, in a study in Oslo, employees at the most peripheral workplaces had the longest mean commuting distances among the whole sample. Together with the influence of workplace location on travel modes, energy consumption for journeys to work was therefore found to be on average three times as high among employees of the

most peripheral than among the most central workplaces (Næss & Sandberg, 1996).

3. Oslo as a case of ecological modernization

The urban development of the Norwegian capital Oslo may serve as an illustration of the possibilities and limitations of obtaining a decoupling between growth in the building stock and negative environmental consequences (Næss, Næss & Strand, 2011; Næss et al., 2011; Næss, 2011). Oslo received the European Sustainable City Award in 2003 and was ranked third among 30 cities evaluated for the European Green City Index in 2009. Oslo thus has a reputation for being among the forerunners on the path toward urban sustainability.

In Norway, the political attention to sustainable development has been strong since the late 1980s. Professionals and decision-makers at that time formed strong discourse coalitions promoting a more space-efficient and less transport-demanding urban development. A long-lasting period of spatial expansion in Norwegian cities came to a halt in the 1990s, particularly in the largest urban regions. In Oslo, the reurbanization trend began even earlier. As can be seen in Figure 2, the population density within the continuous urban area of Greater Oslo increased by as much as 27% over the period 1985-2011. During the latest half of this period, Greater Oslo increased its number of inhabitants within the continuous urban area from 755,000 in 1998 to 907,000 in 2011 (i.e. by 20 %), with an increase in urbanized land of only 7 %.

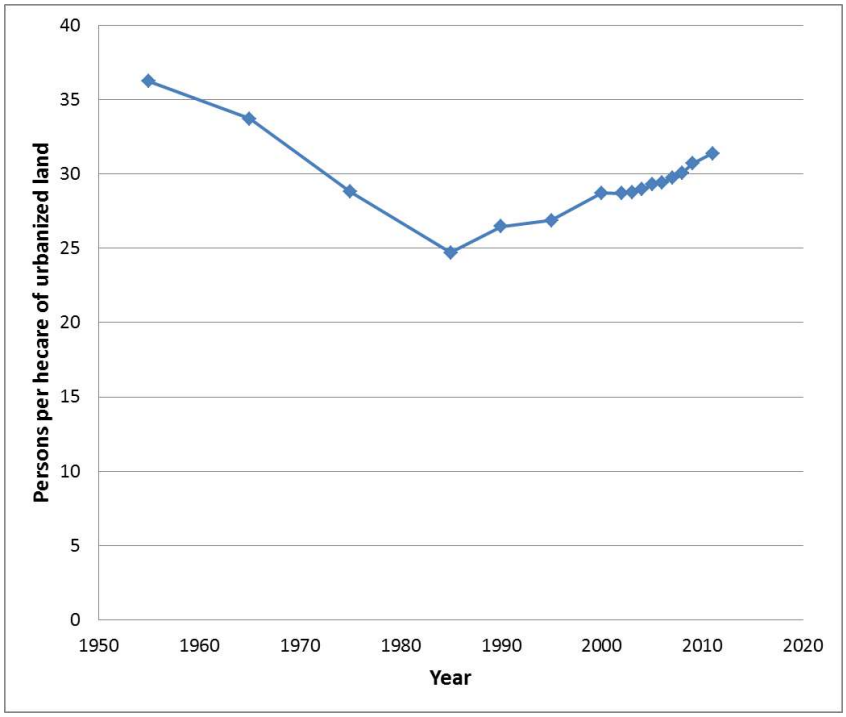

Figure 2: Changes in Population Density within the Continuous Urban Area of Oslo during the Period from 1955 to 2011.
Sources: Statistics Norway, 2011a and b; Riksrevisjonen, 2007.

Within the so-called Inner Zone of the municipality of Oslo, now comprising around 200,000 inhabitants, population density grew by 39% over these two decades. There has also been an overall population density increase for all urban settlements of Oslo Metropolitan Area seen together, although the peripheral settlements have combined densification with some development of dwellings and workplaces on previously undeveloped land. In spite of the latter, the number of inhabitants per hectare of urbanized land within the region as a whole (including 1.2 million urban inhabitants in 2011) grew by 7.5 % over the years 2000-2011. Figure 3 shows how the urban population density has developed within the inner zone of Oslo, the municipality of Oslo, the continuous urban area and within the entire Oslo region since 1999/2000.

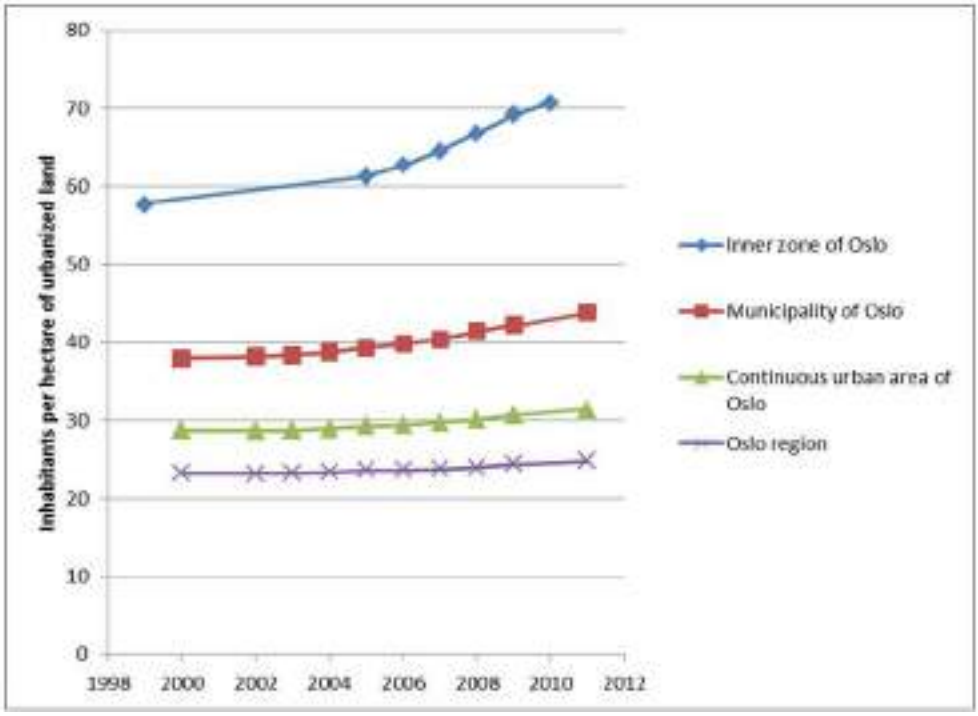

Figure 3: Changes in Population Density within the Inner Zone of Oslo, the Municipality of Oslo, the Continuous Urban Area and within the Entire Oslo Region since 1999/2000.
Sources: Statistics Norway, 2011a and Municipality of Oslo, 2010.

For Oslo Metropolitan Area as a whole, most of the employment growth during recent years has taken place in the counties outside the municipality of Oslo, usually close to main public transport lines. However, for jobs occupied by employees with university education of at least four years, 70% of the job growth since 2000 has occurred within the municipality of Oslo, especially in the inner districts. According to the Dutch "ABC-principle" for environmentally sound location of employment (Verroen et al., 1990), it is especially this type of jobs that should be located centrally in order to reduce car commuting.

4. A partial decoupling

Compared to current urban development in most European cities and to its own development in the postwar period until the mid-1980s, Oslo has managed to combine high growth in population and building stock and low encroachments on natural and cultivated areas. Traffic growth has also been moderate, especially since the turn of the century. During the twelve years from 1996 and 2008, road traffic within Oslo Metropolitan Area increased by 24.5%, with a growth of 11.5% in the period 1996-2002 and 8.5% from 2002 to 2008. These figures may not seem very impressive unless the rapid population growth is taken into consideration. Adjusted for population growth, traffic increased by

1.2% annually from 1996-2002, while there was a weak negative growth (-0.03% annually) over the years 2002-2008. (Statens vegvesen region øst, 2010.)

Figure 4 illustrates how regional GDP, traffic growth and the size of urbanized land in Oslo Metropolitan Area have developed since the mid-1990s (Riksrevisjonen, 2007; Statistics Norway, 2010b and c; Statens vegvesen region øst, 2010). The size of the urbanized area has increased at a considerably lower rate than the regional GDP, indicating a clear tendency of decoupling between economic growth and land consumption. Especially the extension of the continuous urban area has been decoupled from economic growth, but also land consumption measured at a metropolitan scale. Traffic has also increased more slowly than regional GDP during the whole period, and in particular since 2003 there is a clear gap in the growth rates of these two parameters.

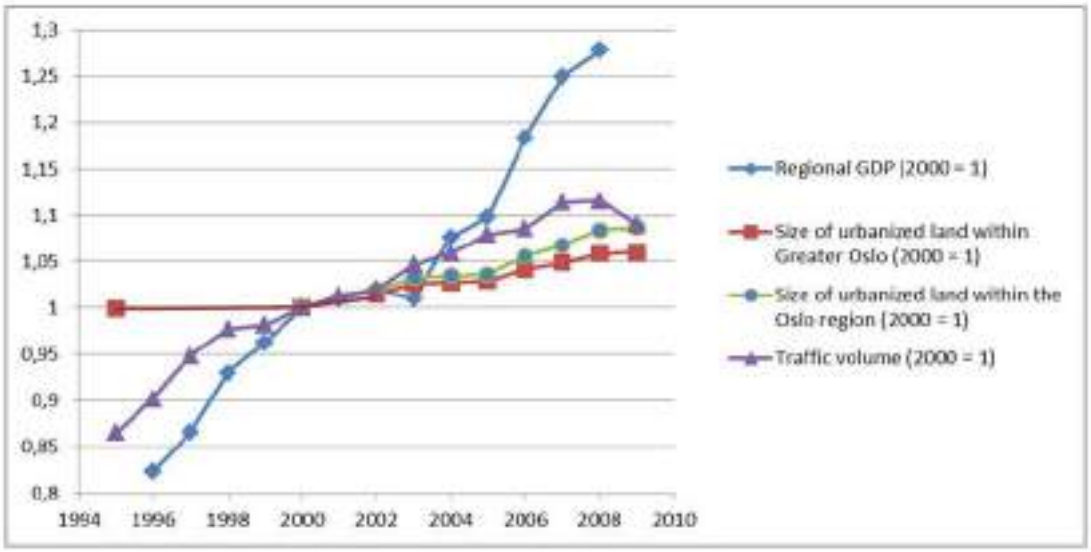

Figure 4: Changes in Regional GDP, Size of Urbanized Land and Traffic Volume since the Mid-1990s in the Oslo Metropolitan Area.

However, slowing down the growth in car traffic is not sufficient to bring about environmentally sustainable mobility. In Oslo, continual road capacity increase has worked against the fulfillment of the sustainability targets. While a new Metro ring has been opened, streetcar services have been improved and new express bus lines have been established, new multi-lane roads have also been constructed. Partly, road building has been motivated by a wish to lead traffic through tunnels away from city centers and housing. But most of the new tunnels have had more lanes than the surface roads they replaced. The purpose of this road capacity increase has been to combat congestion. Such 'predict and provide' infrastructure development will hardly contribute to reducing

greenhouse gas emissions and other negative impacts of urban road traffic (Strand et al., 2009).

5. Environmental justice dilemmas

While Oslo's urban densification has reduced the conversion of natural areas into building sites, it has reduced the intra-urban open-access areas within the continuous urban area of Greater Oslo. For example, there was a 5% reduction of such areas over the five-year period 1999 – 2004. Partly, this was a result of transport infrastructure construction, but green areas also had to yield to new kindergartens or schools in districts where densification caused population growth beyond the capacity of existing social infrastructure. Together with the rapid inner-city population growth, this has diminished the availability of open-access land per resident in these districts.

Moreover, inner-city residential densification will, other things being equal, increase the number of inhabitants exposed to the higher levels of noise and concentrations of air pollution typically found in the inner parts of metropolitan areas. In Oslo, levels of mortality and coronary infarcts are higher among inner-city dwellers than among suburbanites, and this difference is also present when controlling for age, income, education, and unemployment (Statistics Norway, 2005; Municipality of Oslo, 2009).

Regarding traffic accidents (Røe & Jones, 1997), noise (Kolbenstvedt & Hjorthol, 1987), as well as local pollution, the location of developmental areas has its impacts on the distribution of burdens and benefits between the city's own inhabitants. Metaphorically, as illustrated by Krier (1996), the suburbs are 'bombarding' the inner city with cars and their associated environmental problems. If the construction of new residences takes place in the outer parts of the urban area, those who move into the new suburban dwellings will benefit from a local neighborhood less polluted and less exposed to traffic accidents than the urban average, while themselves contributing to an increased overall amount of transport burdening residents living closer to the city center with more through traffic, noise, air pollution and a higher risk of accidents.

Low-density suburban development thus leads to increased polarization by aggravating the local environmental problems facing those inhabitants who are at the outset exposed to the least satisfactory local traffic situations, while providing a sheltered situation for those who move into the new suburban residences. Compared to a more dispersed urban structure, high urban density decreases the city's overall amount of traffic and its contribution to air pollution, and inner-city densification contributes to a less unequal distribution of traffic-related environmental nuisances, since the suburbs will then 'bombard' the city center with fewer cars. On the other hand, high density concentrates the (although reduced) traffic volume and its related local

environmental impacts. The concentration of local air pollution and noise in inner-city areas shows that there is a need for additional policy measures that can lower the amount of local traffic more radically than what is attainable solely through urban containment.

6. Limits to densification and building stock growth

As the densification process goes on in areas where the construction of new buildings can take place with small negative environmental impacts, such area reserves will gradually be exhausted. Subsequent growth in the building stock must then be located to areas where the construction requires the conversion of natural areas or agricultural land. Importantly, many of the sites where densification has taken place without encroachments on natural areas or farmland have become available because manufacturing industries have moved from Oslo (like most other cities in wealthy countries) to developing countries with lower labor costs and less restrictive environmental regulations. Global-scale relocation processes resulting in large encroachments on nature in newly industrialized developing countries have thus been a precondition for the partial decoupling between growth in the building stock and negative environmental impacts achieved in some European cities.

Densification on sites made vacant due to the moving of manufacturing industries to countries with lower wages is an example of picking the 'low-hanging fruits', where it is relatively easy to obtain a reduction of environmental impacts per unit produced (e.g., dwellings or office space). The (spatially delimited) decoupling resulting from such picking of 'low-hanging fruits' and export of polluting, energy-intensive and land-consuming industries to poor countries is, however, temporary. After some decades, no more polluting industries will be left to out-locate, and the technologically and socially easiest achievable efficiency gains will already have been made.

A high rate of growth in the building stock and technical infrastructure may also make it an even more challenging task to combine climate change mitigation and adaptation strategies in urban land use. Although it is possible to design adaptation measures as well as urban densification strategies in ways minimizing conflicts between mitigation and adaptation, the difficulty in setting aside sufficient intra-urban pervious surfaces while containing new construction of buildings within the existing urban area demarcations will of course be higher, the larger is the increase in the building stock.

Buildings are seldom, if ever, constructed with environmental protection as a main purpose. Instead, construction takes place to accommodate growth in the number of households, jobs etc. and in the floor space per resident or employee. As noted by Høyer & Holden (2001), larger dwellings are also associated with higher consumption of other items like furniture, electronic appliances etc.

Increase in the building stock can at best be made environmentally friendly in relative terms (by choosing resource-efficient solutions), not in absolute terms (Høyer & Næss, 2001). In order to make omelet, you have to crack eggs. As already mentioned, fewer environmental 'eggs' will normally be cracked by densification than by urban sprawl. Densification still has its negative environmental and health impacts.

According to the theory of ecological modernization, environmental problems can be solved within the context of existing political and economic institutions by decoupling economic growth from environmental degradation (Barry & Paterson, 2003). Oslo's densification and public transport improvements are examples of ecological modernization strategies within the field of urban development. However, the Oslo case shows that economic growth has only been partly decoupled from traffic growth and land take for urban development. If economic growth without negative environmental consequences were to be possible anywhere, this would most likely be in societies with a high level of prosperity, a high degree of economic freedom of action, as well as a high level of knowledge among the citizens. Oslo metropolitan area has a higher score than most other metropolitan areas worldwide on all these criteria. In this respect, Oslo might be considered a "critical case" where the thesis that a non-environmentally-harmful economic growth is feasible could be tested. So far, however, it looks as if no city region - neither in Scandinavia nor elsewhere in the world – wishes, or is able, to implement more than a partial decoupling between growth and negative environmental impacts.

In the Nordic as well as other European countries, studies have been conducted to investigate the potential for reducing the energy consumption and environmental load per unit produced by 'factor four', 'factor ten' and even 'factor twenty', i.e. down to 25%, 10% and 5%, respectively, of present levels. When the resource to be economized on is undeveloped land, such rates of reduction will only be possible if it is accepted that important characteristics of the 'products' are changed. Among other things, it would require a complete halt in the construction of detached single-family houses in urban areas. Replacing all development of new single-family home neighborhoods with the construction of apartment buildings in the inner cities would, however, be highly controversial. In the long run, it is also dubious whether this would be sufficient to make continual growth in the housing stock environmentally sustainable.

Similar lines of thought could be pursued regarding the construction of other elements of the physical urban development, such as the construction of transport infrastructure, energy supply systems, and sewage systems. Especially investments in transport infrastructure usually give large direct intrusions into the natural environment. Moreover, infrastructure can of course not be recycled in the same way as the products we throw away as consumers.

According to Høyer (1997), the decisive ecological limits for a further growth in the global mobility are therefore set by the tying-up of resources that must take place in the infrastructure.

This leads us to the question of whether it can at all be in accordance with an environmentally sustainable and globally just development to increase the building stock substantially beyond its present size in rich countries like the Scandinavian ones. Population growth, in-migration to the largest urban regions, and changes in the composition of households imply that there will still be a need to increase the number of dwellings. Moreover, despite the overall high Scandinavian housing standards, some people still live in substandard dwellings. Historically, the housing standard among low-income groups has been substantially elevated as part of a general increase in housing consumption, e.g. as a result of moderate-price dwellings becoming vacant when people who can afford it move into new high-standard dwellings. As evident from the preceding sections, such a continuous, general increase in consumption is problematic in an environmental and natural resources perspective. It is also an inefficient way of improving the residential standard among the population groups experiencing the poorest housing conditions (Bysveen & Knutsen, 1987). If we want to meet the need for improved housing standards among these groups while limiting the overall growth in housing consumption per capita, a policy of 'selective improvement' will instead have to be pursued.

As can be seen above, growth in the urban building stock inevitably tends to increase the environmental load, although the environmental pressure can be reduced significantly by means of environmentally friendly urban planning principles and building design. At the same time it is difficult to envisage a society where there is general economic growth but no growth in the building stock (Harvey, 2010). In Norway, the category 'dwellings, lightning and heating' accounted for 29% of household expenditures in 2007 (Statistics Norway, 2009). If we want general economic growth, non-growth within the building sector would require even higher growth within other sectors. Such a shift of growth from buildings to other sectors of society would, however, not necessarily lead to reduced environmental impacts (Xue, 2012). In many of the other sectors there are similar difficulties in decoupling growth from negative impacts as in the building sector. Not the least, this applies to the transportation sector, where CO2 emissions and other environmental impacts have increased steadily in all European countries, despite the fact that climate change mitigation has been high on the agenda (Tapio, 2005). .

7. A de-growth urban planning agenda

In the European environmental discourse, the perspective of de-growth has gained increasing attention during later years. According to this perspective, the

volume of consumption in the EU countries and other wealthy nations is already higher than what can be sustained in a long term if vital natural resources and environmental qualities are to be maintained and people in poorer countries are to be allowed to reach the same consumption level as in the wealthy North (Martinez-Alier, 2009; Spangenberg, 2010). In the Scandinavian countries, residential floor area per capita is currently nearly three times as high as it was sixty years ago, and there has also been a substantial growth in the stock of non-residential buildings. A long-term continuation of such growth in the building stock will put an increasing pressure on the natural environment. There has actually been a tendency of reduced growth rates in residential floor area per capita in Norway and Denmark (Figure 1). Partly, this reflects a strong increase in the cost of housing per m2 of floor area. In Oslo, housing costs per m2 increased threefold from 1993 to 2005, reflecting changes in the financing conditions and land values rather than technical standard improvement. But the declining tendency may also indicate that the consumption of floor area is approaching some saturation level. If so, further growth in households' purchasing power will be channeled to other items, for example holiday flights. Less money spent on housing will then not contribute to reduced environmental load, but rather increase it.

As long as the purchasing power grows, reduced growth in the consumption of one category (such as housing) tends to be compensated by increased growth in the consumption of other items. Such 'rebound effects' have a tendency of reducing or offsetting the environmental gains from energy- or material-saving technologies or reduced consumption of one particular type of commodity, since the money thus saved can be spent on other types of consumption that are not necessarily environmentally neutral (Nørgaard, 2009).

A number of environmental, social and distribution-ethical reasons indicate that the per capita size of the building stock and technical infrastructure in Scandinavian cities has reached a level of sufficiency. From a sustainability perspective, we should instead of quantitative growth give priority to qualitative improvements of the building stock, such as environmentally friendly building-technological solutions, area-effective and flexible layout of the rooms, and a high esthetic quality. Improved housing conditions for the small proportion of the population who still live in substandard dwellings should be realized through selective residential construction directed towards the housing needs among these groups. The rest of the population – the large majority of Scandinavians – would hardly suffer any hardship from continuing their present level of housing consumption. Measures to enhance a better utilization of the existing building stock in cities should also be high on the agenda, including policies to encourage a subdivision of the largest residences into more units, and facilitation of co-housing schemes (Lietart, 2010).

In a longer term, the question of reducing the volume of the building stock and the size of the urbanized land may enter the agenda in cities in affluent countries. In particular, this might be relevant in cities where the number of inhabitants is stable or declining. If the total building stock is not to increase, the construction of new and more environmentally friendly buildings through densification should be combined with the abolishment of some of the environmentally least favorable built environments, such as the most car-dependent single-family home areas and office parks. This could open up possibilities for nature regeneration projects and a larger coherence of the natural areas and landscapes surrounding the city. In a situation with a deliberate de-growth in the economy, a dismantling of several of the most resource-consuming and unfavorably located built structures might become relevant.

In a shrinking total economy, there is a risk that low-income people will be locked in continual or even worsened poverty. Redistribution of wealth from rich to poor population groups will be necessary, if degrowth shall be socially sustainable and gain public support (Martinez-Alier 2009; Spangenberg 2010). Needless to say, such a development would require radically changed political prioritizations and a much higher extent of political influence on societal development than under current, predominantly market-led conditions. It is difficult to imagine how such a societal development can at all be possible within the confines of an economic system driven by competition between individual actors aiming for capital accumulation (Harvey, 2010).

A decision to support de-growth strategies – a planned and voluntary reduction of consumption levels, working hours and the general busy-ness – is thus far beyond the agenda of the present society. However, if our cities are to become truly environmentally and socially sustainable, such a trajectory would arguably be necessary. The environmental load of the existing building stock, infrastructure and consumption in general exceeds the ecological footprint that would be ecologically sustainable and in accordance with a just distribution globally. Technological improvement can only to some extent reduce the negative environmental impacts. The efforts to develop more environment- and human-friendly cities should therefore not be limited to the creation of smarter building designs and urban planning solutions for a growing building stock. We must also dare to raise our view and ask which needs the construction of ever bigger dwellings, shops, offices, other buildings, and roads actually serve to meet – and which political-economic changes the prioritization of better built environments instead of bigger built environments would require.

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SYSTEMATIC OVERESTIMATION OF BENEFITS IN APPRAISALS FOR ROAD CAPACITY EXPANSIONS

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Abstract

Although the phenomenon of induced traffic has been theorized for more than 60 years, the traffic-generating effects of road capacity expansion are still often neglected in transport modeling. Such omission can lead to serious bias in the assessments of environmental impacts as well as the economic viability of road projects in urban areas. This has been illustrated in the present paper by a comparison of environmental and economic appraisals for a proposed road project in Copenhagen with and without short-term induced traffic included in modeling. Even though only short-term effects were included, the comparison showed substantial differences in project feasibility. Induced demand resulted in lower travel time savings, more adverse environmental impacts and a considerably lower benefit-cost ratio when induced traffic is partly accounted for than when it is ignored. Omission of induced traffic can result in over-allocation of public money on road construction and correspondingly less focus on other ways of dealing with congestion and environmental problems in urban areas.

1. Introduction

The aim of the present paper is to illustrate how common appraisal techniques can be, and often are, depicting benefits and drawbacks of proposed transport infrastructure investments in a distorted way. Cost-benefit analysis (CBA) is typically the most common form of appraisal technique for such projects (Mackie 2010; Odgaard, Kelly, and Laird, 2005).

For road projects, the accuracy of traffic forecasts are crucial to the validity of subsequent impact assessments. These forecasts form the basis for estimates for a wide range of impact factors, including time savings, emissions, and noise. Since several studies have concluded that traffic demand for road projects are on average underestimated (Flyvbjerg, Bruzelius and Rothengatter, 2003; Holm 2000; Parthasarathi and Levinson, 2010; Welde and Odeck, 2011), one might assume that this would cause benefits to be underestimated as well. However, underestimating the demand for road traffic also means that the expected time

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saving benefits might not materialize due to additional traffic, since demand could become so high on the new infrastructure that congestion occurs. It is this latter effect that will be the focus of the present article (see Næss, Nicolaisen and Strand, 2012 for a more extensive discussion).

Model simulations of a road project in Copenhagen with and without inclusion of induced traffic is a main source of evidence. In addition, similar, but less in-depth simulations have been carried out for the network of major roads in Greater Oslo, as well as for a planned motorway in a less congested part of Copenhagen Metropolitan area. The empirical context of the paper is the Scandinavian countries, particularly Denmark, but we think the conclusion are relevant also in a wider international context insofar as induced traffic is not fully taken into account in transport modeling practice.

2. The effect of induced traffic

Omission of induced traffic could be a possible explanation why traffic demand for road projects appears to be systematically underestimated. Road improvement generally tends to increase overall traffic volumes due to lower cost of traffic in the form of less time spent to reach a given destination. The effect of induced traffic is now widely accepted among transport researchers (American Association of State Highway Officials, 1957; Downs, 1962; Goodwin, 1996; - Mogridge, 1990; Nicolaisen and Næss, 2011; Noland and Lem, 2002; Næss, Mogridge, and Sandberg, 2001; Overgaard, 1966; SACTRA, 1994; Thomson, 1977). In line with theories of transport economics and transport geography, and a number of empirical investigations in various countries, road development facilitating higher traffic speeds will result in generated and induced traffic by influencing the following six parameters:

1. Route choice
2. Peak hour traffic
3. Modal split
4. Overall transport volume
5. Land use (long-term)
6. Quality of public transport services (long-term)

Among these six effects, the four latter contribute to genuinely induced traffic (i.e. additional vehicle kilometres), whereas the two former contribute to relocation of existing traffic in time (e.g. between the rush-hour and other times of the day) and space (e.g. between different routes in the same transport corridor). To avoid confusion we do not refer to changes in the temporal or spatial distribution when using the term induced traffic, but are mainly concerned with the effects of parameters 3-6 in the case presented here. In the discussion in section 5 we shall, however, cover parameters 1 and 2 as well.

For road projects, the effect of induced traffic implies that traffic demand exceeds forecasts if these do not take this effect into account (or traffic is overestimated in the no-build alternative, see Næss (2011) for a discussion of this). One interpretation of this could be that more drivers benefit from the new capacity, and that the latent demand means the infrastructure investment has been more feasible than expected. However, more traffic also causes higher environmental stress in the affected area, and if the traffic volume becomes large enough to have a detrimental effect on flow, there is also a loss of time saving benefits. The short-term effect of this is problematic for the situation immediately after the new capacity is opened, but the long-term effect from changes in land use, car ownership, and commute patterns are even more severe. It is possible to include the short-term effect of induced traffic in models, but often this is not done (Johnston and Ceerla, 1996; MOTOS, 2007; Nielsen and Fosgerau, 2005; Næss, 2011). Long-term effects are even more problematic to include, due to the inherent uncertainty associated with estimation of parameters that are dependent on a wide range of unknown factors.

In Denmark, only very few transport models currently in use take induced traffic into consideration. According to Nielsen and Fosgerau (2005), induced traffic has usually been underestimated or totally ignored in the forecasts made as preparation for decisions about larger Danish road projects in the past decades. The only exception is the so-called Ørestadens Trafik Model (OTM), which was originally developed to assess the demand for the Copenhagen metro project, opened in 2002. For most of the modeling work undertaken in Denmark in this period, induced traffic has thus usually been disregarded. According to the responsible parties in the Danish Road Directorate, the regional transport models have during the most recent years been adapted to account for induced traffic (UNITE, 2011a).

However, these model features are not always used in practice. For example, in a recent analysis of the impacts of adding motorway capacity to an existing bridge, a model that did not account for induced traffic was preferred over one that did, in spite of the latter being available[4]. The argument for not doing so seems to be a feeling that induced traffic does not cause significant growth in traffic, and that the effect on the CBA would be negligible even if it was taken into account. In a recent report by a government appointed commission on the need for future development of transport infrastructure in Denmark, the effect of congestion as a deterrent against further traffic growth in a given road network was disregarded in the transport model calculations (Danish National Infrastructure Commission, 2008). Traffic was therefore assumed to grow at a fixed rate, even in situations where driving speeds were predicted to be significantly reduced due to congestion. The identical traffic growth forecasts with and without capacity increases result in exaggerated assessments of the

[4] (interview with HNJ, September 2010)

amount of congestion in the absence of new road construction. Since this document now serves as a reference for appraisal of transport infrastructure projects, such bias in the underlying assumptions distorts the entire appraisal system, and thus also the validity of any results it produces.
Neglect of induced traffic appears to be commonplace in other European countries too. According to the European MOTOS handbook on transport project evaluation, many transport models used in practice do not adequately account for induced traffic, and use of fixed matrices have traditionally been quite common (MOTOS 2007). This is also confirmed by preliminary results from a survey carried out as part of the same research project as the present paper. Among 48 respondents experienced with Swedish transport models, 67 % stated that they completely or partly agreed in the statement that transport models are poor at forecasting the effects of induced traffic. In Denmark and Norway, the corresponding shares were 52% and 48%, respectively (UNITE, 2011).

Figure 1 is adapted from Litman (2011), and illustrates how expected travel speeds are systematically overestimated when induced traffic is ignored. It is this effect that causes a distorted assessment of benefits in CBAs for road capacity expansion.

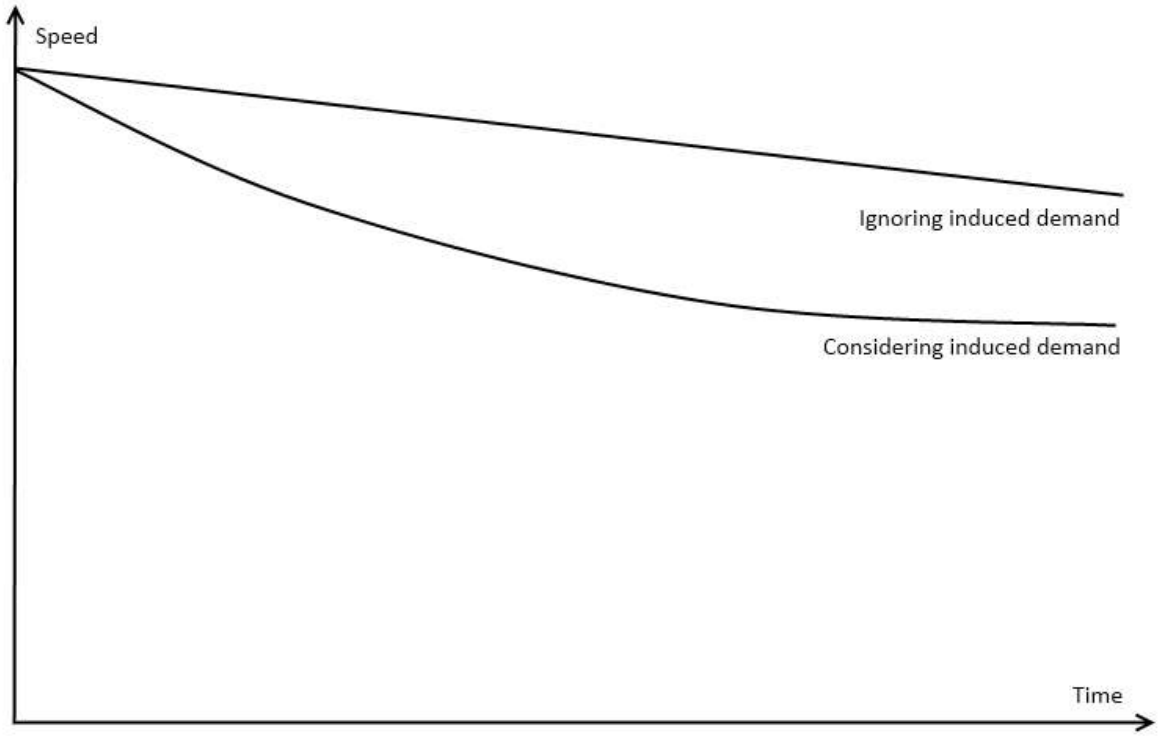

Figure 1. Projected Average Future Traffic Speeds, Depending on whether or not Induced Traffic has been Included in the Forecasting Model. Adapted from Litman (2011, p. 18).

The magnitude of induced traffic can be illustrated through the results of a model simulation for Greater Oslo in Norway. The transport model applied until recently for this region, FREDRIK, offered the opportunity of including induced traffic as well as omitting it. As part of a transport study for the Oslo Region, the need for additional road lanes resulting from a requirement for free-flowing traffic (i.e. no congestion) in a future 2030 situation was illustrated. A simulation specifically made as input for the present paper was made with and without induced traffic taken into consideration. As shown in Figure 2, the estimated need for additional lanes is considerably higher when induced traffic is taken into consideration than in the simulation where induced traffic is ignored. The difference between the simulations with and without induced traffic varies from none to six additional lanes, depending on the position of the road in the entire road network.

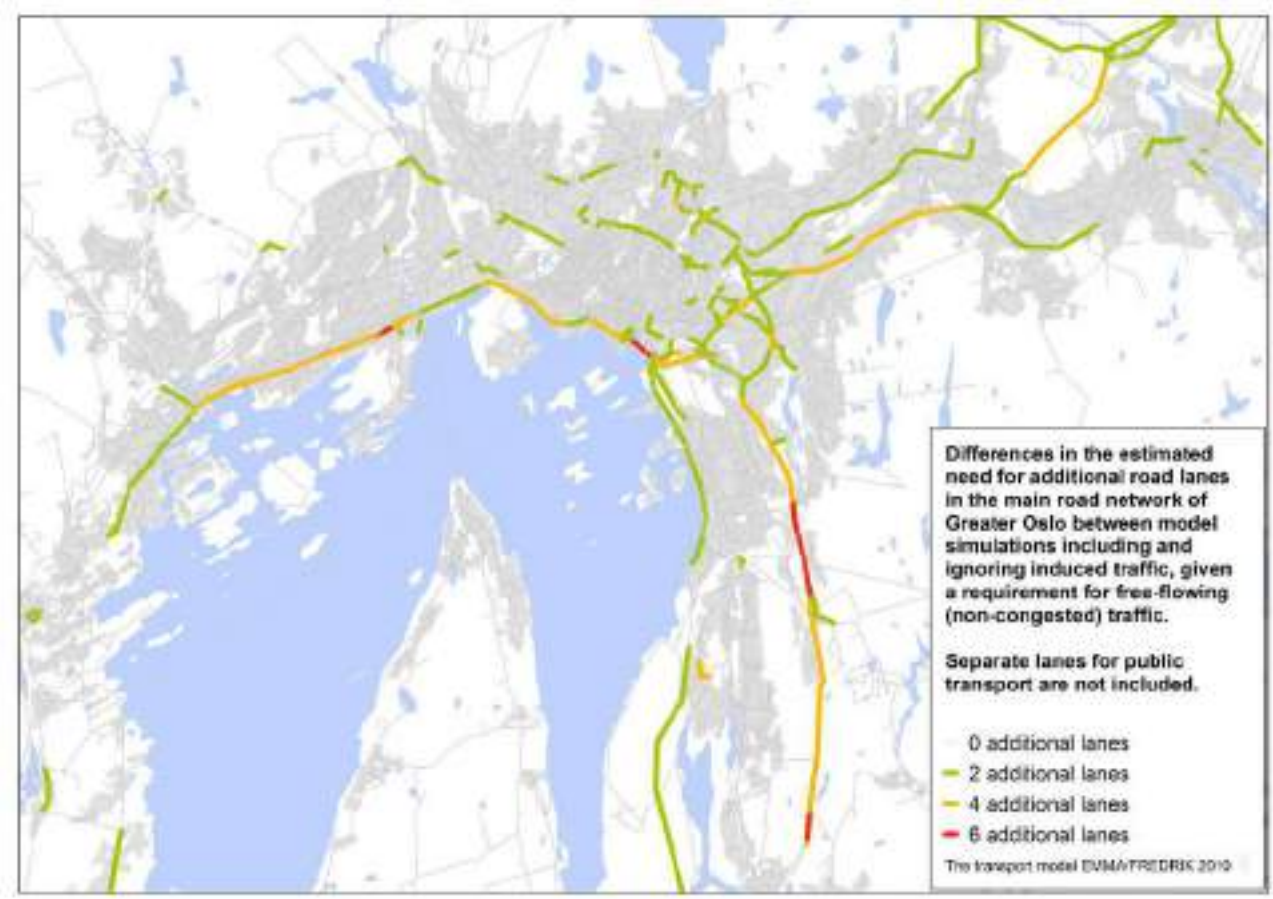

Figure 2. Differences in the Estimated Need for Additional Road Lanes in the Main Road Network of Greater Oslo between Model Simulations Including and Ignoring Induced Traffic, Given a Requirement for Free-Flowing (Non-Congested) Traffic. Source: Simulation made specifically for this article, carried out by Andersen (2011).

Nielsen and Fosgerau (2005) illustrate how the effect can be problematic for assessment of time saving benefits, especially in the form of CBAs. Figure 3 is adopted from their work, and illustrates the supply curves with and without new capacity (do nothing vs. do something). As new capacity is introduced on the network the cost (time) of traffic decreases, and the equilibrium moves from X to Y, which causes an increase in traffic volumes in the short term. An approximation of travel time savings would in this case be the total area A+B. However, if we do not take the effect of induced traffic into account we end up with the approximation A+C instead, clearly a much larger estimate.

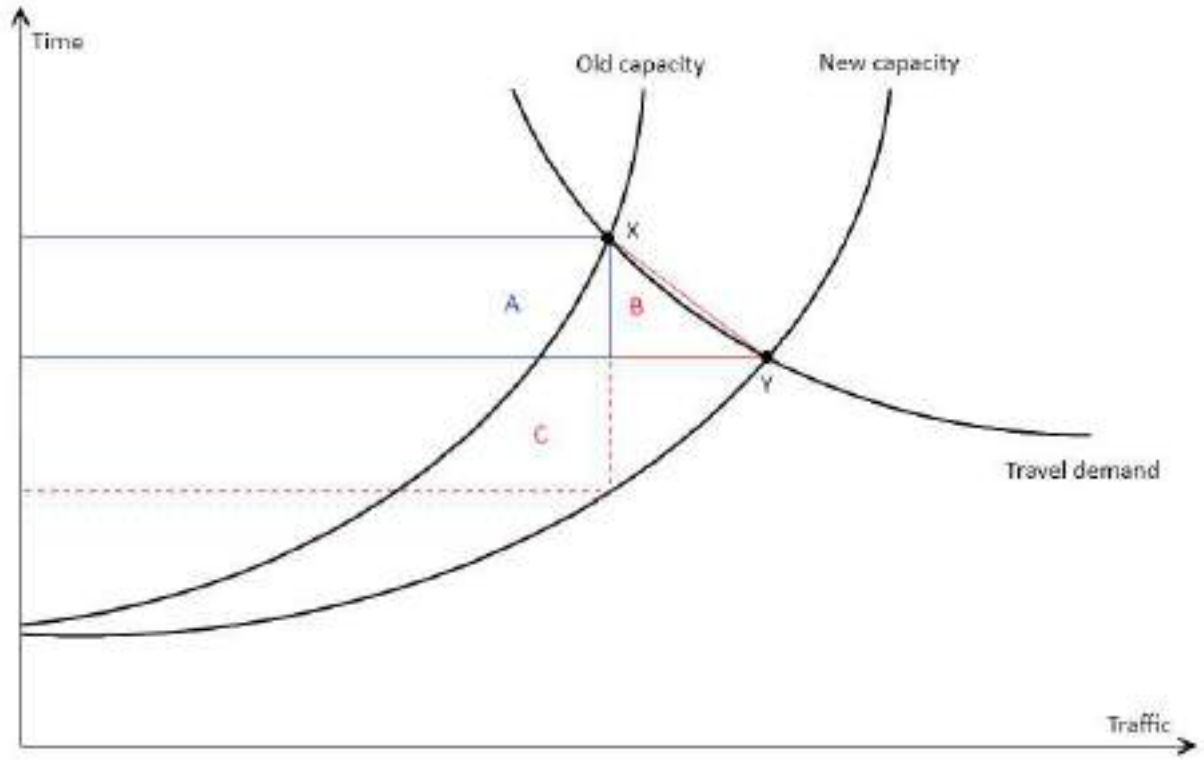

Figure 3. Example of Supply and Demand Curves and Time-Benefit Calculations for a Road Before and After Capacity Increase. Adapted from Nielsen and Fosgerau (2005, p. 10).

It is important to observe that if initial demand is low (i.e. no congestion at X) this effect likely underestimates benefits in the form of travel time savings, as additional drivers would enjoy the benefits without increasing the cost of traffic in any significant way. A Danish example of this could be the new motorways constructed in the northernmost part of Jutland in the years before and after 2000. In such cases the improved road standard usually does not release a large amount of latent demand, and the additional traffic induced by higher speed limits etc. will not be sufficiently great to raise the traffic volume to a level where congestion arises. There are, however, also situations where traffic volumes are high enough that new road capacity can release some demand, but not sufficient to cause immediate congestion problems on the new and

expanded road. In such situations, the time savings for new drivers may exceed the increased travel times among existing drivers caused by induced traffic. In addition to our main case example, we will briefly illustrate such a situation in Section 4, Results. Our main case will, however, be a new road constructed to improve traffic flows in a highly congested urban context. Since capacity expansion is often a measure employed to reduce congestion in areas where this is already a problem or expected to be so in the near future, we consider it highly relevant to illuminate such a situation.

3. The applied methods in the case example

In order to illustrate how neglect of induced traffic can lead to overestimation of benefits we have chosen to perform two appraisals for a selected Danish road project in a congested transport corridor; one which includes induced traffic (model A), and one which does not (model B). The results will then be compared to see whether inclusion of induced traffic in the transport model will result in a reduction of estimated benefits in a CBA. In order to make the results as representative of a typical appraisal as possible, we have chosen to use a recent road project proposal as our case.

All calculations were performed by the agency that typically handles these tasks in the case area, in order to ensure that the appraisals are as true to standard practice as possible. The consultancy firm Tetraplan was thus hired to do the appraisal. The proposed road link was evaluated using current standards for unit prices set by the Danish Ministry of transport. The appraisals with as well as without induced traffic include most of the impact factors included in a standard CBA. However, several effects that could influence the CBA results were excluded due to resource constraints, such as impacts on public transport services or disruptions during construction. However, as construction costs and travel time savings make up the vast majority of total costs and benefits in the CBA for a typical transport project, we doubt that the exclusion of some of the minor effects can have resulted in any substantial misrepresentation of the appraisals presented in the present article. The consequence in the present appraisal is a slight underestimation of costs, which is reflected in higher net present values for both models than would otherwise be the case.

In the chosen case the OTM model (version 5.2) has been used for this purpose, as it is the only model used in practice in Denmark that has the ability to model induced traffic to the extent necessary for this study. It is a state-of-the-art tour-based demand model at the tactical/operational level, and has several sub-models for predicting the traffic demand for different traffic modes based on different traffic purposes. It should be noted here that the OTM model only models the short-term effects of induced traffic, and the results should therefore be considered highly conservative estimates of the impact of including vs. ignoring induced traffic on appraisal results. The standard OTM model will

represent model A. A modified version, which performs like the simpler models typically used in practice, will represent model B. For details on the differences between the two models we refer to Tetraplan (2011a).

The selected case is Nordhavnsvej, which is a planned road project in the northern part of Copenhagen (see figure 4). The new road is intended as congestion relief for the dense residential streets in the nearby Østerbro area just south of the new route. This is argued to be a consequence of comprehensive plans for new urban development in the Nordhavn area just east of the new route, which is expected to house 80,000 new residents and jobs (Municipality of Copenhagen, 2009). These plans are of course expected to increase traffic demand significantly, and the case seems well suited to illustrate the effect of induced traffic on appraisal results for a capacity expansion on a congested network. The current plans for the road involve a new urban link of 1650 meters, with two lanes in each direction and a speed limit of 60 km/h. About 620 meters will be done as a cut-and-cover tunnel, with open ramps in each end. It is expected to reduce traffic in the Østerbro area with 15 % and is set to open in 2015.

Figure 4. The Proposed New Nordhavnsvej Link in Copenhagen. Legend: Black line: surface road; black dotted line: road tunnel; blue line: surface ramps. Source: Municipality of Copenhagen (2011).

In addition to the full case study we have, as mentioned earlier, also made simulation of a road project on a network with little congestion. The extent of this appraisal was more limited than for the full case study, as only first year benefits were calculated. The purpose of this additional study was mainly to confirm that the induced traffic effect is less important to the CBA results under conditions of low congestion, which also turned out to be the case. More information on this appraisal can be found in Tetraplan (2011b).

4. Results

The overall findings of the Nordhavnsvej case are summarized in Table 1. Although a considerably higher traffic volume could be expected in model A as a result of induced traffic, the difference is only around 5 % compared to model B.

Seen in the light of a range of international studies estimating a 10 % capacity increase to result in 3-5 % short-term increase in traffic volumes (Duranton and Turner, 2011; Hansen and Huang, 1997; Litman and Colman, 2001; Noland and Lem, 2002; Strand et al., 2009), the results of model A appear to be in the low range of potential short-term traffic growth. After all, the new link will tie together a four lane motorway with a large redeveloped urban area, where the existing network requires traffic between these destinations to go through dense residential areas. However, in the Nordhavnsvej case, the congestion level is at the outset so high (close to capacity limits) that even a moderate additional traffic can cause substantial reduction in travel speeds. In such a situation, the so-called Braess' paradox may occur, where road capacity increase contributes to reduce overall travel speeds in the network instead of increasing them (Nielsen and Landex, 2005). Since the induced traffic reduces the improvement in travel speeds on Nordhavnsvej considerably, the road's ability to attract additional traffic increase will be constrained. The magnitude of induced traffic will therefore be lower than in a situation where there is considerable congestion but where the capacity increase is large enough to allow for all latent demand to be met without reaching capacity limits.

Table 1. Estimated Main Traffic-Related Impacts of the Proposed Nordhavnsvej, Based on Transport Model Forecasts With Induced Traffic Included (Model A) and Ignored (Model B). Source: Tetraplan (2011a).

Impact factor	Model A	Model B
AADT on main link	22,820	21,740
Total travel time savings (mil. DKK)	2,749	4,589
Changes in fuel consumption (tons)	483	-284
Changes in CO2 emissions (tons)	1,525	-897
Changes in noise level (weighted score[5])	167	162
Changes in safety (accidents involving personal injury)	-0.3	-1.2
Net present value (mil. DKK)	403	2,157
Internal rate of return (%)	5.6	8.1
Benefit ratio per invested capital unit	0.2	1.1

The increased traffic volume in model A results in higher estimates for all environmental cost categories than in model B, although the differences are fairly small compared to the total impact of these factors. An interesting observation is that model B gives the impression that CO2 emission levels will drop as a result of increasing capacity. When the effects of induced traffic are taken into account however, the increased emission levels as a result of higher traffic volumes show up correctly in the appraisal, and model A gives a picture that fits much better with the impacts we would expect for this type of project. A

[5] The weighted score is expressed as SBT (støjbelastningstal), which is a standard unit in Danish noise evaluations. A higher score indicates a higher noise level, although in this case the difference is fairly insignificant.

similar issue can be observed for traffic accidents, where the benefits calculated in model B are four times larger than in model A. While the absolute figures might appear small, the unit values for accidents are quite high, and the monetized impacts over the lifespan of the project measure in hundreds of millions.

It should be noted that the non-monetized values are only for the opening year of 2015, and that long-term effects must be expected to widen this gap – at least if further capacity increases are made allowing traffic to grow beyond the capacity limits soon reached after the initial road construction. In the simulation, traffic is expected to increase by an additional 10 % towards 2030, but from this point on the traffic level is considered static. Both of these assumptions could be expected to underestimate future traffic levels (at least unless policies to limit traffic growth are introduced, including non-expansion of road capacity), and the results of the appraisal must therefore be considered conservative. This becomes especially important when evaluating the travel time savings calculated on the basis of these traffic volumes, as benefits for the entire 50 year period used in the CBA are likely to be overestimated as a result (even in model A).

Even with all these reservations in mind it should be clear from the results in Table 1 that there is a significant reduction in benefits when the effects of induced traffic are taken into account. The results in Table 2 give a better understanding of why we observe reduced travel time savings when including the effects of induced traffic. In line with the underlying economic theory presented in section **Hata! Başvuru kaynağı bulunamadı.**, we observe positive travel time savings from additional drivers benefiting from the new capacity when we include induced traffic. These benefits correspond to area B in Figure 3. However, it is clearly evident from Table 2 that the benefits from these additional drivers are far too small to offset the loss of benefits to existing drivers, which corresponds to area C in Figure 3.

The above-mentioned effects are the results of quite elementary relationships between supply and demand, but they are often ignored in performance evaluations of demand forecasts. For example, Flyvbjerg, Holm and Buhl (2005) observe that while rail demand is typically greatly overestimated, the trend for road demand seems to be a slight underestimation. They therefore conclude that the problems associated with forecasting benefits are much greater for rail projects than for road projects, which also seem plausible when you only look at the actual traffic volumes. However, as the results of the present study clearly show, even slight underestimations of traffic volumes on roads can lead to quite significant benefit shortfalls within the CBA framework. In the Nordhavnsvej case a 5 % increase in traffic results in a time-savings loss of 40 %. Since these effects usually make up 80 % or more of the total benefits, this implies that actual benefits are less than 70 % of those expected from the CBA.

Table 2: Estimated Travel Time Savings from the Proposed Nordhavnsvej, Based on Transport Model Forecasts with Induced Traffic Included (Model A) and Ignored (Model B). Source: Tetraplan (2011a).

Travel time savings (hours per weekday)	Model A	Model B	Change
Cars			
Existing drivers	834	1282	448
New drivers	37	0	-37
Trucks			
Existing drivers	207	284	77
New drivers	6	0	-6
Travel time savings in congestion (hours per weekday)			
Cars			
Existing drivers	435	874	439
New drivers	16	0	-16
Trucks			
Existing drivers	85	163	78
New drivers	1	0	-1

As mentioned earlier, we have also carried out a simulation for a planned motorway in a less congested part of Copenhagen Metropolitan Area. In this case (the so-called Frederikssund motorway leading from one of the outer-area towns to the outskirts of the continuous urban area of Copenhagen), the percentage of traffic growth resulting from induced traffic was higher (around 10-11 %) than in the Nordhavnsvej case (5%). However, due to the much lower congestion level at the outset, the traffic increase in the Frederikssund motorway due to induced traffic would not bring congestion up to a level resulting in significant difference in travel time savings between the models with and without inclusion of induced traffic. Travel time savings were estimated to be 2.7% lower in the simulation with induced traffic than in the model where such traffic growth is ignored, and the benefits due to accident reductions were assessed to be 19% lower. Total travelers' benefits were estimated to be 3.5% lower in the model including induced traffic than in the model omitting induced traffic. (Tetraplan, 2011b).

Although the analysis of the Frederikssund motorway did not show significant congestion arising as a result of induced travel, the 10-11% increase in traffic obviously implies that the time at which the general, 'background' traffic growth causes the traffic volume to approach capacity limits will be shorter than in the absence of induced traffic. As mentioned earlier, only first-year benefits were calculated for the Frederikssund motorway case. Within a longer time horizon, say 15 years, the induced traffic might make up the increment making the difference between severe congestion and high capacity utilization still below capacity limits. With such a time horizon, the difference between the two models in travel time savings would probably have been more similar to that of

the Nordhavnsvej case. Or conversely: additional lanes would have to be added several years earlier in order to maintain relatively free-flowing traffic than indicated by the model ignoring induced traffic (cf. also the Oslo example shown in Figure 2).

5. Discussion

The simulations for the Nordhavnsvej project illustrate the point made by Litman (2011) that a small amount of induced traffic can have a disproportionately large effect on the cost effectiveness of a road project. This is especially so in congested transport corridors, because of non-linear speed flow relationships and typically small net differences between large costs and large benefits. In such situations, underestimation of traffic demand resulting from failure to take induced traffic into account results in appraisals that, ceteris paribus, favor capacity expansion to a larger degree than if this effect is accounted for. The effect is especially crucial in the calculation of travel time savings, as the increased traffic volumes eat up much of the expected utility gains from capacity expansions. There might be a larger total number of drivers benefiting from the new capacity, but the benefit per driver is significantly reduced due to congestion forming much earlier than anticipated.
In the short term the extra traffic leads to benefit shortfalls in the form of longer travel times, which is problematic for the validity of appraisals (particularly CBAs). In the long term it leads to even further benefit shortfalls for time savings, but also severe underestimation of the adverse environmental effects of facilitating continued growth in urban vehicle traffic.
It is important to note that the issues raised in the present paper do not mean that there are no benefits to gain from expanding road capacity in congested urban areas, as more capacity will always offer some form of benefit for drivers. If nothing else, it creates the ability for more traffic to flow through the network. What we argue here is simply that the costs of providing this increased capacity are underestimated and the benefits exaggerated when traffic volumes are underestimated, by ignoring the loss of time savings and increased environmental costs.

Since future traffic volumes are usually estimated on the basis of trend extrapolation, the neglect of induced traffic might also cause an overestimation of demand in the case where no new capacity is added (Næss, 2011). The observed trends in traffic growth are themselves partly a result of prior capacity expansions, and a deliberate choice to abstain from this predict-and-provide approach is likely to result in lower traffic growth than in a business-as-usual scenario. By ignoring induced traffic the deterrent effects of congestion on future traffic growth for the zero-alternatives is thereby also ignored, and since these are the baseline with which different alternatives are compared, this causes further overestimation of benefits from capacity expansion.

6. Concluding remarks

The results presented show a significant overestimation of short-term benefits in appraisals that fail to account for induced demand. Long term effects must be expected to increase these errors exponentially. The faulty conclusions that decision-makers might derive from such appraisals can create a positive feedback loop of continued capacity expansions that do little to solve congestion in practice. Instead, such appraisals create an artificial demand for further capacity expansions, since the expansions themselves create much of the demand that is later extrapolated to reflect a 'natural' traffic growth for which capacity must be provided.

Although model-based forecasts, and the cost-benefit analyses in which they are used, do not influence decisions about project implementation in a one-to-one manner, a systematic overestimation of benefits and underestimation of adverse environmental effects generally tend to legitimize a high spending of society's resources on road construction. They also tend to delegitimize environmental opposition and disarm environmentalists of their arguments. Motorway construction can thus be supported by transport model forecasts by ignoring induced traffic, and it is sometimes portrayed as a suitable approach to reduce greenhouse gas emissions.

Due to the considerable difficulty in knowing beforehand how large the elasticity between road capacity increase and traffic growth will be in a particular transport corridor at a particular time, there is an inherent non-exactness of forecasts of differences between 'do something' and 'do nothing' (Næss and Strand, 2012). In cost-benefit analysis, uncertainty and controversy about how to assess the monetary value of travel time savings (Nicolaisen and Næss, 2011) as well as environmental impacts add to the overall uncertainty of the method. Cost-benefit analysis, which requires precise quantitative input, is therefore in our view not appropriate for assessing whether or not to build a proposed project of a particular category (e.g. a road project) in a specific geographic context. It may, however, be less inappropriate if the task is to compare different alternative ways of designing this project (e.g. layout A, layout B or layout C for a proposed new road). However, due to the uncertainty mentioned above, the CBA should then only be used to assess the marginal differences between different variants of the project, not its absolute economic value.

Given the problematic issues associated with current appraisal practice we argue that it would be more fruitful to pursue a more holistic appraisal approach with simpler, theory-informed models based on multiple scenarios for input variables and more comprehensive sensitivity analyses, rather than pretending to calculate the exact implications of projects.

Such a practice does not square well with the function of model-based traffic forecasts as quantified inputs to cost-benefit analyses in their current form, since this requires forecasts to be extremely accurate. But are forecasts really accurate enough to determine whether commuters will save e.g. 2.15 or 3.12 minutes on average from a new link? Many other public-sector branches use this evaluation method to a much lesser extent, based on the rationality that the effects cannot be quantified to a desirable degree. When cost-benefit methodology builds on such uncertain premises as displayed in the present article, decision-makers should at least take the results with a large grain of salt when considering conceptually different solutions (e.g. investing in road projects, public transport solutions, travel demand management initiatives, or doing nothing at all). If the decision relate to mere design choices of a project that is already decided, cost benefit analysis methodology is likely to be less problematic.

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THE STORY OF A CHANGE IN VENUE: GAZIANTEP

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Abstract

Cities are born, growing, changing and living spaces. Within these development, change and transformation some cities can maintain their physical and social structure. On the other hand some of them may lose their identification, texture and characteristics in this period of change. Especially in developing countries like Turkey, this change emerges faster and multi-sided. This conversion sometimes comes up as replace of functions by itself to meet the increasing demand, but mostly citizens and especially administrators lead to this change and transformation in cities. As one of the most important cities in Turkey, Gaziantep has made a remarkable progress in the last decades and its proportion of national economy has increased rapidly. Having a historical foundation Gaziantep has experienced significant changes in its development process. Especially since 1980s, the city has become attraction center of major investors and this situation is the main leading factor of dramatic change. Depending on increasing industrial employment, rising population and housing pressure, some open areas had been fallen into ruin. Besides this, changing in location of traditional housing, industry and retail facilities has caused existing of lacking quality areas. However, investments for protection and renovation projects have prevented these areas from being without qualification. These investments and restoration projects has made a contribution for economical development with tourism sector. In this study, changes and transformations of Gaziantep in historical period are investigated with positive and negative effects within the frame of existing planning approaches at that time.

Keywords: “urban transformation”, “urban development”, “Gaziantep”

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Cities are born, growing, changing and living spaces. The ongoing socio-economic behaviors are effective in the cities for their spatial variations rather than physical interventions. Physical changes and transformations are results of these behaviors and interventions. The disappearance of borders in concrete terms with the concept of globalization and continuation the system with relational networks has led to appear both countries' national, regional and urban policies and their impact on space in very different ways. It is possible to say that countries which are affected by global trends in the spatial are generally less developed and developing countries.

As a developing country, Turkey is in a process of change in social and spatial issues for years. Since the Ottoman Empire, this change which began with "westernization" movements, named as "modernization" with the Republican Era and "globalization" nowadays. This process Based on social and cultural change is reflected in the cities as spatial. The current phenomenon of globalization continues to influence and differentiate cities and communities in economic, social, cultural and physical sense. Turkey lives in a very fast and versatile urban change and transform with its problems and potentials.

After 1980, adopted liberal economic policies and the industrial perspective have changed in Turkey, and understanding of the importer has taken place of import-substitution manufacturing. Increasing interest in the production of manufacturing industry has made inadequate industrial cities, so the state had to determine the new focuses and to develop them in a short time. 12 provinces which identified as new industrial centers, recorded a significant growth in the industrial sector as soon as possible with the incentive policies applied. Afyon, Bilecik, Çorum, Denizli, Eskişehir, Gaziantep, Kayseri, Konya, Malatya, Kahramanmaraş, Uşak and Karaman are provinces defined as new industrial centers. Each one of the major provinces in its region, and they provide a significant contribution to national economy in terms of export volume. Study on the city of Gaziantep is the most important difference between the foci of other new industries is that the trade center with past and present (Dinler, 2008). This feature prepared the ground for subsequent years for the development of the city in the tourism sector. Nowadays, Gaziantep is recognized with not only industry but also its historical and cultural values, and its recognition is increasing every day. The problems resulting in some parts of the city because of migration and population pressure that comes with fast-growing industry began to eliminate with conservation and renovation projects which were developed with the vision of culture and tourism. In this study, changes and transformations of Gaziantep in historical period are investigated with positive and negative effects within the frame of existing planning approaches at that time.

Gaziantep is the biggest province in South Eastern Anatolian Region and the 6th biggest province in Turkey. It has significant social, cultural and economical potential as not only regional but also national scale. The history of the city reaches to 1300s and it is one of the first settlements in Anatolia. So it has a broad cultural range from the Hittites to Ottoman Empire. As the geographic location of the historic Silk Road route in each period, the city has continued to cultural and commercial center. However, from the beginning of 20th century, city has gained a new

dimension with pursued economic policies. Especially, after 1980 depending on liberalizing Turkey's economy with the globalization movement, new focal points have emerged in Anatolia, and the city has become an important attraction center for investors. While new industrial institutions had taken the workforce to the city with the industrialization movements, investments of tourism sector had prepared the ground for new development dynamics in city. With these improvements in Gaziantep, a rapid change in both economic and spatial sense, and began the process of transformation. The change process in the residential, commercial, industrial and recreational functions of city were reflected in both spatial and functional. While the rapid developing industrial restructuring leads to degradation of urban structure and emerging of lacking quality areas in many cities, Gaziantep has been able to maintained its original character with its urban vision. Administrators and citizens combined historical and cultural potential of the city with the vision of tourism. Also, they managed to make the city more livable by evaluating the new industrial investments in the sustainable growth and development perspective. In the comprehension of this paper, the change story of Gaziantep was discussed and investment decisions affecting the city of change and transformation projects evaluated in this framework.

One of the most important dynamics of the change process in Gaziantep is population. The city's population began to increase, especially after 1960, increased more rapidly after 1975. After these years, migrations from other provinces have begun to increasingly as well as natural population growth. Place of birth data shows that the number of people who was not born in Gaziantep is more than the number of natives since these years. Between 1940-2000 years, during 60 years, while the population of Turkey had increased to 4 doubles; Gaziantep province's population has increased by slightly more than 4 doubles. Furthermore, in this period, as the urban population of Turkey had risen to 13 doubles, the urban population of Gaziantep had grown to 10 doubles. While the city was 13th rank in 2000, it became 9th rank in 2011. According to the percentage of urban and rural population, urban population increased from 65% to 89%, on the other hand rural population had a remarkable decrease from %35 to %11 between 2000-2011 years. This situation proves that being high the speed of urbanization in Gaziantep province (Statistical Institution of Turkey-TUIK).

It is known that there are large industrial investments on the basis of rapid population increase especially since 1980s. Industrial investments creating employment has made the city an attraction center and resulted in rising of population with migration in a short time. There are many structuring refreshing not only regional but also national economy and they created remarkable employment opportunities in the region. Growing industrial sector, primarily led to the establishment of organized industrial zone in Gaziantep. The first organized industrial zone has installed in 1969 had comprised production fields for both region and nation. Therefore it contributed to recognition of the city in terms of economical potential. Depending on changing of economical structure after 1980s, production activities increased and local products began to be imported. Following these developments, the capacity of organized industrial zone remained insufficient and second, third and fourth organized

industrial zones established in 1986, 1994 and 1998 respectively. Thus, Gaziantep has become a major city with a big portion of employment in industry sector.

In addition to organized industrial zones, existing of free trade zone in Gaziantep is a notable component in the context of economical development aspect. There was an important growth in the volume of trade in the Gaziantep Free Zone. It went into action in 1999 and total trade volume increased by 89% from 2002 and to 2003 years. This rise implies that the increase in the share of imports in the region. Besides the macro scale industrial and commercial structures, small scale industries, small retailers and artisans activities contribute to urban economy in Gaziantep.

Population growth along with developments in industry and trade sectors impacts in different ways on the land use format of the city. Development trends of the Gaziantep began to be orientated as planned by a development plan from Professor H. Jansen in 1935. In this plan, Jansen approved that the city will improve in each direction of the settlement. So the planner led to the usages of southern slopes as residential and northern slopes as administration areas. Also, existing green spaces were retained and applications in new settlement areas planned suitable with features of the traditional urban configurations in this development plan. In 1950, a new development plan was prepared by Professor Kemal Ahmet Aru. Opening more lands for usage of urban facilities in development plan is an important indication of the growth rate of Gaziantep. This is also similar to the previous plan which was made by Professor H. Jansen in terms of preserving of traditional pattern of the city.

The first settlements has begun the around of historical castle in Gaziantep. Until 1950s the city did not show urban sprawl intensely and kept its borders generally. Population impression increasing with migration movements caused the insufficiency of city core in the aspect of housing and trade functions and new residential areas including public open spaces were planned on the north and south part of the conventional settlement. Since 1950s rapid population growth in the city was a reason for transformation of public spaces to housing areas and increasing urban density. Residential areas expanded towards new lands which were used for agricultural production before to satisfy housing needs of incoming people. Immigrants who have low income located in the new settlements which beginning from the southern part, while high income people preferred to settle in the west part of the city. Broadening of city center to south and west direction resulted in the segregation of main urban functions as spatial. In this process, to fulfill emerging needs of commercial area, a new central business district occurred between the residential and traditional commercial zone. The direction of new extension areas have shaped by the site selections of industry mainly in the period after 1970. Some mass housing areas were constituted close by new established industry sites to supply with housing need of workers.

Depending on development of industrial employment, unhealthy constructions appeared in some areas of the city, with increasing the pressure of population and housing. In addition, changing in selection of spatial location of

main functions such as traditional residential, commercial and industrial sites led to some worn areas in the city. About this deterioration of urban, the city's characteristics, social, cultural and economic indicators had been effective. However, investments in conservation and renovation partially prevented to become the depression area for those parts of the city. These investments and renovation projects have contributed to development of the city by uncovering the city's tourism potential.

Gaziantep Castle, the city's one of the most important assets, has a history of thousands of years, has hosted many civilizations. Its restoration project was the first step in tourism investments. The castle, the city bore the nature of a focal point of the development process; then it has indicated a landmark identity (Ugur, 2004). Beside this, with increasing about the awareness of preserving historical and cultural heritage for future generations, increased protection and restoration activities throughout the city accelerated the tourism investments. History of Copper Bazaar renovation Project is one of the major developments mentioned above. Under this project, eight streets and 300 shops were renewed, and Gaziantep province won the Grand Prize for Union of Historical Cities with this project in 2007. This award is increased the recognition of the region, especially in terms of cultural tourism. In addition to these restoration projects, the conversion and renovation activities were started in parts of the city had become depressed and giving trade and tourism function to these places allowed to increase in tourism activities. For instance, 120 houses were renovated in Bey District with conservation activities, and inclusion in the scope of renovation of the Atatürk House located in the region, was an important step in increasing recognition of the region. It is observed in the area, corrected the deficiencies in infrastructure and commercial activities caused an increase to boutique hotels, restaurants and entertainment spots (Strategic Plan of Gaziantep Metropolitan Municipality, 2007-2011). There are 974 archeological site and immovable cultural property including 113 monumental structures, 681 civil architectures, 180 archeological sites in the province. The ancient city of Zeugma, the ancient city of Dülük, Chain ruins, mound Tilmen, Sakçagözü (shepherd) mound, Cıncıklı ruins, tombs Dolman are among the important tourism potential. In addition to all of these, the cultural structures such as Archaeological Museum, Hasan Süzer Ethnography Museum reinforces the tourism potential in the city (Gaziantep Governorship).

To summarize the change of physical space in Gaziantep, it is said that the structure of traditional forms of restoration efforts largely preserved places in the city for the figure ground properties, connections, and preservation of the original structure. Furthermore, a growing number of recent protection projects have important contribution to local economic development.

In conclusion, before 1980s, Gaziantep was an agricultural city. Beginning from 1980s, it has a big development based on industrial growing. There are many reason of rapid growing of Gaziantep and some of these reasons are related with local projects such as conservation and renovation projects in historical city centre. Thanks

to encouragement of industry by the state, Gaziantep has a rapid development in a short time. To parallel with the provocation of state, possibility of investment increased in this region. Therefore, population increased depending on immigration and urbanization became too faster. From 1980s to nowadays Gaziantep has a big development with not only industrial growing but also conservation of physical, social and cultural structure. It can be said that easily this conservative approaches and economical movements made Gaziantep one of the most important cities in Southeast Anatolian Region and Turkey.

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STRATEGIC-LOCAL TENSIONS UNDER THE ENGLISH PLANNING SYSTEM: RECONSIDERING THE ROLE OF VALUES IN SPATIAL PLANNING

Mandy Lau [1]

Abstract
Strategic-local tensions occur when there is conflict between the strategic objectives of central government, and the aspirations of local communities. Such tensions were common under the New Labour administration in England, when 'spatial planning' was promoted to deliver neoliberal supply-side solutions to housing needs. Interestingly, however, the Cambridge sub region experienced relatively limited tensions, despite having to deliver major housing growth. This paper argues that effective mediation of strategic-local tensions in the Cambridge sub region, can be attributed to a distinct set of values, in particular the concern for social equity on a sub-regional scale. However, it also demonstrates how these value choices were made within the context of central government's meta-governance framework, as well as local politicians' selective privileging of particular values. This affirms the need for developing 'situated' planning theory, which relates value choices to the contingent contexts in which spatial planning takes place.

Keywords: *Spatial planning; values; strategic-local tensions; England*

1. Introduction

More than two decades ago, Eric Reade (1987) observed that "[planners] devote much time and energy to urging 'co-ordination', and to discussing possible changes in administrative arrangements, at the cost of neglecting the analysis of *the purpose which planning is meant to achieve"* [author emphasis] (p. 157).

Arguably, the introduction of the 'spatial planning' approach in England during the early 2000s, also involved a similar preoccupation with coordination processes, at the expense of considering the normative purpose behind planning. 'Spatial planning' was constructed by the New Labour government as a more effective approach to planning, given its emphasis on stronger 'integration' through the creation of multi-stakeholder partnerships (Nadin 2007). Questions surrounding the purpose of planning were buried under a series of vague discourses, such as 'sustainable development' or 'sustainable communities'.

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In reality, spatial planning in England could not escape the question of values, since all partnership decisions were inevitably guided by a set of normative values. It is not surprising, then, that towards the end of the New Labour administration, more critical commentaries on spatial planning emerged, which highlighted the role of spatial planning in perpetuating neoliberal values, through its emphasis on competitiveness and a supply-side agenda to meet housing and infrastructure needs in the south of England (Allmendinger & Haughton 2012).

What this paper sets out to do, is to bring values back into the analysis of spatial planning. This is not an easy endeavour, however, since there has long been a reluctance to engage with the question of values in planning theory. Part of this reluctance stems from recognition of the oppressive capacity of homogenising models, which assume that particular values can be generalised across different places (Campbell 2006, pp.99–100). Another cause of hesitation is the perception that normative planning theory is too generic, with little relevance to the context-dependent nature of practical planning decisions (Sanyal 2002).

Nevertheless, these concerns could possibly be addressed through development of what is known as 'situated' planning theory (Alexander 2003; Watson 2008). This suggests that it is possible to theorise the role of values in planning, through 'case-based' contributions to theory which relate value choices to the contingent contexts in which planning takes (Alexander 2003, p. 180).

This paper attempts to develop a case-based analysis of the role of values in spatial planning, by focusing on the Cambridge sub region in England. Under the New Labour era, many sub regions experienced tensions in delivering the objectives of spatial planning. In particular, there were tensions between the *strategic* housing development objectives of central government, and the aspirations of *local* communities, a problem which Gallent (2008) referred to as 'strategic-local tensions'. Interestingly, however, the Cambridge sub region experienced relatively limited tensions, despite having to deliver major housing growth.

As will be argued later, successful mediation of strategic-local tensions can be attributed to a distinct set of values, in particular the concern for social equity on a sub-regional scale. In other words, it reflects a concern for *spatial justice* (Upton 2002, p. 259). However, the study also illustrates how these value choices were made within the context of central government's *meta-governance* framework, as well local politicians' *selective* privileging of particular values.

Though focused on the New Labour era, the findings in this paper are relevant to current planning reforms in England. Given the rhetorical emphasis on 'localist' planning, and the simultaneous attempt of central government to retain influence through the National Planning Policy Framework, it is likely that strategic-local tensions are likely to intensify. Under these changing circumstances, which values are going to take precedence in the making of planning decisions? By bringing in the

concepts of central meta-governance and local selectivity, this paper provides insights into the interaction between national and local contexts in shaping value choices, and what this implies for the manifestation of strategic-local tensions in different places.

2. Key concepts

2.1 Spatial planning: it's all about integration

The notion of spatial planning has been around for a while – it became common currency across Europe in the 1990s, especially following the publication of the European Spatial Development Perspective (ESDP). However, there has been much confusion over what spatial planning actually means (Albrechts 2006; Faludi 2002; Nadin & Duhr 2007). In some EU member states, spatial planning has been used as a shorthand reference to the *system* in each state or region for managing land use (Dühr et al. 2010, p.26). In other member states, spatial planning has been used to refer to an emergent approach to *coordinate* the spatial impacts of sectoral policies across the European Union (ibid).

With respect to the English planning system, the emergence of a spatial planning approach has been distinguished by its central emphasis on *integration* (Nadin 2007; Tewdwr-Jones et al. 2010, p.247). This spatial planning approach was formally introduced by the New Labour government through a national planning policy statement, which suggested that spatial planning

> "goes beyond traditional land use planning to bring together and integrate policies for the use and development of land with other policies and programmes which influence the nature of places and how they function." (ODPM 2005, para.30)

The emphasis on integration was accompanied by a specific narrative on the mechanisms by which integration would be achieved, namely through partnerships, networks and 'joining up'. In other words, the New Labour government appealed to the notion of joined-up governance, as the solution to the perceived crisis of the bureaucratic state and the fragmentation problems under New Right marketisation (Bevir 2005).

More specifically, the New Labour government encouraged local authorities to deliver spatial planning objectives through the establishment of Local Delivery Vehicles (LDVs). These partnerships were seen as more flexible networks, involving coordination across administrative boundaries and policy sectors.

2.2 Spatial planning under New Labour: all about meta-governance?

However, the emergence of such partnership approaches to spatial planning was subject to a range of criticisms. In particular, Allmendinger and Haughton (2009) regarded spatial planning as a *political* project of New Labour, in the sense that it

was used to push forward major housing growth and infrastructure investment, in the high-growth areas in southern England. As the authors argued, this was achieved by linking spatial planning to the vague objective of 'sustainable development'. On the surface, this suggested that spatial planning was a neutral activity concerned with balancing between economic, environmental and social needs to achieve sustainable development. In reality, this masked the government's pro-growth ideology (Cowell & Owens 2006), in other words its normative bias towards economic growth.

Building on the above critique, spatial planning under New Labour has been labelled as a form of 'meta-governance' (Allmendinger 2011; Brownill & Carpenter 2009). The notion of meta-governance suggests that the central state is involved in steering the conditions for local governance (Jessop 2002). Meta-governance may involve utilising a range of strategies for steering networks, including linking financial incentives to political priorities of the state, or influencing the decisions of networks through political persuasion or network framing (Sørensen 2006; Sørensen & Torfing 2007; Stoker 2000).

What the notion of meta-governance suggests is that spatial planning under New Labour was not a value-free activity. Instead, the state attempted to retain control over the outcomes of local partnership working, through an institutionalised interpretation of sustainable development, which selectively privileged pro-growth interests. It is within this context that spatial planning in many places was fraught with strategic-local tensions.

However, strategic-local tensions were not manifested to the same extent in every area across England: in some areas like the Oxford sub region, there were intense conflicts between development and anti-development interests; whereas in other areas like the Cambridge sub region, there were relatively limited tensions. How can we explain the variation of experiences under the same meta-governance context?

2.3 Interplay between national meta-governance and local selectivity

In response to this question, a conceptual framework is proposed in this paper to link the concept of *local selectivity* with the concept of meta-governance to explain value choices in different areas.

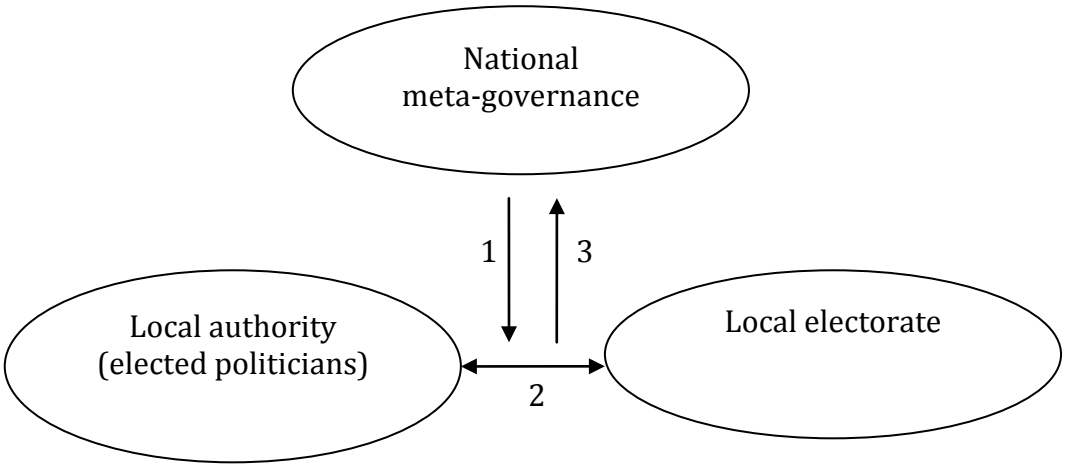
Significantly, the framework recognises that the selection of values is exercised not only at the national level through meta-governance, but also at the level of the local state. Local selectivity has been relatively under-researched (Jonas et al. 2004); likewise, there has been limited research on the role of local politicians as 'local metagovernors' (Sorensen, 2006).

What the framework suggests is that there is a two-way interaction between the values privileged by the national state, and the values privileged by elected politicians at the local level. Clearly, the value choices of local politicians are shaped by the opportunities and constraints inscribed in the national framework. However,

they are simultaneously shaped by the interaction between politicians and their electorate, where politicians need to appeal selectively to particular values to secure normative legitimisation from their electorate.

The conceptual framework is shown in Figure 1 below:

Figure 1: Interaction between national meta-governance and local selectivity



The framework suggests three pathways of interaction between national and local actors, including:

1: National state privileges particular values through establishing a meta-governance framework

2: Elected politicians appeal selectively to particular values to secure legitimacy from their electorate; local electorate respond according to their perceptions of the context

3: Local authorities (elected politicians) respond strategically to the meta-governance framework of the national state

This framework allows us to relate value choices made in a particular locality, with the strategic context which actors are embedded in. Additionally, what the framework suggests is that the extent to which strategic-local tensions are manifested, will depend very much on the specific interactions between pathways 1-3 in different places. This provides us with the conceptual tools to interpret how strategic-local tensions were mediated in the case of the Cambridge sub region, which is presented in the next section.

3. Methodology and case study

In this section, we set out to uncover how value choices have been made in relation to spatial planning in the Cambridge sub region. The Cambridge sub region is located in the East of England (see Figure 2), and the sub region is largely defined on the basis of five local authorities within Cambridgeshire County, including the historic City of Cambridge, surrounded completely by the rural district of South Cambridgeshire, as well as three rural districts adjacent to South Cambridgeshire (see Figure 3).

Figure 2: Location of the Cambridge sub region in England

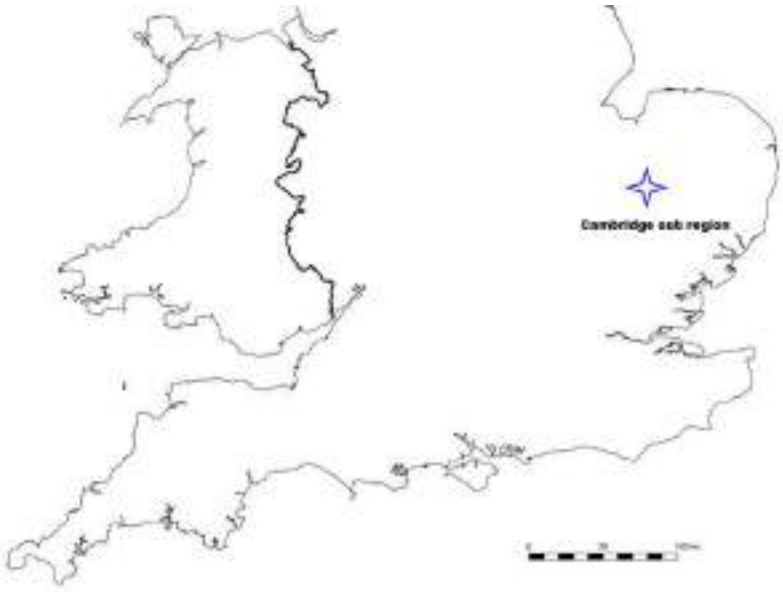


Figure 3: The five local authorities comprising the Cambridge sub region

1. Cambridge
2.South Cambridgeshire
3. Huntingdonshire
4. Fenland
5. East Cambridgeshire

The Cambridge sub region has been experiencing rapid household growth over the last decade, especially an influx of 'key workers' associated with research activities at the University of Cambridge and the high-technology businesses at the Cambridge Science Park. It is thus an interesting case to explore the values underpinning spatial planning, since it involves a strong entrepreneurial economy, co-existing with a historic environment which is sensitive to development pressures.

The empirical research in this case study is based on semi-structured interviews with planners, politicians and members of governance partnerships in the Cambridge sub region. It also draws on sub regional and local plans, planning studies and minutes of partnership meetings.

The case study spans a period of roughly ten years, starting from around 2001 when the spatial planning reforms were first initiated by the New Labour government, and ending in 2010, when the New Labour government was replaced by the Liberal-Conservative coalition government, thus bringing an end to the previous round of reforms.

3.1 Background: Inter-authority relations in the Cambridge sub region

Historically, the relations between Cambridge City and its immediate rural hinterland, South Cambridgeshire, has been uneasy. In the past, Conservative councillors in South Cambridgeshire District were often hostile to the pro-growth agenda of successive Labour and Liberal Democrat councillors in Cambridge City (While et al. 2004, p.289), which resulted in a series of high-profile conflicts over development proposals (Brindley et al. 1996).

However, there was a major reversal in the sub regional planning strategy upon the third review of the Cambridgeshire Structure Plan in the early 2000s. This strategy proposed major housing growth in and around Cambridge City, including three new urban extensions at the edge of the City, which would incur upon green belt land within South Cambridgeshire District, and a freestanding new town in South Cambridgeshire, which would be linked to the city by public transport.

Arguably, a range of values underpinned the change in the sub regional strategy. On one hand, change was driven by a 'competitiveness' logic, in other words a concern to meet the social reproduction needs of the labour force, through the provision of affordable housing and social infrastructure near to major employment sites. In turn, this concern was driven by a fear of losing out in the globally competitive economy. As a senior officer involved in strategic planning explained:

> "I think there was something along the lines that, well, we better all stick together guys, otherwise the growth will go away… so there was a bit of ganging together in adversity. There was a desire for all of the local authorities to say, right, we're pro-growth, it's hugely important to the economy, the quality of life in this area, therefore we want to plan together where that growth is going to go." (Interview, strategic planning officer)

On the other hand, the change in the growth strategy was also justified from the perspective of social equity:

> "We were realising that we were becoming a city for the rich, and for the very poor… you either had a council house, or you were rich. And that was it. Everybody else had to go way out somewhere, way outside the green belt, and we were becoming very, very frustrated and worried about this. We just realised we had to do a big green belt review and allocate some big sites." (Interview, Cambridge City councillor)

Thus the key principle underpinning the third Structure Plan adopted in 2003, was to improve the quality of life for all citizens in the sub region through a better balance between jobs and houses, in the form of major housing growth at the edge of Cambridge, close to major employment sites.

3.2 Changes to the national context for planning

Around the same time as the Cambridge sub region was reviewing its Structure Plan strategy, major changes were taking place in terms of the national context for planning. In 2003, the New Labour government published a national framework for planning in England, widely known as the 'Sustainable Communities Plan' (ODPM 2003). Though not a national spatial plan, the framework indicated the government's strategy for coordinating investment in targeted areas in the country. In particular, the Plan highlighted four major 'Growth Areas', one of which was the London-Stansted-Cambridge growth corridor.

Central government encouraged the establishment of Local Delivery Vehicles (LDVs) in the growth areas, which would provide the structures for coordinating delivery of housing and infrastructure, as well as coordinating bids to the new funding mechanism, which was initially known as the Growth Area Fund (GAF), and subsequently known as the Housing Growth Fund (HGF).

The introduction of this funding mechanism represented a major incentive for delivering new housing. A total of £164m was made available for he first round of GAF (2003-6); a total of £235m was made available in the second round (2006-8); and in the third and final round of funding (2008-2011), a total of £832m was available.

Significantly, these funds were earmarked for areas which were prepared to deliver major housing growth through a partnership approach. According to the guidance issued to all the Growth Area local authorities, the first and foremost criteria for appraising the bids to growth funds was the net addition to housing delivery (DCLG 2008) (criteria 1). In addition, the bids were assessed according to the robustness of local delivery mechanisms and partnership arrangements, meaning growth partnerships had to demonstrate high level of engagement and 'buy in' from major partners (criteria 2).

It is against this background of changes that we can understand the decision of partners in the Cambridge sub region to set up a joint delivery vehicle, known as Cambridgeshire Horizons. The process of setting up the partnership, however, was not short of tensions. Clearly, Cambridge City and South Cambridgeshire District could see the massive benefits of joining up to deliver the urban extensions and new town, since the government's growth funding represented a major stream of infrastructure investment which they had long been hoping for. Theoretically then, the local delivery vehicle could have been established based on partnership working between these two districts alone. And yet, when Cambridgeshire Horizons was created in 2004, the other three districts were also represented on the partnership.

What happened was that the 'outer' districts, in other words the three rural districts of East Cambridgeshire, Fenland and Huntingdonshire, lobbied hard for their representation on the partnership. They were concerned that a partnership based on the City and South Cambridgeshire alone, would suck up all the resources available from government, and leave the other districts struggling to deliver new development. These outer districts made their case by emphasising their interdependency with the urban core. They argued that their role as part of the travel-to-work area of the Cambridge economy, meant that many people who worked in the City were dependent on affordable housing in the market towns in the rural districts, and hence, it would only be fair for the outer districts to receive a share of growth funding to develop new homes and infrastructure.

Although initially reluctant, the 'inner' districts of Cambridge and South Cambridgeshire eventually agreed on the grounds of fairness:

> "It's important that we work with the market towns in other districts, and not only ourselves… it's absolutely right that places like St Neots and Huntingdon also get some money. The original concept was to spend the funds just for the major growth sites, but I think the others argued the case very well that we need to work together, that we need to look at the needs across the county." (Interview, Cambridge City councillor)

Thus, the final decision to establish the joint Delivery Vehicle based on all of the urban and rural districts in Cambridgeshire, was driven by a desire to address the needs across a wider geographical area. In other words, it was underpinned by a concern for spatial equity at the sub regional scale.

3.3 Implementation of the growth strategy

When it came to the actual implementation of the growth sites, a remarkable degree of unanimity was observed, both in terms of the relationship between the local authorities, and the relationship between developers and the local electorate. How do we explain the absence of political discord?

Again, it appears that values played an important role in the mediation of tensions at the implementation stage. First and foremost, the key decisions made at the implementation stage, including the prioritisation of housing growth funds, and the assessment of proposals submitted by developers, reflected the endurance of values and principles agreed at the plan-making stage.

When asked about the logic underpinning the spending programme for growth funds allocated to the sub region, interviewees repeatedly emphasised how the spatial strategy set out in the 2003 Structure Plan, was deeply embedded in the consciousness of all partners, such that everyone agreed that the use of growth funds was to be based on the vision set out in that strategy. The key principle, as we saw earlier, was to improve the quality of life in the sub region through a better balance between jobs and houses, to be achieved through major housing growth at the edge of Cambridge, adjacent to key employment sites. Thus, a major portion of growth funds were targeted at delivering the Cambridge urban extensions and new town in South Cambridgeshire.

At times, the outer districts wanted a greater share of the resources, but they also understood that they needed to respect the spatial strategy which had been agreed:

> "Looking back there was a remarkable degree of unanimity, which followed on from the Structure Plan strategy. We could hardly complain that a lot of money was going into developing Cambridge, because all of us had agreed that Cambridge needs to consume a bit more of its own smoke." (Interview, Huntingdonshire District planner)

The absence of tensions between the local authorities, however, is only one part of the story. The plan to deliver major housing growth on green belt land, with an impact on the historic character of the City, would certainly have been controversial in the eyes of the public. How can we explain then, that there was relatively limited opposition from the public, when major housing developments were actually proposed at the edge of Cambridge?

This draws our attention to how values played an important role in the interaction between local politicians and their electorate. The task of convincing the public about the need for housing growth was no easy one, since years of underinvestment in transport and social infrastructure meant that the public did not have a strong appetite for more houses to be built in and around Cambridge.

However, politicians framed the strategy for growth in a way that would be palatable to the electorate, by anchoring growth to local people's principal concern with housing affordability. In particular, politicians persuaded the public of the need for delivering the major growth sites, by suggesting that inaction would lead to difficulties for people's children to live in the same area in future, due to worsening housing affordability. Implicitly, these politicians appealed to the value of inter-generational equity The consequences of restricting housing supply were therefore relevant to the long-term well-being of families in the Cambridge area:

> "… if we didn't have growth, you wouldn't have a place for your daughter or son to live close to you… where is my family going to live? Have they got to live 40 miles away because there's no affordable housing? I think that was the point we pushed quite hard on… if you don't have growth that's what is going to happen to your family." (Interview, Cambridgeshire County councillor)

In addition, politicians managed to convince local people based on the promise that growth would be accompanied by investment in relevant infrastructure:

> "The public accepted that [growth] was the right way forward, provided that – and that was an important proviso – that there was infrastructure to support additional homes." (Interview, Cambridgeshire County councillor)

A similar view was articulated by developers, who believed that the promise of enhancing quality of life in the area was a key factor in achieving public consensus:

> "…..the public had enough confidence that elected politicians had the ability to ensure that better standards were enforced on these new developments" (Interview, urban extension developer)

Most importantly perhaps, these promises were not just empty promises, but they were actually deliverable given the substantial amount of growth funds which Cambridgeshire Horizons secured from central government. With these funds, not only were the local authorities able to deliver essential infrastructure *upfront*, including transport infrastructure, schools and community centres at the Cambridge Southern Fringe urban extension, they were also able to take a further step forward, through developing a framework for building sustainable communities, known as the Cambridghesire Quality Charter.

Although the Quality Charter is not a statutory document, it has been endorsed by both the local authorities and the developers for the major growth sites What the framework does is that it encourages partners to look beyond the planning system, by highlighting issues which can be addressed through the actions of partners across a range of sectors. For example, this Charter has encouraged the City, South Cambridgeshire District and Cambridgeshire County Council to create a joint Community Services and Infrastructure Group (CSIG), which coordinates the planning and delivery of *community* infrastructure and services across the growth sites. What this means is that growth is not just about delivering houses and physical infrastructure, but also about provision of a range of community services which are integral to the development of *sustainable communities*.

So it was the selective appeal to values by local politicians to secure legitimacy from their electorate, together with effective targeting of resources to deliver the promise of sustainable communities, which explain why political tensions were mediated during implementation of the major growth proposals.

Clearly, the values which politicians appealed to were not the only ones which mattered to local people. It would be fairly reasonable to suggest that some people also valued the principle of environmental sustainability, and hence would be opposed to creating urban extensions on green belt land. Nevertheless, local politicians attempted to legitimise their preferred growth strategy through a *selective* appeal to particular values, which resonated with the principal concerns of their electorate at that particular moment in time.

4. Concluding thoughts: the need for *situated* planning theory

This paper set out to demonstrate the role of values in spatial planning. The findings highlighted that the mediation of strategic-local tensions in the Cambridge sub region, was at least partly explained by the appeal to *relational* understandings of justice (Campbell 2006). This included appealing to the need for affordable housing, for people living across the wider sub region (spatial justice), and the need for affordable housing for the younger generation (inter-generational justice). These relational understandings of justice resonated with the concerns of the local electorate, which explains why resistance to major growth proposals was relatively limited in the case study area.

But the findings also illustrate how the national meta-governance *contex*t shapes the strategies adopted by local politicians. Given the privileging of high-growth economies through the spatial planning agenda of New Labour, the politicians in the Cambridge sub region were more capable of achieving success by positioning the sub region as a major contributor to competitiveness of the regional and national economy, to match the selectivities inscribed in the meta-governance context and thus tap into financial resources from the centre. Indeed, such strategic positioning enabled the Cambridge sub regional partnership to secure substantial resources for the actual delivery of affordable housing and community infrastructure. This, in turn, reinforced the confidence of the electorate of the possibility of delivering sustainable communities, and hence contributed to the relative absence of tensions.

Returning to the problem raised in the beginning of this paper, it is important for planning theory to engage with the question of values, in order to provide a satisfactory account of the complexities of spatial planning. This is not to suggest an abstracted theorisation of values. As Sanyal (2002) and Alexander (2003) have pointed out, normative theories of planning often suffer from the problem of not being able to take into account the role of context and how that leads to differentiation in practice. This paper echoes their view of the need for *situated* planning theory, which pays attention to normative issues, but which is also sensitive to the context in which such values are deployed. This paper has contributed by drawing on the concepts of meta-governance and selectivity, to illustrate how value choices in spatial planning processes are shaped by the national meta-governance context, as well as the selection of values within local political contexts.

The concepts of meta-governance and selectivity are indeed relevant to the current planning context in England, where the shift towards a more localist approach to planning has resulted in the creation of a new sub-local tier of neighbourhood planning. Within this changed context, local authorities are expected to play a role in overseeing the coordination of multiple neighbourhood plans, to ensure consistency with local plans. Simultaneously, local authorities are also expected to cooperate with their neighbours at the supra-local level, to ensure consistency with the objectives in the national planning policy framework.

This indicates the possibility of an emergent form of interaction between national meta-governance and local selectivity, where local politicians simultaneously engage with the selectivities in the national planning framework, while attempting to meta-govern sub-local neighbourhood governance processes.

Going back to the conceptual framework proposed in the beginning of this paper, we can see how an appreciation of the interaction between national meta-governance and local selectivity is crucial to our understanding of the tensions which emerge in particular places. Clearly, the three interactive pathways proposed in the framework are open to change: for example, the perceptions of the electorate may shift under changing socio-economic conditions. Similarly, values privileged by the national state will change under the election of a new government, while local selection of values will change when new politicians are elected into local government.

Whether strategic-local tensions are effectively mediated or not under the new planning context, will depend on how values are deployed by local politicians in their role as 'local meta-governors'. This suggests an interesting area for further research, to uncover how values are deployed under a changing socio-political context, to add to the development of situated planning theory.

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The Study of China's central and western urbanization, risk and prevention during the Industrial transfer process

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Abstract

In the current economic globalization trend, industrial transfer has become a common economic phenomenon to promote macro-regional industrial restructuring, greater economic. Since reform and opening up policy, as the main field of international industry transfer, the regional economy of China's eastern coastal areas has been rapid development, while it plays a vital role to the regional urbanization. However, in the eastern region to achieve "economic miracle", the growing wealth gap between the eastern and western areas is increasing serious.

Following the implement of national regional development strategies, such as "Great Western Development Strategy", "Rise of Central China Strategy" , the central and western regions to undertake industrial transfer from the eastern region's economic development opportunities, and it will have a huge role in promoting the regional urbanization.

After experienced 1990s the government-led initiative to explore the market period, China's eastern industrial shift to the west China are under the guidance of the central macroeconomic policy, appearing initial extensive form breakthrough and market-oriented, showing the three major characteristics: Investment in expanding, large scale projects growing; Industrial projects with feature of large and high value investment; Industry has become a hot spot for investment. And it differences from the past eastern area undertake international industry transfer are: it undertakes from domestic; the industry is high consumption, high pollution and large scale; Industries to relocate to the city is eager to expand the city with the size of the industry concentration, enhance land value.

Based on the background of China's development background, analysis domestic and abroad relative research, the article makes a conclusion of China's industrial transfer characteristics of the various stages of development, power factor, etc. Comparing the

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main cities' index feature of urban industry structure and urbanization indicators, to sum up different areas undertake industry transfer feature, analysis of deep-seated reasons and the effect to urbanization. Then the paper cites the specific urban cases of central and western regions, constructing the risk theory research framework. Through the process of risk recognize, risk assessment to analyze the characteristics of the central and western regions city to undertake the industry transfer. Finally, making the recommendations and suggestions related to prevention.

1 Globalization & Industrial transfer

Economic globalization is the world's economic activity beyond the borders, foreign trade, capital flows, technology transfer, provision of services, interdependent and interrelated organic economy as a global scale economic entirety. Since the 1990s, economic globalization has become the main theme of the world's economic development. In the trend of the globalization influence, the international industrial structure increasingly upgrade and optimization.

International industrial transfer is the industrial transfer between countries.In accordance with the principle of comparative advantage, some industries from one country or regiontransferred to another country or regionthrough international trade and investment.

In recent years, China's rapid economic development plays a very important role in the process of economic globalization. Meanwhile, international industrial transfer activities also generated a great deal of influenceon the Chinese economy.

2 History and the development trend of China's industrial transfer

China's industrial transfer process can be summarized as follows: First east part and west part, first international and regional. Firstly, the eastern coastal region mainly as a carrier taken international industry transfer; with the economic level of the eastern region increasing grow, some of the industry gradually transferred to the central and western regions.

In the influence of international industrial transfer activity, China has undertaken three times of international industrial transfer. The first time is in 1980's-1990's, textile products as the representative of labor-intensive industries transfer to developing countries, accelerating the pace of upgrading of China's textile industry. The second time is since the 1990s, with the international industrial structure adjustment and transfer, prompting China to become the main destinations of international industrial

transfer. And the industry transfer focus from the raw material industries to processing industries, from manufacturing to high value-added industries, from the traditional industries to emerging industries, from manufacturing to services. The third time was around 2000 due to WTO brings new opportunity, a new round of information industry, as a representative of the high-tech industry production manufacturing process mass to transfer to China. The Yangtze river delta and pearl river delta, ring bohai bay, the coastal areas of fujian initially formed unique information industry base. China has become the international "manufacturing center". Guangdong, fujian, Shanghai, zhejiang, jiangsu, shandong, as the eastern coastal province (city) has the dual task of industrial transfer and undertake industrial transfer .

The industry transfer from the east to the west has experienced the government leading market period of 1990's. The new wave of industrial transfer will influent central and western regions in economic development, industrial structure , ecological environment, urban construction, government management mode, urban image, wage level, traditional society and national culture, etc. Comparing with the eastern region undertake the world of industrial transfer, there are some differences: ① this industry shift's industry mainly comes from domestic; ② the transfer industry is always pollution, energy consumption and large land scale; ③ the city which undertaken industrial transfer is eager to expand urban scale to promote land value.

The directions of the industrial transfer from the east China, first is to the internal developing regions transfer; second is to central and western areas gradient transfer; third is transfer to neighboring countries such as Vietnam and India. With economic strength of the eastern, its radiation and influence rage expand increasingly, forming a certain gradient differences. Some traditional industry will transfer from the core area to surroundings, even to the central and western China by radiation and influence rage expanding.

3 The current industrial transfer characteristics of central and western regions

3.1 Industrial transfer and urbanization characteristics of western regions

In 1999, the state council put forward the western development strategy. In October 2000, the15th communist party of China the CPC central committee the fifth plenary session proposed "the national economy and social development made the tenth five-year plan proposal ", the implementation of the western development and promoting the regional harmonious development as a strategic task. The development of western China strategy including Gansu province, Shaanxi province, Qinghai

province, Ningxia Hui autonomous region, Xinjiang Uygur autonomous region, Sichuan province, Yunnan province, Guizhou province, Chongqing province, Tibet autonomous region, Inner Mongolia autonomous region, Guangxi Zhuang autonomous region , totally 12 provinces, autonomous regions, and municipalities directly under the central government, three minority autonomous prefecture, covering 685 square kilometers, accounting for 71.4% of the country's. By the end of 2002 population is 367 million, accounting for 28.8% of the China's.

Table1. GDP and per capita GDP of western provinces

Province	GDP（hundred million yuan）				Per Capita GDP（yuan）			
	1999	2009	growth	Annual growth rate（%）	1999	2009	growth	Annual growth rate（%）
Neimeng	1268.2	8967.52	7699.32	21.60%	5350	37287	31937	21.43%
Guangxi	1953.27	7903.47	5950.2	15.00%	4148	16576	12428	14.86%
Chongqing	1479.71	5693.58	4213.87	14.42%	4826	20219	15393	15.40%
Sichuan	3711.61	14050.78	10339.17	14.24%	4452	17289	12837	14.53%
Guizhou	911.86	3662.43	2750.57	14.92%	2475	9214	6739	14.05%
Yunnan	1855.74	6178.25	4322.51	12.78%	4452	13687	9235	11.89%
Tibet	105.61	434.34	328.73	15.19%	4262	15294	11032	13.63%
Shanxi	1487.61	7752.2	6264.59	17.95%	4101	20497	16396	17.46%
Gansu	931.98	3373.78	2441.8	13.73%	3668	12882	9214	13.38%
Qinghai	238.39	1012.69	774.3	15.56%	4662	18346	13684	14.68%
Ningxia	241.49	1198.15	956.66	17.37%	4473	19642	15169	15.95%
Xinjiang	1168.55	4005.41	2836.86	13.11%	6470	19119	12649	11.44%

Table2. Major industrial index of western provinces

Province	Industry growth（hundred million yuan）			
	1999	2009	growth	Annual growth rate（%）
Neimeng	235.7	2668.58	2432.88	35.44%
Guangxi	281.8	2001.17	1719.37	27.77%
Chongqing	239.5	1514.72	1275.22	25.93%
Sichuan	634.3	3868.6	3234.3	25.36%
Guizhou	196	1006.02	810.02	22.69%

Yunnan	491.1	1701.78	1210.68	16.81%
Tibet	8.4	25.71	17.31	15.01%
Shanxi	346	2189.97	1843.97	25.94%
Gansu	225.6	1066.74	841.14	21.43%
Qinghai	58.3	324.05	265.75	23.91%
Ningxia	61.6	348.68	287.08	24.20%
Xinjiang	256.7	1378.48	1121.78	23.38%

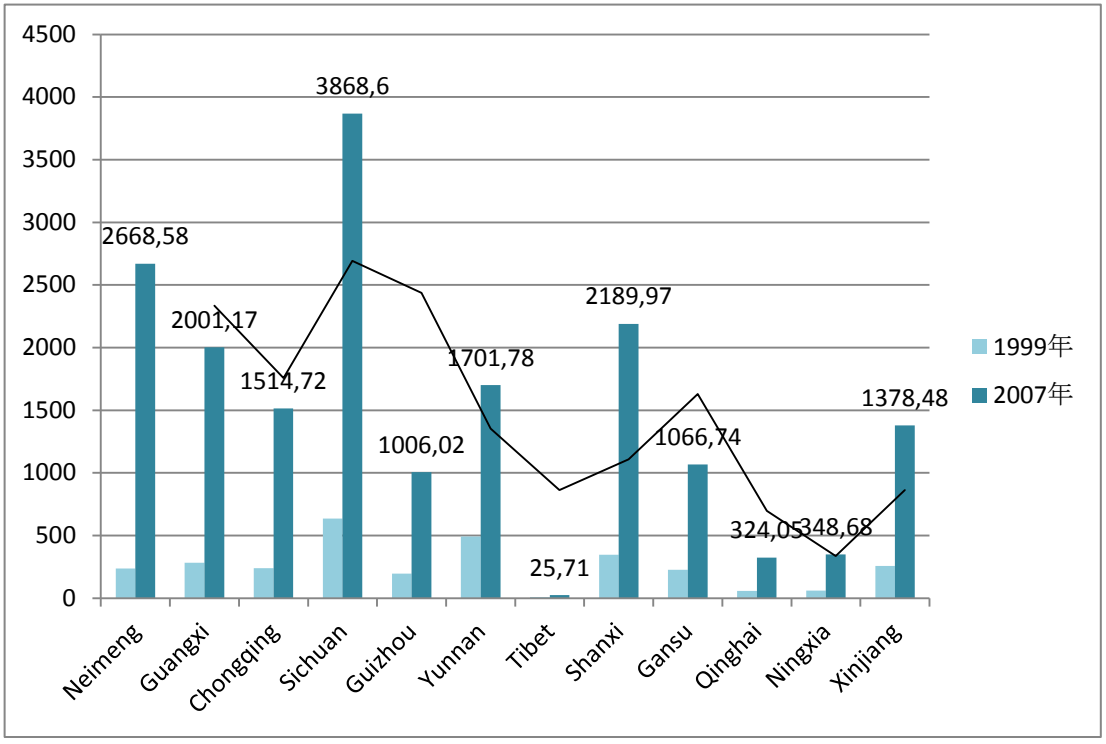

Figure1. Major economic index of western provinces

From the above data, after the implementation of the western development strategy, the western economy made great progress. And the development is uneven develop, Chongqing, Neimeng, Sichuan developed with the fastest speed. The industry also had a rapid development speed, making its share of the national economy proportion rise sharply. The industrial transfer from the eastern region to the western region promotes west China economic develop.

The central region including Shanxi ,Henan, Anhui, Hubei, Hunan, Jiangxi these six provinces, located in China's inland central part. Central China has 10.7% of the country land, the population is 28.1% of China, and the national GDP proportion is 19.5%. It is the population, economic hinterland region and the important market, which plays an important role of domestic regional division.

In March 2004, premier Wen in government work report, first put forward to promote the rise of the central region. “Central China's emerging strategy” meaning is far beyond the central region itself. The general strategy for regional development in China, the central province plays an important role of "as a bridge between the east and the west ".

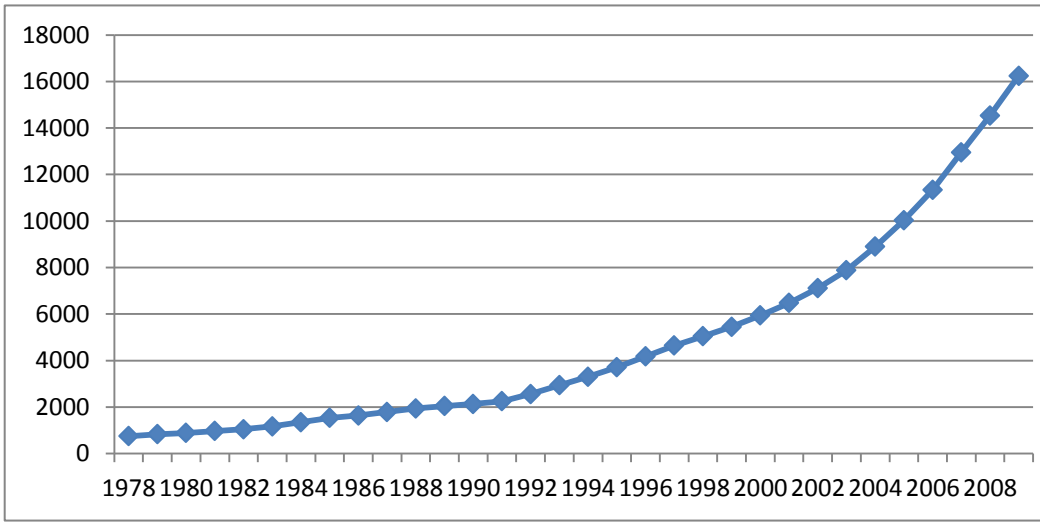

Figure2. GDP of Central China

Table3. Major economic index of Henan province

Year	GDP（hundred million yuan）	Per Capita GDP（ten-thousand yuan）	The three main industries the three main industries（hundred million yuan）		
			Primary industry	Secondary industry	tertiary-industry
1995	2988.4	0.32	763	1395	830
1996	3634.7	0.4	937.6	1677.6	1019.4
1997	4041.1	0.43	1008	1861	1171
1998	4308.2	0.46	1071	1937	1299
1999	4517.9	0.48	1123	1981	1413
2000	5053	0.54	1161	2294	1597
2001	5533	0.59	1234	2510	1788
2002	6035.5	0.6	1288	2768	1978

2003	6867.7	0.7	1198	3310	2359
2004	8553.8	0.9	1649	4182	2722
2005	10587	1.1	1892	5514	3181
2006	12496	1.3	2050	6725	3721
2007	15012.5	1.6	2217	8282	4512

(1) Government-leading industry transfer from the east to the west

Since the 1990 s, in the central macro policy guidance, the local government in the Midwest as the main force of industry transfer has not changed. Since 2000, the eastern coastal area of the industrial transfer to the central and west scale is increasing, the key industry is manufacture, especially labor-intensive industry, resources or energy depending industry.

(2) The industry source opposite concentration

By 2010, only Guangdong, Shanghai, Zhejiang, Fujian these four provinces' and cities' industrial output which need to transfer to the central and western areas will reach 1.4 trillion yuan. For example, because Shanghai successfully held the World EXPO, there were thousands of companies moved away before 2010, and a group of traditional industries gradually out of Shanghai.

(3) The industry transfer has taken shape gradually

First is the industrial transfer level gradually improve, the industry focus from former labor-intensive products to the capital intensive industry and technology intensive industry. Second is the production capacity is no longer the individual enterprise of transfer isolated behavior, industrial transfer from the original single project, a single enterprise, or rather a single industry, change to the integrity industry.

(4) In the industrial transfer process, Zhejiang merchants, Redsun, Taiwanese, Hong Kong businessman' performance is more active

Zhejiang has become China's largest domestic (mainly private funds) output province, Zhejiang merchants also has become China's largest private economic investment venture subject. The capital flow of industry transfer direction is from the east to west, from the south to the north. The transfer industry mainly is labor-intensive industries. Zhejiang enterprise has become an important force in the western development.

With the industrial transfer process forward, based on current China's development situation and related policy guiding, it has the following developing trends: ① Industrial transfer will focus from the labor intensive gradually to the capital intensive and technology-intensive industries ;② Industrial transfer from the first single industry will transfer to the whole industry, and the industry field will be wider; ③ Industry transfer from a government's leading to the enterprise leading, enterprise's leading role is growing increasingly stronger; ④ Capital intensive industry, technology industry will pay more attention to the local technology, talent, research and development ability, and other comprehensive advantages, infrastructure and system conditions.

4 The risk analysis of industrial transfer

According to the characteristics of the industrial transfer, from the urban planning perspective, based on urban development research framework, the article made the risk identification research.

4.1 Urban planning risk

Planning development risk refers to the risk caused by the un-proper planning and design. Urban development projects not only are large scale, but also have great influence on the city development. In order to control planning and design, the government should focus on monitoring project planning and develop target.

Table4. Urban planning risk factors

NO.	Factors	Monitoring method	Monitor
A1	Development orientation	Subjective probability evaluation monitoring ， two-dimensional two-dimension risk matrix monitoring	The government planning departments 、The competent department of city development project
A2	Function layout		
A3	Space development intensity		
A4	Technology risk		
A5	Facilities risk		

Planning and design risk monitoring is in the planning decision stage, the government planning departments and urban development project departments are responsible for monitoring. Once the risk is too high, it shall be ordered to modify planning or direct negative its feasibility

4.2 Ecological environment risk

In China's current rapid urbanization and industrialization background, because the deviation of the development idea and dislocation, the manual intervention by urban development activities to ecological environment is becoming much stronger, and has become the main impact factor of urban ecological safety. So the ecological environment risk is an important urban development projects risk. Urban ecological environment development project risk is mainly in three aspects: First is ecological load, namely whether urban ecological environment can withstand the impact of the project; secondly is the human environment harmonious degree, refers to whether the environment can build project with human feelings in coordination; last is environment pollution.

Table5. Ecological environment risk factors

NO.	Style	Factors	Monitoring method	Monitor
B1	ecological load	Land resources richness	Per capita land area, such as land productivity index quantitatively estimates	The relevant government departments
		Water resources richness	Per capita water, water quality conditions in computer aided data monitoring	The relevant government departments
		Energy resources richness	Light index, energy supply and demand as indexes than quantitatively estimates	The relevant government departments
B2	human environment harmonious degree	Green Index	Building area, such as green area index quantitatively estimates	The relevant government departments, Project manager
		Landscape Diversity	Dominance index, evenness a d experts assess	The relevant government departments
B3	environment pollution.	Water pollution	Sewage treatment, wastewater index quantitatively estimates	The relevant government departments
		Air	S02, TSP emissions and	The relevant

		pollution	JingHuaLv index quantitatively estimates	government departments
		Noise pollution	Noise intensity, influence scope index quantitatively estimates	The relevant government departments
		Waste pollution	Solid waste emissions, cover an area of an area index quantitatively estimates	The relevant government departments

4.3 Social culture risk

The social culture risk mainly refers to the risk of social factors affect the project and project implementation process all kinds of external social effect brings the risk. For urban development projects, the government focused on the social culture risk can be used two monitoring indicators to reflect, namely, social and political stability and cultural risk.

Cultural risk can also let related experts according to the project of the influence of culture design a mass questionnaire, regularly collecting popular feeling, and the result will be transformed into index

The social and political stability risks and cultural risk monitoring is the project manager, but social cultural risk monitoring results and project management strategies and measures that coped with must be reported to the relevant government departments Urban development project social cultural risk often effect wide fields, improper management might cause serious social problem, so the government departments must supervise the social culture risk monitoring and response of project management.

Table6. Social culture risk factors

NO.	Factors	Monitoring method	Monitor
C1	The social and political stability	relocation, public security situation, social differentiation, social conflict, policies and regulations and improve the degree of stability to the public investigation or expert evaluation	Project manager

C2	Culture risk	The public questionnaire, expert evaluation	Project manager

4.4 Natural risk

It's inevitable for urban development project to face natural risk. Project management can regularly get natural risk the probability of information from relevant government department and research institutions and even the insurance company.

Table7. Natural risk factors

NO.	Factors	Monitoring method	Monitor
D1	Earthquake and its secondary disaster risk	Objective probability evaluation monitoring, computer aided data monitoring	The relevant government
D2	Other natural disasters and its secondary disaster risk	The typhoon, debris flow, lightning and other natural disasters and its secondary disaster risk, two-dimensional risk matrix monitoring, objective probability evaluation monitoring	Project manager

4.5 Economic risk

Economic risk of urban development project has four factors: macro-economic environment risk, regional competition risk and the regional cooperation risk, financing risk, debt service risk. Economic cycle, macroeconomic policy, fiscal revenues and expenditures, and other macroeconomic environment, as well as regional competition, the regional cooperation risk will inevitably influence on the project investment decision and operation of success or failure, in project decision-making stage project management should be on the basis of macro-economic environment risk, regional competition risk, the regional cooperation risk is the acceptable limits or whether there are effective strategies to decide whether or not to invest. In the project operation stage project management is still should be regularly monitoring macroeconomic environment risk, regional competition risk, the regional cooperation risk.

Table8. Economic risk factors

NO.	Factors	Monitoring method	Monitor
E1	Regional competition risk, the regional cooperation risk	risk assessment Experts assess	Project manager
E2	Macro-economic environment risk		
E3	Financing risk	Risk and control self assessment, (self assess possibility	
E4	Debt risk	Risk and control self assessment risk assessment	

4.6 Operation management risk

The operation of the urban development project management involves institutions-set, the structure organization and the daily operation management. Project organization setup has management committee, "company" or all kinds of mixed management mode. Considering the city development project public characteristics, in the project operation stage involved in providing service processes related risks but also through the mass questionnaire method regular monitoring.

Table9. Operation management risk factors

NO.	Factors	Monitoring method	Monitor
F1	Organization setup risk	The comparison inspection flow chart Risk and control self assessment	The relevant government; Project manager
F2	Operation management risk	The comparison inspection flow chart Risk and control self assessment Regular monitoring and inspection documents Mass questionnaire Key risk index monitoring	The relevant government; Project manager

4.7 Construction risk

City the large-scale development of the construction of the project need to monitor risk including project construction phase development progress can be expected to plan the project development of the risk and the progress of the project itself project risk, such as technology risk and construction risk, etc.

Table10. Construction risk factors

NO.	Factors	Monitoring method	Monitor
G1	Development progress	Regular monitoring and inspection, document risk and control self assessment	The relevant government; Project manager
G2	Project risk	Planning decision stage, and the expert two-dimensional risk matrix monitoring Development and construction stage, by using the engineering project risk management technology, comprehensive index.	The relevant government; Project manager

5 Planning response and risks prevention

5.1 Planning response strategy

In the industry of the transfer of the macro, pushed by the urbanization development bring mass construction planning, should give full consideration to the risk characteristics, in the development of management system and pattern, the innovation and perfection.

5.2 Risk prevention suggestions

（1） Set unified management institution

Urban development and management of the established separate institutions at home

and abroad in the practice of the urban construction is the common understanding. The different districts management committee may consider the film as a whole the development plan, can fully understand the basic situation of the city. At present, the city risk management methods have been widely recognized and popularity.

（2）Increase the risk management content

The risk for developing the city management work the centralized management, therefore, from duty scale, the ac requires a risk management function in the related department. Facing the complex urban development risk, city need to organize a high level of risk management team, team management ability will directly affect the city development process.

（3）Establish data information platform

In risk management, the information is vital, and how to get good information is the key to avoid the risk. Non-synchronous information cause people to the understanding of the risk degree have differences, also can't risk carries on the comprehensive analysis. Set up the development of electronic information about city data platform, we can ensure that the government, development, enterprise, residents sharing development material in the first time.

The subversion of democratic policy under a regime agenda: The urban governance of residential development in Melbourne

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Abstract

Over the last twenty years in Melbourne, metropolitan spatial planning has increasingly sought to achieve urban sustainability and avoid continued low-density sprawl through policies encouraging consolidation. The important example of housing shows that development outcomes fall well short of policy objectives and that the city's spatial planning is widely perceived as ineffective. This failure is most easily seen in the large tracts of greenfield development far from the city centre, with no public transport, very limited employment opportunities, and only basic services. Yet development in these areas is expensive, with the city undergoing a crisis in housing affordability.

This paper reports on a case study of urban governance in Melbourne. The study is examining the hypothesis that residential development follows an agenda set by an informal urban regime comprised of state and market actors, rather than the metropolitan spatial planning policy generated by the formal planning system in Australia's representative democracy.

There is clear tension between the antagonistic objectives of communicative planning via network governance and urban regimes (working with reactive and discretionary regulatory planning systems), which enjoys widespread support in Australian urban planning practice, and the exercise of metropolitan spatial planning, which has a significant history under hierarchical government as a vehicle for urban vision and metropolitan spatial planning. Examining democratic concepts and the exercise of urban power, this paper argues that state policy (as expressed in metropolitan spatial plans) is superior to modes of network governance (such as urban regimes or communicative planning practice) for collective decision-making at the urban scale.

The superior democratic credentials of strategic spatial planning are also suggested by a consideration of democratic concepts. Whether in the guise of abstract philosophical concepts or as concrete systems of sociopolitical organisation, power and democracy have proven to be inexhaustible themes in the study of human society and are central concerns in any sophisticated understanding of the political economy of urban governance.

Similar challenges are common to many cities across our rapidly urbanizing globe. The political economy of planning is a crucial determinant of the mode of urban governance employed in any city, yet it is not frequently examined at a metropolitan scale. Rapid growth is expected to continue in Melbourne, which is consistently rated one of the world's most liveable cities, but the longer that spatial planning policy is left as political rhetoric rather than implemented across the urban area, the less likely that the city's future will offer the amenity enjoyed by today's residents as social, economic and environmental sustainability continues to decline.

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1 The challenges of democratic urban governance in Melbourne

1.1 Growth, democratic policy and sustainable residential development

This paper is a progress report on a case study of Melbourne's urban governance. The study examines the challenges of democratic residential development in contemporary Melbourne and investigates the proposition that the city's spatial pattern of residential development reflects the operation of a metropolitan regime. Metropolitan strategy in the city has long promoted urban consolidation to improve sustainability while accommodating the city's rapid population growth, but a clear tension between modes of network governance and democratic spatial policy is evident in the contrast between the strategic vision for residential development and actual development outcomes in Melbourne.

The vision of a sustainable urban form is slipping beneath a banal reality of wasteful and unnecessary sprawl. The majority of residential development over the last two decades follows a pattern established in the 19th century of large, detached houses at the city's edge, seemingly oblivious to the needs of a 21st century city. These dwellings are far from high-capacity public transport, lacking in civic services, and remote from the urban environment that contributes to Melbourne's acknowledged amenity. The scarcity of inner urban dwellings relative to demand, limited development in many middle suburbs and the expense of new infrastructure and land banking strategies for fringe development have reduced housing affordability (Gurran et al., 2008, Federal Government, 2008). The average new dwelling has increased in size to be the largest in the world (Victorian Government, 2008, Moodie et al., 2008, James, 2009). This misalignment between supply and demand is a critical issue that threatens Melbourne's social cohesion, economic prosperity and environmental sustainability.

The case study posits that development outcomes have not met spatial planning objectives because in Melbourne's neoliberal political economy, an urban regime with a market-driven agenda effectively manages residential development. Melbourne's urban management has moved away from the mobilisation of a public sector led by representative government and towards governance networks that engage a plurality of actors with conflicting interests, goals and strategies (Albrechts, 2003a). The intersecting political and economic interests of an informal coalition of State Government and major developers appear to be most expediently satisfied by greenfield construction on the urban fringe.

The remainder of this introduction outlines the city's planning system and policy framework and defines urban regimes. With this context, the body of the paper examines the democratic credentials of two incongruent influences on urban governance – the approaches of network governance such as communicative planning and urban regimes, and the policy framework embedded in spatial planning.

1.2 Tensions in urban governance: Substantive or procedural guidance?

In Melbourne, the state is a gatekeeper to land development in an economy based on private property rights and operates a strategic planning system that focuses on determining broad categories of land use acceptable for a given place, controlling the form of development within certain parameters, and the timing of land release. Structural elements of urban governance include the legislative and regulatory environment, institutionalised organisational forms, and formally established relationships and decision-making practices.

Combined with residential development policy, this system ostensibly aims to resolve the inherent tensions between a market supply of dwellings unregulated by form, size, cost or tenure and only loosely regulated by location, and a reactive state-led planning context ostensibly focused on the social, economic and environmental dimensions of urban sustainability. Delivery of policy goals is left to a risk-averse market that matches and moulds its idea of consumer demand to a business model favouring supply of a limited range of products in locations relatively unconstrained by existing development, infrastructure or residents (Adams, 2011). The resulting spaces for informal decision-making ensure a major role for discretionary governance deliberations.

The case study suggests that a different influence on residential development is that exerted by an urban regime. As initially formulated by Elkin (1987) and Stone (1989a), urban regime theory is a well-established analytical approach to investigating the governance of urban change in neoliberal democracies (Imbroscio, 1998b, Davies, 2002, Lauria, 1997). Regimes are a mode of governance in which an informal coalition of state and market actors assembles the capacity to govern and deliver outcomes by cooperating across formal boundaries and institutions (Mossberger and Stoker, 2001, Irazabal, 2011, Stone, 1993). Regime analysis is steeped in the close and specific observation of networked urban governance and the structural dynamics of collective decision-making in a political economy (Mossberger and Stoker, 2001, Stone, 1993, Ward, 2001, Peck, 1995), where regimes may surround and complement the formal workings of government authority (Davies, 2003). Regime theory focuses specifically on urban development to ask 'how, and under what conditions, do different types of governing coalitions emerge, consolidate, and become hegemonic or devolve and transform' (Lauria, 1997). (Stoker, 1995, Stone, 1989b, Irazábal, 2009).

A lively academic debate emphasizes the conceptual value of urban regime theory in exploring complex urban issues while constructively criticizing its contextual and analytical limitations (Stoker, 1995, Mossberger, 2009, Davies, 2002, Imbroscio, 1998a). The regime approach seeks to understand *what is*, by revealing power relations and the consequences of power asymmetries, but its explanation of *why* a particular mode of urban governance eventuated and is maintained is left implicit, and the approach falls short of a normative vision of *what might be*, against which the quality of governance might be assessed (Gordon, 2005, Imbroscio, 1999, Davies, 2002, Stoker, 1995, Feldman, 1997). The critiques suggest that urban regime theory offers a realistic description of urban political economies but could improve its critical edge, normative perspective and explanatory ability (Stoker, 1994, Imbroscio, 1998a).

2 The democratic credentials of network governance and hierarchical government

2.1 Problematising network governance in a neoliberal political economy 368

There is clear tension between the antagonistic objectives of communicative planning via network governance (and its counterpart of reactive and discretionary regulatory systems), which enjoys widespread support in Australian urban planning practice, and the exercise of metropolitan spatial planning, which has a significant history under hierarchical government as a vehicle for urban vision and metropolitan spatial planning. Examining democratic concepts and the exercise of urban power, this paper argues that state policy (as expressed in metropolitan spatial plans) is superior to modes of network governance (such as urban regimes or communicative planning practice) for collective decision-making at the urban scale. Developed through representative democratic systems, state policy has a clear concern for the collective good and urban sustainability. It enjoys greater legitimacy, more logically delivers the collective will and better approximates the common good than collective decisions generated through the intrinsically compromised systems of network governance.

The significant discursive shift in recent decades that has favoured the adoption of postmodern network governance over modernist technocratic planning has been used in an attempt to invalidate spatial plans because they are perceived to pay insufficient attention to community input. Engaging with a deeper understanding of the concepts of power and democracy, rather than effectively dismissing these concepts through a superficial treatment bent to the demands of a particular discourse, develops a coherent logical framework for assessing the quality these competing modes of urban governance in Melbourne.

2.2 Networks in theory: The shift from hierarchical government to network governance

The argument begins by discussing an overarching contemporary influence on urban planning practice in neoliberal Western societies: the shift in emphasis in collective decision-making from formal hierarchical government to informal network governance. Neoliberalism has gradually encroached on pluralist Western democracies in recent decades to become hegemonic across social, political and economic life (Harvey, 2005). While a relatively authoritarian state once appeared to provide a clear framework for managing cities, the contemporary role of the state has been refigured from leader to facilitator (Deleon, 1998) and a wider range of actors are seen to have legitimate roles in collective decision-making. Erstwhile distinctions within and between the state, market and civil society have ceded to governance networks that, under varying degrees of state oversight, accept an open architecture of agent relationships and promote flexible political institutions.

Many urban planning academics tell us that planning practice has ‘moved on’ from modernist notions of technical expertise, state political control and substantive objectives (Hoch, 2007, Innes and Booher, 2003, Forester, 2009, Healey, 2006) in

favour of network consensus and process determinism. Proponents of network decision-making in urban planning such as Healy (1996, 2006) and Forester (1999) privilege interactive process over substantive problem solving as the rightful focus of the discipline. Descriptive paeans feature a rhetoric of privileging diversity and individual rights within notionally equitable frameworks, while discounting expert authority and ignoring the adversarial nature of interest group pluralism.

Led by an Anglocentric set of principles known as New Public Management (NPM), much contemporary theory in public administration positions governance networks as a benign corrective to the shortcomings of government by the state (Ansell and Gash, 2007, Gleeson et al., 2004, Leitner, 2002). Forming a shadow government, networks are claimed to deal more effectively with complex issues and appear to offer a new way of dealing with resource deficiency, bureaucratic rigidity and political obstacles (Agranoff, 2001). Networks are also suggested as crucial to knowledge development and the effective arrangement of human capital, making them vital to support innovation in social and economic production (Agranoff, 2001). The blithe support for networks prevailing in the Anglophone literature is often more concerned with the categorisation of an evolving neoliberal political economy rather than an attempt to understand, explain or assess it.

This merits of this shift, which has been concurrent with the spread of a neoliberal political economy, is challenged by academics in critical social theory who take a less sanguine view of the deployment of power and the concern for democratic process in the highly profitable realm of urban development (Harvey, 1989a, Harvey, 2006, Sandercock, 1998a). The call for network governance repackages the premise of neoclassical economic theory, that the state is operationally ineffective and public services should be outsourced, with an attendant disinterest in spatial, social or cultural insight (Dunn, 2007). In a constitutional representative democracy, where elected representatives remain accountable for outcomes and might be expected to have the upper hand in determining urban development, the legitimacy and transparency of governance networks are validly subject to critical assessment (Aarsæther et al., 2011). A limited consideration of structural drivers of network governance is sometimes ascribed to the notion that the knowledge base is still developing (Agranoff, 2001); but both the conceptual and pragmatic issues of governance are the subject of much attention in other disciplines. Academics such as Harvey (2005, 1985, 2008), Flyvberg (1998b) and Swyngedouw (2005, 2000) seek to make the internalised neoliberalism of network governance explicit by highlighting the logical and empirical links between networks and neoliberalism.

Assessed against its discursive claims, the pragmatic problems of network governance are myriad. The relatively fluid practices of network decision-making may not provide the clear objectives or coordinate the extensive resourcing required to manage the breadth and pace of change experienced in many cities (Klijn and Koppenjan, 2000). While the ideal network empowers a balanced representation of relevant stakeholders, including participants from the wider demos of indirectly affected citizens, and anchors processes in democratic norms, the entrepreneurial narratives common in many governance scenarios conspicuously threaten democratic process while diminishing

transparency, participation and inclusion (Aarsæther et al., 2011). The conceptual concerns are more subtle and, perhaps, invidious. With their bias toward idealistic description and lack of analytical structure, theorists supporting network governance unproblematically flout representative democracy and seek to supplant state power with market and civil society interests. The reasonable concern that the state is an imperfect repository of democratic intent is often taken to unreasonably justify greater empowerment of individuals in the market and civil society (Hajer and Wagenaar, 2003).

The concept of democracy is frequently intoned as a justification for the shift from representative systems toward network governance, but the democratic anchorage of networks is an empirical question (Aarsæther et al., 2011, Edelenbos et al., 2010, Klijn and Koppenjan, 2000). The forms of democracy that are claimed to deliver equitable collective decisions in networks hark back to the Greek polis of communal debate (Dahl, 1989), but contemporary cities are radically different in scale and complexity to the Greek city-states and the concept of democracy that was founded by the Aegean has similarly, and necessarily, evolved. Because greater participation does not mean better democratic process (Dahl, 2000), systems that favour deliberative and discretionary decision-making over the application of clear rules and enforceable rights are problematic, and strong controls are required to prevent network delegation from alienating democratic objectives (Dahl, 1994).

2.3 Networks in practice: The idealism of communicative planning and the realpolitik of urban regimes

Communicative (or collaborative) planning is a normative style network governance ascendant within urban planning. Based on Habermas' abstract concept of rational discourse, where some "better argument" prevails to engender an inclusive consensus between actors, communicative planning has been a major theme in planning theory for the last two decades and is seen by some as a paradigm for contemporary practice (Forester, 1999, Healey, 1996, Innes, 1996, Innes and Booher, 2003, Forester, 1993). Habermas' ideal of a communicative rationality sets a moral standard for 'good' communication, which fetishizes ideal speech situations where comprehensive and comprehensible statements are made with legitimacy, integrity and truth.

With its lynchpin of inclusive consensus, the ideal of communicative planning has certainly brought benefits to practice. The approach celebrates the interaction of diverse actors in a pluralist society, engaged in complex collective decision-making, seemingly liberated from the constraints of institutional structure, historical context and expert guidance. Heeding Habermas' call for a "transformation of the public sphere" (Habermas, 1989), freed from state and economic power relations, communicative planners identify distorted communication in planning practice as a precursor to transforming the culture and processes of urban governance (Healey, 1999).

However, at the metropolitan scale of urban governance relevant to this research, a communicative rationality raises considerable concerns for democratic decision-making (Albrechts, 2003a, Huxley, 2000, Hillier, 2003, Flyvbjerg, 1998a, Tewdwr-Jones and

Allmendinger, 1998, Flyvbjerg, 1998b). Following the concerns raised for network governance, there is a series of disjoints between the rhetorical promise of a communicative rationality and its use in practice that reflect the central paradox of the inconsistency between the modernist foundations of communicative planning and its postmodern expression (Sandercock, 1998b, Albrechts, 2003a).

Conceptually, the perspectives of a range of major philosophers suggest that the notion of inclusive consensus and appeal to objectivity that is central to Habermas' diktat is problematic, questioning the value of communicative planning as a normative ideal. In the intensely political practice of collective decision-making for urban development, two issues stand out:

- The first issue is Habermas' extreme level of abstraction. Nietzsche warns that highly abstract constructs of language and reason create a distorted view of reality (Nietzsche, 1888) while a Foucauldian understanding of all modalities of interaction as historically contingent reveals communicative rationality as an improbable idealization that assumes benign human nature and remains ignorant of relations of power (Foucault, 1991, Flyvbjerg, 1998a).

- Second, Lacan's distinction between reality and the Real demonstrates that no discourse can be fully inclusive, as it requires an "other" of excluded parties (Hillier, 2003) that falsifies any claim to consensus. Attempts to realize consensus may mask the imposition of an ideal as a totalising instrument of discipline (Baudrillard, 1988, Huxley, 2000). Even interchanges based on shared meaning and a commitment to understanding need not have any potential for consensus (Alexander, 2001, Fischler, 2000), while the conditions of inequality endemic to collective urban concerns may warrant conflict via strategic action as a productive force for change (Huxley, 2000). Theories of agonism develop this concept convincingly (Pløger, 2004, Mouffe, 2005).

There is little empirical evidence that the discursive claims can be realised. Research grounded in the specific analysis of urban conditions rarely observes the desirable performance characteristics ascribed to networks (Leitner, 2002). Actually existing networks depart substantially from their discursive representation to exhibit tendencies toward hierarchy, inequality and exclusion. Descriptions of the context and form of collaboration that are put forward as communicative planning in practice are often narrowly inferential interpretations of specific projects that admit of few other contributing factors and are conscribed by time, captured at a favourable point that may not be stable or representative (Fagotto and Fung, 2006, Dean, 2009). The circumstances under which powerful actors might relinquish the dominant positions that secure their aims in favour of ceding to consensus remain deeply opaque, and the notion that actors will be persuaded by an undefined and relativistic "better argument" seems untenable in a society where the use of strategic and instrumental rationalities are central forms of action (Pusey, Huxley, 2000, Alexander, 2001, Phelps and Tewdwr-Jones, 2000).

The allure of network governance and communicative planning is compromised. Although modes of network governance have sought to appropriate the concept of deliberative democracy, contrary to the central positioning of democratic practice in the rhetoric of a neoliberal political economy, governance appears relatively undemocratic (Cohen, 2002, Melo and Baiocchi, 2006). Networks provide a forum for resourceful market and civil society actors to question the validity of state input into collective decisions, offering conditions of reduced transparency and accountability where they can direct their skills and knowledge to advance private interests (Fagotto and Fung, 2006). This subverts representative democracy (Fischler, 2000) and can entrench socioeconomic inequality as political inequality because it makes public involvement more dependent on knowledge, skills and resources (Albrechts, 2003b).

Neoliberalism uses governance networks to direct social action toward the realisation of a market-driven agenda (Scott, 2000, Gleeson and Low, 2000). Whether co-opted as naive idealists unversed in realpolitik or active handmaidens of neoliberalism, proponents of network governance paradoxically expand the potential for non-communicative rationalities to flourish. A less sanguine analysis of collective urban decision-making would seek to identify structural forces driving development outcomes, perhaps the internal strength of powerful actors in the political economy, or the external influence of globalisation on any given city (Peck and Tickell, 2002). The expression of a hegemonic political economy in communicative planning suggests a normative planning practice that welcomes and enables community engagement, yet the accommodating milieu of networked governance support a laissez-faire process that rejects representative authority in favour of a false inclusiveness, bolstered by a shallow appeal to democratic values. This perversely conceals support for a neoliberal ideology amidst a rhetoric of civil society inclusion, allowing networks to function as a Trojan horse from which market and civil society elites can better assert their interests.

At the metropolitan scale which is the focus of this research, urban regimes more closely resemble actually existing networks than the idealistic networks promoted by proponents of communicative planning. The realpolitik of urban regimes is far more evident than the chimera of communicative planning in the closed, opaque structure of many observed networks: dominated by unelected officials, professionals and market interests, with limited input from civil society or even the local state. While the democratic credentials observed within actually existing forums of collective decision-making such as regimes may be little different from communicative planning, the form of manipulation is merely hidden rather than brazenly flaunted.

2.4 Democracy, power and the pursuit of the ‘good city’

The superior democratic credentials of strategic spatial planning are also suggested by a consideration of democratic concepts. Whether in the guise of abstract philosophical concepts or as concrete systems of sociopolitical organisation, power and democracy have proven to be inexhaustible themes in the study of human society and are central concerns in any sophisticated understanding of the political economy of urban governance.

Dahl (2000) suggests that the desirability of legitimate, accountable and transparent collective decision-making is unquestioned in pluralist democracies in the postmodern era. These democratic states recognize that citizens have the right to influence matters affecting their interests and use various systems of democracy in an attempt to rearrange the distribution and exercise of power. An ideal democratic system is too demanding for full realization, but all democratic systems include enforceable rights and the choice (but not the obligation) to participate in political life (Dahl, 2000).

The gap between rhetorical (communicative planning) and observed (urban regimes) forms of democracy under network governance shows a struggle to achieve inclusiveness and effective representation in their procedures, transparency in government interactions, argued deliberation of issues and options in collective decision-making and accountability of the state and its agents (Albrechts, 2003a, Dahl, 1982). The popular concept of democracy is at best amorphous (Dahl, 2000), so powerful actors can appropriate the concept of democracy and strip it of concrete meaning to create a cipher that they can load with rhetorical appeal: the promise of personal empowerment within a redemptive wrapping of collective concern.

The democratic flaws of urban-scale network governance are reinforced through an examination of power relationships in collective decision-making. The form of democracy is influenced by the distribution and exercise of power in the political economy. Power variously structures actor participation, drives a public agenda and determines processes of deliberation within the apparatus of governance, potentially leading to a significant divergence from democratic ideals. Power is a complex and concrete set of relations both set within and reinforcing the unequal social, cultural, economic and political reality of collective action (Albrechts, 2003a). Planning theory and practice demonstrate that the social distribution of power drives collective decision-making in an institutional context (Forester, 1989, Flyvbjerg, 1998b).

The study of power is often grounded in intense observation of specific spatiotemporal contexts, where its varied mechanisms are manifested through institutional and agency relationships. Appreciating the form of power is essential to investigating its use, but the face of power in networks is not always visible (Foucault, 1991, Stone, 1980, Alexander, 2001). Network governance advertises a social production model of power, or "power to", but many forms of indirect power forgo the coercive power of hierarchical government. The partnerships formed in regimes and other forms of network governance typically recreate existing relations of power by constituting and legitimating participants as powerful, perpetuating the position of the disempowered. A subtle, pre-emptive form of power allows networks to occupy a strategic position that can alter the terms of interaction to achieve 'non-decisions' (Agranoff, 2001, Stone, 2006, Flyvbjerg, 1998b, Stone, 1988). This indirect power can provide sustained support for preferred issues on the public agenda (Stone, 1988). Similarly, situational power reinforces and perpetuates existing advantaged positions (Stone, 1980) by controlling who has access to decision-making, which options are considered and how they are promoted (Stone, 1980).

The power arrangements in representative democracy may be more transparent and direct. The original form of democracy engaged all adult male citizens directly in the affairs of state, but since direct democracy palpably cannot be scaled to large populations and territories for the everyday workings of government, forms of indirect democracy developed and one such form, representative democracy, has become the norm in pluralist liberal societies. States operating as representative democracies are typically divided into spatially nested territories, within each of which individuals elect representatives who they believe best reflect their values and interests and have the appropriate skills to responsibly make collective decisions.

2.5 The improved democratic credentials of metropolitan spatial policy

Having identified the democratic shortcomings of both communicative planning and urban regime forms of urban governance, discussion returns to re-examine the credentials of contemporary metropolitan spatial planning. The pre-eminent guide to the pursuit of the 'good city' in pluralist societies remains metropolitan-scale spatial planning (CEMAT, 1983), although a common contemporary view of spatial metropolitan planning sees it as an undemocratic relic of modernist technocratic government. This section reviews the democratic legitimacy of spatial planning policy to show that the substantive visions of spatial plans do actually express democratically sourced collective decisions to guide urban development.

The evolution of metropolitan plans from their modernist origins shows the positive influence of communicative planning. Plans have progressed beyond a narrow technical determinism to become documents of broad social vision that understand urban areas as integrated systems and promote urban sustainability via consolidation (Gleeson, 2011). Cities are now commonly understood as part of the socio-economic fabric, and metropolitan spatial plans that recognise the causes of the urban problem are a necessary intervention and an active force in enabling change to resolve significant urban problems (Hastings, 2000, Albrechts, 1992, Healey, 1997).

The formulation of metropolitan plans now typically incorporates substantial consultation that recognizes and attempts to accommodate the interests and values of diverse individuals and communities (Owens, 1997). These improved processes and holistic strategies seem poorly recognized by many of the diverse market and civil society voices prominent in network governance. No matter the provenance or quality of a plan, some academics appear to hold an ideological antipathy toward them, variously dismissing them as malign, authoritarian, or relics of a command and control state (Healey, 1999). Healey claims society "should be trying to escape" modernist conceptions of planning, but assessment of the utility and legitimacy of a planning strategy should not hinge on whether it displays fashionable sensibilities in its formulation. Other voices raise concerns about the lack of clarity, level of input and poor implementation support (Moodie et al., 2008). Even when these improvements are recognised, the wider field of concern, increased sophistication and breadth of input in contemporary metropolitan plans brings a focus on the collective good and raises two critical problems: it challenges the entrenched interests of many private actors and results in far greater political complexity (Adams, 2011).

While metropolitan plans have become a core vehicle for reflecting on what cities are and shaping what they could be (Healey, 1999), neoliberalism has sought to sideline their substantive vision from influencing urban decision-making and implementation, via its favoured approaches of communicative planning rhetoric and urban regime reality. For example, the uncritical valorization of multiple individual perspectives in network governance fosters a situation where the urban visions presented in metropolitan plans have become vague and generic. This may limit dissent at a conceptual level, but ambiguous visions suffer a variety of problems in attempts at operationalisation, not least of which is that the lack of certainty advantages powerful actors with the ability to influence decisions. Because the implementation of substantive urban objectives requires an apparatus of governance that embraces a legitimate process of public participation, enjoys political commitment from all levels of government and benefits from strong regulatory support (Moloney, 2004), even isolated dissent from vocal vested interests can be crippling.

A focus on the perceived failings of metropolitan blueprints rather than their strengths as legitimate policy documents undermines the concept of spatial planning. Instead of generating greater commitment to effective implementation processes, dissatisfaction with substantive visions becomes a *casus belli* for jettisoning state policy in favour of undirected, unrepresentative and unaccountable governance practices. Decision-making that sidelines spatial policy effectively cedes power to private interests and disenfranchises the majority represented by the state. These concerns are more a demonstration of the inadequacies of postmodern network governance than an issue with modernist comprehensive planning, for after all, in their new focus on vision, recognition of diverse interests, and lack of substantive stipulation, contemporary metropolitan plans simply reflect the communicative zeitgeist.

3 Conclusions

In pluralist societies, the search for the conundrum of the ‘good city’ is typically conducted through some form of democratic process that attempts to ameliorate unbalanced power relationships, leading to a continual struggle to achieve collective goals while respecting individual values. The shifting nature of the political economy has influenced the mode and quality of urban governance, slowly diminishing the relative power of the state *vis a vis* the market.

Following Harvey (2005, 1989b), this situation animates the idea of a hegemonic neoliberal political economy that exerts direct and indirect power over the apparatus and practice of urban governance to validate networked approaches. The distribution and deployment of power in the political economy promotes collective decision-making that is based on networking between coalitions to mobilise, build alliances and reach political consensus, rather than a deep understanding of the content, scope and impact of urban strategies from a planning perspective (Albrechts, 2003b).

Network modes of urban governance have two distinct strands: the discursive ideal of communicative planning, and the more easily observable urban regime. The turn to communicative planning in Melbourne has been detrimental to the delivery of democratic state policy at the urban scale. The disjoint between the discursive claims and practical observation of communicative planning is disconcerting, raising the possibility that it may simply be a Trojan horse for elite interests. While communicative planning is based on an idealistic perspective of collective decision-making, urban regime theory provides a realpolitik view of actually existing networks that recognises the turn to network governance but engages with rather than glosses over power imbalances in the lucrative business of urban development.

Network governance has inferior democratic credentials when compared to established approaches of metropolitan spatial planning. The neoliberal values that are institutionalised in the apparatus of urban governance in Melbourne are in clear tension with the values underpinning support for sustainability that feature in the city's metropolitan spatial planning. This assessment reveals a lack of coherence between the mode of urban governance and the democratic policies it ostensibly aims to deliver. Descriptive interpretations of perceived urban planning 'failure' often deterministically isolate the cause to particular imperfections, say, of rigid institutional structure or limited community engagement. Critical analysis of the structural drivers in the political economy that have promoted the validation of network governance during the era of neoliberal ascendancy invites the interpretation that such 'failure' is a desirable feature of urban planning carefully managed by architects of the system.

Rapid growth is expected to continue in Melbourne, which is consistently rated one of the world's most liveable cities, but the longer that spatial planning policy is left as political rhetoric rather than implemented across the urban area, the less likely that the city's future will offer the amenity enjoyed by today's residents as social, economic and environmental sustainability continues to decline.

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RISK CULTURE REGARDING BUILT ENVIRONMENT IN LARGE-SCALE DEVELOPMENT: THE SHANGHAI CASE

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Abstract

The culture of built environment is gradually formed during the urban development. The most important part of the culture is cognitive and memories that people sense the city and that is the value of historic area and protection. However, China now is experiencing rapid development and changes since China's reform and opening up in 1978.With the speeding up of industrialization as well as rapid expansion of urban area, the built environment is totally different from the city used to be and all the cognitive and memories about the city are facing the danger of extinction. And what China is going through these years can reflect directly the contradiction of the protection and development. Therefore, shanghai is a good case to study a system of culture risk.

The report explains the culture risk from risk identification, assessment, warning, and the management. In addition, culture risk evaluation system with certain risk factors is established. And this system can assess the culture risk of the built environment from different angles and levels. Furthermore, management measures based on the evaluation before are also proposed and provide some reference for the decision makers.

There are five parts in the paper. The first part is to give the background and significance of the research, and define the major concepts. The second part focuses on culture risk identification, which includes figuring out potential risks and their characters and origins, and also predicting the possible consequence. The third part is culture risk assessment, which is the most important part of the paper. In it, several

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elements influencing culture of physical space are raised, each is divided into a couple of indicators; a system of multi-level assessment is built up. The fourth section is warning and management of culture risk. It will look into the subjects of management and suggest proper solutions. The last part is case study, in which Fuxing Wharf Area will be taken as the example to access culture risk.

Key words: culture risk; risk evaluation; risk management

1. Research Background and Significance

The urban culture of built environment is the accumulation of history. While it's not so simple to be equaled to history which can be recorded, it's a concept based on both time and space, which is changing all the time. The events happened earlier can be so vague for us because of our absence under that time and space. Luckily there is a path for us to get closer to the earlier culture and daily life—the physical space. In certain physical space, it's possible for us to sense how people behaved in it and how they looked upon the environment. Usually we get the information from the texture, color, and all the other the characters of the physical space.

Today's China has been experiencing rapid development and tremendous changes since the Reform and Opening-up in 1978. As one consequence, thousands of valuable historic buildings and blocks are destroyed. Together with the disappearance of the physical space which carries human memories, our city is losing their characters, and we are losing our culture. As we can see today, more and more cities in different continents are changing towards a certain standard city form which is occupied with high buildings.

1.1 Theory Introduction

In different kinds of research and reports, there are a lot of study about cultural conflicts and cultural alienation. While cultural risk, especially in urban development, is rarely mentioned.

As represented by Rush and Douglas, culture risk commentators propose The Cultural Theory of Risk. They hold the opinion that it is meaningless to merely focus on society structure of culture. There are various kinds of risk culture existing in society: political risk, economic risk and natural risk. It is those three kinds of risk culture that causes the disordered and unorganized society structure. However, the culture risk brought by large-scale development is not included in their theory.

In China, the study about culture risk in large-scale development is exactly being started recently. The studies mainly focus on the fields of enterprise culture risk and

transnational business culture risk. When referring to risk study in urban development, researches are mainly about economic risk and ecological risk. As culture risk study is barely started in China, it's necessary to learn from those mature theories and techniques.

1.2 Concept Definition

According to the work of Prof. Xia Nankai (2007), the large-scale urban development project is defined as the project that is led by government and constructed in a large and contiguous area, no matter located in new urban areas or old districts. Unlike projects led by economic benefits, large-scale urban development projects with various and complex functions play an important role in urban development strategy.

In this paper, the object faced with culture risk in large-scale urban development is limited to physical space, including space form, scale, texture, style and color etc.

1.3 Causes of Culture Risk

1.3.1 Economic Aspect

1) Economic Development

Economic development brings new culture and new lifestyle which risks former culture.

2) Function Promotion

When the function of the land is promoted or changed into a great extent, it is likely that the historical buildings are facing higher risk of being knocked down.

3) Infrastructure Construction

Infrastructure construction plays an important role in urban development. It is possible that a historical culture can be damaged by the constructing of a subway line or a street.

1.3.2 Political Aspect

To a certain extent, the culture risk is caused by the leaders' disregarding of the historical and cultural heritage conservation.

1.3.3 Technical Aspect

New architecture technology and materials:

The application of new architecture technology is the symbol of the new architecture culture, meeting the requirements of modern city. Historical and cultural heritage with traditional technology and material is impacted in the process of new architecture material's application.

1.3.4 Social Aspect

Culture is a concept which is changing and developing all the times. When certain form of culture fits in the development of modern society, it faces smaller risk of being destroyed relatively. On the contrary, the risk may be much higher.

2 Identification of Culture Risk

Risk identification is the first and the fundamental step of the progress of risk management. Risk managers can never handle the possible culture risk in project development without a correct identification of the risk. There are 3 aspects to identify.

2.1 Identify Potential Risk and Its Characteristics in a Project

In risk identification, figuring out what kinds of risks we are facing is the first step, and the analysis of their nature and influence follows. It is necessary to analyze the factors influence project development as completely as possible and make a list of these possible risks.

2.2 Identify Principal Risk Source

The origins of culture risks vary in different projects. They are relevant to the appearance and developing pattern of the risk. With the understanding of risk developing pattern, we are able to measure the possibility and influence of the risk. Furthermore, the handling and management of the problems can be easier.

2.3 Predict Possible Impacts of Culture Risk

The final purpose of risk identification is minimizing or even eliminating the adverse effects of project risk. After the identification of risks and their origins, predicting the possible adverse effects is necessary.

3 Evaluation of Culture Risk

3.1 Selection of Culture Risk Indicators

3.1.1 Single Indicator

Speaking of the culture risk in urban built environment, the index factors are closely associated with the impacts on physical space from the large-scale development. There are seven aspects which seem to be impacted most directly. They are city texture, city environment, city scale, architecture style, city color, landmark and city sculpture (Table 3-1-1).

Table 3-1-1 The Assessment of Culture Risk Indicators

Elements of assessment	Brief index factor of assessment	Specific index factor of assessment	Assessment method
City texture	The space pattern of buildings The gridding and framework of streets system The segmentation and demarcation of blocks	The building arrangement pattern (enclosed pattern, line-and-row pattern, free pattern) How the planned street network influence the characteristic of original street network How the planned street network connects the original street network Comparison of original street network density and project street network density The gridding and framework of the street system The patterns of streets The scale of block	Expert scoring method Fuzzy comprehensive evaluation method AHP method
City environment	Axis design Sight corridor Major building interface	Axis pattern in the region Sight corridor Changes of building interface	Questionnaire investigation method AHP method

	Skyline	Changes of skyline	
City scale	Building volume Building height Street scale Block scale	The volume of new built buildings and preserved architecture The volume of new built buildings and neighboring buildings W/H (width/height) of the street The height of new built buildings and the originals The impact of building height on the preserved architecture The scale of the block	Index factor assessment method Expert scoring method AHP method
Architecture style	Pattern of the architecture plan Pattern of the architecture façade Architecture material Architecture style Pattern composition	Pattern of the architecture plan Pattern of the architecture façade New material and the original The degree of style unification Architecture symbol Art and technic of architecture treatment	Index factor assessment method AHP method
Architecture color	Major color of block Color coordination Color unification	How the characteristic color of historic block is preserved Characteristic architecture color The unification degree of new built color and the original The degree of association between architecture color and local building material	Index factor assessment method Weighted method
Landmark	Characteristic	To what degree is the	Expert scoring

	architecture	characteristic architecture preserved and made use of New landmark's impact on original block	method AHP method
Sculpture	Characteristic sculpture	To what degree is the characteristic sculpture reserved Neighboring space design of the characteristic sculpture Changes of new sculpture style	Expert scoring method AHP method
…	…		

3.1.2 Comprehensive Indicator

In the process of culture risk assessment of urban built environment, a comprehensive indicator is required. The indicator is brought out in following three steps:

1) Choose the indicators which reflect the characteristic of the physical space in the region.

2) Give each indicator its value according to its weight in all the factors.

3) Analyze the risk of each indicator with mathematic method and add up all the risks

3.2 Assessment System

There are two main parts in this assessment system.

3.2.1 Identification of Regional Culture Valuation_

Identification of the regional culture value is the first step to do in the process of identifying the culture risk. Determine the level of culture value (Table 3-2-1). Large-scale development brings larger culture risk to the region which has higher culture value. The determination can be finished by expert scoring method, or the existing result brought out by statutory planning.

Table 3-2-1 Assessment of culture value in region

The description of culture value	The characteristic of culture value	the level of culture value (color block)	The numerical value of culture

degree			value
Extremely low	Almost no culture		[0，0.2)
low	With a small amount of culture resource		[0.2，0.8)
general	With noteworthy culture resource		[0.8，1.2)
high	With culture resource to be preserved		[1.2，1.6)
Extremely high	With extremely rare culture resource		[1.6，2.0]

3.2.2 Assessment of Culture Risk Indicator

1) Select Indicators

The culture of urban physical space is accumulated along with the history of the space. The selection of index factors varies according to different regions with different functions and characteristics. In order to reflect the culture risk directly, the selection focus on the connection between factors and physical space characteristic. The index factors which have more direct connections with space characteristic should be selected.

2) Evaluate Indicators

An indicator weighs differently in different regions. For a given region, the weights of every selected indicator should be determined. Experts are invited to compare the importance of two factors in each pair. The factors are selected from table 3-1-1. The weights of factors are calculated with AHP method. Use number 1-9 to mark different levels of importance beyond the other factor (Table 3-2-2).

Table 3-2-2 The degree of relative importance for certain two indicators in culture risk influence

The degree of relative importance A compared to B	1-9
Extremely important	9
Much important	7
Relatively important	5
Slightly important	3
As much important	1

3) Define Indicators

Considering the impact on each indicator from large-scale city development, we divide the risk into 5 levels. They are healthy, okay, alert, dangerous and extremely dangerous (Table 3-2-3). There is barely risk when the status is healthy. When it is okay, the risk appears, while still under control. Status “alert” means attention from planning and developing agent is needed. Something should be done to avoid the risk. In the next status “dangerous”, it is necessary to make a thorough strategy and handle the risks. When the top status “extremely dangerous” is reached, the culture risks are possible to lose control at any time, destroying culture resource of the region. Risk control is vital.

Table 3-2-3 Levels of culture risk

Description of risk	Status of risk	Level of risk (color block)	Numerical value of culture risk
healthy	Barely risk		[0，0.2)
okay	Risk within limits		[0.2，0.4)
alert	Risk noteworthy		[0.4，0.6)
dangerous	Serious risk		[0.6，0.9)
Extremely dangerous	Risk anytime to lose control		[0.9，1.0]

3.2.3 Comprehensive Risk Assessment

Analyze the relationship between different single risks, forming the comprehensive risk assessment. First, determine the numerical values of each risk indicator with the expert scoring method, AHP method and questionnaire investigation method. Considering different factors in different regions, calculate the weight of each factor. Combine both the numerical value and the weight to figure out the factor risk (Table 3-2-4). Secondly, perform matrix analysis with factor risk and culture value in certain region to finally get the comprehensive culture risk (Table 3-2-5).

Table 3-2-4 Matrix analysis of different risk factor weight

		The level of culture risk				
		Healthy [0，0.2)	Okay [0.2，0.8)	Alert [0.8，1.2)	Dangerous [1.2，1.6)	extremely dangerous [1.6，2.0]
The relative	As much important					
	Slightly					

importance of two factors	important					
	Relatively important					
	Much important					
	Extremely important					

Table 3-2-5 Matrix analysis of comprehensive risk assessment

		The level of culture risk				
		Healthy [0，0.2)	Okay [0.2，0.8)	Alert [0.8，1.2)	Dangerous [1.2，1.6)	Extremely dangerous [1.6，2.0]
Degree of culture value	Extremely low [0，0.2)					
	Low [0.2，0.8)					
	General [0.8，1.2)					
	High [1.2，1.6)					
	Extremely high [1.6，2.0]					

4 Warning and Management of Culture Risk

4.1 Warning System of Culture Risk

The warning system is to predict the culture risks possibly happen. The fundamental of prediction is information collecting and risk monitoring. We perform data analysis and carry out the risk identification, risk assessment. The goal of the system is to prevent the risk from eruption, to minimize the adverse effect on regional culture.

The base of culture risk warning is culture risk assessment, which can be used to develop the standard of warning. Divide the warning interval into 5 situations according to the index of culture risk. Each situation is represented by a single color. Blue represents healthy situation, not necessity for warning. Green represents okay, slight warning is needed. The third is alert situation represented by yellow. When the

culture risk is higher, orange warning is sent out to alert the subject of development. The most serious situation is red warning with extremely high risk of damaging and destroying culture resource. Warning should be send out immediately to avoid the adverse effects. The assessment table is listed below (Table 4-1-1).

Table 4-1-1 Matrix of comprehensive culture risk assessment

Warning intervals	Risk situation	Level of risk (color block)
blue	Culture environment is not disturbed or destroyed. Structure of the culture system is complete. System function of recovering and regeneration is powerful. There is hardly problem in culture resource.	
green	Culture environment is slightly damaged. Structure of the culture system is comparatively complete. System function of recovering and regeneration is good. There is hardly problem in culture resource.	
yellow	Culture environment is damaged to some extent. Structure of the culture system is influenced. System function of recovering and regeneration is weak. The culture problem appears.	
orange	Both culture environment and structure of the culture system are damaged. Function of the system is weaker, difficult to recover from outside interference.	

	Culture problem is serious.	
red	Both culture environment and structure of the culture system are destroyed. System function lost, much difficult to recover from outside interference. Culture problem is more serious.	

4.2 Management System of Culture Risk

4.2.1 Subject of Culture Risk Management

There are four management subjects divided according to the roles they play in the process of management: manager, developer, designer and implementer. Government is the most important and powerful subject.

The management organization is made up by the government and social agent. Government (especially department of cultural affairs and research center in university) has the responsibility of increasing culture risk awareness. On the other hand, social communities such as cultural city center are more flexible to fill in the gap in which government can't reach. They may perform well in the fields of risk identification, monitoring and warning.

4.2.2 Solutions of Culture Risk Management

Before the very beginning of the building, it's necessary to publicize the warning planning, supervise the illegal buildings, collect feedback from the public and evaluation from experts. When the development begins, introduce various solutions according to the situation and warning level of the culture risk (Table 4-2-1).

Table 4-2-1 Solutions suggested according to different risk levels

Warning level	No warning	Slight warning	Medium warning	Serious warning	Special warning
Warning color	blue	green	yellow	orange	red
Status of risk	healthy	okay	alert	dangerous	Extremely dangerous

Measures	Supervise the process of development.	Take measures to limit and avoid the risk	Avoid the risk and keep the risk from being more serious.	Figure out solutions together with relative department.	Organize urgent management group to preserve specifically on the physical space.

5 Case Study

Research on culture risk of a region includes risk identification, assessment, warning and management. Among all the aspects, assessment system is the core part, on which we will put especially emphasis in the case study.

5.1 Case Selection

5.1.1 Case Introduction

The case of Fuxing Wharf Area[4] is located in a community named Dongjiadu of Huangpu district, Shanghai. The area's boundaries are Baidu road to the north, Dongjiadu road to the south, south Zhongshan road to the west, while Huangpu River lies in the east of (Figure 5-1-1). The total land use area is 16.40ha, while the plus area of all the blocks is 12.89ha. Existing construction area is 199,100m^2. The length of the bund along Huangpu River is 950m.

[4] Shanghai Tongji Urban Planning & Design Institute received the invitation of Shanghai Huangpu River developing bureau in 2007 to finish 《 Conservation-oriented development planning of Fuxing Wharf Region》. The author investigated the developing progress on-site. He found the planning was carried out exactly as its original intention, only slowly in speed. The case is considered to be fit for the following risk assessment.

Figure 5-1-1 Location of Fuxing Wharf

5.1.2 Reasons for Choosing Fuxing Wharf

The area locates in the riverside area outside the old town of Shanghai. This area used to be a typical wharf area of Shanghai. The land use was a mixture of traditional Chinese business, trade, physical distribution and residence. The region was characterized by little-scale blocks and high building density. The unique culture of Fuxing Wharf area can be sensed when we get close to the old architecture and space, for example, Waima Road, Wharf Road, riverside warehouse, the Customs and so on.

5.2 Assessment of Culture Risk

5.2.1 Identification of Regional Culture Risk

The area of Fuxing Wharf saw the industrialization progress of Shanghai. The city prospered on the basis of river. The ethnic capitalists gathered here to take advantage of the convenient water transportation. The culture characteristic of the area lies in the following aspects.

1) The warehouse

Eight warehouses are the most featured buildings in the area. Five of them are located on the riverside (Figure 5-2-1), and the other three are separately for medicine, fruit and freezing. The total architecture area is 65,000 m^2.

Figure 5-2-1 The five warehouses along the river

2) The streets

"Competition for the wharf" reflects the importance of wharf in the time of water transportation. The streets lie perpendicular to the river densely (Figure 5-2-2). Streets are named after different industries, families and areas.

Figure 5-2-2 Main streets

3) The neighborhood

Each neighborhood is owned by a certain industry, gang or family. The average area of a neighborhood is less than 1ha. In the neighborhood, business and shops are outside, while residence is located inside. Storage, business dealers and accounts settlement are all carried out in the neighborhood.

In summary, as the most typical wharf site of Shanghai, Fuxing Wharf area has a collection of valuable historical buildings and spaces. We can divide them into 3 elements. First one is the shops which reflect the society network. Second one is the warehouse and yards symbolizing the prosperous water transportation. The third is the neighborhood filled with characterized residential buildings "Linong". With expert scoring method assess the culture value of Fuxing Wharf Area is as follows (Table 5-2-1).

Table 5-2-1 Culture valuation of Fuxing Wharf Area

The description of culture value degree	The characteristic of culture value	The level of culture value (color block)	The numerical value of culture value
high	With culture resource to be preserved		[1.2，1.6)

5.2.2 Assessment of Culture Risk Indicator

1) Select Indicators

Fuxing Wharf Area is multifunctional with shops, warehouses and yards for goods in majority. There is hardly featured color and sculpture. So we remove the color and sculpture elements from the assessment table (Table 5-2-2).

Table 5-2-2 The assessment of indicators of culture risk in Fuxing Wharf Area

Elements of assessment	Brief index factor of assessment	Specific index factor of assessment
City texture	The space pattern of buildings	The building arrangement pattern (enclosed pattern, line-and-row pattern, free pattern)
		How the planned street network influence the characteristic of existing street network
	The gridding and network of streets system	How the planned street network connects the existing street network
		Comparison of existing street network density and project street network density
	The segmentation and demarcation of blocks	The gridding and network of the street system
		The patterns of streets
		The scale of block
City environment	Axis design	Axis pattern in the region
	Sight corridor	Sight corridor
	Major building interface	Changes of building interface
	Skyline	Changes of skyline
City scale	Building volume	The volume of new built buildings and preserved architecture
	Building height	The volume of new built buildings and neighboring buildings
	Street scale	

	Block scale	W/H (width/height) of the street The height of new built buildings and the originals The impact of building height on the preserved architecture The scale of the block
Architecture style	Pattern of the architecture plan Pattern of the architecture façade Architecture material Architecture style Pattern composition	Pattern of the architecture plan Pattern of the architecture façade New material and the original The degree of style unification Architecture symbol Art and technic of architecture treatment
Landmark	Characteristic architecture	To what degree is the characteristic architecture preserved and made use of New landmark's impact on original block

2) Evaluate Indictors

The value of each indicators is different in culture issue. It's necessary to compare the factors and calculate their weights. The 3 valuable culture elements: warehouse, street and neighborhood fit in with the assessment elements of mark and city scale. While the architecture style and city environment are less characteristic. On this analysis, we figure out the weight of each element (Table 5-2-3).

Table 5-2-3 Weight of culture risk element in Fuxing Wharf Area

Index element	Weight
City texture	5
City environment	5
City scale	7
Architecture style	3
Landmark	9

3) Define Indicators

Urban Texture

Figure 5-2-3 original texture the site

Figure 5-2-4 planned texture of the site

Figure 5-2-3 and 5-2-4 show the original and planned texture. By analyizing the index factors of city texture with the methods of experts scoring and AHP , we can get the comprehensive assessment (Table 5-2-4).

The building arrangement pattern: there used to be two types of textures. One is stand-alone texture which is formed by warehouses along the Huangpu River. The other one is enclosed pattern texture formed by residential building, hotels, banks and pawnshops. During the development, we keep the stand-alone texture and reform the original enclosed texture. Regroup each neighborhood to strengthen the enclosed texture. Integrate all the neighborhoods to form an integrated area.

The gridding and network of streets system: keep the streets network with the trend of extending to the river.

The scale of block: keep the original scale of block, divide the block with street network.

Table 5-2-4 Culture risk assessment of city texture

Description of risk	Status of risk	Level of risk (color block)	Numerical value of culture risk
okay	Risk within limitation		[0.2，0.4)

Urban Environment

Consider skyline and major building interface to be the index factors of city environment. By analyzing the two factors with the methods of experts scoring and AHP, we can get the comprehensive assessment (Table 5-2-5).

Table 5-2-5 Culture risk assessment of city environment

Description of risk	Status of risk	Level of risk (color block)	Numerical value of culture risk
okay	Risk within limitation		[0.2，0.4)

Skyline

The original skyline is higher in the middle and lower on the two ends. There are some tall buildings inserted, creating a complex and charming skyline of the area (Figure 5-2-5). While in the planning, we keep the diversity of the skyline, raising the building height in the south. The skyline seems to be higher on the two ends, and lower in the middle (Figure 5-2-6).

Figure 5-2-5 original skyline

Figure 5-2-6 planned skyline

Major building interface

The building interfaces formed by warehouses are the major interfaces in riverside area (Figure 5-2-7). We keep the space pattern and culture elements of the original interfaces, and change the utilization of the warehouses (Figure 5-2-8).

Figure 5-2-7 original riverside interface

Figure 5-2-8 planned riverside interface

Urban Scale

Consider building volume and street scale to be the indicators of city scale. By analyzing the two factors with the methods of experts scoring and AHP , we can get the comprehensive assessment (Figure 5-2-6).

Building volume

Keep the volumes of original warehouses and continue volumes in new buildings.

Street scale

Make a comparison of South Zhongshan Road, Waima Road and Wharf Road. Analyze the value of W/H. For Waima Road and Wharf Road, W/H=1. For South Zhongshan Road, W/H=2. The scale sense of South Zhongshan Road is comparatively weak (Figure 5-2-9).

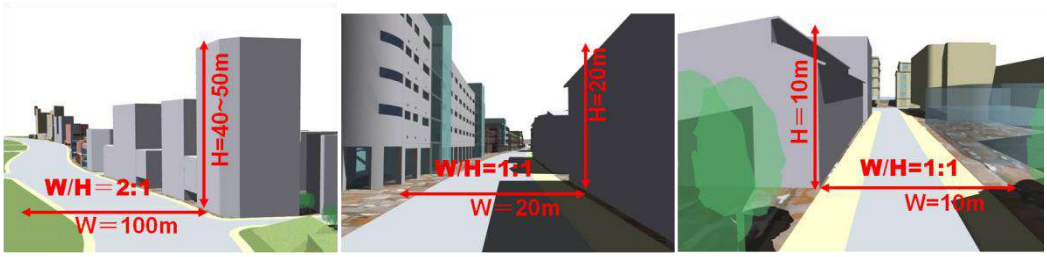

Figure 5-2-9 Street scale of South Zhongshan Road, Waima Road and Wharf Road

Table 5-2-6 Culture risk assessment of city scale

Description of risk	Status of risk	Level of risk (color block)	Numerical value of culture risk
alert	Risk noteworthy		[0.4，0.6)

Architectural Style

Keep original architecture style when renewing the warehouses. However, the modern style of new built hotels, office buildings and shopping malls is so incompatible with the original style (Table 5-2-7).

Table 5-2-7 culture risk assessment of architecture style

Description of risk	Status of risk	Level of risk (color block)	Numerical value of culture risk
alert	Risk noteworthy		[0.4，0.6)

Landmark

Consider characteristic architecture to be the indicator of landmark (Table 5-2-8). The New Wharf Square, the inner court of Jiqingli and a couple of warehouses are preserved. The original and planning are shown in Figure 5-2-10 to Figure 5-2-15.

Table 5-2-8 culture risk assessment of landmark

Description of risk	Status of risk	Level of risk (color block)	Numerical value of culture risk
healthy	Barely risk		[0，0.2)

Figure 5-2-10 Existing 4#5# warehouse and the transformation

Figure 5-2-11 Existing 1# warehouse and the transformation

Figure 5-2-12 Existing 2# warehouse and the transformation

Figure 5-2-13 Surrounding of 1# warehouse and the transformation

Figure 5-2-14 Inner court of Jiqingli and the transformation

Figure 5-2-15 Existing space between 3# and 4# warehouse and the transformation

4) Comprehensive Risk Assessment

Integrate the factor weight and level of culture risk to figure out the risk of each element with the method of expert scoring (Table 5-2-9).

Table 5-2-9 Culture risk level of each culture risk element

		The level of culture risk				
		Healthy [0，0.2)	Okay [0.2，0.8)	Alert [0.8 ，1.2)	Dangerous [1.2，1.6)	Extremely dangerous [1.6，2.0]
Index element	City texture					
	City environment					
	City scale					
	Architecture style					
	landmark					

Culture risk which the index elements are facing is low. Element levels are not necessary to be adjusted in the condition of high culture value. After integrating the risk level of 5 elements, we get the final comprehensive culture risk assessment. In a word, culture risk level of the case is okay.

6 Conclusions

As is known culture valuation of physical space is one of the most important parts of urban culture, since it carries all the memory and reflects culture context. This paper tries to construct a systematic analytical method applying to large-scale development of a city. This system is integrated by culture risk identification, assessment, warning and management, in which, culture risk assessment is mostly emphasized because of its key function in this system. With this analytical method we are able to minimize the risk with which we may face in the progress of city development. In this paper, management strategies are also recommended to provide a risk solution for the city planner.

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THE ANALYSIS OF URBAN SPATIAL DEVELOPMENT UNDER THE INFLUENCE FROM LAND POLICY: SHANGHAI CASE

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Abstract

China has started its reform of land market from planned distribution to market distribution by changing its land policy in 1988, at the time point of the first auction of usage right of one land in Shenzhen, in order to increase the efficiency of land distribution. In the early stage of economy development, land policy maximized the economic benefits and utilized the structure of urban space. However, with the speeding up of industrialization as well as rapid expansion of urban area, such reform led to the chaos on land market, which affected negatively on the efficiency of land distribution through market and utilization of functional planning on urban space.

The report aims to explain how the land policy influent the urban space by comparing difference between the policy and spatial development. And it also will explain the mechanism between the development of urban space structure and influence from the change of land policy, by studying the case of Shanghai, with applying the analytical methods from urban geography, urban economy and new institutional economy.

There are three main sections in this report. First section will apply the statistics method to analysis the influence of land policy on land market under different application subjects of land policy. Three aspects will be considered in this section: policy target, regulation subject, control measures. Furthermore, the second section will use the statistic method to analysis the quantitative change on the development of urban space structure of Shanghai with time series under the influence of land policy. The change of the urban space mainly reflects in urban form (increasing land for construction), land fragment and construction intensity (FAR). Finally, the third part will indicate applicable suggestion to the further land policy constitution based on previous analysis.

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Key Words: Land Policy; Spatial Development; Reform

1. Introduction:

In the past 50 years, cities in China were going through a fierce transformation of land market system and reconstruction of urban space. Sticking to the state ownership of urban land and collective ownership of the rural land, land policy was experiencing a great turning in either acquisition way or basic rights. Especially after 1988 Shenzhen-a city in the south of China-succeed granting the land via auction way marked that the land granting mechanisms in China transiting from administrative distribution to market distribution. Therefore in a long term, the land supply of China is on the double track. One is administrative way to grant state-owned land to certain users, especially for the municipal infrastructure. And another is market way to grant land by bids, auction or listing.

In the early reform, the imperfection of land market system and localization of financial management leaded to a series of different kinds of violations such as keeping land unused, property hoarding, and price rigging. And it also results in chaos of the construction land expansion and irrational structure of land use. System of tax distribution in 1994 especially made more significant influence in land use. The total revenue of local finance decreased from 78% in 1993 to 47.7% while the income of the real estate and construction all belonged to the local government, which further promoted local government to increase their fiscal revenue via selling construction land (Jiang Xingsan, 2010). And all these behavior dramatically changed the urban spatial structure. Take Beijing-the capital of China-as an example. The urban land area was doubled during only 7 years (1985-1992). And so it was in Guangzhou-another city in China, which expanded from 182.3 km^2 in 1990 to 376 km^2 in 2002. Meanwhile real estate began to blossom in the late of 1990s. The aggregate area of commercial residential building was up to 1,200,000 m^2 in 1996 from the 500,000 m^2 in 1992 (Ding Chengri, 2006). That meant the average annual growth rate is 25%, which was a surprise speed to the world.

As the market being perfected by varieties of land policies, effective land protection policies began to play a more and more important role in controlling expansion and disorder of the urban space (Huang Jinxian, 2009). Land scale, development intensity and land fragment were all influenced and adjusted by these land policies. Especially after 2000 when primary and secondary land market were basically formed and land policies gradually became perfect, those policies promoted the spread of urban space as well as inhibit the de-normalize development of urban space.

This paper is based on the relevant land policy published by national government during 1980-2010 and micro data of Shanghai's land market during 1995-2010.

Statistical method is used to analysis the evolution of the land policy and its influences to the urban space (including construction quantity, development intensity and city fragmentation) and help people understand the interaction between policy and space.

2. Analysis of land policy

The reformation of the land policy was actually started from 1980s in China. The national government of China published 93 land policies from 1980 to 2010. In these policies, 69 policies are directly bound up with the urban land, Accounting for 74% of the total policies. The annual number of land policies published by government increased every year. View from the control objects, in 1980s, the land policy controlled the urban land use only via controlling the construction land itself. However, in 2000s the objects of the regulation are not only the construction area but also the non-constructive ones, which both influent the structure of urban space. As an important capital element, land gradually was becoming more and more vital in the urban development. The influences of land policy to the development were also increasingly obvious.

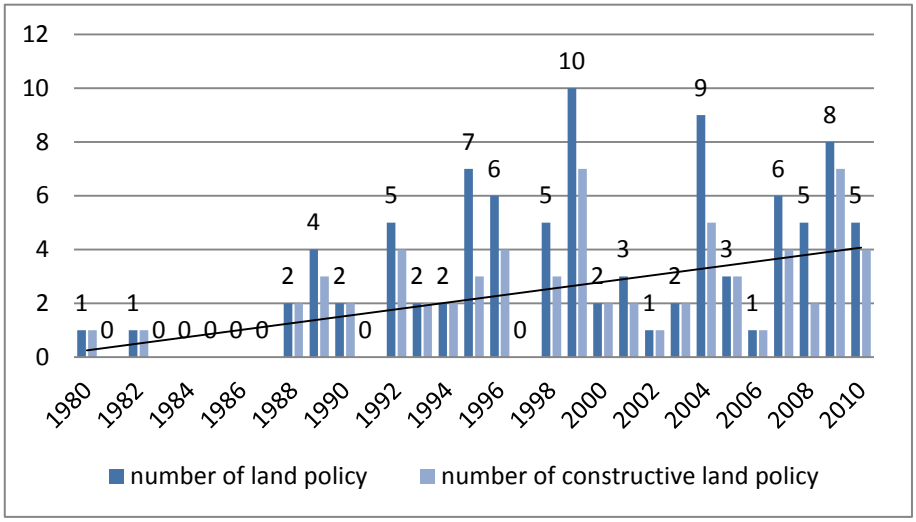

Figure 1. land policy distribution scheme (1980-2010)

According to the content of management, all the land policies can be decided into following types: planning policy, land use policy, price policy, land supply policy, cultivated land protection policy, tax policy, ownership policy, enforcement policy and cadastral management policy. In the early 1990s, tax policy and land supply policy are the main body of the published policies. And After entering the new century, companying with the maturity of the whole land market, the content of land policy became diversified. The regulation of Land use and minimum price policy, as

well as cultivated land protection were becoming an indispensable part of whole policy system, which help to regulate the land market and promote to form a rational land use structure.

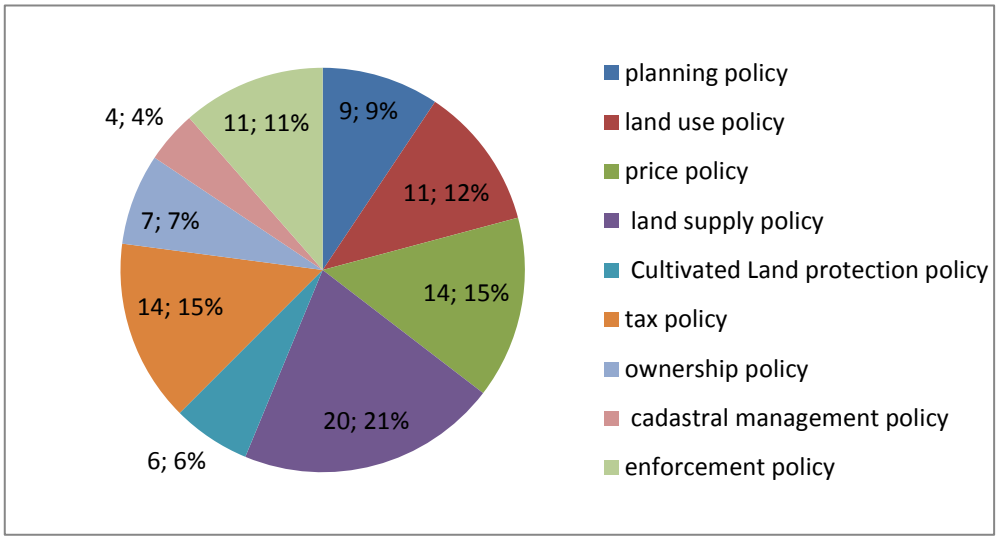

Figure 2.share of different manage content in the policy system(1980-2010)

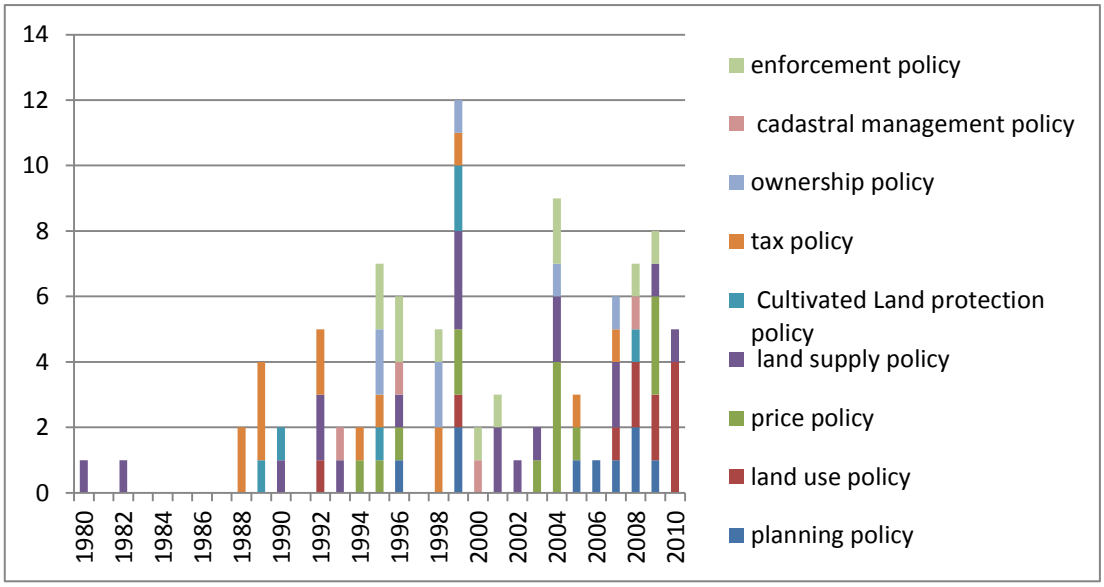

Figure 3. policy distribution scheme of different manage content each year(1980-2010)

According to the analysis of controlling object and management content ,the transiton period can be divided into three phases and they are as follows:

1)1980-1990: Transformation Period For Exploration

The transition of land policy from administrative distribution to the market

distribution in China began in 1980s. İn this period, land supply policy and tax policy were the main body of all the policies granted by national government. These policy framed the most basic of land market operation rules. At first, the land royalities were paid in the form of site fee which only collected from Foreign investors*(regulation of construction land to the foreign venture enterprise published by The state council* in1980). And till 1988, the government officially published *the land royalities regulation of people's republic of China* and other relevant policies such as *supplementary provisions of Some specific questions about land royalities* etc. Land royalities became a main way to exploring the land market distribution in China.

2) 1990-1999: The Land Market Formation Period

In 1990, the state council published *the interim regulations about Land use and transfer of People's Republic of China*. İt is the first comprehensive regulation about the state-owned land transfer method and essencially driving to the separation of the the land use right and ownership. Also in this period , right of transfer, lease, mortgage were clearly defined which meant the land market in China were truely formed. İn this period of time, the management content became to diversity and land supply policy and land price policy became the main policy at that time. And main points were as follows:

A. Futher clarify the ownership of the land, and refine some related rights, such as lease, grant and mortage etc.
B. carry out land registration system to Find out ownership of each land.
C. Evaluate land nationwide to form the basic price of the land market
D. Limited the administrative transfer way and define the lowest transfer price
E. Form the basic distribution mode of land revenue payments

After this period, land market were formed and standarded by all kinds of policies. Market distribution took place of the administrative one and became the main method to grand construction land and the basic price of land market were also formed at that time. The basic distribution mode of land revenue payments promoted local government pay more attention on the land value. Therefore, large scale of urban expansion was openning up.

3) 1999-2004: The Land Market Adjustment Period

İn the year of 1999, *land administration law of the People's Republic of China* and its relevant enforcement regulations were published by the state council. İn this regulation, land right were cleared, as well as the effect of land use planning. At the same time , policy pay more attention to the cultivated land protection and the use

control. İn this period, there were a great demand of urban land with the matureity of the land market, the speediness of urban construction and the tremendous inrush of population. The urban land became a scarce capital to the local government. Therefore land policy in this time began to focus on the rational and normative land structure instead of land itself. The structure of the urban land use and scale were taken seriously, which were so different with the policies in the earlier time. Strength the role of urban planning, reuse of the vacant land and attach more importance to protection of cultivated land and national resources. And main points were as follows:

A. Emphasize role of land use planing and urban planning, leading a rational and economic development.
B. Emphasize the graded examination system in order to control the scale of urban construction and construction quality.
C. Emphasize the regulation of disposing and reusing of vacant construction land, especially in downtown.
D. Relevant provisions about farmland, rural residence and scale of towns and villages. Meanwhile stipulate 15%of the land transferring fees should be used in protection of farmland.

4) 2005-2010: The Macro-Control Period

İn 2004, the Ministry of land and resources in China published a regulation which forbid all the business land be granted by administrative way from August 31 2004. This regulation meant that the market distribution, including auction, bidding and listing, became the only way to obtain the land-use right legally (except for military, affordable housing and infrastructure purpose, which can continue obtaining the land from government directly). In this period the national government limited the coverage of the administrative land and basically ended the double track of the land supply. Meanwhile, the ratio of land use policy increased sharply , strengthening control of land use as well as enforcement policy was published to deal with illegal behavior. Land, as a basic element of capital, began to take participation in national macro-control from this period. And main points were as follows:

A. Set up the relevant examination and approval system for land use control, including residential projects, key construction projects, land use scale, conversion, rural residence base, limited land examination and approval system.
B. Relevant regulation about transfer mode and minimum price of land grant fee.
C. Strengthen the role of the annual plan for the land use

3. Analysis of urban spatial development under the influence from land policy

3.1 Introduction of Shanghai Spatial Development

Shanghai, as one of China's most developed city, is bearing a lot of capital and population. the resident population of Shanghai has reached 23.02 million by the year 2010, 89.3% of which were urban population. İt is also the highest urbanization level in China. For Shanghai only has 6340 square kilometers of urban area, the population density has reached 3631 people each square kilometers by 2010. It is the most densely populated city in China. Especially during 1990s and 2000s ,with the tremendous inrush of capitial and population, the city was expanding quickly. Relatively limited urban area, makes Shanghai have sharp contradiction between human and construction land.

As the other metropolis in the world, Shanghai also made a lot of work to make land use economic and rational, and experienced from “single center” to “more centre”during 1990-2010. According to town system planning, urban master planning and land use planning, Shanghai local government put forward a plan called “one city and nine towns” in 1999, which means set up nine new satellite towns around the main city. With the launch of the plan, the government figured out “1966”urban system in 2005 based on the former one.(1966 urban system means one main city ,9 new satellite cities, 60 new towns and 600 villages.) considering on the great changes of the urban space, it is meanningful for us to take Shanghai as the example to analysis the influence between land policy and urban space.

3.2 The Evaluation Method of Land Policy Influences on Urban Space

This paper uses the macro data of land transfer in Shanghai during 1995-2010 to analysis the influences of land policy to urban space. Influences of the land policy are diversity and the effect on one certain aspect would be quantified in this paper. Three aspects of the urban space are considered in the research: scale of the urban expansion, development intensity and urban fragmentation. And the quantification didn’t represent the specific value but the trend of the influences. And the following characteristics of policies are considered in this process of quantification:

1) The effect of the policy is long-term and accumulating. The action spot of one policy is not one single point when the policy was published. Instead, the effect of one policy will last until it is abolished.

2) The effect of the policy will be explosive at first and then recess year by year. When the Policy (especially mandatory policy) appearing, it must play a larger role (either limitation or promotion) among the related department and aspect. As time pass away, the force gradually back to the balance point.

3) The effects of different policies are related. The regulation of one object may affect other aspects of the urban space indirectly. So policies have certain joint effect.

According to characteristics mentioned above, the index system of land policy quantification is set up as follows: (considering the first characteristic, the starting period should be earlier than the macro data of land transfer. Because of the small amount of land policy before 1990 in China, this paper chooses the land policy in1990-2010 for this analysis.)

Index A:
Performance evaluation index of a policy on certain aspect

$Y_{it}=\alpha_{it}*\beta_{it}*\gamma_{it}$

Y_{it}: performance evaluation index of a policy on certain aspect.

α_{it}: The importance of the policy i on aspect t (define comprehensive laws as the value of 3, Special regulations as the value of 2, Mandatory policy as the value of 1 and suggestion as the value of 0.5)

β_{it}: the relevancy of policy i on aspect t (define no-relationship as the value of 0, Indirectly relationship as the value of 0.25, partly relationship as the value of 0.5, directly relationship as the value of 0.75 and mandatory provisions as the value of 1.)

γ_{it}: the trend of the policy i on the aspect t (define promotions as the value of 1 and limitation as the value of -1)

Index B
Performance evaluation index of policies on certain aspect in one year

$Y_{nt}=Y_{(n-1)t}*\omega+\sum Y_{it}$

Y_{nt}: Performance evaluation index of policies on t aspect in n year.

ω: Attenuation coefficient of the policy each year, in this paper the value was defined as 0.9, which only represents the trend instead of the specific value.

$\sum Y_{it}$: Sum total of the performance evaluation index of each policy in one year.

Establish coordinates with Y_{nt} and the time. The trend of the land policy on certain aspects can be seen clearly.

3.3 Influences Analysis

3.3.1 The Influences of Land Policy on Urban Space Expansion

In 1980s and 1990s, the spatial evolution of shanghai was Significant with both outgoing expansion and internal reorganization. On one hand, urban land expanded outside and doubled in five years. On the other hand, the development intensity of city was still growing, especially in the downtown. After the year of 2000, the scale of shanghai became stability and internal reorganization became the main way for the changes.

Figure 3. The influences of land policy on urban space expansion (1990-2010)

Between 1995 and 2010, about 15963 pieces of land were transferred in market way, which covered about 60031.11million square meters in Shanghai. The trend was like a curve. At the same time, the influences of the land policy to the urban expansion were waning. Especially after a series of policies about intensive land use and macro control of the land market were published in 2004, the urban space influenced by policy was obviously. And three stages are included in the whole period:

1) 1995-1999: Slow Growth Stage

In this period construction land transferred about 1366.99 million m^2 every year, accounting for 11.38% in 1995-2010. And at that time, not all the business land was transferred by market way, so that the scale of new expansion may be a little greater

than the data above. Stable was the characteristic in this time both for the policy effect and land expansion. The regulation about land right and the processing of illegal cases push the whole market to a regularization, which gave a lot of confidence to both developer and government. Meanwhile, the distribution of the land grant fee system also made the local government start to pay more interest to the land transfer. As the spatial distribution, although *management method of nature reserve land (1995)* and *management method of construction land use (1996)* were published to control city expansion, for the small amount of land transfer, all these policies didn't really work. In this period, space expansion was optional and the amount of new construction area in the city was almost equal to it in the suburbs. Developing everywhere without a correct guiding and lacking the reorganization of internal vacant land were two big problem of this period.

2) 2000-2006:Fast Growth Stage

This period is the fastest expansion in the 15 years with the speed of 6062.06milion square meters per year, accounting for 70.68%of the total new area in these years. The land market is basically formed after the exploration for several years and the execution of *land management law of People's Republic of China* in 1999. The regularization of land market operation promoted the fast growth of land transfer. The regulation of land control were still strengthening in this period and more policies were published, including *agreement of granting state-owned land use right* (2003) and *announcement of continue to grant business land by bidding, auction and listing way* (2004) etc. This period is also a phase of world economic recovery; all the industries in the city were blooming this time. Local government took advantage of this opportunity to establish kinds of industrial parks to bring sustainable tax sources for the city. With the development of the industry, shanghai attract more population and services into it, which Speed up the city's expansion. Since late 2004, the national government realized the issue of land recourse limitation; policy became to transfer from encouraging to controlling, such as *The decision on strictly deepening the reform of land management by state council* (2004), *announcement About the protection of basic farmland* (2004) and *The notice of reinforcement of land control by state council* (2005) etc. Although those policies pushed the expansion control to a new high level, due to the boom of the development, the expansion continued until 2006.

3) 2007-2010: Macro-Control Period

In this period, the average annual land transfer decreased to 2690.44million square meters, comparing to the amount in 2000-2006. In this period, the national government continued to publish a series of policies about urban control, including *The measures of annual plan for the land use control* (2006), *notice on promoting the economical and intensive land use by The state council* (2008) and *announcement*

*about land use control and vacant land management by ministry of land and resources in Chin*a (2009) and other limitation policies about Industrial land and residential land. At the same time, the expansion in 2000-2006 took a lot of pressure for Shanghai. According to statistics, by the end of 2006, the construction land of Yangtze River region (with Shanghai as the center) had already reach 17.4% (without water), which is much higher than the percentage of it in USA. Policy guide, expansion pressure and world financial crisis made the amount of land transfer of shanghai in 2007 plunge suddenly, and maintained in the certain level till 2010.

3.3.2 The Influences of Land Policy on Urban Intensity:

National government didn't published relevant policy to directly control the intensity of the urban development. Intensity was more controlled by macro control of the supply amount, which changed the overall intensity (overall intensity= urban area/ building area) indirectly.

	1950	1960	1970	1980	1985	1990	1995	2000	2003
Urban area (km^2)	82.40	140.86	140.86	196.75	351.10	748.71	2057.01	3924.24	3924.24
Building area (million m^2)	4679	6140	7115	9134	12748	17256	22094	34206	51375
Overall Intensity	0.57	0.44	0.51	0.46	0.36	0.23	0.11	0.09	0.13

Table 1: table of comparisons among urban area, building area and overall intensity

According to the table above, the expansion of the city resulted in reduce of the city overall intensity. Because of the encouragement of land granting, the lowest intensity was came up in 2000, for only 0.9, which only a half of that in 1990. According to the comparison of policy effect and development intensity, they didn't match very well. However, from the figure 4 and figure 5, the growing of development intensity can be clearly showed, with the control of policies in 2000-2010

At the beginning of carrying out the new land transfer system, the amount of new land quantity was less; the expansion ability of Shanghai was relatively weak. The average FAR of the new urban land can maintain in a certain level. During 2000-2003, with the loose of the land policy and pursuit of sustainable tax sources for the local government, Shanghai expanded quickly. Especially the set up of several industrial parks around Shanghai resulted in the lowest FAR of new urban land these years. The reduction of the intensity was not only happened in the whole city, not also in the downtown. The quantity and intensity of the new development in downtown were also slow down. During 2000-2003, only 1387 new high buildings (8 floors and above) built in this time, and the construction area was 2265 million m^2. Comparing the large amount of the new granting land, the increase of the

development intensity in downtown was much less.

Since 2004, the government paid more attention on the intensive of the land use. The change of Shanghai from expansionary city to internal reconstruction brought a great opportunity to ascend the development intensity. The high buildings in the downtown were going up on after one in this period. Especially in 2007-2010, when the whole area of new transferring land was decreasing while the demand for inrush population and industry were still increasing, high density became the only way to deal with this conflict. During these four years, the average FAR of the new transferring land reached 1.55, which was 74.15% higher than that in 2002. That is to say, those control policies, not only control the city expansion and guide the urban development efficiently, but also promote the develop intensity much more economic and rational.

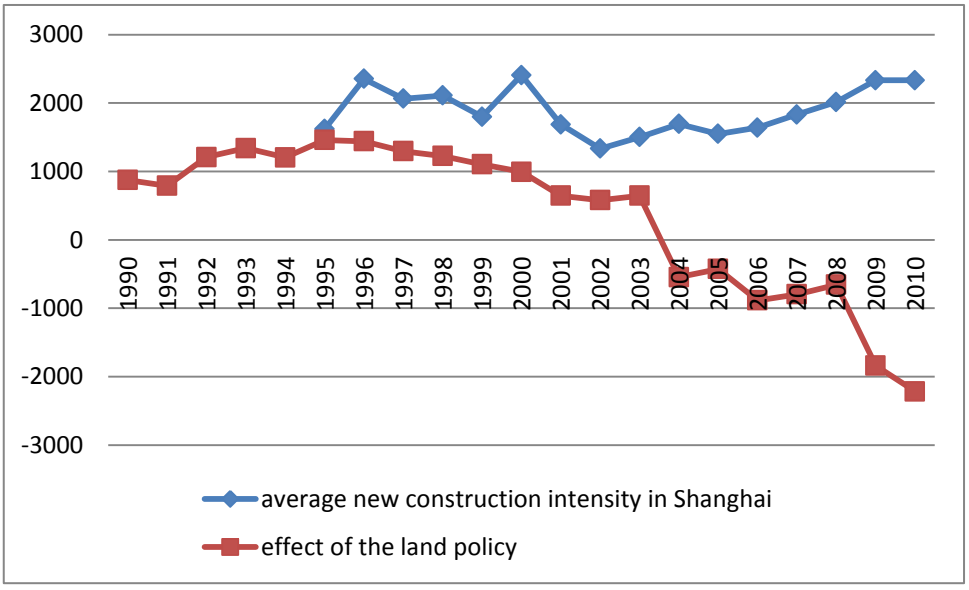

Figure 4. The influences of land policy on new land intensity (1990-2010)

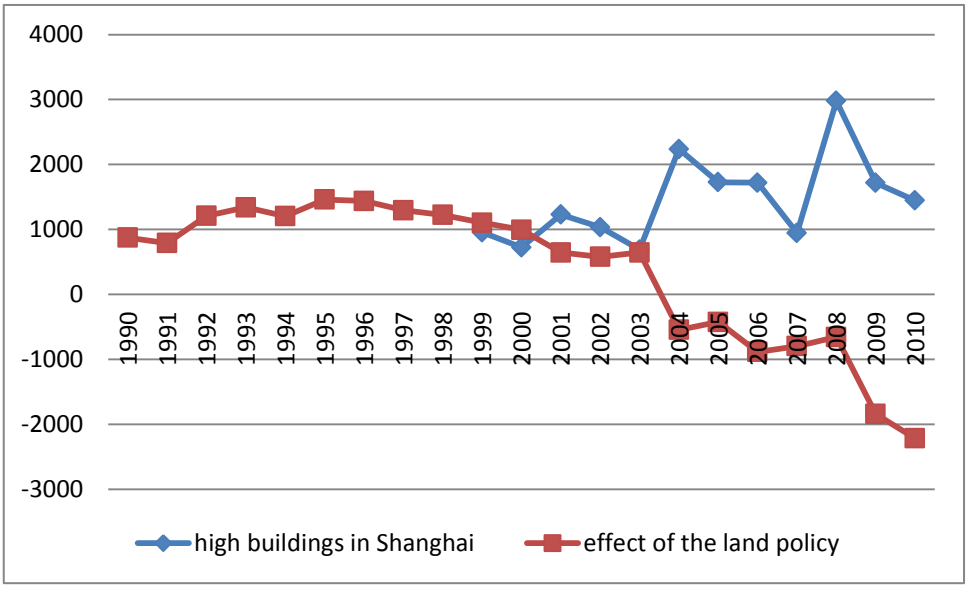

Figure 5. The influences of land policy on the amount of high buildings (1990-2010)

3.3.3 The influences of land policy on urban fragmentation:

Urban fragmentation is the performance for the land size in city, which measures the reasonability of the land size. Along with the development of shanghai and perfection of the property right system, the construction land were attached to certain use and cannot change it for a long time. Therefore the revival of urban land, especially in downtown became more difficult. The size of new developing land was reducing and the city space was tended to be broken. However, when the land reserve system came up in the late 1990s, the situation changed. With the effect of relevant authorities and policies, the land market became marketization and transparent, which provide an opportunities to integration of urban space.

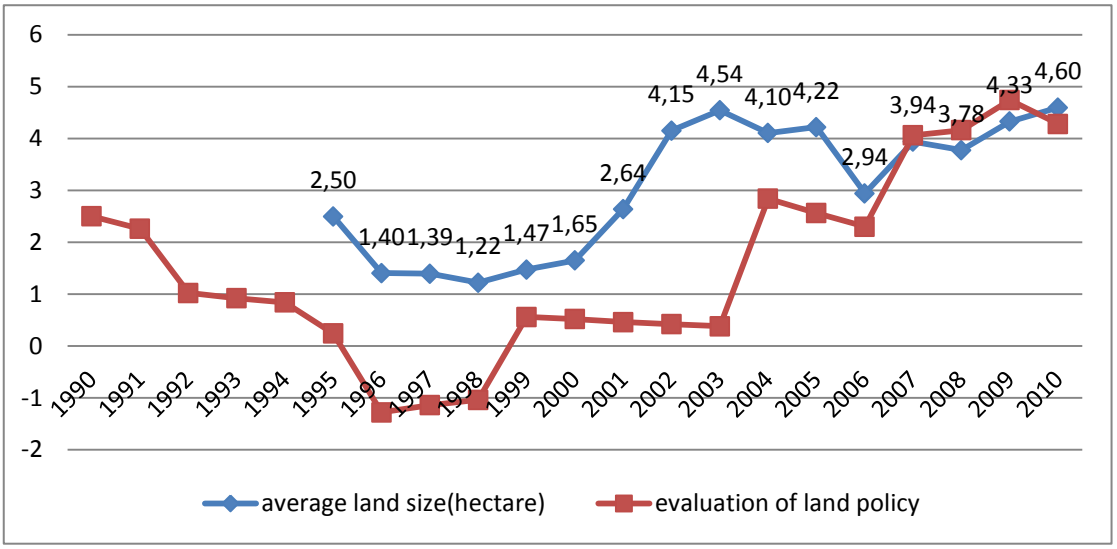

Figure 6. The influences of land policy on urban fragmentation(1995-2010)

According to the figure above, it can be seen clearly that there were two peaks and two troughs in the average land size from 1995 to 2010. From *the administration of ecouraging large-scale development for foriegn inventors* which was published in 1990, China began to step into a era for construction. İn 1992, the national government published severl policies to define the properity right and though land registration and land supervision to strenthen the management of the land use. So the space of shanghai became relatively fixed down and as the formation of land market price, the cost of demolition tended to be higher and higher, which made the city in the further fragment from 1995. The size of the transfer land in 1995 was 2.49 hectare. however, just 5 years later, the average of the land size was just 1.67 hectare in 2000, only 67.06% of that in 1995. Several reasons can be concluded as follows: 1) relative land policies to define the land right clearly resulted in the difficulty of urban demolition. 2) the lacking of policies for demolitionmade the chaos of urban revial. The tense relationship of the government and the residential delayed the step of urban intergaration. 3) the common existance of vacant land and lacking of handling metheod hinder accerating the speed of fragment. 4) lacking of the effective administration. Raw land transfer which was common in China, make the whole land market lacking a plan of the urban space.

The phonommon of space fragment was paid more attention by national government. From 1999, serveral of land consolidation and reservation policies were published, including The vacant land treatment method (1999), land reservation method of shanghai (2004) and the national management methof of land reservation (2007). The land reservation means the government obtain the use right of the land through back, purchase requisition or other legal way, and reserve or consolidate them instead of transfer immidiately. This behaviour was benifit for government to intergate the

urban space and grant them as the plan. The foundation of land reservation system marked the land transfer from the disorder to well-planned way. Unified demolition, unified facility supporting and reserve the idle, vacant and inenfficient utilization state-owned land priority, made more effective of the city internal integration. Althogh the land reservation policy was published in 2004, shanghai set up the reservation center from 1996. Therefore, from the year of 2000, the influence of these policy worked out and the size of land increased to 4.59 hectare in 2010, much more rational than that in 2000.

4. Conclusions and Suggestions:

This research is focus on the influences of the land policy to the urban space. Because of the limited data, only national policy was considered in this paper, which has certain restriction. However considering the national policy is the guide of the local policy, it also has some significant meaning. At the same time, shanghai was experiencing several times of administrative division adjustment. So all the space data cannot correspond to the specific space spot, only macroscopic level can be analysis in this paper.

In this paper, we found that China's land policy was stability and continuity. From market formation, market cultivation and market control, the government basically finished the transformation of the land market from the administrative distribution to market distribution. What is more, it plays an important role in the crazy expansion of urban space in these years.

Secondly, the promotion of land policies to the urban space control was found in this paper. With the help of clear property right, the gradual tax system and appropriate regulatory, the land market in China developed quickly and paid more attention by both government and developers. Through the land use plan, the minimum price control and protection of farmland and national resource, the government try to control the scale of construction land and set intensive land use as the main criteria for the land transfer. At the same time, the land consolidation and reservation also play an important role in the rational and intensive urban space. The interaction of different policies became the key to rule the urban space to a healthier way from different angles.

Last but not least, the study also shows that the influences of land policy sometimes were not so directly to the urban space. It usually operates with a lag. So the stimulate of the outside environment, either economical or political was important to promote the whole policy to implementation, which became the turning point in the transformation.

China now is in a rapid urbanization stage, and the urban space is forming at this time. Whether the land policy guides the land use rational and effective or not, is meaningful to the urban planning in China. Therefore, following suggestion should be followed in the policy implementation in the future.

1) Continuing to strengthen the policy guidance of intensive land utilization. The policy should to be changed from a single suggestion notice to a mandatory policy, strengthening the legal binding of the land policy gradually.
2) Guiding the land use from various angles. Diversified ways should be adopted and the interaction of different policies should be noticed. Using the land planning policies, land use policies, land supply policies, and cultivated land protection policy, the land law enforcement surveillance policies comprehensively to guide the urban space.
3) As a leading policy, the land policy should be forward looking. Considering the policy effects have certain hysteresis, the policy should be cooperate with various aspects of external factors, such as the international economic environment, the orientation of the city, urban land and population capacity and so on. Only in this way can it lead the urban space to rationalize direction.

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RECENT ACTIONS OF SOCIAL HOUSING
FOCUS ON NORTHERN ITALY

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Abstract

From the 80s a general trend of withdrawal of state support from housing policies and social housing is recognized in the majority of European countries. Social housing provision began to decrease and the sector opened up to economic pressures. Housing has been a focus for neo-liberal reforms, but it is not the only sector influenced by it: also practices and interventions in the cities changed with this broad worldwide trend. In urban arena social exclusion and polarization are sharpening, aggravating socio-economical inequalities. In the last decades recent actions and interventions of social housing are taking place: at the local level tools and measures are created to maintain and continue housing policies. Housing is an important issue for local communities and new actions are developed to deal with lack of funding and creativity, even though, after the financial crisis of 2007 housing and development market collapsed. The availability of state support is even more reduced, together with the willingness to subsidies social housing.
The paper presents the social housing scenario summarizing the European common trends. Then the focus is moved on the Italian context, in particular to the city of Turin, in the North-West of Italy. The author collected social housing norms, plans and initiatives of this city in the recent years (from 2000). In this complex scenario the paper presents the analysis of these recent actions, highlighting their innovative characters. The main criteria for the case study analysis are chosen applying a qualitative approach studying the European context and its references.
Examining these recent social housing actions can provide a better understanding of local practices and of how they contribute to develop new methods and forms of actions at the urban level. On the other hand, considering that social housing sector has been in a critical situation for decades, its developments are showing the effectiveness of different forms of responses. Indeed, the paper allows to recognize the evolution of housing practices and provides innovative ideas to face the complex actual context at the urban scale.

1. Introduction

From the 80s a general trend of withdrawal of state support from housing policies and social housing is recognized in the majority of European countries (Priemus & Dieleman, 1999; Doherty, 2004). Social housing provision began to decrease and the sector opened up to economic pressures. The main features of this trend are: decline in scope and size; privatization and disappearance of institutions and particular forms of funding; transformation from supply-side to demand-side subsidies; promotion of home ownership through mortgage loans. Housing has been also a focus for neo-

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liberal reforms, but it is not the only sector influenced by it: also practices and interventions in the cities changed with this broad worldwide trend. Neo-liberal reforms took place through: shrinking and privatization of social services; dismantling of welfare programs; promotion of supply-side competitiveness.
Furthermore, it is important to remember the actual impact of financial crisis. It is nowadays a real issue to develop new policies and new intervention at the urban level. In particular, different issues can affect social housing sector and housing need:

- decline in taxes for public authorities;
- promotion of education and research reduced;
- public investment in infrastructure and environment postponed;
- fall in price of GDP (also houses' prices, sales of existing and new built dwellings) and rise of unemployment.

Indeed, in urban arena social exclusion and polarization are sharpening, aggravating socio-economical inequalities (Allen et al., 2003; MacLeod, 2002).
At the European level, CECODHAS, Housing Europe's Observatory, recognizes common trends in social housing sector (Pittini & Laino, 2011). Despite the critical scenario, housing need is still an issue and various initiatives are taking place trying to tackle it. The main finding of European social housing studies is a complex and differentiate scenario of actions. Dealing with crisis dynamics forced actions and interventions in social housing sector to be residual. It is important to understand the heyday of social housing is over, housing practices and polices of recent years are no longer a full response to housing need. These trends are specialised and targeted to local issues or to specific populations. Indeed, considering these trends and initiatives permits to improve the knowledge about this sector in recent years, but also it could show various responses in a situation of no resources. Nowadays urban governance has to deal with lack of financial resources, social housing could be useful showing different types of actions and their effectiveness.

2. The European trends in social housing sector

In this section of the paper European trends and initiatives are summarized. They are important references studying the Italian case.
At the national level, in the recent years (from 2000) there are some responses in the form of stabilising factors to help recover the housing and social housing sector. In the aftermath of the crisis some governments invested in social housing as part of recovery programmes. In France and England the number of social housing dwellings increased in 2008-09 (Pittini & Laino, 2011, p.25) If the size of social housing has been shrinking since the 1980s (with some exceptions in Europe like Austria, Belgium, Denmark and Finland), the numbers of applicants has been increased. Homelessness levels are growing, the housing affordability is worsening with the crisis scenario, creating an increase of housing exclusion. The figures are rising counting an increasing numbers of working poor and middle-class families as new category at risk of exclusion.
Focusing on local trends described by CECODHAS, they can be read through main dimensions: intervention on dwellings, actors involved in providing social housing,

financial mechanisms, and tenants' involvement. Regarding the dwellings and their management, use and improvement, the registered European trends are:

- privatisation of the existing stock with the objectives of satisfying tenants' aspirations and generating extra resources for improvement or new constructions;
- reduction of overall availability and sales of better located and better quality stock (result of the privatisation pointed before);
- the demand-side subsidies, (mainly in the form of housing benefits to low income tenants helping them paying the rent), has led to a decline in bricks and mortar subsidies and a substantial increase in demand assistance strategies.

Regarding the actors involved in social housing provision, the main trend is providing social housing through private and not-for-profit initiatives with a wide range of social agencies. Indeed, the actors' dynamics are:

- combination of actors involved with public provision (usually by municipalities, either directly or through dedicated publicly owned-companies) often coexisting with a growing private sector, mainly consisting of specialised non-profit or limited-profit bodies (e.g. housing associations);
- local authorities in most cases retreating from the production of new social housing and concentrating on the management of the existing stock, leaving the private sector as the main responsible for new developments;
- increasing involvement with social housing provision by non-specialised actors (commercial developers and private landlords, as opposed to specialised "approved" not-for-profit providers) who have been included as possible recipients of public subsidies in exchange for the use of dwellings for social purposes (low rents, tenants from social housing lists), usually for a limited period of time.

The third dimension concerns financial mechanisms to overcome the economic issues and manage the built environment. In this case the points are various and different since each contexts is trying to deal with financial troubles:

- financing housing projects means combining different sources: standard bank loans (mortgages), public grants/loans, own funds of housing organisations and sometimes also tenants' contributions. Municipalities may also provide additional funding for the construction of social housing;
- supporting the provision of social housing through the availability of land at discounted prices (in countries like Austria, Italy and Luxemburg) and tax privileges for social housing providers (income and investment deduction, depreciation allowances, reduced sales and property taxes, exemption from capital gain tax, and reduced VAT rate);
- widespread practice to set a minimum percentage of social housing in new developments (for instance in England, Spain, Belgium, France), with the aim of: increasing social mix and avoid social and spatial segregation. This mechanism implies that social housing provision is tied to the provision of market housing and therefore might not be particularly useful to increase the availability of affordable housing in times of crisis and low levels of construction by private developers;

- borrowing in the private market: social housing providers are getting rated by international rating agencies to show the soundness of their economic activities and their governance and management reliability (especially in the United Kingdom and the Netherlands). Providers in different countries are implementing innovative ways of pooling risk (for instance in Austria with the sale of bonds via Housing Banks);
- system of intermediation as key element for the sustainability of any financing model for social housing: structures meant to make the link between the market and the providers, supervised by public authorities and under an obligation to provide funding for social housing. Various forms of this intermediation can be found in Austria, France, Netherlands and United Kingdom;
- housing organisations' resources and surpluses can be used to invest in additional housing, to support weaker organisations or to promote innovation and competition (in Netherlands, Denmark and France);
- undertaking non-landlord activities as a mean to cross-subsidise their social dwellings via the development of profitable activities (e.g. building of commercial properties), examples in United Kingdom and Netherlands. In the global financial crisis opportunities to cross subsidise new development from the sale of low cost home ownership properties has drastically diminished;
- some funding models incorporate a small tenant equity contribution (in some cases tenants equity is higher and implies right to buy the dwelling), in countries like Denmark, Austria and Slovenia. There might be government assistance for low-income households to pay this contribution.

The last points regard tenants participation and involvement:

- involvement of the benefiting households in both the management of the service and the functioning of the company providing the service;
- restricting the provision of social housing defining stricter categories of beneficiaries. Some countries can be identified as exceptions: in Denmark and Sweden the registration on waiting lists is open to anyone and no income ceilings are used.

Considering these four dimensions and their points, it is clear how each of them is related and linked to the others.

Some of these trends or practices can be associated to the conventional practices of last years in urban development projects or urban regeneration practices. For instance, public-private partnerships, involvement of different actors and combination of financial resources are methods well known in the urban planning field of the last decades. The integrated approach, typical of URBAN initiatives, relates to a lot of these points. Indeed, in most Western European countries, the social housing sector forms an important part of regeneration schemes. Social housing is both actor and subject to urban renewal. Housing associations are key actors because they own the housing stock and social rented housing neighbourhoods are the targets of a lot of renewal processes.

Referring to the last two dimensions (financial mechanisms and dwellers), the various forms used to diversificate and to find new sources and the involvement of tenants not only in their dwelling's management but also in the general company

provider of the service constitute the main changes and improvement. It is important to highlight the importance of change the role of the dwellers from beneficiaries to active workers in their housing organisation or company. The financial methods are the most differentiated from the conventional ones, like: the minimum percentage in new developments, the ways of pooling risk and get rated, the systems of intermediation, undertaking non-landlord activities and the small tenant equity contribution.
An other issue is the energy efficiency, a physical feature for new buildings and renovation's processes of the older ones. It strongly linked to the general attention towards the principle of sustainability. Public authorities often promote energy efficient renovation as criteria for regeneration practices (for instance, in France, Bulgaria and Sweden specific measures are in force). The use of the best technologies related to energy efficiency is also a parameter for new developments.

3. Northern Italy case study: the city of Turin

3.1. Italian national context

An official definition of social housing in Italy has been provided in 2008 (*Decreto Ministeriale* 22/04/2008). It consists: "mainly of dwellings rented on a permanent basis; also to be considered as social housing are dwellings built or rehabilitated through public and private contribution or the use of public funding, rented for at least eight years and also sold at affordable price, with the goal of achieving social mix". The definition involves also social cohesion principle and the aim is reducing housing distress, offering housing opportunities to families and people who cannot access to free market housing. Housing is considered as part of primary needs.
Social rental housing currently represents about the 4% of the national housing stock[2]. There are three main types of publicly supported housing: subsidised housing (*edilizia sovvenzionata*), assisted housing (*edilizia agevolata*) and agreed housing (*edilizia convenzionata*). The amount of public funding varies according to the different types of publicly supported housing as explained in the table below (Table 1.).

Table 1. Types of supported housing in Italy.
(Table modified by the author, primary source: Pittini & Laino, 2011, p. 58)

	DEFINITION	FINANCIAL MECHANISMS	PROVIDER
SUBSIDIZED HOUSING	Rental housing owned by the public sector. It is addressed to those with lowest income.	Subsidies cover between 60% and 100% of the cost, and the rents are proportional to the income of the tenant. Rents in the public sector are very low, corresponding on average to 1⁄4 of market rents.	Municipalities and public housing agencies.

[2] The information about the Italian national context are taken from CECODHAS documents, which have Federcasa as main source of evidence.

ASSISTED HOUSING	Housing provided both for rent and for sale and aimed at households on low to middle income.	Subsidies for rental assisted housing are between 20 and 60% of the cost and the rent is limited to the minimum price of the market or the 4.5% of the construction cost. Assisted housing for sale is entitled to between 10 and 30% subsidies and the price of the dwelling may not be higher than that of subsidised housing.	Mainly cooperatives.
AGREED HOUSING	Private housing provided for rent or for sale, whose transfer costs or rents are regulated by a specific agreement drawn up between the Municipality and the housing provider.	Providers benefit from a discount on the local tax for building permission, and a lease on the land for 99 years.	Private and public providers: the most active are building firms and cooperatives.

During the 1990s, public investment in housing fell further than before and the limited public resources that had been allocated in this area went to the so-called "integrated urban programmes", which in Italy fuelled urban renewal and regeneration policy. Tosi (2007) defined this change of attention as a "elusive exchange" between housing needs to regeneration of urban peripheries. The privatisation of part of the state-owned housing stock is another development which has been widespread in Italy over the last decade.

The demand of social housing has changed during the decades, the strong differences in economic and social conditions widened the categories of population demanding social housing. Not only the lower segments of the population are suffering housing hardship, but risk of housing deprivation is diffused also in the traditional middle class. For instance, this phenomenon regards young or older people who cannot afford a rent for economic instability, precarious job, etc. The family has always had a stronger role in Southern Europe supporting and providing housing, since the national states were often neglecting this sector (Allen et al. 2004). Nowadays, the economic crisis is impacting also on the housing need, making it a critical issue.

Furthermore, the concept of social housing is obtaining in Italy new attention; these English words are becoming in the recent years a fashionable slogan promoting housing with a social approach. It has not a clear and defined meaning, also private initiatives with scarce social value are using it to advertise themselves.

3.2. The experience of Turin

Turin is the capital city of Piedmont Region, it has about 900,000 inhabitants and is located in the North-West of Italy. It has always been an industrial city, the car industry FIAT was born here. Nevertheless nowadays it is in search of a new identity and new cultural and economic sectors to surpass its Fordist image.

From the 70s the Fordist industry started to crumble and in the last decades manufacturing jobs were cut and the differentiation in skills and qualifications became important to be competitive in the job market. Social issues began to change from unemployment, ageing population and a growing demand for services. The population also decreased from almost one million in 1991 to 865,263 inhabitants in 2001 (ISTAT). In the urban structure, many industrial buildings became empty shells signs of industrial decline. A process of counter-urbanisation can be identified in those years, the municipalities closed to Turin have attracted population searching for better living conditions and less polluted environment. Furthermore, various waves of migration brought thousands of foreign inhabitants to Turin, especially from North Africa and Eastern Europe (Città di Torino, 2011). Indeed, the metropolitan area reached a population of almost one and half million.

During the last 25 years, the large-scale social, economic and physical change has marked a huge transformation for the city of Turin. In 2006, the city hosted the Winter Olympic Games. And from that moment it tried to attract and put in place different kinds of cultural events. The old industrial spaces were transformed and a new season of real estate's expansion took place. On the other hand, urban development projects transformed the urban structure substituting industrial areas (especially located along the railroad system, now underground) with dwellings[3]. This generated issues about the re-use of cultural and sports buildings and the numerous new residential constructions in the free market.

Since the middle of the 90s, the local government of Turin has begun to implement various innovations in urban policies, above all in the field of urban regeneration (Regione Piemonte, 2004) and strategic planning (Turin was the first city in Italy promoting a strategic plan, it was voluntary and involved numerous city's actors).

Governa and Saccomani (2009) summarize the current housing situation in Turin: *Despite this boom in activity in the building sector, until the beginning of 2008 the Turin real estate market did not seem to be affected by an oversupply of housing and, overall, house prices have remained lower than in other big Italian cities. The situation is, however, rapidly changing, with the emergence of unsold buildings, growing difficulties with loan repayments, and the inability of many residential buildings to respond to the growing and varied demand from the more vulnerable social groups which find themselves, for a variety of reasons, in situations of housing hardship* (p.398). Housing hardship is socially quite widespread, affecting heterogeneous groups, and spatially concentrated in certain areas of the city (Citta` di Torino, 2006). Some key social factors (ageing population, low education, low professional qualifications and unemployment) are increasingly concentrated in public housing neighbourhoods built at the time of maximum industrialisation of the city. The weakness of public intervention in the housing sector should be linked to the inability of the rental housing market to provide satisfactory responses to an increasingly complex and diverse housing demand, particularly with respect to the excessive cost of renting and, consequently, the difficulty of some parties, typically non-EU migrants, to access the market.

[3] The new Master Plan, approved in 1995, supported the revitalisation of the real estate sector. After years of stagnation, building production recently accelerated.

3.2.1. Actors, plans, programs and initiatives of social housing in Turin

The actors interested in social housing in Turin metropolitan areas are basically four: the region, the city council, the bank foundations and the third sector (associations and not-for-profit organizations). An other actor should be remembered: the territorial housing agency managing all the social housing estate in the Turin's Province (ATC, former agency of IACP). It cannot promote policies, but it manages the most part of social housing in Turin.
The initiatives' framework of Turin can be summarized considering two main categories: the institutional public plans/programs/norms and the various initiatives or projects (with public or private origin). This distinction can be seen in the next tables. The plans, programs and initiatives analysed are the ones in force from 2000 and they show a recent interest of public and private actors for social housing sector.

Table 2. Plans, programs and norms of social housing in force in Turin.

PROMOTER ACTOR	PLANS, PROGRAMS AND NORMS	BRIEF DESCRIPTION
National State	Housing Plan (*Piano Casa*, Law 133/2008)	Improving national housing stock through new construction and recovering of old dwellings. 5 types of actions. Specific categories of beneficiaries.
Piedmont Region	Housing Program: 10.000 dwellings for the 2012 (*Programma Casa: 10.000 alloggi entro il 2012*), in force from 2006 to 2012.	3 two-years periods. 8 types of housing initiatives.
	Guidelines for social housing (2007, D.G.R. 27-7346/2007).	Integration to the Housing Program, improving it adding two types of initiatives (temporary residences and dwellings to be rented).
	Call for pilot projects concerning social collective residences (2008, D.G.R. 55-9151/2008).	Implementation of the previous guidelines.
	Regional Law on social housing 3/2010.	Regional regulation about social housing.
Turin Municipality	Change in the Master Plan of the city providing a 10% of agreed housing in new housing development (over 4000 m2), (Variante 37/02, art.6 comma 10bis Norme di Piano).	Increasing social housing, promoting social mix in new urban developments.
	Guidelines promoting social mix in the neighbourhoods where are in force urban regeneration programs (D.G.C. 31/08/2004, n.06990/012).	Promoting social mix in social housing neighbourhoods
	Housing Plan 2009-2010 (*Piano*	The plan describes the actual

	Casa, D.C.C. 205/2008).	situation and it defines the strategies and initiatives for the next years.

The main attribute of the national housing plan is promoting housing as a trigger for economic development and not focusing on social housing and the urgent needs of the population. The national plan is also a slow tool, which is going in force only in the recent years. Indeed, this plan's concrete accomplishments are going to be assessed only in the next years.

Housing program of the Piedmont Region represents the general regional frame where the most part of the regional social housing initiatives finds some sort of funding. It is important to remember that this program is a sectorial policy, it is not integrated with the regional spatial planning strategies or the social services policies. The program has 8 main axes of interventions: from improvement of social housing estate, to promoting private rent market. The intent is also promoting sustainability: re-using existing buildings, not consuming land, using sustainable energies and technologies.

The Housing Program has been "updated" during 2007 with the Guidelines for social housing. In this document, the Region extends social housing promotion to temporary residences and dwellings to be rented. The temporary residences have the aim of responding to insecurity's issues like working precariousness, housing market's difficulties and changes in families' structure. These residences intend promoting social inclusion and social integration. The dwellings to be rented are, instead, an improvement for Piedmont's rented sector. They are meant to be a solution for people who cannot access subsidized housing, the rents' prices are lower than the free market's ones.

The next document is the implementation of those guidelines. It is a call for application for pilot cases as temporary residences and dwellings to be rented. The document defines the criteria choosing the pilot cases like: promoting social mix, building/strengthening social networks, supportive housing forms, part of urban regeneration projects. In the next table (Table 3.) about social housing initiatives in Turin the city's pilot cases are presented and described.

The Regional Law 3/2010 is the main law related to social housing in force in the regional context. It focuses on three attributes: the social housing' allocation and social rent's assessment; the organization of the entities and actors working in the sector; the definition of criteria to remove social housing binds from social rented dwellings.

The region intends to experiment on the regional scale also the "social doorman" meaning the presence of a caretaker, a social cooperative/association/organization in difficult neighbourhoods (social housing and vulnerable people), (L. 3/2010 art. 21). The aim is improving the social relations of the neighbourhoods creating networks, services and social events, strengthening the community.

The city of Turin has three documents (norms and plan) which are relevant describing its housing policy in these years. The first norm is improving the social housing estate and the social mix. According to this norm, the Municipality has the pre-emption right to purchase the flats in 12 months or the flats are going to be

rented out as agreed housing. The Municipality provides also a list of people for this rented agreed housing. The low financial resources are the main trigger for this change. Imposing this norm to the private housing developers constitutes a form of private's contribution for the housing development and new social housing flats are improving the public estate.

The second relevant document is a urban norm related to social mix. These guidelines promote different forms of actions improving social mix in social housing neighbourhoods. These actions are promoted mainly in the urban areas where are in force urban integrated programs. Four axes constitute the guidelines:

1. creation of "special lists" of people to access social housing: the normal lists are defined according to economical, social and health criteria. "Special lists" can contain elders, young couples, migrants workers waiting to go back to their countries, disabled people, workers of police forces. Using "special lists" permits of mixing the traditional most vulnerable people with these categories of population, rebalancing the community.
2. Appointing 10-20% of free social housing dwellings in the future call for applicants to people with different entry requirements. For instance, these requirements could be being a young without parents or a family with little children, with an income not too high than the normal economic requirement. The different entry requirements can be studied in relation to the neighbourhoods' free dwellings. The aim could be inserting young people in elderly neighbourhoods, improving the independence of young people, etc.
3. Better management of dwellings' changes: ATC, the social housing manager, should collaborate with the city of Turin aiming to improve the social mix of the neighbourhoods.
4. Transfer of social housing bind: inserting different categories of people in the social housing neighbourhoods means opening the access to people who could not rent them under normal circumstances. The social housing bind has to be transfer to an other public dwelling, avoiding the loss of dwellings.

Then these guidelines are promoted with a specific project of implementation (Allegato D.G.C. 10/03/2009 n.01113/012). The project was approved by the city council in 2009 and it contains the details about the first experiments of the previous four axes.

The local initiatives are summarized in the next table (Table 3.). The active actors are mainly two: the city and the ethic investor (the bank foundation *Compagnia di San Paolo*). The city promotes various initiatives tackling different kinds of housing issue[4], while the bank foundation constitutes a complementary partner financing and promoting similar initiatives and projects.

Table 3. Initiatives of social housing in force in Turin.

[4] There are also Municipality's ordinary practices which are not in the next table (Table 3.). These are: the families evicted by their dwellings have the right to be hosted in hotel or guesthouse until the city provides a decent dwelling; the city checks the requirements for social housing of current tenants; the city can buy new dwellings.

PROMOTER ACTOR	INTIATIVE	DESCRIPTION
Turin Municipality	Lo.C.A.Re., public housing agency supporting the private rented sector.	Public agency promoting the meeting between demand and supply of private rented housing market. It provides economic incentives and guarantees for the owners and economic contribution for the tenants. A huge number of rental contracts have been concluded (more than 3000 of families, Città di Torino, 2008). MAIN GOAL: supporting rented housing, avoiding risk of eviction and housing hardship. FUNDING: Municipal funds and Regional fund (this type of agency is supported by the Housing Program).
	Granting public spaces to the territorial housing agency (ATC) to build social housing & Building of new social housing	Some of the new buildings are going to be provided for different categories of beneficiaries, (not only the most vulnerable population). MAIN GOAL: improvement of social housing real estate, social mix. FUNDING: regional funds (Housing Program)
	Sale's plan of city's subsidized housing	A national law governs this sale (L. 560/93), defining prices and selling ways. The city of Turin has its own plan. Actually, the city has some dwellings outside its boundary, in the municipalities around Turin. These dwellings are going to be sold. MAIN GOAL: the national goal is promoting home ownership and earning financial resources, the goal of Turin is recovering resources to better managing the other dwellings.
	Temporary Residences (Social hotel "Sharing")	Private managed hotel, which provides accommodation for a limited period of time (from few month to one year). From Sept 2011 it hosts city's temporary residents (for financial, familiar, job related issues, no special requirements) and 20 families (chosen by the municipality's waiting-list) waiting for subsidized housing. In the building there are also private health and social services. MAIN GOAL: promoting new forms of housing, solving the housing issue for temporary residents in the city (without high costs and providing independent housing), avoiding the deterioration of a building in a peripheral neighbourhood. FUNDING: A private partnership (between an ethic investor, a social cooperative, and an agency of social venture capital) invested in the transformation and management of the hotel.
	Social Collective	Temporary housing (18 months maximum) for

	Residences (*Residenze collettive sociali*), pilot cases for Piedmont Region	vulnerable people in housing need, moving towards the independence from social services' care. In these buildings there are common services and spaces. The services are open to the neighbourhood, promoting the integration. There's a social manager of each residence, promoting social and care networks. MAIN GOAL: create new paths towards independence for vulnerable people, integration in the neighbourhood/city FUNDING: public funds, regional Housing Program
	Supportive Condo (*Condominio Solidale*)	This form of housing is in the middle between social housing and independent/autonomous housing. There's no limited time and it is targeted on specific category of people: the elderly (in social housing lists). This demand has different issues: various social needs and health services, accessible spaces. Social housing supply is often not suitable for these needs. In these buildings there are common spaces and services for the tenants and the neighbourhood. MAIN GOAL: giving better housing conditions to the elderly population, mixing them with other categories of people and promoting integration with the neighbourhood. FUNDING: public funds, regional funds from Housing Program. One of this building was financed in partnership with *Compagnia di San Paolo*.
	Supportive Co-housing (*Coabitazioni Solidali*)	From 2007 experimental settling of young people in social housing neighbourhoods. The young offer 10 h/week of voluntary work for the community and the municipality gives a discount of 90% of the rent. MAIN GOAL: supporting integration and cohesion in the multi-problematic social housing settlements, promoting respect and education taking care of common spaces, promoting young people's independence from families. FUNDING: there are no special funds for this initiative, there's the loss of 90% of the young' rents. Their work in the neighbourhoods replaces these costs.
Compagnia di S. Paolo, Housing Program	Stesso Piano, private housing agency supporting private rented sector	Stesso Piano is a similar to the public agency LO.C.A.RE.. It offers an help to young people looking for a house/room to rent and it promotes cohabitations forms. A cooperative and an association are working on this initiative. MAIN GOAL: supporting rented housing, avoiding

		housing hardship, promoting young's housing independence.
	Temporary residences	Two buildings destined hosting vulnerable people and people with housing hardship. The initiative is part of the Housing Programme of the *Compagnia di San Paolo*, but there are going to be managers of the service: social cooperatives and associations. MAIN GOAL: giving better housing conditions to vulnerable categories of population, solving housing issue for temporary residents of the city
	Support to other housing initiatives, funding to third sector projects	The bank foundation supports social cooperatives and associations in their housing projects. These projects aim to particular categories of people with social needs (women, elderly, migrants, etc.) and they are often single experiments. Each association/cooperative asking for funding to this ethical investor manages one or few residences. MAIN GOAL: giving better housing conditions to vulnerable categories of population, helping social cooperatives and association to accomplish their housing projects.

The city intends supporting different housing demands. The initiatives summarized in the table represent this complex framework. It is clear a general attention towards the people in housing hardship or at risk of eviction. Different categories of people are coming in the picture of housing issue: elderly, migrants, temporary city's users, young with precarious jobs, etc. The differentiation of these initiatives proves this situation.

The other feature to highlight is the social housing sale's plan, it is obvious its unusual character in a crisis scenario like this one. The previous government promoted this policy, and the main goal was another boost towards home ownership.

The provision of neighbourhood's services in the majority of these initiatives is an important strategy to increase living conditions. The presence of services in low-income and social housing neighbourhoods has always been a critical aspect. The services are not traditional public services, but private, public-private services developed responding complex needs.

Focusing on the initiatives of *Compagnia di San Paolo*, they result similar to the city's ones. Indeed, they constitute a complementary actor provider of housing solutions and funds to experimentations with social attributes. The funding of the *Compagnia di San Paolo*'s initiatives are obviously private, this bank foundation provides its own funds as ethical investor.

4. Conclusions

The numbers and types of social housing initiatives and plans are clearly not responding to housing needs of a metropolitan city of almost 1 million inhabitants. The plans and initiatives collected and presented in this paper have no ambition to substitute the traditional social housing policies. They can be read as particular

experiences and cases born from the lack of financial resources and the urgent local needs. Like in the European context, they interest particular housing demands and population's categories.
In the local context of Turin social housing's concept has been opened up and various types of interventions are part of housing public policies. The public authorities are taking care not only of the most vulnerable classes of the population, but also of different categories of people with housing needs. Indeed, the city public entities and its private not-for profit actors recognize the growing diversity of housing demand. The intent is adapting housing policies to social groups in housing hardship or at risk of housing deprivation. This feature can be identified also in the European context.
In the Italian context the traditional social housing policies were responding to housing needs of low-income groups of population. Nowadays the city intends promoting a "second generation" of housing policies promoting public-private partnerships, a better involvement of tenants, various forms of support for different housing needs. These are the main trends recognized also by CECODHAS (better definition of beneficiaries' categories). The main criticism to this policy is the attention to new forms of social vulnerability than to persistent situations of acute housing deprivation. The general answer is that the implementation of a plurality of housing policies seeks to respond to increasingly detailed and complex needs. Nevertheless, the attention shifts from the lower classes to the middle ones, with less financial resources but more ways to deal with complex issues.
In Turin a balanced relationship between public and private actors can be recognized: the Region, who promotes and finances policies and initiatives; the ethical investors, who became a complementary actor implementing these strategies together with the Municipality; and the not-for-profit sector, who manages specific projects. The private actors involvement is an important feature in this "generation" of policies, the social policies related to housing sector was dismantled and the market is the first reference for neo-liberalism. This is a common issue within Europe, although the focus on various types of financial mechanisms is not so experimented in the case studied. The reason could be that these financial mechanisms are mainly related to housing organizations (in Northern and Central Europe), their management expertise, and their strong role in each national context.
Other important feature of these practices is social mix as goal of housing initiatives. Set a minimum percentage of social housing in new development is an innovative planning obligation improving dwellings' number and promoting social mix. The same mechanism was set in UK and France. Furthermore, the social dimension of the majority of these initiatives reclaims an important link with integrated urban approach and urban governance issues. In this case, the parallelism with the European frame, which is recognized for the other trends and attributes, is less clear. In Turin there is a strong attention creating social relations and promoting integration in the neighbourhoods.
The differentiation of initiatives involves also their forms, they can be norms, rules, or plans, programs, or also initiatives, projects, measures. The change in the city's housing policies demonstrates the attempt to overcome the quantitative approach, moving towards a less aggregate representation of the demand. A relevant element in

this change of policies is the goal change: the supply of services to increase assistance's quality and its different forms. The environmental quality and sustainability criteria are also considered as relevant parameters defining new housing models and a better quality of life.
Furthermore, implementing the policies related to rent subsidies is a relevant dynamic part of a general diversification's frame. Rented housing is a traditional weak sector in Italy and Turin's initiative subsidies the tenant or the owner, better matching demand and supply. This initiative surpasses the city's dimension, other municipalities are involved in the process of matching demand and supply, dealing with housing issue on metropolitan level.

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CONTESTING NEOLIBERAL URBANISATION: CONTEMPORARY URBAN MOVEMENTS IN ISTANBUL

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Abstract

The shift from Keynesian to neo-liberal economic policies, which meant the deterioration of welfare state principles and increasing policies based on competitiveness, marked the changes in the urban agenda and the nature of urban movements in the last three decades. The neo-liberal urban agenda reinforced outstanding transformations on the development, management and planning of urban space, especially in metropolitan areas, including Istanbul. The urban transformation projects, functioning as main tools of neoliberal urban development, result in serious changes in this huge metropolitan area and encounter resistances from different groups of people in the city. Two types of urban movements can be defined; the first type is highly property based and shaped around individual issues and develop as reactions of deprived groups against the effects of the transformation on their own property. The second type of mobilisation, on the other hand, has been shaped as reactions of discontent groups to neoliberal urban policies. However, urban movements of the contemporary city, in particular those of the deprived groups, do not only oppose neoliberal urbanisation, but are increasingly shaped by them. The instruments of neoliberal urban transformation projects such as urban development as a means of wealth generation and redistribution, redefine the movements both in terms of content, based on defence of individual property rights and methods used based on negotiation with the relevant authorities. As a result, a fragmented variety of urban movements occur in the city, which are far from demanding a broader social, economic and cultural transformation.

1. Introduction

Neoliberalisation and market-oriented policies have been affecting the way urban areas develop and function for more than thirty years now. These policies, which prioritised the market mechanism in urban development, resulted in a rapid urban change, particularly in large metropolitan areas through urban transformation projects. In this era, the role of the planning institution has changed substantially, while the commodification of urban land along with land and property development projects has become a means of redistribution of wealth among different groups. The increasing inequalities and differences in the access of different groups to this newly

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generated wealth mobilised them under neoliberal rules and new modes of governance practices emerged.

The functioning of neoliberal urbanisation has austere reflections on urban space, its users, functioning and management, as one of the most profound impacts of neoliberalism is on built environment of cities. This manifests itself in an intense and rapid urban change, which reinforces the cities as places of conflict and tension. Neoliberal urbanisation as the consequence of neoliberal forms of urban policy, transforms the built environment and the urban form in its own way by eliminating or keeping the urban public spaces under intensified surveillance and creating new privatized spaces of elite/corporate consumption. It enforces the destruction of the degraded residential neighbourhoods of low-income groups who formerly constituted the traditional working-class, for speculative redevelopment and constructing large-scale mega projects to attract corporate investment reconfiguring the existing land-use patterns, creating gated communities, urban enclaves and other purified spaces (Brenner and Theodore, 2002). These changes in the urban space encounter resistances from groups of people in the city, which are either deprived of or discontent by them. Consequently, two main types of urban movements in contemporary cities develop; urban movements of the deprived and the urban movements of the discontent groups. The former are deprived by and mobilise against the above mentioned destruction in residential or mixed-use neighbourhoods for speculative redevelopment, which are realised generally by urban transformation projects. The latter on the other hand, mobilise generally against all kinds of neoliberal urban polices including urban transformation projects in residential areas as well as special projects as a part of broader investment attraction and place-marketing goals.

The aim of the paper is to discuss the dialectical relationship between neoliberal urbanisation and both types of mobilisations that unfold against it, building upon the literature on neoliberal urbanisation and urban movements and related experiences in Istanbul. The paper defines the characteristics of both, in terms of what they are actually struggling against, what they aim to get by opposition and what kinds of relationships they form within themselves and with the external actors. To this end, the dynamics of neoliberal urbanisation is examined in the second section of the paper, showing that neoliberal urbanisation reconfigures the way the urban built environment in a creatively destructive way, which lays the grounds for a different type of urban movements. The third section analyses how the neoliberal urbanisation shape the urban movements. The fourth section, based on findings from Istanbul, including those of various case studies, introduces urban movements of deprived groups developing in a more interest-based fashion, and of discontents acting against increasing penetration of neoliberal urbanisation into our everyday lives. Finally, the paper is concluded by arguing that urban movements do not react only against neoliberal urban policies, but they are increasingly shaped by them.

2. Dynamics of Neoliberal Urbanisation

Neoliberalism and neoliberal policies, as a response to the crisis of Fordist/Keynesian capitalism in the beginning of 1970s, have so far attempted to impose the market rules upon all aspects of social, political and economic life. Neoliberalism is also a restructuring strategy, having a creative destructive role on regulatory frameworks (Brenner and Theodore, 2002; Brenner and Theodore, 2005), one of which is the urban change and the urbanisation itself. In parallel, cities have become 'increasingly important geographical targets and institutional laboratories for a variety of neoliberal policy experiments...' such as place-marketing, urban development corporations, public-private partnerships, property re-development schemes and etc., the goal of which is to 'mobilize city space as an arena both for market-oriented economic growth and for elite consumption practices' (Brenner and Theodore, 2002). Today's urbanisation and concomitant urban development projects –referred to as 'urban transformation projects' throughout the paper- come to the fore as localised forms of neoliberal policies and perhaps the most evident intervention area of the neo-liberal agenda.

The different facets of neoliberal urbanism can be better understood by tracing the changes in built environment, which are connected to restructuring the urban economy, the changes in urban governance including planning institutions and practice.

Restructuring the urban economy and increasing importance of the services sector accompanied with the driving of the industry out of the city marks the current economy of the cities. Urban revitalisation is presented and promoted as an opportunity to change economic hierarchies and functions in the urban area, creating new jobs and empowering the city in urban division of labour (Swyngedouw, Mouleart, and Rodriguez, 2002). Parallel to this, the driving force of the global urban economy becomes the real-estate and construction sectors at the service of growing and changing demands of high-qualified workforce of the services sector. Thereby, an extensive part of the neoliberal policies are today made of urban policies, which boost the private sector, construction, finance and tourism sectors being the leading ones. These neoliberal policies aim to eliminate all kinds of barriers against the construction firms involved in the urban transformation projects, pass the needed laws and regulations as soon as possible, and change the zoning status of areas where previously no development was allowed to facilitate the operation of the construction sector.

Large-scale urban development schemes are one of the important features of neoliberal urbanisation, with the objective to turn the city into a global competitor in line with the aspirations of the elites. Parallel to globalisation and increasing mobility of capital, large-scale capital investments are oriented into cities usually in the form of large-scale property development projects, as a target for capital investors, instead of small-scale property developers as in the past. The production of urban rent as well as profitable economic activities is the central goal of these projects. They are implemented as a part of place marketing strategies by urban elites in search of economic growth and competitiveness. They usually take the form of meeting the

inner-city land demand for business or tourism centres, housing complexes for high or middle-high income groups or 'gentrification' projects in degraded areas of especially inner city, where rant has considerably decreased. They are legitimized through a neo-liberal discourse as the renewal of cities and revaluing the city by attributing new functions to areas, which have lost their functions. However, they are criticised for laying the ground for privatizing the already valuable public land, rather than revaluing it. Furthermore, urban land and property development through these projects also constitute a new type of income transfer mechanisms when implemented for redevelopment in degraded residential areas of the low income groups and have therefore, increasingly become means of wealth generation (Eraydin, 2012).

With regards to planning and policy procedures, these urban transformation projects, or urban development projects as used in western literature, are implemented as exceptionality measures, such as the freezing of conventional planning tools, bypassing statutory regulations and institutions, creation of project agencies with special powers of intervention and a change in national or regional regulations (Swyngedouw, et al, 2002). In this process, the zoning regulations of historical and archaeological sites, green areas and forest areas are changed and urban transformation projects proposing housing areas, hotels, shopping malls etc. are implemented by large-scale firms, usually as a part of public-private partnerships. In parallel, these areas have evacuated from their residents. Therefore, these projects accentuate socioeconomic polarisation through the working of real-estate markets that results in price rises and displacement of lower-income groups (Swyngedouw, *et al*, 2002). Furthermore, this type of project-based urban policy does not treat the neighbourhoods as a unity, which results in proliferation of self-contained and isolated islands in the city, created through special plans having special construction rights that are completely disconnected from the rest of the city. Consequently, 'urban islands and a patchwork of discrete spaces with increasingly sharp boundaries' in a physically and socially fragmented city are produced (Swyngedouw, *et al*, 2002).

Changing role of the planning institution enforcing the change in statutory planning is another outcome of neoliberal urbanisation. At this point, the planning institution is not totally displaced, since it still is the prerequisite of neoliberal urban development (Taşan-Kok, 2012), yet acquired new goals and tools incorporating more flexible intervention mechanisms. The above mentioned urban transformation projects come to the fore as important new tools of planning. Thus, it can be argued that it is now project-based urban planning, in which projects precede planning and the planner becomes the agent of neoliberal urbanisation. The process therefore of the planning as an institution going through is called 'neoliberalisation of planning', in which the planning process itself becomes not only 'more flexible and negotiable strategic one", but also a mere corrective mechanism, attempting to 'introduce changes without formulating an overall policy to regulate new development' (Taşan-Kok, 2012).

The new urban governance in this era supported neoliberal urbanisation, defined by Harvey (1989) as a change from managerialism to entrepreneurialism. Entrepreneurial forms of governance began to be adopted by local governments, as territorial competitiveness has become priority for them (Eraydin, 2012). Project based urban interventions brought together a more assertive and entrepreneurial style of urban governance, while formal government structures are subordinated to new institutions, which are highly autonomous organisations that compete with and even supersede local authorities as managers of urban renewal (Swyngedouw, *et al*, 2002). Especially after 1990s, neoliberalisation process itself has been subject to restructuring giving way to "emergent combination of neoliberal economic management and authoritarian state forms (Peck and Tickell, 2002). In practice, it has entailed a dramatic intensification of coercive, disciplinary forms of state intervention in order to impose the market rule in all aspects of social life (Brenner and Theodore, 2002). Furthermore, entrepreneurial forms of urban governance have a significant deficit in terms of accountability, transparency and representation. 'A system of representative urban government has been turned into stakeholder urban governance that is centred on newly established institutional arrangements, lacking formalized mechanisms of representation' (Swyngedouw, et al, 2002). Important decisions are made in closed and mostly elite circles including government representatives, excluding the urban citizens. Local authorities gained a more proactive role, playing the role of an enabler, client or partner.

In sum, neoliberalism creates its own city, by causing dramatic changes in the way urban built environment is planned and managed, tough without making the state institutions and its instruments obsolete, but reconfiguring them. This situation nurtures and defines the oppositions against itself, which constitutes the subject of the paper.

3. Urban Movements Shaped by Neoliberal Urbanisation

Urban oppositions and mobilisation processes of different social groups against urban policies in general or their outcomes are defined as urban movements. In more precise words, they are 'processes of purposive social mobilization, organized as in a given territory, oriented towards urban related-goals' (Castells, 1997:60). From 1980s onwards, as the neoliberal paradigm began to dominate, a transformation occurred in the way urban movements develop. As the surrounding context changed and issues like ethnicity, gender and local autonomy came to the fore, urban movements began to develop less as parts of broader class-struggles. Today, they are not necessarily or essentially class-based; class cleavages have long not been the motivation factor behind urban movements. In parallel, non-class factors such as identity defined in cultural autonomy, gender and ethnicity are among the motivational elements. Secondly, and more recently, they moved even more away from its conflictual character to co-operation and consensus seeking with different stakeholders and the government. Thirdly, before 1980, urban social movements were much more homogenous, involving social interests groups, namely social NGOs. However, from late 1980s onwards and in 1990s, 'the social composition and

the political orientation of the urban movement milieu have become increasingly heterogeneous, manifesting more and more polarizations, cleavage and also forms of implosion' (Mayer, 2006a, p.138). They get fragmented and gained heterogeneity in terms of social composition and political orientation parallel to the erosion of Welfare state and rise of neoliberal policies instead. Neoliberalisation has changed people's motivations in such a way that no broad-based or strong grassroots contestation occurs. The project-based urban restructuring policies 'prevent these movements from transcending the localized issues associated with a project's implementation' (Swyngedouw, *et al*, 2002, p.574), since project-based urban development appears 'too divisive for the local populace to provide a basis for widespread collective mobilisation" (Loopmans and Dirckx, 2012, p.112).

The urban restructuring boosted by neoliberalism resulted in further changes in urban movements. Urban transformation projects aiming at and successfully result in the increasing values of urban land and property, induced 'urban movements' as reactions directed towards this transformation and the consequent uneven distribution of the benefits. However, it also gave rise to a dualism in urban movements. Accordingly, building upon Castells' (1977, 1983, 1996) and Mayer's (2000, 2003, 2006b) frameworks and employing Marcuse's (2009) analysis distinguishing the demands of those deprived of certain basic material and legal rights and those who are discontent with life, two main types of urban movements can be defined; movements whose main mobilisation factor is deprivation and movements whose main mobilisation factor is discontent. First type of movements is those who mobilise against the effects of urban transformation projects on their own property or land and the unequal distribution of the newly generated rent increase. They arise out of dissatisfaction and a sense of deprivation out of the functioning of urban property markets. They are therefore built more around individual-property based concerns. The second type of urban movements has more transcendental goals. These are movements whose main motivation is some kind of discontent with the spatial developments in neoliberal urbanization. The characteristics of each type of movements will be elaborated in the next sections based on Istanbul case.

4. Neoliberal Urban Development in Istanbul

As discussed in the preceding section, cities are today perhaps the most evident intervention area of the neo-liberal agenda. The rapid urban change, particularly in large metropolitan areas, which has begun earlier in advanced capitalist countries and sprawled later to the peripheral ones, comes into being through urban transformation projects. Accordingly, what is experienced in the new neo-liberal era is a project-based urban development. A project-based approach in urban development has also begun to dominate the current urban planning practices of Turkey (Eraydin, 2012), Istanbul being the paramount area of its exercise.

In Turkey, urban transformation process has gained momentum in 2000s. It started with the excuse of protecting the old settlements and cultural heritage areas and reached its current state by projects introduced in almost all metropolitan areas of

Turkey. One reason for this rapidly gained momentum is the high demand for urban land bringing pressure on the low amount of publicly owned urban land. In most Turkish metropolitan cities, pressure on land is so dramatic due to very high population and economic growth rates, that urban transformation projects proliferated. The legal amendments for the empowerment of the authority of the public institutions including municipalities and Turkish Housing Development Agency (HDA) as important actors of such projects, has been predominant in the urban transformation process. It gives the relevant public authorities the rights to planning, making expropriation and implementation and leaves the rest to negotiation and bargaining.

The effects of urban development through neoliberal transformation projects are particularly intensive in Istanbul due to its high rates of economic and population growth as well increasing global functions. Since the 1980s, the importance of the global economic functions in the economy of Istanbul increased substantially, supported by the increasing flow of foreign investment. Its large economic hinterland and its proximity to the European market strengthened the role of Istanbul as a city that can host some global functions. Several studies (Beaverstock, et al., 2000; Taylor and Walker, 2001; Taylor, 2001 and 2003; Beaverstock, et. al., 1999) indicated that Istanbul takes place within the second tier 'important centres' in certain global functions and in the third tier of global cities. In the study by Taylor (2003), Istanbul took the 7th place in finance and banking sector and 14th place in services sector among the European cities. This role is accelerated by the increasing inward foreign investment, especially after Turkey became an accession country to the European Union.

Increasing competitive advantages and attraction of Istanbul for global market players prevail, similar to the other metropolitan areas of the Central Eastern European countries. The increasing attractiveness of Istanbul both for foreign and domestic firms as well as migrants both from rest of the country and abroad increased the pressure on the different levels of the metropolitan government, which have rights to plan and approve[3]. This induced further changes in the legislation on planning, housing and urban land market and enabled the different central government institutions to have power to shape metropolitan development[4]. This changes stimulated the increasing interest of central government becoming a main decison maker on certain parts of the Istanbul metropolitan area, via the activities of Privatisation Agency and HDA, which are functioning under Primeministry. Moreover, Turkish Maritime Enterprises, General Directorate of State Railways,

[3] Metropolitan Municipalities (1/25000 and 1/5000) and district municipalities (1/1000) have rights to plan, which approved by Metropolitan Municipal Councils and District Municipal Councils respectively.

[4] New laws were adopted to create new mechanisms to transfer major spending powers to Special Provincial Administrations, Metropolitan Municipalities and other Municipalities and redefined the roles for metropolitan governments in the provision of services. The new legislation that was adopted in 2005 also increased the financial resources of local governments, especially in Istanbul and introduced participatory processes, which should be evaluated as a first step towards the participation of the different social groups.

State Railways, Harbours and Aiports Construction began to act as entrepreneurs to transfer the ownership rights of their existing facilities.

Therefore, beginning from the 2000s onwards Istanbul became a playfield of different actors that have different interests. The new entrepreneurial urban land regime and struggles around property and collective consumption which translate into territorial projects leading to different governance practices. The urban transformation projects in Istanbul can be grouped into two. First group is territorially-based urban transformation projects, which are named as 'urban renewal projects' in planning terminology that are implemented in a certain territory for new housing and additional urban services, which lead to gentrification of these areas. Second is projects developed as a part of broader policies for global competitiveness and place-marketing. They are in the form of 'special projects' which may be territorially-based or urban infrastructure projects. These projects are distributed all over Istanbul metropolitan area and their high quantity, which is not even exactly known by the authorities of Metropolitan Municipality, indicates the dominance of entrepreneurial urban land regime in Istanbul. The most prominent examples that draw media attraction and trigger opposition are described below and mapped in Figure 1.

4.1 Terrorially-based Urban Transformation Projects

There is a long list of territorially-based urban transformation projects in Istanbul that are mostly related to housing, but also to provision of cultural and touristic facilities. As neoliberalism, began to penetrate into the areas where low income groups settled after 1990s, Turkey's and especially Istanbul's urban development got its share from this trend, though at a later stage. The illegally developed areas as well as the low quality deprived historical neighbourhoods began to be new attraction points of such transformation projects, a result of a set of concerns related to crime, welfare dependency and social breakdown; also for rent generation through revaluing the urban land and wealth transfer. Therefore, the primary method for urban transformation in Istanbul became 'urban renewal', which is in essence a complete pulling down of the existing building stock and reconstruction. This is particularly implemented in 'gecekondu'[5] areas. In the course of these urban renewal projects, as in most of the Turkish cities, many of such gecekondu neighbourhoods are being evicted for developing luxury housing, tourism, trade and etc. Units of apartments to be constructed during the course of the transformation projects are assigned to land owners[6], in return of their land/property by HDA (Eraydin, 2012), which is a public agency established for housing supply for low- and medium-income groups. The remaining apartment units are sold in the market, primarily to those who do not own a housing unit in the same city.

[5] The term *gecekondu* derives from the Turkish words "gece", meaning "night" and "kondu" – meaning "placed" or "landed" (infinitive: konmak) and can thus be translated as "placed overnight".

[6] They are generally former squatters of public land, emigrated from rural areas of the country, but later acquired their title deeds after certain of laws in 1984 and 1985 allowed up to four-storey buildings on such land.

The user profile is aimed to be completely changed in these areas through increase in rents. These renewals are legitimized by highlighting two aspects; first, these areas are informally built on public land and existing property rights are unjustly acquired, and second, they have become criminalized. On the other hand, in neighbourhoods of cultural and historical value, which have a more mixed usage rather than only residential, the transformation project meant gentrification in order to create vivid areas for touristic, commercial and cultural activities.

There are said to be more than a hundred such urban transformation areas (neighbourhoods) in Istanbul, some of which are Gülsuyu-Gülensu, Başıbüyük, Tarlabaşı, Sulukule, Bağcılar, Derbent, Aydınlı, Fikirtepe, Tozkoparan, Fener-Balat-Ayvansaray and etc. Some of these projects are implemented in areas of cultural and historical value, such as Sulukule, Tarlabaşı and Fener-Balat-Avansaray. The opposition and collective action that arises as a response to these projects form mainly the 'urban movements of the deprived' in Istanbul. However, 'urban movements of the discontent' also mobilise against these projects at least as external actors in the case of pure residential areas, or as main actors in areas having historical and cultural value.

In most of these urban renewal projects, HDA, the Metropolitan Municipality and the District Municipality as well as the construction firm are engaged in. HDA is a critical actor in these projects for it has the power to execute the projects as well as to revise planning and zoning regulations in 'transformation' zones. Using these powers, HDA can intervene in any area it deems distressed or obsolete, evict the residents to its public housing and regenerate and market the area to economically more powerful customers. Together with the municipality, HDA also negotiates with land/property owners residing in the area, on property rights they will acquire at the end of the project. In this sense, it became a rival against the old small-scale real estate developers that had long established their hegemony in the city (Erder, 2009).

4.2 Projects for Global Competitiveness: Prestige and Urban Infrastructure Projects

One of the new types of entrepreneurial governance relations in Istanbul have been shaped by projects 'towards competitive regionalism' which characterises entrepreneurial mode of governance in urban land and property markets. Special projects such as Haydarpaşa Redevelopment Project, project for the demolishment of a theatre building named "Emek" in Beyoğlu for reconstruction, Beyoğlu Demirören Shopping Mall Construction, the so-called 'crazy project' that envisages a huge canal that would run parallel to the Bosphorus Strait and Taksim Project (Pedestrianisaiton of Taksim Area) show how different sites in the urban areas became the core of interest of different groups. Especially the ones developed under the privatisation schemes stimulated open and formal negotiations between public and private parties, which resulted in both collaboration and conflict among the existing and new actors of the urban land and property markets. However, the collaborative relations denote

only one part of the relations due to the change in how central and local governments perceived urban areas. This also led to conflicts among public institutions, namely central government departments, metropolitan municipalities and district municipalities. Thereby, Istanbul became a playfield of power struggles between central and local governments. Different ministries wanted to use their legal rights and to intervene in a number of policy areas, especially in infrastructure and land use development, sometimes contrary to the interests of Metropolitan Municipality. Haydarpasa Redevelopment Project, where the Ministry of Public Works wanted to regenerate the existing harbour and very large areas at the back of it for a commercial property development project is one of the examples of conflicting interests. Other prominent examples of urban infrastructure projects on the other hand are, a 3rd Bridge over the real Bosphorus, Haliç Metro Bridge Project, and Bosphorus Highway Tube Tunnel Project for enabling vehicle traffic under Bosphorus.

The contestations and collective action against these projects are usually carried out by discontent groups.

5. Opposition, Resistance and Mobilisations against Neoliberal Policies and Practice: Contemporary Urban Movements in Istanbul

There is an increasing number of research made on urban development in Istanbul, ranging from studies gecekondu and the urban poor focusing on the changing meaning of gecekondu after 1980s and changes in the position of and perception about gecekondu population in the city (Erder 1996, 2009; Erman, 2001; Erkan 2009; Senyapili, 2004; Isik and Pinarcioglu, 2001; Altinok and Enlil, 2008; Pinarcioglu and Isik, 2008), to more recently emerging studies of urban restructuring in the city under neoliberal policies with a view to its socioeconomical and spatial outcomes (Genis, 2007; Eraydın, 2008; Ercan, 2010; Gunay, 2010; Dincer, 2011; Enlil, 2011; Eraydin, 2011; Lovering and Turkmen, 2011; Oktem, 2011; Ozus, Turk and Dokmeci, 2011; Turkun, 2011; Aksoy, 2012). There is on the other hand limited research on grassroots resistances against this restructuring. They generally focus on the deprived groups and usually take a supportive stance towards their struggle (Ozdemir, 2005; Bozkulak, 2005; Celik, 2008; Kuyucu and Unsal, 2010).

In the following, urban opposition and mobilisations in Istanbul are tried to be described and analysed as regards to the movements of both the deprived and the discontent, also referring to the findings of certain case studies. The information used to make the analysis is gathered through textual analysis including researches, reports, and media resources; interviewing the activists of each type of movements as well as municipality staff; attending the meetings of urban movement fractions and following their activities through e-mails by being a member of their e-mail group. In this respect, three meetings were attended, which are a two-day meeting of activists, residents and professionals from different movements named 'Urban Movements Forum' held on 26-27 June 2010, two half-day workshops on urban development and urban opposition organised during 6th World Social Forum held in Istanbul on 1-4 July 2010 and a one-day meeting with the participation of deprived groups from

mainly gecekondu areas of Ankara as well as representatives from Istanbul under the title 'Sheltering Rights Congress' held on 11th of December 2011. Interviews were made with one architect/city planner from Chamber of Architects Istanbul Branch on

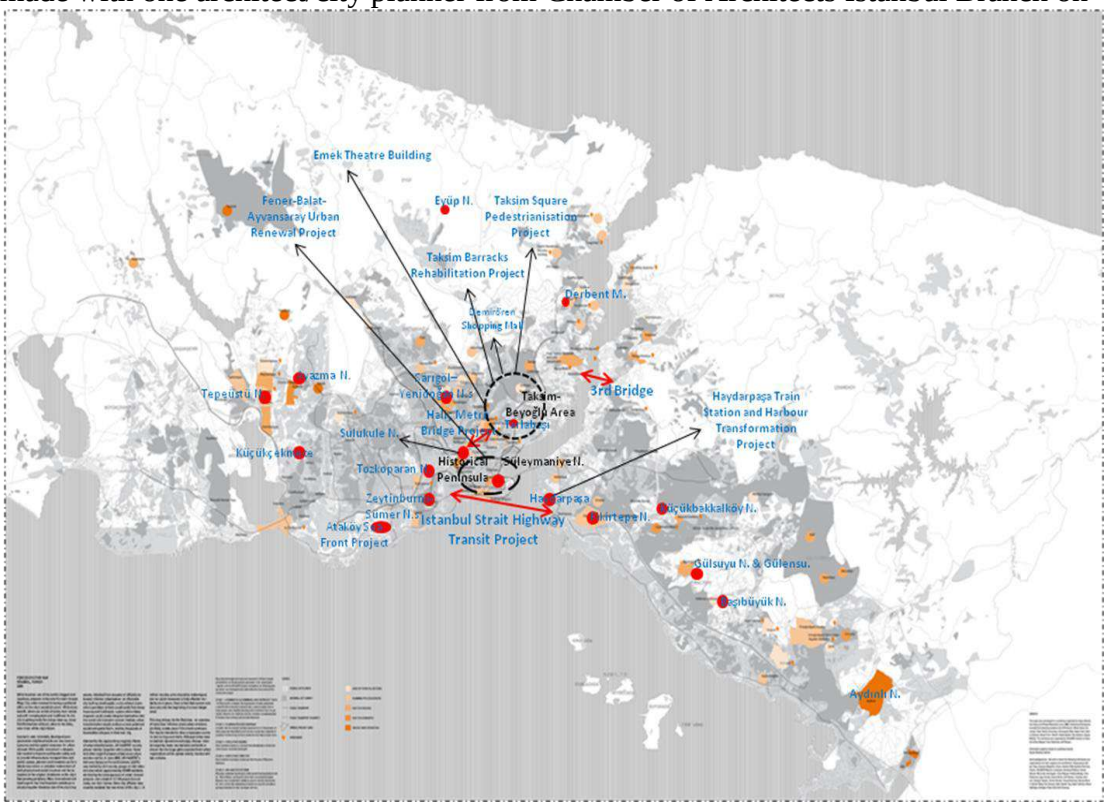

Figure 1. Map of Main Urban Transformation Projects in Istanbul

10th of November 2010, a resident and an activist from Gülsuyu-Gülensu neighbourhoods on 31st of March 2012, a private architect acting as a voluntary supporter of the movements of the deprived and two urban planners from Maltepe District Municipality on 23rd of April 2012. During the course of the Urban Movements Forum, an 'urban movements forum e-mail group' was set up to exchange information and opinions with the members and to carry on more frequent discussions. Soon after its first large meeting mentioned above, this forum began to organise more regular meetings in smaller groups and shared and even continued the discussions made during these meetings via e-mails. As a member of the e-mail group, all these discussions and information shared could be followed.

The two year work following the urban movements summarised above enables us to scrutinize the two main urban movement categories and their subcategories based on Istanbul case.

5.1 Urban Movements of the Deprived

Urban transformation projects in Istanbul generally result in the destruction for speculative redevelopment of the degraded, mainly old working-class

neighbourhoods or neighbourhoods of degradation with cultural and historical assets in basically inner-city areas. Before elaborating on this category, it should be noted that, urban transformation projects do not necessarily give rise to mobilisations. In fact, mobilisations against projects develop as exceptions. Reactions of certain disadvantaged groups have been stabilized through the urban land and property regime, by which low quality or informal hosing is transformed into new housing units, especially through HDA and new property rights in the form of apartment units are assigned to land owners in return of their existing land or property. Many of the residents are satisfied through such wealth transfers by rent generation, functioning as a new means of income redistribution. As a result, many of the residents in gecekondu areas move out, having their share from the urban rent and do not get in any contentious action.

A major type of urban movements in Istanbul are mobilised by social groups who are unsatisfied with the aforementioned wealth transfer and thereby find themselves in a deprived position as a result of the neoliberal urban transformation projects. The movements reacting against these projects generally struggle against the negative effects of the urban transformation on their own property or land, and try to reverse these effects as much as they can. As shown in Table 1, two sub-categories of such movements develop.

First sub-category, movements against projects implemented in degraded residential areas of low-income groups, is the predominant type in Istanbul. Such movements develop when the residents are unsatisfied with the compensation they get out of the rent generated by the transformation project based on their existing property rights, or get no share at all as in the case of tenants and squatters. They spend most of their resources for counteracting this deprivation; claiming 'right to the city' usually remains as a discourse, rather than a motivation factor behind concrete actions. It is even perceived as a romantic slogan within the movements whose target is their own neighbourhood, rather than the whole city (Turkmen, 2011). Accordingly, these movements develop around individual property motives and effects of the projects on the exchange value of the land or property possessed or used by the residents. Moreover, as Kuyucu and Unsal (2010) showed in their study on Başıbüyük and Tarlabaşı in Istanbul, this appetite for personal gain weaken the movements turning them into bargaining processes resulting in more residents agreeing with the offer of the project. In this, these movements do not aim at a broader socio-cultural transformation, although they stem from traditionally working-class areas. As an activist from Gülsuyu-Gülensu neighbourhood stated, they are not against urban transformation – which might have negative effects on the built environment as a whole-, but they just claim their rights. In other words, they oppose their dispossession and demand their share out of the newly generated wealth through rent increase, or at least a 'fair distribution'. In this, satisfaction of material/ economic demands becomes their priority.

Parallel to developing around individual property rights, what movements also resist in is displacement and dispossession as shown by Kuyucu and Unsal (2010).

Residents who do not agree on their property rights given by the transformation project or those who have no rights at all are forced by the municipality, mostly by police force as well, to evict their homes, which is called 'forced evictions'. Moreover, as these projects usually have no social or economic programmes for the residents, they result in some kind of a social exclusion (Kuyucu and Unsal, 2010). Moreover, exclusion from decision making (especially in the processes while the neighbourhood was declared as urban renewal area) as a concern of the residents is another aspect of these movements, as stated by an activist in Gülsuyu-Gülensu neighbourhood and by an urban planner working for a district municipality, since exclusion may result in more dispossession. As claimed by Erder (2009), such exclusion can also hinder the formation of opposition as people are not sufficiently informed about their rights.

The actors of the these movements are mainly residents (property owners and tenants) and supporters as external actors like academics, students, professionals and their organisations, platforms bringing together these different actors. Academics from especially Istanbul Technical University, Mimar Sinan Fine Arts University and Yıldız Technical University, students, professionals such city planners, architects and lawyers, and their organisations like Chamber of City Planners, Chambers of Architects and platforms of different actors are involved in the movements as external actors. They basically provide technical and logistical support to these movements and help them in communicating with different movements of the deprived in the city. Moreover, as discussions in meetings and e-mails among neighbourhood residents and external actors show, the latter encourage the neighbourhoods to unite and act together, claim their sheltering rights as a basic human right and contest their exclusion in decision making regarding the redevelopment in their area. For example, a group of academics together with volunteer professionals work together with the residents of Gülsuyu and Gülensu neighbourhoods and support them in their negotiations with the district municipality which is responsible for and intends to soon start the preparation of 1/1000 implementation plan of the area. In addition, academics and students of Mimar Sinan Fine Arts University City and Regional Planning Department carried out a workshop with the residents, called 'Solidarity Workshop' ('Dayanışmacı Atöyle') to prepare an alternative plan for the neighbourhood as stated by the activist in the area and the private architect. By this way, these external actors aim to somehow bring the 'right to the city' into the agendas of these movements, which is characterised as a more proactive involvement as opposed to the reactive actions of the residents of the neighbourhoods (Turkmen, 2011).

As discussed intensely in meetings and e-mail discussions, there are three types of oppositional ways of action movements under this sub-category apply to; institutional, legal and street struggle. As a part of their institutional struggle, which is the dominant one, they usually adopt negotiational tactics with the municipalities, relevant public agencies and businesses that take part in the project, by sitting around the same table and bargaining on their returns from the redevelopment, with the help of the external actors, particularly at the stage of assignment of new property rights.

They are engaged in this institutional struggle through their neighbourhood associations bargaining with the municipality. These are newly established associations or remobilised existing ones, aiming to defend the residents' rights in front of municipalities, public agencies or businesses involved in the urban transformation. In almost all such project areas, an association is established by volunteer residents, as the driving force of the movement; Başıbüyük, Derbent, Tarlabaşı, Gülsuyu-Gülensu, Tozkoparan being examples. Legal struggle is on the other hand carried out through grating petitions or taking the case to the court. The bargaining process between the association and the municipalities are so determining that Aksoy defines this in her analysis of recent urban trends in Istanbul as the reduction of citizenship into a bargaining process (Aksoy, 2012).

Legal struggle is usually applied to, when the residents are totally unsatisfied with the plan/project in general or what is offered by it. For example in Gülsuyu- Gülensu neighbourhoods, 6500 petitions were given against the master plan including the neighbourhood. Against the 2004 'Urban Renewal Plan', 4.600 signatures were collected and the plan was sued twice. But they did not produce any result. As for the street struggle, demonstrations and building barricades to impede the intervention of police are among the actions. In meetings participated, the residents of most of the project areas as well as external actors claimed that they did not deny the need for legal struggle, but contended that street struggle was inevitable for them to protect their houses. Legal struggle is also sometimes criticized for not being sufficiently representative with regard to the respective neighbourhood as a whole. Moreover, as discussed in such meetings, legal struggle is considered to be possibly difficult, whereas street struggle is always there as an option to be utilized. In general, movements use a mixture of these different struggle methods, including more innovative ones. In Ayazma for example, as a response to demolishment and evictions, 18 families who had no property rights began to keep guard in front of the Municipality and remained there more than 35 weeks. They also established Ayazma Mağdurları Derneği (Associaiton of the Deprived People of Ayazma) and carried on their struggle with the help of different external actors, mainly the The Assocaition named '1 Umut. 1 Umut, together with the association, organised a solidarity day with the families of Ayazma with the participation of different activists who are member of fractions of urban movements, prepared a letter in English for international support and an 'anti-commercial' video as opposed to the famous commercial of Ali Ağaoğlu on the transformation project in the area. They also organised evening meals during Ramadan with the families to show their support.

On the other hand, there may be certain tensions among the adherents of these movements. Since the movements under this sub-category are area-based, there are residents with different priorities, anticipations and at times conflicts among themselves. Accordingly, one type of adherents is property or land/property owners in areas where urban transformation has began or will begin; another is those with no property rights who are actually under most severe risk in similar areas. The former here tend to behave more with individual property based interests and thereby form the core of the movements of the deprived. The latter on the other hand are usually

offered subsidized houses by HDA, which they rarely can afford. This situation results in segregation between the property owners and the tenants during the mobilisation (Turkmen, 2011). Moreover, as argued by Kuyucu and Unsal, the tenure structure may become the most important determinant of the form and the strength of the resistance; as formal property owners, contrary to tenants and occupiers, tend to finally agree with the offer of the municipality pursuing their individual interests. There are even reported cases of serious tensions between those who agree with the offer and agree to evacuate their houses and those who are not satisfied. For example in Derbent, 14 activists were taken under custody for death threat against residents who agree with the municipality (Bianet, 2012). Moreover, the activist from Gülsuyu-Gülensu has stated during the interview, that there have been certain divergences in the neighbourhood due to ideological reasons. Groups with radical leftist ideologies did not want to act with the rest and left the movement accusing them of negotiating with the system.

Second sub-category is movements that mobilise against urban renewal in mixed-use areas having historical and cultural values. These are generally inner-city areas such as Sulukule, Tarlabaşı and Fener-Balat-Ayvansaray, where rents and demand for extra land have risen too high. They are surrounded by more prestigious areas specialised in business, touristic and commercial facilities. These movements are highly similar to the first sub-category as shown in Table 1, and they go through very similar processes. However, as these movements mobilise in areas with cultural diversity and historical buildings, collective interests against the loss of quality of space as well as cultural and historical values gain importance. Thus, the movements under the second sub-category defend also certain collective rights and use value against exchange value, though to a lesser extent. Moreover, the projects contested by these movements attract more attention from the urban 'elites' such as academicians, politicians, NGOS and the media as argued by Erder (2009). In parallel, the above mentioned external actors become the internal actors of these movements making them relatively more effective. For example in Sulukule Platform or Fener-Balat-Ayvansaray Association, many activists act as residents of the area in street struggle and legal struggle, right reports, make interviews with the media as a part of the movement. There are also channels for alternative planning, though in a weak form. 'Illimitable Autonomous Planers' initiative is an example for this, who has prepared an alternative plan for Sulukule, in 'Sulukule worshop' in cooperation the community (Sulukule Blogspot, 2008). This also helps them gain even more media and public attention and support. However, they are still regarded as individual property based, since the determining motivational factor is deprivation based on property rights. Therefore, they are similar to first category in all other aspects.

In sum, the movements under this category are mainly concerned with what they are offered in return for their property or land for redevelopment; in other words with their individual property rights and its exchange value rather than use value. Thus, it can be argued that they mobilise and are engaged in collective action based on more individual interest-based concerns and less on collective ones. As a result, and also

because they are territorially-based stemming from distinct areas of the city, they develop as various weak components of urban movements in the city, without becoming a mass movement. In this, they demonstrate that neoliberal urbanisation today shapes its opposition based on its own rules and accordingly, it redefines the agendas and ways of action used by urban movements in line with its own rules. Thus, urban movements are now reconfigured by what they actually oppose, namely the system itself.

5.2 Urban Movements of the Discontent

Whatever changes are brought by neoliberal urbanisation, political action and oppositions are still significant. Thereby, urban movements with more transcendental goals and ideological backgrounds also develop. These are urban movements whose main motivation is some kind of discontent or dissatisfaction with the spatial developments in neoliberal urbanization. Three widely different sub-categories of this category can be observed in Istanbul.

First sub-category is the movements opposing, based on specific cases, the unjust rent generation on urban land, at the expense of alienation and impoverishment of the urban residents in general. Non-material demands are more prominent in their agenda compared to the movements of the deprived. They feel a need to reclaim and redefine the public space as both a dimension of democratic participation and a field for use. They can be defined as marginal movements against loss of urban values and assets. In these movements; academics, students, lawyers, professionals and their organisations such as professional chambers, community based organisations and platforms bringing together these different actors take part. As mentioned above, these actors may constitute external actors for the movements of the deprived, in terms of providing technical expertise and logistical support or even active participation in their actions. These discontent movements are at times so heavily engaged with the problems of the deprived that they can even be regarded as by-product of the movements of the deprived.

On the other hand, movements under this sub-category may also engage in solely generic issues. For example, against 3rd Bridge project, a platform named ‘Life Platform Instead of the 3rd Bridge’ is organised by a group of volunteers. According to their own blog, the Platform gave out a notice in front of the General Directorate of Highways against the project on the same date as the tendering process began There are also ad-hoc platforms where different neighbourhood associations can come together such as ‘Beyoğlu Platform of Neighbourhood Associations’. IMECE, as an organisation mostly of urban planners, also acts in this sphere by carrying out studies and organizes events to promote ‘a more social approach to urbanism in Turkey that goes beyond marketism and narrow professionalism’ according to the information give at their web site. They produce reports and organize meetings to inform and support the struggle of urban movements.

There are other initiatives like, 'Istanbul S.O.S' and Social Rights Association, who work on different issues, but on similar terms in that they all mobilise against issue-based projects and support neighbourhoods in their struggle against urban transformation projects. However, there is no established cooperation among these different fractions; not even between neighbourhood organisations as stated by two interviewed people -one from Chamber of Architects and the other from Gülsuyu-Gülensu neighbourhood- as well as during meetings organised/participated by movements. There is no unified movement, but movement fractions for both categories of movements. Therefore, the urban movements of the discontent are at the stage of asking questions of what organisational practices they should develop, and what kinds of real relations they should build in between the different fragments. In last couple of years, they have managed to come under an Urban Movements Forum and hold meetings where they discuss urgent matter as regards to neighbourhoods or broader issues like a mass demonstration on 1st of May. However, they are still far from constituting a broad-based urban movement that can bring a change, as they also admit.

The last two sub-categories of movements of the discontent are minor and weak movements in Istanbul. *Second sub-category* is the movement led by elite middle or upper-middle classes who are not content with the redevelopment in their neighbourhoods for it worsens living conditions and they were not involved in decision-making. These movements are in fact built around collective interests, which are confined to the well-being of the community only, but not the whole city. They correspond to the elitist and defensive movements in the West, the so-called NIMBYs in Mayer's terms (Mayer, 2003). They are generally mobilised by loss of quality in their own neighbourhood and consequent worsening of living conditions, an unwanted development in the area that affects their quality of life or lack of decision making regarding the development in the area. The actors of these movements are usually middle or upper-middle class citizens and neighbourhood associations they have established. Mobilisations against the planned redevelopment in Ataköy coastal area is an example in Istanbul for this sub-category. *The third sub-category* is conservative individual property based movements of mainly those who are dissatisfied with the rent generated in the area and struggle for more rent-generating urban development. They support the redevelopment projects that will increase the value of private. In this, they are built around individual interests, seeking to extract the maximum profit from the newly generated urban rent out of redevelopment. The movement in Beyoğlu initiated by The Beyoğlu Beautification Association including the private entrepreneurs in the area is an example of this sub-category in Istanbul (Erman and Coskun-Yildar, 2007).

6. Conclusion

The already week redistribution mechanisms in Turkey coupled with the increasingly depriving functioning of the neo-liberal policies, the uneven distribution of the property rights that have been increased or produced by urban transformation projects constitute the main motivational factor behind the urban movements in

Istanbul. Other possible motivational factors such as identity and claims for democracy and local political autonomy are not neglected, but come out as concerns in the lifespan of the movement. They feed and enrich the movement, but do not trigger it.

Table 1. Categories of Movements

Movement		Fields of conflict	Actors involved	Type of interest	Type of right defended	Action type	Type of Project and Examples
MOVEMENTS OF THE DEPRIVED	a	- insufficient compensation of existing property rights - preservation of individual property motives - displacement - exclusion from decision making	- neighbourhood organisations - residents - external actors: academics, students, professionals and their organisations like chambers of planners / architects - platforms of different actors	- individual (Individual gains are the primary goal.)	- individual property rights (to utilize the exchange value of the property / land) - right to housing / sheltering (in cases where the property is used for use value only)	- negotiation and bargaining - opposition	Urban Renewal in lower income residential areas l(Gülsuyu-Gülensu, Başıbüyük, Derbent, Ayazma, etc.)
	b	- insufficient compensation of existing property rights - preservation of individual property motives - displacement - loss of quality of space - exclusion from decision making	- neighbourhood organisations - residents - academics, students, professionals and their organisations like chambers of planners / architects - platforms of different actors	- individual (Individual gains are the primary goal.) - collective (against loss of quality of space)	- individual property rights and right to housing - right to housing / sheltering (in cases where the property is used for use value only) - collective rights	- negotiation and bargaining - opposition	Urban Renewal in sites or neighbourhoods of degradation in basically inner-city areas (Tarlabaşı, Sulukule, Fener-Balat-Ayvansaray).

Movement		Fields of conflict	Actors involved	Type of interest	Type of right defended	Action type	Type of Project and Examples
MOVEMENTS OF THE DISCONTENT	**a**	- lack of participation in decision making - loss of quality of space	- academics and students - professional organisations like chambers of planners / architects - platforms of different actors - neighbourhood associations and local activists	- collective (and social in broader terms)	- city-wide collective consumption rights, 'right to the city'	- opposition	Special projects (Emek Theatre Building, Beyoğlu Demirören AVM, Haydarpaşa Redevelopment Project, etc.); Urban infrastructure projects (3rd Bridge, Haliç Metro Bridge Project, Istanbul Strait Highway Transit Project, etc.)
	b	- worsening living conditions - unwanted development in the area - lack of participation in decision making	- neighbourhood associations, - planners, architects and lawyers), - their organisations like Chamber of City Planners, and Chambers of Architects	- collective (confined to the community affected)	- collective consumption rights within the community (use value is the primary concern)	-opposition - cooperative (but not as a part of movement activities)	Urban Renewal Projects in middle income residential areas (Ataköy District, etc.)
	c	- maximisation of individual property rights	- neighbourhood associations including private entrepreneurs	- individual (Extraction of maximum profit from urban land rent is the primary goal.)	- individual property rights (to utilize the exchange value of their property is the concern).	-cooperation	Any rent increasing urban redevelopment (Beyoğlu Association, etc.)

As different cases from Istanbul illustrates and the theoretical review in the previous section have informed us, urban movements of the contemporary neoliberal urbanisation do not mobilise based on class-based factors, function less on antagonistic terms and can negotiate with business and public agencies, and do not constitute a homogenous entity, but are highly fragmented. Furthermore, especially in the last decade, they have become increasingly based on individual interests and begin to mobilise as a reaction to neoliberal policies' negative effects on the adherents' own property or land.

The movements of the deprived groups demonstrate this change towards mobilisation out of interest based motivations. As regards to these type of movements, which is the predominant and most vivid type in today's cities, residents do not react against transformation provided that they are satisfied with what is given to them as mentioned earlier. As a consequence, no movement occurs when there is no interest to rest it upon. However, neoliberal urbanisation creates its own kind of movement. Researches made in poor areas of urban transformation projects and interviews made with key actors by the authors themselves demonstrate that, reactions and collective action start when the residents are not satisfied with their share in the rent to be generated, having quite individualistic and interest-based concerns as discussed in the preceding. When they feel they get an unfair share from the rent that is to be generated by the project based on their already acquired property rights, and think that their property rights are seriously violated, they get engaged in collective action.

The movements of discontent groups on the other hand demonstrate that the fragmentation trend in movements still prevails and even in an aggravated fashion under neoliberal urbanisation. Since, neoliberal state is hostile towards any kind of social mobilisation and solidarity that will hinder the capital accumulation; individuals tend to build weak associations rather than broader collective institutions such as the trade-unions of the past. The end result is even more fragmented urban movements without a collective mobilisation of power. A fragmented variety of urban movement fractions that fall under either or each one of these categories appear, who are not tightly coupled and have weak connections with each other. Therefore, one cannot talk, at least for now, about the existence of a broad social movement in Turkey, not even in Istanbul Metropolitan Region. Accordingly, spatial changes brought by these movements are minimal. In other words, they are far from reshaping 'the city in a different image from that put forward by the developers, who are backed by finance, corporate capital and an increasingly entrepreneurially minded local state apparatus' (Harvey, 2008).

In conclusion, neoliberal urbanisation today redefines the opposition against itself via its own instruments like urban development as a means of income distribution. It moreover defines their content based on defence of individual property rights. Even if it retreats at some points as a result of the negotiation and bargaining mechanisms built with the movement actors, in it finally maintains its own sustainability. At this point, it is crucial to complement this analysis made in the general context of Istanbul's urban movements with more focused analysis on certain different localities, particularly in residential areas, in order to see if these urban movements have a potential to overcome their being bound by motivations based on individual interests towards more collective interests, exploring the complex relationships in the form of conflicts and alliances they develop within the movements and with the external actors. This will help us better understand whether, to what extent and under what conditions urban movements can free themselves from the rules of neo-liberal urbanisation.

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BARRIERS AND DRIVERS IN COLLABORATIVE PLANNING PROJECTS: A COMPARATIVE STUDY OF TRANSFORMATION PROJECTS WITH CULTURAL HERITAGE IN THE NETHERLANDS

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Abstract

Due to technological, economic and spatial developments, various inner-city industrial areas with cultural-historical valuable elements, have lost their former use and their original economic value. Governments, private parties, citizens and interest groups in urban redevelopments are often convinced of the desirability of preserving this cultural heritage. However, transformation processes are complex and especially financial agreements seem hard to attain when plans have to be made effective. Recent planning approaches argue that urban developments are shaped through the interaction of many different stakeholders. As interests conflict, negotiation is needed to reach decisions regarding long term vision, short term actions and organizational and financial settlements. At some moments in the process the actors will cooperate, while at other moments they will compete.. This paper gives insight in the interaction processes and the encountered difficulties in urban redevelopments with cultural heritage. In particular, an attempt is made to identify barriers and drivers of complex collaborative planning projects. Therefore, we conducted an explorative case study of ten urban redevelopment projects with cultural heritage in the Netherlands. Based on an analytical framework, we identified important differences and similarities between the cases, and analyzed whether and how project and interaction characteristics have implications for project performance. The results can be used for further research or for process improvements

Keywords: planning approaches, interaction, urban redevelopment, cultural heritage, barriers and drivers

1. Introduction

Present day urban development is characterized by complex and interrelated issues. To find solutions for these issues an integrated approach is needed (De Kort, 2009). Recent planning approaches acknowledge a growing interdependence and the need for adequate interaction between various

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stakeholders. However, different normative planning approaches have different ideas on how these interaction processes should evolve. A main issue is how to deal with the various conflicting interests and achieve outcomes that are favorable for individual stakeholders and at the same time take into account the common interest. Our paper explores how various urban redevelopment projects with cultural heritage buildings deal with this tension. We aim to increase insight in the barriers and drivers in this transformation process, focusing on the implications of stakeholder interaction on project performance.

1.1 Collaborative planning: learning or deal making?

In planning, mutual dependent actors make decisions about the abilities to act and commit to future actions that will satisfy their interests (Forester, 2006). However, decision-making is difficult in a network setting as actors have various (possibly conflicting) interests and resources are fragmented. This implies that negotiation is needed to reach decisions regarding the content of the plan and settlements regarding costs and benefits (Koppenjan and Klijn, 2004). From this point of view, planning is a matter of deal-making, contracting and negotiation between actors whose resources are needed for successful implementation. Negotiation also requires a certain degree of understanding about underlying values and about how to turn these into action (Albrechts, 2001). Thus, planning is a matter of deal-making on the one hand and a process of more democratic mutual learning on the other hand. Both are intertwined and actors learn from each other and make deals at the same time (Leeuwis, 2000).

Individual actors in planning processes can employ different behavior, focusing more on the deal-making aspect or on learning elements. This difference in behavior is related to the distinction between distributive and integrative negotiation processes (Leeuwis, 2000). In a distributive negotiation process actors hold on to their own perceptions and positions and basically use negotiations to divide the value that will be created by a planned physical-spatial intervention. In contrast, in integrative negotiation actors try to expand the amount of value to be divided (Thompson and Hastie, 1990). Actors are cooperative and try to develop new and often wider problem definitions. They change perceptions on the basis of a creative collective learning process, resulting in the identification of so called ‘win-win solutions’ (Sebenius, 2009).

Lax and Sebenius (1986) reconceptualised the processes of integrative and distributive negotiation as value-creating and value-claiming. They argued that creating and claiming value strategies were inseparable. At a certain point in the process, the created value has to be divided and a claim on the increased value by one party implies there will be less for the others. The actors must choose between two opposing motives: cooperate to create value or compete to claim value. For cooperative action the actor will have to share information to find a possible mutual gain and have a good relationship with other actors. However,

showing his interests and giving information makes him more vulnerable of exploitation. On the other hand, competitive moves to claim value individually often drive out cooperative moves to jointly create value (Sebenius, 2009). This puts the actor in a dilemma of strategy, the so called negotiators dilemma (Lax and Sebenius, 1986). This dilemma is related to the well-known Prisoner's Dilemma. Dealing with the tension between creating and claiming value strategies of stakeholders is a main issue in urban development. In the subsequent lines we will argue that this especially accounts for urban redevelopment projects with cultural heritage.

1.2 Creating and claiming value in cultural heritage projects

Urban redevelopment projects are generally characterized by high contextual and organizational complexity. The presence of built cultural heritage makes redevelopment for a number of reasons even more complex. First, regulations for officially registered monuments limit the possibilities for adapting heritage buildings. Second, investments needed to make re-use of built heritage possible are often high due to the costs of restoration and sanitation (Saris et al., 2008); (Bade and Smid, 2008). Third, finding appropriate new uses for built heritage which do right to the unique character and are also financially feasible appears to be difficult. Fourth, the tangible and intangible returns of investments are uncertain as the value of the heritage can rarely be expressed in financial terms alone (Linssen et al., 2009). Despite these difficulties, government, market parties, citizens and interest groups are often convinced of the desirability to preserve cultural heritage in urban redevelopments. Various studies (Ruijgrok et al., 2004); ABF Research, 2008) show that the presence of cultural heritage adds value to an area. It gives an area a specific identity, historical conscience and generally improves the satisfaction of people living in the neighborhood (Linssen et al., 2009); (Aarsen et al., 2010). Besides, cultural heritage offers opportunities for social-economic development, such as the development of tourism, leisure and cultural activities (Bizzarro and Nijkamp, 1997). Although the added value of cultural heritage for urban redevelopment is nowadays generally acknowledged, in practice settlements regarding costs and benefits seem hard to attain. A number of parties profit from investments to preserve and/or transform cultural heritage without contributing in the costs. If parties do not contribute at all, this is known as the problem of free-riders for collective goods. Parties could also choose a more competitive strategy and only claim value to fulfill their own interest, instead of employing cooperative behavior to create or add value by preserving cultural heritage. This misbalance in costs and benefits causes heritage projects to fail or leave opportunities unused. The characteristics imply that especially in heritage projects stakeholders need to deal with the tension between creating and claiming value.

In literature little is known on how value creation and value claiming processes unfold in practice. Interaction often seems like a black box to planners, while planning requires a fine grained analysis of what actually takes place (Albrechts,

2006). To learn more about how these planning processes work and how 'performance' is achieved, more research should be done on perceptions, performances, strategies and more (Forester, 2011). To obtain insight in the interaction between stakeholders in cultural heritage projects and how this effects agreements on costs and benefits and re-use of built cultural heritage, we conducted an explorative case study of ten urban redevelopment projects in the Netherlands.

The outline of the paper is as follows. Section 2 introduces the analytical framework used in the case study. Section 3 describes the research method. Section 4 shows the empirical data. Section 5 presents the main results and shows the main barriers and drivers in urban redevelopment projects in which cultural heritage plays an important role.

2. Analytical framework

Based on insights from literature on negotiation and planning we developed an analytical framework to explore stakeholder interaction and study whether and how it effects the agreement on costs and benefits and re-use of the heritage. Use of our framework should be seen as a means to focus on specific subjects and to understand and interpret certain actions. In other words, it is a guidance for prioritizing in data-collection and data-analysis (Hutjes and van Buuren, 1992);(Yin, 2003). However, it is not meant to condition the research in any way (Eisenhardt, 1989).

Starting point is that urban redevelopments are shaped through the interaction among actors, who are aiming to get the best deal, a deal which creates added value by preserving the cultural heritage and contributes to the aims of the individual actors. Beside the characteristics of stakeholder interaction, the project characteristics are also taken into account as the setup of the interaction is partly shaped by the issues and actors involved (Lax and Sebenius, 2002).

2.1 Project characteristics

Stakeholder interaction takes place in the specific institutional and situational setting. This setting influences the interaction processes and outcomes as it complicates or simplifies possibilities for development and preservation of the cultural heritage. Therefore we described a number of relevant project characteristics. A first characteristic is *project complexity*. We used the scale of built heritage, the maintenance state of the heritage buildings and ground pollution as indicators for complexity, because these have implications for the costs and uncertainty of the redevelopment. Other characteristics we studied are who takes *initiative* and the *participation of crucial actors in planning*. To increase the likelihood of redevelopment plans to be realized, close interaction is needed with actors whose cooperation is necessary for implementation (Albrechts, 2004). The actor's resources determine whether its cooperation is

needed. There are four crucial resources: authority, finances, land ownership and specific knowledge and skills (De Kort, 2009, De Bruijn and Heuvelof, 2008, Walter and Scholz, 2007). These resources give actors power to influence the decision-making and the outcome of the process. As a main bottleneck in heritage redevelopment is assumed to be the lack of balance between the costs and benefits of stakeholders, we further focused on the *contribution in costs of those who benefit* of the re-use of the heritage. Finally, we determined the *distribution of risks* among actors as the benefits of heritage preservation are uncertain and often hard to express in financial terms.

2.2 Interaction characteristics

During interactions we can distinguish two types of processes: formal and informal processes (Ring and Van de Ven, 1994). To assure commitment of the stakeholders whose resources are needed, relationships are often formalized in cooperation agreement. Therefore, we analyzed the *type of cooperation*. The likelihood an actor will use his power, depends on his interests and objectives on specific topics (Olander and Landin, 2005). Conflicting interests on main topics may hamper the process. Therefore, *conflict topics* were analyzed. Based on their own perceptions, interests and objectives, actors will use different strategies to deal with these topics and influence planning processes (Koppenjan and Klijn, 2004). How processes unfold, depends on the interaction strategies of actors. In literature it is argued that integrative interaction more likely results in outcomes that are beneficial for both common interest as for individual interests (Innes and Booher, 2010, Fisher et al., 1991, Leeuwis, 2000, Lax and Sebenius, 2002). In our analysis we indicated the *type of interaction*. The interaction among actors can be typified as integrative negotiation or as distributive negotiation, depending on actors' behavior (Leeuwis, 2000). The contradicting behavior is summarized in table 1 (based on (Lax and Sebenius, 2002)).

Table 1. Indicators of integrative and distributive interaction

	Integrative Interaction	Distributive Interaction
Joined forces	Working together, have shared aim	Each working for themselves, focus on self interest
Perception	Willing to change perception, flexible, learning	Holding on to own perceptions, non-flexible, not willing to learn or change
Communi-cation	Open communication, share information	Communication is hard, not sharing information
Relation	Trust each other	Distrust each other

2.3 Performance

In general, urban redevelopment projects aim to improve the spatial quality of an area. As we study barriers and drivers in transformation processes, an indicator of performance is the re-use of heritage buildings. However, determining whether the re-use actually has been realized will not always be possible as urban redevelopment projects have a long time frame and some of the urban redevelopments will not be finished within the next 10 years. Therefore, the first criterion we used is *commitment of key stakeholders to the preservation of the cultural heritage buildings*. As preservation and re-use of built cultural heritage requires high investments agreement between key stakeholders on the costs and benefits is needed. The second criterion is *agreement on costs and benefits of heritage preservation between key stakeholders*. Furthermore, literature on network managements explains that evaluation of multi-actor processes should be evaluated in actor-specific or process-oriented terms. Performance measurement should pay attention both to the process and to its outcomes. An often used indicator is actor satisfaction (De Bruijn and Heuvelof, 2008, De Kort, 2009, De Graaf, 2005). Actor satisfaction is important to ensure their commitment to further actions. The problem-owner (land-owner of the area and cultural heritage) is the actor who will be most affected if agreement is not attained. In that case, this key-actor will have to invest a large amount without (total) counterbalance of his expenses or accept the decline of the cultural heritage buildings and the area. Therefore, a third criterion we use is the *satisfaction of the problem-owner on the division of costs and benefits*.

In conclusion, our analytical framework we use is shown in table 2.

Table 2. Analytical framework

Characteristic/criterion	Categories
PROJECT CHARACTERISTICS	
(Financial) complexity	high/medium/low
Initiative	1. mainly public/2. Mainly private/3. Public-private
Participation of key-stakeholders	high/medium/low
Contribution of parties who benefit from heritage preservation	high/medium/low
Financiers and risks bearers	1. mainly public/2. Mainly private/3. Joint public-private
Type of cooperation	1. traditional/2. Concession/3. Joint venture
Conflict topics	1. mainly financial/2. Other/3. No conflicts
Type of interaction	integrative / Distributive

PERFORMANCE	
Commitment to preservation of CH	High/medium/low
Agreement on costs and benefits of heritage preservation	yes/no
Satisfaction problem-owner on division of costs and benefits	high/medium/low

3. Research method

To increase insight in the barriers and drivers in cultural heritage projects, we used table 2 in a comparative evaluation of various empirical cases. To specifically study the relationship between interaction and our performance indicators we chose to vary the context in which planning takes place, as little as possible. We studied large scale urban redevelopment projects with cultural heritage in the Netherlands. The general procedure for the case study was straightforward: selection of potentially interesting cases; assessment of available information relevant for a systematic case study approach; execution of a semi structured interview with the land-/real estate owner(s); collection of relevant data from reports, and; systematic data-analysis.

Case selection

We selected ten projects. Eisenhardt (1989) indicates that linkages between qualitative variables or indicators in a framework model can be achieved using a cross-case analysis of 5-10 cases. Case selection was based on the following criteria: 1) redevelopment of an entire area instead of a single object; 2) development of multiple new functions; 3) one or more buildings in the area are considered to be of cultural-historical value and transformation of these buildings is considered desirable; 4) urban located area, and 5) the project is at the end of the planning stage or in the realization stage.

Data collection

For each case, we conducted a semi structured face-to-face interview. The interviewees were the project managers of the owners of the built heritage. Also, a document analysis was executed. Among others, master plans, official decision documents of the city council, studies of the cultural-historical elements and progress reports were studied. For each case the systematic information was put in a data matrix. This information was qualitative in nature.

Data analysis

The comparative purpose of our study calls for a description of the various attributes of the individual cases. A comparison of the interaction in urban heritage projects leads to the need for systematic insight in the situational and organizational characteristics. We used cross-case analysis to deepen our understanding and explanation of conditions by finding similarities and

differences across cases (Miles and Huberman, 1994). Such analysis can show the specific conditions under which a finding will occur and it also helps to form more general categories of how conditions may be related (Miles and Huberman, 1994). The qualitative information about the cases will be used in the discussion and conclusions to derive barriers and drivers.

4. Project Data

4.1 Project description

Strijp S is part of a former industrial area (27 ha) in the city of Eindhoven (215.000 residents). The area consists of mainly large industrial complexes, formerly used for the manufacturing of radios and televisions. Seven of the buildings (build around 1928) are listed cultural heritage. In 2001 Philips sold the area to a private developer. From that moment plans are made to transform the area to a "new dynamic and creative urban quarter to live, work and play'. Several heritage buildings are already (temporarily) in use for cultural activities and (small) working offices. In two other buildings they recently started the transformation to lofts and working space.

Enka Ede is located between the city center of Ede (110.000 residents) and nature reserve "de Veluwe". The area of 42 ha was formerly used by the artificial silk manufacturer. In 2002 the manufacturer closed down, leaving the heritage buildings disused and the ground heavily polluted. Several buildings (build around 1922) are listed, others are protected by a covenant between the developer and the municipality. Ambition is to realize a residential area of 1400 houses, including public and commercial uses.

De Hallen is located in the western part of the city of Amsterdam (790.000 residents) and consists of the transformation of the former tram depot and maintenance place, and the realization of 400 houses. In total, the area is 16 ha. The tram depot is characterized by large halls of around 100 meter long and sawtooth roofs. In 1996 the area was abandoned and several plans were made by various actors. In 2011 the municipality selected a developer, who has the ambition to re-use the heritage buildings as lively meetings place in which handicraft plays an important role.

Scheldekwartier (KSG) is a former shipbuilding yard of 32 ha between the city center of Vlissingen (35.000 residents) and the harbor. Since 2000 the activities were replaced to the eastern part of Vlissingen and the yard became disused. Several large buildings are demolished, but four buildings, the docks and a crane are appointed as heritage. Plan-making started in 2003, when the municipality bought the area. The ambition is to create a new city quarter with a unique waterfront, mondain character and mixed use, including cultural activities in the heritage buildings.

Dru Industriepark is located in Ulft (10.000 residents), a village surrounded by green, Till 2003 the area of 14 ha was used as an iron foundry for bathtubs, stoves and casseroles. Main aim of the redevelopment is to preserve the seven heritage buildings and realize an area to live, work and play. Two buildings are already transformed; one is used for living, the other for cultural activities and accommodates a library, theatre and a stage. For the four other buildings plans are currently made.

The **Roerdelta (ECI)** project is 54 hectares and located between the city center of Roermond (56.000) and the river Maas. In the center of this area, a large complex of "Electro Chemical Industry (ECI)", including a hydro-electric power station, was used for chemical industry. Since 1970 the building is disused and the area lost its value for industry. The ECI complex is considered to be of cultural-historical value. Just around 2011 transformation of the ECI complex and pre-selling of the houses started. The ambition is to realize a green residential area, with a large park and a cultural and creative meeting point in the ECI Complex.

The **Indiëterrein** in Almelo (73.000 residents) is an area of 23 ha located near the city center. It was formerly used for textile industry of Ten Cate. Some of the buildings are still used by textile related companies, other buildings are temporarily used for artists to create liveliness in the area. The ambition is to transform the area slowly to a new green city quarter with housing and working possibilities. The former industrial buildings of cultural-historical value, like the water tower, arched buildings and sawtooth roof buildings, will be re-used.

The **NDSM** yard (43 ha land and 25 ha water) at the Northern IJ-bank in Amsterdam (790.000 residents) is the location of the former shipbuilding company "Nederlanse Droogdok en Scheepsbouw Maatschappij" (NDSM). In 1984 NDSM went bankrupt and the area lost its use. Only in 2003 a first plan was presented for the redevelopment. The ensemble of large halls (build between 1920 and 1957), cranes, slips and docks are listed as cultural-historical valuable. The aim is to create a creative and cultural hotspot, with mixed uses, giving opportunities to all kind of (private) initiatives. In 2007 MTV Networks was the first company who moved into one of the heritage buildings. Other buildings are (temporarily) used for indoor-skating, bars and small offices for creative entrepreneurs.

Stadhouderspark Vught (38 ha) is located in the northern part of Vught (26.000 residents) on former barracks, sport fields of the barracks and private land in between. As the barracks closed down, the municipality bought the area. The area will be transformed to a residential area of 650 houses, including various facilities as a school, bar and health center. Various buildings of the barracks, build around 1900, are considered to be cultural-historical valuable.

Two barracks formerly used to quarter troops, are already transformed into rental apartments.

Overhoeks is an area of 27 ha located at the Northern IJ-bank in Amsterdam (790.000 residents). Shell uses 7 ha for their Shell Technology Centre Amsterdam (STCA) and the municipality bought 20 ha, which is mainly rented by the bank ING. The aim is to create a mixed use area with (rental) housing, office space, shops, restaurants and bars. The cultural heritage is a large tower. The new use of this tower is yet unknown.

4.2 Differences and similarities in the cases

Based on the analytical framework we analyzed the project characteristics, interaction characteristics and performance. The results are summarized in table 3. The important differences and similarities are highlighted in this paragraph to give insight in the process and performance.

Project performance
Commitment of key stakeholders to preserve the cultural heritage is generally high. Often heritage buildings are listed as a (state) monument, and preservation is a precondition for the redevelopment. In many projects the key stakeholders commit themselves also to the non-listed cultural-historical valuable buildings. These buildings are embedded in plans to contribute to the unique character of the area. Only in two projects (Enka Ede and Stadshouderspark Vught) some buildings are demolished and elaborate discussion took place on whether or not to preserve the cultural heritage buildings. The latter also applies to Scheldekwartier.

In all projects, except one, there is agreement between key actors on costs and benefits. In most cases, the costs and benefits of the redevelopment are not equally shared, but divided among the actors, depending on their responsibilities for a specific redevelopment component (housing, cultural heritage, public spaces). Only in one project (Strijp S) costs and benefits are shared among the key actors and the components of the plan.

The satisfaction on the agreement on costs and benefits of the problem-owner is medium to high. In many projects the problem-owner needs to invest without fully counterbalancing their expenses. However, they are willing to invest as they are convinced of the desirability to preserve and re-use the heritage buildings. Municipalities may be willing as they assume preservation contributes to the public interests, while private parties are motivated as preservation may positively contribute to sales of their real estate. When asked, most interviewees expect that the project will generally succeed in the long term. Almost all of them indicate that it will not be an easy process to achieve the aims. One interviewee indicates: "*Yes, the project will be successful. It will not*

be easy, especially not in these economic times, but we will finally put up a unique performance".

Table 3. Comparison of the urban redevelopment projects

	Project characteristics					Interaction characteristics			Performance		
	Complexity of the project	Initiative	Participation of key-stakeholders	Contribution of parties who benefit from heritage	Financiers and risks bearers	Type of cooperation	Conflict topics	Type of interaction	Commitment to preserving CH	Agreement costs and benefits	Satisfaction problem owner on division of costs and benefits
Strijp S	Low	3	High	High	3	3	1	Distrib.	High	Yes-shared	High
Enka	High	2	Med	Low	2	2	2	Distrib.	Med	Yes	Med
De Hallen	Low	1	Med	High	3	1	1	Distrib.	High	Yes	High
KSG	Med	1	Med	Low	3	1	1	Integr.	Med	Yes	Med
Dru	High	1	High	High	3	3	1	Integr.	High	Yes	Med
ECI	Med	3	Med	Med	2	2	1	Integr.	High	Yes	High
Indie	Med	2	Low	Low	2	2	2	Neither	High	no	High
NDSM	High	1	Med	Low	3	1	3	Integr.	High	Yes	Med
Vught	Low	1	Low	Low	3	1	1	Distrib.	Med	Yes	High
Over-hoeks	Med	1	Med	Low	3	1	3	Integr.	High	yes	Med

Project characteristics

The analysis showed that all projects had to deal with quite similar difficulties although the level of complexity varied. Finding new uses for the cultural heritage, high initially needed financial investments and ground pollution that puts pressure on the optional financial benefits, are indicated as main difficulties. In most projects, the initiative for the heritage redevelopment is taken by the municipality. Although in all projects other key stakeholders are also involved in planning, only in two projects their participation is considered 'high'. Planning for the heritage redevelopment is mainly done by the land and real estate owner. Depending on their specific tasks and responsibilities other key stakeholders invest and bear risks. However, in none of the cases,

stakeholders outside the project scope who benefit from the re-use of cultural heritage (for example, residents of neighborhoods) contribute to the costs.

Interaction characteristics
In two projects the public and private parties formalized their cooperation in a joint venture. Five projects have a traditional form of cooperation, in which the municipality owns the land, prepares the site for building and sells it to another party. In three projects the cooperation can be typified as concession, as private parties own the land, plan and realize the development.

In most cases the interviewees indicate that financing heritage preservation is conflict topic between stakeholders. They experience difficulties in coming to an agreement on costs and benefits, as it is hard to negotiate the amount of investments, who captures the benefits, and what the added value is. A second topic of conflict appears to be related to the lack of inflexibility in plans. During the planning stage– which often takes more than 10 years - political and economic circumstances changed. For example, former expectations on sales and prices did not match the changed reality and already made plans and closed agreements were disputed. One interviewee indicates: "*the plans are translated to the current situation, but slightly different than previously meant. That gives discussion.*" Third, the ambitions in plans are often described vaguely. When actors need to specify these ambitions, they do this differently. Perceptions on the suitable new uses for the cultural heritage, housing density or public spaces conflicted in some cases. Related is the indicated difficulty to handle ambiguous preconditions or starting points. For example, in one project the cultural-historical valuable building were only listed after a private developer bought the area with the intention to demolish the old buildings and build new houses.

How actors deal with the various conflict topics in interaction varies in each project. In half of the projects, the interaction can be indicated as integrative, in the other projects as distributive. An example of integrative interaction is given by an interviewee: "*Most decisions and ideas are not written down, but all actors keep their promise and are committed. […] They are willing to change their perceptions and slightly change the plan if needed. They come up with new ideas: I saw this somewhere else; maybe it could work here too? It's not laughed at, but elaborated on, and others will offer their help*." In a project with mainly distributive interaction, an interviewee describes: "*Some people search for new opportunities, but many hold on to their own ideas and perceptions. Especially in the discussion towards finding new uses for the heritage*." In most projects there were both distributive of integrative characteristics. One interviewee indicates: "*everybody was directed on working together. However, at the same time it was very clear what the individual interests were. And that's a barrier, but it also makes sense*." Especially when dealing with conflicting topics, behavior changes. One interviewee says: *"If plans change, you see individual interests manifest themselves in the discussion"*. In some of the projects behavior also changes

during time: "*If the crisis didn't occur, I wonder what would have happened. I guess we would still be working separately, fighting each other on specific issues, and being afraid that some would gain at the expense of others*."

4.3 The impact of interaction on performance

We used the case ordered predictor outcome matrix as a first step in our search for patterns between stakeholder interaction and project performance. Therefore we analysed the separate or combined effect of the variables in table 3. This analysis did not show uniform results regarding the impact of interaction characteristics on the performance of the projects. Projects with integrative interaction as well as distributive interaction, score high as well as low on the performance indicators. Four out of ten projects have integrative interaction and high commitment to re-use of cultural heritage. However, also distributive interactions result in high commitment. Furthermore, in most cases an agreement on costs in benefits is achieved, irrespective of integrative or distributive interaction and cooperation type.

To increase validity of the research and in search for other variables, we also asked the project managers directly what they thought to be important drivers for coming to agreement on costs and benefits and re-use of cultural heritage. It appeared that the drivers the interviewees mentioned are partly related to integrative interaction. For example, knowing each other's interests, respect them and act accordingly, willingness to cooperate, having a shared frame and commitment of actors to the plan and ambition are mentioned as drivers. Furthermore, having clear and unambiguous starting points, being flexible and decisive to adjust plans, and having high ambitions for the area were considered to be important. In conclusion, although no direct relations can be analysed from table 3, interaction appears to be relevant for performance.

5. Conclusion and discussion

Based on an explorative comparison of ten projects in the Netherlands this research tried to identify barriers and drivers of urban redevelopment projects with cultural heritage. The characteristics of these projects cause (financial) complexity due to high preservation costs, difficulty to find suitable new uses and in some cases ground pollution. These issues complicate the process to come to an agreement on costs and benefits and the re-use of cultural heritage. Actors have to deal with conflicts which are mainly financial issues and in some cases the changing of plans or ambiguousness of plans. Despite these similarities, project and interaction characteristics vary strongly. Participation of key stakeholders, contribution to costs, cooperation and type of interaction varies and there appears to be no pattern in these findings. Furthermore, the comparative case analysis did not show a uniform relation between the characteristics of interaction processes and project performance. This research finding does not match with literature on negotiation processes which indicates

that integrative interaction more likely results in a win-win situation. Although the empirical results of the cross case analysis did not support this, interviewees did indicate that aspects that could be related to integrative interaction were drivers in the redevelopment process when asked directly. Some limitations and choices made in the research design might underlie this ambiguity in the findings.

First, in our analytical framework we used three indicators for project performance. Against the background of the research problem we argued that commitment to preserve heritage, agreement on costs and benefits and satisfaction of the problem owner on the division of costs and benefits, are relevant indicators for project performance. We choose to specify these indicators ourselves, as we assumed that more clear and uniform indicators would reduce the chance of different interpretations. For determining the score on these indicators we used an objective approach for the first two indicators, referring to the fact that the score is determined by the researcher, and a subjective approach for problem owners satisfaction, which means we asked the project managers how satisfied they were with the division of costs and benefits of heritage preservation. However, a wider understanding of project performance would also be relevant. Although the problem-owner is most affected by the agreement on costs and benefits of heritage preservation, satisfaction of other stakeholders on the process and outcome is also important to determine whether or not the division of costs and benefits is mutual beneficial. Therefore it is suggested to also take into account their opinions on performance in future research.

Second, we also used a framework to describe interaction characteristics. We argued that interaction consists of both deal-making and learning aspects and typified the interaction between key stakeholders in the cases as integrative or distributive. The indicators we used for this classification were based on literature. To prevent bias or socially acceptable answers we asked project managers to describe the overall interaction process and the behavior of various actors. Afterwards the data was coded to link their stories to the indicators used. In using this approach two important research dilemma's came forward: process dynamics and describing interaction.

Inherent to our view of interaction is that processes are dynamic. Actors learn and may change their perceptions and behavior, which affects the interaction. During the process several deals are made, which may steer the involvement or exclusion of actors and influences interaction. Moreover, as the project has a long time frame, the setting of the project changes and actors have to act. But what comes first? This sequence of events is essential in understanding the interaction process in detail. As the process is dynamic, the type of interaction is hard to define. In each situation and moment in time actors may act differently. On their actions and behavior, other actors will react. Actors will interact

differently with various actors, depending on the personal relation. In this study we focused on the agreement on costs and benefits in multiple-cases on one moment, from the perspective of the problem-owner. However, to overcome the dilemma's and understand the interaction dynamics even better, further in-depth research is suggested.

Finally, to find the barriers and drivers in the urban redevelopment projects we executed a cross-case analysis. The analysis helped to give insight in the general characteristics of the projects. However, to compare the projects we needed to focus, give short description and thicken the data. In the data handling, specific details may be lost. To overcome this problem– in a next step of the research -, we will conduct a longitudinal case study. In this in-depth case study we will be able to study interaction in the relation to the sequence of events. Also, the interrelation of the variables can be studied in more detail.

We hope that this paper contributes to a more profound discussion on the interaction in planning processes and the transformation of cultural heritage in urban redevelopment. We welcome feedback on this paper and suggestion to cope with the presented dilemmas for further research.

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DAR SMART THE CITY TERRITORY.TOWARDS A NEW DIMENSION

Antonella Contin[1], Pedro Ortiz Castaño [2]

Abstract

Our research focuses on how cities balance both macro/micro-economic factors and their spatial structure according to cultural factors: the underlying form of residential/public areas and landscapes. It discusses the relation between new settlement, activity and space and it takes into account the way different cultures are and how their activities require diverse demands on movement, new settlement of formality, gradients and co-presence. Finally we have to determine both the way how patterns of infrastructure/space integration influence the location of different settlements, classes and social groups in the city and how is possible to solve the pathology of housing and public realm estates. The spatial form needs to be understood as a contributing factor in forming the patterns of sustainable urban metabolism, integration or segregation in the city. The starting point of this work comes out from the necessity of defining the contemporary city within its territory, through a clarification of a new scale of intervention. The framework of our research coincides with the formal and structural dimensioning of the city territory. The need for a cultural "jump" is necessary in order to identify a range of elements and relations in the urban context, rather then simply upgrade the instruments of intervention and investigation. This means a better definition of the structural pattern and spine of this reality, so as to show the discontinuity occurring in the urban development and in the cultural awareness of such phenomena.

Our incoming research on Dar es Salaam follows the strategic modeling document by World Bank Senior Urbanist Pedro Ortiz, document that is used as a methodological indication in the development of a settlement. Its design in the urban context of Dar es Salaam will follows the idea of a variable formality gradient, conveniently located as proposed by the metropolitan spatial strategy suggested by Ortiz. Such a scheme guarantees the connection of every settlement to the bus rapid transit system (BRT) and the integration with the surrounding peri-urban agriculture through local form-typology specificity. Such an approach may envisage a sustainable relation between grey and green infrastructure, the latter intended as the hydro-geological system of the territory. A strong economic attractor related to the infrastructure system should foster the reversal of spontaneous settlements back into legality, providing them with services aiming at improving the sustainable level of

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the entire city. In order to cope with the historical structural transformation of the type of settlements, some guidelines on methodology and scale will be suggested, so as to structure the basis for an intervention and, as a consequence, of a specific form of the city-territory.

We promote the appearance of a new scale of settlement typologies and their consequent interrelations, and a change in the urban/rural relation. A formality-gradient type, which capitalizes on its city-center proximity its advanced services, will be determined in relation to mobility structures. Such device should also be able to communicate with the agricultural landscape, which doesn't just have the potential to provide products for consumption and sale for local communities (urban agriculture), but becomes, on the other hand, an element of urban regeneration, as it has always been i.e. in the tradition of the Italian landscape.

1. Introduction

The metropolitan Form comes from the location and integration of large-scale structural elements that coalesce the metropolitan size and extend urban-style living standards to larger populations located in sub-urban areas. Economic structures, including office buildings, factories, enterprise zones, corporate campuses, etc., along with Civic structures, such as full-service hospitals, universities, stadiums, etc., are designed to accommodate ex-urban residents. Transport structures include commuter trains, high-speed trains, airports, freeways, etc. structures that support larger, remote populations and the systems to enter them are the essential elements of the metropolitan Form. Metropolitan territory is “controlled” by a handful specific of local infrastructural nodes These nodal points shape the structure that articulates the metropolis. If these strategic points are located where the Green Environmental and Grey Transport infrastructures are most compatible, then the Metropolitan territory can be controlled. It can be a fatal mistake to impose a strategy upon a Metropolis; rather it must be formulated in conformance with the territory, and structured to take advantage, in the most efficient manner, of the available assets. In the case of the Metropolis, those assets will be the transport infrastructures and the regional size economic or social projects.

1.1 At the new scale of the city growth it cannot react with maintenance or with a partial renovation. Must transform it radically.

Incorporating discontinuous infrastructure (Housing, Productivity, Social) around the strategic nodes increases and expands their strategic importance and, as a consequence, their influence on the surrounding territory. At last, the Metropolis becomes a patchwork of dynamic urban or semi-urban patches and interchange points, where people gather because of their natural attractiveness (Green

infrastructure) and, being crossroads (Grey infrastructure), their convenience. Sent out from the points of interchange place themselves living, working, and social assets, whose borders comprise a “district” of interchange neighbours. Each district owns its distinctive character and it's similar, considering its structure and balance, to the infrastructure assets. These controlled territories form the basic structural form of the Metropolis.

The design of the Metropolis Form has to arise from a spatial concept that synthesizes the strategic assets of the districts in an overall form. Once that strategic form is recognized, then the tactical location of specific projects can be effected. Each project must reflect the strategic concept as tactically applied to that district – the Concept takes Form through the projects. This is "the art of shaping the Metropolis", that proceeds by the Ortiz‘s methodology of development. Therefore we could say that this is a discontinuous reform: the birth of interferences inside the new urban roads: a development method. In fact, rather than a formal model we can better talk about a development model, which consists both of a series of patterns that indicate a direction of the settlements growth and a series of maps which suggest a possibility of configuration/form that constitutes a characterization of the individual qualities with gradient of formality.

1.2 Compatibility between economics and planning / / efficiency and equity

The realm of economy is often considered as an exclusive realm, connected mainly to a regional scale and planning. The concept of time (seen as the metabolic product of society) within the city is not totally understood, therefore is important to think about it as a witness endowed with signs that express the presence of a culture in a specific time, as a particular life-style presence. Transport planning, particularly suffered from a conflict between efficiency and equity. Often, large political powers found more convenient upgrading already existing facilities in the central areas rather than designing new infrastructures, but still we need to consider the important possibility of creating a democratic balance, which means going towards an equivalence between the times-regions. The conflict, then, appears between convenience and compatibility of certain works and plays through a profound social sensibility in order to limit the impact of economic activities and large infrastructures, that undeniably could transform the area, on the environment. We call this "new territorialisation of the region". This aspect is in contrast to the relative immobility of the traditional cities order, based on a horizontal system of traffic -in some cases now even out dated-, and leads us to suggest an integrated model, based both on a capillary action and on the rapidity and the multiplicity of communications, which are spread throughout any direction reclaiming the land to the nature.

1.3 A paradigmatic model to order the real city growth A vision and an idea for the regional city development

Our research starts from the regional scale: the Geography space is the common ground of the physical and social cities. We have to determine a paradigmatic model that is a vision, an idea of city able to order the real city-growth. All social activities leave spatial and symbolical traces in the form of recursive patterns: how can these relate to a geographical, historical context or to a physical and spatial context, whose patterns were certainly laid down long ago, influenced by quite different social circumstances? Even more, how can they relate to some new city paradigm (megalopolis, megacity, metacity) and to the new idea of global cosmopolitism?

2. Analysis

2.1 The role of the City: a cultural leap. A methodological indication for the development of a fast growing city

The starting point of the present work is a provocation coming from the necessity to define the contemporary city within its territory through a clarification of a new scale of intervention. The framework of the proposed methodology therefore with the formal and structural dimensioning of the city territory. The need for a cultural "leap" should identify a range of new dimensions, functions and relations among the elements of the new urban context; this means, therefore, a better definition of the structural patterns and spine of this new reality, in order to show the discontinuity occurred in the urban development and in the cultural awareness of such phenomena. Starting from Lynch's definition of the model as the representation of how the space could be structured and the representation of the shape and process description, we get to the prototype to follow: model, in this case, should be read as a way "to take care of the process through which is possible to think about that shape". We considered also Choay's definition of the model as an exemplary value characterized by reproducibility. We analysed, then, the role of the model for the definition of the Groβstad as it happened in Wien with Wagner and in Chicago with Hilberseimer, we will discuss the role of the theorist plans with a demonstrative character to face the nowadays city's chaos: an implementation devise that would make it physical.

2.2 The Madrid 2016 Plan: the model

Finally we want to demonstrate that the Madrid 2016 plan is the model of a development method for the fast regional growing city. We consider the Plan Madrid 2016, made on 1996 by the Comunidad de Madrid directed by Pedro

Ortiz, the model of a discontinuous reform: the born of the interferences into the new urban roads.

In fact, rather than about a formal model we can better talk about a development model consisting of a series of patterns which indicate a direction of the settlement-growth and a series of maps which indicate a possibility of configuration/form characterization of the individual qualities with gradient of formality. This aspect is in contrast to the relative immobility of the traditional cities order, based on a horizontal system of traffic -in some cases now even out dated-, and leads us to suggest an integrated model, based both on a capillary action and on the rapidity and the multiplicity of communications, which are spread throughout any direction reclaiming the land to the nature.

That Plan connects the geography of the region and the structure of the ancient towns through a simple square geometry. That grid is shaped taming the existing infrastructures, which turn from circular to linear. The new infrastructure model is conceived as an interrelated system between commuter trains and highways.

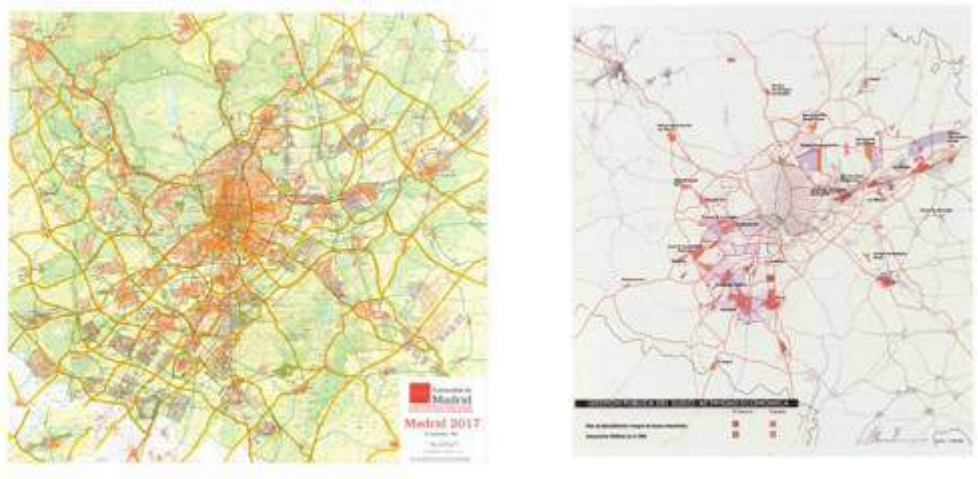

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Figure 1. The Madrid 1985 Plan & The Madrid 2016 Plan

The digit of the Plan is a Figural Landscape Unit (named UDE: equilibrate developing unit): every 4.5kmx4.5km square is the lattice topology, as a sign of human presence to move inside the territory. If we intend map not only as a tool that mimics reality, basically because it represents it, we could think about mapping also as an operational tool, that allows an experience of cognitive mapping. Geography, seen as the original archetypal form of Western knowledge (Febvre, 1922) should thus be redesigned to meet the challenges of the globalized society. The interpretation of the new region dimensions, therefore, is done by geometric linear lines of grey infrastructures. The interpretation of the new local

dimensions is a topological net that determines a new portion of body space (Shane, 2005).

UDE is the physical representation of the abstract idea of time (How many time it takes to cover 4.5 km?). We consider that the UDE is the measure of time: a new UDE or Patch Dynamic measures a new time. So, time is the abstract representation of the shape of the city, today. Time measures the form, i.e. as you distribute the elements of a city over time. Today in the megalopolis we are in a crisis of time: or the time is measured through the number, integral serialism, or the element itself (the Mega block or the Patch) is the measure. It the new measure of a Patch that determines its new nature.

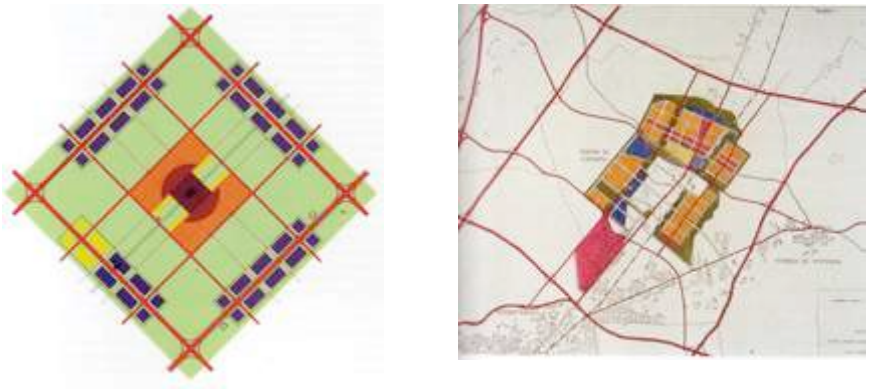

Figure 2. The Madrid 2016 Plan. The UDE model

The world is governed by a mathematical/geometrical conception, and formulas are the shadows it casts. The global order is too complicated to comprehend entirely, as already are multidimensional objects: in both cases, we can only guess through projections. For that reason we have to use models (Hilberseimer, 1927): we understand the models better, reality escapes from us. Of course we know that the lie is behind the mathematical geometric reductionism, basically because it is so powerful that we believe that coincides with the truth (Idealism v. Materialism. Neoplatonicism v. Empiricism). But the problem is that the demonstration of the model must better transfer mechanism and path of thought which made it possible to get to the UDE and understand how nowadays it works at the mega scale.

At last, in that Plan, the design of the metropolis form has to be originated from a spatial concept that synthesizes the strategic assets of the districts in an overall form. Once that strategic form is recognized, then the tactical location of specific projects can be effected. Each project must reflect the strategic concept as tactically applied to that district – the **Concept takes Form through the projects**. We consider that today this is the art of shaping the Metropolis.

2.3 The Plan Madrid 2016: the analysis

The premise

1946, in the plan Bidagor for Madrid, appeared for the first the strong directionality of the character of the entire region morphology. That was possible both thanks to geographical and topographical aspects, which were deeply relevant, and the well identified geographical, topological and ecological lines, which eventually determined the land use.

The model

Requirement of the Plan was to integrate Madrid in the competitive system of world cities, and for this purpose became necessary to rethink the urban structure, giving a correct interpretation of the leap in scale that was running.

In order to reconsider the expertise of modellers urbanism utopia, thought as hypothesis for a redefinition of the urban paradigm, the Plan of Madrid 2016 came to life in a period characterized by the paradigm of a great urban research, as well as by a technical and pragmatic one, which eventually shaped its quite innovative approach.

In this perspective the Plan, in the first instance, must refer to an urban model that is temporally and economically undetermined: urban planning and architecture become contingent transactions that must adapt to changeable political and economic aspects.

Therefore we can talk about an expression of an "idea of the city", i.e., a manifestation of an intention that turns to a condition for action, not to a mere methodology of form. That is the way to design the new regional city scale and its measure, a new spatial semantic, and to shape the figure of the contemporary time (UDE). In order to get to it, we insert the balanced formal structure, memory of its territory (the cuadricula), which can distribute and determine the position of the key elements able to structure and transform it.

The reform of the city paradigm starts from the interpretation of the urban geography of the area set in 1946 by the Madrid Regional Plan of Bidagor, who defined the character of the region, which essentially followed a natural structure similar to the one of its territory and developed itself along the lines. The Regional Plan of 1996 (Madrid 2016, Plan Ortiz) reinforces this character, so as to both counteract a kind of centripetal and centrifugal urban structure and rethink the urban area, in the perspective of another system of connections.

To switch from one old concentric urban form to a metropolitan linear form, JMT Thompson urban studies and the Milton Keynes project, British New Town (1970), are used as archetypal references for the new Plan.

As a consequence, the highway M-45 can be considered as the strength-line that structures the entire Plan. This is the historical trace (Canada Real) of the geographical-region orientation (Plan Bidagor), which rotated the axis of Madrid and eventually released the planning of the city from the city reasons only: in fact it is a no more radial, but tangential line and represents the axis of development of the city along its territory.

Innovation characters of the model

The first topic addressed in the Plan of 1996 pays attention to the status of the city-region, taking care to the relationship between paths and Regional Authorities, between geographical morphology and urban morphology. The purpose of the Plan is to unhook the areas that carry forms and textures of historical city fabrics, generating then environmental areas equivalent and connected by new joints that act as aggregators of new nodes of the structural centrality.

The Plan Madrid 2016 of 1996 was dealing with the instruments firstly of the plan-form and secondly of the movement-form (new linear infrastructural system: commuter trains and highways) as a meaningful element of the Plan, assuming that a new concept of territoriality, at the geographical scale, is based on the organizing principle of land as a meeting place and mobility (Lynch, 1980). Therefore it identifies in a 4.5x4.5km simple geometric square (cuadricula, or UDE: Equilibrated Development Unit), a grid, which permits to enter the territories, characterized by a new territorial dimension. In the Plan Madrid 2016 that simple square-shape is considered the highest guarantee for establishing new centralities, and at the same time it's able to treat and consider the network of mobility as an important and characteristic feature, which doesn't follow the historical city ground mainly because of its lack in interpreting the new scale of infrastructure. But, as Gustavo Giovannoni argued (Giovannoni, 1931), it’s possible to conserve and to develop the ancient cities only if we are able to connect them to a new net. That is an important factor, because old structures are well rooted into the territory and behave, at a regional scale, as important elements that permit to be connected with the geography of the considered territory as a fundamental resource (Geddes, 1909).

The Madrid developing model superimposes a metropolitan scale on the existing system, in order to determine a different relationship between the changed constituent parts of the Great Madrid. As a consequence, it faces the model of the radial forces. The new scale determines, therefore, another form of settlement, in which the scale logic starts from engineering soils, passing to artificial and getting to natural ones: each UDE is not identified by function, but through its geographical meaning.

The Plan sets a system of axis, a governing axis and a penetrative one, which firstly determine the development of the centre along the lines and secondly act as polar systems. The City Council of Madrid is bypassed. Thus, interfering with the

old system of "M" roads in order to define a new relationship, the morphological system is not univocally determined.

We are not speaking about an addition, but about a true reform coming out from a matter of discontinuity: this operation is not meant to save the old structure of the city as if it faced an expansion, but it determines the birth of the interferences of new urban highways.

Four are the defining elements of the Plan: Geography, Geometry, Memory and Denial of the historic city (to change and reactivate it). The Plan assumes its value through the definition of the logic of settlement-distribution, which permits the localization of interchange nodes in peripheral areas. It considers not only the inhabitants but the city-users too, according to the concept that what matters is the existence of an exchangeable organization along the space-time networks of the commuter trains (Cercanias), highways and airports.

Conclusions

The Plan Madrid 2016 identifies as the critical value of the new city dimension, the introverted and a-geographic areas degraded by the effect of implosion and explosion: because that, identifying the inequalities produced in the territory, determines the need for a social and productive re-balancing of the metropolitan area. It is therefore a proposal for a new instrumental technique and structuring large-scale intervention, able to establish a hierarchy between the places, by considering their geographical importance as strategic nodes of interchanges and, as a consequence, of density.

3. Results. An Application of the methodology for a developing regional city model

3.1 Dar es Salaam. Analysis and Strategy of development through the Madrid 2016 Plan Methodology

After the analysis of the structure of the territory through the Ortiz development abstract model, our role, as architects, is to determine a spatial configuration. By learning to control the spatial variable at the level of the complex space-patterns that produce the city, we might acquire the ability to understand both the social element of spatial form, and to detect signs of the social city behind the real city. In that perspective we present DAR SMART research, which follows the strategic modelling document by Pedro Ortiz as a methodological indication for the development of a settlement.

The design of new settlements in the urban context of Dar es Salaam will follow the idea of a variable formality gradient, conveniently located as proposed by the metropolitan spatial strategy. Such an approach, may envisage a sustainable

relation between green and grey infrastructure. A strong economic attractor related to the infrastructure system should therefore foster the reversal of spontaneous settlements back into legality, providing them with services that could improve the sustainable level of the entire city.

Metropolitan scale

In ten years Dar es Salaam has collapse its urban structure. The size and speed of its metropolitan growth as well as the demand for public services and space has overcome the urban capacity, and the limited capacity to respond administratively and financially to the pressures of urbanization has probably speeded up this process and this outcome. Response have to be provided at a metropolitan scale.

Urban radial system

Dar es Salaam has an urban radial system. From this system the coastal roads coincide with a potential metropolitan reticular system.

The metropolitan transport structure

Concentration and congestion must be avoided at a metropolitan scale. Urban axes as route form the embryo of the metropolitan structure. The south 'belt' road would complete the Metropolitan centre distribution ring. The non centripetal design of these systems avoids excesses of traffic pressure on the CBD and distributes accessibility and land use provision in a decongestive system. The elongation of these roads (freeway typology) both as a coastal gradient and inland penetration provide a spread accessible land provision that offer alternative locations to congested metropolitan centre. Meanwhile roads run along administrative boundaries to provide equilibrated and shared benefits to the provinces/municipalities affected.

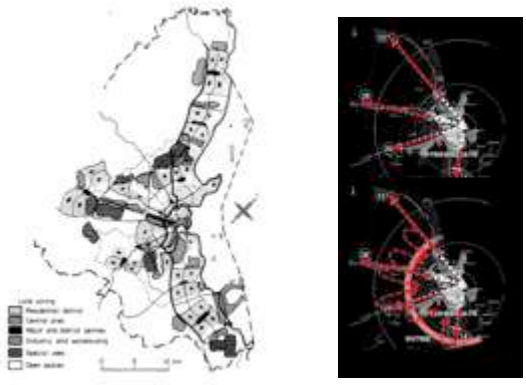

Figure 3. D4D - Dar es Salaam General Plan 1968 & Copenhagen Model Congestion

Radial growth: Finger-like Copenhagen model

The radial structure provides adequate response to the linear provision of public transport systems. It gives priority and accessibility to the centre where most of activities take place and is the destination of the majority of trips, and it is a sound urban structure. The limits of that system are on the extension of the fingers where urban trips would take too far and too long to be efficient. The orbital-radial model presents diseconomies of scale. It is efficient at small urban scales but collapses when large scales are reached.

Collapse of the urban radial Copenhagen model

1st phase: Growth takes place along the provision of transport infrastructure.

2nd phase: Cross connection takes place to avoid over dependency of the centre. This would increase non centripetal trips length and produce central congestion. Transversal connections are provided.

3rd phase: The length of the radial fingers extends to a point where infrastructures provision does not compensate. Interstitial spaces start to fill up. Land for environmental and social assets of the finger structure is taken over and the structure becomes progressively an oil stain expansive structure.

4th phase: The continuous urban pattern of homogenous settlements with multidirectional trips and insufficient traffic space provision develops into a gridlock congestion model.

Finally, the finger Copenhagen urban model has size limitations that need a different response when metropolitan scale is reached

Dar es Salaam uncontrolled infill collapse of the radial model

Dar es Salaam is experiencing the collapse of the radial finger Copenhagen model. In fact inter-finger spaces are being in filled with new urban residential settlements, some controlled, some uncontrolled. Land use enforcement (discipline) could be increased but social forces, within the power of a democracy, are stronger than the capacity of the public administration to set efficient administrative controls. We can argue that traffic situation in Dar Es Salaam is the empirical consequence of this urban process. Upgrading settlements would fix the outcome. Resettlement in the right metropolitan locations could be envisaged as an alternative or complementary policy within a necessary metropolitan model.

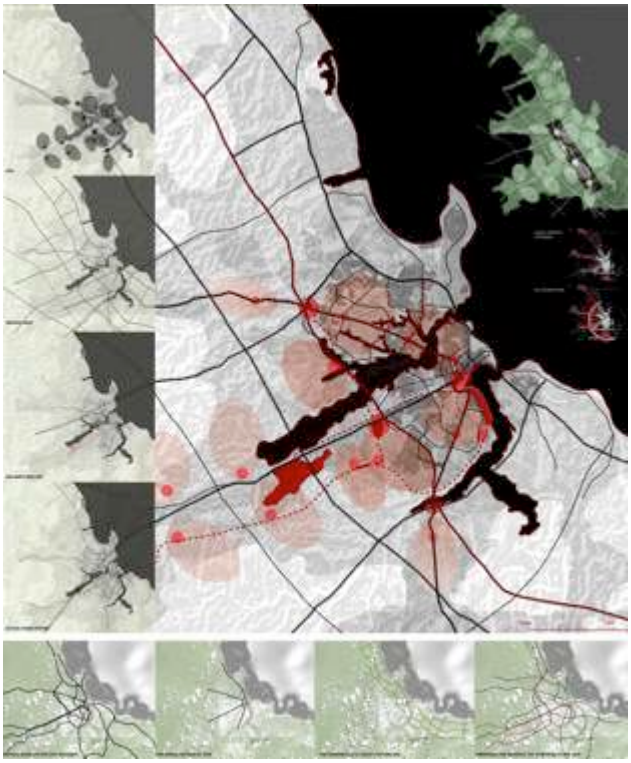

Figure 4. D4D - Dar es Salaam Analysys and Strategy.
(Matteo Motta Drawings)

Metropolitan Rail network

A very important role is played by the mass transport. The Metropolis has to be built on a commuter train system. Rapid urban transport systems BRT's have scale limitations when it comes to transport large number of people for metropolitan size distances. BRT's have an urban scale that reach efficiency thresholds when confronted with larger distance scales and larger passenger numbers. We think that the metropolitan commuting system has to make best of existing infrastructure and land rights of way assets, and the inherited assets have already shaped the metropolis in one hand and have to be as well, on the other, the support for the future structure of growth.

Vertebral system

We may try to build a vertebral system for the new dimension of the metropolis. Metropolitan models are shaped in the coordination of rail and road accessibility infrastructures: both vertebrate the metropolis. The versatility and capillarity of the rail network within the urban fabric is not reflected in the metropolitan territory. The preferential growth potential is defined prior by possible rail network extensions, and the roads network will have to be diversified to avoid

collapse of excess of growth concentration along this vertebral spine: diversified locations in advance of rail expansion will avoid as well an excess of dependency of a linear structure.

Urban rail service

The rail system has to be reinforced: rail layout is peripheral to the urban fabric and has to be completed with complementary urban transport, BRT and buses, feeding routes. Urban rail accessibility can be quite capillaries with a 3 km. maximum distance: with an increase number of stations this distance could be reduced to 1.5 km that is a 20 minutes pedestrian walk, or a 6 m. urban transport ride. For all this a specific and detailed plan needs to be initiated.

Growth potential with existing network

The provision of commuter rail services within the existing infrastructure right of way might be a short investment policy with important decentralization results. Along the 2 existing rail lines a service could be provided with metropolitan rail stations distant of an average of 5 or 6 km, so dense urban settlements can be develop around the intermodal stations which will become new urban centralities (see appendix). Interstitial spaces will be protected to allow for infrastructures, institutional facilities and commercial facilities.

The commuter train would be fed within the urban development unit by complementary urban transport with a maximum distance of 3 km, so population will reach Dar es Salaam centre by train and will bypass and deflate actual traffic problems.

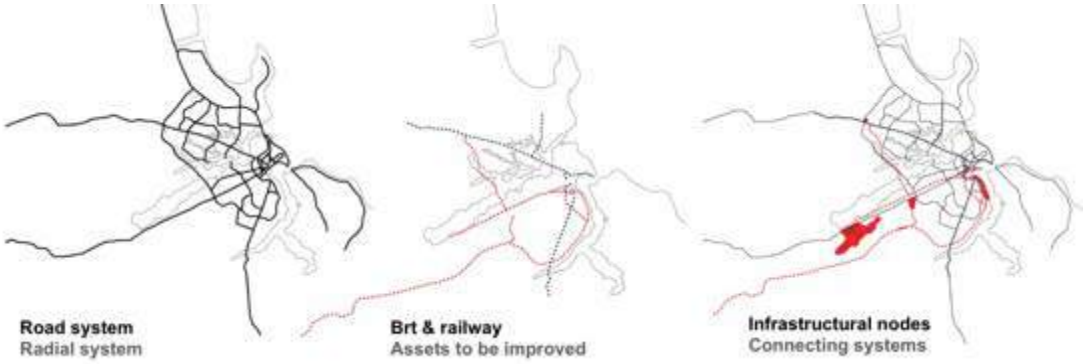

Figure 5. D4D - Dar es Salaam Analysys and Strategy. Grey Infrastructure Proposal *(Matteo Motta Drawings)*

Future infrastructure rights of way provision

If the Rail provision will be radial to maximize train accessibility to central Dar Es Salaam as an alternative to the use of private road transport, Road pattern

accessibility would be reticular to disperse accessibility along a larger well provided territory that would invite decentralization of economic activities and residential provision. The metropolitan grid will provide possibilities for further, equal access, decongestive development.

Rail metropolitan expansion

The rail network expansion would be the guideline for metropolitan settlements expansion. The metropolitan transport will shift form road to rail passenger mass transit. The ‘evolving’ metropolitan diagonals could be the support for rail lines if land provision protection is made early or if finance can confront the underground investment. Urban intermodal centrality will coincide with the reticular pattern. Future rail layout will serve consecutively the areas needed for expansion within the reticular pattern.

Regional scale facilities

Regional scale institutional and social facilities are of the type of large hospitals, universities, sports grounds, and national and regional government institutions. The accessibility to institutional and social regional scale facilities must be both public and private transport. Potential site for those facilities is in the intersection of the metropolitan rail system and the primary road system. The selection of the sites should be made by a precise urban plan for the provision of such facilities.

Regional commercial facilities

Large regional commercial facilities require retail transport, which is made essentially by private transport. Potential location of those facilities is at the crossing of the primary and secondary road network. Final decisions, in response to private initiatives, should be made with a land use pattern of criteria developed in a specific policy plan.

Regional facilities land use coordination

Both socio-institutional and commercial facilities can be coexisting or independent provided they comply each of them with their location rules pattern. Conflict does not necessarily occur as rules are differentiated, but if it does, planning should provide for resolution. Locations are potential and should be decided along the capacity and the necessity to provide a land response for their need to be built.

Environmental protection and provision

Environment capital should integrate the metropolitan fabric. Definition of environmental values must be determined before planning and incorporated as a pre established policy. Flexibility of the model allows for compatibility between environment and urban development. Environment, when overlapping, prevails.

The environmental spaces must have continuity for biodiversity networking and must filter through the metropolitan fabric to reach the core of the urban system. Environmental infrastructure can be enhance when environmental natural values are insufficient

Priorities

To respond to the challenge of growth within a metropolitan context and with the expansion model priorities of investment would be:

1) The backbone distributor-decongesting freeway:

a. Upgrade infrastructure and

b. Protect rights of way – free access

2) The first metropolitan railway line:

a. Upgrade fix infrastructure

b. Set up mobile material for mass transit passenger service

3) Urban development

a. Design and management

b. Urban intermodal centrality

4. The Dar Smart Project: Sustainability of identity. The local scale project methodology

In the global competition among cities and their territories value and growth can only be fostered through the qualities of identity. The last decade has made clear how sustainability is a key issue in setting long-term visions for our cities and it's important to promote an idea of sustainability which is economical, social and energetically and that, for this reason, is strictly linked with urban as a way to settle in a territory. Density, agglomeration, proximity produce the rich interaction networks which contributes to economic growth, poverty reduction and cultural improvement. Driving the urban metabolism towards a densification that is controlled in a sustainable way can enforce a vision able to root the global role of a city in its local characters, demonstrating the sustainability of identity, setting a smart growth.

4.1 Dar es Salaam. The city

Dar es Salaam (Tanzania) can be identified as a urban region with 3 million inhabitants exploding with a growth rate running since more than 10 years around 4-5%/yr and the 80% of the population living in informal settlements. Its geopolitical conditions are making it one of the most important African metropolises, attracting investments from the worldwide system and attentions from the international organizations. Administrative boundaries have been overgrown producing governance conflicts that require compromise, agreements and time. Time is what growth does not respect. Growth is taking place whether the administrative framework is able to manage it adequately or not; a proper flexible strategy is needed.

This can be rooted in the urban character of the city, expressed by a threatened rich porosity based on the complex overlapping of formal and informal economical structure. The great challenge is managing the urban development linked to the ongoing infrastructural projects avoiding the overflow of the formal neo-colonialist development and balancing it to build a smart welfare city.

Figure 6. Dar Smart. Green System Strategy *(Danilo Vicente Damico Thesis. Politecnico di Milano. School of Architecture and Society 2012)*

4.2 Open themes

1. Mobility: Metropolitan spatial strategy.

Net-city and mobility: private traffic and parking, public transportation and slow mobility. The envisioning of an integrated system could configure the city as a fast net that interweaves relations in specialized nodes and defines an archipelago of local enclaves with inner slow mobility and a brand new landscape. These new hierarchic relations will set a new spatial strategy for the city.

2. Urban agriculture: feeding growth.

Poverty and urbanization rates according to well know models seem to be directly proportional. The defence and promotion of local models of urban farming could allow to controvert this relation proposing urbanity scenarios which link living and feeding in accordance to local models. New living and land-use typologies can be studied considering the local property policies to propose an original model of urban farming for the low-grain developments of the city.

3. Energy and sustainable infrastructure.

The urge of making up for the present infrastructural lacks to offer higher standards of liveability suggests the development of low-cost models of urban infrastructure based on innovative technologies able to overcome the limits imposed by the low availability of electric energy; i.e. exploitation of renewable sources, low-tech water treatments, low power consumption lighting and lighting management, liquid and solid waste treatment, etc. It's necessary to set a locally fitted ecological balance for the informal evolving settlements able to produce a specific recognizable urban landscape.

4. New building typologies: between informal and formal.

It is necessary to understand the relation between formal real estate market (and its imported models) and informal settlements dynamics. Identity/cultural aspects link with typological/climate/energetically aspects under the common framework of sustainability. A wide spectrum of issues can be combined in the definition of new morphological schemes and typological solutions thanks to parametric and associative design.

5. Climate change. Natural hazard.

The importance of agriculture and the relation with the sea are great resources for the city, but the future scenarios about the climate change and sea-level rising are uncertain. They need to be monitored and their effects have to be taken in consideration for the present planning decisions (i.e. Kigamboni) producing evolving dynamic scenarios and focusing on urgent actions about water management.

4.3 Power of place and need of a Vision. An urban model based on a formality gradient

The vision project, which is a cultural project, should be verified according to an ecological equilibrium to state its sustainability, according to an economical equilibrium, to state its feasibility and according to the equilibrium of fluxes in order to state its efficiency. Only thanks to a powerful vision of this kind it is then possible to build consensus among the actors and a virtuous dynamic of interaction between public administrations and private investors able to deal with the dichotomy local/global.

Infrastructure, Landscape and Identity

Contemporary cities can be seen as complex systems that have a network armature rooted in specialized multiscale nodes and that set an archipelago of island of urban landscape with various grains. The infrastructural operations linked to the moving issues have to deal with network dynamics and with the global scenario, setting the space/time relation of an urban system. A metropolitan spatial strategy built on a public transportation net can contribute in setting an accessibility hierarchy organized by nodes of density and intensity. These nodes, linking global and local, merging different speeds, scales, grains can behave as flexible stem cells introducing in the formal or informal urban tissues original regeneration elements able to adjust uncontrolled gentrification phenomena. Accessibility to the urban system can coincide with the availability of social and cultural services, rare urban functions, safety and health structures and unconventional interactive typologies, conveniently located according to a general sustainable vision. This means exploring different possible interactions between infrastructure and urban tissue depending on whether it comes across fine grain central areas, evolving suburban neighbourhoods, loose grain informal settlements.

In Dar es Salaam the geographical endorsement of settlements and the infrastructure network set a multiple layered net with high urban potential; built by:

ARMATURES: an evolving grey net of technological infrastructure providing fast interconnection and a green net of topographical ecological corridors currently neglected

NODES: multiscalar entities to be developed as alternative centralities; they activate densification and formalization phenomena to be properly managed

SPONGY TISSUE: formality gradient patterns for the archipelago settlements preserving and enhancing porosity, managing informal urbanity, welfare equipment, urban farming

4.4 A new definition of mega block as a open pattern

The UDE model

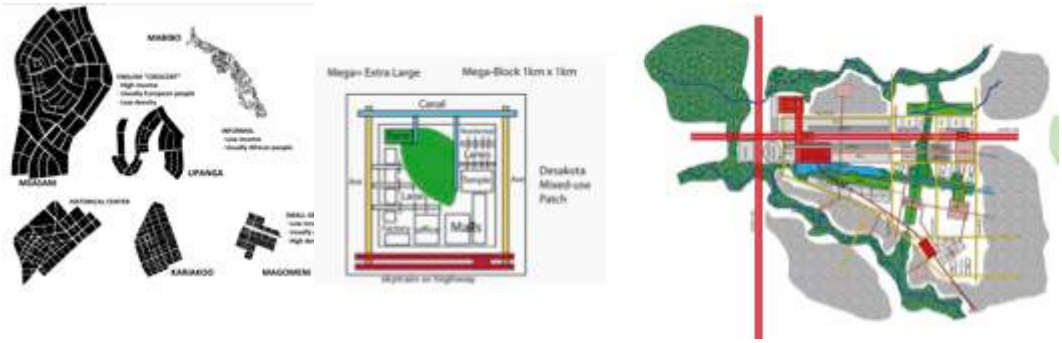

Figure 7. Dar settlements typologies. From the UDE model to the a Desakota Block (1kmx1Km) for Dar. *(Matteo Motta Thesis. Politecnico di Milano. School of Architecture and Society 2012).*

The explosive growth and regional scale involve the necessity of strategic models with a measure descriptive of different density weights and their distribution over the territory.

The Broadacre City of F.L. Wright, was structured on a micro module of 80 x 60m but looking at the regional scale with a macro module of 3.2 x 3.2 km The model designed by Ortiz to manage the regional dimension, predicts a large size of about 5 x 5 km supported by a infra-structural system of geographical matrix lines and public transport.

This system identifies different degrees of mobility and activity and different density weights in relation to the infrastructure. The core of the UDE is supported by the Commuter Train and secondary roads to handle a local scale, which determine the location of elements of public and residential areas. The biggest entity weights are placed near the matrix lines (the main road on a territorial-regional scale) and in particular close to the intersections of the infrastructures. This model shapes the regional system while provides flexibility, density weights and measures used to manage the system.

The critical task of breaking down the model to the local context has taken to a modification of the model towards a definition of the type of grain and porosity of the settlements, freeing them from a mere indication of functional issue and re-evaluating the environmental system that is not taken as background but as the material and substance of the project.

The Mega block Model (green and grey infrastructure)

The concept of mixed-uses and landscapes Desakota model between the urban spaces related to infrastructure, and rural space, characteristic of agriculture, is taken up by Grahame Shane (2011) and defined through a diagram of Mega block, as a large urban element at regional scale. The model of the Mega block provides a size of about 1x1 km, smaller than the UDE model. So, we consider it as a part of the UDE that organizes the UDE centralities: i.e. the mega block is the point where the model of Ortiz is hooked to a large grey infrastructure as railway stations, airports.

The model of Shane provides the presence of very heterogeneous activities that are mixed with each other in a pattern of "patches" dynamic, where the green is not just a background, but an active element with its proper infrastructure and activities.

The diagram then, shows how to structure a gradient of formalities between an infrastructural system heavy and "grey" and an infrastructural system light and "green". Each of them carries density weights and the co-related activities in a pattern of "mixed use patch". This "pattern", thought for South-East Asia, is decomposed into our action-planning to be integrated into the African context of Dar es Salaam, so that, the elements of agriculture, supported by an urban hydro-geological structure (channels), might go deeply inside the structure of mega block generating a porosity that from the informal part of the city goes into the formal settlements at the regional scale. In addition, the provision of a strategic system of elements of welfare allows to connect the large size with the small one: building the elements of an institutional reference, bringing services and infrastructure, it can give shape and legalize the informal settlement.

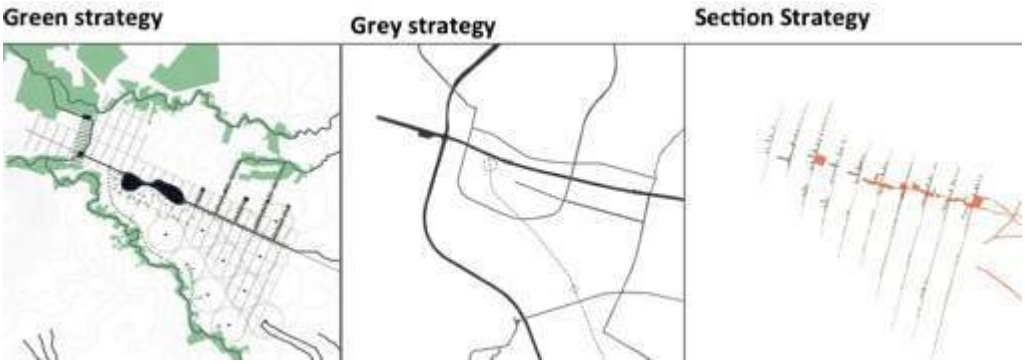

Figure 9. Dar green/grey strategy*(Matteo Motta Thesis. Politecnico di Milano. School of Architecture and Society 2012).*

4.5 Definition of eco-green armature within the concept of the gradient formality potential

A system of eco-armature, from an ecological point of view infrastructures the landscape. The open question is that natural resources can not be planned on the basis of a model, but through a rule: a rule of Form. This form always has 'content'. It leads citizens to recognize the city as an important place to plan their own life. Meaning is attributed. They become symbolic intermediaries.

The city has always been the place of urban metabolism and thus for transformation and evolution. Able to set up the dual urban and social structure, which should never be disarmed because it is not as much the backbone of a communication system, but rather the competence to interact with the site and the land: the inter-somaticity that bodies acquire orienting in a field.

Figure 10. Dar Smart . The rule of the grey/green Interference *(Matteo Motta Thesis. Politecnico di Milano. School of Architecture and Society 2012).*

This sense of direction, which occurs only if a site of the earth, is found and made, that is constructed and marked by man, can be possible then only in a place which becomes central again to human intentions, and therefore, allows man to transform in the symbols the mental processing of the memorable events (plot of desire and memory): we call these places symbolic mediator or intermediaries

5. Conclusions. An urban model based on a formality gradient

The natural and anthropological characters of a territory determine the local value of landscape as part of the identity feeling. For this reason acting on the way of inhabiting a place requires a synthetic effort that has to be systemic and set at the right scale. The transition towards formal uses of land and the related infrastructural process has to combine innovative technical solutions, typological

experimentations, and imaginative issues setting the unique and recognizable image of that territory at the scale of the urban realm.

The new infrastructural system should determine an original urban tissue based on a double formality gradient, connecting to the mobility system of the global scale - opening to urban regeneration and liveability enhancing - but at the same time improving the relation with medium/low density territories of informal settlements and urban agriculture - preserving their rich interactive social and economical system. This strategy could determine a specific local way of settling provided by specific relational dynamics, specific regulations about the private/public partitions, land-use and property.

Figure 11. Dar Smart. The Welfare Staminal and he Green Infrastructure *(Matteo Motta Thesis. Politecnico di Milano. School of Architecture and Society 2012).*

The ongoing infrastructural projects in Dar, like the Bus Rapid Transit, are introducing a new scale in the urban structure moving towards an uncontrolled development. The vision for the city has to be rooted on an idea of urban intensity that is effectively net-connected, but also deeply place-specific. The local peculiarity of the green net given by the geography of the city could be the key issue for the urban growth; its management, driving a virtuous balance of the urban ecosystem, could be the specific know-how and branding identity issue for the African green metropolis.

The proposed spatial strategy, promoting a double formality gradient pattern, considers the existing rich interactive social and economical system as a matchless resource for the city growth. It has to do with an effective local way of settling provided by an uncommon urban porosity. According to this all the required governance tools have to be fitted, so that people can feel a correspondence between laws and behaviours of land-care, minimizing the conflicts occurring in the formalization process. Virtuous interactions between the public and private sectors have to be fostered to assure an economical balance, making densification paying for welfare. Setting an urban model on this perspective could mean opening the way to a competitive strategy for the sustainability of identity.

Long term scenarios for the urban landscape

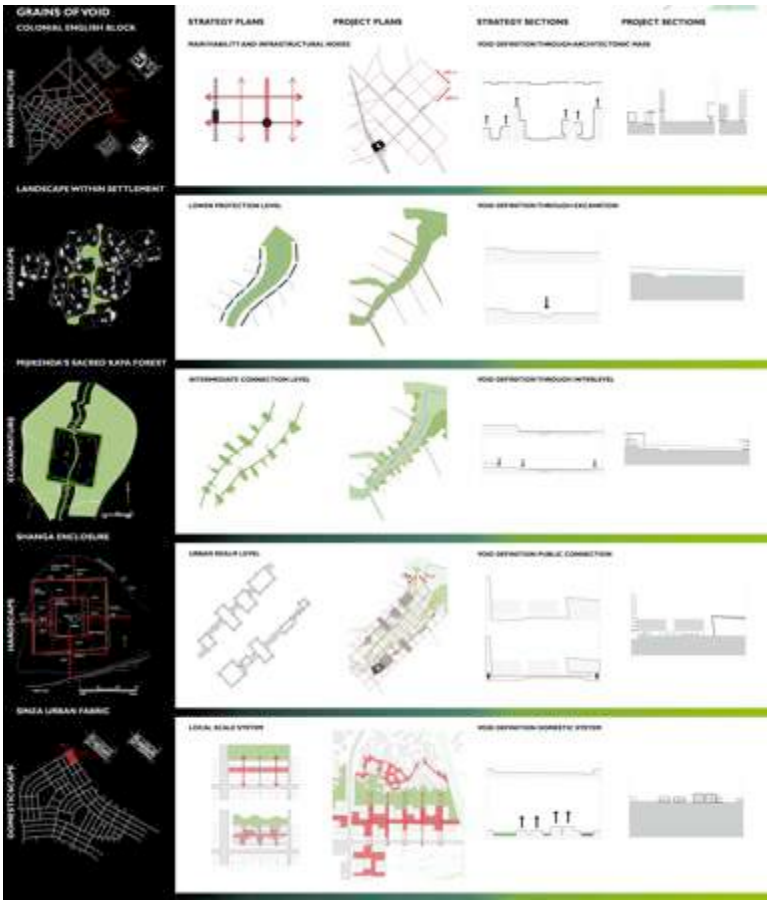

Figure 8. Dar Smart. The Formal/Informal Strategy *(Danilo Vicente Damico Thesis. Politecnico di Milano. School of Architecture and Society 2012)*

Reaching a real grade of sustainability means considering economical, environmental and social aspects in their complex relations. Space and time interlace in this issue making the decision making process even more difficult for the administrations when the spatial strategies don't include some flexibility levels and at the same time long-term wise decisions. In this perspective climate change and natural hazard are the main issues to take in consideration. Dar es Salaam will face two aspects of the climate change problem: the vulnerability of the agro-ecological system with the decline of agricultural capacity and sea-level rising with the risk of floods and the coastline alteration. Defence, attack or retreat are the three strategic options and water the element to deal with. Both the issues

must be faced in accordance with the general urban landscape strategy through a specific and conscious approach to water management, which can become the distinctive element of a conscious far-sighted vision for the city. The virtuous balance of urban ecosystem through the flexible innovative solutions which structure the urban landscape could be the specific know-how and branding identity issue for the African green metropolis.

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The governance of religious diversity inside urban integration agendas: Cases from the Ruhr Area in Germany

Eva Dick

Abstract

In the last decade, integration has become a leading policy objective in Germany. The issue has also been lifted high on municipal and city agendas, albeit with changing emphasis. Recently, within what has been termed the inter-cultural paradigm, the governance of religious diversity has become a topic in many urban integration plans in the country. Based on the analysis of integration concepts of eleven metropolitan cities in the Ruhr Area this paper examines, how religious actors and inter-religious activities are included in urban integration plans, why urban stakeholders chose to integrate them in the agendas and, from a normative point of view, what relevance such activities possess for urban integration and cohesion. The paper suggests that while the inclusion of inter-religious activities and actors in integration measures aligns with recent principles of urban (diversity) management, the often political dimension of such encounters may reinforce rather than attenuate social and cultural borders and stereotypes.

Key words

Migration, urban integration, inter-religious activities, governance, Germany

1. Introduction

The objective of this paper is to discuss the governance of religious diversity and inter-religious activities in the context of urban integration policies in Germany. This will be done by asking how religion and inter-religious activities are dealt with in urban integration plans, why urban governments and administrations include inter-religious activities in these plans and about related potentials and challenges for managing diversity and building up social cohesion in increasingly multicultural cities.

Since 2000, Germany has significantly altered its legislative framework for immigration and the acquisition of citizenship, and in this context integration has become a leading "policy symbol" (Bommes, 2007, p.3) or objective. While the integration of immigrants has turned into an issue of national debate, it has also been lifted high on municipal and city agendas. This must be seen against the fact that in Germany the local level, rather than the national, has been at the forefront of addressing and implementing integration measures for years. Here, and particularly in the large urban areas to which most migrants moved, problems such as unequal

unemployment, education and housing were most directly felt, and as a consequence integration strategies sought to uplift migrants' situation in these fields.

While in the 1970s and 1980s local integration strategies largely consisted of compensating the above-mentioned 'structural' deficits of migrants, current ones follow a different approach. In accordance with the paradigm of inter-culturality, emphasis is now placed on the recognition and activation of immigrants' potentials, on the role of the majority population in a two-sided integration process (Baraulina 2007: 30) and on the 'software' of urban practices and conviviality e.g. cultural identities, values and beliefs. Also religion has become an important ingredient of integration policies, and inter-religious activities are included in many urban integration concepts (Klinkhammer et al., 2011, pp.242, 252).

I will argue that this inclusion is driven by a variety of factors: First, in the context of a migration-related growing religious diversity in German cities urban administrations are increasingly confronted with claims of different religious groups for urban participation and place-making e.g. in the context of the construction of representative religious buildings (Baker, 2008; Beaumont and Baker, 2011a; Schoppengerd, 2008). Second, the significance of inter-religious bodies "as strategic actors for the pursuit of the local governance of religious diversity"(Griera and Forteza, 2011, p.119) has gained political relevance in the context of anti-radicalization efforts following 9/11 (Tezcan, 2006, p.28). And third, the promotion of inter-religious activities in urban integration agendas can be related to a changing planning culture calling for intensified civil society activation and participation within new urban (diversity) management.

The structure of the paper is as follows. In the subsequent, second, chapter I sketch the research context and methodology of this paper. In the third section, I describe the evolution of migration and integration policies in Germany, notably at the local level. In the fourth chapter, I portray the evolution of inter-religious activities in the last decades and discuss the changing attitude of city actors towards such dialogues. In the fifth chapter the present incorporation of religion and interreligious activities in urban integration plans will be discussed, based on the assessment of integration and intercultural plans in eleven metropolitan districts of the Ruhr Area. The sixth chapter concludes with a summary and an assessment of future potentials and challenges for new state-civil society alliances in the governance of religious diversity within urban integration agendas.

2. Research context and methodology

This paper is elaborated in the context of a recently started interdisciplinary research project called "Inter-religious activities and urban governance in the Ruhr Area" conducted by the Faculty of Spatial Planning of TU Dortmund and the Centre for Religious Studies (CERES) of Bochum University. The project uses Duisburg and Hamm, two selected cities of the Ruhr Area, as case study areas and will employ a mix of qualitative individual and focus group interviews, document analysis and (participant) observation as empirical methods. Since it has only recently started the

present paper predominantly draws on literature review, as well as on an internet-based analysis of integration concepts and plans in eleven cities of the Ruhr Area, thereby reaching beyond the case study areas chosen by the research project. At the time of the presentation at the conference, some preliminary results of interviews conducted in the cities of Duisburg and Hamm may however be included.

3. Immigration and integration policies in Germany

According to Klaus Bade, migration scholar and presently chairman of the Expert Council of German Foundations on Integration and Migration, over decades migration policies in Germany were characterized by the paradox of 'a situation of immigration without [being] an immigration country' (2007, p.32). That is to say, until the beginning of the present century, Germany did not see itself as an immigration state and consequently did not have an explicit immigration policy.

In the first years after World War II refugees from Eastern Europe and the German Democratic Republic (GDR) were the principal immigrants to Western Germany (Krämer-Badoni, 2001, p.19; Hillmann and Windzio, 2008, p.10). From the 1950s until the late 1980s guest workers from Southern European countries and their families occupied the highest share among the migrant population. Inter-governmental agreements signed between Germany and the guest workers' respective countries of origin constituted the legislative framework for their temporary recruitment: The first such agreement was signed with Italy in 1955, the last one with former Yugoslavia in 1968 (Friedrichs and Alpheis, 1991, p.117)[1].

Today the proportion of the foreigners in Germany is almost 9 percent and the proportion of the population with a migration background stands at a little more19 percent (BAMF, 2010, p.189).[2] With Turkey still being the country of origin of the highest proportion of the population with a migration background, the legacy of guest worker immigration is reflected. However, in the last years an increasing diversification of national origins, as well as immigration purposes and pathways can be observed, also resulting in the diversification of religious origins of migrants (Dick, 2011, p.69).

The influence of guest worker migration is also evident in the Ruhr Area, an urban agglomeration migrants were historically attracted to due to employment opportunities in the mining and related heavy industries. Among today's foreign population in the Region, the Turkish population shows the highest share of approx.

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[1] Agreements in between these were signed with Spain (1960), Greece (1960), Turkey (1961), Morocco (1963), Portugal (1964) and Tunisia (1965) (Friedrichs/Alpheis 1991: 117).

[2] The population with a migration background is defined as the immigrants that came to the country after 1949, as well as foreigners born in Germany and all German-born with at least one migrant parent or a parent born in Germany as a foreigner (BAMF 2008: 235).

40 percent, followed by people from ex-Yugoslavia (13 percent) and Poles (7 percent) (Regionalverband Ruhr, 2012).

Related to the intended temporary character of guest workers' stay, in Germany in the second half of the 20th century an explicit immigration policy was not deemed necessary (Bade, 2007, p.35). This situation only changed in the 1990s and migration policies started to be conceived in conjunction with strategies for migrants' political, social and economic integration. The underlying, rather pragmatic, assumption was that social costs of neglected integration would otherwise grow far beyond the costs of timely integration support (ibid: 34, Baraulina, 2007, p.28). This has also manifested itself in important legislative changes: The principal milestones in this regard represented the reform of the citizenship law in 2000 and the immigration law that came into effect in 2005. The annual national Integration Summits conducted since 2006 under the auspices of the German Chancellor as well as the formulation of a National Integration Plan in 2007 and its 2012 revision (now National Action Plan Integration) illustrate that the topic has obtained a high policy priority in Germany.

The National Action Plan Integration delineates the following priority sectors for integration strategies in Germany: Early-childhood support; education and (professional) training; labour market and employment; migrants in the public service; health and care services; local support for integration; language and integration courses; sports; integration and the media; support of civic engagement and integration and culture (National Action Plan Integration, 2011). A variety of stakeholders from the State and civil society, among them religious associations cooperated in the formulation of the plan (ibid). By way of the priority sector "providing local support for integration" the role of cities and neighbourhoods for the implementation of integration is underlined.

Since the 1970s, the municipal level has always had a particular role for the integration of the migrant population, since it was at this level, particularly in the urban core neighbourhoods, that integration problems were most strongly felt. However, local integration concepts have considerably evolved in the last decades: Whereas until the 1990s municipal actors largely made use of compensatory integration measures (Baraulina, 2007, p.29)[3], in the last decades the inter-cultural paradigm has gained momentum. In its context, a more resource-oriented approach is brought into play, in which emphasis is placed on the activation and participation of migrants in integration initiatives, the attitude of the majority population and strategies for improving mutual understanding and conviviality. At the same time, organisational networking at the local level for integration-related services e.g. with (inter-) religious bodies amongst other civil society organisations is becoming an imperative, not least in the context of budgetary restrictions (Baraulina, 2007, pp.31-32.).

[3] For these compensatory programmes municipalities or municipal actors merely act as executing agents while the funding comes from the Federal or States-level (id.: 30).

4. Religious diversity and inter-religious activities in Germany

Alongside the growing ethno-cultural diversity notably through migration in the last decades Germany has become ever more multi-religious (view religious groups and memberships in REMID). In the State of North-Rhine Westphalia in which the Ruhr Area is located, the majority of the population (approx. 75%) affiliates itself with the catholic and protestant religion. However, in the last third of the 20th century there has been a growing migration-related pluralisation through Islam (aprox. 3% of the population), Eastern religions, and through the advent of new religious movements (Religion Plural).

While this statement can be made for the country as a whole, religious pluralism and faith-related manifestations in the public space are predominantly an urban phenomenon (metroZones, 2011a, p.18; Penta and Schiffauer, 2011, pp.265-266). To the extent that members of different religious affiliations interact for faith-related or other purposes (e.g. inter-religious prayers, community building or sports events, negotiations for the erection of religious building etc.), religious diversity translates into inter-religious contact and thus becomes potentially relevant for urban integration policies.

Besides historical antecedents, inter-religious activities in Germany set off during the early years of 'guest worker' migration in the 1970s. These activities were predominantly civil society-lead, with the purpose of exchanging information about the respective other religion or, from the side of Christian groups, providing support to recent migrant arrivals. Only from 2000 onwards and notably in the context of a growing sensitivity towards religious fundamentalism, activities between (predominantly) Muslims and Christians obtained political relevance and thus came to the centre of public and media attention (Tezcan, 2006, p.28; Klinkhammer et al., 2011, pp.24.). Also in other European countries, interfaith bodies and activities have recently become more institutionalized and increasingly drawn into governance processes at national, regional and notably local levels (Griera and Forteza, 2011, pp.117-118; metroZones, 2011a, pp.18-19).

In Germany, integration is the policy field religious diversity and interreligious activities have obtained the highest relevance for. Due to the above-mentioned link with security concerns, religion and particularly Islam have become highly relevant elements of the integration discourse (Klinkhammer et al., 2011, p.242). This manifests in high-profile events such as the annual German Islam Conference initiated in 2006 by the Federal Ministry of the Interior, but also in the topical orientation in Muslim-Christian dialogue circles which tend to be dominated by integration-related questions (Klinkhammer et al., 2011, pp.251-257). While the association with integration policies seems to be particularly prevalent in regional or national-level dialogues, it can also be noted on the local level.

In the present paper however I do not inquire into the prevalence of integration themes in interreligious events. Instead the inquiry comes from the other side, i.e. the

focus is placed on the degree and the reasons inter-religious activities and encounters have become a subject matter in urban integration policies and plans in Germany.

5. Results: Inter-religious activities in urban integration policies and plans

In order to analyse the relevance of religion and interreligious topics in integration concepts and plans in cities of the Ruhr Area, the focus is placed on the eleven largest, i.e. metropolitan districts of this region (Regionalverband Ruhr).[4] These are the cities Duisburg, Mühlheim a.d. Ruhr, Oberhausen, Bottrop, Gelsenkirchen, Essen, Bochum, Herne, Hagen, Dortmund and Hamm.

Description

Table 1 displays integration definitions and fields of intervention formulated in integration or inter-cultural plans in five of the mentioned cities[5], and illustrates the role of religion and interreligious activities in the plans. Cities seem to use the terms 'integration' and 'inter-cultural' synonymously since 'inter-cultural' concepts (view e.g. of the city of Essen) tend to place emphasis on similar fields of intervention and objectives as the 'integration' plans of other cities.

With respect to the question how (inter-) religious activities and events are dealt with in urban integration and/or intercultural plans, the analysis in the eleven cities has produced the following results:

1. In most cities inter-religious activities are ***not treated as a separate field of intervention***. Rather, the plans place most emphasis on structural integration support, e.g. in the areas of education, employment, language acquisition and housing and urban development. Among the eleven analysed plans or concepts, only the "Masterplan Integration" of the City of Dortmund points out "Interreligious dialogue and promotion of acceptance of non-Christian faith groups" as a separate field of intervention. In the City of Gelsenkirchen, "inter-religious concept" forms an explicit sub-field of action under the intervention field "culture and sports".

[4] It is assumed that in these large cities inter-cultural and inter-religious relations have the highest prevalence.

[5] For reasons of readability the number of cities indicated in Table 1 was reduced to the five largest, out of the original sample of 11 cities. The information about the other five cities (apart from what is mentioned in the text) may be directly requested from the author.

Table 1. Principles, fields of action and the role of religion in integration concepts/plans in six cities of the Ruhr Area

CITIES AND PLAN	PRINCIPLES OF INTEGRATION	FIELDS OF INTERVENTIONS	ROLE OF RELIGION / IRA	FURTHER ISSUES OF INTEREST
BOCHUM Integration Concept	Process and potential orientation; Constitution as basis of action; Mutual respect; Same-level dialogue; Equal participation and opportunities; Fighting discrimination; Inter-cultural opening of institutions	Education, Language, Employment, Conviviality, Children and Youth, Elderly Migrants, Health, Culture, Intercultural Opening and Sport	-No extra field of intervention -Objective promotion of respect towards cultural and religious difference, within human rights and constitution; Informal meeting between women of Christian and Muslim backgrounds	
DORTMUND Masterplan Integration (2008)	Acknowledgement; Equal opportunities and access; Potentials and participation of all population groups	Education, school and transition; intercultural opening of admin.; language promotion; children and youth leisure; political and social participation of migrants; cooperation and dialogue with migrant organisations; interreligious dialogue; people with insecure residence status; culture and inter-culture; health; age; employment; housing; family; monitoring and evaluation; Dortmund International; Action Plan for Diversity; Action Plan for Socially Integrative City; Integrated Urban Development/Urban Renewal	Interreligious dialogue and promotion of acceptance of non-Christian faith groups is a separate field of intervention Projects in this field: - Supply options for Muslim funerals - Cooperation with Council of Muslim Communities in Dortmund -> target group are representatives of administration, Muslim faith groups, other religious institutions and members of the 'majority population' -Model project religious course for Muslim pupils	Project in 2008: visit of mosques for members of urban administration, in the context of action field intercultural opening of administration
DUISBURG* Concept of Integration "We are You" (2010)	Resource orientation; Dialogue and participation; Individual integration instead of 'ethnisation'; Common urban identity; Neighbourhood scale focus; Lived inter-culturality (*Interkulturalität als Lebensgefü*hl)	Supervision of the Duisburg Council for Integration; Cooperation with migrant organisations; Work with integration 'guides'; Inter-cultural urban portal; Inter-cultural opening of the administration;	- No extra field of intervention - Mentioned in the context of action field inter-cultural urban portal, emphasis on non-essentialised concept of diversity (not only result of cultural, ethnic or religious difference, but also	Important role of Mosque in Marxloh-neighborhood highlighted; city cooperates with and promotes the 'Board/Council' of the Mosque; encounter location of Mosque (*Begegnungsstätte*) was co-financed with EU- and State-funds, as symbol of urban

Table 1. Principles, fields of action and the role of religion in integration concepts/plans in six cities of the Ruhr Area

CITIES AND PLAN	PRINCIPLES OF INTEGRATION	FIELDS OF INTERVENTIONS	ROLE OF RELIGION / IRA	FURTHER ISSUES OF INTEREST
			other elements)	interculturality and integration, not least to high media attention
ESSEN Concept for Intercultural work in the city of Essen – Sachbericht 2010"	Dual change in perspective 1. From traditional support of foreigners (Ausländerarbeit) towards inter-cultural orientation; 2. From traditional administration management towards new public management.and new public management. Integration as a two-sided process.	In 2010: Recognition and participation; Inter-cultural opening; Language, Health and education; Qualification, Employment and self-employment; Urban society and development; Sports; Art and culture General: Teaching in language of origin; Inter-cultural concept; Inter-cultural play and learn groups; Inter-cultural language promotion and training of parents; Inter-cultural mediation; Sport and migration; Cooperation with schools	In intervention field "inter-cultural mediation", interreligious dialogue between Muslim and protestant communities in migrant neighbourhood, location of Aya-Sofia Mosque Mosques are used as locations for a number of (non-religious) integration measures, e.g. education of youth for democracy, support of youth with homework, language learning, conflict management, family support etc.; but also inclusion of family- and youth-related problems in Friday prayer in Aya Sofia Mosque	Close co-operation of city's office for intercultural cooperation with integration Council (representation of migrant' interests in the urban context); action in 2006, "Muslims for Dialogue, Integration and Peace"
GELSENKIRCHEN Integration Concept Gelsenkirchen (2006?)	"Gelsenkirchen is dialogue-oriented": **D**emocratic, **I**nter-cultural/inter-religious; **A**ttentive and sensitive; **L**iveable and lively; **O**pen for learning; **G**ender-sensitive and just	Education in and outside of schools, children and youth work; Culture, leisure and sports; Economy and employment; Intercultural opening of institutions and the administration; Urban development, housing and transport; Social and health affairs	Inter-religious concept a proper area of action under intervention field "culture and sports" including four recommendations; these are quite general and related to inter-religious communication processes, but also to physical buildings	Participation of representatives of intercultural work group (*Arbeitskreis*) 'mosque and church' in formulation of integration concept, as well as of different Christian, Muslim and Jewish groups

2. However, religion and/or inter-religious activities are mentioned as ***important elements under other fields of intervention in almost all the plans***. In most cities, inter-religious activities or dialogues appear under intervention fields dealing with (inter-) cultural affairs (e.g. in Duisburg, Essen, Gelsenkirchen, Hagen and Hamm). In the city of Oberhausen they are attributed to the field of intervention labelled "dialogue and conflict". And in Dortmund, a project of inter-religious encounter (view below) was implemented under the intervention field "intercultural opening of administration".

3. The integration or inter-cultural plans mention a ***considerable variety of inter-religious or religion-related activities*** to be pursued. For instance, in the city of Dortmund, projects involve the organisation of Muslim funerals, to cooperate with the city's Council of Muslim Communities, a model project of religious courses for Muslim pupils and a visit of mosques by members of the urban administration. For the city of Duisburg, the "site of encounter" (*Begegnungsstätte*) of the Merkez-Mosque in the Marxloh-neighbourhood hosts a variety of inter-religious events and is considered a symbol of urban interculturality and integration; a similar project is planned in the city of Oberhausen. In Essen, neighbourhood mosques are used as locations for non-religious integration measures targeted at needy families and youth, e.g. education for democracy, homework support, language learning and conflict management. The great majority of interreligious activities mentioned in the integration plans refer to Muslim-Christian events.

4. With the formulation of most integration plans involving the participation of a large variety of stakeholders from State/municipal institutions and civil society, also ***representatives of religious associations have cooperated***. For instance, in Gelsenkirchen, representatives of the intercultural work group "Mosque and Church" participated in the formulation of its integration concept, as well as members of different Christian, Muslim and Jewish groups. In the city of Bottrop, six out of 38 members of the Council for the formulation of its Intercultural Concept were representatives of mosque and church organisations.

5. Although inter-religious activities can be considered an important element of today's integration plans and concepts of the Ruhr metropolitan cities, the ***nature of State support or involvement in these activities remains unclear***. Exceptions to this pattern can be found in the following cities: In Dortmund, members of the municipal administration are defined as one target group amongst others for the mentioned cooperation with the Council of Muslim Communities and also the inter-cultural opening of the administration. And in Duisburg, city officials are on the Board of the site of encounter (*Begegnungsstätte*) of the Marxloh Mosque that was also financed with federal State and EU-funds.

Discussion

A number of factors determine the relevance inter-religious activities and events have recently acquired in urban integration policies. Based on the studied integration/intercultural concepts or plans of the eleven metro districts of the Ruhr Area I want to specifically point to the following three:

- Changing integration paradigm
- Post-secularization of urban space and societies, and
- Increasing relevance of (inter-) religious actors in local governance processes

Changing integration paradigm: The inter-cultural paradigm facilitates the entry of religion in integration policies insofar religion is treated as a base element of people's 'culture' (Tezcan, 2006; Nagel, 2012). As pointed out in chapter 2, the inter-cultural discourse has become dominant in describing migration- or migrant-related policies and strategies at the local level (Weber et al., 2010). The discursive modification notwithstanding, on the programmatic level in many urban areas 'traditional' strategies continue to play an important if not leading role (Baraulina, 2006). This is also mirrored in the integration plans and concepts of the studied Ruhr Area cities, in which 'classical' integration measures in the field of language, employment and skills promotion tend to be included (view table 1). Nonetheless, the inter-cultural paradigm transpires through the principles (integration as a two-sided matter, oriented in people's potentials etc.), labels (a few cities have set up 'intercultural' instead of 'integration' concepts) and intervention areas of all the plans. The changing integration paradigm goes along with a change in perspective on public and 'diversity management', the latter implying a much higher focus on recognition, networking and encounter between public and civil society stakeholders in the urban context (Fincher and Iveson, 2008; Sandercock, 2003).

Post-secularization of urban societies and space: A recent strand of literature is discussing the growing importance of faith and inter-faith action in the context of the post-secularization of contemporary societies and cities (Beaumont and Baker, 2011a; Baker, 2008). Cities are labelled post-secular due to a presumed "re-emergence of faith into the public realm of civil society and the built environment" (Baker, 2008, p.1), a notion that stands in contrast to former postulations of secularity of public life in modern (Western) metropolises (ibid: p.1; metroZones, 2011a). This is connected to a growing migration-related ethnic and cultural diversity, bringing about pluralized claims on urban participation and space which specifically materialize in cities and the local context (Griera and Forteza, 2011, pp.113, 117). To the extent that migrants bring their claims from the urban periphery to the centre (Arnold and Nagel, 2011), this calls for an increasing attention to such claims by urban policy makers and planners e.g. in the context of negotiating acquiescence for the construction of representative religious buildings (Schoppengerd, 2009). The management of social and spatial claims of religious

groups, particularly Muslims, becomes also manifest in the studied integration plans and their focal areas of intervention.

Increasing relevance of religious actors in local and urban governance processes: Related to the former point, in the last decade religious actors and/or interfaith bodies have gained a larger role in local and urban policies (metroZones, 2011a, pp.7, 18; Griera and Forteza, 2011). Besides the per-se pertinence and pluralisation of religious needs and claims in cities, the literature posits at least three factors shaping this: First, an enhanced capability of religious and inter-religious organisations to make their voices perceived, e.g. due to institutional formalisation and socio-political positioning (ibid: 124; Penta and Schiffauer, 2011, p.252). And second, an opened policy window for such claims and actors, e.g. due to the religious illiteracy of policy makers and planners in Western 'secularist'[6] metropolises and the political dimension of religion and inter-religious relationships in the macro-political field(Griera and Forteza, 2011, pp.124-125). Both lead to (inter-) religious groups fulfilling an important broker-function – both actual and symbolic - between municipal stakeholders and disadvantaged communities, but also between potentially conflicting ethno-cultural or religious communities themselves (Baker, 2009, pp.7-8). And lastly, the inclusion of (inter-) faith actors in urban governance processes is consistent with new discourses on public and urban management in which networking and civil society participation constitute key normative components, however also budgetary necessities (Griera and Forteza, 2011, p.125; Baraulina, 2006, pp.31-32; metroZones, 2011a, p.19). In the studied Ruhr Area cities, particularly representatives of Muslim and Christian communities participated in the development of the integration and intercultural plans, thus suggesting their growing relevance as policy actors, but also the coupling of integration with security agendas down to the local level.

6. Conclusions

This paper shows that linked to changes in the migration legislation, integration has become an increasingly important policy topic in Germany in the last decade. This development has occurred on the national, as well as State and local levels. The specific relevance of the local level and particularly large cities for both conceptualising and implementing integration strategies lies in the fact that traditionally most foreigners have moved to urban areas, among these the former industrial hubs of the Ruhr Area. Thus, as of today most large cities in Germany have come to formulate local integration concepts or plans.

[6] I am consciously adamant to make a generalizing statement about a 'secularist' urban policy and planning tradition, since this holds only true for a very limited period of time in a very specific geopolitical context, i.e. the one of the post-World War II European Welfare State (view Eade, 2011, p.154).

In the last decades the ideas about integration and thus principles nurturing local integration plans have significantly evolved towards what has been coined the inter-cultural paradigm (Baraulina, 2006). In the last third of the 20th century so-called compensating integration measures dominated, seeking to counteract perceived educational or skills deficits of migrants. This deficit-oriented perspective on integration has gradually been replaced by the inter-cultural one, placing emphasis on reinforcing potentials (of immigrants e.g. in the 'ethnic economy', but also the multi-cultural urbanity as a whole), on interventions at the local (neighbourhood or city) level, and on the mutual responsibilities of majority and minority population groups to work towards improved urban integration and social cohesion (Weber et al., 2010, pp.1-2).

While traditional measures for the structural integration of migrants still tend to engage the larger part of local integration policies and budgets, strategies focusing on the promotion of urban socio-cultural understanding and conviviality are on the rise. This paper argues that thereby the inter-cultural paradigm has facilitated the entry of religious themes and inter-religious activities and built up the voice of religious actors (i.a. inter-religious bodies) in local integration policies and planning processes. It develops this and other arguments based on the analysis of integration concepts or plans in 11 metropolitan cities of the Ruhr Area in Germany.

Apart from the inter-cultural paradigm, the paper relates the inclusion of religion and inter-religious activities in urban integration agendas to at least two further factors. First, the proliferation of ever more pluralised religious needs and claims in the urban context, primarily, albeit not exclusively, voiced by urbanites with a migration background. And second, related to the former point, the growing importance of religious actors in the field of local politics. The "opened-up policy window" (Griera and Forteza, 2011, p.125) also needs to be considered in conjunction with transforming wider policy discourses on urban and diversity management, in which civil society and migrants' participation as well as public-civic networking constitute key ingredients. Many interreligious structures and activities in Germany have existed for decades (Klinkhammer et al., 2011) and thus represent civil society activities ready to be built upon in integration programmes.

In the author's view the inclusion of (inter-) religious activities and bodies in urban integration agendas, poses both potentials and challenges to cohesion-oriented future urban diversity management. The potentials are, that the dialogue between different religious groups may effectively enhance options for inter-cultural understanding and bring to the fore the experiences of culturally and socially marginalised groups, considering that many religious groups act as advocates on behalf of the latter. The challenge lies in that the politization of inter-religious dialogue may foster cultural/religious essentialism and the fixation of participants to their ascribed 'cultural' or religious orientation, particularly in the context of overall heated-up political climates. This may eventually work against creating space for "negotiated or performative identities in which secular and religious aspects intermingle" (Baker,

2009, p.7; also view Tezcan, 2006, p.31; Klinkhammer et al., 2011, 243, Weber et al., 2010, p.15).

It also needs to be said that interreligious activities in the context of Ruhr Area integration plans predominantly attend to Muslim-Christian relations - not least as a result of regional demographics. However, since also other religious groups have become claim makers in urban and public space it seems imperative that their concerns are not left out in the process.

The analysis carried out in this paper leaves open a number of questions, notably about the exact motivations of municipal stakeholders to involve (inter-) religious agents and activities in integration policies and plans, their role in these activities and the related processes of co-operation. These aspects will be addressed in the mentioned research project "Inter-religious activities and urban governance in the Ruhr Area" the author of this paper co-directs and will thus hopefully provide complementary insights to the topic.

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THE GREEN SYSTEM AND THE RETICULAR APPROACH IN THE ITALIAN PLANNING INSTRUMENTS

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Abstract

During the last decades, the importance of Urban Planning's role to safeguard green areas and to build green chains gradually increased. The latter played not only an ecological function to requalification the city's environment quality, but it becomes also an occasion to find social space.

In particular the approach changed, from a quantitative to a qualitative point of view. The first procedure reaches to achieve a minimum standard while the second one aims to satisfy ecological and environmental necessities.

The overcoming of a wrong punctual approach and the use of a new reticular one has origins in territorial scope where the new model is used to maintain and improve the ecological network. The latter encourages the ecological exchanges within different natural areas, which in this way, are not converted to island, avoiding a massive loss of species, both plant and animal (Bennett, 1991; Forman, 1995; Jongman, Pungetti 2004).

The transposition of the ecological network into an urban dimension led to the green chain beginning. This new model is not completely implemented by regulations even if often it has been part of the urban planning practices (Angrilli, 2002; Peraboni, 2010).

In the present proposal paper a dissertation about the different approaches to the green chain is proposed.

Indeed the instrumentation of Italian local planning has undergone transformations in the form and the substance: from the structure of Master Plan (PRG), planning instrument legislated by LUN 1550/42, to a new form plan carried out in Municipal Structural Plan (PSC), Urban Building Regulations

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(RUE) and Municipal Operative Plan (POC) and legislated by innovative laws of regional planning

1. The urban green spaces in new Italian urban planning

Pondering on the planning system innovation and its implications as to the systemic and reticular topic of the green on local scale, just means to give an account of the evolutive way/path of the discipline in relation to the territory governance and to the "re-founding role" exerted on it by the growning debate developed around the environmental matrix themes (Gambino, 1997; Filpa, Talia, 2009). If today we're able to consider, as an acquired cultural fact, the centrality of the theme as regards urban spaces and green areas planning, yet we have not to forget the difficulty of bringing this sort of consciousness into the logics and techniques of the piano. Moreover the asymmetry between theoretical conquests and operative applications represents a peculiar feature about the history of the discipline, characterized by a chronic slowness in relation to the technical and cultural evolution of the plan. Effectively, the urban planning, that nowadays succeeds in dealing with the theme of urban green, as a new and further projection plans, still represents an exception to the rule.

On the other hand, making the environmental problems as to an attraction within the urban plan has been the outcome of a gradual process of disciplinary and legislative reformation whose matrixes have to be found in that system of laws and planning practices grown between the Sixties and the Seventies. It is a matter of pioneer experiences, to which the current discipline of territory governance is indebted, that -by the identification of the complex social, productive and environmental component of the extra/suburban area- have subtracted the agricultural areas to the logics of property management, which identify them as places-limbo waiting for future construction (Campos Venuti, 1994; Oliva, 1995).

Reformist plans, after they had metabolized the systemic approach to the second generation urbanism, they promoted, in fact, new urban and environmental politics, stimulating a progressive evolution of relations between ecology and urbanism, seeking operational tools to reconcile ecological protection with development and recovery policies.

In the late Sixties, we're witnesses to a ferment of national legislation which will mark a new approach and a new attention for the extra/suburban areas, attempting to give them back at least that productive role denied by the previous plans. These are the years of the gradual reform of urbanism, where is trying to regulate, on national level, the dramatic use of land. In this case, both approvals of the L.n. 765/67, c.d. legge ponte, and the D.I. 1444/68 mark an important step in the protection of agricultural areas for many reasons: a limit of construction activity, in the absence of fundamental instruments of planning, is imposed; planning practice is spread; the extent required density for the private construction is determined. However, apart from a few exceptions, use plans were unable of being carrier of innovation introduced by such laws, simply classifying the

agricultural areas as E zone uncritically and generalizing constraints and indexes land. In many cases it's also happened that some plans would anticipate the reform laws in a fruitful exchange between practice and theory (Campos Venuti, 1991). It's so clear, for example, how the Reggio Emilia's Master Plan of 1967 provides a model for the articulation of the agricultural areas in three zones, defined on the basis of specific characteristics, productive and environmental, which represents nowadays a lesson in method difficult to overcome. It's in the path traced by this experience that, between 1989 and 1991, in the same town of Reggio Emilia, a "Preliminary urban-ecological Draft Plan" (Reu) takes place although it doesn't seem like a prescriptive instrument but a preparatory study in drafting the report on MASTER PLAN, fixing some basic elements about the territory governance and the plan forms derived from it.

Reu, in fact, establishes the final recognition of the necessary integration between urban planning and environmental planning; it emphasizes the importance of local scale, discussing crucial questions and environmental issues up to now treated on wide scale; it encodes a multidisciplinary system of analysis able to seize the environmental dimension in its own dimension quali-quantitative; it's about the green issue not only in terms of protecting but specially with regard a planning profile.

For more than a decade, these themes have been identifing the stakes for the re-definiton of the relation between towns, environment and pianos with regard the recent laws governing local territories according to the new forms of piano introduced by them.

Rather than going into the merit of the controversy about what has to be intended citing "territory governance" as a comprehensive term, seeing as a substantial problem and not purely nominalistic, there are certain details also ought to be mentioned becuse they mark a new period of the italian practice in urban studies which, gained the awareness about the role of green areas, has focused its reforming vis on the plan as to an instrument, on its form, on its contents and techniques. In these years of heated debates and experimenting, a reform of the local urban planning has now occurred, in its two distinctive components: the structural and the operational one. Regarding with the theme of urban green, the new model of the plan permits to think, in its programatic and structural dimension, a frame of sense around a project for the green areas, shared and not-negotiable. As Federico Oliva says (2008, p.5):

«A really structural form of the general plan is essential to ensure an effective and efficient Governance of the Territory, because within the general strategy that it expresses, it will be possible maximising the tools to use: from the regulatory plans for the existing to the negotiating programs for the trasformations, from the urban policies to the infrastructure projects, from the architecture project for urban quality to an environmental one, for the construction of an ecological network, in a crucial mix of planning, projecting and governance, for which,

sooner or later, we will have to confront a fair italian translation to the term planning».

Within the new instrument, it seems to be possible focusing the action towards a territory project able to realize a connection system between free urban zones and extra/suburban open spaces in order to contain the urban pression and to identify the integration medium between settlement development and natural values and agri-productive conservation. It's a commitment with a dual functional value: ecological, because creating a system around the areas of naturalistic interest permits the natural biological exchange; anthropization, because it strengthens the fruition system of such areas for social and recreational purposes.

Thanks to the case studies of Reggio Emilia and Ferrara we're trying to confirm what we have been explaining teorically up to now, focusing the evolution of the local plan as to the theme of urban green areas. It's an erratic course but, as both cases are demonstrating, costantly changing.

2. The evolution of urban green spaces in the plans of Reggio Emilia and Ferrara.

The selected case of studies – Reggio Emilia as to the instruments of planning (1999) and Ferrara as to the Municipal Structural Plan (2009) - are two emblematic examples to understand the evolution of the systemic approach and, subsequently, of the reticular approach of urban green areas.

The two examples, concerning the first one as the evolution of the other, from an historical to a substancial point of view, make reference to the Regione Emilia Romagna that always, in Italy, improve the structural reform of the urban planning.

Since the early Seventies (70's), thanks to Ian McHarg and Nan Fairbrother, the new ideas for a strategic landscape planning have been growing in order to deliver multiple functions and for enhancing the peri-urban environment and the beginning of the green infrastructure approach.

In the urban planning, the environmental issue becomes an important and central theme and the result is a rethinking of the relationship and interface between development – environment, that thrown in crisis growth patterns followed until now.

The plan of Reggio Emilia, which is part of the third generation's current of the Italian planning, expounds the transition from a culture of expansion to a model of trasformations. The plan of Ferrara, instead, has been consolidating not only the policies for the existing recovery, but also it has been trying to connect, like a network, those areas saved from transformative choices and gives them new social meanings.

The situation of Reggio Emilia, before the new plan, was primarily characterized by an high volumetry introduced by the plan, since 1985, and by the location of such projects, which would saturated and compromise possible green areas of which the plan was lacking.

However, the new instrument of 1999, signed by Campos Venuti, was an opportunity to define and refine, for the first time in the Italy, the change to the rebalance of excess volumes and to the recovery of green areas

A practical plan with a few principles and with simple rules aimed not only to guarantee equality of treatment in respect of property management, but also to reduce the consumption of soil and increase the environmental compatibility and the permeability of the soil to urban and nevertheless, to increase green areas in both choices: in the public areas, that in the private (Campos Venuti, 2008). The instrument, in addition to defining the innovative instrumentation perequazione - development rights - intended to create an ideal combination of built and empty, unable to improve the quality of the city.

The plan of R eggio Emilia, intended as a new planning season in which urban planning became aware that the quality of a place depends on the strategies related to environment and nature in the city. There was the transition from an interest in environmental protection, so far marked by a size of a territorial area, to the recognition of the intrinsic relationship between the environmental and the city.

In Italy the interest about environment in the plan of Reggio Emilia was entirely new: the objective point was that the soil was to be permeable and compact. The improvement begins to be read as an example of a new method of qualitative evaluation of key environmental resources (Oliva, 1999; Peraboni, 2010).

New standards were defined, and showed a break with the past, the quantitative characteristic of the only instrument that governed the urban green areas: from the low values of the D.I. 1444/68, the urban planning comes to the indicators of integrated processing, and those of permeabilization of the soil or the consumption of environmental resources (Campeol, 1999).

The green areas are enhanced with functions and the principal concerned the biological necessity, with main capacity of environmental regeneration of the urban areas. For the first time the Italian urban planning - even if experimentally - introduced through the local plan, issues such as the protection of plant and animal habitats (Campos Venuti, Galuzzi, Oliva, Vitillo, 1995)

So the ecological and environmental potential emerged and levered on new structural type: the network.

The network of the green areas, called also the green infrastructure, met a number of planning issues (Benedict & McMahon, 2006; Mell, 2009). In the United

States, since 1990, «green infrastructure was identified as a strategic, multi-scale approach to land conservation and land use planning, with particular emphasis on 'life support functions' of natural processes or ecosystems. In England, the Community Forest programme was established in 1990 by the then Countryside Commission as a pilot project to demonstrate the potential contribution of environmental improvement to economic and social regeneration» (LUC, 2009, 9). Today Green infrastructure has been discussed as providing theoretical, policy and practice led solutions to the continued demands placed upon urban areas. Drawing on a number of principles from Landscape Ecology it promotes the maintenance of ecological resources within connected networks of green spaces, watercourses and greenways.

Green infrastructure planning also supports the sustainable thinking and the adaptation to address current issues of town while proposing innovative, and often community led initiatives to address them (Benedict, McMahon, 2006; Mell, 2011; Tzoulas et al., 2007).

It's possible to define an interconnected network of green space like the element that conserves natural ecosystem values and functions and provides associated benefits to human populations. Green infrastructure differs from conventional approaches to open space planning because it looks at conservation values and actions in concert with land development, growth management and built infrastructure planning. The system of green wedges penetrating and interconnected, was designed to recover and strengthen the system of eco-biological connections and guaranteed the continuity of flora and fauna within the urban areas.

In Italy one of first example of new approach is Reggio Emilia that began with an experience of integrated urban planning and guided by the new systems approach.

It, even though in theory alluded to quality standards, could not start a total qualitative review of quantitative standards.

The proposed model is concretized for the exclusion of new urban expansions and new principles of treatment of green areas. It acknowledged and defined, increasingly, urban complexity, but was unable to articulate freely. The motivation for this is attributed to the rigidity of an inflexible tool, the MASTER PLAN.

For this reason the plan Ferrara corresponds to a new plan oriented to a total integration between planning and ecology. Experience, since 2009, defines a more flexible and less rigid plan, divided into structural and operational. Its environmental system, which is derived from the word "ecological network", not only maximizes the effects of environmental regeneration, but it guarantees a better use of environmental areas that are enriched with new meanings (Schilleci, 1999; Angrilli, 2002; Bennet, 2004; Peraboni, 2010)

The ecological network established and consolidated at the territorial level, winning a local space with new meanings. Infact the Green infrastructure has its origin in two important concepts: linking parks and other green spaces for the benefit of people, and

preserving and linking natural areas to benefit biodiversity and counter habitat fragmentation (Bennett, 2006, 8)

In the urban areas the model suffers more interesting specifications and news articulations (Lotta, 2011). The features, taken by the environmental system in urban areas, is inherent its function, no longer purely environmental. This function is enhanced by social role, thanks to the inclusion of facilities and public places.

In urban areas, to protect biodiversity, preserve and promote no longer remains confined to the environmental meanings, but it crosses in the urban ecology, also comes to the social component of the urban habitat: the human component.

In Ferrara, the city is understood as a large system of relations and an intimate connection between environment and society. In this way, the plan assumes a role of contact between the community and the green area, which gives way to a genuine need for protection of environmental resources (Bodin, Crona, Ernstson, 2006). Restore contact between man and nature means to start an alternative city defined by the planning instrument "green city", that binds the different parts and peoples through a network of connections and places of ecological regeneration and self-production, where it is possible created a new social reality, maintenance and quality assurance of the human habitat.

The MUNICIPAL STRUCTURAL PLAN of Ferrara leverages on value of the collective space of the environmental system and the green network for future development of the city. The ultimate aims of integration, between ecology and urbanism may affect the involvement of the inhabitants in the active management of common goods and their development, both as a incentive and growth of a sense of belonging to a place, and as a measure to safeguard of environmental areas from carelessness (art. 2 NTA, MUNICIPAL STRUCTURAL PLAN).

2. Conclusions

Since 2009 the construction of the environmental system comes to the definition of urban ecological network and promotes, in addition to environmental protection in urban areas, the construction of the community.

The city recovers the environmental dimension in a complex system and leaning toward «luogo moderno reale e simbolico di esercizio civile» (degli Espinosa, 1990, 236) On the other hand Castells (1996) recognizes the environmental issue

and the social forces, that draw life from it, some of the main engines of transformation of contemporary society.

The case studies highlight that the environmental system characterized by a heterogeneous themes concerned, ever more, the quality characteristics.

In a different way, from a purely environmental issue, introduced by Reggio Emilia, the case of Ferrara open to a more urban and social aspects, in which environmental quality is the core component. It is necessary greater openness and integration of urban planning in other disciplines to resolve the environmental issue. And it's likely that the new structure of the Plan will automatically trigger this effect?

The lack of an established practice of co-management planning in the urban environmental heritage has its negative repercussions, but, at the same time, could the new form of plan undermine the only approach so far regulated and generally followed?

Further compounding an already difficult situation is the predominance of a strong matrix urban centric planning practices aimed at solving spatial problems of urban development. This is an understandable interest, if we reread the phenomenon from the training phase of the discipline, was born and developed to pursue and address the growth of towns and cities, and today shows its inadequacy in the changed context, where instances of redevelopment, modernization and transformation of the existing, need for protection of environmental resources prevail (Gambino 1994; Ricci, 2005).

Obviously, as reported by Oliva (2008), we cannot propose a planning model such as that established by first law of 1942. It is necessary apply the experience more fruitful through the Structural plan.

A plan has to provide management flexibility, to intervene on green areas, to establish decisions essential and not negotiable. If, therefore, there must be a general strategy to guide the process of land transformation is equally true that in Italy, the need for urban reform series, it becomes ever more essential.

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FORMAL PLANNING REGULATIONS VERSUS THE NEED OF RESIDENTS: THE CASE OF DAR ES SALAAM/TANZANIA

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Abstract

In Sub-Saharan Africa urbanization is progressing at a rate unprecedented in human history. In most countries, the state is not in a position to apply a responsive legal framework and to mobilize adequate resources to guide urbanization. A major obstacle are the outdated legal framework and the inappropriate planning concepts inherited from colonial governments which often contradict post colonial policies and are unsuitable to respond to rapid urban growth.

The chronic underperformance of the public sector vis-à-vis rapid urban growth caused a large cumulative backlog in the provision of building land and basic services. In addition, uncontrolled informal urbanization has often caused dysfunctional settlement lay-outs and urban structures.

In Dar es Salaam, Tanzania informal settlements cover more than 70% of the city area because the statutory system cannot provide sufficient building land and settlers have to find plots on the informal land market. It shows the need for a new approach to statutory planning in order to guide urban development effectively, to create more functional settlements, to assist the urban poor to access affordable plots with basic services, and to release financial assets for the urban economy.

The paper will present results of a joint research analyzing empirically factors that determine space standards and land use in prevalent types of formally planned and informal settlements in Dar es Salaam. Goal is to identify parameters to ascertain the long-term suitability of settlements, understood as being functional and flexible to respond to future demands reflecting from socio-economic development.

At the centre of the research are the livelihood strategies of the residents. The overall aim is to evolve a responsive framework for statutory planning including spatial standards for settlements that reflect the current reality of urbanization under poverty while addressing future needs. Main actors will be local leaders and the community to ensure sustainable planning.

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1. Introduction

In Sub-Saharan Africa urbanization is progressing at a rate unprecedented in human history. In most countries, the state is not in a position to apply a responsive legal framework and to mobilize adequate resources to guide this rapid urbanization. Some of the obstacles are the outdated legal framework and the inappropriate planning concepts inherited from colonial governments. They often contradict post colonial policies (Ambe, 1999) and are unsuitable to respond to rapid urban growth.

The chronic underperformance of the public sector vis-à-vis rapid urban growth causes a large cumulative backlog in the provision of formal building land and basic services and leads to growing informal settlements. The outcomes of uncontrolled informal urbanization are dysfunctional settlements and urban structures (Scholz, 2008). The designation of specific land uses by planning authorities, the range of plot sizes and the reservation of space for public uses such as social and technical infrastructure, however, are important tasks to organize a harmonious urban development for the benefit of all (UN Habitat, 2008). Statutory urban planning has to balance the development opportunities of individual plot owners with public welfare and common interests.

Today, in Dar es Salaam, Tanzania informal settlements cover more than 70% of the built-up area. They have emerged primarily because the statutory system cannot provide sufficient buildable land for the demand. Inappropriate planning standards and inefficient land allocation procedures are serious bottlenecks. Most urban inhabitants who aspire to own a house in urban areas have to buy plots on the informal land market. The development of informal settlements does, however, not guarantee functional settlement structures, efficiency in the provision of basic infrastructure and adequate security of tenure (Kombe and Kreibich, 2007).

For urban residents and the poor in particular, a residential plot represents income and employment generation opportunities and essential livelihood assets. However, income generating activities on the plot can be supported or hindered by planning regulations. Additional costs can be caused or avoided depending on what planning regulations and standards are being applied. Too rigid standards, like exclusively residential zoning where no other uses may be allowed, can have a restrictive impact on livelihood strategies of urban settlers since it can make income generating activities difficult to execute. On the other hand, the absence of any formal regulation in informal settlements can also hinder income generating activities due to inter alia restrained accessibility when densities increase or land uses conflict each other. The absence of regulations can also have a negative impact on livelihoods due to unhealthy living conditions and overcrowding. Studies conducted in informal settlements have confirmed that unregulated densification coupled with increased income generating activities can cause threats to public health and sustainable livelihoods (Kombe and Kreibich, 2007; Sheuya 2004).

The same applies as well to planned settlements as the research conducted hitherto revealed. They undergo a process of informalisation due to the lack of development control on the ground and a high pressure on land for commercial land uses and multi-storey constructions.

In many British colonies, the British Town and Country Planning Act of 1947 was adopted uncritically, and even updated versions of the legislation retained the major features in several countries (Payne, 2001). In Tanzania, the British Town and Country Planning Act of 1947 was adopted via the Town and Country Planning Act of 1956. Land use planning standards including land use zoning were based on the model of a low density, green city that reflected the ideals of a colonial version of the "Garden City". This concept may have been adequate for colonial towns with modest growth that were physically and socially contained through restrictions of rural-urban migration. But it cannot cope with the high urban growth rates since independence and, above all, it cannot be implemented by weak public administrations with limited resources (Ambe, 1999; Payne, 2001). Furthermore, it is hardly suitable for the current process of urbanization under poverty where only small plots can be afforded by the majority of settlers. After independence, in Tanzania the colonial planning standards were modified but with little attention to post-colonial socio-economic realities. The 1956 Town and Country Planning Law has only recently been reviewed (Urban Planning Act 2007) but by and large the contents have remained the same (Basteck et al. 2007). Even the internal draft (2011, see Table 1) for the recent revision of plot size standards is far beyond of what urban poor dwellers can afford and does not support sustainable and compact urban development or optimal use of scarce resources including public finances for basic infrastructure services.

Table 1: Proposed revised plot size standards (in brackets current standards)

Density	**Plot size in sqm**	**Maximum coverage**	**Maximum plot ratio**	**Minimum setbacks front**	**Minimum setbacks side**	**Minimum setbacks rear**
High	300-600 (400-800)	40%	0.4	3 m	1.5 m	1.5 m (2 m)
Medium	601-1200 (801-1600)	30% (25%)	0.3 (0,25)	3 m	3 m	3 m (5 m)
Low	1201-1600 (1601-4000)	25% (15%)	0.25 (0,2)	5 m	4 m	5 m (10 m)
Super low *(new category*	1601-2500	20%	0.2	7 m	7 m	7 m

Source: Ministry of Lands, Housing and Human Settlements Development (Internal draft 2011, not published)

Currently, urban land use planning standards still require large plot sizes that are too expensive for the Government to service and unaffordable by most social groups, especially the urban poor. In a paper presented in the expert workshop of this research project in August 2011, W.J. Kombe highlighted the costs for different infrastructure standards in relation to plot sizes. He concluded that for the stipulated plot sizes infrastructure costs would be prohibitive. This reduces the ability of local government to fulfill its obligations of service delivery and contributes to the shortage of building land.[2]

The unmet demand for affordable building land is thus largely covered by the informal land supply system which operates with average plot sizes of about 100-200 sqm. It can thus be argued that inappropriate planning standards, especially the plot sizes, have compounded the problems of urban governance, mushrooming informal settlements and the absence of basic infrastructure services even in most of the new planned and surveyed areas (own fieldwork 2011).

For decades, there has been hardly any planned residential settlement in Dar es Salaam that meets the needs for low-income groups. Even areas planned and designed for the urban poor (so called high density areas), where plots were offered below market prices, did not reach the target groups because these could not afford the land prices requested or were bypassed in the allocation process. In some cases, rising land prices even forced residents to sell allocated plots (own fieldwork 2010).

A recent initiative of the Government of Tanzania (Dar es Salaam 20,000 Plots Project) which aimed at providing planned, surveyed and allocated plots to reach all income groups has again failed due to high service costs, disadvantageous locations and non-transparent allocation procedures (Kombe and Kreibich, 2007). In many locations of the 20,000 Plot Projects prices for plots skyrocketed from an initial average of TSh 400,000[3] for a high density plot (charged by the Government upon allocation) to TSh 5 Mio. (price in the land market) in less than five years. This is more than ten times the official price charged and reflects the development of land prices for surveyed areas (own fieldwork 2011).

Most of the urban poor, therefore, can only find a place for living in the informal settlements where they can access smaller plots at affordable prices for unserviced land. In exchange they will have to cope with higher costs for services and utilities like urban transport and water from street vendors.

[2] The cost of basic infrastructure services in comparison to full service infrastructure (i.e. including private water pipes and sewage) only doubles in case of small plots of 100 sqm. However, for larger plot sizes, i.e. according to the official land use planning standards (min. 400 sqm, see Table 1), the costs increase by more than three times. This is mainly due to the increased total length of infrastructure service lines such as roads, water pipes, storm water drains etc. in relationship to the number of costumers or households being served.

[3] 1 € = 2.100 TSh in February 2012

The lack of buildable land provided through the formal system has also increased the development pressure on existing settlements. The growing commercial and service sector in the current market-led economy has given rise to land use changes towards commercial activities in residential areas. Many property owners are changing their houses to accommodate economic activities such as shops, offices, and workshops due to higher rent expectations. Land use changes from residential to commercial activities are taking place since plots for commercial activities are not sufficiently available on the land market due to an insufficient designation of plots for commercial activities in former and current planning schemes. (own fieldwork 2011)

Another aspect of the pressure on land is the redevelopment of plots with multi-storey buildings following increased land values. While this development tends to support a more compact city, most construction activities under redevelopment, however, ignore the need for adequate set-backs leading to inadequate space between buildings. The planning standards in Table 1 do not include multi-storey constructions and their higher demand for setbacks. They seem to be designed for single storey buildings only and do not deal with floor ratios or setbacks in relationship to the height of the building (own fieldwork 2010).

These facts show the need for re-thinking central elements of the statutory land use planning system focusing on the increasing pressure on land, the need to guide urban development effectively, to create more functional settlements, to assist the urban poor to access affordable building land, and to release financial assets for the urban economy.

The land use planning system also needs to reflect hitherto unused capacities at the grassroots to supplement the role of public administrations in achieving strategic urban development objectives. As far as possible it needs to incorporate local administrative institutions and locally-based conflict resolution mechanisms. This does not mean in any way that formal institutions have to be replaced. The idea here is to explore mechanisms and strategies to reassign land use planning in response to the changing socio-economic and physical conditions.

2. Fieldwork in selected settlements of Dar es Salaam

The research analyzed formally planned and informally developed settlements in Dar es Salaam, Tanzania. Aim was to find out to which extend the formal planning regulations are applied and efficient, which current development processes are going on, how these processes impact on the livelihood strategies of the residents and which land use conflicts mainly take place due to the lack of development control.
Focus was to explore current processes of land use changes, densification, intensification, the livelihood needs of the residents in terms of space and land use as well as the impact and efficiency of statutory planning regulations including land use related conflicts. Land use conflicts in residential planned areas versus the uncontrolled/unguided mixed land use development were examined and the negative ef-

fects of such developments towards the adjoining land uses, residents and the overall functionality of the settlements were studied.

2.1. Applied methods and working steps

Seven settlements were selected for fieldwork (see Table 2): Planned and unplanned settlements under high densification pressure (case Sinza A1, Gongo la Mboto B2, Kawe B3) and an unplanned settlement which underwent a process of regularization and infrastructure upgrading (case B1 Sandali). Cases Mbezi Beach A2 and Bunju A4 serve as an example for settlements developed according to the formal planning standards with respective plot sizes. Case A3 Chamazi, however, is a planned settlement as well but as a model project with far lower standards of plot sizes of 144 sqm which is half of the plot size of Sinza A1 (288 sqm) which was developed as a site-and-service project under the World Bank scheme in the 1980s (see Table 2 and Fig. 11).

Table 2. Typology of Case Study Settlements analyzed

Typology of cases	**Planning approach**	**Selected Case settlement**
A1) Planned settlement under high development pressure	Site-and-service scheme of the 1970s	Sinza A1
A 2, A 3, A4) Newly planned areas	New planned development areas at the periphery	Mbezi Beach A2, Chamazi A3, Bunju A4
B 1) Upgraded informal settlement	Regularized informal settlement	Sandali B1
B 2, B 3) Newly informal settlements	New informal settlement at the urban fringe	Gongo la Mboto B2 and Kawe B3

A first expert workshop was held on July 8th 2010. It aimed at discussing and reviewing of the proposed research issues and research questions as well as at identifying potential case study settlements. After the workshop, intensive fieldwork started in the case study settlements of Sinza A1 and Sandali B1, followed by a second fieldwork in Mbezi Beach A2, Kawe B3 and Chamazi A3 in 2011 and Gongo la Mboto B2 in 2012. During the second expert workshop, held on 10th August 2011, preliminary findings from the first four case study settlements were presented and discussed.

The methods applied during the fieldworks were expert interviews to identify areas inside the case study settlement for in-depth survey and to conduct the interviews, followed by intensive surveys and land use inventory, semi-structured interviews with residents and operators of potential disturbing activities. Strategy for the selection of interviewees focused on identifying information rich cases or cases with a high conflict potential including disturbing land uses such as noise, dust pollution, solid and liquid waste production. These problems are largely associated with activities such as bars, repair workshops, retails business and function or congregation halls. Most of these land uses have emerged against official zoning regulations and land use change regulations but contribute to the income generation of the operators

and meet the demand of clients. However, they can conflict with livelihood activities of the surrounding neighbors.

Table 3. Overview on interviewed residents and operators of businesses

Case study settlement	Commercial operators	Residents
Sinza A1	4	16
Sandali B1	5	23
Mbezi Beach A2	3	24
Chamazi A3	Not available	5
Kawe B3	2	19
Bunju A4	4	19
Gongo la Mboto B2	4	26

The interviews reflect the wide range of the socio-economic figures of the residents in the different settlements (see Fig. 1 - Fig. 5). The relatively high proportion of interviewees above an age of 50 years was intended to collect views from residents who have stayed longer in the settlement and can provide a picture on the land use changes and development trends.

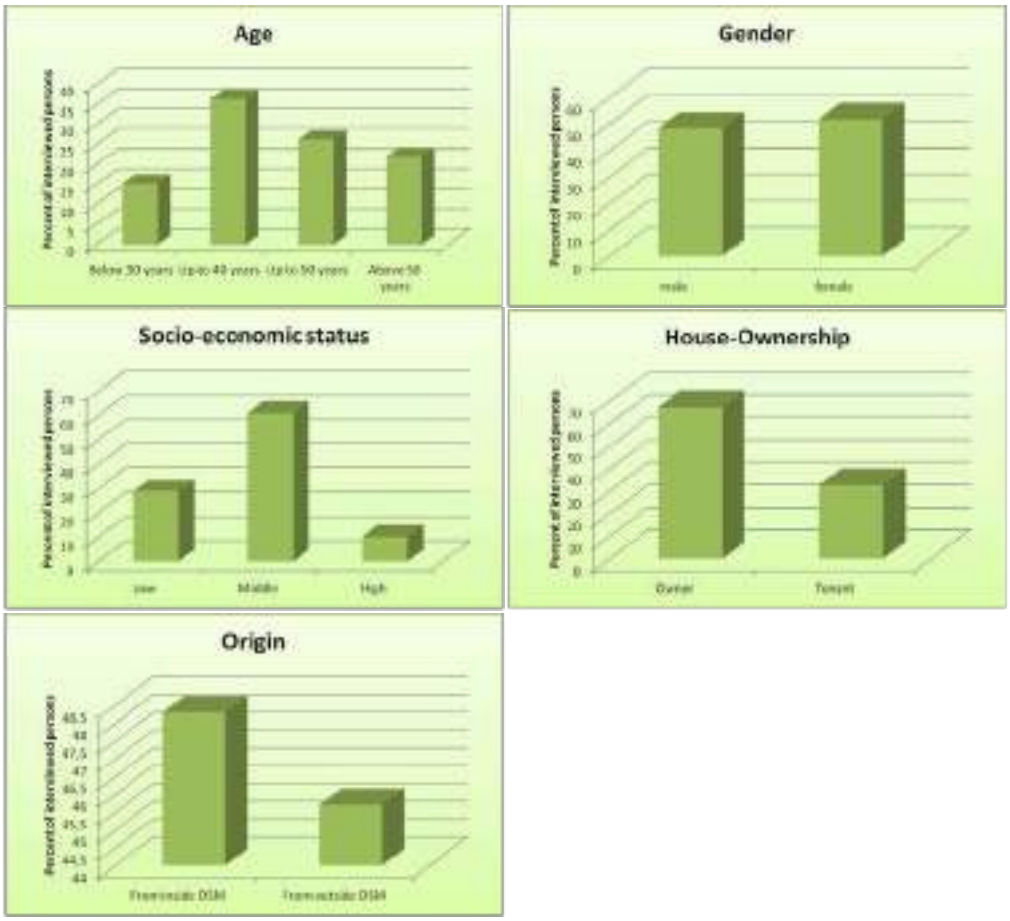

Fig. 1 - Fig. 5: Socio-economic data of the interviewed residents

When looking at the socio-economic figures, the interviews reflect the different income settings. B1, B2 and A3 are rather poor, while A1 and A4 is mainly for the middle class. A2 has been designed for the upper middle class but still rather poorer tenants live there temporally until the main construction is finished.

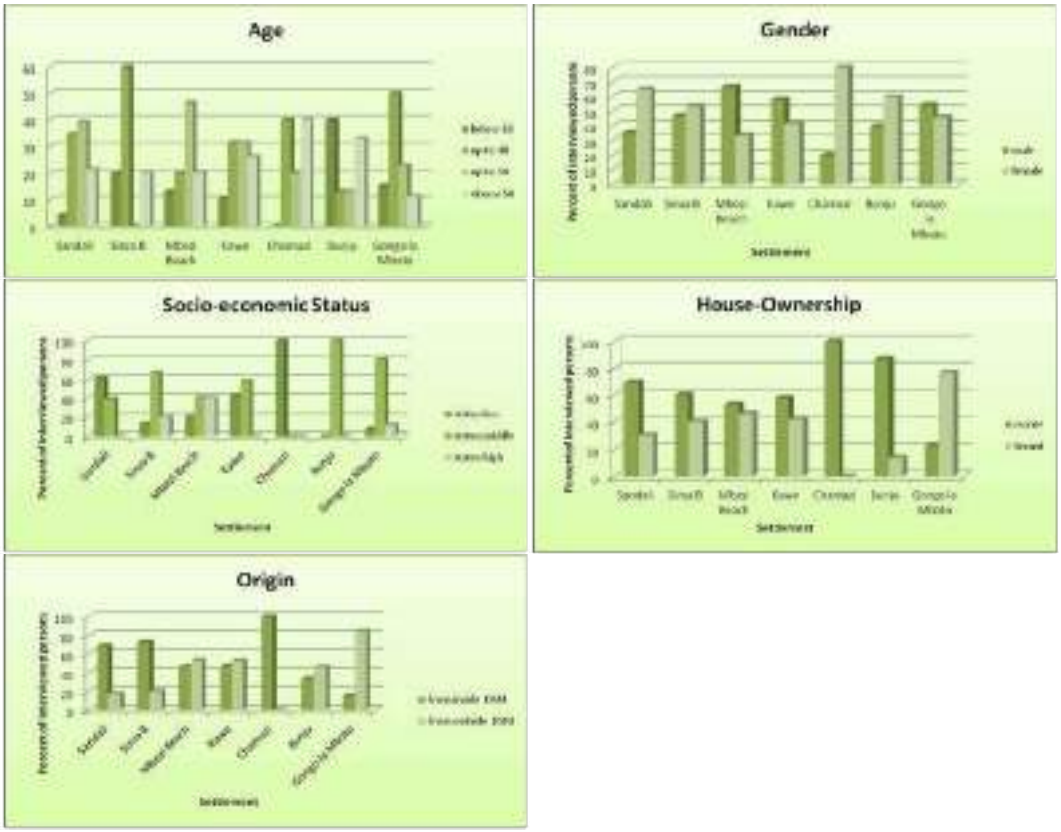

Fig. 6 - Fig. 10: Socio-economic data of the interviewed residents for each case study settlements

2.2. Findings from the case study settlements

The findings from the fieldwork were enriched by findings and conclusions from literature and expert interviews. The findings are differentiated along structure and land uses of the settlements, conflicting land uses, planning regulations and decision making, future development and wind up with a discussion whether planned settlements do not differ much from informally developed areas.

Structure and land uses

In all settlements (Fig. 12-17), the majority of the plots are for residential uses. The percentage of tenants is relatively low. In A1, B3 and A2, tenants, however, represent a significant number. For the rather affluent area A2 the figure is surprising but can be explained because many plots are not yet fully developed or construction has not yet started. In order to enhance the security of tenure, landlords are renting part

of the plot or the unfinished construction to avoid encroachment by other potential buyers (own fieldwork 2011).

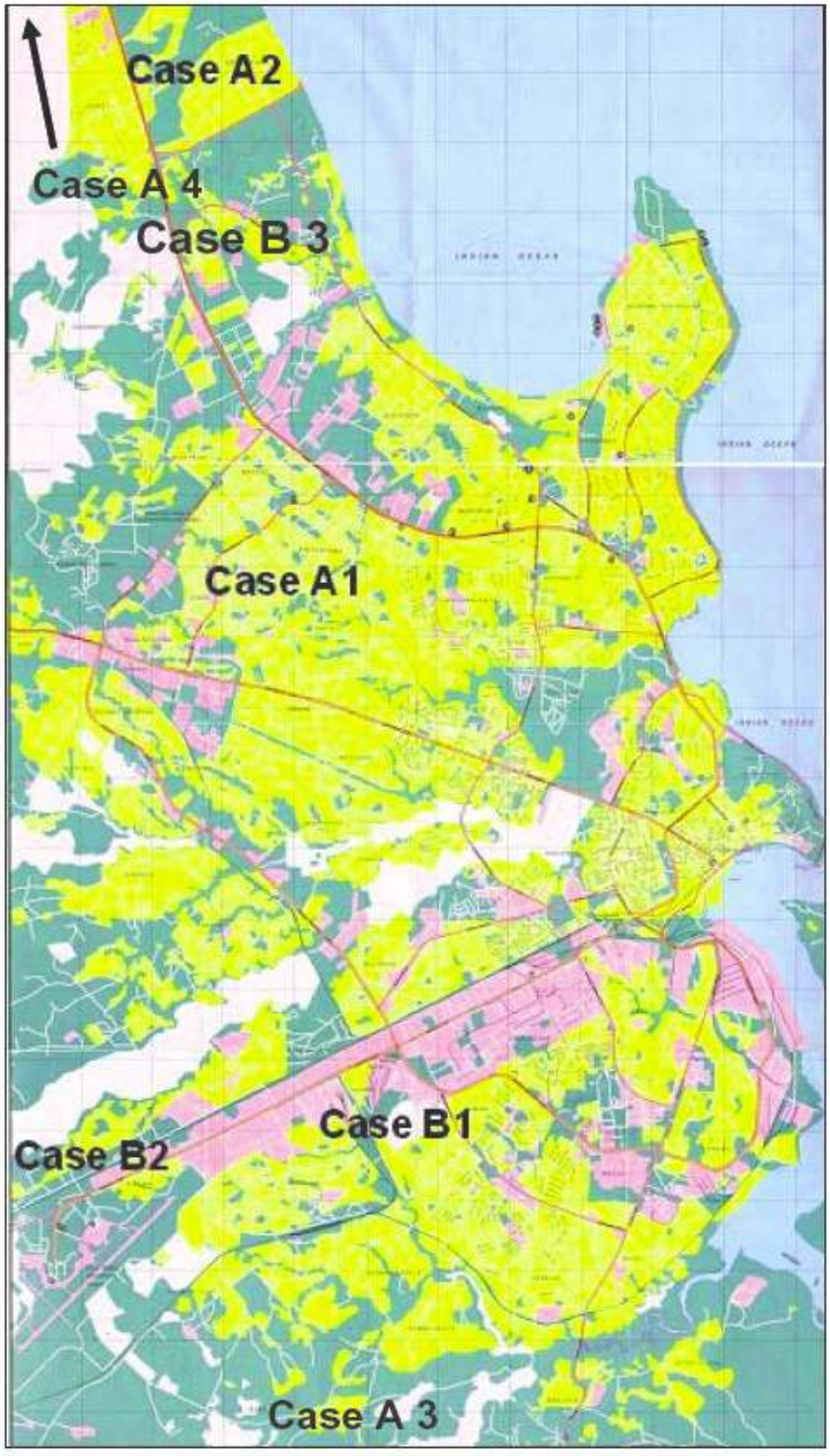

Fig. 11 Selected Case Study Settlements

Fig. 12 Land use inventory in Sinza (case A1) *Source: Fieldwork 2010*

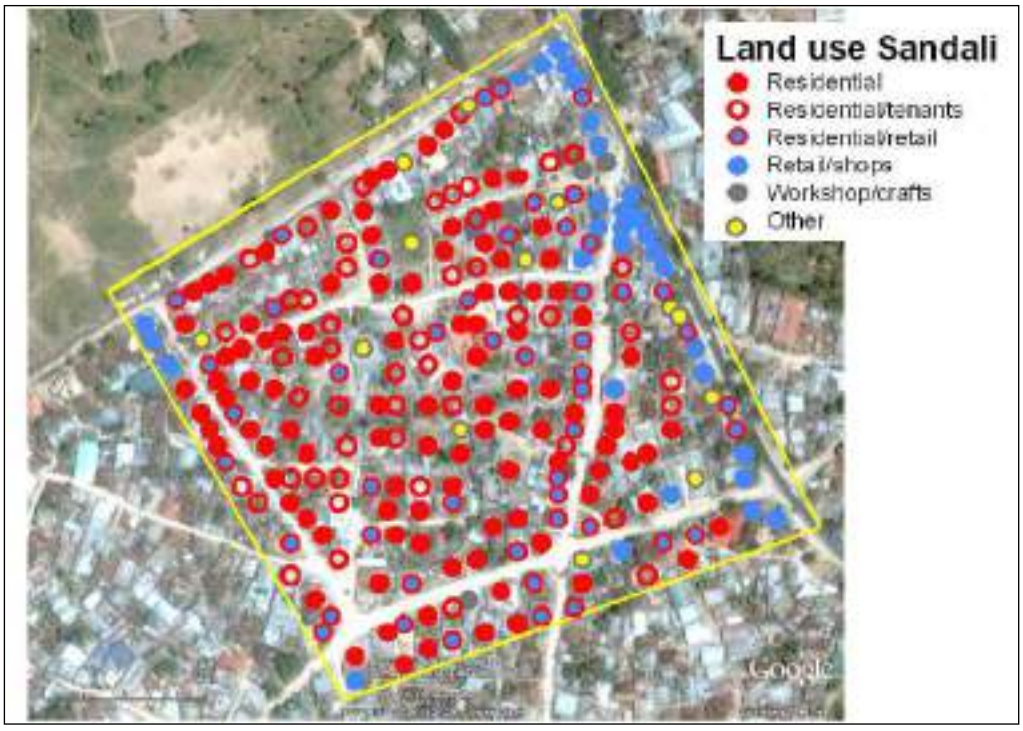

Fig. 13 Land use inventory in Sandali (case B1) *Source: Fieldwork 2010*

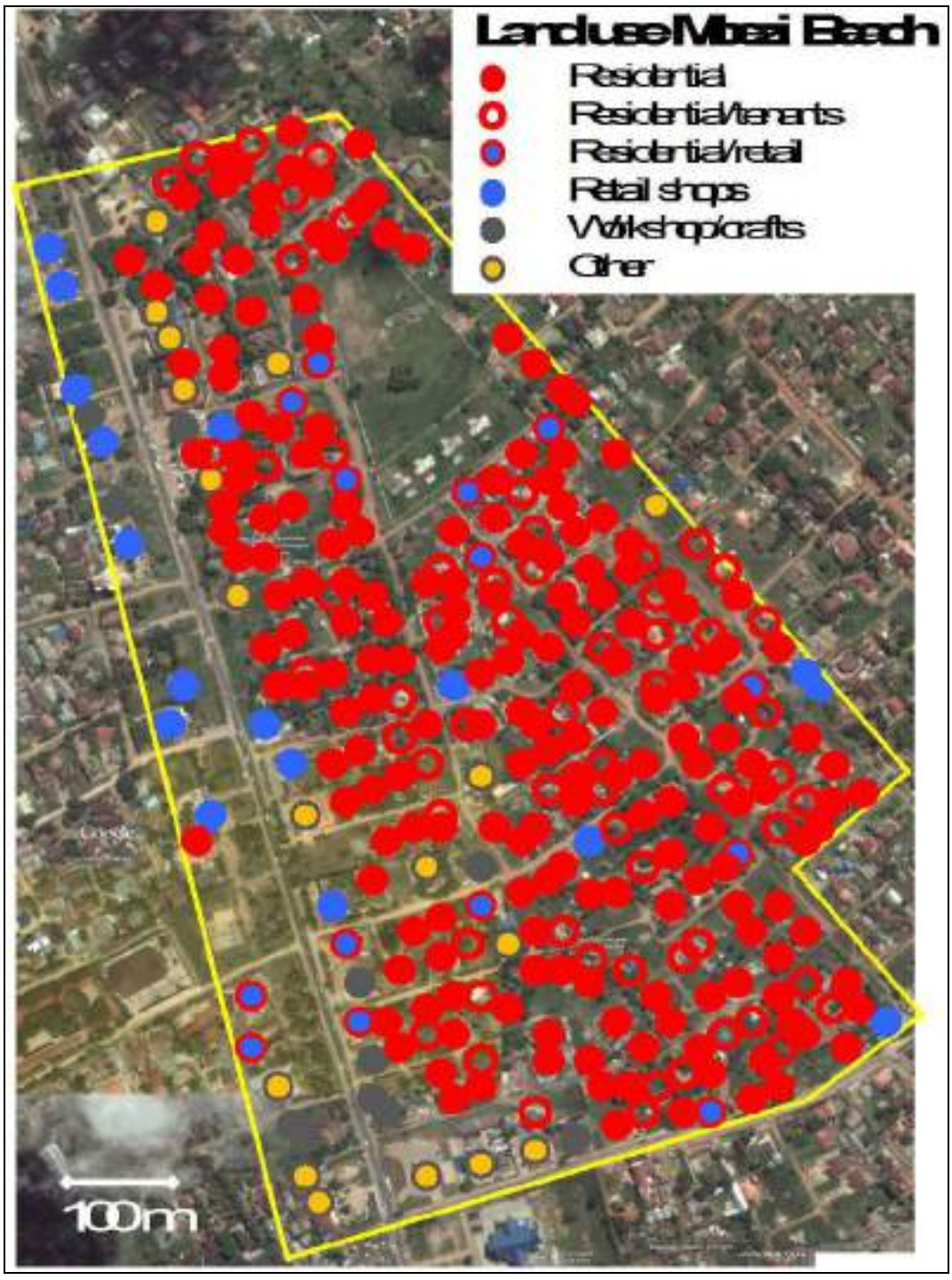

Fig. 14 Land use inventory in Mbezi Beach (case A2) *Source: Fieldwork 2011*

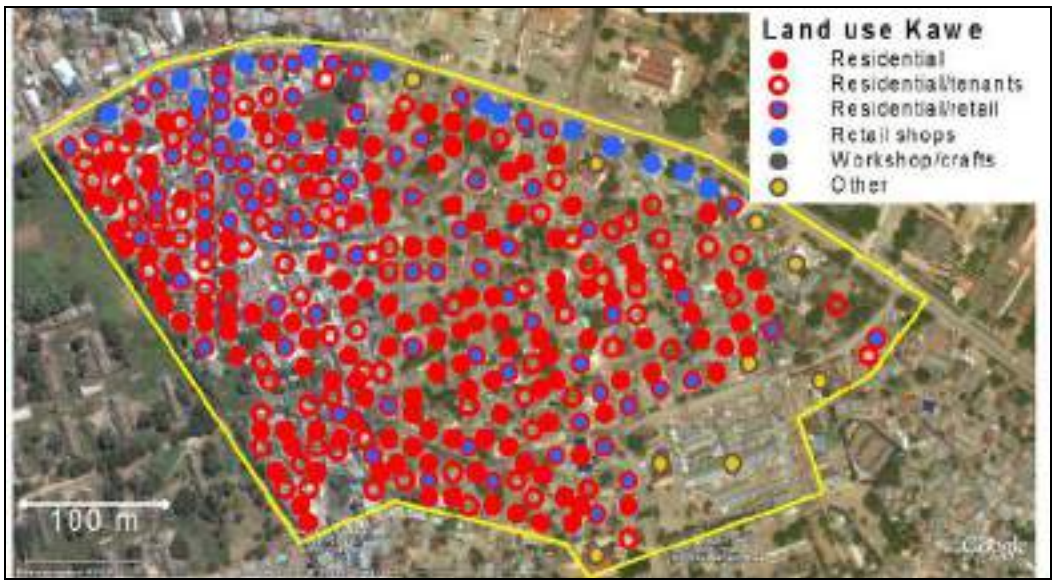

Fig. 15 Land use inventory in Kawe (case B3) *Source: Fieldwork 2011*

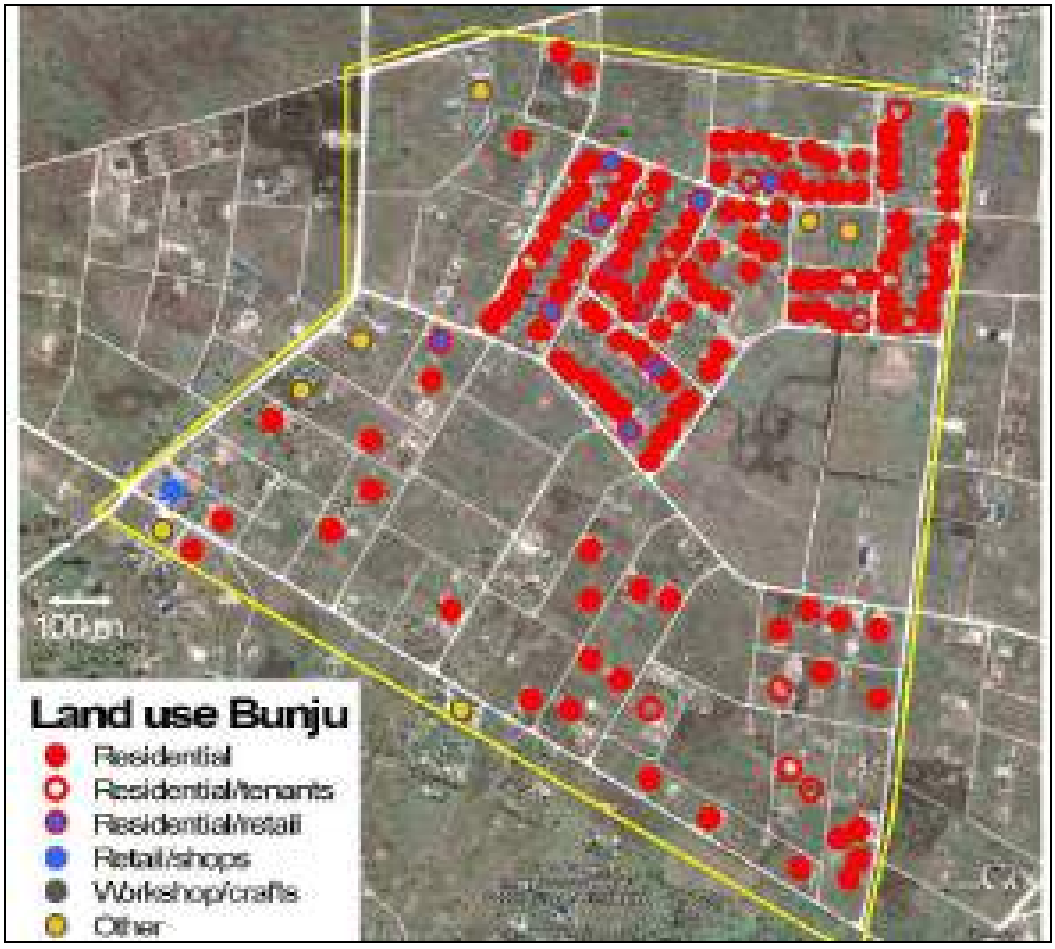

Fig. 16 Land use inventory in Bunju (case A4) *Source: Fieldwork 2011*

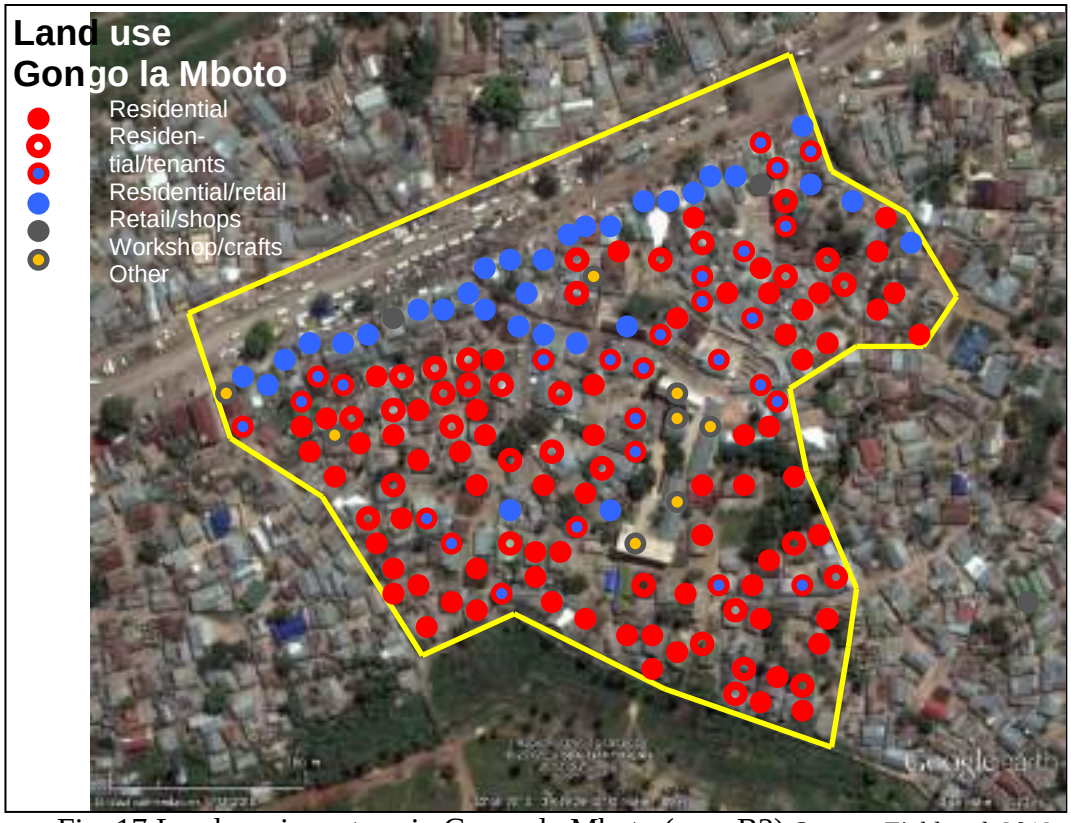

Fig. 17 Land use inventory in Gongo la Mboto (case B2) *Source: Fieldwork 2012*

Commercial uses are mainly located along main roads and at the fringe of the settlements (see Fig. 12-17). Locational preferences of the operators of commercial activities along the main roads are associated with the desire to ensure accessibility and proximity to the major costumer flow channels. However, the resulting functional structure of the settlement is a clear contradiction to the official neighborhood design concept in Tanzania inspired by Clarence Stein (1929) which designates land for communal services and commercial uses at the centre and not at the periphery of the neighborhood.

While this finding reflects the common understanding of locational preferences of such land uses, the contradiction to the official planning concept reveals an important shortcoming. Formal layout plans in Tanzania are bound to the neighborhood planning concept which designates and permits commercial activities only in the neighborhood centre but not at the periphery along the main roads. Therefore, market mechanisms are reversing the designation of the zoning concept since commercial activities tend to locate at the periphery especially along the main roads. This will have severe negative impacts on the functionality of the settlements since plot sizes, parking areas and set backs of the former residential planned area are not designed for such commercial activities and their spatial and functional needs.

Conflicting Land Uses

The fieldwork revealed that disturbances for residents caused by conflicting land uses are mostly related to noise from bars, music halls and religious buildings, less from commercial activities like workshops or repair workshops. Income generating activities such as shops, pharmacies, tailoring shops are generally more tolerated while leisure activities such as bars and worship places are less tolerated by residents in case they cause disturbances. Problems in the settlements are mainly related to conflicting land uses (uncontrolled change of the land use and tendency to mixed uses). Some of the mixed uses have a negative impact to neighboring settlers (e.g. bars etc.) while small corner shops or small scale workshops have little or no significant negative impact (A1, A2, B1, B2, B3).

Planned open spaces or road reserves are mainly used for commercial activities than as green areas (Sinza A1, Mbezi Beach A2, Sandali B1, and Kawe B3). The operators of workshops who have encroached upon communal open space in Sinza A1 (Fig. 12) have started into informal negotiations and agreements for a co-existence with the surrounding residents. The operators are not only aware of the disturbances but also of the regulations and laws that operating such activities in the area is illegal. In most cases, only a temporary permit was issued by local authorities and therefore, they try to avoid open confrontation with their neighbors.

In another case of a bar in Sinza A1 with loud music after midnight, adjoining settlers won a court case on noise reduction; however it was successful only for a short time and music after midnight started again. Sinza is increasingly becoming an area for commercial activities with hotels, bars and groceries which often disturb the residents. An easy access to main roads, good connectivity to other residential areas and suitable plot sizes, including the possibility to make use of the road reserve in front of the plot, have accentuated these commercial activities. Economic agglomerations lead to more business activities which also contribute to traffic congestions and related parking problems.

The owner of a large function hall in Sinza A1, having realized that his business can only run smoothly if the neighbors are comfortable, has recently reconstructed the premise with a parking space on the ground floor and a air conditioned sound-proof hall on the first floor. Although the high investment costs of the entire construction has increased, it makes sense, since he will not face complains from the neighbors and can run the business smoothly. Another example from Sandali B1 (Fig. 13), however, displays a different picture where workshops for used oil are operating in a residential backyard. The surrounding residents have complained about the pollution of this dangerous activity but without any reaction from the operators. The subward leader stated that he is not able to stop these activities since the operators are tenants only and the landlord is living outside the settlement and therefore not accessible for the local leader. Only after termination of the rental contract, the local leader promised to stop new activities. This case shows the limitation of locally made decisions or local regulating systems which often lack of knowledge and awareness as well as

statutory enforcement. Similar findings were revealed in the case study settlement of Kawe B3 (Fig. 15) and Gongo la Mboto B2 (Fig. 17) where land is under high development pressure. Also in these areas, commercial activities along the main road and inside the settlement around the market have given rise to conflicts related to noise, pollution and parking problems as well as increased building density. The sparsely developed cases of Chamazi A3 and Bunju A4 (Fig. 16) still do not exhibit land use conflicts due to the low density and the lack of commercial activities.

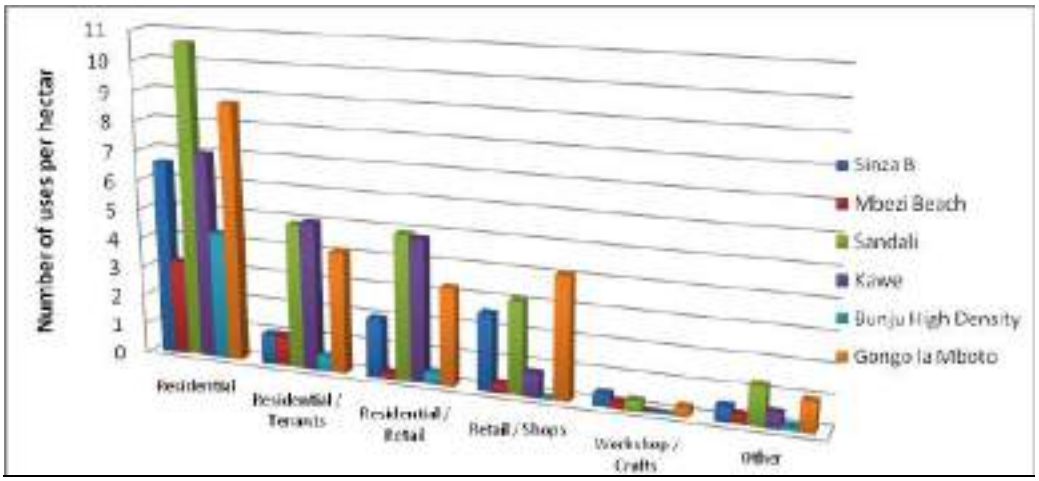

Fig. 18 Distribution of land use categories
Source: Own fieldwork 2010 and 2011

A comparison of the land uses in the case study settlements obviously shows that the informal settlements of Sandali B1, Gongo la Mboto B2 and Kawe B3 are more densely build and display a higher variety of land uses including commercial activities while than the planned settlements of Mbezi Beach A3 and Bunju A4. However, Sinza A1 as a planned settlement displays also a high density and high percentage of commercial activities. This reflects the development pressure on the settlement and the tendency to more commercial uses in the purely residential area (see Table. 4).

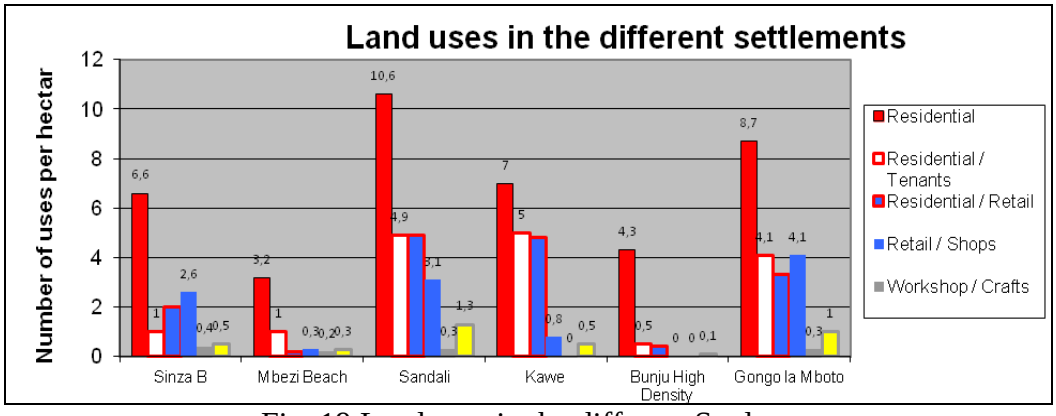

Fig. 19 Land uses in the different Settlements
Source: Own fieldwork 2010 and 2011

Planning Regulations and Decision Making

The interviews in the case study settlements of Sinza A1, Sandali B1, Gongo la Mboto B2, Kawe B3 and partly Mbezi Beach A2 revealed that there is hardly any sensitivity or adherence to planning regulations and land use categories among the residents. Only plot boundaries are respected especially road reserves. Developers are aware that structures can be demolished if built on the road reserves.

Most respondents state that they lack of knowledge on planning regulations and potential positive or negative impacts of the regulations. This is a contradicting finding since in Sandali B1 planning instruments and urban layout plans were used during the regularization process. In this process, intensive surveys were undertaken and demolition of buildings executed to facilitate the expansion and construction of access roads and storm water drainage. The situation is similar in the formally planned settlement of Mbezi Beach A2 where a comprehensive layout plan is in place but not well known to the individual developers.

Also at the institutions at the grassroot level of the Government (Mtaa, ward level), there is a lack of awareness of planning regulations. For instance, in the subward office (mtaa) of Sinza A1 and Mbezi Beach A2 even a copy of the land use and layout plan was missing. It seems that in the understanding of residents as well as local leaders, planning only focus on the change of land use at the plot level approved individually by the local leaders and not according to the general planning scheme. Thus individual decisions happen often not according to the existing plans (Sinza A1, Mbezi Beach A2, and Bunju A4) or general regulations (Sandali B1, Gongo la Mboto B2, Kawe B3). Permission to build, extend or to change the use of a building are issued by local leaders rather based on the political influence of the applicant and thus in disregard of public interests. Therefore, conflicting land uses easily emerge. Such permissions focus only on the plot itself and ignore the neighbors' plot and the construction (concerning size, height, set backs and land use) on it.

Future Development

Congestion is seen one of the key future challenges in Sinza A1, especially because many individuals would like to build multi-storey buildings on the same plot which is today occupied by a single storey house and therefore it will increase in turn the congestion. In Sandali B1 new, modern buildings which are replacing the old structures made of rather poor building materials are seen as a symbol of a better future. However, up to now, multi-storey buildings are generally only few and the redevelopment is taking place in form of new single storey buildings. But because most new buildings are fenced like in Sinza A1 it will create a higher "visible" density, might block access to some buildings and hinder ventilation. Even in the well-planned area of Mbezi Beach A2 with relatively large plots, congestion is likely to occur. In one case two neighbors have built in disregard to the minimum setback regulations and as a result their two storey buildings are hardly one meter apart while the larger part of the plot is left open as a garden.

In Kawe B3, the density in term of plot coverage is already very high and new multi-storey buildings will compound congestion and limited accessibility and thus will cause more problems in the future.

For the case of Bunju A4, so far there are only few building extensions in the well planned more densely build staff quarter up to now. However, the on-going constructions in the privately developed areas for wealthier settlers (Fig. 16) with a higher plot coverage than permitted and insufficient set-backs can easily lead to a problematic density and land use conflicts in the future.

Are planned settlements and informally developed areas different?
There seems to be little difference between planned and informally developed settlements (cases A and B) in terms of adherence to planning and building regulations. In both, they are violated. However, the planning authorities both at national as well as at local levels consider the informally developed areas as unplanned areas in which no regulations can be enforced. Therefore, no one takes care of the basic regulations concerning set backs, land use, plot coverage and plot ratio. In planned areas, at least the settlement structure with a chess board pattern helps to avoid blocked areas.

In both types, uncontrolled building constructions, extension, in-fills and change of land use are persistently going on. This includes redevelopment towards multi-storey buildings without respecting the setbacks and coverage (Sinza A1, Mbezi Beach A2, and Kawe B3), change from residential into commercial uses (like groceries or bars) and neglecting regulations for noise pollution (bars, churches, workshops). In Sandali B1 and Mbezi Beach A2 processes of land use changes are less dominant but gradually increasing. The land uses in the upgraded informal settlement are likely to be similar to planned settlements (Sandali B1) because of processes of gentrification and the pressure of the real estate market on these settlements which are often located in attractive areas of the city. When comparing the plot coverage ratio (Table 4), it becomes obvious that formally planned areas under development pressure like Sinza A1 do not differ from informal settlements as B1, B2, and B3.

Table 4. Calculation of plot coverage ratio

Case study settlement	Total area / analyzed in sqm	Building land in sqm	Built up area in sqm	Plot coverage ratio
Sandali B1	16,032	13,385	6,255	0.5
Kawe B3	8,694/4,783	6,864/4,305	3,267/2,644	0.5/0.6
Bunju A4	50,874	44,734	4,800	0.1
Sinza A1	6,933	6,933	4,059	0.6
Mbezi Beach A2	31,000	30,364	7,007	0.2
Gongo B2	7,385	7,134	3,180	0.5

Source: own fieldwork 2010-2012

Both types of settlements, planned and unplanned, generally enjoy a good security of tenure and infrastructure supply (including improved storm water drainage like in Sandali B1). Therefore, both types are permanent settlements and not a temporally phenomenon as initially perceived by officials. Both planned and informally developed settlements undergo processes of land use changes, densification and potential gentrification following the rules of the real estate market and seek for a more economic land use.

Misguiding Concept of Plot Sizes as Land Use Control Instrument

Although some planned areas were designed as high density residential areas for low income groups, the urban poor as the target group has not benefited. The high density plots (400-800 sqm) are too large and thus too expensive for the low income households. On the informal land market most poorer residents opt for a plot of about 100-200 sqm which reflect their income status and affordability.

Today, the received colonial urban land use concepts and standards such as plot size categories and the resulting zoning in residential neighborhoods based on high, medium, low densities have not much impact on settlement development. Either many middle income residents occupy high density plots designed for the urban low income groups or these plots are used for commercial activities. Setbacks and allowed maximum plot coverage regulations are ignored (Sinza A1 and Mbezi Beach A3 and Gongo la Mboto B2 Kawe B3).

The smaller size of plots in Sandali B1 which is far below the official minimum standard size seems not to be a problem for the residents. Most residents seem to be satisfied with smaller plot sizes as they correspond with their affordability and income status. In this respect, official high density plots are still too big and smaller plots would be ideal for the poor. This could be especially the case if they are not fenced and setback requirements are observed (own fieldwork 2011)

The same applies to the newly developed settlement of Chamazi A3. In this area, a NGO is constructing houses for displaced settlers on a 144 sqm plot which is only half of the size of Sinza A1. Interviews revealed that settlers are satisfied with the plot size and the new home. However, the project is still under construction so a long term study on the suitability of the plot size is needed.

Therefore, efforts to focus on the plot size alone are not adequate to guide urban land use development. Other factors related to land use control like setback control in relationship to the height of the building and plot coverage are more promising but are presently simply not being implemented or adhered to. Landlords seem to have the understanding that after the purchase of a plot the owner can do whatever he/she wants on the plot including developments with a negative impact on the neighbors (noise pollution, solid waste production, excessive plot coverage and building height, etc). Especially, the relationship of the height of the building and increasing necessary set backs are ignored (A1, A2, B2, B3).

Fencing plots is becoming more popular to enhance security especially of the newly constructed houses held by the middle class (almost all in Sinza A1, Mbezi Beach A2, Bunju A4 and new buildings of the middle class in Sandali B1) while poorer residents still use unfenced plots. Unfenced plots allow sharing the space between neighbors and increase the space available for changing activities. On the contrary, fenced plots restrict the flexible space available between the buildings, block potential cross-ventilation and increase the perceived plot coverage ratio.

Land Use Categories do not meet Resident's Livelihood strategies

The majority of the residents in Dar es Salaam is poor. However, as noted earlier there is not any planned area dedicated to low income residents. The rigid land zoning concept and land use categories (residential, commercial, and residential cum commercial etc.) does not reflect the reality especially residents' needs for flexible livelihood including changing employment and income generating activities. Today, the planned residential areas are rather mixed use areas instead of a purely residential as planned.

Commercial uses are necessary in settlements and provide income and services for residents. However, there is a need to regulate and designate them in specific suitable areas in advance before they emerge uncontrolled. Operators of small workshops on leased land are aware of the disturbances and negotiate with residents while bars and music halls do not. Political influence and economic power seems to be the key issue.

There is no clear concept for the distribution and localization of the emerging commercial and service related activities. They are spread haphazardly in the entire settlements without a proper planning concept. In Sinza A1 half of the plots are residential cum commercial while in Sandali, the majority of the plots is still purely residential. Retail shops and workshops are located in separate buildings along the main roads. In many cases they occupy the triangle shaped spaces left open after demolition of buildings for road and drainage construction.

Since these commercial uses are necessary in settlements and provide income and jobs for residents, there is a need to allocate them in specific suitable areas. This calls for the review of the current zoning concept. It should rather address to locate disturbing uses like bars, warehouses, workshops along the main roads at the fringe of the neighborhood on the one hand and purely residential uses in the centre on the other hand. This means the spatial reversal of the neighborhood design concept used in Tanzania and the development of new land use categories in combination with plot coverage rules and increasing set backs according to the height of the building.

Idea is that as soon as sufficient and well designated areas for the critical non-residential uses are available covering the demand, land use changes could be fairly well controlled. At the same time land owners must be aware of which land uses are allowed for their plots and which not. Today, it seems that any land use can be real-

ized anywhere in the settlement and any redevelopment regardless plot coverage, floor ratio and setback or other environmental requirements, e.g. solid waste management, can take place.

3. Conclusion

The fieldwork revealed that current land use planning system especially the plot size standards and zoning concepts based on stringent land use categories are not suitable to guide the current development trends and cannot respond to the changing needs associated with search for sources of livelihood.

Focus of planning regulations should rather address issues related to mixed land uses and mechanism to guide the processes of densification and intensification in the settlements. While small scale enterprises including land uses such as corner shops and workshops find ways of negotiating with the surrounding neighbors, larger uses like open air bars or the unregulated densification processes with a too high plot ratio and/or multi-storey buildings without appropriate setbacks are developed without taking care of the needs of the surrounding buildings.

Therefore, there is a need to adjust the planning system and practice towards suitable regulations which are appropriate to residents´ needs and allow them to engage in different small scale income generating activities but also to control conflicting land uses and larger constructions. In order to implement such regulations, there is a need for simple, transparent and codified norms which can be executed on the local level by officers and persons who are not skilled and well trained in planning related issues. Besides there is also a need for clear negotiation and decision making processes that ensure the direct involvement of the settlers.

Therefore, future research will explore the need and the potential for regulation of land uses, densities and plot sizes on the local level. It will also pick up lessons learnt from the far more developed South African planning system as well as from standards applied in self-regulated informal settlements in other African countries.

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THE RESOURCES OF MULTI-ETHNIC ENVIRONMENTS IN ITALY: PLANNING IN THE "CITIES OF DIFFERENCE"

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Abstract

Immigration is a "hot issue" in many European countries and the cities represent the main gateway for the majority of the newcomers.
From the spatial dynamics and policies' point of view, the debate on urban space and immigration has been dominated by the topic of the problematic aspects of the newcomers' concentration in specific neighborhoods. In this direction, space policies have always been characterized by a dominant approach aimed at mitigating forms of concentration, breaking up the immigrants settlements' territorialities, or dispersing the newcomers groups across the urban territory.
In the last twenty years these forms of intervention have mainly resulted in the promotion of "social mixing" initiatives that this paper puts under critical observation.
In this direction, a main objective is considering some core concepts and narratives that underpin analysis and forms of intervention in multi-ethnic neighborhoods as "assumptions" that, far to be proofed, play a large part in conditioning the public debate and policy agendas on this issue, but also in orientating the researchers' ways of seeing. This objective implies a reframing of the descriptions and of the forms of intervention in multi-ethnic settlements, considering the "concentration/segregation" issue as a powerful "assumption" that is at once both descriptive and prescriptive, leading to "mixing" policies as an embedded answer to descriptions based on concentration.
Italian multi-ethnic settlements are "deeply" multi-ethnic, as people from different countries live in these areas, including the prevailing presence of Italian citizens. They are not ethnic enclaves, but "cities of difference" in the multicultural sense given by Fincher and Jacobs (1998).
Despite these peculiarities, innovative ways of intervention have not be developed, and planning in multi-ethnic contexts works with the same means and rationalities seen in other countries where the concentration phenomena are more significant.
Based on the most recent findings of some "out of the mainstream" literature aimed at describing multi-ethnic settlements in an innovative way, as well as on some case-studies, the paper aims at pointing out how much the peculiarities of the Italian environments may be useful to consider them as "urban labs" to discover the "resources" of multi-ethnic environments, and to develop new forms of research and action: challenging existing descriptions of multi-ethnic settlements, discussing innovative methodologies and intellectual approaches to these neighborhoods, and detecting alternative modes of interventions in such urban environments with a particular attention to the role – provider, enabler, conflicts' mediator, ruler – that the public hand may play in the face of the welfare restructuring.

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1. Introduction

Over the last fifteen years the increasing number of foreign immigrants in Italy has led to a growing body of urban studies whose first aim is to describe how the newcomers' presence has changed the major cities and their neighbourhoods. These are mainly descriptions on how the immigrants settle, "use" and change Italian cities. Despite the variety of these settlements, a common aspect could be found in the Italian multi-ethnic environments: the absence, excluding some exceptions, of "ethnic concentration" in specific neighbourhoods. This aspect could be observed both from the "quantitative" point of view – as the immigrant's share is rarely over 20-25 per cent over the residents' population – as well as from the nationality point of view – as multi-ethnic settlements are "deeply" multi-ethnic, as people from different countries live in these areas (including of course the prevailing presence of Italian citizens). They are not ethnic enclaves, but "cities of difference" in the multicultural sense given by Fincher and Jacobs (1998).
The most common form of ethnic concentration is related to some commercial areas, and a number of sociological and economical studies have underlined how the natives tend to leave to the newcomers *labour-intensive* jobs. In this sense, immigration is also presented as a resource (Ambrosini, 2010).
From the spatial dynamics' point of view, urban studies have underlined how the newcomers' economic activities have been able to adapt to spaces left empty from the Italian entrepreneurs, assuring the neighbourhoods' vitality with reference to the services that they provide (for example the corner shops), and to the uses of public spaces (Grandi, 2008).
These studies try to construct "out of the mainstream" descriptions of the immigrants' presence, presenting it as a resource, and deconstructing a pervasive public discourse focused on the problematic aspects of the newcomers' concentration.
Given this general context, this paper carries on a research path focused on spatial policies in multi-ethnic environments in Italy. This research has made possible to focus on three main spatial forms of intervention where the immigrants' presence is significant and/or visible (Briata, 2010; 2011b):

- where an "intensive" use of public spaces by the immigrants could be found, forms of intervention based on *"breaking up the newcomers' territorialities"* (Yiftachel, 1990). This is possible through forms of urban renewal aimed at introducing functions and services able to attract also the Italian population;
- where the immigrants' share is significant in the residential buildings, *public-led forms of "rehabilitation"* aimed at enhancing the real estate pressure. These forms of intervention may imply the weaker groups – not only immigrants, but old people as well – moving to other places;
- where the ethnic economies are significant, visible or able to attract foreign clients, forms of intervention based on (a) *rules, restrictions and ordinances* – including forms of zoning that introduce "special" regimes for some areas – that may have a negative impact mainly on the immigrants' shops (b) *"commercial development" policies* aimed at attracting new Italian shops and services.

This means that, despite the urban studies have underlined the absence in Italy of "pathological" forms of concentration that could be found in other countries, spatial policies have mainly used the same tools that have been used in other more problematic realities to reduce concentration.
This paper aims at exploring the possible reasons for these choices starting from an analysis of the rationalities that usually guide these forms of intervention, exploring similarities and differences between Italian and other Western countries, and pointing out how much the peculiarities of the Italian settlements may be useful to consider them as "urban labs" to discover the "resources" of multi-ethnic environments, and to develop new forms of research and action.

2. The problematic aspects of concentration

Debates on planning in multi-ethnic contexts have been dominated by the topic of the newcomers' concentration/segregation in specific neighbourhoods (Marcuse & Van Kempen, 2000). This "label" covers a wide range of phenomena felt to be problematic: a large number of immigrants in a certain area, a high percentage compared to the total number of inhabitants in a neighbourhood, and specific forms of settlement such as the ethnic enclaves. The *spatial dimension* is most closely connected with the *urban visibility* of immigration and plays a large part in conditioning the public intervention in the issue (Tosi, 2000). In the mainstream visions of public debate and policies "ethnic neighbourhoods" are considered as "worlds apart" which create barriers to interaction with the rest of the society, hindering the integration of individual immigrants (Mustered & Andersson, 2005). For these reasons, urban and spatial policies have often been characterized by a dominant approach that aims to mitigate forms of concentration, by dispersing immigrants and/or problematic groups across the urban territory and/or breaking up their settlements' territorialities by introducing people of different ethnic, social and economic background (Home, 1997; Yiftachel, 1990). And yet the assumptions of presence and absence of concentration and diffusion that underpin this dominant narrative often remain unquestioned by academics and policy-makers.

In the last twenty years these forms of intervention have been adapted by policy discourses to changing conceptions of the role of the state in public provision, as well as to new development scenarios of the post-industrial cities that have to be attractive for business services, creative industries, knowledge-based economies and tourism. In this way, the promotion of "diversity" at neighbourhood level in terms of social class, income, ethnicity, and lifestyle has been proposed as a precondition for socio-economic upgrading of people living in deprived and "segregated" neighbourhoods (Donzelot, 2006), as a way to counteract stigmatisation putting these places "on the map" of the urban territory, and as key factor to stimulate innovation, creativity and economic growth (Fainstein, 2005).

In these directions, policies aimed at stimulating diversity or "social mix" in social housing estates, inner city areas or decaying historical centres have been carried out in a wide range of countries – e.g. United Kingdom, France, Germany, the Netherlands, Sweden, Belgium, United States, Canada and Australia – becoming a sort of *mainstream approach* to "problematic" neighbourhoods, including those characterized by a significant presence of immigrants (Mustered & Andersson, 2005). In most cases, urban policies aimed at reducing ethnic concentration have resulted in actions aimed at attracting in specific neighbourhoods people of different background to "dilute" the immigrants' presence and/or in actions aimed at the newcomers' dispersal across the urban territory *(ibid)*.

Despite the absence of an academic debate on these issue, this approach has influenced also the forms of intervention activated in Italy: social mixing is considered a good thing *tout court*, a sort of "magic word" able to justify different forms of intervention carried out in different "problematic" environments: from the historical centres to the outskirts areas (Briata, 2011a). .

At the international level, in the last years a growing body of literature has critically analyzed social mixing policies, focusing both on the *principles* that underpin these initiatives, as well as on the *results* that have been observed where they have been implemented. A brief summary of these positions is provided in the next paragraphs.

3. Principles and problems of social mixing policies

3.1. Ways of pursuing social mix

Despite the different patterns of socio-spatial segregation that characterize the different countries – e.g. anti-segregation policies have mainly been promoted to deal with the problematic aspects of the *banlieues* in France, while in United Kingdom there is a strict, relationship between the narratives of social mix and the inner cities' regeneration – a number of common aspects in conceptualising and pursuing objectives of diversity could be underlined. In particular, social and functional mix are presented as strictly interrelated objectives, and policies aimed at stimulating diversity should involve housing, retail business, services and public spaces (Urban Task Force, 1999). Despite this, in many countries social mix objectives have mainly resulted in policies aimed at promoting mixed tenure, housing price level mix, or building type mix to attract wealthier and/or middle-class residents in deprived and problematic areas (Bolt, 2009). In the last years, a growing body of literature has critically analyzed anti-segregation policies focusing both on their principles, as well as on the results that have been observed where they have been implemented.

3.2. Social mix to stimulate local development, upward social mobility and cohesion

Analytical works by planners, geographers, sociologists and political scientists have been helpful to underline that social mix is considered in public discourses and policy agendas as a key factor to enhance individual and groups' opportunities for upward social mobility at least for three main reasons[2]:

- a "local development" perspective (from the "insiders point of view) – as social mix may be helpful to change the perception of deprived and problematic neighbourhoods "from outside[3]", counteracting stigmatisation, attracting new (less problematic) inhabitants, and stimulating new broader relationships and socio-economical opportunities for people living "inside" these places;
- a "social upgrading" perspective – related to the supposed "civilizing" influence of wealthier and middle-class residents, whose presence could motivate problematic individuals and groups, thanks to the contacts with role models from a different socio-economic background;
- a "social cohesion" perspective – as the exposure to "the other" can lead to mutual understanding, learning or, at least, tolerance.

3.3. Spatial proximity between "diverse" groups and socio-economic upgrading: critical views

Analysing the three perspectives listed above, one major objection is linked to the fact that considering social mix as a key factor for change in residents' behaviour thanks to the wealthier or middle-class residents' influence, means reducing these people's problems to "social pathology", neglecting that poverty and social exclusion depend also on structural social and economical

[2] Based on international planning, geographical and sociological literature on social mixing initiatives, this "classification" has been done directly (cfr. Briata, 2011a).

[3] The reference to "internal" and "external" descriptions and dynamics is proposed having in mind that what is "inside" or "outside" a place is never something "absolute": this is a strategic construction operated by the local and not-local actors (including the researcher that embraces these distinctions) to simplify complex situations, and to prefigure some course of research and actions, excluding others.

factors, and that the single persons or groups' know-how/will/exposure to "the other", as well as the local level initiatives may be not enough to reach socio-economic upgrading (Raco, 2003).
At the same time, based on the outcomes of anti-segregation policies, the assumption of a strong link between social mix and housing mix is far to be proofed. A lack of evidence for this link where housing mix was realised has been underlined by a number of studies carried out in different countries (Kearns, 2002; Whitehead, 2002; Musterd & Andersson, 2005). At the same time, tenure mix practices have demonstrated that these policies may result in spatial proximity between different socio-economic/ethnic groups, but that this condition doesn't necessarily translates into social interaction between people of different background in public spaces, schools, services and shops (Butler, 2003; Allen *et al*, 2005). In this direction, also the thesis that the exposure to "otherness" leads automatically to mutual understating and tolerance is far to be demonstrated. Moreover, *from the methodological point of view*, it has to be said that these researches have been useful to highlight how complex is understanding what kind of social mix is taking place in these neighbourhoods, due also to the *slippery nature of this concept*: all neighbourhoods are, in fact, "mixed", but from anti-segregation policies' point of view some seem not to possess the "right" mix (Cole & Goodchild, 2001). Is then social mix a way of intervention aimed at creating the "right" mix? What are then, in these policies rationales, the characters of a "balanced" conception of mix? May "social engineering" create it?

3.4. Development agendas, public-led gentrification, social control: critical views

Other studies have analyzed social mixing initiatives in the context of new development scenarios of the post-industrial cities. In this direction, anti-segregation policies may be seen as strategies to change the deprived neighbourhoods' role, image and population in the broader cities' contexts, putting them "on the map" of the urban territory. These dynamics may be more common in the inner city areas or in some European cities' historical centres, where the relationships between the real estate pressure and urban renewal may result much more clear (Diappi, 2009). For these reasons a growing body of literature has underlined how social mixing initiatives may be seen also as forms of state/municipality-led gentrification, that may carry with them significant threats of displacement for the weaker groups (Lees *et al*, 2008). Other perspectives have underlined that anti-segregation policies may be read also as a means for the states or local authorities to break up the "world apart" characters and territorialities of these neighbourhoods, having back the social control of places that seem to have only their own rules (Atkinson & Helms, 2007). In this vision, anti-segregation policies may be seen also as a "spatial declination" of security policies.

4. Why not ghettos?

A completely different point of view has been analysed by studies less interested in the "external" exclusion of "segregated" neighbourhoods and more focused on the internal dynamics among the inhabitants of these places. The debate on the limits and on the potentialities of segregated places has a long history that goes back at least at Park studies' (1925) in the context of the Chicago School of Urban Sociology. Despite this, the interesting aspects of the recent rediscovery of these issues is due on the one hand, to their connotation as "a reaction" to social mixing initiatives and, on the other hand, to the strong link that they establish with the current situation of the welfare state restructuring. These perspectives have tried to look at segregated neighbourhood not only as dangerous environments with their own rules, but also as places that could have a potential in stabilizing the cities (Cattacin, 2006). In this views, these places' function in contemporary societies

would be underestimated because here immigrants and people of low socio-economic status can find a warm and loyal surrounding and, considering the shrinking capacity of intervention of the welfare state, *self-regulated spaces of mutual-help and solidarity*. These relationships have a strong capacity to act and to solve concrete problems, and "mixing" policies may weaken or brake established networks, without giving any other kind of resource back. These perspectives do not suggest to consider the spaces of segregation in a positive way *tout court*: their potential "integrative role" in the cities is in fact strictly connected with the welfare state's financial crisis and the related difficulties in the implementation of redistributive policies. In this general context, combating these places may create more problems than solutions.

5. Concentration and public policies' role

Despite the vast amount of critical academic literature, social mixing initiatives still remain the main form of intervention in the immigrants' settlements, revealing a sort of disjunction between research and policy agendas. At the same time, this disjunction may be helpful to stimulate reflections on the weak aspects of research that has focused on these issues.
In particular, as underlined in paragraphs § 3 and 4:

- There are critical views of social mixing policies that, despite their criticism towards anti-segregation actions, seem still to be linked to a negative and problematic image of the immigrants' and weaker groups' spatial concentration. These negative views appear in some way embedded also in the researchers' analysis and narratives, and may condition the research point of view, not being useful to explore innovative approaches and ways of action;
- There are studies that underline the public hand's will to re-establish control on "problematic" neighbourhood, considering this issue mainly in a negative way. In these perspectives, social mixing initiatives have been seen mainly as place-focused declinations of security policies, implying forms of "repression". Due to the physical, economical and social conditions of decay that often characterizes these neighbourhoods, the public hand's will to establish forms of control is far to be illegitimated. A negative view *tout court* in this sense may not be helpful to explore innovative approaches related to the "control" issue, for example declined also in terms of care and not only in terms of repression;
- There are studies that suggest to reconsider the potentialities of "segregated places" with a particular attention to their self-regulating capacity, due to the shrinking redistributive capacity of the welfare state. The welfare restructuring is without any doubt a reality, but this does not mean that the public hand shouldn't and couldn't have any kind of role in these places, for example managing situations of conflict or integrating and/or sustaining existing networks. Underestimating the state's or the local authorities' possible role in these places may not be helpful to explore innovative paths of intervention.

Existing literature's gaps may create "open spaces" for further research and analysis based on two main families of problems related to:

- the connections between the *descriptions* of "problematic" neighbourhoods and the consequent *forms of intervention*;
- the *role that may be played by the public hand* in these kind of places.

In the next paragraphs the paper aims at pointing out how much the peculiarities of the Italian environments (a) may represent a good research field to observe the international literature's less explored aspects (b) may be useful consider them as "urban labs" to discover the "resources" of

multi-ethnic environments, and to develop new forms of research and action: challenging existing descriptions of multi-ethnic settlements, discussing innovative methodologies and intellectual approaches to these neighborhoods, and detecting alternative modes of interventions in such urban environments with a particular attention to the role – provider, enabler, conflicts' mediator, ruler – that the public hand may play in the face of the welfare restructuring.

6. Descriptions and "solutions"

A wide range of literature, studies and data have underlined that ethnic concentration is an uncommon phenomenon in the Italian context. Despite this, policy agendas did not invest in original and innovative spatial policies in these kind of environments: the main objective is contrasting concentration through social mixing initiatives as in other Western countries where this phenomenon is much more significant.
The very aggressive public debate on immigration in Italy (Rivera, 2009) could be the first reason for the administrations to act in this way. A public debate that seem to be able to influence even the more "progressive" policy agendas. "Based-on-fear" planning (Paba, 2010) is the other side of a dominant approach towards the newcomers, an approach fuelled by the media that, where the immigrants' presence becomes visible, label as *banlieues* historic and central areas or as *ethnic ghettos* places where the Italian born resident are still the majority.
These narratives of multi-ethnic environments seem able to affect policy agendas more than the "out of the mainstream" descriptions of academic literature and research when the immigrants' presence in a place is presented as an urban resource.
In this direction a core point in this paper is considering some core concepts and narratives that underpin analysis and forms of intervention in these places – in particular the problematic aspects of concentration – as "assumptions" (Raco, 2009) that, far to be proofed, play a large part in conditioning the public debate and policy agendas on this issue, but also in *orientating the researchers' ways of seeing.* For example, all the "distinctions" to look at the immigrants' presence as a resource or to see in the different typologies of ethnic economies a service for all the residents of a neighbourhood, are used to demonstrate that ethnic *concentration is not an issues* in those kind of places. The same could be said of the descriptions of the immigrants' presence in terms of share or percentages as it was introduced in this paper: we have to be aware that an "absolute" index con concentration does not exist. Concentration is defined both by perceptions and by relationships of the local with the global, the neighbourhoods with the rest of the city, a place with other places where the immigrants presence is in the policy agenda in Italy or in other countries.
This implies a reframing of the descriptions and of the forms of intervention in multi-ethnic settlements considering the "concentration/segregation" issue as a powerful "assumption" that is at once both descriptive and prescriptive.
As underlined by policy analysis and social sciences, analysis and problems' framing are strictly linked with existing tools that decision makers may mobilize to cope with them (Bobbio, 1996; Crosta, 1998). In this case it seems as if, as researchers, we try to frame problems in a way that cannot lead to existing tools and "solutions".
In this perspective, social mixing policies may be seen not as *one of the possible answers to concentration*, but as an *embedded answer* to descriptions based on concentration. This means that not only policy agendas should be reframed as literature has underlined until now, but that also our ways of looking at the immigrants' settlements – as researchers – should be subject to challenge and put under critical and auto-critical observation.

7. From immigration as a resource to the multi-ethnic neighbourhoods resources

Observing the immigrants' settlements in Italy, and concentrating on their multi-ethnic and multi-cultural aspects, may lead to some open aspects for further research and action. For example, the neighbourhoods' Italian born residents usually do not feel comfortable with the descriptions of the places where they live made by the media and policy makers. Descriptions made "from outside" are quite different from those made by people living "inside" these neighbourhoods (Briata, 2011b).
These differences may be related to different reasons:

- a multi-ethnic co-existence *de facto* – that of course may bring problems, mistrust and prejudices – but that in some circumstances may lead to consider the "outsiders" as "established";
- a vision of ethnic concentration as an opportunity for commercial development or other kind of business also for the Italian people;
- the consequences that Italian traders have to face in their everyday life due to the negative imagine of the place where they live and work built up from media and actors that see the problems from outside – a fact that generate forms of place stigmatization, rendering the areas less attractive, and weakening the position of the local economies. Be described from outside as "otherness" in the face of the rest of the city, risking to be put out of the maps of the city itself.

These are only some examples of the problematic issues to work on in the perceptions of the Italian residents, traders and workers of multi-ethnic settlements.
In the last years the Italian multi-ethnic settlements and their descriptions as ghettos or *banlieues*, have stimulate the insurgence of some literature that has tried to focus not only on the problematic aspects as they are perceived from outside, but on everyday life and coexistence problems as they are perceived and described by Italian and foreign residents – people, community groups, users of services in those particular neighbourhoods. This is the rationale that guides description such as those of Torpignattara (Rome) by Fioretti (2011) or for Via Padova (Milan) by Arrigoni (2011) and Gadda (2012).
This attempt to catch "the insiders point of view" may be seen also in a number of pioneer actions carried out by public administrations in a number of cities where the guides for the analyses of multi-ethnic environments were a number of associations and community groups rooted at the local level. Social realities that carry on everyday activities in these places, trying to cope with concrete problems. An example could be the "participated analysis" carried out in the Padua train station area by Mimosa – an association rooted at the local level that works on social exclusion issues. This action was carried out in cooperation with the Municipality and Confesercenti (the traders association), involving the local entrepreneurs (including a large number of foreigners), workers and residents. This work aimed at establishing some core points to be followed in the area regeneration. The project was characterised by different types of field analysis: ethnographic observation, interviews to relevant actors, discussion with community groups, interviews to different "categories" of people living in the area (young/old; workers/residents; Italian/foreign entrepreneurs; men/women). Among the more significant outputs:

- the differences between the perception of the place "from outside" and "from inside" (inside life seem to be better than how it is perceived and described from outside);
- the differences between the daytime and night time perception of the area;
- the differences between the women and men perceptions' (independently from the immigrant/not-immigrant origin);
- a vision of the immigrants' presence from the Italian residents' point of view that does not hide problems, but at the same time that is not a stereotypical one – there is not a negative

perception of immigration in general, but a number of deviant behaviours are associated with the foreigners;
- a vision of security that does not seem to be complacent with the narratives based on "emergencies" proposed by the media, but that claims for the restoring of a "lost normality" though initiatives able to bring regeneration, vitality, a different positive visibility of the area that "should be much more similar to the city centres" (Banca Etica, 2008).

This survey was the first step of a project that led to the opening of a "zero kilometre" market (based on the residents' proposal for a quite problematic square); the promotion of a number of events to bring people in the area also in the evening; the "adoption of an ethnic shop" from the Italian entrepreneurs to build up bridges between different economic realities.
The Aldermen for the trade in the Padua Municipality has decided to propose this approach also for another problematic area close to the train station, but not so close to the city centre as the previous one. This experience has been described not for the still weak outputs in the area, but for the unusual way to "build up the problem" that seem to individuate: describing a place that "from outside" is always considered a problematic one based on the insiders perceptions. A description made also of "voices": micro-stories that tell of concrete problems, and of the local capacity (or not) to cope with them; resistance by the local groups to the existing dynamics; tactics that render everyday multi-ethnic and multi-cultural coexistence possible; awareness of what kind of problems could be faced at the local level, and what kind of problems require a not local approach or/and the public hand intervention.
Such a way of looking – less focused on immigration as a resource, and more focused on the resources of multi-ethnic environments – may be helpful also to understand the role that the public hand may play in these kind of places.
Considering the welfare restructuring, the public hand may have a different role, less focused on breaking up ethnic/problematic groups concentration through social engineering, and more focused on managing the coexistence of people with different (and not only ethnic) backgrounds, potentially but not necessarily conflictual.
These ways of looking may be more helpful to understand some strengths and weaknesses of these places such as the capacity of some local association to strike root and cope with everyday life problems, or the level and nature of some conflicts. A comprehension of these aspects could be helpful also to understand what kind of role may be played by the public hand – provider, enabler, conflict mediator, regulatory. This does not mean that all the resources to cope with the problematic aspects of these neighbourhood could be found inside them, but that in the comparison between the insiders and the outsiders images some new paths of research and action may be explored.

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Evaluation of Water Resource Carrying Capacity of Small Towns in the Rapid Urbanization Period in China

Nailu Tian[1]

Abstract

With the acceleration of the urbanization process of the small town in China, the problem of shortage of the water resource has become evident, as a result, it is urgent to set up a system for monitoring and evaluation the water resource carrying capacity (WRCC) of these small towns and predicting the trends of the change of the WRCC in this rapid urbanization period according to the master plan of the town. By analysis the progress and problems of the previous research of the WRCC, this paper proposed a method: per-land water consumption method for monitoring the WRCC of the small town in the rapid urbanization period which can be cooperated with the 3S technology (RS, GIS, GPS) by surveying and calculating the average per land water consumption data of each water consumption unit in the small town. And based on the features of the water supply and consumption in the small town, this paper also proposed the index system and model for WRCC evaluation which is adaptable to the monitoring system. In the end, this paper takes Dongsheng town as a case for testing the reliability of the monitoring, evaluation and prediction system of the WRCC. And according to the result of the evaluation and prediction of the WRCC in Dongsheng town, the rationality of the master plan for 2020 has been tested and solutions are given to improve the WRCC in Dongsheng town.

1 Introduction

The WRCC of small town in the rapid urbanization period refers to the maximum support capacity of the reasonable optimized water resource for the local social and economic development, which is within the administrative region of small town, in the historical stage of rapid urbanization period, on the base of foreseeable technical, economic and social development, for the principle of sustainable development, and in order to maintain the virtuous circle of ecological environment.

Thus, the study of WRCC of small town in the rapid urbanization period is different from the normal study of WRCC. Firstly, it takes the small town as the study area. Since the water circle in the small town has dual characteristic, the WRCC is also impacted by the nature and social factors. So in the study of the WRCC of small town in the rapid urbanization period, the impact of the human activities on water resource and the constraints of water resource on human activities should also be considered. Secondly, the WRCC is corresponding to the background of rapid

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urbanization. China now is facing the rapid urbanization process which is firstly reflected on the changes of land use: with the continuous expansion of urban construction land, a large number of rural lands have been eroded. Meanwhile, this process of land use change, with the rural- urban agglomeration and rural industry structure upgrading, has brought significant impact to the social and economy in the rural area. So the WRCC in this period will also change dynamically according to the huge changes in social and economy. It is the features of WRCC of small town in the rapid urbanization period that makes the evaluation and monitoring of the WRCC much more difficult.

Since the 1970s, scholars have done a lot of researches on the WRCC of small town. These researches have mainly been conducted on in nature resource and environment region, focusing on the improvement of algorithm and the application of evaluation model. Although none unified method of calculation for the WRCC has been confined now, algorithms for these various models have become mature. Meanwhile, there are two deficiencies in these previous studies.

First, in these studies, the data for the evaluation of the WRCC come from the local water resource statistics. However, these data still have some questions as follows: firstly, these data are based on annual statistics. The period of statistics is too long to reflect the dynamically change of the WRCC in the urbanization process. It is impossible to get the monthly even daily data, since it will bring huge amount of work to the statistics department. Secondly, the data of water resource which take small town as the statistic area can hardly be found out in China, because there is mostly no water resource bulletin in the town level. Though we can find out the annual water consumption data from the statistical yearbook of the small town, these data are too general to reflect the water consumption situation. That means these data are not detail enough for the evaluation of the WRCC. Finally, these statistical data may be processed by the local department, so the reliability of the data is not very high.

Second, these studies are tent to focus on the relationship between the town scale and the WRCC. They often reflect the scarcity of the water resource by evaluation of WRCC, like Guo xuan's study on the WRCC in Yiwu [9], or predict the change of WRCC by Scenario analysis, like Teng Zhaoxia's study in Jinan [10]. These studies always consider the needs of water resource first and then find out some method to divert and save water in order to satisfy the needs. However, none of these studies proposed to make constrains to the population or the scale of the towns according to the result of the WRCC. From this point of view, these studies can do little things with the planning for the small town.

2 Evaluation based on per-land water consumption method

In order to evaluate the WRCC which will change dynamically with the urbanization process of the small town in the quickly urbanization period, it is urgent to get the water consumption amount which will change in pace with the change of land use.

Thus, the concept of per land water consumption has been proposed in this paper, which means the average water consumption in 1 m^2 and 1 day for different land use area in the certain level of social- economic development.

The water consumption per land value can reflect the level of water consumption in different land use units. And through the water consumption per land value, it is easy to achieve the conversion between the land use data which can be obtained from remote science technology (RS) and the water consumption data for the dynamic monitoring of the WRCC.

The method for survey of the water consumption per land value is as follows：Firstly, set up the GIS database and put the data of land use and height of the building from RS into the database to form the map of land use and building height separately. Secondly, overlap the maps together to form the map of water use units. These water use units which have different land use and intensity of development are considered to have different value of water consumption per land, and they become the base units for the survey of water consumption per land. Also, according to the features of different water use units, they can be divided into 4 types which have different ways for the survey of water consumption. Then, the total water consumption in small town will be calculated by the water consumption in every water use units. Finally, the total water consumption value will be tested by comparing to the water consumption in annual statistics. If the result is reasonable, the water consumption per land value can be used in the prediction and evaluation of WRCC.

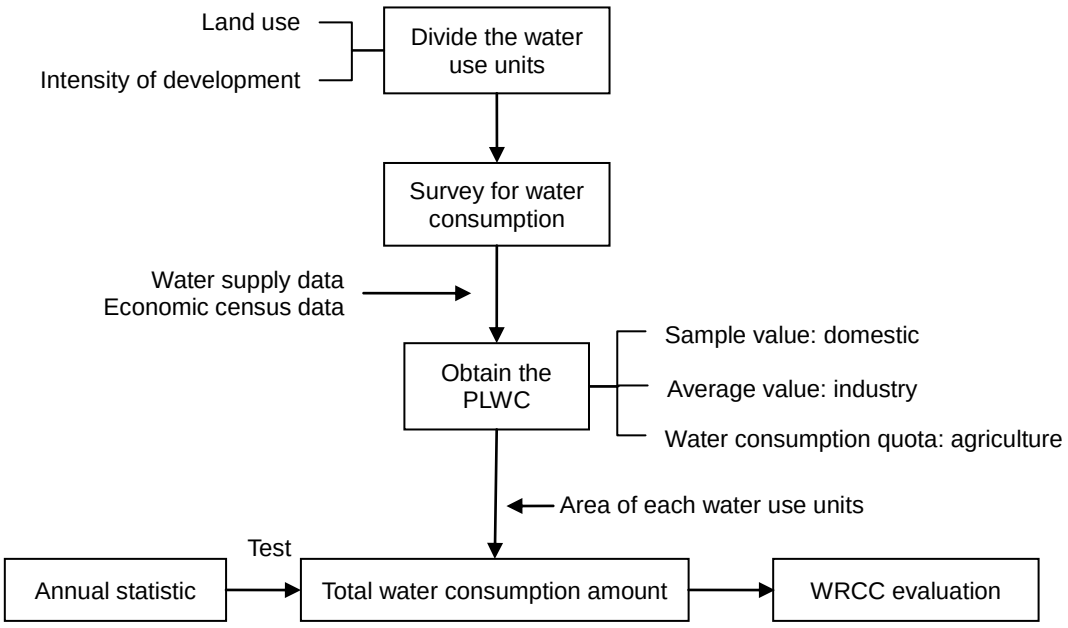

Figure 2.1: Structure of per-land water consumption method

Based on the water consumption per-land, the current system for WRCC evaluation would have to be improved, which means new index system will be set up, and the

data for the new index system will be obtained by calculation with the water consumption per land value and the land use data from RS or mast plan of the town. Also, current evaluation model has to be improved to adapt to the new index system. This new evaluation system for the WRCC can solve the problems in the current evaluation system which is too static to monitor the changeable WRCC in urbanization period. And the new evaluation system can apply better in urban planning. For example, in the process for making the master plan for small town, this new system can evaluate the WRCC in the future according to the population and land use data which has been decided in the master plan. And the result of the evaluation can also be one of the test tools for the rationality of the master plan.

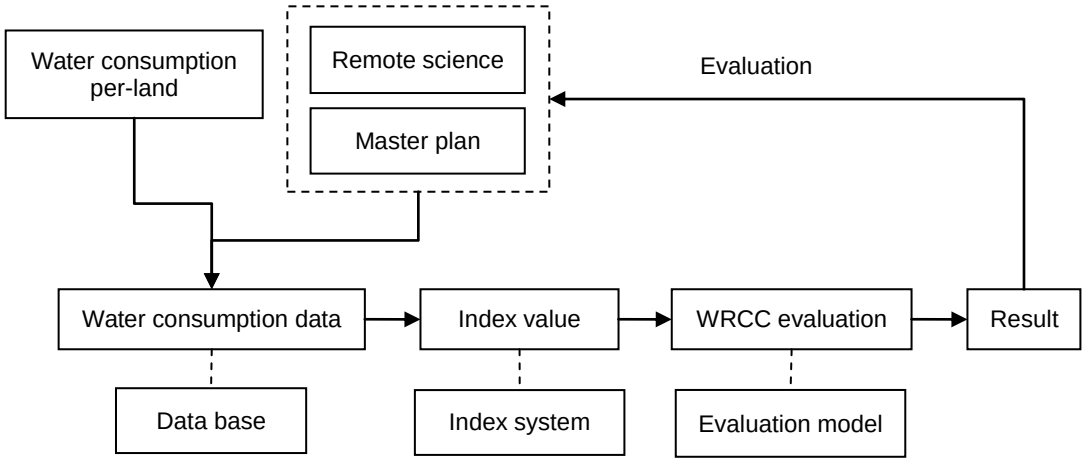

Figure 2.2: Evaluation of WRCC based on per-land water consumption

2.1 Divide the water consumption unit

Since the per-land water consumption is affected by the land use change greatly, the dividing of the water consumption unit is the key for surveying of the per-land water consumption. As the per-land water consumption is mostly affected by the land use and development intensity, these two elements are considered as the basis for dividing water consumption unit. The first thing to do is surveying for the land use and the height of buildings of the town and draw maps of them. The land use is divided into 12 types according to the "land use classification criterion" (GB/T 21010-2007). The heights of buildings are divided into 3 types: high rise buildings which have more than 10 floors, multi-storey buildings which have 4-6 floors and low-rise buildings which have less than 3 floors. Then, the two maps are imported into GIS to set up the spatial data set and overlaid to make the numbers of land units. These land units which have different land use and height information are confined as water consumption units. And these units are also the basic unit for the sample survey of the per-land water consumption.

2.2 Survey for per-land water consumption

On the basis of water consumption unit map, surveys are conducted in each unit. The

data of water consumption are got from the water company, according to the different use of the water, the water consumption units can be divided into following 4 conditions.

1. Domestic water consumption: related with residential and business area, including the water consumption of public service facilities and in daily life. As the water is supplied by the water company, the water supply data of different user can be got from the water company and the water consumption data in different water consumption units can be counted. Sample survey will be conducted for the per-land water consumption data in this condition.

2. Industry water consumption: related with industry area and also supplied by the water company. As there are many kinds of industries in one town, the difference in industry have significant impacts on water consumption. In this study, typical industry area which including almost all the industries in this town will be chosen as the research area, all the industries in the research area will be surveyed and the water consumption data will be got from “the second nation economic census”. As a result, the value of per-land water consumption of various industry enterprises can be got.

3. Agriculture water consumption: related with the agriculture area, the water directly comes from rain water and river. The per-land water consumption in this condition has already be studied and confined as water consumption quota for agriculture. So the water quota will also be used in this research as the per-land water consumption for agriculture.

4. Sanitation water consumption: related with road, green area and squares and the water mainly comes from rain water and river. As the water consumption in this condition is very low and relatively stable, annual data are used for this part of water consumption.

3 Establishment of evaluation system for WRCC

3.1 Index screening

The classification method and itemized method which are commonly used currently for screening of indexes are being combined together: the classification method is used first to list numbers of index exhaustively, and then itemized method is used to filter the index in order to get a small amount of itemized index for evaluation.

First, all of the index in current WRCC evaluation system were summarized and classified. And these indexes were sort by the frequency of occurrence. As a result, 50 indexes were listed. Since the number of indexes is too much for getting the data and determining the weight, these indexes need to be filter, and these indexes which have good representation and specification and easy to obtain are chosen for the index system. According to the data and standard value availability, initial screening

has been done. Then, refer to the features of the WRCC in the rapid urbanization period of small town and on the basis of expert consultation, finally, 12 indexes were chosen for the index system (Table3.1).

Moreover, the weight of the indicators is determined by AHP, Scores from 0 to 1 are given to these indicators according to their importance by 20 experts.

Table 3.1: Index system of WRCC evaluation in small towns

Target layer	Standard layers	Index layers	Units	Weight	Explanation	Function
WRCC in small town (A)	Water resource quantity (B1)	Water resource availability rate per capita (C1)	M^3	0.24505	Water resource available quantity/Total population	Water resource availability per capita
		Crossing water utilization rate (C_2)	%	0.076069	Crossing water consumption/ Total water consumption	Utilization of crossing water
		Ground water exploitation rate (C_3)	%	0.076069	Ground water exploitation yield/Total ground water quantity	Exploitation of ground water
		Water resource utilization rate (C_4)	%	0.141773	Water supply quantity/ Water resource available quantity	Development of water resource
	Supply and demand of water resource (B_2)	Leakage percentage (C_5)	%	0.019514		Water resource management efficiency
		Domestic water consumption per capita (C_6)	Liter	0.056341	Domestic water consumption/Total population*days	Domestic water consumption
		Water modulus (C_7)	Million m^3/km^2	0.108719	Water demand/ Land area	Water demand
		Agricultural water consumption per acre (C_8)	M^3	0.056341	Agriculture water consumption/ Farmland area	Agriculture water consumption
		Industrial output water consumption per million Yuan (C_9)	Million m^3	0.056341	Industrial water consumption/ Industrial output	Industrial water consumption
	Water resource quality (B_3)	Ecological and environmental water rate (C_{10})	%	0.088271	Ecological and environment water demand/ Gross amount of water resource	Ecological water and environment demand
		Urban sewage treatment rate (C_{11})	%	0.026824	Sewage treatment amount/ Total sewage amount	Sewage treatment efficiency
		Surface water level (C_{12})	Class (Ⅰ-Ⅴ)	0.048685		Surface water pollution

3.2 Evaluation model

Currently, the most common models for WRCC evaluation are System dynamics method, multi-objective decision-making method, the conventional trend, fuzzy comprehensive evaluation method. Due to the aim for WRCC evaluation in this research which in order to grading the WRCC into 3 levels for early warning of the lack of water resource on the basis of several indexes, the most suitable model is fuzzy comprehensive evaluation method. This method can not only use the mathematical definition of matrix multiplication to rationally combine the impact of various indicators on WRCC, but also through the fuzzy processing of each indicator to eliminate the jump between the various evaluation levels, thus making the function transit smoothly between the levels. As this algorithm is more accuracy, in this paper fuzzy comprehensive evaluation method are chosen for setting up evaluation model.

3.3 Index grading

The standard value of the 12 indexes which were determined as the factors for WRCC evaluation have 3 sources: the first one is the relevant standards in the national evaluation and supply and demand analysis system; and the second is the existed evaluation system for WRCC; and the last one is the average values instead when standard value can be hardly found.

Table 3.2: Grades of comprehensive evaluation

Index	Unit	v_1	v_2	v_3
Per capita water availability	M^3	>600	600-400	<400
cross-border water	%	<5	5-50	>50
Groundwater extraction rate	%	<30	30-70	>70
Water resource utilization rate	%	<30	30-80	>80
Pipeline leakage rate	%	<7	7-12	>12
Per capita daily water consumption	Liter	<70	70-220	>220
Water modulus	Million m^3	<1.5	1.5-3.9	>3.9
Agricultural per mu water consumption	M^3	<400	400-800	>800
Industrial per million yuan output water consumption	Million m^3	<0.08	0.08-0.2	>0.2
Ecological and environmental water rate	%	>5	5-2	<2
Urban sewage treatment rate	%	>70	70-45	<45
Surface water level	(Ⅰ-Ⅴ)	Ⅰ、Ⅱ	Ⅲ、Ⅳ	Ⅴ

According to the standard value of the index, the effect of these indexes which taken into the WRCC are divided into 3 grades. The grade v_3 indicates that the situation of WRCC is comparatively worse, the WRCC is close to saturation, will not carry in the near future, the potential of the further development of water resource in very small, water resource shortage is likely to occur and the development of economic will be restricted by water resource. So in this situation, an early warning should be given

and measures should be taken to improve the water demand and supply condition. The grade v_1 indicates that the situation of WRCC is good, the water resource still has carrying potential. So in this situation, water supply is guaranteed. The WRCC condition in grade v_2 is between grade v_1 and v_3, which indicates that the development and use of water resource has reached a certain scale, however, the potential of further development of water resource is still high and the water resource can support the economic development in the near future.

3.4 Evaluation matrix *R*

How to choose the evaluation matrix *R* plays a significant role in the fuzzy comprehensive evaluation. Since the value of evaluation grade is discrete, the final point of evaluation is discontinuous with respect to the value of some evaluation factor if we just assign some grade v_i to evaluation factors according to their values. In order to eliminate this kind of discontinuation, in this article we adopt some reasonable weight functions of evaluation grades *V*. These weight functions are characterized by piecewise linear and continuous with respect to the value of some evaluation factor.

4 Case study

In order to test the practicality and accuracy of the WRCC evaluation system which is proposed in this paper, Dongsheng town are chosen as the region for case study.

4.1 Test of the estimated value

Based on the survey methodology introduced before, surveys are conducted in different water consumption units and the per-land water consumption value of each water consumption unit has been obtained. Then, the total water consumption value of each unit is estimated according to the per-land value. Comparing the estimated value with the statistic value in statistical year book of 2008, it is easy to find out that in the first condition, the statistic value is 80% of the estimated value, while in the second and third condition the statistic value and estimated value are almost the same. The estimated annual water consumption of Dongsheng town is 62,250,000m^3, while the statistic value is 59,290,000 m^3, the error is 5%. This proves that the per-land water consumption method for predict the water consumption is relatively feasible.

4.2 Forecasting of water consumption

With the WRCC evaluation model and the estimated water consumption value by per-land water consumption method, not only the WRCC now but the WRCC in the future can also be evaluated. The land use, land scale and the development intensive data are obtained from the master plan, and the evaluation result itself will also become evaluation tools for the reasonability of the master plan.

Figure 4.1: Types of water consumption in different areas

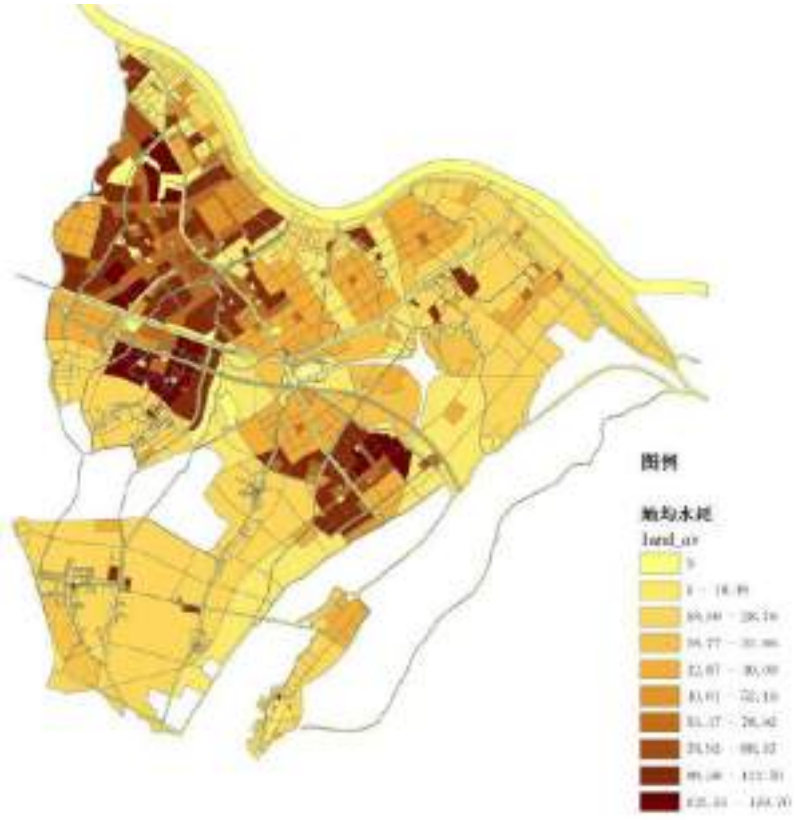

Figure 4.2: Average water consumption in different areas according to the master plan

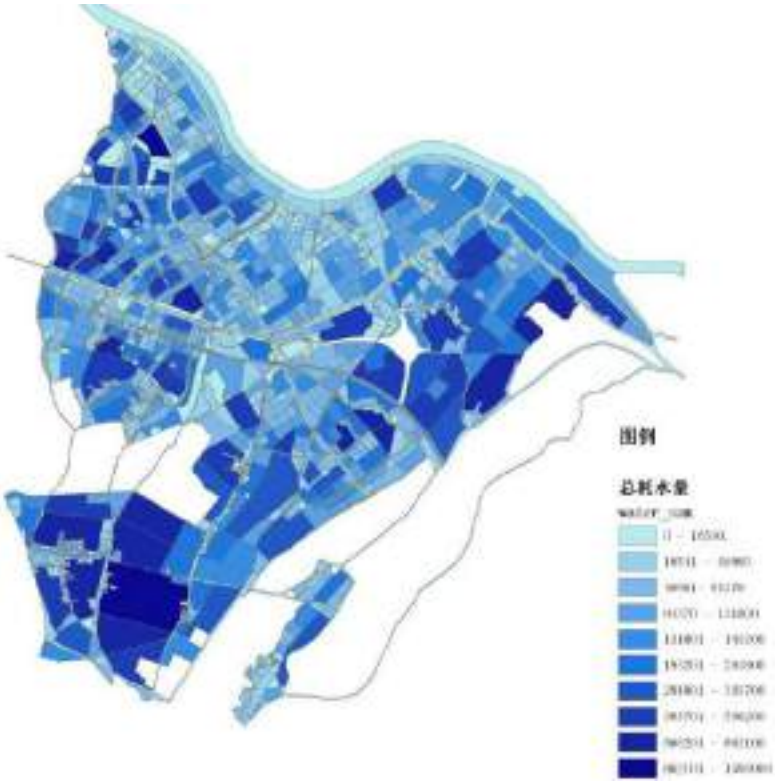

Figure 4.3: Water consumption in different areas according to the master plan

In this paper, the land use and height data are obtained from the master plan of Dongsheng town (2010-2020). 22 water consumption units are set up by overlaying the land use and the height data (Figure 4.1). Based on the per-land water consumption value which surveyed before (Figure 4.2), the water consumption of each unit can be calculated and maps are made (Figure 4.3). From these maps, it can be find out that the planned new town has relatively high per-land water consumption, due to the planning of high density of business and residential area.

Table 4.1 Predictive value of some indexes in Dongsheng, 2020

Index	Value
Per capita daily water consumption	196.91 Liter/person*day
Water modulus	20.22 Million m^3/km^2
Agricultural per mu water consumption	590m^3/acre
Industrial per million Yuan output water consumption	0.0027 Million m^3/million Yuan
Urban sewage treatment rate	100%

Based on the prediction of the water consumption data, the value of each index can also be predicted. It can be found out from the historical data that the amount of water resource stays stably in spite of the urbanization process. As a result, hypothesis can be proposed that the water resource amount in Dongsheng town will still stay stable in the future 20 years. According to the economic and population data

planned in the master plan in 2020, the value of all the index can be calculated (Table 4.1).

4.3 Evaluation of WRCC

Also, the evaluation of WRCC of Dongsheng town in 2020 can be conducted. According to the result of evaluation, in 2020 the critical point of WRCC in the grade v_1 is 0.1916, the critical point of WRCC in the grade v_2 is 0.6162, the critical point of WRCC in the grade v_3 is 0.1922, and the integrated score of the WRCC is 0.4997. It is evidently that according to the master plan of 2020, the WRCC of Dongsheng in 2020 is still belong to grade v_2, which means the exploitation of water resource has already reached a quite big scale, however, there is still some potentiality left for exploitation. As a result, the water resource condition can still support the scale of land and population planned in the master plan in 2020. It also means that the master plan of 2020 is within the carrying capacity of WRCC and it is reasonable from the aspect of water resource. However, the integrated grade of WRCC in 2020 dropped 0.02 comparing to the WRCC in 2008 which is 0.512. So it is also shows that in the process of rapid urbanization, WRCC is being threatened by expanding of land scale and rising of population, and should be pay special attention on.

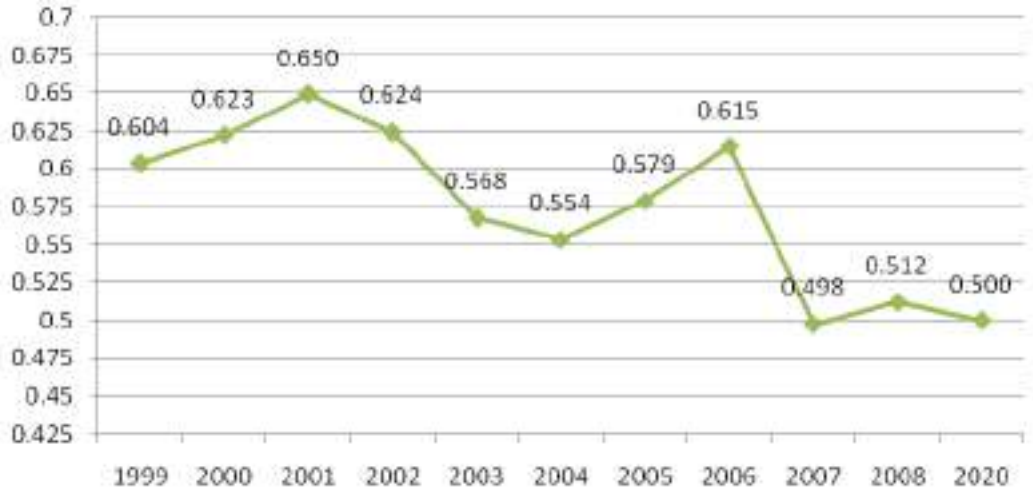

Figure 4.4: Annual integrate score of WRCC in Dongsheng

From the critical points, it is easy to find out that the critical points of 2 indexes: Daily per capita water consumption and water demand modulus in grade v_3 is rising constantly, especially the critical point of water demand modulus in grade v_3 which is 0.53 has exceeded the critical point in grade v_2, which is 0.47, that means this index is now in the warning state. It is the rise of the two indexes that induces the decline of the integrated score in 2020. In order to avoid the damage to the water resource caused by urbanization process, it is very urgent to take measures to improve the WRCC from the two aspects.

Table 4.2: Weights of index in the year 2020

Index	ri1	ri2	ri3
Per capita water availability	0	0.9345	0.0655
Cross-border water	0.5909	0.4091	0
Groundwater extraction rate	0.8	0.2	0
Water resource utilization rate	0.1420	0.8580	0
Pipeline leakage rate	0	0.93	0.07
Per capita daily water consumption	0	0.6539	0.3461
Water modulus	0	0.4739	0.5261
Agricultural per mu water consumption	0.025	0.975	0
Industrial per million Yuan output water consumption	0.7345	0.2655	0
Ecological and environmental water rate	0	0.3024	0.6976
Urban sewage treatment rate	0.8529	0.1471	0
Surface water level	0	0.25	0.75

5 Conclusion and outlook

The method for evaluation of WRCC of small town in the rapid urbanization period being proposed in this paper can be easily cooperated with 3S technology. By the land use and height data obtained by Remote Science (RS), with the spatial data base and calculation by GIS, the water consumption can be monitored dynamically. This method solves the problems in the current WRCC evaluation system which is static and difficult to obtain data, and can monitor and evaluate the WRCC in the rapid urbanization process conveniently. According to the application in the case Dongsheng, this method proved to be feasible, and the result of evaluation are turned out to be reasonable by experience judgment.

Since China has vast territory, and the climatic condition and economic development level are quite different from one region to another, as a result, the water resource condition and consumption amount are also have much difference. The per-land use water consumption value surveyed in this paper can only be representative of water consumption in economically developed small town in South China. In order to built a WRCC evaluation system which can be used in all the region in China, next it is urgent to divide China into several regions according to the climate condition and the habit of water use, and survey the per-land water consumption in all the regions, and set up the per-land water consumption system for the whole China.

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KHARTOUM AND THE SUSTAINABLE URBAN RESTRUCTURING MARCH FOR ABSORPTION OF RAPID GROWTH AND URBAN CHANGES

Dr Sharaf Eldin Ibrahim Bannaga[1]

Abstract

The humanitarian priorities in development patterns has been an international concern, which makes environment and development issues cross-cutting and as a result of rapid urbanization phenomenon the concept of sustainable urban growth becomes urgent since cities are under constant physical and social changes. In addition, cities are made of different and often conflicting interests and landuses. They are therefore, in need of restructuring to contain these changes. Greater Khartoum is a typical example; it has been growing rapidly and is subjected to continual transformation. Khartoum started in the Independence Day(1/1/1956) by less than 3% of the total Sudanese population and this figure jumped to 16.8% in 2010 while the physical block grew beyond imagination.

This paper presents a comprehensive restructuring programme that Khartoum implemented to accommodate the changes, at first absorbed the huge influxes of the rural uprooted population and later improved the physical environment. This included treatment of squatter settlements to strengthen the urban fabric, reallocation of incompatible urban functions, revitalization of the CBDs and other urban renewal schemes. People mobility, a major objective of the restructuring programme received most attention. Transportation lines were extended for more coverage of the road network and higher population concentrations in congested settlements were diluted, particularly the filthy slums. Re-planning of old neighbourhoods, traditional villages, etc was performed and urban utilities were expanded. Popular physical development was encouraged to keep pace with the burgeoning demographic explosion.

Restructuring has also been employed for adoption of the appropriate local governance systems considering surplus population distribution, establishment of new local markets and other economic activities.

The restructuring programme made positive effects in protecting the environment, attaining socioeconomic benefits, particularly activation of the urban economy. The main difficulties encountered were the problems associated with the relocation processes but relocation made the regularization possible thus attaining social justice.

[1]Bannaga Consult, Khartoum – Sudan

1.0 Introduction

1.1 Evolution of the Concept of Sustainable Development

Many people had thought for a long time that environmental requirements were incompatible with the objectives of comprehensive development, but controversy about the environment as a key input to the developmental process has overcome the first stage which made the issues related to environment and development more obvious and evolved the concept of "sustainable development". This was officially born in Rio in 1992 during the UN Conference on Environment and Development and then confirmed by World Summit in Johannesburg in 2002. It becomes a new doctrine and all nations agreed to adopt a pattern of development that integrates production, protection and conservation of resources which brought about a shift from the demand for pure economic growth to the demand for balanced development based on the use of resources with maturity and wisdom, and a robust economy with safe environmental and social cohesion. This gave birth to alternative visions focus on the humanitarian priorities in the development patterns, known as the model of human development. The school of the new visions claims that the previous development model has not trickled down the development benefits to the poor.

1.2 Cities' Dynamics

The city reflects the arts, abilities, intelligence, genius, and temperament of humans and it also reflects their failures. Having to accommodate multiple urban functions and activities it provides a comprehensive life of a nation and represents the contents of its civilization, as reflected by the behaviour of society and its values, the life system and its various activities. Cities may witness throughout history, periods of prosperity, they may also be subject to periods of deterioration and the consequential changes in their physical structure. They may have different and often conflicting interests and landuses, and the larger the city the more complicated are these interests and their conflicts. As the city grows, so do the incompatibilities between landuses. Disparities exaggerate until time comes when conflicts cannot be resolved by any other way than reallocation; in urban forms it implies a start from scratch to make the required urban changes. This phenomenon of urban changes gives a city its dynamic and transformation nature. Experience shows that when a city is in a state of rapid urban transformation, its physical block expands fast and with different modes of growth activities dictated by the transitional characteristics of the city. Khartoum is a typical example of such growth, characterised by massive development of informal settlements and slums, inadequate coverage of public transport and other public goods, particularly employment opportunities, and the consequential increase in the percentage of the urban poor, environmental degradation, deterioration of city landscape, etc. To cope with the emerging situation infected cities are therefore in need to restructure and enhance their urban structures. There are a number of good examples that can be highlighted: Barcelona implemented a successful restructuring programme, the main focus of which was environmental improvement through dilution of development concentrations and

availing land for special uses. Tehran performed urban restructuring and absorbed huge influxes of migrants. Warsaw established a new city and adopted a new urban form creating a balanced spatial structure and evolving a pleasant townscape of a harmonized building form to attract investors. Some of the other restructuring successful stories are publicised by HABITAT and World Bank mainly on slum upgrading such as that undertaken by Dakar/Senegal UNCHS[8], Medellin/Colombia and Santo André municipality, São Paulo, UNCHS[6]. Khartoum massive restructuring programme is described below.

IGAD Map

2.0 Methodology and Objectives

This paper summarises a practical study which benefited from a primary data gathered by the author and his associates from a number of field surveys conducted for different purposes in Greater Khartoum and IGAD Sub-African Region cities, Bannaga[3,4], and a secondary data obtained from an in-depth literature review. The task of data collection was accomplished through different means: households surveys were carried out in selected Khartoum areas while visits were made to IGAD cities to gather the required data. The author observations and accumulated knowledge complement the discussions. He played a key role in the Khartoum restructuring programme when he was the responsible minister for 12 years.
This paper aims at:
(1) throwing light on the extremely huge magnitude of Khartoum growth and the consequential urban degradation which was thought to be beyond repair,
(2) documenting Khartoum successful experience and demonstrating how management reformation can be employed to correct urban distortions.

3.0 Khartoum and the Urban Transformation Process

3.1 Greater Khartoum Profile

Khartoum Capital, is a tri-city formation (Khartoum, Omdurman and Khartoum North), situated in central Sudan where the Blue Nile and White Nile meet and the River Nile originates. Its physical block is shaped by the three rivers; by creating the three distinct cities and an island in between; each city starts by the confluence of two of the three rivers. It exists at latitude 9-15 degrees and longitude 24-45 degrees and at altitude of 1353 feet in a hot and dry semi-desert climate with less than 150 mm, annual rainfall. Urban activities are clearly distributed between the three cities. Khartoum accommodates the business district, foreign trade and international economic activities. It is relatively young but surrounded by ancient villages providing it with agricultural products. Omdurman holds the Sudanese national and cultural heritage and local trade activities while Khartoum North accommodates the large industrial factories, the railway main station, the river transport facility and the government Mechanical Workshop.
Like many cites established by the European colonisers, old Khartoum is a Colonial-style city with a distinguished centre of a fortified core, surrounded by neglected indigenous native settlements. Its architectural style is mixed and the old colonial model of government and staff buildings gives the Nile Avenue its distinguished character. Omdurman's physical model highlights some of the Islamic traditions, such as Khaleefa's house and Mahdi's Dome. Khartoum North's old settlements are famous for their popular building forms exemplified by old tomb-like structures and traditional mud-brick dwelling units.
Unlike European colonisers' big cities, which centres undergo deterioration as their original owners move out to newer, more salubrious and more fashionable residential areas, Khartoum centre still suffers from low density development and it is nearly dead during off working hours. Now the majority of Khartoum new slums are found in the urban peripheries. Such slums provide cheap accommodation and

informal low-cost services, a place for essential economic contributions by lower income people, a reflection of unwanted aspects of urban life. Khartoum is overwhelmed by traditional settlements and villages in addition, to scattered expansions forming organic isolated blocks. The scattered expansions and similar urban formations are due to:
(1) the nature granted by the Nile rivers where the streams form the main border lines of the main physical blocks because villages and other urban areas have been historically founded along the streams of the three rivers,
(2) expansion encouraged by abundant and highly fertile land serviced with water,
(3) natural urban-village style growth, and
(4) viability of Khartoum for more development.
Thus, Khartoum faces the challenge of changing this prevalent village system of growth to a natural urban development system by integrating the villages into the city and forming a strong sequential urban fabric. This is why Khartoum always falls short of providing essential services, particularly extension of transportation networks.

3.2 Khartoum Urban Structure Development

Greater Khartoum urban borders were not delineated, its centres and their role within these borders are also not defined. Khartoum started as a small cohesive and intact town with a solid core forming the CBD. It enjoyed a lullaby of peace, stability and was exemplary in cleanliness, lushness of greenery and ease of life precision. Traffic was easy, while the population density was in proportion and residential reserve was abundant. Greater Khartoum grew with diversified congregation of diversities reflected by ethnic mixture of Arab and African bloods and a variety of African and Nubian cultures, overwhelmed by Islamic faith but this diversification enriched its social fabric when it was well maintained. Khartoum however, lost its physical cohesion and social strong netting when the rural uprooted population began to pour heavily in the city. Since then, Greater Khartoum has been growing rapidly and its scale of growth was beyond belief despite the fact that rapid urban growth is an international phenomenon. The annual population growth in most developing cities was about 4%, Habitat[7], but was about 6% in Greater Khartoum, the fastest developing metropolis where more than 50% of the total Sudanese urban population live. Greater Khartoum started in the Independence Day (1/1/1956) with 250000 inhabitants or less than 3% of the total Sudanese population and this figure jumped to 16.8% in 2010, totalling seven million, Table 1. This is primarily due to huge unexpected migration and the consequential uncalculated urban expansion through illegal encroachment upon lands. The accelerated growth evolved urban forms characterised by haphazard development of irregular endless expansions and sprawled growth lacking basic human services, refer to Fig 1. This is accompanied by changes in residents' traditions, behaviours and cultures. The Khartoum squatter population hurriedly built their adobes in open spaces and void areas inside the three cities and they indiscriminately occupied whatever vacant lands exist to the extent that nearly two thirds of the urban block had been turned into "makeshift shelters", creating huge subdivisions occupied by poor dwellers, the result was total urban

degradation, Bannaga[1-3]. Besides the dwellers' torrents, their shelters were subject to annihilation by rains which made the wet season a nightmare for them.
Khartoum development pattern is contrary to 'Compact City' model which retards urban sprawls and reduces energy and services cost. The table 1 shows a periodical population density decrease, primarily encouraged by lack of development control but reflects low-density traditional development. The sprawled paradigm disadvantage appears in the consumption of farmland, as reflected by Table 1, energy and loss of green space. The scattering of urban formations is due to the nature granted by the Nile Rivers, existence of natural village style that encourages urban-rural growth.
Khartoum Centre also deteriorated because it has not kept pace with the ongoing dramatic urban changes and continues to live in the past.

Fig 1 Stretch of Greater Khartoum Physical Block

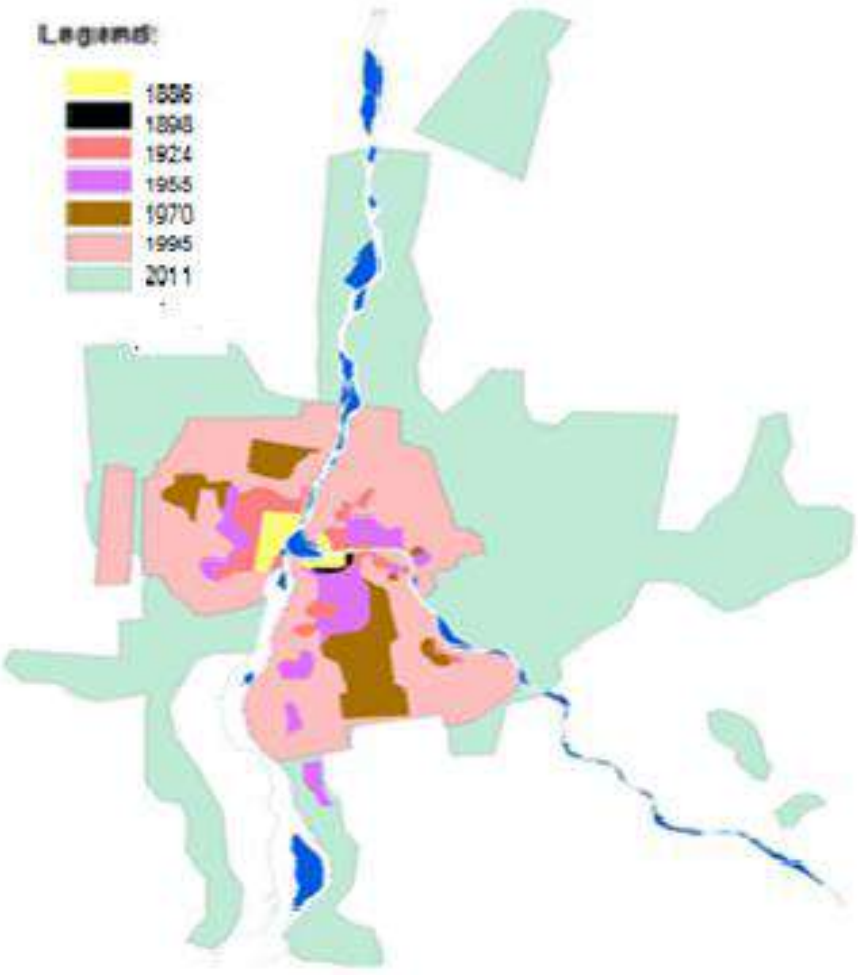


Table 1: Khartoum Physical Block Growth and Population Density

Year	1955	1970	1980	1998	2006	2010
Population in million	0.25	0.64	1.17	4.37	6.01	7.00
% of Sudan population	3.0	4.4	5.7	14.9	16.4	16.8
Total area in hectare	1680	3000	22840	80250	132300	165000
population density in person /ha	149	213	51	55	45	42

4.0 The Khartoum Urban Restructuring Programme

4.1 **Why Urban Restructuring?**

Urban restructuring adopted by Khartoum was not for reconstruction of dilapidated or ruined structures or building renovation, but for undertaking a complete urban reformation e.g. treating the deteriorated environment, correcting the distorted urban structures, maintaining the deplorable public utilities and generally enhancing the cityscape. These distortions led to loss of the urban entity and the citizens' civilized behaviours. Thus, restructuring must firstly, corrects the mistakes of the past and secondly accommodates the transformation needed to advance urban efficiency, build a sustainable city capacity and elevate the quality of urban life. This required installation of a better urban management scope to:

1. Bring justice between residents and reduce the physical forms variations between different settlements e.g. bridging the gap between two types of building patterns: full service regular neighbourhoods inhabited by affluent categories and dense, overcrowded shanties or slums, lacking basic services and mostly not recognized by authorities. This inequality feeling poses an barrier between the two distinct different groups and threatens the society, public security and social order. According to UNCHS[7], city status report, (62 %) of urban residents live in slums in African.
2. Setup a base for government resolve to address the squatting phenomenon which is encouraged by complete absence of effort in the sphere of urban planning, housing

and basic services provision. The neglected burgeoning population continued their squatter practices, justified by genuine demand for shelter.
3. Correct all previous mistakes e.g. abandoning the colonizers ' old urban model and containing change effects of rapid expansion.
4. Reorganise the urban space after re-evaluating all urban functions and activities to achieve environmental sustainability through landuse optimisation and to accommodate new desired functions that strengthens cohesion of the urban fabric.
5. Give urban residents the opportunity to rehabilitate the structures they live in.
6. Perform total urban reformation to accommodate the huge influxes of migrants, absorb the city surplus dwellers, improve the physical environment, strengthen the urban fabric and integrate all isolated scattered villages.

4.2 Urban Management Reformation

The first pivotal task for execution of the urban restructuring programme, reticulated above was installing a new effective management, equipped with knowledge and popular authorisation and able to pursue an integrated approach focussing on implementation of supportive legislations and polices and application of intensive sound spatial planning. Reformation was not difficult because Khartoum has great potentials. It is endowed with all kinds of natural resources encompassing land, water and energy and possesses vast stretches of fertile soils. Khartoum is a laboratory for education and training and it contains colourful inhabitants with different cultures, backgrounds and specialities thus, able to attract all kinds of investments and businesses but far away from adopting a knowledge-based economy.
As expected, the new management succeeded in replacing the prevailing legislations issued by central governments by legislations that belittled the role of the Federal State and weakened its grip on town planning and land management. The current Physical Planning and Land Disposal Act, 1994 was the first to be issued. The deficiency of the old acts was not primarily related to lack of accommodation to local requirements but the main aim of the legislation reform is to protect individual and group rights of the state residents, and to adhere to the principle of the local rule to solve conflicts that arise locally. The management then effectuated the Spatial Planning tool and performed wide-range planning processes. A change in the concept of planning paved the way for a shift from serving the rich minority to serving the poor which achieved justice among all urban society layers. A coordinated workable Ten Year Restructuring Plan was formulated in which treatment of the informal settlements and absorption of the surplus population were foremost tasks and spatial reorganisation was applied in a manner that strengthened urban fabric. This helped the poor to settle and become tools of development. And before embarking on remedial works, urban planning was employed to delineate new directions and areas for physical development to accommodate all populations whether new or original residents. Urban restructuring was also applied to balance landuse intensities to reduce the disparities among populations. The idea was to appropriate the use of space because Khartoum had large free spaces and some areas were less utilized compared to normal built-up area rates, Doxiades[5]. These vacant

areas were planned and certainly many benefits were harvested such as covering urgent needs of expansion but the main factor that necessitated free spaces planning was to control and protect the vacant lands from illicit use and invasion by squatters.
Khartoum management took a step further by applying informatics in all land allocations and development activities. Use of GIS and space and computer technologies, and internet enabled Khartoum management to benefit from the geo-spatial data technology for allocation, processing and registration of lands. The most beneficial work gained is computerisation of the "Housing Plan" which was based on allocation of land plots (site and service system) for citizens. The land administration role was to choose the eligible people who apply for land plots after making an evaluation in accordance with a criteria. Currently, the information system performs the job by automatically identifying and nominating the eligible persons without human intervention.
To better their performance, authorities implemented a wide-range of urban policy reforms, particularly those govern land tenure, transfer transactions, acquisition and expropriation dealings. Accessibility of shelter for all people(UNCHS Agenda) was also promoted through the legalization of the status of squatter and unauthorized settlers and by encouraging all kinds of regular residential development and by lifting restrictions imposed by government financial institutions on real estate's development and housing schemes. It was necessary firstly to apply prompt solutions to promote and encourage house development and return things to normal to prevent citizens from acting on an impromptu basis, which had previously led to the rolling of unauthorized settlements. However, by mobilising all people masses the processes of residential development was expedited and raised to a higher level and scarcely seeing a site without construction activities because popular construction was propagated. Upgrading of squatter and displaced settlements has also produced a development revolution and increased the housing stock allowing many marginal families to settle down. New towns have cropped up, dilapidated dwelling units were rebuilt and regular settlements have become overwhelming. Popular and official development proceeded to include construction of schools, water network, roads, etc and almost all urban activities .
To manage the city the management recognised the significance of being in close contact with the urban communities to effectuate a change of positive attitude that is necessary when seeking solutions for the urbanisation problems. Decentralisation of urban decisions, democratisation of local authorities and sharing of information were exercised and yielded positive results. Success was attained because the urban community was fully empowered and all stakeholders' efforts were mobilised, and a decentralized system was fully operational.

4.3 Surplus Population Absorption Schemes

Ambitious housing schemes, details of which are displayed in Table 2, were implemented but no option other than site and services model was at hand. They included huge housing plans, where 320,000 families received plots and other allocations through Alssalam townships(relocation sites) served 25000 families and allocations of built housing units benefited 40000 limited income families. Private

housing projects were also executed and a number of sites were allocated but were subjected to tight planning regulations to ensure validation of project by the authorities and as a result 30000 families were accommodated. Accordingly, new towns have been founded, becoming a real addition to the physical block. These included three Alssalam (Peace) townships, allocated for settlement of newly arrived homeless families. The described schemes availed large spaces for public utilities thus, releasing the pressure on open spaces, vacant lands and government reserves left for future expansion in old subdivisions. The new extensions, distributed evenly throughout the three cities, assimilated active and effective urban communities, refer to Fig 3. The total number of people served was 2.65 million and the number of plots allocated was 123% of the total number of the housing stock existed in Khartoum before programme commencement in 1990, which was 337400 units, as estimated by Doxides[5].To service these huge residential subdivisions land allocations for public utility development were made easy for all kinds of investments to provide services and employment opportunities for the population. The decentralisation system was reinforced by spatial redistribution to consolidate local rule, reduce traffic pressure and ease people mobility. Administrative districts, market centres and selected urban economic activities were redistributed to make them closer to dense population concentrations.

Table 2: Number of land Plots, Built Housing Units, Private Schemes and Alssalam Townships

City	Land plots (housing plans schemes)	Housing units (popular housing scheme)	Housing units (private investment schemes)	Land plots (Alssalam Townships)	Population served based on 6.4 P/family
Khartoum	95000		12577	10000	
Khartoum North	120000		15756	10000	
Omdurman	105000		1400	15000	
Total plots	320000	39400	29733	25000	
Grand total				414133 plots	2.65 million

4.4 Restructuring Operations

4.4.1. Aim

The aim of the restructuring operations programme was to transform Greater Khartoum into a metropolis of good urban style and dress while taking a life pattern

that adapts to the future and with special consideration to the presence of the Nile Rivers that give Khartoum its flavour and colour and its original urban form. Its implementation made sure of an inclusive involvement of city dwellers and their representative organizations while responding to local conditions and reducing the risks on poor people. Two of the important courses of actions pursued were clearance of worse physical distortions while the other was irregular settlements treatment.

4.4.2 Treatment Processes Applied

To regularise slums, villages, squatter and informal settlements, they were subjected to treatment processes to primarily improve their environments, correct their illegal status and improve their living conditions. Each irregular settlement was studied and three different approaches were considered for its treatment and this was accomplished either through settlement clearance/relocation or planning/replanning or incorporation into the urban fabric, accordingly Fig 2 was produced:

Clearance/Relocation: Worse physical distortions represented by filthy slums were cleared because they were insusceptible to improvement. Clearance of settlements was also applied to dilute the concentration of population in congested areas, as a prerequisite to environmental improvement. Relocation targeted recent settlements occupied by people who were not strongly attached to the land and their level of mobility was high so it was easier to relocate them to alternative sites. Other types of relocated settlements were those occupying areas which had been allocated for other uses as well as slums built in areas unsuitable for residential use or those which were a focus of human relegation.

Planning/Replanning: was applied in settlements more liable to improvement than relocation because e.g. their inhabitants constitute a permanent city population with strong attachment to the land they occupy though land ownership, level of permanency of buildings and planning requirements were major factors in deciding the planning option,

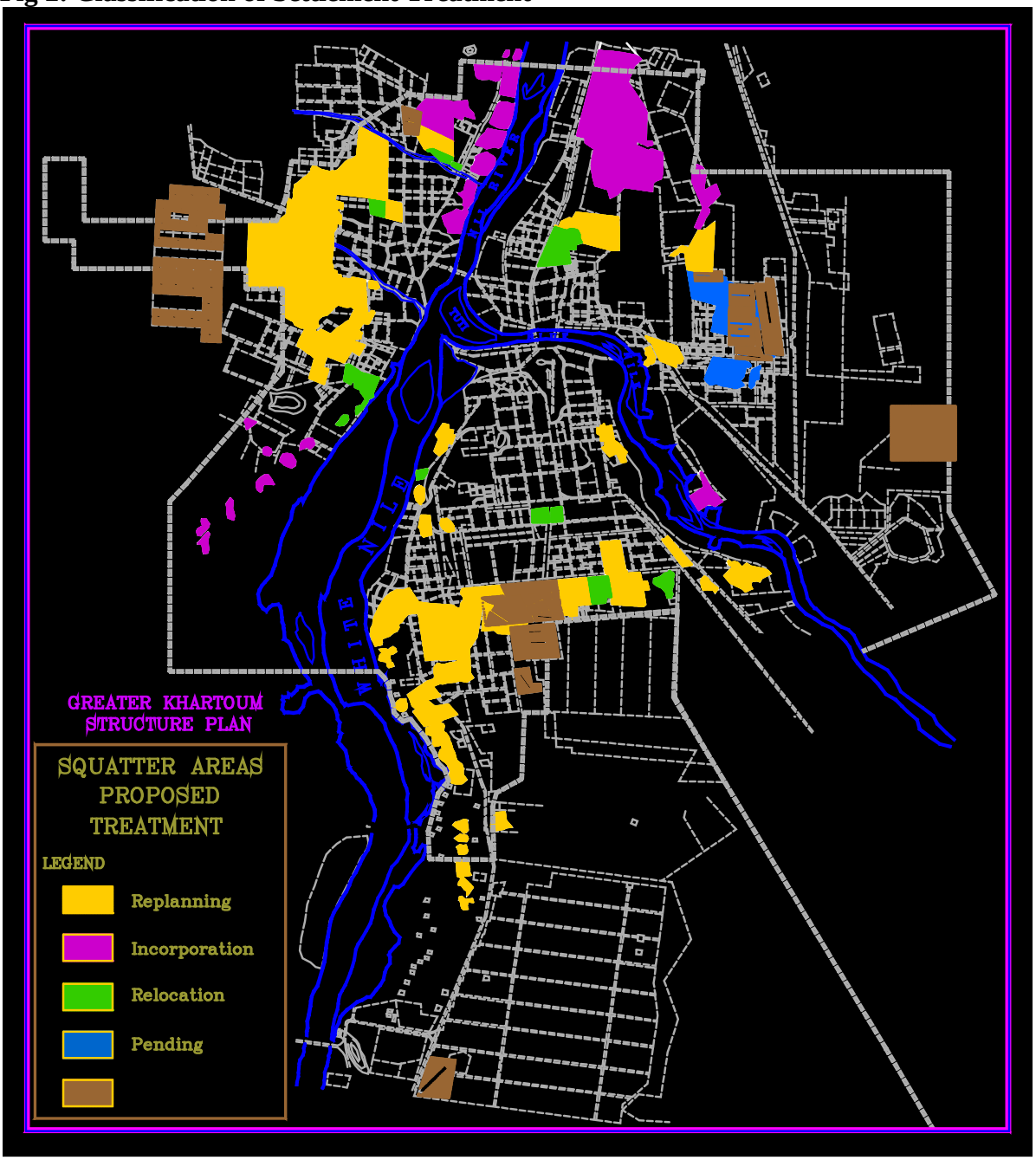
Incorporation: was applied in cases where the history of settlement/village establishment goes back several decades and their inhabitants lead a normal way of life i.e. settlements' planlayouts were acceptable and served with basic social services.

4.4.3 Clearance of Worse Physical Distortions

Though remediation means correcting thing but here correction can only be by returning to normal situation and clearing filthy settlements or those misplaced or their environments were seriously affected by awful malpractices, resulting into a drastic deterioration. Such settlements were highly unsecured and constituted real threats to public health. Some of them were built on natural water courses and were a principal cause of the 1988 flood catastrophe that devastated Khartoum and led to

collapse of tens of thousands of houses. More than fifty Filthy settlements of the kind were cleared.

Fig 2: Classification of Settlement Treatment



4.4.4 Treatment of Slums and Squatter and Informal Settlements

Slums are settlements that are densely populated and their environments are filthy and unhygienic but still function to provide cheap accommodation, informal low-cost services, and places for essential economic contributions by lower income people. It is recognised that many of the squatters are genuine cases of lack of shelter and this provision gap is filled by encroachment on whatever available urban land. Land mafias are also operating with huge financial resources and they know the ways and means that are available to organise their crimes. UN-HABITAT considers housing as" Informal Housing" when it does not conform to the laws and regulatory frameworks set up in the city in which it occurs. It is not likely to conform to the enforced planning and building regulations, a good example, is the traditional villages established in areas outside Khartoum previous boundaries. Numerous villages were built facing the River Nile forming historic residences of indigenous people of Khartoum suburbs. Some of these residences may include high quality housing, occupied by rich and influential people.

Fig 3 shows the huge scale of the treatment operations carried out targeting villages, squatter and other informal settlements(represented by single oblique lines ///), while Table 3 exhibits details of the legalised number of plots. More than 160 slums and squatter settlements were regularised, benefiting more than 280000 dwellers while IDPs settled in more than 70000 plots.

4.4.5 Village Organisation Programme

Villages are traditional informal settlements scattering throughout Greater Khartoum. They were incorporated in the physical block of the metropolis after they were subjected to planning/replanning or incorporation processes. They possess vacant areas which were used to accommodate some of the surplus population thus they provide enormous opportunities to address the squatting problem and help in absorbing rapid growth. Village organisation processes were therefore, promoted and the majority of villages was regularised and incorporated in the physical block. Their environments were improved and they were linked with the main transportation and metropolis networks. Most of squatter settlers and IDPs who managed to live in the core of villages were absorbed and the surplus was resettled in relocation sites.
The village organization programme paved the way for village physical forms improvement through streets opening and open spaces allocation and for registering villagers' plots in land registers. According to Table 3, more than eighty thousands villagers possessed proper titles.

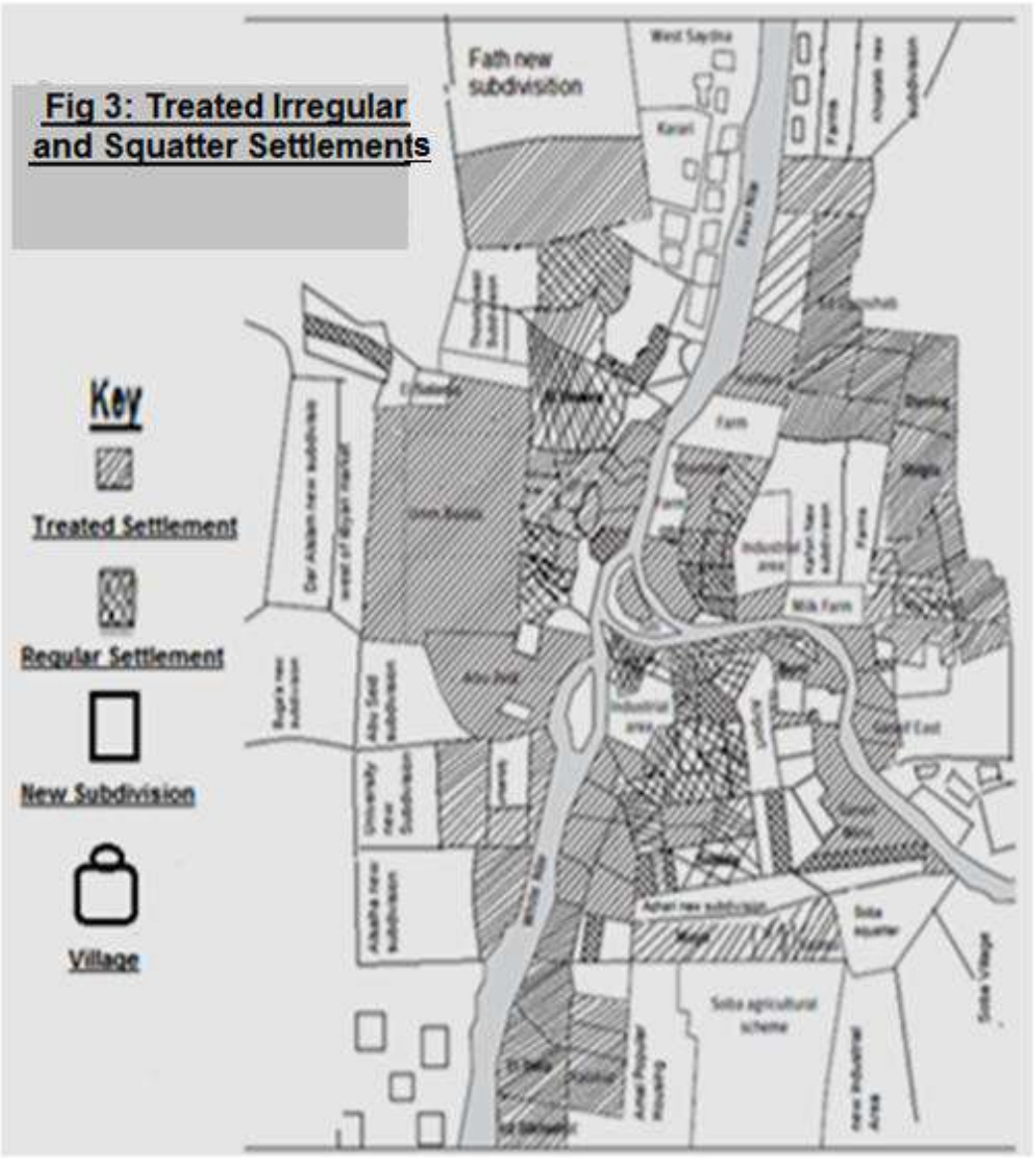


Fig 3: Treated Irregular and Squatter Settlements
Key
Treated Settlement
Regular Settlement
New Subdivision
Village
Fath new subdivision
West Saytha
Farm
Industrial area
Milk Farm
Sotka agricultural scheme
Sotka Village

Table 3: Number of Plots Targeted by Treatment of Squatter and IDPs' Settlements, Village Organization, and Old Neighbourhoods' Replanning Programmes

City	Number of plots treated (squatter programme)	Number of plots legalised (village programme)	Number of plots replanned (old neighborhoods programme)	IDPs settled through (IDPs Programme)	Population served based on 6.4 P/family
Khartoum	50250	32550	6500	15500	
Khartoum. North	50290	30250	5560		
Omdurman	181236	20400	14050	61000	
Total plots	281776	83200	26110	76500	
Grand total				467586	3.0 million

4.4.6 Replanning of Old Neighbourhoods Programme

Old traditional residential neighbourhoods underwent urban renewal to improve their quality of life and to facilitate the provision of services and public utilities and to ease traffic flows. These old quarters were developed at the time when man and motor were not separated. In this programme the number of families involved surpassed 26000.

In summary, the Khartoum Urban Restructuring Programme provided shelter through absorption and legalisation schemes for more than 5.5 million people or benefiting greater than 880000 families.

4.4.7 Restructuring and Development of the Khartoum Centre:

4.4.7.1 Development Authority:

It is known that management of capital cities always suffers from cross-cutting and conflicting forces exerted by all levels of governments especially if the central government is overruling and interfering in all aspects of local governance. Khartoum Capital is no exception.
Khartoum Centre Development Authority was established to supervise the execution of joint development projects between State and Federal governments in the Centre but has been given limited administrative authorities. Most importantly was the agreement on the Centre geographic boundaries. Two main issues were considered: (1) complete coordination between higher government executives(central-state-local) who possess constitutional authorities after identifying the role of each in the Centre management (2) resolving the professional conflicts between all levels of

government executive departments by formulating a workable procedure and specifying the tasks and responsibilities of each.

4.4.7.2 Restructuring and Developmental Projects:

To develop environmentally safe and prominent centre some reforms were made:

- Distortions were corrected targeted misplaced and substandard buildings but those of historical and cultural values and giving the Centre its Sudanese spirit and identity remained untouched while some of old government departments, including departments situated along the water frontage were reallocated for rearrangement of the Centre spaces.
- Some improvements in urban efficiency were made when:

(1) incompatible functions were replaced by desired economic activities

(2) reallocation of urban functions in central zones was inevitable due to strong functions expansion and urban dynamics particularly where functions consuming unnecessary large valuable spaces

(3) new social, civic, commercial and recreation activities cropped up forming modern features of urbanisation

- Open spaces in the Centre Heart witnessed expansion and if made green will enhance the landscape, allow fresh air movement and dilute the concentration of development. Once this becomes a reality the Centre will be vivid and full of life. Enlargement of the Centre Heart open space helped in creating new pedestrians routes and passages and gave people easy access to the Centre surrounding areas but what hoped for is the complete evacuation of all types of motors out of the inner central spot represented by the UN square. The pedestrians movement to and from the square could then follow four axes, two in the north-south direction and the other two in the east-west direction. These axes when freed from motor movement pedestrians commercial and recreational spines will lead into marketing and leisure zones. The void areas and the Army garrisons in the eastern part of the Centre, beyond the railway tract, if developed will cover future investment demands.
- Some transportation lines were extended out of the Centre but, the Centre still falls short of essential transportation and other networks. However, the Centre population density is extremely low necessitating adoption of compact city development model.

4.4.8 Reallocation of Selected Metropolis Functions

To follow are some of the reallocated functions:

1. Many incompatibility-based urban functions relocation schemes have been executed in the last two decades to sustain growth, optimize spatial utilisation and attain urban efficiency. They were carried out for (a) landuse revitalization (b) landuse compatibility(c) Central Markets decentralisation, etc
2. Restructuring of metropolis transportation lines, municipal and other engineering networks. They were essential for serving the huge urban expansions. Restructuring included almost all existing urban networking e.g. water systems, electricity supply and other municipal services considering that transportation and traffic systems restructuring often result in spatial rearrangement. New passages to facilitate traffic

movement were opened and extended to serve the vast urban subdivisions and markets in an unprecedented manner and the lengths newly constructed roads exceeded several times of those constructed since Independence Day.

5.0 Lessons Learned from Khartoum Experience

Urban restructuring is a fearful task to perform and the main difficulties encountered in executing the Khartoum restructuring programme is containing the problems associated with squatting and the consequential relocation processes.. The appropriate measure is to address its root causes together with lands distribution to the needy since use of force alone is a meaningless solution without strict controls and painful punishments of mafia land grabbers.

Relocation in its final form is uprooting and replanting in an alien and hostile environment. Therefore, it is a tough decision to make, justify, explain and carry out. On the face of it, looks like any other simple planning decision but most problems arise when relocation decisions involve the disadvantaged, the poor and the under privileged. Much resentment is precipitated if relocation is forced involuntarily. lnA fact some relocation are simple, popular and gratifying. Khartoum Experience show that patient grassroots action preceded by elaborate and comprehensive consultations can produce miraculous results. Haste and high handed approach especially if accompanied by indecision and hesitant actions produces irreversible damage and nasty unnecessary confrontation. To set the process in motion the first issue to be addressed is guaranteeing support of higher executives followed by an elaborate process for securing public approval and support. The second issue is the proper contact with the citizens involved. Most important is dissemination of information, and media monitoring. Popular committees were best forums to float such action and employment of the civil judges helps a lot. Their presence abates citizens' fears, moderates committees members squabbling and infighting and adds respect and credibility to the committee's actions.

6.0 A Concluding Assessment

Urban restructuring certainly satisfies the three pillars of sustainability; environmental protection, social elevation and economic growth. Khartoum gained real benefits from urban structure enhancement and provision of public goods, particularly housing and slum upgrading.

The socioeconomic benefits are evident when considering the large scale of house provision and the improvement of the poor's settlements conditions. Urban planning has forced social diffusion, effective stakeholders participation and created some sort of commercial and trade activities that sprout along the streets. The most important residue of urban restructuring is settlements regularisation which was exercised with fair and just procedures and all land allocations are completed mechanically and without human intervention. All stated benefits have been harvested by citizens and particularly the marginalised residents. In last visit made to one of the treated large settlements, namely Haj Yusuf East area, in April 2010 an enormous social and economic development was witnessed. To date, essential services such as, water,

health, education, electricity and other urban facilities have been completed. A number of Haj Yusuf dwellers who were subjected to the planning process and granted proper land titles together with those settled in absorptive cities were interviewed to know their opinion about their new living conditions. Their response was very positive and they were satisfied by the level of progress made. The interviewed people reacted by a warm welcome and recalled the days of their positive interaction with the planning process, and they are very pleased to harvest the fruits of the legalisation process. They remembered the previous awful conditions and their sufferings and the hardship they went through when residents were afraid to walk through their settlements in daylight, and when even police forces avoided chasing any criminal person who entered their slums for hide-out.

In conclusion, Khartoum deserves to be rewarded for the very useful work accomplished and other cities should learn from its experience because it is of a huge scale and unmet internationally. Khartoum has enormous urban potentials and can meet the future challenges without complications if it seizes these opportunities and continues to carry out more urban enhancement and developmental projects though it has not yet benefited from its unique site and genius loci. However, Khartoum would sustain its growth and move forward if the Restructuring Programme is accompanied landscape beautification and greenery programmes targeting the ample open spaces and void areas throughout the physical block. Intensive reforestation and trees plantation make the programme highly innovative and add a lot to Khartoum which is gifted by the three Nile Rivers.

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THE COLLECTIVE MEMORY EFFECT ON CROSS-BORDER COOPERATION PRACTICES IN EUROPE

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Abstract

The main objective of this paper is to examine the significance of planning cultures under the lense of overcoming the dividing function of national borders. Doing so this papers seeks to analyse the collective memory effect on cross-border cooperation practices and more precisely to figure out to what extent subconscious collective memories influence formal planning decisions in general as well as the quality and success of cross-border cooperation processes in particular. However, rather than searching for the cultural nucleus of cross-border planning practice, I am proposing an analytical framework, capable of examining the question of how appropriate trans-cultural understanding can be built up in different cross-border regions. Absent such an understanding will tend to legitimise the stereotypes we hold of 'the others' and hamper the practice of cross-border cooperation.

1. Introduction: Setting the scene

European spatial planning has emerged in a way that has (mostly) ignored the complexities associated with national borders, tending to take a monochromatic view of them as either 'closed' (external borders of the EU) or 'open' (internal borders of the EU), often rooted in a singular view of either a 'space of places', or a 'space of flows' (after Castells 1996). But this view denies the much more complex, shaded reality of borders, which are ambiguous human constructions (*cf.* Paasi 2009; O'Dowd 2003). Unpacking the complex border phenomenon brings to the fore that borders are in fact comprised of an overlapping set of boundaries (including administrative, political, social, cultural, economic and mental), all of which have spatial and social impacts and influence spatial planning processes, decisions and outcomes (Haselsberger 2010). This understanding helps explain why properly working cross-border networks are rarely found throughout Europe despite the many financial support programmes and institutional frameworks set up by the European Union (*cf.* Dühr et al. 2010, de Vries 2008). Assuming that the planning systems mismatch is not the root-cause of the problem, as can be learned from successful cross-border cooperation projects (Fürst 2009), I am arguing that the lack of a trans-cultural understanding may be regarded as one of the reasons why, despite good intentions, long-lasting and effective cross-border cooperation turns out to be so difficult in planning practice.

As planning cultures are changing over time and the beliefs, perceptions, and feelings of different social groups, classes and entire societies are difficult to grasp

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(Friedmann 2005; Hofstede 2001, Knieling & Othengrafen 2009), it is not surprising that these complex aspects have so far been largely ignored in planning research debates. In this paper, I propose an analytical framework that will allow us to explore these mostly subconscious and all too often 'taken-for-granted' dimensions of cross-border planning. The innovative aspect of my approach lies in combining collective memory and planning culture theories and by unpacking 'taken-for-granted' generalisations about 'the others', which often take the form of negative stereotypes and misconceptions within a given planning culture. By doing so, I hope that this paper will contribute to a deeper trans-cultural understanding and thus help to overcome a critical aspect of the continuing, historically contingent, and divisive effects of (European) borders.

2. Cross-border cooperation: The significance of planning cultures

Overcoming national borders through spatial planning and, in particular, through various forms of cross-border cooperation is a very challenging task that requires much more than 'just' planning the physical space of the area under consideration. It has to deal with issues such as the figuring out of appropriate solutions for differing or even conflicting interests and intentions on both sides of the border. The situation becomes even more complicated when considering that human beings are not only part of their respective administrative and political systems, but behave according to their own cultural and societal backgrounds and experiences. Reeves (2001) alerts us that if planners, professionals and practitioners do not reflect upon these socio-cultural characteristics or do not consider them important enough in the planning process, this may compromise the effectiveness of planning.

But it is also the case that those directly involved in the planning process – planners, professionals and other practitioners – act according to their own social and cultural understandings as well as their value system, that is to say, according to their own planning culture(s). Fürst (2009) defines planning culture as a mental predisposition, encompassing specific values and orientations, which those involved in a given planning process share. These 'soft cultural factors', as Ernste (2012) calls them, are decisive for the success of any planning process. As part of their professional work, planners, professionals and practitioners, make or implement spatial plans or manage and coordinate development projects, in accordance to their *"ability to interpret and re-interpret rules and norms in the framework of their own personal motivations"* (Ernste 2012, p.88). Hence this group of people does not act in a detached and unemotional way, but according to what I call 'the collective planning ethos' of their country (representing the institutional and political settings in which they are embedded). On the other hand it has to be stressed that, in addition, very emotional individual, cultural and societal backgrounds – the 'habitus' (collective civilised dispositions) of a person, as Bourdieu (1979) calls them – are at play. They are characterised by gender, religion, race, ethnicity, language, politics, family background, education, dress-code, hobbies, interests, personal experience, professional qualification, views, beliefs and priorities.

In the scientific debate, it has been strongly emphasised that different planning cultures produce very different kinds of planning as well as that the underlying cultural differences may hamper cross-border cooperation and even risk the building up of negative or stereotypical judgments of 'the others' on the other side of the border (*cf.* Friedmann 1998, 2011; Sondercock 1998; Hofstede 2001; Healy & Upton 2010; Fürst 2009; Knieling & Othengrafen 2009; Haselsberger 2010). On the other hand it has also been demonstrated that trans-cultural understanding provides a means to grasp the way that *"planning tools and practices are being adjusted in different ways in response to common challenges and with what effect"* (Nadin 2012, p.2), and doing so furthers the spatial integration process. What is needed then is a truly trans-cultural understanding, where *"planners [on both side of the border] must identify what values they are taking into their work and whether they could provide betters services for their customers by seeking constructively to change some of their attitudes, values and ethics"* (Kitchen 2007, p.147).

This raises the question if planners, professionals and practitioners have the ability (or rather the political will and/or interest) to understand issues deriving from other frameworks and languages. Interestingly, *"similarities can be equally important as differences [when] looking at different perspectives and challenging one's own beliefs and attitudes towards people with which one is dealing."* (Reeves 2011, p.598-9) Dory Reeves further alerts us (by referring to the work of Susan Bryant 2001 on the building up of cross-cultural competences) that it could be very problematic if the planning culture within which a planner is embedded appears to be too similar to the institutionalised practices of his/her cooperation partner. This might easily lead to over-identification and moreover to inappropriate assumptions about the reality. Languages serve as a good example here. The meaning of the terms *Raumplanung* (Austria, Germany), *Urbanistica* (Italy), *Urbanisme et Aménagement du Territoire* (France, Belgium, Luxembourg), *Town and Country Planning* (UK), *Ruimtelijke Ordening* (the Netherlands), and *Land Use Planning* (Ireland) all evolved in their own particular legal, socio-economic, political and cultural contexts. Strictly speaking, the terms are not internationally transferable to other countries, except in the most general sense. This applies even in countries with the same language; *Raumplanung*, for instance, has different meanings in Austria and Germany (*cf.* Haselsberger 2009).

So what we can learn from current debates is that planning cultures:

- are very hard to grasp as they encompass various interests, beliefs and perceptions as well as different means of resources, such us power and money (Reimer & Blotevogel 2012) originating from different spatial scales (e.g., local, regional, national, supra-national, cross-border), which are not necessarily harmoniously aligned;
- are manifested in many different (symbolic and ideological) layers, such as values, traditions, attitudes, mind sets and habits, which are shared by those taking part in the respective planning process (Fürst 2009);

- vary from place to place as well as from context to context, but might gradually converge over the next few decades due to the ever-expanding worldwide net of professional contacts and the internet (Friedmann 2011); and that they
- are difficult to decode from non-native-language-speakers and cannot be transferred easily to any other context or situation (Haselsberger 2009).

Although it is often argued that the concept of planning culture is unclear and difficult to define within humanistic and social science research and that it is a big challenge to operationalise it as a scientific concept (Knieling & Othengrafen 2009), a first important theoretical-analytical roadmap has been provided by Gullestrup (2009). He distinguishes between a horizontal dimension of culture (those segments of culture, which are manifested on the same 'perceivable' level: e.g. immediately visible cultural traits) and a vertical one (those segments of culture, which provide an understanding for the perceivable cultural layers: e.g. hidden, taken-for-granted assumptions and fundamental legitimating cultural traits). For him culture consists of (a) meanings, attitudes and values – the emic perspective (according to Harris 1999) or the cultural specific aspects of communication (according to Reeves 2011) – as well as of (b) the visualised or manifested product of social interactions – the etic perspective (according to Harris 1999) or the generalised aspects of communication (according to Reeves 2011). Knieling & Othengrafen (2009) have further elaborated the model of Gullestrup (2009) by incorporating the three levels of culture as introduced by Schein (2004) into it. Doing so, they have introduced the 'cultural planning model', which consists of three levels, namely (a) 'planning artefacts' (visible planning products, structures and processes); (b) 'planning environment' (shared assumptions, values and cognitive frames that are taken-for-granted by members of the planning profession); and (c) 'societal environment' (underlying and unconscious, taken-for-granted beliefs, perceptions, thoughts and feelings which are affecting planning) (Knieling & Othengrafen 2009, p.57).

Although these models provide important insights for grasping the planning culture complexity, it is argued here that the dimension of time and change – although partly considered in the Gullestrup model – does not achieve the attention required. The model of Gullestrup only briefly introduces the 'culture dimension of time' and limits it to 'culture change-initiating factors'. He distinguishes between external ones, those deriving from nature e.g. climate change or from other cultures e.g. through European integration processes and internal ones, those which arise within a particular culture, due to political change, etc. But planning cultures are subject to change or as Friedmann (2011) describes it, they are "*in movement in the sense that they are continually being revamped to adapt to perceived changes both internal and external in origin*" (p.196). Hence the question arising is of how shared meanings and values are constructed and why which elements are passed over – or not – to the next generations and what impact this process has for the building of personal and social identities turns out to be a fundamental issue.

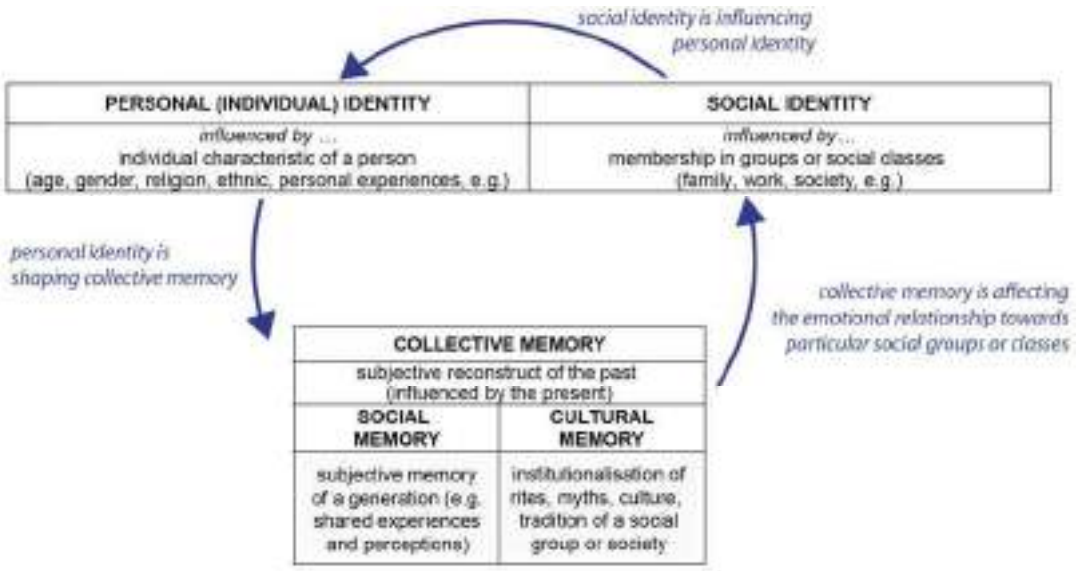
This is particular relevant in a cross-border planning context, where different kinds of boundaries are often deeply rooted in the minds of people, manifested through stereotypes and sometimes expressed through distrust and fear. Building on the hypothesis that spatial planning and consequently cross-border cooperation is strongly (but often unconsciously) influenced by identities, collective and cognitive (mental) pictures of a specific area, adapted from 'collective memories' of social groups (e.g. societies), which are only coherent in a relative sense, I'm arguing that it would be important to find out how far 'subconscious collective memories' affect the quality and success of 'formal cross-border cooperation processes and practices'. Interesting, however, is that while the awareness of the identity phenomenon is present in the 'sociologists' world' (e.g. Manuel Castells), little attention is paid to it in the 'planners' world'.

3. The subconscious dimension of planning: Collective memory matters

Collective memory offers useful insights into the 'cultural mismatch' understanding of problems in cross-border cooperation processes and practices and doing so help to better specify and conceptualise some of the still prevailing difficulties in cross-border network structures emerging from real interactions between partners who may occupy more or less coterminous juridical, organisational, cultural and cognitive planning spaces.

The added value of collective memory becomes even more evident for the planning culture discourse when considering that it provides a fundamental basis for the construction of social identity or to say it with Sandercock (1998) words *"to take away a person's memory is to steal a large part of their identity"* (p.208). Identity in turn is an essential segment of planning culture (Castells 2010). As introduced in Figure 1 the development of an individual's identity is partly influenced by the groups and social class (*cf.* Bourdieu 1979) to which a person belongs. Interesting in this context is that belonging to one social group may favour the interests and opinions of in-group members (inclusiveness) over out-group members (exclusiveness), which in a cross-border planning context can also result in the building up of generic stereotypes of 'the others' (Hofstede & Hofstede 2005). This also means that cross-border cooperation activities may fail simply because the social affiliation to their own group (or society) is much stronger and more developed than a desire for contact with some particular out-group, in particularly in those cases where there is a fundamental split in interests and perception between the cross-border cooperation partners (Haselsberger forthcoming 2012).

Figure 1: Interrelationship Identity – Collective Memory



Source: Haselsberger (forthcoming 2012)

The emotional relationship of groups and individuals' towards a particular group or even society as a whole depends on both collective memory and history, which are by no means synonyms (Halbwachs 1985). In contrast to history (more or less objective and static picture of the past), collective memory is a subjective reconstruction of a past that is shared, passed on and constructed permanently by a particular social group or class, through personal (individual) experiences and traditions, that may permit temporal and spatial distortions of past happenings. Hence, collective memory colours the present and is embodied in contemporary practices

According to Aleida Assmann (2006) collective memory can be divided into the more subjective social or communicative memory (for example the memory of a generation, which refers to a time-horizon of around 80-100 years) and the more objective cultural memory (institutionalisation of the rites and myths of a society). Social memory is the most subjective form of memory, which builds on the individual perspective of a single person and remains vital as long as this person is alive and/or part of the group. A personal (subjective) example may help to explain the significant role of knowledge building by this kind of (subjective) memory. My father served actively in the Second World War. Thus he personally experienced the moment when the Italians changed sides: at the beginning of the war, he had fought shoulder-to-shoulder with the Italians as allies, but by the end his former 'war colleagues' had become enemies. Luckily he survived the War, but what remained was his generalised picture of Italians, mainly characterised by distrust. Despite living next to the Italian border, travelling to Italy was not acceptable for him. This – of course personal and subjective – example helps to explain why in some cases it may be so difficult to work together across national borders and in particular to build up reciprocal trust. Cultural memory might thus be described as '*the culturally*

institutionalised heritage of a society' (Assmann J. 1995, p.130) insofar as it preserves the knowledge from which a society derives its identity, tradition and culture. The distribution and adjustment of the cultural memory is institutionally organised through expert bearers (such as scientists, academics, priests) and becomes reality through time-independent cultural patterns or *lieux de mémoire*[2] (texts, hymns, rites, monuments, signs, cultural emblems) as well as institutional communication (recitations, practices, observances). The work of Nora (1984) concerning the loci memoriae of France exemplified that the society itself creates identity through visible and non-visible cultural patterns. He argues that comprehensive time- and place-independent cultural patterns enable all to build on a collective identity, even if people sharing this identity are not personally acquainted. Important, but often underestimated, is the extent to which these *lieux de mémoire* are influencing and shaping peoples' opinions and viewpoints. Hymns serve as a very good example to underline this point: '*Wo man mit Blut die Grenze schrieb*' – where the border was drawn in blood (Carinthian hymn); *'heiss umfehdet, wild umstritten […] viel geprüftes Österreich'* – strongly fought for, fiercely contested […] much tested Austria (Austrian hymn); or *'Già l'Aquila d'Austria, le penne ha perdute. Il sangue d'Italia, il sangue Polacco, bevé, col cosacco, ma il cor le bruciò.'* – The Austrian Eagle has already been plucked. Italian blood, Polish blood, it drank, together with the Russians', but its heart was burned. (Italian hymn)

4. Collective memory & planning culture: An underestimated interrelationship

The planning culture discourse has strongly emphasised that cultural differences manifest themselves in several different ways or perspectives. Nonetheless the focus of the current debate has tended to be on the formal end of the spectrum, in an anecdotal way. The subconscious aspects of culture, those being referred to as underlying and unconscious, taken-for-granted beliefs, perceptions, thoughts and feelings in the planning culture debate although being recognised as important cultural dimensions have not received the attention required in the theoretical planning culture discourse so far.

Figure 2 depicts the prevalent cultural considerations emerging from sociology as well as planning theories and debates much as the layers of an onion. Doing so it provides the basis for a comprehensive overview of how collective memory is shaping and influencing planning-specific formal and informal discourses and practices. Social memory (the nucleus of culture) and societal environment (the nucleus of planning culture) build up the core of the onion. Representing the emic perspective of (planning) culture, these aspects are hard to grasp from an outsider perspective and as a consequence are often referred to as 'taken-for-granted' in the scientific debates. The situation becomes even more difficult when considering that both core dimensions are heavily interrelated and influence each other subconsciously. On the other hand cultural memory and the planning environment as well as the planning artefacts are introduced as the most superficial layer of the onion

[2] A *lieu de mémoire* is any significant entity, physical or non-physical, which has (the potential to) become a symbolic element of the memorial heritage of any community (monuments, hymns, e.g.) (*cf.* Nora 1984).

– the etic perspective of (planning) culture – which from an observer perspective is immediately visible. In addition the framework unpacks also the degree of objectivity of the different layers, with the core layer(s) characterised by different meanings, attitudes and values as the most subjective form of (planning) culture. The outer layers of the framework, on the other hand, represent the most objective aspects of (planning) culture, which could also be described as the visualised and manifested product of social interaction.

All layers of the comprehensive framework have a clear relationship to each other, in both a horizontal (within the respective layer) and vertical (cross-layer) way. On the one hand, the horizontal relationship assists the understanding of how the several layers of collective memory are influencing the layers of planning culture and consequently the planning profession as a whole. On the other hand, the vertical or cross-layer relationship – with individual preferences based on nurture and experience influencing and shaping the kinds of collective action – underlines the importance and relevance of subconscious and subjective aspects within formal structures, such as the planning system as a whole. Due to the cross-layer relationship, where the informal-subjective layer, which derives its evidence from the social memory, is recognised as a central anchor point towards the understanding of what impact socially produced culture has on planning, the dimension of time and change is fully considered and integrated in the framework introduced.

Figure 2: Collective Memory & Planning Culture's Framework

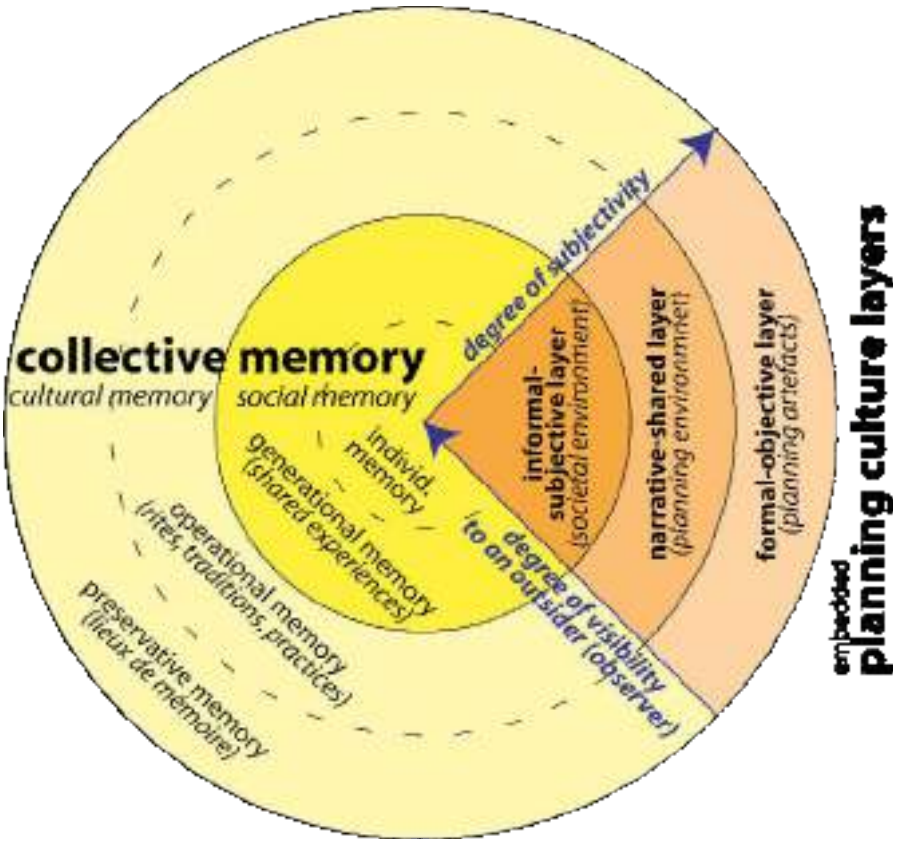


Table 1: Collective Memory Layers

Collective Memory Layers	***Social memory*** (conversational remembering): transmitted interactively; limited to a time-horizon of 80-100 years; intergenerational scope; consists of: (a) The ***individual memory*** might be described as a biographical remembering of own experiences and relationships based on which an individual derives his/her personal identity. (b) The ***generational memory*** emerges in a specific milieu of spatial proximity, where it gets shaped and transmitted through regular interactions, discourses and dialogues based on shared ways of life, experiences and perceptions.
	Cultural memory (institutionalised collective remembering): transmitted symbolically; unlimited time horizon; trans-generational scope; consists of: (a) The ***operational memory*** manifests the rules and attitudes of collective activities and practices a culture considers as socially essential, such as social and religious ceremonies, rites, actual behaviour or dress codes. (b) The ***preservative memory*** is the most symbolised layer and consequently the immediately perceivable cultural layer of a society. It becomes reality through time-independent cultural patterns or lieux de mémoire, such as artefacts, texts, monuments, national holidays, hymns.

Source: Authors' elaboration
(dimensions after Assmann A. 2006; Assmann J. 1995)

Table 2: Planning Culture Layers

Planning Culture Layers	***Informal-subjective layer*** The basic value layer influencing people's acceptance for plans, social justice, social efficiency, moral responsibility, etc. Core cultural layer (according to the Gullestrup model) Societal environment layer (according to the Knieling & Othengrafen model)
	Narrative-shared layer The formalised layers of norms and rules, planning practices, objectives and principles, shaping the contents of planning, such as considerations for ethnic minorities or handicapped persons. Manifested cultural layer (according to the Gullestrup model) Planning environment layer (according to the Knieling & Othengrafen model)
	Formal-objective layer The immediately perceivable layer and its resultant outcomes, such as planning systems, structures, institutions, instruments and products. Manifested cultural layer (according to the Gullestrup model) Planning artefacts layer (according to the Knieling & Othengrafen model)

Source: Authors' own elaboration
(dimensions after Gullestrup 2009; Knieling & Othengrafen 2009)

The framework suggested allows further the proposition that 'what planners do or consider important' is rooted in their individual concerns which are transmitted to wider social expectations and influence the way planning work takes place in a particular national, regional or local context. Because of these differences emerging from the different planning cultures, the exchange of planning ideas and practices, meaning when *"planning ideas and practices get to travel from one context to another"* (Healey 2010, p.XX), turn out to be a major challenge in particular in a cross-border context. Also Friedmann (2011) described this phenomenon very well on the case of the World Congress of Planning held in 2001 in Shanghai. *"The global discourse was far from unified, and […] planners often talked past each other, not quite knowing whether or not they made sense to their polyglot audiences."* (Friedmann 2011, p.164)

5. The significance of 'the others': Trans-cultural understanding has many dimensions

Considering that cross-border network and structures of cooperation evolve from social interactions between partners who may occupy more or less coterminous juridical, organisational, cultural and cognitive planning spaces, the added value of trans-cultural understanding becomes evident for any cross-border cooperative endeavour. But how can it be built up? Due to the fact that borders are ambiguous human constructions constituted by many different kinds of overlapping boundaries (Haselsberger 2010), I am hypothesising that it is not sufficient to *only* understand 'the others' planning approach, but in addition to unpack the taken-for-granted yet powerful generalisations about 'these others' which might have been yoked to negative stereotypes and prejudices over time. Ethnographers (such as Brown & Theodossopoulos 2004) have highlighted with a series of case studies that it is through the strategic use of stereotypes of 'the others' that social and political boundaries of inclusion and exclusion are drawn. By stabilising expectations concerning what lies beyond the 'self-constructed differentiating border of comfort' (van Houtum 2003), doubts, uncertainty and vulnerability are reduced within the bordered territory. This means, on the one hand, that it is through the awareness and perception of otherness, that social solidarity and membership is affirmed and hence a society is able to define itself (Paasi 2005). On the other hand, such certainty is generated by the distortions of collective memory in characterizing 'the other' (Herzfeld 1992), where (those in) power assert a positive meaning for their own identity while defining difference as 'otherness' (Sandercock 1998). Evidently these distortions impede cross-border cooperation. Brown & Theodossopoulos (2004), for example, have highlighted in their work, about the 'constructions of otherness in southeast Europe' that the contingent constructions of otherness is exhibiting the region's profound historicity, but 'history-as-interpreted' and not 'history-as-lived'. Furthermore it is important to acknowledge that the rhetoric about 'the others' (deriving from 'history-as-interpreted') reveals itself in everyday life through more or less subjective versions of collective memory (cartoons, aphorisms, jokes, proverbs, etc), where content is abstracted from context. Mainstream media but also politics play a significant role in the production but also transmission of the

(mis)perception about 'the others', as Arsenault & Castells (2006), have demonstrated on the example of how the Iraq War was justified in the USA.

As the picture of 'the others' is manifested in the minds of people and gets expressed through social behaviour and practices, I am arguing that the proper understanding of 'the others' and the way 'otherness' is produced builds up the basis for trans-cultural understanding and doing so assists the overcoming of mental barriers. In methodological terms the proper understanding of 'the others' requires a slightly adapting of the analytical framework (introduced before) regarding its focus of analysis towards a multilayered consideration of the different perceptions of 'otherness' (see Table 3).

Table 3: Understanding 'the others' (potential layers of analysis)

Unit of Analysis	Expected Evidence
Emotional Perception of 'the others': **Experiences & Feelings** *(informal-subjective layer)*	*How people think and feel about 'the others' in specific and general terms:* • *individually (personal experiences, stories, feelings, emotions, e.g.)* • *collectively (shared experiences, myths, stories, ways of life, events, e.g.)*
Popular Perception of 'the others': **Mainstream Media & Politics** (*narrative-shared layer)*	*How the picture of 'the others' is generated and communicated by:* • *mainstream media (newspaper, radio, television, e.g.) and* • *politics (e.g., political agendas)* *and how it is manifested within the popular 'place culture' (e.g., music, cuisine, education)*
Official Perception of 'the others': **Legal & Contractual Frameworks** (*formal-objective layer)*	*How 'the others' are represented in:* • *official documents (e.g., laws, government reports) and* • *planning documents (focus: national, regional, local and focus: cross-border)*

The interrelationship of the three layers of analysis introduced in Table 3 provides a mean to understand how 'the others' are represented in a particular planning culture and what impact this has on cross-border cooperation practices. Doing so, it is most likely that the collective memory effect on cross-border cooperation practices can be grasped. Unfortunately the story is not as simple as it looks like at first sight. As discussed earlier, human beings tend to interpret and re-interpret information according to their own socio-cultural backgrounds and experience. In order to not risk fudging the evidence gained from different planning cultures that would favour the investigator's own culture, a neutral 'interpretation scheme' has to be set up before the field work takes place. This 'interpretation scheme' may vary from situation to situation and context to context.

6. Conclusions: Overcoming borders through trans-cultural communication

The building up of more effective long-lasting cooperative structures, based on mutual trans-cultural understanding and reciprocal trust, not only requires the understanding of the involved planning cultures and the role 'the others' play within it. This is only the first step on a longer journey towards the overcoming of deeply embedded boundaries.

An equally important second step is the cultural exchange, the communication and dissemination of 'the others' planning culture in an adequate trans-cultural way. This is a step, which can be done effectively only if (a) 'the others' culture (including its language) and planning literacy skill as well as (b) the way how the professional's perception of 'the others' is affecting the situation are well understood (Reeve 2011, Friedmann 2011). Moreover, success relies on the planner's engagement as well as his/her capability to negotiate, mediate, advocate and facilitate between conflicting interests. It is important that people involved in this step respect the diversity and difference of cultural views and are able to interpret them in an unemotional way (Sandercock 1998). Unfortunately the issue of trans-cultural communication, which is a competence more than a technical skill, has not yet achieved the attention required in professional training and planning education curricula (Reeve 2011).

If trans-cultural communication is done properly, it will certainly favour the building up of cross-border identities, which is considered here as the third important step towards the overcoming of the borders' dividing function. Several authors (*cf.* Smith 1992; Eder 2005; Haselsberger 2012) have highlighted that collective cross-border identities are possible. They argue for example that there is no contradiction between progressive forms of identity or even multiple identities originating in different national identities, as observed in the case of migrants. Moreover it should be underlined that identification with and belonging to larger social circles does not imply that smaller circles such as the family or the local, regional and national space are automatically displaced. On the contrary, these circles are more like layers. In terms of constructing a cross-border identity *'the consequence for the individual is an increase in choice: between his national and cosmopolitan identification he has the additional choice of being European'* (Eder, 2005, p.212). It appears that cross-border identities provide a means to assist complex societies (as in the case of a cross-border context) to overcome conflicting interests. But how can they be built up? Eder (2005), for example, argues that what is required is *"to bring the past of different groups together and merge them into a new past, they need to be coordinated in light of a past that transcends the diverging and often conflicting pasts that might have separated the members of the new group so far"* (pp.200–201). Hence, a shared overcoming of e.g., the failures of history by placing emphasis on the different facets emerging from the different nation-states – in the sense different but equally important – is building up collective memory as the basis for a collective cross-border identity.

However, if trans-cultural communication is done improperly, it could either foster existing negative stereotypes or revitalise those which have already been overcome as Jedlicki (2005) exemplifies with the case of the Polish German relationship. *'I was*

too optimistic when I wrote that the trauma of Nazi crimes had been overcome and their memory did not burden the Polish relations with Germany any more. […] Unfortunately, in recent years there were disturbing signals coming from some segments of the German society that have stirred uneasy feelings in Poland. [These signals] *arouse fear, distrust, and the worst recollections of the wartime massive expulsions of the Polish population from the territories annexed to the Reich […]. The healed wounds opened again. This is fully understandable, even if sometimes oversensitive response.'* (p.46). The Polish-German example raises two important points in terms of building up a cross-border identity. The building up of a collective memory is a very sensitive issue, which needs to be reconstructed permanently, by a retelling of the common past. Accordingly also the building up of a collective (cross-border or even European) identity is an ongoing process, within which individuals reshape their own collective memory, in relation to that of other relevant groups.

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The arguments made in this paper will be presented at the conference on the basis of some specific examples of cross-border planning projects in Europe.

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A COMPARATIVE EVALUATION OF URBAN DEVELOPMENT MANAGEMENT: TALE OF VIRTUOUS PRACTICE VS. QUESTIONABLE PRACTICE

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Abstract

As a consequence of current economic dynamics it's undeniable that most of the contemporary urban development activity is more and more forced to take place by public-private partnership processes in many parts of the world. In consideration of these stiffening conditions suffered by local governments, this paper will provide an analysis on recent and current urban development practices based on two contrasting instances. In this context, the delivery of good practice in urban design will be questioned from a process-oriented perspective. In examining how to deliver good quality in urban development this study will make use of a comparative approach, principally confronting two analogous towns (in terms of size, population and peripheric position with respect to greater metropolitan area) namely, Sesto San Giovanni (Milan) and Chelmsford Town (London) in their approach to manage the urban development in two development projects of similar size, respectively Ex-Falck Area and Beaulieu Park. The significant aspect differentiating two projects, is that the Beaulieu Park is project of a recognized design quality (CABE, 2004), fruit of a development process, reasonably lasted 5 years mainly thanks to public administration's pro-active participation and virtuous negotiation with property developers for the quality places (Hall, 2011). Whereas Ex-Falck Area, despite covering a similar surface area, has witnessed a prolonged development process initiated in 1993 and development plan approval has been finally obtained in 2011. The process has encountered several refusals of various proposals and stagnations due to abandoning of the various developers.

The object of comparison will on the basis of the relation of planning policy to the development process and approach followed by two local governments. The paper will draw lessons concerning the promotion of quality design in urban development processes by comparing how the problem of concerting the urban development process is handled in different urban design cultures and planning policy contexts.

1. Introduction

Downgrading conditions in many urban realms as opposed to promotion of the cities to attract new investment, places a contradictory attention on the practice of urban development in the agendas of many local governments as well as on the agendas of

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developers. (Madanipour, 2006). The diminishing economic resources available to today's local governments not allowing them to shape the urban development autonomously, propelled further by the global financial crisis of 2008, has certainly created noteworthy scarcity issues in financial resources for urban development both from public and private domains.

The above-portrayed concerns which force the urban development to take place within the available financial means, the delivery of good practice asks not only the recognition of what's good urban design but also guidance, negotiation and proactive engagement in urban development process. The key to deliver well-designed places also lies on construction of good partnership between the private and public sector and on the local governments' capacity in guiding the private sector into socially and environmentally sensitive place making. (Tiesdell & Adams, 2011). This paper acknowledges that the first aspect is dealt with by a number of resources and therefore it will examine local governments' behaviours in decision-making processes, in order to promote the good practice in urban design in different policy contexts, since today's local governments need to be more pragmatic in creating instruments which attract the participation of private sector in the development process (Alberini 2011; Tiesdell & Adams, 2011).

In the proceeding chapters, we will first deepen the insight in process approach in urban design and deepen the analysis on the decision-making environment of property developers. Then each of the case studies will be explained on the basis of the policy context and the development of the process. In the closing section the different approaches pursued in two examples will be compared.

2. Regarding the Interaction between the Urban design and Real Estate Development

2.1. Urban Design as a Process

It's important to note beforehand, the proceeding parts of the present study will take the term urban design into consideration as a process, which is aimed to create good quality. Accordingly, the urban design can be viewed as direct design and indirect design. George (1997) classifies these design activities as first order design and second order design. First order design relates to the designer as the direct author of a project whether it's a public space, a building or so. The second order design relates to the designer which does not directly design the physical characteristics of places but designs the decision-making environments, development processes or frames through which designers (of first order), financial promoters, real estate developers operate. Generally (yet not exclusively) the second order design is performed by public administrations making use of tools as plans, incentives/disincentives, infrastructure provision, economic land provision and etc. To note that in the development process, second order design occurs before the first order design. Second order design creates/forms places by creating directions for first order design mainly by set-

ting constraints and potentials. Thus carries a considerable potential for policy makers which can easily alter the physical features of future development.

Concerning the dynamics which call for a second order urban design in the context of urban development one shall principally state three principal driving factors (George, 1997): The first is about the velocity in which the decision environments may change in the contemporary era. The urban development processes incorporate dynamic factors such as economic, social and political, which may change during the development of a project. This may prove inefficiency in relying on first order design in the context of urban development which tends to be comprehensive rather than being strategic. Secondly, the number of different issues that urban design needs to address as owed to its multi-disciplinary character, urban development processes call for involvement a number of different types of actors in process. This creates fragmented decision-making environments, which first order design cannot effectively govern. Second order design however proves itself more effective in complex and fragmented decision-making environments as it produces more global and abstract objectives which can becomes more easily agreeable and more easily diffused in fragmented decision making environments. The third one relates to the number of different involved actors, which can be produced by the urban development projects. Unlike a traditional designer which produces a single plausible solution for a single client, the urban designer usually finds itself in front many different client with different expectations which cannot be collectively satisfied by a single traditional design. The second order design becomes more appropriate when faced with a multiple client as a range of acceptable solutions are more likely satisfy multiple interests.

Drawing on the distinction between the first order and second order design activity, we can consider the second order design activity similar to contemporary governmental practice, which is characterized by Salamon (2002) as public managers must create the incentive systems which obtains the cooperation of the actors over whom they have limited control. Yet, It's worthwhile to make a distinction between various government models as specified by Tiesdall & Adams (2011): The traditional hierarchical, top-down government systems where power flows downwards and outwards and consider that policy decisions can be implemented by a command & control systems are outdated government systems which seem to have very limited capacity and opportunity to make sound policy implementations in the contemporary conditions.

The contemporary process of governance is composed of interaction networks between governmental and non-governmental actors, power is diffuse, with all actors having specific resources with which they bargain to pursuit their own objectives. The contemporary governance model means that all actors need to operate in new ways to create mutually favourable conditions to have the cooperation of the other actors. Arguing that the contemporary network of governance shifts the importance in policy delivery from management to enablement, basing on three sets of competences listed by Salomon (2002,16): "Activation, orchestration and modulation skills" the urban designers must be able to create networks, create positive synergies

between the actors involved and make use of incentivation and disincentivation tools for the delivery of good practice.

2.2. Real Estate Development

Real estate development is the process, which creates the built environment and consequently transforms the forms and character of the urban settlements. As framed by Rowley (1998), the real estate sector has transformed the character and the form of the cities in most continents. The public policy is a means of managing the real estate development process ensuring a direction for what's publicly good. In weak public policy environments, real estate development tends to create marked-led outcomes which reflect developers' marketing strategy or perception of what sells better (Hall, 2011); whereas strong policy guidance can make real estate development create policy-led outcomes (Tiesdell & Adams, 2011) which are more compatible to societies needs rather than being market oriented products. In order to operate effectively policy makers certainly have to have a good understanding over the dynamics, risks associated with the real estate development processes and interests of the principal actors (designers, investors, developers, landowners etc.) in the real estate development process. In the context of a diminishing role for the public sector in the urban development, such an understanding by the operators in public sector, can modify the institutional incentives, barriers and the regulatory context for the delivery of what's public good (Carmona et al. 2002). The lacking of which will most probably result in an abundance of private-led development project with limited attention to public needs.

The real estate development sector operates in cycles and it has a volatile character. Likewise the governance term, also the real estate development has undergone several significant changes during the latest decades. The contemporary developers are highly consensual on the fact the what makes the development success is the offering of the quality product at the right timing and on the right location (Tiesdell & Adams, 2011).

The state – market relations in the context of the urban development has been subject to analysis by a number of studies. At the most profound level Barrett et al. (1978), pointed out the tasks and processes where state – developer contact took place and identified the forms of it. At a later stage, Doak & Karadimitriou (2007) identified the roles played by different actors in the development process and furthermore highlighted power relations between the actors and how these come together complex structures. Ball (1998) analyzed the structure of the networks of the actors in the development process which showed that the linkages between the actors do not solely occur from economic ends but also social historic, political and cultural ones. Moreover, the study asserted that the actors engage in the process as long as it contributes to achieve their basic objectives and classified them on a detailed table according to their role, functionality, timescale, external appearance and relation. His findings demonstrated that supply-side actors (being: Landowners, developers and funders) typically have short-term financial and economic motives to engage in the project

and tend to see the development as a financial commodity. Demand side actors (investors, occupiers and community) typically have long term, and design objectives and see the development as an environment to be used. One significant key finding of the study has been the design quality globally wasn't an objective shared by the whole of the actors and objectives are also subject to internal trade-off. In his study Ball, views the debate on the development quality as a 'gap' between the conflicting objectives of supply side and demand side actors. The remediation of this gap can be performed by three means, which are regulative means, remunerative means and normative means. It's worthwhile to keep in mind that the first means is coercive and the latter two are foresee encouraging of developers via financial and normative facilitation. Given the variety of possible interventions, public sector can make use of a number of resources in order to guide the urban design practice and formation of urban development. More specific tools are explained by a number of studies (Carmona 1999, Bentley, 1999, Carmona 1998, Carmona 2002, Punter & Carmona 1997, Punter 2007).

3. The Questionable Case: Ex- Falck Area in Sesto San Giovanni

Sesto San Giovanni, located on the northern border of Milan municipality, has registered a surprising fast growth due to the industrial settlements, i.e. Pirelli, Breda, Marelli, Falck etc., which occupied a relevant size in the city since the beginning of the 20th. century. Given the intensity of the industrial activity in the city, Sesto San Giovanni pursued the role of the "industrial pole" of the Milan metropolitan area in this period and became considered as one of the principal productive centres in Italy. After 1970'ies, the period which characterized the closing up and moving out of many industrial settlements throughout the world, as well as the ending production of the Falck Factories which have left a dismissing area with large industrial structures for a city like Sesto with modest settled dimension and relatively low economic capabilities.

By the beginning of '90'ies, the owner of the area the steel production company Falck has already closed down the production and completed the dismantling of industrial structures formerly housed the production. However, the PRG[2] approved by the municipality in 1993, has confirmed the industrial land-use of the area (even though the industrial productions had already stopped for some years by then), which made any re-use hypothesis quite irrelevant. Furthermore, the industrial land-use attributed by PRG has also undermined the property value of the area, which rendered economically unfeasible if not unreasonable the potential sale of the area. Under these consequences, the property owner, Falck decides to propose to the Municipality an alternative transformation plan for the Falck area and for this purpose Falck commissions the architect Kenzo Tange for drawing up a masterplan covering and area of 160 ha. (Goldstein, Bonfantini, 2007) The plan proposed a linear theme park which tributes the industrial past of the area. However, the large green area (covering about 40 ha.) becomes the only feature, which receives an attention in the project of Tange.

[2] PRG: Piano Regolatore Generale: Stands for the general zoning plan in the Italian Planning System

Given the area owner's apparent willingness in transforming the area and the scarce quality in Tange's proposal, the municipal administration contacts the Falck group in order to reach at an agreement on the characteristics of a possible transformation. In 1997, an agreement document is signed between the owner group, local administration and Agenzia Sviluppo del Nord Milano in which establishes requisites and modality of transformation of the area. In 1998, an international idea competition is organized for the design of an Urban Park for the area. The winning project by Arch. Viganò, which proposes residential, commercial and productive uses inside an urban park, is not put into action though.

At the end of 90'ies the Falck Group sells the area to another operator Cascina Rubina Immobiliare, Gruppo Pasini, which commissions two architects (Lugli and Goggi) for preparing the new PII[3] for the area, in 2001. The project proposes a series of interconnected areas with a major residential development. The proposal faces a resistance by the local administration because of the incompatibility between the proposed uses and those foreseen by the PRG of 2000. After the refusal of the proposal, the area owner decides to change the approach and commissions a group of experts from several disciplines in order to prepare the guidelines for the transformation and a new project proposal by Arch. M. Botta. In 2002, on the basis of the guidelines prepared by the commission, the Gruppo Pasini prepares a new PII proposal which contains residential, productive new uses as well as the conservation of the historic buildings.

Given the necessity to define a unitary and strategic development plan, which can be shared both by the public and private sector, the Sesto San Giovanni municipality creates a work-group Aree Falck Work Group which is composed of the municipal technical officers and various external consultants regarding the specific themes. In 2005, the technical office of the municipality by collaboration with the Aree Falck workgroup, publishes a document "organic framework reference" which aims to define a unitary urban development project which ensures an architectural quality of buildings, and of the street furniture in the entire site. This document becomes integrated part of the guidelines prepared in 2000.

In 2005, The Zunino Group acquires the Falck area from the Pasini group, at a distance of three months, the Zunino Group commissions Renzo Piano Building Workshop for the preparation of the masterplan for the area. In 2006, a preliminary proposal of PII to the municipality council, the discussions of administration and a public consulting which takes place at a period of one year. In 2008, the updated PII, revised based on the observations of the commission and work group, is once again presented. However, by the raising voices of global crisis and by the Zunino Group

[3] PII: Programmi Integrati d'Intervento (Translation: Integrated Intervention Programs). Italian Law 179, 17/2/1992 (Bossetti & Gatti, 2011). A recent implementation tool in Lombardy Region which disciplines requalification of the urban fabric by the intervention of a mix of uses and building typologies to be promoted as a private (or public-private consortium) initiative.

decides to sell the Falck area. After two years of negotiation with several real estate operators, finally in 2010, the Sesto Immobiliare acquires the area and 2011, a new preliminary plan of PII is proposed by the same project author. After 2 revisions as requested by the municipal administration, in the septemeber 2011, the proposed PII becomes finally approved.

4. The Virtuous Case: Beaulieu Park in Chelmsford Town

Chelmsford town is a small borough with a population around 150.000 and it's situated on the north - east of London, and it's the center of the county Essex. The town has achieved to grow continuously as a part of County policies, even after the decline in the manufacturing sector, which is compensated by the expansion in the service sectors. In order to sustain it's growth the town has faced a substantial and ongoing house-building programmes. However, as noted by Hall (2011, 75) the physical features of the development which has been formed during 1960 – 1970'ies was has been mediocre so far, uninspiring and far from satisfactory.

The "reversing" of the town's ordinary history in town planning, the first move was made by the new administration by the adoption of a new local plan in 1997, which structured the whole town's future development. Moreover, the county of Essex has also emanated a revised design guide to supplement planning guidance on the county level. As asserted by Hall (2011): These two elements have been the legislative foundation for a progress in a town-wide the design control. Though the breaking point in the town's planning history has actually been the change of the philosophy pursued by the new local administration, which attributes an important role to urban design in the development process, accepting urban design as an integral part of the planning activity and created a significant difference in the ongoing practice, because urban design is not a statutorily required function of planning authority in the English planning system rather it has a promotional standing.

The overall goal adapted by the Chelmsford local government was to make places by envisaging, shaping and managing change. This implied reasoning in different scales (town, neighbourhood and street); taking account of different information, using the density as the context for design and using the quality term as a glue which holds the whole together.

Still the progress cannot be made solely by definition of global goals yet they needed to be translated into site – specific guidelines. The overall global spatial strategy was translated into a development plan employing a long-term vision. The new plan prepared in 1997, emphasized policies encouraging intensity of the development and accessibility which put a significant attention on the brownfield land. In the translation of the generic design goals into operative guidelines the town Chelmsford used the county-wide design guide as a basis which applied on generic aspects of the future design.

The most crucial aspect of having a clear spatial policy translated into specific design guidelines from the development point of view is the bridging role it sets up between the authority and the developer. This way, all the relevant aspects that the planning authority expects, are clearly transmitted to a potential developer.

In the aim to provide the quality in urban development the local administration made use of another planning tool in order to take a more active role in the project development process. The planning brief – a synthetic site-specific document addressing the physical and design features of an eventual future development – acted as the principal vehicle in taking a proactive approach in the development process. The council prepared planning briefs for the sites available for development or for those whose development it promoted. By doing this, the design principles and guidelines for a site were being set-out beforehand. The essential role of this tool played is asserted by Hall (2011, 76) as: "They often helped to unlock complex urban sites, if done quickly they influences value, increased certainty and established a design approach before negotiations took place."

In the practice all the site specific types of guidance normally contained a review of purpose of the guidance; site appraisal; policy context; design principles to be applied to the site. In addition a proactive engagement enriched this document by diagrams of the desired building blocks, frontages access and uses and guidance on implementation.

The distinctive character of these design briefs were their significant detail in which they address the physical structure of the new development. Block sizes, active facades, location of open spaces were all defined in the brief in order to leave less room to move if the all design guides is to be followed. Hall (2011), claims that this level of detail received a positive reaction by the developers in Chelmsford on the basis that, developer knew right from the beginning the position and the idea of public administration which saved them time in the process of planning approval.

Even though a having a clear policy and guidance of future development and a proactive role in the process the local administration has also engaged in ongoing negotiation with developers and their professional agents. In some instances the proposals were handled by a group of professionals from different disciplines. Despite being time consuming negotiation also proved useful when done in positive and constructive manner in order to reach the desired results.

The Beaulieu park project site lies on the north-east margin of the Chelmsford town and covers about 370.000sqm of green land (CABE, 2004). It's a project carried out in two phases, to be realized by multiple developers. The initial planning brief, approved by the council in 1996, hadn't foresee any detail on the physical form further than pedestrian and vehicle access and location of playgrounds. The local government at that time had the expectation that the initiative on design can be left to housebuilders (Hall, 2011). Therefore in the first phase of the project the developers proceeded by producing their own masterplan, which set out a spine of road network,

unable to form building blocks, defining the overall development scheme of the whole area. Later on a variant of the masterplan has divided the land into parcels to enable the construction. More specifically, the first two stages of the development consisted principally of large detached housing aligned by main roads and placing the smaller-sized housing as well as social housing to the marginal portions of the site. Thus, the initial phase of the development reflected an urban development scheme from the developers' perspective. As in Hall's words (2011,80): "this followed the desire of house builders at the time to 'front' their schemes with what they considered to be the most impressive houses, relegating the smaller properties, including the social housing to the rear of the site."
In 2000, when the development of the northern part of the Beaulieu Park was brought into agenda, the urban design team of town's planning council has taken advantage of this opportunity and prepared a design brief for the site in the form of masterplan. The design brief consisted of a site appraisal, a prescriptive masterplan diagram addressing the location of blocks, facades, pedestrian routes and open spaces. The result achieved by the latest stage was clearly distinguishable from the precedent stages. Larger detached houses were replaced by smaller, with different styles, more façade continuity and higher density were achieved. Furthermore the social housing was seamlessly integrated to the rest of the built fabric and it was indistinguishable. The new scheme adopted a range of architectural styles which provided a deliberate diversity and gave a distinct character to the development at the most intimate scale.

According to CABE (2006, 32) the developers of Beaulieu Park scheme expressed that the masterplan has been very useful in making clear the expectations of local authority. As affirmed by CABE (2004), the developers haven't objected to these as they recognized the higher quality in the scheme proposed by council and furthermore satisfaction of those requests speed the process up considerably. The cooperation between the planning council and developers produced a final settlement scheme which is detailed loyally to the initial masterplan.

5. Conclusions

A narrative based comparison between two public administrations of similar sizes essentially demonstrates how the problem of concerting the urban development process is handled in different planning cultures and policy contexts. In order to concretize further the dependability of the outcomes of this comparison was made between two development projects of similar sizes.

For an understanding of how urban design policy could impact developers' decision-making with positive outcomes the Beaulieu Park at Chelmsford is accepted to be a reliable example where public administration succeeds in making realize what is publicly desired by a proactive engagement and negotiation. On the contrary, in case of the ex-Falck Area in Sesto San Giovanni poses an equally important example where the public inertia unable to provide a shared vision for the future of the area, forces the private sector to take a pivotal position in visioning the probable future scenarios for the area and public administration remains as passive actor which relies

solely on its legislative powers in managing a highly complex development process. More specifically, perhaps the principal inadequate move made by the government was in the contents of the zoning plan approved in 1993. A simple short sightedness in grasping the potential of the area by approving a land-use which had already chosen to abandon the area, not only decreased the market value of the land but also forced the private sector (the land-owner in this case) to generate a new scenario principally in order to keep the value of its assets. Consequently, the private sector became the promoter of the future urban development in the area as the option of cession of the land has become economically unfeasible by the new zoning regulation.

The development of the rest of the project which sustains 28 years between the initial development proposal and undersigning of development plan for the area, takes place in the form of highly recursive process composed of four cycles starting by the proposal of a new masterplan (by different designers commissioned by different private operators) and concludes by refusal of the masterplan proposal by local government which also causes the private to abandon the project. It's important to underline what's criticized here is not the refusal itself; but the inefficiency caused by the passive role played by local government which doesn't go beyond an "officer" who approves or refuses the private proposals rather than taking a proactive role in development of an area with certain potentials.

During all four cycles, we witness a project development majorly in line with property developers' philosophy indeed the all of the four owners of the area choose to commission renowned architects or except the first owner which also organizes a international ideas competition for the development of the area. It seems plausible that in an ambiguous decision-making environment, property developers make use of important architect names as a proof of the validity or the quality of their development proposal in order to convince the local government to grant approval. Moreover, the fact that the third private developer which had to sell the area in 2010, as majorly affected by the downturn of the real estate market, is a further sign of the prolonged development process being incompatible with the property markets character of cyclical functioning.

The development of the Beaulieu park on the other hand, demonstrates a more successful approach in the management of the urban development processes which goes beyond the usual management via proposal-refusal-revision cycle. The proactive approach shown by the public administration ensures the delivery of the expected results by the public administration. This became the principal breaking point which makes the Chelmsford case distinct from the Sesto San Giovanni's approach to the development process and which marks a distinction in the planning history of the Chelmsford town as well. The planning council, aware of the crucial need to transmit their own opinion regarding the spatial features of good quality development, made use of a tool which already existed in the system with an adequate operational rapidity. Preparing the design brief's on development areas has given the privileged position to public administration to act as the pivotal actor in the development process.

Moreover, it also clearly transmitted the public administrations expectations on an area well before the development begins. From the developers' point of view this has already been a major progress because the developers were able to understand clearly what was expected from a certain land (Hall, 2011, CABE 2004), which proved to be time saving in obtaining the planning permissions. Further to the successful pivotal position pursued by the government which enabled them to put their second order design skills effectively on the table. However, the proactive engagement in the process, which is open to constructive negotiation, has become the substantial drivers of the success in the delivery of the good quality in future development.

The comparative approach attained in this study not only demonstrates how the large-scale urban development is managed in different policy contexts by similar sized local governments. The outcomes show the inefficiency of conventional proposal-refusal planning system in managing complex development processes and its incompatibility with property market cycles. Furthermore, the study evidences the only possible way in overcoming the development plans shaped from the private perspective is taking proactive approach and bridging the public expertise and know-how to developers who otherwise tend to form the development according to what sells better as noted by Hall (2011,81).

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TERRITORIAL COHESION OF A METROPOLITAN AREA IN THE LIGHT OF IMPLEMENTATION OF SPATIAL POLICY – THE CASE OF LODZ METROPOLITAN AREA

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Abstract

In Polish legislation there are no relevant provisions allowing for institutionalisation of metropolitan areas. This means that the biggest cities and their directly surroundings, strongly related to each other and experiencing dynamic transformation of the socio-spatial structure, are deprived of joint coordination of spatial policy. According to the administrative division of the country, the main responsibilities for shaping and implementing the objectives of spatial policy are assigned to a municipality – a territorial unit of the lowest level. Municipalities are equipped with a local spatial development plan, which is the only instrument having the status of a local legal act. It only must be consistent with the provisions in regional and national plans, which are assumed as general documents, relating to the major development directions but not to the particular land use.

Metropolitan areas in Poland are mostly consisting of several dozen of municipalities. Unfortunately, each territorial unit usually implements its individual spatial policy, considered as the most profitable only by the local authorities. This situation is potentially most dangerous in the territories of strong internal linkages, such as metropolitan areas definitely are. It would be a truism to say that long-lasting effective functioning of the metropolitan area is not possible without the common spatial policy.

The authors' main objective is the analysis of relations determined by the local spatial policies in the metropolitan area. The analysis is conducted on the example of Lodz Metropolitan Area (LMA) – a territorial unit located in Central Poland, consisting of Lodz and its 27 neighbouring municipalities. Choosing LMA for analysis is not accidental. For two years the authors have been conducting a wide research project in this area, which should result in elaborating a method of measuring territorial cohesion of the metropolitan areas.

The analysis described in the article is based on the obligatory spatial planning documents and takes under consideration future land development along the municipal borders (directly neighbouring land use forms and subsequent ones, in case the first land use form was a linear object). The key element of the procedure is the identification of conflicts in the borderline zones. First, each

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place where any kind of discrepancy is observed is being marked on a map. The discrepancy means that the land use on the sides of the municipal border has a different form eg. agricultural and residential areas. Furthermore, more detailed discrepancy criteria are established (combinations of land use that may be classified as spatial conflicts), the length of the border with discrepancies is measured and its share in the total length of the border is calculated.

The final step of the analysis is supposed to reveal the impact of the identified conflicts on LMA's functioning, which is followed by formulating recommendations for unified spatial policy in the metropolitan area.

1. Introduction

In common parlance, cohesion is mostly understood as a close contact or union, a result of separate elements forming a new whole. In academic research, the term applies to various domains – economy, social relations, ecology, and infrastructure – and especially to transportation, spatial planning, etc. The common point for all these is the territory which forms a reference point for their analysis. Therefore, when trying to present the internal integration of a territory in a holistic perspective, the term territorial cohesion should be used (Bartosiewicz, Pielesiak 2010b, 2011)**.**

Territorial cohesion is a multidimensional, ambiguous and controversial term. In the past few years, it has frequently appeared in debates over the European Union's future development. The Polish government assumed in its proposal that territorial cohesion should be explained in both its static and dynamic aspect. In the first sense, it is presented as the optimal state, a result of efficient economic exchange and flow which ensure economically and socially effective resource allocation. This state, which assumes a certain minimal development level of selected domains (access to public services, accessibility by various transport modes, etc.) instead of their standardisation, is a consequence of an adequate spatial planning, which creates the optimal circumstances for the development of individual territories. It is emphasised that the process of reinforcing territorial cohesion is an extremely complex one, hence its implementation should take place not only on the EU level, but also on the national, regional and local one. In turn, the dynamic aspect of the term "territorial cohesion" places emphasis on the simultaneous stimulation of socio-economic cohesion (stimulating management efficiency and the effectiveness of addressing social disparities) in the framework of integrated management of EU development (Bartosiewicz, Pielesiak 2010b, 2011).

At present, research on territorial cohesion is focused on the macro scale (the national or international level). At this stage, there are a number of concepts and instruments which serve to measure territorial cohesion. (Dutkowski, 2009; Farugia, Gallina, 2008). This branch of research is an inherent part of the EU cohesion policy.

Research on territorial cohesion on the subregional stage is less common, although this dimension seems to be equally important. Creating cohesion policy on a national or international scale without including the lower levels poses significant difficulties. There have been several studies on subregional territorial

cohesion but it still remains a poorly researched area, especially where the methodological aspect is concerned. Researching territorial cohesion on the subregional level requires a wholly different approach.

The territorial unit analysed by the authors is a metropolitan area. It is understood as the area of a large city and its functionally related direct neighbourhood. In a number of international classifications, the terms "metropolis" and "metropolitan area" apply not only to large cities but also to urban settlements which contribute significantly to the economic structure of metropolitan functions, that is exogenic service and administrative functions on a global, continental or national scale. In Poland, the term is commonly applied to the largest cities and their neighbouring areas. As a result, not all metropolitan areas distinguished in Polish studies meet the international criteria. In any case, they are areas with strong internal linkages, which require particular attention and unified coordinated management.

In Poland, the subjects of metropolises and their surrounding areas is gaining the recognition of the academic world as well as local authorities of various tiers. Although legal acts regulating the functioning of metropolitan areas have not yet been passed, a few municipalities have already carried out detailed analyses of the current socioeconomic situation and have prepared and started to implement concepts for future development. However, in most cases, apart from a delimitation and a very general idea of the area's future functioning included in provincial spatial development plans, no detailed, multifaceted analyses have been carried out. In particular, the municipalities' territorial cohesion, which should form the basic standard for the possible creation of institutionalised municipal areas, has not been researched.

In case of a metropolitan area, it is impossible to apply most of the indices used in international and interregional comparisons. Notwithstanding the fact that assuming the municipality as the basic unit of research calculating some of them would be pointless, many data are aggregated at least on the regional level, and therefore the researchers may encounter a lack of input information.

In a situation like this, accepting various kinds of internal linkages within a metropolitan area as the benchmark for territorial cohesion seems to be the most reasonable solution. This approach is consistent with the authors' theoretical framework. For two years, they have been implementing a large-scale research project under the title Territorial Cohesion of Lodz Metropolitan Area, which aims to develop a comprehensive and universal method of measuring territorial cohesion on the subregional level based on a number of internal linkages (cf. Fig. 1) (Bartosiewicz, Pielesiak, 2010b).

In this set of linkages shaping territorial cohesion, relations resulting from the implementation of spatial policy are of vital importance. When there is no common policy for a large city and its surrounding areas, and each municipality in fact implements its own one (for further details see subchapter 2), such relations may be investigated by analysing spatial planning documents valid in individual municipalities which specify the guidelines for spatial planning.

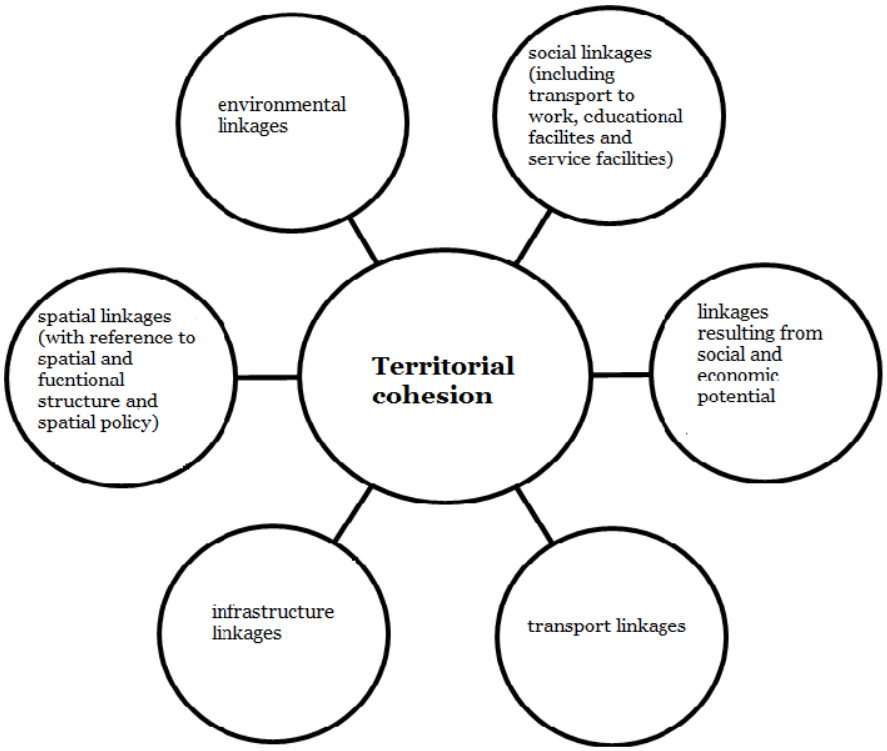

Figure 1. Linkages creating territorial cohesion

The authors' observations prior to the research suggest that the guidelines for spatial development of areas along municipality borders are often divergent and lead or may lead to functional and spatial conflicts. Such situations are particularly dangerous in metropolitan areas, which are subject to intensive urbanisation processes, and may result in irreversible negative alterations which disrupt the proper spatial development of the territory. This means that the borderline zones are crucial from the perspective of spatial policy cohesion of metropolitan areas. Therefore, it is these zones that should be selected for analysis when assessing spatial development policy, taking into account the intended use of the adjacent areas (for further reference see subchapter 3).

Based on these assumptions, the primary aim of this article is to develop a universal method of measuring the cohesion of metropolitan areas in light of spatial policy, based on the identification of spatial conflicts (according to the spatial planning documents in force), and to present the conclusions following its implementation in Lodz Metropolitan Area.

2. Spatial functional conflicts in Lodz Metropolitan Area

Spatial functional conflicts are analysed in Lodz Metropolitan Area – an urban region located in Central Poland. It consists of Lodz and its 27 adjacent municipalities (area of 2.5 thousand km^2) and is populated by 1.1 million people. As far as the demographic potential is concerned, it is the fourth largest metropolitan area in Poland.

2. 1. Spatial policy and the metropolitan areas in Poland

The Polish three-tier spatial planning system is regulated by the 2003 Spatial Planning and Land Development Act. According to its provisions, the individual levels – the national, regional, and local one – should complement one another, forming together a consistent spatial policy system. The first two tiers aim to specify the main guidelines for spatial development throughout the country and in individual regions. Documents passed on these levels do not constitute law; they are instructions designed to broadly name the guidelines for development and secure the implementation of national or regional sector policies (e.g. transportation policy or public security policy).

On the national scale/nationwide, these functions are fulfilled by *The National Spatial Development Concept*. Legislated at the national level, it is a binding legal document, whose provisions should be taken into consideration when preparing sector policies and documents specifying the guidelines for spatial policy on a regional or local level. It is an obligatory document whose primary aim is to identify the main guidelines for regional spatial development, while taking into consideration supralocal needs.

The lowest but most important from the standpoint of spatial planning is the local tier. Municipalities, which are the basic administrative units in Poland, have the widest possibilities to influence spatial development. It is a consequence of their legal character. In light of existing regulations, municipalities are autonomous and independent units. Municipal authorities are responsible for providing the residents with conditions necessary for their proper functioning and for the management of the municipality's development. Municipalities have their own financial resources and may undertake independent actions.

In light of the 2003 act mentioned above, Polish municipalities have at their disposal two basic instruments of spatial development. The superior one is the *local spatial development plan*. Of the two documents, it is the only local legal act, which means that its provisions are legally binding and determine the intended use of a particular area. It may encompass the municipality as a whole, but due to its detailed nature it is usually designed only for its particular areas. The spatial development plan specifies the details of the intended use of the land, takes into consideration the existing and planned infrastructure and transportation facilities, and specifies the regulations for land development.

The other obligatory document for every municipality is a *study of conditions and directions of spatial development*. It encompasses the whole local administrative unit. It does not constitute local law but its provisions must be taken into consideration when preparing local spatial development plans.

Although the aim of this article is not to assess the spatial planning system in Poland, it should be emphasised that it does not function properly, especially at the local level. Local spatial development plans are not obligatory for municipalities and although the act has been in force for almost ten years, they encompass only somewhat less than 50% of the area of Poland. Unfortunately, in

the case of the largest cities and their surrounding areas, this number is even smaller. This is not only the result of high costs of preparing spatial development documents but also, and especially, the consequence of a very complicated and lengthy procedure. Decisions based on purely political motives hamper the process to a considerable extent and also contribute to the problem. Lack of binding local spatial development plans results in inconsistent spatial development, spatial chaos, mixture of conflicting forms of spatial development. These problems are particularly common in metropolitan areas, which are the most attractive lands for investors. The situation is exacerbated by municipalities which compete with one another to attract as many investors as possible, often disregarding the individual residents' interests.

The best solution seems to be the introduction of legal provisions which would oblige the authorities to pass common regulations specifying the spatial policy in a metropolitan area. Unfortunately, although there have been many debates in Poland about the need to institutionalise metropolitan areas, little has been done is this respect. Current legislation imposes only the obligation to delimitate the metropolitan areas in provincial spatial development plans, but it does not oblige the authorities to take any specific actions to coordinate the development.

While the legislators notice the problem of metropolitan areas, they have not yet stipulated any instruments for implementing a common spatial policy. In 2008, a government initiative emerged, proposing passing legal provisions leading to coordinated management of metropolitan areas. The need for a common/unified spatial policy, as well as transportation or housing policy, was strongly emphasised. However, no consequences followed; the issue of so-called metropolitan act has been suspended and has not been discussed for a long time. Meanwhile, many studies conclude that the changes to public space are irreversible, especially the ones conducted in Warsaw Metropolitan Area, where the problem is at its most extreme (Jakóbczyk-Gryszkiewicz, 1998, Lisowski, 2010).

In this situation, seeing the need for cooperation, local governments in large cities and surrounding municipalities started a grassroots movement of forming associations for cooperation in the development of metropolitan areas. In a few regions of Poland such associations have been functioning for years, sometimes with moderate successes (mainly with respect to the common organisation of public transportation), but the lack of necessary legal provisions significantly hampers the effective functioning of these authorities. Sometimes not all municipalities are interested in joining metropolitan associations, which also limits their efficiency.

To sum up, the Polish spatial planning system is not ready for the processes which take place in metropolitan areas, and independent initiatives of individual municipalities increase significantly the risk of spatial conflicts. The problem is exacerbated by the procedure of enacting spatial planning documents. If the documents are obligatorily consulted with the governments of adjacent municipalities, their comments do not need to be taken into consideration. This means that there in fact no legal obstacles to pass documents which allow for potentially conflicting provisions.

2. 2. Identification of spatial functional conflicts in a metropolitan area

Spatial conflicts take on/appear under various names – land-use conflict, locational conflict, environmental conflict, prohibited location, nuisance property, LULU – Locally Unwanted Land Use, NIMBY – Not In My Back Yard, etc. Their appearance is related to various combinations of social and economic factors, such as the increase in environmentally damaging activities, the growing range of public and private investment projects, increasing ecological and social awareness in society, the improvement in the residents' education and living conditions, the decline of public trust in authorities and social institutions as well as greater mobility (Meyer, 1995). The locations which prompt objections are commercial facilities perceived as a nuisance (industrial sites, certain service facilities such as petrol stations, large animal-raising farms) or a threat to local businesses (shopping malls), construction and development of existing technical infrastructure facilities (motorways, sewage treatment and solid waste utilisation facilities, power plants), but also objects which were designed to serve the community (council housing, alcohol and drug rehabilitation centres, youth correctional facilities, and even hospitals).

Identifying and defining the conflict from the standpoint of spatial planning is not an easy task. One viable solution would be to assume that the conflict stems from the incompatible intended use of adjacent lands, which is related to negative external effects (environmental degradation, nuisance affecting neighbours due to noise, electromagnetic radiation and odour pollution, landscape defacement, etc.), and results in a decrease in their effective functioning. Spatial conflicts may take on different forms, depending on the local socioeconomic and environmental circumstances. In tourist resort, they manifest through an expansion of hotel, boarding and recreational facilities, which often damages the neighbouring lands of natural value. The development of natural resources extraction projects may lead similar consequences, together with an extreme environmental degradation and a considerable nuisance to the neighbours. Actions considered conflict-provoking include planning economic centres without taking into consideration the existing buildings (frequent in case of greenfield projects), locating nuisance manufacturing and service facilities in the immediate vicinity of residential areas, introducing multi-family housing into single-family or homestead housing areas, dividing green corridors (river valleys, forest areas) with anthropogenic development. Spatial conflicts are triggered by the presence of relatively environmentally non-degraded areas, legally protected to secure the local ecosystems from increasing human pressure. These areas, which should be left undeveloped, are gradually surrounded by residential areas and subject to a wide range of negative phenomena, such as land enclosing, increased tourist traffic, lack of sewerage and solid waste treatment policy, etc. An extensive set of legal provisions for environment protection tends to be perceived as a source of conflict by the local authorities and investors, who prioritise the economic and social sphere instead of environmental protection. The local governments' negative attitude is exacerbated by a lack of financial compensations for lost growth potential (Gołąb-Korzeniowska, 2008).

Spatial conflicts arise very often in suburban zones of major cities, which are at risk of intensive suburbanisation processes. Unwanted alterations to the suburban zones in Poland are possible partly due to their insufficient coverage by spatial development plans, which paves way for accidental development. This allows for placing typically urban or residential single-family houses among homestead housing. Spatial chaos is becoming more intense in suburban areas, the more so because according to the public opinion lotting and selling the existing agricultural areas is a very lucrative business. In that case, landowners and investors have more say in the matter of long-term permanent spatial planning than spatial management authorities. On the other hand, often the local authorities themselves are interested in attracting new residents, considering them a positive influence which increases the municipality's income. This results in numerous problems, among them environmental degradation, poorly developed infrastructure, increased costs of its development and maintenance, conflicts between the local agricultural producers and the newcomers from highly urbanised areas (Henderson, 2003; Lisowski, Grochowski, 2008; Tokajuk, 2011). The last situation is particularly problematic when the area in question is incorporated into the sprawling city. In these circumstances it is advised to avoid ostensibly reconciling the conflicting functions in local spatial development plans by specifying mixed-use locations. A plan should explicitly determine the intended use of the land. Where a conflict of functions appears, a transition period should be introduced to gradually eliminate the unwanted ones.

The starting point for the authors' methodology of investigating spatial conflicts in metropolitan areas is the assumption that they tend to arise in the borderline zones along municipality borders. This assumption is a consequence of the Polish spatial planning system described above, where municipal authorities establish spatial policy guidelines on their territory and are not obliged to take into account the situation in the neighbouring areas. Such a system may trigger spatial conflicts.

The basis for the identification of spatial conflicts is a planning document obligatory for every Polish municipality, that is the *study of conditions and directions of spatial development*. It specifies the target model of the administrative unit's spatial and functional structure, which is the basic spatial planning document.

The first step in the analysis is the identification of the existing forms of intended land use along every municipality border within the metropolitan area (see Fig. 2). The scope of the analysis depends on the type and area of the land in question. If it is of a small size or linear character (e.g. a road), an adjacent area is included in the analysis.

The next step is to determine the compatibilities or discrepancies in the intended land use on each side of a municipality border. Discrepancy is described as every situation when the intended land uses differ, even if it does not create a conflict (e.g. a forest and a meadow). This step requires to specify the length of the border where the discrepancies occur (in proportion to the overall border length) and analyse their type, that is characterise each pair of discrepancies

which can be observed in the borderline zones. This method of analysis allows the researchers to determine some details of the discrepancies in question (cf. Fig. 2).

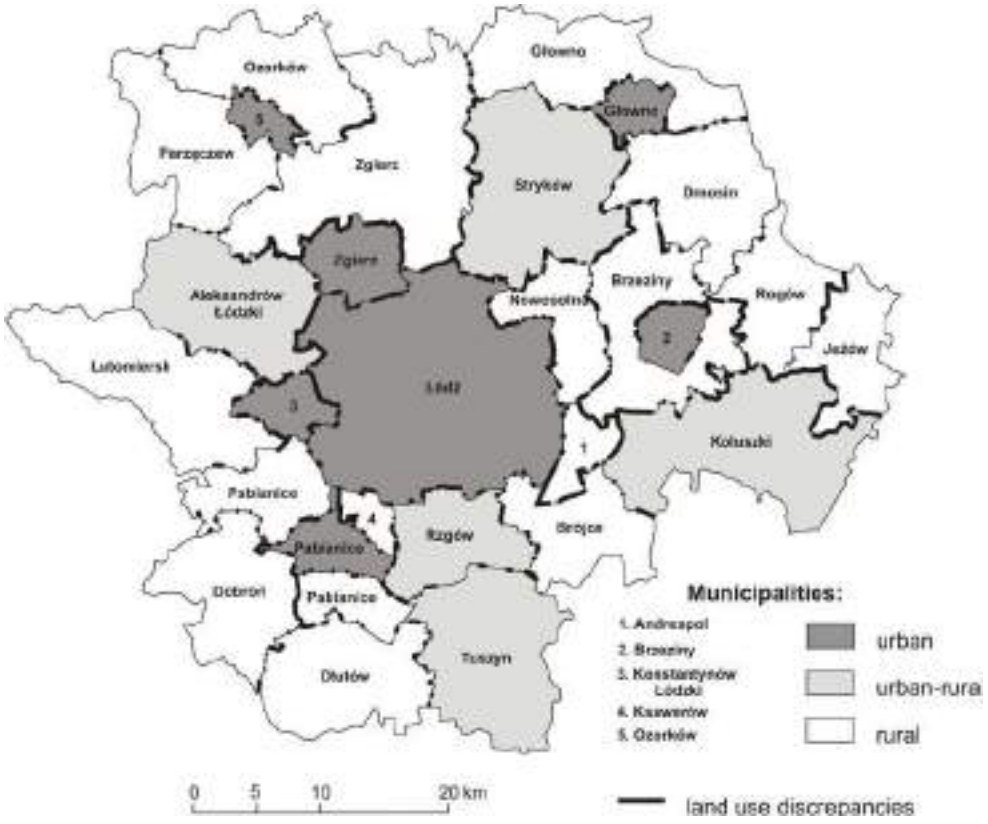

Figure 2. Identification of potential land use discrepancies in Lodz Metropolitan Area

The outcome of this part of the analysis is a map showing the outlines of the municipal borders subject to the analysis, highlighting the sections where discrepancies occur, and a table depicting the length and type of discrepancies for each borderline zone.

The next stage, based on identification of the discrepancies, is selecting the sections of the borders where conflicting development is intended. Conflicting development arises when following intended land uses occur on adjacent lands:

- residential areas – industrial areas;
- residential areas – nuisance service facilities (e.g. large-format stores, logistics terminals, etc.);
- residential areas – land of natural value subjected to legal protection;
- residential areas– nuisance properties (e.g. sewerage treatment plant, garbage dumping ground);
- industrial areas – land of natural value subjected to legal protection.

The selection is based on analysing all discrepancies and subjecting the selected areas to a detailed analysis. It consists of studying local spatial development plans, if any exist, then air photographs and topographic maps, in

order to exclude areas where the conflicts are a result of permanent development and the potential to change the situation within the existing spatial policy is limited.

The spatial conflicts identified in this way are then characterised in detail and form a basis for guidelines for local governments which outline the ways to eliminate the conflicts.

2. 3. Results

In the area of the authors' research, the subjects of analysis was the intended land use of 62 borderline zones of total length of over 600 km. Out of these, 52 types of sections characterised by discrepancies in the intended land use on either side of the border were identified. Their total length amounts to almost 330 km, which is 54% of the total length of municipality borders. Out of the 52 sections, 25 ones (total length of 165 km) which could cause potential conflicts were subject to a detailed analysis. These were adjacent residential areas and forest areas; residential areas and industrial, commercial and storage areas; multifunctional areas and open spaces; recreational areas and industrial, commercial and storage areas; residential areas and resource exploitation areas. Land uses indentified as not being potential sources of conflicts were adjacent additional afforestation and forest areas, forest areas and open areas, residential areas and cultivated green areas, industrial, commercial and storage areas and commercial areas.

In case of 14 borders, conflicting types of land use appear along over 70% of their length. Spatial correlations among the analysed conflicts are difficult to observe. They appear both in close vicinity to the central city, influenced by intensive urbanisation processes, and in rural areas, located in peripheries and consisting mostly of open spaces. However, it should be emphasised that most conflicts appear in borderline zones, where urbanisation processes are at their most dynamic (cf. Fig. 3 and Fig. 4).

During the course of a further detailed analysis, nine of the original 25 potentially conflict-provoking relations were identified as non-conflicting. These were holiday housing areas – sport, tourism and leisure (recreation) areas; single-family housing areas – multifunctional areas; open spaces – industrial and residential areas; open spaces – agricultural areas; open spaces – multifunctional areas, multi-family housing areas – commercial areas, holiday housing – industrial, commercial and storage areas, commercial areas – recreation areas, open spaces – special use areas.

Currently and, according to spatial planning documents, in the long-term perspective, spatial conflicts in Lodz Metropolitan Area appear along 44 km of municipal borders (almost 14% of the total analysed border length). Most of the identified 16 types of conflicts are connected to residential areas adjacent to forest areas or open space which are legally protected or planned to be placed under such protection. They make up respectively 28% and 15% of the length of potentially conflict-provoking borderline zones. These observations confirm the paradoxical effects of legal protection for areas of high natural value, which attract residential and holiday housing.

Along 10 km of borders, residential areas are located adjacent to industrial, commercial and storage areas (most of them are located in the borderline zones of municipalities situated the immediate vicinity of the central city). Borderline zones where residential areas are located adjacent to commercial areas, or holiday housing is situated next to forest areas, are scarce.

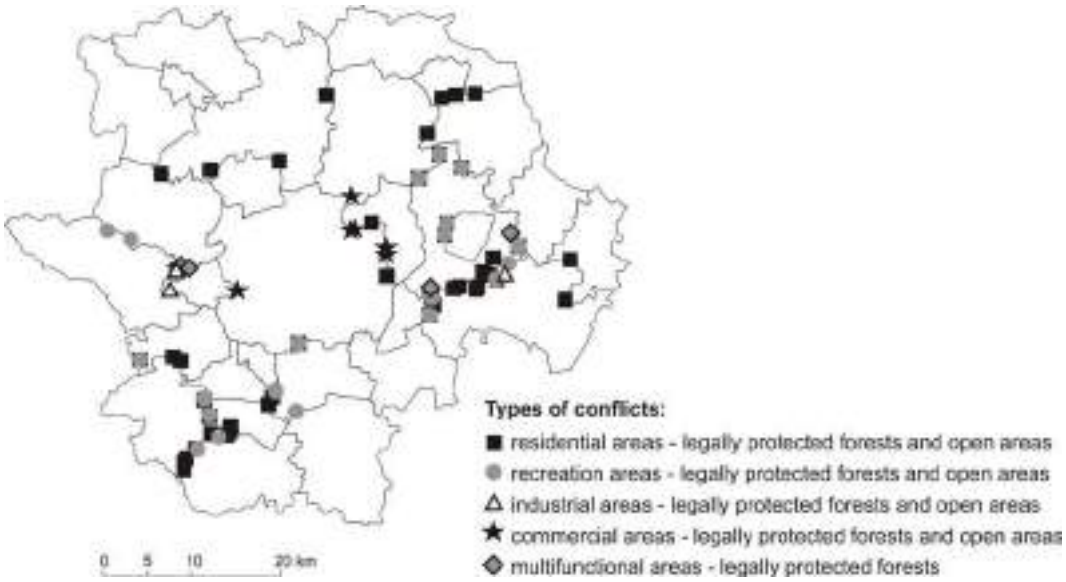

Figure 3. Potential land use conflicts concerning legally protected forests and open areas in Lodz Metropolitan Area

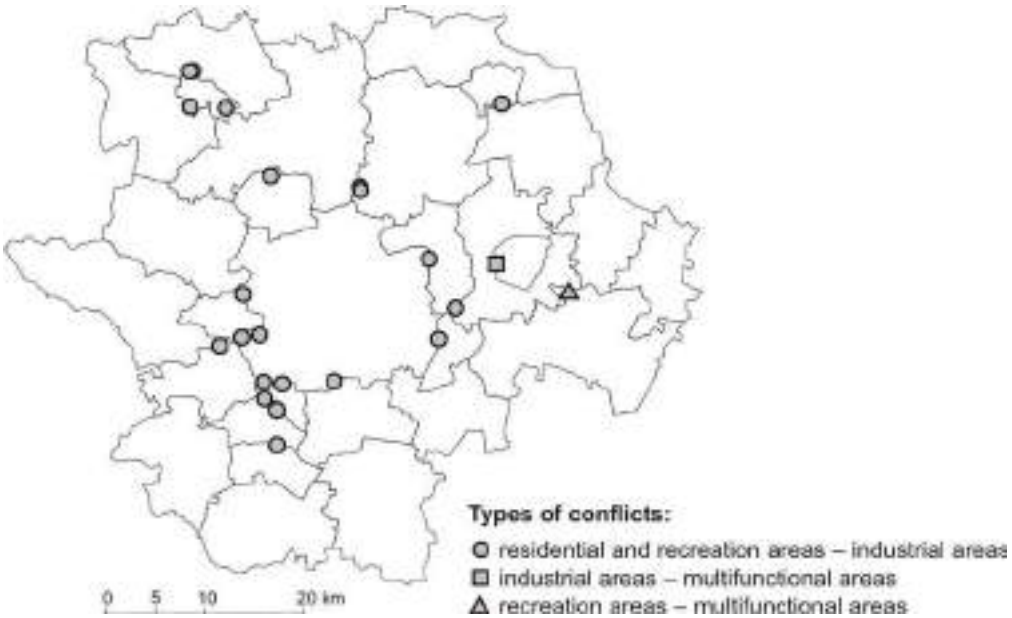

Figure 4. Potential land use conflicts concerning industrial and multifunctional areas in Lodz Metropolitan Area

Apart from the areas mentioned above, multifunctional areas located adjacent to residential areas, recreation areas, and industrial, commercial and storage areas were identified as potential sources of spatial conflicts. This results from the fact that multi-purpose designation is very imprecise and in fact does not specify the intended land use. Therefore, residential areas adjacent to industrial, commercial and storage areas, as well as commercial areas, were also described as potential sources of conflicts.

3. Conclusions and guidelines for spatial policy coordination in Lodz Metropolitan Area

Based on the analysis of locations which may create potential spatial conflicts, the following general directions for the municipalities included in Lodz Metropolitan Area could be proposed to eliminate problematic issues:

- Developing a local spatial development plan for borderline zones should be preceded by an in-depth analysis of the state of and guidelines for spatial development of the adjacent land. The decision-making authorities (resolution-passing and executive organs) should be made aware of the potential consequences of negligence in this field. Simultaneously, implementing legal instruments with more power over local governments is a solution worth considering, since the current legislation does not oblige local authorities to take into consideration motions pertaining to the *Study of conditions and directions of spatial development* or the opinion of neighbouring municipalities on the solutions accepted in the draft of the study.
- For selected sections of municipalities, specified in the S*tudy*, where the intended land use is a source of spatial conflict, the S*tudy* should be changed or provided with more details in the local spatial development plans, in a way which would decrease the negative impact on adjacent areas. A positive change would be introducing buffer zones (e.g. green belts) separating residential areas from industrial, commercial and storage ones. A model for a detailed spatial development plan is the local spatial development plan for a part of Koluszki municipality, where forest areas were delimited to separate recreation areas from multifunctional areas on the other side of the municipality border, which formed a part of a legally protected area.
- Ambiguous land designation, that is ‘multifunctional areas’, should be eliminated from spatial development documents due to its imprecision and the fact that it allows to introduce unwanted functions, which increase the municipalities’ profits but contribute to a permanent destruction of spatial order.

To sum up, in light of the research method used by the authors, territorial cohesion in Lodz Metropolitan Area was evaluated positively. The number and severity of identified spatial conflicts are low, making the spatial policy of the municipalities relatively easily tolerable for the adjacent ones. It should be appreciated that when providing additional details to the *Studies* in local spatial development plans, solutions compatible with the generally accepted rules of

spatial planning are used when conflicts arise. However, it is to be noted that Lodz and adjacent areas, contrary to Warsaw or Poznan metropolises, are not marked by dynamic socio-economic development when compared to other regions. Therefore, it may be assumed that the positive conclusions are a result of relatively little investor pressure instead of adequate planning tools and awareness on the part of decision-making authorities.

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THE GOLDEN HORN: HERITAGE INDUSTRY VS. INDUSTRIAL HERITAGE

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Abstract

The aim of the research is to evaluate the role and the impact of heritage industry in the revitalisation of the post-industrial spaces of Istanbul, with a case study on the Golden Horn as empirical evidence. The results of the research are related to the questions: What role the industrial heritage play in the revitalisation of historic environments? What are the ways to turn such industrial heritage into sources of social and economic development? What are the likely impacts on the local economy and local community? The conclusion gives an overview of the extent of the impacts that industrial heritage has on the Golden Horn, and in turn relates this back to the wider idea of heritage industry being promoted for the wider urban policy-making in Istanbul.

Keywords: Heritage industry; industrial heritage; Golden Horn; Istanbul.

1. Introduction

The revitalisation of former industrial areas has been one of the crucial tasks facing the urban policy agenda throughout the world since the mid-1970s; whereas the "heritage industry" has become the new orthodoxy in the shift from production to consumption as means for the restructuring and reimaging of post-industrial economies in the global order. The increasing tendency to link heritage and conservation with economic development has brought new meanings to cultural assets, the value of which has started to become related solely to the economic value it sustains or generates. In particular, the commodification and instrumentalisation of industrial heritage by the heritage industry has turned out to be the determining factor in the creation of "opportunity spaces" in post-industrial economies. At the same time, many academics are critical of attempts to reform post-industrial spaces of consumption with privatised spaces and commodified cultures.

Within this context, the aim of the paper is to evaluate the role and impact of the heritage industry in the revitalisation of the post-industrial spaces of Istanbul, with a case study on the Golden Horn industrial heritage as empirical evidence. The results of the research are related to questions regarding the role industrial heritage plays in the revitalisation of historic environments as well as ways to turn such industrial heritage into sources of social and economic development, and the likely impacts on the local economy and local community. Regarding these questions, the first two

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sections are devoted to the theoretical discussions to question the role of the instrumentalisation of industrial heritage in the revitalisation of post-industrial economies. The third section explores reflections of these theoretical discussions regarding the Golden Horn industrial heritage in relation to the Istanbul heritage industry. The conclusion gives an overview of the extent of the impacts that industrial heritage has on the Golden Horn, and in turn relates this back to the wider idea of heritage industry being promoted for the wider urban policy-making in Istanbul.

2. The Heritage Industry: Instrumentalisation of Cultural Heritage

In a world, where the value of a cultural asset depends on the economic value it generates, it is not surprising that heritage has become "the" industry itself. The revitalisation of former industrial areas has been one of the crucial tasks facing the urban policy agenda throughout the world since the mid-1970s; whereas the "heritage industry" has become the new orthodoxy in the shift from cultural production to consumption as means for the restructuring and reimaging of post-industrial economies in the global order. Since the mid-1970s, the industrialized world has experienced the effects of the deindustrialisation process through the restructuring of the global economy and its associated production and technology developments. While these deindustrialised areas have been turned into derelict and brownfield lands, communities have faced severe economic, social and spatial detoriation through the lack of economic development potential and reduced quality of life. The urban policies of the 1980s have put these derelict areas on the development agenda within the framework of socio-cultural and economic regeneration initiatives. In particular, deindustrialisation has given them the opportunity to attempt to reinvent themselves within a new role through the use of culture, and especially heritage, more broadly as part of place-marketing, the growing emphasis of which is stimulated by urban entrepreneurship, as well as urban competition.

The economic exploitation of heritage is not a new phenomenon, however the economic function has come more to the forefront in recent times as a result of the global urban agenda and economic imperatives in policy formulation. There is even an increasing amount of research that focuses on the necessity of evaluating cultural heritage as an instrument for economic development in response to the challenges brought by globalisation and neoliberalisation. According to Tiesdell et al. (1996), the rational economic and commercial choice starts with the desire to conserve historic landscapes. Similar to the governments' increasing focus on economic returns, the role of heritage in economic development has also become the primary policy agenda both for international and national conservation expert institutions (i.e., UNESCO, 2010; ICOMOS, 2011; English Heritage, 2005a; 2005b). The development of cultural sector as an industry has led to profound changes in urban policy through the utilisation of regeneration as a driving force to emphasize the role of heritage as an opportunity space. According to Hall (1998), cultural industries may provide the basis for economic regeneration; filling the gap left by vanished

factories and warehouses and creating a new image that would make them more attractive to mobile capital. The relationship between heritage and the rising tendency of heritage industry is well-defined by Rypkema (1992). According to him, conservation primarily involves buildings; historic buildings are real estate, and real estate is a commodity. For a commodity to attract investment capital, it must have an economic value; for an economic value, there is a need for scarcity, purchasing power, desire and utility. Thus, heritage has it all.

The growing articulation between heritage and industry is stimulated by a number of factors (OECD, 2009): First, there is an increased interest in culture, particularly as a source of identity and differentiation in the face of globalisation. Growing levels of cultural capital, stimulated by rising education levels, postmodern consumption styles, and increased mobility creates a high demand for culture. Secondly, the evidence for the economic contribution of culture reveals high supply potential which includes the development of cultural tourism to stimulate jobs and income, and which projects the external image of regions and nations. The OECD study (2009) on the economic importance of culture indicated that in several major economies, the value of the cultural industries is between 3% and 6% of the total economy. Similarly, WTO/ETC estimates that cultural tourism accounts for nearly 50% of international tourism (2005). In the USA, the surveys of cultural travellers indicate that 30% of domestic tourists are influenced in their choice of destination by a specific artistic, cultural or heritage event or activity. In Africa, Latin America and Asia, cultural tourism is often seen as a means of supporting heritage conservation as well as raising local incomes (Richards, 2007). In addition, the tourism industry is a sector that demands less costs in comparison to other industrial sectors (Urry, 1999). According to Urry, the cost of creating labour in tourism and leisure is only 1/8 of manufacturing. The heritage sector, which represents an important part of the cultural industries, provides jobs for 8.5 million people in the EU, and contributes 4.5% to Europe's GDP (OECD, 2009).

While culture has become the business of cities as evident from the figures above, one of the most important consequences of neoliberal policies on urban conservation is the transformation of cultural heritage into a "cultural product" with a marketing value under the name of cultural capital. In this way, it is possible to define the heritage industry as the management of historic environments and cultural heritage as consumption spaces that are rearranged and organised to promote consumption. The increasing tendency to link heritage and conservation with economic development has brought new meanings to cultural assets, the value of which has started to be related solely to the economic value it sustains or generates. According to Pendlebury (2009), there is a great tendency to perceive heritage as producing immediate and instrumental benefits, rather than conceptualizing it as important for its own sake. While cultural heritage has been turned into a concept that is related to present conditions as a result of interpretation of history, it also becomes an inseparable part of the global consumption models through the "packaging of history" (Walsh, 1992). This, according to Urry (1999), is the reconstruction of culture.

3. Reimaging Industrial Heritage as an Industry

> "*Holland in just one day!!: The Netherlands Open Air Museum uses authentic buildings, objects and true stories to bring the past to life. Come with us on a journey through the last two hundred years. The museum, with its farmyards, farmhouses, cottages and businesses, farmer's café and shops, is a hive of activity.*"

Industrial heritage is the witness of the industrialisation process of nations. It has affected and continues to affect all social, cultural, technological, and economic dynamics of life. It explains not only the past, but includes present and relates to the future (Alfrey and Putnam, 1992). As the material evidence of this industrial culture, it has become the new opportunity space in the revitalisation strategies of post-industrial economies by providing a unique chance of conversion in the shift of cities and countries from being centres of production to centres of consumption.

This significant role has been well documented by international conservation institutions. For example, 52 of the 936 UNESCO World Heritage areas listed in 2012 are industrial properties. The scope of industrial heritage consists of buildings and machinery, workshops, mills and factories, mines and sites for processing and refining, warehouses and stores, places where energy is generated, transmitted and used, transport and all its associated infrastructure, as well as places used for social activities related to industry such as housing, religious worship or education. According to the Nizhny Tagil Charter for Industrial Heritage (TICCIH, 2003), the values of industrial heritage consist of "universal values" as they are evidence of activities which had, and which continue to have, profound historical consequences; "social values" that provide an important sense of identity; "technological and scientific values" in the history of manufacturing, engineering, construction; "aesthetic values" for architectural quality, design or planning; "intrinsic values" contained in human memories and customs; and "rarity (scarcity)", in terms of the survival of particular processes, site typologies or landscapes. The fundamental that differentiates industrial heritage from other heritage is its nature, which is closely related to individual areas, as well as its social identity and history (Köksal and Ahunbay, 2006).

There has been not only an increased awareness of the importance of industrial history in understanding heritage in recent years, but also the growing tendency to use industrial heritage. This tendency has emphasised the importance of sustaining historic buildings and any remaining industrial uses, while attracting new investment and introducing high-quality new designs. There are important examples throughout the world that build conscience to restore and reuse existing industrial heritage stock in order to stimulate cultural and economic regeneration such as London Tate Modern Museum (former electric plant), Swansea National Waterfront Museum and Liverpool Merseyside Maritime Museum (former entrepots), Big Pit National Coal Museum in Blaenavon (former coal mine), Gar D'orsay in Paris (former train station), World Heritage Site Zollverein in Essen (former colliery and coking plant), Notthingham Lace Market and Birmingham Jewellery Quarter (former lace and jewellery manufacturing sites), Shanghai M52 (former warehouses) or Birmingham

Back to Backs (former worker lodgements).

The reason for this increasing interest in industrial heritage is that they are stated to be more interesting than regular office spaces (Zukin, 1989). According to Zukin (1989) their structure has both a solidity and a gracefulness that suggests a time when form still identified place rather than function. Moreover, the scarcity factor highlights the fact that the process of deindustrialisation after a process of rapid industrialisation has left many places that are in need of reuse; and the value of converted industrial buildings have held their value and remained saleable in depressed housing markets (Tiesdell et al., 1996). Reusing existing buildings is also a simple way of achieving sustainability by saving waste and reducing the need for new building materials (English Heritage, 2005b). Finally, there is the governmental desire that the heritage industry creates attraction zones not only for visitors but also for enterprises and workers. Industrial heritage may provide opportunity spaces to increase the competitive advantage of cities through the deployment of tourism investments and the branding of space. Even the industrial landscape is emphasized as a strategy to reclaim and validate a post-industrial site in order to turn it into a multifunctional landscape. For instance, UNESCO (2010) states that the Tate Modern is estimated to bring in revenues of over €125 million to London every year. The Birmingham Jewellery Quarter has introduced the role of industrial heritage as an instrument in local economic development. English Heritage (2005a) states that the Quarter has turned out to be one of the most important tourist nodes of Birmingham, creating 1500 businesses and 6000 jobs. In the Nottingham Lace Market, moreover, 80% of the 450 firms located there are still in the cultural production and consumption sector, while the property values have risen by 28%.

However, many academics are critical towards attempts to reform post-industrial spaces of consumption with privatised spaces and commodified cultures which focus on conservation and social consequences. The commodification and instrumentalisation of industrial heritage by the heritage industry, in particular, has turned out to be the determining factor in creating opportunity spaces in post-industrial areas. It has increasingly been threatened with the loss of its functional values due to technological, economical and social changes. The industrial heritage has even become too industrial. This is related to the debates on history versus heritage, which underlines the fundamentals of authenticity values (Alfrey and Putnam, 1992). The process, which started with the model of Disneyland, finds new arenas of use. Examples for the modification of heritage for heritage museums or parks include the change of the Manchester Castlefield Heritage Park, Netherlands Open-Air Museum in Arnhem, or Abu Dhabi Heritage Park. Today, the similar pattern is evident even in shopping malls such as Forum Shops of Ceasar's Palace in Las Vegas. Thus, heritage industry commodifies the past and its architecture into new forms, and stylizes historic areas through abstract and artificial forms. Unless industrial heritage can retain some of its original functions, its intrinsic qualities are lost. According to Lowenthal (1985), even conservation practice has turned into an artificial modification of the past, while ripping away the connection between the conserved and the past. Hewison (1987) emphasizes the examples like the Wigan

Pier Heritage Centre as the promotion of British rural life as a romanticized and exaggerated industrial past. According to him, the heritage industry is regarded as responsible for devaluing the cultural worth of cultural objects as they are repackaged for mass consumption. This is romanticisation and commodification of the past which shows itself in Laura Ashley shops, vintage clothing, façadism in urban centres, heritage parks and the souvenir industry. In particular, Urry (1999) states that if we are interested in history, we should protect it from the preservationists. Similarly, Ashworth and Tunbridge (2000) state that the more conservation, the less locally distinctive identities. Although culture and heritage-led approaches search for distinctiveness/uniqueness, standardisation is perceived, such as in the case of thematic parks, thematic housing projects, shopping malls, and archistar museums. Boyer (1996) states that the city as spectacle is a commodified location for consumption. On the other side of all these developments, the main problems of citizens are ignored, local cultures and identities become lost. For instance, the examples of the Lace Market and the Birmingham Jewellery Quarter, which are stated as good practice examples, are criticized for the fact that the attractiveness of physical buildings has contributed to higher value users wanting to colonise the area and displace the existing buildings. This has brought a threat of gentrification and even the loss of industrial heritage to the area (Pendlebury, 2009). With regard to the reuse of industrial heritage, it is therefore important to maintain the links that areas have with their own history.

4. The Golden Horn Industrial [Heritage] Industry

Industrial heritage has always played an important role in the revitalisation process of the Golden Horn. In the 19th century Ottoman Empire, Istanbul and its environs was the place where industrialisation was the most dense. Due to increasing foreign investment, labour and technology in particular, the number of industrial facilities increased after the 1850s. At the beginning of the 20th century, Istanbul had 55% of the total 256 industrial complexes of the Ottoman Empire (Köksal and Ahunbay, 2006). Among these, the Golden Horn has always had an importance by virtue of its being a major natural port for economic, cultural, social and military development. Since the Byzantine period, the Golden Horn has been surrounded by shipyards, merchant houses and warehouses. In the Ottoman and Republican periods, it became one of the major industrial zones, as was especially proven by the Prost Plan of 1936. The industrial development in the Golden Horn, which continued in the 1970s and early 1980s, had profound environmental and socio-economic effects on the surrounding neighbourhoods including the deterioration of the historical urban layout, water pollution and change in the social layout. The 1980s marked another turning point in the transformation of the Golden Horn into a heritage industry. Starting with the Golden Horn Waterfront Revitalisation Project in 1986, several interventions have taken place to clean-up this very valuable area to provide a global city image. These include the reclamation and the beautification of the shores of the Golden Horn and the clearance of industries under the leadership of Bedrettin Dalan - the first Mayor of the Greater Istanbul Municipality between 1984 and 1989. As a result, 600 small manufacturing establishments were evicted, and 30.000 buildings,

100 of which were historic examples which reflected the industrialisation of the Ottoman Empire, were demolished (Bezmez, 2008, p. 821). In the period starting from the mid-1990s, the Golden Horn has once more become the central focus for city governments in need of creating a world city image for Istanbul and increasing their competitive advantage in the new global order. This was the same period when the Golden Horn was declared a "cultural valley" by Ali Mufit Gurtuna, Mayor of the Greater Istanbul Municipality between 1999-2004. Considering culture as the growing value of global economy, the goal was to reintegrate the Golden Horn with the rest of the city by providing a new culture-led attraction zone to represent Istanbul globally. The role of the Golden Horn as a culture-led attraction zone was once more mentioned in the 1/100.000 Scale Istanbul Environmental Master Plan (2009) and the Istanbul Strategic Plan 2010-2014 (2010).

The Golden Horn Cultural Valley Project plays an important role in the turning of industrial heritage into sources of social and economic development. It has different dimensions including the conservation of historical waterfront neighbourhoods, the transformation and refunctioning of historic industrial facilities, and the utilisation of cultural amenities and landscape design. This paper especially focuses on the transformation and refunctioning of industrial heritage.

The number of industrial facilities in Istanbul, which was 256 in the 19th century, decreased to 43 (Köksal and Ahunbay, 2006). Today, 15 of the remaining 43 industrial complexes are in the Golden Horn (see Fig. 1). Three of these are now used as museum complexes (Şirket-i Hayriye and Lengerhane / Rahmi Koc Industrial Museum, Silahtaraga Electric Plant / Santral Istanbul Energy Museum), three as congress and exhibition centres (Feshane Textile Factory / Feshane Exhibition Centre, Tophane-i Amire: Imperial Armory / Mimar Sinan Fine Arts University Exhibition Centre, Darphane-i Amire: Imperial Mint and Printing Office / Exhibition Centre), and one is now used as a university campus (Cibali Tobacco Factory / Kadir Has University). Silataraga Electric Plant is also accomodated by Istanbul Bilgi University. The Golden Horn Dockyards (Tersane-i Amire) are still in their original usage, which makes them the oldest dockyards still operating. On one hand, adaptation and re-use is an appropriate and a cost-effective way of ensuring the survival of industrial heritage; on the other hand, the use of original patterns and the utilization of new uses that respect the historical identity of industrial heritage contributes to the sustainability of the industrial heritage of the Golden Horn.

In economic terms, the transformation and refunctioning of historical industrial facilities has resulted in increasing economic vitality, especially by means of new retail investments and land and real estate prices (Günay and Dökmeci, 2012). In Sütlüce, where the Sütlüce Congress Hall is located, the abandoned sites have started to be transformed into offices along with new real-estate investment projects including shopping malls and hotels such as the Arçelik Company Headquarters, the Enyapı Shopping Centre, the Hilton Garden Hill, and large-scale housing projects such as the Polisan Residence, the AG Plaza and waterside residences. In particular, the location choice of the Hilton Garden Hill, as the first luxury hotel investment, is

very important for the future envisioning of the Golden Horn. Many domestic and foreign business groups such as Koç Holding, Demirören and Ulusoy are also attempting to purchase the remaining land in the area (Hürriyet, 2010). Considering the land market values declared in the official websites of the Beyoğlu, Fatih and Eyüp Municipalities, it may be seen that the value per square metre in Karaağaç Street reached €1560 in 2011 (it was €140 in 2009 and €85 in 2004). The value per square metre in the residential areas toward the slope of the hill has increased to €570 in 2011 from €35 in 2009. In commercial areas, the prices begin at €4600 per square metre. A similar increase in the land values can be seen in the areas surrounding Kadir Has University and the Rahmi Koc Industrial Museum. In the Halıcıoğlu neighbourhood of the Rahmi Koç Industrial Museum, for instance, the price per square metre of residential area land is between €640 - €1560, while it was between €35 - €65 in 2005. This has also had an effect on the spread of arts and museum facilities along the Hasköy manufacturing zones in the environs of the Rahmi Koc Industrial Museum. While the number of visitors to the Rahmi Koc Industrial Museum reached 134,000, the Feshane Exhibition Centre receives 2 million visitors per year (Günay and Dökmeci, 2012).

Figure 1. Industrial Heritage of the Golden Horn

Figure 2. Adaptive Reuse: Rahmi Koc Industrial Museum (above); Santral Istanbul (below) (Source: Z. Günay)

Figure 3. Sutluce Slaughterhouse, after reconstruction (Source: Z. Günay)

Figure 4. Halic Dockyards (Source: Z. Günay)

Despite these economic impacts, the likely impacts on the industrial heritage and community are still under question. The most important reason for this is the fact that the Golden Horn Cultural Valley Project has not been integrated into policies for economic development or into regional planning. Moreover, there has been no comprehensive strategy for the conservation of industrial heritage. The interventions have had tendencies to compromise historical integrity or the authenticity of industrial heritage such as in the Sütlüce Slaughterhouse case. Once defined as "the gigantic ghost" (Radikal, 2002), it was demolished and reconstructed as a congress hall by the Municipality (Fig. 3). Recently, the proposals on the replacement and refunctioning of Tersane-i Amire (Fig. 4) as a privatised tourism facility have raised serious debates (Birgün, 2008). Moreover, there are still a considerable number of industrial sites to be registered and utilized such as the Kasımpaşa Flour Factory, the Cendere Pump Station or the Unkapanı Flour Factory. This shows the importance of private sector incentives in the conservation of industrial heritage, contrary to the general norms when the state is the primary enabler of conservation. In the Golden Horn case, the private sector has been able to refunction these industrial complexes by respecting their original uses, contrary to the incentives promoted by the Municipality such as the demolition of the Sütlüce Slaughterhouse.

Regarding the socio-economic consequences, one of the criticisms focuses on the fact that economic vitality is limited to specific locations. This is also related to the provision of the functional integrity of industrial heritage to the wider surrounding. For example, the opening of Kadir Has University has resulted in new functions being made available for utilization by new potential customers. The increasing number of students and visitors has increased the overall safety of the region and has encouraged further arrangements regarding transportation links in the Golden Horn. However, the local retailers complain that the closed structure of the university limits expenditures. However, the privatisation of public spaces, such as in the case of the Rahmi Koc Industrial Museum or Kadir Has University, has prevented public use and public service. These even include the changing of the name and the closing of the street in front of the University. In addition to public spaces, the emphasis on building the infrastructure for attracting visitors such as convention centres, prestige hotels or thematic parks results in the transformation of residential areas into business districts and the isolation of the community. Considering cultural participation, most of the visitors are outsiders and the accessibility of the community is limited to participating in cultural activities in their neighbourhoods.

5. Conclusion: Heritage Industry vs. Industrial Heritage

The fundamental that differentiates industrial heritage from other types is the fact that it is about communities own lives, identities and histories. This makes industrial heritage an issue of social phenomenon along with its potential to be a catalyst for further cultural and economic development. The research has demonstrated that there have been important investments during the previous decades to encourage the transformation and re-functioning of industrial heritage in the world, including Istanbul. However, this growing interest could not prevent industrial heritage from

becoming deteriorated. While the general tendency is to demonstrate history "in just one day", there is still a misunderstanding of the value of industrial heritage, and the lack of community conscience. The research shows that the Golden Horn projects run the risk of commodification of industrial culture and heritage; although they have played a vital role not only in improving the image of the Golden Horn, but also in being part of the branding of Istanbul. The solution is more to do with the conservation of the "industrial landscape" through the preservation of the "spirit of place", as ICOMOS (2008) states. This necessitates programmes for the conservation of the industrial heritage to be integrated into planning processes and into policies for socio-economic development; the preservation of historical integrity and authenticity and the utilization of adaptive re-use and preservation of functional integrity by creating links between areas to their own history.

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THE VISUAL LANGUAGE OF STRATEGIC SPATIAL PLANNING: HOW IT WORKS IN DIFFERENT PLANNING CONTEXTS

B. Gedikli[1]

I. Introduction

Visualization is a key concept for spatial planners since, after all, the very discipline is about territories[2]. Although a variety of media can be applied for visualization – such as 3D images, sketches, diagrams— the most suitable medium seems to be maps for the representation and visualization of territories.

Maps are powerful tools in that they can lead to consensus or conflict. The so-called consensus or conflict can be attributed to what maps represent: A map is *"...a cumulation of choices made among choices every one of which reveals a value"* (Wood 1993 cited in Jensen and Richardson 2003). Map-making, according to Jesen and Richardson, involves activities of selection, omission, simplification, classification, creation of hierarchies and symbolization. Their point can be linked to plan-making --as it also involves the very same activities--: The visual language of plans[3], too, can lead to consensus or contradictions among the relevant parties, namely central government; local government; property owners; land developers; professionals related to planning, design, conservation, engineering and the like. This implies the necessity of well-developed cartographic representation so as to transmit the very ideas of the plans as intended, and avoid conflicts.

Plans at city, metropolitan or regional scales are strategic ones. They aim at showing the general spatial organization for territories. Hence, they are *intentionally* selective (Mazza 2010, Friedmann 2005); i.e. their scope is limited to key issues, which decisively pave the way for further lower scale plans.

This paper aims at exploring the visual language of strategic spatial plans. In the face of the rapid changes that cities have had to tackle since the 1980s --thanks to ever globalizing socio-economic relations--, planning community has assumed that cities can attain a desired future state only through more flexible plans; i.e. strategic spatial plans. These plans, as mentioned above, simply and purposefully general, selective and comprehensive; implying a different way of representing the space than the

[1] Middle East Technical University, Ankara- gedikli@metu.edu.tr
[2] This study uses the terms territory, city, space, urban, etc. in place of one another.
[3] Obviously, contradictions or consensus on plans do not simply refer to the visual language selected; yet, the scope of this paper is limited to that.

traditional land-use plans. The study first portrays the intention of strategic plan-making and how this intention is represented visually through examples from different planning systems; and then elaborates its interpretation in the Turkish context.

II. Representation in Strategic Spatial Plans

Visualization of the territory is an inseparable component of spatial planning. Dühr (2003) mentions that images are used to either directly express the intention of an urban policy and/or support the policy. Kunzmann (1996 cited in Dühr 2003) suggests that visualized spatial presentation, despite its vagueness, can reduce complexity to a great extent.

Mazza identifies three typical characteristics of strategic spatial plans: **Generality, selectivity** and **comprehensiveness**: The strategic plan has to be **general**, because its frame has to be both precise and flexible at the very same time. The stability and durability of strategies should be secured in a way to provide a certain framework for the investors. Concurrently, they should allow margins for maneuvering (or flexibility) for the realization of policies and projects in the face of changing conditions. The plan should be simple in order to keep its strength over time, be easily understood and communicative. Meanwhile, the strategic plan should be **selective**. It should not face all the phenomena related to urban development; but should stabilize the priorities in time and space, and select a few primary spatial problems. Finally, the strategic plan should be **comprehensive** in a way to bring the solutions and selected problems together in a spatio-temporal framework. This framework should allow the assessment of opportunities and constraints, advantages and disadvantages (Assessorato allo Sviluppo del territorio, Comune di Milano, 2000).

Salet and Faludi (1999) talk about the "revival" of the strategic spatial planning rather than the birth of it. It is because the strategic approach in plan-making had already been experienced during the establishment of the welfare state after the Second World War and in the 1960s. How the contemporary strategic planning differentiates from the one experienced in those years lies in its **policy agendas** and **institutional relations**: Vis-a-vis the rapidly changing socio-economic conditions and the accompanying sustainable development discourse, the present policy agendas of strategic planning oscillate between two poles; namely competitiveness agenda and environmental agenda (Albrechts 2003). A multiplicity of aims, directly or indirectly related to spatial development, take place in between these two poles (Figure 1).

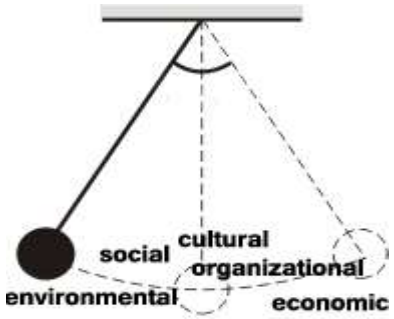

Figure 1-Multiple Aims of Strategic Spatial Planning

Under the impact of the global mode of capital accumulation, the aims of strategic spatial planning practices of the last two decades seem to go beyond physical development; including improvment of competitiveness capacity of localities while providing urban sustainability. These two new agendas have led to a new visual language for spatial planning which go beyond mere coloring of different land-uses.

I.1. A Metaphoric Imagery

Many practical cases around the world reveal that the generality, selectivity and comprehensiveness features of strategic plans are often associated with metaphoric visualizations. These metaphoric images are believed to increase the power of the spatial strategy. Dühr (2003) states the metaphor of "Blue Banana", representing a developed area from the south-east of England to the north of Italy (Figure 2). She notes it as a successful one in raising awareness and understanding about complex spatial development trends.

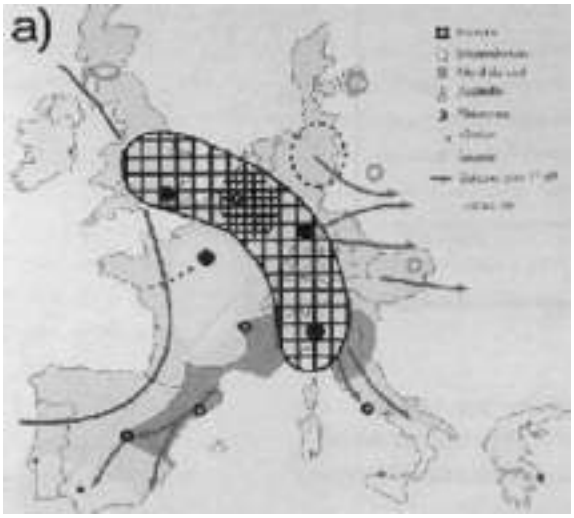

Figure 2- Blue Banana
(Dühr 2003)

Likewise, the metaphor of "Reversed T" (T rovesciata) in the Strategic Plan of Milan represents a spatial strategy based on a reversed T-shaped transport corridors (Figure

3). The "Reverse T" connects Milan's three airports; Malpensa, Linate and Orio al Serio. Part of the strategy is to locate private and public investment in these axes to improve the public infrastructure and transform the surrounding areas. These axes also aim at linking new developments in the periphery with the city centre, providing more green areas, improved services and accessibility across the City, and producing new alliances with the stakeholders across the urban area (Mazza 2007). Another example is that of Lyon's Schema Directeur: The territories in Lyon are represented by the petals of a flower including the centre. The petals show a balance between the different territories of the urban area (Figure 4).

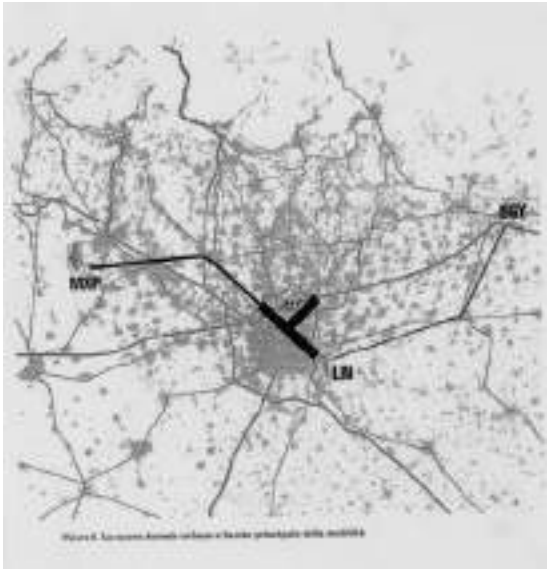

Figure 3- Reversed T
(The Framework Document of Milan)

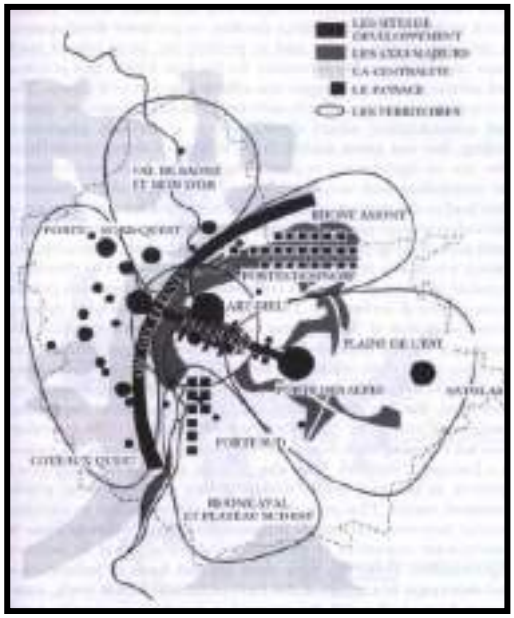

Figure 4- Five Petals
(Le Schéma directeur de l'agglomération Lyonnaise approved in 1992)

Many people, even without reading the plan reports, can capture the visions, core values and spatial relations which are embedded within such metaphors. They carry powerful messages about the organization of space within a certain locality (Jensen and Richardon 2003). Planning systems in many European countries, under the impact of the EU's common spatial development agenda[4], increasingly apply metaphoric imagery in strategic spatial plans.

Use of metaphors are often applied for strategic projects that are supposed to create brand new images for cities. The waterfront design competition held for Doha Waterfront guides to the competitors with the idea of "Three Corniches"; a metaphoric image for the waterfront development strategy (Figure 5).

[4] The efforts towards a European scale spatial policy in the EU promote the use of metaphors in spatial planning, since they describe the spatial structure of Europe in a way to be easily understood.

Figure 5- Doha Corniche
(Design Brief for Doha Corniche, 2003)

The metaphoric language, in fact, improves the communicative capacity of the strategic plan: It is through the metaphors that the major concern of the plan is transmitted to decision-makers, investors and general public. The use of metaphors comply with the generality, selectivity and comrehensiveness principles of the strategic spatial plan. A metaphor reflects the general idea of spatial development; it is selective only focusing on certain issues; and it is comprehensive in that problems/potentials of the territory can be grasped within it. Obviously, metaphoric imagery is not an obligation in strategic plan-making. However, practical cases prove that they are very powerful instruments to transmit the aims of a plan to interested parties.

II.2. Use of Logos and Slogans

Likewise the metaphoric representation of space through catchy images, use of logos with sloganlike statements is also common in strategic spatial plan-making. As extensively discussed in the planning literature (eg. Harvey 1989, Brenner 1999, Hall and Hubbard 1996, Gordon 1999, Williams 2000, Vanolo 2008, Zimmerman 2008), one major impact of globalizing socio-economic relationships is the rise of interurban competition. Localities compete with one another in order to attract the globally wandering capital (Şengül 2003). The logos accompanied with slogans are supposed to disseminate "how the city should be perceived" as proposed in the strategic plan. Figure 6 shows the logo of the Strategic Plan of the Bologna Province, which is in fact an abstraction of the strategic plan itself.

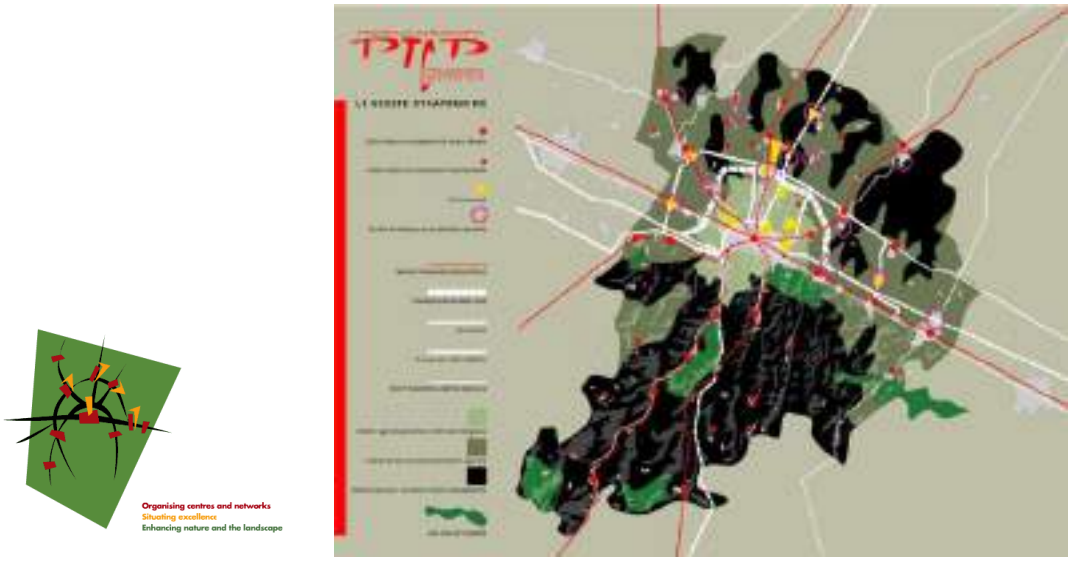

Figure 6- The logo for the Bologna Province Strategic Plan (left) is an abstraction of the plan itself (right). (URL: www.provincia.bologna.it)

Figure 7 and 8 show the logos for the strategic plans of Rio de Janerio and La Spezia. Both logos are accompanied by slogans; "Rio forever Rio" and "Verso la citta nuove" (Towards a new city), which are easy to remember by the general public.

Figure 7-The Logo for the Strategic Plan of Rio de Janerio
(The Strategic Plan of Rio de Janeiro 1996)

Figure 8-The Logo for the Strategic Plan of La Spezia
(The Strategic Plan of La Spezia 2011-http://pianostrategico.spezianet.it/Documenti/visioni_ottobre_2001.pdf)

II.3. Representation of Strategy

The second step, after the metaphoric imagery, is the representation of the spatial strategies on maps. It should be noted that some plans demonstrate both the metaphor and strategies on the very same scheme, while some others show them in successive schemes. As mentioned before, the strategic spatial plan --while providing a definite framework—should be flexible enough in the face of the rapidly changing socio-spatial conditions. Salet and Faludi (1999) makes an analogy between the "territorial space" and "war space": The role of strategy in a military plan is to never lose sight

of the final objective despite the ever-changing conditions of the battlefield. The troops have to adopt to the changing conditions, but should not leave the main strategies of military action. Similary, a territorial strategic plan has definite strategies, which are flexible enough to respond and adopt to the changing socio-spatial conditions without losing sight of the desired future goal; namely the **vision**.

What does the strategic plan aim at with the strategies it possesses? A strategic plan basically demonstrates **1) no-go areas** (natural and archaeological heritage sites, valuable agricultural land, immediate coastal areas, etc. are under this group), **2) areas for development** (obviously the way and degree of development are differentiated in different areas) **3) major hubs and corridors** (showing the interflows among territories). The strategic plan, with its vision and strategies, guides the preparation of lower-scale land-use plans (with precise forms, widths, heights, densities, and coordinates of land-uses). In other words, it is not an alternative to the land-use plan; rather, it provides a framework for the preparation of land-use plans.

As it is not the alternative of the land-use plan, the strategic plan should have a language of its own. Examples around the world show that the three strategic groups mentioned above mostly represented via symbols, icons, signs, geometric forms (triangles, circles, etc.), lines with arrows. The illustration does not have to fit the geographic space, some significant functions can be exaggeratedly drawn. Within the EU countries, there are attempts towards developing some iconographies to represent common spatial policies; eg. Figure 9 shows the polycentric and balanced development of European territories, while Figure 10 represents the policy of urban-rural partnership (European Commission 1999).

Figure 9-Polycentric and balanced urban development

Figure 10-Urban-Rural Partnership

Obviously, there are national differences in the application of iconographic language, because of cultural differences and long-established planning traditions (Dühr 2003). Still, as the below examples indicate, it is possible to talk about a common tendency towards the use of this style.

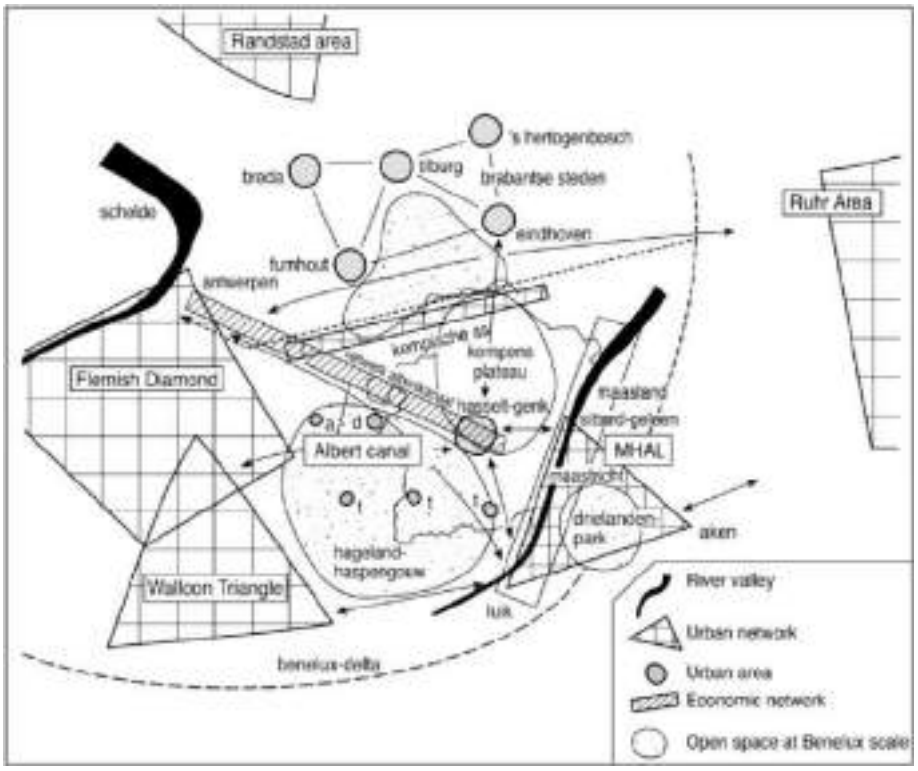

Figure 11-"Flemish Diamond"
(Albrechts and Lievois 2007)

Figure 11 illustrates the application of the "diamond" metaphor in spatial planning. The plan adopts a simple iconography to demonstrate the spatial strategies, which are supposed to have strong impacts on territories like creating economic networks, urban networks, etc. The legend items imply the two basic agendas of the current era: Both economic and environmental aims are strongly included in the aims of strategic spatial planning of the Flemish Diamond.

Two other recents example are that of Northern Ireland (Figure 12) and London (Figure 13). Likewise the above example, their strategic plans show important hubs and corridors, protection and development areas with reference to specific locations. The legend of the London plan also includes some policy issues in parantheses, which can be referred for detailed explanations of illustrations.

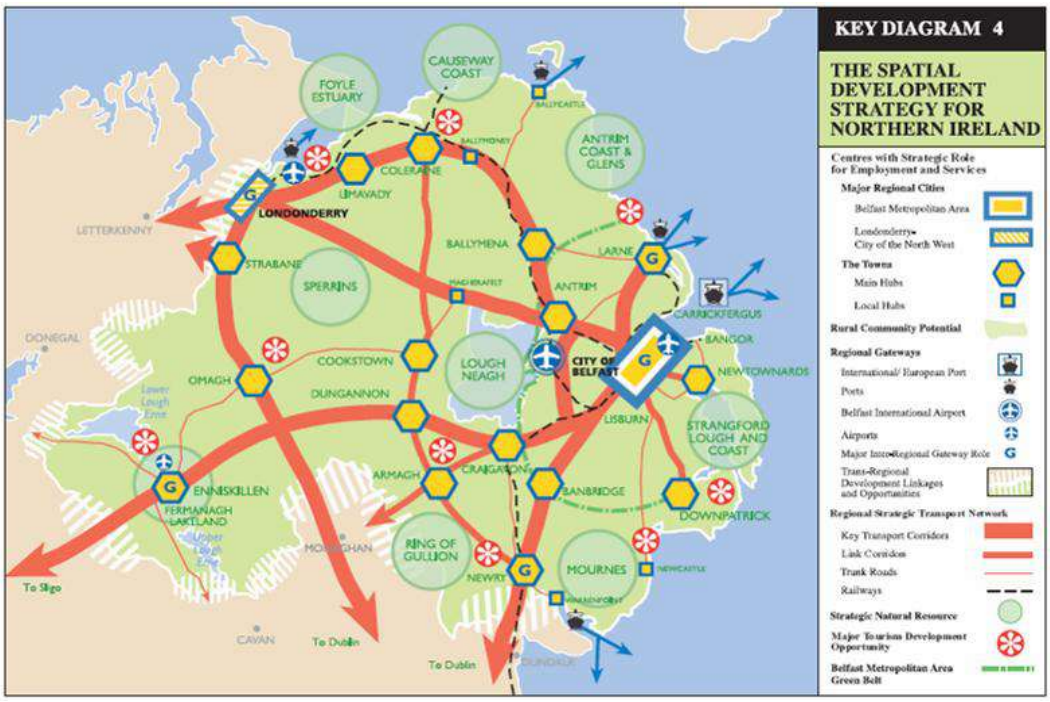

Figure 12-Northern Ireland's Spatial Development Strategy
(Shaping Our Future-
URL: http://www.drdni.gov.uk/rds_adjustments.pdf)

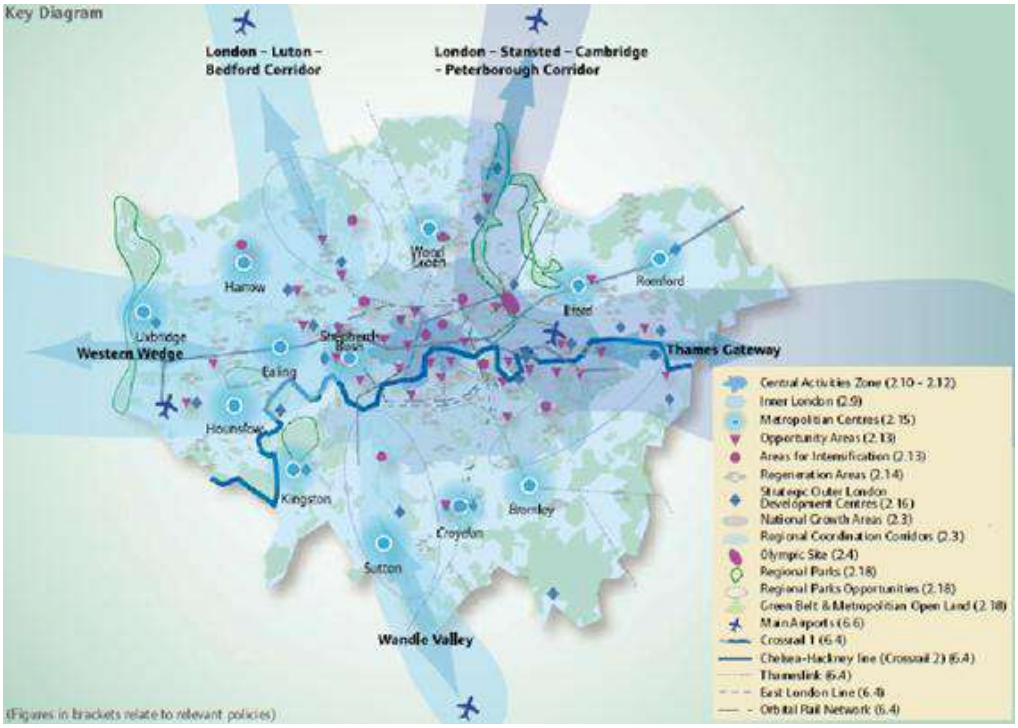

Figure 13-London's Spatial Strategy
(The London Plan-
URL: http://www.london.gov.uk/sites/default/files/The%20London%20Plan%202011.pdf)

The examples above show the general spatial strategy in a selective way. Actually their very language also proves why they cannot be the alternatives of land-use or urban design plans. They do not indicate any spatial form, any coordinates, any code for urban development. With the simple iconographic language they have, what they do is to guide the lower scale plans.

III. Strategic Planning in the Turkish Context

Until the beginning of the 2000s, strategic plan-making did not take place in the Turkish planning legislation. Therefore, there was not a nation-wide recognition of this approach, except for the attempts of a few local governments. It was in the early 2000s that the strategic planning has been declared in national official documents and legislation. In 2004, a series of laws were enacted related to public administrations, obliging them (including local governments) to prepare strategic plans and performance-based budgeting with reference to the plans (Gedikli 2009).

This paper is not to elaborate the above-mentioned strategic plans, since they may or may not be related to the spatial development; therefore may or may not have physical schemes with them. Another plan type in the Turkish planning hierarchy – the subregional land-use plan[5]-- is intended to carry the message of a strategic spatial plan as described in literature. Over 15 years ago, this plan type was introduced between regional and urban development plans within the spatial planning hierarchy. The authority for preparing it changed hands several times; now belongs to the Ministry of Environment and Urbanism.

The new law on Provincial Special Administrations (2005) introduced a new type of Subregional Land-Use Plan – namely the Provincial Land-Use Plan[6], without a clear explanation of its content and scale, therefore conflicting with the existing Subregional Land-Use Plans (Ersoy, 2006). The Urban Development Law defines the "subregional land-use plan" as *"the plan that determines housing, industry, agriculture, tourism, transportation, etc with respect to national and regional planning decisions".* It is problematic that it does not tell anything for heritage conservation, and leaves its consideration to regulations. Moreover, the multiplicity of upper level plans (subregional, provincial land use plans not much differentiating from one another) leads contradictions and inefficiencies in practice.

Leaving the authority conflict aside, the visual language adopted in subregional plan-making also leads to confusions. These plans are prepared at the scales of 1/100000, 1/50000 and 1/25000, i.e. they are upper level structure plans. Examining the plans, they (maybe not all) seem to adopt some new legend items in line with the contemporary strategic spatial planning practices around the world; eg. *"special project area", "innovative industrial zone", "R&D area", "ecologic impact boundary"*. Moreover, they do comprise symbols for some functions, perhaps not as

[5] Çevre Düzeni Planı
[6] İl Çevre Düzeni Planı

strong or exaggerated geometric images, therefore not holding a strong visual message.

However, most of them are still prepared with the logic of comprehensive land use plans, covering everything related to the territory under concern. Because of the language they adopt, general public tend to comprehend them as physical land use plans with accurate coordinates and forms; and plans can occasionally be the subject matter of court cases.

A plan at the mentioned scales can only be a *structure (or strategic) plan* guiding to urban development plans. Although the related legislation mentions the guidance role of subregional land-use plans, they are drawn with a visual language not much differentiated than that of urban development plans, which, first of all, causes conflicts in practice; and second of all, creates a chaotic situation in the planning hierarchy.

Although the present paper points out the obstacles related to representation of space in upper level plans, it does not propose an immediate modification of the existing visual language. If the visual language problem of these plans is not handled together with a review of the language of urban development plans, the problem will remain, even get worse. Therefore, a careful review and revision of their language, too, should go together, so that they could adequately interpret the decisions of strategic plans at settlement scales.

IV. Conclusion

Map making (or plan making as the subject matter of this study), as Jesen and Richardson (2003) mention, is about *selection, omission, simplification, classification and symbolization*. They can lead to consensus or conflict. This implies the necessity of well-developed cartographic representation so as to transmit the ideas of the plans as intended, and avoid conflicts.

This study has focused on the strategic plan-making, which has become widespread in the face of the ever globalizing socio-economic relations. These plans, prepared as general, selective and comprehensive ones, adopt a different visual language than that of the traditional land-use plans.

Strategic spatial plans are in fact upper scale structure plans, aiming at demonstrating the general spatial strategy in a strong way. Many recent strategic planning examples reveal the increasing use of metaphors, logos and catchwords in order to raise awareness about complex spatial issues. Meanwhile, since they are not alternatives to physical land use plans, practical examples show a variety of iconographic language adopted in strategic plan making. Obviously the iconographic languages adopted change from one planning system to another due to cultural differences.

Upper level plans have been comprised in the Turkish planning system, too, with the name "subregional land-use plans" and "provincial land use plans". They are supposed to guide to the preparation of lower scale land use plans. Nevertheless, they seem to adopt a very similar language to that of urban development plans. Moreover, they do not seem to carry powerful and creative spatial messages that would highlight the distinctive qualities of settlements. This is not to say that the role of strategic planning is simply to improve the competitive capacity of territories va highlighting their distinctive features. Rather, an emphasis on the distinctive qualities and combining them in a strongly constructed spatial image give the territory *a direction for future*.

This study does not indicate the foreign examples as benchmarks to adopt in the Turkish context; nor proposes an immediate modification of the existing visual language in upper level plan making. The cultural specifities, as mentioned before, should show themselves in different planning systems. Moreover, the visual language problem of these plans should be handled together with a review of the language of urban development plans. Clearly, this would be a careful and collaborative work of many relevant institutions, also involving other topics of plan making.

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Collective Housing and How It Effects Contemporary Planning – Learning From the Danish Bofælleskaber From a Complexity Perspective

Abstract for AESOP 26th Annual Congress, Ankara 11-15 July 2012

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Track:

11 – Housing, regeneration and community development

Key words:

Co-housing, Self-organization, Actor-networks, Planning Strategies

Abstract

In the light of current emergence and promotion of collective private commissioning for housing (co-housing) in the Netherlands, this paper explores the encounters such civic initiatives have with spatial planning practice. Co-housing is a challenge for conventional planning practices since it moves beyond the well-know concept of (governmental-led) participatory planning, and side-lines conventional public-private partnerships. Instead, planners are confronted with the capriciousness and diversity of civil actor-groups, and civic groups are challenged by a rigour planning system – both of them working within their own logic. In order to study how co-housing initiatives and practices of spatial planning interrelate and effect each other, three recent planning experiences in the establishment of 'Bofælleskaber' in Denmark are explored. The comparison between Denmark and the Netherlands is made because both countries have similar planning systems, while communal housing is such a strong(er) cultural element in Danish society. Defining the actor groups initiating co-housing schemes as 'self-organized' (the emergence of new structure out of fairly unstructured beginnings), (*Cilliers 1989*) and the process towards realisation of their projects as 'translation towards actor-networks' (*Callon 1986, Latour 2005*), brings together elements from both actor-network theory and complexity theory into one analytical framework. Using this analytical approach, the trajectories the initiatives took towards realization are studied, with an emphasize on how they engage in planning and what controversies and associations arise from these interactions. This framework not so much focusses on the mergence of perspectives into a coherent whole, but rather on the multiple trajectories that run through a process of establishing a co-housing initiative. (*cf. Massey 2005, Hillier 2007*). From these cases, lessons can be learned how planning systems can be made more adaptive to self-organization by community-based networks.

1. Dutch Housing: moving towards private commissioning

Since the 1990s already, the role of citizens as commissioner for the development of housing in the Netherlands is a subject of debate. Coming from a post-war tradition of large-scale reconstruction and urban lay outs, with its last episode the construction of the VINEX-neighborhoods in the 1990s, the Netherlands has been known and celebrated for its efficient, large-scale and institutionalized building sector. However, this practice is also criticized for the strong uniformity in the Dutch housing stock it caused, turning the Dutch citizen into a dependent consumer of houses, and reducing the once common practice of private commissioning into nothing more than a niche of the Dutch housing market. (SEV 2010). Subsequent interventions from national governments through resolutions (such as the Resolutions Duivesteijn in 1998 and 2000) and policy documents (such as the Memorandum Mensen, Wensen, Wonen in 2000), subsidies provided by regional and local governments, and the execution of numerous experiments with different forms of private commissioning (such as by the SEV – the Housing Experiments Steering Group) have attempted to bring the Dutch resident back on the stage of commissioning. Figures on commissioning, kept by the Central Statistical Office of the Netherlands (CBS) however show, that over the last thirteen years (1998-2011) there has not been any increase – on the contrary: rather a decrease of private commissioning (see figure 1). In 2006, the Housing Experiments Group (SEV) explained this lagging behind by some of the barriers they encountered while executing experiments with private commissioning: the Dutch building customs and (planning) regulations, leading to high (financial) risks and extensive planning processes. Their recommendations in order to further stimulate private commissioning were: 1) to designate land in the land use plan as intended for private commissioning, 2) to establish a pre-funding-scheme for private commissioners in order to reduce financial risks and 3) a 'knowledge campaign'. (SEV 2006).

Recent figures on commissioning – up to 2011 – however still show no significant increase. Although the financial crisis has led to quite a downfall of overall housing production (82.932 houses were realized in 2009, compared to 57.703 in 2011, a decrease of 30%), and a slow retreat of commercial developers, this has not been compensated or replaced by more private commissioning. That this might change in the near future, is argued in a final evaluation of the experiments executed by the SEV in 2010. Chances for private commissioning are seen in a more relaxed land- and housing market, a demand for more sustainable and social forms of living and a less task-setting, more facilitative government. The recommendations coming from this final evaluation are: 1) reconsider the distribution of risks – both financially and institutionally, 2) less regulatory frameworks and 3) more reasoning from the perspective and interest of self-organized initiatives for collective private commissioning. This latter aspect was also recently advocated by Adri Duivesteijn in the leading debate TV-show 'Buitenhof' (dated 02/26/2012). Duivesteijn – once the initiator of the Resolutions Duivesteijn – is now alderman for Housing in Almere, where he is making private commissioning possible on a large-scale. During the TV-show, which main topic was the current stagnation of the Dutch housing market – he argued on the urge to bring 'housing' closer to people themselves again, to have people act collectively in taking responsibility for their maintenance of their living environments, or realizing their houses, not only as individuals but in small self-organized building groups. If people themselves are the initiator, he argues, it is surprising to see what quality is realized, according to the Almere experience. However, Duivesteijn argues, in the Netherlands,

people still tend to think too much that government needs to take care of citizens. The citizen, on the contrary, has since long been able to act for himself, only being obstructed by a system in which the building sector has been monopolized by developers, housing associations and housing policies.

Figure 1: Newly build houses according to commissioning (source: CBS)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Public	22,5	22,5	20,6	18,8	19,6	22,4	22,4	25,4	26,2	26,1	27,1	29,1	32,7	35,5
Commercial	63,2	62,3	62,0	67,1	65,4	63,3	64,7	63,5	62,4	63,4	62,2	60,7	56,2	53,3
Private	**14,3**	**15,2**	**17,3**	**14,1**	**15,0**	**14,3**	**13,0**	**11,2**	**11,4**	**10,4**	**10,7**	**10,2**	**11,1**	**11,2**

This last recommendations by the SEV and the remarks made by Adri Duivesteijn, triggered me to consider a specific branch of private commissioning – that of *collective* private commissioning ('collectief particulier opdrachtgeverschap') – in more detail in this paper. Collective private commissioning – or: co-housing in more international terms – concerns people who collectively commission, develop and maintain their living environments, sometimes paired with collective ownership of (parts of the) estate and communal living. (SEV 2010). This form of development is even more of a challenge within the Dutch context, because it does not only sideline the conventional building institutions and practices by the direct acquisition and development of plots by individual citizens, like regular private commissioning. The collective element of such projects, turns it into a spatial planning process as well: common facilities, common (or even public) spaces, several houses instead of one, make it necessary to asses which program is allowed and best on what location – both from the municipal planning perspective as from the initiating citizens perspective. Therefore, this form of collective private commissioning is not only a challenge for developers and housing corporations, but also to municipalities and its spatial planners. Moreover, the initiative no longer lies with the municipality providing plots, but with the self-organized building groups themselves – leading to a civic-public interaction that is very unusual within the Netherlands. In Dutch planning, civic-public interaction is foremost structured by participative planning procedures, that are predominantly governmental-led. In participatory planning procedures, citizens are merely invited to 'think along' the planning objectives set out. Collective private commissioning, or co-housing, on the contrary, refers to initiatives that originate in civil society itself. (Boonstra and Boelens 2011). As such, planners are confronted with the capriciousness and diversity of civil actor-groups, and civic groups are challenged by a rigour planning system – both of them working within their own logic.

It is in this light, and through this paper, that I want to explore the conditions that are needed to better facilitate such civic initiatives from a spatial planning perspective. In order to study how co-housing initiatives and practices of spatial planning interrelate and effect each other, in this paper I make an international comparison of the housing schemes and planning systems in the Netherlands and Denmark. These countries show many similarities in planning and housing, but differ on some

specific aspects that relate to the barriers that were observed in the Netherlands concerning collective private commissioning, as I will argue in the second paragraph. After discussing these contextual differences between Danish and Dutch planning and housing schemes, I theoretically frame initiatives for co-housing as self-organization in the third paragraph. Defining the actor groups initiating co-housing schemes as 'self-organized' (the emergence of new structure out of fairly unstructured beginnings) and the process towards realisation of their projects as 'translation towards actor-networks', brings together elements from both actor-network theory and complexity theory into one analytical framework, providing me a vocabulary the express the particularities in the establishment of a co-housing initiative in more detail. Using this analytical approach, in the fourth paragraph, I explore three cases of co-housing in the Copenhagen-area, in order to learn what trajectories the initiatives took towards realization, with an emphasize on how they engage in planning and what controversies and associations arise from these interactions. From these cases, lessons can be learned how planning systems can be made more adaptive to self-organization by community-based networks in general, thus redefining the contemporary relevance of planning in theoretical and practical terms, to a more discretionary practice of shared responsibilities.

2. A Dutch-Danish comparison

2.1 Some methodological notions on international comparisons

Before I take off in making an international comparison between the Netherlands and Denmark, some notes need to be made concerning the minefield one walks into when conducting international comparative research. International comparative research is often set up in order to borrow from policy and planning practices elsewhere for problems found in one's own planning environment, or to strive towards convergence of planning practices (for instance done in the context of European Union cohesion policies). (Booth 2011). This is considered to be a minefield because planning as a practice is the outcome of very specific local and national cultures; planning systems are deeply embedded in their socio-economic, political and cultural context, and there exist path-dependencies such as persistence of institutions and cultures. (Booth 2011, Nadin and Stead 2008). These path-dependencies should be taken in consideration when conducting comparative research. Following Mahoney (2000), Booth describes these path-dependencies as: historical sequences of contingent events that set institutional patterns or event chains in motion that have deterministic properties, causing an unwillingness to change. (Booth 2011). Overlooking the path-dependencies that shape planning practices, can cause serious difficulties when one tries to borrow and transfer or to converge practices over national (and thus institutional) boundaries. However, the reason I conduct this comparative research is not so much to converge practices or to borrow Danish concepts to translate these to the Dutch context, but rather to study the particularities of both Danish and Dutch practice, in order to understand and question the path-dependencies that exist and determine the Dutch interaction between how co-housing initiatives and practices of spatial planning. Therefore, taking in consideration the path-dependencies that exist within the Danish and

the Dutch planning system, are not so much a problem to overcome, but rather the reason for doing a comparative research in the first place. To take this into full consideration, I use a mix of comparative research strategies (conform Booth 2011, following Tilly 1984). First, in the comparison of the national planning system and housing policies I use an individualising comparison, in order to grasp the particularities that exist within each system. In the later part of this paper, I analyse four recent planning experiences in the establishment of 'Bofælleskaber' in the Copenhagen-area and Sjælland, Denmark. The comparative strategy that I use in this part of my research is twofold. On one hand I use a 'finding variation' strategy: to 'establish a principle of variation in the character and intensity of a phenomenon by examining systematic differences among instances' (Tilly 1984, 82–3) and on the other hand I use a 'encompassing' strategy: to find 'different instances at various locations within the same system, on the way to explaining their characteristics as a function of their varying relations to the system as a whole' (Tilly 1984, 82–3). Or in other words: on one hand I look into the variations between and particularities of the cases, and on the other hand I look into recurring characteristics between the cases that can be traced back to what is called the 'planning system'.

2.2 Comparing the planning systems

Planning systems in general

An international comparison of planning system is easiest to start off from previous studies on the different planning families that exist within the European Union, such as those conducted by Newman and Thornley in 1996, and the European Commission in 1997. These planning families make clear that – on a global scale– the Danish planning systems and housing scheme is perhaps one of the most comparable to the Dutch. Using the planning families as a starting point can however also be tricky, because these planning families have been defined in order to facilitate the convergence of planning practices among European Union member states (CEC). And my aim is to grasp the particularities of each system. But, as the following comparison will show, the particularities of the systems are nuanced, and thus of even greater value to the study of path-dependencies concerning co-housing and planning.

As planning systems are expressions of fundamental values in a society, there are parallels between models of society (that shape the relationships between state, market and citizens) and the spatial planning system (the ensemble of territorial governance arrangements that seek to shape patterns of spatial development in particular places). (Nadin and Stead 2008). Dividing the European planning systems into four families (Nordic, Germanic, Napoleontic and Anglo-Saxon), Nadin and Stead find it hard to qualify the Dutch planning system as part of one specific family, since it has characteristics of all. The Danish planning system is qualified as part of the Nordic tradition. (Nadin and Stead 2008). Newman and Thornley, who base their study of national planning systems on legal families, classify the Dutch planning system as part of the Napoleontic family – characterized among others by a division of regulation between central and local governmental control, and the Danish as part of the Scandinavian family – characterized among others by a strong emphasize on local self-government.

However, both planning systems do not work out that distinct. The Dutch system is one of the forms of the Napoleontic family that is a rather 'fused' system – in which the three – local, provincial and central – governmental layers are all involved in planning; fused between hierarchy, relative autonomy and co-government. The same workings between levels of government – a fuse between hierarchy, relative autonomy and co-government – is visible in the Danish planning system. (Newman and Thornley 1996). Both the Netherlands and Denmark are part of the 'continental legal systems' (Roman, Nordic, Germanic) – that seek to create a complete set of abstract rules and principles in advance of decision-making: making plans, regulate things in advance, drawing up rules and systematizing things. (Zweigert et al 1987).

According to the European Commission, both the planning systems in Denmark and the Netherlands belong to the Comprehensive Integrated family (other families are Land Use Regulation, Regional Economic and Urbanism). (CEC 1997). This stands for a spatial planning system that is conducted through a very systematic and formal hierarchy of plans, from national to local level, with its main focus on the coordination between public sector activities on various scales and spatial coordination in general, being plan-led, and strongly influenced and funded by national government. More specific similarities concern:

- A governmental system that can be classified as 'unitary', in which power resides with national government, although certain responsibilities may be delegated to government departments for specific territorial units of local government. Both planning systems are predominantly public sector driven, the public sector enacts land acquisition and land banking. (CEC 1997)

- Both planning systems use national instruments, strategic instruments, framework instruments and regulatory instruments. As national instruments, in both planning systems the national government provides perspectives, plans, sectoral and issue based guidance; in Denmark the national government also provides general policy guidance. Strategic instruments are in both planning systems used by regional groupings of local authorities, in the Netherlands by the provinces, and in Denmark by the regional administrations (provinces are absent in Denmark since a reform in 2007). Both framework and regulatory instruments are enacted by the municipality, the local planning level. Frameworks are set by Kommuneplan (DK) or Structuurplan (NL), and the regulatory instrument is the Lokal Plan (DK) or Bestemmingsplan (NL) . In both systems, only these last regulatory instruments set by local government are legally binding. (CEC 1997)

- Concerning discretion: the Netherlands provide just a little bit more discretion and flexibility in decision making in practice compared to the Danish system that is very committed and tolerates little formal discretion. However, in both planning systems the planning objectives and policies are relatively close to the development that actually takes place. (CEC 1997)

- In both planning systems permits for building are provided by the municipalities. In Denmark this is the 'byggetilladelse' (DK) or the 'bouwvergunning'(NL). Permits are needed in both planning systems for construction, building, change of use, sub-division and demolition, and applications must be in compliance with building plans and regulations. In Denmark there is

very limited flexibility to vary from the approved plan, in the Netherlands there is some departure allowed from the approved plan in specific circumstances.

Overall, the Danish and Dutch planning systems are comparable to a high degree. But by elaborating in more detail on the two systems, also some differences become explicit, making the comparison between the two countries interesting and relevant for my research. These differences concern civic involvement in plan procedures, and the development of legally binding plans.

Difference: civic involvement

The first difference concerns participation, the right to appeal to plans and public involvement. In both planning systems participation is legally embedded, but in slightly different ways. In Denmark there is more public involvement in advance of the approval of plans, but no possibilities to appeal to a plan after approval for other than procedural or legal grounds – compared to the Dutch system in which there is public involvement in advance of plan approval occurs is not legally embedded (though it does occur often through participatory planning processes), but there are more possibilities to appeal to once approves plans on content based issues. In Denmark, the lack of opportunity to appeal is argued because the extensive early consultation is generally thought adequate. Concerning the permits needed, in Denmark no consultation takes place. In the Netherlands a notification is mandatory, and interested parties have the right to object to the provision of permits[1].

Difference: the legally binding local plan

A second difference concerns the development of the only legally binding plan within the planning system – in the Netherlands the Bestemmingsplan and in Denmark the Lokal Plan. In the Netherlands, the Planning Act obliges all municipalities to develop and regularly update the Bestemmingsplan for its whole territory, and make sure that – through the Bestemmingsplan and its legally binding status – all developments within the municipality are in line with the Structuurplan (the strategic vision) made by the municipality. The Bestemmingsplan is developed by the municipality itself, and functions as a way to steer land acquisitions by developers, that come after the Bestemmingsplan is approved by the municipal council. In Denmark, the Lokal Plan has a similar

[1] The differences in civic involvement in more detail. 1) Before proposals are confirmed. DK (Kommuneplaner): the public are informed of the major issues and are encouraged to submit ideas and proposals. The 'pre-consultation' stage must last a minimum of eight weeks. NL (bestemmingsplan): public may be informed but this is not mandatory. 2) After publication of planning authority's firm proposals. DK: consultation for eight weeks with the public, opportunity is to object. Further consultation is undertaken if the plan is modified significantly. NL: consultation for four weeks on draft plan and opportunities to object. 3) The use of hearings and inquiries. DK: non. NL: objectors may request a hearing to explain their objection in person to the municipality. 4) Opportunity for challenge after the plan is formally adopted / approved. DK: challenge is possible on legal or procedural grounds only. NL: after the municipality has adopted the plan it is submitted to provincial executive and displayed for four weeks during which limited objections can be made. After approval it is displayed for a further four weeks when appeals to the Council of State are possible on matters originally subject to objection. NL: at the time of submission to province for approval, new objections may only be made to changes.

legally binding status, which becomes instated after approval from the municipal council. However, in Denmark it is by no means a legal obligation to provide such plans for all the municipal territory. Lokal Plans are only developed at the time a large or important development is proposed, or when the municipality wants to promote a certain area. Moreover, the Lokal Plan is often developed in close negotiations with the intended land-acquisitioners or developers, before the approval of the plan by the municipal council. (Newman and Thornley 1996).

New laws

The comparison of the two systems in CEC was made in 1997, based on spatial planning acts that have since then been changed in both countries. In Denmark the legal framework of the 1992 Planning Act has been replaced by a new planning act in 2008. In the Netherlands, the 1965 planning act has also been replaced in 2008 by a new planning act. In Denmark, the Ministry for the Environment revised and updated the Planning Act as a consequence of the reform of local government structures in Denmark, which was fully implemented by 1 January 2007, transforming most planning responsibilities to the new municipalities, and mandating the new administrative regions to prepare a regional perspective for future spatial development with the new municipalities. (Ministry of the Environment, 2007). In the Netherlands, the Parliament approved for a new law on spatial planning in 2008. The objective of this new law was to reform the Dutch planning system into a more decentrally organized system, distributing more responsibilities to the provinces and municipalities. According to this new law, national government only pinpoints general guidelines, and provinces and municipalities each make their own strategic visions for their respective territories, they themselves being responsible for a good synergy between these visions. (Staatsblad van het Koninkrijk der Nederlanden, 2008). Although these new laws might have provoked new working methods and a different practice in the respective countries, fundamental changes to the above comparison are not at stake.

When I summarize the above comparison, I come to the conclusion that although there are many similarities between the Dutch and Danish planning system, some fundamental differences occur as well, that might be of influence in the interaction between co-housing initiatives and planning practice. First, the Danish planning systems allows more civic involvement before plans are approved, and lesser opportunities to appeal afterwards, on which one can assume that Danish planners overall are more experienced with open civic-public negotiations than the Dutch planners. And second, because of the Danish flexibility in land acquisitions and the development of the legally binding land use plans through negotiations with the intended acquisitioners and end-users, one can assume that the Danish planning system suffers less from regulatory frameworks that obstruct co-housing than the Dutch planning system.

2.3 Comparing the housing schemes

Housing schemes in general

In a short overview of the historical development of the housing sectors in both countries, again some parallels become explicit. Even though the growth of population in the second half of the Twentieth century, when the current housing sector was institutionally shaped, shows some divergence between the two countries (In Denmark from 1945-2011 37,5%, in the Netherlands in the same period 80,7% - Source: Danmark Statistik; CBS) – the institutions that were shaped in this period do not diverge that much. First, both countries have very explicit policies on housing set by national government. (CEC 1997). This interference from national government, under influence of respective social-democratic and conservative-liberal governments, manifests itself mainly in a strong expansion of non-profit housing the second half of the Twentieth century, and a complex system of tax-reliefs to encourage home-ownership and economic growth (Boelhouwer and Van der Heijden 1993, Nielsen 2010). Second, and related, the countries have a very similar composition of the housing stock (see figure 2).

Figure 2: Composition of the total housing stock in ownership (2011) (Source: ABF Research and Statistics Denmark)

Ownership form	**Denmark**	**The Netherlands**
Private ownership	60%	60%
Social rent	20%	31%
Private rent / other	12%	9%
Andelsbolig (see page 12)	8%	-

Overall, also the housing sectors and related policies of the Netherlands and Denmark show a high degree of similarity. But of course, by elaborating on the similarities of the two systems, also the differences become more explicit, making the comparison between the two countries interesting and relevant for this research. These differences concern individual commissioning, and forms of collectiveness.

Difference: Individual commissioning

A first remarkable difference between the Dutch and the Danish housing sector is the way in which houses are developed. In contrast to the Dutch housing construction, in which from 2007-2009 70% of the newly built housing stock is the result of multi-dwelling programs, in Denmark only 7% of the newly housing stock is *not* individually commissioned – 93% of the newly built houses are developed as individual projects. Moreover, of the 7% multi-dwelling programs, 49% is 2-4 dwellings, 22% is 5-9 dwellings, 14% 10-19 dwellings, 2% 20-29 dwellings, and 13% 30+ dwellings in one project (McKinzey&Company 2010). With a total housing production of 87.899 new dwellings in the same period, this leaves around 80.000 new dwellings developed individually, against around 800 dwellings developed as part of a 30+ dwelling program. (Danmark Statistik). So, one can conclude that overall, building projects are small in Denmark. This is a direct result of the small land allocations that are usual in Denmark. In order to develop highly diverse residential areas, local

planning and tract housing[2] tendering procedures by municipalities are often regulated by tendering building plots individually, sometime even with a maximum limit to the number of building plots per buyer. Moreover, new buildings tend to have their own individual characteristics and it is rare for two projects to be exactly the same. The general conduct and tradition in the Danish construction industry is that projects are often designed with detailed specifications. Danish clients typically leave planning and design to advisors (engineers and architects) while construction companies are brought in late in the process to execute the plan, which leads to a highly fragmented building sector. (McKinzey&Company 2010). As the percentage of new dwellings constructed in the period 2005-2007 in owner occupied is 85% (Danmark Statistik), it can be assumed that in Denmark, the development of new owner-occupied dwellings is almost entirely done in private commissioning.

Difference: Forms of collectiveness

A second remarkable difference between the Dutch and the Danish housing sector is the collective character. This may sound remarkable in the light of the amount of small projects being developed, but the frequent occurrence of collective forms of ownership or collective maintenance of living environments does not necessarily overlap or conflict with the culture of small projects. In general, Danish society has strong collective features. In a research published in 2002 on power within Danish society by the university of Århus, it was argued that the strong presences of 'associations' within Danish everyday life forms a significant base for civic power, of importance for the development of networks and mutual trust among citizens. And although issues of individualization, professionalization and European unison are considered to be threats to this associational culture, the conductors of the research wondered whether perhaps the associational aspects of Danish everyday life where so common to Danes, that the awareness of the particularity of this collectiveness are beyond noticing. (Mikkelsen 2002: 13).

As part of the same research project, Andersen (2002: 207) found that in 2000, 93,6 % of all Danes is in one way or another associated to at least one 'forening' (association, or 'vereniging' in Dutch) and that the average Dane is involved in 3,7 different 'foreninger'. These 'foreninger' can concern any aspect of civic life. Andersen distinguishes four types of foreninger: 'gruppeinteresser' (organized around a shared responsibility), 'sagsorienterede forening' (organized around a political or societal goal), 'aktivitetsbestemte forening' (organized around a certain activity) and 'kooperative forening' (organized around cooperative ownership). (Andersen 2002: 207). As these 'foreninger' occur in every aspect of Danish everyday life, they are also present in the domain of housing and spatial issues. As 'gruppeinteresser' concerning spatial and housing issues, Andersen mentions bolig-, lejer-, grundejerforeninger (home, rental or landowners associations). What these foreninger have in common is that individuals living in an certain building or environment, associate with one another in order to maintain certain shared facilities. For instance in rental housing, residents are associated in lejerforeninger, small self-governed units where local tenants have a high degree of self-management. (Bengsston and Ruonavaara 2010, Jensen 1995). Or in a grundejerforening, people

[2] Housing developed with multiple identical homes and few design variations. (McKinzey&Company 2010).

privately own plots on which their house is located, but collectively take care of their shared environment (a road, a garden etc.).

As example of a 'kooperative forening' concerning housing, the 'andelsbolig' cannot remain unmentioned. Roots of associative home ownership are considered be found in the rural cooperative tradition, taken towards the Danish cities in the early twentieth century, when rapid urbanization took place as a result of industrialization, and new houses where urgently needed. Workers established building societies (byggeforeninger) and build terraced houses for themselves and their families. When the workers would have paid off the buildings, they turned into cooperative housing associations that owned the buildings collectively. (Bruun 2011: 67). Especially during the second half of the Twentieth century, this form of ownership has been promoted by legal measures and tax reliefs. Today, it forms a well-known and common form of housing in Denmark, amounting for 8% of the total housing stock in 2011 (Danmarks Statistik) and in the inner city of Copenhagen up to one-third of all housing. (Bruun 2011, Kristensen 2007). This form of associative of home ownership is some in-between form of private ownership and rent. The apartment building is owned by the association, and in order to obtain an apartment one has to become member of the association, by buying a 'share' – which is the apartment – and by paying a membership fee on a monthly base. If one moves, the 'share' is sold back to the association, that is responsible for the maintenance of the building and is democratically governed through a board and regular meetings.

A third aspect of collective forms that characterize the Danish housing sector that is of interest to mention here are the 'bofælleskaber'. These are communities of people sharing residence (in one building or in separate entities) with a high degree of shared facilities, such as a shared kitchen, common rooms, gardens etc. Often, these communities are organized around an intentional life style, such as eco-communities, but they can be pragmatic as well, such as senior- bofælleskaber. Two forms of 'bofælleskaber' can be distinguished: the 'collectives' (communities with a common economy) and 'co-housing' (that pay a fixed amount for common expenses but not sharing an economy). (Marckmann 2009). Real statistics on this form of housing are lacking, but estimations illustrate that this form of living is not such a uncommon thing in Denmark. In the late 1970s, around 3% of the Danish population lived in 'bofælleskaber'. (Skardhamar 2010). Today, estimations are that there are at least between 50-150 'bofælleskaber' in Denmark, housing around 1% of the Danish population (estimations based on memberships of 'bofælleskaber'-organizations such as www.bofælleskaber.dk and LØS for ecocommunities). But, as 'bofælleskaber' are not administrated as such, there is no organization for senior 'bofælleskaber' (for elderly) and membership of an organization is not obligatory, these estimations can be rather low. (www.bofælleskaber.dk; www.losnet.dk; Marckmann 2009)

When summarizing the above comparison, I come to the conclusion that again similarities between the Dutch and Danish schemes exist in general terms, but some fundamental differences occur as well, that might be of influence in the interaction between co-housing initiatives and planning practice. First, the private commissioning in the development of houses is not just a niche like in the Netherlands, but in Denmark this is the common practice. Therefore, one can assume that the institutions that are believed to obstruct the private commissioning in the Netherlands –developers and housing corporations – play a lesser role in the Danish housing sector. This accounts not so much for the housing corporations respecting the size of the Danish social housing sector, but it does account for the developers. The McKinzey&Company study of 2010 indeed does problematize the

absence of professional and efficient developers-building sector in Denmark because of the amount of private commissioning. But overall, it can be assumed that in the Danish practice of developing houses, both professionals as citizens are much more accustomed to the idea of private commissioning in general. (McKinzey&Company 2010). Second, the Danish housing sector and habits show many more forms of collectiveness than the Dutch housing sector. These forms of collectiveness concern common maintenance of living environments, cooperative ownership and common social lives in communities. These forms of collectiveness do not necessarily overlap, but the extend to which these forms of collectiveness penetrate society, makes it possible to assume that Danes in general are quite accustomed to collective living environments. Therefore, I assume that in Denmark, co-housing is much less of a niche than in the Dutch housing sector.

2.3 Resumé

I started off this comparison from the hypothesis that Denmark and the Netherlands have very comparable planning systems and housing sectors. Indeed, from an international perspective, Denmark can be considered to be one of the most comparable countries for the Netherlands with respect to planning system and housing schemes. The comparison however, becomes more relevant because of the differences.

As major obstructions for private commissioning in the Netherlands, and more specifically collective private commissioning, I mentioned several aspects in the first paragraph. First, I mentioned the Dutch building customs that retain the monopoly of the development of new housing with developers and housing corporations, making it difficult for private individuals or groups to enter the stage of commissioning. Second, I mentioned the lack of financial and institutional frameworks to support co-housing initiatives. And third I mentioned the regulatory frameworks in planning practice that make it difficult for self-organized initiatives to find a match between their own objectives and the ways of spatial planning. It seems, as I learned from the international comparison between Denmark and the Netherlands, that some of the institutional aspects that obstruct the Dutch situation are quite different in the Danish situation. This makes it possible to assume that collective private commissioning is a far more common thing in Denmark. There are simply more path-dependencies that can be followed in the Danish situation when one takes the initiative for developing a co-housing project, or a self-organized building group than in the Dutch situation. These path-dependencies are: forms of collective living that are more common in Denmark than in the Netherlands, the common practice of private commissioning in Denmark, the flexibility and negotiated character of the legally binding Lokal Planer, and the habituation of civic-public deliberations over plans.

But this is only speculative so far. Does collective private commissioning indeed take place on a more frequent base in Denmark than it does in the Netherlands? And if so, do the Danish initiatives encounter significantly less barriers in the realization of their initiative than their Dutch counterparts? The first question is difficult to answer, because it demands good statistical data and a well defined demarcation of what co-housing or collective private commissioning exactly comprises. Does one only look at the 50-150 bofælleskaber that are listed as members of the various overarching organizations, such as LØS and www.bofælleskaber.dk? Or does one include the senior-

bofælleskaber as well? Does one look only at the newly established initiatives, or does one include the older ones – some dating back from the 1960-1970s – as well? And does one or does one not include the Andelsboligforeningen – making up such a significant part of the Danish housing sector, but most often established in already existent estates, and not newly built as such. With all these different demarcations in mind, I come to the estimation starting at 1% of the Danish population that can be considered as collective private commissioner (which is probably not a whole lot different from the Dutch situation), up to 10% (which is significant). And then I have not even taken into account that real statistics are lacking on collective private commissioning in both the Netherlands and in Denmark – leaving me really only guessing whether these percentages are realistic estimations or far, far below the actual Danish situation.

Therefore, this is a question I willingly leave for the more statistical scientists – be it economic or demographic researchers – and instead limit myself to the second, more planning-related question. Do the Danish initiatives for co-housing and collective private commissioning encounter significantly less barriers in the realization of their initiatives than their Dutch counterparts, because of the many path-dependencies that already exist within Danish planning and housing schemes? This is the question I will deliberate on in the following sections of this paper. In order to answer this question, I will take a closer look into four recently established co-housing examples in the Copenhagen-area. But before that, I will first introduce a theoretical framework that gives me the vocabulary and analytical tools to frame such initiatives as self-organization.

3. Framing co-housing as self-organization

3.1 Self-organization of actor-networks

In the introduction of this paper, I already framed collective private commissioning, or co-housing, as initiatives that originate in civil society, autonomous community-based networks of citizens. They get organized outside government control and develop their living environments out of their own interest, in self-governance and with their own means – a definition earlier developed as self-organization in urban development. (Boonstra and Boelens 2011). This definition however, deserves some further theoretical elaboration, which I will give below.

Self-organization

Developed in the physical sciences, self-organization is generally defined as the appearance of structure or patterns where before no structure or pattern existed: a process of autonomous development and the spontaneous emergence of order out of chaos, whereby a system can develop a complex structure from fairly unstructured beginnings, or the spontaneous emergence of global coherence. Key feature of self-organization is that the intention for emergence of new order comes from (elements within) the system itself: spontaneous, autonomous, out of local interactions,

without external agents imposing anything. (Heylighen 2001, Teisman et al. 2009, Cilliers 1998). However, a system never stands entirely on itself, it has both a history and an environment, and movements of and inside the system can never be explained to a single origin. (Cilliers 1998). As Cilliers puts it: a system "*can develop a distributed form of internal structure that is neither a passive reflection of the outside, nor a result of active, pre-programmes internal factors, but the result of a complex interaction between the environment, the present state of the system and the history of the system*." (Cilliers 1998: 89). As systems emerge, it is important to note that in complexity theory it is generally understood that emergence is not heading for a certain form of optimization, equilibrium and order, but rather towards higher forms of complexity. The newly emerged order from self-organization is not so much a solution to the chaos or the unstructured beginnings that existed before, but rather an addition of extra complexity. The emergence of new structure happens because or despite of already existing structure, and thus is increasing multiplicity. (Prigogine and Stengers 1984).

Currently, complexity theory and the notion of self-organization are entering the domains planning and governance as well. When applied to governance structures, self-organization is understood as the internal dynamics of an existing governance systems developing organized structure, but also as the steering limits of one singular actor due to the autonomy of other actors and their ability to behave and organize in a self-chosen way. (Klijn and Snellen 2009, Boons et al. 2009). Understanding co-housing as a form of self-organization makes two things explicit. First, in puts the emphasize on the internal drivers of the initiative: the idea to establish a co-housing project does not come from one actor summoning others to start co-housing, but is a complex constitution of various actors sharing the same internal drivers and ideas. The incentive for movements comes from (elements of) the system, the actors and intended end users themselves. The drivers come from within the group itself, and are based on self-interest and self-motivation. Second, it puts emphasize on the emergence of the system, and on the emergence of new order, understanding co-housing as a process that starts with a person having an idea but no co-initiators, resources, location, etc. towards a realised co-housing project in which a number of people live their everyday life – the newly emerged order. Despite the internal drivers of those involved in the co-housing group, the importance of an environment (both physical as institutional) should not be forgotten. As the system emerges further, elements of this environment are constantly dealt with and boundaries of the system can shift: elements in the environment can become either included or excluded from the system during the process. Moreover, the eventually newly emerged order – the realized co-housing project – is not replacing any pre-existing chaos, but as a realized project is rather adds another layer to the existing planning and housing schemes.

Actor-network theory

However, though such abstract interpretation of a co-housing project make explicit the difference between internal drivers, the environment and emergence of new order, they do not explain the behaviour of actors and their interests and motivation to act to the conditions that surround them, or to decide to change something. In order to understand the behaviour of actors in less abstract terms, I make use of the strong resonances that exist between complexity theory and actor-network theory. (Hillier 2007). This relates to a baroque interpretation of complexity, in which the discovery

of more detail, interconnectivities, heterogeneity and specificity are leading in the study of a system. (Law 2004). Systems can be understood as networks – networks that are not defined by theorists standing outside the system, but networks (and its boundaries) that are performed, operated or constructed by the actors that make up the network (or system). Moreover, individuals act in multiple networks simultaneously, who are themselves in turbulent, unstable motion, connected entities moving in folds and infinitely varied patterns. (Hillier 2007: 47). What is interesting in using actor-network theory as an addition to co-housing projects as self-organization, is the non-distinction it makes between human and nonhuman entities. (Latour 2005). Actor-network theory not only focusses on the behaviour of human actors involved in the process of network-making, but adds a material thinking. Space is seen as part of the sum of relations, connections, embodiments and practice that make up networks. Things relate because of (in)voluntary encounters in space (Thrift 2006: 139). Moreover, networks can also be constituted around places and things, and places and things play a crucial role in the maintenance of the networks. Thus actor-network theory enables to consider the importance of the spatial objects in the process of establishing a co-housing project, such as location, architecture, plans etc.

Translation

Moreover, what complexity theory abstractly terms as 'emergence', has a more developed equivalent in actor-network theory, which is 'translation'. Translation is the movement of an actor in the construction of his network. The process of translation consists of several phases in which the "*identity of the actors, the possibility of interaction and the margins of manoeuvre are negotiated and delineated*". (Callon 1986: 203). Translation is also characterized as the sociology of ordering, and how this ordering is done in practice. (Thrift 1996: 25). In spatial planning, translation is understood as organizing the resources to make certain spatial transformations possible. The process of network-building is "*the translation of the objectives, limitations and opportunities of other actors so that these can start 'behaving' according to their own requirements, but in line with the wishes / characteristics of the dominant actor*" (Boelens 2009: 190). This refers to both the group formation a co-housing project has to do, the collection of resources needed for the realization of the project, and the constant maintenance of the homogeneity and coherence within the system or network. All this can be characterized as a process of translation. (Thrift 1996, Hillier 2007).

The combination of self-organization, actor-network theory and translation, enables me to do three things that I consider to be important in studying co-housing projects and their interaction with existing planning and housing schemes. First, self-organization enables me to put the emphasize on the internal drivers a group has. Second, actor-network theory enables me to consider the importance of the spatial objects in the process of establishment, such as location, architecture, plans etc. Third, translation enables me to focus on the process of becoming, the way a network forms itself and develops towards realization. However, the mutual benefit of this combination goes deeper, as I will illustrate in the following paragraph.

3.2 Self-organizing behavior

In the literature on self-organization, different forms of self-organized behavior are described, more or less opposites that exist simultaneously within a self-organizing system. These are bifurcations versus equilibria, and dissipative versus autopoietic behaviour. (Heylighen 2001, Cillier 1998, Van Meerkerk et al. 2012). However, there is little literature on how these different types of behaviour interact with each other, or how these kinds of behavior can be used in analyzing the formation of networks or systems. In the literature on translation four sequential 'steps' are presented - Problematization, Interessement, Enrollment and Mobilization. (Callon 1986). These steps, or moments that are presented as phases a network moves through, are however in practice not at all so sequential, and in reality overlap. As I will argue, the four types of self-organized behaviour are equivalent to the four phases of translation. By combining the two in one analytical framework, I transform the four sequential steps of translation into four types of behaviour that are simultaneously present in the constitution of a system or network, and I transform the four types of self-organized behaviour into interrelated moments a systems moved through.

Bifurcations and Problematization

The problematization phase in the establishment of an actor-network is often presented as the first start-off. In this phase, the leading or initiating actor starts with a disassociation from the existing situation, making others (and one selves) see there is a problem that needs to be addressed by new ways of doing. The actor renders him- or herself indispensable in finding this new way of doing, and defines obligatory passage points that need to be taken into consideration in finding new kinds of behaviour. (Callon 1986). This phase corresponds with the type of self-organized behaviour that is named 'bifurcations'. According to complexity theorists, bifurcations are moments in time and place on which elements in a system suddenly 'decide' to break with existing path-dependencies and start behaving in a new, unforeseen and unexpected way. These bifurcations spontaneously set in motion and emergence of new order. (Heylighen 2001, Cillier 1998). Bifurcations are therefore both a starting point for new behaviour, like the problematization phase, but they are as much a reaction to that what is already in existence – that what was considered to be in equilibrium. The notion of bifurcation therefore adds the notions of iterative movement and the notion of 'event' to the definition of problematization) – the 'lightning strike' that misses to the rather passive description issued by Callon (1986). (Thrift 2000).

Dissipative behaviour and Interessement

The second phase presented by Callon is that of interessement. In this phase, the initiating actor starts looking for allies, and tries to tie them to the network. In doing this, he is in competition with other evolving associations and identities, and severe work is needed in order to 'interest' other actors to the emerging actor-network. (Callon 1986). This phase is therefore very much about dealing with the outside, with the others. It has to be considered what is taken into account, and what new propositions need to be found and accounted for. (Latour 2004). This phase therefore

corresponds with the type of self-organized behaviour that is indicated as 'dissipative'. Dissipative behaviour also concerns to external orientation of a system: increasing interactions between various systems, a sensitivity to external influences but also affecting the environment (so both way interaction) and wide(ning) boundary judgements. In this process, the production of new structures and processes takes place, in which variety and redundancy of ideas (plans, content) and actors is aimed for. This often happens at the expense (in terms of attention, time, energy, resources) of existing structures and processes leading to tensions between 'new' and 'existing'. (Van Meerkerk et al. 2012).

Autopoietic behaviour and Enrolment

The third phase presented by Callon is that of enrolment. In this phase, the specific role of the actors that become interested in the actor-network are negotiated, and a common identity is determined and set. (Callon 1986). This phase is characterized by an internal orientation: propositions are instituted or otherwise rejected, hierarchies are set, and both the inside and the outside of the collective are stabilized. (Latour 2004). This phase therefore corresponds with the type of self-organized behaviour that is indicated as 'autopoietic'. This type of behaviour also concerns an inward orientation, as it concerns the process of reproduction, confirmation and self-(re)creation, highlighting the essential of the system, stabilizing internal structure and intensifying boundaries. In this phase, the identity of the system is formed and set, and a variety and redundancy of plans and ideas is countered. (Van Meerkerk et al. 2012).

Equilibriums and Mobilization

The last phase of translation, according to Callon, is that of mobilization. In this phase, the actor-network has evolved into a coherent whole, and only a small number of individuals speak in the name of all others in the network. Thus, a new type of equilibrium, a new type of order has emerged, in which certain entities within the network control the others. (Callon 1986). In this phase, the maintenance of the network as a collective becomes important, but also the constant evaluation whether the network is able to still follow through. (Latour 2004). The terms equilibrium and emergence of order already make explicit the kinship to self-organization. Mobilization, or the new equilibrium can both be seen as the outcome of translation as the outcome of self-organization. But, following Prigogine and Stengers, this new order does not necessarily go at the expense of other – already existing order (this competition being a concern of dissipative behaviour), but rather exists on top of the already existent order – bringing things into an even higher order of complexity. (Prigogine and Stengers 1984).

Adding different types of self-organized behaviour to the process of translation enables me to emphasize the difference that can occur between the various actors involved in the process – in this case the initiative as a group, the individuals that acted as leading actors or initiators in the process, and the planning officials involved – because, as becomes clear in the cases, different processes of translation take place simultaneously. Translation therefore is not a linear process towards

optimization, but rather different types of behaviour that should all be simultaneously present within a process in order to succeed – and be a success for all actors involved. In the perspective of co-housing projects, these four types of behaviour relate to the following aspects. Bifurcation and problematization refers to the willingness or urgency of the involved actors to step out of the usual way of working, to disassociate from existing planning and housing schemes and try something new. Equilibrium and mobilization refers to the elements or schemes that are used in order to turn the initiative into something familiar, something obvious, something that does fit existing planning and housing schemes; the initiative becomes something identifiable, it gets a name that represents the initiative as a coherent whole. Dissipative behaviour and interessement refers to the encounters the initiative has with the outside environment – trying to be as broad, informed and open for new and different options and actors as possible, in order to choose – once in the selective modus of autopoietic behaviour and enrolment – in the best interest for the initiative, and excluding those thing unnecessary. In the autopoietic and enrolment modus, the initiative deals with the internal dynamics, including those elements from the outside that are necessary for the initiative to survive, and selected and choosing in the best interest.

3.3 Associations and Controversies

This brings me to the core question I put forward in this part of the paper, namely the interaction between an initiative for co-housing and the existing planning and housing schemes. What problems and barriers, and what changes and opportunities become visible between these two worlds? What encounters take place? Therefore, as a last step in setting out the theoretical framework for analysing co-housing initiatives, I introduce the notions of controversies and associations, notions that are also derived from actor-network theory. (Latour 2005). In actor-network theory, enquiries should always focus on tracing the associations that have made the system happen. In doing so, the researcher is re-assembling: mapping those actors and elements that have actually made something happen and bringing them together again. This mapping is done by studying the formation of networks by "*deploy controversies and trace associations*" (Latour 2005: 16), because the moments of controversy and association are usually surrounded by activity and thus well documented. Controversies roughly means when things break down, when people disagree, when innovations or new unexpected situations happen. Deploying controversies means to open, unfold, and arrange these controversies in order to make use of them. Associations roughly means when people and/or things join, when they line up, when things start functioning as a whole, when the network (that was visible at the controversy) become invisible or 'normal'. A system or network proofs its existence by its associations. For this reason, it is not possible to determine a system beforehand. Defining a system is only possible if actors, associations and influences become clear through the actions of actors, "*we have to follow the actors themselves*" (Latour 2005: 12, see also Callon & Latour 1981, Law 1986, Law 1992). When mapping the actions by the various actors involved, the associations and controversies between the self-organized group or co-housing initiative and existing housing and planning schemes become visible.

4. Case analyses

Using this analytical approach, the conditions that gave rise to the initiatives and the trajectories the initiatives took towards realization are studied, with an emphasize on how they engage in planning and what controversies and associations arise from these interactions. In this paper, I explore three present-day cases in Sjælland, Denmark. All of them are newly developed projects. Two are examples of ideological living, one has a more everyday-life cohabitation scheme. They are all different in the planning process they underwent. Below I give an overview of some of the key characteristics of each initiative.

	Lange Eng	***Fri og Fro***	***Hallinge Lille***
Location	Albertslund	Egebjerg, Odsherred	Valsømagle, Haraldsted
Size	54 houses	17 houses	18 houses
House ownership	Private	Private	Private Rental
Collective schemes	Bofælleskab Grundejerforeningen	Bofælleskab Andelsforeningen	Bofælleskab Grundejerforeningen
First meeting Moving in	2004 2008	2001 2005	1999 2007

4.1 Lange Eng

(Sources: Interview Albertslund Kommune 2011, Interview resident Lange Eng, www.langeeng.dk, Vaerdigrundlag for Bofællesskabtanken 2006)

Lange Eng is a co-housing initiative in the municipality of Albertslund, close to Copenhagen. It consists of 54 individual households. It is a bofælleskab organized in a grundejerforening, not based on any ideology but quite pragmatically organized around a shared everyday life, such as common dinners six nights a week, and a variety of social activities. The houses are in individual ownership. Lange Eng is one of the six other projects in the development of Herstedlund, which was developed simultaneously – but the only co-housing project. The whole of Herstedlund is organized in a forening as well, but the inhabitants of Lange Eng do not participate too actively in this neighborhood-community. Lange Eng was established in 2008, after two years of ideation and two years of building activities. The realization process consists of four phases: 1) ideation and shaping

the core values, starting with four friends sharing an idea and ending with finding the location in Albertslund, 2004-2005; 2) designing and planning: starting with finding the location and ending with the purchase of the ground, 2006; 3) building: starting with the ground purchase and ending with moving in and the bankruptcy of the developer, 2006-2008; 4) living in Lange Eng: ever since moving in in 2008.

Bifurcations and mobilization

The reason to start the initiative was that there were no houses available that fit the demands of the initiators. The developer involved was willing to experiment with a co-housing project this scale, and the municipality was also willing to work with such a new group of people. During the process, some justifications to the original idea had to be made, but none of the actors considered this problematic. When setbacks occurred as the developer went bankrupt, the community took over easily, even though this was new for all. The main controversy related to these bifurcations was the tens housing market and high demands for a nice and social living environment forced some people to start developing their own houses. The main association was that all actors involved were willing to experiment and try something new.

Dissipative behaviour and interessement

Contacts to find more allies were laid in the personal network of the initiators, other initiatives were visited, and consultant were hired. Various locations were considered, as are various forms of ownership, the architectural design is discussed, a bank is contacted for loans. During the process, people leave to initiative because they disagree with the location in Albertslund. After realisation of the project this kind of behaviour stops except for open house-days that are sometimes organized. Main controversy in the dissipative and interessement modus is that so many things have to be taken into consideration, that the network of allies is remains still fluent and elusive for some time. The main association is that between the people that become resident in Lange Eng, as this one becomes durable, while all other associations are temporary, and function more or less 'helpers' on the way of the process.

Autopoietic behaviour and enrolment

Core values are defined right from the beginning. Meetings are held on a frequent base. Soon, a plot of land is found that fit the demands of the initiators. Many people leave because of the choice for the location in Albertslund, but soon a new group forms around the initiators and the location and a forening is established. Choices are made on loans, ownership, design and the land is purchased. The meetings are still frequent once the community is established, but now organized around a common social life. The group is in the end quite homogeneous in age, and socio-economic backgrounds. Main controversy in the autopoietic and enrolment modus is that some choices concerning the initiative shut out interested people, but attracts new people on the other hand. Main association is

that a match is found between the demands of the initiators and the local planning conditions. The forening is established after the decision for the location was made.

Equilibrium and mobilization

The four initiators are the leading actors and spokespersons for the group and remain so during the whole process. Use is made of the concepts bofælleskab, forening, grundejerforening. The development, planning and design process are considered to be quite regular by all actors involved; in the end Lange Eng is not seen as something new, but rather part of a long tradition – only the size of the project is considered to be rather unconventional, but as a logical thing because of the tens housing market when the project was initiated. Main controversy in the mobilization and equilibrium modus is that, after realization, Lange Eng does not have any interactions with the other housing estates in Herstedlund, as was hoped for in the planning of the area. Main association is that even though most actors in the beginning were willing to experiment, they eventually did follow all the path dependencies concerning planning and housing schemes, and a satisfactory match between the demands of the group, the plan, and housing scheme was found.

4.2 Fri og Fro

(Sources: Elm and Dilling-Hansen 2003, Martinussen 2010, Interview resident Fri og Fro 2011, Interview Odsherred Kommune 2011, www.losnet.dk, www.friogfro.dk)

Fri og Fro is an eco village in the municipality of Odsherred, north west Sjælland. It consists of 17 individual households. The core values of the community are based on sustainability, both socially, economically and environmentally. The individual houses are all self built, using natural and re-used materials. The idea of Fri og Fro is inspired by the Danish eco Village Friland, which was the subject of a TV show in 2001-2002. It is a bofælleskab organized in an andelsforeningen, which owns the land, but the individual houses are not part of that forening. In 2005 the people of Fri og Fro moved to the area, after three years of ideation and planning, but the building of the individual houses, the common facilities and landscaping is still taking place in 2011. The realization process consists of three phases: 1) ideation and drawing out the first ideas for an eco village, starting with initiating and ending with finding the location in Trundholm (now part of the municipality of Odsherred), 2001-2003; 2) designing and planning: starting with finding the location in Trundholm and ending with moving to the area, 2003-2004; 3) building and living, a phase that is still current.

Bifurcations and mobilization

The initiators were inspired by the TV show about Friland and wanted to take such an initiative themselves too. What they tried to do new is to apply the legal form of andelsboligforening to the eco village concept. Also unconventional was that the Lokal Plan was written by the initiators themselves, both new for them, as for the municipality. The willow-based sewage system they applied was unconventional. Adjustments to the planning of the area were a shift from the 60 houses the area was 'planned for' to 17 houses by Fri og Fro, the adjustments of rural and urban

zoning, and the allowance of temporary houses. People in the group were all inexperienced with building ones own houses, especially with the natural and re-used materials. Architecturally the eco village is very distinctive. Main controversy related to bifurcations and mobilization is the whole 'doing-everything-by-themselves': the ideation, planning, designing, building is considered to be something very unconventional by the actors involved. Main association is between the municipality that was very willing to step out of conventional ways of working in order to get the land developed, and the initiators that were well prepared and educated for the do-it-yourself process.

Dissipative behaviour and interessement

From the beginning, a website to inform and attract people is made and maintained during the whole development process. Many municipalities are contacted in order to find a location. A legal advisor, constructors and a bank are consulted during the process, and a contractor is hired to make the area ready to be built. The relation between the initiative and the local community in the existing village is considered important and several events are created to establish good relationships between these two worlds, that gradually become more intertwined, and conflicts on nuisances are solved informally. Some people leave the initiative along the way, but soon new people join, some couples divorce during the demanding building process and several houses are for sale in 2011. The materials for the houses are mostly local and natural or re-used, so some group members go around the area in order to 'pick up' left over materials from building sites and the like. Fri og Fro has many visitors and organizes frequent tours. The goals for sustainability are generally felt to have been too broad and are not considered to 'bind' the group together, as the building process on the individual houses has been demanding, the focus of the group has been less on living together as was intended. Moreover, there are disagreements on the prices for the houses that are put to sale and whether this is an individual matter or a concern for the community. In the end, an andelsboligforening is not established because the houses are considered to be too different. Main controversy related to the dissipative and interessement modus is that the focus of Fri og Fro has been more on the individual building processes than on living together as a community, there are disagreements on the prices for the houses that are for sale – said to be fixed prices for economic sustainability, but now felt too be a more individual matter by some members, the core values on sustainability are considered to be not focused and defined enough to bind the community into a coherent whole, no andelsboligforening. Main associations are the temporary associations between consultants and contractors during the development process, and a more durable association between Fri og Fro and the local residents of Egebjerg: due to the constant outwards orientation of Fri og Fro the two communities have grown quite intertwined.

Autopoietic behaviour and enrolment

At the very start of the idea, the initiating couple sets out the core values and ideas for the eco village. Very soon the location in Trundholm is picked because it fits the demands of the initiators, and the municipality is willing to cooperate because having a community like Fri og Fro settle in Egebjerg means the local school and supermarket can survive. The core values and design and planning for the eco village are discussed among members during frequent meetings in Copenhagen.

It is felt that living in a group makes a sustainable life easier to realize. The members of the group agree on the fixed prices for the houses in order to prevent speculation. A collective loan is made in order to purchase the land as an andelsforening. Since the people moved to the area, common meetings, occasional parties and working weekends are held, but these are voluntary and not all members join. Main controversy related to the autopoietic and enrolment modus is that the core values on sustainability are not felt to be strong and focused enough to bind the community, the agreement on fixed prices is now dividing the community, focus has been on individual work, not on common activities. Main association is that between the interest of Fri og Fro and the municipality, and with the local community in maintaining the amenities.

Equilibrium and mobilization

The initiating couple is spokesperson for the whole group during the development process. A byggeforeningen is established during the planning process, an andelsforening is established to purchase the plot, and an forening is established to maintain the sewage system. In adjusting the Lokal Plan, conventional planning procedures can be used. Landownership as an andelsforening is unconventional, but in practice not so distinct from other forms of private ownership, since it is quite common that publicly accessible land or nature conservation areas are privately owned. Main controversy related to the equilibria and mobilization is that small adjustments to the land use zoning are made, and the specificity of the Lokal Plan due to the demands of the eco village makes it a very unconventional plan. The decision not to apply the concept of andelsboligforening because this legal form does eventually not fit with the architectural lay out of the eco village is a controversy as well. Main associations are between the demands of the community and the Lokal Plan, that are merged into one legally binding document, and several forms of forening are used in order to realize the project.

4.3 Hallinge Lille

(Sources: Elm and Dilling-Hansen 2003, www.hallingelille.dk)

Hallinge Lille is a co-housing project in the municipality of Ringsted, mid Sjælland. It consists of 18 individual households. The core values of the community are on sustainability and permaculture. The houses and buildings are individually designed, using natural and re-used materials. It is a bofælleskab organized in a grundejerforening. The first people move to the plot in 2002, to live in the already existent farm in the area, but the whole community gets established in 2005. The development of Hallinge Lille is characterized by a long and problematic planning process. The realization process consists of four phases: 1) ideation and drawing out the first ideas for a whole village, starting with initiating and ending with finding a location in Skjoldnæsholm, 1998-1999; 2) designing and planning (1): starting with the location in Skjoldnæsholm and ending with a different location in Ringsted 1999-2001; 3) designing and planning (2), working on the location in Ringsted and ending with an adjustment of the demands of the community to the existing land use plan; 4) building and living, from 2005 onwards.

Bifurcations and mobilization

The idea for a community as Hallinge Lille was a long cherished dream of the eventual founder of the community – a place where one could live 'from cradle to grave', with facilities for both children and elderly. She was motivated to have this dream due to personal circumstances in her family, and started realizing her dream after following a course on 'taking life in ones own hands'. A new community for 100 dwellings in the open, rural land is however an unconventional thing in Danish planning, so the planning process showed to be problematic – until the county decides to open a pilot on developing adjacent to small villages in the rural areas. Main controversy related to bifurcations and mobilization is a lack of places – both in urban as in rural areas – where one can live in a small social community but with all sorts of facilities for children and elderly motivated the founder to develop herself. Main association is that it proved difficult to find a location to settle, but the county pilot opened the final possibility.

Dissipative behaviour and interessement

By putting up notes, the initiator finds the first interested people that join the initiative. Various municipalities and landowners are contacted for locations. However, the first and second locations found are both subject to a local planning conflict between residents and county, and long negotiations are held between the initiative and local residents, but eventually the landowner refuses to sell. This setback makes that the group of initiators starts to fall apart. New locations are taken into consideration, but the eventually found location is again subject to disagreement on the plan, and again negotiations are held between the initiative, local residents and the municipality of Ringsted. Landscape architects and architects design the buildings and area. During the whole process, various consultants on legal, organizational and financial matters are contracted. Now Hallinge Lille is established, a website is maintained, and there are various possibility to visit the community, and villagers are invited to join festivities in the community. Main controversy related to the dissipative and interessement modus is the divergence between the initial ideas and the local planning conditions, which makes negotiations and reframing of the initial idea necessary, but almost leading to disintegration of the whole initiative. Main association is between the demands of the initiative and the local planning conditions, but at the costs of the first.

Autopoietic behaviour and enrolment

First meetings are quickly followed by the establishment of a forening, and a strategy and statutes are made. The outlines of the initiative are: a location in mid Sjælland, approximately 50 hectares, 100 dwellings and various facilities. Twice, a location is found but not developed because of local planning disputes and disagreements with landowners. Several meetings are held among the initiators to agree on the goals of the initiative, permaculture and a eco-spiritual community is the main binding idea. The initial ideas are scaled down in order to make a fit with local planning

schemes more feasible. After the first setbacks, the general meeting decides in 2001 to give it one other try. A new site is found in Ringsted, the farm and land are bought, but again concessions have to be made to the demands of the initiative and local planning conditions. Architecturally, in size and use of colour, the houses are made to fit to the architecture of the local village. Paths running through the area make sure the existing village remains connected to the forests. Main controversy related to the autopoietic and enrolment modus is that the group or community ends up being considerably smaller (18) than originally intended (100) and hardly any of the intended facilities are realised in order to fit the initiative in local planning conditions. Main association is that the founder, group and initiative is determined enough to continue to make efforts to realise – at least parts of – the original idea. The ideas on permaculture, consensus democracy, and eco-spiritual community appear to be strong binding elements for the group.

Equilibrium and mobilization

Soon after the first people come together, a forening is established. During the process, various plans – municipal, regional and national – appear to be dominant over the initiative. An adjustment of zoning is needed, and thus consultation with local residents, eventually the municipal council disagrees with adjustment of the zoning boundaries and the initiative has to be realized within the boundaries of the existing land use plan. When the houses are built, a grundejerforening is established. Main controversy related to equilibria and mobilization is the dominance of existing land use plans prevents new order to emerge. Main association is between various concepts of forening and bofælleskab and the ideas of the initial founder.

5. Conclusions

Reviewing these cases with this analytical framework makes several things apparent that are interesting to mention, before diving deeper into the conclusions that relate to the research question. In each phase, almost all types of behaviour are visible. These are not only performed by the leading actors, but by all involved in the process. Actors and interests move in and out the initiative and the process, and persuaded end goals can be different for each. Both the project, the location, the actors involved act in multiple networks simultaneously, who are themselves in turbulent and unstable motion. (Hillier 2007). Interlocking interests in one phase, can continue in another phase, but might as well unlock or change during the process. This framework makes apparent that co-housing is not so much on merging perspectives into a coherent, agreed whole, but rather on the multiple trajectories that run through a process of establishing a co-housing initiative (cf. Massey 2005). Of course the initiative self-organizes towards realization, and this can be seen as a coherent whole. However, actors involved other than the initiators and intended end-users, can have different end goals than the realization of a co-housing project per se. Therefore, not the merge into a coherent whole is what is important, but rather the emergence to a higher form of complexity, that is the existing situation *and* the realized co-housing project. Focus is not on

changing a situation, but rather on adding something new, something extra to the already existing situation. A higher form of complexity that is satisfactory for all involved.

5.1 Case encounters

The main research question for this second half of the paper concerned the encounters between Danish co-housing initiatives and the existing planning and housing schemes. In order to investigate this question, I identified different types of self-organized behavior, four kinds of attitudes between a co-housing initiative and existing planning and housing schemes. Bifurcations are jumps away from the usual path-dependencies in the housing schemes and planning system, and the decision to take matters in ones own hand and to develop something new on ones own behalf. New equilibria stand for becoming part of the usual scheme of things, a new thing but part of a coherent whole. Path-dependencies are deployed for ones own sake – elements of the existing housing and planning schemes are used in order to establish 'the new'. Dissipative and autopoietic behaviour are reactions of the evolving network to the internal dynamics and the external environment. Internal means who is and who becomes part of the system or group. External means who is kept outside but still needs to be considered or encountered. As these types of behavior all show different attitudes between the initiative and planning and housing schemes, each type of behavior concerns different associations and controversies between the initiative and the planning and housing schemes. Reviewing these associations and controversies makes clear what the exact encounters between co-housing, housing schemes and planning are.

Associations between the co-housing initiative and planning and housing schemes appear to have been strongly colored by various actors who are willing to experiment, open to try something new. In Lange Eng this concerned the initiators, the municipality and the developer, in Fri og Fro the initiators and the municipality, and in Hallinge Lille the initiators and the county. Surprisingly, in all cases, the eventual divergence from the usual ways of working has not been as big as might have been expected. In Lange Eng, conventional planning procedures were followed, and a satisfactory match between the demands of the group, the plan, and housing scheme was soon found. In Fri og Fro, the content of the Lokal Plan is unconventional, but since the municipality was open to the ideas of the community (out of self interest!) and the initiators were well educated in what was expected from them, the demands of the initiators and planning schemes of the municipality did satisfactorily merge into the legal document of the Lokal Plan, and eventually all obligatory planning procedures were followed as usual. In Hallinge Lille eventually there was hardly any divergence from the usual planning procedures. Local conditions obstructed the original ideas of the initiators, which in the end were adjusted to fit the local planning conditions after all. Concerning the collective housing schemes that exist in Denmark, all three initiatives used various forms of forening during the process. In Lange Eng the forening was established after the decision for the location was made, and eventually it turned into a grundejerforening. In Fri og Fro the byggeforening was established soon as the location was found, and an andelsforening was established to purchase the plot. In Hallinge Lille the forening was founded even before a location was selected, and eventually the group got organised in an grundejerforening. All three projects are bofælleskaber.

Other associations that occur during the development of the co-housing initiatives that have been important for the realization, concern three aspects. First, the temporary associations between the initiative and various consultants and constructors. The initiators of the cases appoint that the more these external actors are acquainted with co-housing initiatives, the better and fruitful these temporary associations are. Second, the association between the various members of the co-housing initiative is important. In all initiatives this is organized around sharing a certain life style, pointed down in the statutes of the forening. In Lange Eng and Hallinge Lille, this proved to be strong binding elements for the community. In Fri og Fro, the work on the individual houses proved to be more dominant than the communal aspects of the initiative. The third association concerns the relation between the co-housing projects and its surroundings. In Lange Eng, no significant association appears to exist between the residents of Lange Eng and their neighbors. When Lange Eng was built, the whole area of Herstedlund was developed, so no negotiations with local residents had to take place, and the social activities within Lange Eng itself appear to be sufficient for the residents but closed to outsiders. In Fri og Fro, deliberations and activities between local residents and residents of Fri og Fro take place from the very start of the project, and gradually, the two communities become socially intertwined, because both communities use the same amenities in the village. In Hallinge Lille deliberations between the local residents and the initiators take place, but these are not on all aspects positive. As the project is realized, social activities do take place in which both local residents and the residents of Hallinge Lille participate.

Controversies between the co-housing initiative and planning and housing schemes apply firstly to the lack of available houses that meet the demand of the individuals, making them eventual decide to develop for themselves. This was especially the case in Lange Eng, where the initiators were confronted with a tense housing market, and Hallinge Lille, where the initiators whished for a rural community with facilities for both children and elderly. The initiators of Fri og Fro were mostly driven away from the conventional housing market by ecological and self-building aspirations. Secondly, concerning the local planning schemes, in Lange Eng no controversies happened. In Fri og Fro, small adjustments to the land use zoning were necessary, and the specificity of the demands of the eco village makes the Lokal Plan into a very unconventional document. In Hallinge Lille a controversy occurred between the original ideas of the initiator in order to fit the local planning conditions. Negotiations with local residents and the municipality and a reframing of the initial idea proved necessary, almost leading to disintegration of the whole initiative. The group or community ends up being considerably smaller (18) than originally intended (100) and hardly any of the intended facilities are realised in order to fit the initiative in local planning conditions. The dominance of existing land use plans prevents new order to emerge. Thirdly, concerning collective housing schemes, the only controversy happened in Fri og Fro, was that the initial idea to become an andelsboligforening was abandoned, because the architecture of the project proved to be incompatible with this legal form of ownership. Fourthly, architectonically, all three projects turn out to be rather distinctive from their surroundings. Lange Eng is a considerably larger structure than the other projects in the surroundings. Fri og Fro is completely different with the houses built out of straw, clay, and re-used materials. In Hallinge Lille, the architecture of the houses is adjusted to the surroundings in use of colour and building heights, but still the houses built on ecological principles look very distinct.

Other controversies that occur during the development of the co-housing initiatives that have been threatening the realization, mostly concern the choices that have to be made concerning location,

ownership and financing of the initiative. As long as these choices remain open, the network of allies remains fluent and elusive. Soon as choices on these aspects are made, people leave the initiative but others join. In Lange Eng this concerned the location in Albertslund. In Fri og Fro this concerned the choice of having fixed housing prices. In Hallinge Lille it concerned the lack of location. Core values defined in the beginning do not always turn out strong enough to keep the community together, or vibrant. In Fri og Fro, the project has individualised because the building process of the individual houses has proven to be too demanding for some, and moreover, the discussion on the housing prices for those houses on sale, has been dividing the community. In Hallinge Lille, the community is seriously threatened by the setbacks in the planning process, and ends up considerably smaller than originally intended.

5.2 Learning from the Danes?

Having said all this, it is now time to move to the final conclusion of this paper, concerning the Dutch-Danish comparison. In the first part of this paper, I mentioned various aspects that are presumed to be obstructing the emergence of collective private commissioning in the Netherlands. Among these obstructions are Dutch building customs that are accustomed to large scale development by professional developers and housing corporations, and regulatory planning frameworks that are governmental-led and leave little room for the civic-public negotiations that are part of collective private commissioning. In order to understand how the Dutch planning system can become more adaptive to self-organization by co-housing initiatives, in the second part of the paper I argued it might be beneficial to take a closer look into the Danish planning and co-housing practice. Danish and Dutch planning systems and housing schemes have many similarities, but differ on some crucial aspects concerning the obstruction for co-housing in the Netherlands. I mentioned four major differences: first, the Danish custom of consensus-based civic-public negotiations before plans are approved; second, the Danish custom of negotiations between municipalities and (future) landowners before the legal plan is defined; third, the Danish custom of small projects, small plots, making private commissioning a common practice and the building sector fragmented; and fourth, the many forms of collectiveness in taking responsibility for maintenance, ownership and everyday life, make the Danes much accustomed to collective living environments. For these reasons, I assumed that in the Danish situation, co-housing initiatives suffer far less barriers – or at least different ones – than their Dutch counterparts.

So let's see. In the third and fourth part of this paper I used an analytical framework for self-organization to study three co-housing initiatives recently developed in Sjælland, Denmark, and their encounters with the planning and housing schemes. This leaves me with the question whether the binding and conflicting elements that the Danish initiatives face, are the same, or different ones than the Dutch initiatives. First, concerning public-civic negotiations. The cases show that the Danish custom to have extensive deliberations between citizens and municipality before plans are approved, do not concern the co-housing initiative itself, but rather a desired consensus between the new co-housing initiative and already existent local community. Whether these deliberations are obstructive to an initiative or not, depends much more on local planning conditions than on systemic elements. For Lange Eng, no negotiations were necessary since there was not local community yet when Lange Eng was developed. In Fri og Fro, the initiative took much consideration in getting to be

wanted by the local community itself. In the Hallinge Lille case, the negotiations between the initiative and local residents remained problematic for all locations they applied for, but these disputes were rather the result of disagreeing residents and planning authorities than between the residents and the initiative itself. Second, concerning the negotiated legal plan. In the cases, it shows that the negotiated legal plan was enabling for both the initiative and the municipalities in finding a fit between the various demands and the eventual legal plan. There was no beforehand allocation of the plots to become home to a co-housing initiative. Rather did the initiatives suit the general planning intentions of the municipality (for Fri og Fro and Lange Eng the resourceful people it would bring to the municipality), giving the municipality the arguments to prefer these initiatives over others. The negotiated legal plan also enabled the initiative to have their specific (ecological or other) demands legally framed and secured. Third, concerning the practice of private commissioning. In the cases, indeed no problematic encounters took place between the initiative and contractors based on individual commissioning. Rather, the more difficult encounter between Lange Eng and its contractor was due to the large scale of the project (52 houses in one architectural structure) than to the non-professional commissioning. And for both Fri og Fro and Hallinge Lille, the challenges to get loans, contractors and legal advise had more to do with the communal and ecological character of the initiative than with the private commissioning. Fourth, concerning the collective forms of living. All three cases have taken benefit from the collective schemes Danish law provides. These were supportive on various aspects: they helped in finding loans and purchasing the ground, they helped to define common goals and rules-of-living for the people in the initiative and to define these in self-written statutes, and they helped in appointing spokespersons for the initiative that could deal with all negotiations and deliberations with planning officials.

These examples show indeed, that in the Danish system, a co-housing initiatives suffers less barriers in relation to the existing planning system and housing schemes. This does not mean however, that the Danish co-housing initiatives are without turbulence or challenges. Their starting point has been provoked by a tens housing market or general lack of houses that meet the demands of certain individuals. Finding allies, resources, a location to settle, are all hurdles all initiatives face. Some general lessons can therefore be learned from the cases I studied in this paper. First, it is important to find like minded people and people and parties that are willing to try something new, and not focus too much or too long in convincing or deliberating with those that regard the initiative as something threatening. Second, it is important to acknowledge that the networks around an initiative can remain fluent and elusive for a long time, and it is perhaps more fruitful to accept the temporality of some associations than to focus too soon and too strict on membership and commitment. Moreover, it is important for the initiators to stay close to their initial goals, and to find a location, framework, plan that fits their idea – if no allies are there yet, they will come eventually when most choices are made. All actors involved in the initiative are subject to different and multiple trajectories, and acceptance and acknowledgement of these differences can make deliberations more easy-going and changes less disappointing.

For the Dutch system specifically, some recommendations can be made on how planning can become more adaptive to self-organization by community-based networks in general – without wanting to merge the two planning systems or the bluntly copy Danish practice to the Netherlands. But learning from the Danish cases, I would like to make the following recommendations. First: try not to change too much in the planning system, since local planning conditions seem to be more relevant chances or obstructions to a co-housing initiative than the planning system in general.

However, the negotiated legal plan is for sure a form of adaptiveness that could be beneficial for the Dutch planning practice as well. Second: the building sector based on large scale development in the Netherlands is the opposite of the Danish small scale and fragmented building sector. As the latter is critiqued for its lack of economic efficiency, it might be a challenge to think of ways in which the building sector in the Netherlands can become more small scaled and thus more open to private commissioning, without losing its economic efficiency (perhaps through the application of ICT in order to efficiently connect demand and supply in materials, concepts, contractors etc.) And third, it might be worth exploring how forms of collectiveness can become more promoted and legally supported in the Netherlands, in order to help initiatives to get organized, become and remain robust and to gain the resources they need in the realization of their dreams.

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REGIONAL DISPARITIES IN THE EUROPEAN UNION. WHAT ARE THE FACTORS THAT COULD INFLUENCE THE SUCCES OF SINGLE REGIONS IN DEPLOYING EUROPEAN AID?

Federica Leone [1]

Abstract

The concepts of solidarity and cohesion represent the principal aims of European Union (EU) regional policy. Indeed, promoting economic and social cohesion can mitigate the structural disparities among European regions, having positive effects on all Community territories. EU encourages these objectives through financial funds and instruments in aid of less developed regions. However, despite these financial efforts, disparities in the European context and within the same national boundaries persist. The reasons for this phenomenon are partially ascribed to the capacity of Member States and regions to manage financial resources, identifying priority projects and sectors, where investments should be directed.

Moreover, regional disparities are quantified by means of symptoms and driving forces. The former represents the effects of inequalities, such as GDP per capita, unemployment and youth unemployment. The latter concerns the reasons of spatial imbalances, such as R&D and human capital, infrastructure, environment, governance, social, natural, and human capital. On the other hand, only by tackling these problems could economic and social development be encouraged and promoted. In addition, single Member States have a directive role in deciding how the financial instruments should be used and in bearing the responsibility for managing it properly. From this perspective, the driving forces represent causes of spatial disparities and at the same time the key factors of regional success in deploying EU aid. However, some of these elements, such as R&D, human and social capital, and governance, can influence the strategies and policy to manage European funds in a direct way. Indeed, for example, innovative projects in the R&D field and forms of governance, characterized by transparency and efficiency, can represent the distinction between more and less developed regions. On the other hand, although infrastructure, environment and natural capital do not have a direct impact in deploying EU regional policy aid, their analysis is necessary in order to understand the invariable aspects, such as geographical position, and how these immutable factors should be handled, acting to other elements.

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The main disparities in terms of GDP persist at regional level. From this perspective, Italy represents a significant case study due to historical divide between northern and southern regions. Indeed, Italy represents an emblematic case of coexistence of a rich area, which is typified by the central and northern regions, and the south, characterized by widespread economic and social deprivation. From this perspective, this paper aims to identify and examine driving forces that influence and encourage the regions' success in deploying EU regional aid, analyzing the specific case study of Italy.

1. Introduction

The formal birth of regional policy within the European Union (EU) dated back to the adoption of the Single European Act in 1986. The principal aim of EU regional policy concerns solidarity and cohesion concepts. The former is based on the reduction of structural disparities; meanwhile the second intends to promote economic and social cohesion owing to the positive effects that the mitigation of economic and social gap among European regions could have on all territories (European Union, 2011).

This purpose is achieved through three main objectives: Convergence, Regional Competitiveness and Employment, and European Territorial Cooperation. The Convergence goal promotes conditions and factors in order to foster growth and real convergence for the least developed Member States and regions. The Regional Competitiveness and Employment objective intends strengthening regional attractiveness, competitiveness and employment throughout EU. Meanwhile, the third goal aims at promoting cross-border, trans-national and interregional cooperation in order to achieve an integrated territorial development (European Union, 2009). In practical terms, the EU uses Structural Funds and instruments for the purpose of achieving these three objectives. Moreover, the principal fields of investment are: knowledge and innovation, transport, environmental protection and risk prevention, and human resources (European Commission, 2008, pp. 2-3). For the 2007-2013 programming period, the three fundamental financial instruments are: the European Regional Development Fund (ERDF), the European Social Fund (ESF) and the Cohesion Fund (European Union, 2009).

The ERDF focuses on regional development, economic challenges, competitiveness and territorial cooperation; meanwhile the ESF supports actions in order to promote employment and social integration in the labour market, and reforms in the education system. The third financial instrument, the Cohesion Fund, concerns different issues such as transport and environment infrastructure, energy efficiency and renewable energy (European Commission, 2008, pp. 2-3).

Although the EU defines the priority goals by means of the Community strategic guidelines on cohesion, National and regional governments manage European regional policy in a decentralized way. Indeed, the single Member States and regions have the task of choosing the principal objectives for each territory through a

collaborative process among European, regional and local authorities, social partners, and civil organizations (European Commission, 2008). Indeed each Member States drafts a National Strategic Reference Framework (NSRF), which defines strategies and the operational programmes (OP) that it intends to implement. The latter identifies criteria and priorities in order to select the single projects (European Union. 2010).

However, in recent decades, the European regions have tackled new challenges deriving from globalization and opening up of its economies. Indeed, the competition among new and old European countries but also between Member States and South-east Asian countries has increasingly extended. These phenomena have caused a redistribution of activities due to production dispersion and an increase of intra-sectional and intra-firm trades. These aspects represent some of the causes of the recent economic crisis that has hit both less and most developed regions in Europe (European Commission, 2006).

From this perspective, in the European context, two levels of disparities can be recognized: national and regional. The first concerns the national level, where Luxembourg represents the richest Member State in terms of per-capita income; meanwhile the poorest is Romania. The latter is around seven times poorest than Luxembourg. This gap becomes wider at regional level, where Inner London, the richest region, has a gross domestic product (GDP) that is 290% of EU-27' average. On the other hand, Nord-East Romania region, the poorest, has a GDP which is 23% of the EU average. From the international perspective, these disparities are really significant. Indeed in China and India the regional gap has a value of 7 times, in US only 2.5 times and in Japan 2 times. This difference between European Union and the international scenario reflects the fact that the EU is not based on a common market but on community values and policies, which are underwritten and accepted by all Member States (European Commission, 2008).

From this perspective, it is easy to understand what the real importance of EU regional policy is. However, single funds and financial instruments are not sufficient to achieve the social, economic and territorial cohesion. Indeed, only if Member States and regions are able to manage the funds and to identify priority projects, they can benefit from these financial instruments in order to encourage and promote the economic, social and territorial cohesion.

From this conceptual framework, this paper aims at identifying factors that influence and encourage the regions' success in deploying European Union regional aid. In particular, the Italian case study is analyzed in order to understand the direct and indirect issues that have entailed the historic disparity between northern and southern areas.

2. Disparities and factors of success in the EU

The main territorial disparities at European level are between the core and the periphery. Indeed, the European Spatial Development Perspective (ESDP) identifies only a big economically integrated area, named “pentagon” that is composed by London, Paris, Milan, Munich and Hamburg. This zone provides global economic services and functions that guarantee high incomes and well developed infrastructures. On the other hand, at national level it is possible to recognize different inequalities, such as those between rural and metropolitan areas. Indeed, in the capital city region, there are the most favorable business conditions, such as accessibility, IT usage, transport, infrastructure, and education level. This unbalanced phenomenon reduces the possibility to have an aggregated economic growth (European Communities, 2004).

From this viewpoint, it is possible to recognize two different types of disparities: symptoms and driving forces. The former represents the effects of disparities in the EU, such as GDP per capita, unemployment and youth unemployment. Meanwhile, the latest, which are R&D and human capital, infrastructure, governance and social capital, constitutes on one hand the causes of spatial inequalities, and on the other hand, key aspects that can promote and encourage an appropriate and efficient management of the European financial instruments. Indeed, single Member States have a directive role in deciding how the funds should be used, and in bearing the responsibility for handling them properly. Therefore, the driving forces represent the factors that influence the regional success in deploying EU’s aid. However, their clout can be either direct, such as R&D, human capital, governance, and social capital, or indirect, such as infrastructure, environment, and natural capital.

In the following paragraphs, the European context in terms of direct and indirect aspects is analyzed in order to define the conceptual framework in which the Italian case study is included.

2.1 Direct factors

The success of regions in relation to European financial aids is closely connected to their capacity to change and innovate. From this perspective, encouraging research, development and innovation represents a key issue in order to promote a sustainable economic growth. In this paragraph, the different direct factor are analyzed for the purpose of defining the current situation within the European borders and in order to clarify in what way they could promote an efficient handling of financial instruments.

First of all, an important and significant disparity exists among Member States and single regions in terms of research, development and innovation. Indeed, at European level, the better standards in relation to research are achieved in Sweden, Finland, Netherlands, Germany, France and some areas of United Kingdom. This phenomenon reflects the geographical distribution of disparities in EU. Indeed, in the

Convergence regions people with a tertiary education represent only 18% of total amount of human being aged 25-64. Meanwhile, in other regions this percentage achieves 26-27%. Moreover, different studies and analysis show that higher education and training improves and increases labour productivity, people's income and life satisfaction. In addition, people with a tertiary education, and in particular researchers, exercise a key role in terms of production and exploitation of new knowledge. Indeed, in 2007 the average relationship between productivity and the amount of people aged 25-64 with a tertiary education showed that productivity was 780 PPS higher for every percentage point in regions where the share of tertiary educated was above average. From this perspective, a high percentage of tertiary educated people represents a factor that can promote and encourage the economic growth (European Commission, 2010, pp. 32-37).

On the other hand, the tertiary education does not represent the only source of highly skilled workers. Indeed, retraining of people in every level of skills can improve and increase the number of highly skilled workers in particular if it is connected to labour market needs. In addition, skills and highly skilled workers allow regions remaining competitive in a global, knowledge-based economy. Indeed, the globalization and the recent economic crisis have increased intra-sectional and intra-firm trades. This phenomenon has caused some problems and at the same time some advantages. On one side, it has provoked a dispersion of the production, which has been located outside European borders by the main companies. From this perspective, some vulnerable sectors, such as textile, metal and electric equipment, have registered a decline in employment. In particular, this trend has concerned less specialized zones that have to compete with no European emerging economies, which are characterized by low-cost and low-quality products. Meanwhile, the specialized regions have moved up their economies towards high-end production, niche markets and high-tech goods. As a consequence, this market behavior has increased the production, maintaining the same level of employment. On the other hand, the globalization has produced an increase in the demand for logistic, monitoring and management systems. Indeed, the regions, where the economy is characterized by employment in financial, business and logistic sectors, have registered an improvement in terms of production and employment. It is the example of Luxembourg and Ireland, where in 2008 the trade surpluses in services thanks to financial sector were respectively 31.6% and 13.3% of its GDP (European Commission, 2010). From this perspective, the investments in human capital, entrepreneurship and improvement of business environment are essential in order to reduce economic loss, in terms of employment and production. Moreover, the integration of global trades, the introduction of new technologies and more skills could improve the economic situation of all regions. In other words investments on research, development and innovation as well as an appropriate and effective business venture can help State Members and regions to administrate EU regional policy's financial instruments.

Moreover, the quality of institutions and governance in general can have significant effects on economic growth in terms of efficacy of regional development strategies. Indeed, not only does an effective governance system entail guaranteeing that funds

are spent in proper ways but also it ensures and encourages a coherent and efficient strategy, the involvement of all stakeholders, the selection of good quality projects, and the monitoring, and the assessment of results. According to European Commission (2001), good governance is composed by five principles: openness, participation, accountability, effectiveness, and coherence. The first principle refers to a more open cooperation between local, regional and national government. It is important in order to encourage the participation and the involvement of all community. Participation is a prerequisite of development strategies' success. Indeed, first of all, coordination of all the stakeholders who participate in the planning processes is fundamental since the impacts of their actions could be completely out-of-control otherwise. This would possibly cause ineffectiveness and/or inefficiency of the planning processes. Secondly, the management of public participation processes provides information about local planning contexts and allows implementing more effective action strategies. Therefore, it promotes a better understanding of a community's needs, and as a consequence, planning decisions could meet population demands in the most proper way. From this point of view, participation could give a solid foundation to planning strategies and narrow local conflicts. The concept of accountability concerns the clarity of defining and identifying the roles and the responsibilities in the legislative and executive processes. The fourth principle refers to the effectiveness and timeliness of policies and strategies in order to identify clear objectives and an evaluation of future impacts. Coherence regards the complex problems that are not possible to be tackled individually because they need a political leadership, a strong responsibility, and a cooperation beyond national boundaries.

Form this point of view, an efficient governance system should be multi-level in order to identify the multiple and complex needs and preferences of people (Gore and Wells, 2009). Moreover, the multi-level governance has to be composed by horizontal and vertical collaboration. The first refers to central government; meanwhile the second concerns the cooperation across different governmental levels. This could represent a way to implement coordinated strategies of public investments. However, a multi-level governance needs a good training of municipal staff that should have skills in project management and budgetary practices. From this perspective, the partnership represents a key principle in order to achieve the economic, social and territorial cohesion, because the sharing of skills and knowledge can make planning and implementation more effective. For instance in France, a partnership between regional and central governments has been introduced in order to share responsibilities in terms of strategy design, monitoring, reporting and managing. On the other hand, only if the administration and the other different authorities are competent, efficient, impartial and client oriented could a multi-level governance be effective. (European Commission, 2010).

2.2 Indirect factors

Encouraging the economic, social and territorial cohesion represents the main objective of EU regional policy. From this perspective, the investments in specific

fields such as infrastructure, environmental, and natural capital can promote the economic and social growth. However, although little do they have a direct impact in deploying EU regional policy aid, their analysis allows a more complete and exhaustive comprehension of investment channels, which are the key issues in the identification of strategies and policies to manage European funds.

Moreover, the opportunities of regional success in terms of competitiveness and economic development are connected to availability of infrastructure, such as transport and telecommunication networks. Indeed, the provision of effective infrastructures can have positive effects on productivity and growth. For instance, a well-planned transport system can encourage the regional development in terms of productive costs reduction, and improvement of competitiveness. From this perspective, a better access to labour market represents a key factor in order to attract investments and to promote economic and social cohesion (European Commission, 2010). In general, the major motorway networks in terms of density are located in Netherlands, Belgium, in the western German regions, and in United Kingdom. Moreover, high accessibility for goods and passengers represents an important aspect for regional economic performance that can be achieved by means of efficient road or motorway but also thanks to railways and airports (EUROSTAT, 2010). In addition, high –speed ICT networks represent another significant element because it improves the capacity to compete in the global market. From this perspective, the access to this kind of technology is essential in order to develop public and private on-line activities, such as communicating, selling and buying goods and services. Therefore, the crucial issue is the lack of bonders. Indeed, these activities are not linked to a specific place, and as a result, it allows people to take part in economic, social and political life. In addition, ICT networks make market more flexible (EUROSTAT, 2010).

On the other hand, environment and natural capital are two significant factors in order to achieve the EU regional policy objectives. However, some environmental aspects such as the geographical position represent an invariant factor. Indeed, for example regions with geographic handicaps, such as mountain and insular regions, show physical characteristics relating to their positions that inhibit their development. Therefore, the main problems concern the population decline, and high levels of unemployment. Moreover, the low density population goes with low level of infrastructure and services (European Communities, 2004). In addition, climate change has negative impacts on economic, social and environmental systems in terms of environmental degradation, biodiversity loss, unsustainable use of natural resources, food supply, health, industry, and transport. In particular, the regions, which are mainly exposed to these problems, have to face important challenges to agriculture, forestry, fisheries, energy production, and tourism industry. Moreover, the intensity of these impacts depends on different issues, such as the physical vulnerability, the economic development and growth, the natural and human adaptive capacity, and the disaster monitoring mechanisms. From this perspective, the use of renewable energy and the measures to mitigate the impacts and causes of climate

change can create an economically and environmentally “win-win” situation (European Communities, 2004).

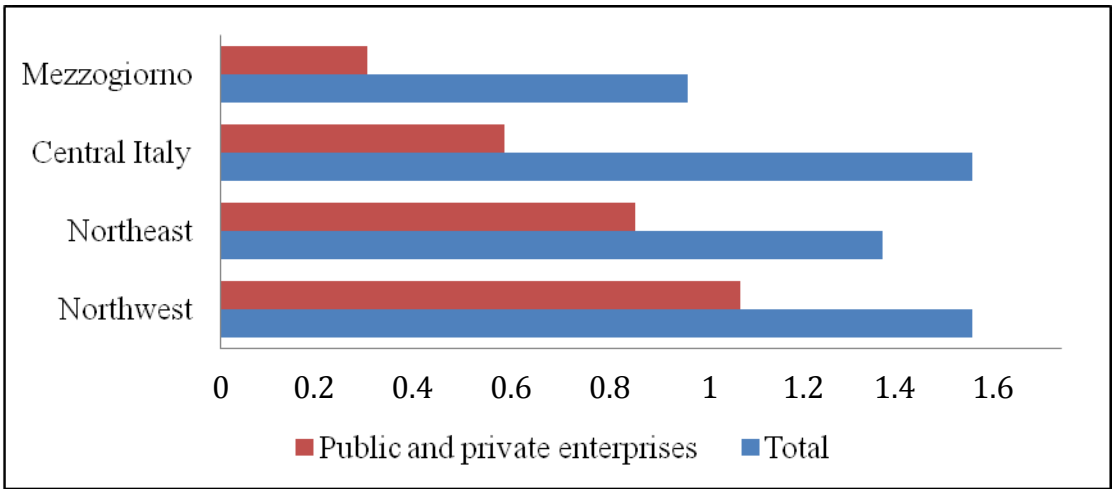
In conclusion, the regional success could be indirectly influenced and promoted by a better management and development of infrastructures, and by the investments on environment. Indeed, the latter can promote the economic development in three ways: ensuring a long-term sustainability of economic growth, reducing external environmental costs and promoting innovation and new jobs (The Council of the European Union, 2006).

3. The Italian case study

Despite in recent years, disparities in terms of GDP has been reduced, significant regional differences within the same nations persist. Although these disparities are marked in different Member States such as Germany, France and United Kingdom, Italy represents an emblematic case due to coexistence of a rich area, which is composed by centre-northern regions, and the Mezzogiorno, which is characterized by an economic backwardness. However, the significance of Italian example in this context is not related to intensity of these imbalances but to their persistence in the course of time. Indeed, this divide depends on historical factors that date back to Italian unification. This phenomenon has led to a dualistic framework that represents a distinctive aspect of Italian development model (Aiello and Pupo, 2009). In this paragraph, the direct and indirect factors in relation to the Italian case study are analyzed in order to understand their impacts on the historical disparities between northern and southern regions.

3.1 R&D and human capital

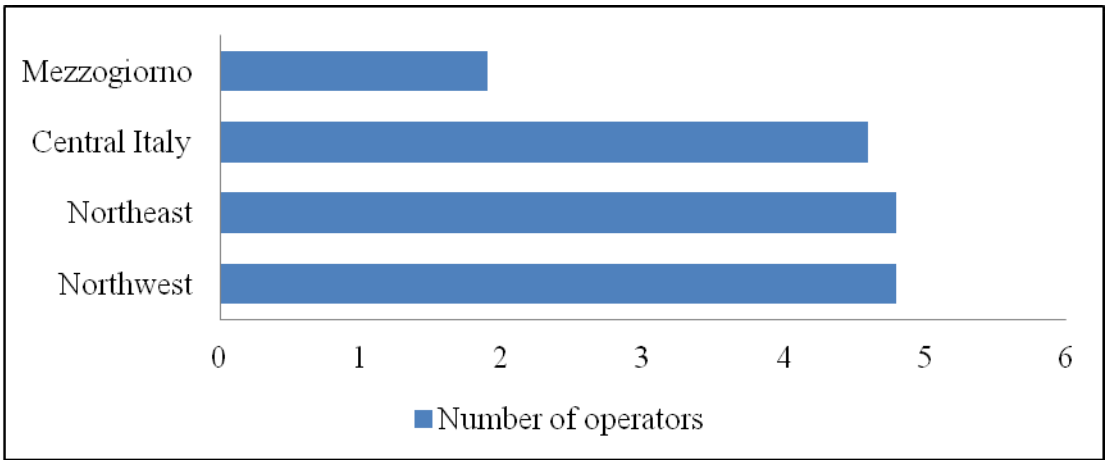
In relation to R&D, in 2009 the main total expenditure on this field, in terms of GDP percentage, is located in the north and central Italy (Bar chart 1). In particular, the worthiest regions are Piedmont (1.83%), Latium (1.78%), and Trent (2.09%). However, in the latter the significant percentage is due to both public and private institutions. In Piedmont is prevalent the role of private enterprises; meanwhile in Latium, universities and public research bodies represent the main investors. Moreover, the expenditure of private enterprises in the Mezzogiorno is below the national average owing to medium-low dimensions and the sectional compositions of companies (Istat, 2009).



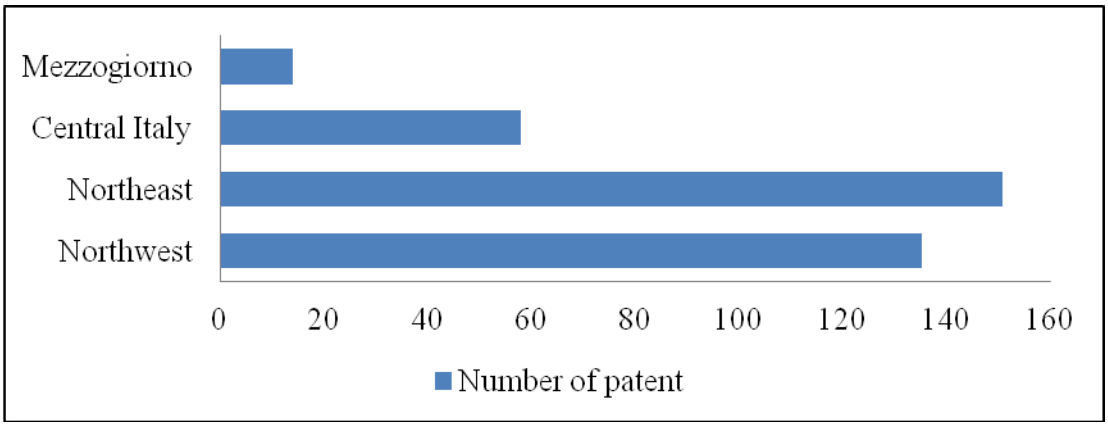
Bar chart 1 Expenditure (expressed in percentage of GDP) on Intramural R&D in 2009 (Istat, 2009)

In addition, the companies that invest in R&D are concentrated in the northern Italy, where regional governments support small-medium enterprises by means of tax reliefs. In particular, the most amounts of funds come from Lombardy, Lazio, Piedmont, Emilia-Romagna and Veneto. For example in Lombardy two different kinds of funds exist: FRIM and FESR. The former finances industrial and development research projects that are oriented to innovation in terms of products and processes. The second support investments that are linked to industrial application of research results (Pagamici, 2011).

The divide between Northern and Southern regions is confirmed also by the number of operators (for 1000 inhabitants) on the R&D field (Bar chart 2) and by the number of patent for millions of inhabitants (Bar chart 3). Indeed, the higher percentages are linked to the northwest and northeast areas, where there is the combined action of private enterprises, which absorb the 60% of R&D operators, and universities. However, in the central and southern regions, the supremacy concerns the universities and public research institutes (Istat, 2009).



Bar chart 2. Number of operators (for 1000 inhabitants) on the R&D field in 2009 (Istat, 2009)

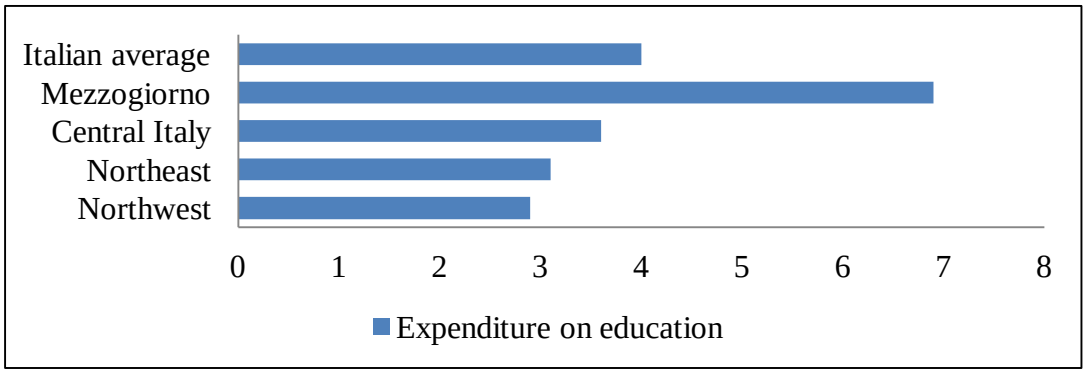


Bar chart 3. Number of patent per millions inhabitants in 2007 (Istat, 2009)

In relation to the second indicator, the territorial distribution of patents shows a low level in the Mezzogiorno, where the value is similar to the less European State Members. Meanwhile, the situation is different in the North due to the sectional productive structure (Istat, 2009). From this perspective, the success of northern regions is assignable to a strong presence of industry and a polycentric spatial organization, where productive services are distributed around a number of local centers.

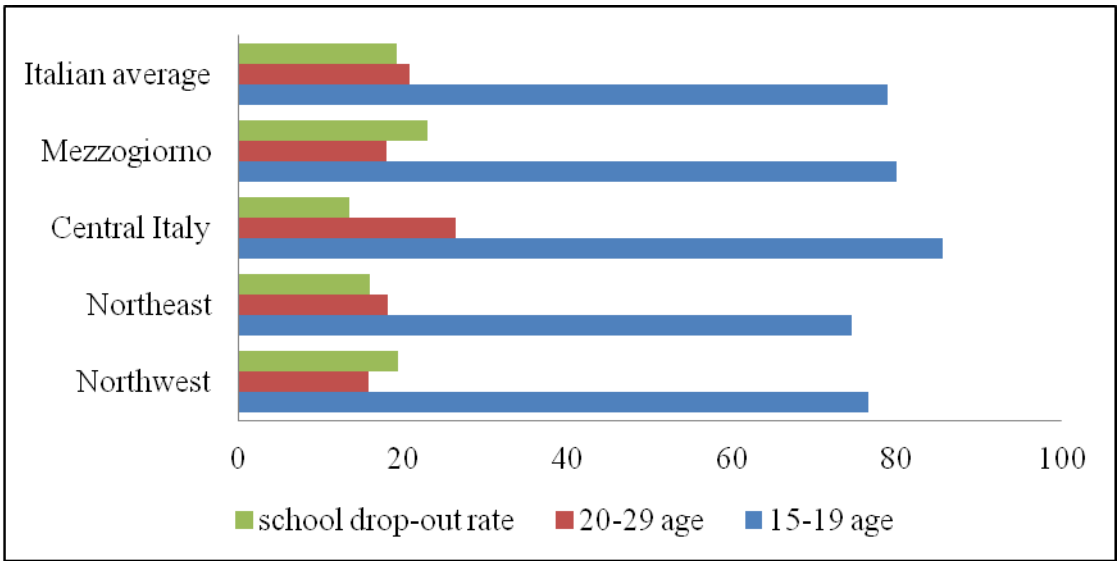
Moreover, the gap between northern and southern regions in terms of human capital is analyzed in relation to six indicators: public expenditure on education, expressed in percentage of GDP, rate of participation to education in relation to 15-29 age population, the school drop-out rate, the percentage of population with a tertiary education, and the rate of young people outside the productive and the educational process.

In 2007, the rate of expenditure in relation to GDP on education was 4.0% in Italy (Bar chart 4). However, the situation is different between northern and southern regions. Indeed, the main percentage of investments concerns the Mezzogiorno regions, such as Calabria, Sicily, Basilicata, Apulia, and Campania, owing to a larger school age population (35.1% of total Italian school age population).



Bar chart 4 Rate of expenditure in education, expressed in percentage of GDP in 2007 (Istat, 2009).

On the other hand, the percentage of participation of 15-19 and 20-29 age population to education (Bar chart 5) shows the same data in the entire Italian territory. Little is the percentage in relation to 20-29 ages. However, this phenomenon suffers from the mobility of tertiary educated people. Although the percentage of participation is regularly distributed, the school drop-out rate is particularly relevant in the Mezzogiorno. Indeed, for example in Sicily the trend reaches nearly a 25 percent.



Bar chart 5 Rate of participation to education in relation to 15-19 and 20-29 age population and the percentage of school drop-out in 2009 (Istat, 2009)

In addition, it is significant the percentage of 30-34 age population with a tertiary education. Indeed, the rate is particularly low in the Mezzogiorno, where the percentage assumes a value of 15.2% that is below the national average (19%). Moreover, in the south of Italy the rate of 15-19 age population outside the productive and educational processes assumes a value of 29.7% that is 9.7 point lower of Italian average. These data are confirmed by the statistics on unemployment. Indeed, the rate of youth unemployment (15-29 ages) was about 36% in 2009; meanwhile the Italian average was about 25.4% (Istat, 2009).

From these perspectives, despite the higher expenditure in the education field, the Mezzogiorno shows a lower percentage of tertiary educated population and a higher school drop-out rate. Therefore, it appears that the backwardness of southern Italy is imputable to other reasons, such as quality of education process, and social issues in relation to family composition. On the other hand, the efforts of private enterprises on the R&D field represent the distinctive aspects that have positively influenced the success of northern regions.

3.2 Governance and social capital

Until 1990s, the national strategies of development reflected the top-down approach in Italy. As a consequence, the role of public administration has increasingly become central in the Mezzogiorno, exacerbating the historical divide between Northern and Southern regions.

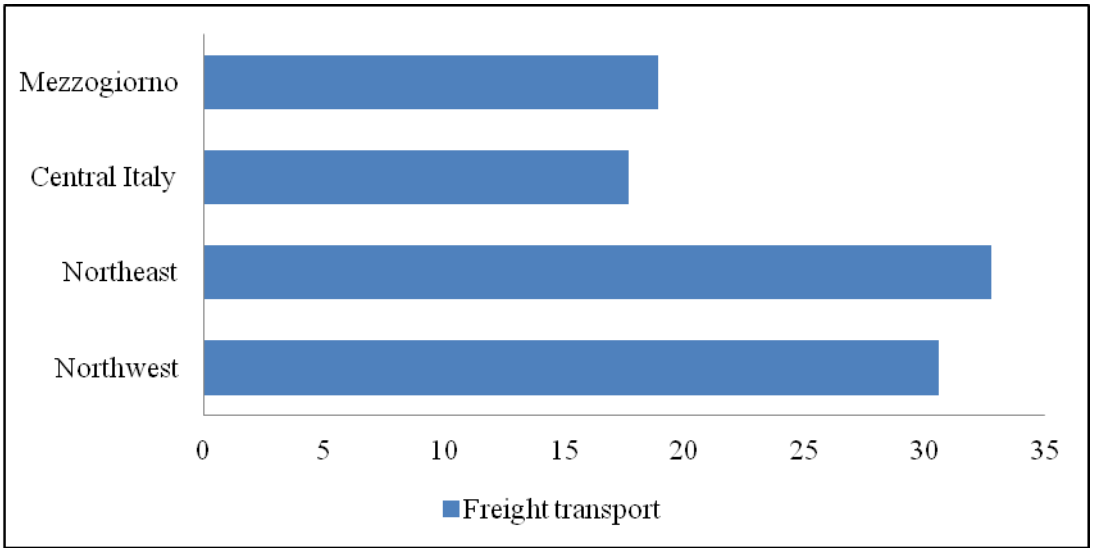
However, although it appears (Calamai, 2009) that the devolution in conjunction with the liberalization of key sectors have decreased the Italian disparities, strengthening the capacity of self-financing, the Mezzogiorno is still characterized by

an existence of criminal organizations, which undermine the effectiveness and transparence of economic, social and political strategies as well as the integrity of public administrations. One example is the incapacity to manage the emergency state relating to solid waste disposal in Campania. Indeed, this emergency state represents an economically profitable situation for the organized crime, which collects more profits from the illegal waste management rather than from drugs deal and extortions. Moreover, this situation is made worse by legal entrepreneurial sectors, which on one hand, take advantages to illegal waste disposal systems in order to reduce costs and on the other hand, this context allows them taking an active part in crisis management (Lacuelli, 2008).

From this perspective, despite the new progress of Mezzogiorno, the historical disparities between northern and southern regions are partially ascribed to a scarcity and a negative typology of social capital, based on political patronage and characterized by dishonest governance.

3.3 Infrastructure, environment and natural capital

The road transport represents the favorite modality of freight movement, provoking consequent phenomena of congestion. Moreover, four fifths of total freight transport originates in the central-north regions, meanwhile one fifths in the Mezzogiorno (Bar chart 6).



Bar chart 6 Percentage of freight transport in 2008 (Istat, 2009).

Indeed, the economy of northern regions is based on an export oriented system and it is strongly dependent on international markets. In addition, the main industrial productions are located in Lombardy, Piedmont, Veneto and Emilia-Romagna. Moreover, northern producers do not have interest in the southern market due to single market and currency and globalization. This situation has led an increasingly demand for federalism forms by northern regions. The principal airports in relation

to tonnes of freight, and number of passengers are Milan-Malpensa, and Rome-Fiumicino. Another important aspect is represented by ICT networks. In the central-north regions the 50% of families possesses a broadband connection. However, the percentage is lower in the Mezzogiorno, where the rate reaches the 38.6%. On the other hand, the gap in relation to the access of broadband connection is lower for the category of enterprises. Indeed, the rate of companies that use this typology of ICT networks is 77.8% in the Mezzogiorno, and 84.5% in the central-north regions.

Moreover, the geographical position represents an important factor that can promote and encourage the economic and social cohesion. Indeed, northern regions are obviously advantaged owing to their proximity to the more economically integrated areas. In addition, this situation reflects the disparities between core and periphery zones of Europe. In addition, the percentage (gross domestic consumption) of electricity production from renewable energy sources is 20.5% in Italy in 2009. However, the situation is different between the Norths, where the rate reaches the 22,3%, and the Mezzogiorno, where the percentage represents the 16.1% of total electricity production in 2009.

From this perspective, the success of northern regions is represented by facility of commercial trades beyond their boundaries thanks to their geographical position but also to their infrastructure effectiveness, the production of hydroelectric power thanks to their proximity to the Alps and a wide flat territory.

4. Conclusions

The EU regional policy promotes economic, social and territorial cohesion and innovation among its Member States by means of financial funds and instruments. However, despite EU efforts, disparities among different territories continue to exist at international and national scale. In addition, globalization and economic growth has affected more and less developed regions, representing one of the main challenges for European regions. Moreover, within the national boundaries regional disparities are significant. From this perspective, Italy represents an emblematic example owing to the historical divide between economically stronger northern regions, and the Mezzogiorno. The latter is affected by economic backwardness, which is made worse by criminal organizations, corruption and political patronage.

However, in no way does the only role of European Union guarantee a stable growth across all European territory. From this perspective, the EU regional policy represents a tool in order to influence and promote the regional success but at the same time it is not sufficient to promote economic, social and political growth. Therefore, more efforts and skills from single Member State and regions are necessary to achieve EU regional policy’s objectives. For this reason, direct and indirect factors are analyzed in order to understand the aspects that can promote the regional success.

The first group of aspects, concerning R&D, human capital, governance, and social capital, promotes the important principle of innovation. Moreover, governance and strong institution represent a prerequisite in order to achieve the EU regional policy aims. Indeed, the capacity to allocate funds within the regional territory is one of the most important issues of the European strategies. Therefore, only if governments and public administrations have skills and competence to identify the most appropriate investment sectors, can funds help the economic, social and political cohesion. The indirect factors, such as infrastructure, environment, and natural capital, allow regions to produce new surplus value goods and services, improving the local competitiveness in the international market. From this perspective, Northern Italian regions are famous for "made in Italy" products. They are linked to continuous innovations in terms of materials, marketing and quality. The small-medium enterprises are oriented towards a specialized market of exclusive products that are expression of quality. The "made in Italy" products allow to compete with the emerging economies, which are characterized by low costs of production and low quality. In addition, although the traditional successes in the fashion industry, which are represented by famous brands, such as Gucci, Prada, D&G, Armani, Versace and Valentino, Italy is characterized by production of famous gastronomical products such as "parmigiano reggiano" and "prosciutto di Parma". They are Protected Designation Origin (PDO) products. PDO is a regime within the framework of Protected Geographical Status (PGS) defined in European Union Law. PDO products are entirely produced and manufactured within the specific region and for this reason, they acquire unique properties. From this perspective, the capacity to orient the economy towards specialized sectors together with innovation efforts represents a key success of northern Italian regions (Onida, 2004). Therefore, innovation needs experimentations in all knowledge fields.

Moreover, the necessary infrastructure has changed since the possibility to buy and to distribute services online exists. Despite the increasingly importance of digital networks transport, infrastructures remain important due to its capacity to move people and goods across the EU and the world. In addition, some regions are more successful thanks to their geographical position and their natural resources. On the other hand, problems such as climate change need coordinated and integrated actions at all scale and level, because they have negative impacts on economic, social and environmental systems.

In conclusion, the scenario of northern Italian regions shows different factors that have promoted and encouraged the success in terms of economic, social and territorial cohesion. Some of these are connected to efficiency of public administration and institutions, others to capacity to orient the market towards specialized sectors that represents the Italian products in the world. From this perspective, more efforts in terms of R&D, innovation, infrastructure, governance and social capital are necessary in order to achieve the success in deploying the EU regional policy aid.

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Hypocritical transitions?
The challenge of urban sustainable mobility transition.

Nina Vogel [1]

Abstract

This paper addresses the issue of sustainable urban mobility and the still persisting problems of implementing this objective, illuminated by current planning practice in the municipality of Fredericia in the so called Triangle Region of southern Denmark. The core questions are whether any imprints of a sustainable mobility discourse can be traced in the policy documents, how mobility is framed, and which arguments are used to legitimate or envision strategies and planning practices. Is Fredericia performing a transition towards low-carbon mobility? The paper will draw on concepts from transition theory in order to provide a framework to structure the analysis and to illuminate its contribution to explain possible path dependencies blocking more radical changes as well as identifying indicators for paths taken for the future development of the city. The paper aims to contribute to the discussions around urban complexity within transition processes. Transitions are always taking place, but the question is which direction they take and if these directions are in line with a planning approach for sustainable mobility.

Key words: Sustainable mobility, Ambivalence in planning, Complex city, Transition theory, Multi-level perspective

1. Cities' challenges of sustainable transitions

This paper analysis the challenge of cities to fulfill their aspiration for sustainable urban development with a focus on urban mobility planning in the case of Fredericia and the Triangle Region in southern Denmark. Identifying the transitions actually taking place and linking these to the main drivers behind current development will contribute to the discussion of ambivalent planning practice, the given gap between policy and planning practice, and creates more clarity for opportunities and necessity of intervention for more sustainable urban mobility. Dynamics and interrelation of general trends of growth and climate change pressure (landscape) and what generates and is translated into hegemonic practices and norms in urban mobility development (regime) as well as possibly opponent or supportive niches are discussed and will shed light on opportunities for change.

There is a general increase in the awareness about climate change and its consequences and the role of cities being prime generators of pollution and

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responsible as well as having opportunity for facilitating transitions towards more sustainable futures (Newman, 1999; Bulkeley et al., 2011; Graham et al., 2001; Hodson et al., 2010). Sustainability concepts are common in a lot of current planning policies and probably an obligatory 'section' to legitimate today's planning documents in general. However, questions arise if such concepts hold true or if they become 'empty, green promises' that are rarely fulfilled. "Our common future" - the Brundtland Report of 1987 - was path-breaking for many further formulations and understandings of sustainable development. Two main concepts are characteristic for the concept of sustainable development used in this report, such as: 1) the *concept of 'needs';* especially concerned with the world's poor and 2) the *concept of limitation*; regarding the state of technologically and socially conditions. These concepts should help to organize life here and now without compromising possibilities for future generations to meet their needs. This global contextualization of sustainability has to be scaled down to local contexts and explicit actions have to be taken.

In this paper, some possibilities and constraints in pursuing a transition of urban development into a more sustainable direction will be illuminated, using the Danish town of Fredericia as an illustrative example. The transition-theoretical concept of the multi-level perspective (MLP) will be used as a framework for analyzing the complex dynamics and diverse factors that affect urban development and (ambivalent) planning practice to map the transitions actually going on, and to identify drivers behind these transitions and possible interventions that may evoke changes in development paths (Geels & Schot, 2007; Rotmans & Loorbach, 2009, Geels, 2011). However, being interested in more radical changes to reach desirable futures of sustainable mobility, this paper will include a normative standpoint of transition from a sustainability perspective based on planning theory for sustainable urban development and political economy literature (Næss, 2012; Harvey, 2010). Hence the paper includes also the identification of directions of transition and the aspect of change versus reproduction or continuing of business as usual. Moreover the context within which one uses the analytical understanding or methodology of transition is crucial. The urban and its complexity will define transition in this analysis (Næss & Vogel, 2012).

The next section (2) introduces the theoretical and methodological context (transition theory), some challenges when investigating urban complexities of transition, and the analytical use of the multi-level perspective. In Section 3, the case of Fredericia will be introduced and key traits of its spatial development will be analyzed using the multi-level perspective, including a discussion of the main dynamics of the niche, regime and landscape levels. In the final section (4), main lessons drawn from the study will be presented.

2. Theory and methods

Generally speaking transition theory is considered to be of interest comprising issues of complexity and attempts to explain systemic change. For the research of transitions towards sustainable mobility the understanding of dependencies of socio-

technical processes and artefacts, such as the building stock, its utilization and the transport systems and especially how automobility is influencing and influenced by urban land use and transport infrastructure provision, will be essential. Moreover, transition theory can help to identify possible drivers for sustainable transitions such as key actors, resources available or pressure to for creating regime change.

Bertolini (2011) for example describes transition as *transformative change in complex systems*. Others define transition as "*a long-term process of change during which society or an important sub-system of society fundamentally changes*" (Rotmans & Loorbach, 2000: 2). Both of these definitions describe rather incremental change processes even though they sound quite profound being structural system changes. Nevertheless, to adapt to new conditions with e.g. optimizing through replacing or adding new components to a system can keep the basic system structure intact. The electrification of the car would be such an example, continuing on the main system infrastructure with maybe more efficient and less polluting artifacts. Moreover pace plays a role too especially when we are experiences a pressure to act now to avoid even worse climate disaster as already occurring. Other authors point towards the embedded contexts of technological change when describing: "*Transitions […] as shifts or 'system innovations' between distinctive socio-technical configurations encompassing not only new technologies but also corresponding changes in markets, user practices, policy & cultural discourses and governing institutions*" (Geels & Schot, 2007).

However it remains a challenge to define the urban mobility regime. Multiple causes and factors affect the given conditions and direction for urban development and its mobility patterns and systems, including e.g. different sectors of land use and transport planning, contested political structures, contemporary mobility culture as well as locally bounded socio-economic circumstances (Næss & Vogel, 2012).

2.1 Urban transitions

Gullberg and Kaijser are not explicit transition research scholars, but are interested in the urban and its transitions. They relate more to e.g. theories around the network and the complex city such as Marvin and Graham introduced these concepts in *Splintering Urbanism (2001)*. Moreover the spatial conditions of the urban (the building sites) and the network activities of actors are explicitly included. These elements are repeatedly criticized of being insufficiently included in transition theories of socio-technical regime change. Gullberg and Kaijser developed an own approach, called the City Building Regime Approach (CBR Approach), to analyze and define urban transition with its stabilization and change phases. "*By a city-building regime (CBR) we mean the set of actors and the configuration of coordinating mechanism among them, which produce the major changes in the landscapes of buildings and networks in a specific region at a given time*" (Gullberg & Kaijser, 2004: 18). They underline the institutional legacy of the city and describe the design of coordination mechanisms such as consensus, hierarchy, networks, trust and cooperation. The latter is interesting regarding responsibilities and political

action being formed and reproduced in cities and reflects a necessary discussion around legitimacy and normative dimensions in transitions.

The spatial dimension, its physical mass and inertia of the urban built environment, is crucial when dealing with cities' transitions. The ways in which cities grow reveal the type and potential of sustainable transition. Urban structures (e.g. infrastructure, housing) have a relative permanence and persistence to fast change. To analyze the geography of transitions helps to contextualize transition more concretely, to be able to compare different cases with varying transition pathways, different pace and direction of transitions (Coenen et al., 2010). Central questions are concerned with the explicit physical condition that creates and limits mobility patterns and also about relational space of cities that points towards the strategic interventions of transition actors and action. This represents exertion of power and possible influence on transitions from a niche level perspective.

The previous authors all relate to processes of change when defining transitions and some are more precise with their references than others. The normative dimension or question of legitimacy is relatively faint, but should be more in the forefront when aiming at steering transitions (e.g. Transition Management, backcasting as normative scenario tool). Moreover the complexity of transition processes and the difficulty to define and identify the explicit transition points and loci based on multi-causalities could be counteracted with a normative standpoint. Such an approach would help to filter and direct actors' goal setting, strategy formation, explicit planning practice and might be even able to estimate interaction mechanism of different systems.

To give an example from the field of planning: multiple actors can agree on the strategies and visions formulated for cities' potential development to describe desirable futures. They may fulfill the necessary 'sustainability agenda' in their goal formulations, but they often do not translate these overall goals into explicit, integrative and sensible measures. Planning goals and planning practice contradict each other, as exemplified in the case of Fredericia. This can be related to simultaneous growth approaches, which lead to a liberalization of planning and are reluctant to regulative measures that would help to develop towards their desirable futures (seen from a sustainability point of view), but might reduce the chance of fast profit. A more regulative as well as integrative policy arrangement would limit planning practice such as location and zoning in land use decisions and could thereby also reduce the amount of transport infrastructure needed for accessing new development sites as well as the distances actually traveled in daily life. Conversely transport infrastructure could be oriented more towards reducing individual motorized traffic, which would correspond with more dense development with different demand structures (Næss, 2011; Holden, 2007). However, based on a development away from formal planning to more informal planning practice, often ad hoc and developer led planning, these forms of regulation do not take place. Therefore the defined futures in form of vision or strategy documents as well as policy papers have little coherence with planning practices, they are missing an anchoring or outset in given challenges and become of a hypocritical character.

2.2 The multi-level perspective (MLP)

The multi-level perspective (MLP) is a theoretical transition concept that aims at describing transition pathways on three main analytical levels, socio-technical niches, socio-technical regime and socio-technical landscape, which reflect micro, meso and macro level respectively. Main transition pathways are 1) transformation, 2) de- and re-alignment, 3) reconfiguration and 4) technological substitution (Geels & Schot, 2007). The pathways differ in their intensity of the regime change and if the force is more internally or externally driven. The MLP is primarily concerned with reconstructing transitions around technologies, their interrelated, historical-evolutionary development within society and is often quite sector oriented.

The socio-technical regime is central and comprises the dynamically stable, established and hegemonic practices, discourses, institutions and artifacts. Or according to Rip and Kemp (1998: 338) a regime is defined as "*the coherent complex of scientific knowledge, engineering practices, production process technologies, product characteristics, skills and procedures, established user needs, regulatory requirements, institutions and infrastructures*".

Niches are relatively similar in their basic characteristics to regimes, but do not have the same pervasiveness and power in societal systems. Niches can support regimes or can be opponent in their approaches. Many transition scholars believe that niches are the main loci for transition or innovative development, being able to 'think outside the box', to use other resources and maybe having the ability to react more easily on pressure and change than the regime, which is considered to be more path dependent and locked in.

The landscape level could be described with: *"Developments [that] […] include largely exogenous processes that neither regime or niche actors can influence, or just very partially, such as broader developments in the demographic sphere (e.g. the transformation of family relationships, aging of society), social sphere (e.g. the growth of travel mobility and virtual networking), economic sphere (e.g. the globalization of production and consumption), cultural sphere (e.g. the surge of individualism), or environmental sphere (e.g. the depletion of natural resources)."* (Bertolini, 2011: 6)

Especially the landscape level includes crucial factors and developments to arrive at moments and processes of change. However, the MLP describes the interplay of niches, regimes and landscapes with main interest in opportunities for regime change. The analysis will be used for identifying important dynamics between these levels and to arrive at a better picture of crucial parameters for change in the case of Fredericia's urban mobility development.

3. Analysis

Based on an interest in understanding current development and its deviation from sustainability goals set, transition theory can be useful to explain possible path dependencies, which deny more radical changes as well as identifying indicators for paths taken for the future development of the city. The case study of Fredericia builds on document studies such as municipal planning documents, policies, visions and strategy papers of the Triangle Region, an interview with the director of the Triangle Region in 2011 and further relevant reports and sources of references illuminating case related circumstances.

3.1 Planning context

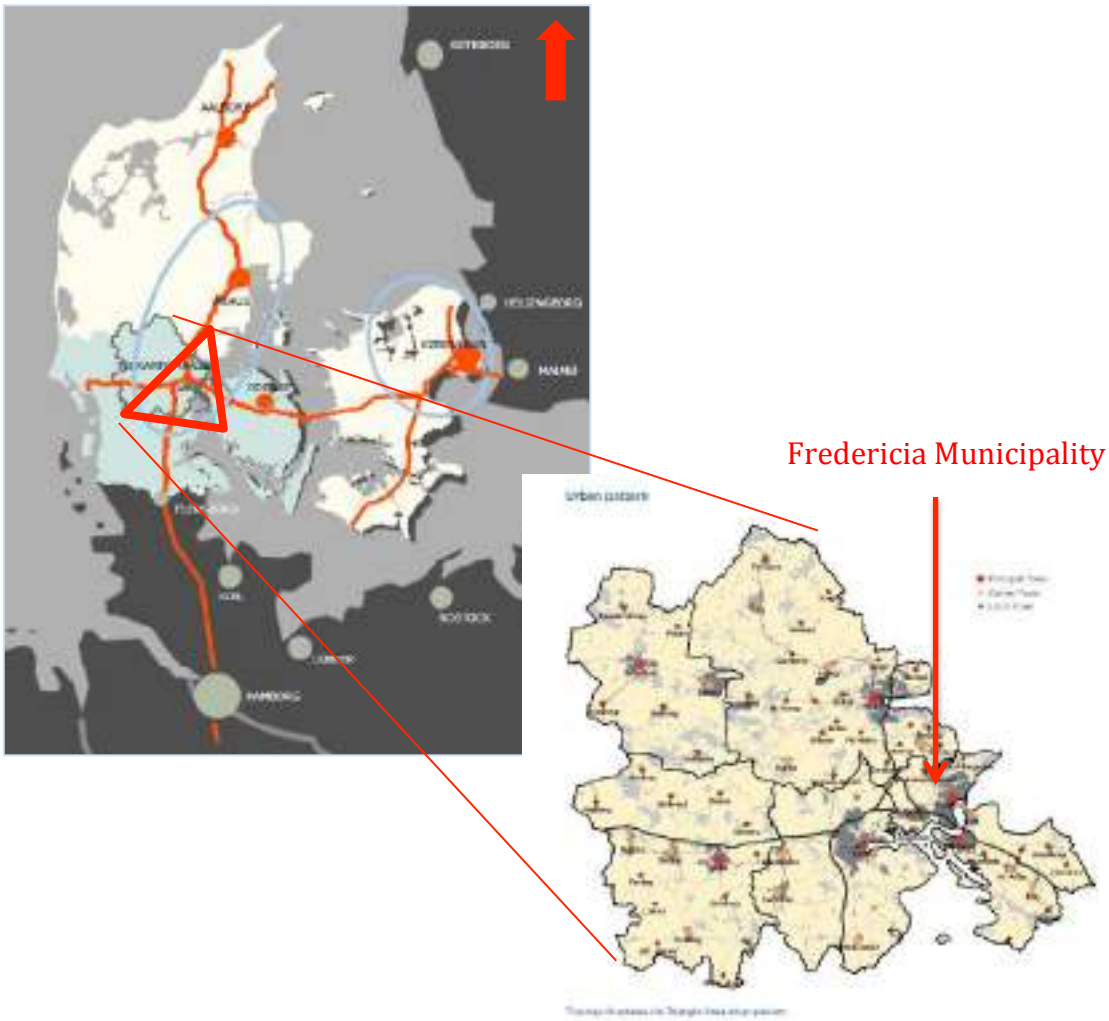

Figure 1: Location of the Triangle Region in Denmark and urban pattern of the Triangle Region (based on: Trekantområdet Danmark, 2007; Fredericia C, 2011)

The municipality of Fredericia has a population of approximately 50,000 (of which 40,000 in the continuous urbanized area of Fredericia) and is a part of the so called

Triangle Region. This polycentric region is a network of six municipalities, which account together for around 350,000 residents. The name *Triangle Region* originates from the three bigger cities Vejle, Fredericia and Kolding, which form a triangle when connecting these. In this network Fredericia is one of the most urban municipalities, covering a relatively small area and with less rural land within the municipal borders than what is the case for the other municipalities of the Triangle Region (see figure 1 above).

The Triangle Region is part of the so called East Jutland Growth-Corridor, stretching from Randers in the north over Aarhus to the Triangle Region in the south, including 17 municipalities. Since the national planning report 'The New Map of Denmark' (Ministry of the Environment, Denmark, 2006) this corridor has been given attention for investment and development strategies to be a growth center along with Copenhagen Metropolitan Area. Such belonging reinforces the general strive of municipalities for inward investment and they do compete with each other for attracting business and people. Consequently land use and transport planning practices appear to be of rather liberal character with less emphasis on objectives to e.g. reduce transport emissions and expansion of the built-up areas.

Nevertheless, there is a general increase in the awareness about climate change and its consequences and many Danish cities are aiming to take responsibility to tackle causes and adapt to conditions and so is Fredericia. Fredericia wants to be *one of the leading climate municipalities in Denmark* and is expressing its endeavor with plans to reduce its CO_2 emission by 25% in 2015 (with reference to 2006). Especially within the Triangle Region's network climate initiatives were launched. Fredericia participates in the following projects that can influence its urban mobility:

a) a partnership agreement with the DONG energy company, which addresses the high ambition of becoming also energy producer,
b) a pilot project introducing electric cars, which is part of a nation wide project, where in cooperation with Designskole Kolding a report with key parameters to introduce electric vehicles was developed (Etrans, Designskolen Kolding, 2011), and
c) buses running on alternative fuel are introduced (Triangle Region Denmark, 2009).
d) The so-called Formel M mobility management project is approaching the critical fact of the high amount of personal car travel to work within the municipal boundaries concentrating on the industrial park Danmark C (www.formelm.dk). This appears to be a necessary approach, as the Triangle Region is one of the Danish regions with an outstanding high automobility and highly car-depended land use structures (Krawack, 2011).

As an example, Figure 2 represents one of the most important arguments of travel time and distance within transport planning discussions as well as personal mobility decisions. The region-wide accessibility by car is clearly demonstrated in this comparison of areas accessible from Fredericia by car and public transport within certain time limits.

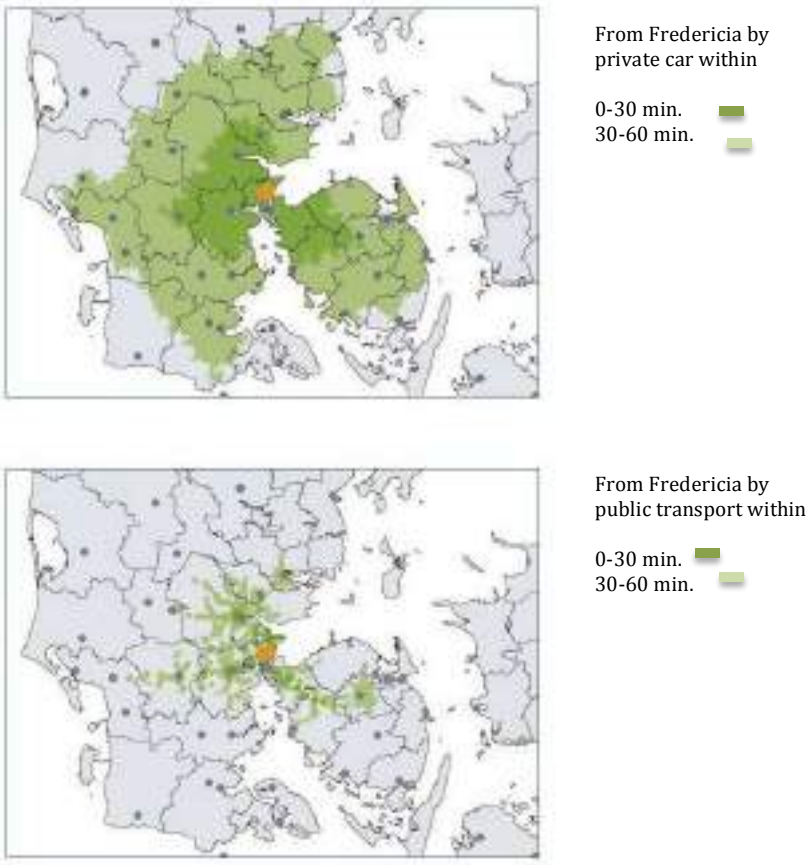

Figure 2: Travel time and distance by private car versus public transport (Region Syddanmark, 2010: 8)

However, the land use and infrastructure plans of Fredericia reflect no clear development strategy. The urban development is kind of two-fold, continuing a trend of sprawling development with expansion of the urban area demarcation, while simultaneously planning for inner-city densification, notably the new 'sustainability flagship' city district 'Fredericia C' (see illustration in figure 3).

Figure 3 represents the current land use in Fredericia municipality. As introduced above, Fredericia does have a relatively urbanized spatial structure with reference to other municipalities in the Triangle Region. However, this map illustrates the quite high amount of space available in-between the built-up areas such as green spaces and derelict as well as current low-density industrial zones. The map also illustrates the planned urban expansion, which seems to be spread rather randomly within the municipal borders. Danmark C as the biggest Danish industrial park with 600 ha, Fredericia C as new (sustainable) development project of 20 ha and the 140 ha sized new development site towards the west will be dealt with more in depth in Section 3.2). Moreover the relatively high amount of industrial space reflects the city's historical identity and it may evoke the impression of an industrial city even today. The representation in the municipal plan though is somewhat indistinct and might

give the impression of a need for expansion of the mapped demarcation. There is a gap between the actual used areas and the visualization in the planning document.

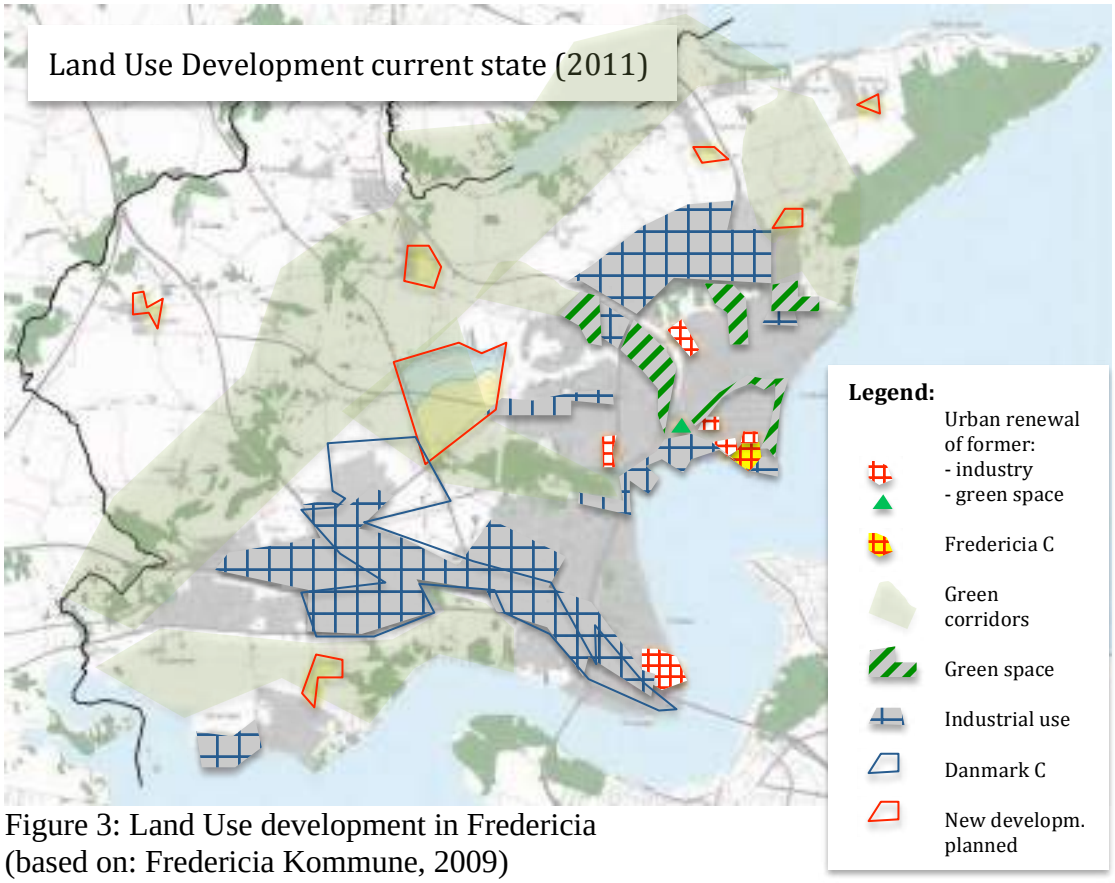

Figure 3: Land Use development in Fredericia (based on: Fredericia Kommune, 2009)

3.2 Chances for transition?

Applied to the context of urban and mobility planning in Fredericia, the landscape level comprises dominant trends and pressures that are more omnipresent such as the broad discourse about climate change and the need for cities to meet given and evolving challenges. Also a prevalent high level of competition within the polycentric region and between cities in general, accompanied by a liberalization of planning practice and strong promotion of growth strategies and couplings of growth to transport as well as a general need for a high mobility demand would account to this analytical level.

Ecological modernization is one of the most dominant paradigms around climate change and attempts to counteract the negative environmental impacts of higher consumption. Trends of individualism and mobility as freedom, materialistic lifestyles, continuation of a high exploitation of resources, however, are not as such altered, but rather adjusted to meet the numbers e.g. appointed in visionary documents. That also means there is a strong belief in technological solutions and innovations that will reduce emissions in transport for example to continue a level of

consumption and production patterns compatible with continuation of or increase in the present high amount of transport. A closer examination of demand, lifestyle and moral questioning tends to be excluded in such discussions.

Another important landscape-level feature is the general trend of increasing competition between cities, which may be even more pronounced in a polycentric region such as the Triangle Region. The notion of competition between urban areas internationally, nation-wide (the East Jutland Growth Corridor versus Copenhagen Metropolitan Area) as well as the inter-municipal competition in the Triangle Region (especially between Fredericia, Kolding and Vejle) exercise pressure.
The Triangle Region as a municipal network has no authority power on municipal planning practice. Relevant though are the mediations of planning approaches for the overall region and what is understood as valuable and necessary development.

One of the consequences is the municipal planning practice in the western part of Fredericia with an over-dimensioned zoning plan for urban expansion of 140 ha assuming the need for around 850 new housing units and retail development. Beyond a strong cultural value in Denmark of living in one-family houses influences such planning preferences. General reluctance to regulative measures of the spatial consumption of land prevails as with land for the industrial park Danmark C. Next to expanding the urban demarcated area infrastructural concerns are crucial. The highway infrastructure is understood as a logistic necessity for the industrial park and more generally as a major growth-generating asset of the region. The geographical context of the case municipality is used as argument for being an important Danish transport hub legitimating the expansion and construction of transport infrastructure (Fredericia Kommune, 2011).

The regime level comprises dominant modes of transportation, main infrastructures and actual spatial development, leading professional and institutional discourses around planning practice and its main tasks, prevailing political agendas as well as the dwelling types and locations, transport modes, shop designs etc. preferred by broad population groups. This comprehensive list of issues assign to different segments that are approached by planning practices and influence mobility developments. Especially the heterogeneity is crucial, which is favored by liberal political landscapes and reflected in regime structures. Market economy fosters such conditions to increase competition (Harvey, 2010). There is interplay between a multitude of actors, practices and structures, which are under constant formation and reformation and which have formed prevalent *multi-segmented regimes* within land use as well as within transport infrastructure development (Næss & Vogel, 2012).

The city authority is conscious about the need to transform towards more sustainable urban futures. Currently a main focus is directed toward the urban transformation project Fredericia C, where a former industrial area at the harbor is redeveloped into a dense and multi-functional city district. Fredericia C is a redevelopment project that started already in 2009 and was among other things initiated with an international idea competition on how to develop the former harbor area into a

economically, socially and environmentally sustainable city district. Connectivity to the given city was an important aspects as well as historical values and overall a distinct focus on multi-functional and dense development with 50% housing, 40% retail and 10% cultural use. Noticeable is a so-called *sustainability process tool* intended to lead and ensure the project's sustainable character throughout the competition as well as in further formal development phases. This appears to be a positive transition towards more sustainable structures in urban spatial planning. Additionally, local mobility management projects concerned with travel to work, parking policies or pilot projects introducing electric vehicles try to address a change in travel patterns towards more sustainable conditions. However, it is questionable how powerful these developments are in a long term and structural perspective. I would, initially, locate them on the niche level in a MLP perspective. They do not yet show any pronounced regime characteristics and it is questionable if a checklist with sustainability indicators can shift a political primary goal of growth.

Certainly the ambition is there to develop these niches to be part of the future regime in Fredericia but this is seen as challenge under current conditions of a general lack of an integrated approach of land use and transport planning towards more sustainable mobility. The inertia of the existing built environment is a different complexity and severity for transitions, which has to be accounted for when planning new development. The given planning practices do not reflect a clear awareness to the latter fact of relative permanence and path dependency. For example, the workplaces already located in the large sprawling industrial and commercial districts in the western part of the municipality will for a long time ahead make up a strong incentive to car commuting even if urban development in the next decades takes place mainly as densification. Besides, Fredericia has set aside an area of 140 hectares as a future development site for new dwellings and retail development. For one thing, this is an over-dimensioned expansion of the urban demarcated land that is unreasonable, judged against current needs. Secondly, this rezoning of land takes place in the outskirts of the city with poor access to public transport facilities, which will most likely create more car-dependency for its future dwellers and visitors (Fredericia Kommune, 2009).

The above descriptions point towards certain attempts by the regime to include some niche developments in the regime structures. Niches though can be of different character seen from a sustainable mobility perspective. Niches can support given regime formations or act in the regime's shadow without necessarily pushing for change, such as businesses favoring location in Danmark C as logistically central industrial park with direct highway connection and little regulations. Then there are niches that oppose the regime structures and practices and even try to tackle these. In this case, Fredericia C as a development project reflecting an integrative planning approach (at least as it is promised by the current documentation of the idea competition and plans), general densification plans for the inner city, promotion of bicycling as well as the attempt to introduce forms of mobility management could be considered as niche initiatives pointing towards a sustainable transition. On the other hand: unless these niche approaches are being backed up sufficiently, they risk to be

inefficient or outweighed by more dominant practices of daily mobility patterns, car-lobbies or businesses in general that would lose profit through major changes. Finally, the underlying driver for municipalities to support such niche projects is inherently the same, namely attracting people and businesses to the municipal territory. Sustainability initiatives thus run the risk of being subordinated to or coopted by a dominating strategy of increasing the city's economic competitiveness (Fredericia C, 2011).

3.3 Dynamics and barriers preventing sustainable transition

One of the key conditions preventing Fredericia and also other cities' from developing towards more sustainable mobility is the overall lack of an integrated land use and transport planning approach. The Triangle Region is addressing this gap in their agenda for the plan strategy currently being developed. Nevertheless, actors are struggling to approach this challenge and there are barriers that hinder the value and awareness for better land use planning as well as an integrated approach in planning. The above mapping of the different levels and their dynamic interaction reflects this basic problem. The landscape pressure or trends do affect the regime's segments differently. Taking into account the relative stability of the regime, which supports and facilitates multiple lifestyles and subsequent housing types and transport patterns, this leads to disconnected responses, which then in turn also explains the ambivalence in planning practice due to trying to satisfy 'everybody's needs' or performing rather hypocritical practices to reduce pressure. The regime seems to be ruled by the landscape trends and there is limited focus and support of challenging niche development.

One of the barriers is the missing political willingness to really deal with land use planning. The land use plan has developed into a massive list of regulative procedures, exceeding its limits of being able to cover all the issues stated and has ended up being neither read nor followed up and finally having no impact in planning practice (Krawack, 2011). This reflects a relative vulnerability of the regime, meaning it is sensitive towards general landscape trends of e.g. growth and attempts to offer prospects for urban development, but does this, however, with limited steering ability. Keeping the two main concepts of *needs* and *limitations* in mind, introduced by the Brundtland Report, the policy documents (e.g. land use plan, municipal plan) should, from a sustainability perspective, translate these concepts into locally anchored measures and aims. It could be questioned though to what extend these concepts are understood or used profoundly. Often short and superficial definitions are to be found in policy documents, which do relate mostly to the so called 'triple bottom line' introduced by the World Bank, namely the economic, social and environmental dimension of sustainability. However, this dominant concept of sustainability does not ensure a balance of these dimensions. Instead the economic sustainability often outweighs the other two.

This is tightly connected to another barrier, the planning system itself and has more of a structural character. Institutional responsibilities and organization hinder each

other in progressing towards more sustainable and integrative planning practice. Again, this is mainly a regime representation. A regime that is arranging its dynamic stability due to different structural segments with different practices, actors, discourses, values and norms. Also the region's strong external focus, rather than on improving internal conditions, determines to a high degree the planning discourse. The region's affiliation to the so called East-Jutland-Growth-Corridor as new national growth area is reinforcing competition in the regime from the landscape level.

Additionally the physical planning alone is questioned to have any impact as long as no explicit improvement in providing better public transportation infrastructure is given. Only an interaction of different measures can offer a development towards more low-carbon and generally more sustainable mobility patterns. So in MLP-terms it would translate into a more pronounced interplay of niche and regime to strengthen the niches to prosper, to network and to exercise power in an integrative approach. Furthermore the strategic relation between niche and landscape could exercise more specific pressure on the regime, such as creating a counter discourse to the coupling of growth and transport, frictionless mobility or general to reveal contradictions of the regime practices.

4. Main lessons drawn

The fuzzy transition processes taking place in Fredericia represent some first cracks in the regime structure and the beginnings of desirable niches that could by and large be up-scaled to the regime level. However, the power of rather unsustainable landscape trends on the regime dominates. The initiating and promoting of niches pointing towards more sustainable urban development is not enough and might loses momentum if no general landscape trends change as well.

In this context both opportunities and obstacles for Fredericia's sustainable transition in urban development and mobility can be seen. I will point out three main obstacles on landscape level as being crucial for the urban transition prospects:

1. Dominant discourse of ecological modernization, which translates and is accompanied by technological fixes in approaching solutions,
2. Spatial conditions in the municipal and regional area that create challenges for transport infrastructure and land use zoning,
3. Liberal political arena that is willing and compelled to create growth, which most likely impedes regulative planning approaches.

These landscape trends and paradigms are again translated into structures and practices on the regime and niche level and are used as legitimate arguments for rather unsustainable development.

Responses of the regime in form of expanding infrastructure and urban built environment or initiating competition processes around new sustainable city districts

are reflections of the regime ability to keep ‘in place’. The transitions taking place may slightly adapt the regime structure to an increasing pressure to act more sustainable, but in the main the regime prevails. This means that planning policies for sustainable mobility reflect a general acceptance of the region’s car-dependent structure, focusing on car-pooling, mobility management and zero-emission vehicles rather than aiming to reduce the amount of transport, which would integrate also land use planning into the policy measures. To influence the ‘mobility culture’ of the Triangle Region would definitely call for greater transitions on the landscape level including regional-scale land use planning and changed priorities in transport infrastructure development.

Nevertheless, opportunities on niche level can also be identified, such as:

1. A relatively transparent and participatory process of the redevelopment project Fredericia C that created a discourse around the sustainability of this flagship project
2. Nation-wide mobility management projects that take a closer look at the local circumstances in the Triangle Region or
3. Public transport and non-motorized forms of transportation get more attention (bus system in Fredericia, promotion of bicycling).

However, these niche initiatives will not have any bearing on environmentally sustainable and low-carbon urban mobility if a planning discourse is dominant that credits spacious areas for commercial and housing development due to a consideration of these elements as being competitive advantages or necessary to meet cultural needs. The same applies to a planning discourse depicting expansion of (road) infrastructure and also increases in the amount of transport as inevitable trends.

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FRINGE: CHANGING CONTEXT OF THE URBAN PERIPHERAL AND 'NEAR-RURAL' AREAS IN A PROCESS OF STABILITY AND DEGROWTH

Ozan Hovardaoğlu[1]

Abstract

The dominance of the growth based theories over the planning literature and implications has once seemed to be unyielding and indomitable. For decades, growth has overwhelmingly been on the focal point of development strategies influencing both economic and spatial interventions in a wider range from national and regional level policies to land use planning. This picture, however, is itself receding in the past. Demographic structure changes having begun to be much more apparent especially after the 2000s in many countries represent a real challenge to almost all of the urban growth based strategies. These demographic structure changes seem to lead at least two vital questions. The first question deals with the need to find new strategies for efficient, suitable and so also 'smart' ways to entrench a certain level of economic success with possible near future labor market bottlenecks and without the existence of fast urbanization and rapid urban growth. The second question seems to be about the main 'problem' of the planning profession. The existence of population stability – or even decline – intertwined with the absence of rapid urban growth paves the way for taking quality based problems into the focal point of planning instead of growth based ones. The attention of the literature in relation to these two questions is directed toward new strategies which attempt to cope with controlling the economic consequences on the one hand and seeking problem based planning processes focused on qualitative issues of urban areas rather than just intending to manage growth problems on the other. In tune with this tendency in the literature, this study aims preliminarily at asking a third question having regard to the formerly identified two questions. This question takes urban peripheral areas wherein the 'urban' touches the 'rural', and near-rural areas wherein the accessibility to the amenities of urban life qualities and the proximity to the regional towns are minimally influenced by the friction of distance into consideration. This study aims secondly at contributing to the conceptual framework of urban fringe studies. To anticipate the direction, two major new industrial districts of Turkey, Gaziantep and Kayseri are examined in this research.

1. Introduction

Whatsoever might have been the reason, the Total Fertility Rates (TFRs) have begun to be dwindled after the baby boomers especially in the industrialized world. Although the total population of the globe still draws an upward tendency, many

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countries have already faced stability or even decline trends. The decreases in the TFRs intertwined with influential increases in the average life expectancies in these countries have provoked attention to the economic consequences of demographic changes. While the dependency ratios of younger cohorts have steadily been decreasing, an exact opposite tendency of the elderly dependency ratios have resulted economic impacts in a wide range from labor market bottlenecks to total efficiency losses. This kind of demographic structure change has influences on national level social security policies and so also on immigration policies which somehow find opposite reflections within the rise of right wing politics in some countries.

A similar demographic change tendency has begun to be apparent in Turkey especially after the 2000s. 'A young and dynamic population' component of the Turkish economy has already begun to lose its influences. The increase in the legal retirement age, revisions in the social security policies, preparations of ageing action plans seem to be the indicators of national politics awareness about what Turkey may face in terms of demographic change in the near future.

Fast population increases and rapid urban growth do not seem to be the fundamental components of the towns in Turkey as once they had been especially in the period between 1950s and 1980s. In tune with the prevalent demographic boom in this period, the main concern of planning had been the management of rapid urban growth. But beginning from the 1990s, the 'rapid' and 'fast' aspects of Turkey's population have gradually disappeared. The demographic indicators of the 2000s are becoming more like the ones in the European Union countries. Asking to what extent it is possible to maintain a certain level of economic growth without the population dynamism, therefore, indicates real challenging economic consequences of the demographic change. Both the national and local economies in Turkey have enjoyed the externalities of rapid urban growth and population increases, not only in terms of labor market but also in terms of industrialization. Until the 2000s, a somehow disguised interdependency between urban growth and industrial sectors has paved a way for remarkable local development success stories. A careful examination of these stories will certainly indicate the great merit of rapid urban growth and high amounts of urban population increases in these local development experiences, no matter if these success stories were planned or uneven.

This relation between economic development and urban growth seems to be one good reason explaining why urban growth is – and always have been for decades – so central in planning. Any forthcoming demographic structure change tendencies, in which the population draws stability or even decline trend, will presumably entail reconsidering urban growth based development politics. This shift in the focal point of planning indicates another challenge for the planning education, planning professionals and for the profession itself in Turkey.

The national planning agenda has already started to suffer from stridently brought up debates about what planning should deal with. A wide range of other professions from architects to engineers, sociologists, economists, geographers etc. take part

within these debates. These travails of the Turkish planning agenda, however, seem to give birth to new dimensions in planning in Turkey. These new dimensions are identified altogether as Turkey's new urbanization process in this study and in tune with these two questions mentioned above, this study aims preliminarily at asking a third one. This question takes urban peripheral areas wherein the 'urban' touches the 'rural', and near-rural areas (Hovardaoğlu, Çalışır-Hovardaoğlu and Sınacı, 2011) wherein the accessibility to the amenities of urban life qualities and the proximity especially to the regional towns are minimally influenced by the friction of distance into consideration. This study aims secondly at contributing to the conceptual framework of urban fringe studies.

The impacts of national level demographic structure change, perhaps, will not simultaneously be effective on local levels. Regional towns may face these problems in mid-term thanks to their central positions both in economic and urban terms. But the validity of these three questions depends on and requires empirical data from a case study. Examining the urbanization experiences of two major new industrial districts of Turkey, Gaziantep and Kayseri can give plausible evidence on the subject. Four main indicators are used in order to understand the direction of demographic change in these two towns that are the temporal changes of (a) TFRs, (b) population increase rates, (c) dependency ratios, and (d) cohort populations. Besides, the changes in the urban macro forms, urban growth and land use decisions of the towns of Kayseri and Gaziantep are researched in order to understand the rural urban fringes.

2. The Demographic Change Trends of the Global, National and Local Levels

2.1. The Demographic Change Trends of the Global Level

The term demographic transition was first used by the American demographer Warren Thompson in 1929 to label the changes — or transitions — he observed in birth and death rates in industrialized societies. The relation between demographic structure and development can preliminarily anticipate creating links between workforce or labor force demographics and productivity. This is why the effect of demography on economic performance has been the subject of intense debate in economics for decades. Actually, the demographic dynamics of nations, regions, and cities are thought to have vital importance in terms of general economic performance. However, the demographic structure is dynamic. It is easily possible to observe population fluctuations throughout the history in almost every scale, from settlements to regions, nations and even transnational levels.

The problem of population ageing is one of the most pronounced demographic change problems recently, particularly in the developed countries. The second problem is the fertility decline. The most common indicator for fertility is the Total Fertility Rate (TFR). It gives the average number of children per woman. Researchers show that TFR below 2.1 means a low fertility and decline in the total population. However, it is important to underline that, little fluctuations in this rate

result big influences. McDonald (2000), for instance, stresses that in a population with a fertility rate of 1.3, the population falls at the rate of 1.5 % per annum and such a population, in 100 years would fall to less than a quarter of its original size. He also shows that with a fertility rate of 1.9, the rate of decline in this population is only 0.2 % per annum which at the end of 100 years would result a population that is 82 % of its original size (McDonald, 2000). Despite the continuing increase tendency of the total world population, the increase amount is – owing to a decline in the TFR – gradually dwindling.

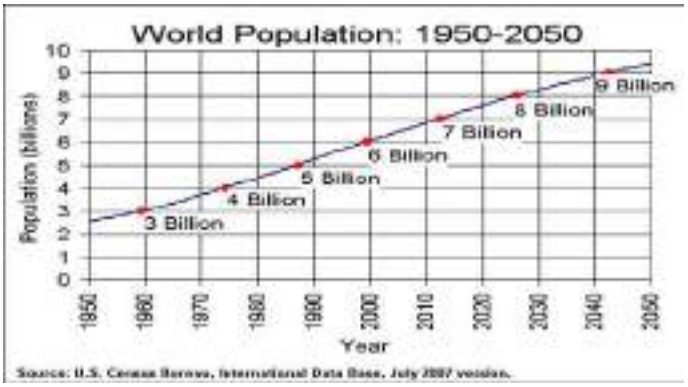

Figure 1. World population: 1950 – 2050 (Source: US Census Bureau, International Database, 2010)

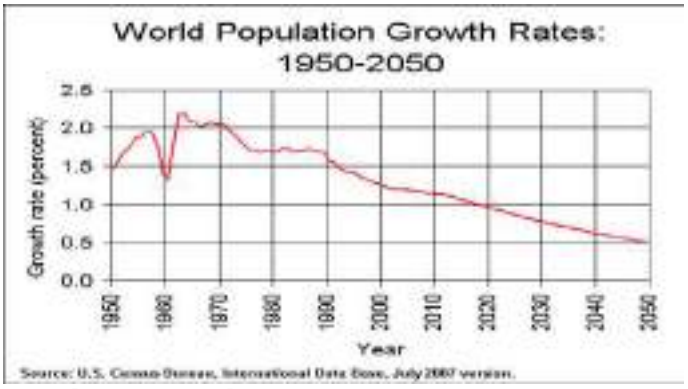

Figure 2. World population growth rates: 1950 – 2050. (Source: US Census Bureau, International Database, 2010)

An influential research example analyzes the possible near future influences of the recent demographic structure of the European Union (EU). At the 2nd Organization for Economic Cooperation and Development (OECD) world forum, Rainer Muenz was trying to draw attention to the rapidly ageing demographic structure of Europe by stressing that Europe is facing the lowest fertility rates ever recorded in the history of mankind (Muenz, 2007). Almost all countries in Europe have a downward trend of total population, a fertility decline, and an ageing demographic structure, he expresses.

Table 1. Total (Period) Fertility Rates in the EU Region

	1960/64	1970/74	1980/84	1990/94	2000/03	2004/05	2050
Belgium	2.64	2.07	1.61	1.62	1.63	1.64	1.70
Czech Republic	2.22	2.14	2.01	1.72	1.16	1.23	1.50
Denmark	2.58	1.97	1.44	1.73	1.75	1.78	1.80
Germany	2.46	1.77	1.48	1.32	1.35	1.37	1.45
France	2.83	2.36	1.88	1.72	1.89	1.90	1.85
Ireland	3.91	3.84	2.92	1.99	1.95	1.99	1.80
Italy	2.50	2.37	1.55	1.28	1.26	1.33	1.40
Hungary	1.88	2.01	1.82	1.77	1.31	1.28	1.60
Netherlands	3.17	2.15	1.52	1.59	1.72	1.73	1.75
Austria	2.78	2.08	1.61	1.49	1.37	1.42	1.45
Poland	2.76	2.24	2.33	1.93	1.28	1.23	1.60
Slovakia	2.93	2.50	2.29	1.94	1.22	1.25	1.60
Finland	2.68	1.64	1.68	1.82	1.74	1.80	1.80
Sweden	2.30	1.90	1.64	2.04	1.62	1.75	1.85
United Kingdom	2.86	2.20	1.81	1.78	1.66	1.74	1.75
Turkey	6.18	5.68	4.36	2.99	2.42	2.20	1.85

Source: Eurostat from Europe's Demographic Future: Facts and Figures, 2007, p.17

2.2. The Demographic Change Trends of the National Level in Turkey

The TFR in Turkey in 2005 was 2.20 while it was 6.18 in the period between 1960 and 1964. In a forty-five-year period, therefore, the TFR has declined approximately 65 %. Having regard to this decline in TFR, the total national population in Turkey seems to stabilize and seems to decline in near future if this latest forty-five-year trajectory remains the same.

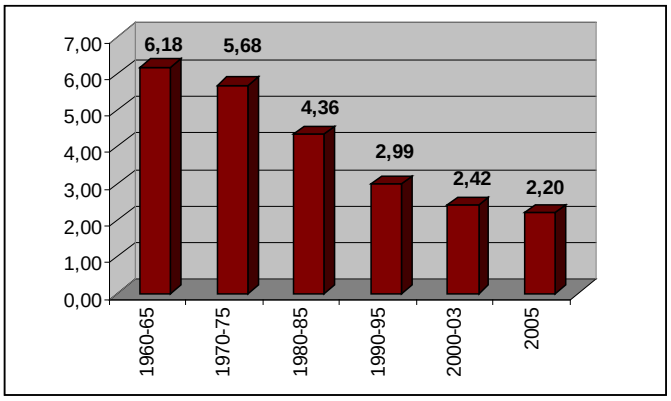

Figure 4. The national level TFR changes in Turkey in the period between 1960 and 2005 (Compiled from Europe's Demographic Future: Facts and Figures, 2007, p.17).

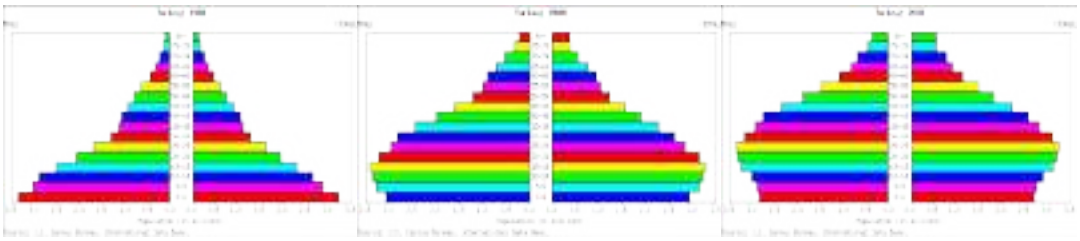

Figure 5. The national population pyramid of Turkey in 1980, 2000 and 2010 (Source: US Census Bureau, International Database, 2010).

In addition to the TFR decline trend shown in Figure 1, the population trajectory becoming much more apparent in the latest national population pyramid indicates the decline in the population increase ratios on the one hand and the shrinking proportion of the population of younger cohorts on the other. This trajectory, moreover, refers to a mid-term decline in the work force cohorts and to an increase in the population of the elder cohorts which indicates an increase in the elderly dependency ratios.

2.3. Contemporary Demographic Change Trajectories in Two New Industrial Districts of Turkey: The Towns of Gaziantep and Kayseri

Certain recent researches stress that the national level TFR change tendencies show some regional and geographical distinctions (Işık and Pınarcıoğlu, 2006). Despite some minor distinctions from one another, two new industrial districts of Turkey; the towns of Gaziantep and Kayseri, however, represent a similar trajectory to the national level changes. According to TURKSTAT data, the provincial TFRs in the year 2008 were as in the following: Gaziantep: 3.30 and Kayseri 2.56; thel TFRs in 2000 were: Gaziantep: 3.39 and Kayseri 2.51; and the TFRs in 1990 were: Gaziantep: 4.09 and Kayseri 3.64. There is a minor increase in the provincial TFR of Kayseri in 2008; however, the decline in the period between 1990 and 2008 is 29.68 %. Similarly, the decline in the same period in Gaziantep is 19.32 %. In the same period, the national level decline corresponds to 26.42 %. The rate of decline, therefore, in Kayseri is more than the national level, while the rate of decline in Gaziantep is less than the national level. All trajectories represent a decrease in TFR contrary to the trajectories of the period before 1980s. The population pyramids also represent a similar tendency.

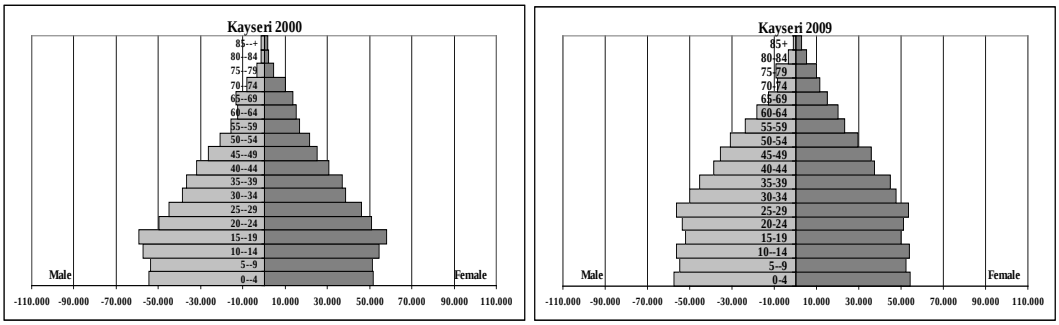

Figure 6. The population pyramid of Kayseri in 2000 and 2009 (Compiled from TURKSTAT census data).

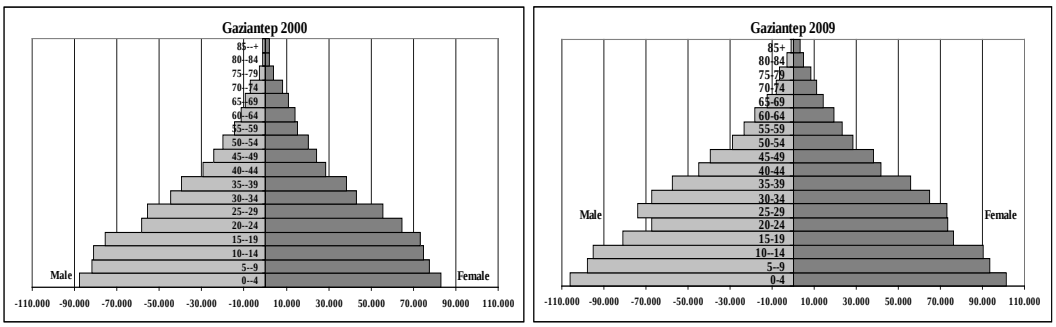

Figure 7. The population pyramids of Gaziantep in 2000 and 2009 (Compiled from TURKSTAT census data).

The change in the population ratios of working force and non-working cohorts in Gaziantep in the period between 2000 and 2009, however, seem to represent a coming decline particularly in the population of work force cohorts. In both towns, the population rates of younger cohorts have declined in this period while the population rates of elderly cohorts have increased. Table 2 apparently indicates the increase in the elderly dependency ratios and thus the population aging and the decline in the population rates of younger cohorts and thus the renewal rate of total population. In mid-term, both of these towns seem to represent similar demographic change trends to the national level trajectories and therefore, population aging, decline in the TFR and the dwindling proportion of population renewal rate seem to be the main determinants of the demographic structure of these towns.

Table 2. The population changes in Gaziantep and Kayseri in the period between 2000 and 2009 (Compiled from TURKSTAT census data)

Gaziantep	**2000**		**0-14**	**15-64**	**65+**	**Total**
		Male	250.515	373.296	21.482	645.293
2000-2009		Female	234.995	377.159	27.114	639.268
Total		Total	485.510	750.455	48.596	1.284.561
Population		Rate (%)	**37,80**	**58,42**	**3,78**	**100,00**
Artış Oranı	**2009**		**0-14**	**15-64**	**65+**	**Total**
28,73		Male	299.484	501.585	30.842	831.911
%		Female	285.468	494.730	41.561	821.759
		Total	584.952	996.315	72.403	1.653.670
		Rate (%)	**35,37**	**60,25**	**4,38**	**100,00**
Kayseri	**2000**		**0-14**	**15-64**	**65+**	**Total**
		Male	165.230	336.873	27.392	529.495
2000-2009		Female	157.771	341.061	31.934	530.766
Total		Total	323.001	677.934	59.326	1.060.261
Population		Rate (%)	**30,46**	**63,94**	**5,60**	**100,00**
İncrease rate	**2009**		**0-14**	**15-64**	**65+**	**Total**
13,73		Male	168.439	404.137	34.446	607.022
%		Female	160.390	393.805	44.655	598.850
		Total	328.829	797.942	79.101	1.205.872
		Rate (%)	**27,27**	**66,17**	**6,56**	**100,00**

3. The Rural-Urban Fringe

3.1. Theoretical Attitude toward the Rural-Urban Fringes

The post-war period after 1945 represents a major restructuring process both in economic and urban terms for almost all of the countries no matter if they joined the war or stayed as neutral countries. It is possible to distinguish between three significant realities of this period. Presumably, the most apparent one is the dominance of the Keynesian economics. In tune with the rise of welfare state and Keynesian economics, planned economy and planning profession itself had gained a central importance. The rapid population increase can be identified as the second clearly distinguishable realities of this period. It is not surprising that the short period after 1945 was called the 'baby boom' period in many countries. This generation is called the baby boomers. Rapid urban growth, fast urbanization and a higher amount of increase in the number of urban population than the total population can be identified as the most apparent consequences of this baby boom period.

This period also represents a beginning for an extremely high increase in urbanization in relation not only to the rapid population growth, but also to the industrialization based development strategies. Everything about 'urban' had become a focal point since development has been thought to be depended merely on urbanization; and thus industrialization. Even the indicators of development had been organized to measure the industrialization levels. The policies and strategies of this period have, therefore, focused on urbanization and industrialization. The dominance of welfare state policies and thus planned economy has paved the way of planning profession for a central importance. And central issues in planning were all related to 'growth' one way or another.

Drawing a brief perspective about how planning theoretically conceptualized the rural-urban fringe in a period in which 'growth' played the leading role seems to have a vital importance. The fringe has not been discovered recently, it has always been there in theoretical foundations of planning. It is possible to identify the first theoretical footprints of the fringe in von Thünen's influential work "The Isolated State in Relation to Agriculture and Political Economy" (von Thünen, 2009 [1863]) in a form of a dialectic between the core and periphery especially in 'Thünen's Rings'.

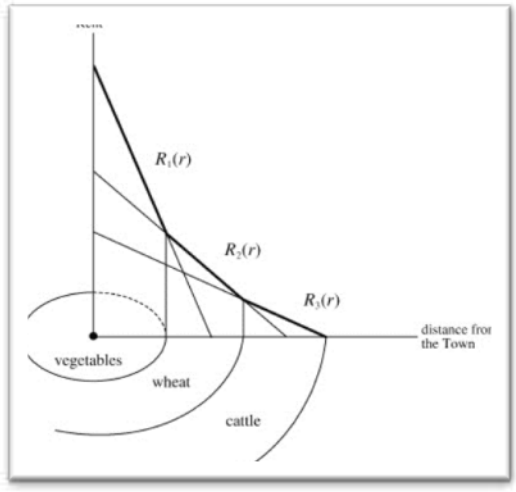

Figure 8: Thünen's Rings (Fujita, M., 2012).

Another influential study sharing a similar approach to the fringe with von Thünen's work is Walter Christaller's "Central Places in Southern Germany" (Christaller, 1966 [1933]). He identified the hierarchical relationship between the central places and 'hinterlands' wherein a dialectic between core and periphery results a hexagonal pattern of urban and regional services. In addition, McLoughlin (1969) draws attention to Charles Colby's (1933) study on 'centrifugal' and 'centripetal' forces in urban geography and puts that centrifugal and centripetal forces in cities have "the effect of concentrating certain activities and dispersing others respectively" (p. 62).

Besides, both in Burgess' (1968, [1925]) studies on concentric rings and later, Harris and Ullman's (1957, [1945]) influential conception on multiple-nuclei, it is possible to identify the core-periphery type of relations between the urban and fringe. The common point of all these fundamental theoretical studies of planning is that they all focused on center and central; and explain the peripheral within a context of core-periphery relations.

Adding the concept "land-use" within all these conceptions will pave a seminal way for the attempts of this study to understand the theoretical position of the fringe. According to those theoretical studies in which the land-uses occupy the focal point, the rural-urban fringe is a valuable part of urban wherein the land-uses which entails huge amounts of area usage and which should not be 'located' within the urban area are 'located'. Or it is the location for inter-urban and / or inter-regional heavy transportation. Especially in land-use based theories, as Gallent, Andersson and Bianconi (2006) put, "fringe is often seen as a degraded area, fit only for locating sewage works, essential service functions and other less than neighborly uses" (p. xv). Stuart Chapin, Jr. (1972) most remarkably puts the attitude of land-use based theories toward the fringe as in the following:

> *General principles relating to the location of land uses customarily identify three major functional areas in the urban complex: the work areas, the living areas, and the leisure-time*

> *areas. (…) The leisure-time areas are generally considered to include the major educational, cultural, and recreational facilities of the urban center consisting of colleges, museums, concert halls, libraries, colosseums, golf courses, large public parks and wildlife reserves for hiking, picnics and outings of all kinds, and similar facilities* (Chapin, Jr., p. 371).

> *(…)Intensive manufacturing: variety of site sizes for modern one-story or multiple-story buildings and accessory storage, loading and parking areas in close-in and fringe locations…* (Chapin, Jr., p. 372).

> *(…) Wholesale and related use areas: #2: range of choice in close-in and fringe locations, site sizes…* (Chapin, Jr., p. 373).

> *(…) Region-Serving recreation, education and cultural facilities: Major parks, public reservations and golf courses: acreage sites in fringe and outlying areas…* (Chapin, Jr., p. 374).

Finally, the attitude of growth-based approaches toward the fringe is tried to be shown. One of the basic methods of urban-growth based approaches is the threshold analysis. In their seminal work on threshold analysis, Kozlowski, Hughes and Brown (1972) define the thresholds as obstacles blocking minimum cost expansion opportunities of the urban areas.

> *(…) from which the most suitable physical growth directions for a town can be deduced. By estimating the threshold costs, indispensable for opening up new land for urban development, and by calculating the capacity of threshold areas (…) important data for determining the most viable possibilities for urban expansion taking into account existing physical conditions can be obtained. From this sequence in which adjacent areas should be developed can also be indicate (...)* (Kozlowski, Hughes and Brown, 1972, p.25-26).

According to their statements above, rural-urban fringes are considered to be the thresholds for urban expansion. To put in a nutshell, even though the fringe has not been discovered lately and it has always been there with the urban areas, many of the theoretical studies, owing mostly to somehow reasonable grounds, tend not to take care with the rural-urban fringes. The fringe has sometimes represented thresholds, sometimes been thought to be a ‘rational’ location for ‘less than neighborly’ land-uses and so on. In certain cases, the roles and usages of the fringe has not even been considered theoretically. The rural-urban fringe of the towns in Turkey stands for a remarkable example of these roles and usages.

3.2. The Rural-Urban Fringes in Turkey

To put it briefly, it is possible to observe similar notions of the rural-urban fringes of the towns in Turkey. But in addition to them, the urbanization process of Turkey entails identifying two important and, to a degree, peculiar characteristics of the rural-urban fringes which are, in turn, the slum house (gecekondu) areas and economically influential amounts of speculative investment on urban land. Every urban settlement, but especially the big towns, in Turkey has experienced rapid population increases and thus rapid urban growth for more than 50 years. During the

1970s, the increase rates of urban population reached a level way higher than the total population increase, and this 50-year-long period represents incredible amounts of population flows from rural areas to urban. Even the population projections of those plans which predicted the most reasonable increase and growth rates have become insufficient owing to population boom.

Slum house areas and urban land speculations have been two of the main agendas of both urbanization and planning profession in Turkey. And the basic spatial component of these two agendas was – and to a degree still is – the rural-urban fringes. Any attempt to consider the rural-urban fringe in Turkey in those times, therefore, seemed to be sentenced to become useless owing to the growth rates of towns. In some cases like Ankara, İstanbul and İzmir, and so also like Adana, Bursa, Gaziantep, Kayseri etc., urban expansion rates would have defied all attempts even to define a rural-urban fringe in a period when one year's rural has become the urban of another.

It seems totally reasonable for planning, both in practical and educational terms, to focus on dealing with urban growth and other related problems. But as underlined in the foregoing sections, the national demographic dynamics of Turkey has already begun to change and the influences of this demographic shift have started to be much more apparent. Urban transformation related issues and debates seem to capture the planning agenda in Turkey recently and urban growth and urban expansion seem to lose their central importance at least on popular grounds. Even though the urban transformation and renewal implications result an unnecessary density increase type urban growth (Hovardaoğlu, 2010b), the growth itself now seems to fail in attracting direct attention.

In tune with this shift, certain new usages seem to appear in the rural-urban fringes. Gated community type low density and high priced housing areas and big malls are the most popular ones located in the fringes. However, in many towns, the fringe has already occupied by slum house areas, industrial zones, certain public services and institutions which need big areas etc. In these towns, those popular uses need to jump over the 'traditional' land-uses of the fringe and they create new circles sprawling beyond the existing edges of the towns which of course results the existence of the speculative expectations. However, owing on the one hand to the jam within the urban area and on the other to the old habitual attitude toward the fringes, these areas have not been considered sufficiently enough to be components of neither the total quality of life nor the local development efforts especially in terms of professional and urban agriculture. Examining real examples from case studies can clear the ambiguity.

3.3. Some Key Evidences from two Major New Industrial Districts of Turkey

The towns of Gaziantep and Kayseri have experienced rapid population increases and rapid urban growth in the period especially between 1950s and 1980s. Even though the demographic indicators shown in the foregoing sections draw a similar

trend with the national tendencies, and the recent population increase rates have dwindled more than twice since the 1960s, urban growth still seems to be a dominant variable in their planning processes. Since 2005, particularly after the acceptance of new Metropolitan Municipality Law (Law no: 5216), the municipal area of these two towns have grown approximately ten times in hectares which results an inclusion of a huge amount of rural areas within the municipal borders. Although a contemporary law arrangement discusses to enlarge the metropolitan area into the provincial borders, this first 'municipal growth' paves the way for officially perceiving these rural areas as if they were the fringes of metropolitan towns.

Actually, many of these rural settlements, in a somehow commonsensical way, fit a definition of 'neither rural nor urban'. However, neither these settlements are from those places where 'urban' touches 'rural', nor do they fit a prevalent contemporary definition of rural-urban fringes if they are defined as "*that zone of transition which begins with the edge of the fully built up urban area and becomes progressively more rural whilst still remaining a clear mix of urban and rural land uses and influences before giving way to the wider countryside*" (Countryside Agency, 2002, in Gallent, Andersson and Bianconi, 2006, p.5). They seem more likely to fit a definition of 'near-rural' attempted to be explained in this study. And those areas, those zones of transition as defined above still seem to be left unconsidered. A brief look toward the rural-urban fringes of these two towns will ease to understand the actual relationship of these areas between the fully built up urban areas.

Figure 9. The current land-use pattern of the town of Kayseri (Archives of Metropolitan Municipality of Kayseri)

The traditional growth directions of the town draw a linear form begin from the city center to the west in one direction and to the north-east in another. The main land-uses have been located toward these directions but there has been a traditional bulb-

like growth direction towards north owing to the Sumerbank Textile Factory. On the opposite edges of the town, on the west and north-east edges, two industrial areas are located and one of them is already unified with another industrial area and shares a border with the free zone. The north and south edges of the town are surrounded by hills and mountains, and these edges can be characterized mostly by housing areas. It is possible to identify certain slum house areas especially on the northern parts of the west edge and southern edges. But these areas are not as prevalent as the ones in other major towns in Turkey.

Until recently the characteristics of the rural-urban fringes of the town did not have peculiar features when compared with most of the other towns in Turkey except those areas of orchard houses and Mountain Erciyes. But three important land-use types have begun to be apparent on the fringes of the town currently. The first one can be characterized by regional health services. On the northern part of the west edge of the city, a huge regional health campus with complex health facilities has planned to be located. The second one can be characterized by regional transportation services. On the west edge of the town, the construction of a freight village has been considered for some time. And finally, the third one is characterized by prestigious housing areas. On the south eastern part edge, the construction of this kind of houses has started. The local administration, however, does not have a special policy neither for rural-urban fringes, nor for the near-rural areas yet; although the administrators seem to be highly aware of a possible new type of competitiveness based on attracting especially qualified population (Hovardaoğlu, 2010a). The local administration of the town of Gaziantep also seems to be aware of this type of competitiveness and spent certain efforts to improve the total quality of life in the town. However, their policies have not considered special strategies for the rural-urban fringes yet.

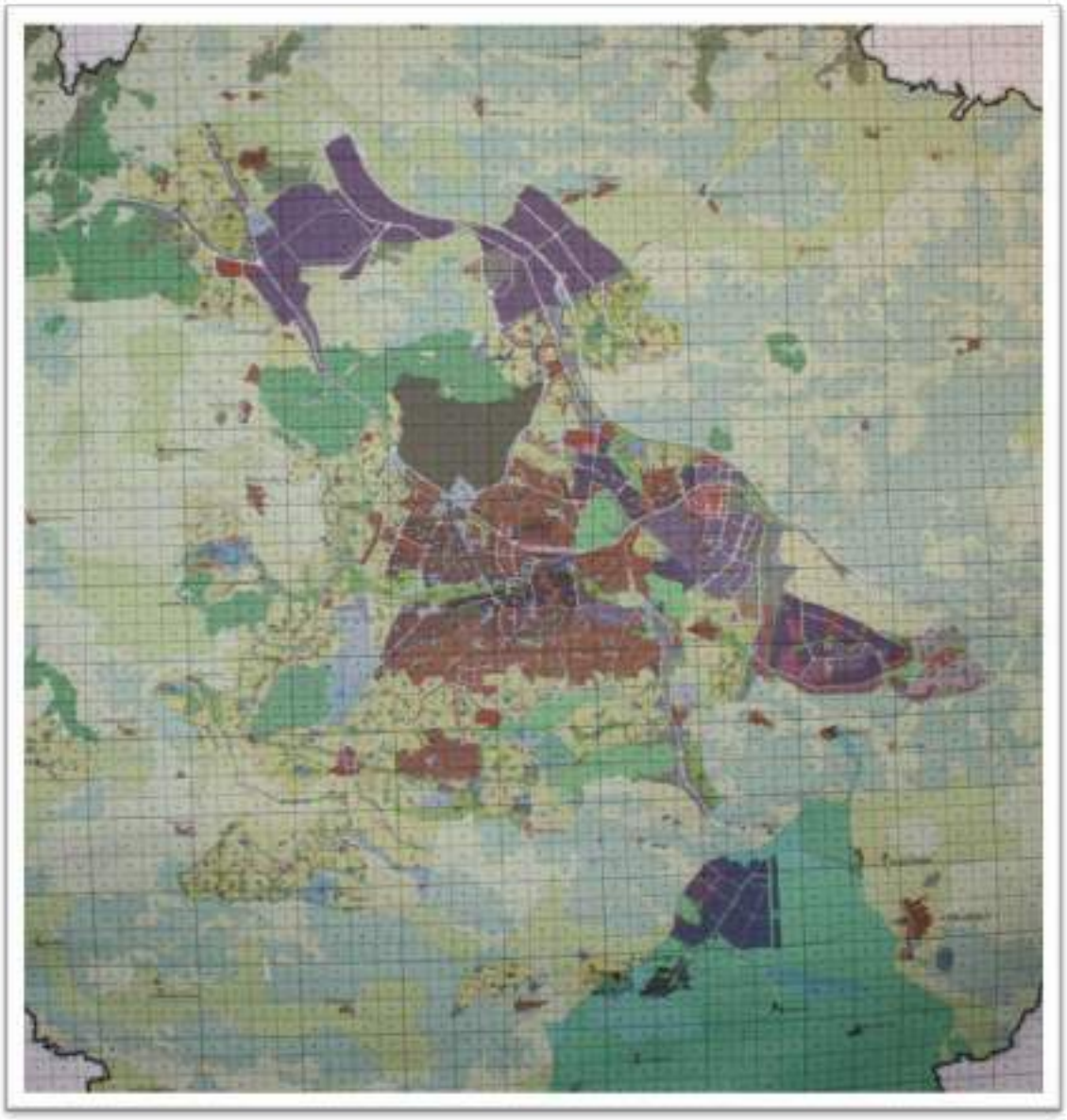

Figure 10. The current land-use pattern of the town of Gaziantep (Archives of Metropolitan Municipality of Gaziantep)

The industrial land-uses can easily be identified on the northern, eastern and southern edges of the town. But the actual distance and locations of these land-uses make it very difficult to relate the transition areas to the town, and especially on these parts, the transition seems to be ceased abruptly. There is a wide opening for the city, however, for such a transition especially on those parts begin from north-west edges and ends at south-west. This opening seems to give an opportunity for the town for a plausible rural-urban transition. In fact, it is already possible to identify some prestigious housing areas sprawling towards this opening which seem to be supported by the latest urban mass transportation investments. But still, the town does not have peculiar policies neither for fringes nor for near-rural areas.

4. Conclusion: Changing Context of the Rural-Urban Fringes and Near-Rural Areas

It is clearly possible to put that not considering the rural-urban fringes in conventional ways which tend to identify these areas in peripheral and rather passive terms can be much more helpful for those strategies attempting to improve the total quality of life with problem solving-based approaches on the one hand, ad to find alternative ways of development in an era of deindustrialization on the other. The fringe, today, represents greater amount of opportunities than anticipated in the traditional conceptions of planning. Not only do prevalent contemporary discussions in the planning suggest, but also the current demographic dynamics entail reconsidering a change in goals and tools of planning implementations. In fact, after an era dominated by the frantic increases in urban population and thus by advocacy of urban growth and growth management comes a time when these goals and tools once seemed solid and unshakable foundations of planning implementations turn into inefficient repetitiveness of routine blocking the way for seeking problem solving-based and quality-based approaches.

In this new era, if agricultural production – in professional and multifunctional terms – and urban life quality will be the two of the leading variables of development equation, then it is possible to put an obvious need of reconsidering rural-urban fringes and near-rural areas. Again, in this new era, if planning theoretically tends to reconsider or reimagine the urban in terms of mixed spatialities which are open and cross-cut by many different kinds of mobilities, from flows of people to commodities and information as, for instance, Massey, Allen and Pile (1999), Urry (2000), and Amin and Thrift (2002) put, then there will be an obvious need of reconsidering and reimagining the rural-urban fringes and near-rural areas as certain spatialities which convey much more than just being the opposite of urban.

Table 3. A Brief Look towards the Conceptions and Uses of the Rural-Urban Fringes.

	Traditional Conceptions of Planning	Conventional practical uses	Contemporary practical uses
Rural-urban fringes	- Thresholds which block alternative growth directions - Areas for specific land-uses which ***cannot*** be located within urban areas - Areas for specific land-uses which ***should not*** be located within urban areas - Low-priced peripheral areas - A tangent for certain uses which need to touch but do not	- Slum house areas - Waste-lands waiting desperately to transform into urban - Farmlands also waiting desperately to transform into urban	- Freight villages - Prestigious housing areas - Great malls & out-of-town retails - Areas for decentralized office space - Green energy production

	cut into urban areas like heavy transportation - Reserve areas for future expansion - Conservation areas like green belts - A hinterland piece connected to urban with dependency bonds - Areas for 'other' or 'excluded' less than neighborly uses - Areas for locating leisure facilities		- Conservation areas like green belts

To put in a nutshell, planning, especially in Turkey ad especially due to the current demographic dynamics, has a great opportunity to reconsider the rural-urban fringes and near-rural areas as vital components of both the development efforts and urban quality of life. In fact, these places seem to become the mıst valuable areas of urban agriculture and rural development.

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NEIGHBOURHOOD DESIGN AND VMT: IS MALAYSIA PLANNING TO ACHIEVE THE SPIRIT OF NEW URBANISM?

M. Rafee Majid, Foziah Johar & Alia N. Nordin

Abstract

Urban population currently represents sixty eight percents of the total population of Malaysia, doubling its value of thirty three percents in 1970. By the year 2020, when Malaysia plans to achieve industrialised-nation status, about two thirds of the population will be in urban areas living in mass-produced housing schemes first constructed in the 1970s. Although travel modes have changed significantly in Malaysia along with the changes in the physical design of these housing areas, very little is known about how the changes influence household vehicle-mile-travelled or VMT. The effects of neighbourhood design on VMT are an important aspect to consider in our effort to reduce greenhouse gas emission. Thus, this paper presents the findings of a study carried out in the City of Johor Bahru, within the designated economic growth area of Iskandar Malaysia, to understand how the change in neighbourhood designs over the decades due to policies and lifestyles influences VMT. Fifty two residential neighbourhoods representing several decades from 1970s to the 2000s were selected and travel diaries of their randomly selected households were recorded. While the results obtained confirm the prevalent theory on the relationship between neighborhood design and VMT, unfortunately for the study area the average VMT has been increasing with the newly-designed neighborhoods. Increasing wealth and mobility apparently has seen increasing demand for neighborhood designs that are not as compact as the traditional ones and not as 'mixed uses' either. While the rest of the world is going for 'new urbanism', Malaysia which embraced its form of 'new urbanism' called 'mixed development' since 1970s is doing the opposite. As population of Johor Bahru is rapidly growing due to its location in the economic growth area of Iskandar Malaysia, serious rethinking of the current development policies is in order.

Keywords: Vehicle Miles Travelled (VMT), Sustainable Neighborhood, Neighbourhood Design

1. Introduction

Urban population currently represents sixty eight percents of the total population of Malaysia, doubling its value of thirty three percents in 1970. By the year 2020, when Malaysia plans to achieve industrialized-nation status, about two thirds of the population will be in urban areas living in mass-produced housing schemes first constructed in the 1970s. Over the decades, due to the economic and population growth as well as rapid urban development has been resulting in a tremendous increase of private vehicle ownership in Malaysia. Inadequate public transport availability and services worsen the situation. According to Malaysian Road and Transport Department (2011), the total numbers of privately-owned vehicles (POV) in Malaysia have reached 19,144,262 units. Among the units in 2011, Johor State with a population of 3.5 millions holds the second largest POV rate among the states in Malaysia with a total of 2,649,657 units. This POV rate is set to further increase as the population of

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Johor is estimated to increase to 5 millions in 2025, with the biggest share of the increment will take place in the Iskandar Malaysia region.

Higher POV will increase the total number of travel trips which lead to higher vehicle-mile-travelled (VMT), thus resulting in traffic congestion and increased air pollution. Transportation, together with electricity and heat generation; manufacturing and construction; and residential have been identified as four main sectors that contributed to the greenhouse gas emission in Malaysia. However, research on VMT in Malaysia was barely heard off. Back in 2003 and 2007, it was used once as an indicator to measure road safety performance and as an indicator for international traffic safety comparison purposes. The parameter provides additional information about crash risk in terms of exposure for certain groups of road users. For instance, drivers who travel long distances are more at risk to be involved in an accident than those who make shorter trips (MIROS, 2011).

Therefore, it is the main objective of this study to investigate how changing designs of neighbourhoods in Iskandar Malaysia over the decades have influenced household VMT. The changing designs are described in terms of quantifiable characteristics including neighbourhood size, location of commercial zone, density, land use diversity, etc. The effects of neighbourhood design on VMT are an important aspect to consider in our effort to reduce greenhouse gas emission.

2. Residential development in Johor Bahru

After the 1997 monetary crisis, together with announcement of several physical and national plans, urbanisation of Malaysian cities intensified which saw a surge in the number of new housing projects or neighbourhoods that sprawled into rural area. Urban sprawling hit many cities in Malaysia, including Johor Bahru (Majid, 2011). Historically, residential development has been constantly happening in Johor Bahru since the 1980s (Table 1). Housing areas or neighbourhoods of many sizes were being developed each year with each new one was moving away from the city centre, encroaching into the rural area. This rapid urbanisation resulted in higher dependency on automobile as the preferred mode of travelling. Most of these developments are offered as mixed-used development where a diversity of land uses present ranging from residential to commercial and also industrial facilities in some cases. This is especially so for big development but some small ones offer only residential units, relying on the neighbouring developments for other facilities. Recent trend however has seen more and more exclusively-zoned developments offering only residential and recreational land uses which are not entirely a good idea if the city is trying to reduce household VMT.

Table 1. Development of Neighbourhoods in Johor Bahru over the years.

Year	No. of Neighbourhoods	Individual Size (acres)
Pre 1980s	7	From 35 to 251 acres
1980s	99	From 4 to 2000 acres
1990s	96	From 4 to 4800 acres
2000s	100	From 3 to 3200 acres

3. Neighbourhood Designs and Household VMT

Considerable amount of research has been carried out at varying depth trying to understand how built environment influences travel behaviour. Travel research by Cervero and

Kockelman (1997) has identified “three Ds” that influence travel demand and behaviour. They are density, diversity and design. Meanwhile, Ewing & Cervero (2001) and Ewing et al. (2009), next identified another “two Ds” which are destination accessibility and distance to transit.

Density refers to the variables of interest per unit area. The area can be gross or net, and the variable of interest can be population, dwelling units, employment, building floor area, etc. Ewing (1997) concludes that “doubling urban densities results in a 25-30% reduction in VMT or a slightly smaller reduction when the effects of other variables are controlled”. By other means, doubling urban density refer to compact neighbourhood. Compact neighbourhoods can degenerate vehicle trips and encourage non-motorized travel in several ways (Cervero & Kockelman, 1997). Furthermore, Cervero and Kockelman mention that by bringing origins and destinations closer together, the opportunity for resident to leave their car at home and walking or cycling to a destination will increase. In addition, compact neighbourhoods tend to have less parking, better quality transit services, wider mixes of land uses, and larger shares of low-income households, all factors that reduce car usage. In Johor, high density development can reach maximum of 60 units per acre (for apartments). However, high demand on landed houses, which particularly comprise of 8 to 40 units per acres, makes compact development not a development choice.

A simulation study by Kulash et al., (1990) and McNally and Ryan (1993) found that a connected or grid street design reduces VMT as well as slower average travel speeds. These support Calthorpe (1993)’s conclusions about the transportation benefits of neotraditional design, which connected street patterns reduces the distance of trip (with assumption trip frequencies are fixed). Research by Cervero and Kockelman (1997), found that neighbourhood with good design especially street pattern design and diversity will encourage people to commute by non-motorized modes. Their research result suggest “ a neighbourhood with all rectangular or square blocks could be expected to average nine more daily personal VMT per household than one with no quadrilateral blocks”. This is because rectangular or quadrilateral blocks (grid-like street pattern) will encourage walking since the interconnectivity between destination is higher. From the research, number of intersection (more intersection) helps fewer personal VMT per household.

Higher density is expected to reduce the need to travel long distances, thus lower the VMT. However, argument against this hypothesis by some scholar had made the literature on this hypothesis became ambiguous. Steiner (1994), in her review of literature on the link between residential density and travel distances conclude that resident of high density areas will travel shorter compared to resident of lower density areas. Differ with Steiner, Levinson and Kumar (1997), on the basis of their study across cities in the US with more than 1 million inhabitants, state the opposite. In their paper, they suggest that metropolitan residential density is principally a surrogate for city size. Large settlements offer more services and facilities, which could reduce travel distances and favour the use of slower transport modes and public transport. On the other hand, the dispersion of urban land use over a large area may lead to longer distances, which lead residents to use their cars. In addition, research conducted by Banister (1997) showed that average trip distances were shorter in larger settlement than in smaller settlement. This is because, inadequate or few public transport facilities require the resident to use their own car to get to the services and facilities that were also not provided in a smaller settlement. In Malaysia, neighbourhood size varied according to the land owner who developed the area. Thus, it may also associate with the changes of VMT in Iskandar Malaysia.

Using cross sectional data, Handy & Clifton (2001) and Bagley & Mokhtarian (2002) observed association between travel behaviour and neighbourhood characteristic are largely explained by the self selection of residents with certain attitudes into certain kinds of neighbourhoods. Residents will basically have their own preferences in choosing a neighbourhood. Those who are exposed with environmental friendly and low carbon programme may end up choosing a neighbourhood that promotes sustainable development (i.e. neighbourhood that provides special track for walking and cycling). Dieleman et al. (2002) who examined the issue with use of the Netherlands National Travel Survey, confirmed that both personal attributes and the characteristics of residential environments are determinants of travel mode choice and trip distance. However, home buyer with preferences to live near to their workplace, might not take neighbourhood design factors into consideration in buying a house.

New urbanism and transit-oriented development are some of urban design philosophies that have gained popularity in recent years as ways of shaping travel demand and lower the VMT. These urban design philosophies shared three common transportation objectives, which are to reduce the number of motorized trips, to increase non motorized trip (by foot or bicycle) and to reduce travel distances and increase vehicle occupancy levels (i.e. encourage shorter trips and more travel by transit, and ride-sharing) (Cervero & Kockelman, 1997). The New Urbanism principles synthesize a whole range of spatial patterns that are not only good urban design, but also fit in well with many other important planning goals including growth management, environmental protection and urban revitalization (Ellis, 2002). It promotes the creation and restoration of diverse, walkable, compact, vibrant, mixed-use communities composed of the same components as conventional development, but assembled in a more integrated fashion, in the form of complete communities (http://www.newurbanism.org/).

4. Materials and Method

4.1 Study area

The study area comprised of 52 neighbourhoods located within Iskandar Malaysia with irregular spatial shapes and has different land areas between 10 acre (minimum) and 3000 acre (maximum) (Figure 1). The average land area of neighbourhoods is about 1000 acres. Spatial data, including distance and area were obtained from Iskandar Region Development Authority, IRDA.

4.2 Data Collection

To understand the changing of VMT in Iskandar Malaysia, we conducted a survey of resident in fifty two selected neighbourhood located inner and outer from Johor Bahru City Centre. The selection of these neighbourhoods was mainly based on the time-periods during which they were developed (from 1960 till present).

The survey was conducted by means of distribution of travel diary and questionnaire among a school's students, with assumption that these students come from the neighbourhoods that their schools are in. Travel diary is a crucial method in order to obtain respondent vehicle miles travel data (see Cervero & Kockelman, 1997; Ewing & Cervero, 2001; Ewing et al, 2009). In this research, school student was asked to record their father or family vehicle odometer reading for one week. In addition, household data and travel data was obtained

using a questionnaire that was distributed together with the travel diary. The questionnaire consists of two sections, which are Household Demographic Data in section A, while section B gathers the Household Travel Information which includes: work trip, non-work trip, provision of public transportation, neighbourhood self-selection, travel frequency and travel attitude. Different with travel diary, in order to collect fair data, school students were asked to pass the questionnaire to their parent to be filled.

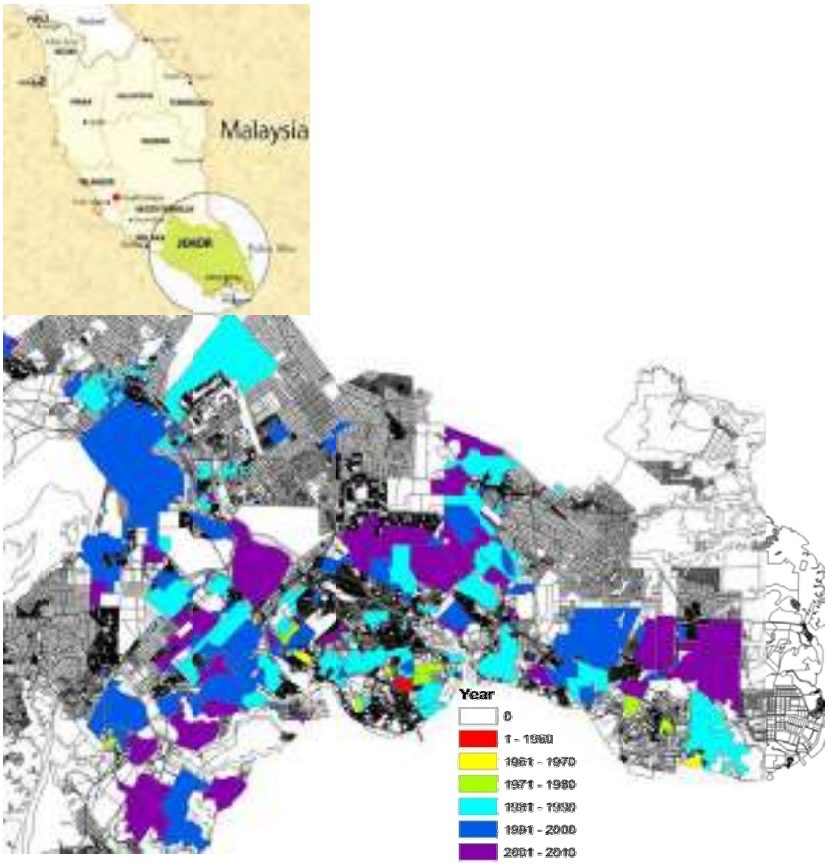

Figure 1. Residential neighbourhoods of Iskandar Malaysia by year of development.

5. Analysis and Discussion

Table 2 displays briefly the demographic characteristic of the respondents. From the survey, 69.44% respondent own at least one car, and 21.69% respondent own two cars. Respondent with more than two cars hold the lowest percent of car ownership with only 3.8%.

Table 2. Descriptive statistic travel data of neighbourhood by years

Building Decade of Neighbourhood	No. of Neighbourhood	Travel Distance (KM)	Household income (RM)	Household member	Car Ownership per house	License ownership per house
		Mean	Mean	Mean	Mean	Mean
Pre1980s	3	48.88	2722.22	4.44	0.8	1.67
1980s	15	66.19	3469.58	5.31	1.21	2.13
1990s	20	66.88	3210.47	5.41	1.18	2.33
2000s	15	57.84	4154.16	5.71	2.37	2.0

The results of the VMT survey indicate that average daily travel per household increases against age of the neighbourhoods (Figure 2). Recently-approved neighbourhoods, i.e. new designs, tend to generate higher VMT compared to old ones. On average, daily travels range from 50 km/day for neighbourhoods built in the 1980s to about 100 km/day for those built in the 2000s.

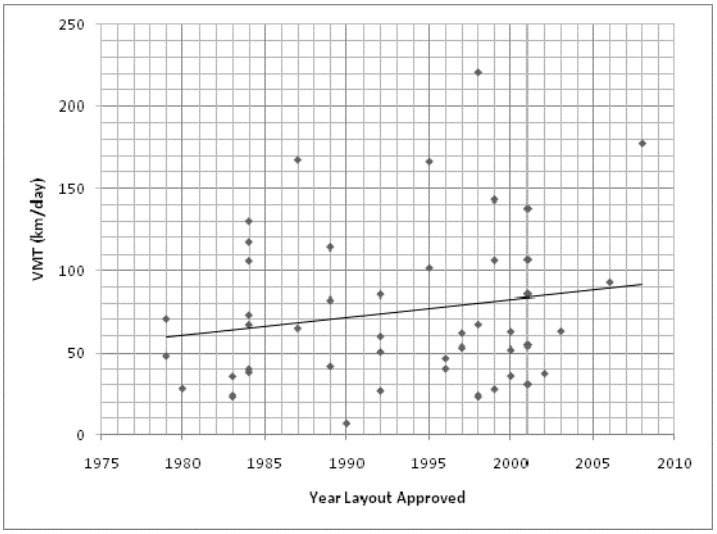

Figure 2: Higher VMT (km/day) are generated in recently approved neighbourhoods.

The values obtained have been controlled against the average household age and also against distance of neighbourhoods from the Central Business District (CBD) where most jobs are located. In this study, the distance of neighbourhoods to the CBD does not influence the total VMT generated by residents in respected neighbourhoods (Figure 3). This finding is opposite to that of Nasri (2012) which reported that neighbourhood distance to CBD is positively linked to VMT. Nasri (2012) concludes that longer distance from the CBD results in longer travel distance to reach various destinations. This, however, is only true if all those destinations are located in the CBD. In our case, only sixteen percents of the respondents work in the CBD. Besides, non-work travels are kept close to the respective neighbourhood and away from the CBD with all the services available nearby such as shopping malls, hypermarkets, linked shops and even offices above these shops. Thus, majority of the people no longer need to travel all the way to Johor Bahru City Centre to do their shopping or for work.

One factor that has been identified to have contributed to the increase of VMTs in those neighbourhoods is the diversity index. A study by Kassim (2012) has highlighted a progressive decrease of land use diversity in neighbourhoods in Iskandar Malaysia, including the neighbourhoods in this study. For plot of diversity index against age of neighbourhood, please refer to Kassim (2012). Figure 4 plots the VMTs obtained from this study against the diversity index from Kassim (2012) study for the neighbourhoods shared by both studies. The plot indicates that VMT increases as neighbourhood land use diversity decreases. Residents

of low land-use diversity neighbourhood will need to travel far in order to get to the facilities or services that are not provided within their neighbourhoods.

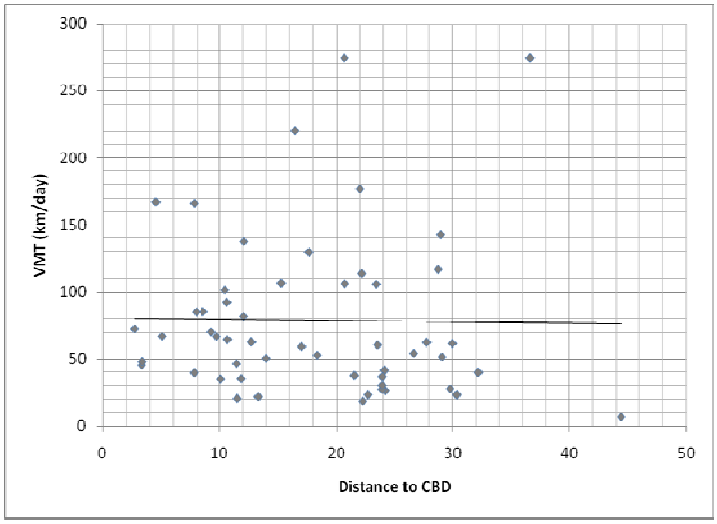

Figure 3: Distance from CBD has no effects on household VMT (km/day) for the study area.

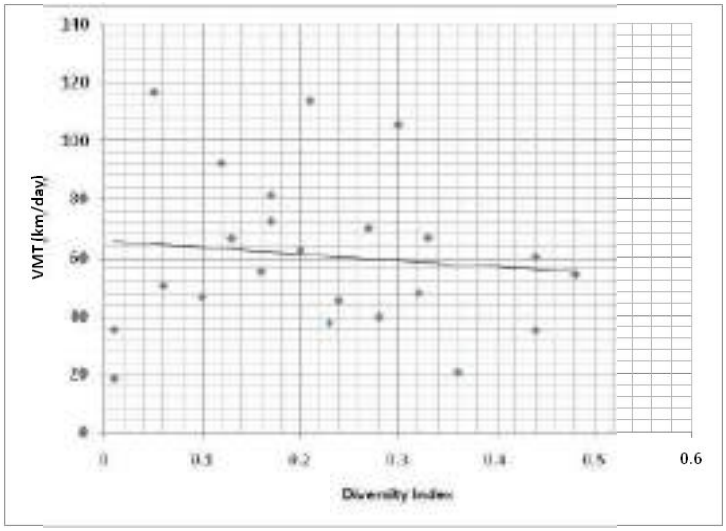

Figure 4: VMT (km/day) increases in neighbourhoods with low land use diversity.

Size of the neighbourhood and the location of the commercial area within a neighbourhood also influence VMT per household. Analysis of travel dairy against these two variables indicates that VMT is directly proportional to neighbourhood size but inversely proportional to the centrality of commercial area location (Figures 5 & 6). Centrality of commercial area location is crudely represented by the distance between the centroids of each neighbourhood area and its commercial area.

Currently Malaysia has no restrictions on where the commercial area should be located within a neighbourhood development. There are neighbourhoods with commercial area located at the centre which is alright but there are also commercial areas located at the

entrance or along the side of a neighbourhood development for various other reasons. There are some, due to their larger size, with more than one commercial area that are scattered over the neighbourhood. Locating facilities and services, i.e. commercial area, at the front and at the back of the neighbourhood, far from the residential area, forces residents to travel by car and over a longer distance. This situation is as explained by Levinson and Kumar (1997) that dispersion of urban land uses over a large area may lead to longer distances, which lead residents to use their cars.

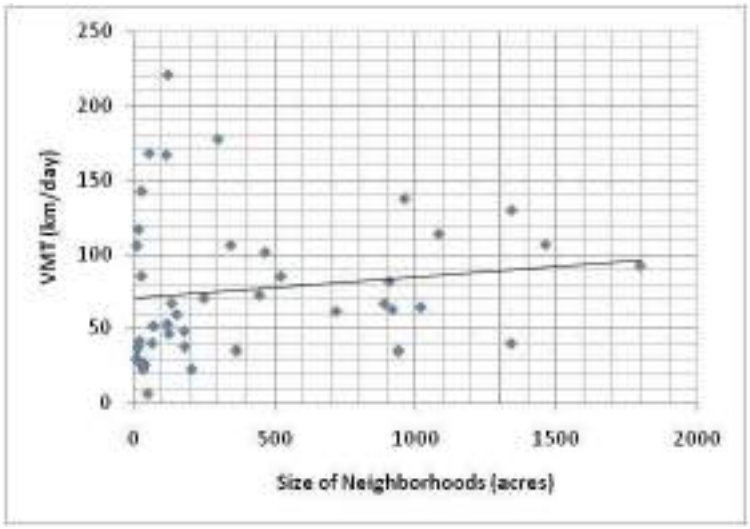

Figure 5. Vehicle Miles Travelled by Neighbourhood Size

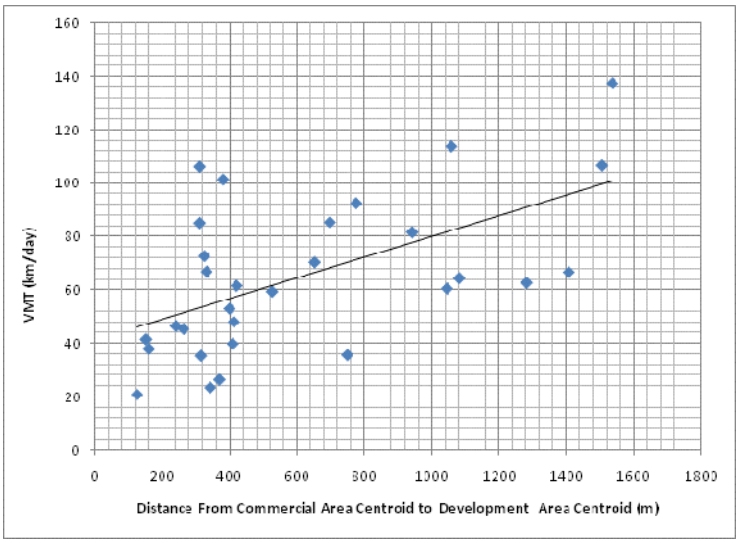

Figure 6. VMT (km/day) is also influenced by the location of the commercial area within the neighbourhoods.

Studies also show that density plays an important role in determining the size of VMT and higher density would normally result in lower VMT. It is however not true with the neighbourhoods studied in this research. It was found that VMT increases slightly with density. This is due to the fact that neighbourhood density is influenced by the size of the

neighbourhood. Smaller neighbourhood size will lead to higher neighbourhood density but with lower land use diversity. As a result, the VMT will not decreased even though the neighbourhood density is higher since the resident have to travel far to get to the facilities and services needed.

Finally, the last factor identified to influence VMT is neighbourhood intersection density. Theoretically, higher intersection density lowers VMT in the neighbourhood (Cervero and Kockelman, 1997) and grid-like street pattern encourages walking since the inter connectivity between destination is higher. The neighbourhoods in Iskandar Malaysia has, over the years, gone through a lot of changes with the street pattern from grid to cul-de-sac, loops as well as curvilinear, thus resulting in lower intersection density and finally lower connectivity index (Rusman, 2012). VMT analysis done in this study shows that VMT increases with the decrease in connectivity index which happens to keep decreasing as more recent neighbourhoods are shying away from the grid pattern into more aesthetic curvilinear pattern or more private cul-de-sac-dominated pattern.

6. Conclusion

The most important finding from the study in terms of effort to minimize greenhouse gas emission is that household VMT in Iskandar Malaysia is on the increase. More recent designs of neighbourhood seem to contribute negatively towards this, i.e. higher household VMT coming out from neighbourhoods developed the last couple of years than decades before.

Among the factors that contribute towards the increase in VMT are changes in lifestyles and preferences in housing that help shape the current neighbourhood designs. Neighbourhoods now are becoming bigger with less density and, unfortunately, less diversity of land uses. Those high density neighbourhoods are normally small ones exclusively zoned for housing, forcing the residents to travel beyond the neighbourhoods for amenities and facilities. Preference for curvilinear design rather than the higher connectivity grid design also increases household VMT.

While many cities are talking about reduction of VMT through better and compact designs, unfortunately for Iskandar Malaysia the average VMT has been increasing with the newly-designed neighborhoods. Increasing wealth and mobility apparently has seen increasing demand for neighborhood designs that are not as compact as the traditional ones and not as ‘mixed uses’ either. Thus, Malaysia in general and Iskandar Malaysia in particular are taking its mixed development concept, which has been initiated since the late 1970s, further away from the New Urbanism concept while the rest of the world are embracing New Urbanism. This is cause for alarm as Iskandar Malaysia is targeting to increase its population from the current 1.5 million to 3.0 millions in 2025.

7. Acknowledgement

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REJUVENATION OF HOUSING DEVELOPMENT THROUGH COLLECTIVE SALES LEGISLATION

by

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Abstract

Real estate goes through a life cycle from the predevelopment to the redevelopment stages. However, with the building of more multi-owner residential communities in the form of strata-titled developments, it is difficult to consider redevelopment as it is necessary to secure the consent of all owners to proceed with the redevelopment exercise. This paper discusses the planning strategy adopted in Singapore to undertake the rejuvenation efforts to ensure that the city-state would continue to be built with vibrant and modern residential developments. The pros and cons of such a strategy using the collective sales legislation are discussed. The collective sales law allows a majority of residents rather than all the residents to agree to the sale and redevelopment of the existing old developments. The legislation has been a subject of much criticism the main of which are the uprooting of existing owners, and the waste of building resources because of the demolition of fairly new buildings. This paper puts forth some recommendations for a modified strategy to ensure a more orderly and productive use of resources. The rejuvenation strategy, however, has useful relevance for speeding up urban development in a densely populated city.

Keywords: collective sale, rejuvenation, residential development, Singapore

1. Introduction

Land is generally developed to satisfy a particular function, typically by the building of a structure. There is a distinct cycle in the demand for developed land and in the ability of a built-up property to satisfy the market needs. An important concept in understanding urban planning and development is the life cycle of a property. This concept explains the evolution of the property from the beginning as an undeveloped land through the completion of the building to the end when the structure is demolished and the site re-developed.

This rhythm of obsolescence and renewal in a property over its life is known as the theory of property life cycle (Thorncroft, 1969). The planning and design of the development signifies the first stage of a property life. It carries on through its construction and completion. And finally, with the passage of time, a building becomes obsolete when it is physically exhausted or when it is no longer economically worthwhile to keep it in use, and a decision may be made to redevelop the property.

The redevelopment initiative is easily undertaken when the land belongs to a single owner. In the context of multi-owner residential developments in the form of strata-titled development, it is difficult to consider redevelopment as it is necessary to secure the consent of all owners to proceed with the redevelopment exercise. This impediment is serious in a country which is highly urbanised and subject to rapid changes in the environment. The purpose of this paper is to discuss the planning strategy adopted in Singapore to undertake the rejuvenation efforts to ensure that the city-state would continue to be built with vibrant and modern residential developments to meet the needs of the new environment.

2. High density and strata developments

High residential densities have become an increasingly important feature of compact urban environments like Singapore and Hong Kong. While there have been arguments against high density living such as congestion (Mitchell 1971), overcrowding (Baum and Davis 1980), and difficulties of maintenance (Dredge and Coiacetto, 2011), there are positive reasons for encouraging high rise developments. Some of the advantages of high residential densities include equitable access to a range of key services within walking distance and the development of a strong local identity. However, in view of the urban planning challenges in most capital city cities, the trend is towards higher and not lower densities. These challenges include reduced availability of land, the need to accommodate growing urban populations and the need to ensure economic viability of public transport systems and other community infrastructure.

There is considerable consensus nowadays that medium-density and high-density development will provide the major source of urban housing in the future and is a key response to urban planning challenges in most capital city cities (Randolph and Easthope, 2007). Indeed, increasing density through the adoption of median-density and high-density residential development is thought to improve the efficiency of urban settlement patterns and achieve more sustainable urban forms (Randolph, 2006).

Strata title provides a key property rights mechanism to deliver medium-density and high-density development. A strata scheme is a development or collection of buildings where individuals have title to, or can own, a small portion known as a lot, and share access to and responsibility for the maintenance of common property which is jointly owned by all the owners. In an apartment building, a buyer purchasing a unit would receive title to a lot comprising a private apartment and a share in the common property that includes areas such as lifts, stairwells, car parks, recreation facilities such as pools or tennis courts. Most compact cities have legislations providing for the building of such multi-owner developments. Similarly Singapore introduced the Land Titles (Strata) Act in 1967 to provide for such developments.

3. Studies on rejuvenation and reurbanisation

In a modern urbanised city, several medium and high density structures are a common feature of these cities. However, when high-density developments reach their old age and become functionally obsolete, rejuvenation and renewal would have to be considered in order to retain the vibrancy of the urban city.

Urban decay is an inevitable result of growth of a city based on the property life cycle (Thorncroft, 1969). However, urban regeneration is not a "slash and burn" process (Planning and Lands Bureau, 2001). It is a process by which dilapidated structures and deteriorated buildings are improved through various means, ranging from upgrading, modernisation, rehabilitation, and redevelopment (Prasad, 1989).

Urban regeneration has been defined as "….comprehensive and integrated vision and action which leads to the resolution of urban problems and which seeks to bring about a lasting improvement in the economic, physical, social and environmental condition of an area that has been subject to change" (Roberts 2000 p17). The primary aim of urban regeneration is to upgrade a whole neighbourhood through improving blighted areas, ameliorating traffic situation and providing open space and better urban infrastructure (Couch, 1990; Zielenback, 2000).

Most of the previous studies discussed the challenges encountered in the urban regeneration process. Poor institutional arrangements (Adams and Hastings, 2001), non-people-centred policy (Ng et al, 2001), and dislocation of people (Sigsworth and Wilkinson, 1967) are some of the difficulties encountered. In some counties, governments are blamed for their ad hoc and patchy efforts in urban regeneration (Yung and Ho 2008).

Over the past decade there is evidence suggesting that many countries such as many English cities are experiencing a degree of reurbanisation with the emergence of city centre living after numerous years of counter-urbanisation (Couch et al, 2009).

Private housing investment in these areas has re-emerged during the 1990s and has become an established trend during the 2000s. The process of reurbanisation involves the movement of people back into the cities, and the repopulation of the city centre and inner ring. It has been argued that reurbanisation represents a phase of urban development in the urban lifecycle model (van den Berg and Klassen, 1987).

However, the redevelopment of a site with existing old structures, and the repopulation of the site require much efforts. Very often they could only be undertaken with the support of legislative powers. In the context of housing developments which are owned by multiple owners such as strata titled developments, the decision of each of the owners has been to be obtained before a redevelopment initiative can be undertaken. To overcome the difficulty, Singapore's government introduced an amendment to the strata title legislation in 1999 allowing a majority rather than all residents to agree to the sale and redevelopment of the existing old developments. This has facilitated the rejuvenation process as a few minority owners cannot now upset the initiative. The legislation has, however, been a subject of much debate and criticism the main of which are the uprooting of existing owners, and the waste of building resources because of the demolition of fairly new buildings. The following provides a detailed description of the approach to rejuvenation planning in Singapore.

4. Collective sales legislation

In Singapore, a strata title development may consist of purely residential, commercial or industrial premises or any combination of these properties. The nature of these developments is typically high-rise and high-density. The residential developments, mainly condominiums, must have a minimum plot size of 0.4 hectare. The larger condominiums are provided with the full range of amenities and facilities such as car parks, swimming pools, saunas, gymnasium, squash and tennis courts, putting green, clubhouse, a multi-purpose hall, barbecue pits, supermarkets and shops. The smaller condominiums may only be able to provide a small swimming pool. A 24-hour security system is a common feature in many condominiums.

The body corporate which is known as management corporation comprises all owners of the strata development. To enable the management corporation to obtain the necessary funds to carry out its duties and functions, it is empowered to levy contributions determined by it at a general meeting. Each subsidiary proprietor or owner is required to contribute an amount proportional to the share value of his respective lot. The share value is commonly allotted based on the floor area groupings of 100m2 (or 50m2 for newer properties). A larger unit with a higher share value would therefore contribute a higher levy.

An enbloc sale or a collective sale refers to the sale of the properties owned by individual owners in a strata titled development undertaken collectively to a purchaser who is usually a developer. In other words, the sales of these properties are undertaken together at one go simultaneously. The process for an enbloc sale is provided by an amendment in 1999 of the Land Titles (Strata) Act (Cap. 158), which is explained as follows:

- For developments less than ten years old, the owners with at least 90 per cent of the total share values and at least 90 percent of the total strata areas must agree to the enbloc sale. For developments ten years or more, the owners with at least 80 per cent of the total share values and at least 80 percent of the total strata areas must agree to the enbloc sale.
- The sale committee comprising up to 14 members must be elected at a general meeting of the management corporation by an ordinary resolution.
- General meetings must be called to consider the appointment of lawyer, property consultant and marketing agent, the apportionment of sales proceeds, the terms and conditions of the collective sale agreement, and the terms and conditions of the sale and purchase agreement.
- A lawyer must be present to witness the signing of the collective sale agreement to sell the properties.
- Owners are given a five-day cooling-off period after signing the collective sale agreement but they can change their mind only once.
- The sale must be by public tender or auction, after which negotiation is possible if the reserved price is not obtained but the negotiation must be concluded within ten weeks.
- A four-weekly report must be given by the sale committee to keep the owners updated of the progress of support by the majority.
- A valuation report on the worth of the site as at the date of the close of the tender is required to be carried out (Lim, 2010).

5. Impact of legislation on development

The amendment to the strata title legislation enabling collective sales has the following impacts on urban planning and development.

- Enbloc sales are undertaken because a greater potential is possible when there is a higher plot ratio is allowed on the site. The existing site may be under-utilised, that is, not fully developed or the existing building is already physically obsolete, and need to be re-developed.

- Enbloc sales provide an important source of vacant lands which will hasten the redevelopment process in a highly built-up city.

- The redevelopment of older buildings will yield modern and vibrant projects with up to date features, amenities and design. A necessary element in a rejuvenation project is physical improvement (Jeffrey and Pounder, 2000).

- Investments in development projects will contribute to the economy. As new investments are always larger than the value of existing developments, they would promote economic activities.

These positive impacts are beneficial for a compact city like Singapore which provided private owners the opportunity to redevelop their existing old buildings and rejuvenate the environment, and for the planning authority to better plan the overall physical landscape and infrastructure of the city.

Despite the various positive impacts, there are also negative influences of the collective sale law on planning and development. They include possible social disturbance and the destruction of social networks of existing residents and communities (Needleman, 1966), the displacement of businesses (Thomas, 1977) and the waste of building stocks if the existing developments are fairly recent. These are some of the reasons why rehabilitation rather than redevelopment is preferred. There is therefore the need to consider the balance between retaining existing social communities with a strong sense of belonging, and redeveloping an old site to a modern, vibrant neighbourhood in line with the changing trend and developments of the surrounding environment.

6. Recommendations

The two key criticisms of the rejuvenation approach adopted in Singapore are that building resources are wasted, and the untimely dismantling of existing homes and neighbourhoods. The following are proposed solutions that may help reduce the objections raised.

In order to overcome the demolition of fairly new buildings and the uprooting of existing communities, a longer period may be mandated before a collective sale is being considered. In other words, no collective sale should be undertaken unless the buildings are say, at least 20 years old. An exception can be allowed for buildings which are in a poor state of repairs. To identify such buildings, a government or an independent professional review panel can be established whose function is to assess the state of repairs of the building. Developments which are in a good state of repairs and functional would not be approved for collective sales.

Alternatively, a higher percentage of owners' approval may be considered for collective sales. In other words, for developments less than ten years old, the law may provide for owners with at least 95 per cent of the total share values and at least 95 percent of the total strata areas must agree to the enbloc sale. For developments ten years or more, the owners with at least 85 per cent of the total share values and at least 85 percent of the total strata areas must agree to the enbloc sale. A higher majority level of owners required for the approval of collective sale will certainly help to prevent strong existing communities from undertaking collective sales.

Whatever new proposals are introduced or imposed to overcome some of the negative influences of the collective sale law, there is a need to strike a balance between retaining existing development and undertaking redevelopment. In a situation where the building maintenance has not been properly taken care of, the city would be filled with old and dilapidated buildings. The benefit of a redeveloped neighbourhood would certainly outweigh that of retaining the identity of the existing communities located in an unpleasant environment.

7. Conclusion

In a highly compact city and where housing developments are jointly owned by multiple owners, opportunities should be provided to allow these property owners to decide on issues governing the retention, upgrading and redevelopment of their developments. With rapid changes in the environment and the advancement in building technology, property developments can easily become both functionally and economically obsolete. In addition, for residential developments, the changing lifestyles and rising living standards will exert a greater need for change for such developments to improve their facilities and services. All these developments affect the vibrancy and rejuvenation of an urban city.

The Singapore's approach to rejuvenating housing developments in the urban city is one useful planning strategy which can be adopted. This paper makes recommendations for ensuring a more orderly and productive use of resources to speed up the urban development process in a densely populated city.

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"Tehran", city of non - spaces

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Abstract

Urban public spaces are one of the fundamental elements in the structures of cities and these spaces play an important role in the social life of communities, and one aspect of social life is social values so there is a relationship between public spaces and social capital of communities. And this relationship is question of this research. This paper is assessing the relationship between neighborhood public spaces and social capital of one community, in doing so it investigate 2 neighborhood of Tehran, as Iran's capital and one sample of cites with rapid urbanization, both with same inhabitant period to eliminate its affect on the result, one of them with variety of public spaces and one without it, at the same time it investigate social capital in both neighborhoods according to residents point of view. Because of nature of this research mixed approach (quantity and quality method)are chosen and resident's point of view is obtained through interview and observation and questionnaire, the result shows that in the neighborhood with public urban spaces these values are stronger, but most of the Tehran's neighborhood suffer from this shortage so finally this paper provides a map of Tehran's neighborhood to show how are their condition in having this kind of spaces the results show that most of the neighborhood in Tehran lack this fundamentals as a basis for formation of community.

Key word: social capital, public space, neighborhood, Tehran City.

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1- Introduction

Increasingly, national and local planning policies have supported the development of more sustainable communities in recent decades. Thus, governments require that 'livable communities' are created and new neighborhoods are designed to encourage social interaction.

This arises from the need to encourage more vibrant communities, it helps rebuilding local social capital. Local social capital is the 'glue' which binds people together in a neighborhood and encourages them to cooperate with each other. It is the local networks together with shared norms, values and understandings that facilitate cooperation within or among groups in a neighborhood. Individuals feel isolated and are untrusting without social capital and levels of cooperation in the neighborhood are reduced. In this sense public space as one the fundamental elements of neighborhood play a vital role in the shaping & promoting social capital as a fruit of social relationship. They act as a 'self-organizing public service', a shared resource in which experiences and value are created (Mean and Tims, 2005). The social capital of public space is wide ranging and lies in the contribution it makes to 'people's attachment to their locality and opportunities for mixing with others, and in people's memory of places' (Dines and Cattell et al., 2006). Although paying attention to concept of public spaces is becoming enhance in the urbanism literature these days but in Iran it seems this spaces have been reduced in the compare with last decades. Moreover, public space in Iranian cities promoted social interaction in the past. Before 1920, inside each "Mahalle" (urban neighborhood in Iran) we could find a variety of neighborhood public space. Some spaces were shared between some neighbors while others belonged to all residents of a Mahalle. Therefore, a basis was formed for different levels of social interaction between the inhabitants which consequently caused the local social capital to shape and improve. In Pahlavi dynasty that started since 1925 until 1979, significant interests in Modernization and tendencies to imitate Western urban planning were emerged. After 1960s, Iran led itself to a more rapid rate in its urbanization process urbanization. This transformation occurred because of brisk changes in social life, political structure and economic formations. As a result, a high level of rural-urban migration occurred. This process has intensified since 1976(The IRANIAN revolution and the war between Iran and Iraq). These rapid changes were the cause of great transformation in the form, function and meaning of neighborhoods. Evident shifts in the spatial organization and reduction of public spaces were the most significant signs of this change. Moreover, the recent Master plan of Tehran demonstrates the lack of urban public spaces designed for the purpose of people's social gatherings in the neighborhood (The Ministry of Housing and Urban Development, 2008).

So, this article aims to explain the relationship between public spaces and the concept of social capital and show how these spaces can shape and promote this concept in the neighborhoods.

Thus, this article surveys two neighborhoods that both of them have plan but they are different in distribution of public spaces.

2- The Social capital's definition

For the first time, the term of social capital was used in 1916 in an article[4] by "HanIfan" and it was raised in West Virginia University (Yaghoubzadeh, N and Amiri,P. 2011). The term to describe the tangible things that people used in everyday life is often used. This term later in the book "Death and Life of American Cities," Jane Jacobs were cited. Jane Jacobs stated that the impact of social networks within the old and historical contexts, urban and mixed urban uses a form of social capital and can maintain the cleanliness and safety and urban quality of life in the urban structure of the efficient role of urban life in the public arena are (Jacobs, j.1996). This term has little background in sociology and political management and training of the 1990s by scholars such as James Coleman, Bourdieu, Robert Putnam and Fukuyama were used (Navid,Y and Parviz ,A. 2011). Moreover, there isn't any agreement about social capital definition and it depends on the discipline. Because of the difficulties in defining social capital, authors tend to discuss the concept, its intellectual origin, and its diversity of applications and some of its unresolved issues before adopting a school of thought and adding their own definition (Adam and Roncevic 2003).

In this paper we survey different definitions and theories about it and finally determine some variable for measuring it. Dekker and Uslaner convey that Social capital is about the value of social networks, bonding similar people and bridging between diverse people, with norms of reciprocity (Dekker and Uslaner 2001; Uslaner 2001). Dekker and Uslaner (2001) posited that social capital is fundamentally about how people interact with each other. Knoke (1999) said that 'the process by which social actors create and mobilize their network connections within and between organizations to gain access to other social actors' resources' (Knoke 1999, p. 18). Portes (1998) defines it as 'the ability of actors to secure benefits by virtue of membership in social networks or other social structures' (Portes 1998, p. 6). Brehm and Rahn (1997) said that it is 'the web of cooperative relationships between citizens that facilitate resolution of collective action problems' (Brehm and Rahn 1997, p. 999). Moreover, 'Social capital can be defined simply as the existence of a certain set of informal values or norms shared among members of a group that permit cooperation among them' (Fukuyama 1997). Putnam defined it as 'features of social organization such as networks, norms, and social trust that facilitate coordination and cooperation for mutual benefit' (Putnam 1995, p. 67) and as the extent to which people in communities engage with one another and outside agencies that affect the quality of their lives (plamer, 2001). The social exclusion unit (2000) defines social capital as 'the contact, trust and solidarity that enables residents to help, rather than fear, each other' with vital resources such as community spirit. Whereas in the past, social networks were commonly based on proximity, they are now based more on work and interest groups. The strength of networks based on proximity has decreased because people know few of their neighbors, particularly in medium to high density areas and where there is high residential mobility. Pantoja (1999) identified a different set again, including: family and kinship connections; wider social networks of

[4] "The rural school community center" by Hanifan, LJ

associational life covers the full range of formal and informal horizontal arrangements; networks; political society; institutional and policy framework which includes the formal rules and norms that regulate public life; and social norms and values.

We know that there are approaches against of our idea. Critics of the social capital approach include RICHARD FLORIDA. In the rise of the creative class florida writes: 'A number of serious social commentators in recent years have urged us to recultivate and rebuild the old form of 'social capital' found in these communities. Such efforts are fruitless. Since they fly in the face of today's economic realities, a central task ahead is developing new forms of social cohesion appropriate to the creative age. All in all, we agree with FLORIDE and mentioned that social capital is made base on level, type, and strength of current relationship and public spaces promote the social capital that we want to extend them. Although there are critics such as mentioned, we can't ignore vital role of public space in the social and economic life of communities (Cowan, Rabert, 2005).

3- The Role of public space on promoting social capital

Public space (including street, street market, community center and park) is a vital part of everyday urban life. Public space is open to all, regardless of ethnic origin, age or gender and there isn't limited time for using it. Different age groups tend to use public spaces at different times of day and for different reasons. People spend time in the public space without spending money. Public space can promote neighborliness and social inclusion. The open spaces near our homes give us a valuable place to socialize with our neighbor, whether chatting over the garden fence or meeting in the local park. On the large scale, community gardens and city farms bring people together from different ages and cultures, and thus help to create a real sense of neighborhood. Another benefit of Public space is its potential as a venue for social event and shared resource in which experiences and value are created (Mean and Time, 2005).

In fact, we can't conceive space without social content and society without a spatial milieu. So, there is two-way relationship between them. Because people create and modify spaces while at the same time being influenced in various ways by those spaces. According to Gehl (2004), today, urban designers and planners focused mainly on human aspects of public spaces, and people response positively to be in such places (Daneshpour and Charkhchian, 2007). Urban design as knowledge that deals with the public realm- both physical and sociocultural- and the making of places for people to enjoy and use (Carmona et al, 2003), is able to encourage people to be present in urban spaces through promoting spatial qualities of public spaces within the urban areas. This will be led to social interactions in such spaces. Hence, it is clear that cities need sociopetal spaces in order to achieve the healthy, active and livable societies. Hence, by shaping that built environment, urban designers influence patterns of human activity and social life (Carmona et al, 2003) and Jane Jacobs as one of the adherents of the social usage tradition, emphasized their role as containers of human activity and places of social interaction and about replacing "art" by "life" pointed out that: The city could not

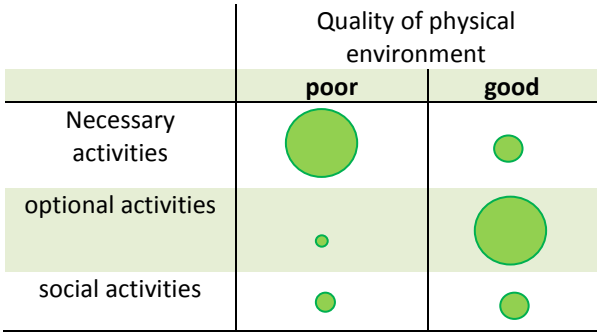
be a work of art because art was made 'selection from life', while a city was 'life at its most vital' complex and intense (Jacobs, 1961). The same kind of detailed observation informed subsequent work in this tradition such as Jan Gehl's studies of public space in Scandinavia (1971) and William H. Whyte's(1980) The Social Life of Small Urban Spaces (Carmona et al, 2003). The Important work on the role of space in the accumulation or building of social capital has also been produced Henri Lefebvre[5]. Lefebvre (1991) argues that city plans exist as representations of space while at the same time urban space itself is constituted by special practices of everyday life. Urban space must become the place where speech becomes a catalyst to reshape social relationships. Designing urban spaces that encourage social activity establishes an image of collective social life (M. Ijla, 2012).

The social space contains a great diversity of social objects which facilitate the exchange of material things and information (Lefebvre, 1996). So, urban space has to become a place where people enjoy spending their free time and sharing their common interests with others in that space. This interaction gives these public spaces the ethical and aesthetic power to build the social capital that underscores the stability of society, its common threads and interests, without destroying the uniqueness of any group.

With this background, we discuss Gehl's idea about public space. Gehl illustrates how the environmental quality of public spaces affects the intensity of their use. He argued that outdoor activities in public spaces can be divided into three categories – 'necessary' activities; 'optional' activities and 'social' activities. *Necessary activities (such as going to school or work or shoping, waiting for a bus or person, running errands and describing mail, etc)*include those that are more or less compulsory. *Optional activities (such as taking or walk to get a breath of fresh air, standing around enjoying life, sitting and sunbathing, etc)* are which activities that people participate in if they wish or have enough time to do. *Social activities (such as greetings and conversations, communal activities of various kinds, passive contacts, etc)* are all activities that depend on the presence of others in public spaces. Social activities occur spontaneously, as a direct consequence of people moving about and being in the same spaces. This implies that social activities are indirectly supported whenever necessary and optional activities are given better conditions in public spaces (Carmona, Tiesdell, 2007). The crux of Gehl's argument is that when public spaces are of poor quality, only strictly necessary activities occur. When public spaces are of higher quality, necessary activities take place with approximately the same frequency – although people choose to spend longer doing them – but, more importantly, a wide range of optional (social) activities also tend to occur (Carmona, Tiesdell, 2007).

[5] Lefebvre, Henri. *The Production of Space*. (Oxford: Basil Blackwell, 1991),34.

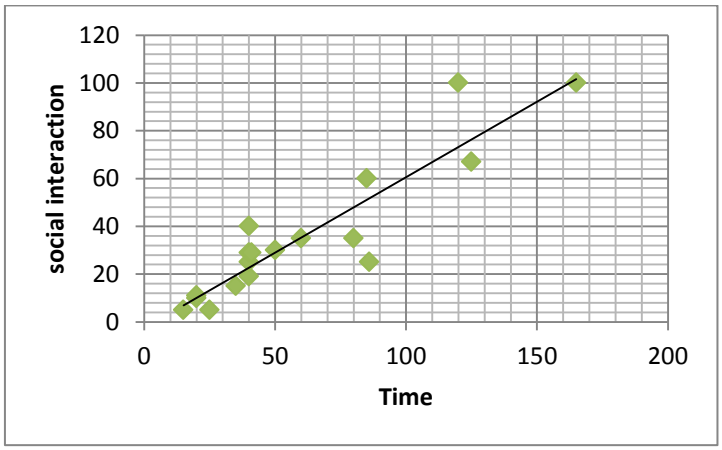
Figure 1: relationship between the quality of public spaces and the rate of occurrence of activities



(Carmona, Tiesdell, 2007).

This figure presents the relationship between the quality of public spaces and the rate of occurrence of activities. When the quality of public space is good, optional activities occur with increasing frequency. Furthermore, as levels of optional activity rise, the number of social activities usually increases substantially.

Chart 1: relationship between the number of public space and frequency of social relationship



(Carmona, Tiesdell, 2007).

This chart shows the relationship between the number of public space and frequency of social relationship. So the more time people spend public space, the more frequently they meet and the more they talk.

Another point is the use of semi-private space between private and public (or communal) space that can increase the threshold, as can good social relations between neighbors (Williams, J 2005). Semi-private space is very important in terms of social interaction. They provide a gentle transition between public and private space (Williams, J 2005). Increasing proximity through design increases repeated passive contacts between residents, which helps to form social relations (Williams, J 2005). Of course,

the importance of design in influencing social interaction but there are many other factors that many also influence social interaction, including: personal factors, informal social factors, formal social factors. But this paper just aims to figure out the issues involved in public spaces as representational spaces, and it also shed the light on the role of public spaces in creating social capital. Therefore social capital as a fruit of social relationship was shaped and improved by public spaces.

It has long been acknowledged that different housing neighborhoods acquire different social Relationship, meaning and identity (Douglas.R, et al.2008).There is a clearly related between neighborhood's physical and social dimensions. Among this, public spaces can affect both of two aspects – social dimension and physical dimension- Many commentators have discussed how spaces affect people, their feelings, behaviors and identity. (Ralph, Rappaport, Montgomery, Gehl, lynch…) but in this paper, we focus on social aspect of public space that shows in the bellow diagram. So bellow diagram shows the relationship between social and physical and perceptual dimension of public space and social capital. The quality of public space can influence on the type of activity and activity kind is related with social relationship so it promotes social capital. On the other hands, social capital can affect on the quality of public space, because there is two-way relationship between them.

Chart 2: the role of public space on promoting social capital

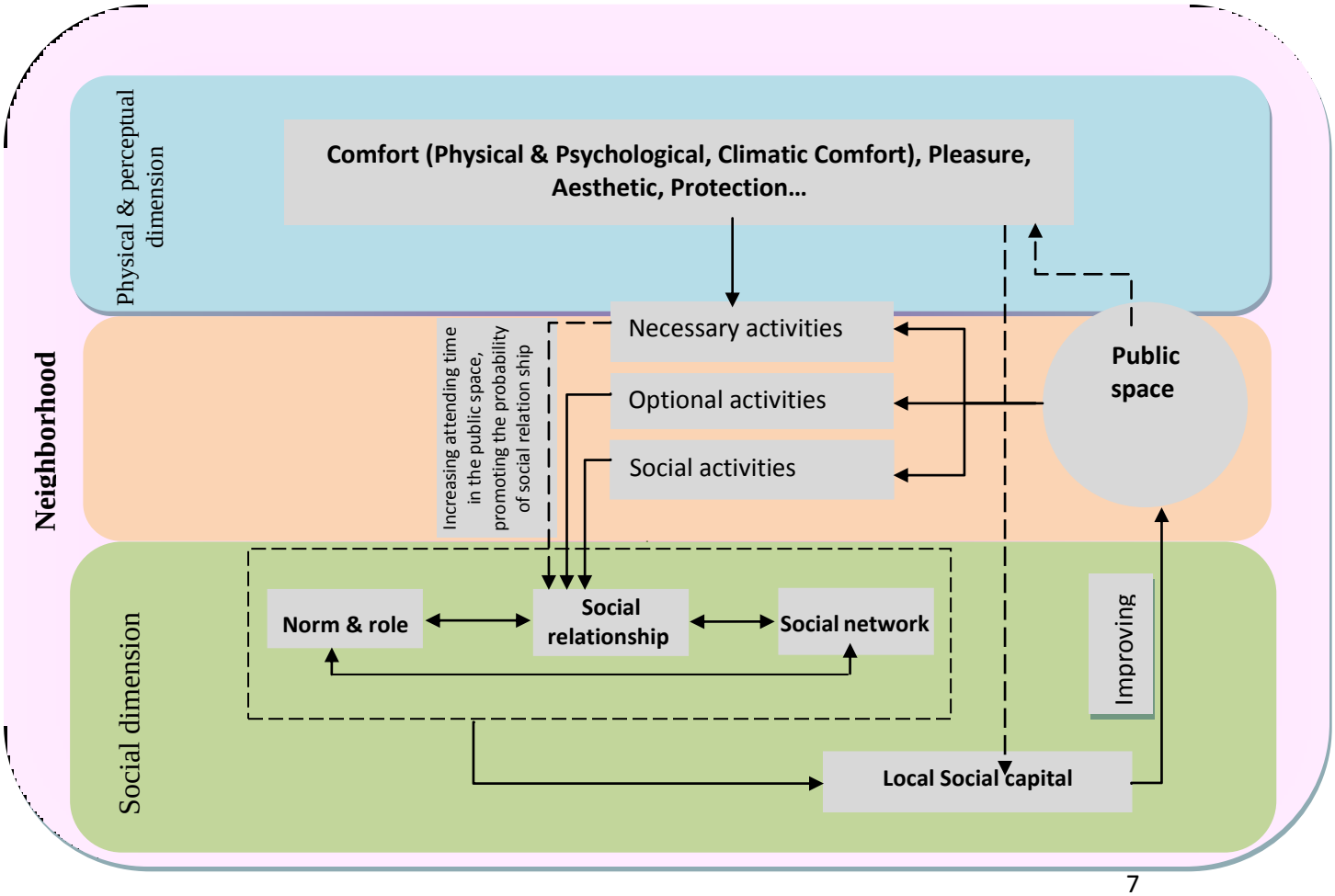


Table 1: Factors and Indexes of Social Capital and Related Theoretician

Factor	Index	According to who recognize
Rule & norms	1. Helping neighbor (care children or sick person) 2. Trust (the most people can be trust/ the most people are honest/borrow sth…) 3. Pride to neighbor 4. Level of integration & segregation	1. Jane Jacobs 2. Robert D. Putnam
Social relationship	1. Informal (family- friend- neighbor) 2. Formal (organization- association- colleagues) 3. Level of social relationship	1.Gehl 2. Whyte
Social network	1. Membership in some groups 2. Frequency of attending in public meeting 3. Frequency of participation in group or in election or in doing something in neighborhood as volunteer	1. Robert D. Putnam 2. Robert A. Hanneman

Some indexes aren't mentioned because they have multidimensional essence, they are made indirectly and with much relationship.

4- Research approach and methodology

This study draws on an exploratory research undertaken in the role of public spaces on shaping and promoting local social capital within two urban neighborhoods in Tehran: **"Nazi abad"** in the south west and **"Mehran"** in the west of Tehran. These two neighborhoods were selected based on a great difference between their spatial organizations. Both of them are middle class neighborhoods which have existed for more than 40 years, and at least two generations have lived there through this period.
Because of study nature, a mixed-methods approach was adopted, which have two parts: first part consisted primarily of first-person observation by the authors. The purpose of this study part was examining how, when, where, why the urban spaces are used. In other words, the difference of public life was tried to understand– public space in two neighborhoods. Many of the best commentaries on the use of public spaces and the function of these spaces in the public realm framework are based on first-person

observation: Death and life of great American cities[6], life between buildings[7] and the social life of small urban spaces[8].

The second part evaluates the role of public spaces on shaping and promoting of "social capital" in these two neighborhoods by quantitative approach (**questionnaire)**. Whereas In each of the two different neighborhoods studied, **norms and rules, social relationship** and **social network** as social capital's factors.

According to this structure, the questionnaire was designed to find out the role of public spaces on shaping and promoting social capital's indexes.

Table 2: The Related Question of Each Index

Index	Question
Rule & norms	- Interest in living in the neighborhood - Conveying that the character of neighborhood is good - Dislike to go to another neighborhood - Sense of supporting neighborhood and neighbor - The length of residence
Social relationship	- What do they do with friends/ family/ neighbors? - When/ where do they go? - Level of relationship - Like to have relationship with other neighbors
Social network	- Membership in some group (for example group of neighbors) - Frequency of attending in public meeting or memorial meeting - How many your friends live in the neighborhood?

Information presented in this report is the result of a survey done in four times; first on spring days in May 2010, second time winter days in February 2011, tertiary time summer days in august 2011and last time was autumn days in November 2011. In each neighborhood 100 inhabitants took part in the survey. As people's relation with public spaces differs according to their age and gender, therefore quota–a sampling method was selected for this survey. Samples were chosen based on the age pyramid of Tehran (according to national surveying 2007.)

[6] Jane Jacobs,1961
[7] Jan Gehl,1971
[8] William H whyte,1980

5- **Case – study neighborhood**

Both neighborhoods that were selected for detailed investigation was officially started at the beginning of the 6th decade of 20th century, When Tehran as a capital of Iran are faced rapid urbanization. “Mehran” is located at the west of Tehran; in close proximity to the CBD whilst “Nazi Abad” located at the south of Tehran where so is far from city center and suffers from accessibility.

The communities contrast in terms of social, personal and design characteristic. The layout of the neighborhoods is different: “Mehran” uses a row layout and “Nazi Abad” uses clustering. The division of communal, semi-private and private space within the neighborhoods is also rather different. “Mehran” has no semi-private space and thus no buffer between communal and private space, whilst “Nazi Abad” has buffer zones (semi-private space) between private and public (or communal) space into the layout. Overall, “Nazi Abad” has more verity of public space than “Mehran”. There are more families that were lived in “Nazi Abad” than in “Mehran”, where are more couples and singles. But conversely “Mehran” has higher social status than “Nazi Abad” (Majid Mansoor Rezai, Shabnam Esmaeily, 2010).

Spatial organization of Nazi Abad *Reference: Author,2012*

Spatial organization of Mehran Reference: Author,2012

Table 3: Comparison of the Case Study Neighborhoods

	Nazi Abad	Mehran
Location	South of Tehran	West of Tehran
Being development	1960	1960
Area	248 H	257H
Residential Area	76.7 H	116.2H
Mean Residential Unit	118m	398m
Population	42874	22443
Density	591	193
Per capita Residential	16.9	51.77

Function	Residential/commercial /cultural	Residential
Current configuration	Perimeter block enclosing an open space	Terraced pattern (traditional street layout)
Block scale	Short	long
Transition from public to private space	Gradual	Rapid
Household types	Diverse—majority families but also couples and singles	Mainly a newly married couples and singles

Source: *Author, 2012*

6- Result

1-6- Observation

The purpose of this part of the paper is to examine how the urban spaces are used. It provides information on where neighbors walk and stay either as part of their daily activities and public life. Author's observation from Distribution of public spaces shows a major difference between two neighborhoods (Table.4).

Table 4: Distribution of public spaces in two neighborhoods

Nazi Abad	Mehran
There are various layers and types of public spaces, such as: parks, local public squares, leisure axis, a cultural center and wide and green pedestrian paths. "Nazi Abad" has a powerful centrality in providing a community center for the neighborhood Like any other neighborhood center for each "Mahalle" (Iranian old neighborhood), Nazi Abad's comprises a mosque, a public square and a Bazaar. The Central Public Square in "Nazi Abad" is "Bazaar Dovvom" and "Mada'en" street is defined version of Iranian traditional Bazaar. Due to successful pedestrianization and a vast range of activities, these spaces have become dynamic and vital locations.	Mehran neighborhood has two typologies of public spaces: Parks and a shopping Centre. The shopping center that named "Pardis Zendegi" is situated front of the most important neighborhood's park to the edge of "Abozar Street". Shopping Centre is a complex On four floors; it is based around a large covered square with seating areas, cinema, cafes, kiosks and ornamental features. In fact This complex has mutual relationship with park. Thus, community center was shaped in this part.The other outdoor spaces are car oriented and do not firm public realms.

Observations of the **"Nazi Abad"** showed that most social interactions tended to occur in communal or semi-private spaces. These interactions were classified as being: formal or informal; frequent or infrequent; and sustained or brief. Thus, sustained, formal social interactions are more likely to occur in communal spaces, whilst brief informal interactions are more likely to occur in semi-private spaces. Public spaces are

distributed all over the neighborhood and there are pedestrian accesses to all of them. Wide and green pedestrians, accessibility, street front and level activity encourage walking in the neighborhood.

In "**Mehran"** can't be found an impressive increase in the volumes of walking and other neighbor's activities in the public spaces in the compare with Nazi Abad. Most streets of this neighborhood were empty of people and social interaction, but parks are meeting places as the most important public space of neighborhood for old people in the morning and for young people in the evening. Moreover, these parks and Pardis complex are used by different age and sex. But in these spaces are done only optional activities. Another meeting place of the neighborhood is a fast food restaurant that even people in other neighborhood go there and young sons and girls go there with their friends. Although this restaurant attract a lot of people, it can't help reinforcing public milieu in the neighborhood. So the public life in Mehran is lower than Nazi abad. The variations in the types of activities within different spaces are summarized in Table 3.

Table.5: observation public life through public spaces

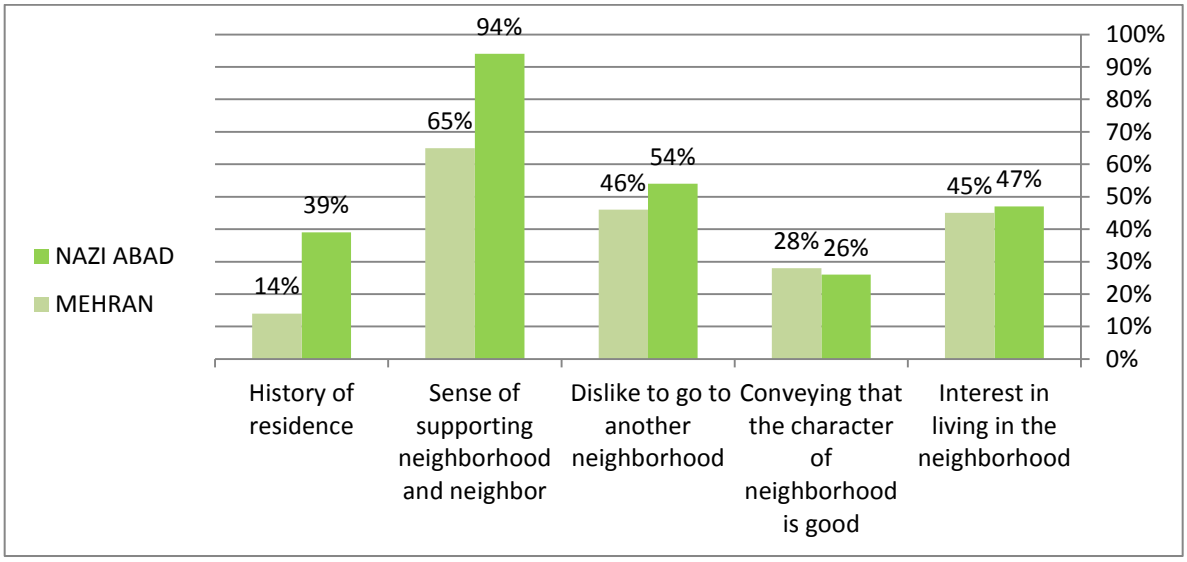
	Nazi Abad	Mehran
Interesting facades, window displays and exhibits		
Good walking rhythm with few interruptions in wide and green pedestrian		
Widespread secondary seating such as steps and edges of planter boxes		

pedestrian traffic in the evening		
neighborhood center		
semi-private space shared between neighbors		

2-6- The role of public space on social capital index according to inhabitant's approach

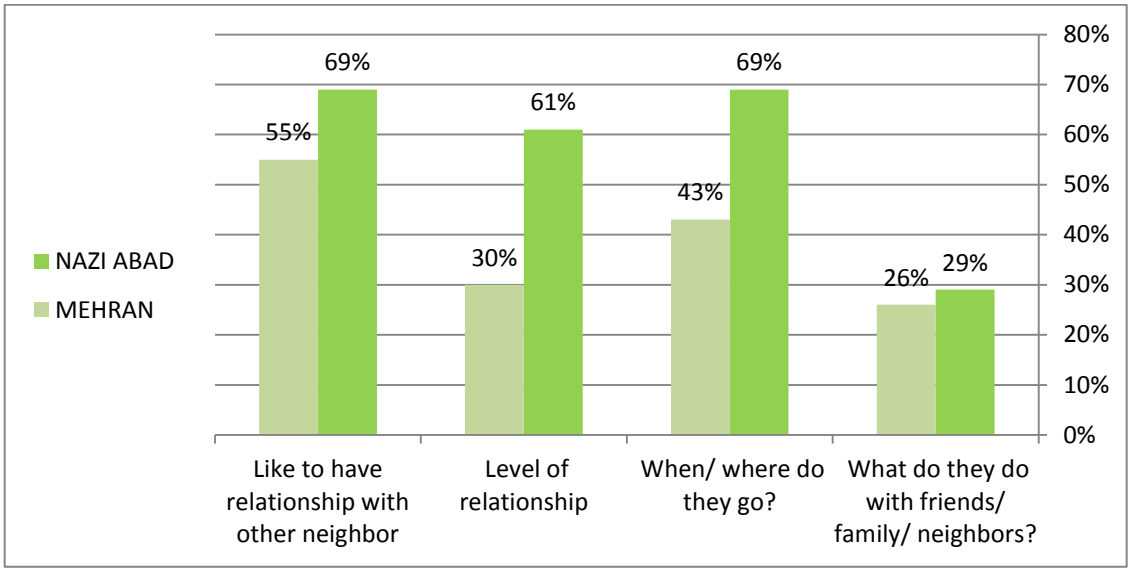
According to the theories, the social capital has three factors (role & norm, social relationship, social network). For measuring each factor, some questions are used that are presented in the bellow charts. The aim of the questionnaire is surveying the role of public space on social capital index based on inhabitant's approach. First, role and norm are surveyed. The average length of residence in Nazi abad is 28 years but it is 11 years in Mehran. Nazi abad inhabitants convey some good character for their neighborhood such as comfort (14%), good physical character of neighborhood (30%), capability of providing daily needs (30%), social cohesion (30%) and having social network (17%), but in Mehran this factors are comfort (37%), capability of providing daily needs (29%), good physical character of neighborhood (21%),good social character (23%). Thus, the average length of residence, sense of supporting neighborhood and neighbor, disliking going to another neighborhood, interesting in living in the neighborhood in Nazi Abad is more than Mehran, but considering good character for neighborhood in Mehran is more than Nazi Abad although the difference of them is miner. Finally, all questions are computed for measuring role & norm. It shows that role & norm in Nazi abad is stronger than Mehran.

Chart 3: The Related Question with Role & Norm



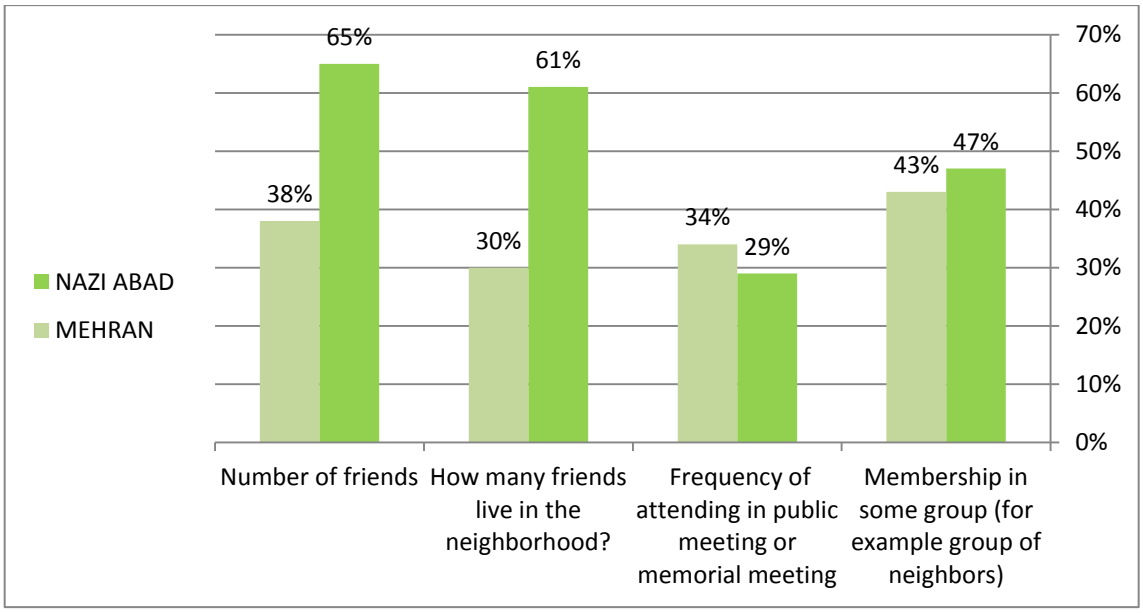
Nazi abad Inhabitants go to the public space for necessary activities (18%), optional activities (68%) and social activities (28%) and Nazi abad Inhabitants go there for necessary activities (4%), optional activities (57%) and social activities (26%). So according to the Gehl's approach they show that quality of public space in Nazi abad is better than Mehran. In Nazi abad resident go to park (34%), educational & cultural places (22%) and go to recreational & marketing places (34%) but in Mehran they go to park (67%), educational & cultural places (25%) and go to recreational & marketing places (2%). So bellow chart shows that all questions that are used for measuring social relationship in the neighborhood confirm that social relationship in Nazi Abad is more than Mehran.

Chart 4: The Related Question with Social Relationship



In Nazi abad they convey that they (57%) have many friends in the neighborhood and only some of them (5%) don't have any friend in the neighborhood but in Mehran they (29%) have many friends in the neighborhood and only some of them (14%) don't have any friend in the neighborhood. In Nazi abad they (68%) meet their friend in the neighborhood and only 23% of them meet their friend out of neighborhood, but in the Mehran they (42%) meet their friend in the neighborhood and only 37% of them meet their friend out of neighborhood. In the Nazi abad they meet friend in the known memorial meeting in the iran such as CHAHAR SHANBE SORY (18%), NIME SHANBAN (21%) and MOHARAM (46%), but in the Mehran they are CHAHAR SHANBE SORY (37%), NIME SHANBAN (22%) and MOHARAM (23%). So all questions except of frequency attending time in the public space or memorial meeting shows that social network in Nazi abad is stronger than Mehran.

Chart 5: The Related Question with Social Network



The analysis of social capital factors in two neighborhoods (Nazi abad & Mehran) shows that social capital in Nazi abad is stronger than Mehran. Because all indexes of social capital have higher rank than Mehran.

7- Conclusion

According to obtained Information from two neighborhoods, it is recognized that local social capital in "Nazi Abad" (neighborhood with verity of public space) is stronger than "Mehran". Also this paper result show how public spaces as a catalyst enable neighbors to build communities; to commit themselves to each other; and to knit the social fabric.

Based on this article's results, social capital and the representational space provide crucial insight in the role for urban planners in building social capital and stability for a society. Public space gives the opportunity for people to interact within the spatial environment they belong.

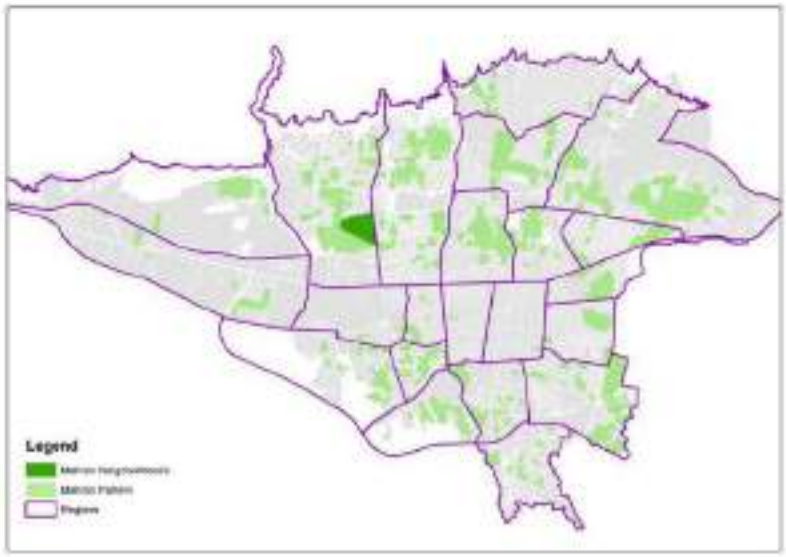
Whereas, recent Tehran development (after 1960) isn't paid attention to make new neighborhoods and redefine old neighborhoods according to require public spaces.

Tehran's urban management because of more income allocate more ground for residential land use and eliminate public and open spaces in neighborhoods. In fact they couldn't be called neighborhoods and merely they are residential districts like "Mehran". If we accept "Mehran" as a residential districts that doesn't have Variety of public spaces and suffer from lack of social relationship, participation, trust, social network and so social capital.

Most neighborhoods in Tehran are like Mehran according to low variety, distribution and accessing of public space. We don't convey in which of them social capital is low or strong because a lot of factors influence on it, but public space have fundamental role on it.

Social contacts are enhanced in a community when residents have opportunities for contact, live in close proximity to others and have appropriate space for interaction. Authors based on their knowledge about Tehran try to show that spread and development of Tehran neighborhood are like Mehran. So the convey that Tehran tend to be a city with non spaces. Bellow figure shows this reality in the Tehran's map.

Figure 2: Neighborhood Pattern in Tehran



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PLANNING LOCAL RESPONSES TO THE ECONOMIC DOWNTURN: RHETORIC AND PRACTICE IN A SMALL PORTUGUESE MUNICIPALITY

Carlos Rodrigues[1]

Abstract

This paper analyses the planning of the local responses to the global crisis, giving particular emphasis to the relationship between rhetoric and practice. As such, it pays particular attention to the ways the planning process and outcomes are being affected by a planning-inspiring discourse that imports and, enthusiastically in the case of Águeda, uses the whole set of buzzwords wrapping up European development policy. The analytical focus is placed on the discursive line based on the Triple Helix Model. The paper argues that, despite the mismatch between the local conditions and the requirements of a true THM-based development path, the associated discourse and rhetoric is contribution to positively transform the territory.

Introduction

Águeda is a small municipality located in the Centro region of Portugal. The local economy, heavily dependent on an industrial basis made of SMEs operating in the so- called traditional, low technological content sectors, is suffering the effects of the current period of economic downturn. The local government is playing a prominent role in the attempt to mitigate those effects and the inherent planning effort is being directed at the design and delivery of a broad range of economic, environmental, cultural and social initiatives, which, in a way or another, are aimed at contributing to alleviating or even reverting the situation. This paper analyses the planning of the local responses to the global crisis, giving particular emphasis to the relationship between rhetoric and practice. As such, it pays particular attention to the ways the planning process and outcomes are being affected by a planning-inspiring discourse that imports and, enthusiastically in the case of Águeda, uses the whole set of buzzwords wrapping up European development policy – e.g., the green economy, smart growth, sustainable and inclusive development, energy efficiency, and climate change.

The paper draws heavily on experience, as the author has been actively involved in the planning effort that is taking place in Águeda. The views resulting from a (privileged) observation point are considered against the theoretical developments that are tackling the role discourse and rhetoric play in the design and delivery of territorial development policies. In this sense, by offering insights on how a globally-defined prevalent discourse influences the way a small municipality of a Southern

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European country is responding to the crisis, the paper is an attempt to give a contribution to empirically enrich that burgeoning planning theory literature.

The state of the art (briefly taken...)

The use of language and communication in planning has been the subject of a prolific and controversial scholar work in the last decades (e.g. Tett and Wolfe, 1991; Throgmorton, 1993; Richardson, 1996; Jessop, 1997; Innes, 1998; Gunder and Hillier, 2009). Discourse, rhetoric, argumentation and so forth, have been placed under the spotlight by planning theorists, mirroring, in a way, the linguistic turn occurred within the social sciences (Rydin, 1998). Even planning *technical* tools, such as computer modelling, forecasting and survey research were studied as "*rhetorical tropes*" (Throgmorton, 1993, p. 334). However, the recognition that language and communication has a role in the planning endeavour can be regarded as a major reason for that interest, namely after the so-called argumentative turn (Fischer and Forester, 1993) and the rise of communicative (Sager, 1994; Innes, 1995) and collaborative (Healey, 1997, 2003) planning paradigms. As emblematic as it can be, Judith Innes's suggestion that "w*hat planners do most of the time is talk and interact*" (Innes, 1998, p. 52).

In this context, the emphasis placed by planning theory on language can be associated to the motivations underpinning the rising of the argumentative turn. Using the words of Fischer and Gottweis (2012, pp. 7/8), that emphasis stems from, on the one hand, "*the realization that public policy, constructed through language, is the product of argumentation*" and, on the other hand, "*the recognition that language does more than reflect what we take to be reality, [...] it is constituent of reality, shaping –and at times literally determining – what we understand to be reality*". This equates Maarten Hajer's idea that language can *create* the world, besides describing it (Hajer, 1993). Accordingly, language can be regarded as endowed with transformative power. The basic argument here is that it may change material conditions and even power relations (Khakee, 2000). Moreover, the argumentative turn in planning theory wrecked the positivist tradition according to which discourse was as a neutral means for describing the world (Hajer, 1993). In fact, the Habermasian communicative rationality empowering action, at the core of the new planning paradigms, turns language into a political, thus non-neutral, system of meaning which, in the words of Healey (1997, p. 277), is "*embodied in a strategy for action*". This political nature accommodates the claim for democratic, value-laden planning (Healey, 1997; Innes, 1998). Language, as such, emerges as a means to democratize the policy making process (Torgerson, 2003).

Several intellectual drivers guide the language related research in the planning field: from post-structuralism, such as the Foucault inspired studies (e.g., Richardson, 1996) or the Lacanian approaches (e.g., Gunder and Hillier, 2009), to neo-Gramscian appreciation of hegemonic discourses (e.g., Jessop, 1997). Within these approaches, many assume a critical stance towards what Khakee (2000, p. 122) would call the "*postmodernism´s requirement of a multitude of discourses that form the future*". In

fact, planning language is full of buzzwords, many more than the ten contestable words that make the "*game of buzzword bingo*" placed under the spotlight by Gunder and Hillier (2009).

Buzzwords pullulating in planning hegemonic discourses often shape the formulation and bear the legitimacy of ideas about what developmental action should be. They provide ammunition to the rhetorical devices (Throgmorton, 1993) that ground an arguably apparent mitigation of uncertainty about the future and the expression of desirable states of well-being (Gunder and Hillier, 2009). This can be associated with the deployment of an unquestionable '*truth*' about what should be aimed and done. Empty signifiers (Laclau, 1996) are instrumental here, since they have the power to lift buzzwords up to a state beyond question and critical enquiry (Swyngedouw, 2007).

Sustainability, as it would be revealed by a broad-brush literature survey (e.g., Gunder, 2006; Gunder and Hillier, 2009; Davidson, 2010; Swingedouw, 2010), stands out as illustration of something that, as a praiseworthy planning final goal, is beyond dispute and, above all, disallows dissensus or disagreement (Swyngedouw, 2010). Krueger and Gibbs (2007, p. 1) make the quantitative account: "[...] *over 6,000 local governments from 113 countries have adopted sustainability initiatives since the early 1990s*". Gunder and Hillier (2009, p. 20) associate this dominant planning narrative to the empty signifiers ability to act as a "*foil to give the appearance of doing something about global warming and the environment, when in effect it is largely deployed to maintain the priority on economic growth for achievement of global competitiveness*". This gives ground to the assertion that buzzwords like sustainability enter a hegemonic discourse meant to perpetuate the neoliberal *status quo* (Swyngedouw, 2007), in which market forces and concomitant focus on growth override a broader approach to societal development (ironically at the core of the sustainability '*triangular*' conceptualization).

To this argumentative line follows a critical stance towards communicative planning and its democratic ideal based on consensus building processes leading to collective action (e.g. Bengs, 2005; Purcell, 2009). The argument that the communicative planning paradigm favours the neo-liberal '*plan*' is attached to the ways academic ideas are traded on the intellectual marketplace, where they are subjected, in the words of Bengs (2005, p. 9), "*to the laws of rhetoric as are all other kinds of discourses*". The problem of unequal power distribution is also brought over (Purcell, 2009), originating the labelling of communicative planning as naïve, due to the impossibility of neutralizing power imbalances, i.e., of establishing the "*ideal speech situation*" (Habermas, 2001, p.102, cited in Purcell 2009). Allmendiger and Haughton (2012, p. 90) add to the critical ground by averring that the planning system "*gives the superficial appearance of engagement and legitimacy, whilst focusing on delivering growth*". This manipulative stance, according the same authors (ibid.), bears on "*some carefully choreographed processes for participation which minimise the potential for those with conflicting views to be given a meaningful hearing*". Language, obviously, is a central piece in the choreography...

This debate, though nurturing a burgeoning academic literature, is still poor in what concerns the *praxis* effects of the widespread planning language, that is, what is happening in the terrain[2]. This paper aims to humbly contribute to fill in this gap and, in a way, to know more about the power of discourse and rhetoric to brighten the dark side of planning that can be knitted together with the popular saying that *the hell is full of good intentions*.

The method and the research context

Following Winton (2012, p. 4), rhetorical analysis provides a method for knowing "*how arguments are constructed to persuade audiences to accept and support particular constructions of reality, truth, and courses of action*". In the context of this paper, the focus was placed on the construction of reality, truth and courses of action that took place at Águeda, a small Portuguese city of approximately 50 thousand inhabitants. Rather than using a formal method of discourse and/or rhetorical analysis, the research was heavily based on direct observation, made possible by the active participation of the author in the local policy making and delivery process, combined with the analysis of documental sources, namely policy documents, institutional WWW sites and newspaper reports.

The information gathered from these sources was analysed against the perception that discourse, namely if marked by incompletion, ambiguity, and contradiction, has the power, as put by Phillips and Hardy (2002, p. 1), '*to produce a reality that we experience as solid and real*'. The subsequent research step drew on an approximation to the three elements which, following Leach (2000), need to be considered when dealing with rhetorical analysis: exigency, audience and persuasive discourse. The final research stage was dedicated to appreciate the results of the discursive and rhetorical framework for action developed in the city under scrutiny.

Located in the Centro Region of Portugal, in between the two major national cities, Porto, up North (70km), and Lisbon, down South (250 km) Águeda presents as distinctive mark a long industrial tradition. Its economic structure is dominated by manufacturing industries (ca. 56% of total employment). The metal processing industry is the most important sector of activity, representing 41% of the total number of manufacturing firms and 33% of industrial employment. In addition, the sectors of ceramics for construction and articles of stoneware and earthenware, the manufacture of components and accessories for motor vehicles, and the production of furniture (mainly metallic) are significant for Águeda in terms of the employment structure.

The weight of SMEs is overwhelming. In fact, the number of firms with more than 250 workers is marginal and more than 92% of the total firms have less than 10 workers. Most of these firms are family-owned, with a business model centred on the

[2] Though, for instance, Raco (2005).

supply of standard products with a relatively low technological content. However, the capacity of these companies to compete in both national and international markets is fairly high (e.g. the municipality ranks third in the Baixo Vouga sub-region in terms of exports, being only superseded by Aveiro, the main city in the region, and Ovar, where several large multinationals operate), taking advantage from a variety of competitive factors, which range from low-skilled, low-cost labour force, to more innovation-related factors.

Águeda's endogenous entrepreneurial capability has highly contributed to the local economic success during the last century. A number of firms in various sectors of activity have been able to swiftly adapting to changes of international market demand. For instance, the metal furniture sector found a competitive advantage in developing areas such as design and marketing, and the lighting industry evolved towards more sophisticated products based on innovative design and technologies. This explains why Águeda was able to maintain a high employment level until the turn of the century. In fact, after decades of almost full employment, from 2001 onwards, the unemployment rate has substantially increased, trend that has been strengthened by the economic crisis. Manufacturing was the major responsible for this development. Between 2000 and 2009, for instance, there was a reduction of approximately 7000 jobs in manufacturing firms. According to the most recent data, the unemployment rate amounts to ca. 9% (against the national 15% mark).

Going beyond good intentions...

These recent developments in unemployment, as well as the crisis effects on firms' performance, as one could expect, have drawn the local government attention. They configure what can be regarded as the *exigency*, that is, the *defective* situation to be addressed (Leach, 2000). Local development policy has gained a new perspective, the one of fighting the impacts of the downturn. Nevertheless, the changing dynamics had already started with the election of a new political leadership in 2005. At the time, SMEs' competitiveness and innovation capacity were lifted up to the policy (discursive) core. Since then, as reported by Rodrigues and Melo (2012), a process of '*Europeanization*' of Águeda's policy environment held ground. In other words, the competitiveness and innovation discourse found shelter in the *plentiful* basket of buzzwords that wrap up the European policy context and started serving as inspiration for the local policy response to the economic downturn: the omnipresent concept of sustainable development, the green economy, the zero carbon goals, climate change mitigation, and, with the recent Europe 2020 framework, the hegemonic '*smart*' qualifier (CEC, 2010).

> "*Águeda assumes itself as an emerging smart city, because by developing triple helix partnerships aimed at looking at the territory in intelligent manners and placing ICT at the service of governance, mobility, economy and the environment, it is contributing to improve the quality of life of its citizens*".

This statement[3], taken from a speech made by Águeda's Mayor in 2011, provides a good illustration of the ways the local approach to development policy is being influenced by the hegemonic discourse emanated from Brussels, in which empty signifiers abound. To the Mayor's words one can add up a diversity of initiatives ranging from the association to international organizations and events with sustainability at their core (e.g., ICLEI- Local Governments for Sustainability and Energycities), to the Local Agenda 21. In sum, the green colour of the green-yellow city flag gained a new meaning, the one of a quest for sustainability in every government sphere, recurrently mirrored by the political discourse as the (only) way to fight and even revert the downturn effects.

It is at the level of industrial development through innovation that the aims pursued by the research reported by this paper find the most effective ground for evidence collection. Having the vast *audience* of local and regional actors determinant of and/or affected by economic development, the rhetoric adopted the deployment of triple helix partnerships, heralded by the Mayor's speech reproduced above, as a major reason for Águeda's '*smartness*'. The triple helix model (THM) (e.g., Etzkowitz and Leydesdorff, 1998), in brief, depicts the development of innovation systems with basis on relationships between and functional overlapping of university, industry and government. The THM discourse gained ground in Águeda through a EU project financed from 2008 to 2011 by the URBACT programme[4]. It was specifically aimed at generating several triple helices based on local clusters of economic activity and thus developing university-government-industry relations.
The local government states as major development objective the promotion of a strong local economy through entrepreneurship and the renewing and strengthening of the existing productive fabric (CMA, 2010). The government reserves for itself a leadership role in serving as a "*development agent*" contributing to develop new technology and innovation-based industries, create jobs and better future prospects for university graduates, and retain and attract population. Still, sound collaborative dynamics between the local political and production worlds and between these and academia is regarded as a crucial development.

In this context, the THM was rapidly looked at as the tool that would nourish success. This was mirrored by the official discourse, in which the model gained prominence and a persistent presence in the local policy design and in the local development debate. This can be illustrated with basis on a diversity of pieces of evidence. For instance, the THM is being utilized by the political forces opposing to the Mayor's party as a means to give argumentative power to criticisms. In fact, a member of the local City Council, criticizing the allegedly excessive focus of public investment in the city centre in detriment of the rural surroundings, averred: "*the triple helix model states that in order to keep the competitiveness of a region, its different parts should be equally developed*" (AMA, 2010, p. 52[5]). For those familiar

[3] Translated from the Portuguese.
[4] **http://urbact.eu/en/projects/innovation-creativity/runup/the-role-of-universities-for-economic-development-in-urban-poles/**
[5] Translated from the original in Portuguese.

with the THM, this statement lacks accuracy because the model does not make explicit any requirement related to equal development levels among different parts of a given region.
Meanwhile, the discursive focus on the THM has permeated industry-related organizations. For example, in an international seminar on innovation held in Águeda, industry representatives pointed out "*the importance of the theme of triple helix and the fundamental role of the university to stimulate innovation and entrepreneurship within this time of knowledge*"[6]. One can argue that the official discourse had the *persuasive* power needed to spread an enthusiastic perception towards the THM.

The use of the THM as policy inspiration can be regarded as problematic in the context of a small, traditional, and peripheral economy. In fact, significant barriers challenging the aim of putting in motion the kind of organizational and interactive arrangements predicted by the THM can be identified in Águeda (Rodrigues and Melo, 2012). Rather than analysing these barriers, it is seemingly more productive to shed light over the way the model permeates the policy making process and influences action. Nevertheless, a previous point should be made: local firms do not rely on academia or other formal knowledge centres to develop their innovation capabilities; the most important inputs are found in the chain of suppliers and customers that they integrate. As such, one can argue that the prospects for a full deployment of '*true*' (i.e., as described and/or predicted by the THM) and systematic triple helix based arrangements are far from brilliant. In fact, the THM- related objective of "*convergence of methodological and epistemological aims and norms between academy (industrialization of science) and industry (scientification of industry)*" (Viale and Etzkowitz, 2005, p. 9). The argument could, indeed, feed the frequent suggestion that, using the words of Edwards and Nicoll (2001, p. 104), "*the rhetoric, particularly that of policy, is not reflected in the reality*". Taking into account the mismatch between the model and the framework conditions, there is scope for an attempt to find out an explanation for the uncritical acceptance of the official rhetoric. Rodrigues and Melo (2012) provide an answer, suggesting that the plasticity characterising the fashion the THM is being used, because implying its conceptual emptying, offer local government officers the ideal basis sustaining an approach to local development susceptible of easier social legitimacy. In other words, the model assumed the status of an empty signifier and, as such, became a subject of consensus.

The local consensus on the THM-based path leading to enhanced innovation capacity and competitiveness can be seen as an example of how rhetoric, though established upon an unrealistic basis, may be instrumental in influencing an *audience* in its way of thinking. In addition, the research made in Águeda allows for an additional argument, configuring a perlocutionary act as in Austin (1962): the new ways of thinking have a nourishing effect on the willingness of local agents to act, or, maybe

[6] See **http://urbact.eu/en/projects/innovation-creativity/runup/the-role-of-universities-for-economic-development-in-urban-poles/**

more accurately, to act differently, that is, in innovative ways. In fact, there is evidence showing that the official discourse and rhetoric has been instrumental in the deployment of important initiatives marked by their **real** contribution to innovation and competitiveness of a number of local firms and to attract new businesses, thus creating jobs. This is the case of the recent prize-winning "*Águeda concept: from local to global*" initiative[7], based on a Municipality-led partnership including ca. 20 local firms and several other public and private organizations (ironically, despite the THM discourse, higher education, at least directly, does not participate). The partnership developed an innovative house model based on modular architecture which gathered the competences of a diversity of industrial sectors operating in the region and made appeal to the mobilization of innovation resources that, in isolation, would remain latent. In a traditionally unfavourable terrain as far as cooperation among firms is concerned, the successful effort underpinning the collaborative platform cannot be dissociated from the rhetoric-induced new ways of thinking. The Mayor himself helps to consolidate this view. In a recent speech about the '*Águeda concept*', he averred that the initiative was placed under the more encompassing will of transforming Águeda into "*an internationally recognised smart city*".

Additional evidence is provided by the Lighting Living Lab[8] that has been the most tangible result of an innovation and competitiveness network financed by a regional innovation strategy developed by the Centro region authority. This network, actually, was a kind of launching ramp of the THM-centred discourse which today wraps up the local policy endeavour. The project aims at promoting R&D and innovation in the lighting industry sector, in which Águeda has a prominent position in the country, focussing on the concepts of smart and eco-sustainable lighting. Adding to the advantages ripped by the participating firms, there are strong indications that the community will also benefit from the initiative, namely from such developments as the public lighting master plan aiming energy efficiency.

The benefits accrued by the THM rhetoric go beyond enhanced firms' competitiveness and efficiency gains in public services. It has also brought over improvements to the policy-making process, which changed from a traditionally fragmented and atomistic approach into a more coherent fashion of designing development strategies and policies. In this sense, one can argue that the use of the THM as referential contributed to enable Águeda to better organize itself and start to create more favourable framework conditions to enhance the innovation capacity of the local productive fabric. Eventually, these improved framework conditions would also contribute to strengthen the ability of local firms to make use of the knowledge produced within academia, or, in other words, to diminish the gap between discourse and reality (Rodrigues and Melo, 2012).

Moreover, benefits can be extended to the enlistment of new resources to fight the crisis, namely financial ones, tapped from external sources. This is true both at the

[7] http://www.aguedaconcept.com
[8] http://www.lighting-living-lab.pt/

national and European levels. The THM ideal driving the policy-making process has, in fact, fostered new communication patterns between the local and the central government[9], facilitating the local access to national funding streams directed at industry development. It has also created the opportunity to internalise the discursive *spirit* of European programmes, very much focussed on such things like collaborative innovation, smartness and sustainability, thus placing the municipality, because perfectly tuned with the EU language, in a better position to access financial resources otherwise overwhelmingly reserved for larger cities. The participation in EU programmes like URBACT and INTERREG, supporting the argument above, put Águeda working together and learning from much bigger urban agglomerations such as, among others, Potsdam, Gateshead, Patras, Montpellier, Almeria, A Coruña and Lugo.

The unrealistic discursive line craving for emulating in Águeda innovation practices taking place in more advanced economies endowed with the critical mass to deploy THM-driven development strategies, is underpinning new forms of policy design and delivery. New and old ways of acting and deciding together with new and old development coalitions are being combined in ways that are provoking positive transformations in the territory. The THM, unfeasible to be put in motion in its true meaning and institutional structure, has endowed Águeda with better ability to enter what Sotarauta (2010) calls the *spirit of times*, that is a general atmosphere emerging from the general societal communication upon which development opportunities and paths are open and consolidated.

Concluding remarks

This paper shed light over the effects discourse and rhetoric can exert on planning and policy making and thus on the transformation of territories. By studying the case of a small Southern European city, it has shown that new ways of thinking and thus new forms of policy design and delivery can spring from discursive and rhetorical devices, even when these are made of buzzwords and '*buzzmodels*' many times inspired by events going on in specific places (e.g., the widespread techvalley syndrome ignited by the Silicon Valley) of impossible or at least very hard replication elsewhere. The analytical focus was placed on the discursive line based on the THM, which can easily enter the category of 'buzzmodel' of unfeasible materialisation in the specific case of a small peripheral economy like the one characterising Águeda. The THM as local development inspiring source incorporated a mismatch with local reality and a match with the global *spirit of times*. The former is being left for the satisfaction of those who, like Albert Einstein, think that imagination will take you everywhere (as opposed to logic which takes you only from A to B). The latter, though, can be associated to real processes of change that are making Águeda a *smarter* city, though not in the sense of the dominant discourse. In fact, Águeda is accumulating *smartness* because, under the inspiration of such

[9] This approximates the argument of Rydin (1998), who looks at rhetoric as a way to nourish new communicative patterns between local and central governments.

rhetorical devices like the THM, it is, firstly, forming new development coalitions where cooperative traditions were hard to find – a good example are the double helix configurations bringing together the local government and industry -, and, secondly, improving its capacity to access both national and European funding sources. In addition, the evolving change dynamics may produce benefits that go beyond the generation of increased profits in a number of local firms and thus are extended to the local society as a whole. Hitherto, the mitigation of an eventual Janus-faced effect (Swyngedouw, 2005) subjugating the collective good to segments of interest defined by market forces is being ensured by the clear positioning of the local government as the institutional sphere leading the change process.

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Agonism and conflict in strategic urban projects: the dynamics of political opinion formation and social mobilization as condition and potential for reflexive governance

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Abstract

There has been a renewed interest and planning-theoretical underpinning recently for the idea of urban development projects as instruments for strategic urban transformation as well as for reflexive governance (e.g. Pinson 2004; Van den Broek et al. 2010; Oosterlynk et al. 2011). In many respects, however, the normative perspective envisioned by such contributions appears to stand in a counter-factual relationship to real-world scenarios. Empirical evidence and scholarly critique (e.g. Moulaert et al. 2003; Altshuler and Luberoff 2003; Salet and Gualini 2007) in fact highlight the fact that urban projects very often fall short of their strategic or integrative intentions: on the contrary, they often are occasions for untreatable controversies over urban development. As such, they express a peculiar a vocation for enhancing potentials for local conflict and often provide the scene for their very enactment.

Understanding the reasons and dynamics of conflict around urban projects still represents therefore a crucial precondition for arguing about the potentials for strategic reflexivity of project-based urban development initiatives. In this perspective, we need not only acknowledge agonism and conflict as constructive and constitutive elements of social relations, as sources of its strength and ability to innovate, but also inquire into the conditions under which agonism and conflict can be turned away from producing disrupting social outcomes and towards realising potentials for innovative transformative dynamics.

The paper proposes an empirically informed reflection on such conditions. Based on selected cases of conflict around urban development projects in Germany, it focuses in particular on a dual aspect which often characteristically defines the dynamic of

planning conflicts: the contradictory rationales and temporalities taken, on the one hand, by (institutionalized) policy development and planning practices and, on the other hand, by social mobilisation practices within the extended timeframe of the process. It argues that more awareness and consideration of the way an agonistic moment may develop and of the dynamics and forms of social mobilization (Melucci 1988) in the course of policy development and planning is crucial for addressing a process design that may enhance the potential for reflexive outcomes.

1. Introduction: on the 'strategic' potentials and challenges of urban development projects

Urban policy and planning research literature has shown recently a distinctive interest – with variable critical depth – for urban development projects as instruments for strategic spatial transformation (Pinson 2004, 2009; Van den Broek, Albrechts and Segers 2010; Oosterlynck et al. 2011; see also: Carmona and Burgess 2001; Carmona, Burgess and Badenhorst 2009).

Following a season of studies more explicitly targeted at inquiring critically into the contradictions of projects as the expression of 'neoliberal' practices of urban development policy (Altshuler and Luberoff 2003; Flyvbjerg, Bruzelius and Rothengatter 2003; Moulaert, Rodríguez and Swyngedouw 2003; Salet and Gualini 2007a; Majoor 2008; Diaz Orueta and Fainstein 2008), these contributions signal a distinctive interest in re-assessing and re-defining (in critical but overtly normatively-oriented perspective) the potential meaning of spatial projects, within an alleged movement of 'revival' of strategic spatial planning as evoked, among others, by authors like Healey (1997, 2007, 2010; et al. 1997), Albrechts (2004, 2011), or Salet and Faludi (2000).

According to a meanwhile diffused commonsense understanding, the 'strategic' nature of planning is identified with a "long time perspective" which "does not specify a fixed end state but operates as a flexible framework for sustainable spatial development", by this combining "a strong 'action orientation' and an increased sensitivity to the multiplicity of actors involved in strategic spatial planning" and to the need for introducing forms of social innovation into the planning and policy process (Oosterlynck, Albrechts, and Van Den Broek 2011: 3).

What is particular interest for us here is the way a strategic orientation of planning is tied to the potential roles of projects as instruments and measures of spatial transformation. Key in this respect are the notions of action-orientation and co-production. In the words of Oosterlynck et al., "action orientation implies an interest in planning instruments [that may realise] the *governing of land-use conflicts*, ways of *integrating various spatial claims* and the *operationalization of spatial quality and sustainability*, whereas social innovation draws attention to *the coupling of the transformation of space and the transformation of social relations in space* and to the

satisfaction of local needs" (Oosterlynck, Albrechts, and Van Den Broek 2011: 3, italics added).

This understanding resonates of Healey's concerns for the potential and challenges that urban projects – in light of her conception of "place-governance with a planning orientation" (Healey 2010: xiii) – bear for practices of strategy formation in place development. Major urban projects are seen as new interpretations of urbanity through complex mixes of interests and resources mobilised, and raise the question of how to create new places that are not elite enclaves, but "long-term public realm resources", with "attributes of inclusive urbanity" (Healey 2010: 126-7). Urban economies, policy processes, public and private entrepreneurship and management models, mobilisation patterns, strategic imagination and framing visions, as well as positioning in translocal development trends, are discussed as elements that need to be understood on the background of the ongoing struggle for "safeguarding the public realm" in urban projects (Healey 2010: 159): a struggle which involves conditions like energetic agency and a proactive governance mode, skilled and committed guidance, critical monitoring by the political and civic community, plus a strategic view of trans-local connections.

Similarly, authors like Salet and Gualini (2007b; Salet 2008) have argued in favor of a joint critical consideration of aspects of conceptual, strategic and democratic integration across scales in the framing of urban projects as a condition for their capacity to introduce sustainable socio-spatial innovation.

Compared with a more critically-minded literature, however, recent discourse on 'strategic spatial projects' has often gained a distinctive normative orientation. Recent work by Oosterlynck et al. is, again, a significant example. Projects as the instruments for the "structural transformation of socio-spatial reality", in this respect, are seen as necessarily capable of exerting (strategic) 'selectivity' while pursuing an 'integrative' framework of goals, which in turn implies fostering horizontal and vertical forms of cooperation. In sum, projects constitute an instance of 'co-production' which implies "a specific focus on how spatial transformation may facilitate social innovation both in the substantive sense of improving the satisfaction of local needs and in the process sense of involving non-conventional, grassroots and disadvantaged actors and groups" (Oosterlynck, Albrechts, and Van Den Broek 2011: 3). Again, what is of particular interest here is however the convition that "[t]he *place focus* of strategic planning and design […] provides a promising basis for public-public cooperation as well as between the government and civil society and private sector actors (a 'government-led-but-negotiated form of governance' […]" (Oosterlynck, Albrechts, and Van Den Broek 2011: 3-4, italics added). This conception leans upon the 'four-track' model of strategic spatial planning elaborated by Albrechts (2004, 2011; see also Van den Broeck 2011), based on the combination of different action trajectories, "one for the vision, a second for the short-term and long-term actions, a third for the involvement of the key actors, and finally a fourth track for a more permanent process (mainly at the local level) involving the broader public in major decisions" (Albrechts 2004: 752).

In a similar vein, Pinson (2004, 2009) has argued about re-assessing urban development projects and their role in public policy. His reading is in line with an attention for the governance of urban projects as the specific focus of analysis, as expressed by approaches to the inquiry of projects as 'policy instruments' (Lascoumes and Le Galès 2004) as a way to get insights into the nature of a policy. This amounts to assuming 'projects' as the object, rather than as merely a unit, of analysis (Pinson 2004: 200). In this respect, projects can be analysed as a specific mode of policy action: rather than simply a context, arena, or sequence of actions that unveils a set of power relations and interests in the city, it represents a constitutive dimension of their enactment. Projects are a specific mode by which the urban policy arena is constituted.

In this perspective, "in as far as it adopts the instrument of projects, public intervention does not consist anymore in imposing the supremacy of public regulation, but primarily in organising the combination of different types of regulation" (Pinson 2004: 228 - my translations from French). This justifies an attention for projects that points at changing sources for legitimacy and effectiveness of public action, implying new 'reflexive' attitudes such as capacity of anticipation, integration of uncertainty, openness to context, decentralisation of action, and sensitiveness to actors (Pinson 2004: 220).

Interpreting projects as expressions of a reflexive and innovative process- and action-orientation of urban policy, however, remains problematic, and normative applications of this ideal deserve critical scrutiny. In fact, assumptions of projects as 'open' frames of public action, allowing reflexive responses to emergent outcomes and turning unintended consequences into collective resources, remains largely counterfactual if not merely ideal. Analysing their logic is hence crucial for a critique of the strategic nature of urban projects and of their potential as innovate instruments of public policy. This paper is a step towards such a critique.

2. 'Strategic urban projects' as object of theorization and object of research: insights from a social movement perspective

The brief, and certainly partial review of current scholarly discourse on 'strategic spatial projects' represents an outstanding critical background – as well as a critical object – for our assessment of urban development projects based on empirical evidence from some case-studies. It is based on an on-going critical concern, on the one hand, for a domain of urban policy and planning practices in which urban development projects constitute specific strategic-relational constructs (Gualini 2008, 2010, forthc.) and, on the other hand, for contentious character of urban policies and for the role urban development projects often play in this respect as factor of social contention – to the point, in some instances, of even becoming catalyzers of social movements and major foci of local political conflicts (Gualini 2011a, 2011b).

The perspective chosen in this paper, against this background of interests, is a quite specific one: it is an attempt to gain new sources of reflexivity from an engagement with the nature of social contention around urban development projects, and to do so based on hypotheses drawn from the literature on the dynamics of contentious politics and social movements.

Besides specific interest in this literature and in the issues it raises for critical-interpretive urban policy analysis, this approach is motivated by the conviction that the development of the 'strategic' features and the effective pursuit of the 'strategic' aims of urban development projects – as briefly sketched above – are only to a limited extent amenable to be subject to a 'design' intentionality, and that they rather highly depend upon the capacity for reflexive co-evolution in relation to insurgent social inputs along the life-span and dynamics of the policy and planning process. In this respect, the task of this paper constitutes a limited step in this direction of analysis, based on case-studies of the actual reality of what are all-too-often 'strategically dumb' projects. Along a critical reconstruction of their policy and planning processes and of related dynamics of contention, the paper aims at gaining elements of understanding of what the logic of social protest and mobilization can specifically teach us about how and under which conditions such a strategic reflexivity can emerge and be exerted.

2.1. Contentious politics and social mobilization

In this section, we first define the key assumptions drawn from research on social movements, and then formulate the hypotheses that inform the two case studies that follow.

In adopting a social movement perspective on conflicts around urban development projects, we move from the basic observation (Tilly 2004) that the dynamics of contention and social protest are tied to their political-institutional, social and economic context, and that this context significantly defines conditions under which they may take place. In this context, however, social movements must be understood as a distinct form of social protest and contention by virtue of three features that characterize them as collective action and as a collective construct (Tilly 2004: 53):

- they are sustained organized public efforts to raise collective claims, combining claimants, objects of claims and a public in a 'campaign';
- they combine forms of political action, which form over time context specific, standard-operating modes by which collective action is enacted: the social movement 'repertoire';
- they are public representations of unity, worthiness, collectivity and commitment, involving significant processes of identification and collective identity building.

The sorts of claims, forms of action, and collective identification mobilized and their combinations differ according to the time-space specificity of social movements and the contingent situations in which they emerge. Their relative salience may vary

among social movements, among claimants within movements, and even among phases of movements (Tilly 2004, 184). The origin and features of social movement claims, repertoires and identities, moreover, are rooted in the regime within which they operate. In this sense, as pointed out by Tilly (2006), contentious actions are shaped by regimes in several ways:

- by regulatory control on possible claim-making repertoires;
- by the power of policy practices and discourses to selectively constitute potential claimants and potential objects of claim;
- by producing streams of issues, events, and governmental actions around which movements may rise and fall.

The forms and dynamics of contention are hence a function of the specific political-institutional, social and economic conditions under which they emerge: it is in their shadow that a 'political opportunity structure' (Tarrow 1998) for collective action may emerge: "contentious politics is triggered when changing political opportunities and constraints create incentives for social actors who lack resources of their own. They contend through known repertoires of contention and expand them by creating innovations at their margin. When backed by dense social networks and galvanized by culturally resonant, action-oriented symbols, contentious politics leads to sustained interaction with opponents. The result is the social movement." (Tarrow 1998: 2).

In our perspective, this observation is important in a twofold way. First, it leads us to consider planning practices as being defined as a 'policy regime', i.e. as an action situation which is not only shaped by political-institutional, social and economic framework conditions, but by the specific policy rationale that defines its course of action and by its potential for selective regulation of modes of collective action. Second, the selectivity of forms of social-political regulation and discipline expressed by planning as a 'policy regime' may precisely become the occasion for forms of identification, leading to the emergence of a 'political opportunity structure' for collective mobilization.

This observation is important in relationship with the insurgent, constructed and anything but 'natural' features of social movements – an aspect which has led scholars to warn against the 'ontologisation' of social movements (Melucci 1988: 330). Against approaches to social movements that emphasize factors for individual mobilization – material interests and resources as well as subjective and voluntaristic variables – over the symbolic-cognitive and interpretive aspects of social experience, authors like Melucci (1988, 1989, 1996), Snow (et al. 1980, 1986), Tarrow (1998) and Tilly (2004; and Tarrow 2006) emphasize the emergent and constructed character of social movements as forms of collective action.

As these author show, a motivation to adhere to a context of interaction – like a form of collective mobilization – *per se, i.e. a priori* of interaction itself, is rarely found; conversely, with the varying of activities and modes of involvement, interests for participation and modes of participation also tend to vary: "the 'motives' for joining

or continued participation are generally emergent and interactional rather than pre-structured" (Snow *et al.* 1980: 795). Motivation to participation can neither be seen exclusively as an individual nor as a discrete variable: it is rather constructed and consolidated through interactions and in the framework of their process-like dimension (Melucci 1988), whereas "rationales for participation are both collective and ongoing phenomena" (Snow *et al.* 1986: 467).

Actors 'produce' collective action because they are able to define themselves and to define their relationships with the environment (other actors, available resources, opportunities and obstacles) in terms that involve a collective and shared identification of issues and issue-boundaries, in relation to which they feel their interests to be involved and they might consider to mobilize their resources in that direction. The identities that are thus strengthened are 'social products' of the events that occurred in a particular time-space conjuncture (Melucci 1988, 1996).

Contrary to conceptions which see the outcomes of social movements as functions of the definition of objectives and of the group's ideology - thus binding them to the sharing of defined 'values' –, this conception understands processes of collective mobilization as phenomena subject to significant variability according to differences in relational structures. In this sense, the relational settings of interaction constitute at least as important factors in defining paths of participation and cooperation as dispositions or value assumptions do.

2.2. Social movements and planning processes: research hypotheses

This aspect is of relevance in relationship with fragmentation that characterizes contemporary societies in late modernity (Melucci, 1989, 1996) and the way this affects social movement in the urban context. It hints at a recognizable change in features in contemporary urban movements, whereby 'neoliberal' and globalized urban development policies and practices have contributed to a progressive erosion of cycles of urban movements based on established local groupings and interests based on traditional forms of affiliation and mutual identification – be they corporatist, class, or community based – and on their social movement infrastructure (Mayer 2007). While moving away from conflicts grounded on basic social cleavages, however, urban conflicts have pointed to the emergence of "a variety, a multiplicity of conflicts, revealing the untreatable diversity of local societies and the emerging need to build shared identities" (Pacchi and Pasqui 2011: 4). To this obviously contribute the new cross-sectional social impact and visibility taken by the 'neoliberal project' in cities, as well as an unprecedented local as well as trans-local mediatization of urban struggles.

This is in line with the observation that contemporary social movements take often the form of 'multiform movements' (Tarrow 1998: 103), flexibly, syncretically and pluralistically combining different forms of collective action and tactics. This accounts for the fact that often, in contemporary social movements, "heterogeneity

and interdependence are greater spurs to collective action than homogeneity and discipline" (ibid.: 137), and that mobilization often takes the form of democratically decentralized movements (ibid.: 129), that is, of 'decentralized, segmented, and reticulated' groups that capitalize on variety and pluralism.

Two interrelated conditions are crucial for collective mobilization to occur under such conditions. The first is the enactment of opportunities for involvement through the development of a repertoire of actions: "contentious collective action demonstrates the possibilities of collective action to others and offers even resource-poor groups the opportunity that their lack of resources would deny them", and thus "it can pry open institutional barriers through which the demands of others can pour" (Tarrow 1998: 87). This aspect points to the importance of the 'public performance' of contention and of the development of itineraries of repertoire change in response to changing opportunity structures.

The second is the importance of symbolic mobilization in order to define alternative belief systems that may constitute interfaces for mutual identification and support collective action. In fact, "it is participants' recognition of their common interests that translates the potential for a movement into action" (Tarrow 1998: 6), but this recognition is an interpretive endeavor that implies developing frames of identification that allow to bridge differences in positions and preferences and to create new symbolic-cognitive bonds. This explains the importance of collective action frames and of dynamic and co-evolutive processes of framing in the development of social movements

'Framing' results from practices of consensus mobilization intended as a practice that involves constructing symbols of consensus: these however are not only drawn from 'categorical identity' (Tarrow 1998: 119-120) but increasingly involve mobilizing emotional commitments that may contrite bridging categorical differences. Thus, "most of the work of 'framing' is cognitive and evaluative – that is, it identifies grievances and translates them into broader claims against significant others" but, to a significant extent, it involves "tapping or creating emotional energy" (Tarrow 1998: 111). This can occur through different processes of framing – like frame bridging, frame amplification and frame extension – and ultimately lead to *frame alignment*, i.e. of the alignment between individuals' or groups' frames along *collective frames*. As such, "frame alignment [...] is a necessary condition for movement participation, whatever its nature or intensity, and that is typically an interaction accomplishment" (Snow *et al.* 1986: 467).

'Framing' is anything but a purely intentional process: it is an interactional outcome, as part of what Tarrow (1998: 121) calls 'framing through contention' – and, at the same time, it is a condition for reproduction and co-evolution of interaction.

This leads us to discussing two last interrelated aspects that are key for assessing social movements in the framework of planning processes: the nature of frames dominating social movements, and their intertemporal dimension in terms of their

possible trajectories of evolution. They bear a combined relevance to the question of the social-political outcomes of contentious movements in the context of public policy and, in particular, their prospects of their co-evolution towards integrative rather than polarizing and ultimately disruptive outcomes.

The first aspect can be usefully discussed combining the typologies of conflicts and related forms of social movements advanced by Pizzorno (1993) and Melucci (1996), as Pacchi and Pasqui (2011) have recently proposed. In their view, even if their peculiar combinations are frequently observable, distinguishing these types analytically is important in order to recognize the different consequences that different kind of urban conflicts based on them can have for planning and policy practices.

Pizzorno (1993) proposes a threefold typology in which he distinguishes 'recognition', 'interest' and 'ideological (or value)' conflicts. 'Interest conflicts' are typical for parties which share the same values and the same systems of relations in a pluralistic environment in which they struggle for their relative distribution of benefits. Obviously, conflicts of interest can be radical and can entail radical opposition, but they usually are framed as a distributive game, in which what is at stake is typically a comparative benefit gain.[1]

'Recognition conflicts' are conflicts that are promoted around a group's or actor's claim for recognition of its identity. As Pizzorno underlines, 'identity' in this case is anything but a given, being rather often defined in opposition to other parties, and involves therefore struggle for mutual identification in which a new identity is a possible outcomes of the conflicts itself.[2]

'Ideological (or value) conflicts', finally, involve clashes among (ontological) world-views and among systems of values and beliefs which claim for universal validity. The relation to concrete interests is therefore often not transparent if not irrelevant, and different interests can be bridged and conveyed.[3]

[1] In the characterization by Pacchi and Pasqui (2011: 4): "Interest conflicts take place when scarce resources (and firstly land and its possible uses) are distributed through planning decision. Often these kinds of conflicts have an economic and financial dimension: for example the competition between different uses of transformation areas is often a competition between developers and landowners, or between different promoters, or between financial operators and developers, and so on. If we consider also the public administration an economic actor producing resources through planning permissions, also the bargaining between institutional bodies and the private sector can be considered an interest conflict."

[2] In the characterization by Pacchi and Pasqui (2011: 4): "Recognition conflicts take place when social groups (often local) want to be recognized through planning decisions that contribute to their identification. Often these kinds of conflicts are connected with the defense of 'local' (environmental, cultural, community) values, or with the claim for exclusive uses of a public space, against uses considered inconvenient."

[3] In the characterization by Pacchi and Pasqui (2011: 4): "Ideological conflicts take place when the beliefs themselves (the very ontological frameworks) are a contentious object. In this kind of planning conflicts there is not a shared framework between the parts: the framework is the object of conflict. Radical ecological conflicts, for example, can be considered ideological, because the parts

If we combine Pizzorno's typology of conflicts with the emergence of specific kinds of social movements which give expression to them, as in Melucci's typology, we gain elements for interpreting the potential evolution trajectories involved. As Melucci (1996) underlines, new social movements increasingly involve practices of mutual identification and recognition that tend to stress the limits of social representation within which traditional class or corporatist struggles were played out. Melucci's distinction between 'claimant', 'political' and 'antagonistic' movements resembles the one proposed by Pizzorno in that, moving from one to the other, it stresses the increasing importance of alternative framings both as a factor of external positioning and of internal cohesion of the movement – with an increasing availability to systemic conflict as factor of identification and mobilization. In the words of Pacchi and Pasqui (2011: 5), "[m]oving from a claimant to a political and to an antagonist movement, the symbolic content tends to increase, while the divisibility and negotiability of goals tends to decrease, and so does the reversibility of conflicts; in the end, such conflicts tend to become zero sum rather than positive sum games."

The second aspect concerns the intertemporal dimension of social movements, that is, the development of cycles of contention and of the evolution they may take – through phases of mobilization, processes of diffusion, extension, imitation and reaction, and possibly demobilization and decline (Tarrow 1998: 142 ff.). The issue is relevant in view of the outcomes of contentious planning processes. The trajectories taken by social movements around contentious plans and projects, as pointed out earlier, are the result of the strategic selectivity of 'policy regimes' and of the way opportunity structures are defined and appropriated by collective actors.

The hypothesis that can be inferred from these observations and that we want to explore is threefold:

- firstly, as they contribute to defining the political opportunity structures for contentious actions and for collective mobilization, and ultimately for the nature of social movements, planning processes and the 'policy regimes' in which they are embedded are also determinant for shaping their evolutive trajectories;
- secondly, the co-evolution of planning processes and social movements in a defined contentious situation depends upon the way forms of strategic reflexivity either side are developed on either side and on how these mutually interact;
- thirdly, a more developed awareness of dynamics of contention and social mobilization in planning processes is essential for developing a strategic reflexivity of public policy that may make co-evolution towards integrative outcomes possible.

The question is, ultimately, how far awareness of the nature and meaning of social mobilization processes is can be developed within the context of planning processes and how far this may lead to responses and realignments that may develop a form of strategic reflexivity and favor the emergence of integrative outcomes.

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want to produce (different) universal systems of values and meanings. Often, in this kind of conflicts scientific information and technical knowledge are at stake."

3. Planning processes and cycles of contention: two case studies

In this section, we present two case-studies of actual conflicts around urban development projects in Germany. The case-studies neither claim to be exhaustive overall assessments of these conflicts nor to draw conclusions on grounds of direct comparability. However, they share a common interpretive framework based on the *joint analysis of planning processes and of related cycles of contention*. The focus of interpretation is therefore the pattern of co-evolution of planning and contention, as can be interpreted through an analysis of the social mobilization developed around each project.

3.1. The case of MediaSpree, Berlin, 1992-2012

Introduction

The urban development project known as 'MediaSpree' – extending over 180 ha. for an originally expected built space of 1.3 mio. sqm. and an investment volume of ca. 2.6 billion Euros – is basically a marketing construct. MediaSpree does not actually exist as a unitary, let alone publicly initiated project. It is basically the result of a marketing initiative, characterized from the outset by an incremental approach to place-making. As a unitary project, it is identifiable mainly by a strategic frame of a mainly symbolic branding- and marketing-oriented nature. This is reflected in the nature of public-private relationships developed around the project.

Phase one: indicative strategic framing

The public career of the project has developed in a distinctively incremental way. Its origins date back to the early post-reunification years, in the early 1990s. Despite its regained centrality, the area's development potential was rather neglected in the immediate aftermath of Berlin's unification, being sidelined by a focus on development along the so-called *Zentrenband* connecting the eastern and western city and on the 'critical reconstruction' of the historic city pursued by the *Planwerk Innenstadt* (Senatsverwaltung 1997). Nevertheless, this planning background proved to be determinant in framing its prospects as attention extended to the area of the Ostbahnhof, leading to an urban design contest in 1992 and to the first formally binding plans in the mid-1990s. Extending the design rationale of the *Planwerk Innenstadt*, plans foresaw a new skyline made of a 'chain of architectural pearls' along the eastern waterfront.

The fusion of the boroughs of Kreuzberg and Friedrichshain in 2001 introduced the opportunity for a unitary development scheme. The planning document devised by the Berlin Senate – as a complement of the *Planwerk Innenstadt* – in coordination with the boroughs, the *Leitbild Spreeraum Friedrichshain-Kreuzberg* (Senatsverwaltung 2001) is a spatial-functional vision which redefines the

Spreeraum as a unitary area and attempts at a coordination of the heterogeneous developments taking place. The focus was on tertiary development along a livable waterfront environment for a mix of leisure and working activities. Subsequently, the vision was strategically targeted towards creating an attractive urban environment in particular for 'creative' and media enterprises to locate, prospectively contributing to clustering and specialization in key sectors for the city's economy. Nevertheless, the strategy was clearly functional to a maximization of development potentials. This was backed by provisions for a 10-meter public waterfront integrated with a new open space along remains of the Berlin wall, the East-Side-Park.

The resulting planning approach relied on a flexible steering mode with minimal regulating inputs from the public. Despite its identification as strategic development zone, the city's direct commitment – besides the provision of incentive structures mainly through public subsidies – was from the outset significantly restrained. As the strategic frame was made of an indicative system of objectives implying incremental market-based mechanism of implementation, the relational frame adopted was a relatively stable but loose, disjointed structure of relationships.

Phase two: market-oriented strategic-relational framing

MediaSpree's planning objectives were mainly pursued through joint marketing efforts. This in fact amounted to a substantial delegation by the city to a private interest coalition to define a development strategy for the area. The result was a flat hierarchy behind which, however, lies an apparent dominance of behaviours and attitudes framed by market-oriented visions and behaviors clearly dominated, which made the future of the area primary dependent on the demand-side and on investors' preferences. This aspect, as we will see, bore important consequences for the project's reception in public debate in the first phases of contention.

Accordingly, MediaSpree gained the status of a strategic project *de facto* more by marketing and branding than by formal political commitment. A crucial role was played in this by the initiative taken by the area's landowners – in large part public- or semi-public corporations – shortly after the adoption of the *Leitbild* to join a local marketing agency. Originally founded as Spreemedia GmbH, the agency was turned a few years later into an association known as Mediaspree e.V., financed with the contribution of the Federal scheme for regional development and by members' contributions.

Change from the original form of a limited liability company to an association, introduced in 2004 and politically supported by the Berlin Senate, conferred the agency a semi-public character strongly contrasting with the original set-up. This transformation however did not change its mission as an agent of property interests, entrusted with marketing properties, attracting investors, networking and counseling members, and building an image for the purpose of an effective overall development of the area. Following the successful location of the headquarters of firms like MTV

Europe and Universal, Mediaspree e.V. consistently focussed its image-building and marketing efforts on media-related industries.

Mediaspree e.V. represented an attempt at contrasting a weak market situation by channeling investors' attention on a unitarily marketed area. Its associative form suggests transparency as an expression of non-self-interested conduct.

Despite this carefully constructed public image, Mediaspree e.V. was neither an open forum for public consultation nor a true interest coalition. On the one hand, an extended range of local stakeholders was never involved, the public being represented by local authorities – the Berlin Senate and the borough – in the advisory board along with the Chamber of Commerce and the local Agency for Labour. On the other hand, while the agency acted as collective representative of property owners, negotiations about concrete investment deals were kept strictly individual.

Another significant feature that emerged along with this relational setting is that MediaSpree was never formally declared as a priority project of the city. In line with its rather non-committal attitude, in overall terms the Berlin Senate adopted a delegation strategy which – next to a key role for Mediaspree e.V. – implied leaving formal planning authority with the local borough. The borough acted mainly as controlling instance in enforcing planning laws, regulations and development contracts. At this level of the planning procedure, the borough was thus entitled to formulate its own goals and to exert influence on developers. The key instrument for this was the development contracts attached to each building plan and reflecting the degree of cooperation between the public and the private investors. The Senate however kept planning authority over some areas – e.g. Anschutz and some others – as well as significant influence over areas of state-owned enterprises. The presence of land property of significant public-owned companies in fact the Berlin Senate a stake in development in the area. It was to become, however, also a potential source for conflicts of interest between the Senate and the borough – particularly, as we shall see, as the project became contentious.

Phase three: awareness raising and antagonistic mobilization

The project's strategic and relational framing briefly described constitutes the framework within which MediaSpree turned, within a few years, into one of Berlin's hotspots of overt antagonism. Despite all this, it took relatively long for citizens groups to raise their voice – in particular, participatory process having been kept strictly formal. This is in part certainly due to the practices of Mediaspree e.V., which have remained largely unaccountable as well as unaccessible to the general public. Moreover, in first instance, its branding approach constructed an artificial image that was little targeted to as well as little felt by local citizens. In addition, given the nature of the area and the significant physical and symbolic separation from its Kreuzberg side, developments on MediaSpree's core areas did not

necessarily raise expectations of typical neighborhood conflicts. For long, all these factors contributed to the rather limited public visibility of the project.

This however was rapidly bound to change in the mid-2000s. A variety of development contributed to introduce the first phase of mobilization. For one, the pervasive marketing and branding activity of the agency – with its symbolic co-optation inclusion of local 'grassroots' activities in image building – increasingly raised awareness on the factual consequences of planned developments for the alternative milieux that had been making the area famous – and a major tourist attraction – after Berlin's reunification. Moreover, some key initiatives dramatically contributed to rise local as well as supralocal awareness.

In fact, dependence on market forces led development of MediaSpree to be in part defined by single disjointed development initiatives, for which ad-hoc negotiation frameworks were defined. These were clustered in particular in a section called Oberbaum-City as well as in a large-scale project by the American investor Anschutz Group – now known as O2-World Arena – for which development contracts were signed with the borough in 2000.

The initiative by Anschutz – one of the first major foreign investors in the area – to build a large multifunctional event arena bound to exert a huge impact on the area. Development contracts – by which Anschutz agreed pay-offs for road improvements and contributions to the realization of a playing field and the East-Side-Park along the Spree – were defined directly with the Senate at a time in which the overall concept for MediaSpree was still in the making, and were decisively influenced by Anschutz negotiating power vis-à-vis the boroughs' compelling need for facilitating investments under public zero-cost development conditions. This led to obtaining a prominent and intrusive position in the area. One paradoxical result was that the planned East-Side-Park appeared to be degraded to a facility dependent on the investor's will – keeping an unhindered riverside view and waterfront access – to which even part of the former Berlin wall monument has been sacrificed. This had a tremendous impact on public perception on the threats to an area that had turned over years into one of the city's most dynamic and creative hotspots of informal development.

This rise of visibility went along with the progressive emergence of antagonistic action, drawing in particular from autonomous-anarchist circles related to a mixed milieu of squatters and extending to insurgent anti-capitalist and anti-gentrification groupings, which had increasingly been pointing to the segregation and polarization effects of east-Berlin's revitalization processes.

A crucial role as an 'early riser' and as a broker of citizens' mobilization was to be exerted by the formation of the association *MediaSpree Versenken!* ('Sink MediaSpree!'), as it proved capable of directing attention to the specific local development challenges involved in the project while tying them to a broader, city-

wide system-critical movement. In a few years, MediaSpree Versenken! managed to develop reference to the Spree waterfront area into a cohesive and bridging symbol.

On the one hand, the contentious practices it promoted – like demonstrations, occupations and flash-mob inspired performances – were capable of appealing to actors and groups attached to specific local development issues, like the public nature of the waterfront and the nature of its uses and appropriation, as well as to tie-in to the pragmatic interests of a variety of local actors, particularly of 'pioneers' of temporary creative-cultural and leisure-oriented uses of space. By this, its actions also contributed to turning the image-building campaigns of Mediaspree e.V. upside-down, and to introducing a symbolic re-appropriation of the image of the area. On the other hand, MediaSpree Versenken! proved capable of connecting local and supra-local interests and perspectives and in bridging scales of protest. Accordingly, while slogans like 'Spree waterfront for all!' rapidly became carriers of broader forms of protest and mobilization and gained local as well supra-local attention – beyond the ideological origins of the promoters – as rooted in an alternative vision of local development, MediaSpree itself become an overarching symbol of opposition to the 'selling-out' of the city.

Not surprisingly, the features of the relational setting also turned into a significant matter of contention at a point in time in which first antagonistic actions raised attention on the contentious potential of the project, as the marketing agency and the actors they represented lent themselves to becoming an amenable symbolic target for movements critical of neo-liberal urban developments – not necessarily with direct local ties.

Phase four: institutionalized dissent and diffused contention

MediaSpree Versenken! became a significant actor in the project's arena by raising attention on the exclusionary character of planned development and on the marginalization of local interests. In organizational terms, MediaSpree Versenken! represented anything but a decentralized-networked movement in the strict sense (Tarrow 1998: 129), and actually kept a radical ideological core throughout the cycle of contention. Its actions, however, developed on the background of a significant resurgence diffusion of urban antagonism in Berlin, with significant forms of 'localizing protests' (Mayer 2007), like the actions promoted by the Berlin Social Forum founded in 2003, but also the emergence of contentious urban policy issues leading to direct actions like the storming and subsequent public appropriation of the Tempelhof area in 2009. In this respect, the resonance of its actions was amplificated by the network-like diffusion of urban policy related contention in the late 2000s.

MediaSpree Versenken! contributed thus to conferring visibility and symbolic unity to contentious forces around a project. What is also notable, however, is that it managed to develop elements of a counter-project which – even more than the symbolically powerful, but techno-politically unviable alternative to Stuttgart 21 –

could introduce a wedge in local planning. By this, it eventually gained an active role in the policy process as it managed to channel a diffuse public distress towards recognizable planning counter-proposals.

Success in mobilizing citizens – under the slogan 'Spree waterfront for all!' – towards a local consultative referendum, which was ultimately held in July 2008, led to overwhelming support for a development alternative to the official plans. This was expressed in the form of concrete physical requirements – a 50-meters clearing along the whole of the eastern Spree-side in order to realize a consistent public waterfront, a unitary 22 m. building height, and a pedestrian-only use of the planned bridge – which were easily identifiable beyond more or less ideological divides, but would in practice imply a moratorium and a substantial revision of formally and in part legally binding agreed developments.

In the aftermath of the referendum, these requirements and their implications for political action temporarily became the main focus of contention for current local politics. Crucial for the dynamics of contention around MediaSpree was the fact the referendum had forcefully altered the relational setting of the project, introducing new constraints and resources for policy actors. This implied not only new opportunities for representatives of the movement to influence policy agendas, but also the emergence of hidden intergovernmental tensions as it put the project's main public actors – the Berlin Senate and the borough of Friedrichshain-Kreuzberg – in a rather awkward position.

While formally directed to the borough – statutorily mandated to give a formal response to the consultation – the referendum clearly was primarily directed against the 'neoliberal' practices of Berlin's governing coalition and of its business partners. While the joint marketing agency was liquidated in late 2008 – formally because of expiration of federal funding, but factually as a sign of the weakness of its coalition of interests face to the political challenge ahead – the Berlin Senate and its decided unwillingness to revise strategies for the area became the political target of contention – with developments around Anschutz's O2-Arena as the main symbolic marker.

The borough's potential to influence development, on the contrary, was reinforced, even if controversial. Following the referendum, the borough was forced to balance between dual political commitments. Its official position was – in line with formal planning developments – that, while demanding consideration for citizens' orientations, the referendum could possibly alter the state of things. In fact, established or progressing development contracts negotiated with developers define a difficult balance of public and private interests which – so went the argument – would have required amendments involving often dramatic compensations. On the other hand, the borough was asked to play a mediatory role which could only be possible if significant if partial recognition of citizens' requests could impact on the redefinition of the project.

The resulting situation was conflictual. The Senate at several occasions threated with withdrawing the borough's planning authority over the area in case decisions should be enforced that would imply devaluation and/or compensation measures. Subsequently, the Senate confirmed the borough's authority, as well as these threats, upholding the original planning goals (Abgeordnetenhaus 2008a) and pursuing a strategy of sidelining the referendum's result.

Moreover, after the liquidation of Mediaspree e.V. no unitary representation of land owners is presently in place. In July 2008, in reaction to the referendum, twelve major land owners have constituted an informal agreement based on the demonstrative rejection of any public dialogue. Nevertheless, controversy continued on whether existing formal agreements really constituted a binding legal obligation – as the Senate argued – since not all areas actually had defined building contracts, while several areas still lacked concrete commitments by developers.

The emergence of social antagonism thus also created new political opportunities for the borough. While subaltern in terms of power relations, its new position introduced possibilities for refining its own role by exerting a more proactive and ad-hoc mediation between public and private interests.

Following the referendum, the borough first promoted a discussion forum, and then established a public commission – the *Sonderausschuss Spreeraum* (Bezirksamt Friedrichshain-Kreuzberg 2007, 2009), including all political groupings of the council as four citizens' representatives – called to deliberate on the planning amendments demanded by popular vote. The commission was an attempt at bridging interests and opening-up participation in response to increasing unease with the shortcomings of formal decision-making processes. As such, it asserted the legitimacy of stakes beyond those represented by Mediaspree e.V. and the need to articulate consensus at a broader scale of involvement. While the results reached by the commission were disappointing and ineffectual – as well as contested by opponents (Initiativkreis Mediaspree Versenken 2009) – in upholding the formal prerogatives of the project against demands for change, it actually contributed to creating a structured arena of exchange to a range of actors, leading to some significant is partial and ad hoc change in plan provisions on specific lots. It was an expression of an insurgent dynamics of informal deliberation practices which, far from capable of revising the overall strategy for the area, nonetheless contributed to a significant if piecemeal shift in attitudes and practices.

A first notable example was readiness shown by the Berlin Senate in late 2008 to rethink its land-use policy along the Spree (Abgeordnetenhaus Berlin 2008b) introducing measures for safeguarding non-commercial, social and experimental activities and to adopt according up-dates of the *Leitbild*.

This involved a revision of criteria for land assignment adopted by the Berlin public land agency, the *Liegenschaftsfonds*, introducing new possibilities for the promotion

of alternative socially oriented projects in strategic (re-)development areas (Abgeordnetenhaus Berlin 2010).

Significantly, this partial reorientation of public policy developed within a broader public debate on the rationale of urban development (Stadtforum Berlin 2009) – of which a project like MediaSpree had been a major catalyzer.

Thus, while revision from rent maximization goals towards a more socially oriented (and more effective) land policy agenda was formally included – in the wake of an insurgent housing policy issue – in Berlin's new coalition agreement (SPD – CDU 2011), the issue also became a stake for broader forms of mobilization. In 2011, the civic initiative *Stadt Neu Denken* brought together a coalition of representatives from academia, professions, arts and civic associations and groups around the idea of an alternative approach to urban development. Soon around 500 individuals and civic organizations were involved in activities centered on developing ideas and requesting public policies allowing for socially attentive and flexible forms of urban development capable of reflecting the social creativity and pluralism of local urban contexts.

A further development which clearly reflects issues and demands raised in the framework of MediaSpree and other contemporary planning controversies – and which can be seen as a clear albeit partial response to shifting public moods on urban issues – is Berlin's Senate initiative of launching an IBA Berlin 2020 as a policy framework for a more experimental and participated approach to urban development in the inner-city fringes (Senatsverwaltung 2011).

3.2. The case of Stuttgart 21, 1988-2012

Introduction

Stuttgart 21 is a project which has become the center of a complex and still on-going social and political controversy, bearing different conflict potentials and developing along several significant social and political dimensions. As such, it has already acquired a significant position in public as well as scholarly attention. The intensity and diffusion of antagonism developed around the project are uncommon to public policy processes in Germany, and have prompted attention e.g. on the 'new' sociological features of urban protest and citizens mobilization around contentious urban development initiatives – their peculiar cross-sectional and inter-generational features being one of main aspects addressed by social researchers.

Above all, Stuttgart 21 has triggered a large public debate on issues concerning local policy and the apparent legitimacy deficit of public decision-making procedures incapable of incorporating a truly agonistic dimension of politics. Accordingly, the features taken by citizens' mobilization against this project have turned Stuttgart 21 into a catalyst for a broader public debate on the 'renewal' of local democracy.

First phase: techno-political conception

The beginnings of the project's political career are marked by what will be experienced as a key feature throughout the protest mobilization, a significant lack of transparency and of public openness. The marking event was the press conference in which, on April 18, 1994, the project called 'Stuttgart 21' was officially presented as a partnership project of the German federal government, the Land Baden-Württemberg, the City of Stuttgart and Deutsche Bahn AG (DB), involving a new underground station on the location of the extant, urban redevelopment dismissed railway grounds, and an improved railway connection to Stuttgart airport. What was presented by the protagonists themselves as a 'coup' (Heinz Dürr, CEO of DB, *Stuttgarter Nachrichten* 14 February 1995, quoted in: http://www.leben-in-stuttgart.de/geschichte.htm) marked a style of policy-making which was characteristic for a phase of techno-political conception carried out 'behind closed doors'. In fact, a first concept by Stuttgart-based transportation expert Gerhard Heimerl for a transit station connected to a new railway line to Ulm had been developed by DB since 1988, and was backed in September 1992 by a first crucial intergovernmental agreement on a solution combining a new station to a specific railway development option.

Significantly, in this phase, the way the project was managed in the public domain does not allow it to arise above a threshold of attention amenable to turning it into a significant issue in political campaigns. This happened despite the fact that critique had been voiced early: the alliance *Umkehr Stuttgart*, composed of seven environmental and transportation advocacy groups, had expressed dismissal of the project, backed by the Greens which advocated the 'lean' alternative (Bündnis 90/Die Grünen 1995) – with arguments later by and large taken over by the movement. This was certainly due to the peculiar inter-institutional and inter-party support which backed the project, but also to the form of political communication adopted. In both the elections of the state parliament of Baden-Württemberg in April 1992 and the elections for Stuttgart city council in June 1994, Stuttgart 21 did not play any significant role. Even more significantly, the issue was almost completely absent from official parties' election campaigns for the Baden-Württemberg parliament in March 1996.

Second phase: formal planning

The latter elections took place at the outset of the *second phase* of the process, which marks the beginning of formal planning. From 1995 (first feasibility study presented in January, first exposition of plans in Stuttgart) (DB 1994) to early 1997 (decision on the design competition for the station), the foundations were laid for the start of the legal planning procedure, the *Raumordnungsverfahren*.

Meanwhile, a framework agreement among the institutional partners reached in November 1995 established mutual responsibilities in the development and financing

of the project, based on fixed costs forecasts – with a ceiling on public expenditure – and defined performance benchmarks. Both provisions, and in particular the former, were to become major issues of contention as for the cost-benefit ratio of the project and, above all, the transparency of expenditure forecasts.

The inter-institutional agreement of November 1995 was a landmark event in the development of the project. After only two years from the launch of the project, with formal planning procedures still pending, a contractual foundation for the project was laid down binding all partners (DB, Federal government, State government and the City of Stuttgart) to realizing the project under defined financial and operational conditions. The agreement provided for a timeframe and a building costs ceiling of 4,893 billion DM to be covered according to defined share rules by DB, the Federal state, the State Baden-Württemberg, the Region and the City of Stuttgart.

The double-bind realized between the parties in 1995 – to be later strengthened by agreement between DB and the City of Stuttgart by which 'fixed' the former's gains from the sale of the released railway tracks areas for urban development – was to become a major political factor and a key argument for the allegedly 'irreversible' character of the choice to build Stuttgart 21. By this, a contradictory situation was defined: on the one hand, a techno-political solution in a relatively advanced and concrete decision-making stadium, backed by a binding long-term financial and operational agreement; on the other hand, a still running formal planning procedure which, while formally providing for them, in fact ruled out any public consideration of techno-political alternatives of development.

A key defining element for the ensuing controversy since the *Raumordnungsverfahren* was the practical impossibility for any significant alternative concept to be analysed and discussed in public. In fact, the subsequent formal planning procedure, the *Planfeststellungsverfahren*, contemplated an alternative infrastructure and urban-regional transportation concept based on a rationalization of the existing node, which however was dismissed as not capable of realizing the objectives of the project. The strategic aim of Stuttgart 21 was since that moment held as identical with the techno-political adopted – by which, any possibility for public debate to influence the nature and features of the project was effectively ruled out. Accordingly, during the formal planning procedure and the consultation process involved, no real interface for dialogue with instances based on rejection of key tenets of the concept or on requests for alternatives was in any way made available. Rather, a political-institutional logic made of presumptive consensus formation and procedural legitimation consistently became dominant in framing the context in which contention could develop.

Third phase: institutionally-framed contention

Mounting civic protest notwithstanding, the planning process proceeded swiftly. In February 1997, a first phase of formal public insight and consultation – as required

by the *Raumordnungsverfahren* – was opened: the objections submitted – mostly referring to environmental and local impacts and on property rights – manifested the project's potential for conflict. Nevertheless, in November 1997, the *Raumordnungsverfahren* was positively concluded and the operational planning phase, the *Planfeststellungsverfahren*, introduced. During the *Planfeststellungs-verfahren*, 11,500 objections were presented by about 2,700 citizens, local communities and environmental groups, which were mostly dismissed as not relevant.

In this phase, contention around the project arose significantly, gaining a significant role in political campaigns, for the first time, on occasion of local elections in Stuttgart – involving choice of a new mayor – in October 1996.

Despite significant elements of polarization and even personification of the issue in party-political spheres, the dynamics of contention was still strongly framed by the institutional and procedural logic of the formal planning process. This occurred in two different, apparently contradictory, but intertwined ways.

On the one hand, the formal planning process offered a framework for expressing dissent on the project which – despite increasing contestation – still proved capable of framing and 'disciplining' protest. In fact, this framing capacity was to endure until the mid-2000s, when the last judicial procedures ensuing from the formal planning process were finally decided against the projects' opponents. A contribution to or, at least, an attempt at 'disciplining' protest was also given by an institutional strategy of 'displacing' dissent by opening spaces for participation on significant local side-aspects of the overall project. A significant moment in this strategy was the public participation procedure initiated by the City of Stuttgart in 1997 on the basis of the urban development framework concept for the railway areas to be dismissed, drafted by the city's planning department (Stadtplanungsamt Stuttgart 1997). Attended by an average 200 citizens and developing in a highly contested atmosphere between March 1997 and mid-1998, the public participation procedure increasingly manifested the limits of an approach systematically devised to exclude debate on the strategic conditions for development in the area and, in particular, on the feature of the infrastructural project on which it is premised. This rapidly led to radicalization and to petitions of principle concerning a truly democratic assessment of the effectiveness and legitimacy of Stuttgart 21 as a whole. As a matter of fact, as a side-effect of opponents' disappointment about public consultation, the first significant judicial initiatives against the city's decisions concerning the project were launched by representatives of the movement.

On the other hand, the first significant organized civic initiatives started addressing institutional possibilities for democratically rejecting the project. This is in particular the case of *Leben in Stuttgart - kein Stuttgart 21*, a civic initiative founded in 1995, which in July 1996 managed to gather 13,000 signatures in support of a local petition to change the city's statute in order to allow holding a local referendum on Stuttgart 21. Demands for a democratic opening of decision-making procedures, however,

were doomed meet on deaf ears on side of political party coalitions in power. Until 2007 – and before regaining significance in 2011, under completely changed political conditions – requests for a referendum remained a constant strategic focus of opponents, and their recurrent dismissal the marker of an political-cultural hegemonic elite and of its supporting interests coalition.

Between 1997 and 2001, Stuttgart was the scene of constant but scattered and often minor protest activities against the project developing within this dual frame. The experiences made by contentious forces on both these levels – the establishment of an effective interface for debate and strategic interaction, and the employment of institutional resources – however, proved to were key to the shift in protest and to the formation of a true an unprecedented social movement against the project during 2000s.

Fourth phase: extended and decentralized mobilization

Despite procedural successes and resulting claimed legitimation, the project's prospects become increasingly problematic in the late 1990s-early 2000s in connection with inter-institutional issues (not least, because of the self-deceiving timeframes and financial conditions defined for its realization, face to the need to complete the framework of agreements on matter of transaction involved) and, furthermore, with significant change in the nature and forms of civic protest.

In order to understand the reasons for this shift, three aspects must be considered. The first concerns the increasingly problematic commitment of the city's government to co-financing agreements with long-term political and administrative consequences. After a crucial a covenant between the Bund and DB was signed March 2001 – securing federal support to a project the financial viability of which appeared increasingly questionable –, in December 2001 the City of Stuttgart purchased from DB – for an amount of 459 million Euros which, according to opponents, clearly exceeds any reasonable profitability – the areas on which it committed itself to realising 17,000 new jobs and 11,000 residential units, thus significantly contributing to securing financing for the project.

The second aspect concerns the increasing symbolic visibility of the project and of its consequences as its realization approached. Controversies on the demolition of parts of the listed station hall building – designed by Paul Bonatz in the late 1920s – and on the destruction of parts of the popular historic park space, the Schlossgarten, in the city center, in particular, contributed to heating discussions and spreading civic mistrust, and marked the last stages of approval of the project, which was finally reached in 2007.

The third aspect is, as previously mentioned, the progressive expiration of procedural-juridical resources for effective opposition and the exhaustion of related strategies of contention by civic initiatives against the project.

As a matter of fact, between 2005 – when the *Planfestellungsbeschluss* was adopted – and April 2006 – when the last pending lawsuits against Stuttgart 21 were dismissed in favour of the project by the Land court of justice, rendering the *Planfestellungsbeschluss* legally binding – not only the last formal hurdles for the project, but also the last factors for strategic restraint to contention were removed, and a new structure of opportunity for new direct antagonistic actions emerged.

This was further reinforced when, in the following years, the latest attempts at adjudicating the right for popular expression were exploited. A significant escalation in readiness to public protest was reached with the mobilization in favor of a local referendum on the project, which was backed by about 67,000 signatures, but again dismissed by a majority of the Stuttgart city council in December 2007. In July 2009, also the Land court of justice – on grounds of the extant contractual agreements among the parties reached in 1995 and 2001 – rejected popular requests for a referendum on the project.

Meanwhile, the landscape of contentious practices against the project was significantly developing. Already during mobilization for the referendum, random demonstrations had been held demanding a stop to the project, with an estimate average of 5,000 participants. In July 2007, the various streams of opposition expressed by actors, initiatives and groups in and around Stuttgart were bundled in an umbrella organization called *Aktionsbündnis gegen S21*. The *Aktionsbündnis* brought together most 'historic' protest groups along with insurgent initiatives developed along the way. The *Aktionsbündnis* included local citizens' associations (Leben in Stuttgart e.V., SÖS Stuttgart Ökologisch Sozial), associations for ecologic protection and heritage at state and local level (*BUND, Stiftung Architekturforum BW*, *Aktive Parkschützer*, *Schutzgemeinschaft-Filder e.V.*), political parties of the centre-left spectrum (*Grüne, die Linke, SPD-Mitglieder gegen S21*), unions' representatives (*GewerkschafterInnen gegen Stuttgart 21*), and specific issue-related associations (*Pro Bahn e.V.*, *Verkehrsclub Deutschland*). The model was later imitated by similar associations dealing with the issue in other regional contexts (e.g. *Aktionsbündnis Heilbronner gegen S21).* The focus of mutual identification was support for the concept known as K21, which had definitely gained a key role as an alternative to the official project after it was presented in 2000 under the name 'optimised terminal station' (*Kopfbahnhof*) and subsequently fine-tuned in terms of both technical and financial terms. The concept showed on grounds of technical performance and of its comparative cost-benefit ratio the futility of 'megalomanic' structural interventions, while still allowing for 75 ha, i.e. about three-quarters of land-use gain through improvements on the railway tracks.

The *Aktionsbündnis* was led by a coordination team of about twenty representatives, which devised basic strategies concerning the repertoire of actions and the communication and negotiation strategies to be adopted. The pattern of protest initiatives however remained decentralized. It represented, in this respect, a typical example of a democratically decentralized movement (Tarrow 1998: 129), i.e. of an organizational setting drawing its strength from representing a decentralized,

segmented, and reticulated coalition of groups which allowed for multifarious and pluralist expressions of contention while providing an 'master frame' for mutual identification and recognition.

The new constellation formed an important condition for the development of a true social movement in opposition to the project, as it extended not only the basis for representation, but also opportunities for identification with and participation in contentious practices.

Under the umbrella of the *Aktionsbündnis*, the movement soon promoted a broadly accessible and appropriable repertoire of actions. Most remarkable of all was the start of the weekly *Montagsdemonstration*en against the project held in front of the station in Stuttgart's city center. The career of Stuttgart's *Montagsdemonstrationen* – started almost spontaneously on October 26, 2009, with five participants – was to become as remarkable as was the symbolic reference chosen: the public Monday's demonstrations held by citizens of Leipzig, Dresden and other cities in the doomsdays of the German Democratic Republic in 1989, as a public expression of a withdrawal of trust and legitimation. The extent reached by such statement of distress towards politics and institutions by an increasingly broad range of participants – held for the one-hundredth time in November 2011 and attended by a steadily rising number of participants – was a powerful attractor of statewide media and public attention for the Stuttgart 21 controversy. It also constituted a new structure of opportunity for broadening mobilization, in that it laid the conditions for the emergence of a repertoire of forms of contention made of peaceful direct actions performed in public, like the weekly demonstrations, the tatzebaos and public 'wall-of-complaints' postings, and other performances like sit-ins, human chains, the occupation of endangered trees, monuments and public places, as well as the mobilization of creative and suggestive symbols (such as the recurrent Swiss national flag waived during demonstrations: a symbol for both a referendum-based democratic culture and for an integrated railway network planning approach opposed to the criticized DB planning philosophy).

Success by the Greens in June 2009 local elections – replacing for the first time the Christian-Democrats as the largest party in city council – and the start of the *Montagsdemonstrationen* later that year introduced a new public mobilization phase, further fuelled by the ongoing unveiling of contradictions in the financial basis of the project.

Under these changed social and political conditions, events around Stuttgart 21 rapidly precipitated. On February 2, 2010, the first tree cuts marked the actual beginning of construction works, which were readily countered by mass demonstrations: on July 10, attendance reached 20,000. On August 25, under police protection after demonstrators had occupied the roof, demolition of the north wing of the old station terminal began. Two days later, over 30,000 participants demonstrated against the project forming a human chain around the station. The

Montagsdemonstrationen gained a new salience and went on throughout the year, with participants constantly rising and reaching up to 60,000 in late 2010.[4]

Meanwhile, with politics at the federal, state and city level becoming fully involved with the issue – with the Greens as the party-political wing of the project's opposition, the Social Democrats in Stuttgart finally accepting requests for a referendum, and the federal and Land government coalitions rejecting any claim for political or legal revision – citizens' protest extended to the occupation of public spaces in central Stuttgart. As a consequence of its insurgent politicization – in view of state election to be held in early 2011 – first attempts at mediation were initiated on September 24, 2010, but failed. This phase culminated in the dramatic events of 'black Thursday' when, on September 30, 2010, ruthless attacks of armed police forces on protesters during a demonstration against the cutting of trees in the Schlosspark left about four-hundred citizens hurt – among which 50 school children – and one seriously injured. At this point in time – and with the determinant contributions of these scenes of violence – Stuttgart 21 had definitely become the most mediatized event in recent history of German politics and society.

Fifth phase: mediatized re-politicization and mediated negotiation

Under the pressure of September 2010 events, and under the threat of a significant regime change after the 2011 Land government elections, the main actors on both opponents and supporters agreed in October 2010 to the need for an extraordinary measure of mediation. Remarkably, this new phase combined a distinctive re-politicization of Stuttgart 21 with a condition of radical uncertainty among the involved actors. This historic conjuncture may explain the peculiar mutual interdependence that led political actors to agree to a moratorium of regular procedures and to initiate a mediated negotiation experiment in order to deal with the conflict. Under unprecedented nation-wide public attention and media coverage, what was originally a 'local' issue became the occasion for experimenting and debating a new form of public scrutiny and deliberation around a major project – and an occasion for renewal of democratic practices.

This is not the place for discussing details of the mediated negotiation procedure conducted in Stuttgart along eight sessions between October 22 and November 30, known in Germany as the *Schlichtung Stuttgart 21*. The features and outcomes of this highly significant but contradictory experiment are worth an analysis of its own (see: Gualini 2011a, 2011b). Here we highlight aspects crucial for understanding the impact the *Schlichtung* had on the social movement against Stuttgart 21. As a crucial

[4] As is usually the case, figures on attendance of demonstrations obviously differ according to sources: e.g. a demonstration on October 4, right after 'black Thursday' – as reported by *Der Stern* (2012) – was attended by 54,000 according to the organizers and by 25,000 according to police. It is also worth noting that the rise of public opposition fostered emulatory reaction like the organization of counter-demonstrations in favor of the project, backed by advocacy groups like *Wir sind Stuttgart 21* and *Für Stuttgart 21*, often tied to governing coalition parties.

result, the parties agreed that a 'stress-test' assessing the expected performance of the project would decide about its prospects of realization. This key provision from the mediation, albeit agreed upon by all the parties – including DB – to be binding, was marred by two contradictions, which soon proved of major political relevance. Firstly, the solution was basically technical and, moreover, it was technical in a non-neutral way, being strongly framed as a technical test of the proposed solution – the official Stuttgart 21 project – and by no means as way of testing alternatives that may express a different view on the problem to be addressed. In this sense, even if allegedly binding, the stress-test represented no opening whatsoever to alternative views on Stuttgart 21. Secondly, all possible exit strategies following from the stress-test were subject to the contractual bonds extant among the project partners. This amounted *de facto* to a black-mailing factor for DB towards both the Land Baden-Württemberg and the City of Stuttgart, as it implied substantial and politically unbearable claims for financial compensation in any instance – from the extension of moratoria on construction works to the demise of the project – that contravened scheduled realization. In addition – as turned out after the mediation sessions and in particular after conduct of the stress-test – granting independence and transparency in conduct and dissemination of results of the assessment proved impossible under such conditions, lending DB in many respects an unreasonable vantage position.

It is significant that, after a highly contested presentation of the result of the stress-test on July 29, 2011 (SMA 2011), allegedly confirming the DB's expectations of technical performance and thus giving way to the project, its validity was broadly contested by representatives of the *Aktionsbündnis*, while attempts by the mediator, Heiner Geißler, to bring into play a new 'integrative' solution based on the K21 concept (SMA and Geißler 2011), was readily dismissed as already negatively assessed in the *Planfeststellungsverfahren*. Paradoxically, at this point in time, arguments about the project's 'legitimation by procedures' seemed to have won it.

Sixth phase: mediation breakdown, institutional pacification – and demobilization?

It is impossible to understand the shift in the cycle of contention following the *Schlichtung* without emphasizing change in political conditions introduced by the 2011 Land elections and how they transformed opportunity structures for mobilization. As a matter of fact, the March 2011 elections had already exerted their influence long before being held, favoring the actors' willingness to enter a procedure of mediated negotiation. Much more disruptive was however their effect as they led to an historic change in government regime – with the Green party becoming the second largest fraction in the Baden-Württemberg parliament behind CDU and ahead of SPD, and ultimately leading to an unprecedented Greens-SPD governing coalition which made Winfried Kretschmann the new prime minister of Baden-Württemberg and the first Green prime minister in German history, and which relegated the Christian-Democrats to opposition for the first time in 40 years.

As a result, the Land government had become the institutional, but internally divided, representative of a diverse constituency of project opponents: on the one hand, it was to be held accountable for its electoral promises and, in particular, for promoting a state-wide referendum in case the *Schlichtung* would not effectively stop the project: on the other hand, however, it was now also accountable managing institutional agreements concerning the project.

Of this complex double-bind, the Greens-led governing coalition of Baden-Württemberg was soon to experience the consequences – in first place, after the referendum – held on a state-wide level on November 27, 2011, after a complex institutional procedure to make it possible – failed to reach majority for the rejection of the project.

Under these conditions, the movement had since experienced first instances of 'de-mobilization': remarkably persistent, but declining participation to the demonstrations in front of the station, as well as so-far isolated, but significant instances of polarization and radicalization. Of great public significance was, for instance, not only overt denial of legitimation to the referendum by several opposition groups, including some of the key representatives of opponents, but also the occasional outbrake of violence, originated by the splitting of strategies of groups which had joined the Aktionsbündnis, but had denied legitimation to the mediated negotiation process. As construction works at the station resumed on June 20, 2012, the first violent clashes with police occurred – probably due to the actions of a splitting group, the *Parkschützer* – resulting in 15 arrests and in charges against unknown for attempted manslaughter, within what had been until then – and with the exception of 'black Thursday' – a peaceful movement.

4. Provisional conclusions: social mobilization, cycles of contention, and the reflexive capacity of planning

It is obviously unwarranted to draw comparisons from two case-studies as diverse – and still ongoing – as Stuttgart 21 and MediaSpree. Nevertheless, the focus we have placed on the co-evolution of planning processes and cycles of contention makes it possible to recognize significant differences and to advance a few conclusions with regard to our hypothesis.

In general terms, we can characterize the key difference between the two cases in the following terms.

In the case of MediaSpree, the cycle of contention, moving from an essentially antagonistic mobilization with strong political-ideological tones, developed around an opportunity structure which made it possible to establish a ground for a broad symbolic identification (the fusion of local and supra-local urban policy issues around MediaSpree as a 'neoliberal' symbol) as well as to develop elements of a concrete alternative (an 'other' vision of urbanity for the area) which created

opportunities for activating interest based claims. This led to complex combination of diffusion and differentiation of social mobilization which, however, realized a relative shift from ideologically based antagonism towards more interest based claims for recognition. Apparently, this was key to the development of an interface with the statutory planning process and their actors and, ultimately, for the inclusion of elements of the repertoire of contention into the strategic response of actors.

The opportunity structure for social mobilization in the case of MediaSpree was therefore increasingly shifting towards an alteration of the strategic-relational setting of the project itself, and this – at least potentially – introduced significant factors affecting its evolution.

As of today, contestation and antagonistic action appear to have been playing a key role in altering the relational framing of the project and, more significantly, in possibly fostering reflexive strategic responses. They have generated significant public attention and capacity of local mobilization as well as opportunities for redefining the role of public actors and for partially reframing their priorities. Far from being settled, the controversy around MediaSpree appears to have at least generated conditions for a significant reflexive evolution of the project.

Very much to the contrary, Stuttgart 21 seems to delineate a paradigmatic example of a planning process reinforcing an opportunity structure for enhanced ideological radicalization of protest.

This is not to say, of course, that opposition to Stuttgart 21 was itself 'ideological' or not grounded on concrete alternatives. It means to say however, that the capacity to develop alternatives within the strategic framework of the project – a role meant to be played by arguments and proposals clustering around to the counter-project K21 – was progressively marginalized by the early closure of the planning process to any significant form of reflexivity with regard to the nature of the insurgent contestation. As a matter of fact, the modes of regulation and disciplining embedded in the statutory planning procedures – the legalization of dissent and its dispersion through singular compensation measures – in this case did not realize a dilution of protest, but rather its reinforcement across highly diverse interests and social groups. What has therefore characterized Stuttgart 21 as a unique case of extensively cross-sectional as well as intensively emotional social mobilization in opposition to a public project is that it has become symbolic for the unresponsiveness of politics and institutions and, for this reasons, increasingly political-ideological and antagonistic in nature – despite its diffuse 'bourgeois' character.

Such a reading would contrast, of course, with one underlining the 'post-' or 'anti-political' nature of Stuttgart 21 protest since, on the contrary, it underlines the political salience of a situation incapable of providing for adequate arenas for dealing with interest based claims. In this respect, the ideological and antagonistic nature of social mobilization is probably attributable in large part precisely to claims for recognition by citizens feeling excluded and estranged from public policy.

This is not the place for a thorough analysis of the reasons for this – which are in large part recognizable in the institutional and procedural rationale of planning for strategic development projects, in Germany as elsewhere. What we want to point out here is that, according to the features of the planning process, social mobilization around Stuttgart 21 gained momentum precisely in connection to the emergence of an opportunity structure that may appear surprising in relation to the 'concrete' nature of the object of opposition: an opportunity structure sustained by – but also increasingly 'stuck' into – a complex frame dominated by symbolic and identity-related recognition claims, with a distinctive antagonistic political-ideological profile. This frame made it possible for a broad cross-section of local society to identify and mobilize against the project, but its reverse was the progressive limitation and marginalization of opportunity structures for creative-integrative influence. As a matter of fact, the attempt to develop margins for integrative solutions thorough a procedure of mediated negotiation produced almost farcical results (Gualini 2011a, 2011b).

It is remarkable, in this respect, that even a dramatic change in the relational setting of local politics and institutions could not effectively alter the pattern of decision that had clustered over time along the project, consolidating it as an un-reflexive – object almost beyond the wish of the involved actors. It is hence only tragic that today – after a generous, but highly belated, and ultimately ineffective attempt at mediation, marred by problematic framework conditions, as well as after a long sought-after but ultimately failed referendum – the only possible alternatives (bot not unlikely) to realization of the contested project appear to be either its financial-operational break-down and abandonment, or a polarization and radicalization of protest. At any rate, Stuttgart 21 appears as of today as the ultimate example of planning failure to develop a capacity of strategic reflexivity and integration vis-à-vis the dynamics of social mobilization in a local context.

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POTENTIAL IMPACTS OF CLIMATE CHANGE IN RAPIDLY URBANIZING REGIONS-A CASE STUDY IN HANGZHOU (CHINA) REGION

Liu Dan[1], Allaert Georges[2], Hua Chen[3]

Abstract

Climate change is expected to be a major driving force of landscape in the coming decades. It will have a multitude of potential impacts that vary in intensity and effect according to region and sector. In the context of global warming, the climate of China has changed significantly in the recent 100 years. According to "China's National Climate Changes Programme", there are mainly five aspects about the fact of climate changes in China: Firstly, the annual average temperature increases; Secondly, regional precipitations fluctuate somehow largely; Thirdly, the frequency of extreme weather events increase in speed and in intensity; Fourthly, sea level rises; Fifthly, mountain glaciers retreat rapidly, and the trend accelerates. The reason of climate change in China caused by human activities is mainly the irrational land use, which chiefly results in the rapid industrialization and urbanization process. This paper explores the potential impacts of climate change for the Hangzhou region. The aim of this paper is to conclude on the one hand some of Hangzhou sensitivities in relation to the expected primary effects of climate change. On the other hand a reflection is made on methodology to formulate preconditions as a scientific basis for further research by design on integrated adaptation options for the future spatial developments in function to upgrade Hangzhou resilience in relation to climate change challenges.

Keywords

Climate change, Impact, Exposure, Adaptation, Resilience

1. Introduction

Since the 1980s, global climate change, characterized by global warming, has a great deal of attention from governments, international societies and scientific researchers. Climate change will have a multitude of potential impacts that vary in intensity and effect according to region and sector (e.g. EEA, 2008). In the context of global warming, the climate of China has changed significantly in the recent 100 years. The reason of climate change in China caused by human activities is mainly the irrational land use, which chiefly results in the rapid industrialization and urbanization process (Zhang et al., 2009).

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This paper examines the impacts of climate change in China through a study of Hangzhou region, with a focus on an integrated and comprehensive assessment. The object of the regional analysis and assessments is to provide the basis for understanding where, how, and why certain regions are affected by climate change. The following sections apply the indicator-based assessment method to explore impacts of climate change relevant for spatial development in Hangzhou region.

The framework for this impact assessment was built upon the concept suggested by the Intergovernmental Panel on Climate Change (IPCC) (2007), Fussel and Klein (2006) and Rannow et al., (2010). Impacts of climate change are a product of exposure and sensitivity to climate stimuli. In this context exposure describes the nature and degree to which a system is exposed to significant climatic variations, while sensitivity is the degree to which a system can be affected, either adversely or beneficially, by climate variability or change (IPCC, 2007).

2. Study area

Hangzhou locates along the southeast coast of China. The prefecture-level region of Hangzhou extends from the border with the hilly-country Anhui Province in the west, to the flat-land near Hangzhou Bay in the east. As a core city of the Yangtze River Delta, Hangzhou has a position on the Hangzhou Bay 180 kilometres southwest of Shanghai that gives it economic power. It has been one of the most renowned and prosperous cities of China for much of the last 1,000 years. The total area of Hangzhou region is 16,596 km^2 with a population of 8.70 million. The urban area of Hangzhou (Hangzhou city) and five counties (county-level cities)—Fuyang, Lin'an, Jiande, Tonglu, and Chun'an are under the jurisdiction of Hangzhou (Figure 1, Table 1).

Figure 1. Location of Hangzhou Region

Table 1. Population and Land Areas of Six Districts in Hangzhou Region, 2010 (Source: Hangzhou Statistical Yearbook, 2011; the sixth China's National Population Census, 2010)

	Hangzhou city	**Lin'an city**	**Fuyang city**	**Tonglu county**	**Chun'an county**	**Jiande city**
Land area(km^2)	3068	3124	1808	1780	4452	2364
Total population(1000)	6242	566.7	717.7	406.4	336.8	430.8

The recent research show that the main tendencies of climate changes in Hangzhou are as follows: (a) significant warming of the winter; (b) extreme heat during the summer and the autumn; (c) an increase of precipitation; (d) more frequent typhoons (Hangzhou Meteorological Bureau, 2011). In terms of the urbanization impact on local climate change, the average surface temperature has increased by about 0.26℃ per decade from the 1960s to now in Hangzhou. Since the 1990s, when Hangzhou phased into the high-speed urbanization process, the degree of increase in temperature was higher. A historical reference is listed for each impact, substantiating it (Table 2).

The projections of climate change for the 21st century using the regional climate models indicate that, in 2071-2100, the surface air temperature in Hangzhou region will continue to increase (Figure 2).

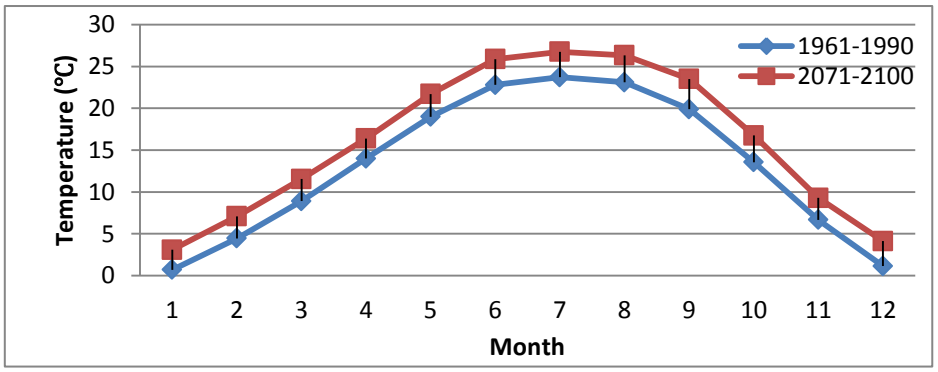

Figure 2. Comparison of Average Monthly Temperatures between 1961-1990 and 2071-2100 by the Regional Climate Model RegCM3 (Source: China's National Climate Centre)

Table 2. Climate Change Impact Table for Hangzhou Region (Source: own processing according to Hangzhou Meteorological Annals, Hangzhou Municipal Annals and Zhu et al., 2008)

exposure	Impact	Historical Reference	Adaptive Capacity in place
	Caused by extreme event:		
Temperature	Fluvial floods	Abundant rainfall events in summer (e.g. July 2002, June 1999, June 1996, May 1995, June 1994, June and July 1993,…, June 1901) induced several severe floods from rivers through history	Floods forecaster system in place
Precipitation			
Evaporation			
Storminess	Pluvial floods	Local floods in cities as a consequence of heavy showers in combination with an inadequate sewage system and no room for water(e.g. July 1997,Sept 1989,…, 1931)	
Drought			
Frost	Drought	Abundant drought events in summer, autumn and winter (e.g. July 2004, July-Oct 2003, March-Sept 2000, Dec 1996-June 1997, July 1994, Sept 1990, July-Dec 1988, Jan-June 1986, May-Oct 1967)	Drought forecaster system in place
Snow			
	Typhoon	Several typhoons are documented through history (e.g. Oct 2007, August 1997, August 1988, …, 1910)	Disaster weather forecaster system
	Heat waves	Several heat waves are documented through history in the summer (June-Sept 2003, Sept 1995, July 1995)	Awareness-warnings broadcasted on radio and television
	Cold waves	Several cold waves are documented through history in the winter (e.g. Feb 2008, March 1998, Jan 1996, Jan-Feb 1984, Jan 1977,…, 1916)	Awareness-warnings broadcasted on radio and television
	Hail and storm	Abundant hails and storms (e.g. June 2006, May 1991, April 1986, April 1977, April 1972, April 1962)	Disaster weather forecaster system
	Urban heat island effects	It is assumed that the historical cores and nucleuses are potential hotspots for UHIe.	Research in progress
	Not included effects caused by extreme event:		
	Summer smog Winter smog Ozone Forest fires	Several warming per year	Monitor system in place and broadcastings to raise awareness
	Caused by slow changes:		
	Water scarcity groundwater; surface water; rainwater; production water	Measurements show that Hangzhou region has yearly 2601m3 of water per person. This is a little less than national average level.	Monitor system in place and awareness raised.
	Loss of species and biodiversity	Rare species are being endangered in Hangzhou region.	Systematically monitored and awareness raised
	Increased Erosion (loss of soil)	Each year 5 million tons of soil erodes by water from 1980's.	Systematically monitored and awareness raised
	Other not included effects		
	Increased Energy demand (…)		

3. Materials and Method

3.1 Identification of climate change impacts relevant for spatial analysis

To focus on the spatial analysis a multitude of impacts of climate change were examined. The impacts were analyses in terms of their relevance for spatial development. Eight types of climate change impact of primary relevance for spatial development on a regional level in Hangzhou (large river floods, heavy rain and flash floods, heat waves, mass movement, forest fires, destruction of infrastructure, loss of soil by water erosion and loss of species and biodiversity) were identified. They are grouped into impacts caused by extreme weather events and impacts caused by slow climatic changes.

3.2 Assessment framework

The assessment framework defined the way the assessment procedure for every impact is organised (Figure 3). Each indicator provides useful information about single aspects of climate change impacts, but absolute numbers provided by indicators are only of limited value for an integrated assessment of impacts (Metzger et al., 2008). Three assessment classes (or categorical values) were used. Every indicator was classified to represent low (1), medium (2) and high (3) risks or low (1), medium (2) and high (3) sensitivity status. Assessment matrices were used to join and reclassify the indicators and provide a common index. This procedure provides comparable results for every impact regardless of the number of indicators used for the assessment. This classification remains coarse and thus emphasises the qualitative character of the assessment results. For the reclassification of exposure and sensitivity indicators the assessment matrix shown in Figure 3 was used.

The application of this framework for every impact allowed a comprehensive evaluation and comparison of the results. Figure 3 presents a scheme of the applied approach. In Table 4 and Table 6 the indicators and input data for the assessment are listed.

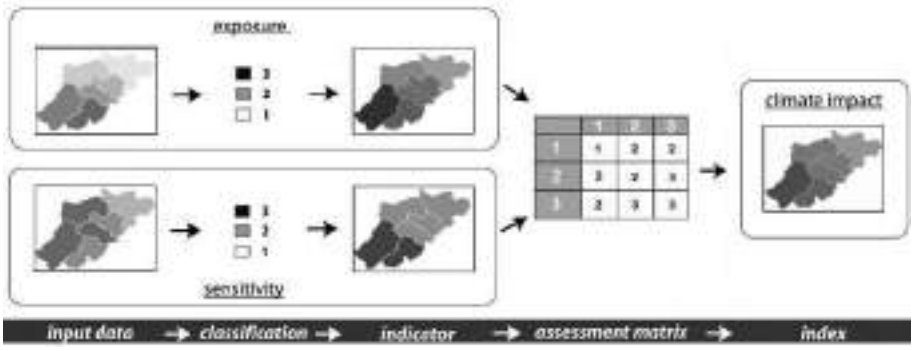

Figure 3. Assessment Framework for the Indicator Based Assessment of Climate Change Impacts (Source: in accordance with Rannow et al., 2010)

3.2.1 Assessing exposure

In order to calculate and assess indicators for regional exposure to climate stimuli the data sets from Hangzhou Meteorological Annals were extracted. Climatic parameters included information on precipitation (mm/month) in rainy season, days/year with heavy rain (Daily precipitation>50mm), hot days/year (T_{max} >37℃), percentage of summer months with low precipitation, Precipitation in month with erosion and yearly mean temperature (Table 3).

Table 3. Available Input Data of Six Districts in Hangzhou Region, 1986-2005 (Source: own processing according to Hangzhou Meteorological Annals)

	Hangzhou city	**Lin'an city**	**Fuyang city**	**Tonglu county**	**Chun'an county**	**Jiande city**
Precipitation in rainy season	277.4	283.2	284.6	299.5	332.9	332.4
Days/year with heavy rain (Daily precipitation>50mm)	3.70d	3.75d	4.00d	3.65d	5.20d	4.75d
Hot days/year (T_{max} >37℃)	8.2d	13.55d	10.8d	14.8d	14.65d	9.3d
Percentage of summer months with low precipitation	45%	35%	40%	65%	65%	55%
Precipitation in month with erosion	303.5mm	293.0mm	315.0mm	328.5mm	375.1mm	355.8mm
Yearly mean temperature	16.45℃	15.8℃	16.3℃	16.0℃	17.4℃	17.0℃

The results were averaged for each administrative district in Hangzhou region. The results are stored as a database with each administrative region referring to a database record. The records are referenced for further mapping and regional assessment.

Following the general framework in Figure 3 every climatic parameter that was used as an exposure indicator was classified into low, medium or high risks (Table 4).

Table 4. Input Data and Classification Used to Assess the Exposure to Climate Change Stimuli on the Base of the Information from 1986 to 2005. (Source: in accordance with Rannow et al., 2010)

Impact	**Available input data**	**classification**	
Caused by extreme events			
Large river floods	Precipitation in rainy season	<250mm 250-300mm >300mm	Low Medium High

	Days/year with heavy rain (Daily precipitation >50mm)	<4d 4-5d >5d	Low Medium High
Heavy rain and flash floods	Days/year with heavy rain (Daily precipitation>50mm)	<4d 4-5d >5d	Low Medium High
Heat waves	Hot days/year (T_{max} >37◦C)	<9d 9-12d >12d	Low Medium High
Mass movement	Days/year with heavy rain (Daily precipitation>50mm)	<4d 4-5d >5d	Low Medium High
Forest fires	Hot days/year (T_{max} >37℃) Summer months with low precipitation	<9d 9-12d >12d <40% 40-60% >60%	Low Medium High Low Medium High
Destruction of infrastructure	Days/year with heavy rain (Daily precipitation>50mm) Hot days/year (T_{max} >37℃)	<4d 4-5d >5d <9d 9-12d >12d	Low Medium High Low Medium High
Caused by slow changes			
Loss of soil by water erosion	Days/year with heavy rain (Daily precipitation>50mm) Precipitation in month with erosion	<4d 4-5d >5d <300mm 300-350mm >350mm	Low Medium High Low Medium High
Loss of species and biodiversity	Yearly mean temperature	<16℃ 16-17℃ >17℃	Low Medium High

3.2.2 Assessing sensitivity

Sensitivity to climate stimuli is determined by endogenous factors and main regional characteristics. The interdependencies (or the interplay) of these bio-physical, social and political factors and processes influence the degree of sensitivity (Rannow et al., 2010). Therefore, indicators for the main social and structural factors are needed to model sensitivity.

Most data were selected from the public databases of the Hangzhou Statistical Office (Table 5). The data cover aspects of (a) land use (e.g. percentage of water erosion area, forest or area protected by nature conservation law); (b) social issues (e.g. percentage of people older than 65 years); (c) built environment or technical infrastructure (e.g. percentage of area covered by streets, main roads, etc.) and (d) hazard risks (e.g. percentage of flood year, assessment of landslide hazards).

Following the general framework in Figure 3 all sensitivity indicators were classified using three classes (Table 6). The limits for each class were obtained by expert assessment of the available input data or based on the literature (e.g. Rannow et al., 2010; Yu et al., 2011).

Table 5. Available Input Data of Six Distracts in Hangzhou Region (Source: own calculation from Hangzhou Meteorological Annals 1986-2005, Zhejiang Construction Information Port, 2007; Hangzhou Statistical Yearbook, 2011; Hangzhou Forestry and Water Conservancy Bureau, 2001, 2010; Hangzhou Environmental Protection Bureau, 2004; Huang et al., 2008, Yu et al., 2011)

	Hangzhou city	**Lin'an city**	**Fuyang city**	**Tonglu county**	**Chun'an county**	**Jiande city**
Percentage of flood year	60%	64%	52%	57%	64%	67%
Percentage of built-up area	11.23%	0.37%	1.37%	0.82%	0.21%	0.33%
Percentage of people older than 65 years	17.5%	16.5%	15.5%	17%	15.8%	17.5%
Assessment of landslide hazard risk	Low	High	Medium	High	Medium	High
Percentage of forest	28.45%	77.76%	63.18%	71.43%	75.19%	75.25%
Percentage of area covered by streets and other infrastructure Fraction of highway	No data available	No data available	No data available	No data available	No data available	No data available
Percentage of water erosion area	6.37%	20.05%	24.48%	18.97%	32.92%	21.02%
Percentage of area protected by nature conservation law	6.05%	8.09%	1.07%	2.63%	21.35%	9.05%

Table 6. Input Data and Classification Used to Assess the Sensitivity to Climate Change Stimuli on the Basis of Different Data Sources (Source: in accordance with Rannow et al., 2010)

Impact	Optimal input data	Available input data	Data source	Classification	
Caused by extreme events					
Large river floods	Area impacted by dam failure	Percentage of flood year	Hangzhou Meteorological Annals,1986-2005	≤49.9% 50–59.9% ≥60%	Low Medium High
Heavy rain and flash floods	Percentage of paved surface	Percentage of built-up area	Zhejiang Construction Information Port, 2007	≤14.9% 15–29.9% ≥30%	Low Medium High
Heat waves	Percentage of population sensitive to heat waves Area sensitive due to urban heat island effects	Percentage of people older than 65 years Percentage of built-up area	Hangzhou Statistical Yearbook, 2011 Zhejiang Construction Information Port, 2007	≤18.9% 19–20.9% ≥21% ≤14.9% 15–29.9% ≥30%	Low Medium High Low Medium High
Mass movement	Area sensitive to mass movements	Assessment of landslide hazard risk	Bu et al.,2011	Low hazard Medium hazard Major hazard	Low Medium High
Forest fires	Area of forest cover sensitive to forest fire	Percentage of forest	Hangzhou Forestry and Water Conservancy Bureau, 2010	≤19.9% 20–39.9% ≥40%	Low Medium High
Destruction of infrastructure	Amount of infrastructure Importance of infrastructure	Percentage of area covered by streets and other infrastructure Fraction of highway	No data available No data available	≤4.9% 5–9.9% ≥10% ≤99.9m/km2 100–199.9m/km2 ≥200m/km2	Low Medium High Low Medium High
Caused by slow changes					
Loss of soil by water erosion	Area sensitive to water erosion	Percentage of water erosion area	Hangzhou Forestry and Water Conservancy Bureau, 2001	≤14.9% 15–24.9% ≥25%	Low Medium High
Loss of special and biodiversity	Number of species and habitats endangered by climate change	Percentage of area protected by nature conservation law	Hangzhou Environmental Protection Bureau, 2004	≤6.9% 7–13.9% ≥14%	Low Medium High

3.2.3 Assessing impacts

After exposure indices and sensitivity indices were quantified, they were merged to represent an index for each impact of climate change. The result was documented in maps showing the spatial distribution of every index for an impact of climate change at local level. In this way, maps of impacts of climate change in Hangzhou were created.

4. Results

The results from the impact assessment as well as the input data on exposure and sensitivity are presented below.

4.1 Exposure

Based on the data from Hangzhou Meteorological Annals, the map of local exposure to climate change risks in recently past is represented in Figure 4. The map shows that Chun'an county is the highest risk district. In addition, some hilly area like Jiangde city, Tonglu county and Fuyang city also show considerable exposure. And the analysis indicates most districts are exposed to heat waves. This is due to extreme heat of summer and a high grade of urbanisation aggravating heat wave events.

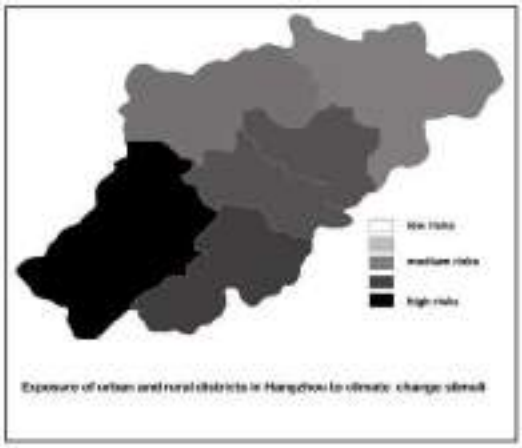

Figure 4. Local Exposure to Climate Change Risks

4.2 Sensitivity

Based on the indicators derived from social and economical statistics the sensitivity of six districts was analysed for all eight impacts. The results are documented in maps for every impact.

Most districts are sensitive to forest fires. This is due to the mountain region with abundance of forest resources. Also the sensitivity towards river floods is high.

This is related to the high frequency of flood year in all of districts of Hangzhou region. For destruction of infrastructure no sensitivity indicator could be obtained because of missing data.

After the assessment for each sensitivity index in isolation the results for each district were summarised. The map of the accumulated sensitivity indices for all impacts analysed is shown in Figure 5. Jiangde city, Lin'an city and Chun'an county are the most sensitive to the eight impacts analysed. The comparison of sensitivity indices gave a first indication of areas at risk of negative impacts of climate change. This status quo analysis provides information about areas where resilience to climate change needs to be enhanced.

Figure 5. Local Sensitivity to Impacts of Climate Change

4.3 Impacts

For the assessment and spatial analysis of each climate change induced impact the relevant indices of sensitivity and exposure were compared. Individual impacts show differing spatial distributions (Figure 6).

The analysis indicates a concentration of major impacts on Chun'an county, where a major climatic change stimulus meets high sensitivity. The impact of large river floods is concentrated on Chun'an county and Jiande city. The risk of forest fires is mostly relevant for Tonglu county and Chun'an county. The impact of heat waves is strongest in western hilly area, but north-eastern flatland is especially sensitive because of its high percentage of high urbanized areas.

The increase of temperature shows special relevance for the high value nature conservation areas and the highly urbanised centres. The risk of soil erosion by water is high to Chun'an county with abundance of water resources. The impact of heavy rain and flash floods is generally higher for hilly area than flatland. The potential mass movements are mostly relevant for all mountain ranges in central

and southern Hangzhou region. Lacking a qualified indicator for sensitivity, the destruction of infrastructure is solely influenced by heavy rain days and hot days. Nevertheless, Chun'an county is indicated as the location of major exposure.

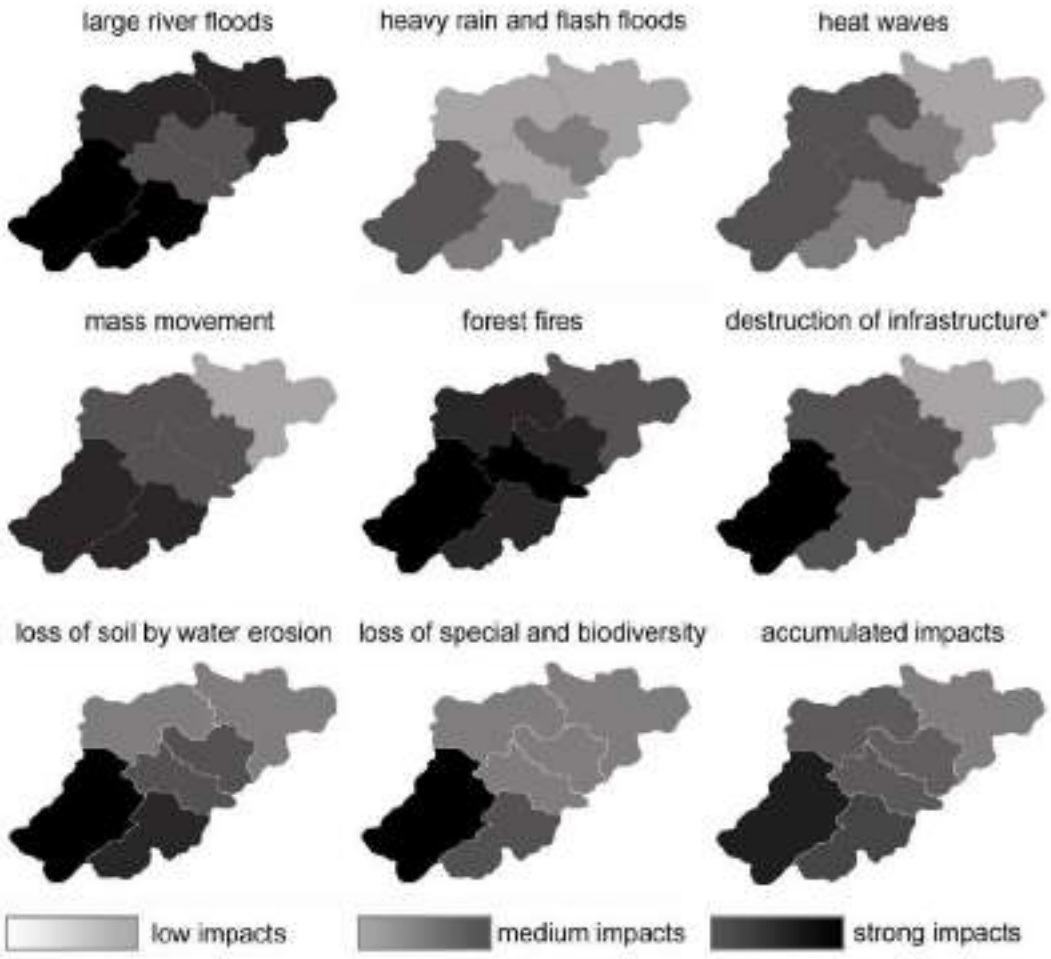

Figure 6. Results of the Indicator Based Assessment of Climate Change Induced Impacts.
*Lacking a qualified indicator for sensitivity, the destruction of infrastructure is solely influenced by changes in heavy rain days and hot days.

Based on assessing exposure and sensitivity, this research represents a picture of the impacts of climate change in six districts of Hangzhou region. In sum, the impacts of climate change from northeast to southwest had an increasing tendency. The hilly-country like Chun'an county, Jiangde city, and so on, is relative high risk.

4.4 Gaps and future research

It is very hard to describe the vulnerability without knowing which kinds of impacts are expected. In the case of Germany, Rannow et al. look in for available input data about potential impacts of climate change. However, there is not enough available data in Hangzhou/China. For example, based on the regional climate change model RegCM3[4], China's national climate centre only provides to date the data on temperature (T_{max}, T_{min}, T_{mean}) and average amount of precipitation from 2071 to 2100 for the IPCC scenarios A2[5]. But other data is still forthcoming, such as the information on the average number of summer or hot days, the average number of frost days and the average number of heavy precipitation days for the IPCC scenarios A2 and on the relative ones for the IPCC scenarios A1B[6] and B1[7]. In the present study, it is hard to assess and spatially analyse potential impacts of climate change without sufficient available input data to calculate and assess indicators for exposure to future climate stimuli.

Another gap which shall be required to be addressed is the urbanization stress on local climate change in Hangzhou region. Recently research shows that there is an objective dynamic coupling relationship between urbanization and regional climate change in China, which consists of the multi-level network effects of climate change on urban "social-economic-nature" complex ecosystems, the pressure of social-economic development, energy requirement and urban land sprawl in the process of urbanization on regional climate change (Fang, 1989; Huang, Fang, 2003; Wang, 2010). Reducing the negative impacts of climate change and increasing the resilience of physical and social structures within the rapidly urbanizing regions requires pro-active adaptation strategies. Understanding the impacts of climate change on land uses and the urbanization stress on local climate change is an essential basis for the development and application of adaptation strategies.

It is also necessary to enhance the database for the input data and provide more detailed information. In addition, further evaluation of the appropriate scale with regard to input data and assessment result is needed (Rannow et al., 2010).

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4 RegCM3 is a 3-dimensional, sigma-coordinate, primitive equation regional climate model.

5 The IPCC scenario A2 describes a very heterogeneous world. The underlying theme is self-reliance and preservation of local identities. Fertility patterns across regions converge very slowly, which results in continuously increasing population. Economic development is primarily regionally oriented and per capita economic growth and technological change more fragmented and slower than other storylines.

6 The IPCC scenario A1B is one of the three A1 groups and its technological emphasis is a balance across all sources.

7 The IPCC scenario B1describes a convergent world with the same global population, that peaks in mid-century and declines thereafter, as in the A1 storyline, but with rapid change in economic structures toward a service and information economy, with reductions in material intensity and the introduction of clean and resource-efficient technologies.

Even though there are further improvements to be made, this study enables a primary understanding of where, how and why certain areas in Hangzhou region are effected by climate change. This information is essential for adaptation activities.

Furthermore, additional research will address the following issues about Hangzhou region in the near future: a) An assessment and spatial analysis for exposure to future climate stimuli; b) Identifying potential "hot-spots" of climate change by means of GIS-based overlay technique; c) Identification of interaction between urbanization and local change climate.

5. Discussion and conclusion

What is adaptation to climate change? Figure 7 shows vulnerability is determined by the exposure to primary effects of climate change, the sensitivity of structures of human activity and the adaptive capacity of systems under stress. Exposure and sensitivity determined the impacts of climate change; these are the secondary effects of climate change. As a reminder, the social ad spatial characteristics of the system are a function of the sensitivity, i.e. factors and driving forces. These are the socioeconomic, environmental, demographic and political factors, which are in turn controlled by drivers, such as the degree of economic diversification, the degree of education, etc. (Füssel and Klein, 2006) Mitigation enables us to adapt the exposure side, while adaptation enables us to adapt the sensitivity of a system.

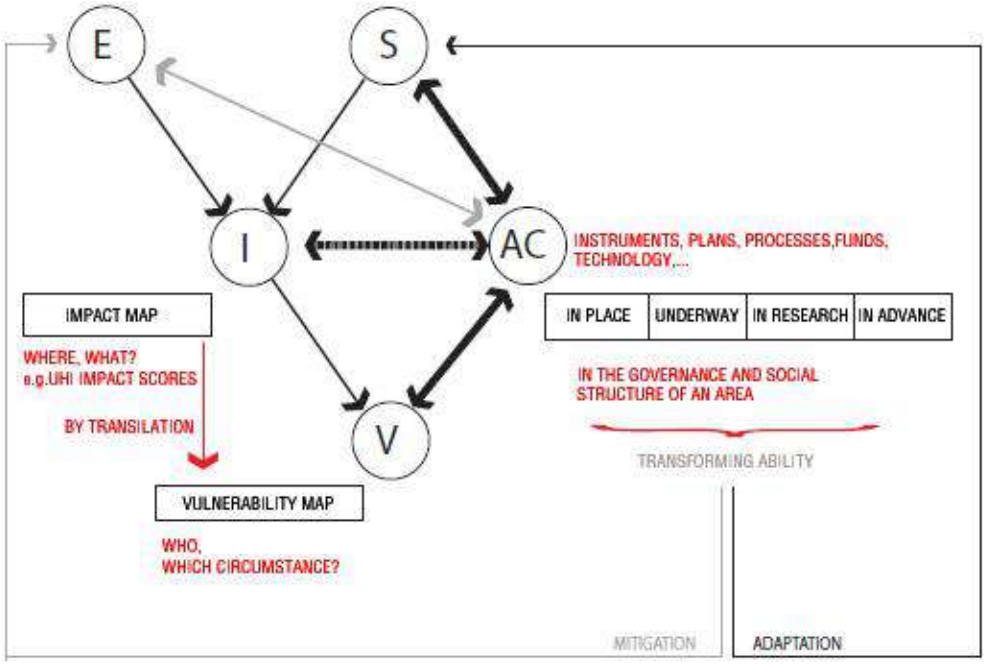

Figure 7. Integrated Vulnerability/Resilience Framework (Source: Verhofstede, 2012)

Hangzhou municipal government to date mainly focuses on mitigation of climate change by reducing greenhouse-gas emissions and enhancing sinks. According to "Hangzhou development planning of Low Carbon City", there are some strategies to meet the challenges of climate change. These strategies are: (a) to establish Low-carbon industries Agglomeration district; (b) to promote clean energy; (c) to build ecological zones and to enhance sinks; (d) to optimize the urban function; (e) to promote Low-carbon buildings; (f) to develop public transport. Furthermore, Hangzhou's adaptive capacity in place to climate change mainly emphasizes on forecaster system and monitor system in place. It has to date not been sufficiently considered to integrate adaptation options into planning procedures in Hangzhou. In face with both climate change pressure and population pressure, it is necessary to improve adaptive capacity of climate change in Chinese cities, Hangzhou included. Both adaptation and mitigation are now essential. There are researches which try to lead to the implementation of new planning strategies in Europe, while there is still a long way to go in China.

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More Athenian sociospatial injustice in the works?
Creating a metropolitan park
at the former Hellinikon International Airport of Athens

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More Athenian sociospatial injustice in the works? Creating a metropolitan park at the former Hellinikon International Airport of Athens

Polina Prentou[1]

Abstract

Hellinikon is the largest, publicly-owned, urban, coastal area in Attica (626 Ha), as well as one of very few such areas left across the European urban coasts. It is the only remaining large-scale open space of Athens that can be used to address the shortage of green open public spaces, provide public access to 3.5 km of the urban waterfront, and supply an existing and extensive building stock for necessary social uses. By employing a variety of quantitative and qualitative methods with dross-disciplinary data at multiple scales, this paper has three objectives: a) to decodify the ways in which the current privatization processes spatialize not only intensifying inequalities and injustices, but also intensifying opposition by urban social movements; b) to document the importance of creating the Metropolitan Park of Hellinikon, by demonstrating why it is indispensable, feasible and inexpensive; and, c) to propose a basic strategy for the immediate protection of public ownership of the area and the creation of a Green, Culture & Recreation Park, by outlining a set of phases with short-and long-term concerted actions. Thus, in the midst of "no alternatives" discourses, it presents a realistic counterproposal to the privatization plans and mega-projects for Hellinikon and other public spaces across Athens and across other European cities.

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Introduction[2]

Hellinikon, the area of the former international airport of Athens, is one of the last available, publicly owned, large-scale and prime urban coastal sites of Europe. It has been presented as "the largest planned real estate development project in Greece" (Hellenic Center for Investment, 2004) and it is currently promoted for privatization as the "largest urban development project of Europe" (Mitropoulos, as cited in HRADF, 2012, para 3). It s also an area with several unique assets of significant importance to the Greater Athens Area residents. It is 14 minutes away from the Syntagma square, 30 minutes far from Egaleo, Peristeri and Piraeus, and less than an hour far from almost the whole metropolitan area, by using the existing fixed rail, metro and light rail systems. Measuring a total area of 626 Ha, 528 Ha of the former airport along with 98 Ha of the coastal zone, it is the only remaining large-scale open space of the Greater Athens Area that can address the dramatic shortage of green, open and public spaces in Athens, albeit partially, being just 1/10 of the green area that the Greater Athens Area needs by domestic and European standards and laws. It is, also, the only remaining coastal zone of Athens that can provide public access to 3.5 km of the Athens waterfront, where more than 20 km are inaccessible or accessible only by paying user fees. Hellinikon is an area with a total stock of 480 buildings, many of them of technical, historic or architectural value. More than half of the area (56% or 250 Ha) can open to the public immediately, while the rest can open in phases after the necessary institutional arrangements.

The paper develops in three parts. First, it examines the history of the Hellinikon area since the closure of the airport in 2001, and especially the process towards its privatization since 2010. Second, it describes urban social residents' movements against the privatization of the area. Finally, it presents a counter-proposal for creating the

[2] This paper is based on the research project "Basic planning & design principles for the creation of the Metropolitan Green Park at the former Hellinikon International Airport of Athens", conducted in 2009-2010 by the National Technical University of Athens, Department of Urban and Regional Planning, Urban Environment Lab for the Local Union of Municipalities & Communities of Attica and the Cities of Alimos, Argyroupoli, Glyfada and Hellinikon. Research team: Dr. Nikos Belavilas, architect-planner, associate professor NTUA (head of the research), Konstantina Soureli, architect engineer AUTH, phd student in urban planning UCLA (research coordinator), Polina Prentou, architect engineer NTUA (research coordinator), Dr. Fereniki Vatavali, architect-planner NTUA, Maria Kalatzopoulou, civil engineer-transportation planner, researcher NTUA, Paschalis Samarinis, architect-planner, researcher NTUA, Evaggelia Hadjikonstantinou, architect-planner, researcher NTUA, Vasiliki Vallindra, architect engineer NTUA, Marina Theodorou, architect engineer NTUA, Theodora Hadji-Rodopoulou, architect engineer NTUA, Thomai Christopoulou, architect engineer UTH, and George Papathanasopoulos, civil engineer NTUA. Research advisory team: Vaso Trova, MSc architect engineer, associate professor UTH, Phaidon Georgiadis, urban and regional planner, and Dr. Yiannis Psycharis, economist, associate professor, Panteion University of Athens. The summary of the project (in English) is publicly available at: <http://courses.arch ntua.gr/fsr/135952/NTUA_2010_Hellinikon_Metropolitan_Park_Summary_En-1.pdf>.

Hellinikon Metropolitan Park, which is the concluding part of a research project conducted in 2009-2010 by the NTUA Urban Environment Lab.

1. Brief history of the area and of the current privatization processes

The area of Hellinikon was the International Airport of Athens until 2001, when the new airport at Spata started to operate. Law 2338/1995 specifies the terms and conditions for the relocation of the Athens International Airport. Further, regarding the future use of the former airport area, it outlines its conversion into mainly a Metropolitan Green Park. Former PM, Kostas Simitis, at the inauguration ceremony of the new airport emphasized that Hellinikon would become the largest metropolitan park of Europe. As Simitis (2009) mentioned, "It will become a metropolitan green area, a large park. I believe it will be the largest park of Europe" (Simitis, as cited in Kemanetzi, 2009). Despite the inaccuracy of this pledge, given the a number of existing larger parks in European cities, subsequent prime ministers also pledged for the creation of a metropolitan green park in Hellinikon (Papandreou, 2010).

However, about a third of the area was used for Athens Olympics infrastructure with *ad hoc* pre-Olympics regulation, in conflict with the regional plan of Athens and the aforementioned law. Law 2730/1999 permitted, without a regulatory plan, the development of Olympic games infrastructure inside the area. Many of the Olympic works were presented as temporary but they still exist in the area. After the closure of the airport, academic-research institutions, the state and the private sector presented projects and proposals regarding the future of the area. The proposals vary widely in terms of the social, environmental and economic priorities that dictate the potential development directions of the Hellinikon area.

Despite pledges by three subsequent prime-ministers to make Hellinikon a metropolitan green park with zero new construction, the efforts of the state have focused, since 2010, on the privatization of the former airport area (Table 1).

The current plans for the privatization of the area are officially launched in September 2010, when the Greek government started investigating possibilities of attracting funds from Qatar. The Memorandum of Understanding signed between the government of the Hellenic Republic and the government of the state of Qatar, acting by and through the Qatar Investment Authority, mentions the establishment of a joint committee of cooperation concerning joint investment activities. Despite these actions, the negotiations with the State of Qatar came to a halt a few months later, in spring 2011. While there are no official statements confirming or denying the end of negotiations, press articles note that the main reasons were the lack of a business plan for the area and disagreements on the terms of investment. Further, according to the European competition regulations, the Greek government had to make an open call for investments, and not to grant a single potential investor privileged status (Tsitsas 2011).

Table 1: Basic steps of the process towards the privatization of Hellinikon Area.

Process towards privatization	
2012 May	Four shortlisted. U.K.-based London & Regional Properties, Qatari Diar Real Estate Investment Co., Israel's Elbit Systems Ltd. (ESLT) and Greece's Lamda Development SA (LAMDA)
2012 April	New Regulatory Plan of Greater Athens under published for public consultation, did not pass as a state law End of the first phase of the expression of interest. Nine expressions of interest were submitted
2012 February	L. 4062/2012 for the development of the Hellinikon Area passed
2011 December	Invitation to submit an expression of interest for the acquisition of a majority of the share capital of HELLINIKON S.A. Eviction notices to public bodies and companies located in Hellinikon
2011 July	Hellinikon in the list of the state-owned assets of the privatization program (L. 3986/2011) Establishment of Hellenic Republic Asset Development Fund (L. 3986/2011)
2011 June	Presentation of Acebillo draft strategic urban model
2011 May	Establishment of Hellinikon S.A.
2010 September	Memorandum of Understanding between the government of the Hellenic Republic and the government of the State of Qatar

In May 2011, Hellinikon SA was established in order to manage the area of Hellinikon, to accelerate the development processes, to deal with technical and legal "obstacles" of the area and facilitate the negotiations between the Greek government and potential investors. As Hellinikon SA CEO Spiros Pollalis (2011) states: "We [Hellinikon SA] won't tell them [the investors] 'this is our plan, take it and implement it'. We will give them the guidelines and tell them that they will be judged according to the business plan and the development plan they will propose" (as cited in Papachlimintzos, 2011, para. 2-3).

A subsequent move towards the privatization process is the presentation of the Acebillo/Barcelona Urban Systems strategic urban model in June 2011. Former Greek PM, George Papandreou, invited Josep Acebillo in 2009 to make a proposal for Hellinikon area. Acebillo was involved in the negotiations with Qatar in 2010 and presented an outline of a strategic plan in 2011. According to Acebillo (2011), this is a first proposal, not a complete master plan, for the creation of a mixed-use area in Hellinikon. His proposal includes the construction of new building stock totalling

2.000.000-3.000.000 m^2 and the demolition of most of the existing buildings. It proposes the creation of 6.200-6.500 m^2 of housing units and 980.000 m^2 of residential areas on the coastal zone characterized as “mediterranean villages” and several “neo-tertiary” uses such as a financial and governmental district, a university and R&D district, live-work artists' dwellings, and one or more malls (Acebillo, 2011, p. 1).

A month later, in July 2011, Hellinikon was included in the list of the state-owned assets of the privatization program that was launched with law 3986/2011 of the Medium-term Fiscal Strategy established by the Greek government, the EU, the IMF and the ECB Also, with the same law, the Hellenic Republic Asset Development Fund (HRADF) was established, in order to manage the privatization programme. All state-owned assets that would be privatized are transferred to the Fund and the revenues of the privatization program will serve the stated primary goal of the fiscal strategy, to reduce state debt.

In December 2011, the Hellenic Republic Asset Development Fund announced the invitation for submissions of expressions of interest for the acquisition of a majority of the share capital of Hellinikon SA. The invitation includes the whole area, both the former airport and the coastal zone, and allows the investor to create a mixed-use development without any restrictions regarding land uses, with the exception of manufacturing. It allows for the development of up to 2,500,000 m^2 of new building construction. Further, it allows the complete demolition of the existing building stock of more than 470 buildings, including the Olympic games infrastructure and excluding just four designated buildings. At the same time, there is no specific plan for the creation of a park and public spaces. The first phase of the expression of interest ended in April 17, 2012 with proposals from investment and real-estate companies from the USA, the UK, Qatar, Israel, Spain, Cyprus and Greece. As the Hellenic Republic Asset Development Fund (2012) announced:

> Nine (9) expressions of Interest were submitted, indicating strong competition for this unique asset. The participation of 9 strong groups in this complex and long-term development project is particularly encouraging. Arguably this is currently the largest urban development project in Europe and it is strategically significant for Athens and Greece. (para. 3)

Out of the original nine who had expressed an interest, the Hellenic Republic Asset Development Fund chose four groups to participate in the second phase of the tender to buy Hellinikon SA. As *kathimerini* (2012) reported, “U.K.-based London & Regional Properties, Qatari Diar Real Estate Investment Co., Israel’s Elbit Systems Ltd. (ESLT) and Greece’s Lamda Development SA (LAMDA) are the four groups that will compete to buy Hellinikon” (*kathimerini*, as cited in Tugwell, 2012)

At the same time, in December 2011, all public bodies and private companies located in the Hellinikon area have received eviction notices by Hellinikon SA, and thus have been ordered to evacuate their facilities within one to five months, with no relocation

provisions (Lialios, 2011). Until May 2012, none of the total of more than 50 public bodies and private companies located in the area left their facilities.

In February 2012, L. 4062/2012 was passed for the development of Hellinikon area, after being in the phase of public consultation for only five days. The law provides a flexible plan for the investor of the area to create a mixed-use development that would include housing units, a research and educational centre, leisure and cultural activities, a business and administrative centre as well as recycling facilities and cemeteries. The park would be at least 200 Ha, including green and open spaces, leisure, sport, cultural and social activities, streets, as well as the open spaces of private developments urban infrastructure.

In February 2012, the new draft Regulatory Plan for the Greater Athens Area was also in the phase of public consultation for six days. Although the draft plan adopted some of the critical dictates of the Medium-term Fiscal Strategy regarding the privatization plans and real-estate development of the area, it did not eventually pass as a state law. Despite the fact that the plan lacked planning and economic documentation for the development directions, land use decisions, or local and regional costs and benefits of the Hellinikon development prescribed, it proposed a rather specific mixed-use development program for the Hellinikon area. This would include a metropolitan public space area, not less than half of the total area, of which 250 Ha would be a green park. In the rest of the area the plan proposed a mixed-use development that would include education, research, culture, tourism, sports and business activities, housing units and a business center.

The projects and laws presented so far on the privatization process of Hellinikon area indicate that a highly selective and step-by-step process of deregulation and re-regulation has been adopted. In order to attract investments, new laws are passed and new agencies are established, to ensure flexibility in land uses and building regulations. Also, well known architects, urban planners and experts, such as Acebillo and Pollalis, are mobilised to promote the project and devise the privatization strategy in collaboration with major financial institutions and law firms that serve as international advisers. What is common to all these proposals is that there are neither estimates, nor provisions for the long-term social, environmental and economic effects of the proposed urban development project on Greater Athens Area. Further, it should be noted that as of May 2012, there has been no accurate and detailed topographic plan of the area and no business plan for the proposed development and the viability of the various land uses in the current conjuncture. Similarly, there are neither analysis of immediate needs of the residents of Greater Athens Area, nor provisions for ways in which the proposed project is expected to address these needs.

2. Local and regional resistance movements, coalitions and initiatives against privatization

A coalition of residents, organizations and local and regional authorities have been opposing the privatization process of the area and demand the cancellation of plans for the privatization of the area, as well as the creation of a Metropolitan Green Park, with compatible social uses in the existing building stock. There is a long history of struggles of the residents for the protection of the public character of the area, starting with the closure of the airport in 2001 and the associated law. These struggles have culminated in a stable and growing regional coalition that has organized a series of initiatives, especially since 2007, when a rather milder privatization and development plan by the state had to be withdrawn (Table 2).

In 2007, residents of the City of Hellinikon and of the Greater Athens Area demolished illegal barriers and fences to reappropriate a part of the public coastal zone that was illegally occupied by nightclubs. The City of Hellinikon, which has responsibility to maintain and clean the beach, installed ADA infrastructure for the first time on public beaches of Greece (Antonopoulou, 2009). The mayor of the City of Hellinikon, Christos Kortzidis, supported the movement with a 24-day hunger strike. In January 2008, the coalition “Common action” was established by the four mayors from the cities that include the airport in their administrate boundaries. The coalition organised the three-day forum “Three days for a life” with discussion panels on the development of the area, with participation of academics, researchers, archaeologists, historians, engineers, architects and planners and a series of organizations and institutions. As part of the forum, local and regional authorities, institutions and residents from the Greater Athens Area, as well as students, planted 10,000 trees in the former airport area (City of Hellinikon, 2010). In June 2010, City of Hellinikon, organizations and residents demonstrated against the illegal occupation of the beach and illegal operation of nightclubs and other uses.

Facing the current privatization processes, the Initiative for Hellinikon Metropolitan Park was created in March 2011 by citizens and groups of people from the Greater Athens Area. Their initiative works aims at promoting a different direction for the development of Hellinikon area, addressing the needs of the residents of Athens. 76 local and regional initiatives, including the Initiative for Hellinikon Metropolitan Park, signed the “Open letter to the greek government, to the troika [IMF-EU-ECB], to the emirs and to whom it may concern: Hellinikon is not for sale!” declaring their opposition and mobilizations against the privatization of the Hellinikon area. The Initiative for Hellinikon Metropolitan Park launched the Festival of Resistance and Creativity for a Metropolitan Park in May-September 2011, with exhibition events, concerts and cultural activities. In May 2012, 20 greek artists gave a concert against the privatization plans of the area. In June 2012, social initiative “Iliosporoi” organised a picnic for ungrowth with the participation of Serge Latouche.

Table 2: Resistance movements against privatization (2007-2012)

Resistance movements, coalitions and initiatives	
2007 June	City of Hellinikon in collaboration with a variety of civil society organizations re-appropriate the illegally occupied Agios Cosmas beach by nightclubs, by dismantling the fences, restoring public access, and initiating a program of maintainance and cleaning, including ADA infrastructure for the first time on public beaches of Greece. Mayor Christos Kortsidis on a 24-day hunger strike supporting the re-appropriation of the illegally occupied beach.
2008 January	Coalition "Common action" established by the four mayors of the cities that include the airport area in their administrate boundaries. Coalition "Common action" organise three-day forum "Three days for a life" 10,000 trees planted by local and regional authorities, schools and institutions from across Athens
2010 June	City of Hellinikon, organizations and residents demonstrate against the illegal occupation of the beach and illegal operation of nightclubs and other uses.
2011 January	Autonomous Urban Farm established in 0,3 Ha lot, with residents and organizations starting planting of local vegetables and fruits, courses and networking with related initiatives in Greece and abroad
2011 March	Initiative for the Hellinikon Metropolitan Park established. 76 local and regional initiatives sign the "Open letter to the greek government, to the troika [IMF-EU-ECB], to the emirs, and to whom it may concern: Hellinikon is not for sale!" declaring their opposition and mobilizations against the privatization of the Hellinikon area.
2011 April	Former employees of state Olympic Airways create the Aviation Museum with Olympic Airways historic items at the former West Terminal.
2011 May-September	1st Annual Festival of Resistance and Creativity for the Metropolitan Park of Hellinikon: Concert by 20 Greek artists against the privatization plans of the area. Forum "Picnic for de-growth" with the participation of social initiative "Iliosporoi". Visit and talk by Serge Latouche "Full moon freedom beach party: Reclaim the beach 2 stages festival against the sell-out of ex-airport of Athens" by the Void Network, with more than 2,500 participants. 300 artists create visual and multi-media works of art for the protection of Hellinikon. One-month free exhibition in former Olympic Basketball building. Concert by Greek composer Mikis Theodorakis against the privatization of Hellinikon and for the creation of a Metropolitan Green Park. Four discussions and roundtables on the privatization of state assets and

	urban social movements and initiatives against it.
2011 December	Metropolitan Social Health-care and Social Pharmacy established serving patients from the region with limited or no access to the health care system. Psychological support services for people facing hardships and unemployment.
2012 March	1,100 olive trees planted by more than 3,000 residents and institutions from Athens, with the support of the Autonomous Farm. Regular gatherings for maintenance and irrigation by participants. Initiative for Hellinikon Metropolitan Park organises demonstration at Syntagma square against the law for the development of Hellinikon area
2012 April	1st Metropolitan Semi-Marathon organised by five runners clubs from the surroundings cities of Hellinikon and the region Initiative for Hellinikon Metropolitan Park organises demonstration at the HRADF offices against the privatization of the Hellinikon area 27 bodies and institutions located at Hellinikon sign petition against the privatization process and their displacement

In July 2012, the collective Void Network organised a full moon beach party and concerts with more than 2,500 participants. In September 2012, composer Mikis Theodorakis gave a concert against the privatization plans and for the creation of the Metropolitan Greek Park. Also, in September 2012, 300 artists participated in a month-long free art exhibition in the former Olympic Basketball building. As part of the festival, four discussions and round-tables were organised to discuss the privatization of public assets and the coordination of social movements and initiatives against it. The Initiative for Hellinikon Metropolitan Park also supported the initiative for an Autonomous Urban Farm inside the area that was created in January 2011. The farm measures an area of 0,3 Ha and produces local vegetables and fruits covering part of people's needs. As Totsikas (2012) notes: "From the first time, it is clear that our initiative is part of the protest against the privatization of Hellinikon area" (para. 16). The initiative has also connected with other initiatives and networks and has co-organised joint courses and workshops.

In April 2011, the former employees of the formerly state-owned Olympic Airlines run an Aviation Museum at West Terminal. They have collected items, as well as airplanes, from the history of Olympic Airlines and from the Hellinikon airport. In December 2011, an initiative of doctors, with the support of local authorities, established the Metropolitan Social Health-care Centre and Social Pharmacy, catering to patients from the region with limited or no access to the health care system, as part of emerging solidarity networks across Athens addressing pressing social needs. In March 2012, more than 3,000 residents and institutions from Greater Athens Area planted 1,100 olive trees inside the area of the former airport (Totsikas, 2012). In April 2012, five runners

clubs from the surrounding cities of Hellinikon area and the region organised the first semi-marathon inside the former airport area.

The Initiative for Hellinikon Metropolitan Park organised two demonstrations against the privatization process and the law for the development of the area, at Syntagma square and at the HRADF offices, in March 2012 and April 2012 respectively. Also, the Coalition of Architects issued a statement against the law for the development of Hellinikon area. What is more, 27 bodies and institutions located at Hellinikon signed petition against the privatization process.

The proposal for Hellinikon Metropolitan Park, as it is shaped by the NTUA Urban Environment Lab research team in collaboration with the Local Union of Municipalities & Communities of Attica and the Cities of Alimos, Argyroupoli, Glyfada and Hellinikon, was endorsed by local and regional movements, initiatives and coalitions, professional bodies and research institutions as a fact-based, feasible and inexpensive counter-proposal for the area. The basic approach of the research and its strategy is presented in the following section of the paper.

3. A counterproposal for creating Hellinikon Metropolitan Park

The discussion on the future of Hellinikon centers on critical issues facing cities and regions under conditions of cumulating crises, as articulated across spatial scales. The conflict over Hellinikon expresses variegated approaches regarding the functions of city space, urban development and more broadly the production of space, not only in intensifying or mediating various sociospatial inequalities and injustices but also in transcribing on the ground potential alternative sociospatial practices.

Hellinikon can be considered an exemplary case of how this discourse is set on the ground, especially because of the unique assets of the area for various actors, including the residents, the state system and domestic and international financial institutions and developers, the scale of the financial interests and states involved, and the symbolism embedded in the development of Hellinikon as a top priority and precedent-setting model of planning and privatization increasingly across Europe. In various debates on particular issues, what Hellinikon stands for, and for whom and what it is to be used, remains a defining difference of a range of approaches to space and justice. On the one side, Hellinikon is treated as a precious real estate asset for development, directly attached to objectives of debt and deficit reduction. On the other, Hellinikon is treated as a city space contributing to the city, which can partially address ongoing injustices and set a precedent for alternative development priorities and directions against the production and intensification of sociospatial injustices. While approaches that proclaimed to take a more in-between and nuanced stance were being occasionally presented over the past decade, the rapid developments and the continuous changes in the dominant discourses on the future of Hellinikon have tended to lead to a polarization

of various viewpoints. In addition, persistent demands for disclosure of the underlying priorities of various proposals are increasingly made in debates, critiques and public events.

In 2009-2010, given the shifting terms and means of the particular debates taking place regarding Hellinikon and facing the plans to address the intensifying crisis in Athens, the NTUA Urban Environment Lab was invited to collaborate with the four cities surrounding Hellinikon and was commissioned to conduct research on the area. This research seeks to answer the extent to which adopting alternative scenarios for Hellinikon is justified on sociospatial and economic grounds, to examine the feasibility of these alternative scenarios based on economic data, comparative analysis of case studies in various countries and documentation of the area along with an examination of its relations to the Greater Athens Area, and to propose feasible strategies forward. The rest of the paper provides a brief presentation of the specific questions addressed and the strategy proposed by the research team.

3.1. Hellinikon is indispensable for Greater Athens Area

Athens demonstrates a dramatic lack of urban public open and green spaces. Athens provides just 2-2.5 m^2 of green space per resident, and it has wasted 1.23 m^2 of publicly-owned open space per resident for the 2004 Olympic Games infrastructure and the subsequent private developments.

According to comparisons of indicators among 15 cities by the Hellenic Ministry for the Environment, Physical Planning and Public Works in 1994, Athens displayed the second lowest rate of green space per resident (2.55 m^2/resident), while Paris (8.5 m^2/resident), London and Rome (9 m^2/resident), Zurich (10 m^2/resident), Berlin (13 m^2/resident), Warsaw (18 m^2/resident), Wien (20 m^2/resident), Amsterdam and The Hague (27 m^2/resident), Rotterdam (28 m^2/resident), Bonn (35 m^2/resident) and Washington DC (50 m^2/resident), demonstrated 3 to nearly 20 times higher rates (MEPPPW, 1994).

This extraordinary lack of urban public open green spaces in Athens suggests, as an immediate action, the protection of all the existing spaces across the Greater Athens Area, as well as the conversion of other remaining open spaces at various scales into public open green spaces. The allocation of the whole area of the former international airport and the coastal zone and the creation of a green metropolitan park would add just 1.98 m^2 of green space per resident to the Greater Athens Area, resulting at best to nearly 4.5 m^2 of green space per resident.

Further, as it is prescribed by Greek planning standards and laws since the 1980s, it is not just the 626 Ha of Hellinikon Area that the city needs. About ten-times more green space is needed in order to acquire what might be called schematically “acceptable level of green space” in Athens i.e. green space approximating the levels prescribed by

planning standards and legislation.. Further, this standard does not take into account the current state of Greater Athens Area. It was established well before the successive expansions of the city with the production of urban sprawl across former forest and agricultural lands in Mesogeia, in Thriasio and on the slopes of the surrounding mountains. Also, it was established well before the accelerated loss of urban open spaces, either designated by law or potential green spaces, especially since 2004 for the Olympics infrastructure and the subsequent post-Olympics private developments. And, last, it was established well before the 2007 extensive and destructive wildfires of Attica. Therefore, even the adoption of such "acceptable level of green space" would remain significantly lower than the European mean.

What is more, the creation of Hellinikon Metropolitan Park will provide public access to 3.5 km of the Athenian coastline, while about 20 km are inaccessible or accessible only by paying entrance and user fees.

3.2. The park is an inexpensive project

The creation of Hellinikon Metropolitan Park is an affordable project, despite a series of statements to the contrary since 2003, by successive governments and planning authorities. The Hellinikon Metropolitan Park project has been continuously presented as an excessively expensive project, with a projected cost amounting to a range from €400 to €700 million, with respectively high operational and maintenance costs. During the period 2003-2007, the Greek state launched an international ideas competition, planning an extensive urban redevelopment project under the title "Hellinikon Metropolitan Park and Urban Development" and the creation within the park of a small luxurious city with floor areas ranging in the final 2007-2008 proposals between 1.300.000 m^2 and 1.450.000 m^2. This was an excessively expensive project both in terms of its building construction component and in terms of the infrastructure and design of open and green spaces. But although the projected costs were used to shape the justification of these development directions, there has never been a business plan or feasibility study to back these numbers.

Thus, the excessive estimated cost of the Hellinikon Metropolitan Park, as it has been presented over recent years, constitutes a choice rather than a documented necessity. This choice and position is problematic in three main respects. First, there is no justification for the need to construct a luxurious small city with high infrastructure costs on social, environmental or economic grounds, except for catering almost exclusively to a very limited subset of the economic sector of development, as well as a very limited set of consumers as beneficiaries, with potential adverse effects even on their counterparts. Second it presents impressively overestimated and overpriced construction and operation costs. There is no explanation for the construction cost of 76,000 euro/m^2 and its deviation up to 16 times from e.g., Maurice Rose Airfield project in Germany (4,500 euro/m^2). Last, it constitutes a choice to systematically display exorbitant costs as

unavoidable, in order to justify plans for privatization and concessions of the whole area or parts of it, the construction project or its subsequent management and commercial operation.

In contrast to the aforementioned estimates, the research indicates that the construction of a park with mild interventions and high quality construction is affordable, based on analysis and comparisons of construction costs in Greece and in Germany, taking for example the new parks at former airports of Berlin and Frankfurt. The estimated cost amounts to just €50 million for the area readily available today to begin major green works and restore building and technical monuments restoration and reuse – distributed in phases over a 10-year horizon. The total cost is just €100 million for the whole project – distributed in phases over a 20-year horizon. The estimated cost for annual operations, based on comparisons with the multi-year and detailed operation costs of parks such as the Royal Parks of London, amounts to €5 million annually upon completion of the first phase, and to €10-12 million for the completed park.

The cost needed for the construction and operation of the park could be covered by utilizing the revenues of less than a decade since the 2004 Olympics, from the existing infrastructure and leasing and concession contracts of the area. As our findings point out, according to economic data submitted to the Hellenic Parliament in 2010, the total revenues from leasing and concession contracts of the Olympic facilities of the area amount to €75.8 million, while the realised revenues amount to €35.7 million. That €40-million gap is due to the fact that the private companies which have signed mostly long-term concession contracts with the state-owned companies stopped their agreed-upon rent payments to the Greek state from 2008 onwards.

To conclude, the actual realised revenues of the Olympic facilities, if they had been used for the area, could have already financed more than the half of the construction of the park. If the total revenues were used, they could have financed about 75 percent of the park.

3.3. The park is feasible

For the creation of Hellinikon Metropolitan Park, the NTUA Urban Environment Lab research project proposes six immediate actions.

First, critical prerequisites for the creation of a Metropolitan Park are the cancellation of real estate development plans for the area. That is, the cancellation of sales, privatization, and concession plans for the entire area or parts of it; the abandonment of the questionable in many respects and excessively expensive plans to develop exclusive planning unit developments; and the cancellation of the environmentally detrimental, anti-urban and excessively expensive highway infrastructure construction projects along Poseidon and Alimos avenues.

Another critical prerequisite that has to take effect immediately is the removal of internal fences as well as the removal of the prefabricated exhibition pavilions in the surrounding area of the former East Terminal. This will help prevent a further fragmentation of the area, which would render future interventions even more difficult. It will also help reverse the image of abandonment and decay of the area.
In the coastal zone, it is necessary to implement the Presidential Decree on the coasts in effect since 2004, and control the permits and operations of businesses of sanitary interest, in addition to canceling administrative selective exceptions from the laws granted by the former Ministry of the Environment (e.g., Greek Church-owned cape along the coast with a concession contract for a nightclub).

Also, it is possible to immediately allocate 56 percent of the area to public uses and safeguard free public access. This could happen by the immediate opening to public access and use of 170 Ha of the southern part of the area, and of 180 Ha of the northern Olympic Pole, with the removal of fences. The remaining 44 percent of the area can open to the public gradually, by making the necessary institutional arrangements with the various public stakeholders (e.g., Ministry of National Defense, Aviation).

A relocation of the transportation facilities that occupy 19 Ha of the area is considered unrealistic and unjustified in planning and economic terms. This part, occupied by the Tram, ETHEL, KTEO and Attiko Metro, can be exempt from the public use of the park, as long as further construction or expansions are prohibited.

The gradual restoration and reuse of the existing building stock can provide a socially, environmentally and economically sound, as well as effective, solution to integral and complementary uses of the park that seek to address needs of the Greater Athens Area residents. Based on the documentation and evaluation of the building stock conducted in 2009-2010, out of the 480 existing buildings with a total floor area of over 490,000 m^2, 241 buildings with a total area of 366,160 m^2, or 75 percent of the existing stock, can be reused for low-intensity uses, mainly social in nature and scope, and with the exclusive use of all realized or expected revenues for the creation, operation and maintenance of the park.

Regarding new uses in the existing buildings across the park, the research project proposes the adoption of a strategy “from the ground up” based on the existing assets of the area, rather than the treatment of the space as an “empty lot for development.” Toward these ends, the aim must be the democratic and active involvement of society, its citizens, its organizations and local institutions in planning and implementation of what is socially beneficial, rather than the search for an investor who will implement a private development project. As noted above, a series of concrete examples along these lines have been developed in the area since 2010.

Following the aforementioned immediate actions that constitute prerequisites for devising a medium- and long-term strategy for the area as a whole, the NTUA Urban Environment Lab research project proposes a 5-axis strategy by area for Hellinikon Metropolitan Park (Figure 1).

It proposes the creation of an Open Metropolitan Sports & Recreation pole. This pole can be created by relocating the facilities of Agios Kosmas within the existing Olympic pole in the former airport. This relocation relieves the coastal zone from some of the recent construction. The creation of an Open Sailing Center in the Olympic Marina can cover the needs of local recreational, sports and sailing clubs, and further relieve the northern part of the coastal zone.

It proposes the full removal of the illegal mass entertainment uses from the coastal zone, the restoration of free unobstructed public access and the comprehensive redesign of the waterfront in compliance with the Presidential Decree on the coasts. The existing structures of the coastal zone have to be reduced significantly so that practically free public access and its natural features are restored immediately and for the long run. This objective requires demolishing the illegal entertainment structures, moving some of the sports facilities of the coastal zone as well as the complex of the Hellenic Center for Marine Research (HCMR) eastwards inside the former airport, and banning further construction in the Olympic Marina. In the open zones that will result from these actions, the research proposes the restoration and regeneration of the natural coastline, along with the protection of the archaeological sites, as well as the streams, the sandy beaches and the Agios Kosmas cape. Enhancing green spaces and creating an extensive pedestrian way and bike path network will improve the area and its public access, and will connect it to the rest of the Saronic Gulf coastline, north and south.

It proposes the creation of a Center for Culture, Education & Research in the area of the former West Terminal. The research proposes the development and integration in the park of the Hellenic Center for Marine Research along with the creation of a Scientific & Educational Aquarium, and, the restoration and protection of the coastal and marine antiquities, along with the restoration of the natural coastline. It also proposes the expansion of the existing archaeological storage spaces, the enhancement of the conservation and restoration laboratories, and the creation of an Archeological Museum exhibiting the large collections of the Saronic Gulf and Mesogeia, along with developing museological, educational and cultural programs. The historic civil and military aviation material that is preserved within the former airport can constitute the core of an Aviation Museum, housed in the historic hangars. It should be noted that the aforementioned proposals are already supported and promoted by related institutions and organizations. A small aviation museum already operates in the West Terminal building, with an exhibition curated by the former employees of state Olympic Airways.

Figure 1: General Master Plan of Hellinikon Metropolitan Park. Source: NTUA Urban Environment Lab research, 2010.

It proposes the creation of a Local Center with Social Uses, with the reuse of many of the existing buildings on the premises of the former USA base, with social welfare, education, culture, recreation and small-scale retail and entertainment uses. It is possible to also incorporate local administrative uses.

It proposes, finally, the restoration and reuse of the large designated building of the former East Terminal as a Metropolitan Node with compatible metropolitan uses (such as exhibitions, conferences, scientific and artistic events) under specific terms of operation. This large designated building, designed by architect Eero Saarinen, displays a metropolitan identity and through its size and symbolism can acquire a metropolitan role, if its uses and their scale are compatible with the preservation of the building and the operation of the park. Its proximity to the new metro station of Hellinikon can further enhance this possibility. Uses considered as compatible are uses with specific terms of operation that do not affect the building and the functions of the park, along with a ban on further construction, expansions or use of extensive areas for supporting

activities (such as outdoor parking). The term that the revenues from any operation within the park are allocated to the construction and operation of the park, namely the social, environmental and cultural uses and activities within it, applies to these uses and activities as well. By meeting these conditions, the aforementioned metropolitan uses can further enhance the social character of the park. Examples of incompatible uses are mass commercial and entertainment uses (e.g., malls and multiplex cinemas), because of their intensiveness and their incompatibility with the architectural complex and the overall role of the park. Large-scale administrative or educational uses (e.g., ministries or universities respectively) are also incompatible with the East Terminal building because of their architectural and functional requirements.

4. Conclusions

The discourse and debates for Hellinikon have focused, the past decade, on the creation of a metropolitan park. Despite the series of actions and initiatives to the opposite ends described herein, government proposals and pledges aimed at the maintenance of the open public character the area, or the largest part of it, by establishing free access and developing public uses in a metropolitan park it. The debates the area have revolved around practical issues, variegated theoretical and political assumptions about the city and, often, around scientifically unsubstantiated myths. The key issues of the debates have been the size of the park and its necessity to Greater Athens Area, its relation with Athens residents' needs, the construction and operational cost of creating a metropolitan park. Since 2010, the discourse on Hellinikon has focused on the unique characteristics of the area for attracting development projects. It is presented as a precious real estate asset for development, which could potentially serve the Medium-term Fiscal Strategy goal of debt and deficit reduction. The plans and state laws for the privatization of Hellinikon area allow for the construction of a new city inside the area, with no documented benefits on the social, environmental and economic conditions for the Greater Athens Area and its residents, and no estimates of costs, adverse effects and negative externalities.

This research seeks to address the key issues pointed out on the discourse and it proposes a feasible strategy, with short- and medium-term actions to create Hellinikon Metropolitan Park. Basic priorities of the strategy proposed is to maintain the public character of the area, to allow the public access to the coastline, to reutilize the building stock to cater for social needs, and to address the shortage of green spaces in Greater Athens Area. This counter-proposal has been endorsed and promoted by local authorities, local and regional coalitions, initiatives and movements reacting to the privatization process of the area. These initiatives and movements have already demonstrated how they protect their urban public space with concrete initiatives on the ground.

In conclusion, urban development appears to take center-stage in the proposed macro-economic remedies for the crisis regardless of its uses in the production and reproduction of crisis and restructuring, or its geographical diffusion across spaces and scales. A major approach focuses on mega-urban development as usual; asserting that it is through space again that macro-economic stability will prevail. At the same time, opposing approaches question its assumptions and premises for cities and regions and even for macro-economic stability per se, while exposing its potential effects in intensifying inequalities and injustices. Hellinikon can be considered as a prominent example through which to de-codify and analyse current debates and struggles over space, its production and its use across spatial scales and its effects over urban life, citizenship and justice. The directions and results of current developments on the future of cities and regions across Europe remain to be seen. But as the Hellinikon case appears to be increasingly demonstrating, a significant change of course in spatial development towards sociospatial justice, as every day process with concrete outcomes, is an idea whose time has come.

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URBAN CONSEQUENCES OF DIVISION IN 'DIVIDED CITIES': A COMPARATIVE PERSPECTIVE

Gizem Caner [1], Fulin Bölen [2]

Abstract

In the last three decades, there has been a growing body of literature concerned with a specific form of urban division, classified by its extremity. Whether the cities experiencing extreme division are called *partitioned* (Kliot and Mansfeld, 1999), *polarized* (Benvenisti, 1986; Bollens, 1998), *contested* (Hepburn, 2004, 2006), or generally *divided*, the main issues in these cities are agreed upon: disruptive circumstances of extreme tensions related to nationality, ethnicity, religion and culture. Well known examples of such cities are Belfast, Jerusalem, Nicosia, Sarajevo, Mostar, Beirut, and Berlin. Due to their distinctive attributes, these cities have an exclusive discourse differentiating them from other urban areas.

In this context, the central theme of this paper is to comparatively analyse urban consequences of division in selected case studies—Belfast, Beirut, Berlin, Jerusalem. Before starting the analysis, general definitions and concepts of the term 'divided city' will be briefly summarized. Then, each city will be analysed in terms of their divisive attributes. As each city has unique attributes of geography, history, and economic development, their division processes and outcomes differ substantially. Therefore, in each city, consequences of division are evaluated in concordance with their division processes.

In the conclusion part, it will be revealed that in spite of differences among cities, a common pattern of functional, structural, and social urban consequences will surface. These general outcomes will be illuminating for future studies that aim to generate planning models to tackle with the problems of divided cities.

1. Introduction

A general literature review on divided cities reveals a division between two separate discourses. The first one, mostly developed from 1950s to 1980s, referred to divided cities as common themes and conditions prevailing throughout the developed western world: divisions of capitalist production processes, urban segregation and increasing inequality between the affluent and deprived city districts (Safier, 1997). In the last three decades however, there has been a growing body of literature concerned about a more specific form of urban division, classified by its extremity. This limited sense indicated physical or political contestations in few special cases.

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According to Anderson (2008) “mainstream urban studies in English-speaking academia have generally concentrated on 'normal', ‘undivided’ and more or less peaceful cities […] where these [ordinary] cities are considered 'divided', we have seen it is usually not by nationalism but by other divisions, such as ethnicity per se or social class”.

The above excerpt implies that reasons of division are determinant in identifying which group a city belongs to. Processes like globalization, decolonization and neo-liberal restructuring form socio-economic differences in cities, often layered with ethnic differences. Status, class, welfare, power, race and ethnicity are the lines of division, hence, pluralist disputes are emphasized (Gaffikin and Morrissey, 2011). These cities—New York, London, Paris etc.—are usually referred to as ‘multicultural’, ‘cosmopolite’ or ‘global’, and are believed to be easier to cope with since they are ‘merely’ divided (Benvenisti, 1986).

On the other hand, most prominent processes behind division in ‘extremely’ divided cities are political and ideological oppressions like wars, as well as divide-and-rule and exit strategies of the colonizers. In these cities, long-standing questions of identity, national sovereignty, territory, culture, language, and religion are to the fore, and they are usually layered with socio-economic differences. The presence of these undisputable aspects turns these cities into areas of challenge by all means.

This paper is mainly concerned with the latter type of divided cities. Four case studies have been chosen from this group: Belfast, Beirut, Berlin, and Jerusalem. Division in these cities can be perceived as an unwanted and unexpected intervention to the city ‘organism’. How this organism responds to this situation from within it, and how outside factors shape the development of the city during and after such an intervention is the main concern of this paper.

As conclusion, this paper aims to find a common pattern valid for all these cities by looking at the case studies’ urban development processes during their division phases. By doing so, it is expected that this paper will contribute to further studies regarding planning approaches and management means in divided cities.

2. Case Studies

Urban consequences of division in case studies are evaluated in a process-oriented manner. The process of division may be composed of following phases: pre-division, division, post-division or reunification (Kliot and Mansfeld, 1999). Each phase has a turning point marked by significant changes, and this is reflected on urban space.

Among case studies, Belfast is the only city that has not achieved reunification and remained in the post-division phase. On the other hand, Berlin and Beirut have both been reunified for almost twenty years. The case of Jerusalem stands discrete; even though reunification has been achieved, it was not recognized by the international

community since it was acquired by illegal annexation of West Bank territory. Moreover, latest developments point to a re-division phase in this city.

Within this study, division process and its urban consequences are examined in detail for each case. Each phase of division is analysed by giving specific reference to the changing nature of the physical setting of the city and its urban development patterns. Apart from the consequences of the imposed situation caused by division, other factors exerting force on the shaping of the city—such as planning approaches—are evaluated.

2.1 Belfast

[Pre-division] Ethnic conflict in Belfast has its roots in the 17th century when the British decided to establish a colony on the island by a process known as the *Ulster Plantation*. The newcomers—Protestants—walled themselves to form what the natives—Catholics—perceived to be "pockets of civilization" (Jones, 1960).

With the industrialization boom of Belfast in 19th century, labour demand was mainly met by the Catholics living in the hinterland (Boal, 1996). As a result, even though Catholics started to reside within the walls, they lived relatively clustered in their own residential environments (Jones, 1960), which were mainly located on the west side of the city. By clustering linearly on the axis of the Falls Road, they formed the Catholic working class area of Belfast. Similarly, working class Protestants started locating on the north, along the Shankill Road. These clusters are still visible in the city (Figure 1).

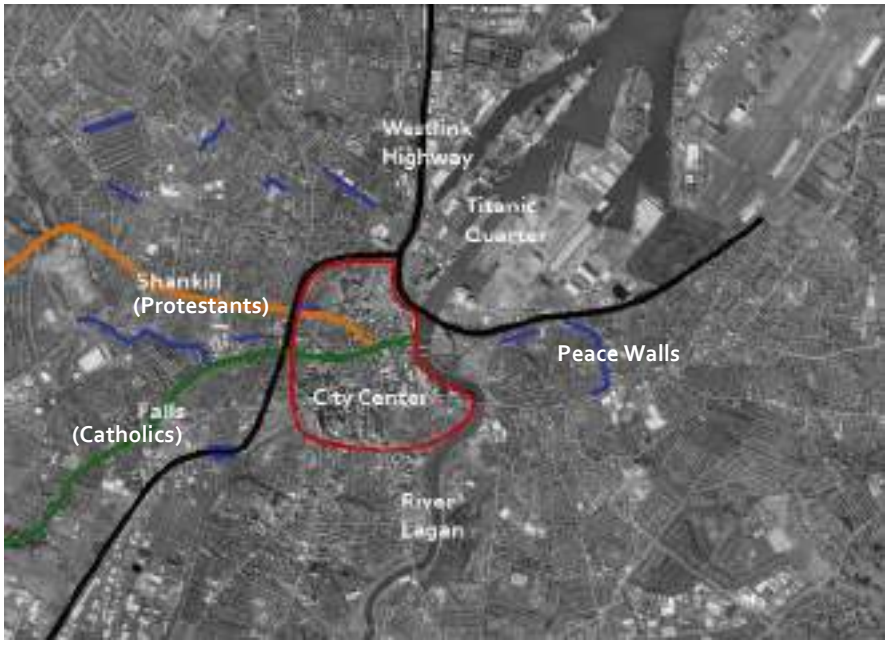

Figure 1. Belfast's Division (1974-2012)

The mainly ethnic and religious division took a nationalist form by the second half of the 19th century when Catholics started to voice their demand for Irish independence, and Protestants for reunion with Great Britain (Boal, 2002). Disturbances arose on the streets of Belfast. Catholics were from now on also referred to as Republicans and/or Nationalists, whereas Protestants as Loyalists and/or Unionists. As a result, in 1921, Ireland seceded from the United Kingdom, while only Belfast, which was predominantly British and Protestant, was granted regional autonomy. Consequently, segregation increased gradually during the 20th century.

[Division] As Catholics in Belfast became more alienated, they started to retreat into an institutionally self-sufficient world. By 1969, with the beginning of "The Troubles", spatial artefacts of division, the so-called "Peace Walls" started to appear on the face of the city.

As more Catholics and Protestants moved closer to their own ethnic groups, the boundaries of residential enclaves became more pronounced and symbolically significant (Calame and Charlesworth, 2009). Around 60.000 people moved as result of The Troubles (Brand, 2009).

Peace walls were constructed at 'interfaces' – boundaries where segregated Catholic and Protestant neighbourhoods collide with each other. When first constructed in 1969, it was hoped that they would be temporary. However not only are these walls still in place over 40 years later, but many others have subsequently been added to the urban fabric, adding up to a total of 88 up-to-date (Community Relations Council, 2008).

[Post-division] Even though Good Friday Agreement was signed in 1998, it did not bring solutions to the fractured structure of the city, or to everyday life within it. Urban arena of Belfast today, is a hyper-segregated one with strict sectarian territoriality (Bollens, 1998). In 2001, around half of the city's population lived in wards that are 90% Protestant or 90% Catholic community background (Gaffikin and Morrissey, 2011). As people moved to their homogeneous neighbourhoods, the city centre went through significant population decline. Today, major 'showcase' projects like Victoria Square, and other new apartment blocks for city-centre living has been built to overcome this disadvantage. But according to Gaffikin et al (2008), these developments are further dividing the two communities since the sectarian enclaves remain in place.

The ethno-religious clusters are particularly working class, suffering from a low quality of urban environment (Sterrett et al, 2011). In these clusters, social infrastructure, such as hospitals, schools, religious compounds and leisure services are duplicated. Each community builds their own institutions to meet the needs of their own community.

The contemporary urban structure of the inner and central city has been shaped by a comprehensive redevelopment process that emphasized major road infrastructure

projects (Hackett et al 2011). For instance, the new Westlink Motorway cut a path through working class housing areas and became a barrier between Catholics and Protestants. Further problems regarding transportation infrastructure are the increasing presence of cul-de-sacs since the 1980s (Figure 2) due to the eradication of peace walls.

Figure 2. The Layout of Inner City Belfast – 1960s, top; 2000, bottom (Forum for Alternative Belfast, 2006)

Figure-ground ratios of the city have changed drastically over recent years. Car-dominance in the city caused the emergence of spacious car parks, which further contributed to the increase of vacant and derelict land near the inner city. This situation, coupled with derelict buildings and poor pedestrian connections, bring about questions of safety. One measurement against these concerns is the caged houses. These houses are caged by individuals with bars and grills over gardens for protection against flying stones and the like.

Another important consequence of division in Belfast is the transformation of sectarian regions via the use of symbols. Murals are the most visible artefacts of territorial ownership usually displaying solidarity and grief. Curb stones are also transformed into territorial markers through red-white-blue or green-white-orange paint in many Unionist or Nationalist areas, respectively. Flags, being cheap and easy to display, are also used for strengthening groups' identity.

The bitterest artefacts of division without dispute are the 'Peace Walls'. 88 peace walls exist in Belfast today, some as high as ten meters and sometimes several kilometres long. Some have gates which can be closed at specific times of the day; some are operated by the police, some by adjacent communities (Brand, 2009). These walls are usually built upon request of the residents living near interface areas.

Recently, these walls have been painted by graffiti artists around the world to create tourist attraction (Figure 3), but as Brand (2009) implies, beautification legitimizes their existence. Peace walls are the scars of conflict on the urban form of the city, appearing suddenly and unpredictably, interrupting roads/parks, and shaping daily movement patterns of local residents drastically.

Figure 3. Peace Wall Painted with Graffiti, Cupar Way (Authors)

2.2 Beirut

[Pre-division] Beirut has always functioned as a multicultural city where religious groups coexisted, but lived in separate enclaves, with few mixed neighbourhoods (Silver, 2010). During 19th century, there was a 25% Christian community, living on the east side of the old city walls which constituted a boundary against Muslims living on the south and west of it. Mixed neighbourhoods existed near the commercial areas of the city (in the west), but even here, sectarian consciousness was strong among the residents (Davie, 1994).

As in Belfast, starting from the mid-19th century, Beirut witnessed rapid urbanization. From 1870s up to the First World War, Maronite peasants were coming from the rural areas and settling on the eastern quarters with the Greek Orthodox community, making Christians the majority in the city (Khalaf, 1993).

During the first years of the French Mandate (1920s), Beirut flourished as the "Paris of the Mediterranean" (Nagel, 2002). There was constant influx of immigrants from neighbouring countries, who preferred to reside with their own 'kind'. The city doubled in size. Consequently, 'Lebanism' of the Christians was pitted against 'Arabism' of the Sunni Muslims, and during 1930s there were violent clashes between Christian and Muslim gangs (Khalaf, 1993). After independence in 1943, due to the Arab-Israeli war in 1948, another influx of populations, this time

Palestinians, changed the face of Beirut's urban development. Dense shanty towns and refugee camps started to grow in Beirut's urban fringe. The main result was an increase in the Sunni Muslim population in the western part of Beirut.

The first civil war during 1956-1958 saw the first real demarcation line dividing the city along the former commercial axis; '*Rue de Damas*'- Damascus Road. Barricades were constructed across main roads; accentuating territorial identities of Beirut's West-Muslim and East-Christian residents. While Sunni Muslims and Greek-Orthodox communities lived near the city centre, the later coming population of Shiites and Maronites lived in the suburbs (Davie, 1994). When these suburbs carried on expanding, they started to meet; inevitably this lead to tensions along interface areas (Davie, 1994), which lead to another civil war.

[Division] The civil war started in 1975. Paramilitary organizations of the religious sects took power in their territory, and the line established during the first civil war was reactivated, which later became to be known as the Green Line (Figure 4). Permeability between two sectors of the city was entirely blocked.

Figure 4. Beirut's Division (1974-1990)

During the first phase of the war, Beirut experienced an outflow of people from its core, resulting in a process of 'ruralisation' (Tabet, 1993). These population movements escalated the slums and squatter settlements on the outskirts of the city. Ribbon developments appeared, beaches on the south of Beirut became slum areas, and whole coast on the north was ruined by high-rise complexes (Nagel, 2002).

Urban form of Beirut went through enormous changes during years of division; streets widened or narrowed according to exposure to snipers; buildings were classified according to how much they faced the battle zone; and, there was a

disjunction between intended function and effective use (Yahya, 1993). Former commercial and civic buildings, formerly the scene of inter-communal commerce and social interaction, were transformed into militia headquarters (Fricke, 2005). The built-up area, road and infrastructure systems sustained severe damage.

As further fractions into subgroups in East and West of Beirut started to appear the city became spatially fragmented into militia-controlled 'mini-states' (Silver 2010). The proliferation of territories, defined according to sub-national community or sectarian identities, fragmented the urban space into very small structural and functional parts (Makdisi, 1997; Nagel, 2002). Each of these subgroups marked their territory by setting up check-points, drawing graffiti, and building other visible or invisible boundaries (Davie, 1994). Yahya (1993) describes how Beirutis created self-sufficient neighbourhoods and apartment blocks, by generating electric power, providing housing, and safety for their inhabitants.

By the end of the civil war, one fourth of Beirut's buildings were damaged or demolished (Figures 5 and 6), some having been removed to allow movement of military vehicles, and half the population had temporarily or permanently left their homes. As a result, Beirut's primacy in Lebanon as the capital city was dismantled and its functions and services were decentralized to adjoining peri-urban or rural areas (Khalaf, 1993).

[Reunification] In October 1990, the civil war in Lebanon ended, "more from exhaustion than from the clear victory of any one group" (Nagel, 2002). Within a couple of months, the paramilitary organizations had been dissolved and the Green Line dismantled. However, the 19th century East-West divide is still there; neither of the two parts wants to pass to the other side (Davie, 1994). Davie (1994) explains this on-going division as follows: "having lived in two different geographies with two different cultural ways of living, each evolved into individual ways" and therefore developed their own social solidarity and self-sufficiency.

According to many authors (Makdisi, 1997; Kassab, 1994; Khalaf and Khoury 1993; Gavin and Maluf 1996; Höckel 2007) reconstruction developments since 1990s has contributed to the on-going division in the city. A master plan executed by a private reconstruction company, *Solidere*, is creating an ultra-modern global cityscape with futuristic urban landscaping (Larkin, 2010) concentrated in Beirut's Central District (BCD).

Critiques have raised many questions and concerns including; marginalization of the state from planning process and the monopoly of a single private company (Makdisi, 1997; Kassab, 1994); inadequacy of sole concentration on central district while the rest of the city remains divided (Nasr, 1996); the ultra-modern landscape appealing only to upper-class groups (Höckel, 1007); and discontinuity from historical bonds (Larkin 2010; Fricke 2005).

Figure 5. Photo of Martyr's Square from a Postcard in 1960s
(http://www.habeeb.com/beirut.war.lebanon.02.html)

Figure 6. Photo of Martyr's Square during the Civil War in 1978
(http://www.habeeb.com/beirut.war.lebanon.02.html)

Even though there have been efforts to address these critical discourses, the modern infrastructure of the downtown contrasts with the persistent poverty of the refugee camps and slums (Silver, 2010). Further, the city is still ethnically divided.

2.3 Berlin

[Pre-division] Berlin constituted one entity until it was divided in 1945.

[Division] After the Second World War, Berlin was forcibly separated into west (UK, USA, France) and east (Soviet Union-SU) sectors. West Berlin was an exclave in Soviet territory, with road, air and rail connections to West Germany.

After the *Berlin Blockade* of 1948-1949, quarrel between East and West Germany culminated in the setting up of two rival states; in Western Germany the *Federal Republic of Germany* (FRG), comprising the American, British, and French Zones, and in Eastern Germany the *German Democratic Republic* (GDR), comprising the Soviet Zone. GDR declared East Berlin as its capital, while FRG carried its capital city to Bonn.

The sealing off of the border was a gradual process which first appeared in 1952. GDR was approaching an economic collapse, and people of the East were trying to escape the negativities by fleeing to West Berlin (Elkins et al, 1988). In 1961, to restrict movement, *The Berlin Wall* was erected and armed by military and police forces of the GDR (Figure 7).

Immediately after 1961, roads were torn apart; rail systems were separated; and a full defence depth was erected with alarmed wires, dogs, watch towers etc. (Figure 8). In order to erect the wall, buildings were demolished along its route, usually involving a single street of structures, but sometimes, encompassing entire blocks (Loeb, 2006).

In West Berlin, urban development opportunities were restricted due to limited available land. Therefore, in the first phase of division, during 1950s, reconstruction projects were implemented in the built-up area. Even though the Eastern sector did not have an urban expansion problem, lack of funds and building material, combined with strict planning policies helped to contain the urban sprawl (Von Beyme, 1990). Consequently, both halves of the city evolved compactly. During the second phase of division, between 1960s and 1970s, the growing demand for housing was dealt with construction of massive, high density housing areas on the outskirts of the city in West Berlin. In the Eastern sector, there were also major urban extensions. Again, this caused the two sides of the city to develop in accordance with each other.

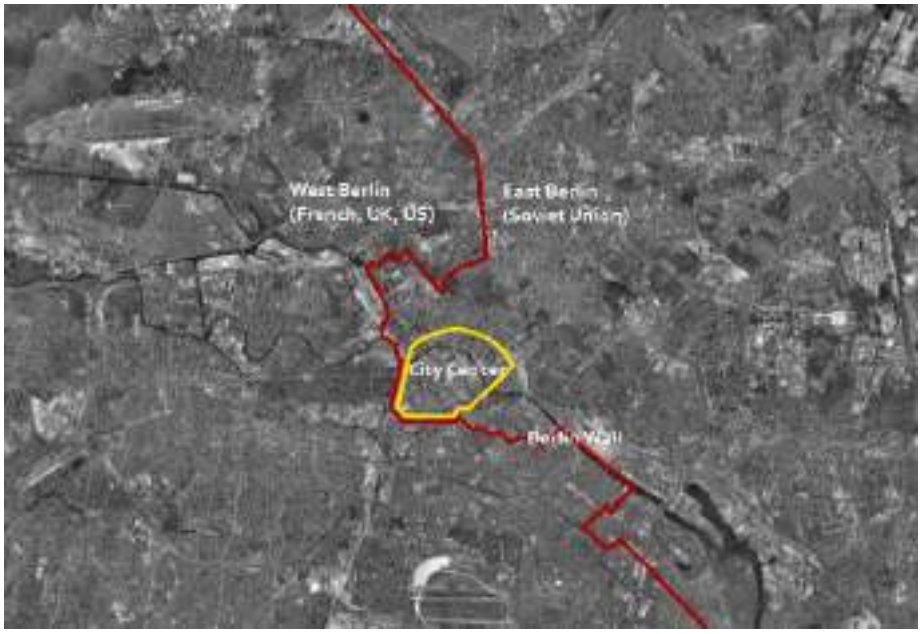

Figure 7. Berlin's Division (1961-1989)

Figure 8. Berlin Wall and its Defence Depth
(http://www.bbc.co.uk/schools/gcsebitesize/history/images/hist_berlin_wall.jpg)

The historical city centre (*Mitte*) and the Central Business District (CBD) on the north-east axis (*Friedriechstrasse*) remained in the East (Figure 7). But this commercial axis was treated as any other street in anti-market GDR, and the CBD was further developed in *Alexanderplatz*. West Berlin had to develop a new CBD around the Zoo rail station which was already a secondary commercial centre before division with shopping and entertainment functions. During the years of division a hierarchy of central places developed in West Berlin (Ellger, 1992), making this part of the city polycentric.

On the other hand, a concentric structure was taking shape on the East side (Schwedler, 2000). East Berlin had the advantages and central functions of a capital. It housed all government institutions, top party bureaucracies, headquarters of industrial conglomerates and embassies (Ellger, 1992). In FRG, the capital was moved to Bonn, giving a disadvantageous position to West Berlin in this respect.

The dual landscape of the city was accentuated by infrastructural dissociations. Only the sewage treatment plant in East Berlin served for both parts of the city. There was also collaboration in matters of water infrastructure. Solid waste disposal was also agreed upon after 1971. Most severely affected was the transportation network, which was split up and developed in different directions. Traffic played a smaller role in the GDR than the West; the huge magisterial roads were sufficient (Von Beyme, 1990).

In West Berlin, land use plans (FNP) developed during years of division were made as if no boundary existed. The context of the surrounding GDR was included in pale grey, and major routes that would be reconnected following reunification were indicated by dashes in a light tone (Figure 9). Construction that would impede a future reunification was not permitted. Contrarily, plans of the Eastern side showed no trace of West Berlin.

[Reunification] Almost 45 years of division finalized in 1989 with the end of Cold War. The destruction of the wall started rapidly and works to unite the city socially, physically, economically and politically has carried on up to date.

Since reunification, planning process of the city is shaped by a doctrine which became to be known as *Critical Reconstruction*. This approach to planning is; "a critical re-appropriation of the past's particular urban virtues" (Murray, 2003). The emphasis is given to pre-1914 history (Marcuse, 1998). There are some scholars who do not find this approach fulfilling (Nasr, 1996; Marcuse, 1998) since the urban environment after reunification did not shelter great historical artefacts. The most criticized development in this respect is the demolishment of GDR Palace of Republic in 2008 to restore the former *Hohenzollern Palace* which stood in this site before division.

Figure 9. Detail of the 1984 Land Use Plan (Loeb, 2006)

Berlin's planning activity has since been focused on three main themes: (1) Physical reunification; (2) Re-establishment of Berlin as the capital; and (3) Showcasing Berlin to create a global city. Specifically the final theme resulted in a number of large projects which are centred in the inner city. These projects have been criticized for creating a segmented city, and as in Beirut, being under the drive of solely the private market (Marcuse, 1998). A well-known example of these projects is the *Potsdamer Platz*.

On the other hand, presence of the Wall was acknowledged in all the plans that were created after reunification. Main consideration is to preserve the memory of the wall; by locating landmarks; leaving walkways and bicycle paths along the border strip; and preventing temporary uses along the border zone. A report developed in 2000 by the City Development Office elucidates the significance of the Wall and opportunities it offers for future development of the city as a unity (Loeb, 2006).

2.4 Jerusalem

[Pre-division] Due to its long history, a great variety of different populations lived in the city. Historically, Jerusalem was a city of quarters, where rigid separations were rare and customary (Pullan, 2009).

Between 1920 and 1948, Jerusalem was administered by the British, as the capital of British Mandate of Palestine, and its political and economic importance expanded. Population grew rapidly (due mostly to Jewish immigration). Although the city was always one entity until 1948, in mid-1930s both the Jewish and Palestinian communities had developed into cohesive and self-sustaining societies (Benvenisti, 1987).

For the purpose of municipal governance, the British designated twelve wards according to religious majorities. These were the first 'ethnic fault-lines' to be formally inscribed in Jerusalem during the twentieth century (Benvenisti, 1986). These were regarded as autonomous communities; enclaves, rather than quarters (Pullan, 2009).This approach fostered intergroup competition, deepening animosities between traditional rivals in Palestine.

[Division] After World War II, international support to build an Israeli state emerged and Israel declared independence in 1948 following a civil war (1947-1948). This resulted in division from 1949 to 1967. The *Green Line* marked the international armistice lines between East and West Jerusalem (Figure 10).

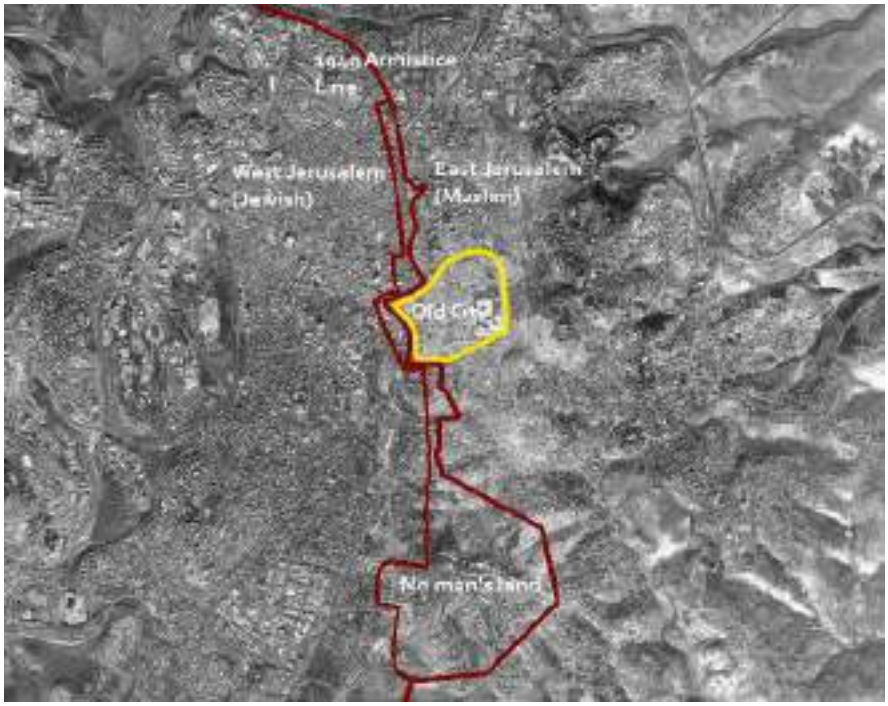

Figure 10. Jerusalem's Division (1949-1967)

During the 1949-67 period, armistice line between Israel and Jordan became an international border running 7 km north to south through the centre of the city. By 1962, the armistice line consisted of a physical barricade of barbed wire through a mined no man's land, with ramparts and blocked roads (Silver, 2010). The two countries each had their own institutions and jurisdiction over their own half of the city. Effectively, Jerusalem had two autonomous urban centres with UN supervision of the border and crossings closed to Arabs and Israelis (Pullan, 2009).

After division West Jerusalem became the capital of the state of Israel. The Israeli government was determined to secure and expand their holdings in West Jerusalem. Immigration was encouraged and government ministries were relocated from Tel Aviv to Jerusalem (Calame and Charlesworth, 2009). As the former commercial

centre of the city along *Jaffa Road* was bombed and deserted after the war, West Jerusalem shifted its business centre away from the Old City walls to the west, north and south. Physical infrastructure projects and housing construction flourished. The built-up area was expanded towards its hinterland, where possible–west and the south. These suburban settlements, over the years, transformed Jerusalem into a city of neighbourhoods, each with its own concentration of homogeneous, socio-economic, ethnic and religious populations (Kliot and Mansfeld, 1999).

The population and prosperity of East Jerusalem shrank because investments were focused in the capital, *Amman*. Palestinians preferred to live and work in Amman. Therefore, population growth in East Jerusalem lagged behind. Residential areas developed to the north, integrating rural communities within the urban area. Therefore, urban areas in East Jerusalem were segmented, lacking continuity, with separate population concentrations and lack of infrastructure. Unlike West Jerusalem, there was no organized planning or zoning process.

Residential quarters on both sides of the border became *cul-de-sacs*, so that nobody wanted to live in them. There was a reversal of traditional development patterns. Areas close to the city centre were occupied by frontier residents – immigrants, refugees or the destitute (Calame and Charlesworth, 2009). As might be expected, the two halves of the city shrank away from each other, trying to avoid the negative impacts of border areas: one side was oriented westward to Israel (*Tel-Aviv*) whilst the other focused east on Jordan (*Amman*).

Similar to every other divided city, Jerusalem was obliged to duplicate itself in every way. A dual landscape was visible through separate municipalities, CBDs, hospitals, schools, transportation networks and infrastructural systems.

[Reunification] Reunification of Jerusalem was not achieved by rapprochement, but instead by an occupation as a result of the 1967 Six-Day War. This incorporation of East Jerusalem into Israel was not recognized by the international community or the Palestinians. The two halves of the city were reunited by force; hence, two parts remained hostile even though the Green Line was dismantled.

All the barricades and partitions along the former Green Line were demolished and municipal services (water delivery, telephone services, electricity links etc.) unified. Roads were connected and paved, and new signs were posted: Jerusalem was physically re-united. However, there was a stark disparity of social conditions and opportunity between Israeli and Palestinian residents of Jerusalem, and this did not disappear with the barricades. This disparity was further deteriorated by urban planning policies of the Israeli government.

Israeli planning between 1948-67, and especially after 1967 has been shaped by objectives of national security and political control (Bollens, 1998). Many of the new suburbs are designed as individual enclaves, connected by primary road systems for the Jewish population and separated from Palestinians by open landscapes (Figure

11). The aim of urban policies; is to extend the Jewish city, demographically and geographically; to control hilltops for security reasons; to reconnect the formerly partitioned Jewish sites; and, to build scattered but interconnected Jewish neighbourhoods so that division of the city cannot occur again (Bollens, 1998).

Figure 11. View of a Palestinian Neighbourhood from an Israeli Neighbourhood and the Separation Wall in Between (Pullan, 2011)

This kind of planning is nominated as *partisan* planning (Benvenisti, 1986; Bollens, 1998) and establishes a radical form of *frontier urbanism* (Pullan, 2011), *forensic architecture* (Weizman et al, 2010), *conflict urbanism* (Misselwitz and Rienietz, 2009) and a *geometry of occupation* (Weizman, 2006). A local form of gated communities (Pullan, 2011) is the main form of urban development. Without a question, architecture and planning became tools in the conflict themselves.

[Re-division] In 2002, Israel began to build systems of physical and electronic separation—known as the *Security Fence*—between Israeli and Palestinian territories and within the Palestinian areas (beyond the internationally recognized Green Line) in northward and eastward directions. This wall is planned to be 570 km long and 6-8m high. The regional barrier passes through Jerusalem with 51 km segment separating Israeli Jerusalem from Palestinian suburbs to the east (Calame and Charlesworth 2009). Today a map of Jerusalem shows this complex patchwork of settlements and villages across the city, with its plethora of borders (Figure 12).

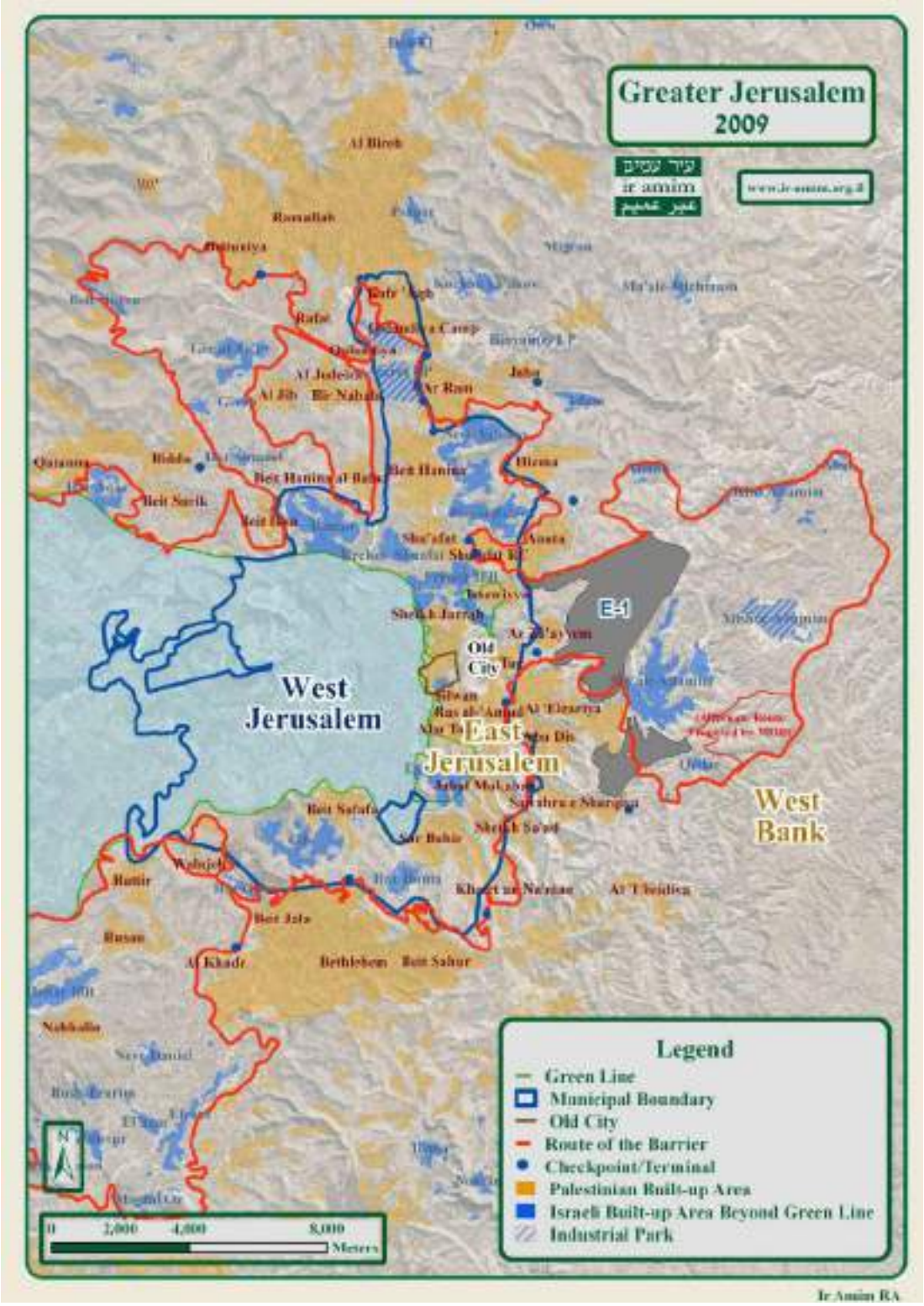

Figure 12. Distribution of Israeli settlements and the route of the Security Fence in Jerusalem and West Bank, 2009 (http://www.ir-amim.org.il/eng/?CategoryID=162)

2.5 Results

Division process of each city is the main reason why different urban consequences are achieved. Belfast is particularly unique among case studies in that it was not divided by a war, but a colonization process. This caused internal cohesion in each group (colonized and the colonizer's representatives), and therefore the conflict grew from within the social organism. This is the main reason why Belfast's division process took longer than the rest, and why division still lingers.

Berlin, like Belfast, was divided in a long time-span, with more integrated borders, than those of Beirut and Jerusalem, where division was immediate and less penetrable. In Beirut and Jerusalem, it was during wars that the lines separating them were completely sealed, hence making them less permeable. In this respect, Berlin was also divided by an international war, but unlike Jerusalem, it was a relatively relaxed border where some interactions were possible from time to time.

All the case studies were divided through the heart of the city, except for Belfast, where division is scattered all around the city. Furthermore, peace walls in Belfast are not as armed as the others were. Since wars are the main reason of division in other cities, their borders carried a military presence. But all in all, the dividing lines turned streets into *cul-de-sacs* via walls, barbed wires, sandbags, wire meshes, steel and (in Jerusalem and Berlin) land mines.

When the city is divided from the middle, the two halves have restricted options for growth. The traditional pattern of urban sprawl is hindered where each side can only advance on available routes. For example, West Jerusalem could only develop towards the west. Different developmental patterns were observed; linear (Jeusalem), band (West Berlin) or ribbon typed (Beirut) developments. However, even though West Berlin had a hierarchy of centres, East Berlin continued to grow concentrically.

Deterioration of the buildings near the border was not only because of war damage, but also due to population exchanges. In Berlin, a further consequence has been derelict industrial buildings due to lack of finance (East Berlin) or incompetence (West Berlin). In war-torn cities of Berlin, Beirut and Jerusalem, buildings were demolished to give way to military border zones. This caused vacant lands to proliferate near border zones, especially after reunification. On the other hand, vacant lands in Belfast were mainly formed due to new road projects.

Especially in Belfast and reunified Jerusalem, urban fabric is dominated by roads. In Jerusalem, new road projects are used as tools to accentuate existing divisions, and in Belfast, although having the same effect, the aim is to attract new investments.

The most visual artefacts of division are territorial markers used to exert prominence on people's perception and behaviour. For example in Beirut, territorial zones of paramilitary organizations were marked by checkpoints and graffiti. Belfast and Jerusalem, which are not 'reunified', are fruitful areas for the study of artefacts of

division. Murals, flags, curb stones are only some elements reflecting territorial claims through the usage of urban artefacts.

A further consequence of division in war-torn cities has been the changing functions of urban space. The central functions of the urban core were lost; especially due to extensive war damage (in Beirut and Berlin). Once, these areas were the heart of the city with lively commercial and service activities, now they had become edges. Commercial areas moved away from the dividing line and bi-polarized. New CBDs were created, because either the old ones were right inside or partly occupied by the border zone. Bi-polarization of CBDs and reconnection of urban functions were essential problems encountered after reunification, particularly in Berlin.

All four cities were the capital of their respective countries before division. Administrative functions of the capitals remained in place in each, except for West Berlin, where it was carried to Bonn. However, the primacy of capital cities of Berlin, Beirut and Jerusalem faded away during years of division, in accordance with their political instability.

Residential zones in all the cities examined became ethnically homogenized due to population movements and displacements. Intersection points of residential zones were most vulnerable areas for conflict, and either barricades were erected (as in the case of Belfast peace lines), or they turned into derelict sites. People who had the opportunity moved out of these areas for safer havens, and low status immigrants, refugees or homeless people occupied the empty houses. As a result, residential segregation coincided with socio-economic cleavages, further breaching divisions.

The economies of all four cities suffered tremendously due to division. First, because all (except East Berlin and Belfast), lost their hinterland and became an ‘end city’. Second, even though West Jerusalem and East Berlin were improved as the capital city, duplication of public facilities, services, transport systems and infrastructure meant enormous waste of resources.

Reunification in Berlin, Beirut and Jerusalem showed that it was easy to re-connect the infrastructure, but hard to reinstate a city which will function as a whole. Among case studies, this is particularly prominent in Jerusalem; where East and West Jerusalem remain divided, and further, new divisions appear each day. Social realities, like chronic fear, contribute to this situation.

3. Conclusion

The results of the analysis show that in spite of differences among case studies, a common pattern of functional, structural and socio-economical urban consequences surface (Table 1). The fact that each city produces unique consequences according to their political, socio-economical and physical transformations should not be neglected. Hence, this list is preliminary and can be altered in consistence with the subject and the choice of case studies.

Table 1. Urban Consequences of Division

Functional consequences	* Declining central functions of the urban core * Segregated residential areas, 'ethnic enclaves' * Bi-polarization of commercial areas * Fading primacy of capital city administrative functions * Duplication of urban functions (transportation, services etc.) * Changing functions of urban space
Structural consequences	* Changing urban development patterns (linear, ribbon, concentric/polycentric etc.) * Road-dominated environment (Belfast, Jerusalem) * Proliferation of cul-de-sacs * Presence of frontier landscape * Proliferation of vacant land * Deterioration of buildings * Everyday artefacts of division
Socio-economic consequences	* Economic depression * Chronic fear * Population exchange, homogeneous zones * Socio-economic divisions parallel with ethnic divisions

All in all, it is expected that illustration of common developmental patterns of division will facilitate early recognition and management of this process. Further, this study can contribute to future studies which aim to construct effective planning approaches and management forms in divided cities.

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ASSESING THE PUBLICNESS OF PUBLIC PLACES: TOWARDS A NEW MODEL

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Abstract

In an urban world greatly concerned with sustainable development (Human Development Report 2007/2008; UN Climate Change Conference Copenhagen 2009), building more socially cohesive, environmentally friendly and economic competitive cities appears as a key prerequisite. Through their multiple functions and various roles, public places are central to achieving urban sustainability. But public space has been a contentious term in the academic literature and a 'fuzzy concept' in the practice of city-making. This paper will present the findings of my doctoral thesis, clustered around three main points:

- a new way of conceptualising the publicness of public space, defined as the sum of characteristics that make a public space public;

- a new methodology for practically assessing public places and

- the testing of the new methodology on three new public place case studies, created in the past three decades on the post-industrial waterfront of the River Clyde in Glasgow, UK.

The research was based on a new understanding of publicness as having a dual nature: it can be grasped simultaneously as a cultural reality and as a historical reality. As a result, it was considered that assessing the publicness of a public place comprises two things: first, a measurement of the site as a snapshot against the existent standard of publicness and second, an explanation of that measurement though exploring its development process. This was applied in practice, on three new public places created on the regenerated waterfront of the Clyde, in Glasgow and conclusions were drawn regarding the robustness and usefulness of this approach.

1. Introduction – What is public space?

Public space is neither an uncontested nor an uncontroversial arena in the disciplines of urban design and planning (e.g. see Atkinson, 2003; Raco, 2003). Indeed debates on the "politics of space" (e.g. the tension between surveillance and access rights to public space) continue to capture academic and public attention (see Lefebvre, 1991; Flusty, 2001; Mitchell, 2003; Madanipour, 2003; Kohn, 2004), raising important questions of social justice, such as: "Who makes and controls public space?" and

"Who benefits from the development of new public space in the context of restructuring the city?" There are even more pessimistic voices arguing for the breakdown of society and „the fall of public man" (Sennett, 1977) due to a change in people's attitudes. From active participants in the life of the city, „the people" have become passive spectators to the display of neoliberal and market-driven forces (Foucault, 1986); the „public" has been „pacified by cappuccino" and lost its ability to fight for „social justice for all" (Zukin, 2000; Atkinson, 2003).

As a reflection of such concerns, a distinctive strand in recent urban design policy in the United Kingdom has been focused on urban design as making places for people (Urban Task Force, 1999 & 2005; DCLG, 2009; Carmona et al., 2003). As such, „the public" has been the subject of increasing policy attention over such matters as the commodification of space; cappuccino urbanism and a focus on affluent consumerism; the privatisation of public space; the militarising and securitising of space through CCTV and other express security measures; exclusion from public space; the emergence of gated communities; the Disney- fication of public spaces etc. In turn, public space is also the subject of a growing academic literature from the full range of social science and humanities disciplines (Carr et al., 1992; Sorkin, 1992; Mitchell, 1995; Zukin, 2000; Madanipour, 2003; Massey, 2005; Mensch, 2007). Each discipline sees public space through a different lens, and with particular interests and concerns to the fore. Political scientists, for example, focus on democratisation and on rights in public space; geographers on „sense-of-place" and „placelessness"; legal scholars on the ownership of and access in public places; sociologists on human interactions and social exclusion etc. The result is a diverse array of multi-disciplinary approaches towards understanding „public space" (Figure 1).

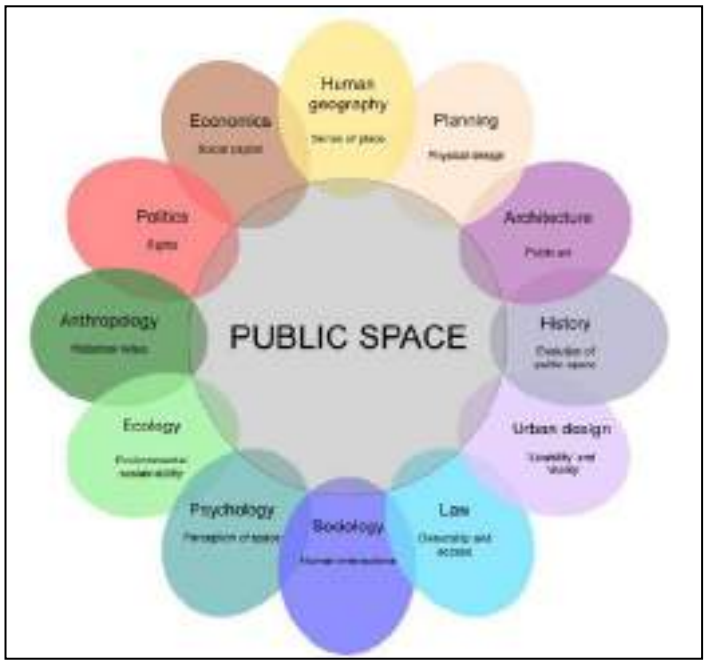


***Figure 1** Public space – a multidisciplinary approach*

What these various

disciplinary accounts seem to have in common though is a sense that something has been lost. It seems that a commonly accepted standard of publicness of public space has been tainted by the intrusion of economics and politics of fear and control (Sorkin, 1992; Mitchell, 1995; Davis, 1990; Zukin, 2000). The starting point of this research was to find out if there was a way to measure publicness and describe in a more rigorous way if and what has been lost.

The existence of these various understandings of public space from multi-disciplinary perspectives creates much confusion around the meaning of the terms „public space" and „publicness of space". During the research, it became apparent that the notion of public space is such a „slippery term" because first, on a theoretical level, there are so many conflicting and confusing multi-disciplinary views and definitions in the matter. Second, on a practical level, the real, built public places are complex socio-cultural, political and environmental products of a social group while on a third, individual level, public space is also a subjective, personal construct. A space can be public to me but not to you. The first aim of this inquiry was to try to shed some light into the meaning and the complicated nature of public space. Because of the existence of so many different disciplinary perspectives on public space and as it was felt that none of them clearly explained why public space is such a „slippery term" and defined it in a comprehensive manner, the research sought to approach the matter in a fresh way. The next paragraphs will present the theoretical foundations that anchor this study.

2.0 Theoretical considerations

2.1 The dual nature of public space and the Star Model of Publicness

As a distinctive part of the built environment, the main stage where the life of the community unfolds, public space is deeply intertwined with the beliefs, traditions, experiences, political views and so on, what is generally understood as the culture of a particular society.

> "The existence of some form of public life is a prerequisite for the development of public spaces. Although every society has some mixture of public and private, the emphasis given to each one and the values theyexpress help to explain the differences across settings, across cultures, and across times. The public spaces created by societies serve as a mirror of their public and private values as can be seen in the Greek agora, the Roman forum, the New England common, and the contemporary plaza, as well as Canaletto's scene of Venice" (Carr et al., 1992; p. 22).

In other words, on the background of larger political, economic and social structures, a certain society, at a certain point in time, holds a common understanding of what makes a public space, public, or otherwise said, what the ideal public space is and this is then translated in the various public places that are created. If one could grasp this general held view on the ideal public space and determine what key

characteristics are considered as giving a certain place its „quality of being public" or in a shorter phrase „its publicness", then this could be used as a standard for measuring different public places. But how to grasp this ideal? The approach taken here was to investigate the literature in the field, from as many disciplines as possible (with a focus on urban design and planning), in a deductive manner (see Figure 2).This is the understanding of a public place as a cultural artefact and its publicness as a *cultural reality*.

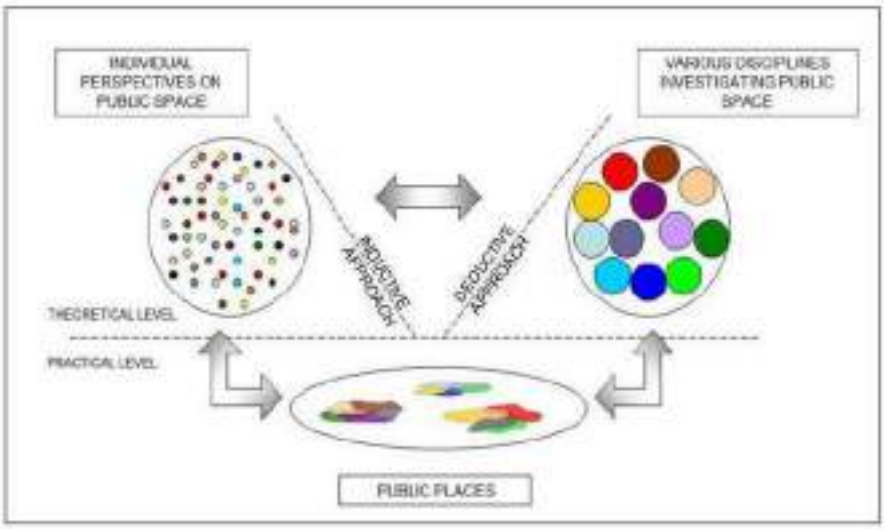


***Figure 2* Deductive and Inductive approaches to studying public space**

At the same time with being a cultural reality, the publicness of a public place is also a *historical reality*. As the western society changed in time, so did the conception and implicitly the physical representations of public space; a reflection on the history of public space in the western world shows that in different time periods, different public places were created according to different ideas and ideals of publicness. The ideal of publicness of the ancient Greeks reflected in the agora where women, foreigners and slaves were not allowed to take part (Mitchell, 1995) seems inappropriate for the contemporary western society. For the present inquiry, this means that an ideal public space and a standard for its publicness can only be defined for contemporary, newly built public places, in the UK and generally in the western world, in the last fifty years or so.

It needs to be stressed that publicness is seen here from a critical realist point of view, as something *out there*, something measurable, independent of the human consciousness. However, it is accepted that publicness can also be grasped from a subjectivist point of view. Each individual has a slightly different way of perceiving what a public space is (from one's experience of different public places and the personal meanings they are associated with). The subjective nature of publicness means that even though this ideal can be defined, it will not be shared by everyone. From this discussion, it results that on a conceptual level, public space is ever an

ideal, reflecting a general common view held at a certain point in time and in a certain socio-cultural setting; no reality can match it but by grasping this ideal and using it as a standard for publicness, public places can be measured, compared and as a result it can be known more clearly where they fail and how they can be improved. Therefore the research question anchoring this research was: *what makes a public space, public?* In other words, *how can one conceptualise and measure the 'publicness' of public space so that different public places can be graded and compared?*

In order to answer this, the dual nature of publicness theory was created. To analyse public space as a historical reality, there are available methods of research such as interviews, focus groups, document analysis and archival research. However, for analyzing the publicness of public space as a cultural reality, no actual method was found in the public space literature. Therefore, the Star Model of Publicness was developed to fill in this gap. Although the first of its kind, it is built upon several original and valuable attempts of analysing and quantifying different aspects related to the publicness of public places. The Dutch scholars Van Melik et al. (2007) looked at indicators related to one dimension of public space, management, and were concerned with comparing two opposed types of managed public places, "secured" and "themed" ones. On the other side of the Atlantic, the Americans Nemeth and Schmidt (2007) have also looked at the management aspect of public space and attempted to create a "methodology for measuring the security of publicly accessible spaces" (Nemeth and Schmidt, 2007).

When asking the quite deceptively straightforward question: "What is public space?" a web of closely related but loosely defined terms complicates the answer to this question greatly. As Orum (2010, p. 13) asserted "...the mystery and drama of public spaces begin with their very definition". When closely analysing the different ways of defining and conceptualising public space, it can be noticed that the literature can be grouped in five thematic clusters.

First, a key characteristic of public space appears to be related to **ownership**. Writers from North America such as Lofland (1980), Kohn (2004) or Staeheli and Mitchell (2008) identify as a crucial element for a place's publicness, its maintaining in public ownership. In addition to the above writers, there have been many voices arguing that a growing phenomenon of privatisation of urban space is responsible for much of the damage produced to the cities' public realm. These have come also from North American authors such as Sorkin (1992), Zukin (1995) or Banerjee (2001). Kohn's (2004) extensive study Brave *New Neighbourhoods: The Privatization of Public Space* is dedicated entirely to this phenomenon.

A second clearly defined cluster in public space research is concerned with the **physical configuration** of a public place. In several of the definitions and conceptualisations investigated, public space is associated with real physical urban places. For example Brown (2003) identifies urban public space as including "…formal squares, roads and streets, but also vacant land, verges and other 'edge-space'" (p. 10) while Tibbalds (1992) describes the extension of the public realm

from "… all the streets, parks and squares of a town or city into the buildings which enclose and line them" (p. 1). The bulk of this literature on the physical appearance of public places comes from the disciplines of urban design and architecture.

A third strand of research is framed by the sociological and anthropological public space literature and refers to the use of public space, or in other words, to their **animation**. Being the places of free assembly and interaction among the members of a community, public places are the physical stage where "…the functional and ritual activities that bind a community, whether in the normal routines of daily life or in periodic festivities" (Carr *et al*., 1992, p. xi) take place. Whether the case studies are the Latin American plazas (Low, 2000), the New York's redeveloped parks (Zukin, 1995) or "the third places" of the western culture (Oldenburg, 1989) these writings share a common preoccupation with people's behaviours and actions in public space and how these change over time. Two key studies that document the use of public space in relation to the above mentioned dimension of physical configuration are in the USA, Whyte's (1980) *The Social Life of Small Urban Spaces* and in Europe, Jan Gehl's (1996) *Life Between Buildings.*

A fourth strand of research is related to public space as the arena where the fragile relation between freedom and **control** unfolds. Many authors, among which Carr *et al*. (1992), Mitchell (2003) and Goodsell (2003) consider the quality of a public place of being a democratic arena for public life as fundamental for its publicness. They note that public places are historically the places that have served as the stage for the expression of the people's dissatisfaction with a certain state of affairs. As a result, they are the places where fundamental rights guaranteed by a democratic society, such as the right to speak freely and assemble, are manifested. What appears to have happened recently is an increase in the surveillance and control measures in public space, noted by scholars such as Koskela (2000), Atkinson (2003) or Raco (2003).

A fifth and last common theme is concerned with the maintenance of public places according to certain standards, so that they are clean, friendly and inviting areas. Although this meta-theme of **civility** is not as explicit as the others, many of the reviewed writings identify the presence of refuse and decay in urban public places as a cause and a mark of the broader decline of the urban public realm. One of the writings where the issue of public space maintenance is thoroughly addressed is Francis Tibbalds' *Making People Friendly Towns* (1992) where he states with concern:

> "… we are now witnessing a serious decline of this rich domain. Many of the world's towns and cities – especially their centres – have become threatening places – littered, piled with rotting rubbish, covered in graffiti, polluted, congested and chocked by traffic, full of mediocre and ugly poorly maintained buildings, unsafe, populated at night by homeless people living in cardboard boxes, doorways and subways and during the day by many of the same people begging on the streets." (Tibbalds, 1992; p. 1)

Five key dimensions of publicness have been presented, differentiated for the purpose of this theoretical endeavor into five meta-themes: ownership, physical configuration, animation, control and civility (Figure3).

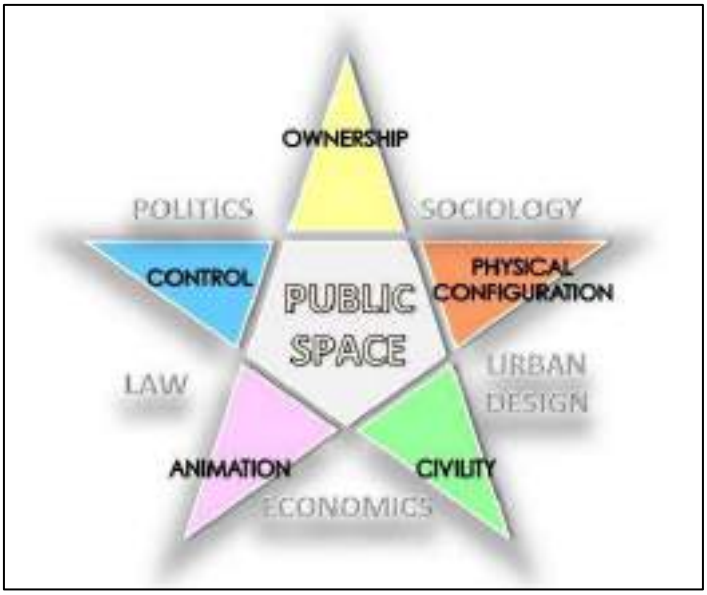


Figure 3The Star Model of Publicness

Through their synergic interaction, where the sum of all is greater than the parts added together, they create the publicness of public space. Public ownership of a site means that the place is owned, in a way, by all members of the society and is, in principle, open to all members of the public, no matter how one defines that public. It means that decisions about its use and accessibility are subject to some form of public accountability. High connectivity and visual permeability enable greater access into a public place, while specific elements of design support different activities, responding to different needs of people in public places. The absence of oppressive control allows for a freer and therefore more diverse use of a public place. A more civil place – one that is well lit, clean, green and inviting, will attract a greater number and diversity of users. A more animated place, where a variety of activities are performed by a large and diverse public will also designate a more public place. Therefore in this research public space is defined as:

> *the concept referring to all public areas, that are publicly owned by democratically elected bodies, well connected in the surrounding urban grid and designed according to principles that foster activity and social interaction, used by a large and diverse public in a variety of ways, controlled in an non oppressive manner and characterised by an inviting and tidy atmosphere.*

The definition illustrates the common understanding found by the researcher of what

constitutes a *very public* public place today in the UK and in the Western world generally, in relation to which existent public places can be measured. A key aspect is that these disciplines can be seen as varying from a *more public* to *less public* situation (Figure 4). This was the foundation for constructing a new tool for measuring public spaces.

More public	**-**	**Less public**
Publicly owned space with public use	**OWNERSHIP**	Privately owned space with public use
Well-connected/located within the movement system (i.e. on-the-beaten-track); strong visual connection to external public realm beyond space; without obvious entrances and thresholds; a wide range of supports for a wide range of activities	**PHYSICAL CONFIGURATION**	Poorly connected/located within the movement system (i.e. off-the-beaten-track); poor visual connection with external public realm; with explicit entrances and thresholds; narrow range of supports creating a limited potential for activities
A large and diverse public engaged in a variety of activities	**ANIMATION**	Dead public space: few people engaged in few activities
Free use and a comforting police presence	**CONTROL**	Overt and oppressive control presence - human and electronic surveillance; highly visible security presence
Cared-for; well-kempt; inviting	**CIVILITY**	Untidy, vandalised, dirty and uninviting

Figure 4 Descriptors of 'more public' and 'less public' for each meta-dimension

2.2. The Star Model – a practical tool for measuring public places

The thought process driving the translation of the Star Model from a theoretical construct into a practical tool to measure and represent publicness is shown in Figure 5. The challenge was to find elements for each meta-theme that could be measured easily and quickly so that anyone with an interest in a site could calculate its publicness. Bearing these in mind, a search was initiated for those elements that could bemeasured and that were influential for determining the five meta-themes (Annex 1).

Following this, the second stage was concerned with calibrating them. In this respect, a rating scale was decided upon for grading their variation from low to high publicness. In

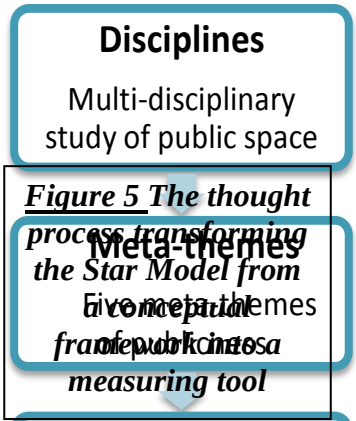


Figure 5 The thought process transforming the Star Model from

previous research, Nemeth and Schmidt (2007) have used 0, 1 and 2 values and created statistical modeling for a large number of public places in New York. This was considered as a too superficial way of observing and translating into measurements the different shades of publicness of particular public places. As a result, it was opted for a scale from 1 to 5, 1 being the lowest publicness and 5 the highest. A scale more than 5 would have complicated the model too much while a lower one would have not been sensitive enough for the different levels of variation. For each grade, the researcher tried to give a description as objective as possible for every indicator and create a scale ranging from „less public" to „more public" based on the theoretical decisions made during the literature review stage. Although it is acknowledged that the rankings have an inherent degree of subjectivity, the researcher tried to be as objective as possible and create a model as less arbitrary as feasible with the available time and resources.In relation to aggregating the results, it was decided to consider all indicators equal for each meta-theme, recognising that it is a task for future research to find out other more complex ways of calculating the measurements for each meta- theme.

To illustrate the results pictorially it was decided to translate the Star Model into a Star Diagram. The larger and better delineated the star, the highest the publicness of the public place would be while less well-delineated, even „negative" stars would reflect a site with a low value of publicness. In order to apply the model in practice, the majority of the indicators can be measured by using the method of structured observation. The only indicator that cannot be measured in this way is *Ownership status.* The rating for this indicator needs to be found out during the investigation of publicness as a historical reality, for which the methods of document analysis and semi-structured interviews were chosen. These made possible for the researcher to construct the development story of each site and understand how its publicness was influenced by different actors during this process. However, this will be not covered here due to the paper's limitations. Instead, only the results of applying the Star Model will be presented.

2.3 Applying the model in practice

The creation of new public places on the recent regenerated waterfront of the Clyde,

the central river in Glasgow, has not been adequately investigated. From a highly industrialised river that brought wealth into the city and made Glasgow the second city of the empire, in the second half of the 20th century, the waterfront underwent slow decay culminating to the city having turned its back to the river. The recent regeneration of the waterfront has been therefore a controversial process that captured the attention of the public, the media and the research community. In the process of urban regeneration, public space has been seen as a priority for changing the image of the city and for promoting Glasgow on the world stage. By assessing the publicness of new public places on Glasgow's post-industrial waterfront it was intended to apply and test the model, while investigating the recent transformation of the river as part of the broader background of the city's regeneration.

Regarding the number of case studies, a balance needed to be found between the advantage of investigating more case studies, which would help test the applicability of the model and the disadvantage regarding less time available for appropriately exploring the development process and historical background of each site. Consequently, three case study new public places created on the post-industrial waterfront of the River Clyde were selected. These were new public places, created in the last decades of waterfront regeneration, similar in purpose, in the sense that they should all have been created for the 'wide public', Glaswegians and tourists alike (and not for specific categories of users, such as a children's playground). Also, in order to introduce variation and see how the model works in slightly different circumstances, each case study was chosen as part of a different type of development that has been produced in a different period in the last thirty years or so. Based on these considerations, the following sites were chosen:

Pacific Quay, one of the first places where development started to happen on the derelict post-industrial landscape of the Clyde's waterfront, was the location for one of the first cultural regeneration events in the city – the Glasgow Garden Festival in 1988. It is an area dedicated to leisure and tourismbut also to the media industries, representing Glasgow's new „Media Quarter (the new headquarters of BBC Scotland have been relocated on site in 2007). The site is situated approximately one mile to the west of the City Centre, on the southern bank of the river. On the northern bank, opposite to the case study public place are the SECC (Scottish Exhibition and Conference Centre) and The Clyde Auditorium or 'The Armadillo' – two famous landmarks in the cultural and touristic life of the city.

Glasgow Harbour, developed mainly as a housing project, especially in its first stages, started in 2000 and it is one of the most controversial developments in Glasgow in the last decades. This is due primarily to the demolishing of the famous Meadowside Granaries, a significant landmark from Glasgow's rich shipping industrial past, to be replaced with luxury apartments and a new public place. It is situated to the West of the city centre, bordering the traditional working class neighborhood of Partick and was planned as an extension of the close by West End – the most affluent part of the city and the location of the University of Glasgow.

Broomielaw, the latest public space development on the Clyde waterfront, was

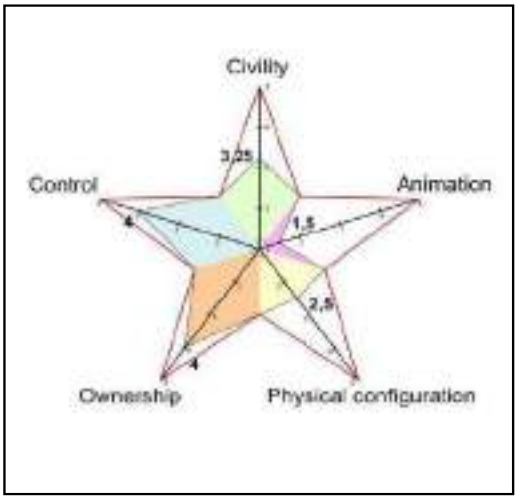
opened in 2009. It is part of a larger project consisting of two regenerated river walkways, one on the north side of the river at Broomielaw and one on the south side of the river at Tradeston, connected by a new pedestrian and cycle bridge, the Squiggly Bridge. Due to the current recession, the Tradeston development is not yet completed; the greatest progress has been made in the Boomielaw part and as such, the new public place here – the river walkway - was chosen as the case study. The site is in the City Centre of Glasgow, next to the International Financial Services District (IFSD) and has been a publicly led project by the Glasgow City Council.

Three days were spent in each location, from morning until evening and measure the indicators: Mondays to account for the week use, Fridays and Sundays for the weekend use pattern. It was considered that it was insufficient to record the animation of a place only for one day, because this would lead to a biased set of data. In that specific day, adverse weather conditions, a special event or celebration in the city or other similar factors could greatly influence the animation of a site. It was decided to perform the observations in the autumn of 2009, for approximately two months, from the end of September until the beginning of November.

3. Results

Applying the model was a successful attempt in the sense that the publicness of each public place could be graded and as such, comparisons were possible among them. The results show that the most public, public place is Broomielaw, with a value of **3.63** and the least public is Glasgow Harbour, with a value of **2.6** while Pacific Quay rates intermediary, with a value of **3.03** (Figure 6). The Star Diagrams allow for comparisons in terms of each meta-theme while the investigation of each site's development story allows for explanations of the obtained ratings.

Regarding the first meta-theme, each public place presents a different rating, illustrating a different 'shade' of ownership. Broomielaw is in public ownership, and as such it rates the highest. This is a result of the public place being in the ownership of the Glasgow City Council, the local democratically elected public authority, which led the regeneration process and kept its hold on the site.



Pacific Quay – overall rating of publicness **3.03**

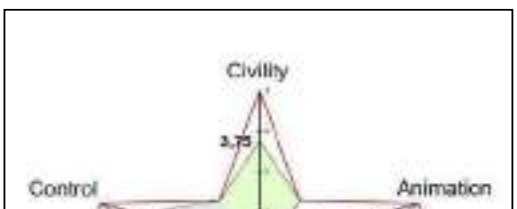


Figure 6**The results of the Star Model application in Glasgow, UK**

Pacific Quay has a mixed ownership, comprised by two owners, the BBC and the Science Centre. Glasgow Harbour is in the private ownership of Clydeport, the local port authority which has always owned the land and led the regeneration process. It cannot be concluded from these three case studies that a phenomenon of privatisation of public space is happening on the Clyde Waterfront. A larger study, involving more case studies would be required to establish this.

Related to physical configuration, the case studies can be discussed in terms of both macro-design and micro-design. Related to macro-design, none of the public places was found to be very well integrated in the surrounding urban grid. The best connected is Broomielaw, due to its proximity to the city centre, the creation of a

continuous walkway along the river in the 1970s and also to the desire of the Glasgow City Council to link the IFSD to the less developed south side of the river. Both Pacific Quay and Glasgow Harbour are very poorly connected to the surrounding urban grid, apart from the northern direction. In the case of Pacific Quay, this has resulted from a combination of factors: the lack of strong leadership and focus from the main actor, Scottish Enterprise, the continuous delay from the part of the private actors, who own the adjacent land and the lack of agreement among the public and private parties. In the case of Glasgow Harbour, there is a similar lack of development in the surrounding areas, a consequence of the recent economic crisis but also of the disagreements between the public and private actors to build a bridge over the Clyde.

In terms of micro-design, there is a good provision of walking opportunities in all the public places while sitting opportunities are better delivered in Glasgow Harbour and Broomielaw (although the focus was on robustness not comfort). In the case of Glasgow Harbour, the private owner and developer, Clydeport, wanted high quality materials in order to create an upscale housing development while in the case of Broomielaw, the aim of the Council was to create a postcard for the IFSD and Glasgow as a whole. In the case of Pacific Quay, there are very few and poor quality sitting opportunities, a reflection of the lack of emphasis on the development of this new public place. The Science Centre is an indoor venue, the BBC, a public office building and Scottish Enterprise focused mainly on bringing development on site and not creating a high quality public place. There are no active frontages bordering the new public places and very few opportunities toactively engage with and discover the environment. In other words, there is very little to make these places into destinations as they were intended.

All the public places rate fairly low regarding animation.This can be related to the lack of opportunities for active engagement and the poor connectivity with the surrounding environment, as discussed above. Pacific Quay and Glasgow Harbour rate the same and seem relatively empty places. Broomielaw is the most animated out of the three public places (with five activities performed in a short time interval), which can be related to a better connectivity of the site and its proximity to the City Centre. In terms of the number of people, although there could be no straightforward indicator devised, the indirect indicator, the Presence of Street vendors and/or entertainers reflects the number of users of the public places (448 people were recorded in Pacific Quay and 420 in Glasgow Harbour, with no street vendors and/or entertainers in either of them, with a much higher number of 1391 people recorded in Broomielaw, where there was only one street vendor present).

All three public places rate fairly high in relation to control. This is due to the overall absence of signs deterring behaviours and of sadistic street furniture. Also, a fairly low presence of guards was recorded. There were no private guards observed in any of the three sites and no public guards were observed in Glasgow Harbour and Pacific Quay. However, daily patrols were observed in Broomielaw. This is related to the existence for a long period of time of a negative image for the area (violence, drug abuse and prostitution) but also to recent incidents of childrenclimbing the

newly built bridge. All the public places have been found to be observed by CCTV cameras.

Related to civility, analogous, medium ratings have been obtained. None of the new public places have been provided with public toilets, a result of the Glasgow City Council's policy of closing them down on account of diminished public budgets. All of the public places have a fairly good provision and maintenance of greenery and lighting, Broomielaw rating marginally better. In terms of the tidiness of the area, the least clean site was Broomielaw. One of reasons is the fact that it is more animated and it seems that generally in Glasgow, the public does not respect the tidiness of the public places (littering, graffiti). Another reason is the lack of appropriate, high standard maintenance provided by the Glasgow City Council.

The three case studies investigated can be seen as representative for Glasgow's re-invention as a post-industrial city. The Pacific Quay site shows the focus of the city towards enhancing its media services, the Glasgow Harbour site is illustrative for the new trend of creating up market, luxury housing developments while the Broomielaw project is part of the new trend of establishing Glasgow as a financial and business centre. As part of this broader context, the average ratings of publicness obtained for the three new public places can be related to several factors. Among them is the relatively late regeneration of the waterfront, begun only at the end of the 1990s and the permanent empty purse of the Glasgow City Council, combined with a lack of funding from a national level (although the River Clyde is considered a Scottish national priority). Also, the divided ownership on the banks of the Clyde, the lack of a comprehensive vision for the river's regeneration from the part of the local authorities and the existence of a variety of public agencies and actors in charge with the public place provision and maintenance, frustrate the publicness of the new public places.

4. Conclusions

The following paragraphs will highlight the main ways in which this research project has addressed the existing literature, presenting both what this study challenges and what it confirms.

By initially reviewing multi-disciplinary literature, in which public space and publicness were conceptualised and defined in many different ways, this research gives a multidimensional definition of public space and proposes a unified theoretical model to describe the publicness of public places. Measuring publicness has proven to be a difficult task, and although a model has been created, and its first testing showed promising results, there remains plenty of scope for improvement. This is most evident in respect to the meta-theme of Animation, where more and better indicators need to be found. Also the possibility of measuring Animation in a similar way to the other four meta–themes needs to be reflected upon in more depth.

Through the application of the Star Model of Public Space, light was shed on the two overarching contemporary phenomena that have been identified recently as leading

to a loss in the publicness of new public places; privatisation of space and increased control of public places. Concerning the privatisation of public space, the results obtained by applying the model to the three new public places in Glasgow did not show conclusively that such a phenomenon is taking place in the Scottish city. However, they did show that indeed, increasingly, there is a blurring taking place between the boundaries of public and private as noticed by commentators such as Madanipour (2003), Kohn (2004) or Marcuse (2005). Concerning the control of public space, the results did show an increase in control measures especially electronic surveillance (i.e. CCTV).

Regarding the strengths of the model, first, on a theoretical level, the Star Model of Publicness brings together, for the first time, different key elements of publicness into one single entity. As such, the model clarifies the slippery concept of the publicness of public space and offers, at one glance, a comprehensive image of what makes a public space, public.Second, it measures publicness, quantifying in an objective way a concept previously considered mainly as a subjective construct. More, the publicness rating is not only encapsulated in one numerical value but it is also illustrated in a Star Diagram of Publicness. This is a new graphical representation that shows in a straightforward manner exactly where publicness is eroded or where it is enhanced. Third, the model offers a much-needed method to compare and contrast different new public places, created in the urban western world. The comparisons allow for understanding which public places are more public than others so that knowledge exchange is made possible and lessons are learned from the success and/or failure of different projects.

Apart from these theoretical strengths, the model is also deemed useful in the practical creation of public places.First, by giving one clear and comprehensive definition of what a standard public space is, the model facilitates information exchange in the development process, helping to overcome misinterpretations that cause many projects to be compromised in terms of quality. Moreover, by offering a standard for public places, the model functions as a decision support tool. In this respect, the different actors in the development process can strive to create not just a public place, but a public place with at least, for example, a publicness rating of **3**.Second, a chief advantage of the model is that it can be used as an audit method in the redevelopment of public places. Those in charge of such a project can assess where publicness fails, in a quick and informed way, so that interventions can be made towards the right areas and delays overcome.

Critically reflecting on the research undertaken and on the Star Model created, although this is deemed useful both in public space research and practice, several limitations should be highlighted.First, by applying a common standard and a common way of measurement to all public places, it can be argued that the particularities of a public place are lost when its publicness is translated into a number and respectively, a Star Diagram. Each public place has its own identity, its own atmosphere or *sense of place* resulting from the particular geographical location, the historical character of the area, the colours, the smells, the sounds, the specific layout and materials used, the type of greenery etc.

Second, although it is asserted that the Star Model measures publicness as objectively as possible, it has to be recognised that this is the subjective creation of the researcher. At any time, other researchers might find other key meta- themes or indicators to measure publicness. Nevertheless, it is hoped that thisinvestigation will open the way towards more rigorous and objective studies of public space and publicness.

Overall, this study can be seen as an experiment at the border between social and physical sciences, aiming to express in a formula, a complex social concept – the publicness of public space. It is felt that although a new conceptualisation of publicness was brought forward and an innovative way of measuring it was created, this is only the first, small step in a long journey towards more rigorous and more objective studies of the publicness of public space.

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CULTURAL INDUSTRIES AND URBAN REGENERATION. PHYSICAL RENOVATION AND TERRITORIAL IDENTITY CREATION IN *ZONA TORTONA*

Ilaria Giuliani [1], Chiara Valli [2]

Abstract

The main subject of this paper is the relation between urban space and the agglomeration of economic activities tied to creativity and cultural production. The authors aim to contribute to understandings of this relation through a focus on the development of Milan as a creative city.
Urban issues such as identity redefinition, district regeneration, territorial branding and urban competitiveness are in this particular case closely bound to the production of culture and creativity. The co-localization of creative activities in a territory, it is argued, has important effects not only for the cultural industry itself, but is a potential engine for the broader development of an urban district and potentially whole cities. In our empirical example, we show how the gradual settlement of cultural economic activities in the *Zona Tortona* district of Milan has changed local space in terms of both the built environment and territorial identity.
The *Tortona area*, on the post-industrial periphery of Milan, has become a recognized territorial brand, "*Zona Tortona*", and one of the most dynamic zones and attractive areas in the city, used as a location for big events such as the *Furniture Fair* or the *Fashion Week*. The process through which this has been achieved began in the mid-1980s – with a pivotal intervention on a vacant industrial site by a photography company – and is still going on, in the form of a gradual and incremental series of creative settlements that continue to encourage other creative industry professionals to buy and renovate ex-industrial spaces.
As in *Zona Tortona*, all over Europe we see to an increasing number of examples of urban, economic and social regeneration led by private, bottom-up developments, very often connected to creative economic activities. This is why the *Zona Tortona* experience constitutes an interesting case study: enabling us to deepen our knowledge of contemporary processes of urban change.
In particular, two processes have intertwined in the Tortona area recent history: built environment renovation and territorial identity creation. The paper aims to throw light on these meaningful intersections.

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1. Introduction

Milan is an international node for design and fashion production, in terms of trend setting and related manufacturing. Being known worldwide as a fashion and design capital, the city and the wider Lombardy Region are characterized by a spread distribution of small, medium and large businesses connected to this kind of production; furthermore, Milan is a major R&D and formation center for design and fashion subjects. Promotional events, like the design and furniture trade fair – *Salone del Mobile* - have literally changed large parts of the city (Jansson and Power, 2010). It is obvious, then, that a certain vocation and diffused knowledge about design and creativity is "in the air" in Milan.

All over the world, though, creativity and cultural production have been at the center of the discourse of Planning and urban renovation strategies. During the last 15 years, the importance of creativity seems to be emerged not only as a new, alternative, potential source for urban cultural development, but also as an essential resource to be competitive in the global market. Nowadays, creativity together with innovation and knowledge – the immaterial component of society – are differentiating factors that influence ideas, products, services and places, leading to competitive advantages in all fields of economy. As creativity, innovation and knowledge seem to become some of the main drivers of economic development of cities and regions, a new kind of economy is emerging, a new paradigm which embraces economic, cultural, technological and social aspects of development both at macro and micro levels. Indeed, many cities have recently recognized the value deriving from the presence of creative and cultural industries and have started to investigate how the mixture of culture and commerce, production and consumption, large and small businesses might work as a strategy to improve their image as global and dynamic nodes.

However, one of the major problems with creativity is its definition. Klausen (2010, pp.347) notes that "*the standard definition of creativity is problematic and maybe in an even worse state is generally acknowledged by creativity researchers themselves"*, and Scott (2010, pp.115) remarks that "*in view of its current vogue, the term calls urgently for substantive clarification"*. Kuntzmann (2005) defines creativity as a *fuzzy concept*, Landry (2000) indicates it as an alternative strategic approach to urban planning, and Florida (2002) describes it as the main source for cities to be competitive.
Furthermore in recent times, this new trajectory of the developmental perspective has raised a lot of uncertainties, conflicts and ambiguities. Central to this debate is the exploitation of cultural production for economic profit, in the service of the new emerging middle classes, leading to a destruction of original artistic values, instead or in the name of a genuine interest in stimulating cultural advancement. .
Regarding this, Zukin (2010) argues that creativity is arguably not just an end in itself, but also a means to develop distinction, economic spin-off and authenticity.

Indeed, all over the world we see an increasing number of examples of urban, economic and social regeneration, in which the conscious creation or nourishment of cultural and creative areas, districts, neighbourhoods has already been used as an instrument in the urban planning agenda.
In every major city, cultural and leisure functions are grouped together in a great variety of spatial forms and programs. They can be enclosed in stand-alone building or larger buildings complexes, or they may include entire quarters or networks of locations. Most of the time projects hosting cultural and creative functions are located in former industrial complexes but quite often they also imply the construction of new buildings. Some clustering strategies are simply linked to artistic/cultural activities, but many others also incorporate a great variety of leisure and entertainment elements such as bar, restaurants, cinemas, retail spaces, etc.
Sometimes such projects have started their career as innovative attempts in places left over after planning, by informal, private groups of cultural producers who turn them into new alternative cultural sites through bottom-up developments; in other examples, cultural clusters began their existence already in the minds of cultural managers searching for the ways to strengthen the market position of their amenities within a more competitive cultural and leisure market (Mommaas, 2004). In still other cases, projects come to life on the drawing board of urban planners through a top down approach, looking for ways to revitalize urban quarters or to strengthen the local creative economy improving the "global brands" of cities, through growth-oriented policies.

This seems to acquire more importance in a globalized world where places compete with each other and the image of a city plays a crucial role. In this contemporary global competition, cities become themselves products, trying as best as they can to attract investments, business residents, tourists, events and to improve citizens' satisfaction. In order to deal with this competition, which puts under pressure not only enterprises and public and private sectors, but also territorial areas, different typologies of tools are exploited, such as strategic plan adoption, place urban territorial marketing strategies, city branding actions, events and mega-events hosting that could produce and spread positive images of cities. So that when all these elements are well managed and promoted, the potentials to obtain good results are definitely higher and of success.

The case study we are presenting here explores some alternative urban patterns, that seem to be quite innovative in terms of features and factors involved in the process and which make this experience rather unique.
Indeed, it is a story of overlapping urban dimensions, equally giving their contributions to the redevelopment process: it is a story of industrial reuse and transformation, territorial promotion and urban marketing strategies linked with world known events taking place in Milan.
Thus built environment renovation and territorial identity creation are inextricable key factors of the regeneration process that need to be analysed together, with the same relevance, since they are continuing influence each other along the path (Giuliani, 2010). What links and supports these two material and immaterial

dimensions is exactly the territory, its spaces and its unused possibilities.

What makes this experience unique and worth to investigate is a combination of elements of interest: first of all, *Zona Tortona* is nowadays renown as one of the most influential fashion and design district in the world, accounting the location of top names in creative industries, beside being one of the most dynamic and attractive neighbourhood in Milan. Secondly, its uniqueness lays in the fact that it is able to grow and renovate itself thanks to its embeddedness in the territory, since it has developed not by top-down interventions, but rather from spontaneous triggering initiative from private creative companies. Thirdly, territorial image creation, still by private sector, has been the supporting infrastructure for the territorial transformation.

The paper is divided into four main parts. The first one reconstructs the historical context of this part of Milan, starting from its origin to narrow down to the urban, socio-economic situation the area was facing before the redevelopment process started. The second parts concerns the process from a physical point of view, considering the interventions on the ex productive sites and the actors were promoted by. The third one regards the immaterial dimension of the transformation, analyzing how different strategies of urban marketing have been applied. The last part tries to produce some final considerations about this urban spontaneous reindustrialization as an occasion to renovate and revitalize this part of the city, proposing possible future research issues. Maps, images and logos are provided for a better explanation of the case.

2. Research methods

The methodology adopted in this study is based on three different steps and on the assumption that it is always appropriate to use multiple methods and triangulation (Barnes, 2009). The first step consisted of a literature review to capture relevant background knowledge on creative and cultural projects within cities, and rehabilitation of traditional districts and old factories, which helped to develop a theoretical framework for the case study.
The second stage was a case study both with on-site interviews and review of some materials. Qualitative analysis of the social dimensions were carried out based on site direct observation and in-depth interviews, as well as review of both formal, published articles and informal documents led to events and activities such as brochures, magazines, websites, blogs about the case study. In depth ethnographic interviews were conducted in *Tortona area* and are intended to represent the common general perception and the evaluation about the zone; for this reason, interviews have been conducted with some people living in the traditional housing neighbourhoods, several creative workers based in the district, young people attending events in the area during some particular manifestations –like the Design Week, and the managing director of the first agency who founded the *Zona Tortona* brand. The third stage of the research methodology were in-depth surveys and drawing of thematic maps, intended to verify the extent of applicability of the list of

attributes collected from the literature review and to identify the underlying factors for urban and socially rehabilitation of this ex industrial periphery of Milan.

3. The story of *Zona Tortona*

The *Tortona area*, near *Porta Genova*, is a traditional neighbourhood of Milan which has become in recent years one of the most dynamic zones of the city in terms of cultural production, in particular in the fields of design, fashion and contemporary art. This area is known as the *Tortona area*, or *Zona Tortona*, following the name of one of its principal streets. This urban transformation has followed some uncommon paths, which have been partially influenced by the specific morphologies, histories, and geographical characteristics of the area, as we will explain in the following paragraphs.

3.1 Location

Located in the south–western part of Milan, the area is bound between the *Naviglio Grande* canal and the railway, and it is characterized by a huge variety of urban elements composing the landscape, belonging both to the productive and residential vocation of this area. Developing from the city-centre and involving several concentric strips, the area extends from the very central presence of *Naviglio* and *Darsena* canals, bordering with some more peripheral adjacent municipalities, producing different patterns of urban composition, both in terms of social and urban features.

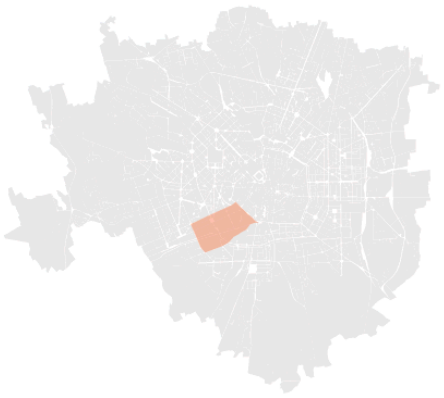

Figure 1: Location of Tortona Area in Milan

Tortona area was part of an old territory, the *Corpi Santi*, added to Milan in 1873, de facto a different municipality, mainly composed by some agricultural sites. This has been one of the main reasons why it has not been involved by the planning strategies and projects adopted by the Municipality of Milan during the last century.
This kind of unplanned character has led, through the years, to the coexistence within the same spaces of several heterogeneous functions, to a mixture of old and new

architectural typologies as well as to some different socio-cultural paths.

Thus differentiation from the city as a whole and non-homogeneity are two of the key features of this part of Milan, even in the perspective of becoming an interesting place of research, experimentation and production: the area preserves this kind of traditional and popular image and sense of belonging which is so deeply consolidated in the collective perception and at the same time, as place ever changing, it is spread to the introduction of new urban qualities, able to create a laboratory of contemporary city images.
Indeed the area seems somehow to go along with the contemporary trends in terms of urban regeneration, combining features of the past with patterns of the present and leading to an inclusive urban community where urban settlements are "*indicative of the way in which rooted cultures have evolved appropriate lifestyles in their physical environment"* (Guy, Farmer, 2001, pp.144).

3.2 Origins and urbanization process

After the annexation of the *Corpi Santi* to the Municipality of Milan, the localization of the *Porta Genova* Railway Station in 1865 and the construction of part of the railway, the urbanization process started within this urban portion of Milan. This was the chance for many industries of the metallurgical, mechanic and chemical sector to locate their plants there, in order to exploit the advantages coming from the presence both of the railway and of the *Naviglio* canal.
In shaping one of the most important productive sectors of Milan was, together with the location of vast industrial sites, a quite flourishing network of small and medium enterprises, handcrafts laboratories, workshops, garages, railway tracks, traditional architectural typologies as the *case di ringhiera*, eating houses and social housing neighbourhoods, located in-between mixed up spaces of working and living.
This functional mixitè of land uses laid the foundations for the urban morphology of a quite huge territory, included within the streets *Tortona, Solari, Savona*, up to *San Cristoforo* and *Giambellino*, designing a solid and heterogeneous urban continuum.
In a few years the agricultural vocation of this area had been converted into an industrial-productive one, changing the area's social composition and becoming one of the traditional working class neighbourhoods of the city.
At the same time this territory developed precisely as an enclave system due to the presence of two rigid layouts, the *Naviglio* canal and the railway, which, even being the key starting point of the industries settlements, have contained the urban sprawl towards the neighbouring areas, contributing to eventually shape a marginal, abandoned and pending environment.

The high concentration of industrial sites continued to evolve until the '60's, involving several famous companies, such as *CGE, Ansaldo, Nestlé, Riva Calzoni, Richard Ginori*, etc. At that point, because of the deep transformations affecting the whole productive system, most factories were dismantled to be moved farther from the expanding city center or have been closed due to the cessation of the production, leaving grand empty spaces behind.

Thus, in a 30 year period, all the industrial sites have been abandoned leading to a situation of urban blight and socio-economic depression, typical of the most post-industrial peripheries of Milan.
Before the starting of settlement of cultural and creative activities, these vacant disused spaces have been pending for quite a long time, without any kind of economic or social actor being interested in giving a new future to them – they seemed not to present any profitable patterns of transformation.

3.3 The process

The transformation of *Tortona area* is a story of a bottom-up preservation case, together with the promotion of a new vocation, started with some specific features that definitively could have not foreseen the result. It's a story of revitalization and re-industrialization in which the main infrastructures is cultural capital.
Tortona area regeneration is not a story regarding only the physical and functional transformation process and regeneration of historic spaces within an old productive neighbourhood; instead, it involves several and variegate aspects, such as local cultural and creative renaissance, new architectural typologies, and innovative strategies of territorial marketing.
Indeed one of the aspects that can be identified in retrospect is the necessity to apply different tools, both material and immaterial, in order to draw a new profile for this area creating a real new urban proposal. We argue that this process of urban regeneration has mainly involved two different patterns of transformation, recognizable because of the different intertwined competences: built environment renovation and territorial identity creation.
These two features mutually influenced each other, both in chronological and concrete terms. This interdisciplinary approach is considered here as a surplus value, as an ingredient that has been basic in the perspective of promoting this urban transformation along the time.

3.3.1 Built environment renovation by self organization[3]

As mentioned before, the two decades of urban blight with industrial settlements pending in hold for new potential uses let the economical values of the industrial properties went down, leading to a relative low price and to an immediate availability to be restored.
This new spatial and economic configuration transformed the neighbourhood in a fragmented territorial portion, without any precise vocations.
In that period the area was not involved in any kind of redevelopment process, both because of the lack of interest - at public administration's eyes it seemed that bigger and better shaped areas were more appetizing in terms of urban development for the whole city - and lack of adequate, less rigid tools to face such a neglected situation.
Nevertheless these ex-industrial sites were hiding a huge potential for the whole urban context, because of the proximity to the city centre and the particular

[3] For a chronological map of physical transformations, please see figure 5a and 5b, pp. 16-17

morphology of such kind of territory, made of a mixité of functions and spaces.

We will have to wait until the ’80s to face a new regeneration phase when, without introducing a large-scale redevelopment project - usually imposed from above and accompanying a relocation of the original inhabitants - the rebirth of *Tortona area* started, with what we’ll call the pivotal pioneer intervention, that afterwards led to an incremental series of interventions gradually transforming old buildings one after another. Thus the entire regeneration of *Tortona area* was achieved by a self-organizational process, launched by the aggregation of individual buildings renovations.

In 1983 the photographer and entrepreneur Fabio Lucchini, together with some other prestigious cultural professionals such Gisella Borioli and Fabrizio Ferri bought part of ex *CGE* company in *Tortona* area to settle their *Superstudio*. *Superstudio* is a poly-functional and versatile multi-location, a huge space (10,000sqm) created to meet the needs of operators and creative people working in the overlapping fields of fashion, art, design, communication, culture and entertainment.
The studio consists in wide and flexible spaces, which can be divided or combined, suitable for great events, exhibitions, conventions, fairs, fashion shows, performances. The variously-sized spaces are also suitable as studios for furniture, car, advertisement photo-shooting, for cinema/television sets.
Supertstudio soon became great attraction pole for international members of the creative class, such as photographers, journalists, artists, both in terms of temporary and stable permanence in the area, enhancing its fame within the district itself and also the whole city. Just two years later, in 1985, a second intervention took place with the settling the laboratory of the photographer *Carlo Orsi* inside an old complex of machine shops. What is important to point out here is that this is the case of already well established creative companies and big names in the cultural production field, who moved here and consequently attracted lots of smaller artists and creative producers.

In that time that ticking situation has been unlocked with the pioneer intervention initiative, it seemed that the risk of investment on such kind of properties has increasingly reduced because of the adequate location of cultural and creative functions in this urban territory. In this sense this first interventions triggered a gradual incremental process of revitalization of the area, encouraging other professionals, within the creative industry, to buy and renovate portions or entire industrial buildings and start their activities there.
This kind of perception was going to strengthen within all the private actors of the transformation along the years, leading to an inverse ratio for which the more high is the quantity of the settlements of creative and cultural activities inside disused productive properties, the less huge is the risk to invest in a regeneration process of such kind, exploiting the advantages deriving both from being inserted in a similar functions network and from the proximity and face to face relations.
Photographic sets, design and architectural studios, offices, universities, research centre, communication and marketing laboratories, are just some of the main cultural

and creative activities settled within *Tortona area*.

In 1999 the Municipality launched a bid for what was defined as the main intervention of cultural requalification in Milan in the last 50 years: the project of the "City of Cultures", for the realization of Center for Extra European Cultures, the Archeological Museum of Milan and the CASVA - Visual Arts High Studies Center. The competition was won by *David Chipperfield Architects*, but the work started just two years ago because of lack of funding. However, this shows the acknowledgement of the new identity of the area as the new cultural district of the city, even if so far this is the only intervention promoted by a public actor for the Tortona area.
Because of the increasing of activities and the consolidation of such kind of territorial connotation, at the beginning of the 2000's *Superstudio* decided to enlarge its spaces, establishing a new multipurpose laboratory, *Superstudio Più*, in the ex productive properties of the *CGE*, devoted to conventions, exhibitions, festivals and all kind of temporary events related to culture and creativity.
Going forward with the process, at different times and from different private entrepreneurs, several international "archistars" - such as David Chipperfield, Mario Cucinella, Tadao Ando, Antonio Citterio, Matteo Thun - were called for the renovation projects of big abandoned manufacture buildings and even several important fashion firms – Armani, Ermengildo Zegna, Hugo Boss, Kenzo – settled their headquarters occupying parts of these vacant properties.

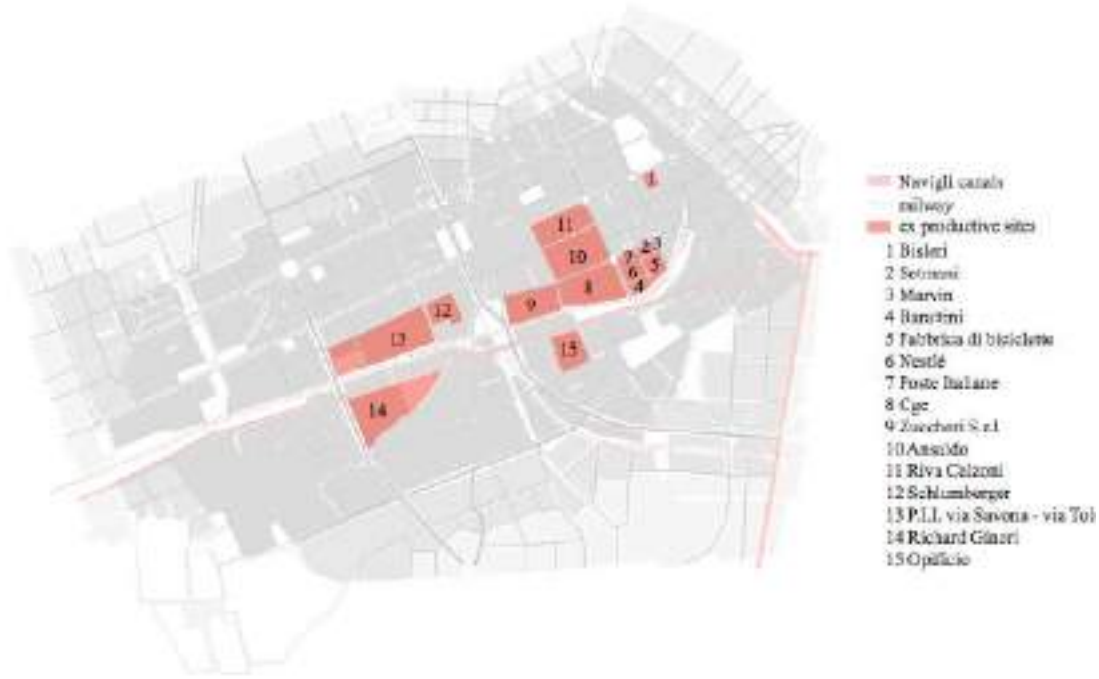

Figure 2: Map of the ex-productive sites

Running parallel with the physical transformation featured by diffused reuse of ex

industrial sites converted in new cultural functions, is a capillary soft movement to obtain new residences and services for the new established creative class.
Indeed as soon as the creative atmosphere infiltrated into the areas, some professionals moved there within new residential complexes and some others renovating old houses by themselves. These expansions added new values to the existing residential buildings and transformed the status of the devastated industrial communities, maintaining the traditional functional mixité and the restricting original neighbourhood community structure.

Figure 3: Map of actual creative and cultural activities

Under no circumstances the results and the reshaped identity were planned from the beginning by Milan Municipality, but were generated spontaneously by enterprises of private stakeholders to meet their own needs.
Indeed, what seems to play a crucial role in this reindustrialization case is also the typology of actors involved in the process. Both the pioneer intervention and many of the projects that came later one after the other, hade been promoted by actors of world renown, which are far from minor members of cultural industry. At least at the beginning their purposes was not dealing with the redevelopment of such kind of territory as a whole or with the possibility of taking advantages from being part of a cultural - creative network, but uniquely with the chances offered by this large scale ex productive spaces, perfectly easy-fitting and adaptable to their already wealthy activities. What emerged, thus, is not alike to other apparently seemingly examples of creative districts such as the Brooklyn's, East London's and Berlin's type examples of cultural industry SMEs moving into an area and transforming it.
Tortona story could be defined as a case of re-tasking abandoned large scale

industrial complex through new kind of production, i.e. cultural and creative industries, which had fundamental effects on the territory as a whole, both from architectural and immaterial dimensions.

Zona Tortona could be defined as an *informal* district (Chapple, Jackson and Martin, 2010) that maintains at the same time the well strengthened collective image of working class industrial periphery peculiar of the last century and the reshaped identity obtained through settlement of cultural and creative activities.

3.3.2 Territorial identity creation: *Zona Tortona* brand

The transformation process of the area has been deeply and inextricably sustained by the creation of a new image for this territory. The development and the relaunching of the area needs to be understood in connection to a more immaterial dimension made of identity promotion and communication strategies.
Zona Tortona is nowadays known as *FuoriSalone* area, the biggest satellite event zone of the annual international Furniture Fair (branded Milan Design Week) that now takes place at the fairground in Rho, just outside Milan. During Design Week and other great events like *Milan Art Week* and *Milan Fashion Week*, the entire Tortona street and its adjacent streets are filled with endless initiatives. Every industrial space, small or big, are temporarily occupied by showrooms, galleries, and fashion and design exhibitions.
One could unquestionably say that *FuoriSalone*, settling in *Zona Tortona*, was the spark that has triggered the promotion strategies and the branding process that constituted the inseparable binomial between *Zona Tortona* and *FuoriSalone*.
FuoriSalone event was launched and gradually expanded starting from the 80s as an alternative location for emerging designers to showcase their work contextually with the International Furniture Fair. The set of cultural and creative activities occurring at the same time but located outside the official International Furniture Fair was institutionalized in the early 90s, with the name of *FuoriSalone,* thanks to the initiative of *Interni* Magazine that published a volume entitled *Guide to FuoriSalone (in 1992)*. *Interni* started to handle the management and coordination of all the events and activities referred to *Fuori Salone*, with a great impact for the territorial promotion and international visibility of the area.

The typology of actor plays a crucial role even within the immaterial path of the redevelopment of the area. Both the Fair and the *Interni* Magazine are belonging to the private sector, and both of them are famous at the global scale. So that the initiative *FuoriSalone* developed and leaned on such powerful grassroots, and, thanks to those actors, it has been able to take on with a good probability of success, going beyond the traditional use of spaces for official fairs.
They had the capability to foresee potentialities, somehow hidden behind the merely entrepreneurial purposes of actors re-tasking abandoned large scale industrial complexes, making official that kind of cultural capital that was already in the air, coordinating events, giving new temporary images to locations, proposing new uses of spaces, and overall, involving people fully for one week per year.

That's how the strong liaison between *Tortona area* and the *FuoriSalone* has been created.

Along with the consolidation path of the event and the progressive renovation of spaces in *Tortona* area, more actors contributed to the development of the area.
Crucial for the formalization of the image of *Tortona* area has been a society for communication and event organization called *Recapito Milanese*. In 2002, *Recapito Milanese* promoted the creation of the brand *´Zona Tortona´* that institutionalized the emerging role and the creative vocation of this portion of Milan. The function of the brand was basically the one of gluing together all those initiatives that were already and independently well established, including them in an acknowledged symbol as part of the same entity. The red round logotype (figure 4) become unmistakable and was used in producing flags, pocket maps, guidebooks and road markings for the *Fuori Salone* week events. In 2005, the most important Milanese industrial realities in fashion, design, arts and cultural fields founded the association *Zona Tortona*, to further corroborate the district as a place of excellence for Milan at a national and international level.
Among the most relevant stakeholders, which created partnerships with *Zona Tortona*, we find: *Studio Labo* – which coordinates the relations between events and location through the portal *fuorisalone.it*, and *Esterni* Magazine – with sets up performances and stands all around the town. All these subjects collaborate and cooperate in a perspective of city marketing, which aims to launch the events in the area and the image of Milan as capital of Fashion and Design.
2011 marks another important step in the transformation of the image of *Zona Tortona*. At the beginning of the year *Design Partners srl* –the company that founded the brand of *Zona Tortona*, bankrupted following legal issues. A new name and a new logotype under the name of *Tortona Design Week* were created for the event by the *Tortona Area Lab* association, a no-profit organization set up in 2010 by the big names pioneer of the regeneration of the area, such as *Superstudio Group*, *Estate 4*, *Magna Pars* and *Tortona Locations*. *Tortona Area Lab* association works as a collector and selector of offers, a facilitator of creative processes and organiser of services for exhibitors and visitors.
The aim is to network the different talents of the area to enhance it in a wide perspective. Namely, the latest edition of *Fuori Salone* have pointed at attracting international creativity professionals and reaffirming the image of Tortona and Milano on the global panorama of quality creative economy. This is clear also from the new names of the brand and the association –*Tortona Design Week* and *Tortona Area Lab*, both formuated in english from the beginning.
The new logotype of *Tortona Design Week* was created by the internationally famous designer Stefano Giovannoni, it abandons the traditional red circle and assumes a squared shape with the representation of a black on white old shed-roof factory, typical of the Milanese industrial periphery.

Figure 4: Evolution of the logotype (2002, 2009, 2011)

As years go by, *FuoriSalone* has exponentially grown both for number of visitors and organized events: from 77 registered events and 25,000 visitors in 2003, to 772 events and 196,000 visitors in 2011[4].
Numbers are not the only thing that has deeply evolved during the last 20 years. We have seen how *FuoriSalone* was born as a complementary event of the official institutional *Design Week* in the Rho fairground. It used to be a not codified, spontaneous practice that aimed to promote young and unedited talents, together with the desire to animate not conventional spaces of the city through creativity. With the passing of the years, we saw how the event has been transformed in one of the most well organized and sponsored happenings of Milan, accompanying a meaningful physical transformation of the area. The lively chronicle of the creation of names, brands, associations and initiatives that have taken place in this area has represented a climax towards excellence and attraction of international creative insiders.
We argue that the strength of this event does not consist only in its innovative and creative contents; what makes *FuoriSalone* work is its authentic bond with the territory, in different ways. Firstly, on the pretext of *FuoriSalone,* parts of the Milan that are usually closed open the door to visitors, becoming public spaces for a week; showrooms and design studios are open until late, parties and social events are organized in spaces and modalities that have different functions during the rest of the year. In this sense, *FuoriSalone* proposes a different urbanity for Milan, even only for one week. Secondly, the territorial promotion strategies are not something that has been planned top-down by local governments or agencies; the self-organizational nature of all the initiative starts from talents and energies that are embedded in the territory, that unite their creativity from below. This aspect is quite different from other examples of territorial marketing strategies and creativity policies traceable in other European cities. The self-promotion through the brand "*Zona Tortona*" could be seen as a ´*a posteriori* vision´, it is a label to define a process that had started and developed organically.

3.4 Urban effects of an ongoing process

In the past century, Tortona area has rapidly changed its face, passing from suburban area, partly outside the city walls, to working class neighborhood, to postindustrial periphery and finally tertiary district with a strong connotation given by cultural and

[4] Data from the official website of *Fuori salone*, http://fuorisalone.it, accessed 21 april 2012.

creative industrial settlement.
All the phases of the transformation process were carried by micro scale changes deriving from socio-economic dynamics, without any overall coordinating planning actions.
Especially in the last two decades, as we saw, spontaneous economic dynamics were the occasion to renovate and revitalize parts of the city. The growth of the knowledge based economy went along with the progressive renovation of the city´s built form and the revitalization of entire neighborhoods.
Despite their relevant outcomes, the processes featured high levels of *informality*. To explain the meaning of formal/informal districts we refer to Chapple, Jackson and Martin (2010, p.226): "The term 'formal´ usually invokes a degree of intentionality, often involving a civic plan for redefining the identity of a neighborhood. The term 'informal´ invokes a degree of organicism and spontaneity; it usually refers to [arts] districts that have evolved through practices of local actors who have not been organized by a civic plan".

For what concerns *Tortona*, it is clear that we are talking about grassroots practices – at least at the beginning - which are connected by functional and localization economies´ patterns, but not by a planned general view.
The driving forces behind the regeneration of this neighborhood could be roughly described as the interests of professionals and companies who find convenient to establish their activities in the area. The factors concurring in making the area attractive for new professionals are of different natures: flexible and relatively low cost locations, but also geographical agglomeration advantages.
The spiral of image creation and physical renovation is an ongoing process that fosters its impacts every year.
Furthermore, we are talking about a culture-led transformation that is not traceable only in the physical buildings and open spaces, but lies greatly in the new ´creative' life styles and atmosphere, which belong to a more immaterial process of transformation.
Nevertheless, the presence of working class population is still strong, so that the social composition is still very mixed.
The result, then, is a vital and dynamic district, in continuous transformation and with a big potential due to the presence of still vacant real estate properties, together with a variegated social composition and a lively cultural atmosphere.

4 Conclusions and research agenda

As we saw along the analysis, there are several factors that make of this story quite a rare and unique case: the socio-economic and urban features of this traditional urban pheriphery of Milan as first support to the process trigger; the importance of world class and world city level cultural firms/corporations as factors increasing the success of the redevelopment; the two intertwined dimensions of physical renovation and identity creation as key factors of the transformation.
Since the spontaneous nature and the extremely dynamic and fast mutability of the transformation in *Tortona area* - exemplified also by the evolution of its image and brand, we argue it is interesting and important to keep on monitoring and researching

about this area and its vicissitudes.
Accordingly, after this first mainly descriptive framework, next steps in the future research should go more in depth into the following issues:

- the development of the private-led urban regeneration strategies and image creation in relation to the public governance vision
- the patterns of gentrification or soft-gentrification
- the positions and reactions of the historical population of the area
- the future of this part of Milan, in relation to the availability of further and still numerous formerly-productive sites
- Zona Tortona as a pivotal practice in relation to the new emerging cultural district promoted during the FuoriSalone (*Brera Design District, Porta Romana Design, Ventura Lambrate, Mecenate Area Design, Porta Venezia in Design*)

Notwithstanding the prevalent descriptive nature of this paper, we wish it can provide a glance of the complexity and significance of the integration of creativity in urban development, or in this case we could say: the integration of urban regeneration into the dynamic forces of creative industry.

The search for new forms of urban cultural governance seems more than ever necessary and urgent. Creative policies in Milan are not about boosting the creative image of the city. Indeed, the label of Milan as a capital of fashion and design has been present for centuries, nourished by the vivid and productive economy in these sectors. Unlike uncountable examples of city governments around the world setting up brands and improvised cultural vocations to compete in the global panorama, Milan can count on an authentic creative fervour of creative people, products, processes and places.
The challenge for the local government here is to match up these forces, dialogue with them and try to involve them in solving meaningful social, economic and environmental issues of the city and its metropolitan area. The risk, otherwise, is the one of an uncontrolled and deregulated development driven by private interests, which could irreversibly sharpen gentrification processes and social polarization.

Figure 5a: Chronological steps of transformation 1985-1995

Figure 5b: Chronological steps of transformation 2000-2010

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Shrunk Hinterland and Swollen Seaboard: Regional Planning and Population Dynamic in Southern Brazil

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Abstract

The population dynamics in Brazil is strongly related to the increases in poverty, social exclusion and to a lack of a planning framework in a regional scale. In spite of its balanced net of cities, in Santa Catarina State the west high plains show a significant decrease of population in small and medium cities at the end of the last century and, at the same time, the swelling of costal cities. The State Government concerned to this issue, launched in 2003 a new decentralized administrative network, aiming to ease the development of the high plains region and avoid migration towards the seaboard. Last Census (2010) showed the plan failed. This paper's aim is to analyze the effectiveness of the regional planning actions to avoid the migratory flow from the interior to the coastal cities in State of Santa Catarina, Brazil.

Introduction

The State of Santa Catarina doesn't have metropolises, but it has the best level of income share in the country and count on with several well defined regional industrial and agro-industrial clusters (Siebert, 2008). The arrival of the neoliberals' economical policies in 1980 starts a migration flow from the interior plateau to the coast. The proximity of the ports and the improvement of the tourist infrastructure in the coastal area, besides to the lack of jobs in the hinterland, have also impelled this migratory flow (Bastos, 2011).

By 2000, this process of concentration of income and population in the seaboard was perceived as a barrier for development and for the regional

socioeconomic balance. Thereby, in 2003, the State Government establishes a new structure for an administrative decentralization whose objective was to strengthen the local policies, promoting an endogenous development. In spite of the establishment of several regional offices and programs in the last ten years, the migration process toward the seaboard continued and the population shrinkage already reaches medium cities like Lages (157 thousand inhabitants, 11st GDP of the state) (IBGE, 2011).

In spite of the fact that many scholars have been working on studies aimed to frame the problem of the population mobility, the recent data from the 2010 Census that shows the populational shrinkage in Lages, make the scientific community aware of the weight of the problem. For this reason, the study of Lages and surroundings is paradigmatic in this context to evaluate the effectiveness of the regional planning in Santa Catarina. Distant 200 kilometers from the coast, the Lages' region had its economy sustained by the wood extraction and Pinus reforestation for several decades. The monoculture, lack of positions in the industry and commerce are usually pointed as causes of the demographic decrease of 16,75% (IBGE, 2011) in the last decade that nor the administrative decentralization, nor the proposed regional planning were able to revert.

As the region is not economical stagnated we have looked for the possible causes of the failure of the government actions related to the regional endogenous development proposals.

Analysis

Economy and Migration

The increases in poverty and social exclusion that have resulted from urbanization in Brazil - and, more broadly, in Latin America - are key points to understand the population mobility that has led to the shrinkage of small towns and even some medium cities in Brazil. Actually, the concept of "urban shrinkage" in Brazil is complex and has to be linked to other issues as housing and jobs shortage and real estate market expansion rather than only urban environment decay.

In the second half of the twentieth century, a very intensive urbanization occurred, mainly due to a change in Brazilian economic base from agriculture to industry (as happened in several LA countries). Huge urban growth due the national economic policies (Import Substitution Industrialization-ISI) in the 1970's, further enlarged the industrial parks in the big southeastern cities (as São Paulo and Rio de Janeiro) and attracted additional millions of people from rural areas (by 1980, almost 43 million rural people had moved to cities) (Santos, 1996). As a consequence, at the middle of the century the city's periphery swelled and concentrated a huge number of poor people, previously spread in rural areas (Brito 2005; Maricato 2001).

The process of the liberalization of the Brazilian economy in the 1980's and the adoption of Foreign direct investment (FDI) economic policies certainly impacted some regions in the country with less-skilled population in a process that some authors have named "reverse polarization" (Rodrigues-Pose and Tomaney, 1999). In Brazil, FDI favored a relative dispersion of economic activity from the

metropolises outward into the hinterland and a migratory flow of capital and jobs toward south eastern states.

Notwithstanding, in Santa Catarina State such process did not occur with the same magnitude due its particular process of colonization that kept a balanced spatial distribution of the population. The successful pattern of development of the State is credited to the diversification of productive activities that embrace several successful local productive arrangements. Also, a significant agreement between social actors, good educational opportunities has pioneering in Brazil the creation of business incubators and technologic parks (Turnes, 2008).

Santa Catarina State

The landscape of Santa Catarina State, in southern Brazil, is characterized by two different regions: the coastal plain zone at East and high plains at West, separated by the mountain range called "Serra do Mar". This configuration helped to set up the development patterns for social and economic occupation of the territory. At West, huge proprieties for cattle rising and cook pines (Araucariaceae) extraction, later replaced by pinus wood (pinus elliottii) cultivation, boosted the development of cities like Lages (156,000 inhabitants in 2012) and Caçador (71,000 inhabitants in 2012).

At the Atlantic coastal zone (including major rivers basins and valleys) skilled European immigration at the beginning of 20th century favored industrialization and the ports helped the development of commerce. Somehow the coastal zone was also privileged with a mode of occupation conditioned by its fragmented physical and natural factors, allowing a balanced urban network, characterized by a rural small lots structure and by an absence of a strong regional pole. (Siebert, 2001). By 1950, the development of the road system in the state increased the connection between West and East, including in the State economic flows areas that previously were excluded, and also facilitated the population flows.

In spite of the increase of inter-municipal flows, the lack of roads infrastructure and the geo-economics fragmentation kept the Santa Catarina coastal cities isolated from the more dynamics centers of the country until the middle of the century. Between 1960 and 1970, the creation of a Federal University in the State Capital, Florianópolis and the roads improvements along the coast, changed the economic State trends, pushing cities development by the reinforcement of the tertiary economic sector (Pereira, 2003).

With the new road infrastructure, the tourist flow to the seaboard that have started slowly at the beginning of the 20th century increased, causing strong changes in cities morphology and impacting in the cultural and behavior local patterns. The development of the "tourism economy" is followed by decay on the small scale agriculture and by an expressive migration toward the seaboard, where the hope for a regular job was likely better. A significant parcel of the migrants was absorbed by the civil construction industry in cities that have been showing an accelerate growth since 1970. On the Santa Catarina´s seaboard, in spite of its socioeconomic

heterogeneity and good social index, a lack of basic infrastructure and urban planning characterize most of the cities (Pereira, 2003).

The cities development allowed by the tourism sector has act as a magnet for jobs. In the 1990 decade, many cities in the seaboard duplicated their population and reduced the poverty slower than the State medium. Data from IBGE (Brazilian Institute of Geography and Statistics) points out that among the ten faster growing cities in Santa Catarina between 1991 and 2000, eight are on the coast and also are on the coast the four where were observed the faster expansion (IBGE, 2004).

Notwithstanding, other factor have contributed to the faster development of the coastal areas in the State. The set up of industrial poles[1] closed to the coast also was crucial to the development of the Atlantic border (Seabra, 2011). In a deeper study Seabra (2011) found out that the distance to the coast is inversely proportional to the demographic expansion and the growth of the per capita income.

At the same time, the State hinterland at West show a significantly de-growth, mainly in cities where the economic base is the small agriculture business. Several crises in farming and cattle sector help to create a background favorable to pushing the population to the Atlantic coast cities (Turnes, 2008).

Administrative Structure

The power centralization is a major factor in the socio-political formation in Brazil. This administrative model, inherited from Portugal was reinforced by the military regime (1964-84), with serious consequences for the relationship between local, state and federal governments (Kraus, 1991). However, in the 50's, new territorial policies make municipalities and regions feel the need to combine efforts to meet their needs of planning and development.

In this context, by 1960 a municipal association process began in the State of Santa Catarina. With the State Constitution of 1989, the Santa Catarina Municipal Associations find their legal basis, consolidating the cooperation process started decades before. Today, all municipalities in the state are associated in 21 municipal associations, which have their activities coordinated by Fecam (Federation of Associations of Municipalities of Santa Catarina), based in the capital Florianópolis.

Conceptually, the Associations of Municipalities are organizations that aim to promote regional development through the intermunicipal planning and cooperation. In Santa Catarina, these associations are composed of micro-regions structured and bounded according to common political interests. The key aims of these associations are to join the municipalities associated in a permanent forum for discussions about common issues and provide specialized technical services (Moraes, 2005).

Besides the associations of municipalities it is observed in the 90´s a struggle to increase the participation of different actors in development processes. Several

[1] It refers to the textile complex in the Itajaí Valley, the metal-mechanic pole in Joinville and the coal industry in the Southeast.

initiatives in order to create links between civil society and local government were launched. Among these initiatives, we can highlight the formation of networks for development, as the Regional Development Boards, Hydrographic Basin Board and the Departments of Regional Development (SDRs) (Filippim and Rossetto, 2008).

In 2004, the new State Governator Luiz Henrique da Silveira (2003-2006) included in his government plan guidelines to promote an administrative decentralization in order to rebalance the State cities ´net and reinforce the local policies. In this context was created the Project My Place (Meu Lugar) that among its main aims are: formulation of 30 regional development plans focused in the social participation and identity reinforcement; formulation of programs for human resources capacitation in order to promote development and an implantation of a monitoring system to follow the regional and State development (Santos et alli, 2008).

To achieve its aims, the State Government strategy was the creation of 30 Department for Regional Developmente (SDR) establishing a new administrative structure for Santa Catarina State. The SDRs were created with the goal of representing the State Government within each respective region, coordinating government actions, promoting decentralization and regional integration of public administration, and coordination of development activities in their territory (Filippim and Rossetto, 2008).

Thus, at least three forms of joint development by are present in Santa Catarina nowadays: the Associations of Municipalities, boards/agencies and SDRs. They coexist and sometimes conflicted as they have very similar goals and act in the same territory. However, rather than integrated they are juxtaposed.

Lages Region - Amures

The study of the city of Lages and surroundings is important to the understanding of whether and how much the political and administrative structure is able to develop the region. Lages is the headquarter of a region with 18 municipalities, pooled in an association named Amures (Associação dos Municípios da Região Serrana) (Figures 01 and 02).

Figure 01: Santa Catarina State in Brazil and AMURES region in Santa Catarina State.
Source: Instituto Euvaldo Lodi de Santa Catarina.

Figure 02: The AMURES Region and Lages City.
Source: Instituto Euvaldo Lodi de Santa Catarina

Most Amures municipalities have extensive agricultural base characterized by large estates. From the 18 municipalities, 11 are among the 21 with lower Human Development Index (HDI) of Santa Catarina and have low investment in the productive sector and a large population concentration in urban areas. In relation to economic, political, social, educational and health differs from other regions of the State by high rates of illiteracy, unemployment, housing shortage and rural exodus. The Amures region is considered the poorest and most backward in Santa Catarina (Peixer in Filippim and Rossetto, 2008).

Lages emerges in the seventeenth century as a strategic point in the hinterland of Santa Catarina, right in the colonial arterial route for trade cattle and horses with the rest of the country. Livestock takes the lead role in the first economic cycle of the city and defines the structure of landholding in the region. Since 1850, the presence of skilled European immigrants facilitates industrialization and trade of Araucaria (araucaria angustifolia) timber, abundant in the region. Soon timber replaced livestock, giving the region a new rural and urban setting, with swelling of the headquarter city by migrants from rural areas seeking employment in the timber industry (Bastos, 2011).

From the first decades of the twentieth century, the exploitation of Araucaria allows the structuration of the entire urban complex and the economic and political structure. During this period, the region got a huge population growth, receiving a number of migrants from all social classes in search of personal opportunities.

In the Lages region, the timber industry was and remains until today basically the major source of income and investments. A shy diversification made for the pulp and paper industry has occurred in the years 1950 and 1960 did not change the economic perspectives. With the depletion of Araucaria timber, all Amures, region has entered a long period of economic regression just in years when the State economy grew more. Only in the 1990' s, with the trade of reflorested Pinus (Figure 03), the timber industry was again heated (Goularti Filho, 2007).

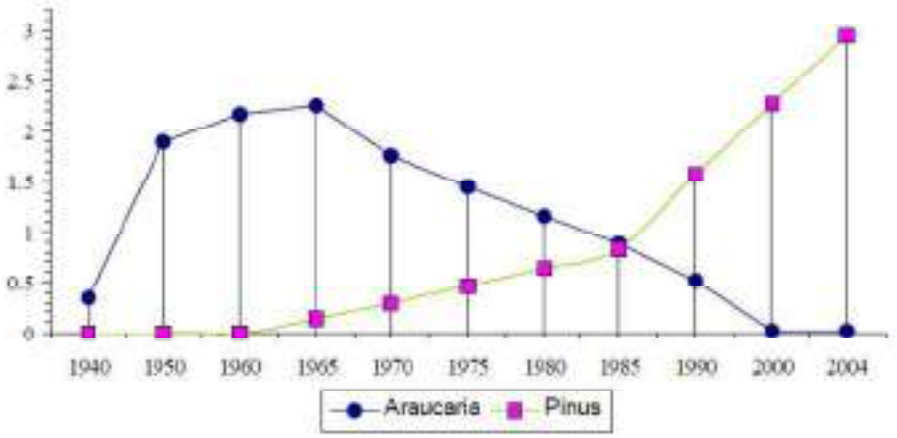

Figure 03 - *Pinnus elliottii* versus *araucaria angustifolia* production (millions of m^3)

Source: Sindicato das Indústrias de Serrarias, Carpintarias e Tanoarias de Lages (Sindimadeira), 2005, *apud* Hildebrando, 2009.

It is important to highlight that at the peak of the so-called Timber economic cycle circa 1950-60 - the region, and especially the city of Lages, became economically and politically strong enough to hold the title of chief state's economy (Goularti apud Hildebrand, 2009). Although the araucária depletion was blamed to the economic crisis, still in the early 1980s Lages had a prominent position in the state, occupying the third position among Santa Catarina counties, revealing that the social crisis and demographic decrease should be due to the process of income concentration and social inequality of Brazilian capitalism or due the administration inability to set up “Local Productive Arrangements”.

The nearby city Caçador (180 km north bound) should be taken as a counter example. It has a similar economic history related to the timber and was able to overcome the economic decay by economic diversification and investments setting up several other Local Productive Arrangements within the industrial timber sector, in agro industrial fruit complex and plastic material industry (Goularti Filho, 2007).

Final Discussion

In the contemporary world, the presence of multiple and complex economic activities generate the need for a set of political practices within a context of polarization and alliances between adjacent territorial units, which seek to aggregate and forming a unit - the region - which seeks to strengthen this union politically (Freestone, 2000).

This union, however, is not enough to unleash a process of "regionalization". So, the processes of "regionalization" we see today in Santa Catarina State appear from an attempt for leverage the political processes, many times without an understanding of how the different layers of different systems act - physical,

environmental, economic, social, cultural etc. ., as well how these systems are interconnected, what their interfaces and how these vital elements and especially how the community can manage the local systems.

In Brazil, as a rule, committees, associations or government institutes which intend to invest in regional planning, end up guided by political, technical and reflect a little off that real economic development and quality of life and environmental the territory. To reverse this common sense it is necessary to understand the key components in the constitution of a territory and think on the possible policies, planning and management within a given context. If on one hand the Brazilian public policies advanced significantly in recent years in relation to citizen`s participation in the process of social construction of urban territory, on the other hand has not yet materialized, in most of the country, effective plans for regional planning. (Moraes, 2005)

Despite the administrative dynamic of Santa Catarina State that intends to create a coherent structure to the regional development, the Municipalities Associations are still the most recognized agency when discussing regional policies in Santa Catarina. In spite of this, many authors (Kraus, 1991; Filippim and Rossetto, 2008) agree that the Municipal Associations do not perform adequately the role predicted in its statutes as planning, community discussions forums and services offer.

As a "discussion forum", the Municipal Associations work more as a space for exchange of information and experiences among the Mayors than as a mediator between the Administration and other social actors (Kraus, 1991). Also the financial applications despise the chances that could be offered by the Associations and the use of traditional channels through direct relationships with congressmen and senators always occur, characterizing what Kraus calls "favors'policy" which ends be replayed in the relationship between community and municipal power, obscuring the possibilities of increasing power to the organizing society (Moraes, 2005).

Kraus (1991) also shows that there are several obstacles to implement a structure for "micro-regional planning". Besides the lack of interest of the each associations (involved in different social actors as trade associations, unions, environmentalists, etc..), there are trends to act in the associated municipalities only as a service provider, bridging the gap of municipal technical frameworks.

Also the creation of the SDRs by the State Government is much criticized. As mentioned above, the SDRs are not integrated, but juxtapose to the other agencies. The passage of a proposed regional organization for development co-ordinated by civil society (forums / agencies) to another, coordinated by the government sphere (SDR) ends up to disorganize the local representations that refers its organization in different political edges. In fact, the SDRs disrupt the autonomy of the local organizations and have a strong negative effect on the local interactions and their claims (Filippim and Rossetto, 2008; Santos et alli, 2008).

The challenge for Lages' region is to set up integrate public policies and territorial actions that show more attention to the structural potentialities of the area and to promote an economic diversification and "Local Productive Arrangements" in

order to overcome the lack of pragmatic character, pointed (Goularti Filho, 2007) as a possible causes of the continued flow of people toward the seaboard. Turnes (2008) also give us a clue highlighting the need for a new model of development for rural regions, based on familiar agriculture, cooperatives, and strategies for generation of employment to young people.

The idea that a "Santa Catarina model of development", based on endogenous development and on a balanced network of cities with a homogeneous population distribution could promote a better quality of life, lasted for a long time. Notwithstanding, today this idea has been demystified (Santos et alli, 2008). The uneven growth of the coastal cities of Santa Catarina in relation to those of the interior and the impossibility of an integrated management due to the mismatch of the different regional administrations have been blocking opportunities for regions as Amures in the hinterland high plains of the State.

What can be seen through an analysis of the Amures region context is that even with the reduction in population and economic participation in the context of Santa Catarina, the region still has a potential industrial-economic dynamism. The use of this potential cannot be supported by Government administrative structure, but should be the result of a joint action between the public sector (municipal authorities and representative bodies of local government), the private sector and the organized society in developing programs and measures to attract new investments.

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THE CHANGING ROLE OF URBAN HERITAGE AS DEFINED BY STAKEHOLDER ATTITUDES

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Abstract

This paper attempts to demonstrate the relationship between the changing role of urban cultural heritage and the attitudes held toward heritage by relevant stakeholders. The proposed framework is explored particularly through cities in Turkey, which the author has studied as part of her doctoral dissertation on 'Urban Conservation Projects and Governance', and cities in Abu Dhabi emirate, of the United Arab Emirates, where she has been working in the local heritage authority for several years. A comparative analysis is made to capture any enduring patterns shared across the different countries, and any specific situations particular to each. In an increasingly globalizing world and professional network, such comparisons can help to identify the scope of possible cross-pollination between the various cultural contexts of planning practice.

The conducted research and practical experience mentioned above suggest that the role which the urban heritage can assume within the planning, development and public life of cities is closely contingent on the attitudes held toward heritage by stakeholders involved in the preservation process, as well as the roles that these stakeholders play in the process. The degree to which the urban cultural heritage can effectively play a 'productive' role in the life of the city, or to which the preservation of its authenticity can be sustained in the face of development pressures and contemporary societal needs, are determined by the outcome of confrontations and negotiations among various stakeholders, each with their own particular interests and capacities. Some salient examples of factors affecting these negotiations are the maturity of public institutions and legislation, the awareness of and priority attributed by local governments to cultural heritage in their policies, the economic tools available to property owners and users to realize the economic potential of heritage assets, the lobbying capabilities of specialized civil society and community groups, and the level of involvement of experts and academics in actual urban conservation projects and processes.

Introduction

The **concept of 'heritage conservation'** has been constantly evolving since the birth of this modern notion in the 19th century. Around the middle of the 20th century, heritage began to be understood in an urbanistic sense and to feature in planning discourse, transcending the curatorial framework of single monuments and museums. This still remains an important and relevant conceptual milestone, as its implications

continue to be addressed today. The conflicts between the 'philosophical' aspects of urban heritage, related to the importance of heritage as a source of cultural identity, and the 'practical aspects', related to the realities of real estate economics, have as yet not been fully resolved. International principles and professional standards of heritage conservation have spread around the world, but their interpretation in each **cultural context** and the levels of practice that are attained still differ from country to country. This is both a challenge in terms of safeguarding the values that heritage presents, and an opportunity in terms of the multiple alternatives for preservation approaches offered by the diversity of the world's cultures. The understanding of how approaches can be customized also averts the dangers of importing foreign models to places far from their original source without regard for particular needs of local contexts.

Many of the underlying dynamics determining the level of understanding of, and thus the role attributed to heritage in the life of today's cities, are cultural, which implies they are contingent on the **value systems**, attitudes and behaviors of the **stakeholders** taking part in the urban discourse. This idea has been explored here within two cultural contexts, those of Turkey and the United Arab Emirates, where the author had a chance to observe these dynamics in action. In **Turkey**, these observations are based on the author's previous professional experience since 1998 and particularly on her doctoral dissertation on 'Urban Conservation Projects and Governance' completed in 2011, and in the **UAE**, on the author's experience in the heritage protection authority of Abu Dhabi Emirate since 2008. In both contexts, it has been possible to observe **certain recurring patterns** and also an **evolution** in the perceptions and roles of stakeholders regarding the urban heritage, albeit set in different social and political circumstances.

Evolving role of urban heritage

The **new understanding of heritage as an urbanistic force** that has a symbiotic relationship with development has been advocated by various researchers in the field, and increasingly gaining recognition in related industries. Some notable examples of this are seen in publications of the Getty Conservation Institute (2011) exploring 'Historic Cities', the Royal Institute of Chartered Surveyors (2011) dedicated to 'Heritage', and the Scientific Symposium of the International Council of Monuments and Sites (ICOMOS) themed 'Heritage as a Driver of Development' (2011). As highlighted in these publications, the notion of the built heritage now gathers cultural values and meanings in a broader context, and the 'need for heritage' is a signal of human societies trying to find themselves in a world dislocating under the effects of globalization. Heritage can move from a passive and aesthetic component, to a more active and assertive one, proposing visions and strategies for future development that combine conservation and 'modernity', providing lessons in reaching a more balanced, sustainable form of development that offers more cohesive social relationships, more human scales and more successful adaptation to the physical environment as demonstrated by vernacular buildings that use local materials and

techniques. Long considered a factor of additional cost, heritage is increasingly considered as a resource supporting economic development and social welfare. Investment in heritage produces attractive returns and positive impacts on land value, though methods to evaluate this are often still commercial and short-term-oriented. Cultural tourism can also be a form of sustainable development, as it is integrated within the local socio-economic context and cultural identity. Concepts and methods for the management of historic cities can make essential contributions to urban planning, as the analytical appreciation of the historic city reveals a repository of ideas that can provide continuity in city building. All these opportunities require a change of attitude, where we must question our expectations of buildings, and accept to modify our usage according to local environmental constraints (ICOMOS, 2011, pp. 9-11; Siravo, 2011, pp. 4-5).

A focused look at the **economic benefits of heritage conservation** is deserved, in light of its impact on shaping the role of urban heritage. Preservationists are increasingly being joined by other industries' professionals in defending that there is a strong economic case for regenerating historic buildings. Important historic buildings that may have been perceived as redundant for contemporary needs are often transformed, through adaptive reuse schemes, to a host of surprising uses that become very successful due to their unique character (Allies and Morrison & M&N, 2011). The inclusion of heritage assets in regeneration schemes provides a focus and catalyst for sustainable change. The impact of successful schemes is felt beyond the boundaries of the heritage asset itself and can boost the economy of the whole town. Historic buildings give a sense of place and a focal point that the community will rally around to support. The fabric and design can add a distinctive identity to the 'new build' part of a regeneration scheme, lifting the overall quality of the built environment. They may have interesting historical or cultural associations that can be developed through the wider regeneration area, and attract occupiers who would not be interested in a less distinctive building (Drivers Jonas, 2011, pp. 2-3). Economic benefits are further listed as increased and stabilized property values, which translate into increased property tax revenues; cultural tourism, which translates into increased jobs and increased sales tax revenues; and the building of strong communities and distinctive places where populations wish to live and work. Just the act of restoring one building can encourage others to do the same and improve the value of the entire block. Successful preservation programs foster community pride, learning, and creativity, which are critical to an educated workforce, as a strong economy and a strong community are inextricably linked (Anon, 2012).

The identification of heritage as catalyzing economic development is only just beginning to be supported by **robust and credible analyses**, through hard economic measurements, qualitative or environmental indicators (Rypkema & Cheong, 2011a). These measurements help to address not just the environmental but also the social and economic contibutions of heritage conservation to sustainable development, such as embodied energy, reduced infrastructure expenditure and reduced carbon footprint, and other energy savings of reusing existing built resources. Heritage

conservation may be, in fact, the single development strategy that simultaneously advances all aspects of sustainability (Rypkema & Cheong, 2011b).

The economic and social contributions of heritage to urban development are demonstrated to be possible, but depend on certain **conditions** being in place. Some schemes fail to deliver expected results, due to factors such as unforeseen costs, a beneficial use not being found for buildings, or visitor attractions failing to attract sufficient public interest. Working with heritage assets brings to the development process a special set of conservation, planning, funding and construction considerations, which often **require** specialist knowledge (Drivers Jonas, 2011, pp. 2-3). The special requirements are further elaborated in a study to assess the outcomes of the Townscape Heritage Initiative set up by the UK Heritage Lottery Fund, which identifies the importance of local knowledge, local capacity, appropriateness of scale, a permanent and stable local population, the presence of community groups, some local money existing in place, appropriate levels of housing market and demand, and a reasonable difference between the rehabilitation costs and the resulting property values of buildings (Shipley & Reeve, 2011). From a broader perspective, the sustainability of urban heritage preservation is contingent on its being part of a larger rehabilitation process that also addresses the issue of turning areas that contain the heritage into fully functional and developed portions of the city (Rojas, 2011, pp. 11-12), and integrated into the economic system of cities.

While it is critical to strengthen the **quantifiable aspect** of the economic role of heritage, this by no means means that **qualitative evaluations** are no longer as relevant or valid. On the contrary, these two aspects are mutually reinforcing, and integral to a full understanding of development. The **term 'development'** is defined in the UNESCO Declaration of Cultural Diversity, not simply in terms of economic growth, but also as a means to achieve a more satisfactory intellectual, emotional, moral and spiritual existence (ICOMOS, 2011, p. 9). As the concept gains new dimensions, the diversity of the types of values also increases, and more stakeholders become involved in the debate.

Stakeholder attitudes and roles

As our societies are becoming increasingly globalized due to advances in communication and mobility, global market economies fostering new trade and consumption patterns, and the spread of participatory democracies, so the policies of government intervention in the fields of planning and preservation are undergoing paradigm shifts. There is a new emphasis on **values-based conservation**, where the assessment of significance for heritage is made on a premise of the subjectivity of values, and the authority of expertise is questioned or tempered with a diversity of social narratives. This has the potential for a more holistic approach to conservation, integrating independent professional spheres with each other and with society at large, and broadening the audience for heritage. As such, cultural heritage acts as a medium of evolving social values, and its conservation can help manage rapid social

changes and mitigate their negative effects (Avrami et al, 2000, pp. 3-4). Conservation is thus required to engage more actively in cultural politics, to assess social and economic, or use and non-use values together, and to quantify the qualitative aspects of 'cultural capital' (Throsby, 2002, p. 103).

Upon examining the various types of values and their championing stakeholders, ones sees a basic pattern of **duality** manifested in different forms, such as scientific expertise versus social inclusivity, public benefit versus private rights, state intervention versus market forces, or indeed, conservation versus development. Expressed in another way, sociocultural values mobilize the cultural elite, philanthropists and community leaders, while the economic values attract consumers and real estate investors. Another pattern commonly mentioned is the shifting of values, e.g. how heritage is often perceived as a barrier to regeneration that too complicated to work with, or a symbol of decline and social deprivation, but how it is finally being recognized for its true range of cultural, social and economic values. For sustainable preservation programs, one needs to put all values embedded in urban heritage into play, as they are the drivers that mobilize a diverse set of stakeholders; the wider the variety of values, the better heritage can draw the support, financing and skills of diverse and capable stakeholders (Drivers Jonas, 2011, p. 2-3; Rojas, 2011, p. 11).

The **reconciliation of this duality** remains at the center of the debate regarding the role of values-based conservation and governance. Making heritage more accessible on a wider social level will also enable its acceptance as a valid option for the general public, politicians, decision-makers, contractors, developers and others. For this, an effort on both sides is needed, through bringing a more urbanistic approach to the heritage conservation agenda, while also improving the position of heritage values with the planning agenda. These can then be transformed from competing alternatives to mutually beneficial components of the same joint agenda (Yildirim, 2011, p. 28). Highlighting the social relevance of this proposition, Siravo (2011, p. 9) points out that conservation represents a minority position, but it is all the more relevant in times of environmental concern, and as it offers to overcome the divide between a powerful minority who are partisans of unrestrained destructive growth and a powerless minority who champion total conservation, to show how development can be channeled in the **interest of a vast majority of users**.

At this point, the question of whether or not the urban cultural heritage can effectively **play a 'productive' role** in the life of the city can be addressed in terms of reconciling the dualities related to value-based conservation through negotiations among stakeholders. A perhaps brutally simplistic assumption would place the answer given by the proponents of economic development as 'yes', while that given by the heritage conservation sector as 'no', with the former garnering larger support in society. However, a more consensual solution can be facilitated as more diverse types of 'value' (i.e. inherent, non-use values as opposed to use values measured strictly in terms of monetary profits) are adopted by members of industries such as real estate, economics and engineering, who are classically trained to undertake cost-

benefit analyses within purely financial parameters. The **definition of 'productivity'** in turn can be expanded to allow for new ways of measurement beyond the financial and quantitative.

Similarly for the question of whether promoting heritage as a driver of development inevitably leads to **gentrification**, a more predominant and immediate response would be 'yes', based on the premise that conserved and regenerated historic areas inevitably experience increase in their property value, which entails replacement of lower-income groups with higher-income ones. However, there are several points that show there is more complexity to this question. Gentrification can be considered part of the natural evolution and cycles of invasion and succession in places, where low-income populations are often themselves inheritors of their neighborhoods from earlier, wealthier occupants. Social change needs to take place, but the question can be modified to pursue its rate and manner, rather than its existence. Change can be softened, e.g. by reducing displacement, if not completely preventing it, through social housing policies that local governments adopt, such as subsidies and rent control. To give two examples to the risks of extreme approaches on both ends, full retention of low-income residents can lead to disrepair, as they cannot afford the maintenance costs of buildings, while full displacement of the resident population can cause mayors to lose their electorate and long-time partner in urban conservation efforts, as the new rich who move in can be unappreciative of the earlier efforts, in turn causing the disruption of projects (Getty Conservation Institute, 2011, pp. 19-22).

Further to the broad themes mentioned above, some **more specific factors related to stakeholders** can be acknowledged as influencing the role of heritage within urban development. The various social and economic characteristics of stakeholders that constitute important factors include the demographic profiles and the income levels of the communities residing in historic areas, the level of conservation culture that is internalized by these communities, the strength of the connection between users and the buildings they use, the approach of the local government toward heritage and the skills at managing funds for its conservation. The maturity of public institutions and legislation determines the level that economic incentives and aid can be offered to owners and users, conservation works on buildings can be facilitated, local governments are empowered to support owners and users, and how effective regulating mechanisms are.

To be elaborating on arguably the most important stakeholder in the debate, **local governments** are the only actors capable of ensuring coordination of other stakeholders, through a combination of legal enforcement powers, economic tools and social engagement and outreach abilities. They are increasingly required by communities to take responsibility for preserving the public-good component and the socio-cultural values of urban heritage (Rojas, 2011, p. 12). Economic tools made available to property owners and users to realize the economic potential of heritage assets, become more potent when local governments can channel the use of funds in a way that maximises the multiplier effect of incentives, e.g. by providing seed

money for privately owned buildings conditional to match funding. As another key tool at the hands of local governments, participatory governance has the potential to impact on historic environments through the devolution of land use planning and development control to local authorities. While this presents an opportunity to mediate between the competing interests of conservation and development, tensions also arise between localized decision-making, and national policy and international obligations to protect heritage (Landorf, 2011). To competently handle these sensitive dynamics, it is important to have good technical staff with heritage expertise in local authorities, consisting of well educated professionals of architecture and planning-related fields, as well as financial and real estate advisers (Getty Conservation Institute, 2011, pp. 19-22).

Beside individual characteristics of local governments and other stakeholders, the **methods of organization** between them present another essential factor in supporting the role of urban heritage. In the multi-actor settings that undeniably form the only viable governance system today, effective coordination and collaboration between all stakeholders that share responsibility, the ability for key actors to find enlightened partners with whom they can work together, and the presence of a stakeholder that assumes ownership of urban conservation projects and fosters the spirit and culture of collaboration are some of the basic requisites for the success of urban heritage conservation. Similar tenets have been outlined in the literature of site management for historic places. The principles adopted by UNESCO for managing World Heritage Sites, as explained by Feilden and Jokilehto (1993), include the conservation of all values present on the site, consultation with all stakeholders, regular monitoring and reporting done by appropriate experts, and periodic work programs and priorities defined within the strategic conservation plan framework.

The Turkish Context

Situated in a historical crossroads of civilizations, Turkey is home to a rich stock of built heritage, which endows almost every town with historic quarters to be protected. Legal and administrative systems to address the conservation of this legacy have been in development since the 19th century, and have generally followed worldwide trends in the field. However, the size of the population and the socio-economic and geographical dynamics of the country have rendered conservation a constant challenge. Influx of rural migrants into urban areas to form the new industrial workforce, in particular have made populist policies in local governments prevail at the expense of adequate protection of the urban heritage.

Traditionally, the conservation mandate has been burdened on the government and not fully integrated into the economic life of cities. In the face of the threats posed by these trends, conservation efforts have been undertaken with legislation that was strict, but weakly enforced and ill-equipped with implementation tools, and a centralized administrative structure, comprising the Cultural Ministry and its provincial branches, that had only meagre state resources at hand; these factors

confined conservation to the level of a bureaucratic and academic exercise that was marginalized from political decision-making processes, and not taken root as a community-wide culture. This 'top-down' approach can be understood in the context of the state-interventionist regime that was prevalent until the 1990s, but which has now given way to trends brought about by the evolving democracy of Turkey (Yıldırım 2009b).

Reflecting the wider trends discussed in the previous section, there have been important **new developments** over the last few years in the legislation regarding cultural heritage. Many are related to the accession for European Union membership and EU-compliance reform, entailing the devolution of government power and localization of preservation services, whereby increased roles, responsibilities and funding resources are given to local authorities, as well as incentives to private persons and bodies for cultural and natural heritage protection.

Since 2003, about ten **new laws and associated regulations** have been adopted, which have direct and indirect implications for historic preservation. These include new funding sources and responsibilities given to special provincial directorates and municipalities; the establishment of municipal Conservation Implementation and Regulation Bureaus (KUDEB) and provincial project and training bureaus, the streamlining of bureaucratic procedures; new tools for compensation of historic property owners such as transfer of development rights, and an expanded scope for urban regeneration and tourism-related investments. These changes, while deemed a remarkable legislative and administrative reform, have been received with some skepticism in terms of their effectiveness and consequences, which are yet to be fully realized.

This legislative reform coincides with **socio-economic trends,** such as an increased general interest in heritage preservation, fed by media coverage and the new awareness of economic value to be gained through cultural tourism, especially by local governments; a shift away from centralized, modernist planning toward strategic planning and the emergence of site management plans, particularly in the context of World Heritage Sites; the adoption of the new concepts of sustainability, livability, devolution and governance covered within the UN-based Local Agenda 21; increasing international sponsorship through programs of the European Union and funding bodies such as the World Monuments Fund and the World Bank; the increased interest of private companies in tourism investments in archaeological sites; and the strengthening of non-governmental organizations, including citizen groups and professional chambers. While these trends present opportunities supporting heritage conservation, they are accompanied by controversial project investments of international corporate capital in prime urban locations in Turkey, which draw the reactions from community groups through court battles and protest campaigns.

This all helps to produce an **increased number of actors** in the preservation sphere, coming together both in terms of their conflicting interests, such as in preservation battles, and in terms of collaborations, in terms of both international and public – private partnerships. In this new era of democratization, two important implications emerge that need to be monitored and managed for positive outcomes. Firstly, the relaxation of centralized government control will give way to more varied and contested views of preservation and to less strict applications of preservation principles. Secondly, the view of preservation as an economic revenue generator presents intensive initiatives for projects to preserve and reuse historic fabric on one hand, and potential abuse through misguided interventions on the other. In other words, it is possible to foresee a **quantitative rise and qualitative fall in** urban conservation projects and practices.

In response to these challenges and opportunities, some **basic measures** can be proposed, including staff and technical assistance to the highly underserved local authorities to provide guidance in interventions; the community sector to rise to the challenge of checking speculative interests in the private and government sectors empowered by the new laws; incentivizing good practices among private sector investors; and forming the 'right' type of partnerships in conservation projects that will achieve optimal results (Yildirim, 2011, p. 32-36).

Empirical research conducted during the author's recent **doctoral dissertation**, which explores the governance framework of actors in the urban conservation process, has provided some insights that elaborate on the propositions outlined above. The main **hypothesis** of the dissertation, explored through numerous case studies, states that 'for a successful project, the governance framework must include the active participation of four types of actors, i.e. Statutory Authorities, Investors, Users and Experts, to fulfill the respective requirements of legal, financial, social and scientific credibility of projects, as well as a fifth actor who will be the Project Owner. The focus case studies of the study have been the cities of Gaziantep, Kuşadası and Mudurnu, as well as about forty other towns of large, medium and small scale.

In the metropolitan municipality of **Gaziantep**, the 'Culture Trail Project', which is part of a wider initiative called 'Gaziantep: The City that Turns its Assets into Abundance', features a 5.5 km axis connecting the citadel with the historical commercial center, where street and building façade rehabilitation, infrastructure and landscape improvements, and restorations and adaptive reuse of historic buildings have been carrid out, aimed at revitalizing the historic center and integrating it into the social life of the city. Here, the urban heritage is clearly seen as a vital component of the vision for the city's future. The project has been initiated with the election of a new mayor with such a vision, and successfully implemented though strong municipal leadership and coordination, which revolves around the multi-actor 'Common Mind Platform'.

In the mid-sized tourist resort town **of Kuşadası,** the **'**Kaleiçi Quarter Street Rehabilitations Project', which is part of a wider initiative called 'Kuşadası Reclaims

its Natural and Cultural Identity', features street and building façade rehabilitation, infrastructure and landscape improvements. Kuşadası Municipality has formed a strong partnership with the Foundation for the Protection and Promotion of the Environment and Cultural Heritage (ÇEKÜL) and various universities' architectural faculties for the project.

In the small Silk Road town of **Mudurnu**, the 'Project for Tourism-based Revitalization of Traditional Architecture' involves efforts to revitalize the economy through cultural tourism, after the collapse of the poultry industry in the economic recession of 2001, through minor and comprehensive repairs in historic buildings, adaptive reuse for tourism, and visual improvements in the public realm. The special success of the Municipality, in coordination with the Provincial Directorate for Culture and Tourism, has been mobilizing funds provided by the new grant scheme of the Ministry of Culture and Tourism, for the design and execution of thirty restoration projects.

The examined projects have revealed some **successful outcomes,** such as transformation of the project areas- most of which had less development dynamics compared to the rest of the city- into more attractive destinations through physical improvement and increase in use and economic activity; enhancement of the city's identity; emergence of social and economic expectations from the local government and community toward the urban heritage; setting an example and providing impetus for other projects; actors sharing ownership of project, and development of a local preservation culture. Some **points of concern** also emerge, mostly related to interventions being superficial and lacking full technical and scientific competence. However, a general attitude full of optimism and a resolution to continue works is observed, as well as a tendency of implementation improving in quality, as lessons are drawn from mistakes in earlier phases of projects.

Some important points observed regarding the **processes** of projects are that partnerships are based on ease of implementation (e.g commercial districts being favored in initial phases over residential, as project co-funding by local traders is available), and a notable element of public participation, through information and consultation meetings with business owners, and multi-actor committees set up either for the specific project or operating city-wide.

The main stakeholders of urban conservation projects**,** in order of importance, emerge as Municipalities, with particular importance of individual mayors, Cultural and Natural Heritage Preservation Boards, and Governorships. projects. The role of Project Owner is played mostly by the metropolitan or district municipality, supported by the Ministry of Culture and Tourism and the Directorate of Foundations. A wide range of actors act as project partners, including the Directorate of Surveying and Monuments within the Ministry, the ÇEKÜL Foundation and its local branches, the Association of Historic Towns (TKB), the Chamber of Architects, private architectural practices. Project funding comes mainly from Municipalities, grants distributed by the Special Provincial Administrations based on the new real

estate tax co-payment scheme, international funding bodies and the Ministry of Culture and Tourism.

The case study findings suggest that the positive processes and outcomes of the examined projects are supported by the presence of the types of actors outlined in the main hypothesis, thus largely supporting the hypothesis (Yildirim, 2011, p. 322).

The key issue that needs to be addressed for success appears as maintaining the productive momentum of projects without compromising on scientific standards. From the governance perspective, this entails the **balance** between the 'Regulating' role of the 'Experts' and 'Users' and the 'Executive' role of the 'Investors' and 'Statutory Authorities'. To achieve this, an effective system of **coordination** and collaboration between these parties is required, harnessing as many channels of communication as possible. Other factors to consider include actors being involved in full capacity, whereby mandatory roles defined by legislation are supported by voluntary roles; technical capacity building for municipal staff through support from experts; project continuity being achieved, on a technical level by involvement of dedicated experts throughout design and implementation, and on an institutional level through long-term, lasting governance structures independent of electoral politics, being put in place. These measures also help to awareness for and reinforce the culture of preservation in the community.

As a concluding remark on these developments in urban conservation and their effect on the role of urban heritage in Turkey, one can note a **positive change** toward more social engagement, more opportunities to realize the economic potential, and heritage becoming a more visible component of the city image and the strategic visions for the cities' futures. For plans and projects that could not find the funds to be implemented before, the 'opportunity to implement' has arrived, being realized with varying degrees of success and competence, but nevertheless with great enthusiasm and a positive trajectory of improvement.

The Emirati Context

The urban heritage of the United Arab Emirates has been marked by the astoundingly **rapid transformation** of the country through its oil wealth, from a confederation of semi-nomadic tribes surviving on a basic subsistence economy into a futuristic post-modern landscape. The distinction of the post-Oil UAE from the pre-Oil period is clearly marked by the country's social and physical characteristics, but a continuum of **layers of urban growth** has still managed to form in this transition. Beside the survival of a short but vital urban layer attesting to the history of modernization, Emirati cultural heritage can be gleaned through traditions linked with a strong adherence to Islamic practices, enduring references to a nomadic, desert-bound lifestyle, and intangible heritage elements such as poetry, camel-herding and falconry. There are also important archaeological remains and ancient oases dating back to the Bronze and Iron Ages, which together form a cultural

landscape that have evolved and survived to the present day. The rapid development of the 20th century have caused major loss of the pre-Oil urban fabric, leaving behind only the monumental structures such as Qasr al Hosn in Abu Dhabi, and some traces of villages that can be found at the edges of oases in Al Ain. Although the heritage is not as strong in the built, urban sense, the intangible and rural elements find their references in the modern urban landscape, producing an unusual mixture of urban heritage. The country owes its modern-day achievements to the masses of expatriate workers and professionals taking up residence here, forming a highly multi-cultural population that has indirectly contributed to the urban culture.

The UAE is essentially a monarchy in terms of political regime, but it has some distinctive features that suggests a more democratic **governance structure** than one might presume. Firstly, the country is a federation of separate emirates, each with a certain amount of autonomy that includes a strong local mandate for culture; secondly, the **tribal governance** structure centered around the 'majlis' tradition of consultation enables a considerable degree of upward feedback of the communities' interests to the well-respected rulers to consider. With the advent of civic institutions, the government has adopted modern state organs such as the Federal National Council, but these have been superimposed on, coexisting with, and thus affected by local tribal structures. The urban development projects, which began with the flow of funds from oil exports in the 1960's, were initially directed from the Rulers' courts, but soon the realization of development plans required the establishment of government departments for specialized operations, which eventually led to the creation of federal ministries after unification as a nation-state in 1971. Today, local governments have a very high profile in the development of the physical world (Damluji, 2006, pp. 16, 36). Development budgets and projects are allocated by the Executive Councils representing the government of each emirate (Damluji, 2006).

More specifically for **heritage**, the development of **stakeholders** and activities can be traced back to archaeological excavations in the mid-20th century which started under the auspices of the late president Sheikh Zayed, and the establishment of the Center of Documentation and Research to record the emirate's history and resolve territorial issues. This was followed by the Department of Antiquities and the Al Ain Economic Development and Tourism Promotion Authority, which asked for UNESCO's support in preparing the Abu Dhabi Cultural Heritage Management Strategy. Completed in 2005, the Strategy promoted an integrated approach to the management of the emirate's cultural heritage, and recommended the establishment of the Abu Dhabi Authority for Culture and Heritage (ADACH) to implement this vision. The founding Law no. 28 of 2005 charged ADACH with a broad mandate for this end, and placed it among several new Abu Dhabi government agencies that have been expected to guide Abu Dhabi's ambitious future development (Yıldırım & El Masri, 2010). These agencies include the Abu Dhabi Urban Planning Council (UPC), Department of Municipal Affairs overseeing Abu Dhabi, Al Ain and Western Region Municipalities, the Department of Transport (DoT) and the Environment Agency. In 2011, ADACH was integrated with the Abu Dhabi Tourism Authority (ADTA), to form the Abu Dhabi Tourism & Culture Authority (TCA), this restructuring being

viewed by some as an indicator of a shift in the emirate government's policy toward engaging culture and heritage more actively in economic development.

The Abu Dhabi government has been showing strong initiative also in adopting the **Abu Dhabi 2030 Policy Agenda**, in development since the mid-2000s. Cultural heritage has been given an important role at policy level, as one of the main subject areas in the agenda; however, the level of implementation has revealed challenges, as it is often not clear how conflicts arising between the mandates of different agencies will be resolved and how the **government's priorities will be negotiated**. A recent example of this has been the Abu Dhabi Bus Station, an urban landmark of modern architectural heritage, which has been designated for protection by ADACH/ TCA but also scheduled for replacement with a new facility as part of the bus transportation development plans of the DoT. Negotiations between the two agencies are currently ongoing, and have recently taken a turn on the side of preservation, as the matter has been raised to the level of the Abu Dhabi Executive Council, and various briefings on the significance of the station have helped key officials re-consider the redevelopment scheme.

The policy agenda has been followed by sectoral versions, foremost among them the Abu Dhabi Economic Vision 2030, as well as the upcoming **Environment 2030** sustainability agenda. It has not been clearly defined how cultural heritage features within this agenda, i.e. in terms of the social, environmental and economic pillars of sustainability, but this may be a point that will be addressed among the agencies in future deliberations, as the EAD and former ADACH have many procedural and practical relations in effect.

The **emirate government's** predominant role also manifests itself as the primary **funding source** for both development and heritage conservation projects; the government's decision to cut the budgets of many agencies, which has been interpreted as a strategic move in the wake of the 2008 economic recession, has affected the heritage conservation work at TCA.

On a level below the emirate government, **municipalities** have exercised their **regulatory** capacity in a way that has shaped the formation of new urban layers. During the 1980s, bye-laws of the Department of Town Planning have required new buildings, particularly residential ones, to feature architectural elements of 'Arab/ Islamic' style on their elevations. Intended to reflect regionalism, the effect of this has been criticized by scholars to produce instead only superficial decorative features, often without consideration for the underlying principles of Islamic architecture (Damluji, 2006, p. 32).

Similarly, the misappropriation and literal application of features of traditional architecture such as wind towers and desert forts, have produced unintended consequences, misrepresenting the identity of the built heritage (Allies and Morrison & M&N, 2011). Here, the quality and role of design professionals becomes key as they **interpret and reproduce the regional cultural identity**. Damluji (2006)

provides some insights into this, such as the conventional architectural education in the region having been oriented towards structural engineering (p. 36), and the influx into the region of architects from different backgrounds and sense of aesthetics resulting in the experimental nature of the architectural profession (pp. 24 , 102-116). More recently, professionals recruited to the new public and private sector agencies are advocating context-sensitive design as the global best practice, instead of the conventional, narrower focus on operational and 'engineering' aspects of urban projects. This is a salient instance of the multi-cultural character of the stakeholder ecosystem in Abu Dhabi at work.

There are some examples of **architectural modernism** in Abu Dhabi, from the 1960s-80s, that has provided an appropriate response to local cultural and climatic conditions (Damluji, 2006). It is important to recognize this layer as part of the urban heritage, to complement and provide continuity to the more 'ancient', pre-Oil era sites and buildings, which are more readily recognized as 'heritage'. The scope for **adaptive reuse** of both types of heritage is as yet somewhat limited, due to factors such as the fragile physical nature of pre-Oil buildings and the substandard physical construction techniques of some early modern period buildings, not to mention the absence of a sufficient culture and industry supporting the idea. However, as more value is placed by the government, developers and the local community on the full range of heritage assets, it will be easier to develop methods of regenerating and integrating them within urban development.

Many illustrative issues related to stakeholders and the role of urban heritage can be observed in **Al Ain**. Considered the most 'authentic city' within the emirate, the modern city of Al Ain has developed in juxtaposition with an ancient oasis landscape, which was inscribed oas aUNESCO World Heritage Site (WHS) as the serial property of 'The Cultural Sites of Al Ain'. Al Ain Oasis, one of the components of the property, has been the subject of TCA's Al Ain Oasis Cultural Quarter Master Plan, aimed to connect the historic oasis with the surrounding urban fabric, and conserve it as a local environmental resource (Yıldırım & El Masri, 2010). The master planning efforts and the WHS nomination process have together been advanced through productive inter-agency coordination between TCA, UPC and Al Ain Municipality (AAM), to integrate the oasis master plan with the wider local plan, and to ensure coordination of the development control processes of each agency in and around the WHS areas. The AAM has supported some development restrictions by exercising the basic economic tool of plot reallocation. As additional restrictions arising from the WHS take effect in the property's buffer zones, reactions of local landowners and developers have also increased, revealing the need for more effective outreach to the local community to garner their support. The WHS designation also seems to have triggered a shift in the tourism marketing policy of the former ADTA, and the integration of the cultural heritage and tourims agencies forming TCA is likely to support work on cultural tourism promotion in Al Ain.

In conclusion, although the urban heritage has not been immediately explicit in cities within Abu Dhabi Emirate, it is nonetheless being recognized for its unique characteristics, created by a combination of factors special to this region and telling the particular story of the emirate's development. With the maturing of public organizations, legislation and capacity building with qualified local and expatriate professionals to support its conservation, the gradual development of its awareness among interested social groups, and perhaps most importantly its prioritization by emirate leadership, the urban heritage is slowly acquiring a more prominent role in the urban development context of Abu Dhabi.

Comparative Results

In evaluating the contexts of Turkey and the UAE, it is possible to conclude that while the two countries have quite different histories and socio-political situations, the developments occurring around the world, in terms of stakeholders and the role of urban heritage, have relevance in both of them.

The most important thread that one observes to tie the countries' experiences together is the general process of **modernization**, although each is at a different stage along this trajectory and have not necessarily followed the same sequence of steps to arrive where they are. In particular, both countries having predominantly Moslem and Middle Eastern societies, with elements of traditional and conservative cultures, the Emirati population can be said to be facing, since the late 20th century, some of the same key issues of modern life that the Turkish population was facing in the early 20th century with the establishment of the modern republic, or perhaps going back to the late Ottoman period. This has spatial dimensions such as the move from extended to nuclear family and household models that reflect in the move from traditional large houses to high-rise apartments, the development of participatory governance in planning and the establishment of civil institutions in regulating urban development.

In terms of shaping stakeholder values and attitudes toward the role of urban heritage, modernization overlaps largely with **democratization**, and the evolution from conservative to **progressive policy tools**. Referring to the range of policy tools for preserving the built heritage as formulated by Schuster et al (1997) in a sequence of most to least conservative, i.e. from ownership and operation, to regulation, incentives, property rights and information, Turkey's recent legislative and administrative reforms have enabled more advances along this line. However, tools such as plot reallocations to enable the transfer of development rights are also in use by Abu Dhabi's municipalities. In terms of the shift from top-down, government-controlled governance system toward multi-actor settings, Turkey has adopted more of these changes, although some multi-actor processes such as public-private partnerships can be found in the UAE as well. The federal government of the Emirates supports a decentralized governance structure more easily than in a unitary

state like Turkey, but local devolution in Turkey has also been in process, notably in relation to European Union accession.

In Turkey, concepts of urban heritage and its integration with the planning process have been a **long time in development**, resulting in more mature institutions and complex administrative systems. The much more substantial stock of built heritage to deal with, the economic dynamism in cities and the scarcity of financial resources in proportion to the size of the heritage stock, lend certain challenges to the effort of conservation. In the UAE, the drive to 'catch up' and excel on the global stage, and the exposure to international 'best practice' ideas brought by expatriate professionals, enables a potentially **faster adoption of progressive models**, though their true 'digestion' and internalizing by the local community naturally requires more time. Conversely for the UAE, time is short, but financial resources more ample. Also distinguishing the UAE are the multicultural collisions of professional and cultural practices, and the unusual, 'post-modern' combinations that result from it. In both countries, however, the fact that **promoting heritage** against development involves a **struggle,** is not so different. No matter how much wealth there may be, the action of engaging with urban heritage depends on the interest and will by those with the power to allocate and mobilize resources. Both countries thus prove themselves to be **part of the same global community**, where the future of urban conservation requires stakeholders to value and harbor a positive attitude toward the urban heritage.

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Keywords: Stakeholders, roles, attitudes, urban conservation process

The 'new' Metropolis as a post-political script? Re-reading a vision exercise for a metropolitan region

Peter Ache [1]

Abstract

Fritz Lang produced between 1925 and 1927 one of the most powerful 'allegories' (Fischer, 2003)regarding the 'Metropolis'. It was a futuristic as well as romantic script of the state of an urban society, which finds itself divided between the over ground managers and the underground workers, the latter caring for the 'm-machine', a mythical entity that keeps the society going. Metropolis is a story of salvation and betrayal, and the appearance of a first ever 'robot' that influenced all future images of an 'android'. The reception of Metropolis was diverse and mainly expressed huge levels of irritation. Siegfried Kracauer, the founding father of the sociology of film, called the movie 'a strange mixture of Wagner and Krupp' (Kracauer, (1984/1947)). In visual terms, it is safe to say that Metropolis set a standard, which was rarely met in later efforts. Despite being aged, Fritz Lang's personal vision of a metropolis still finds a link to current times, where the co-creation of metropolitan futures in group vision making processes has become very important, looking f.i. at Les Grand Paris exercise – or the exercise, which is under consideration here, the Greater Helsinki Vision 2050 (Ache, 2011). In fact, the metropolis continues to be 'the', though somewhat fuzzy, object of our times, where the globally acting research community discusses its existence (Sassen, 2001), the functions (Castells, 2010), or the way of operation (Taylor, Hoyler, & Verbruggen, 2010). The paper and presentation will reflect on the Greater Helsinki Vision 2050 process and will present a.o. the following findings: The vision exercise can be interpreted with the help of the institutional analysis and development framework (Ostrom, 2005) as an action situation with specific elements and structures. Furthermore, the GHV 2050 process shows characteristics that can be interpreted through new theoretical perspectives, like soft spaces (Haughton, Allmendinger, Counsell, & Vigar, 2010), (neo) pragmatism (Hillier & Healey, 2008), or planning in post-political times (Swyngedouw, 2009). And, returning to the outset, today the metropolis continues to be not just a new territorial form but the result of the preferences and intentions of actors, who create the metropolis in different variants. This includes the idealistic vision, that the metropolis itself is actually the 'm-machine', of unknown providence but with the capacity to mediate between 'hand and brain' (Lang).

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1. Introduction

Fritz Lang produced between 1925 and 1927 one of the most powerful 'allegories' regarding the metropolis. It is a futuristic, dystopian but as well romantic script of the state of society. That society is definitely an urban society and it's most remarkable feature being a divide between over ground managers and underground workers, the latter caring for the 'm-machine', a mythical entity that keeps the urban society going. The romantic element comes as a story of betrayal and salvation, and the appearance of the first man-machine, an android built as the copy of the main female role/actor, an image that influenced all future perceptions of androids. This vision of a metropolis was influential in many ways. In visual terms, it is safe to say that Metropolis set a standard, which was rarely met in later efforts. Much of the scenery was designed by film-architects and can be found almost one-to-one in modern science fiction movies like 'Blade Runner' by Ridley Scott. The reception was, as one can read from historical comments, diverse and mainly a result of huge levels of irritation. Siegfried Kracauer, the founding father of the sociology of film, called the movie 'a strange mixture of Wagner and Krupp' (Kracauer, (1984/1947)), alluding to the combination of a deep mythical almost *Götterdämmerung* kind of layer with the steel juggernaut.

Film is of course not the main issue here, but urban futures are, though again, not in the futuristic terms of Fritz Lang. The creation and design of urban and in particular of metropolitan futures has become very important recently, looking for instance at the Les Grand Paris exercise, or looking at the exercise, which is under consideration here, the Greater Helsinki Vision 2050. For about a decade now, the metropolis or metropolitan region came into focus of such exercises of spatial and strategic thinking. In a EU context, the European Spatial Development Perspective (EC, 1999) could be named here first, sparking for instance in Germany a discussion about metropolitan spaces of a European importance, which many years later resulted in a debate about a new category to organize the national territory around metropolitan spaces (ARL, 2007; Knieling, 2009)[3]. In fact, the metropolis is the object of our times, albeit somewhat fuzzy, where the globally acting research community discusses its existence (from a global south perspective Robinson, 2006; starting obvioulsy with Sassen, 2001; UN Habitat, 2006), the function (Castells, 2010; Taylor, Hoyler, & Verbruggen, 2010), or the way of operation (Hall & Pain, 2006), and also its many variations (see the special issue of Regional Studies, Neuman & Hull, 2009), and the political or strategic dimensions (MacLeod & Jones, 2011).

[3] Which brought as well a new interesting interpretation, the communities of shared responsibility (in German *Verantwortungsgemeinschaft*), i.e. combinations of metropolitan cores with wider hinterlands with the core taking also responsibility for the surrounding hinterland [*(Peter Ache, 2008)*.]

The article uses for its reflection a metropolitan vision exercise that ran in Finland between 2007 and 2009, and continues as a strategy and planning process until today. The Greater Helsinki Vision 2050 exercise (hence GHV 2050) might irritate international readership right at the beginning. Finland and a metropolis sound like a mismatch, for instance due to a small overall population of five million inhabitants spread over a vast territory, with the largest city having just about six hundred thousand inhabitants in 2011. Compared with other metropolitan spaces (OECD, 2006b; UN Habitat, 2009; Wiechmann, 2009), we can speak about the lower end of the scale.

The exercise was also critically and with some irritation observed in the local context; until today a gross suspicion cannot be denied, expressing the fear that Helsinki as the capital city will be further developed on the expense of the hinterland. When looking into the constellations of that exercise, what can actually be seen is a strong link with a governmental agenda that drives territorial development into a specific, a 'metropolitan' direction. In a way, the metropolis becomes an object of intentions of the actors and the GHV 2050 Vision is the new script for that metropolis. This script, not least, is formulated as an agenda of creating the right spatial setting for a larger modernisation strategy. Finland's economy is heavily dependent on information and communication, on advanced technologies and services, operating at the technology frontier, that 'requires' so to say a metropolitan space with creative ingredients (Farole, Rodríguez-Pose, & Storper, 2009 (January)).

Terminology is important, as the reader has seen, and varies between greater region, metropolis, metropolitan space, or metropolitan region, capital city, and capital city region[4]. The spatial object of this article does not fit well the existing scientific terminology. It seems that our existing set of categories, theories or concepts is insufficient. The metropolis has probably much more of a transitional quality (P Ache, 2007) than anything else, as the current case study shows. It is a blurred definitional array, allowing for agreement or accordance, frequently operating on the basis of a 'perceived similarity' between collective actors[5]. A precise terminology is maybe not that necessary, if we accept the discursive construction of policy (Fischer, 2003). Then, the main element of the 'form', classically formulated (Benevolo, 2000 (8)) as an idea of density, morphology, mono or poly-centricity, is not that essential as an element. Seeing the metropolis from that perspective, it is not simply a new existing territorial form but the result of the preferences and intentions of actors who create the metropolis in different variants. And the 'vision' is the new script, no matter whether of or for the metropolis.

What will the paper do? This article will look into the outcomes of the GHV 2050 vision exercise, in particular the follow-up activities after the original

[4] Readers should be aware, that the notion of metropolis (and its variants) does not refer to a simple statistical area, like in the USA.
[5] So, one might wonder whether it is an 'empty signifier' (Swyngedouw and others?)

competition. The vision exercise can be read with the help of the institutional analysis and development framework (E. Ostrom, 2005) as an action situation with some specific elements (Part 1). The content side of the vision exercise presents interesting insights into actor's perceptions of what the metropolis should be. In particular the momentum of change is interesting to look into. The essential difficulty to cooperate over loose issues, the conflict filled opposition especially over budgets or economic items, shall be overcome by a strong but framed leadership, or in other words, by managers of change (Part 2). And finally, returning to the outset, GHV 2050 scripted a different future for the metropolis. In the reference case of the Metropolis movie, Fritz Lang, being an artist, developed an extreme and exclusive vision. He acted as an individual driven by the interest in the artistically enhanced *(but also 'poetic', see Hardy, 1998)* vision of a new life world. Lang's vision uses a conflict, not only dramaturgically, to elaborate a different future, calling for a race against the machine. Compared with that, the co-constructed future by a group of institutional actors has a different character, with one surprising aspect being, that in principle the vision is free of any conflict. In review of the process, the paper will reflect on this aspect and establish links with the discussion about soft spaces (Haughton, Allmendinger, Counsell, & Vigar, 2010), agnostic (neo)pragmatism (Hillier & Healey, 2008; following from Pløger, 2004) but also the post-political city (Swyngedouw, 2009) and the institutional void (Hajer, 2003). (Part 3)

2. Analysing a vision process in the metropolis

The metropolitan region of Greater Helsinki is an institution in the making and the Greater Helsinki Vision was and is instrumental in the creation of this new arena, addressing possible futures for the metropolitan space and creating a new action situation 6.

In 2006 the international ideas competition 'Greater Helsinki Vision 2050' (henceforth GHV 2050) was announced jointly by the region's fourteen municipalities, in cooperation with the Ministry of the Environment and the Finnish Association of Architects. The aim of GHV 2050 was to create a joint vision for the sustainable development of land use, housing and transport. The basic assumption of the brief was a rate of population growth similar to that in recent years, leading to an estimated 1.8 million inhabitants by 2050. Altogether 109 entries were submitted by the deadline in 2007. Out of these, nine entries received an award, which was presented in December 2007.

For the analysis of the GHV process, institutional theory provides a well-established conceptual framework for interpretation. Institutional theory has a

[6] The article works mainly with findings obtained in participant observation over a period of now five years. At several stages the author was invited to participate in the Greater Helsinki Vision and follow up process. During that period, a deeper insight into the operations and structures of the metropolitan region were obtained.

long standing tradition with at least three distinctive scientific branches, namely political sciences (Scharpf, 1993), social sciences (Berger & Luckmann, 1966) and economics (Samuels, 1988). The work by the Nobel Prize winner Elinor Ostrom belongs to the latter group, providing the institutional analysis and development framework (IAD) 7. Especially the work done by Elinor Ostrom (2005) will be used as the main source for an interpretation of the observations.

Much of Ostrom's work is interested in the management of common pool resources. One could argue that with the new spatial structure of a metropolis a very complex variant of a common pool resource problem is addressed, starting with the dimension of land-use and stretching to the complex resource climate 8. The most exemplary theme is probably urban sprawl (European Environment Agency, 2006) as a negative land-use phenomenon which brings arguments in favour of a better coordinated metropolitan space and calling for more effective planning institutions at the level of the functional urban region. The characteristics of common pool resources create conditions for cooperative action in distributed institutional settings.

The GHV 2050 exercise is essentially a spatial planning exercise, using the metropolis as it's object. Typically spatial planning is a public service produced in shared constellations, though increasingly using also private service producers (P Ache, 2010). The orientation for the service provision can be understood as guided by a preferred state of community affairs (V. Ostrom, Tiebout, & Warren, 1961), not least emphasising the political influence on the service provision. In such a context of preferred states of community affairs, preferences and intentions are more likely to be negotiated again, re-emphasising the common pool dimension of the metropolis. Overall, the metropolis in principle fits the common pool resource criteria quite well, though in the discussion at the end of the article we also point out an alternative view.

The framework of institutional analysis as outlined by Ostrom (2005) is multi-dimensional and complex. In the context of the current article, it is especially important to look into what is called the action arena. The GHV 2050 vision process can be seen similar to an action arena. There are several elements that institutional analysis applies to understand an action arena. Biophysical or material conditions, attributes of the community, and rules are the exogenous variables of an action arena. The action arena itself consists of a specific action situation, in our case the core of the GHV competition and follow-up process, and of participants. Participants interact in the specific external framework and create in an action situation the outcomes which are evaluated, therefore having an

[7] Which is compatible and partly integrates theories and concepts from game theory, microeconomic theory, transaction cost theory, social choice theory, public choice, constitutional theory, theory of public goods, concept of common pool resources (Ostrom 2005, 28).

[8] The World Meteorological Organization makes this claim of seeing climate as a resource. See http://www.wmo.int/pages/mediacentre/infonotes/info_17_en.html

impact on following rounds of action situations. The internal structure of an action situation focuses on the production of solutions or outcomes. Actors, assigned to positions which literally allow to act, are linked in the action situation. They have information about and a control over actions and are knowledgeable of potential outcomes, possibly including a view towards the costs and benefits of the potential outcomes. Using additions like potential or possibly denote an obvious element of uncertainty, which is that the probability of specific actions leading to certain outcomes is unknowable. Actors are restricted in that respect and cannot fully grasp all outcomes; in other words they are not fully rational in their behaviour and decision making. One essential element of institutional analysis are the rules which both, exist as exogenous variables but which are also applied or co-created in the problem solution. Rules order relationships in the action situation. Three categories are basically in use: operational, collective choice, and constitutional rules. If individuals voluntarily participate in an action situation they must share some general sense that most of the rules governing the situation are appropriate. However, as it says most, there is always an element of ambiguity, which brings another essential element, that of learning. Actors can learn in action situations, either from each other or from the achieved outcomes, and can adjust their behaviours accordingly.

Using above outlined basic principles, the Greater Helsinki vision competition and the continuation process can be understood as an action situation which is faced with many challenges: The external framework conditions over past years have developed a metropolitan policy angle, which partly pushes actors to think and act metropolitan. The national government created some external pressure on the discussion of a metropolitan concept, including management structures and processes.

The competition as such started as a one-off exercise and turned into a continuation process; meanwhile it shifted from the rather informal original setting to the more formal institutional arena of regional planning. Using the concepts of institutional analysis and development, the one-shot action situation turned into a flow of action situations, including a change of institutional composition. Within both action situations, actors from different institutions with different powers cooperated. That starts at the level of the municipality, which can be understood as as collective actors (Le Galès, 2002)9. Helsinki has primacy in the current action arena, being the economic, political, cultural capital. However, the basic situation is asymmetric not least in terms of the problem solution capacity, namely the provision of developable land, which is mainly provided by the surrounding municipalities. The vision, though highly complex, can be understood as a new collective choice rule, prescribing and invoking norms for future development. The vision intends to shape the behaviour of actors, though in its final form, it provides a rather loose framework of orientation and is not

[9] Le Galès quotes the Italian author Pichierri (1997) and his model of the collective actor: Common interests within the city, and those perceived as such; Collective decision-making; Internal and external representation; Integrating mechanisms, and; Capactiy for innovation.

strictly implemented. Sanctions cannot be given, unless the state steps in 10. A positive link is sought with a letter of intent, binding aims and objectives of the vision to investment programmes, partly financed by the state.

However, in the most common case participants bring back the vision into the individual institutional structures and will influence the activities there, as a script framing the mind-sets of actors. The process of taking the vision into institutions brings a separate element for consideration. If we turn away from an institutional actor perspective and bring the individual to the fore, what then can be said about the vision process and its importance?

The first perspective results from post-empiricist research and concepts in policy science, especially from an understanding of public policy as a discursive construct (Fischer, 2003). In a discursive setting, belief systems of policy makers do play an important role, not only in policy making as such but also in administrating decisions. Those believe systems shape facticity and are reflections of the myth of the given. From such a perspective, the metropolis can be interpreted in many ways: It is a metaphor, linking past experiences and perceptions in a comparative fashion to current times. As a synecdoche it stands as pars pro toto, resembling the nation state and its fate. It comes as a story, usually the story of globalization, which helps to accommodate the amorphous challenges resulting from global space of flows (Castells, 2010). It can also be understood as a model, a metaphor elaborated with further details, frequently using existing role models elsewhere (like the global cities London, New York, Tokyo). So, the metropolis is highly symbolic and therefore, as the interpretation of symbols says, it also has a high potential of ambiguity (Fischer, 2003). 11 The 'vision' of a metropolis covers before mentioned categories

Before-mentioned aspects all point out, that the metropolis as a new action arena is a very ambivalent structure and process; its main quality probably being a transitional object (Ache, 2008). On the other hand, in complex institutional settings like the ones posed by metropolitan spaces, the interactions in land-use are of such a magnitude, that a full rational control ultimately will fail 12. The solution might be found in the creation of a 'soft space' (Haughton et al. 2010), which bring in an element of vision making. In a stepwise approach, consider the following remarks:

"What has changed today is the complexity and scale of the mega-city region, and its multiple intersections with virtual spaces and flows of globalization. This complexity and scale not only has clouded our image of the city (even as it has

[10] Which is why the vision would not qualify as a rule 'proper', when for instance applying the IAD syntax (Basurto, Kingsley, McQueen, Smith, & Weible, 2010)

[11] And from a more radical perspective, it also has the quality of being an 'empty signifier'.

[12] In a sense, this argument is pointing back to the old debate about rational vs. incremental perspectives. The system maps on drivers of the land-use system, provided by the foresight exercise in the UK, are a good demonstration of that complexity (The Government Office for Science, 2010).

reinforced its centrality), but also has clouded our very ability to construct an image of the city region. This of course has direct consequences for the ability to govern one. If we cannot imagine, then we cannot manage." (Neuman & Hull, 2009, emphasis added)

An approach applying an 'incrementalism with perspective' might be more appropriate (Hutter, 2006) in such a situation. The incremental action is taken by various institutions. The perspective is provided by the vision, an imagination of the future. The article actually proposes to reverse the argument made by Neuman and Hull (2009): We can only manage if we can imagine!

3. Metropolis - creating a new script

Section will follow later

4. Re-reading the vision exercise – a new script for the Metropolis?

In terms of evolving planning practice, a number of dimensions become visible from the previous sections that result from such an exercise: the competition setting; the quality of an informal instrument; the intention to create ownership by experts; the attempt to create an accord on the basis of a vision; but also the coexistence of many visions, including that of planning experts and that of politicians. What more can be learned from such a vision process, in terms of the metropolis and its governance?

Figure 2 Metropolitan co-operation arrangements (see Annex)

The GHV 2050 competition and follow-up process attempted to create a vision to facilitate planning processes and cooperation at the level of the metropolitan region. Figure 2 (OECD, 2006a) provides an overview on metropolitan co-operation arrangements, using already existing examples from around the world. Besides organisational forms, for the current argument it is also interesting to see the row on long-term strategic vision in Figure 2. The element of having or not having a vision is a distinguishing moment. The academic discussion here takes an even stronger stance, as the presence or absence of a vision is considered as one binding if not essential element in the strategy formation process. We have already introduced the quote from Neumann/Hull alluding to the 'un-imaginable' metropolis, and it was also said, that in principle a reversed version of the argument is suggested here. The example of the GHV 2050 process has shown that developing a vision is resorting to a soft instrument to steer the otherwise distributed planning action in a setting of partly cooperating, partly competing institutional actors. The exercise of 'imagining' or 'en-visioning' had a boundary

spanning element, and at least attempted to change the course of events, not to speak of breaking path dependency. The material and normative aspects of the vision provided sufficient space for interpretation, due to the principal fuzziness of their character (de Roo & Porter, 2007). However, the fuzziness contributed to the communication function, in both the expert face-to-face communication settings but also beyond that in terms of a wider communicative or symbolic setting. Following system theory ("climate as a resource,") that communication function is very important to create autopoietic 13 self-adjusting systems. Following the argument made by Fischer (2003) on the discursive construction of public policy, the highly symbolic value of the metropolis can penetrate the institutions and change policy and action.

And, as it seems, such strategies can be found in many other places over the recent past and provide further prima facie evidence (P Ache, 2011): 'Milan 2030' attempted to create an 'open space as the main resource to act upon to ensure democracy'; 'Zaragoza 2014' wanted to keep momentum by using the ExPo Landscapes 2014 as an experimental continuation of ExPo 2008; 'Belgrade 2021' provides an 'open space for visions'; 'Turin 2011' applied a communication plan utilising amongst other elements 'images, stories, narratives'; 'Bologna 2015' works with 'seven cities' and focuses on habitability; and finally 'Paris 2100' is considered a general 'consultation' exercise. Actors in metropolitan spaces are obviously experimenting with many similar processes and try to utilise the various potentials or capacities provided by such vision exercises.

The motivation side of actors can be further explored using the idea, the metropolis resembles a common pool resource. On the basis of before findings and with a view to the specific set of actors, this statement needs to be adjusted; looking at the GHV 2050 example and for the time being, the metropolis has rather a 'club good' character. The set of actors, the addressees, even aspects of the wished for metropolitan society show aspects of 'exclusiveness'. The club good feature can also be seen as the main reason, why no conflicts became visible. Using concepts of 'agnostic pragmatism', no real antagonistic behaviour was obvious during the process. The absence of conflict relates not only to the chosen aims and objectives, the material sites of which seem to go together seamlessly, but also in terms of the processes. At the time of writing the paper, some form of antagonistic behaviour becomes visible. Mergers and other forms of joining up municipalities have been put up for discussion by central government, where cities assess their options by looking into the advantages or disadvantages of the proposed new institutional structures, and not all actors subscribe to the option of a metropolitan merger around Helsinki. The conflict finds here a different arena. The stakes are negotiated and rejected, mostly in or between different political bodies, not surprising with municipal elections at the end of 2012. Politicians fear a cut back of capability, especially in economic questions, which are overly understood as competitive situations; other regarding

[13] Applying the thoughts of H.R. Maturana and F. Varela, who developed this notion to describe self-adaptive systems.

preferences fall back behind a maximizing strategy in competition for exclusive investments. In other words, a club good perspective (if not even a private good perspective) takes over.

A critical comment made by Allmendinger and Haughton (2010) about soft-spaces and soft-planning and the post-political condition is evoked here:

"This body of literature emphasises how a consensual pluralist mainstream organised around loosely defined and hard to refute 'feel good' issues and labels such as sustainable development (and spatial planning) can in effect deny legitimacy and influence to more radical alternatives, in the process narrowing the search for creative approaches to planning". (Allmendinger & Haughton, 2010, p. 804)

On the basis of his analysis of UK developments and a critical comment on a debate of the city region, Harding (2007) emphasises that not all phenomena derive from a neo-liberal logic and nuances count; his claim is more positive in that "a much more fundamental rethink [is needed] of what it means to be progressive in an age characterized by perforated sovereignty and stretched urban hierarchies … but increased urban accessibility and more flexible work patterns …"; and further "(w)hat we currently lack are the conceptual frameworks and practical tools which might best facilitate such a balance", with balance referring to regional growth patterns combined with social and environmental benefits (Harding 2007, 456). The practice of the Greater Helsinki Vision process can be seen with a similar perspective. Although some institutional actors claim, that already the cooperation of the fourteen municipalities as such constitutes a creative approach, a more radical perspective was left out.

The lack of a radical perspective, in particular regarding issues of breaking up well-trodden paths, can be linked to the idea of a metropolitan identity. The metropolitan identity is not only an issue for workshop settings, the metropolis brings or requires as such a new 'civitas', a newly defined political subject. In the words of Agamben (2006):

"Going back to the metropolis, my idea is that we are not facing a process of development and growth of the old city, but the institution of a new paradigm whose character needs to be analysed. Undoubtedly one of its main traits is that there is a shift from the model of the polis founded on a centre, that is, a public centre or agora, to a new metropolitan spatialisation that is certainly invested in a process of de-politicisation, which results in a strange zone where it is impossible to decide what is private and what is public." (Agamben, 2006, 2)

The polis here is the city constituted by the subjects and by identity, both linked to the power to act, as Agamben continues at a later point. Citizens and their inclusion or exclusion gets into focus as a central actor in the entire system. Agamben claims, that the metropolitan *spatialisation* invests in processes of de-politicisation. In the view of the GHV 2050 jury decision, a contribution like City

2.0 that wants to establish a social silicon valley on the basis of city-cells and direct decision making by citizens, has been selected as a resourceful idea countervailing those perspectives. City 2.0 adds one dimension to the new governance setting by introducing basic democratic features. These are combined with strong positive leadership (open mayor) but also with regional citizen assemblies. At the core are the citizens and their communities. The local administration supports their ideas and motivations. This support is channelled through the "city-cells", neighbourhoods consisting of 10.000 to 25.000 inhabitants. The support can be money, expert services or space.

GHV 2050 and the other examples mentioned here are attempts to shape life worlds which are relevant for a very large population segment in Europe. In statistical approximation, geographical Europe has about five metropolitan regions of more than five million inhabitants, seventy larger than one million, and about 650 metropolitan regions with between 500,000 and one million inhabitants, though they are not equally distributed across the European space (Wiechmann, 2009). The latter group of metropolitan regions obviously accommodates a rather large sum of inhabitants. The hypothesis of the collective actor city (Le Galès, 2002) applies to the various citizens as actors, too. It is of importance to look into issues of identity or loyalty in an actually very open or porous situation, with reference to the transitional quality of the metropolis, and how the relationships between citizens and sovereign entities are constituted in negotiated and renegotiated processes (Paasi, 2003). With the help of a vision and matching symbols, we could build the metropolis as an imagined community (Anderson, 1991; Appadurai, 1996). There is of course the risk, as other authors critically claim (Swyngedouw, 2009), of empty signifiers and a post-political agenda in favour of a neo-liberalism (or elite socialism). That argument opens up our alertness to critically address the experiments and to make sure, that the 'wronged' parts of society can claim the rights they are entitled to. As is demonstrated in various European projects (Barreiro, 2010), without that aspect of forming a community and identity, the entire process will certainly be incomplete, and we will lack crucial elements of the futures which would otherwise not be.

And, how about the new-metropolis? The movie itself has received much critical acclaim, and Fritz Lang reportedly dissociated himself from the closing sentence, 'the mediator between hand and brain is the heart!' as a political motto. The motive remains though; the construction of a new metropolis with a new 'm-machine' of unknown providence but huge expectations is high up on the agenda. There is a new mediator between hand and brain, seen as the super-manager of change; looking at the requirements almost a super-natural being, maybe a new but definitely human android? Not only the current exercise of GHV 2050 demonstrates that there is still a prevalent idealistic vision; across all observations, in the end the metropolis becomes actually the 'm-machine', the highly symbolic '*Herz-Maschine'* (heart machine) in the German original of Lang's movie.

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Annex

Table 3.4. **Main purposes of a selection of metropolitan co-operative arrangements**

	Informal co-operation networks (association/ platform/metropolitan conference)	Metropolitan authority/agency		Metropolitan government	Amalgamation	Tax-base sharing and redistributive grants
		Single-purpose	Multi-purpose			
Examples	Regio Randstad (Plateform) Lyon Urban Region, Council of Stockholm Mälar Region, Bilbao 3I – Metropolitana, Torino Internazionale (Associations) Regional conference (Rhine-Ruhr)	Many US cities Mexico City (large number of sectoral agencies) Athens transport agency	Montreal Metropolitan Community Greater Vancouver District Urban and Agglomeration Communities in France	Greater London Authority Stuggart Verband Association Portland Communidad de Madrid and Region Ile-de-France (Paris) as existing regional governments	Montreal, Toronto Busan/Seoul in the 1960s Madrid in the 1960s Melbourne in the 1990s	Minneapolis Saint-Paul Stockholm County Some municipalities within Paris Ile-de-France Busan/Seoul
Administrative boundaries	No change	Possible creation of a new layer		Building on a regional tier or creation of a new regional tier with an elected body	Disappearance of municipalities. Possible creation of sub-local units	No change
Economies of scale (cost saving)	No	For one public service only	For certain public services only	For certain public service only Expected (??)	Expected (??)	No
Sharing of public services	No	Yes, for one public service only	Yes, for certain public services only	Yes, for certain public services only	Common	In a limited way
Specific advantage	Great flexibility Might provide impetus for further co-operation	Cost saving for a particular service Better management of a metropolitan function	Idem to single-purpose + integration and co-ordination of sectoral policies	Integration and co-ordination of certain sectoral policies	No fiscal disparities Stronger political power One decision centre Better equalisation of costs	Reduce fiscal disparities Still allow some variety
Specific disadvantage	Does not tackle issues such as territorial spillover/negative externalities/equity Weak implementation capacity	Emergence of sectoral constituencies	Emergence of the funding and legitimacy issues	Democratic cost	Lack of creative diversity Democratic cost	Separate the costs and benefits of local public services
Long term strategic vision	Yes, in many cases	Yes, in many cases for economic development agency but risk of avoiding the multi-sectoral aspects of urban development	In some cases only	Yes, will depend on the administrative boundaries of the new structure	Yes, will depend on the administrative boundaries of the new structure	No

Note: This table provides a typology of metropolitan governance arrangements previously discussed according to the different objectives that calls for horizontal co-operation. This typology is not exhaustive. The selections of different options that it includes are not mutually exclusive, as some metropolitan regions combine several options (e.g., Montreal experienced an amalgamation of 27 municipalities whilst a multi-sectoral agency was created at the wider metropolitan level).

Source: OECD 2006a

Form and Position：The Study of Building Capacity Distribution

——with discussion about the common problems in China's city development and urban planning

Shanshan Li , Qingniao Shen

Abstract

FAR (Floor Area Ratio) is an important index to understand and study the spatial development pattern of the city. In the condition of a given FAR, the spatial distribution of the capacity always represents the city form in particular place. A good design proposal is necessary to give a comprehensive treatment to the different contradictions in the site. The contradictions contain both external problems such like how to deal with the relationship between the site and surrounding area and internal problems such like how to deal with the contradiction between orientation and landscape. In the process of historical period, the distribution of FAR is highly explored by architects and urbanists such like Walter Gropius, Rem Koolhaas, MVRDV and so on.

In this paper, from a case study of urban design in Chongqing(China) , a methodology to create a understandable city form is present. This methodology is usually used at the beginning of a design proposal. Without considering the architectural style and material in advance, the urban form can have a visual assessment through the study on the distribution of FAR. Diverse spatial forms which come from different capacity distributions are explored, and then dealing with different contradictions, the urban designers need to give a contrast and assess between different forms, and finally conclude the optimize one.

Combined with the case study, the authors argue the complex relationship between FAR, site coverage and architecture height. And the general problems in China's city development and urban planning are also explored and discussed.

1. Density and FAR in city development

In the past ten years, China has a shocking urbanization process, with more building ,more car, more roads and so on.In this process , we can see hope of improving, which is different from many western countries. we should see the

advertage of the Chinese urbanization ,which takes along with more opportunity of working ,more goods. But on the other side it also have more problems such like high density of city environment , traffic jam and poor quality of building. It is well known that urban planning is a subject about how to distribute resources effectively, especially for land resources and a governmental decision on the goal of urban growth. At present, with the rapid urbanization and commercial development, the maximum economic that benefits from the given site is the main purpose of the city developer. So impose restrictions on density in urbanism becomes more and more important for the city developers. On the other side ,all the city governments have to face the basic contradiction between guaranteeing the continuous development of the city economic which means a narrow urban space with high density and avoiding the overdevelopment which meaning the damage to a livable city and a consummate image of the city. What is more , for the citizens, a city with high density is not suitable to live. As a result of all the city people paying attention to the density, FAR becomes an important index to deal with the urban spatial development mode, and it is also a kind of effective measures in the present urban planning and construction control of the city.

The concept of density in urbanism is frequently used to describe the relationship between a given area and the number of certain entities in that area. These entities might be people dwellings, services, or floor space. However, the simple fact that density is used in , for instance , design requirements, plan descriptions and communication between parties, does not mean that it is used correctly or to its full potential.①. In the book “farmax” ,density means the amount of available space per person. FAR (floor area ratio) means the total floor space of a built area to the total size of its lot. In the urban planning in China, every given area has a maximal FAR which is control by the local plan state.

For a given FAR of limited conditions, which is the basic premise of Chinese city planning and architectural design, different FAR means the space what can be built of local area ,also means distribution of urban form, while the same FAR can produce many different ways of space distribution, which lead to different space forms and architectural forms. In the condition of a given FAR, the spatial distribution of the capacity always represents the city form in particular place. A good design proposal is necessary to give a comprehensive treatment to the different contradictions in the site. The contradictions contain both external problems such like how to deal with the relationship between the site and surrounding area and internal problems such like how to deal with the contradiction between orientation and landscape.

In the process of historical period, the distribution of FAR is highly explored by

architects and urbanists such like Walter Gropius, Rem Koolhaas, MVRDV and so on.In this paper, from a case study of urban design in Chongqing(China) , a methodology to create a understandable city form is present. This methodology is usually used at the beginning of a design proposal. Without considering the architectural style and material in advance, the urban form can have a visual assessment through the study on the distribution of FAR. Diverse spatial forms which come from different capacity distributions are explored, and then dealing with different contradictions, the urban designers need to give a contrast and assess between different forms, and finally conclude the optimize one.Combined with the case study, the authors argue the complex relationship between FAR, site coverage and architecture height. And the general problems in China's city development and urban planning are also explored and discussed.

2. Historical research on density

During the last century, density has used to show the problems of the city. There are some arguments about the lack of relationship between density and form and some people think that the use of density in urban plan does not create a more livable city,
After a period of lacking the interest of the density, the research of Rem Koolhaas makes the concept get more attention in urban research fields.In the early research to Manhattan and New York, he used "crowded culture" to summarize the essence of Manhattan. "Crowded culture" can be analyzed as the skyscraper and high density of the city. What is more, its deep meaning is the crowd of the program in Manhattan. What he wants to show is the change of life style in the big modern city. The skyscraper changes cities culture, people can't gain a single function through a single plot. On the research of Rem Koolhaas, density is used to show the mixed culture of big city.

MVRDV does a research of the Netherlands and other states, seem to be filling up with a suburban "matter" of low cost housing, low rent offices, warehouses and other low density elements. The book "Farmax" examines the possibilities of how are we to cope with the matter that is turning our environments into a "sea of mediocrity", one vast "greyness", an education of difference and individualism and it is possible to reconsider this situation by carrying density to extremes and ruffling the texture with inserts or polarities.②. In addition, the light, the sunshine and related issues such as noise is also parts of the research content. In the study of MVRDV it clearly shows that in the extreme condition, any requirements, rules or logic are pure and unforeseen. They transcend the art intuition. In the research , the most important thing is how to change the restrict into possibilities.

Besides the mentioned arguments for a revaluation of density, there are two general

developments in the process of urbanization which can be identified that further legitimize the study of density. Firstly ,recent changes in how city building is organized have created a greater need to relate development programs to spatial qualities. Second, the trend in the increase in space consumption and the environmental, economic and social effects associated with this trend point to the need for research into the relationship between the quality and capacity of space.

Here we can see that the concern of density does not only focus on density as research method of a city, but also more and more urban researcher, urban planners and architects use creative ways. In the paper what is discussed is how to provide a planning and design method at the early stage of the design.

3. Form and position: a case study on FAR

Under a given FAR of the site, with no doubt, it means a fixed building capacity. But in such a fixed space size, urban design shapes as many as different possibilities, it just like putting certain capacity of water into different containers. So different containers show different forms and the different types of forms have different advantage and disadvantage. For example, a proposal with high level and low density of building-covered area and another proposal with low level and high density of building-covered area have many different impacts on the city.

In the numerous of design proposals, as the research of density in the works of MVRDV, they can have different qualities between the relation of a performance. So comparing with the different kinds of works, what the designers need to do is to choose the best one. If with a kind of design research to approach, in acme condition, the proposals can be measured with any demand, rules or logic in a pure form, which makes it to trend optimal design scheme through the assessment.

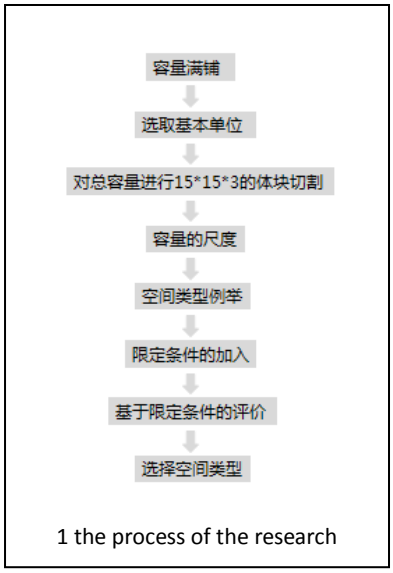
In this part, a specific case in Chongqing will be discussed to explore the planning and design method in a residential area planning project. What needs to be valued is the limiting condition which makes the design to be more logical in the project. What is more, the method is useful for the urban planners to optimize the space form in the urban design projects.

This methodology is usually used at the beginning of a design proposal. Without considering the architectural style and material in advance, the urban form can have a visual assessment through the study on the distribution of FAR. In the design process, firstly it puts forward different space forms which come from different distribution of density, then urban planners need to give a contrast and assess between different forms, and finally confirm one unique optimal space form. In the process, the

interaction condition will be appraised such like physical environment, behavior patterns, urban image and so on.

1) Background of the project

The project is located in stone pillars which is a small city in Sichuan province, China. It belongs to the new district. The main river of the city is close to the site which brings a realizable river view. The site is also along the main road which leads to convenience transportation. On surrounding environment there is a primary school near the site and some residential spaces.



1 the process of the research

The land use of the site contains green corridor, commercial and residential in the plan of government. Based on the space research of the elements on construction density and city's skyline control, the project tries to make it to be a new important area supporting residential, large-scale commercial, office services and so on. In the future it will become a new center area of the city.

For the urban planner, the most important thing is how to balance the public interest and the city development. In the project, the designer have to maximize the development scale in a given FAR, which is the main purpose of the developer. On the other side, the optimization urban spaces need to be created. So how to balance the two parts is the main question.

Before coming into a detail design, the logic of building space derivation method is discussed. The method can be separated into four steps. In the given FAR capacity calculation need to be discussed firstly. Secondly several typical space forms will have to be given under the certain FAR and certain capacity. Then contrast and assess between different forms. The interaction condition will be appraised such like physical environment, behavior patterns, urban image and so on. This process is the most important step. Finally using the chosen proposals (not only one proposal), the designers have to give more optimization and adjustment scheme.

Therefore, the logic of building space is discussed using a derived way in the early step of the design stage, but that does not means that the city design have the absolute most optimal solutions. In the selection of the evaluation, there was not the "correct" solution. This way just try to show a research attitude that in the design process there is a relatively rational way to cut into the study.

2) Four steps of the research

i. capacity calculation

In order to select the typical spatial types, the use of extreme conditions on the basic capacity can have a better effect in a fixed development capacity. So according to the given FAR and the land area, the biggest capacity of the project can be known. The biggest capacity means the maximal capacity calculation that can be built in the project.

2 capacity calculation

The Maximal Capacity Calculation= FAR * (Area of Fabric)

After that, the maximal of the construction spaces should be calculated. The maximal of the construction spaces means the rate of coverage which is given by the local government times the area of fabric. At the same time, without thinking about the possible existence of sunshine distance requirements, build capacity in the maximal of the construction spaces. The building should cover the construction spaces completely. After that the least layers and the lowest height can be known.

The Least Layers= The Maximal Capacity Calculation/ [(Area of Fabric)* (The Rate of Coverage)]

This limit layer (height) looks be like an unreachable situation and also can't start successfully in practical projects, but it can effectively delimit the boundary, making more intuitive understanding on the capacity size of this typical project for the urban planner.

Then the basic architectural dimension will be determined. There are two typical buildings (7 layer and 12 layer). According to each building there is a fixed construction area, the number of the building can be calculated.

ii. typical space forms

There are several factors to decide the forms of the space such like height, building forms, road density and so on. Also, the different combinations such like “I” “L” “U” can have different space visual experiences. So for different height, there are high-rise building and multistory building. According to different building layouts, there are different space type examples such like enclosed layout, half enclosed layout, linear

3 numbers of two typical building

layout and so on.

In order to improve the operation of the model, firstly the basic scale of one layer is used to cut the whole capacity. This process looks like cut the cake ,also when the whole capacity is cut into smaller and basic ones(15m*15m*3),the next thing is to group them and create a new form. On another word, it can be operated like playing the LEGO.

4 typical space forms

What should be noted is that in the process of taking examples of different space forms, there is not a result to put forward all the types. And the only thing that the designer need to do is trying to aim at different emphasis on the layout and give the typical and spatial types.

iii. contrast and assess

5 contrast and assess

In the whole process of the derivation of space form, contrast and assess the space performance is the most important step. The assessment is not a fixed standard measure. By contrast, in the different conditions and in different sites the factors that can influence the layout of the space are also different. These factors do not need a precise computation but the site investigation and the emotional thinking which are made by the designer.

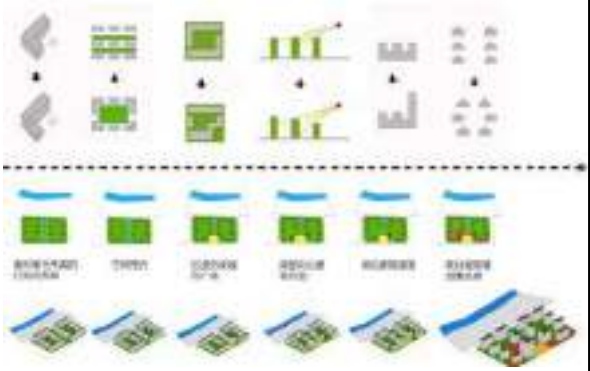
In this case, because of the functional requirement of the house, factors on light of the residential space and ventilated condition become the most important one to be considered first.

Secondly the public spaces are also play a positive role in social interaction. Also public space means more green plants and a more livable environment. What is more , considering the location of the site , there is a good river view which means the designer need to make more liver of the site to have the river view. Lastly the city environment also has important effect on the space forms. With the goal of becoming the a new center area of the city the space form need to create a impressive image of the city including the skyline and the public space of the city.

For the specific environment, a suitable standard is created to contrast and assess the

different proposals. After the urban designers give a contrast and assess between different forms, and finally the optimize ones are concluded. In the part, exclusive method is an effective way .

iv. Optimization and adjustment



6 optimization and adjustment

Based on the combination of limited conditions, many types of space layouts do not meet the requirements. So these space layouts will be deleted. Then the designer can choose one or two types to give more optimization and adjustment and finally choose the most suitable one. In the process of optimization and adjustment, considering the specific situation of the environment, more adjustments are added to the chosen proposal. The adjustments are more focused on the detail of the space forms. For example ,in the city environment ,a land mark is useful for the image of the site, so the designer improves the height of one building to 100m while other building can be more lower. The liner layout is a good way for the building to have enough sunlight, but considering the feeling in the site, some buildings turn to face east and west so that the whole space can have an enclosed feeling. Considering the sun light, the southern building should be lower than the northern ones. Al l the adjustments makes the proposal be more effective.

4. summary

In the China's urban development and planning, density is one of the essential fields of urban questions. The general problems in China’s city development and urban planning are lack of thinking on integrity. Most of the city developments only pay attention to the economic factor. Some others consider the sun light. But how to balance all the factors is the main problem. In this essay, a methodology to create a understandable city form is present. Used at the beginning of a design proposal, this methodology does not consider the architectural style and material in advance so that the urban form can have a visual assessment through the study on the distribution of FAR. During the process the urban designers give a contrast and assess between different forms, and the designer can have an integrity view which is the most valuable part of the methodology.

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SYNAPTIC SPACES OF EUROPE: A CHALLENGE FOR SPATIAL PLANNING

Cecilia Scoppetta [1]

Abstract

On the background of contemporary rescaling process and of the current broad rethinking of some relevant concepts – such as "region", "territory", "locality", and "space" – the case of the Baltic Sea Macro-Region, and of the related place-based EU successful «experimentalist» strategies highlights the emerging of «soft spaces» as new forms of territorial organizations.
These clearly appear as a result of EU "soft" ("lateral") territorial approach outlining a really innovative multileveled spatial pattern.
By using a biological metaphor these soft spaces may be intended as «synaptic spaces» clearly claiming for a radical shift in planning approaches, by moving towards soft and synaptic planning practices involving «'soft process' of negoziation and learning».
Features of these spatial configurations drawing new continental geographies are explored by highlighting the role both of images/imaginaries and historical/geographical/cultural roots, to be used (re-interpreted) in the de-construction/re-construction of the contemporary European spatiality.
In this sense, we may say that, according to Faludi «geography still matters» (and also history!). In fact, Baltic Sea cooperative networks (that is: the basis of the new EU strategy) can be seen as a return to what once was an important communication channel for thousand of years and flourishing trade in the region. The model is that of the Hanse League, based on flexible not hierarchical (mainly economic) «weak ties» – or «loose coupling» – among autonomous cities (but not exclusively), which share a transnational unbounded Hanseatic "space" (not "territory") and which are periodically (not always) able to act as a collective actor to achieve local collective competition goods avoiding the «trap of joint decision».
It remains to be seen whether such a strategy – which has proved successful in the Baltic area – will be so effectively applied to other specific spatial and cultural contexts (with their differences in challenges and potentials), such as the Danube corridor, or to the much more "explosive" Mediterranean basin.

1. Introduction: on contemporary rescaling processes.

Since the end of the 70s, many scholars have focused on the emerging of metropolitan regions as dominant economic units in global society (Storper, 1997; Sassen, 2001; Scott, 2001) and as a key level supplanting national/regional/local

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governments as the place of decision-making (Altshuler *et al*., 1999; Katz, 2000). Some of them have linked the rise of these entities to the shift from government to governance (March & Olsen, 1995), within which network forms are transforming, supplanting, or supplementing historical structures such as markets and hierarchies (Castells, 1996). Three main (often interrelated) paths have been explored: one is *networking*, encompassing processes and flows, actors and interest, organizations and structures, ideas and capitals. The second is *governance*, also claiming to engage a wider range of sectors and interests in governing, and the third is the *scale* of governance.

Governance research has pointed to the importance of processes of de-territorialisation and re-territorialisation in re-defining governmental boundaries and jurisdictional competences. Network analysis has inquired into emergent forms of interest intermediation that exceed or bypass established institution of territorial representation. Both emphasize the relativisation of geographical space – in particular of bounded space – as a determinant for policy action; both share an interest for phenomena of re-scaling of State action and for shifts in the meaning of territoriality for public policies.

Research traditions associated with scale (or scaling) – intended as the identification of the proper placement of governing responsibility – have a somewhat longer history than governance or network traditions. Antecedents include coordination among levels of government (Hambleton, 2003; Dijst *et al*., 2002), decentralization from higher to lower levels, devolution of functions among levels, and subsidiarity, which attempts to locate functions at the most appropriate level. But now there is something new: urban and regional studies have recently experienced a re-assessment of geographical notions – such as "region", "territory" and "locality" – in face of emergent socio-spatial phenomena that highlight an innovative concept of spatiality. In this sense, spatial re-scaling maybe represents one of the most significant contemporary changes in territorial interpretation and (consequently) planning.

Critical geographical studies have identified four geographical dimensions as co-constitutive of socio-spatiality: place, territory, scale and network. Among these, *territory* and territoriality entails the enclosure, bordering and fragmentation of social relations. Once established, these bounded territories constitute a «fixed, stable and immobile grid» and an «element of fixity on an otherwise changing geographical landscape» (Brenner, 2009), which it is difficult to modify.

Scale and scaling entails the vertical differentiation of social relations among, for example, global/State/regional/urban/local levels, as it is the assignment of responsibilities and the social construction of capacities of institutions (Miller, 2009): «the focal setting at which spatial boundaries are defined for a specific social claim, activity or behaviour» (Keil & Mahon, 2009). In this sense, scale-shifting refers to changing relationships, sets of participants, resources involved. Both scaling-up and scaling-down can produce a more favourable political opportunity structure for particular interests. Scale-shifting (or scale-jumping) also relates to the existence of extra-local and inter-scalar rules regimes that «constrain and channel the strategic options and tactical behaviour of local actors» (Miller, 2009): higher level institutions establish/limit the scope for policy and actions at lower levels,

enabling/preventing democratically-made decisions. In this sense, besides shifting responsibilities and capacities between levels of government, re-scaling also can involve the invention of new scale of actions: «scale is the actor's own achievement» (Keil & Mahon, 2009), because «we scale politics to our own purposes» (Magnusson, 2009).
But rescaling does not only mean the shift of responsibilities from *one* level to *another*: it also implies the emerging of multi-scalar interactions and of «a governance environment characterized by multiple constellations and multiple coalitions for development that define a geography of governance that is flexible, often overlapping, and increasingly autonomous from given territorial jurisdictions» (Gualini & Woltjer, 2004). This approach goes beyond rescaling in recent theoretical literature (Brenner 2003; Salet, 2003). By following part of the logic inherent in its predecessors (coordination, decentralization, devolution, and subsidiarity) aimed at responding to the breakdown of hierarchy, a principle behind rescaling was to find the most appropriate scale of governance for policy delivery. The evolution of terminology reflects two substantive facts. The first is the evolution of thought regarding institutional design and policy, which has recognized that hierarchical bureaucracies, command and control are not as effective in a flexible global economy and democratic institutions. The second is the emerging of governance alongside government.
But the main innovative feature of multi-scalar large institutional networks seems to be their learning dimension: they evolve and *learn* through complex processes in ways that are distinct from the ways that "mere" organizations or individual institutions. Grasping this peculiar way is essential to understand how they function/malfunction, how they create, decide on, and execute policies, strategies and plans, and how they exert power and influence to obtain outcomes, and how, in turn, they are affected by power and influence of their own members and by those outside them.

2. European soft synaptic spaces.

The interest on territorial changes due to globalization has inevitably led to a broad rediscovery of the spatial in policy disciplines (Le Galès, 1998; Salet & Faludi, 2000): the linkages among these emergent concepts – territory, governance, networking, rescaling – have been deeply investigated (Castells, 2001; Scott, 2001; World Bank, 2003) and spatial planning has become a fertile field for this analysis (Vigar *et al*., 2000; Albrechts *et al*., 2001; Salet *et al*., 2003).
Undoubtedly, the Europeanization process has highly contributed to this renewed interest. Reasons are firstly to be researched in the fact that European *space* – a borderless single market within which internal space mobility – coexists with national *territories*. But EU can no longer simply be viewed as a Europe of nation-states or a putative supra-state: it can rather be conceptualised – and this is its spatial novelty – as a multileveled or networked space of governance.
Further reasons can be find in the fact that, even if Brussels had never been granted a specific competence, interest in territorial issues are related to EU regional policy since the mid-70s, as it was conceived to balance development disparities between

countries focusing on the spatial impact of regional development within the framework of the Structural Funds and the objective of social cohesion. And, undoubtedly, both agricultural and regional policies (that is: the most of the European budget) presents striking territorial effects. In addition, during the '90s, EU policies started focusing on the role of cities as growth engine, in the light of the need of competitiveness to face the changes due to globalization. Cremaschi (2004) highlights four different tiers of the «wedding cake» of EU spatial policies: the basis of this "cake" consists of regional policies, the second tier is infrastructure networks and trans-European cooperation, the third is urban initiatives and the last – according to an idea originated in the Council of Europe as early as 1964 – corresponds to a spatial development perspective, that is a policy document aimed at guiding integrated strategies of territorial planning of member states. Cremaschi (2004) also underlines a somewhat double character of the concept of spatial development, a neologism which «combines the German practice of regulatory planning of physical and environmental factors with the British concern for local economic development». Thus, the European spatial logic has led to a sort of "light" Europeanization, which clearly refers to the three relevant contemporary issues of networking, governance and rescaling. In this sense, the spatial novelty of this soft and "lateral" approach can be clearly observed in the multi-fold terms and concepts that are used in EU territorial policies, since they have at the same time both a physical and not physical meaning. The term "polycentrism" (Davoudi, 2003) is the main example, because it refers to physical features, such as a multiple centres and diffused growth rather than core-periphery distinctions, but it is also connected with the idea of multi-level governance, which implies (not physical) partnerships between EU institutions/national governments/regional/local authorities. It is easy understanding why this flexible notion of polycentrism – which refers to forms of non-territorial politics which emanate from a multiplicity of (physical) *sites* and which cannot be reduced to a single centre – has become a useful way of thinking about the decentred, de-territorialized (and re-territorialized) dynamic nature of Europe, since this term has a much wider applicability to political and societal transformations under conditions of globalization (Scholte, 2004; Delanty & Rumford, 2006). Another useful neologism is "territorial cohesion" that link together both spatial and economic dimension.

This means that the «governance turn» in European studies (Marks *et al*., 1996; Jachtenfuchs & Kohler-Koch, 2004; Bache & Flinders, 2005) corresponds to a «spatial turn» (Berezin, 2003) because of the transformation of involved spaces. In fact, rather than being primarily concerned with state-building or the institutionalization of governance structures, the EU is centrally concerned with the construction of European space(s), and with the ways of understanding them, that is: a result of processes by which these governance spaces are constructed, showing the way space itself is constitutive of social and political relations.

These particular features of the (still ongoing) EU construction, on the background of the contemporary spatial re-scaling, have led to the emergence of the so-called "soft spaces" (Waterhout, 2009; Faludi, 2010b; Haughton *et al*., 2010): multi-area sub-regions in which regional strategies are being made between or alongside formal institutions and processes. These spaces are often overlapping and characterised by

fuzzy geographical boundaries. In a certain sense, we could also talk about "synaptic spaces", whose spatial dimension constantly changes as it is given by the lighting up and turning off of inter-relationships involving not only action potential, but also knowledge as a further learning value towards a co-evolution of places and planning approaches and styles (Faludi, 2008). Developing a new imagination of spatial phenomena may enable re-assessing their socio-political features, challenges and potentials. In fact, this innovative spatial concept means re-interpreting space as an open and dynamic multiplicity of relations through which power is being constantly re-shaped. This implies changes in powers across the existing tiers of decision-making, original scales of intervention, new actor constellations, and variable geometries of governance. According to Waterhout (2009) and Faludi (2010b) these emerging "soft spaces" seem to require a concept of soft rather than hard planning (for soft rather than hard spaces) to be used wherever challenges cut across boundaries demanding innovative joint action.

3. Using a biological metaphor to define the main features of synaptic planning approaches.

A fascinating suggestion is given by studies on self-organisation in the research field of biology and, more generally, on the topic of complexity and of artificial intelligence (Morin, 1983; Prigogine & Stengers, 1979, Anderson, 1999; Kauffman, 1995).

As it is known, the biological evolution implies that microscopic components, characterised by a simply structure and strong and relatively rigid ties, constitute – through their interaction – the constructive elements of more complex systems with weaker and more flexible ties, which allow the adaptation to unpredictable environmental changes. This highlights the relevance of resilience rather than stability: the latter is what allows a system to quickly come back to its original status after a temporary perturbation; differently, resilience allows a system to adapt itself to perturbations, especially if these are deeply different from those it already knows, and to absorb unforeseen shocks, continually adapting and evolving so as to resist collapse. In fact, the concept of resilience is defined as the «measure of persistence of systems and their ability to absorb change and disturbance and still maintain the same relationships between population or state variables» (Holling, 1973). In other words, a resilient system is formed by the dynamic interplay between deterministic forces and random events, structural factors and human agency, linear paths and contingency.

The example is the self-organization of living organisms (Bak, 1996): they are not a kind of automaton, directed from outside by a deterministic program, but systems whose state lies *between* the two extremes of a rigid, immovable order – which cannot change without being destroyed, as the order of crystals is – and a constant renewal without any stability. This state is clearly not static, but it allows reacting to random perturbations (Waldrop, 1992). In this way, transformations are not simple destructions of the already existing, but re-organizations enabling the emergence of new features, which can be a new structure or a new behaviour influenced by new structures (Holland, 1995). Every combination and renewal of a single part implies a

different functional organisation, that is: a different meaning of the relationships established among different parts. Therefore, the most relevant aspect of self-organization is the sense of self-creation (Atlan, 1983).
This means that the self-organisation of a system can be conceived as a «not banal machine» (van Foerster, 1981), which – differently from a "banal" one – does not work with a predictable input/output logic, by simply responding to the specific need for which it has been constructed. This is because a "not banal" machine is characterised by its own internal status that can generate multiple outputs.
A further feature of self-organization of living organisms obviously is its complexity: biological systems, in fact, are at the same time something more and something less than the simple sum of their parts. This allows the emerging of features deriving from accidental consequences and secondary products of interaction, and these, in turn, through a feedback mechanism, stimulate each single part of the system towards the expression of their specific potentialities. An example is given by the way in which culture or language – that is: features that exist at the level of the system as a whole – retroactively work onto the single components, by allowing the development of potentialities of each individuality. In fact, as well as spatial studies, contemporary sciences of complexity are marked by a crisis of traditional "boundaries": between concepts such as "producer" and "product", "cause" and "effect", "one" and "many", "organism" and "environment" (and also between "science" and "not science"). This leads to the concept of «recursive organisation» (Morin, 1977), in which effects and products are conceived in turn as necessary for the production itself.
Transferring the biological metaphor within the planning sphere means considering soft synaptic spaces as a collective *construct*, because they cannot be ascribed to a single definitive and deterministic project: in fact, the different actors involved constantly interpret it, take decision and act. This collective construct is a resilient experimental network based on weak ties shaping a not always predictable spatiality. But, in a certain sense, the by-products of this construct – the learning process given by the feedback mechanism – seem to be more relevant than the product itself, because they may allow further developments. As a "not banal" machine, the construct of a synaptic space is featured by its own internal status – and this means that it depends on history – but it is able to produce multiple outputs and different development trajectory.

4. The Baltic Sea EU Macro-Region as a synaptic space.

A significant example of synaptic spaces conceived as a construct is given by the recently introduced concept of EU Macro Regions (Stead, 2011). Macro-regions mean regions comprised of adjacent territories from several different countries that share a number of common challenges. While there may be many such functional regions in Europe, especially connected with geographical features, it is the development of a Macro-Regional Strategy (MRS) that establishes a macro-region from the EU's perspective. For example, the EU MRS for the Baltic Sea Region – published in the summer of 2009 and often presented as a blueprint for other possible

macro-regions – is defined as «an integrated *framework* to address the challenges and opportunities of a particular geographical area» (CEC, 2009).
Even though the concept has been used in International relations before, and even though the collaborative work between national and regional actors in the Baltic Sea area has been quite extensive, this EU MRS brings something new and concrete on methods and actions for sustainable territorial development, as it is aimed at creating a joint "platform" to enable all partner to act together in a transnational context.
During the last twenty years a paradigm shift has taken place in the Baltic Sea Region, as cooperation in all levels has changed from earlier bilateral to multi-level transnational cooperation in networks, such as city or thematic networks, the VASAB Long Term Perspective and the EU project South Baltic Arc. Networks and cooperation patterns between the local authorities are an existing and well funded resource, but their full potential has not been utilised so far. The EU Baltic Sea MRS should serve as a pilot case and good example on how the EU addresses challenges related to a specific region, from a transnational and cross-sectoral perspective. Further examples of EU MRS include the recent Danube Basin Strategy, and those for the Mediterranean, Alpine and North Sea regions (under discussion/consideration).
The need for an EU MRS for the Baltic countries has largely arisen from the fact that eight of the Baltic countries became members of the EU with the major eastern enlargement in 2004. But we may say that since the end of the Cold War the development and integration of this region has expanded and deepened. Much of the activity and integration has happened within and between cities and local authorities thanks to cooperative networks – such as the Union of Baltic Cities, the Alliance of Baltic Cities, the Council of Baltic Sea States – as a return to what once was with the Baltic Sea as an important communication channel for thousand of years and flourishing trade in the region.
An inclusive consultation process, aimed at identifying genuinely local concerns (and at building consensus from the bottom-up) constitutes the starting point of EU MRS. In the case of the Baltic Sea region, this process involved the submission of non-papers from governments and other official bodies, stakeholder events and a public consultation through the EU web site. This led to the establishment of three policy principles. The first is: *no institutions or laws*. In fact, before the establishment of the Baltic Sea EU MRS, a plethora of institutions already existed in this region (the Council of Baltic Sea States, the Helsinki Commission, the EU's Northern Dimension and the Nordic Council), but none of them took an integrated approach to coordinating all the sectoral policies. Nevertheless, it was felt that adding another administrative layer would not succeed in integrating this institutional network. Instead, it was decided to build the Baltic Sea MRS on existing institutions: notably the EU and, for cooperation with the external partners such as Russia or Norway, the Northern Dimension.
The second principle is: *no new funds*. In fact, it was felt that better coordination of the considerable existing resources – EU Structural Funds, research and IT EU programmes, Member State resources, funds from the EU Investment Bank and other international and regional financial institutions, such as the Nordic Investment Bank and the EU Bank for Reconstruction and Development – was more important.

Thus, we have no policy instrument or planning programme in the original sense, because the Baltic Sea MRS is rather defined – and this is the third principle – as an *action and place-based* strategy with a functional spatial approach. Four main "priority areas" for cooperation have been identified (environmental sustainability, competitiveness and prosperity, accessibility and attractiveness, safety and security), and fifteen goals to convert them into concrete policy action. In addition, eighty "flagship projects" are distributed over the fifteen "actions", in order to implement them, and a number of "horizontal actions" (including urban, rural and maritime issues, territorial cohesion and spatial planning) cut across priority areas.
Although discussions have already begun on the question about whether a specific EU budget line can be allocated to macro-regions in the programming period beginning in 2014, the premises of no new funding, no new legislation and no new institution currently set the frame for a coordinating strategy of already existing resources, instruments and networks of different legal status and tiers: MRS's key-words are creative implementation and coordination between programmes. This means that the macro-regional approach is place-based, inclusive and multi-sectoral (while many of the actions need coordination of sectoral policies). It also is multi-instrumental – since the wide scope of actions makes it impossible to fund them solely through one instrument – and it is based on multi-actor collaborations between different type of actors at various governance levels to reach consensus and to fine tune the actions. Thus, macro-regional approach requires imagination and lateral thinking rather than particular technical skills.
Another interesting novelty of MRS consists of its explicit experimentalism, since the EU Commission prepares periodical reports on the basis of coordinator reports and annual forums take place for partners and interested third parties, in order to review the strategy and to make recommendations on implementation.
But, in the light of the broader rescaling processes, the main relevant feature of MRS is related to the fact that the priorities do not necessarily have to be embraced by all actors, according to the principle of flexible membership: «the frontiers of a macro-region do not have to be precisely defined. Moreover, there is no requirement that any given territory be part of only one macro-region» (CEC, 2009). In fact, in the Baltic Sea region, some members focus on a select few, depending on their priorities and problems. This means that the physical boundaries of the target area may vary according to the relevance of the policy area in question: for some policies, all countries are involved; for others, policy might focus on a few regions, while some policies might be defined locally.

5. Explorative images towards a shift in planning imaginary.

If different countries of a macro-region share a number of common challenges, it is possible hypothesising that the latter derive from a shared "image" of their territories, which in turn constitutes a powerful and communicative instrument of territorial knowledge allowing further unpredictable development.
In this sense, a shared image of the Baltic Sea region is undoubtedly given by the landscape of the Baltic Sea coast, characterised by the formation of flat beaches, called "haffs", which are almost completely separated from the open sea by a narrow

ridge of land, the Nehrung (or “spit”). Such a narrow ridge of land is completely made up of shifting dunes, the securing of which is a constant problem for the population.
On the other hand, as macro-regions are proposed as a *framework*, we may say that also the latter is an “image” on the background of which all planning actions and policies can be oriented.
Generally speaking, on relationships between imagination (production/construction of images) and processes of knowledge a vast literature exists (Holton, 1978; Gruber, 1966; Kuhn, 1962; Starobinsky, 1970; Mills, 1959; Brown, 2003). The term “imagination” refers to activities of individual consciousness, through which each one, using images, represents to himself things, subjects or situations that, at that time, are not given to perception. Imagination can see elements concerning the problem and all significant relations between what it is known and what it is unknown, between what we know and what we want to know. Through imagination we put into inter-relation different knowledge so that they can be simultaneously used to interpret a situation. Imagination allows anticipating possible “scenarios” (frames) in which to place that problematic situation we are examining. Imagination, therefore, is not to be led back to “memory”, by confusing “image” with “recollection”, as a mere reproduction of sensitive things that are given to our mind through perception of senses: by recognizing its “creative” function, imagination is rather to be intended as «ability of possible» (Sartre, 1936, 1940). Within this perspective, “images” increase distance from “perception” and emerge with their own features. It leads to extend the term “representation” towards images that we recognize as «construction of the mind» (Jouvenel, 1964).
In fact, imagination first establishes a preference principle towards an idea, but also a different intensity among different representations, proposing an order between them. Furthermore, imagination allows transitions from an idea to another one through successive phases, by introducing to the mind simultaneous different representations and creating a convergence of many images within a single one (Kuhn, 1962).
Not by chance, a large sector of the vast bibliography on relationships between imagination and processes of knowledge regards “spatial” studies, both descriptive and operative, because of the use of representations (for example: cartographic representations) as main instrument. In the planning case imagination (production/construction of images) as interpretation (frame) means a way of analyzing, selecting, organizing and making sense of a complex reality, equipped with a spatial “appearance” (Rein & Schön, 1986). Planners use representations as comprehensive “narrations” (reflecting how a society has been arrived to the present through the past) on which constructing an agreement for the future among different and often conflicting social groups, so defining a practicable «negotiation space» (Secchi, 1989).
But images may also play a role as suggestive guide of collective imaginary (in the sense of an interactive learning) or as exploration/evaluation (Palermo, 1998) of social availability towards some proposed solutions (Gabellini, 1996). Among those focusing on the meaning of representations as “projection towards the future” (visions), many studies emphasize the role of images within identity’s (re)constructing processes. Anyway, the strategic meaning of images – in particular,

of images which are produced within planning processes (scenarios) – has been largely acknowledged (Faludi 1996; Secchi 2000). In this sense, a scenario is an image of a possible desirable future (Hirschorn, 1980).
Differently from "images" – which are produced by individuals – "imaginary" is instead a dimension of history and society. As well as "imagination", "imaginary" refers to images, that is to an articulated set of persistent representations (Starobinsky, 1970), which are equipped with powerful inertia, by opposing to their replacement. But, on the other hand, imaginary is not featured as something stiffened, but rather as something that is subject to a constant evolution and enrichment (Gramsci, 1977). In this sense, imaginary is a category to be led back to a predominantly collective dimension, with a unifying role of subjects (that is: a community), which are recognizable also in relation to the set of images they share.
On the other hand, these shared images are connected to a set of values, "figures", norms and rules (Hobsbawm & Ranger, 1987), cognitive and evaluative criteria, codes and languages, but also customs, beliefs, paradigms and «traditions» (Fleck, 1980), ritual practices, repetitions, frequent omissions and oversights (Soubeyran, 1988), "repertories", including what already exists (what is possible to describe and represent) and what, instead, does not exist yet (what is possible to imagine and prefigure). In a word, a system of relevant purposes through which a community recognizes what place within society it intend to hold in the future (that is: what is its own transformation project) and what it consider to have been in the past as well as the method of moral justification of its objectives.
Not only, therefore, each group (community) has its own imaginary (Baczko, 1978), but each recognizable level of a complex society refers to a specific imaginary (Patlagean, 1978). In this sense, it is possible to individuate some disciplinary imaginaries, that is: images (metaphors) which are shared by a scientific or academic community (Kuhn, 1962). It is also possible to individuate a "collective imaginary" based on the collective sharing of some particularly powerful metaphors (images): «perhaps universal history is the story of some metaphors» (Borges, 1963).
It is possible indeed to recognize some historical periods (Baczko, 1978) in which the broader collective imaginary appears as permeated by characters of one or more specific (disciplinary) imaginaries. In fact, boundaries among different imaginaries are not clearly defined, but fluid, discontinuous, sometimes overlapping and mutable over time (Bachelard, 1957) as well as the contribution of a certain specific imaginary to the construction of a larger collective one tends to change through stability/instability periods.
On the other hand, every specific disciplinary imaginary (for example: planning imaginary) has its own sedimentation and codification stages, and these could not always coincide with the pursuing transformations concretely acting in the realities (in "facts"). But this implies transferring them within the sphere of meanings (of collective imaginary). In this sense, it is possible to recognize reductions/expansion (Secchi, 1988) of "discursive" forms within «planning speech» (Secchi, 1984), which are associated with stability/instability periods. This means that the emerging of innovative "facts", characterizing instability periods, imposes the use of tentative (explorative) – necessarily indefinite, vague, often allusive – new categories (languages, images) towards the construction of innovative metaphors (utopias?).

Think of the different meanings that have been connected in different historical periods to the term "strategic planning" and to the need – in the mid-'70s and even more in the '80s, after the interruption of growth conditions, which had been assumed as the norm – to develop new planning theories and methods to face the emerging problems, by "assimilating" the new explicit role of the market (together with its rationality, its jargon and its specific imaginary). And think also of the further evolution of the term in the '90s that is: in the years of the rhetoric of competition among cities and territories and of the loss of authoritativeness of the old power and representation structures, demanding a wider inclusion of civil society in the sphere of planning. As a result, nowadays strategic spatial planning can be described as a social process through which local communities answer to endogenous and exogenous challenges connected to territorial governance (Healey, 1998; 2003a; 2003b).
In this sense, the concept of "synaptic spaces" may be conceived an explorative "image" towards a shift in planning imaginary.

6. Geography (and history) still matters: the Hanseatic model.

Not by chance the firstly experimented macro-regional strategy is that of Baltic Sea. In fact, the model is that of the Hanse League, based on flexible not hierarchical (mainly economic) «weak ties» (Granovetter, 1983) – or «loose coupling» (Weick, 1976) – among autonomous cities (but not exclusively), which share a transnational unbounded "Hanseatic space" (not "territory") and which are periodically (not always) able to act as a collective actor to achieve local collective competition goods avoiding the «trap of joint decision» (Scharpf, 1986).
In fact, the Hanse was an economic system – and a cultural universe – in which cities were the basic nodules for interaction (Dollinger, 1964; D'Haenens, 1984; Schildhauer, 1988). It was never *strictu senso* a political entity or even a city league, but an economic association which – even if it sometimes exercised political or military functions – was made of units with different levels of alliance. Strong and stable political links proved evil for Hanseatic commerce, as it happened, for instance, when conflicts arose between the fur-providing Russians and the only prince who was also a member of the Hanse, the Great Master of the Teutonic Order (Schildhauer, 1988). On the contrary, looser and more mobile groupings seemed to work better.
The general assemblies, which usually took place in Lübeck, were the only durable institution of an organization with no burocracy. While many minor towns were represented by the leading cities of their area, not even all the important cities were always present at the Hansetag, in spite of menaces and fines, so that it is difficult to know which cities belonged to the Hanse at a given time. The very way in which the Hanseatic cities grouped and the fact that some cities changed from one group to the other are also evidences of the laxitude of relationships within the Hanse. On the other hand, the Hanse surely produced a strong feeling of belonging far beyond commercial agreements. Even with so malleable organization and with so fluid and de-territorialized external or inner limits, the Hanse of cities was, in the late Middle Age, a redoubtable economic and cultural power. At times, it gathered more than two hundred cities throughout a territory stretching over a thousand miles. These strongly

interactive, decentralized but mutually coordinated small units developed a well-balanced urban self-organised system that survived for over three hundred years.
It is to be said that Marxist historiography has interpreted the Hanse as a colonial institution based on a class structure, which led to an economic domination against the pre-existent populations and against the opposition movement coming from the small bourgeoisie and the working classes (Fritze, 1984). According to such an outlook, the Hanse considerably retarded the development of autochthonous middle classes among non-Germans, while maintaining for centuries a noticeable unbalance between economic centres and peripheries, only capable of providing raw materials. Such an interpretation has led – especially in the Countries "on the other side" during the Cold War (and especially in the DDR, but also, in a certain way, in the DBR, because of the collective *mea culpa* sentiment) – to assimilate the medieval *Drang nach Osten* with Haushofer's *Lebensraum* theories and to a substantial erasing of history. But we can say that Slavic, Teutonic, Hanseatic, Jagellonian, Vasa, Prussian and Polish Danzig/Gdansk are all contained in the contemporary city, highlighting the Hanse's positive influence given by the network of stable communications between Eastern, Western and Northern Europe, based on a spirit of dialogue and compromise against warfare, which made technological and cultural development possible for very remote areas.
Especially about the worries (affecting the debate on EU macro regions) on the heterogeneity of the national, socio-economic situations, culture, political background, planning traditions and seniority as EU Member States, it is to be underlined that it was for only fifty years that the Countries of the Baltic Sea Macro Region were separated and isolated by the "Iron Curtain" and how the EU Strategy, in a certain sense, has allowed the re-emerging of deeply rooted historical links, leading back to the Vikings and the Hanseatic Period (the latter running from the XII to the beginning of the XVI century).
This means that, according to Faludi (2010a, b) we can say that geography (and history!) still matters and, therefore, place-based strategies are still needed: following Williams (1996), «spatial positioning» is still one of the key concepts to be considered, even though intended – according to the contemporary meanings of "space", "place" and "territory" – as geographic, historic or symbolic shared "images", which may be seen as a precondition for the development of innovative (imaginative) solutions.

7. Conclusions: the Baltic Sea Strategy in perspective.

It is too early to speak about the future of the Baltic Sea Strategy (BSS) and its implications on the economic, social and territorial cohesion of the region (and whether it fulfils the implementation of the Lisbon and Gothenburg Agendas, and not least the Territorial Agenda). What is already clear, is that the European Union will develop more of these "place-based" macro-regional strategies and approaches as «a tool of European integration and increased territorial cohesion» (Dubois et al, 2009). The elaboration of MRS makes it possible to promote the territorial dimension of EU policies and co-operation, because «the benefits of defining more "localised" policies are beyond dispute» (Salez, 2009).

Certainly, a one-size-fits-all approach does not work in a European Union of 27 Member States and 271 regions, but the question is whether it is possible to cover the whole European territory with this kind of macro-regional policies.
The reason for this increased interest is due to the awareness that all regions are different, and – as pointed out by the Territorial Agenda and the Green Paper on Territorial Cohesion – these differences should be turned into strengths. It is impossible to compare one region with another as the prerequisites are diverse, just like the opportunities and feasibilities. With a MRS the co-ordination of collaboration and financial means is facilitated by sharing the common challenges, goals and accomplishments. There will always be some features that cannot be solved only on local, regional or national levels, but which have to be faced with a transnational approach (such as transport corridors, energy and ICT networks, environmental issues and problems inflicted by climate change).
The debate whether the MRS is to be considered as part of the Cohesion Policy, or as independent beings with a more integrated and place-based policy approach, induces the BSS, according to Samecki (2009), to be summarised as an opportunity for transnational co-operation to constitute an excellent laboratory for multi-level governance on common development challenges and opportunities, and a means for an integrated and co-ordinated implementation of multi-sectoral EU policies, aiming at increased economic, social and territorial cohesion. In other words: the MRS is a new way of making Europe more effective.
There have been some criticisms of the BSS as well. According to Peter Schmitt (2010), the BSS is indeed a place-based strategy but it «suffers from a comprehensive territorial perspective». He states that the VASAB Long Term Perspective could «serve as a complement and explicit territorial strategy that takes into account the function and problems of different types of territories within the Baltic Sea Region». Peter Schmitt argues (and fears) that a macro-regional strategy, even if it is place-based, is not so clearly linked to territorial cohesion that it should be, because generally the latter focuses on better economic performance of different types of territories/regions, thus he sees a need for a co-ordination between the actions/policies and the location of the territory that they are supposed to have an impact on (Schmitt, 2010).
On the other hand, Faludi (2010a) argues that, if spatial planning is to be formulated as macro-regional strategies, then it becomes a vehicle, both for territorial cohesion and EU policymaking in general. If so, the interest in spatial planning is certain to increase.
Furthermore, understanding macro-region as “synaptic spaces” could allow us to imagine Europe in terms of cities, urban-systems, city-borne regions, and macro-regions: a more heterogeneous, complex and well-defined and coherent organism (in the biological sense), defined by deeper cultural layers (rather than those imposed by modern states).

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REPRESENTATIONLESS URBAN IMAGES: CONTRASTING FORMAL PLANNING NARRATIVES AND INFORMAL REALITIES IN SARAJEVO

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Abstract

The level of urban competitiveness and positioning in the elusive global network/hierarchy of cities have in post-Fordist paradigm change, become crucial criteria for determining the successfulness of proper urban development. Following this logic, the strategies of representation of urban space have been, for some time now, the main focus of entrepreneurial urban governments. Indeed, the construction of the urban image, and such that is believed to be intrinsic to the successful global city, nowadays directs institution of urbanism in each of its practices – from crafting of planning narratives to design of the development projects. The ready-made contemporary urban representations, such as knowledge and creative districts, the landmark "starchitectural" commodities by famous authors or globalist commercial and leisure centers booming around the World thus gain symbolic primacy over plethora of small but significant symbolisms that surge daily in urban space as the result of its appropriation by the people of the city.

To reflect on the relation between appropriation and domination in the contemporary city, this investigation focuses on the city of Sarajevo where informal /illegal/ settlements built on the hilly urban periphery, mainly by war migrants and refugees, have gained strong visual presence in the urban image, and became a far-reaching symbol of sorts for the space-appropriation processes. Comparing the European city of Sarajevo to the urbanization boom in Latin American cities, such as Sao Paolo or Caracas, the similarities are becoming very visible as informal settlements are being systematically ignored and excluded from any development or upgrading plans.

By analyzing how this self-generated, informal urban reality of extreme appropriation contrasts with the recent planning narratives and strategies of the city's representation it will be demonstrated how contemporary urban governments fail to contain appropriation processes and the resulting symbols in their representational strategies, even when these constitute an imposing urban image. Keywords: urban representation, planning narratives, informal settlements, urban identity, appropriation of space

"Words are never 'only words'; they matter because they define the contours of what we can do." (Žižek, 2008)

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1. Introduction

Ever since the 1960s, the issue of relation between representation and space-molding disciplines has been intensively addressed by the protagonists of (broadly defined) critical theory (Debord, 1995; Foucault, 1970; Baudrillard, 1995; Lefebvre, 1991; De Carteau, 1998). The identification of the rising primacy of the visual in the field of philosophy, sociology and critical cultural studies coincided with the abandonment of self-assured modernist doctrine in the field of urban planning. By the early 1980s, the struggling discipline of urban design liberated general planning theory from concern with the questions of form (Palermo and Ponzini, 2010), while the simultaneous rising importance of strategic spatial planning introduced myriad new media of representation – amongst them that of the text – as a way of giving shape to the intentions of the discipline regarding urban space and society as a whole (Healey, 2004). The political dimension of these texts cannot be overemphasized. Their mobilization by local authorities, along with those of culture and heritage, as a part of promotional activities, secured the emergence of urban branding – the ultimate representation of the urban reality in the global market of cities. Accordingly, the use of stories based on cultural content of places has been recognized as increasingly important for understanding the planning practice and political discourses on development. (Jensen, 2007; Sandercock, 2003)

Upon deliberate simplification, it could be argued that representational democracy implies, in its basic settings, even representation of all of urban existentialities in the workings of the public. However, under the auspice of selectivity implied by the notion of strategy, the agency of the institution of strategic spatial planning does not display this kind of balanced treatment – a praxis resulting in what theory un-ambiguously entitles: deprived urban neighborhoods. Another theoretical concern related to the same matter is distinguishing between that what is formal and that what is, in counter-position, informal in the contemporary city.

Present investigation seeks to deliberately ignore these kinds of theoretical naturalization of givens in planning and social sciences, trying to throw a fresh analytic glimpse at urban facts and their representation by using systems of categories developed through the cutting-edge work of scholars such as Michel De Carteau and Henry Lefebvre.

At stake here is the important notion of social appropriation of urban space that is always tightly related to the possibility of use. Appropriation of space has been conceptually applied by scholars to address questions of signification by users' spatial practices (Lefebvre, 1991), community empowerment and interactivity of identity production in terms of space-community relation (Feldman and Stall, 2004), ontological security, and familiarization of public space (Giddens, 1984).

The products of appropriation are dispersed and, often, hardly identifiable signs – either material traces, in the form of real changes in urban spaces, or the common stories strongly bounded to certain places in the city. In both cases, these are representations of

sorts, signs of civic life and activity, signals of existence of people in the city. They are weak, ephemeral, fleeting, and, precisely for these reasons, easily ignorable vital elements of urban existence. Appropriations of space and their clustered uses produce informal urban geographies and cultures.

Extensive research has been undertaken to address causes and consequences of planning practices and development projects in relation to their poor consideration of urban informality, often combined with practices of minority exclusion (Harvey, 1993; Hayden, 1995; Mele, 2000). While formal culture and its representations, such as national monuments, acquire unmistakable introduction to planning and political narratives, insured by the agency of the institution of heritage preservation, products of informal culture are largely ignored – with the exception made when they prove to be prone to commodification and branding (Vivant, 2010; Zukin, 2008).

Especially the recognition of the phenomenon of urban competitiveness and related branding practices had complicated the relation between scientific credibility of planning and issues of urban representation. The quest for the appropriate image that would compel investment and service sector workers has left little space for informal identities in the development agenda. The visual and the visibility play great role in this kind of a game, because, to exist in the city, means to be represented. (Hayden, 1995) In this research, two types of representation are addressed – the one of planning and branding texts; and the one generated by the 'city in itself', captured in the phenomenological concept of *place*.

The city of Sarajevo is studied as a valuable case providing for the possibility to vividly illustrate the discrepancy that often takes place between the two, but is rarely so obvious. In Sarajevo, the informal housing construction that had its first appearance already in the 1950s, dramatically increased in the second half of the 1990s, due to great demographic changes caused by post-war immigration. While in the majority of other cities the existence of zones of informality can be seamlessly 'over-written' through planning narratives and branding practices, in Sarajevo this kind of overwriting is unmistakably disclosed as a result of specific urban topography in the midst of which the 'informal' becomes an imposing part of the overall urban image, thus entering the collective representation of place.

This research will, accordingly, focus on the role of planning in the domain of representation by means of different types of texts /textual explanations of spatial plan, strategic plans, investors' guides, official city presentation /, and the ways in which they oppose the urban realities of extreme appropriation, namely, the informal settlements. In the next section the theoretical background of representation in critical studies and philosophy will be reviewed. By using the main extracted categories, a fresh insight will be offered into the dominant representational logic recognizable in contemporary planning and urban governance, in opposition to the production of informality through processes of appropriation. In the third chapter the clash of formal representational narratives and informal realities of Sarajevo will be exposed as a case study which demonstrates paradoxical confrontation between the city-text and the city-phenomenon.

Finally, the case will be put in a wider context by comparison to similar instances present in Latin-American cities where thriving informality gives rise to what we designate as the phantom-city syndrome.

2. Urban representation – the stakes in symbolism of urban form

2.1 The city, its representation and - the power

To imagine the future of the city means, firstly, to understand its present urban form and capture its ontology through the available media, and secondly, to use these media to project the ideas and intentions that would, hopefully, introduce change for the better. Both of these processes are, in the realm of space, matters of concern of the practice of spatial planning and both, thus, evolve around the sublime kernel of knowledge and expertise. The challenge to untouchability of this kernel and the deconstruction of its interwovenness with power regimes has been effectively and constantly undertaken by critical theoreticians and philosophers in the 1960s and 1970s, who supplied a range of conceptual tools to address this important issue.

In the work of Michel Foucault (Foucault, 1970), the underlying conditions of truth, inherent to the historical moment, decisively shape its related episteme. The question of representation of facts, or truth, through the scientific discourse is thereby put into focus and, with a gradual spatial turn in social sciences (Lefebvre, 1991; Allen et al, 1998; Massey, 2005) expanded to the notion of origins and epistemological justification of the space production practices. Henry Lefebvre has, with special rigor, developed a conceptual framework to address the matters of power relations and their accommodation in the ontology of the spatial (Lefebvre, 1991). The application of his conceptual triad, consisting of *representations of space*, *representational spaces* and *spatial practice*, establishes clear position on joint agency of power and knowledge in the processes of space-production. In the 1970s, in the light of fostering of what, not only, Lefebvre addressed as advanced capitalism, his concern was about the rise of *the abstract space* which promotes the *domination*, as opposed to *appropriation* of space.

In this kind of understanding, the representational aspirations of power or – the production of representations of space – are crucial to the outcomes of contestation processes and overall control over the space of the city.

According to Lefebvre, in the present world order the representations of space, produced by power and knowledge, collide, with the representational spaces of the users, which they seldom manage, or even aspire, to reach. Relying on myriad processes of scientific reductionism they asses and then reproduce what was found through available and officially recognized media, only to set the ways for intervention which is to be based upon and which is justified by the articulated representation.

The potency of the symbolic, important since the first spatial practices left marks in the natural space, is decisive in the era of abstract space. In Lefebvre's words: "Space may be marked physically, as with animals' use of smells or human groups' use of visual and

auditory indicators; alternatively it may be marked abstractly, by means of discourse, by means of signs. Space thus acquires symbolic value. Symbols, on this view, always imply an emotional investment, an affective charge (fear, attraction, etc.), which is so to speak deposited at a particular place and thereafter 'represented' for the benefit of everyone else. In point of fact, early agricultural and pastoral societies knew no such split between the practical and the symbolic." (Lefebvre, 1991, p.141)
What easily gains crucial weight, when this argument gets to be positioned in the framework of contemporary planning debates is the *separation*, between the symbolic and the practical through representation, which is found here to occur on many different levels as an inherent process of production of planning narratives.

2.2 Urban competitiveness and entrepreneurial representational logic

The constitution of global network/hierarchy of cities, the skyrocketing rates of foreign direct investment and the mobility of high-qualified workers have been recognized to had given rise to the phenomenon of urban competitiveness – an imperative for urban governments of 'doing what it takes' to position their assets high in this conceptual, but still very real, scale of desirability. (Friedman, 1995; Castells, 1996; Sassen, 2001) In effect, the entrepreneurial character of contemporary urban governance has been recognized as one of its main features (Harvey, 1989), pinpointing thus the ways in which spatial and its qualities become both tools of, and arena for, the processes of promotion and trading. With the decline of nation states' powers and jurisdictions, these play out, increasingly, as primary determinants of urban futures, while forming expressly naturalized context of planning practices. (Carmona et al, 2009).
It has been widely agreed by now that culture and its spatial manifestations play important role in creation of urban brands (Evans, 2001; Kunzmann, 2004; Landry, 2000; Jensen, 2007). The cultural assets employed in the process of branding can be very varied, from architectural cultural heritage artifacts, which imply the aura of authenticity by the virtue of 'proven' authentic history, to flagship cultural architectural projects which imply the constantly living, regenerating cultural activity that suppose to present the city as a vital part of the global world. (Judd & Fainstein, 1999; Miles, 2005; Strom, 2003) All these fragmentized associations tend to be subsumed under a desirable image, the role model of sorts that we intent to capture in the notion of 'authentic global city'.
Importantly, this city-text is understood here as a representation of the existing place, the phenomenology of which implies myriad complexities that are curated through the process of cultural urban branding. (Chaplin and Stara, 2009) Another concept which intends to systematize and which successfully captures the notion of expanding cultural and place-related bases of planning is that of a narrative approach to cultural urban brands, where planning activities are seen as underpinned and, indeed, frequently fully informed by preconceived stories about the place. (Jensen, 2007)

Similarly, the discursive and semiotic processes at play have been considered by scholars who tried to understand their agency and importance in contemporary planning and governance schemes. (Jensen & Richardson, 2003; Harris & Hooper, 2004; Healey, 2004; Duhr, 2007). The wider picture of sea-change from essentialist to relational geography clarifies the simultaneous popularization of strategic spatial planning (Healey, 2004). The essentialist approach, aspiring to order and objectivity, has given way to relational approach which understands the space as "social construct" and in which "'places of the mind' are as significant as physical objects and flows". Taking this into consideration, in her definition of strategic spatial planning Patsy Healey designates it as "self-conscious collective efforts to re-imagine a city, urban region or wider territory". (Healey, 2004, p.46)

As curating, storytelling and re-imagination equally imply valorization, selection and simplification of uttermost complexity of the urban, it seems that only the "optics" of "representational logic of urban intervention" maintain enough analytic credibility when addressing contemporary urban planning and governance. More specifically, the question in focus is the one of the general 'climate' of the entrepreneurial urban governance, the ways in which it influences the formation of planning narratives when they work with signs and metaphors and, in turn, the relation of these narratives to the phenomenology of the place.

2.3 The production of the informal - Social appropriation of space, its 'visibility', its symbolic loads.

The polarization between the formal and informal culture broadly introduces the parallel realities of formal and informal city. While the urban intervention interpellates the user through its formal discourse (Harvey, 1996; Jameson, 1997; Balibrea, 2004), in the realm of the informal the users produce the meaning through the wide variety of their agencies and interactions. Here we consider the manifestations of urban informality in the light of the notion of appropriation, as advanced by Henry Lefebvre.

Amongst those categories defined in Lefebvre's opus, appropriation is one of the few that truly and undeniably "hold the side" of the citizen, standing for the processes that endow the space with symbols implying "time (or times), rhythm (or rhythms)" and spatial practice (Lefebvre, 1991, p.357). It especially strongly relates to his favoring of the use value (as opposed to exchange value) of space. For Lefebvre, understanding appropriation lies at the very core of the new science of space, as he calls on to planners to apply the "imaginary invested in appropriation (of time, of space, of physiological life and desire)". (Lefebvre, Kofman and Lebas, 1996, p.155).

Appropriation thus produces symbolic value, also identified as *difference* – alternative to the imposed homogeneity. It is produced through the use that infests the representations of power by means of its collateral symbolisms. The result of this collision is the 'city in itself' – the place and the phenomenon.

Given the pursue for the 'authenticity', imposed by the entrepreneurial climate in urban governance, planning narratives have recently intended to incorporate some of the semantic 'products' of informal practices – the alternative artistic cultures and the allure of their corresponding spaces are increasingly used as powerful material of branding and promotional activities in cities. The dispersed, unsynchronized semantics of the "bohemian" activities are tracked down, recollected, synchronized and introduced into overarching narrative of "the creative and open place to work, invest, create and live" (Vivant, 2010, p.107)

Not all products of informal practices of appropriation, however, can be seamlessly blended in the preconceived city-word of 'authentic global' role-model. The blurred border-line of informality gains again very determined and strict presence when this kind of semantic recycling cannot be easily (or at all) undertaken. And if they are not suitable to be promoted and integrated into the nexus of strategic planning narrative and entrepreneurial governance narrative, the *differences* are disregarded or stigmatized.

Still the "city in itself" exists outside the narratives as a superior *oeuvre* that supersedes the product and enters into conflicting, unclear and dialectical relationships with its institutional form (Lefebvre, Kofman and Lebas, 1996). The structuring of social and cultural urban geography reveals these conflicting tensions, not only in terms of quality of life, but also in terms of identity construction when the semantic hierarchies between the center and the periphery are recognized in the narratives. The urban centers are source-fields of iconographies and symbolisms of representation, leaving the less significant periphery existing "in itself" but, also, at the safe distance from the curated space of representation (Harvey, 1993).The notion of visibility then gains prominence suggesting the "out of sight, out of mind" principle that permits fine-tuning of the representative "city-in-itself" with the narrative, while the distanced ghettos, informal settlements and other *differences* can be seamlessly overwritten by the dominant representational logic.

In Sarajevo, however, the specific topographic context of the city has permitted for a situation of peculiar semantic ambiguity. While the recent investment has tended to 'materialize' into ever-more spectacular architectural forms indicative of global-city well-being, their backdrop, the 'city in itself', all too clearly demonstrates the *difference* as it elevates it to prominent display surrounding the representative city-center.

3. Sarajevo, its informal realities and its imagined futures

3.1 The hills of Sarajevo – the becoming of the informal city

The social and cultural geography of Sarajevo is, not surprisingly, as complex as the city's turbulent history.

Being founded by the Ottoman Empire in the XV century, as the most western administrative center of the regime, the initial urban structure nestled in the outset of the valley of river Miljacka, taking advantage of the topographic configuration to introduce

the unmistakably oriental urban organization – the market-place in the valley and the residential areas around the hills. In the late XIX c, the city was conquered by Austria-Hungary which continued to fill-in the widening valley towards the west, organizing the Central-European urban structure of blocks in the orthogonal disposition of streets with sustained construction around the hills. In the immediate aftermath of the WWII the newly founded socialist regime revolutionized, yet again, the manner of urban planning and development, relying entirely on the principles of the Athens Charter. Formal and project-based occupation of land continued to be predominantly directed at the flat valley of the river, as the large housing estates and their generous pseudo-parks sprung-up, one by one, to accommodate the ever-intensifying influx of migrants (Figure 1). Coming from the countryside and the smaller cities of the Republic alike, attracted by the possibilities of employment offered by the industrialized capital city, these blue-collar workers were the ones to pioneer the self-initiated construction of single-family homes that were soon stigmatized as illegal settlements. The unfortunate, yet common, socialist approach of putting all stakes of industrialization in the narrow urban areas of the biggest cities and turning blind-eye to the necessity of the regional development, resulted in overcrowding of Sarajevo's housing stock (Bublin, 2006). While around 1910 the city population numbered 21 377, by the 1920s it doubled, only to reach some 70 000 in the early 1940s. With the post-WWII onset of intensive processes of de-agrarization, industrialization and urbanization, the number of inhabitants increased to 213 101 in the early 1960s. The increasing influx of migrants to Sarajevo was unmistakably followed by the growing informal housing that almost exclusively occupied the steep slopes of the surrounding hills – a terrain too complex to be urbanized through the large housing schemes employed by the socialist-modernist planning practices.

The trends of growing informal settlements continued through the 1970s and 1980s, only to escalate after the Serbian aggression and the siege of the city that ended in 1995, when the wave of war-provoked migrations splashed hillsides of the Miljacka valley.

This distribution of the formal city in the valley and informal city on the hills (Figure 2) not only created a clear social and cultural geography in which the line separating the valley from the slope and the flat from the steep turns into borderline between two different worlds, but also collaterally produced a complex and problematically rich urban panorama in which the image of the city, however and wherever contemplated, pays equal tribute to formal and informal through the monumentality of the visible (Figure 3).

3.2 Fostering the formal representation in transition: the plans, the pamphlets, the prescriptions

The second half of the 1990s in Sarajevo has been profoundly marked by the overall shift of epic proportions: from socialism to neoliberal democracy, from Fordist to Post-

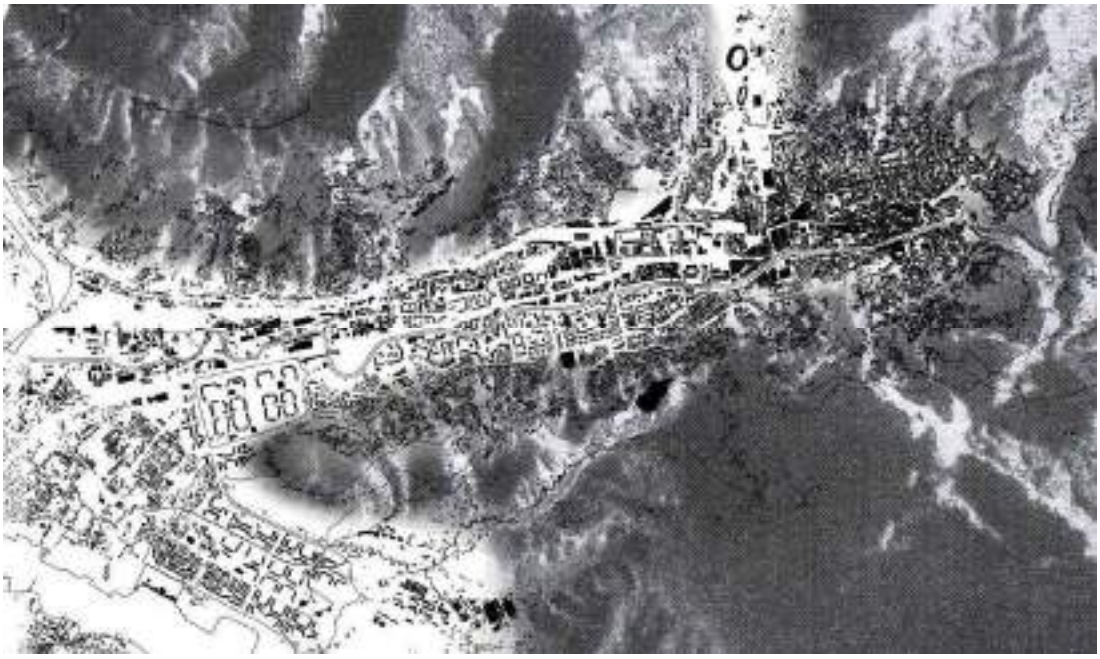

Figure 1. Urban morphology of Sarajevo in its topographical context

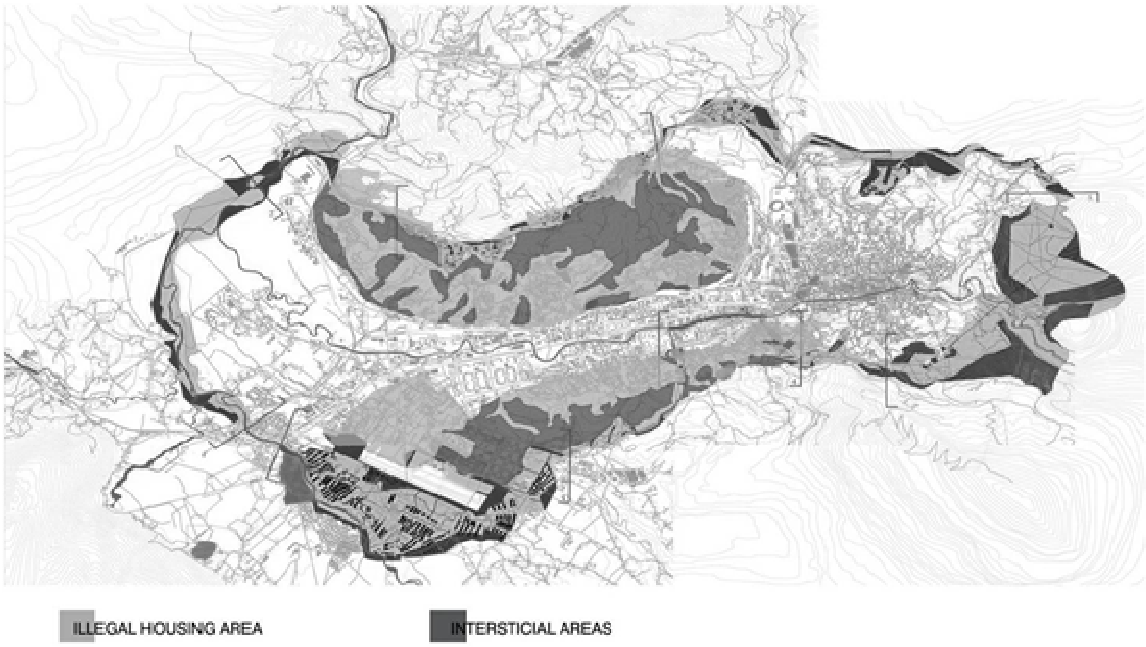

Figure 2. Distribution of informal housing areas on the hills surrounding the city

Fordist economy, from war to peace. All these intertwined processes have been immediately articulated, both popularly and academically, by being subsumed under the concept of transition, the recognition of the overall "abnormality" which asked to be overcome by applying "good practices" of the "normal" world (Stening and Horschelmann, 2008). In the realm of planning and urban governance, this meant, among other things, the introduction of the new logic of representation, the one that would supersede the nation-building identity formation, so typical of the socialist era, and answer to the new situation of the neoliberal global market (Pichler-Milanović, 2005). The recognition of the unfolding urban competition and of the fact that development and investment depended directly and uncompromisingly on the quality and skillfulness of representation, introduced range of innovations into activities of the Development Planning Institute of the Sarajevo Canton (DPISC), the ultimate institutional authority in the realm of spatial and economic planning of the city.

The first post-war spatial plan, issued in 2006, demonstrates these changes in a multiplicity of ways (DPISC, 2006). The document opens up with enumeration of 'general and specific goals' that give it a strategic dimension. Three of these acquire specific prominence for their mobilization and circulation in range of other documents and turn into a motto of sorts that synthetizes the main aspirations of the city (DPISC, 2006, p.4) The first one: "Profiling of the space of Sarajevo Canton as the ambience of lucrative (sustainable and highly profitable) business" is further elaborated to designate science and knowledge-based economy, small and middle-size enterprises, food-production and tourism as the principle economic bases of development. The second one relates to the "ambience of enjoyable living" that sets the goal of providing "humane, healthy and creative living through the elevation of quality and standards". Finally, the third one demands that Sarajevo Canton be profiled as "regional and European metropolis", and thus encompasses the previous two by stating that 'the environment has to be made attractive for the international capital", as well as for the "young professionals", so that it provides for their permanence in the country. The framework narrative that these basic strategic goals constitute echoes, despite its generality, in the subsequent chapters that intent to specify "The Projection of Spatial Development and Spatial Systems". Inside the proposed categories (natural resources and conditions, population and settlements, economy, dwelling and residential development, social infrastructure, agricultural land, etc.) the informality is addressed exclusively as a process and as technical entity – "the informal construction" – a problem that requires rehabilitation and control.

Springing from the bases set by the Spatial plan, this kind of overarching strategic spatial narrative divaricates and reappears in other, more specific documents. Two are addressed here with particular curiosity: The Investment Guide – Sarajevo: a Profitable Business Location (DPISC, 2008a) and Sarajevo – Presentation (DPISC, 2008b). Both are available for download at the official web-site of the DPISC, and both are intended to represent the city, following the basic strands posed by the strategic goals.

The Investment Guide is directed at potential investors with the purpose of providing a range of useful procedural information (founding the company, getting construction permit). More importantly, however, it provides a list of potential investment locations in which undertaking of construction is preferred, as well as the intensive visual support in the form of images and maps that are to represent the city as the "profitable business location". Here the representation is employed in a rather more pragmatic form - the territory of the city is reduced to the range of locations "covered" by the Master plans that selectively reproduce the city of the future (Figure 3) Without an exception, all 17 Master plans are situated in the flat valley, promising further polarization between the normality of the formal and otherness of the informal settlements. This kind of 'selective recognition' is reinforced through the rich photographic documentation that accompanies the entirety of the text and that 'narrates' the 'authentic global city' into being – a task accomplished by means of romantic panoramic views (Figure 4) and snap-shots of recent examples of global architecture (Figure 5), in each one of which the heavily populated hills are somehow eluded.

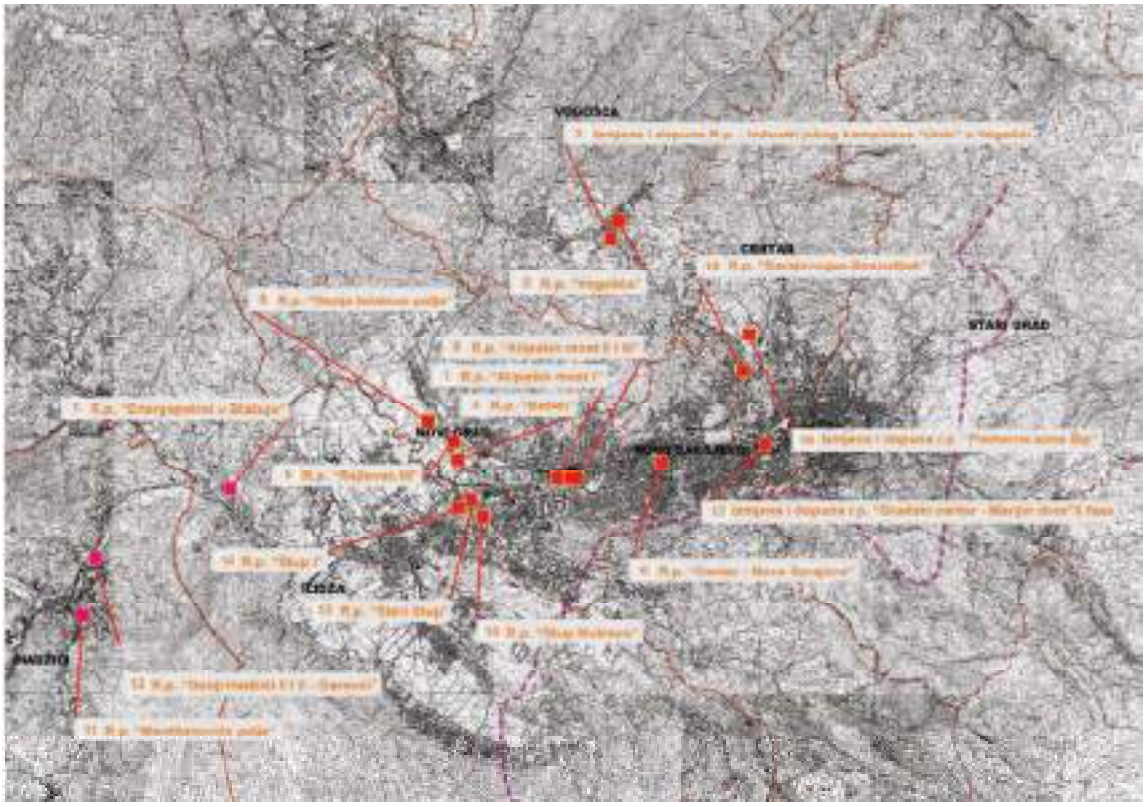

Figure 3. Future is selective: the position of the potential investment locations exclusively situated in the Sarajevo valley

Figure 4. The panorama of Sarajevo on its blurred background – the handy 'fog' disguises the informal world

Figure 5. The recent architectural "prides" of the city photographed from the fortunate vantage point that evades the visibility of informal housing

Figure 6. Sarajevo by night and its hills covered by night-tome fog

Figure 7. The 3D view of the Marijin Dvor new city center and its upcoming architectural wonders

Finally, the Presentation of the Canton Sarajevo entitled "Yesterday Today Tomorrow" complements the palette of representational logic by recreating the city in the light of its formal identity (DPISC, 2008b). Informality has no place in neither one of the temporal categories covered by this colorful document that features architectural monuments, events of culture and natural riches. Again, the graphic illustrations selectively "recreate" the favorable views (Figure 6), employing this time also the 3D visualization (Figure 7) to communicate the imagined futures of the city, and all that without any consideration of the part that dozens of thousands of informal households are to play in its construction.

4. CONCLUSIONS: Overlooking the vividly visible - The syndrome of the phantom city and its discontents

Informality is pervasive but rarely imposing in its visibility. The very real concept of "periphery" implies its safe distance from the affluent, manicured and identity-forming center. This distance and implicitness are not to be underestimated.

The fostered "dual city" of Sao Paolo (Dear and Lucero, 2010), for an example, exists both in its hybrid physicality and in its dual aspiration to the production of identity and culture: the white, global, corporate, establishment culture Vs. non-white, local, ghettoized culture, that occasionally semantically "harasses" the formality of the center by means of graffiti. Except through this kind of very ephemeral overlappings, the fragmented social geography can be appreciated almost exclusively by studying maps and contrasting snapshot separately taken in the mutually isolated dual realities.

It is the visibility of contrasting artifacts, however, that unsettles the spirits of the liberal democratic myths – the phantasmagoric images of the squatter-tower in Caracas have circulated the world, as an ambiguous message craving decipherment and reaction. The 45 stories high unfinished office tower, hosting some 600 families of the urban poor has provoked wildly varying insights – from those which designated it as "breeding ground for radical social change", to those which saw in it "an unintended parody of the society that created the squatters' dire situation to begin with" (Woods, 2011).

Still the intensity of fascination reveals the concealed civilizational impasse, demonstrating how formal representation of appropriation makes all the difference.

So too, in Sarajevo, the semantic stratification of the panorama has posed a challenge for the policy-makers and the planners alike. (Figure 8, Figure 9) And as it occurs with challenges, it also indicated the open-ended way to innovation, a chance which, if handled with greatest of (technical and humanistic) care and audacity, can result in the invention of something new.

The disappointment of the answer so far given to this challenge has not been in its practice of "overwriting", for the realm of representation seems to be the first frontline of any fight for betterment in the world order pervaded with signs, images and narratives.

Figure 8. The semantic layers of the panorama – new development icons in the foreground and the informal settlements on the hills in the background

Figure 9. New development flagship projects contrast with the 'city in itself'

As for the part of it that falls to planning, it has been already well recognized, that "issues of representation are an important part of the persuasive capacity of strategic planning. They have impacts in carrying framing concepts from the arenas of policy articulation to the arenas where decisions are made about specific investments and regulatory norms and permits." (Healey, 2004, p.46)
This investigation is dedicated, thus, to reflection on the paradox of representation in planning practice, when confronted with the issue of informality.
It has been demonstrated, with these ends, how pioneering strategic spatial planning and policy of post-socialist Sarajevo intent to navigate through the representational realm, by constructing narratives and embedding them in documents that truly hold wagers on the future of the city. Furthermore, it has been shown how these narratives, as semantic constructs, collide sharply with the unarticulated semantic loads of the 'city in itself'. The operativity of these narratives proves to be, therefor, both pragmatic and semantic. While they strongly influence the distribution of investment inside the complex social geography of the city, the signifying capacity of urban intervention is seen as productive of identity.
It has been aimed to show, however, that, before the intervention itself has been made effective, the signification and signs enter the planning practice through the narratives of planning. Separation of the practical and the symbolic can thus be found in the metaphoric content of the spatial vocabulary that pervades contemporary planning practice. The aspiration of urban governments to the 'authentic global city' results in mobilization of spatio-cultural concepts that address those features found to be 'in tune' with the elusive qualities of this ultimate role-model. Meanwhile, informality is what prevents the urban landscape to become, as some scholars address it, 'discourse materialized' (Schein, 1997).
However more the construction of narratives related to places proves to make a crucial part in the creative labor of the contemporary planning practice, it is worth remembering one simple and ingenious observation: identity is not nice (Venhuizen, 2010), and it has never been. The formal identities narrated through artifacts of castles and fortresses managed to incorporate and supersede their original stories, sometimes related to the true traumas of war and subordination. Similarly, when facing the phantomlike existentialities of representation-less urban images, it falls to the planners and policymakers to invent new narratives that will have enough potency to forefront our contemporary battles, many of which are fought in the real space of the informal city.

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EVALUATING MAJOR TRANSPORTATION INFRASTRUCTURE IMPACTS USING GIS AND MULTICRITERIA DECISION ANALYSIS: THE CASE OF EGNATIA MOTORWAY IN GREECE

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Abstract

Renowned for their ability to deal with spatial problems, commercial GIS software packages can play crucial role in spatial decision making processes, given that they are provided with sophisticated tools that allow both private and public organizations to manage and analyze spatial referenced data. In order to expand GIS abilities to the consideration of decision criteria, OR/MS researchers strongly pronounce in favor of developing synergies between GIS and multicriteria decision making tools. The rationale of this integration is the GIS ability to store and manage and visualize geographically referenced data and the efficiency of Operational Research tools for modeling decision problems. As a result MultiCriteria Spatial Decision Support Systems (MC-SDSS) provide a consistent framework that allows alternatives ranking combining both spatial data and DMs preferences according to a selected decision rule. Regarding to their applicability in situations that involve classification, ,multiattribute decision models are considered as a very attractive procedure in urban and regional planning concerning the appraisal of transportation infrastructure construction.

In the present a spatial multicriteria evaluation of the impacts derived by the realization of Egnatia Motorway is performed. Egnatia Motorway is considered one of the most significant interventions that have taken place in Greece during the early pre-Olympic Games period and up to the year 2007. With a length of 670 km, it crosses 12 prefectures starting from the Igoumenitsa Port, which provides links by boat to Italy, ending to Kipi in Evros (Greek-Turkish borders). It is a dual carriageway with two traffic lanes per direction with an overall construction cost of about 6b€. Aiming to enrich Northern Greece's potential in transport industry and tourism, European Union has heavily invested in its construction.

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1. Introduction

Land-use suitability mapping and analysis, that aim to identify appropriate spatial patterns for future land uses according to specific requirements, preferences, or predictors of some activity, have been widely accepted as one of major fields of interest between GIS analysts (Collins et al, 2001). The ability of the contemporary GIS software packages to support geoprocessing tools such as overlay procedures led both scientists and practitioners to refer to them as Spatial Decision Support Systems (SDSS). However, there is growing consensus about the limited role of GIS as SDSS (Pereira & Duckstein, 1993). This criticism is mainly addressed to the lack of adequate techniques that allow DMs preferences contribution to the final result; and to the fact that Boolean overlays identify as solutions only those that simultaneously satisfy all the analysis' criteria (Laaribi et al, 1996; Chakhar & Martel, 2003).

Recent advances in both GIS technology and Multi Criteria Decision Making methods (MCDM) led many authors to recommend integrations between the two research areas. The rationale of this integration is the GIS ability to store and manage geographically referenced data and the efficiency of Operational Research tools for modeling decision problems. As a result, MultiCriteria Spatial Decision Support Systems (MC-SDSS) provide a consistent framework that allows alternatives' ranking combining spatial data and DMs preferences according to a selected decision rule (Anagnostopoulos & Vavatsikos, 2007).

At the same time evolutions in software technology allowed the development of tools in order to support decisions for semi structured problems. Concerning the development of build-in modules in the commercial GIS packages, ESRIs ArcGIS, Microimages Inc. TNT GIS and Clark Labs IDRISI provide tools for suitability index estimation according to a weighted average of the criterion maps. In particular, IDRISI supports estimations based on Ordered Weighted Average decision rule and a calculator-like module for criterion weights estimation of a pairwise comparisons matrix (Eastman, 1993). The last decade efforts focus on the development of more comprehensive solutions in order to meet DMs requirements. These efforts were encouraged by the provided mediums for preparing, compiling and running macros and development platforms, which permit application programs writing using objects and their build-in properties as well as methods in compliance with programming languages such as Visual Basic and C++.

Transport infrastructure is considered as a regional development project. The new European transport policy (EU–European Commission, 2002), has acquired a clear development dimension, and is directly linked to the policies for the social, economic and territorial cohesion of Europe. This is enhanced by evidence from numerous research studies (Vickerman, 1996; Faludi, 2006).European Spatial Development Perspective (ESDP) explicitly refers to the significance and the consequences of the European transport policy for the organization and development of the European area (EU–European Commission, 1999). It is suggested to assess the spatial impacts of European transport infrastructure on the basis of the following criteria: (a) impact on

land use, (b) impact on productive systems of regions, (c) impact on spatial structure, (d) impact on the income and production, (e) impact through regional reinforcement measures, and (f) impact through the spatial differentiation of public intervention.

In Greece, transport infrastructure constitutes a valuable tool in spatial policy. The General Framework of Spatial Planning and Sustainable Development and the Special Spatial Planning Frameworks consider the investments in transport infrastructure as works of regional development (Ministry for the Environment, Planning and Public Works, 2007). The assessment and evaluation of spatial impacts caused by transport infrastructure is a special multidisciplinary task and requires systematic investigation and monitoring, but it has not yet been explored in Greek bibliography.

The Egnatia Motorway (Figure 1) is one of the largest transport projects constructed lately in Europe, and was included in the top priority projects of the Trans European Transport Networks (TENs-T). The motorway, 670km long, crosses Northern Greece horizontally from Igoumenitsa to Kipi on the Greek – Turkish border and is connected via vertical axes northwards to the Pan – European Corridors and via the PATHE (Patra-Athens-Thessaloniki) motorway and the western Ionian axis, to the rest of Greece. It is designed and built as a dual closed carriageway of international standards and comprises numerous long twin bridges, a large number of tunnels, 50 interchanges, 350 underpasses and overpasses, and 720 km of service roads. Moreover, it links all major urban centres, 4 ports and 6 airports (Egnatia Motorway Observatory, 2005).

Figure 1. Egnatia Motorway horizontal axis

At the national level, the Egnatia Motorway represents the backbone of the Northern Greek transport system, making it possible to break the isolation of remote Regions such as Epirus, Western Macedonia and Eastern Macedonia and Thrace. At the European level, it links Greece to Europe and the Middle East, while it operates simultaneously as a point of confluence for the merging transport flow from the Balkans and South-Eastern Europe. It is expected to operate as a zone of cooperation

promoting selected economic activities, transport and energy networks, exchanges of technical knowledge, as well as the effective preservation of the environment and of cultural heritage. It is there that the Pan-European Corridors IV (Berlin-Sofia-Thessaloniki), IX (Helsinki – terminating at Alexandroupoli) and X (Vienna-Belgrade-Thessaloniki) terminate (Spiekermann & Wegener, 2006).

The importance of the project and the investment size necessitate supplementary actions, beyond construction, that would multiply benefits and mitigate the impacts from operation. It is necessary to monitor and assess the impacts of the Egnatia Motorway, not only on transports and the operation of the road network, but also on the economic, social and territorial cohesion, the environment, and the general spatial arrangement of the geographical zone crossed and influenced (Fourkas & Papasiopi, 2006).

In the present paper an integration among GIS functionalities and multi-attribute decision making models such as Analytic Hierarchy Process (AHP) (Saaty, 1977) is proposed in order to estimate the impacts provoked by the construction and operation of Egnatia Motorway in regional level. For that reason the 12 prefectures crossed by the motorway, are evaluated with the use of socioeconomic, environmental and transportation indicators. The proposed framework can be used as a valuable tool that allows public investments' evaluation in regional level, as well as inter-regional inequalities' estimations.

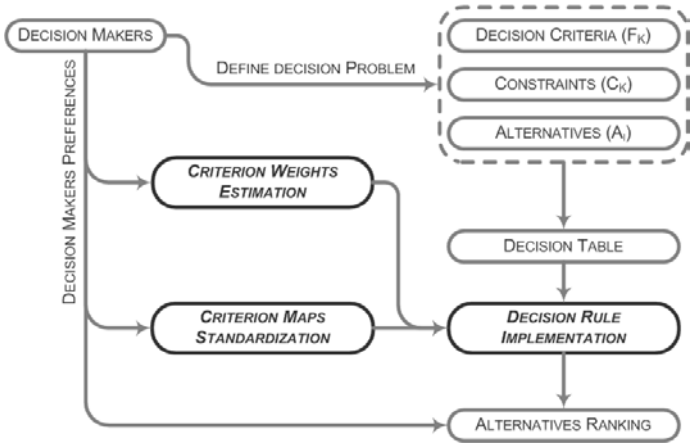

Figure 2, Decision making flowchart

2. Spatial Multicriteria Decision Analysis

Rational decision making is characterized by a coherent sequence of actions that ensures DMs from dubious results in the final outcome. The methodological framework, as it has been stated by H. Simon (1960), can be distinguished in three phases (Figure 2). In the intelligence phase, decision space is well stated by the objectives and sub-objectives identification, and constraints criterion maps determination. In the design phase, feasible alternative scenarios are determined

performing Boolean overlays among the constraints criterion maps. After the analysis decision table formation, criterion maps relative importance is estimated and utilization procedures of the geographical data are performed. Finally, in the choice phase suitability index maps are derived as the synthesis result of the per criterion utilities under a certain decision rule implementation. Moreover, the stability of the final outcome is tested to changes regarding the former steps of the analysis, including either the consideration of new criteria or alternatives to stakeholders' preferences. When conflicts arise a compromise solution for implementation in the study area is identified.

At the most rudimentary level, GIS-based multicriteria decision analysis can be thought of as a procedure for combining geographical data and value judgments (the DMs preferences) to obtain information for decision making (Malczewski, 2006). Spatial multicriteria analysis aims to the ranking and/or the selection among candidate locations through estimations regarding a graded variation of suitability. The nature of the above integration is complementary given that GIS is a powerful tool for managing spatially referenced data, while MCDM methods are efficient tools for modeling spatial problems (Chakhar & Martel, 2003). Furthermore GIS based land use suitability evaluation expands the aspatial nature of traditional MCDM methods given that evaluation criteria vary across space. On the other hand MCDM allows the consideration of decision criteria allowing suitability mapping (Malczewski, 1999). The last is most commonly achieved by scaling attributes data to a common ratio scale and then to combine them by means of weighted average.

2.1 Analytic Hierarchy Process

Developed in the late 70s, AHP is a scaling method for deriving priorities (weights) for a set of activities according to their importance (Saaty, 1977). Since its release, the method has been widely used because it elicits DMs' preferences in a friendly and easily understood manner. As a procedure, AHP belongs to the family of methods that use pairwise comparisons in order to estimate relative preferences among decision analysis parameters in semi-structured decision problems. The method is based on three principles: the decomposition of the decision space to its fundamental elements, the comparative judgments, and the composition or synthesis of priorities.

The first of these principles is accomplished by breaking down the decision problem to its components by developing decision hierarchies. In general, the objectives tree is defined exclusively by the DMs aiming to represent their experience and intuition over the problem. Comparative judgments principle has to do with the development of a solid base for establishing priorities among the decision parameters. Local priorities are obtained by comparing qualitatively each node against each of its peers with respect to its parent node using the nine levels of the fundamental scale of preferences (Saaty, 1995). Technically this is achieved by forming pairwise comparison matrices $A = [a_{ij}]_{n \times n}$, where the ratio a_{ij} assigned by the DMs expresses the dominance relation of the factor in row i when it is compared against the factor in

column j. The measure of the dominance relation is determined by using the strict preference (A_iPA_j) and indifference (A_iIA_j) preference structures (Equations 1,2). Consequently pairwise comparison matrices are positive and reciprocals (Equation 3), and the elements in the diagonal equal to 1 (Equation 4). Local (or relative) priorities or weights are then established as the principal eigenvalue λ_{max} of the pairwise comparison matrix solving the system of Equations 5. When the transitive property holds (Equation 6), the matrix is consistent and λ_{max} equals to n. Since in real-life situations it is quite rare to obtain consistent judgments by the DMs, AHP provides measures of inconsistency as a function of the deviation between λ_{max} and n.

$$A_iPA_j \rightarrow a_{ij} > 1 \quad (1)$$

$$A_iIA_j \rightarrow a_{ij} = 1 \quad (2)$$

$$a_{ij} = 1/a_{ji} \quad (3)$$

$$a_{ii} = 1 \quad (4)$$

$$(A - \lambda_{max} I) \times w = 0 \quad (5)$$

$$a_{ij} = a_{ik} \times a_{kj} \quad (6)$$

2.2 Spatial Analytic Hierarchy Process

The framework for applying AHP in site suitability analysis studies, known as spatial AHP, has been firstly introduced by Banai-Kashani (1989) in the late 80s. According to this approach in a GIS environment, the overall priority Sj of an alternative location j is estimated as the weighted summation of the standardized criterion maps (Equation 7). As a procedure, standardization enables the transformation from the natural and constructed scales of measurement to the DMs' preferential system enabling the addition of commensurate attribute maps ensuring coherent results estimation. Standardization with respect to a specific objective can be performed using both relative and absolute measurements. Technically spatial AHP in GIS environment is implemented as the weighted average of the standardized attributes row data. Summarizing, the method is carried out in the following steps (Voogd, 1983; Malczewski, 1999):

Step 1: Analysis overall goal determination.
Step 2: Constraints implementation and alternatives determination.
Step 3: Define a consistent family of criteria for the alternatives evaluation and their spatial patterns (criterion maps).
Step 4: Standardize attributes row data x_{ij}.
Step 5: Obtain ratio weights w_j for the analysis decision criteria.
Step 6: Calculate the per criterion suitability index S_{ij} by multiplying standardized attributes row data x_{ij}^s with the corresponding criterion weight w_j.

Step 7: Generate suitability index S_i using the sum operator on the S_{ij}.

Step 8: Rank alternatives according to S_i.

$$S_i = \sum_{j=1}^{n} w_j r_{ij} \qquad 7$$

3. Problem formation and Evaluation Criteria

3.1 Egnatia Motorway Observatory Indicators System

Egnatia Odos S.A. (EOSA) established and operates the Observatory of the Egnatia Motorway, which collects, processes, and provides valid and updated data regarding parameters in order to: (a) support the integrated management of the motorway, (b) contribute to the utilization of the project in the cohesion and development of a greater area, and (c) contribute to the harmonized assessment of TENs-T impacts on the cohesion of the European area (Vickerman, R., 2004).

A central element for the operation of the Observatory is the organization of the information system that provides a potential for recording, calculating, and monitoring of 50 various indicators. Raw data originate from official and reviewed sources except raw data for some traffic and environmental indicators originate from measurements undertaken by component EOAE Units. The indicators are compatible and comparable with the indicators used by basic EU programmes (ESPON, 2005; ASSEMBLING, 2005; EEA, 2004). The indicators concern specific properties and are grouped in three categories related to socio-economic and territorial changes, environmental impacts and the transport infrastructure and operation of the road network.

Figure3. Egnatia Motorway and the examined alternatives

Among these indicators, twenty have been chosen for this particular application and have been subjected to the necessary changes and modifications in order to become

suitable for the purposes of the research. The examined influence zone includes the transit route of the axis, which is directly influenced. For its definition, the spatial level which is represented by the Prefectures is considered more useful in operational terms. Therefore, the transit route from the West to the East consists of the following twelve Prefectures, which are part of five Regions: Thesprotia, Ioannina (Region of Epirus), Trikala (Region of Thessaly), Grevena, Kozani, (Region of of Western Macodonia), Imathia, Thessaloniki, Serres (Region of Central Macedonia), Xanthi, Rodopi and Evros (Region of Eastern Macedonia and Thrace). This area covers 32.000 Km^2, representing 49% of the total surface of Regions and 24.5% of the national territory. According to the 2001 Census, the actual population adds up to 2.319.052 inhabitants. The Prefecture of Thessaloniki is the most populated of the Prefectures, since it concentrates 27% of the population.

3.2 Decision Hierarchy Formation

The need for performing MCDA approaches in order to gauge the examined prefectures occurs given that there is no effective solution that dominates all the others in the analysis. Figure 4, shows the rankings of the alternatives to the examined indices. Granted that, it is rather difficult for both practitioners and researchers to handle effectively the amount of information. In order to avoid the above drawback AHP is used in the present paper aiming to establish a composite index of suitability enabling thus sufficient ranking of the alternatives.

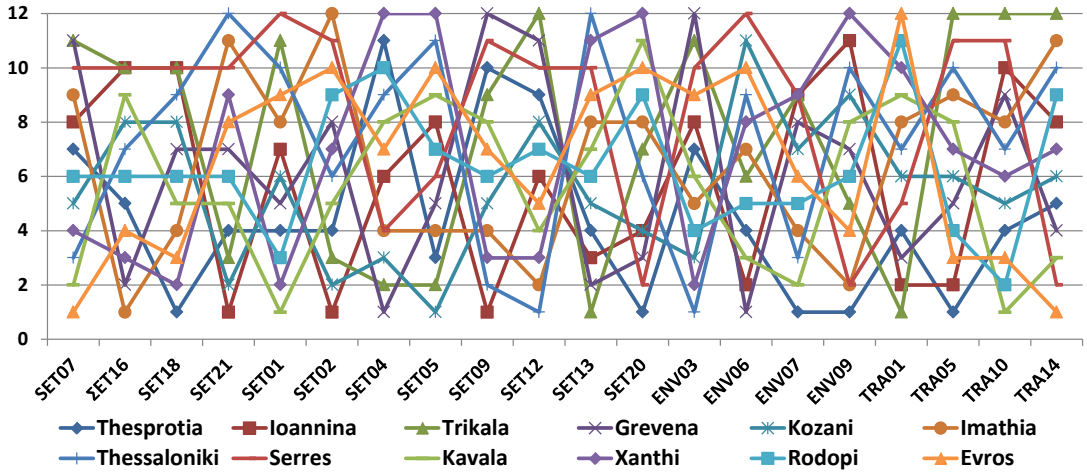

Figure 4. Alternatives profile to the analysis criteria

In order to enable coherent evaluations among the analysis objectives and subobjectives a five level hierarchy is formed (Figure 5). The first level consists of the analysis goal which is the effective ranking of the examined prefectures while in the last level is occupied by the analysis alternatives. The twenty indices that are used for the alternatives evaluation are grouped under socioeconomic, environmental and transportation objectives that should be improved by the Egnatia Motorway

realization. Moreover socioeconomic objective is further subdivided into socioeconomic and planning indicators in order to build clusters that ensure coherent evaluations during the process of deriving relative priorities i.e. the contribution of each objective to the final outcome. Finally the contribution of each alternative to the indices satisfaction is standardized using the maximum score method (Voogd, 1983). The last is a linear utilization approach which allows sufficient transformation from the natural scales of measurement to the DMs' preferential systems and thus the performance of weighted average as decision rule for synthesizing the per criterion impact scores.

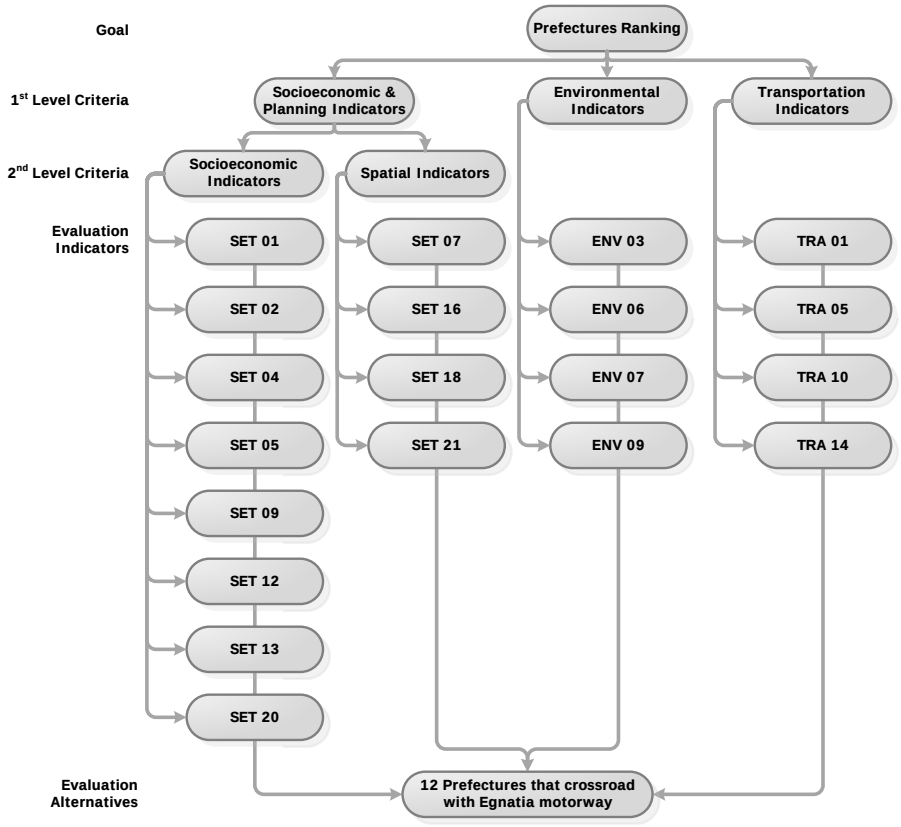

Figure 5. Decision hierarchy

3.3 Socioeconomic Indicators

SET01: It defines the percentage of 2011 population of every prefecture's municipalities which have the main axis of Egnatia Motorway passing within their boundaries comparing to the total population of the prefecture. The indicator's purpose is to assess the population which is potentially benefited directly from the road axis on the level of everyday trips.

SET02: It defines the Annual Average Domestic Product (GDP) 2000-2007 per prefecture. The improvement of transport infrastructure results in an increase of the production factors' mobility and markets' improvement of accessibility.

SET04: It records the average annual rate of change of the declared income per taxpayer 2002 – 2007 in constant prices 2000, per prefecture, as a factor of the area's level of development and prosperity.
SET05: It records the percentage of the unemployed change 2004-2008 per prefecture. The unemployment rate is considered to be one of the main indicators of the development status of a region.
SET09: It determines the population change 2001-2007, per prefecture. The objective of monitoring this indicator is the identification of the macroscopic effects of transport infrastructures improvement on the increase, retaining or decrease of a region's population.
SET12: It determines the change of density population 2001-2011 per Prefecture. Density is a basic indicator of the distribution of population in relation to the motorway's axis.
SET13: It records the Total Gross Value Added (GVA) Annual Rate Shift 2000-2007. The GVA is a basic structural characteristic of a regional economy and it is affected, among others, by the improvement of the movement of goods or the markets' accessibility.
SET20: It refers to the change of total work circle of the Enterprises 2000 – 2005, per prefecture. Entrepreneurship is potentially enhanced by the operation of transport infrastructure, as enterprises improve the accessibility and have an impact on increasing the production factors' mobility and on market integration.

3.4 Spatial Indicators

SET07: It records the distance (km) of the Industrial Areas and certain other productive infrastructure located in each prefecture from the closest intersection of the motorway. The optimum connection of the road network with the productive infrastructure is generally a basic development parameter of the productive activities.
SET16: It defines the percentage of change of urban land use (continuous, linear and un-continuous development) in the areas around the nodes of each prefecture.
SET18: It estimates the average change of land value 1998 – 2007 within the direct influence zone of the axis as well as in selected areas in each prefecture. The purpose of calculating this indicator is to examine the effects of the operation of the road axis on land value.
SET21: It records the change of attraction that takes place among the prefectures' capitals after the improvements in distance brought by the construction of Egnatia Motorway and depends on the exact distance from the road network before and after the operation of the Egnatia Motorway and on 2001 population.

3.5 Environmental Indicators

ENV03: It presents the change of fragmentation of organized settlements before and after the axis' operation per prefecture. The fragmentation of settlements is calculated as follows: [number of settlements] x [average permanent population] / [average area]x(1/100) and has important implications in their urban organization, proper operation as well as safety of their residents.

ENV07: It defines the change (%) of the technical surfaces along the Egnatia Motorway 1998 – 2007 per prefecture in the areas nearby the interchanges. The conversion of rural and natural land into technical surfaces is a cause of biodiversity loss and reduction of natural resources.
ENV08: It indicates the relation between the environmentally sensitive areas and the road network as well as the potential options that they would be affected by human activities.
ENV09: It captures the change in density of the crossings of the national road network with surface waters per prefecture (crossings/km), before and after the operation of the Egnatia Motorway and intents to identify the sensitive spots from the perspective of the potential impacts of the axis on water supply.

3.6 Transportation Indicators

TRA01: It records the change (%) 2000 – 2005 in the average daily distance travelled (in km) per prefecture of the vehicles that travelled between two successive interchanges of the Egnatia Motorway during one year. The traffic volume is the basic indicator for the depiction and examination of the movement on the axis.
TRA05: It estimates the change of the average time distance between the capital cities of each prefecture after the operation of the Egnatia Motorway by road means of transport. The time distance between these cities is a basic indicator for the estimation of the transport cost of persons and goods.
TRA10: It estimates the change of the average time distance between the prefectures' capitals after the operation of the Egnatia Motorway by road transport modes. The time distance between these cities is a key indicator for assessing the accessibility and provides basic information for the calculation of the transport cost of persons and goods.
TRA14: It records the change (%) of the trips 1996 – 2006 before and after the operation of the axis within the boundaries of each prefecture. The impacts of the axis on the trips' characteristics are related to the change in mobility, the trips' extension and the operational linkage of the areas.

Table 1. Analysis Scenarios Criterion Weights

	Crit. 1	**Crit. 1.1**	**Crit. 1.2**	**Crit. 2**	**Crit. 3**
Scenario 1	0,540	0,333	0,667	0,297	0,163
Scenario 2	0,333	0,333	0,667	0,333	0,333
Scenario 3	0,333	0,500	0,500	0,333	0,333
Scenario 4	Each index derives a weight of 1/20=0,05				

4. Results analysis and discussion

In the present four scenarios are examined according to the estimation of the criterion weight. In the first (Scenario 1) the relative importance is estimated through the performance of pairwise comparisons as it is imposed by the AHP. On the other hand the last scenario (Scenario 4) considers the case where all the analysis indices

correspond equally to the analysis. Scenarios 2 and 3 correspond to compromise situations. In particular scenario 2 reflects the situation where the first level criteria are of equal importance while the third scenario the previous assumption to the second level criteria as well. Table 1 summarises the weights for each evaluation scenario.

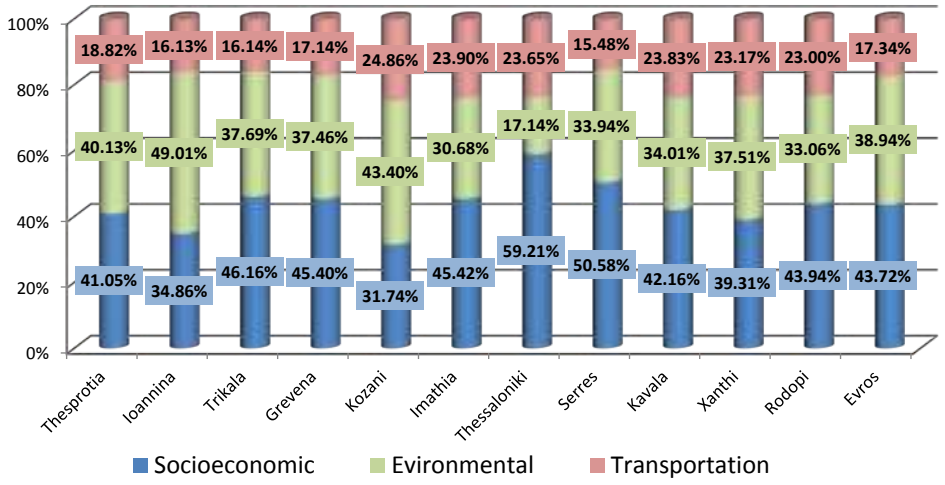

Figure 6. First level criteria impact to the prefectures rankings

With respect to the first Scenario (AHP) it is noted that for the majority of prefectures, the socioeconomic criteria have the highest impact on their final ranking (Figure 6). Exceptions are the prefectures of Ioannina and Kozani the performance of which on the environmental and transportation indicators impacts more on their final ranking. This can be explained by the fact that these prefectures include areas of outstanding natural beauty and moreover, they have significantly improved their transportation infrastructure. It is worth mentioning that the ranking of Thessaloniki Prefecture which includes the metropolitan area and adds up to around one million inhabitants, is mainly shaped by the socioeconomic indicators and secondarily by the transportation ones.

The rankings of the twelve prefectures to the examined scenarios of the analysis are presented in Figures 7. From the spatial distribution (Figure 8) of the suitability index it is obtained that Thesprotia and Kavala prefectures are ranked in the first two places while Trikala and Serres are ranked last to all the analysis scenarios. Thesprotias' ranking can be explained by the fact that emerges as one of the most important entrance gates in Greece given the presence of significant port infrastructure. Respectively, the role of Egnatia Motorway seems to be less beneficiary for Trikala and Serres given that only a limited part, close to their administrative borders, is crossed by the horizontal axis.

With respect to the differences that occur in the alternatives ranking, it is noticeable that Evros which is ranked 10th and 9th to the first two scenarios, is ranked 3rd in

scenario 3. On the contrary Ioannina suffers the most in the third scenario ranked in the 9th place from the 4th that possesses in the first two scenarios. The above can be explained by the good performance that receives Evros prefecture to the environmental and transportation indices that gain high relative importance to the third scenario. Regarding to the other prefectures the changes to the ranking series it is not noticeable. Shortly, Kozani Prefecture remains in the 3rd ranking place while three others (Rodopi, Grevena, Imathia) improve their rankings by one place, while two other are downgraded by two places (Thessaloniki, Xanthi).

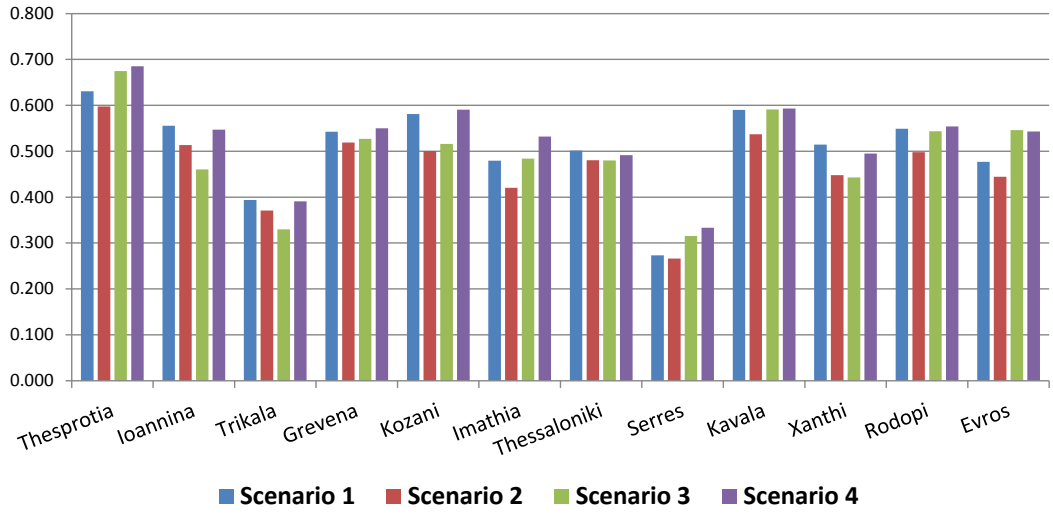

Figure 7. Prefectures rankings to the analysis scenarios

5. Conclusions

The realization of Egnatia Motorway consists one of the most important intervention that have been utilized in northern Greece during that last two decades aiming to enrich connectivity among the capital cities and with the major international transportation axes. Since the establishment of the Observatory services by the Egatia Odos S.A. a variety of socioeconomic, environmental and transportation indices have been developed in order to monitor and assess the spatial impacts of the motorway. In the present twenty of these indices are combined in order to derive a composite index for ranking the prefecture that crossroad with the horizontal axis of the motorway. Technically this is achieved combining GIS technology and Multicriteria Decision Analysis methods. The approach combines GIS abilities for managing and visualizing spatial data while AHP provides a consistent framework for the integration of decision makers' preferences to the planning of future interventions. The above synergy allows practitioners and policy makers to identify and visualize the impacts provoked by the operation of significant public works and in the same time to identify the presence of intraregional inequalities. Thus, the proposed approach can be proved significant in order to support future decision related with the planning of future interventions in the examined area.

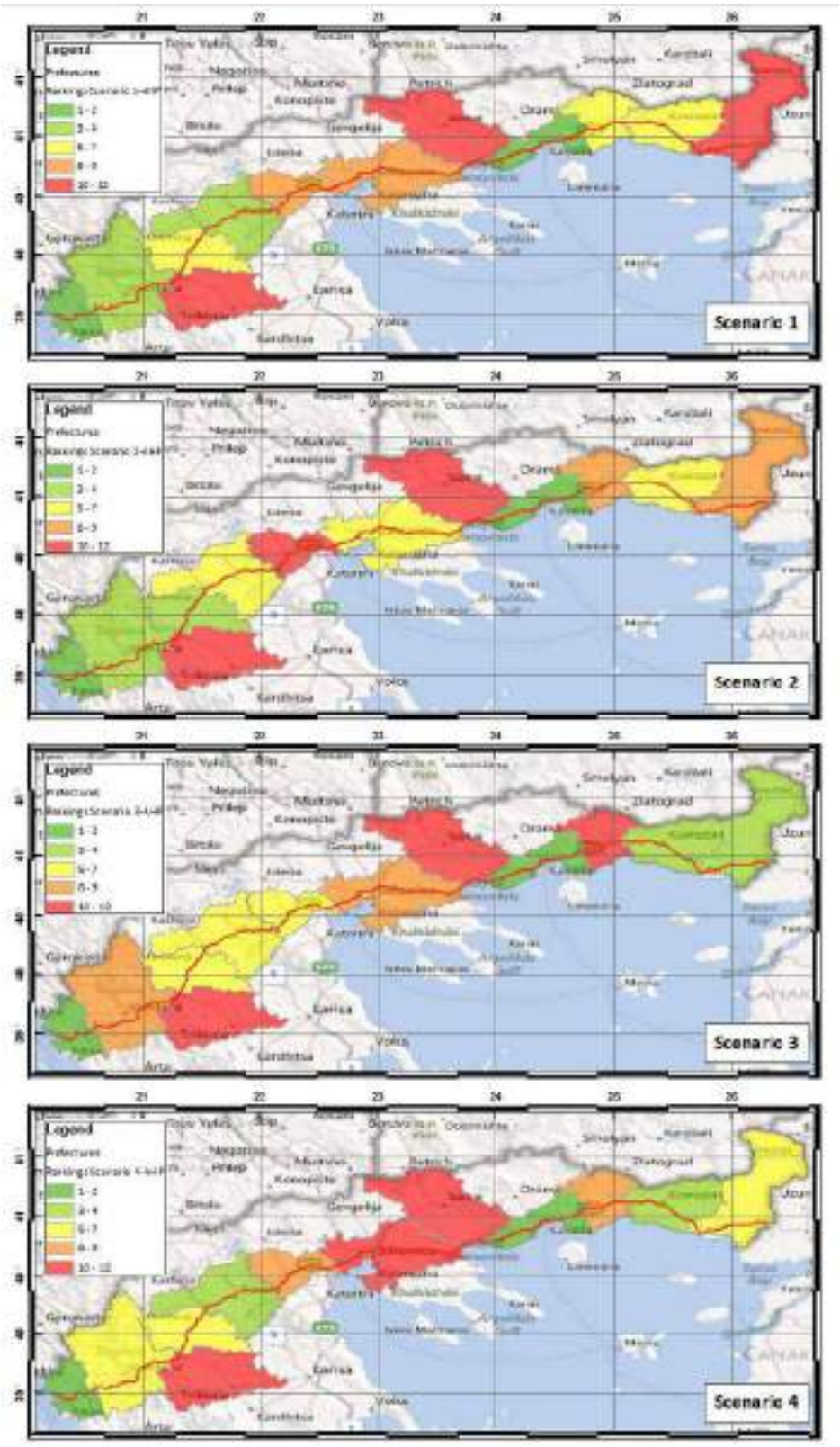

Figure 8. Prefectures rankings according to the examined scenarios

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The Competition for the Financial Surplus between Municipalities and Multi-municipal Administration in France

An Analytical Framework for Land Policies

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Abstract

This paper considers municipalities and their multi-municipal administration as separate actors involved in the struggle for the financial surplus created by urbanization. It proposes an analytical framework for land policies in the French context.

In France, since the 1980's, municipalities can cooperate in a multi-municipal administration in order to share financial, technical and human resources. Different levels of integration exist, and some jurisdictions, such as land policies, can be shared by both administrations. The issue of the coexistence of these two decision-making scales has been addressed in terms of inefficiency of urban planning procedures : the territorial dynamics occur at a multi-municipal scale while municipalities still retain important decision-making power in this field.

But this coexistence has not been integrated in the analysis of the interactions of local actors around land policies. Traditionally three actors are identified, in the "triangle" of land policies: the public local administration, the land owner and the developer. We argue that in the French local administrative context, this "triangle" can be considered as a square: municipalities and their multi-municipal administration are separate stakeholders. They can have different political aims and different strategies to achieve it.

Needham and Verhage (2003) proposed to analyze these interactions in terms of struggle for the financial surplus. This surplus is defined, for a land development project, as "the difference between the market value of the completed project and the minimum production costs" (Needham and Verhage, 2003). The local administration aims to recover some of it to finance facilities, infrastructures, and social housing. From this point, land policies are seen as means for the local administrations to appropriate a part of the surplus.

In this paper we argue that the struggle for the financial surplus can become an analytical framework to understand the interactions between municipalities and their multi-municipal administration as well as their own strategies. The land policy tools, and the objectives they try to achieve might be contradictory, and by implementing them, municipalities and multi-municipal administration might conflict with each other. This analysis through the financial surplus brings a complex view of the relations between these two stakeholders.

The struggle for surplus analysis is applied to the case of the Pays Voironnais, a multi-municipal administration located 25 kilometres north from Grenoble in the French Alps. The study of the actors' relations is based on interviews. It is completed with an observation of the land policy tools implemented by the municipalities and the multi-municipal administration.

Introduction

Land policies are a major stake for urban development in all developed countries. In France, the question is very important because of the housing crisis, the dynamics of urban sprawl (Couch, Petschel-Held, Leontidou, 2008; Vilmin, 2008; Wiel, 2010) and the difficulties to produce building land (Verhage, 2002; Vanoni, 2007). The French situation is made more complex by the coexistence of two local authorities that may share competences: the municipalities and their multi-municipal administrations. The municipalities can cooperate in a multi-municipal administration in order to share financial, technical and human resources. Different levels of integration exist, and some jurisdictions, such as land policies, can be shared by both administrations.

The issues of this coexistence and the difficulties that it creates for land policies have been addressed in terms of political complexity (Adef, 2006; Adcf, 2011), cultural obstacles (Renard, 2009) or financial and technical limitations (Vilmin, Brumelot, 2011). We argue that those explanations are not sufficient to understand the stakeholders' interactions, especially between two public local authorities. Like Needham and Verhage (2003), we think that the sharing of the financial surplus arising from the development process is the central issue of local land policies. The relations between the stakeholders of land policies, but maybe of urban planning in general, may be analyzed as a competition for this financial surplus. We use here this analytical framework in application to a French example, the *Pays Voironnais*, focusing on the housing production.

The paper is divided in 3 parts: we shall first introduce the French administrative context of planning policies. Then we will show that land policies are a way to shape the distribution pattern of the surplus. Finally we will show that in the *Pays Voironnais* the relations between municipalities and the multi-municipal administration reveal a form of competition for the surplus.

1 - The French local administrative complexity

Traditionally France has been a centralized country. But since the 80's, several competences have been decentralized and transferred to the local authorities: *regions*, *départements* and *communes* (municipalities). Those local authorities are represented by assemblies directly elected by the population. This administrative context is really complex because of the so-called "general competence clause". This clause implies that every local authority has general competence over its territory: they have designated jurisdictions and powers, but they can intervene in any domain if their territorial interest is at stake. This leads to complex situations where two local authorities are involved in the same project, or the same program, but with divergent

interests and strategies. The municipalities are the most important authorities, because of their proximity to the inhabitants and because of their competences. They are the major local authority in the urban planning and housing policy domains, they are also competent in designing the urban transport systems, and they are the main local tax collector.

If that were not enough, a new local authority has been created in the 90's: the *intercommunalité*, which we will call "multi-municipal administration", and which is an association of several municipalities. Those multi-municipal administrations were created in reaction to the tiny size of the French municipalities. France is known for the numbers of municipalities on the metropolitan territory (36000, when the Netherlands have 415 municipalities, Germany 12000 and Italy 8100), and for their small size. The average size of the French municipalities is 14.9 square km and the average population is 1700 inhabitants (42000 in the Netherlands, 7500 in Italy, 6700 in Germany). This historical heritage is a problem in terms of territorial coherence because the decisions of the municipalities, which are the strongest local authorities, concern only a small part of the territory. It is especially problematic in urban situations: all the French urban areas are fragmented in several municipalities. How, in this situation, to build a coherent urban master plan, to design a new transport system, to struggle against urban sprawl?

To address this issue, the legislation has created three kinds of multi-municipal administrations: the *communauté de communes* (less than 50.000 people), the *communauté d'agglomération* (between 50.000 and 500.000 people) and the *communauté urbaine* (more than 500.000 people). But those associations of municipalities are not compulsory, and they are voluntary. This explains that not all the French territory is covered by these administrations (the areas where municipalities do not cooperate in such an administration are mainly rural areas, or are in the capital region). And most of the time, when the municipalities do cooperate, it is not on a territorial or functional basis, but according to political affinities. Therefore the multi-municipal administrations often do not cover the urban areas but are smaller. Another thing that we have to mention about the multi-municipal administrations is that they are not directly elected authorities. Considering that they are voluntary gatherings of municipalities, the legislation decided that the councilors in those administrations will not be elected by all the population living in the multi-municipal territory, but will be chosen among municipal councilors. This may lead to a lack of legitimacy for multi-municipal administrations, especially when they are confronting the municipalities.

The domain of urban planning (planning policies, land policies and development process), has traditionally been the competence of the municipalities. The main document in this domain, the local urban plan (*plan local d'urbanisme*) is elaborated by municipalities. It decides on the future land uses in the municipality and is binding on third parties. The building permit is also a competence of the municipality and has to follow the prescriptions of the local urban plan. The multi-municipal administration intervenes on two levels. First, it elaborates the territorial coherence plan (schéma de coherence territorial) which is a land-use plan on the multi-municipal scale. This plan became very important in the past decade. Even if it

can't impose land uses on the scale of the land plot as the local urban plan can, its prescriptions have to be integrated in the local urban plan. Secondly, during the development process, the multi-municipal administration can intervene. But the municipality also has this possibility. The sharing of the development operations between the two authorities relies on local arrangements: some municipalities decided to transfer to the multi-municipal administrations competences such as "major equipments and infrastructures" or "operations of territorial interest" which allow the multi-municipal administration to intervene in very important operations.

Although the municipality still has the main decisional power, the multi-municipal administration is increasingly seen as a better scale to address the planning issues (housing, equipments, transportation and environment). This explains the success of the territorial coherence plans, and the several incentives to build multi-municipal administrations and/or use such plans. These incentives come from the central government, which tries to identify the good practices among different programs like Scot-Grenelle[1], or reinforce the multi-municipal administration through legislation[2].

But in the field of urban planning, the municipalities are often reluctant to abandon a competence which is seen as essential: for municipal councilors, not having the ability to guide the uses of land and the housing production, and to approve the building permits, renders the municipality almost useless.

2 - Local land policies as the distribution of a financial surplus

In the field of urban planning, in spite of the reluctance of municipalities, the multi-municipal administrations are more and more central. They are often leaders in projects in urban transports, or in the social housing production. But in the field of land policies, the multi-municipal administrations are not yet very involved. The land policy tools such as compulsory purchase, preemption right or the *zone d'aménagement concerté*[3] (ZAC) are in most cases still municipal tools. Several analyses have explained this obstacle. Some authors (Adef, 2006) point out the institutional constraints, while others emphasize the cultural and political aspects (Charmes, 2007). If these analyses are quite convincing, they always look at land policies as if they were like any other kind of public policies, and don't consider land in its specificities.

On the contrary, we think that land policies cannot be analyzed in the same way as other public policies, because land takes a particular role here, with several

[1] « Grenelle » is the name given to large consultation governmental programs in France. In 2008 the Environment's Grenelle took place, which led to two Grenelle Laws, and a series of governmental actions. The *Scot-Grenelle* are territorial development plans identified by the government, which are exemplary of the Grenelle Laws orientations.

[2] A recent law, effective in 2014, modifies the local electoral rules. The multi-municipal councilors will be partly designated by electors and not only by the municipal councilors.

[3] The *zone d'aménagement concerté,* is an operational public proceeding applying to a development zone. It allows the local authority to elaborate a general plan, and to plan the public facilities.

dimensions: economic, juridical, and physic. Dealing with property and land as an economic good and as a juridical object, land policies need to be seen through a particular focus: the production of a financial surplus. Therefore we hypothesize here that **municipalities and multi-municipal administrations are involved in a competition for the financial surplus arising from land development**.

We define this financial surplus as the "difference between the market value of the completed project and the minimum production costs" (Needham, Verhage, 2003). This surplus arises at different moments in the land development process, and has different origins. The figure below shows the different factors responsible for the financial surplus. We can separate "internal" factors, that directly concern the plot, and "external" factors, that take place on other lands. Internal factors occur only at a precise step of the development process. But external factors may occur at any step.

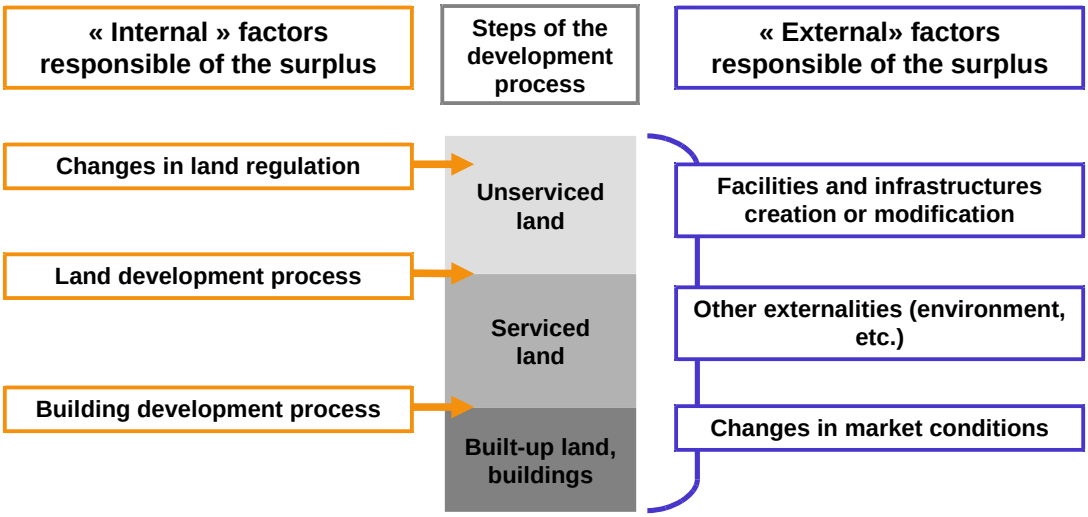

Figure 1 : factors responsible for the financial surplus in land development

The figure does not represent which are the agents at the origin of the surplus. But we can guess that local authorities are central: they decide on the *changes in land regulation* and can intervene in the *development process*, they also *create or modify facilities and infrastructures*, and are often involved in the production of *other externalities*. But if they are influential in the production of the financial surplus, local authorities may also affect the allocation of this surplus. Because the major question about financial surplus is: who gets it at the end? In other words, this may be summarized as: who finances the urbanization process? Does the local authority get a part of the financial surplus to finance equipments, infrastructures and social housing? Or on the contrary is it the original owner who gets the surplus?

This distribution pattern is influenced on two levels: the legislative framework, over which local authorities have no influence; the land policy tools used by local authorities[4]. These tools may be considered as a way to modify the

[4] It is here that the juridical dimension of land takes place.

distribution of the surplus: when a surplus, arising from any kind of factor, goes to the original owner, the local authority can implement a tool that will allow it to get a part or the totality of the surplus. Let's take an example. A municipality decides to build a new train station in a suburb. Automatically the value of the properties around this new station rises (financial surplus), without any internal modification, only because the geographical situation becomes more profitable. If the municipality does nothing more, this surplus will go to the owners when they sell their land. But, if the municipality implements a tool such as a taxation of the properties near the new station, or tries to purchase these properties before the construction of the new station to develop a new neighborhood, it will get a part of the surplus back. But the leeway of the municipality is limited by the legislative framework.

In Europe, the sharing of the financial surplus may be very different from one country to another. In France, the surplus traditionally goes to the original owner, maybe because of the French tradition that implies that the property is something "sacred". The legislative framework limits the possibilities for the local authorities to get a part of the surplus back. But it doesn't forbid it, and municipalities and multi-municipal administrations can use different tools to split the surplus. The attitude of the local authorities can explain the distribution pattern. In the Netherlands, on the contrary, financial surplus is mainly recovered by the municipalities, because they purchase land to develop it themselves. But between France and the Netherlands (which are of course an extreme example), the legislative differences are quite small: the French municipalities have the right to do what the Dutch do. And, regarding some points, they have more powers than the Dutch. The differences in the capacity to recover the surplus are therefore relevant to the local practices.

The question of who gets the financial surplus is more far-reaching than it may seem at first: it is another form of the question *who pays for the urbanization process*? As Needham and Verhage (Needham, Verhage, 1998) indicated it, when the local authority gets a part of the surplus back it is a way to finance the "quality of urbanization": public facilities, infrastructures, but also the servicing of lands. The idea for public authorities is not to act as private companies and gather the surplus to increase their capital. Recovering the surplus has to be seen as a way of financing the public expenditure on the quality of the urban space.

In this situation, we may imagine that there is a competition between the different stakeholders of land development process to catch the surplus. These stakeholders have often been presented as a triangle: the owner / the local authority / the developer. Several research works refer to this triangle to analyze the stakeholders' interactions (Vilmin, 2008). But we think, as we started to mention previously, that the local authority cannot be considered as unique in the French local administrative context. During the analysis, the distinction between municipality and multi-municipal administration is essential to understand what the public strategies are: the municipality doesn't have to interact only with owners and developers, but also with the multi-municipal administration. That is the reason why we propose to analyze not the triangle of land policies, but the square of land policies: the owner / the municipality / the multi-municipal administration / the developer, and especially the relations between the two local authorities.

Figure 2 : Stakeholders in land policies: from the triangle to the square

The purpose of this paper is to present the results of a small research about **the competition for the financial surplus between municipalities and their multi-municipal administrations**. This competition, as we will see, may take several forms: the use of land policy tools; a political struggle in general; a competition for the appropriation of the planning competence.

This investigation took place in the *Pays Voironnais*, a French multi-municipal administration, which is representative of the global relations between municipalities and multi-municipal administrations in France.

3 - Urban planning and land policies in the Pays Voironnais: the sharing of competences between multi-municipal administration and municipalities.

The *Pays Voironnais* is a *communauté d'agglomération* gathering 90.000 people, 34.000 jobs in 34 municipalities. It is situated 25 kilometers north of Grenoble, an important agglomeration of 400.000 people. The proximity and the demographic and economic weight of Grenoble make the *Pays Voironnais* dependent on its large neighbor. This dependence appears in several forms: employment, demographic dynamics and public facilities. The territory of the Pays *Voironnais* is composed of a central city, Voiron, 20.000 people, of a rural space to the north and to the south, of the *Isère* plain, which is more dynamic economically, and which is crossed by important transportation infrastructures (roads, highways and railroads).

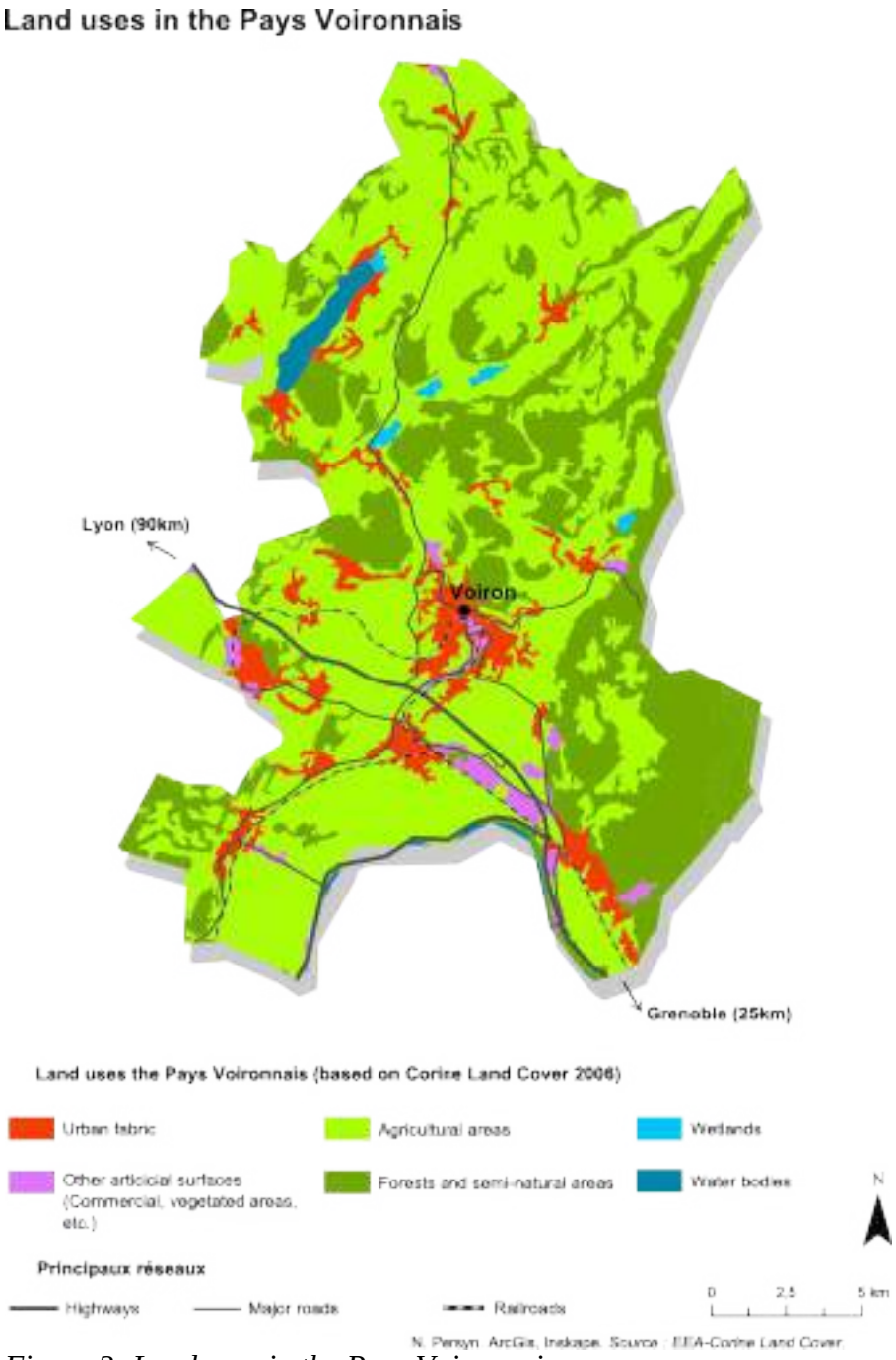

Figure 3: Land uses in the Pays Voironnais

The multi-municipal administration was structured early compared to other multi-municipal administrations in France: while the majority of French multi-municipal administrations were created in the 90's or after 2000, the first administration gathering several municipalities was created in 1974. It was created in reaction to a new town project, led by the state: the municipalities didn't agree with the idea of receiving 200.000 new inhabitants in thirty years. So they set up a multi-municipal administration that gave them more weight in front of the state and the

Grenoble agglomeration. This point is important because it shows that the *Pays Voironnais* was originally devoted to urban planning issues.

The different competences concerning urban planning are shared between the *Pays Voironnais* and the municipalities. The multi-municipal administration has competence over the territorial coherence plan, which allows it to have an great weight in the land use decisions. But the municipalities still elaborate the local urban plan, which is the most precise document for land uses. In terms of political weight, the municipalities have greater control on land use than the multi-municipal administration. The competence concerning social housing has been transferred to the multi-municipal administration. It elaborates the housing local program (*programme local de l'habitat*), that, for 5 to 10 years, states the objectives of the local authority in terms of housing, and that can impose social housing ratios. For social housing, the multi-municipal administration also intervenes financially, granting subsidies to municipalities for projects including social housing. Multi-municipal administration has a competence called "development operations of structural importance". This means that it can intervene, or completely elaborate and lead any project corresponding to this category. But this is only possible if the municipalities agree.

In terms of land policies, the competences are mostly in the hands of the municipalities. The local urban plan is a major instrument, but other kinds of instruments can be used by the municipalities: building permit, preemption and compulsory purchase right, taxations and contribution to the equipment imposed on the developers, etc. The multi-municipal administration doesn't have such competences[5]. But in 2005 it introduced a new land policy program: when the municipalities buy a land or a building in order to develop a project, if this purchase is too expensive for the municipal budget, they can ask the multi-municipal administration to buy it by themselves, and to sell it back to the municipalities after a few years, during which the project will be elaborated. So it is not a direct intervention of the multi-municipal administration in the land policies, but rather a support.

If this sharing of competences doesn't reveal a competition for the financial surplus, it establishes that the municipality is, *de jure*, predominant in urban planning and land policies domains. But does it means that the municipality is more able than the multi-municipal administration to catch the surplus? And how does the multi-municipal administration, which seems to be in a week position, try to catch this surplus? How does the competition for the surplus between the municipalities and their multi-municipal administration occur?

4 - Two forms of competition for the financial surplus

[5] Except for economic development and industrial zones

The competition for financial surplus between municipalities and the multi-municipal administration takes two forms: an indirect – political – competition for the sharing of competences, in other words for the ability to catch the surplus; a direct competition, to catch the surplus, in development operations.

We have seen that the ability to distribute rights in land is central because it impacts both the creation and the distribution of the surplus. Municipalities and the multi-municipal administration both want to hold this competence. It is now the competence of the municipalities, but things are changing. Through the territorial coherence plan, the multi-municipal administration is able to influence the municipal decisions in terms of land uses. But the *Pays Voironnais* wants to go further, and is currently trying to obtain the transfer of the urban planning competence from the municipalities. In this case, the multi-municipal administration will be able to decide by itself on the land uses through a multi-municipal local urban plan. But for the moment municipalities are mostly reluctant. Some municipal councilors think that is would be a good thing: it would ensure a coherence of the land uses decisions. Some others are reluctant but think that this transfer is inevitable. The majority of them think that it is not a good thing because it is the most important competence of the municipalities. Between the municipality and the multi-municipal administration the discussions on this point are numerous and lively.

There is another case in which the multi-municipal administration has taken an important stand: the adhesion to the local land public agency (*etablissement public foncier local*). Such agencies have existed in France since 1991. Their role is to financially and technically assist municipalities when they purchase land. These agencies are independent and are financed thanks to a tax. But they can't act without the approval of the municipalities, and they operate as associations to which the municipalities or multi-municipal administrations adhere. So they don't have a political but only a technical role. As we have seen, until 2011 the *Pays Voironnais* played this role with its land policy program. But in 2001 the Grenoble agglomeration, the neighbor of the *Pays Voironnais* implemented a land public agency. At this date, the *Pays Voironnais* refused to adhere because it wished to remain independent from Grenoble. This situation changed in 2011, after the two agglomerations learned to work together, particularly through the elaboration of the territorial coherence plan. In 2011 the *Pays Voironnais*, and the municipalities, of course, decided to adhere to the land public agency. But the multi-municipal administration imposed a condition that is not present in other cases: when a municipality wants to submit a project of purchase for a plot or a building to the public agency, it has to submit it before to the *Pays Voironnais.* This situation makes the multi-municipal administration central in the land policies: it can check all the municipal purchase projects, and if it does not agree with the idea or the technical modalities of this project, it can decide to not submit it to the public land agency. This means that the municipality will not be able to complete this project (because it needs the financial help of the agency).

Of course even with this competence, the multi-municipal administration cannot get back the surplus arising from the land development. But it is a way to control the transactions of the municipalities.

The competition for the surplus may also be direct. Some urban development or renewal projects are led both by a municipality and the multi-municipal administration. In such situations can we read the relationships between these authorities as a competition for the surplus? Of course, not all the discussions are guided by this stake. But the surplus is often at stake. We will here take two examples, two municipal operations were the multi-municipal administration have been intervening.

The first is an urban renewal operation in Voiron, the central town in the *Pays Voironnais*. The municipality wants to redevelop a brownfield near the train station. Part of the site of 8 ha is occupied by a former plant, and the other part is not built. The objectives are to build houses (with 25% of social housing) and to extend the adjacent hospital. To the north the site is bordered by the railroad. The stake here for the municipality is to finance the public facilities and infrastructures. New roads have to be built, especially one crossing under the railroad. At first, the municipality wanted to charge this expenditure on the developers. But the developers can't both support this expenditure and build social housing (which is sold at a lower price than the market one). The municipality then wanted to reduce the social housing ratio, so that the developers should be able to finance the infrastructures, because of the increase of the exit price of the global project. The multi-municipal administration was opposed to this solution: it is responsible for the social mix in the territory and wants that ratio to be respected. The solution that the municipality found was to present the new road under the railroad as relevant to the interest of all the municipalities of the *Pays Voironnais* and not only to the city of Voiron. Arguing that it will improve traffic conditions in the central town and therefore in the heart of the *Pays Voironnais*, the city of Voiron wants the multi-municipal administration take on the expenditure. The question is not solved yet, but the *Pays Voironnais* seems to be reluctant to pay for works it consider relevant to the municipality.

This is not a real competition to *catch* the surplus. This surplus, arising from the development process, will go to the original owner of the land. But if the municipality doesn't get it back, it doesn't want to finance it through equipments. It can charge the developers without threatening the operation's balance, so it turns to the multi-municipal administration to finance this surplus.

Another example may illustrate this point. As we mentioned it, the *Pays Voiron*nais is in charge of the network development: water supply, sanitation and some roads. Because the local financial resources are rather limited the multi-municipal administration wants to limit their extension. It therefore encourages the municipalities to locate the development project on plots that are already serviced (brownfields) or that are close to the existing networks. This incentive is supported by the existing discourse around sustainable urban development and the compact city: the urban development needs to be situated in the existing city, or at least in immediate proximity. But if this solution allows the multi-municipal administration to reduce expenditures, it is not the cheapest solution for the municipalities. Brownfields are generally more expensive that greenfields. Building on the brownfields complicates the elaboration of the project and makes it more difficult to

find the financial balance, especially when the project includes social housing. There is therefore a tension between the municipalities and the multi-municipal administration to identify the plots that will welcome a housing project. Once again, it is not really the capturing of the surplus that is at stake here, but the possibility for the multi-municipal administration not to finance it. This situation imposes some difficulties to elaborate the project on the municipalities: if they want to make the developer build houses at a reasonable price, they will have to finance the surplus of both the original owner and the developer.

These two examples illustrate a general situation in France: the financial surplus arising from the urban development is very rarely caught by the public authorities. It goes, depending on the step of the development process at which it arises, either to the original owners, or to the developers. Despite the former (Topalov, 1984) and the recent (Lacoste, 2009) reflections about the possibilities to tax, or better, to get the surplus back, the local practices are still favourable to private parties: land owners and private developers. Locally, the authorities do not really try to catch the surplus. We see several reasons for this.

For most of the researchers, the main reason is that the electoral weight of the land owners at a local level is very important, especially in the peri-urban municipalities where the demographic pressure is high. This makes the municipalities and the multi-municipal administration reluctant to change the sharing of the surplus. But this explanation, if it is true, is insufficient. For us, the main reason is that the tools that should be used to influence the sharing of the surplus are either inappropriate or missing. Many land policy tools are extremely difficult to use for local authorities. On the one hand, the procedures to implement such tools are very long and complicated, and a lot of municipalities, but also multi-municipal administrations don't have the human, technical and financial means to overcome these difficulties. It is for example the case of the preemption right or the compulsory purchase procedures. On the other hand, the implementation (but in fact the whole development project) is subject to great uncertainty, because of the multiple legal remedies possible: when a municipality wants to use its preemption right it has to be very careful if it wants to avoid the possible legal remedies from the owner. But the local authorities also point out a lack of tools. Especially, the impossibility for local authorities to force an owner to build, when its land is designated as building land, can lead to reduced land availability, which means competition increase, a rise in prices and in financial surplus. It also means that the owner has great power in front of the local authorities (the owners who want to develop their land at low prices are rare): it is hard for the public bodies to influence the sharing of the surplus.

The fact that they are not able to get the surplus back leads the municipalities and the multi-municipal administration to compete in order not to finance it. They try to impose on the other to finance the surplus of the owner or of the developer. As we have seen, each local authority has its own assets. But the actual context, even if the municipalities still have an important weight, seems to turn in favor of the multi-municipal administrations. The recent law about the local administration, which will apply in 2014, will reinforce the multi-municipal administrations. The central state

incites the multi-municipal administrations to act in the urban planning and land policy domains. And at the local level the practices tend to ascribe a greater role to multi-municipal administrations.

Conclusion

The definition of the distribution of the financial surplus is the central stake of local land policies. The two local authorities that may shape the distribution pattern, i.e. Municipalities and multi-municipal administration, compete with each other. But they rarely compete in order to recover part of the surplus: in France, the legal framework and the local practices generally lead to grant almost all of the surplus to original owners and developers. They still are local variations of the distribution pattern, which are due to the decisions of the municipalities or the multi-municipal administrations, but in general the local authorities don't catch it. There is therefore a competition between the two local authorities about two points: first the power to decide on the distribution pattern; second they compete *not to finance* the surplus.

This competitive situation doesn't seem to ensure the best output for land policies or planning in general. The question of how to finance the urbanization is currently limited by the local practices: that the local authorities, and hence the inhabitants, finance the facilities and infrastructures, while land owners and developers take advantage of these amenities without paying. This makes very complex for local authorities to create social housing or important infrastructures.

Of course, municipalities and multi-municipal administrations are not always at loggerheads, and they are more and more able to build projects together. But the distribution of the surplus may be an important obstacle to these projects. We tried here to provide an analysis framework for these obstacles and for the relations between stakeholders in the land development process.

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Self-organized Urban Growth Shaped by Institutional Rules

Empirical Experiences from Beijing

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Abstract

Beijing, as capital city of China is undergoing a striking fast urban growth process. The increasing dynamics and uncertainties along with it already become a key issue as well as a great challenge for contemporary planning debate. Among the various perspectives, there is an emerging body of research trying to address and solve it by touching upon complexity science. This paper aims to contribute to this debate through an empirical study on case of Beijing urban region. As one of the most developed cities in China, Beijing had experienced tremendous urban expansion over the last thirty years. Meanwhile, Beijing land use plan is featured by a strong control system supported by the Chinese unique land ownership system. This plan performed well in functionality such as urban growth management, preservation of farm land and open space. On the other hand, it created illusions that reality could be well controlled and changes could be well created. In reality however, more and more dynamics outside this powerful plan can be found lately. We'll explore these informal urban land use changes in this paper, with evidence coming from Beijing land use data, two land use plans of Beijing, and interviews on urban planners and private developers. We expect this evidence can indicate potential autonomous changes under a self-organized mechanism instead of controlled reality. Moreover, we have disagreement with the complexity based discussion on this point that a self-organized urban region is totally unpredictable. Instead, we take a perspective called institutional constrained self-organization. The influence of institutional settings on self-organization urban progress could also be found in the empirical study. Through all of these, the influences of both self-organization mechanism and institutional settings on urban growth and their relationship during this urban process can be well analyzed. Then the main concern of land use planning, As one type of institutional power, could be reconsidered and clarified: telling what to achieve and what to avoid.

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Key words: self-organization, urban growth, institutional settings, Beijing

1. Introduction

The past decades has witnessed an astonishing urban growth process in China, particularly for some very big cities in the eastern part of the country (Wu & Yeh, 2007; Deng et al., 2010). Beijing, as one representative for this situation, is now one of the most dynamic metropolitan area in the whole universe. The dynamics can be observed extensively: the over flourishing of Beijing urban region, increasing employments and investment, better service in education and health care, convenient information network, abundant daily flow of population, goods and information, et al., all of which leads to large amount of urban land consumption. The expansion of urban land, on the one hand can better meet the urgent demand for more residential, commercial and industrial space; on the other however, acts as trigger to stimulate additional regional development. Therefore, the demand and supply of construction land in Beijing urban region are now positively interacted and mutually promoted, well supporting high-speed growth during this period. This situation greatly benefits from demographic bonus due to regional gradient urbanization, meaning immigrants from both rural areas and other cities are coming national wide. From this perspective, we can conclude that the trend of rapid growth with loads of land consumption in Beijing urban region will also not change in the coming years. The increasing and lasting dynamics create a rather complex situation which becomes a great challenge for both planners and policy makers.

In addition, the increasing negative effects coming along with this fast urban land growth has put sustainable development under high risk. Ecologists and environmentalists remind us that negative effects of this fast growth is ignorable, of which two aspects are most alarming First, increasing tension between sharping decrease of farming land and Chinese farming land regulations. For food safety reasons, China has been long emphasizing on a policy of self-sufficiency food crop. According to this policy, every provincial level region (Beijing urban region is also one of provincial level region), no matter how developed it is, has to conserve certain amount of farming land. What's more, this policy is reinforced by a code named arable land balanced system, which means the exact same amount of arable land as growth of urban land should be supplemented during urbanization process. It in general causes decreasing quality of arable land as in these big cities like Beijing as potential arable land resources are rather limited (Tan, et al., 2005). Secondly, environmental implications of fast urban growth are becoming serious including depletion of natural resources and descending level of underground water (Bao and Fang, 2012; Varis and

Vakkilainen, 2001), air pollution (Wang and Xie, 2009; Chan et al., 2005), traffic jams (Zhao, 2010; Kombe, 2005; Gwilliam, 2003), et al.. Both of the above two negative effects of fast urban growth in practice, also attract research attentions, in order to get in-depth knowledge on urban growth process and find a solution to cope with growing demand for urban space.

If we move one step further to pay attention on the context within which Beijing urban growth is happening, more inspirations could be found. This unique system could be summarized as a strong top-down mandates and a homogeneous urban governance structure (Zhang, 2006; Maskin et al., 2000), as well as a unique land property system (Liu et al. 1998; Li et al. 2010), both of which makes research on Beijing urban growth an additional contribution to current theory and therefore a very hot topic (Wei and Zhao, 2009; Cartier, 2001; Alston et al., 1996). In China, there are two categories of land ownership: state ownership for urban land and collective ownership of villagers for rural land. These two types of ownership however, has a subordinate relation instead of being equivalent. This is firstly because the collective ownership of villagers is not a complete ownership in term of that it is strictly forbidden for utilizing, leasing or selling for non-agricultural use. Urban utilization can only be achieved after transfer of land ownership from collective owned to state owned through a process named requisition. For the loss of land ownership, villagers will get one-off compensation in money or in kind, which according to current national and local standard however, is still rather low and unfair (Ding, 2007; Lichtenberg and Ding, 2009). Besides, the chair of village representative committee who made decisions for villagers collectives act as the bottom level in the Chinese top-down government system and their decisions are largely dependent on higher level government. This makes it clear at least for two points. For the first, two types of ownership in China can be summarized as one as far as urban growth is concerned only if we don't consider growth outside legal context. . And the second, urban growth is in firmly controlled by the top-down government system. The linkage between this top-down structure and land use changes is land use planning, by which distribution and regulation of urban land use are realized. Land use plan is embedded in Chinese top-down governance system and featured by a technical rationale. It is regulations on land use usually for 15 to 20 years. It's main task is for spatial distribution of various land use like industries, dwellings, commercials, et al. and quota of various land use for each lower-level urban region, all of which are mainly pre-determined by a strictly technical planning method system. This state-owned land property system, and the technical spatial planning system together gives a unique context for Beijing urban growth, in term that many western countries on the contrary have private land ownership and dominated communicative planning method.

Right out of the above reasons, Urban growth has been a popular topic in several subjects like urban economics, natural geography, public management and so forth. Topics related with Beijing urban growth also covers a wide range including driving forces, growth mechanism, how planning contribute in urban sprawl, et al.. Much have been much discussed in past research, which is full of diversity with respect of both research focus and methodology. Research basing on the regional and urban economics theories are very much focusing modeling with market factors including demography, economy, transportation, rent, and so forth (Ewing, 1997; Brueckner, 2000, 2001; Anderson & Ge, 2004; Deng et al., 2010). Geographers and planners are quite dominant in urban growth research. Research interests encompass urban land changes (Gaubatz, 1999; Tan et al., 2005), spatial pattern and process (Liu et al., 2002; Gu & Shen, 2003; Deng & Huang, 2004), driving force (Cohen, 2004; Wu & Webber, 2004), urban growth prediction (Chen et al., 2002; Liu & He et al., 2011), and environmental and ecological implications (Chan, H et al., 2005; Güneralpa & Setoa, 2008). In particular, an increasing group of scholars, enlightened by complexity theory, start to use cellular automata model and agent based model recently, making good use of computer science, remote sense and GIS (Chen et al., 2002; Liu and Zhou, 2005; He et al., 2006).

In sum, the above research provided abundant material for this paper. To certain extent, however, they are basing on fact, causes and impacts of urban growth, attempting to explore historical-morphological and spatial characteristics and evidence on urban land use changes of Beijing metropolitan area. Cities are somehow taken as machine when making predictions for spatial-temporal regulated planning and policies, which have profound influences on decision makers. On the contrary, they take little or no account of interactions of stakeholders between different spatial levels, how these macro regulated plan and policies are influencing people on micro-level, how they understand, interpret and respond to them, and ultimately how these responses contribute to the "fact" of urban growth. Factors of economy, proximity, topography and so forth are not the whole story. Although this is largely ignored, we happily find a small part of research touched upon this realm. Zhang's (1997) research provides a number of important insights on mechanism of Beijing urban growth by clarifying the informal constructions in Beijing's older inner city neighbourhoods in urban growth process. Moreover, social equity implications are also taken into account as an inspiration to rethink of the regulatory function of city planning and management. These pieces of work are particularly appreciated because it was an very early in-depth argument on relation between marco-level regulation and local responses although it didn't make this crystal clear. Research from another group of scholars who have strong institutional concerns also shed a light on this debate.

Cartier (2001) argued that inconsistencies in China's land use regime lead to 'zone fever,' arable land loss and real estate speculation. China's decentralized fiscal system and the changing structure of local public finance are also regarded as institutional causes in urban growth (Deng, 2003c). Deng and Huang's (2004) work reveals institutional reasons by making two seemingly contradictory phenomena in Beijing's urban development: development zones and semi-urbanized villages, suggesting the role of uneven land reform in leapfrog growth in suburban area as well as inadequate growth in urban surroundings. It'll be interesting to continue this exploration of macro level institutional influence, in addition to connect self-organization on micro level.

This paper, focusing on urban growth process of Beijing urban region by taking an institutional constrained self-organization perspective, aims to explore the existence of self-organized behaviours within this top-down controlled, technical-highlighted governance style. More than that, interactions between these self-organized behaviours and related institutional settings will also be analysed. Both of the above could contribute to current theoretical debate in both urban growth and complexity theories of cities, as an growing part of planning theory research, as well as suggestions for planners and decision makers in practice.

To achieve the above objectives, the paper is structured as the following. Section two will elaborate the methodology and analytical framework of case study. Section three gives three cases to illustrate different types the self-organized mechanism in Beijing urban growth process, basing on an interview result. In the next discussion part, in depth discussion are made to explore the general characteristics of these three cases and reflect questions in Beijing urban growth process. Also, additional mechanism promulgated in case study are put in a broader arena in the light of self-organization theory, in order to orient this research and also to inform further research directions. The conclusion part will give general brief words on how plan can better work with this additional mechanism being taken into considerations: what to achieve and what to avoid.

2. Methodology

2.1 Perspective

According to an interview on related stake holders, we find additional such a type of growth which is neither in line with policy intention, nor in line with the common technical rationale. Instead of being organized, behaviours of stakeholders seem to be rather emergent and self-property based. self-organized.

This phenomenon could also be well linked to an emerging body of research, trying to address growth and planning issues by touching upon complexity science, or to be more specific, self-organization.

Progress in complexity theories shed a light on planning and urban studies, by providing an alternative perspective and theoretical basis to cope with increasing uncertainties in both urban development and decision making process. According to Portugali (2011), self-organization already Implicitly appeared in the cybernetics writings of McCulloch and Pitts, and then explicitly in studies such as Ashby's psychological discussion on the nervous system and Yovits and Cameron's and Forester and Zipf's studies in the domain of system theory. Nevertheless, dominant opinion on the origin of self-organization, particularly original application of self-organization in urban and regional science, will be referred to related theories since 1960s, mainly including Prigogine's(Nicolis and Prigogine 1977; Prigogine 1980; Prigogine & Stengers (1984) dissipative structures and Haken's (1983, 1991, 2000) theory of synergetics. Although rises in physics, mathematics and cybernetics, gradually it became general methodologies beyond the boundaries of its original domains. Haken's theory of synergetic beyond the domain of laser and fluid, Prigogine's dissipative structures beyond physical-chemical systems (Portugali, 1999/2000). Portugali(2000) himself contributed a lot in applying self-organizations concept in cities and planning. Regional science turned to be an suitable filed to apply self-organization. Application of Prigogine's theory of dissipative structures by Allen and Sanglier (Allen 1981; Allen and Sanglier 1981), who reformulated the static central place theory of Christaller and Losch in the dynamic terms of dissipative structures. The old formulations the landscape reflects an equilibrium state which is the optimized sum of the properties of the various economic forces while the new formulations holds the idea that spatial hierarchical order among the central places is obtained, maintained and then transformed by means of an interplay between interaction and fluctuations, and dissipation. Synergetic theory emphasizes on the interrelations, interactions and synergy among the many parts of the system and its overall structure and behaviour. Weidlich(1994) applied Haken's theory of synergetics to population distribution in cities to create theory of synergetic cites.

Portugalli (2011) summarized theory and research which tries to apply complexity theories into cities as complexity theories of cities (CTC). The domain of CTC already includes a rich body of research on fractal cities (Batty and Longley 1994), self-organization and the city (Portugali, 2000), cities and complexity (Batty 2005), cellular automata and agent base urban models (Benenson and Torrens, 2004), self-organized criticality (Bak and Chen, 1991),

etc. Main achievements of CTC research can be briefly summarized into two aspects. First, it reinterpreted on urban and regional issues which were considered as independent of each other earlier, by using complex networks emerging out of local interactions between urban agents that give rise to the global structure of cities (Portugali, 2010). Second, it added new insights to understanding of cities, inspired by basic properties of complex system such as fractals, self-organization criticality, phase transition, et al.

This paper treats cities as systemic wholes, and scientists and planners as some of the many parts, agents and forces that participate in a complex and spontaneous urban game (Allen, 1997; Batty, 2005; Portugali, 2000). More and more scholars now take this alternative perspectives. Cities are the example par excellence complex systems: emergent, far from equilibrium, requiring enormous energies to maintain themselves, displaying patterns of inequality spawned through agglomeration and intense competition for space (Batty, 2008). Self-organization behaviours in this paper are defined as such a type of local behaviours of stakeholders with the following characteristics: i) they are responses to environmental changes (mainly refer to plan or policy regulations); ii) they are usually not in line with expected effect of regulated policy or plan; iii) they are somehow responsible for large-scale urban structure evolution, which is called contribution to urban development from local-scale decision-making process in terms of principles of self-organization (Batty & Xie, 1994).

2.2 Interview

In order to explore self-organized behaviours on micro scale, this paper adopts an semi-structured face to face interview on various stakeholders with regard to urban growth in Beijing. Under current context in China, public sectors are still very powerful stakeholder (Zhang, 2002). Meanwhile, developers are becoming more and more influential(Güneralpa and Setoa, 2008; Zhao, 2009). Planners as the third force, also have their contribution to some extent although their diverse roles could be either on benefit of government, developers or common people. Therefore, interviewees were selected among these three groups, private developers and government officials are particularly emphasized.

In total, 17 interviewees[4] participated, of which eight are private developers, six are government officials and three are planning specialists (See table 1a). Developer interviewees are from eight different companies, which have significant variance in ownership, organization, scale, developing experiences,

[4]1 of them was interviewed by email and phone call due to an sudden schedule change of the interviewee.

relations with Beijing local officials and so forth (See Table 1b). They can well represent an overall situation of various styles of developing agencies in Beijing. Government official interviewees are from key departments related with growth management. Three of them are from land resource bureau and the other three are from planning bureau, agricultural bureau and industrial part respectively. These 17 interviewees are adequate because hardly any new information can be acquired as number of interviewee increases (See Figure 1).

Table 1a. Basic information of interviewees

	Developers	Government officials	Planning specialists
Number of interviewees	8	6	3

Table 1b. Basic information of interviewees

company names	characteristics	Government department	Number of interviewees
Wanke	biggest real estate company in China	land resource bureau	3
Huarun	Top 10	planning bureau	1
Beijing Chengjian	Top 50, Beijing local state owned enterprise	agricultural bureau	1
Zhongliang	One of the best commercial real estate developer, state owned	industrial park	1
Tianhong	state owned	planners	3
Wukuang	state owned		
Jinxiuzhiye	Small private enterprise		
Qiyeshu	Small private enterprise		

Source: Author compiled. Ranking of real estate enterprises refer Chinese association of real estate.

A preliminary list of items was included in the interview, which covers how stakeholders interpret, understand, respond to certain regulation policy; uncertainties during developing(planning implementation) process and innovative solutions to them; interactions with other stakeholders during a specific developing(planning implementation) process, and so forth. Each item was defined in unambiguous terms. Each interviewee was also informed that information he or she gave would be stored and used in a way that made it impossible to disclose its origin. Specific questions were devised for each specific interviewee according to their characteristics, in order to make them feel relaxed and tell their real feelings as much as possible. Similar questions around the same

item will be skillfully asked in order to confirm the given answers. The interviews lasted from one to three hours. Recording machine wasn't used because most interviewees felt being under surveillance and will talk less. Instead, an assistant helps to take notes while the author is talking with each interviewee. A interview report for each interviewee will organized by the author right after each interview, just to keep the information loss as low as possible.

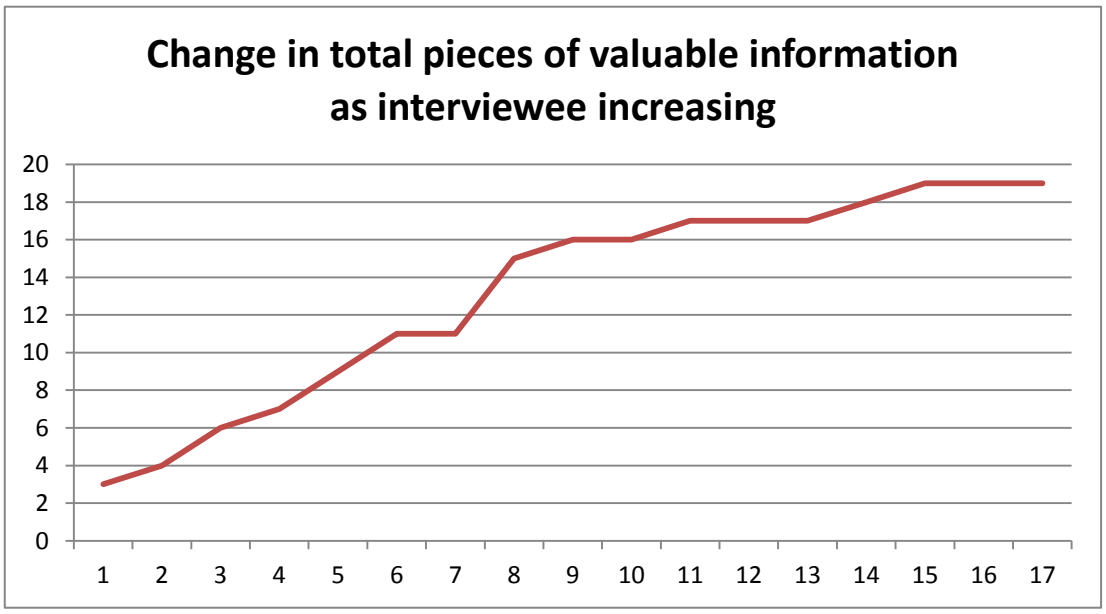

Figure 1. correlation between total pieces of valuable information and number of interviewee

3. Case study: three types of self-organized behaviours

3.1 Case of Dingxiu Community development: contribution from small developers to spatial decentralization of urban area

The past decade was the best times for real estate developers in Beijing in term of spectacular appreciation of house properties. The idea has been repeatedly confirmed by interviewees that over the past years the only secret for making a profit in Beijing real estate market is to buy a piece of land and develop it. The past decade was the worst times for real estate developers in Beijing in term of inconstant regulated policy. The number of potential customers can be reduced to one third in one day because of a new restriction code on real estate market. On February 16th, 2012, Beijing municipal government announced an official document named *restrictive conditions for real estate consumptions*, according to which only two groups people own the rights to buy a house in Beijing urban region. The first group is Beijing local residents with Hukou (household

registration, see Chan & Zhang, 1999) with no more than two house property and the other group is people without Hukou but have been living and working in Beijing more than 5 years with no more than one house property, proved by a 5 years consecutive payment of social security fund. Actually this was not the first time of governmental intervention on real estate market. Similar regulations already appeared early in 2005 and revised, enhanced, adjusted over past years, all of which are aiming to cope with the so called over heated real estate market, trying to stabilize the over fast upward tendency of housing price at least if this trend can't be stopped. However, the real effects of this intervention on one hand, was not that effective as expected and on the other, had more unexpected effects. Dingxiu company's experiences can well illustrate this observation.

Dingxiu company is a small real estate company founded in late 1990s. Although it's clear inferior position when competed with big companies which is both powerful in finance but also in good relation with Beijing municipal government, this company can still acquire steady growth benefit from good market environment. However, this situation have changed since 2005 when intervention from macro level came occasionally. Many defects of this company are magnified under this new context of inconsistent regulation policies such as complicated stock right structure with many small stockholders, weak capacity in financing, lower anti-risk ability, et al.. According to a co-owner of this company, every policy change could possibly push this small company to bankrupt.

In order to cope with this emergency, the company adopted a series of new strategies, which proved to be very effective later. They did a special and deliberate research on the intention and psychology of Beijing municipal government. They found that the local government may also be in a dilemma between housing price control and local economic development. Therefore, from a pragmatic perspective, this regulation will neither be one hundred precents restrictive nor being revocatory soon. So it could be an appropriate strategy to avoid spatial focus of regulation in the central city and look for opportunities in outer space of Beijing urban region. Moreover, they also realized that the close relations between big companies, particular state owned companies and Beijing municipal government, and information, conveniences they got from this relations just took away the slight chance of Dingxiu developing successfully in central city. On the other hand, property of potential consumers has shifted to people who want better housing instead of people for their first house. So preferable product becomes with relatively large space and decent surroundings instead of proximity to business or commercial centres. By taking the above two ideas into consideration, the company made their final response: leave the central city and transfer their developing activities to suburban districts.

In October 2007, after two years preparation with cautious investigation and successful attempts to build cooperative relations with local county government, they got this 310 thousand squares meters piece of land through bidding. This site locates 50 km north from Beijing city centre and 5 km south from Huairou District centre, which in either ways, doesn't follow the proximity rules. Development aiming is relaxing dwellings, totally European style houses coordinated with ecological orientation in land use plan for this region (See Fig. 2). On messo spatial level we can still find many technical functional considerations in selection of this site. In its surroundings, an industrial-research park for Chinese academy of science was already in construction, as well as the new national digital centre of Chinese film and television, together with comprehensive development of Yanxi Lake area all of which provided a promising prospect for real estate development. Nevertheless, this is not the same rationale of Beijing municipality for the real estate regulated policy.

Figure 2. Apperance of Dingxiu residential area

The company confirmed this was a very smart decision by the achievement of more than 20% growth of their company under such a unstable period. However, what they may not know is that many small companies like them which also got survived in the regulated period adopted similar strategies. Moreover, they didn't realize that they have greatly contributed to the diffused and polycentric urban morphology (Zhao, 2009). It's difficult to tell whether the municipal government will like this result or not, nevertheless it is not what is expected effect of intervention on real estate market.

3.2 Case: Maofangchang piece of land: accelerated growth caused by contingent developing decision

In this case the leading role is Huarun, one of the top ten real estate enterprises in China. Unlike small companies like Dingxiu, Huarun is focusing more on strategic development instead of one single profitable opportunity. Therefore, they make plans for developing activities each year, have their spatial priority, keep intensive interaction with government officials and other companies. Normally, decisions for single developing project is made basing on influential factors like profit rate, total investment, risk, relations with local government departments and so forth. However, long term strategy usually has priority when it's not coordinated with the factors mentioned above. An ideal illustration for this argument can be a very influential event in Beijing real estate company: Maofangchang piece of land. An contingent factor becomes dominant in this deal: annual performance of the company in Beijing market.

This case is unique for many reasons: Firstly, Maofangchang plot of land is the largest piece in area since land leasing has been implemented through market approaches. Second, it became prime site in term of the highest dealing price. Seven influential real estate companies in Beijing participated in the auction, one of which has been paying attention to this piece of land for a long time and did quite a lot preparation work in various aspects. Compared with its competitors, this company was willing to accept lower profit in order to win the auction. After 81 rounds bid, however, Huarun company, out of expectations of many involved companies, finally became the buyer of this auction. And dealing price, 2565 million CNY was almost as three times higher floor price of the auction, which also became the new record of single sale. Calculated by the real estate price of its surroundings, there was already hardly no profit could be made out of this piece of land.

Although Huarun refused to admit all stochastic reasons for this seemingly inappropriate decision, asserting that only economic and strategic consideration were taken into account, they didn't deny various sayings from its rivals." they are anxious about annual performance, pressures are coming from headquarters", "they are crazy because they want to avoid being crazier when available developing land in Beijing runs out, which will come very soon". On the other hand, Huarun made an ambitious goal in its strategy for the coming 5 years which seems not to be achieved according to the its performance over the last two years. Therefore, Maofangchang plot of land meant much more than the land itself. So it's not difficult to understand why Huarun would like to win this bid at all cost. It

seemed they took a big risk, but at least they grasped the opportunity to achieve their ambition.

In fact, the difficult situation Huarun faced was not adequate for them to make their final risky decision because this irrational decision could put them into financial trouble. However, it was made anyway, pushed by the urban planning made in 2004 to a large extent. Beijing urban planning basically sketched a regional divergent landscape in land development. According to this plan, the regions Maofangchang plot belongs to is right one the high-tech industry development zone. This fills developers with firm confidence of prospect for regional real estate development. This confidence can be seen according to what a principal of Huarun said:" We believe the promising prospect for this region, we believe government and customers have same beliefs with us. Superiority of this plot of land is comprehensiveness, not only for dwellings, but also for commercial, sports, and financial real estate development. We have the confidence to elevate the value of the whole region through our comprehensive developing activities." A big publicity program was implemented to achieve what he told, including commercials, forum, hype of related regional news, even published a book, all of which is to describe a magnificent future of this region, trying to create an image that this region has great potentiality of real estate appreciation through interactions with potential customers. In addition, only a small precents (less than 20%) of the whole project was developed as first stage, which for Huarun basically achieves two purposes. On one hand, the left part could wait for higher price which is companied with fast urban development process in Beijing. On the other, they not only release to the public an impression but also cause the fact that real estate products in this promising region is in shortage. Through all these interactions, Maofangchang turned to be a big success, companied with the premium of the whole region. The housing price for the first developing area was around 8000 CNY in 2006, and 9000 CNY in 2009. In 2011, this figure turned to be 35,000 CNY.

The demonstration effect of Huarun's case is significant. During last five years, the dealing record of single plot of land in Beijing was broken many times. Before the depression of real estate market in latter half of 2011, people didn't realize how blindness and over-confidence relying on the very high interactive-created expectations. In 2012, many plots of land used to have bidding record, such as Number 14 Baiziwan Road, Number 22 of Tianzhu development zone, were withdrawn due to affordability problems of developers because of more strict credit policy under regulation times. From this case, municipal plan scheme is not only accepted but also utilized by developers as tools to enhance their effort in convincing people with a very high expectation in regional

development, as well as their real estate product. Growth therefore was pulled ahead and speeded up as expectation increased.

3.3 Case: Key town development project: interactions between government departments and its contribution to multi-centred urban growth

This case shows how self-organized behaviour even exists within the top-down government system itself, how policy orientation is continuously adjusted to coordinate with changing realities. In Beijing urban region, there is a four-level urban network in spatial plan: central city, new sub-city, town and new rural community. For the municipal government, there is always a dilemma between efficiency and equity when making development strategies for these four types of urban agglomerations. Therefore for a long time they adopted a easy solution called Administrative Nonfeasance, meaning without putting special intervention for any level. Under such a governance system, as the central city and new sub-city, particularly central city has significant advantages in competing for investment, migrants, technology, et al., it's no doubt development of small town long lagged behind. On the contrary, various government departments of Beijing urban region are also competing for opportunities to extend authority of its own department. As the landscape of authority within central city and new sub-city are very clear and almost steady, mainly charged by land use bureau, housing and urban-rural construction bureau and so forth, there is little chance for any other department to get involved. On the contrary, towns in periphery area become ideal spatial extension for management authority. Beijing agricultural department, making good use of its tradition management authority in rural area, then becomes dominant power in town development. Cooperated with department of Beijing development and reform, a project of 42 key towns development was launched in 2009. This project earns enough attention from the municipal government because it can somehow help decrease the increasing gap between central city and periphery rural areas. Then in order to avoid turning these key towns into residential sleepy parts of Beijing urban region, a very functional development policy came up to instruct these developments: called production first, and then live. With this policy, key towns are encouraged and requested to build their own industry park which can take in adequate employment to turn key towns into urban units with comprehensive functions. Beijing municipal government also carried out a series of additional measures to ensure the achievements of this policy. First, a special financing platform was built for construction of transportation and industry infrastructures. 500 million CNY was financed by municipal government as initial capital; second, most key towns were provided about 100 square kilometres construction land for the construction of industrial

park. Third, several state-owned companies like SANY Group built production centre in town as supportive strategy to help local development.

It's difficult and not the main concern of this paper to evaluate this town policy. However, it's indeed crucial to explore the pros and cons this policy brings in to local development, particularly the unexpected part, all of which are originally resulted from interactions of various municipal government departments. First of all, these supported policy greatly accelerate development of these small towns. And part of them have found their distinguishing characteristics for competition. For example, Caiyu town as famous tourism destination, Xiaotangshan town provides graceful commercial conference places, industrial service base built in Beiqijia town, famous industrial park in Nankou town, et al. Depending on these comparative advantages, the growth speed of these small towns are really beyond expectation. pre-development for cities. E.g. Mapo, Songzhuang, Xihongmen which used to be small town are now part of central city or new cities.

Secondly, development of small towns just explored a bottom-up style of urbanization, significantly absorbed surplus labours in rural area to relieve employment pressure of central cities. Third, the above achievements also contribute to improving villagers' living standard and enhance social equity.

Meanwhile, cons resulted from this town development policy cannot be ignored either. Although there is a financial platform, town development still can't completely solve shortage of investment due to drawbacks of location, infrastructure and other facilities compared with central city. 38 industrial parks were actually set up and most of them were less efficiently operated, homogenization and less sustainability of industries. Besides, due to the specificity of Beijing as the political centre, experimental behaviour not in line with current institutional framework is not welcomed. This also resulted in lower efficiency of these towns when compared with Yangtze river delta area or pearl river delta area.

4. Discussion

Three cases are given to elaborate an additional mechanism in Beijing urban growth process. In the light of self-organization theory, they can be better analysed, compared and understood. If we regard Beijing urban region as an open complex system, the above case then can be seen more in-depth as various emergent local behaviours driven by certain kind environmental changes coming for upper spatial level. Macro institutional rules, local responses, and its

contribution to upper level aggregate pattern, together form a interacted feedback or feed-forward loop (See figure 3).

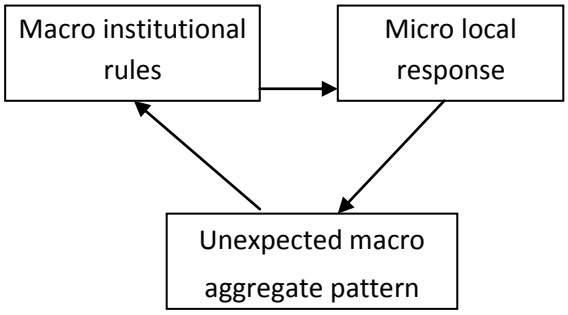

Figure 3. Feedback loops during urban growth process

In all three cases, we see interesting unanticipated aggregate patterns on macro level of urban growth which are actually caused by local interactions and responses between and of various stakeholders. Macro institutional rules or changes of them usually result in certain kind of unexpected local effect. Then local decisions are made as responses, which are rather comprehensive, complicated, even contingent occasionally, however without escaping from the institutional 'rules'. Nevertheless, these seemingly simple rules can still cause various possibilities of complex unexpected aggregate patterns. In all of three cases, elements of self-organized behaviour could be observed.

In Case one, regulation policy on real estate consumption of Beijing municipal government set a simple rule for real estate development and trade: only people with certain qualifications (mentioned in case study) are allowed to buy. This policy is aiming to control the over-speed increasing housing price. However, this policy could result in different unexpected local effects on developers with divergent properties. In our case, this regulation means high risk for developing activities in central city because as a small company, Dingxiu doesn't have either strong financial ability nor a steady relationship with local government, both of which are necessary and crucial conditions to guarantee successful development activities. Therefore, instead of developing with lower price, this small company shift its spatial focus outward to suburban area and put great efforts in product design, in order to attract potential qualified buyers. This process was easily elaborated here but actually cost the company almost 2 years to make the final decision after trying various possibilities like contacting with municipal and local authorities to check the risk of developing in central city, interacted with rivalries, making research on land use plan and people who implemented plan, et al. The decision could be totally different if any main changes during this process happened, which made this very emergent, contingent

and unpredictable. Nevertheless, for this time Dingxiu's moving outward strategy and its many other fellow developers who adopted similar tactics contributed to aggregation of constructions outside central city and act as one important driving mechanism to the fact of a decentralized urban pattern of Beijing urban region (Feng et al., 2009; Cartier, 2011). In the second case, urban planning of Beijing urban region provides public a promising future as well as a divergent growth strategy, following with a snowball effect. They were firstly interpreted by developers as positive signals from Beijing municipal government, which are precious business opportunities. This belief is continuously amplified through peer interactions among developers, real estate customers, and the physical reality of increasing housing price. Higher and higher expectation and confidence about a prosperous real estate market is gradually formed and believed without a shadow of doubt. In practice, this gives rise to irrational investment, particularly when it is combined with individual reasons of real estate company like in Huarun's case the confidence is pushed one step forward due to the pressure of annual performance. The result is, larger scale, faster speed and more in quantity of growth than needed. This could be seen from facts such as the large quantity of real estate stock, the vacancy rate, and land in developer's control without real building, waiting for opportunities of land speculation (Yan and Feng, 2010; Hui and Shen, 2006). Once again, simple rules has dominated the final macro aggregation form through local interactions. In Case three, the institutional rules are not as explicit as the first two. However it's not difficult to find it out when we move our attention to government structure and power relation. As mentioned in the above part, central city development has been long taken charge by several powerful departments, development and reform committee, land use bureau, housing and urban-rural construction bureau and so forth. Other departments like agriculture committee, which according to current administrative structure, are parallel with the above departments, however, with much less management authority. In order to change this unbalanced power landscape, it's necessary to search specific spatial area as base for development. This directly resulted in a series of supportive policy for small town development, particular the industrial parks. The other side of this coin is that the municipal government, as upper level government of these departments, also looks forward a more balanced power landscapes among its sub-sections. Although this feedback forward is rather within horizontal and vertical government departments, but it left physical manifestation in urban growth through pushing forward a multi-centred spatial pattern. Meanwhile, although efficiency of industrial parks in those towns is in general low, facilities and infrastructures built for these industrial parks made those small towns easily merged into the central city as a functional part. It can be regarded as pre-development of central city expansion, accelerating the growth process but also solving part of problems in advance (See Table 2).

Table 2. Mechanism of feedback nodes for each case

Case	Macro institutional rules	unexpected local effect	Local response	Unexpected macro aggregate pattern
Dingxiu	Regulation onreal estate consumption	High risk for developers	Developing moving outside	Decentralization in urban growth
Maofangchang	Master plan on urban growth	High expectation: Over confidence and speculated opportunities	Irrational investment under pressure of annual performance	Faster growth speed
xiaochengzhen	Governance framework and Power balance	Own spatial area for management	Supportive policy for small town development, particular industrial parks.	Multi-centre pattern, pre-development of central city expansion

Here we actually talked two seemingly contradictory elements in urban growth, unpredictable self-organized behaviours and manageable institutional settings. It's necessary to clarify the relation between the two, which can also help us to orient ourselves on a broader arena.

The key to unlock this seemingly contradiction is to pay attention on spatial dimensions. If we conceptualize spatial level into three levels with macro, messo and micro, Beijing urban region as our case belongs to the messo level. Take case 1 as illustrations to explain how behaviours on various level interacts. Beijing implemented a regulation policy on real estate market, as requested by the central government. This can be seen as institutional influence from macro level to messo level. Then this messo level policy subsequently put influences on developers of micro level. Within the framework of policy rules, developers on micro level have to make decisions. It could be made out of expected possible options, also could be created by developers themselves according to their own specific properties or the unique situation they are in. So right on the micro level, it's where the real constrain of institution happens and where the rule shaping self-organization is set. Then thousands of these decisions from individual companies and their interactions contributed to certain kind of physical aggregated pattern in urban growth, which belongs to physical dimension. This is rather result of

self-organization and is too difficult to be predicted. Then there perhaps follows with institutional changes as response to this unexpected physical outcome of the original institutional rules. From this feedback loop we can notice that how wrong or at least inadequate to only pay attention on the relation between physical urban growth and institutional settings on the same spatial level. This is also where the complementary role of the additional self-organized mechanism to current debate on urban growth. Besides the physical and institutional dimension, some scholars also add organizational level in between (Burnes, 2005; Dawson, 1994), which form a matrix together with three spatial levels (See Fig. 4). With this matrix, case study can be oriented and space for research directions are informed as well.

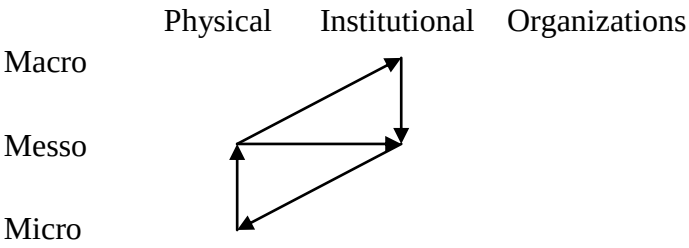

Figure 4. interactions between various spatial scales

5. Conclusion

This paper reported results of three case study, in order to illustrate various types of self-organized behaviour in moment of fast change in Beijing urban region, which is an increasingly important additional mechanism to better understand and cope with this comprehensive and complicated urban growth process. More than that, these self-organized behaviours are not totally unpredictable, but constrained by certain institutional settings and therefore manageable to some extent. The spatial scales matters when physical, organizational and institutional elements interacts among various spatial levels through feedback or feed-forward loops. This complementary mechanism, as we called self-organized urban growth shaped by institutional rules also reminds us to reflect back on current planning: what to achieve and what to avoid.

The pursuit for single causal-relationship in management and planning made decentralized approaches long been ignored or overlooked in China. Inadequate attention on self-organization mechanism leads to various top-down style of regulated policy, trying to create a reality as desired by organizing both changes of reality and behaviours of related stakeholders. This methodology used to be very effective in China during pre-reform times decades ago when economic factors such as labours, finance agencies, fiscal levy, foreign direct investment

were all in strictly control and highly decentralized (Zhang et al. 2012). However, as the Chinese urban system has been turning to become rather dynamic after reform, increasing interactions and networks have been gradually built (Bardhan, 2002). Therefore it's not difficult to understand unexpected results coming out after the regulation policy, which was originally designated to control reality but was inevitably forced to adjust itself to cope with new emergent situations. In order to get out of this trap, the self-organized mechanism in urban growth process should be serious dealt with.

Although the unexpected results of regulated policy could be seen as positive or negative, it's necessary and beneficial for both planners and policy makers to better understand them, in the light of which appropriate urban planning and policy can be improved by enhancing pros and reducing cons, or we can say to be clear of what to achieve and what to avoid.

First of all, the conventional governance idea of single focus in causal relationship, trying to build direct relation between physical growth and institutional settings and trying to use regulation policy to control changes of reality should be adjusted. More attention should be paid on exploring self-organized behaviours on micro level and find out how they were influenced by current planning policy. On the basis of the above, the following can be achieved. Gradually and smartly add incremental intervention on micro behaviour while decremented control on macro level should be reduced meanwhile. Cooperated with this policy orientation, a dynamic in time update system of planning should be built as complementary to current long term land use plan. Last but not least, policy makers and planners should take concerns of interactions between organizational and institutional dimensions, organizational and physical dimensions, and so forth on various spatial levels, Where further research is still needed.

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FINAL PAPER

Track 6: Urban Change: Plans, Visions and Policies

MEGA PROJECTS, HUMAN CAPITAL DEVELOPMENT AND URBAN HOPE: School infrastructure projects in Bogota City during the last 10 years and their Impacts, effects and significance for the urban and social fabric.

Figure 01: Public School Gerardo Molina. Architect Giancarlo Mazzanti.

Source: http://www.archdaily.com/8660/gerardo-molina-school-giancarlo-mazzanti/

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MEGA PROJECTS, HUMAN CAPITAL DEVELOPMENT AND URBAN HOPE: School infrastructure projects in Bogota City during the last 10 years and their Impacts, effects and significance for the urban and social fabric.

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ABSTRACT

The golden Lion award for cities gained by Bogota city during the past 10th Biennale di Venezia 2006 in Italy was a remarkable and worldwide recognition of a planned and well executed urban development vision that through mega projects achieved social processes of inclusion, improvements in life standards for citizens and enhancement of Urban Hope.

Between 1995 and 2007 a visionary development politic carried out by 3 different but consecutive mayors started a trend of physical reconstruction of the city based on megaprojects mostly in three complementary infrastructure branches: Mobility and transportation with the introduction of the BRT system Transmilenio, Education with the construction and renovation of more than 300 school facilities as well as 3 new mega public libraries and Environment due to the investments in new public spaces as parks, bicycle paths, sidewalks, pedestrian bridges and boulevards.

With an investment over 330 Million euro[2] (more than 420 million Dollars, twice the entire cost of the Guggenheim Bilbao) made during the last decade on new school facilities, mostly for children from the poorest sectors of the city, Bogota, the capital of Colombia with nearly 8 million inhabitants, contributed effectively with poverty reduction, social inclusion, urban regeneration and with the improvement of life standards within the city.

According to Becker[3] *"Education, training and health are the most important investments in human capital."*. Thus through the construction of a new network of school infrastructures according to the highest standards and specification in architectonic quality, the mayor office of the city has triggered processes of human capital development as well as urban reactivation, giving to the poorest citizens new perspectives, skills and the hope of a better future.

The following revision of this school megaproject strategy built in Bogota city aim to discuss the impacts and effects of infrastructure interventions in their social and urban fabrics.

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Mentor: Univ. Prof. Mag. Dr. Rudolf Giffinger.
[2] Official Homepage from the Bogota Mayor Office. [online] Available at: http://www.bogota.gov.co/portel/libreria/php/x_imprimir.php?id=38568 . [Accessed 12 01 2012].
[3] Becker G.S. Human Capital. The concise Encyclopedia of Economics. [online] Available at: http://www.econlib.org/library/Enc/HumanCapital.html . [Accessed 12 01 2012]

KEY WORDS

Bogota, School infrastructure, urban hope, human capital, Mega Projects.

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1. PRELIMINARY STATEMENTS

"Educate the children and it won't be necessary to punish the men."
(Pythagoras, Quoted by Geary, J. 2007).

Figure 02: Bogota's panoramic view facing north.
Author: Antonio ca2.

The improvement and provision of the School Infrastructure System carried out in Bogota city during the period between 1998 and 2007 is probably the biggest and most important investment made by the city's Mayor Office in the branch of education in it entire history, as well as the first megaproject of this kind built in any Colombian city until these days.

Developed in a relatively short period of time, the Bogota's New School Facilities might be understood as a megaproject made of more than 300 facilities distributed all around the city, which impacts relevance for the citizens in terms of urban and social inclusion, are just comparable with what in 1936 meant for the city the construction of the Campus for the Universidad Nacional de Colombia (Public National University).

The main goal of the megaproject was to actualize and improve the physical state of the existing School facilities of the city due to it old and high deteriorated levels as well as it high seismic vulnerability structures as long as according to a technical previous analysis more than the 60% of the facilities had a high seismic level risk (Rodriguez 2009).

Although the main goal of the project was really specific, the way to achieve it brought several elements into consideration as the role and meaning of the school building in the urban context, or the necessity for a definition of architectonic quality parameters to achieve with the new facilities, rising the complexity and at the same time assuming broad social impacts to achieve with the infrastructure improvement.

Thus having a look at the entire process of the megaproject during those 10 years of work, it is possible to understand 6 different main actions or phases, that might be seen as specific goals and further outcomes:

- To enhance and improve the physical features and spatial quality of the existing school facilities as well to ensure the structural reinforcement from all of them with regard to the highest architectonic standards.

- To increase the capacity of the education system due to the construction of new schools in several sectors of the city without supply of the public service.

- To carried out a Master Plan for Education Facilities that organize allocation and distribution of the public school infrastructures along the city, as well as that determine urban interaction aspects regarding land use, accessibility and environment, promoting equity and social inclusion.

- To create a bridge between the private and the public education sector giving in concession for management and guidance of 23 new public school facilities located in the poorest areas of the city to recognized private groups with previous experience in the education field.

- To clearly define and summarizes spatial and architectonic standards for the new schools and for the updated facilities with regard to the educational models and the kind of academic goals that the Colombia's Education Minister as well as the Bogota's Education Secretary had defined.

- And to actualize a survey of all the Public Schools in the city in order to create an updated and systematized data bank of the real physical state of all facilities as a comparative tool in order to organize, schedule and set up priorities of intervention.

Thus the process of the entire megaproject had been developed bottom-up regarding the previous goals list, starting with the survey of the existing schools in 1998, following with the compilation of architectonic standards in the year 2000 with the publication of the book "Construyendo Pedagogía. Estándares básicos para construcciones escolares, SED" (Rivera et al. 2000), (Building up education. Basic standards for school facilities SED). And mainly building up mostly of the new schools as well as reinforcing structures of the existing facilities between 2004 and 2008 (Benavides 2009).

Different actors have been involved along the process both at the City as well as at the National level, but the main public agency responsible for the management of the project has been the Secretaria de Educación del Distrito Capital SED (The Capital's District Education Secretary), together with the Bogota's Mayor Office. Among other public institutions involved on the project is important to mention the District Planning Department and the Universidad Nacional de Colombia, who through it Planning and Projects Office (Working as a professional consultant office) carried

out the Master Plan as well as the coordination for the Design of the new Schools and the structural reinforcement and renovation of the old facilities.

The successes of such a complex and ambitious megaproject lies in many different variables going from the quality of the professionals involved to the effectiveness of interaction and coordination between public agencies. But is of utmost importance to underlying how at the core of the process, the success in achieving the goals depended on the continuity of a visionary development policy of a more inclusive city, committed with the improvement of life quality levels for it citizens carried out by 3 different Mayors during a period of almost 10 years.

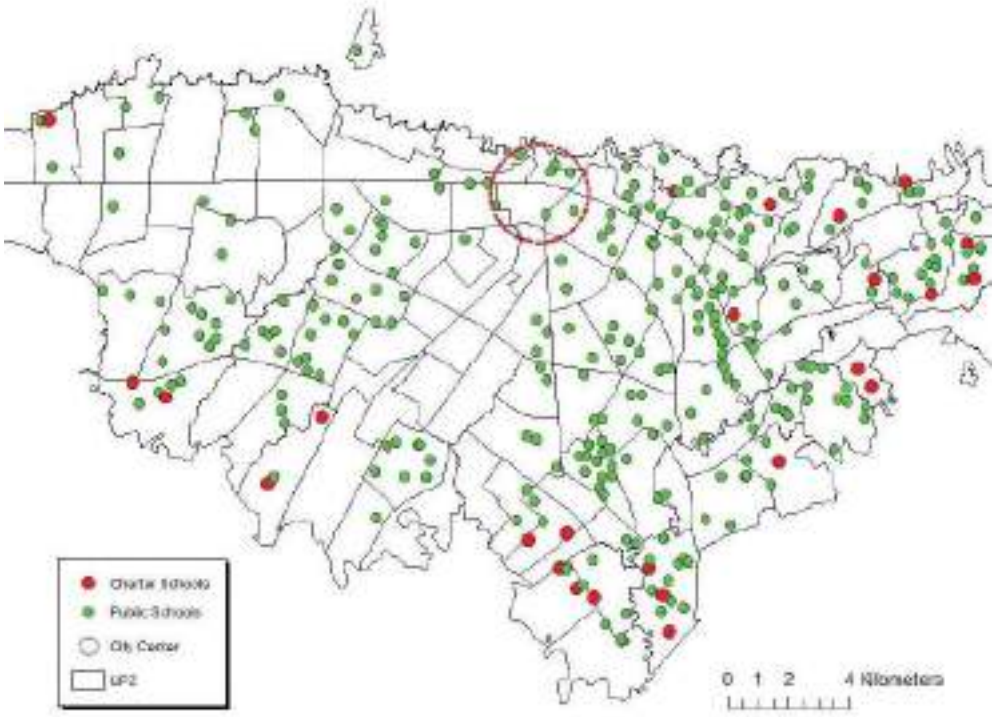


Figure 03: Bogota's public school distribution. In green color public schools and in red color schools in concession or "Charter schools".
Source: Juan Diego Bonilla 2010.

2. DEVELOPMENT VISIONS OF SOCIAL AND URBAN INCLUSION

"Vision without action is a daydream. Action without vision is a nightmare."
(Japanese proverb).

Figure 04: Former Mayors from Bogota between 2005 and 2007. From left to right: Enrique Peñalosa , Antanas Mockus and Luis Eduardo Garzon .

Source: http://www.terra.com.co/noticias/articulo/html/acu24564-preguntele-a-enrique-penalosa-lucho-garzon-y-antanas-mockus.htm

The process of physical reconstruction carried out in Bogotá city between 1998 and 2007 has been studied, discussed and awarded by the media, the academy and planning experts both nationally and internationally during the last years. Mostly focused on the BRT Transmilenio project success, Bogotá has been seen as an example of how effective visionary politicians articulated with serious planning and high quality execution and implementation is a right way to intervene positively the built environment.

Provably the most important recognition in that sense have been the Golden Lion award for Cities that the city obtained in 2006 at the 10th Biennale di Venezia in Italy. "*The Golden Lion Award for cities is awarded to Bogotá, Colombia. This city has in the last decades addressed the problems of social inclusion, education, housing and public space especially through innovations in transport… Bogotá is, in short, a beacon of hope for other cities, whether rich or poor*." (Sennett, R. Khan, A.A. Gormley, A. Hadid, Z. 2006).

Having a close look at the main interventions carried out in Bogotá during this period might be seen that the physical reconstruction strategy was focused on the improvement, reinforcement and consolidation of it urban infrastructure networks.

Thus the reconstruction trend of the city might be understood as the improvement of 3 complementary infrastructure branches and its networks associated on:

- Mobility and transportation with the introduction of the BRT system Transmilenio. Physical improvements of the entire transportation networks used by the system.

- Education with the construction of 61 new schools, the renovation and structural reinforcement of 201 existing facilities and the physical improvement of other 399 existing schools. As well as the construction of 5 new mega public libraries.

- Environment due to the investments in new public spaces as parks, bicycle paths, sidewalks, pedestrian bridges and boulevards, consolidating environmental networks, green corridors and the pedestrian as well as the bicycle paths continuity.

This infrastructural renovation trend of the city motivated by the vision of a more inclusive, accessible and balanced built environment has it roots in a context with tremendous social disparities, dramatic poverty – richness contrasts, unbalanced social infrastructure distribution and a fragmentary urban reality.

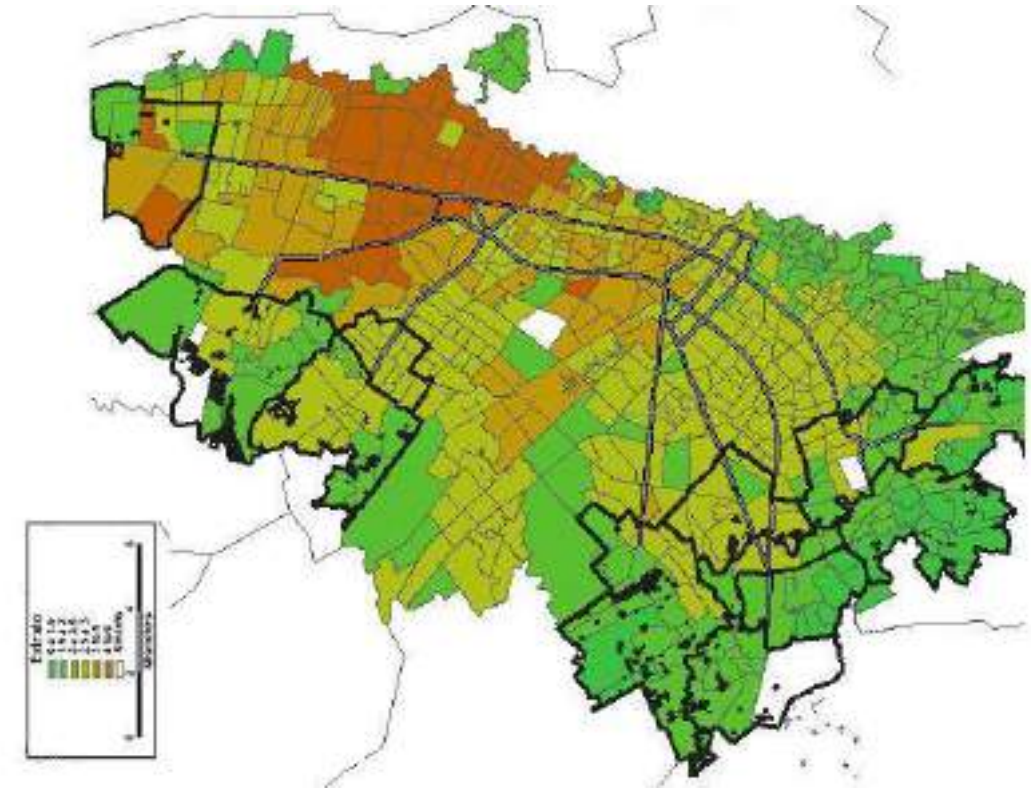


Figure 05: Socio economical distribution in Bogota. In Green tones strata 1 and 2

Source: Steer Daviea Gleave 2000

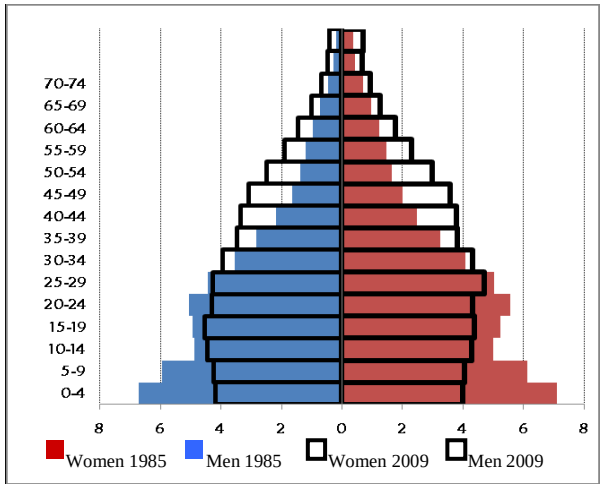
Bogota estimated population was in 1999 about 6'294.000 inhabitants with about the 44% of it population living in poverty and 11.3 in absolute poverty or destitution. For 2003 population living below poverty line was estimated in about 55,3 % (Garzón 2003).

According to Rueda (2003) Bogota was in 1999 about 31000 hectares what means a gross density of 204 inhabitants per hectare and therefore is seen by some city rankings among the largest populated cities of the world as one of the 10th with highest density levels (City mayor statistics 2007). Poverty is spread in the city and there are different figures expressing the real share of urban land use among the different socio economical stratification sectors. According to some of this estimations the strata 0, 1 and 2 (stratification of the population below the poverty line) are concentrating about the 34,6 % of the housing areas of the city while the strata 5 and 6 (Higher income strata) are just the 14%.

Social disparities and contrasts are also visible on the age distribution of the population in the different sectors of the city city, as well as on the household income distribution.

Indicators are strong enough and show some of the social and morphological problematic of the city and lead to understand why at that time was necessary to undertake measures in order to promote physical and social regeneration while reducing poverty and improving living standards and conditions for the citizens.

But this visionary development process seen in Bogota between the period of 1998 and 2007 would not be possible without the right political commitment coming from the heads of the public institutions, which right decisions and effective administration achievements turn into reality ideas and visions of social equity and a more inclusive built environment.



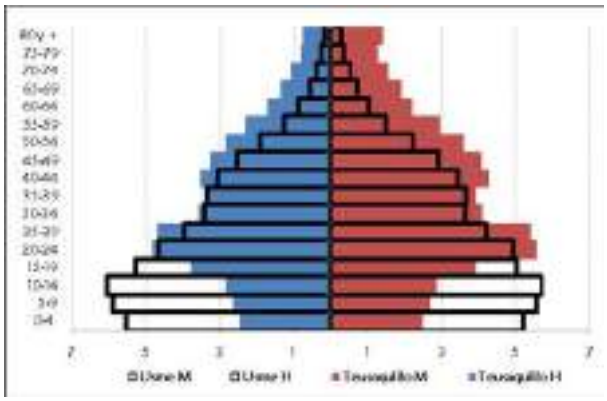


Figure 06: Bogota's population pyramids comparison. Above City's total comparison between 1985 and 2009. Below comparison between the Usme and Teusaquillo sectors in 2005

Source: DANE, Oficina Asesora de planeación. Boletín estadístico sector educativo Bogotá 2009.

2.1 The balance between political continuity and innovation

Perhaps one of the most important key issues that allowed visions turned reality was the continuity of development policies among 3 different Mayors along 4 consecutive administration periods, changing the traditional political behavior of cutting up plans and goals fixed by previous administrations. In that sense the administrative continuity of the 3 mayors started by Antanas Mockus, followed by Enrique Peñalosa and Luis Eduardo Garzon, is a positive example of right balance between the political commitment for policies continuity and the desire for innovation.

The megaproject for new schools facilities is one of the examples of this policies continuity where each Mayor took the achievement of the previous administration and tried to give a step further for the project improvement. Even thought the 3 Mayors were at that time politicians coming from different parties and having different origins they shared the vision and goals and the way the city should go through.

Peñalosa is clear while defining his believes when talking about the visions his administration had: "*What I would propose is that there are at least two kinds of equality that every society should strive to provide for its citizens. First, that all children have access to nurseries, education, food, music, art, and green spaces. This ensures that we all start off on the same footing and are nourishing the same potential. Second, I believe that the first article in every constitution should read "all citizens are equal before the law.*" Peñalosa interviewed by Grunow (2012).

And Mockus as well when talking about the new mega Libraries which Peñalosa started some years before his second administration period: "*One of my dreams is that in a future we will have poets and intellectuals, who saw the light in these Libraries*". Mockus quoted by Caballero, M. C. (2003).

2.2 Education as a priority for development

Never before in the history of the city was development and improvement of the education system for the less income citizens a priority for politicians like in this period. Prove of that are the allocation of the schools mostly carried out in the poorest sectors of the city (strata 1 and 2), the size of the economical investment more than twice the price of museum Guggenheim Bilbao for example[4], the quality of the facilities which projects were designed by some of the best Colombian architects and the administration of the entire network carried out after construction assuring the expenses for it functionality as well as assuring the quality of education itself given to the children.

[4] Investments in education between 2004 and 2008 where about the 31% of the entire budget of the Capital City (SED, Bogota's Mayor office 2004)

Infrastructure Project	Time Period	Units	US Dollar Million.
Transmilenio Phase I *	1999 - 2002	42,4 km	$ 682
New Mega Libraries**	1998 - 2002	3 Facilities	$ 17,4
Public Spaces associated to the libraries		For 1 facility	$ 6
New Schools in Concession ***	1998 - 2003	23 Facilities	$ 57,5 (Est.)
Agreement SED-UN ****	2004 - 2008		$ 421 (Est.)
New Schools		38 Facilities	$ 140
Expansion and Reinforcement of existing schools		201 Facilities	$ 281
Architectonic Improvement of existing schools		399 Facilities	
Total Investment in Educative Related Infrastructure		**About $ 501,9 (Estimate)**	

Table 01: Bogota's Infrastructure investment comparison between Transportation (t\Transmilenio Phase I) and Education related projects during the 10 years period analysis.

With information from: *Angel, S.L. et al. (2011)

** Caballero, M. C. (2003)

***Sarmiento, A. et al. (2005)

****Benavides, S. C. (2009)

Nevertheless the role played by the Education Infrastructures in terms of social inclusion goes beyond their academic main objective as long as the school facility has been understood as an urban node for socialization able to be used for participative activities by the communities. In fact the school is used for scholars as well as for their parents or any other social groups for cultural events, participative talks and sport and leisure activities in some moments. The school facility is used for the Mayor office as well as a place where to meet with the communities, where to get contact with them through special programs like the one to provide food for the poorest citizens for instance.

This influence capacity of the Education infrastructures in the community amplified the role of the education for citizens and goes beyond it own boundaries in giving them the chance to socialize in a dignified built space.

2.3 Public agencies working together

Probably the third key issue that played a relevant role during the entire process was the interaction and support between public agencies in all different aspects present in a megaproject like this.

Cooperation and coordination among agencies was of utmost importance according to Carlos Benavides S, chief director for the Facilities planning and design department of the SED: " *according to the UNESCO and the Latin American and Caribbean countries the different agencies should improve and strengthen the links among them and the national and international organizations as well as with the universities and the professional associations of architects with regard to the improvement of the design, construction and maintenance of Education facilities*" Benavides, S. C. (2009).

Without the active cooperation and coordination between the different public agencies the political development vision from the Mayors could not been possible to see the light as long as some of them are in charge to regulate and approve land use, environmental laws or public services topics that due to the location of the schools mostly in the periphery and in the poorest sectors had a lack of information and technical studies.

3. THE MEGAPROJECT DIMENSIONS AND COMPONENTS

"Para renovar no es necesario contradecir, basta profundizar."
(To renovate it is not necessary to contradict; it suffices to make something more profound)
(Nicolás Gómez Dávila, 1992).
(Translated by Nikos A. Salingaros)

Figure 07: Public School Gerardo Molina. Architect Giancarlo Mazzanti.
Source: http://sancheztaffurarquitecto.wordpress.com/category/arquitectura-colombia/

The megaproject for new school facilities construction had several planning and implementation dimensions which might be understood as a 'step by step' process, where every reached "product" was wisely used as a resource for the development of the next stage.

Therefore is important to underlying the remarkable coordination and guidance effort that the SED perform along the entire process.

The following figure illustrates the different activities and main relevant external "Planning products" (POT and LDT) along the 10 years analysis period, together with every Mayor's period.

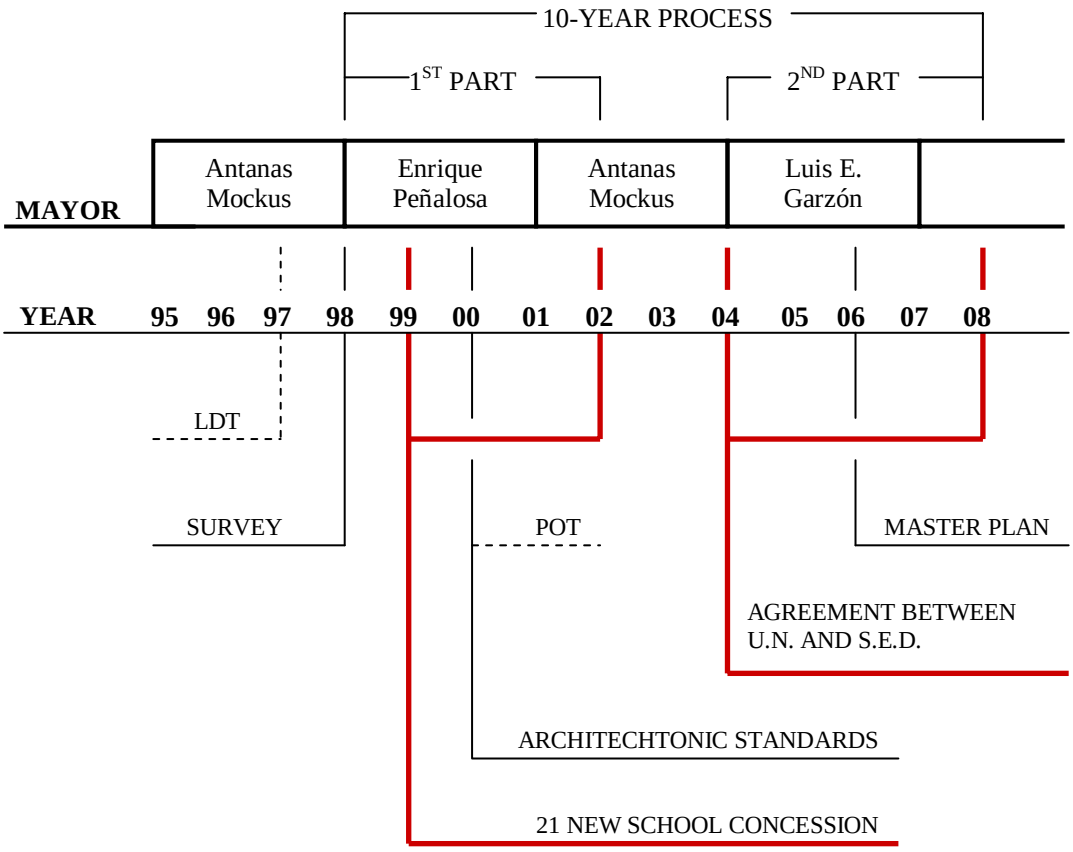


Figure 08: Dimensions of the megaproject 10 years process.
Source: Author.

3.1 The LDT from 1997 and the Bogota's POT

The territorial planning process transformation triggered in Colombia for the law 388 from 1997, better known as the Territorial Development Law (LDT), sought to complement the economic and social planning with the territorial planning dimension, to rationalize physical interventions on the territory itself and to direct it development as well as it sustainability (Fernandez, F. 2007). Probably one of the most important changes introduced with the law for all cities and departments was the obligatory development of a Territorial Plan called POT (Plan de Ordenamiento Territorial) by every Mayor Office and Regional Governor Office, which in the case of Bogota fist version was approved in the year 2000 and had a time frame of 12 years.

The POT territorial strategy is based on three principles; the protection and guardianship of environment and natural resources; the improvement and optimization of infrastructures of mobility, basic services, and social facilities; and the socio economic and spatial integration at different scales. Thus, it identifies three

complementary and interdependent structures to develop its territorial strategy; the main ecological structure composed by environmental and natural elements, rural land, protected areas, and parks; the functional structure composed by general systems of mobility, basic services, public space and social facilities; and the socio-economic structure composed by city centre and centralities networked.

The role the POT played in further urban interventions was crucial as long as it introduces a broad urban and regional perspective of influence and impacts analysis as well as specific goals and guidance's for the articulation between systems or structures and the reinforcement of the urban centralities. In order to achieve all these "allocation and distribution" parameters and requirements the law designates a planning tool called the Master Plan which articulate the macro scale of the POT with the specific scale of the urban project.

3.2 The survey of existing Education Facilities

As a first step for the improvement of existing and the design of new school facilities the SED carried out in the year 1998 a survey and systematized inventory of the Education infrastructures of the cities, with detailed information about quantitative and qualitative physical and environmental features of the buildings, along with an seismic vulnerability evaluation. According to Benavides (2009) the scope of the survey covered almost 667 facilities with an approximated built up area of 1'138.000 Sq m. The evaluation determined that mostly the 63% of facilities had risks under seismic events.

Based on the survey the SED obtained not just a first measurable scope for the physical intervention in existing facilities, but an actualized data bank of the properties in terms of documentation for legalization and regularization of plots with regard to the property law.

3.3 Building up with high architectonic and spatial standards

Parallel developed to the survey of existing infrastructures the SED carried out a research about the desired spatial and architectonic standards to be used in the design of the new schools as well as the parameter to de achieved with the renovation of existing facilities. The project was finally compiled and published in the year 2000, under the name "Construyendo Pedagogía. Estándares básicos para construcciones escolares, SED" (Rivera et al. 2000), (Building up education. Basic standards for school facilities SED).

The book is a useful tool and a fundamental reference for architects and professionals involved in the design of the school facilities, as long as it gives the desired architectonic parameters, dimensions, features and specifications for classrooms, and every interior and exterior spaces to be required. Moreover the book explains and discusses the relationship between education and architecture in order to set up spatial concepts for designers and architects to be achieved within the buildings.

	For New Facilities	For renovation in existing Facilities
Parameter	**Sq m per Student**	
Plot Area / Student	12 Sq m	5 Sq m
Built up Area / Student	6 Sq m	2,7 Sq m
Open Space / Student	9 Sq m	2 Sq m
Amount of Floors	2 Floors	2 Floors
Building Footprint Rate	0,35 Max.	0,35 Max.
Academic Room	**Minimum Rates per Student**	
Kindergarten Classroom	2 Sq m / Student	1,3 Sq m / Student
Medium – High School Classroom	1,8 Sq m / Student	1,2 Sq m / Student
Specialized Classroom	2,2 Sq m / Student	1,5 Sq m / Student
Specialized Workshop room	3,5 Sq m / Student	3 Sq m / Student
Administration and General services	0,45 Sq m / Student	0,26 Sq m / Student
Toilets per Kindergarten children	1 Toilet / 15 Students	1 Toilet / 15 Students
Toilets per Medium – High School children	1 Toilet / 25 Students	1 Toilet / 25 Students

Table 02: Basic School Facilities Standards indexes.

Source: Rivera y asociados (2000)

The Document is considered today a reference book about the relationship between architecture and education not only nationally but internationally.

3.4 The school concessions (Chartered Schools)

Between the 1999 and 2002 the SED started the first round of new school construction based on the architectonic standards already delineated.
These first 23 new school facilities build up in the poorest sectors of the city where gave up under concessions contracts for administration and management to recognized private operators with a large experience as the Universidad de Los Andes, The Nueva Granada, the San Carlos and the Nogales School among others.

The model of concession looks for promotes quality in the education for children from the poorest sectors, offering the best Education infrastructure and educators from the highest levels free of charge.

Facilities under the model of concession are administrated for a period of 12 years for operators, which are elected after a public competition regarding their capabilities, experience, educational program and proved quality of past results in the ICFES examination (National recognized final examination for scholars similar to the SAT in the US, or the Maturita in Italy).

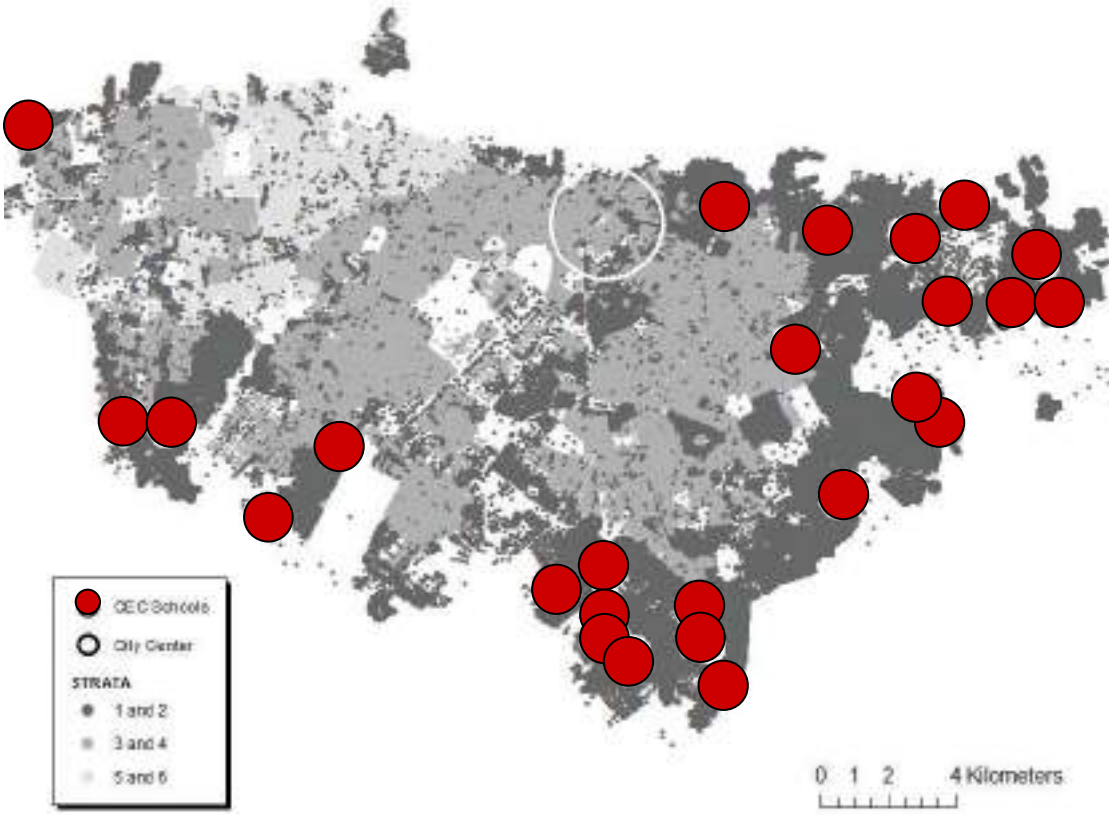


Figure 09: Bogota's schools in concession location with regard to the socio economical distribution.

Source: Juan Diego Bonilla 2010.

3.5 The Master Plan PMEE

Probably one of the most important features of the megaproject is the fact that the school facilities are distributed all around the city, mostly in the poorest and less income neighborhoods. This operation of allocation and distribution of the social infrastructures is regularized with Master Plan for School Equipment with regard to the broad parameters established for the planning department of the city in the POT as was already explained.

According to Talavera (2005) "*The Master Plan… has the task to delineate the ordering principles for endowment services, to adopt urban standards and provide indicators to allow future building and implementation planning*."

The Master Plan understood the school facilities as nodes of a network functionally articulated with regard to it spatial characteristics able to be linked by other services, or community uses, aiming to assure a relevant urban and social role to the school building beyond it physical limits. This understanding of the social responsibility that Education Facilities might represent with regard to the specific Bogota's urban

context was of utmost importance for the design and implementation phase of the project as long as determined typological and spatial organizations of the building itself as urban quality standards.

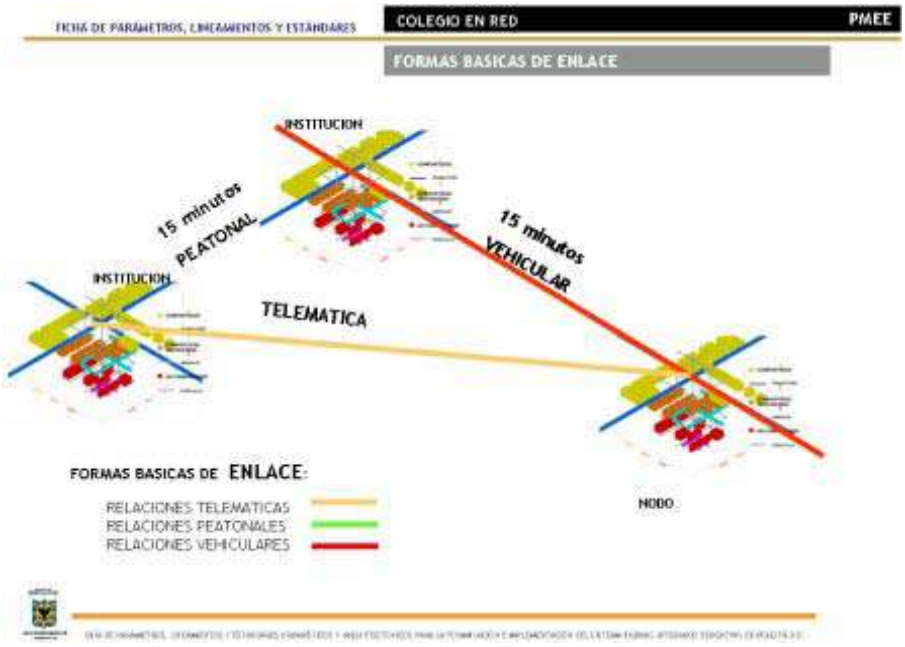


Figure 10: The School facility as urban node working in network and it basic different kind of connections according to the Master Plan for School Equipment.

Source: Decree 449 – 06 PMEE.

http://www.sedbogota.edu.co/archivos/SECTOR_EDUCATIVO/Plan%20Maestro%20de%20Equipamiento/DECRETO_449-06._PMEE._VERSIxN_OFICIAL_REGISTRO_DISTRITAL.pdf

Developed by the Universidad Nacional de Colombia under the direction of architects Henry Talavera and Pedro Juan Jaramillo in a inter-institutional agreement with the SED between 2004 and 2006, the Master Plan is probably one of the most interesting and relevant Infrastructure planning and implementation tools developed in the last years in Bogota due to the aim to promote inclusive spaces for community socialization as well as nodes of urban inclusion and interaction.

3.6 The UN – SED Agreement and the new Facilities

Based on the experience and results obtained from the previous phases of the project the SED started what would be the biggest and ambitious Facility improvement program carried out for any administration in the city before.

The SED organized in two different phases this development endeavor: with the first one they carried out public competitions among the best national architecture offices in order to find out the best proposals for the design and construction of the new Schools.

	No. of Facilities	Students capacity
New Schools	38	111600
Expansion and Reinforcement of existing schools	201	30740
Architectonic Improvement of existing schools	399	
Total	**638 Facilities**	**142340 new places**

Table 03: Goals for the expansion and improvement of the Education Infrastructures in 2004.
Source: Benavides, S. C. (2009)

Thus the SED together with the SCA (Colombian National professional association of architects) elected 5 of the more renowned Colombian architects giving them the chance for the design and construction of 11 new Facilities each one for 1410 students in plots about 7200Sq m and 7 of 940 students in plots of 5200Sq m.

Figure 11: Public School Maria Mercedes Carranza. Architect:Consorcio Arquitectura y Educacion Urbana. Arquitectos Leonardo Alvarez, Sergio Trujillo and Diego Suarez.
Photo: Jorge Gamboa.

The second phase, for existing Facilities improvement, expansion and structural reinforcement, was organized by the SED in a different manner with regard to the big amount of schools and the complexity of the different interventions.

Taking into account the big challenge and in order to guarantee the quality of the facilities as well as to fulfill the chronograms and general expectations of that big

enterprise, the SED subscribed an inter – institutional cooperation agreement with the Universidad Nacional de Colombia in order to get their expertise, guidance and technical support during four years of project development.

Figure 12: Public School Nicolas Buenaventura. Architect: Consorcio Arquitectura y Educacion Urbana. Leonardo Alvarez, Sergio Trujillo and Diego Suarez.
Photo: http://www.bogota.gov.co/portel/libreria/php/x_frame_detalle.php?id=35822 .

The University participation was of utmost importance for the achievement of the goals. It coordinates during 4 years time more than 380 professionals and experts from different fields as architects, engineers, educators, social workers, economists, urban planers, environmental experts, and lawyers among others, focused and working all together.

The different work teams organized by the UN had to react to the big range of different technical problems in existing facilities in order to achieve the high spatial and quality standards defined by the SED, aiming to pull up, renovate and qualify old existing educational infrastructures at the level of performance of new facilities. For that reasons many of the original small interventions had to be reconsidered and had to be reformulate mostly in bigger physical interventions or spatial expansions.

Figure 13: Public School Republica Dominicana. Architect Eduardo Samper by the Universidad Nacional de Colombia, Bogotá.
Source: http://colegio.redp.edu.co/repdominicana/ .

Figure 14: Public School Porfirio Barba Jacob. Architect: Leonardo Alvarez by the Universidad Nacional de Colombia, Bogotá
Source: http://jaimebuitrago.com/proyectos.php?cat=42 .

4. FINAL STATEMENTS AND CONCLUSIONS

"Sow seeds for the future harvest"
Old proverb.

Figure 15: Public School Gerardo Molina. Architect Giancarlo Mazzanti.
Source: http://sancheztaffurarquitecto.wordpress.com/category/arquitectura-colombia/

Among the positive impacts reached by the SED and the Bogota's Mayor Office with the planning and implementation of the New school Facilities Megaproject provably those associated to the strengthening of the Social and Urban fabric are of a remarkable importance.

On the one hand the project urban dimension had understood the school facility as the node where to get contact with the community and as a physical link to orientate infrastructure projects associated to the public space and transportation networks in slums and the poorest districts of the city.

And on the other hand less income children had found a dignified place right at their districts where to meet with the community, and where to get the tools and skills to build a perspective for a future.

Besides that it is possible to state that the megaproject promoted the strengthening of the public agencies and institutions involved due to the dimension of the challenge and the responsibilities assumed by them.

Both of these positive impacts, at the community and at the public agencies, reached with the Megaproject had had a remarkable effect on the enhancement of urban hope in citizens as long as agencies had proved commitment and real qualified results and the improvement of the built environment has positively changed.

4.1 Human capital development

It is thought that the investments carried out in education are going to have direct impacts in the human capital of a society as long as through education human resources as knowledge, know how and creativity among others might be spread, understood, discussed and improved.

With the Bogotá's Mayor Office education policy carried out between 1998 and 1997 it is possible to see an effective investment program on human capital development, which future vision aim looks for a more inclusive and equilibrate society and built environment.

4.2 Conclusions

There is no doubt about the usefulness of Megaprojects as a tool to trigger urban and social change regarding it final physical dimensions and it normally Multi and Meta disciplinary processes.

But it positive impacts and influences mostly depend of the accurate statement and understanding of the real problems it is planned to improve as well as on the urban and social visionary foreseen reality is hoped to be built up.

Therefore an evaluation of the possible side effects as well as the non project scenario must be compare with the megaproject scenario in order to determine real positive and negative impacts at the different social and urban scales.

As long as the time frame for evaluation, design and implementation of a Megaproject use to be relatively long different forecast scenarios might be evaluated and compared aiming to determine the right decisions undertaken today.

Megaprojects must not being seen only as a punctual big operation but as a chain link which multidimensional reactions might improve or affect the urban as well as the social fabric.

The spatial distributive strategy implemented with by the SED in Bogota with the planning and construction of the School Facilities between 1998 and 2007 give an example of how a Megaproject might be maximize for the use and improvement of social and urban conditions of the majority of the population.

The visionary development of a more inclusive built environment has found in Bogotá a real built example which allows us to understand a social megaproject as an infrastructure network.

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Recovery Plan for Post-Disaster Tourism Destinations Image in Bam after Earthquake

Sahar Nedae Tousi [1], Sina Shahab [2], Amin Masoudi [3]

Abstract

Natural disasters are frequent treats to tourist locations, and have the potential of adversely affecting tourism industry; as one of the world's largest economic sectors. Subsequent to a disastrous event, destinations are faced with not only the daunting tasks of rebuilding infrastructure and communities, but also restoration image of destination; as one of the most significant roles of a travel destination's image is its profound impact on the travel decision-making process. Where communities have considerable economic dependence on tourism related activities, their vulnerability to crisis occurrence is significantly increased, given that they need to maintain a positive image of attractiveness for continued success. Therefore planning can play a central role for economic recovery and changing potential customers' misperception. After studying the importance of tourism industry in the earthquake-prone areas, the present paper aims to define the effects of earthquakes on tourism continuity plan and various ways that they affect the operations and viability of tourism in the Bam city. The study focuses on perception changes and negative impact on the "Image of the Destination" after the 2003 Bam earthquake. It also proposes mechanism to develop tourism marketing strategies tallying with internal and external environment in Bam destination.

Achieving the aim, includes studying the effects of the 2003 Bam earthquake on behavioral intention of visitors to choose Bam destination and economic loss as it's consequence through archival studies by means of published census and statistics. Hence this paper proposes tourism revival marketing strategies by SWOT method. The paper may contribute to the understanding of consumers' affective reactions towards a tourism destination and their influences on future visit intention and by providing a prescriptive list of functions that are dependent to destination or disaster characteristics can serve as a foundation for revival policy making of Bam in post-earthquake recovery.

1. Introduction

Tourism, as one of the world's largest economic generating sectors, can affect regions' competitiveness (Wickramasinghe, 2008). This has made tourism

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destinations look for the ways to attract more tourists from all around the world. Since potential tourists are exposed to many alternative destinations similar to each other and fiercely competing to get more of the market share, then it is vital for destinations to differentiate themselves from competing ones and to occupy a favorable position in the minds of potential visitors by developing a positive and favorable image (Sahin & Baloglu, 2011). Destination image[4] can be defined as "the perception of a person or a group of people regarding a place (Sahin & Baloglu, 2011)" that can influence tourist satisfaction and their behaviors such as the choice of a destination, the subsequent evaluations, and their future "behavioral intentions[5]" (Chun-yang & Maxwell, 2010). Hence "destination image" is commonly accepted as an important aspect in successful and sustainable tourism development and destination marketing due to its impact on both supply and demand side aspects of marketing. Destination Image can be influenced by several factors including "natural disasters" that may impact on the destination marketability.

According to the World Tourism Organization (WTO, 2003), Natural disaster risk[6] like earthquake is one of the major sources of risk[7] with the potential of affecting tourism destinations (Lehto & et al., 2008). So recreating and managing an attractive image through marketing strategies is an important key to sustainable success for tourism businesses in quake-hit areas. In this regard, the paper aims to:

- Study of the effect of the earthquake on business continuity of tourism sector and define the various ways that it affected the operations and viability of tourism in the quake-hit areas (with emphasis on Bam);
- Propose mechanism to develop tourism marketing strategies and address feasible solutions in order to re-image destination aftermath a sudden calamity considering theoretical concepts and using analytical techniques and hence restore region competitiveness.

As a result, the paper would contribute to understanding of consumers' reactions towards a tourism destination after a natural disaster (with emphasis on earthquake) and their influences on future visit intention and serves as the foundation for policy making for revival of destinations following the earthquake.

2. Theoretical Framework

Disaster refers to "situations where an enterprise (or collection of enterprises in the case of a tourist destination) is confronted with sudden unpredictable a catastrophic change over which it has little control (Lehto & et al., 2008). Disasters that are unavoidable, since they are beyond human control, have been known to transform

[4] image is the sum of beliefs, ideas, and impressions that a person has of a destination (Tasci & Kozak, 2006)

[5] The concept of behavioral intentions can be captured by a tourist's willingness to revisit a tourism destination (Andreassen & Lindestad, 1998).

[6] Natural disaster risk refers to the possibility of being involved in a natural disaster event.

[7] Risk is defined as the uncertainty that consumers face when they cannot foresee the consequences of their purchase decisions.

the reputation, desirability, and marketability of popular tourist destinations (Park & Reisinger, 2010). The occurrence of natural disasters leads to a decrease in tourists' arrivals because of perception change. Therefore, after elimination of the physical hazards associated with natural disasters, the amount of tourists is another significant issue in a tourist destination.

Perception changes can occur after natural disaster occurrences due to their devastating effects because the thought of tourism naturally evokes feelings of enjoyment, pleasure, relaxation, and safety while conversely, disasters arouse distress, fear, anxiety, trauma, and panic in individuals. This can be both serious and long-lasting because of its profound impact on the travel decision-making process (Lehto & et al., 2008). Therefore subsequent to a disaster, destinations are faced with not only the daunting tasks of rebuilding infrastructure, facilities and communities, but also Image[8] Recovery (Travel destination image).

Where communities have considerable economic dependence on tourism related activities, their vulnerability to crisis occurrence is significantly increased and they need to maintain a positive image of attractiveness for continued success. Hence marketing strategies through business continuity plan can play a central role for economic recovery and changing potential customers' misperception.

2.1 Post-Disaster Recovery Plan and Business Continuity Plan Concept

Disaster management for tourism has often focused on the post-disaster recovery phase. The International Strategy for Disaster Reduction (ISDR) defines "Recovery" as the "decisions and actions taken after a disaster with a view to restoring or improving the pre-disaster living conditions of the stricken community, while encouraging and facilitating necessary adjustments to reduce disaster risk". Recovery is therefore about shifting focus from saving lives to restoring livelihoods (UNDP, 2010).

Reconstruction and rehabilitation are considered as main steps of "disaster recovery phase" (Figure 1). These steps are focused on activities that are devoted to restoring the condition to normal. Reconstruction process is associated with the immediate post-disaster activities in order to help affected population for restoring them to normal lifestyle. On the other hand, rehabilitation is the next step after reconstruction and ongoing long-term development. This step not only helps economic revitalization, but also promotes the business continuity (UNDRO, 1992).

[8] Image is an attitudinal construct representing an individual's beliefs, feelings, and general impressions about an object or destination (Lehto, Douglas & Park, 2008).

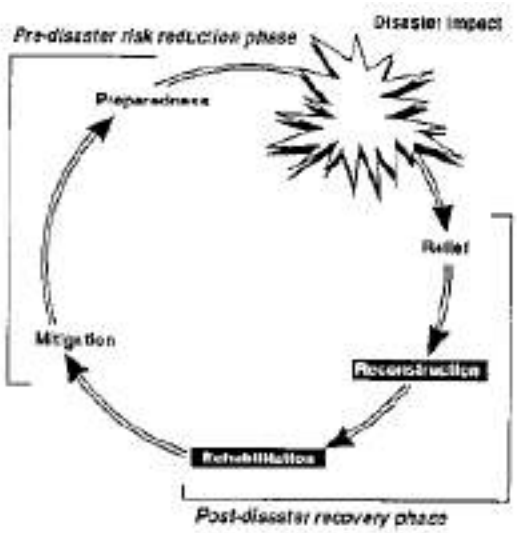

Figure 1. Disaster Management Process (UNDRO, 1992)

Disaster Recovery Plan (DRP) and Business Continuity Plan (BRP) often used interchangeably in various texts. Whereas Recovery Plan is used for retrieval of systems and infrastructure components in a specific time series, Continuity Plan has more expanded scales and scopes, which is associated with determination of components and functions of recovery. Business continuity plan can be considered as an iterative process in order to determine mission of critical business function, policies, processes, plans, procedures which are needed for continuation of activities on unforeseen events (Nickolett, 2001). Instead of the focus on rebuilding of infrastructures or hotels, Business Continuity Plan emphasis on re-launching of different scale of touristic businesses and people who are the target of tourism[9] (NZIER,2011). Proposed activities for the revitalization of long-term business continuity are (Nickolett, 2001):

- Recognize the importance of the tourism market in region and its impact on tourists in order to minimize the effects of reduced demand;
- Determination of the functions of the tourism sector should return to normal;
- Preparing recovery promotional programs;
- The beneficial evaluation of system through: (1) Speed of return to the former condition, (2) Rates of return to former condition, (3) Amount of increased resistance of buildings against next disasters.

[9] Proposed activities for capacity building in communities based on the following steps are (Nickolett,2001):

- Planning (readiness) phase including preventive activities and increase capacity;
- crisis management readiness program including evaluation of effects due to disaster preparedness management and disaster management;
- The step that response during and immediately after the accident including effective contingency plans;
- Long-term disaster recovery step.

The first three steps are outside of the subject of this study and only the final step will be considered.

2.2 Destination Image Concept

It is commonly recognized that destination image[10]-"the sum of beliefs, ideas, and impressions that a person has of a destination (Crompton, 1979; Kotler & et.al., 1993)"- is an important aspect in successful destination marketing; so one important aspect of destination marketing is "destination image management". Several researchers have studied destination image as an independent variable influencing several consumer behavior variables, such as destination choice, decision-making and satisfaction. Due to the importance of destination image in terms of its effects on tourist behavior, researchers have been trying to identify the determinants that define, modify, and strengthen this construct (Tasci & Gartner, 2007) in order to minimize the "gap that may be between "desired brand image[11]" and "perceived one[12]"(Lopes, 2011)" undermining the continuity of the destination business.

Promoting destination image requires knowing about image formation agents or components. Development of the image of a tourist destination is based on the consumer's rationality and emotionality, and as the result of the combination of two main components or dimensions. Beerli and Martin (2004) suggested that "affective" and "cognitive" image together leads to an overall image, resulting either in a positive or a negative image about the destination. Cognitive image is determined by beliefs and knowledge about a place, whereas affective one is all about feelings towards that destination[13]. Overall tourism destination image has an indirect impact on "behavioral intentions". Also destination image literature reveals three sources of image formation factors (Table 1):

A- Supply-side or destination that refers to destination marketers engage in promotional efforts to establish a positive image or to change an existing image.

B- Demand-side or image receivers that is related to their characteristics.

Disaster management literatures show a relation between "perceived influence of natural disasters" and "travel risk[14] acceptance" depending on the type of travel risk and individual tourists' characteristics(such as nationality, gender, Age, marital status, education, employment status, annual income & travel companionship). The rapid increase in natural disasters makes many tourists

[10] According to the World Tourism Organization, the image of an object or situation is defined as (Lopes, 2011) the artificial imitation of the apparent form of an object; Similarity or identity with the form (e.g.: art or design); Individual or collective ideas about the destination.

[11] Desired image is related to how the company wants to be perceived by the target segment (Lopes, 2011).

[12] Perceived image is about how the target segment sees and perceives the brand through a brand image study (Lopes, 2011).

[13] Cognitive evaluation has an indirect influence on the overall image through the affective evaluation. A common agreement among researchers seems to point out that affective evaluation depends on cognitive assessment while the affective responses are formed as a function (Chun-yang & Maxwell, 2010).

[14] Travel risk is defined as the possibility of experiencing a danger while engaging in travel or the consciousness of security and knowledge of the likelihood of damage during travel (Park & Reisinger, 2010).

perceive that travelling around the world is dangerous and risky (Park & Reisinger, 2010). Park and Reisinger (2010) study about "perceived influence of earthquake on travel by demographics" shows that:

- Asian people perceived a greater influence of the earthquake on travel than other nationality group. American and the European travelers feel more comfortable about earthquake.
- Female tourists perceive a greater influence of earthquake than male tourists.
- Low-income tourists are more concerned about travel when the risk of natural disasters is high; probably because they have a relatively lower travel budget and are more concerned about the extra spending and financial losses when involved in a natural disaster accident.
- Tourists with low educational attainment perceive a greater influence of natural risk than high and middle-educated tourists perhaps because they have relatively less social skills and are less confident about their vacation choice. As a whole educated tourists perceive lower risk.
- Family and friend tourists perceptions of natural disasters are stronger than alone people.

C- Independent or autonomous as intermediate factors between demand and supply side that consist of information sources such as news articles, educational materials, movies, etc.

Autonomous agents create general knowledge about a destination, and are out of a destination's immediate control (Tasci & Gartner, 2007). Gartner and Shen (1992) assert that in the case of a disastrous event, distant countries, for which lack of knowledge exists, the autonomous agents, such as news reports, articles, and movies are able to cause a more dramatic change in image due to their high credibility and ability to reach mass crowds than destination-originated information. The intense and sometimes sensational media reporting could play a significant role influencing in consumers' cognition about a destination after natural disasters (Lehto & et al., 2008).

Table 1. Destination Image Formation Factors

image formation factor	**Attribute of image factor**	**location**	**Image formation means**
Supply side	dynamic/ controllable	Destination-oriented	Marketing strategies
Independent	semi-dynamic/ semi-controllable	intermediate	Information sources (educational materials, news, movies, word of mouth, user groups)
Demand side	dynamic/ uncontrollable	Perceiver Characteristics	Socio-demographics, psychologics, tourist's motivations, cultural values, experience and prior visit, attitude, needs

Author's analysis based on (Tasci & Gartner, 2007)

3. Research Methodology

This paper provides a framework for creating business continuity plan. Due to the existing definitions of business continuity plan presented in the previous section, using a strategic approach is the necessary elements to promote the business continuity plan. Strategic planning is possible in each field by answering the following four basic questions (Brewster, MTP, 2005):

- Quiddity of the current situation;
- Quiddity of probable outcome if failure to do corrective action;
- Quiddity of desirable long-term future of the community;
- How to achieve this desirable future and required actions to achieve.

Process of business continuity plan in this research would have the following steps, with focus on the final step of business continuity plan and adoption of strategic planning methodology:

1. The first step: Analyzing the situation and current and future trends (identifying the opportunities, constraints and limitations) by foreseeing, if failure to do corrective action (Nickolett, 2001). Identifying the importance of tourism marketing in the region and the effects of the disaster occurred, can be done using statistical quantitative methods. The output of this step plays a major role in making the plan in next steps.
2. The second step: Drawing out the desirable future through goals setting;
3. The third step: Making improvement strategies and programs for regeneration; at this step, key functions would be identified and risk management prescribed. The output of this step would directly lead to business continuity plan.

There are four types of relationship between development and disaster (Figure 2). Approach of this paper in making strategies is transitioning of phase (--) to phase (-+) to reduce the negative impact of disasters on development - caused by the waste of resources and as a consequence, disruption of economic growth, disruption of programs and destabilization - and to convert it into an opportunity[15] for development.

[15] Disasters could achieve rapid and extensive economic changes by creating economic and political atmosphere which is impossible under normal conditions. Disasters provide opportunities for development through the following items (UNDRO,1992): Creating fundamental changes in environment; Mobilizing national and international resources; Creating new skills and job opportunities; Modernization and development of regional economic basis; Increasing global attention to the area through the media;

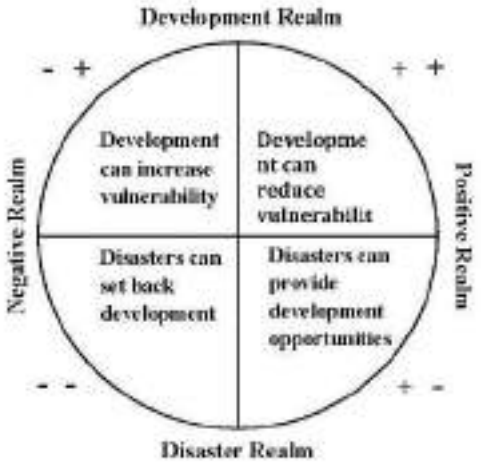

Figure 2: The Types of Relation between Development and Disaster (Stephenson, 1991)

The ultimate success of a strategic business continuity plan is largely dependent on the accuracy of an effective situational assessment (Wickramasinghe, 2008). SWOT technique is one of the best and the simplest in situational assessment. So, Competitive strategies for tourism destinations would be offered by use of strategic assessment matrix according to internal capabilities and insufficiencies and external factors. The proposed model positions the destination's strengths and weaknesses and permits the identification of opportunities to improve Bam destination competitiveness.

The difference between this paper and other researches in this field is in making business continuity strategies, referring to the destination image concept. Accordingly, the situational assessment is done using the SWOT technique, according to the constituent elements of destination image. Demand-related and Intermediate factors will be considered as external factors, outside the system control (opportunities and threats). Also, in the supply-related factors, strengths and weaknesses of the system are considered. In the business continuity plan, strategies are following maximum use of available strengths and opportunities and confronting weaknesses and threats ahead.

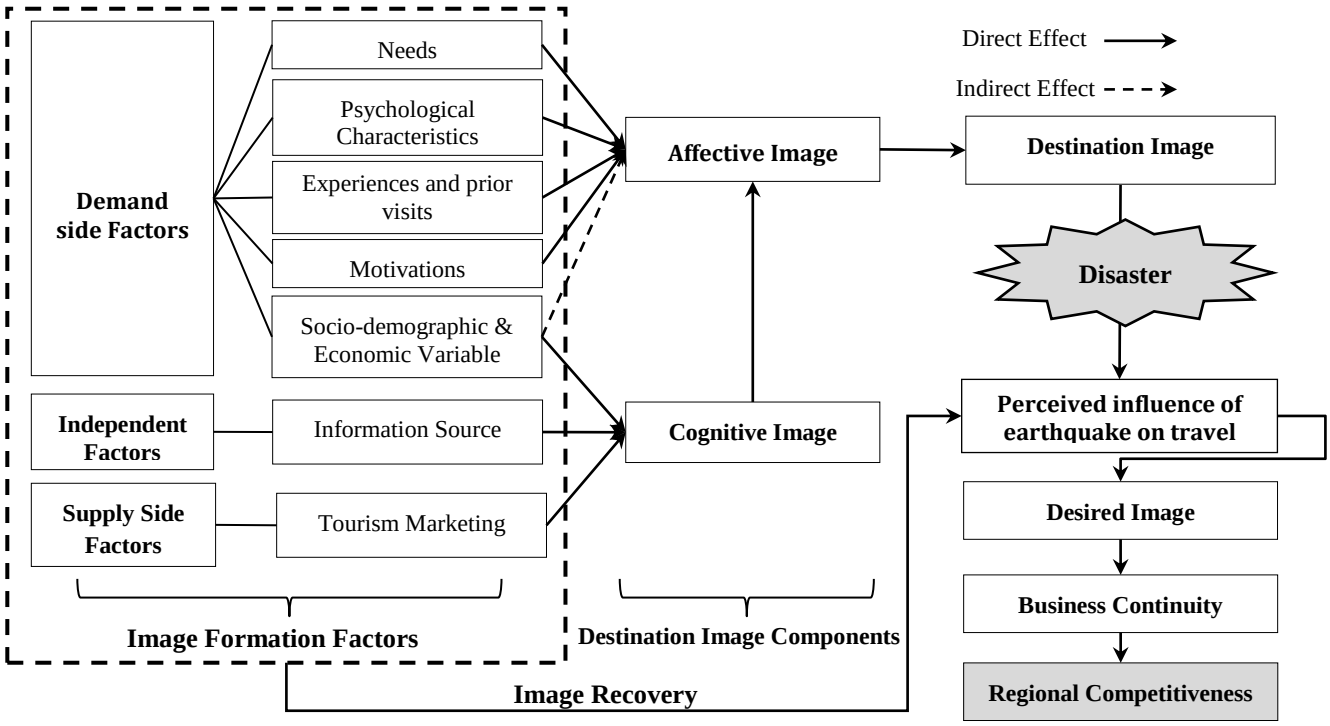

Figure 3. Conceptual Framework of the Study Based on Destination Image Concept

4. Case study

One of the ancient urban centers in Iran is located in Bam City with about two thousand five hundred years old. Due to be at the crossroads of important trade routes including Silk Road and Spice Trade Road and known for the production of silk and cotton garments, this city was of strategic importance. The cultural landscape of Bam and its citadel, which is made entirely of mud bricks, clay, straw and the trunks of palm trees, is a significant symbol of the interaction of man and nature in a desert environment.

Bam tourism industry, a large income generating industry prior the 2003 earthquake, was an important driving force of regional economic development contributes to the employment generation and to the enrichment of many related industries.

After the earthquake, this industry was faced with a severe disorder. 90 percent destruction in the citadel, as a showcase of Iranian architecture, due to the earthquake led to lose its place among the world's tourist attractive poles for several years; Although after the earthquake, citadel and historic perspective of Bam were simultaneously recorded on the UNESCO World Heritage List and the List of World Heritage in Danger, during the twenty-seventh session of the UNESCO World Heritage Committee, and placed in the center of international attention. Bam earthquake, despite all its' damages to the tourism sector, has made the largest international restoration workshop in this ancient city, due to the widespread absorption of foreign experts, including Japanese, German and Italian along with

Iranian experts. Also, this earthquake has raised supports, credits and international attentions for restoration of the citadel.

4.1 Analysing the Impact of Bam Earthquake on Tourism (Situational Analysis) and Outlining the Desire Future

The Bam earthquake was centered approximately 10 km to the southwest of Bam. In terms of human cost, this earthquake ranks as the worst recorded disaster in Iranian history. Damage was concentrated in a relatively small area, of roughly 16km radius, around Bam -a tourist destination on the old Silk Road- famed for its 2,500 year old citadel. The historic city center and fortress ruined. According to field reports, up to 95% of buildings collapsed within the ancient Bam Citadel (Figure 4).

Also, studying the amount of active units by type and location status, based on official statistics published by the Statistical Center of Iran, shows the 88 percent destruction and 11 percent damage to the hotel and restaurant units and also 82 percent destruction and 16 percent damage to business units in Bam after the earthquake in 2003.

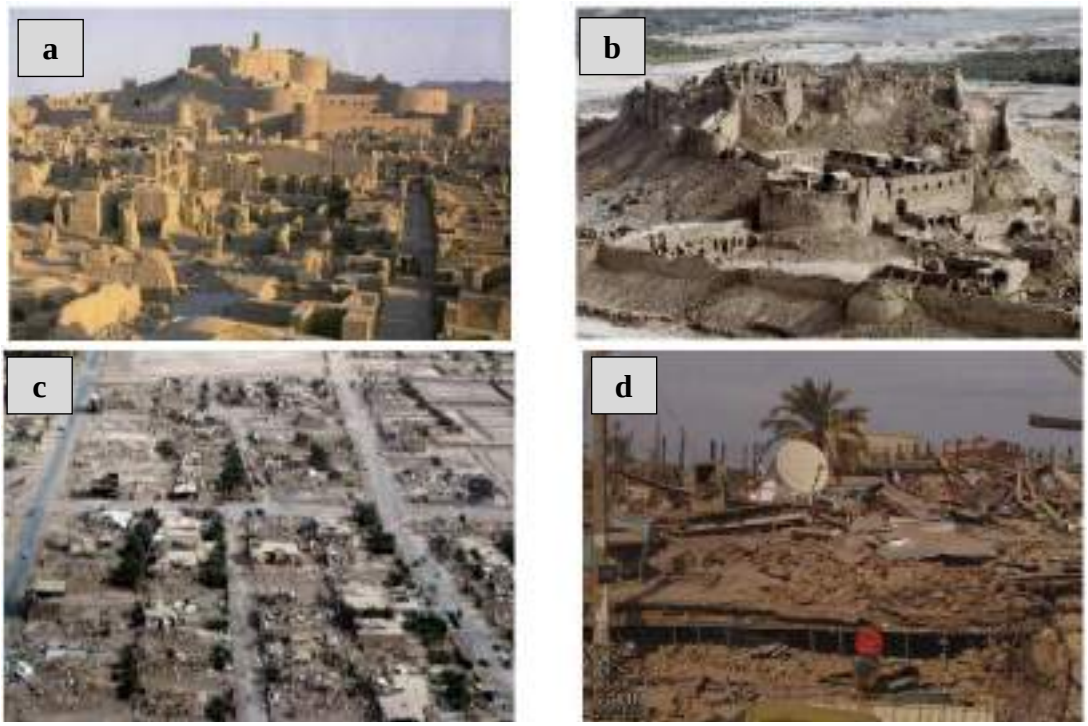

Figure 4. Photo Mosaic of the Citadel of Bam and Surrounding Urban Districts. (a) the Citadel before the earthquake struck; (b) the Citadel after the December 26, 2003 earthquake; (c) residential city blocks razed by the earthquake; (d) mud-brick houses reduced to rubble (Adams and et al. 2004)

It is important to recognize that the impact of such a natural disaster affects not only the immediate communities, livelihood of local people, disruption of natural and built environment which are all important stakeholders at any given destination, but also the minds of the potential travelers. The later will need great attention in the recovery process.

Bam Citadel, one of the greatest monuments of Iran, was almost destroyed by the devastating earthquake on the morning of December 26, 2003. Since this year, in a period of several years, there was no registered visitor, according to official statistics published by the Cultural Heritage, Handicrafts and Tourism Organization of Kerman province.

The 2003 earthquake in Bam caused directly a 100 percent drop in tourist arrivals because of the formation of negative destination image. The ruinous Bam earthquake and the risk of another earthquake have made many tourists perceive that travelling to that region is dangerous and risky. This has caused a sharp decline in region's tourism income and has undermined the continuity of the destination business in future (Figure 5).

So due to the importance of destination image in terms of its effects on Bam tourist behavior and with acceptance of problem solving approach, the main goal of the Bam Business continuity plan is devoted to speed up recovery of the tourism sector by restoring traveler confidence in the region so that visitor flows resume as quickly as possible.

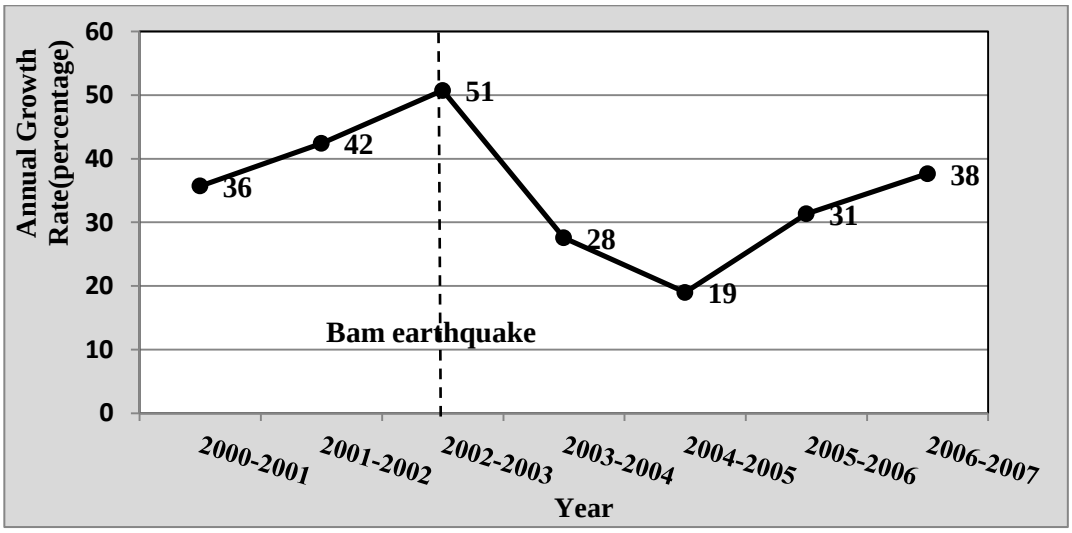

Figure 5. Average Annual Growth Rate of Bam Tourism Sector Income Before and after the 2003 Earthquake due to Authors Analysis Based on Available Official Statistics (Census Data)

4.2 Developing Tourism Revival Strategies

Tourism revival marketing strategies, for establishing a positive desired image or changing the existing image, would be presented in three main parts based on paper's methodology and situational analysis as the result of confronting internal and external factors (Table 2): Destination-oriented or supply-side revival strategies, independent or intermediate revival strategies and perceiver-oriented or demand-side revival strategies;

1- Destination-oriented or supply-side revival strategies

A- Ensuring the sustainability of tourism products in the form of diversification and changing nature of tourism, after the disaster.

Post-earthquake development offers the opportunity to correct the mistakes of the past and make the re-emerging destinations among the best in the world in terms of environmental conservation and community involvement in the planning process. It also offers the chance to rethink and diversify the product offer so that destinations become more competitive in the global marketplace (WTO, 2005).

B- Promoting participatory approaches and decentralized planning and programming for recovery;

As one of UNDP strategies, planning, programming and execution of local level recovery initiatives does not require the complex and time consuming impact and feasibility studies and planning processes of national level long-term reconstruction planning, enabling recovery activities to begin as early as possible after the disaster. Strengthening of community groups to stimulate involvement in planning process also makes them confident.

C- Increasing economic benefits and employment opportunities for the local community and hence sustainable tourism.

Recovery activities should contribute to improving the living conditions of the affected communities and sectors through the revival of production (agriculture, industry), trade and services, and the creation of income-generation/employment opportunities. The goal should go beyond the simple restoration of pre-disaster levels, but aim towards the creation of more sustainable livelihoods for the population. This could be met by improving the living conditions of the affected communities and sectors in Bam through (WTO, 2005):

- employing local staff wherever possible by retraining programs;
- The earthquake disrupted the employment of many of people. Retraining programs are needed to help them find new jobs or to help update their skills while waiting for their former jobs to become available again. Likewise, new employees for the tourism industry need to be trained to replace those who perished and make them more efficient and competitive in order to raise service standards. Building leadership capacity and counseling for those in the tourism sector are also needed (WTO, 2005).

- helping small tourism-related businesses and employees survive the recovery period; Small and medium-sized tourism businesses in the Bam destination, such as restaurants, handicraft producers, have less access to recovery funds than large corporations, so assistance is urgently needed. In addition, many of these enterprises are family-based and may have lost family members in the earthquake. Technical and financial support is needed to help them resume business and increase competitiveness. In this thematic area one policy could be identification and assistance to small enterprises damaged by earthquake through grants and micro-financing.
-

D- Making coordination plan;

Coordination commands would be prepared in this strategy. In reality, multiplicity of actors, national and international, requires improving/maintaining coordination; hence, promoting and initiating recovery activities have to avoid duplications and gaps and to optimize the resources available for sustainable recovery. This could be satisfied through conceiving recovery as an integral part of ongoing developmental process at all levels: national, regional, and local.

E- Making review, refine and maintenance plan in order to update and increase the usefulness of business continuity plan. Since business continuity plan such as cyclical process of strategic planning, requires continues update;

F- Making Risk Management plan;

To make Bam tourism destinations safer and more secure, risk management analysis will be conducted, with special attention to clear communication channels and increase cooperation between the tourism sector and public safety authorities. Training workshops will also be offered in risk and reputation management.

2- Independent or intermediate revival strategies

G- Capacity building to face effectively with negative traveling propaganda for tourism destination and recovering the confidence of the marketplace;

Clear, detailed and abundant information is a key factor to recover the confidence of the marketplace. Effective communications is needed on many different levels: government; business; tour operators; travel agents; the media; and the public. Special attention needs to be paid to travel advisories. The use of special events and development of new products is also needed to help speed the recovery process. In this thematic area policies could be (WTO, 2005):

- Organizing familiarization trips for journalists and tour leaders and
- hosting “hallmark” or “mega” events, involvement with travel writers
- Provide communications expert to help look for and disseminate positive news throughout the recovery period;
- Provide financing to enhance tourism website and email newsletter;

H- Ensuring a stable integrated flow of information to consumers and operators.

Prevention of the malicious rumors spread, that cause harm to destination image, requires sustainable unified information flow for users and beneficiaries and making connection between public and private actors, national and regional organizations and other groups. This could be met tough capacity building in governmental institution for facing effectively with negative advertisements against destination by means of:

- Establishing media center responsible for correct informing;
- Provision of effective contingency plans in order to damages controlling and informing interest groups;

3- Perceiver-oriented or demand-side revival strategies

From a crisis management perspective, a crisis recovery system that is built upon better understanding of consumer psychology in the face of environmental changes can be more effective than one that is built upon suppliers' frame of mind. In this relation Bam demand-side revival strategies are:

İ- Facilitating attraction of tourists all around the world that perceive less risk and are less concerned about travel when the risk of natural disasters:

- Trying to Absorb and motivate American and European visitors that feel more comfortable about earthquake.
- Applying attractive actions for alone and high educated visitors.
- Motivating high income visitors with lower risk perception.

Meeting these strategies require recognition of their interests in defining tourism product; furthermore improving the diversity of tourism infrastructures and the quality of tourism facilities and services that is necessary for these groups of tourists.

J- Changing nature of tourism to meet short term goals and business continuity in the age of reconstruction.

In this relation, disastrous tourism seems effective. Disaster tourism is used to designate tourism to sites of natural disasters (Robbi, 2008). Pottorff and Neal (1994) in their discussion of marketing implications for post-disaster tourism destinations posited that disasters sometimes actually attract visitors that may be curious about the damage left behind. This approach to utilize visitor's mass convergence tendency could be effective to tourists who are driven by novelty, curiosity and competence.

K- Persuading visitors about destination safety and restoring confidence in the minds of potential visitors. Destination marketers should therefore ensure that messages communicated after the disaster is effective at persuading visitors that the destination is safe. Additionally, marketing messages should serve to defray any misinformation prevalent in media which has the potential to significantly affect the rate of economic recovery for the destination (Lehto, Douglas & Park, 2008).

L- Presenting Bam cultural landscape and enhancing the visitor experiences. This could be done through:

- Preparing educational programs;
- Organizing cultural programs such as local festivals and exhibition for both the local domestics and international tourists;
- Developing, publishing and marketing interpretation materials preferably unified in product line and quality with Bam identity (such as souvenir guide book, brochures and information leaflets;
- Improving site presentation and interpretation;

Table 2. The Summary of Bam Situational (SWOT) Analysis after 2003 Earthquake

External factors		
Image factors	**Opportunities**	**Threats**
Supply Side Factors	• Bam registration on the UNESCO World Heritage List and the List of World Heritage in Danger after the earthquake, in 2004, as a factor to absorption of international attention; • Creating opportunities to Modernize and develop of regional economic basis; • Opportunity to correct the mistakes of the past and making fundamental changes; • Having chance to rethink and diversify the product offer so that destination becomes more competitive in the global marketplace; • Drawing the attention of the world to Bam and its cultural landscape as opportunities for economic development of the region; • The inscription of Bam and its cultural landscape on the world heritage list; • Revealing much of the archaeology in the Bam area after the 2003 earthquake; • Attraction and mobilization of international scientific, technical and financial aid and credits for renewal of historic buildings and sustainable development of tourism through UNESCO, Japan and Italy; • Bam Citadel as the largest international workshop for historic restoration experts & scholars and archaeologists from around the world; • Creation of the potential for tourism development with natural crises; • Appearance of the skills and new job opportunities related to reconstruction of the city;	• Destroying about 90 percent of the citadel and Impossibility of visiting from all parts of it; • Increase in population and social instabilities caused by migration of natives and immigration of non-native people to the city; • Reduction in safety and environmental comfort as a factor to outgoing of local capital; • Reduction in regional competitiveness ability; • Formation of negative perceived image in potential travelers regarding safety and security Instability and as a consequence sudden fall in the number of visitors; • Increase in unemployment rate with finalization of post-earthquake reconstruction; • Existence of open work sites where relatively few structures have been completed;
Independent Factors	• Increasing global attention to Bam area through the media;	• Lack of real knowledge between autonomous agents about Bam situation that has caused a more dramatic change in image; • Negative messages communicated after the disaster by high creditable medias have access to mass crowds;
Demand side Factors	• Less influence of the earthquake on American and European visitors' travel intention; • Less influence of earthquake on high-income tourists' intention; • Lower earthquake risk perception in educated tourists; • Lower perceptions of natural disasters in alone people; • Presence of visitors that are curious about the damage left behind the disasters;	• Perception change, especially in low-income visitors, Asian visitors and low-educated tourists; • Presence of further seismic action that contribute to a feeling of insecurity and uncertainty;

Internal factors		
Image factors	**Weaknesses**	**Strengths**
Supply Side Factors	• The possibility of delisting of Bam by UNESCO because of Inability to control the informal settlement; • prolonged reconstruction because of shortage of credit among other national projects; • The 15-year period in the recovery projects due to the sensitivity and complexity of the reconstruction of Bam Citadel; • Disregarding of national institutions to the issue of tourism and crisis; • Lack of the awareness of the rebuilding process and the situation in Bam after the disaster; • Lack of proper policies in order to take necessary scientific and financial assistance of UNESCO for recovery projects; • Under-developed tourism and related facilities appropriate for high income and educated national and international visitors; • Poor preparation for facing another earthquake; • Lack of Active Tourism Controlling Authority; • Inadequate Marketing promotion strategies; • Absence of systematic management of the territory and poor Coordination among local, regional, national and supranational tourism authorities; • Under-developed tourism and related facilities appropriate for high income and educated national and international visitors; • Poor preparation for facing another earthquake; • Lack of Active Tourism Controlling Authority; • Inadequate Marketing promotion strategies; • Absence of systematic management of the territory and poor coordination among local, regional, national and supranational tourism authorities;	• Existence of dependency, economic and cultural sense of belonging and interaction with residents and natives of Bam; • Attractiveness of Bam as an outstanding example of a fortified settlement and citadel in the Central Asian region, based on the use mud layer technique combined with mud bricks; • Touristic attractions of Bam Citadel as promoting economic growth; • High degree of authenticity and integrity in Bam Citadel in spite of the severe damage incurred during the December 2003 earthquake; • Presence of an ensemble of exceptional testimonies to the development of settlements dating back to Neolithic times; • High degree of authenticity and integrity in Bam Citadel in spite of the severe damage incurred during the December 2003 earthquake; • Presence of an ensemble of exceptional testimonies to the development of settlements dating back to Neolithic times;
Independent Factors	• Lack of media coverage and Problem with inquisitive visitors;	-
Demand side Factors	-	-

Authors analysis based on (Iranian Cultural Heritage, Handicraft and Tourism Organization (UNESCO, 2008) and other information sources

5. Conclusion

As shown in this paper, after 2003 earthquake and in the post recovery phase, Bam has been facing not only with daunting task of reconstructing, but with rehabilitation and as one of the most important parts, image restoration. Devastated Bam destination image caused serious problems in tourist viability due to rigorous earthquake influence on behavioral intention of visitors. Bam, as a city with considerable economic dependence on tourism related activities, needs to look seriously for feasible solutions in order to re-imaging destination and hence restoring region competitiveness and its viability; So this paper tried to promote a revival strategies framework for continuing business after earthquake by means of SWOT situational analysis in the form of three image formation factors; since linking the perception changes of the traveler to the destination is important for destinations to effectively manage image formation and change.

As a result, this paper may contribute to the understanding of consumers' affective reactions towards a tourism destination and their influences on future visit intention and by providing a prescriptive list of functions dependent to destination or disaster characteristics can serve as a foundation for revival policy making of Bam in post-earthquake recovery. It also serves as a call for active research into issues relating to the effects of natural disasters on the consumers of the tourism product in the affected areas due to the importance of managing image and image recovery after a crisis situation; Since From a crisis management perspective, a crisis recovery system that is built upon better understanding of consumer psychology in the face of environmental changes can be more effective than one that is built upon suppliers frame of mind. So cognition of differnces between feasible solutions for revival marketing strategies based on tourists with different socio-demographic background is necessary.

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Study on Pedestrian's Speed and Density under the Mid-low Density: Comparison of Pedestrian Behavior on the Station Square between Chiba, Japan and Shanghai, China

Shouni Tang[1] , Dongyun Kwak[2] , Toshio Kitahara[3]

Abstract

Context

The correlation between pedestrian's speed and density is a key point in walking space research. In the field of walking space, there are massive investigations about the correlation between speed and density under the high pedestrian density. Under the mid-low density condition, the question about the correlation between pedestrian's speed and density is not a hot topic in previous researches.

In fact, pedestrians are under the mid-low density condition at all time. And the station square is also a place where there are many pedestrians. Additionally, much attention has been attracted to pedestrian-oriented planning and the cultural implications of place-making in urban planning. Therefore it is necessary to discuss the correlation between speed and density under the mid-low density and compare pedestrian behavior on the station square between Japan and China in order to clarify the different characteristics of pedestrian behavior in dissimilar cultural contexts.

Method

We took the north square of JR Nishi-Chiba Station in Chiba, Japan and the fourth square of Dapuqiao Station in Shanghai, China as two examples. These two squares both have steps and flat. We took videos for one hour in spare time and rush time on these two station squares. We then investigated the situation of pedestrian streams in

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the spare time and in the rush time. By images of these videos, we drew pedestrians' pathways from parts of the videos. So we could get the information of speed, density and shortcut behavior by these pedestrians' pathways.

Statistics & Analysis

From the statistics of data, we could describe the characteristics of speed and density during different periods on the two squares. After the statistic of speed and density, we calculated separately the correlation between pedestrian's speed and density on the steps and on the flat in the spare time and in the rush time.

Conclusion

After the analysis, the characteristics of pedestrian behavior were as follows:

General characteristics on the two squares: the speed is slow and the density is low in the spare time; the speed is fast and the density is high in the rush time. The speed on the steps is slower than on the flat. Under the mid-low density walking space, the correlation between speed and density is weakly positive correlation. It is different from the correlation under the high density walking space. In other words, a certain degree of density can make pedestrians speed up.

Different characteristics on the two squares: pedestrian's speed on the square of Dapuqiao Station is slower than JR Nishi-Chiba Station. Shortcut behavior on the square of Dapuqiao Station is more obvious than JR Nishi-Chiba Station. These results suggest that pedestrians in some parts of China adopt shortcut rather than fast walking for quickly reaching the destination, but pedestrians in some parts of Japan more adopt fast walking. These results are useful to create walking spaces which will be more suitable and effective for person's behavior in dissimilar cultural contexts.

Keyword

Density, Speed, Pedestrian, Station Square, Shortcut behavior

1.0 Context

The correlation between pedestrian's speed and density is a key point in walking space research.(Fruin, J.J., 1971; Pushkarev, Boris. and Zupan, Jeffrey. M., 1975) In the field of walking space, there are massive investigations about the correlation between speed and density under the high pedestrian density.

For studying the effect of the high density on the pedestrian, some researchers

divide pedestrian's density into 3 sections. In the section B and C: density > 1.1 p/m^2(person/m^2), it is taken as the high density section and pedestrian's walking is not free, the correlation between speed and density is negative.(Minegishi. Yoshikazu, 2008; Nishida Yoshihiro, 1985) But in the section A: 0.0 p/m^2 ~ 1.1 p/m^2, it is taken as the mid-low density section. In the section A, some research refer to the part of 0.5 p/m^2 ~ 1.1 p/m^2 , and the correlation between speed and density is considered negative or not obvious.(Morita Takao, 2004; Hirai Noriyuki, 1993)

Under the mid-low density condition, the question about the correlation between pedestrian's speed and density is not a hot topic in previous researches.

In fact, pedestrians are under the mid-low density condition at all time. And the station square is also a place where there are many pedestrians. Additionally, much attention has been attracted to pedestrian-oriented planning and the cultural implications of place-making in urban planning. Therefore it is necessary to discuss the correlation between speed and density under the mid-low density and compare pedestrian behavior on the station square between Japan and China in order to clarify the different characteristics of pedestrian behavior in dissimilar cultural contexts.

2.0 Purpose

This research will take the part of pedestrian density 0.0 p/m^2~0.35 p/m^2 as a condition object, and discuss the correlation between the pedestrian's speed and density on the flat and on the steps.(Nishida Yoshihiro, 1984)

3.0 Observation

We took the north square of JR Nishi-Chiba Station in Chiba, Japan and the fourth square of Dapuqiao Station in Shanghai, China as two examples. These two squares both have steps and flat. We took videos for one hour in spare time and rush time on these two station squares.

3.1 Observation in Japan

3.1.1 Place

JR Nishi-Chiba station north square is in Chiba, Japan. This square has a pure function of transportation. It makes the motivation of walking simple.This square is divided into two parts: flat and steps.(Figure 1, Figure 2)

Figure 1 JR Nishi-Chiba Station

Figure 2 JR Nishi-Chiba Station North Square

3.1.2 Observation time

2010/07/02 It is under the mid-low density condition.
12:30-13:30 spare time(lunch)
17:30-18:30 rush time(go home)

3.1.3 Tool

25mm wide-angle lens camera and timing device.

Figure 3 Dapuqiao Station

Figure 4 Dapuqiao Station Entrance 4 Square

3.2 Observation in China

3.2.1 Place

Dapuqiao Station Entrance 4 square is in Shanghai, China. It is a part of a circular plaza around the subway station. This square also has flat areas and steps.(Figure 3, Figure 4)

3.2.2 Observation time

2011/04/21 It is under the mid-low density condition.
12:00-13:00 spare time(lunch)
17:00-18:00 rush time(go home)

3.2.3 Tool

25mm wide-angle lens camera and timing device.

4.0 Comparison of pathways

We then investigated the situation of pedestrian streams in the spare time and in the rush time. By images of these videos, we drew pedestrians' pathways from parts of the videos. So we could get the information of speed, density and shortcut behavior by these pedestrians' pathways.

4.1 Pathways of JR Nishi-Chiba station square

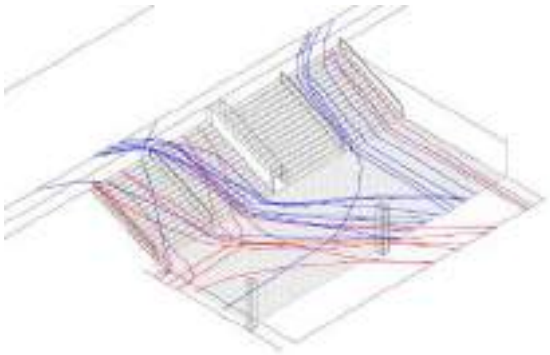

Figure 5 Pedestrians' Pathways on JR Nishi-Chiba Station Square (60s in spare time 12:30-13:30)

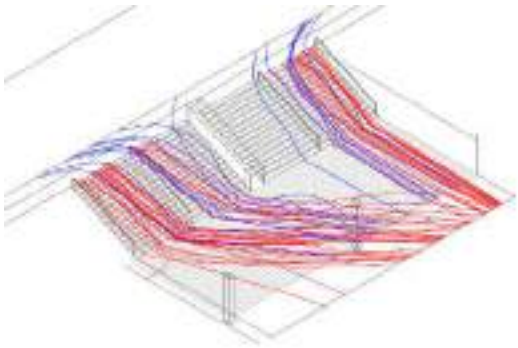

Figure 6 Pedestrians' Pathways on JR Nishi-Chiba Station Square (60s in rush time 17:30-18:30)

We took the videos of JR Nishi-Chiba station square for two periods: 12:30-13:30; 17:30-18:30. Then we chose 5 minutes rush time video from every period. We printed 60 pages of image for every minute video. Through these images, we can draw the pathways. Figure 5 and Figure 6 is pathways for one minute(60s) in spare time and in rush time. In these figures, blue lines are pathways of going up steps; red lines are pathways of going down steps. We find that there are more people going up steps in 12:30-13:30 and more people going down steps in 17:30-18:30.

4.2 Pathways of Dapuqiao Station square

In the same way, we took the videos of Dapuqiao Station square for two periods: 12:00-13:00; 17:00-18:00. Then we chose 5 minutes rush time video from every period and drew the pathways. In order to describe the situation of pedestrians clearly, we showed figures of pathways for 60 seconds. In Figure 7 and Figure 8, red lines

are pathways of going to entrance; blue lines are pathways of going to exit; green lines are pathways of passing. We find that there are more pedestrians to enter the gate in 17:00-18:00.

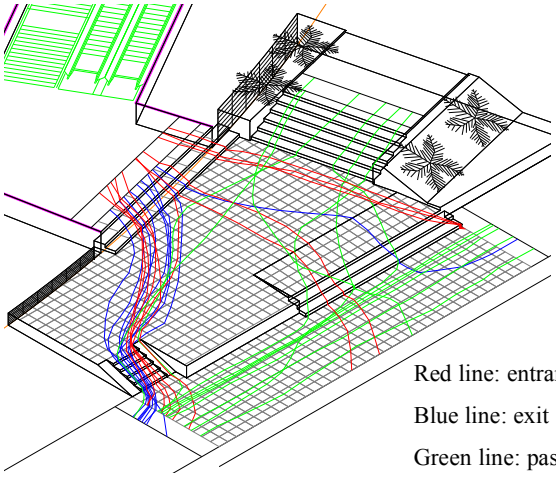

Figure 7 Pedestrians' Pathways on Dapuqiao Station Suare (60s in spare time 12:00-13:00)

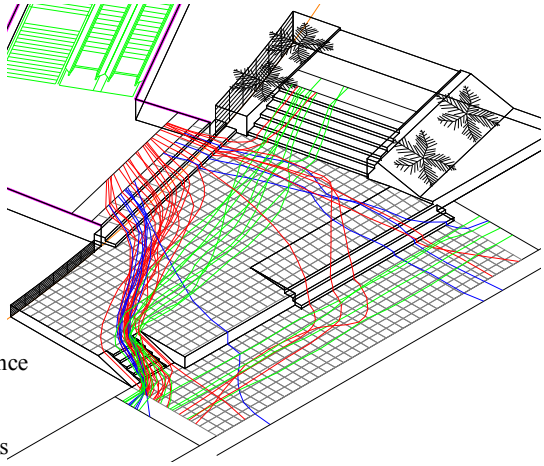

Figure 8 Pedestrians' Pathways on Dapuqiao Station Square (60s in rush time 17:00-18:00)

4.3 Comparison

Pathways on the square of Dapuqiao Station are very concentrated and crowded. Although the square is huge, a large number of pedestrians choose the most narrow steps, because it is the nearest path. These results suggest that shortcut behavior on the square of Dapuqiao Station is more obvious than JR Nishi-Chiba Station.

5.0 Statistics of speed and density

5.1 Data

We got the time for one pedestrian through flat and steps by the video. The number of samples from this 5 minutes is 100 on the flat and 100 on the steps for every period. The speed and density of samples will be counted one by one.

5.2 Definition

Speed is the speed that one person was walking on the step or on the flat at the midpoint of the pathway.

Density is the density that this person was walking at the midpoint of pathway.

5.3 Statistics

From the statistics of data, we could describe the characteristics of speed and density during different periods on the two squares.

5.4 Period comparison

5.4.1 Speed

In this statistics, speed is a key point, because it is an indicator that we can evaluate walking is free or not. The speed of pedestrian is slow at the period of spare time; and it is fast at the period of rush time on these two squares. The effect of time is significant.(Table 1)(Table 2) In the same time, the variation of speed on flat and on steps is uniform.

All in all, under the mid-low density condition, the speed of pedestrian is fast and walking is comfortable, but we can not say that walking is free completely. We must consider other condition.

Table 1 Period Comparison Speed Statistics on JR Nishi-Chiba Station Square(m/s)

Time	Position	N	Mean	Std. Deviation
12:30-13:30	Flat	100	1.4099	0.22514
	Steps	100	0.8159	0.16402
17:30-18:30	Flat	100	1.5737	0.25870
	Steps	100	0.9790	0.24276

Table 2 Period Comparison Speed Statistics on Dapuqiao Station Square(m/s)

Time	Position	N	Mean	Std. Deviation
12:00-13:00	Flat	100	1.3335	0.2299
	Steps	100	0.7199	0.1539
17:00-18:00	Flat	100	1.4880	0.2044
	Steps	100	0.8865	0.2009

As shown in Table 1 and Table 2, pedestrian's speed on the square of Dapuqiao Station is slower than JR Nishi-Chiba Station during these two periods of time .

5.4.2 Density

On JR Nishi-Chiba station square, the density of pedestrian is low in 12:30-13:30,

the mean of density is 0.0888 person/m^2. And it is high in 17:30-18:30, the mean of density is 0.1517 person/m^2.(Table 3) On Dapuqiao Station square, the mean of density is 0.0896 person/m^2 in 12:00-13:00 and 0.1293 person/m^2 in 17:00-18:00.(Table 4) There are middle density condition at times and low density condition at times on these two squares.

Table 3 Period Comparison Density Statistics on JR Nishi-Chiba Station Square(p/m^2)

Time	N	Mean	Std. Deviation
12:30-13:30	200	0.0888	0.0471
17:30-18:30	200	0.1517	0.0566

Table 4 Period Comparison Density Statistics on Dapuqiao Station Square(p/m^2)

Time	N	Mean	Std. Deviation
12:00-13:00	200	0.0896	0.0324
17:00-18:00	200	0.1293	0.0286

5.5 Position comparison

There are two parts on this square: flat and steps. As shown in Table 5 and Table 6, the speed of pedestrian on the flat is fast in 2 periods of time, it is 1.4918 m/s on JR Nishi-Chiba station square and 1.4108 m/s on Dapuqiao Station square. The Speed of pedestrians on the steps is slow in 2 periods of time, it is 0.8974 m/s on JR Nishi-Chiba station square and 0.8032 m/s on Dapuqiao Station square. The variation of pedestrian speed on the flat is larger than on the steps on these two squares.

Table 5 All Periods Speed Statisticson on JR Nishi-Chiba Station Square(m/s)

Position	N	Mean	Std. Deviation
Flat	200	1.4918	0.25546
Steps	200	0.8974	0.22223

Table 6 All Periods Speed Statisticson on Dapuqiao Station Square(m/s)

Position	N	Mean	Std. Deviation
Flat	200	1.4108	0.2304
Steps	200	0.8032	0.1971

5.6 Up & down comparison

Taking the speed of going up steps and going down steps into consideration, we do some statistics as Table 7 and Table 8. The results suggest that speed of going up

steps is slower than going down steps on these two squares.

Table 7 Steps(up & down) Speed Statistics on JR Nishi-Chiba Station Square(m/s)

Steps	N	Mean	Std. Deviation
Up	77	0.8106	0.18761
Down	123	0.9518	0.22558

Table 8 Steps(up & down) Speed Statistics on Dapuqiao Station Square(m/s)

Steps	N	Mean	Std. Deviation
Up	135	0.7735	0.20218
Down	65	0.8649	0.17163

6.0 Analysis

After the statistic of speed and density, we calculated separately the correlation between pedestrian's speed and density on the steps and on the flat in the spare time and in the rush time.

6.1 Flat and Steps speed-density linear fit comparison on JR Nishi-Chiba station square

Figure 9 and Figure 10 are the speed-density scatter diagrams of flat and steps on JR Nishi-Chiba station square. According to scatter of two figures, the scatter distribution of Figure 9 is more uniform than Figure 10. And the characteristic of fit linear of flat is more obvious than fit linear of steps. In other words, the correlation between speed and density on flat is more obvious than on steps.

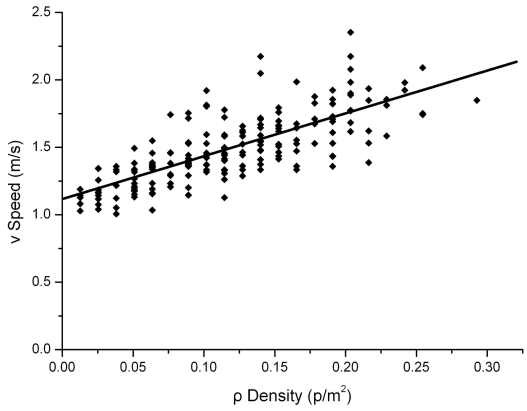

Figure 9 Flat Speed-density Linear Fit (2 periods of time) n=200

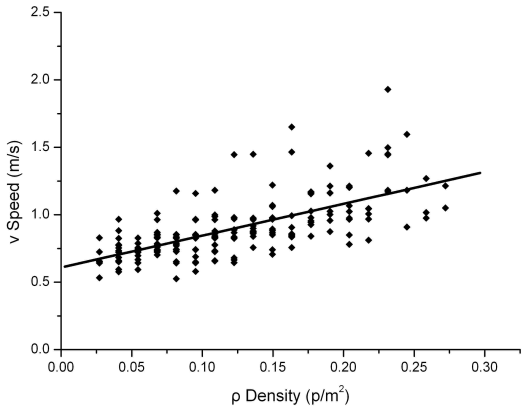

Figure 10 Steps Speed-density Linear Fit (2 periods of time) n=200

On the other hand, The fit linear of flat is steeper than steps, so variation of speed on flat is faster than on steps.(Figure 9, Figure 10)

6.2 Flat and Steps speed-density linear fit comparison on Dapuqiao Station square

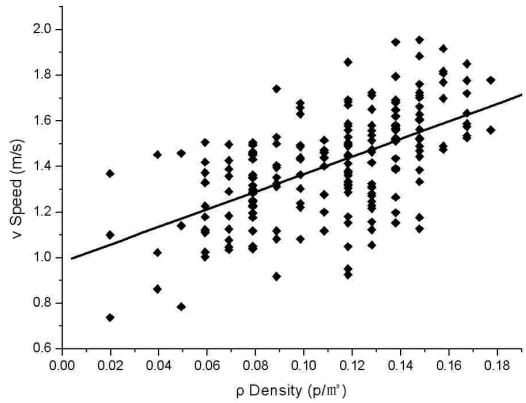

Figure 11 Flat Speed-density Linear Fit (2 periods of time) n=200

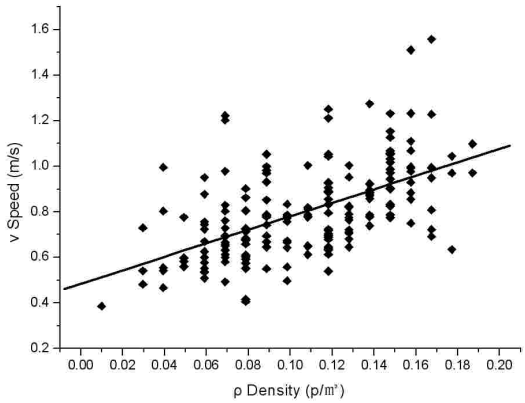

Figure 12 Steps Speed-density Linear Fit (2 periods of time) n=200

Although, the central tendency of the fit linear on Dapuqiao Station square is not stronger than on JR Nishi-Chiba station square, the characteristic of fit linear is obvious. In other words, it is necessary to discuss correlation between speed and density of these two squares. The fit linear of flat is steeper than steps, so variation of speed on flat is faster than on steps.(Figure 11, Figure 12)

6.3 Correlation between speed and density on JR Nishi-Chiba station square

Table 9 shows the correlation between speed and density. On the flat, the correlation is 0.755; on the steps, the correlation is 0.649. Wherever on the flat or on the steps, the correlation is significant at the 0.01 level(2-tailed). It shows that the speed and the density appear weak correlation in relation to the mid-high pedestrian density, but it is positive correlation.(Density is the most important effect on speed under the high density condition, but it is one of effects on speed under the mid-low density.)

The point of positive correlation is very important, because it is different from under the mid-high pedestrian density. Despite that this research have some differences of research condition and method from the previous researches, it is an interesting result nevertheless.(Table 9)

Table 9 Correlation between Speed and Density on JR Nishi-Chiba Station Square

Position	N	Correlation (speed & density)	Sig. (2-tailed)
Flat	200	0.755(**)	0.000
Steps	200	0.649(**)	0.000

** Correlation is significant at the 0.01 level(2-tailed).

6.4 Correlation between speed and density on Dapuqiao Station square

As shown in Table 10, the correlation between speed and density on the flat is 0.581, and the correlation between speed and density on the steps is 0.573 on Dapuqiao Station square.

The correlationn between speed and density on Dapuqiao Station square is weaker than on JR Nishi-Chiba station square. It is the result of pedestrians and environmental(the station square) interaction: Dapuqiao Station square is more complex than JR Nishi-Chiba station square; there are some different characteristics of pedestrians in different areas.

Table 10 Correlation between Speed and Density on Dapuqiao Station Square

Position	N	Correlation (speed & density)	Sig. (2-tailed)
Flat	200	0.581(**)	0.000
Steps	200	0.573(**)	0.000

** Correlation is significant at the 0.01 level(2-tailed).

7.0 Conclusion

After the analysis, the characteristics of pedestrian behavior were as follows:

General characteristics on the two squares: the speed is slow and the density is low in the spare time; the speed is fast and the density is high in the rush time. The speed on the steps is slower than on the flat. Under the mid-low density walking space, the correlation between speed and density is weakly positive correlation. It is different from the correlation under the high density walking space. In other words, a certain degree of density can make pedestrians speed up.

Different characteristics on the two squares: pedestrian's speed on the square of Dapuqiao Station is slower than JR Nishi-Chiba Station. Shortcut behavior on the square of Dapuqiao Station is more obvious than JR Nishi-Chiba Station. These results suggest that pedestrians in some parts of China adopt shortcut rather than fast walking for quickly reaching the destination, however pedestrians in some parts of

Japan more adopt fast walking. These results are useful to create walking spaces which will be more suitable and effective for person's behavior in dissimilar cultural contexts.

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CENTRALITY AND METROPOLIZATION: DETERMINING FACTORS AND REPRESENTATION

DAVID COHEN-SCHNEE[1]

INTRODUCTION

Metropolization can be defined as the extension of recruitment areas with intensified commuting. In this context of increased mobility, what does centrality mean?

This article attempts to answer to that question. We shall first examine the classic methods of identifying centrality: by concentration and attraction. We shall then present an original approach developed by French geographers that will enable us to elaborate our own method of identifying centrality. In order to define centrality, all of these methods have recourse to indicators of concentration and attraction. In addition, they consider that centrality can no longer be apprehended at the level of just one commune, and that communes must be grouped together in order to reach a significant level of centrality. We shall explain how these groups can be constituted.

When we have observed the results of this method, we shall conclude by evaluating the possibilities of development for the territory under study: the Gironde. Depending on the type of transport development strategy and the associated urban planning strategy, we shall obtain contrasting results for the territory.

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1. Identifying subcentres

a. Methods based on concentration

Methods based on concentration presuppose that a concentration of enterprises has a significant effect on the urban spatial structure (cf. spatial distribution of population, employment and property rates). They identify centrality in terms of local density peaks. These methods differ in the manner in which they identify these peaks. We can distinguish two types of methods based on concentration. One descriptive statistics as indicators of centrality while the other uses density gradient models.

Among the methods of the first type we retain those developed by McDonald (1987[1]), and Giuliano and Small (1991[2]). There are many differences between these two approaches. The main controversy focuses on the indicator retained. While McDonald uses, among others, the work/population ratio, Giuliano and Small consider total work density to be a better indicator. They argue that the presence of population is not characteristic of centrality. For them, centrality is based on the proximity of enterprises (cf. localised externalities). Whereas McDonald considers that a work/population ratio > 1 expresses the capacity of a space to attract its neighbourhood.

Frédéric Gaschet (2001[3]) opts for this ratio after demonstrating that the work density retained by Giuliano and Small is too sensitive to certain factors:

- disparity linked to how long the different spaces have been urbanised
- heterogeneity of the proportion of non-urbanised space in different zones
- heterogeneity of the spatial breakdown used

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[1] John F. MacDonald - *The identification of urban employment subcenters* - in Journal of Urban Economics 21 – 1987 - pp. 242-258

[2] Genevieve Giuliano and Kenneth A. Small - *Subcenters in the Los Angeles region* - in Regional Science and Urban Economics 21 – 1991 - pp. 163-182

[3] Frédéric Gaschet - *La polycentralité urbaine* – Thesis - Université Montesquieu-Bordeaux IV - 21 December 2001

- disparity of ground consumption per product unit, depending on the economic activities in question

The second type of method is developed, by Craig and Ng (2001[1]), McMillen (2003[2]) and McMillen and Smith (2004[3]), among others. These methods specify the function of the density, whether parametric or non-parametric. The interest of these more or less sophisticated methods lies in their capacity to define density peaks in relation to their distance from the centre. There is thus no need to adapt centrality thresholds in function of their distance from the centre, as we find with Giuliano and Small.

b. Methods based on attraction

Jean R. Boudeville (1972[4]) makes a distinction between an urban agglomeration (defined as a homogeneous region), and a region of polar attraction (which is heterogeneous i.e. it links centres with each other by means of flows)

We can distinguish two types of flow:

- material and immaterial flows that feed enterprises
- flows of people in transit, particularly commuters

The first type mobilises a reticular and dispersed space. We are interested in the second type because they mobilise a local and more or less compact space. This space is the subject of our study: local urban structuration through labour and centrality.

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[1] Steven Craig and Pin T. Ng - *Using quantile smoothing splines to identify employment subcenters in a multicentric urban area* - in Journal of Urban Economics 49 – 2001 - pp. 100-120
[2] Daniel P. McMillen - *Employment subcenters in Chicago: Past, present, and future* - in Economic Perspectives - 2003
[3] Daniel P. McMillen and Stefani C. Smith - *The numbers of subcenters in large urban areas* - Journal of Urban Economics 53 – 2003 - pp. 321-338
[4] Jacques R. Boudeville - *Aménagement du Territoire et Polarisation* - Editions M. TH. GENIN - 1972

The method known as the preferential flow method is a good means of evaluating the attraction of urban spaces. This method enables us to distinguish gravitational attraction (linked solely to the weight of the territory under consideration) from a underlying attraction. Depending on whether this is positive or negative, we speak of "barrier effects" or "preferential effects". Global observation of flows and any reciprocity between them enables us to determine whether certain flows are dominant or not.

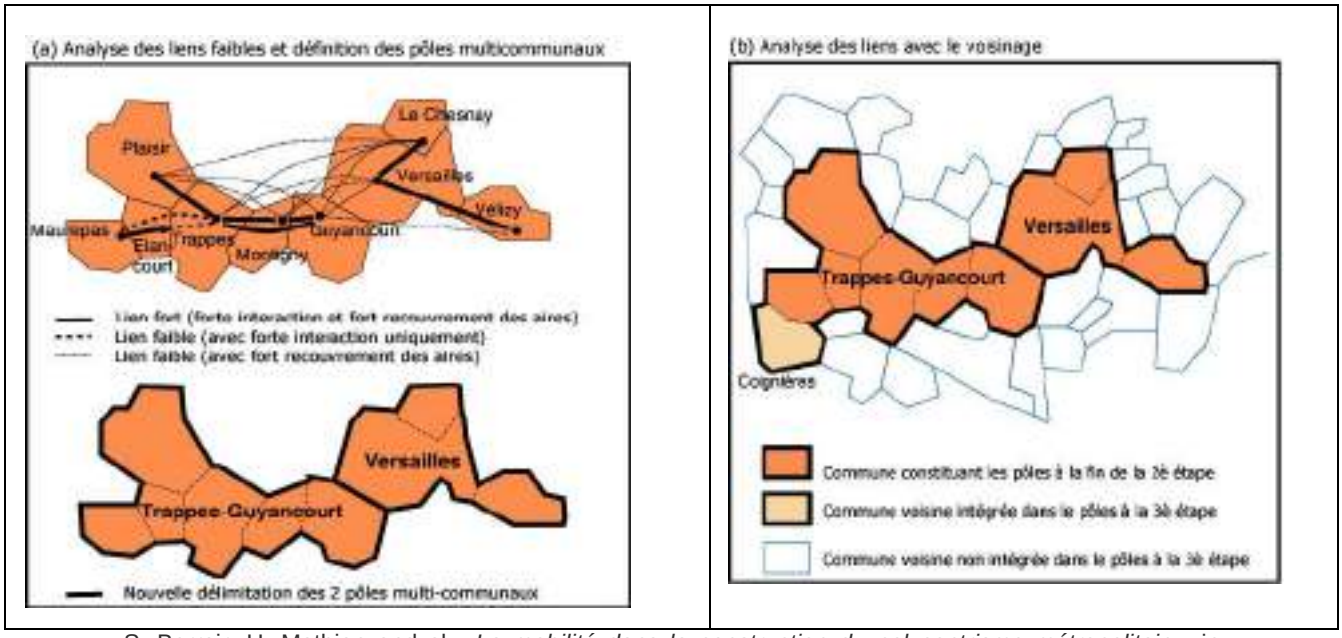
c. Berroir and Mathian's approach (2004[1])

Berroir and Mathian's approach has the advantage of combining the two previously mentioned approaches (concentration and attraction). They define five absolute or relative indicators of concentration and attraction. Using these measuring criteria they then proceed in stages:

- identification of node communes
- consolidation of multi-commune poles
- definitive formation of multi-commune poles

Figure 1 : Identification, consolidation and formation of multi-communes poles

[1] S. Berroir, H. Mathian et al, Mobilités et polarisations : vers des métropoles polycentriques – Le cas des métropoles franciliennes et méditerranéenne, for PUCA, January 2004



S. Berroir, H. Mathian and al - *La mobilité dans la construction du polycentrisme métropolitain* - in Thériault M., Des Rosiers F. (sous la direction) - *Information géographique et dynamiques Urbaines 1* - Hermes-Lavoisier - collection IGAT - p. 41

The great advantage of this method lies in its capacity to model the grouping together of contiguous communes that function together. Based on this method, we can construct a method of identifying centralities in Gironde.

2. Subcentres, commuting and metropolization

a. An approach based on concentration and attraction for the Gironde department: Method

Let: x_i: home-workplace travel inside commune i

y_i: share of commune i employment relative to population

χ a threshold of x

ψ a threshold of y

$$\begin{cases} X_i = 0 \text{ if } x_i < \chi \\ X_i = 0{,}5 \text{ if } x_i > \chi \end{cases}$$

$$\begin{cases} Y_i = 0 \text{ if } y_i < \psi \\ Y_i = 0{,}5 \text{ if } y_i > \psi \end{cases}$$

Then $X_i + Y_i = \{0 ; 0{,}5 ; 1\}$

Aggregation criteria for forming Areas of Multi-commune Cohesion

Communes that reach the stability threshold and the work rate threshold, or communes that achieve only the stability criterion cannot claim to be a part of an area of multi-commune cohesion, their operational modes being largely self-centred.

An aggregation of communes implies that they meet the following conditions:

- a work rate that exceeds the threshold;
- contiguous;
- employment in excess of the thresholds 1500 or 5000 jobs, depending on whether its location is rural or urban, for at least one of the communes applying to form part of an aggregation.

Commune categories

Different types of centrality are thus defined depending on the conditions:

- communes that remain below the thresholds, regardless of the indicators, are classified as towns
- communes whose employment figures exceed the threshold are classified as cities

The distinction between a town and a city thus corresponds to its size, provided it meets no other conditions.

- communes having only the stability rate in excess of the threshold are classified as residential
- if, in addition, the employment figure exceeds the threshold, the commune is classified as an autarchic subcentre

When the majority of jobs provided in the commune are occupied by residents, the autarchic character of the commune is clearly asserted: few employed members of the active population leave the commune to work and, reciprocally, a large share of jobs in the commune are occupied by residents. If, in addition, the quantity of jobs does not exceed the threshold, the residential rather than economic vocation of the commune is clearly asserted. Against this, if the quantity of jobs exceeds the threshold, the term "subcentre" can be applied.

- communes in which only the employment rate exceeds the threshold are classified as centres

When the concentration of work is high, we can speak of a centre, in the sense that this commune acts as a focus for employment. However, because the quantity of jobs is too low, we cannot speak of centrality.

- moreover, if the quantity of jobs exceeds the threshold, the commune is classified as an "extrovert" subcentre.

When it meets both conditions, we can speak of a subcentre: employment is considerable and concentrated. However, jobs are not occupied primarily by residents, many of the active population leave the commune to work and, reciprocally, jobs there are occupied to a considerable extent by an active population from outside the commune: we can thus speak of extroverted commune employment.

- communes with an employment rate and a stable rate in excess of the thresholds are classified as local centralities because the quantity of work available in the commune does not allow it to radiate largely;

- moreover, if the quantity of jobs exceeds the threshold, the commune is classified as a primary centrality: it meets all the conditions.

b. Subcentres and commuting in the Gironde department: Results

The candidate communes for grouping in order to constitute areas of multi-commune cohesion are: Bordeaux, Blanquefort, Mérignac, Le Haillan, Bruges, Cestas and Bouliac; Libourne, Saint Emilion, Pomerol, Vignonet, Saint Pey d'Armens, Saint Hippolyte and Saint Etienne de Lisse; Lesparre and Blaignan; Pauillac and Saint Julien de Beychevelle; Blaye and Cars.

The Areas of Multi-commune Cohesion method enables us to highlight certain striking characteristics. The first obvious feature that comes to the fore when we examine the maps is the almost total disappearance of the residential commune status and autarchic subcentre, with the exception of Soulac sur Mer. The second characteristic is the disappearance of the primary centrality status at the level of the commune. Third, a considerable number of communes have regressed to the rank of town. Fourth, the economic size of communes in terms of the quantity of jobs has increased greatly with the result that many towns have become cities, particularly within the urban unit of Bordeaux where the peripheral communes of the CUB have considerably increased their economic weight. Fifth, although the agglomeration comprising Arcachon, La Teste de Buche and Gujan Mestras concentrates jobs, this employment is insufficient in relation to the local population for it to exceed the centrality thresholds or aspire to AMC status. However, the reciprocal flows between these communes would enable it to meet the conditions for stability. Sixth, the fact that some communes regressed from the rank of primary centrality to lower ranks enables us to formulate the hypothesis that the department space was structured differently between these two dates: a change from local recruitment zones to an inter-connection of departmental sub-spaces.

Figure 2: Gironde – Area of Multi-commune Cohesion – 1982 (threshold 50%/65%)

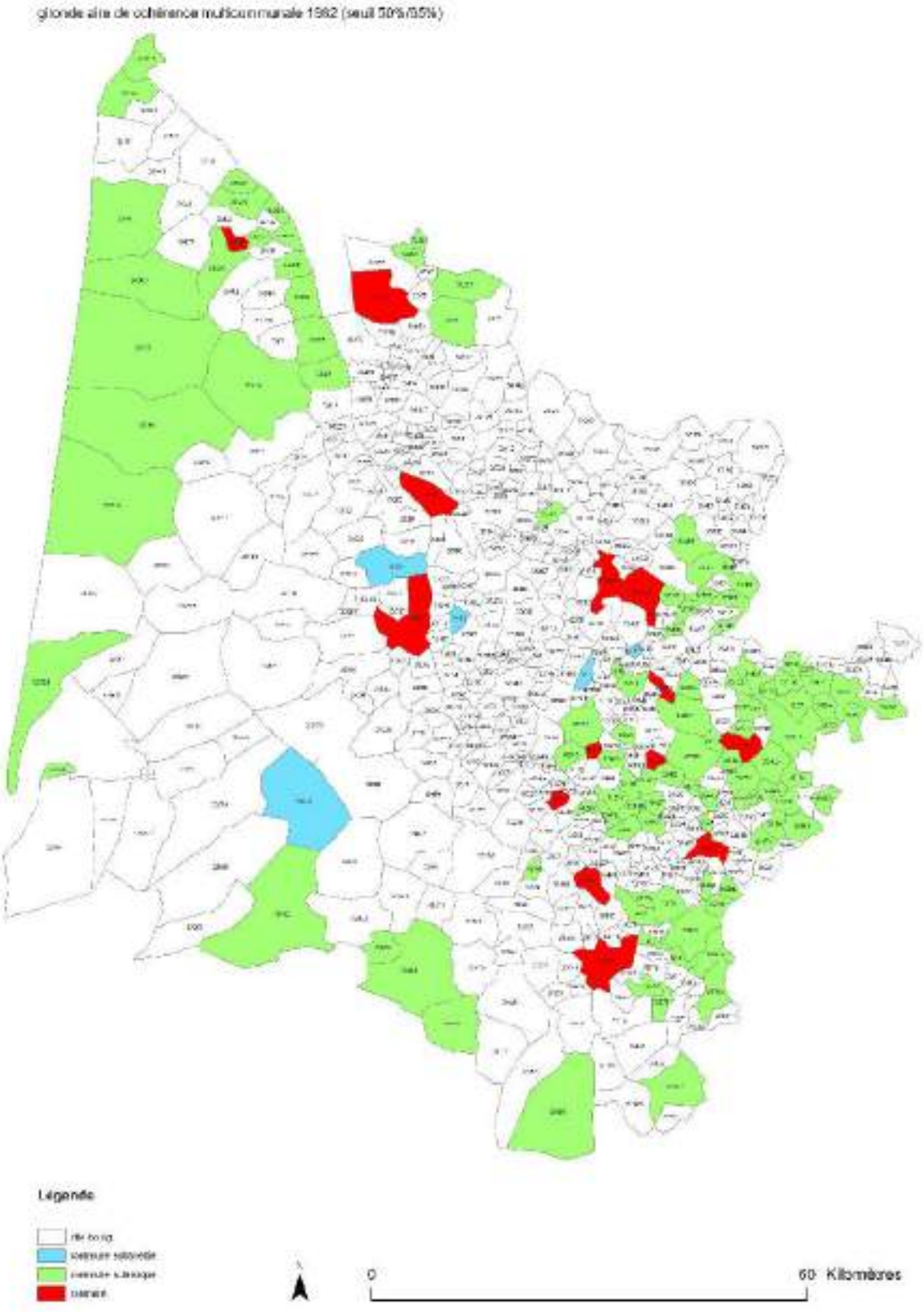
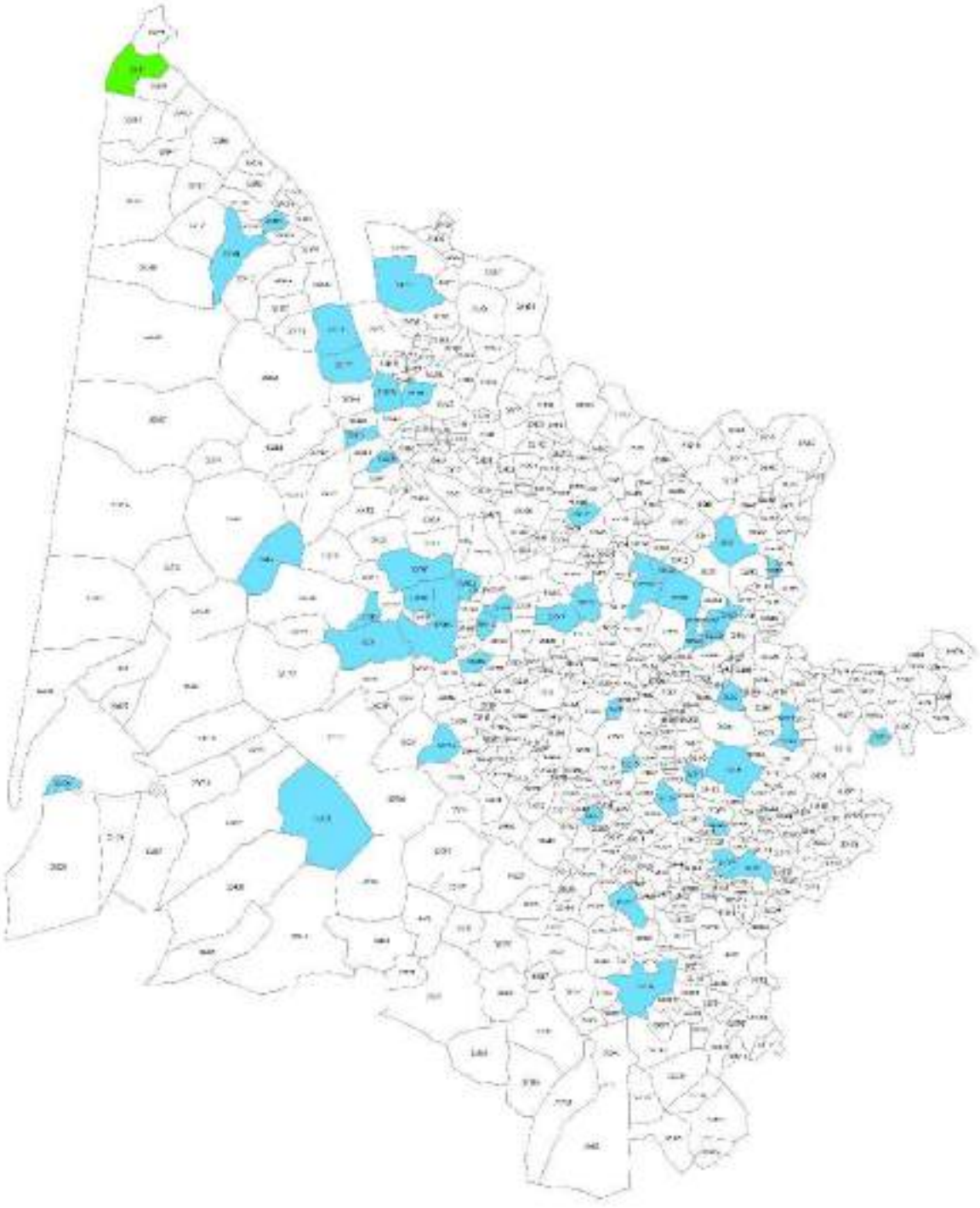

gironde aire de cohérence multicommunale 1982 (seuil 50%/55%)
Légende
0
60 Kilomètres

Figure 3 : Gironde – Area of Multi-commune Cohesion – 2006 (threshold 50%/65%)

grande aire de cohérence multicommunale 2006 (seuil 50%/50%)



Légende

- Aire locale
- Commune attractrice
- Commune attractrice

0 60 Kilomètres

Hierarchical transitions

Table 1: Communes in hierarchical transition between 1982 and 2006

2006 1982	City/Town	Extraverted commune	Autarchic commune	Centrality
City/Town	(Other communes)	Arcins; Bassens; Beychac et Caillau; Blaye; Bouliac; Bruges; Cars; Gironde sur Dropt; Le Haillan; Margaux; Martillac; Mérignac; Pomerol; Saint Exupery; Saint Hippolyte; Saint Léon; Salaunes; Vayres; Vérac; Vignonet; Yvrac	/	/
Extroverted commune	Branne; Espiet	Artigues près Bordeaux ; Le Barp; Blanquefort	/	/
Autarchic commune	(See list in appendix)	Arcachon; Blaignan; Gornac; Lesparre; Landerrouat; Lussac; Merignas; Pauillac; Saint Antoine du Queyret; Saint Cibard; Saint Etienne de Lisse; Sainte Foy la Grande; Saint Julien Beychevelle ; Saint Pey d'Armens; Sauveterre de Guyenne; Soussac	Soulac sur Mer	/
Centrality	Ambès; Cazaugitat; Prignac en Médoc; Rauzan	Bazas; Bordeaux; Braud et Saint Louis; Cadillac; Ladaux; Langon; Libourne; La Réole; Saint Brice; Saint Emilion	/	/

Areas of Multi-commune Cohesion

Based on our definition of AMCs, we can distinguish the communes comprising these areas in Gironde (cf. Table 8 and Figure 47)

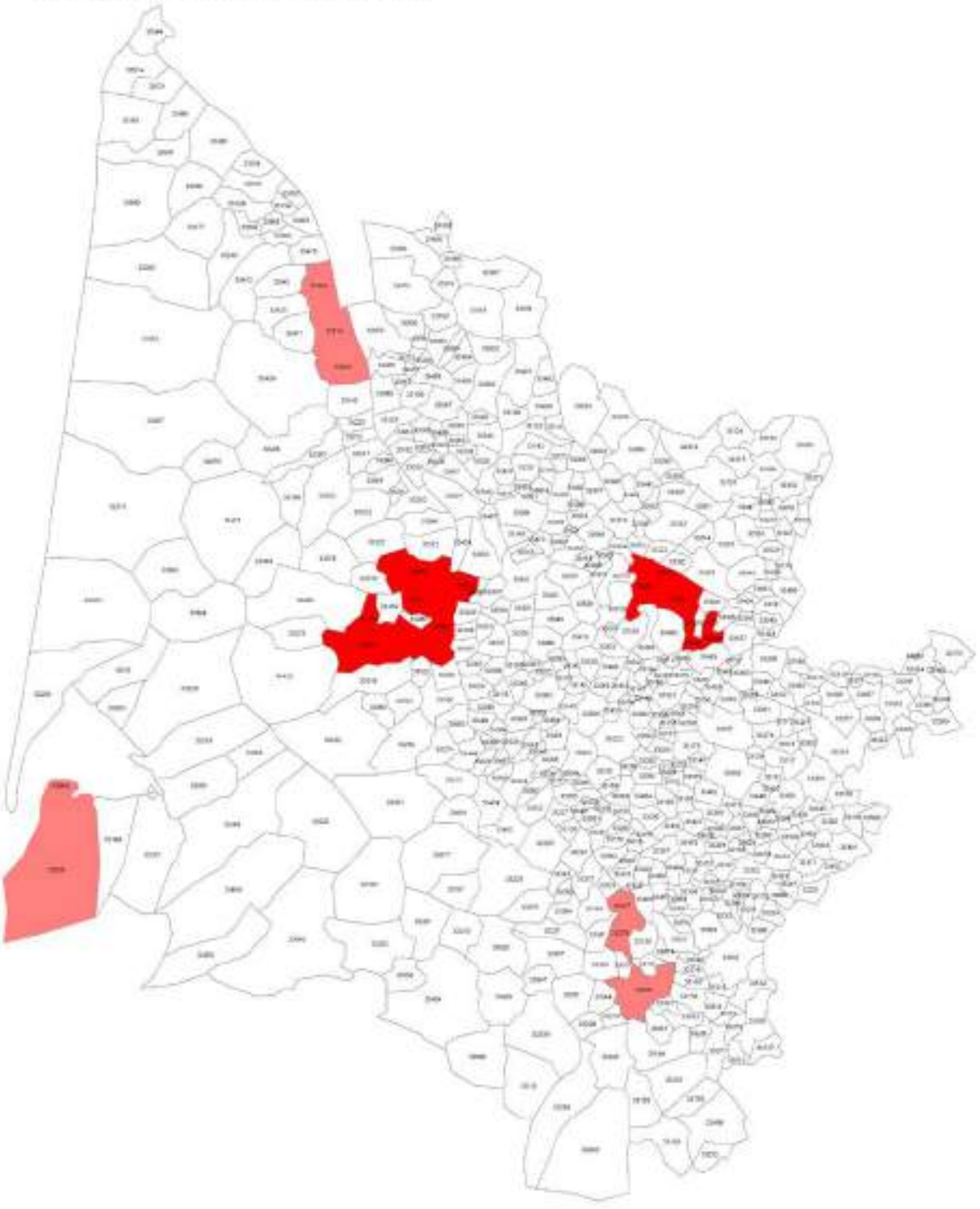
Table 2: Communes comprising Multi-commune Coherence Areas

Thresholds AMC	50-65	40-65	65-65
Bordeaux	Bassens, Blanquefort, Bruges, Le Haillan, Mérignac	Bassens, Blanquefort, Bruges, Le Haillan, Mérignac, Pessac, Cestas, Le Barp, Canéjan, Martignas sur Jalle, Bègle, Latresne, Bouliac, Floirac, Cenon, Lormont, Artigues près Bordeaux, Tresses, Yvrac, Saint Loubès	Blanquefort, Mérignac, Le Haillan
Libourne	Pomerol, Saint Emilion, Vignonet, Saint Pey d'Armens, Saint Hippolyte, Saint Estèphe	Pomerol, Saint Emilion, Vignonet, Saint Pey d'Armens, Saint Hippolyte, Saint Estèphe, Vayres, Beychac et Caillau, Fronsac, Néac, Montagne, Lussac, Saint Cibard, Puisseguin, Castillon la Bataille,	-

		Saint Magnes de Castillon, Saint Laurent des Combes, Saint Christophe des Bardes	
Arcachon	-	La Teste de Buch	-
Langon	-	Mazeres, Bazas	-
Pauillac	-	Saint Estèphe, Saint Julien Beychevelle	-

Figure 4 : Area of Multi-commune Cohesion – 2006

gironde .Synthèse : aire de cohérence multicommunale 2005



Légende

0 60 Kilomètres

c. Some urban planning and transport choices for the Gironde department: a prospective approach

The Gironde territory is subject to powerful demographic and land use pressure that completely upsets the major traffic flows and the balance of territories inside the department. Depending on the strategies adopted for transport and urban planning, and the combinations thereof, we shall see that certain choices can render territorial balances more vulnerable. We have chosen to give precedence to the transport strategy over the urban planning strategy.

We start by defining two scenarios for the transport strategy. The TER and Trans' Gironde networks are of limited efficiency: a 45-minute travel radius from centre city Bordeaux using a modal public transport system scarcely exceeds the limits of the agglomeration. If we take into account the time lost in transit changes and waiting, which can be longer at certain times of day, this radius is reduced even further. However, the intercity networks are not the only source of difficulties in PT links between communes in the Gironde department. The public transport network in the agglomeration of Bordeaux has other shortcomings: once we leave the corridors served by the tramway, the possibilities of finding a quick link to a destination in the Bordeaux agglomeration are reduced. In order to develop a network of public transport, the department needs to free itself from these constraints and limits. Hence the need to increase the current PT offer, but also to improve the quality and inter-connectability of the services provided. Two options can be retained:

- a scenario with a hierarchical system of serving priority centres: increasing the speed and efficiency of the network by applying a system of priority status for certain stations and stops, thus enabling the Bordeaux agglomeration to increase its attraction radius. This scenario could be summed up as "Faster/Farther".
- a scenario with a generalised system to serve all stops stations in the urbanised territory: increasing the efficiency of the public transport network

by eliminating or minimising transit changes, augmenting the number of urban stations or stops, extending secondary and tertiary branches of the public transport network in the metropolitan area. This scenario could be summed up as "Territorial accessibility".

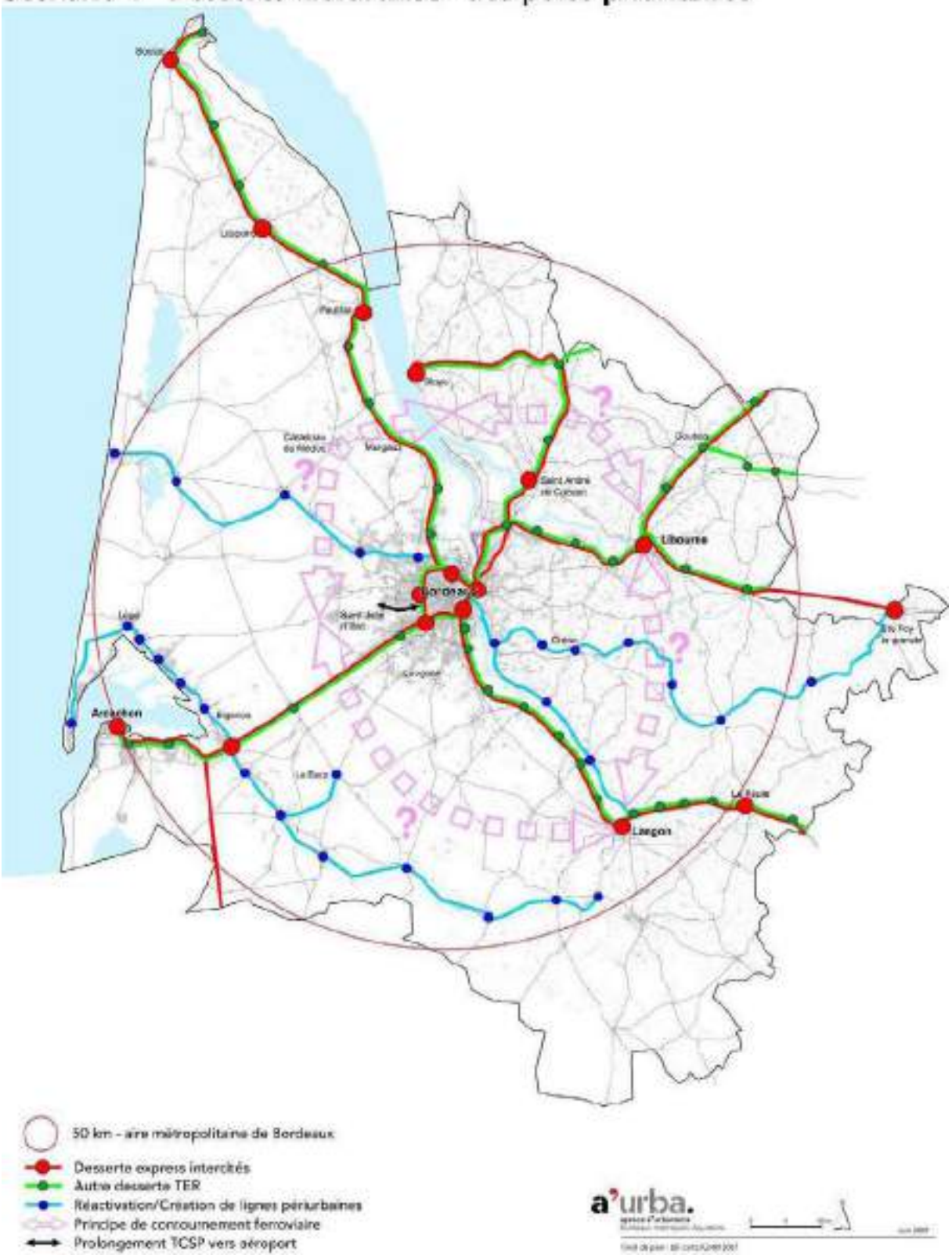
These two logics are complementary and non-exclusive: the efficiency of the public transport service depends on a combination of the two scenarios.

Two principles can be applied to organise PT networks regardless of the scenario retained:

- enhanced exchanges between the Bordeaux agglomeration and the rest of the department
- improved meshing of the urban tramway system inside the agglomeration

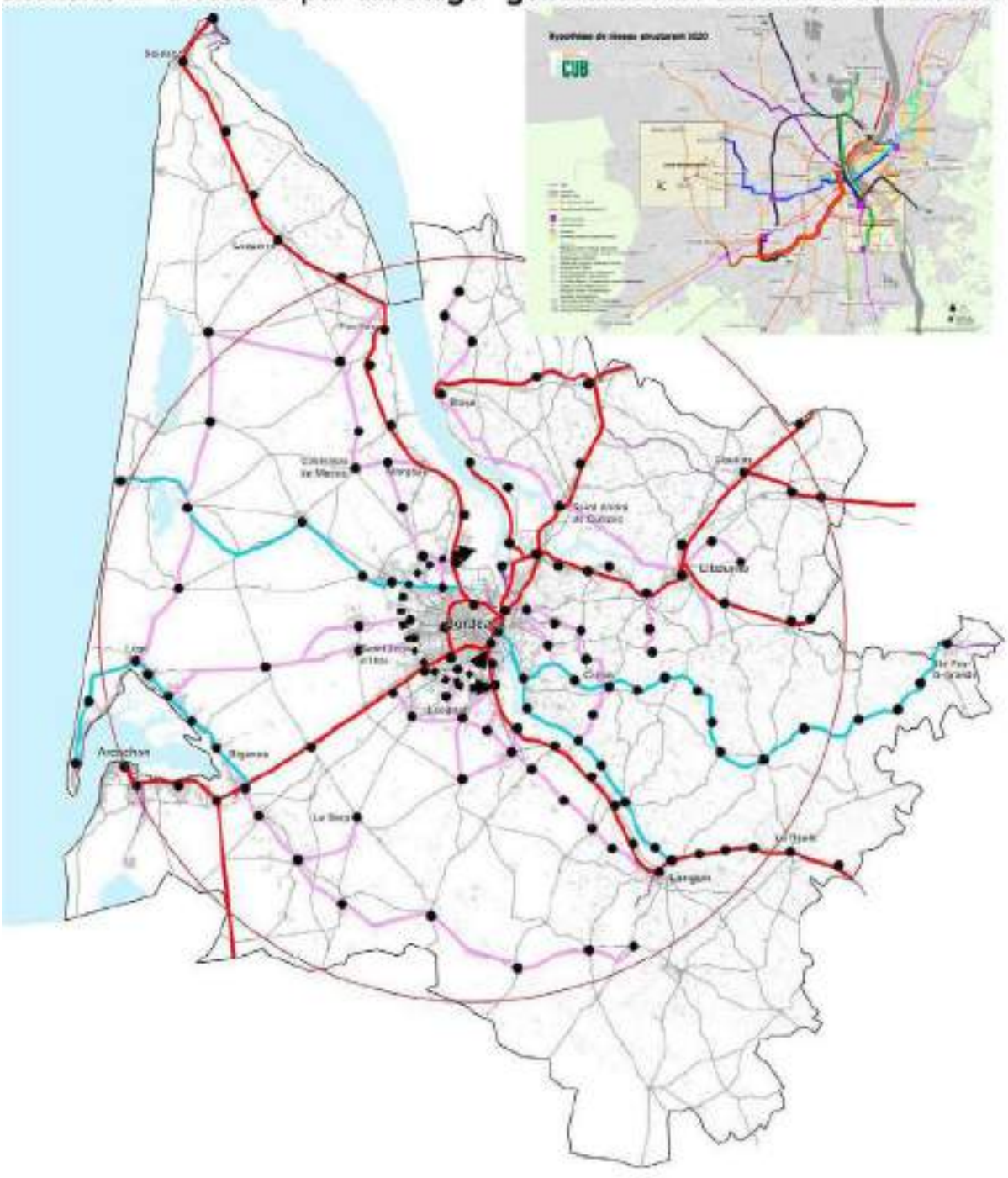
Appel à projet PUCA "Lieux Flux Réseau dans la ville des services"
Pour un scénario de transports collectifs, quels scénarios de développement urbain?
Approche comparée sur les agglomérations de Bordeaux, Coimbra, Karlsruhe.

Scénario 1 "Desserte hiérarchisé" des pôles prioritaires



Appel à projet PUCA "Lieux Flux Réseau dans la ville des services"
Pour un scénario de transports collectifs, quels scénarios de développement urbain?
Approche comparée sur les agglomérations de Bordeaux. Coimbra. Karlsruhe.

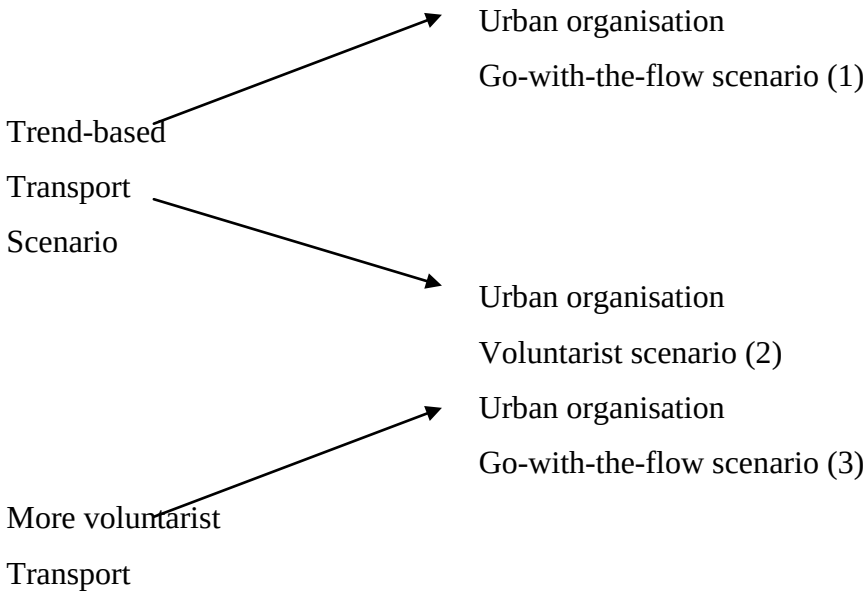
Scénario 2 "Desserte par cabotage" généralisée à l'ensemble du territoire

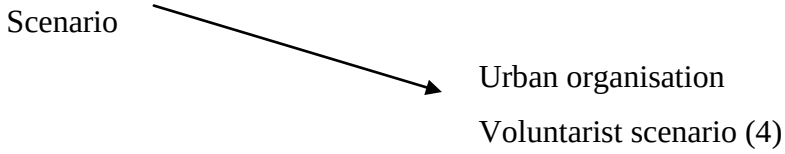


Urban planning choices reflect these transport issues and influence the structuration of the Gironde territory:

- a "go-with-the-flow" scenario: continuing the urbanisation movement without any particular re-evaluation or urban renewal, continuing the current public transport development policy, fragmented political control, lack of cohesive public action, little or no change in the centre-periphery dichotomy
- a voluntarist "Rhineland" scenario: organising the territory into an urban necklace in which public transport (particularly tram-train) acts as a channel for urban development (development supported by public transport policies, public policies for reorientation and urban renewal in and near the leading centralities, train station neighbourhoods, TCSP corridors). This generates secondary urban agglomerations which themselves produce polarities; we can distinguish two approaches, one aiming at residential zones, the other targeting service centres.

The type of territory provides a framework for the elaboration of two possible scenarios for territorial structuration combining transport and urban organisation.





"Go-with-the-flow" urban organisation corresponds to a progressive disconnection between the networks and the underlying urban infrastructures. It is characterised by the absence of an ambitious development policy that prioritizes train station neighbourhoods and the corridors served by the PT. Paradoxically, developing the PT offer would favour the risk of urban sprawl and the occupation-based segmentation of territories by forcing households to reside in increasingly remote zones while continuing to access central activity hubs via effective PT services.

Voluntarist urban organisation (centralities, intermodality, exchange centres) corresponds to the creation of effective urban support systems around the PT networks. The subcentres served by PT being reinforced by urban development and priority densification policies implemented around centralities and train station neighbourhoods, thus rendering polarities relatively independent with regard to the city centre.

We can infer the consequences of urban development choices in function of the retained public transport scenario.

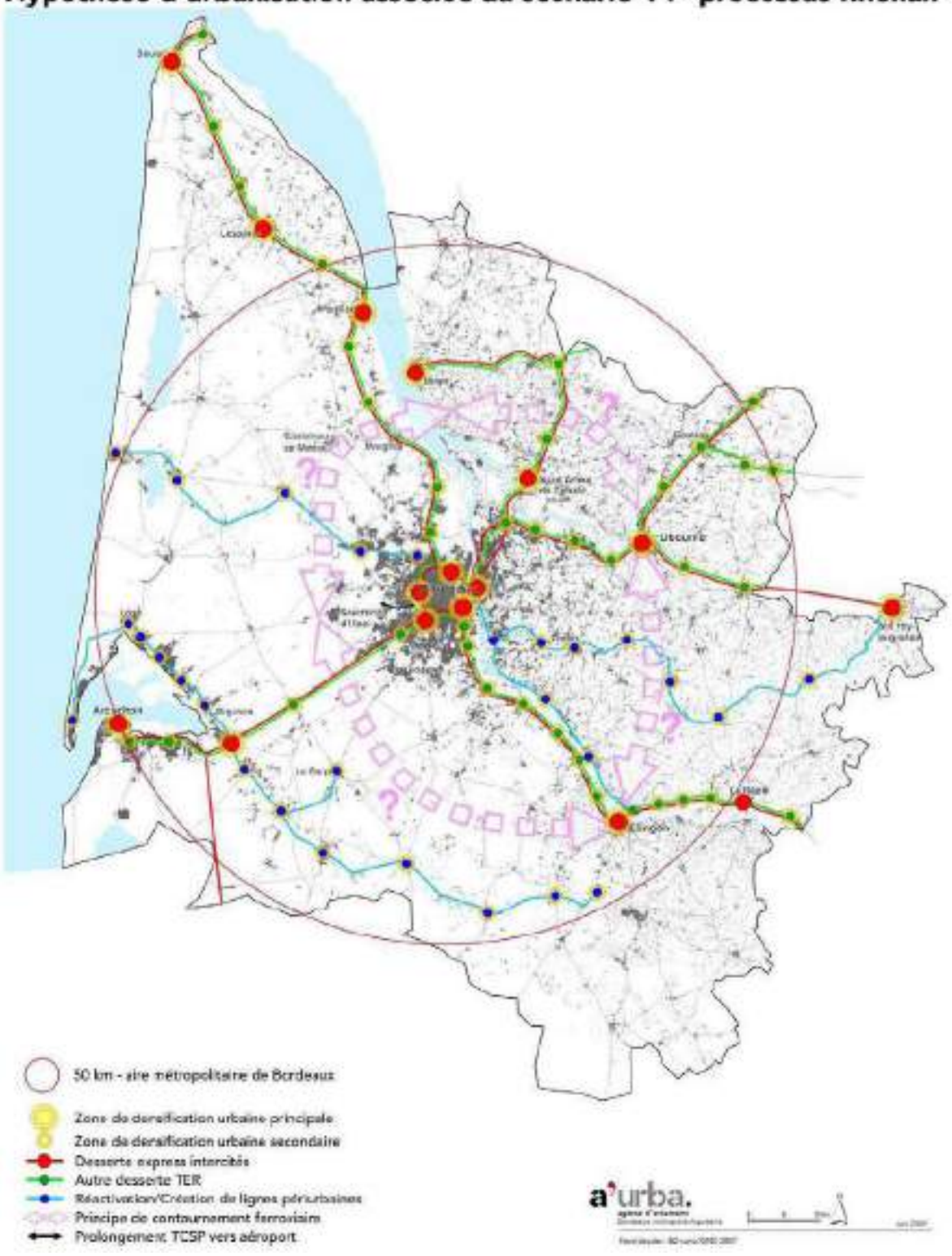
(1) The Rhineland process associated with a hierarchical service

Densification takes place primarily around the polarities constituted by stations served by express inter-city trains. Secondary densification zones are identified around other stations and stops. Outside of these territories, urban expansion is neutralised. This urban policy can be used to curb urban sprawl but also to reinforce the main centralities in the territory. For this development model, the priority centralities would be Soulac, Lesparre, Pauillac, Arcachon, Biganos, La Réole,

Langon, Sainte Foy la Grande, Libourne, Blaye, Saint André de Cubzac and the Bordeaux agglomeration. This model is hierarchical: the Bordeaux agglomeration continues to be the main centrality and the subcentres all converge toward it via a radial public transport network. This model thus asserts a **monocentric** vision of the Bordeaux metropolitan area, dominated both demographically and economically by the agglomeration toward which the mobility system converges.

Appel à projet PUCA "Lieux Flux Réseau dans la ville des services"
Pour un scénario de transports collectifs, quels scénarios de développement urbain?
Approche comparée sur les agglomérations de Bordeaux, Coimbra, Karlsruhe.

Hypothèse d'urbanisation associée au scénario 1 : "processus Rhénan"



(2) Urban dispersion associated with a hierarchical PT service

Densification takes place around the existing urban cores but not primarily around stations or stops in the public transport network. All built-up zones may be terrains for densification, particularly in a close radius around stations and stops served by public transport. The main centralities of the territory (centres, areas and nodes) are no longer the subject of priority densification in the territory: this model is thus a-hierarchical by virtue of the absence of consultation between the urban players. The main result of this model is the dispersion of dwellings around the stations and stops in the public transport network: it is an "**leap-frog**" model.

(3) The Rhineland process associated with a detailed PT service to the territory

Densification takes place primarily around stations or stops in the public transport network. Because the network is close-knit, more stations and stops will be densified. The urban development model nevertheless remains hierarchical. The network converges toward the large agglomerations in the territory (Bordeaux, Arcachon and Libourne) and the subcentres (Gujan Mestras, Sainte Foy la Grande, La Réole, Langon, Coutras, Lesparre, Blaye, Saint André de Cubzac). It would be logical to expect an increase in their power of attraction and their centralising capacity. Even if the Bordeaux agglomeration were to continue to exert a powerful influence, it would be part of a **multi-polar** development model.

(4) Urban dispersion associated with a detailed PT service to the territory

Urban extension develops through densification around stations and stops but also through urban dispersion beyond these. Because the transport network is close-knit

and dense in the region of the three main agglomerations, we can expect conurbations to form and extend around these agglomerations. This development model is characterised by "**urban sprawl**".

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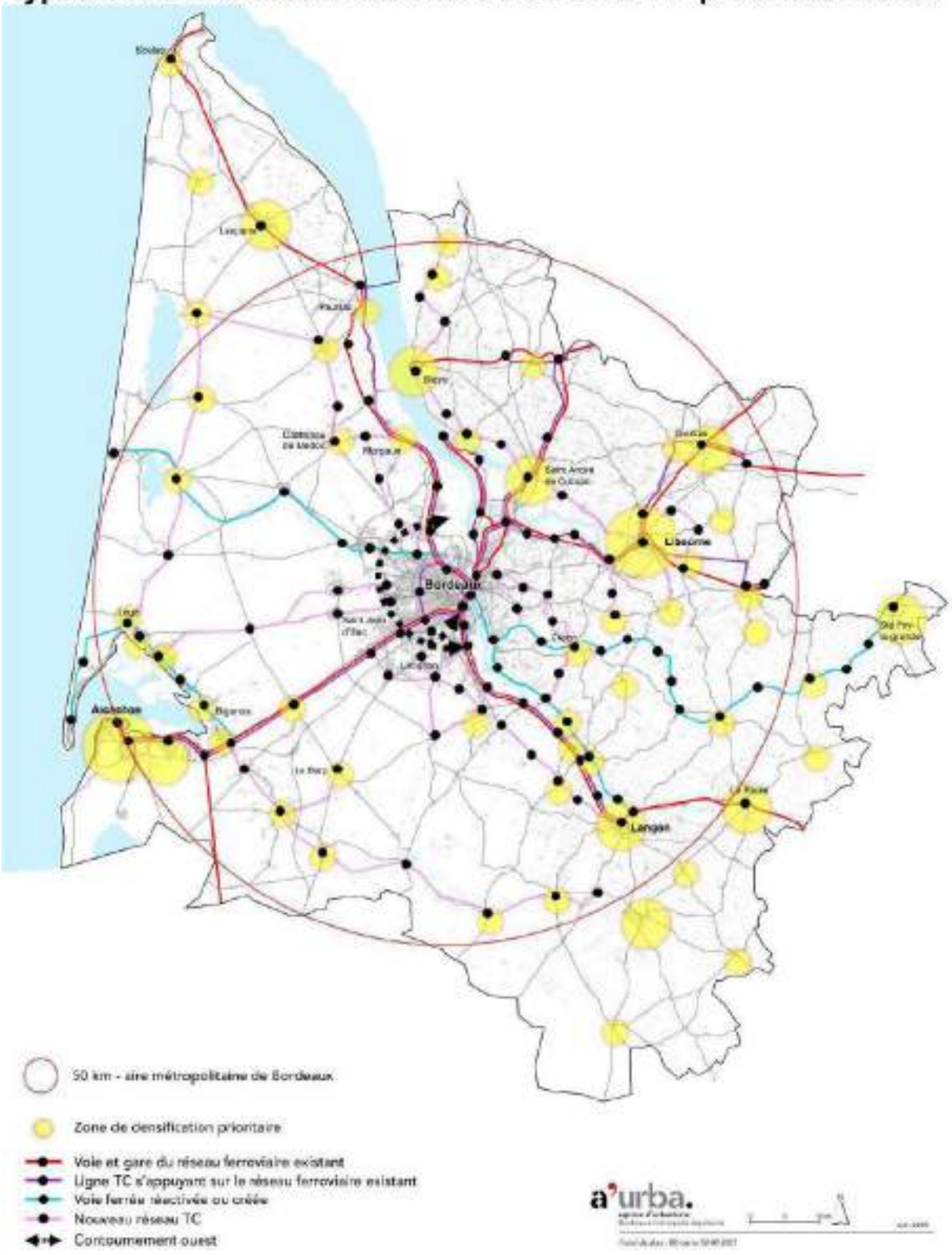
Hypothèse d'urbanisation associée au scénario 1 : "dispersion urbaine"

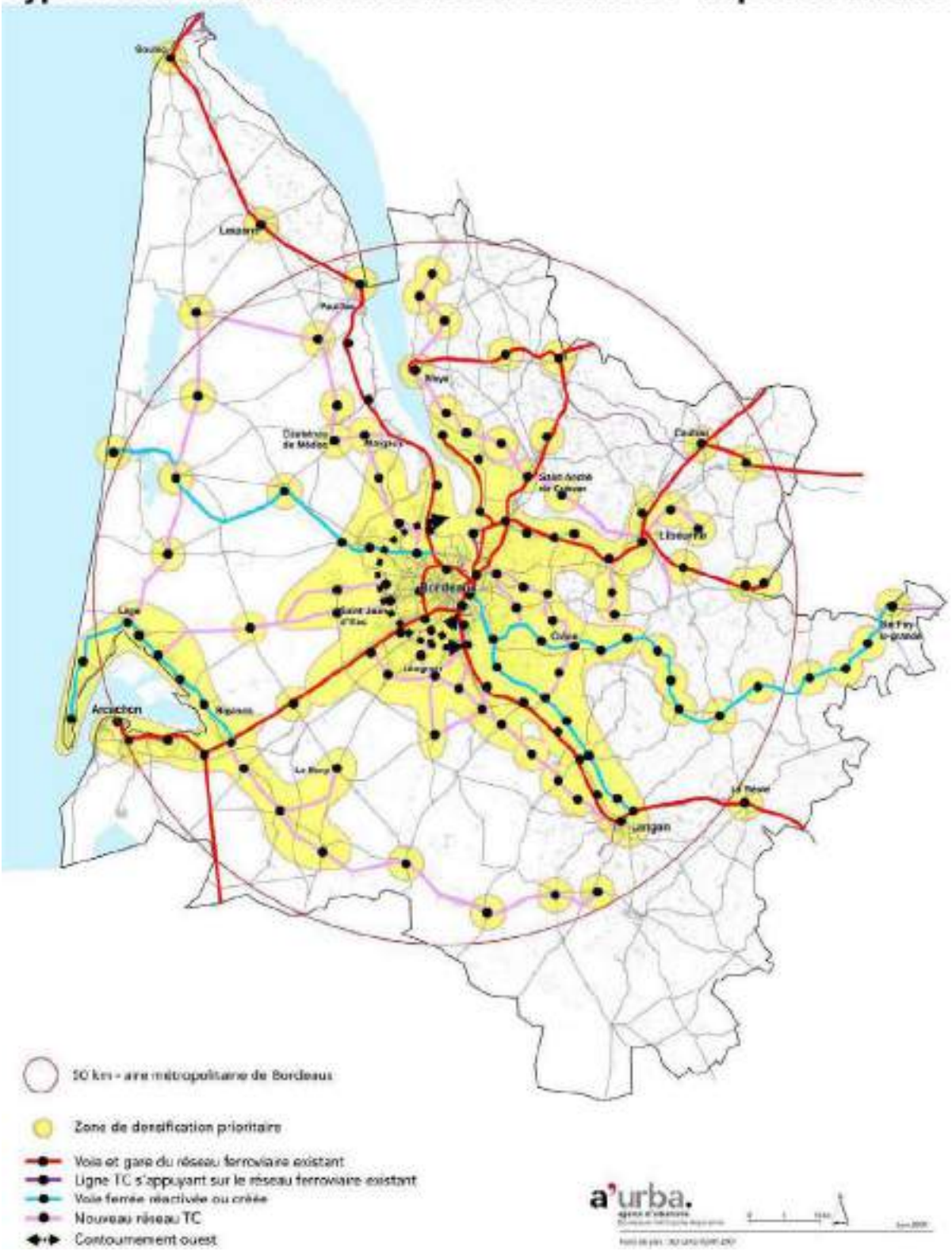
Appel à projet PUCA "Lieux Flux Réseau dans la ville des services"
Pour un scénario de transports collectifs, quels scénarios de développement urbain?
Approche comparée sur les agglomérations de Bordeaux, Coimbra, Karlsruhe.

Hypothèse d'urbanisation associée au scénario 2 : "processus Rhénan"



Appel à projet PUCA "Lieux Flux Réseau dans la ville des services"
Pour un scénario de transports collectifs, quels scénarios de développement urbain?
Approche comparée sur les agglomérations de Bordeaux, Coimbra, Karlsruhe.

Hypothèse d'urbanisation associée au scénario 2 : "dispersion urbaine"



We would like to explain the densification of urban blots on the prospective maps. This process makes it easier to observe the urban phenomena that characterise the different development models: "monocentric", "leap-frog", "multi-polar" and "urban sprawl" development.

Our study thus enables us to demonstrate that there is no ideal strategy for transport or urban planning. In reality, it all depends on the how they are combined: a transport strategy will be effective for a given urban strategy in relation to previously established development targets, but could be completely ineffective for another urban strategy. We wish to stress yet again that the two transport scenarios described in this study are not opposed to each other but perfectly complementary.

CONCLUSION

We find centrality at agglomeration levels greater than the commune and which concentrate economic activity and employment and attract the main flows of commuters. If centrality is not diluted in the metropolization process, we still find risks linked to the extensive and intensive increase in mobility.

Development choices for transport services and the associated urban planning are thus determining factors for the future development of the Gironde. We can infer two complementary types of policy recommendations from these observations: one for the public transport system, the other for economic development. Local decision-makers are thus faced with two main choices for each policy.

For the transport system:

- to serve the whole urban area population settlements;
- to serve the main subcentres.

The "egalitarian" approach enables workers to settle anywhere in the surrounding countryside whilst having close access to the public transport system, whereas the "hierarchical" approach serves more remote places in less time (thus eliminating geographical and time constraints).

For economic development:

- to concentrate and densify activities in the principal subcentres;
- to enlarge and spread activities all over the urban area.

In other words, if policy-makers prioritize a "concentrated approach", this implies a constraining planning decision. If policy-makers prioritize the "spread approach", this implies that the land-use market will have a strong influence on the location of economic activities

By combining these two choices, four consequences can be inferred:

1. development of urban-sprawl;
2. leap-frog urban development;
3. concentration around the CBD;
4. distribution around the principal subcentres.

COMPACT CITY DEVELOPMENT AND THE CHALLENGE OF ENVIRONMENTAL POLICY INTEGRATION

A multi-level governance perspective

Rien van Stigt[1], Peter Driessen[2], Tejo Spit[3]

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Abstract

Sustainable urban development entails integration of environmental interests into decision-making at the local level. In order to achieve this, higher tiers of government, may compel municipalities to explicitly consider environmental objectives or even prioritize them by demanding compliance with national standards, thus, at least theoretically, restricting local government's room to manoeuvre in balancing all relevant interests. This paper explores the extent to which national standards narrow the range of local options and what this means for sustainable urban development. Adopting a multi-level governance perspective to three cases of inner-city redevelopment, we find that environmental standards are either not problematically restrictive or, if they are, sectoral policy offers ways to circumvent them. From a sustainability perspective, this may lead to undesirable outcomes. A combination of approaches may solve this predicament.

1. Introduction

Over a period of some twenty-five years now, since the publication of 'Our common future' (WCED, 1987), the concept of sustainable development has attracted the attention of scholars. Researchers, especially in Europe, have amassed a large body of literature on a particular aspect of sustainable development, namely the integration of environmental policy into other policy sectors (Jordan and Lenschow, 2010; Jordan, 2008; Persson, 2004; Nilsson and Persson, 2003). This concept, known as 'environmental policy integration' or EPI, is wholeheartedly accepted at the (supra)national level and there is much political commitment to it, especially in the EU. However, at lower levels of government, its implementation in everyday decision-making still faces many challenges (Jordan and Lenschow, 2010). As 'Our common future' explicitly mentioned cities as the focus points for sustainable development, it is

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interesting to look at the implementation of EPI at the municipal level, the outcome of which must be sustainable urban development.

In their study of the urban politics of climate change, Bulkeley and Betsill (2005) drew attention to the fact that local authority's aspirations for sustainable development cannot be understood in isolation. Instead, using a multi-level governance perspective (Hooghe and Marks, 2001), they demonstrated that local sustainability policy can be greatly affected by the circumstance that authority is shared among different, state and non-state, actors and institutions. It appears that this multi-level governance character of EPI can, in part, explain the observed 'implementation gap' (Nilsson et al., 2009). The growing body of literature on EPI, however, rarely offers analyses of policy implementation at the local level (Watson et al., 2008); insofar as it does address the multi-level governance characteristics of EPI, the literature concentrates mainly on the national and supra-national level (Nykvist, 2008; Catenacci and Sgobbi, 2007). There are, however, several recent accounts indicating that the pursuit of sustainability objectives by regional or local authorities can be severely hampered by other governing institutions at different levels of the state (Bulkeley and Betsill, 2005; Alahuhta et al., 2010).

By contrast, it can be argued (e.g. Newig and Fritsch, 2009; Bradshaw, 2003) that higher authorities can best safeguard relatively weak interests, such as the quality of the environment. Indeed, the European Union (EU) and many countries outside Europe have adopted a system of quality standards that regulate environmental aspects such as air and water quality and/or energy performance of buildings. Such regulations, in principle, constrain local authority's room to manoeuvre in making trade-offs between social, economical and ecological interests, which, according to Campbell (1996), comprise the essence of planning for sustainable urban development. In the Netherlands, where there are many land-use claims in urban areas – partly as a consequence of national land-use policy, geared to save green and open space – professionals involved in urban area development have indeed claimed that national environmental standards unnecessarily complicate and restrict local development (OTB, 2011; De Zeeuw et al, 2009).

This paper addresses two questions: How and to what extent is local room to manoeuvre restricted by sectoral regulations from higher tiers of government? And how do these restrictions influence the outcome in terms of sustainable urban development? We tackle these questions by analyzing how environmental interests are balanced with other, social and economic, interests. We do so in particularly complex cases, namely inner-city redevelopment near railways, that we deem characteristic for many highly burdened, high-density developments worldwide.

The rest of this article is structured as follows: First, we present an analytical framework, describing the multi-level governance aspect of EPI in cases of urban redevelopment. Second, we look at the role of EPI in the type of urban redevelopment discussed here. Then, after going briefly into the research method used, we give an

overview of the indicators of EPI that are relevant in this type of case study and of the national and provincial requirements that are set with respect to each of these indicators. Next, we present the three cases and the ways in which the most relevant aspects of sustainability have been weighed in each case. Finally, we discuss the findings in the light of our analytical framework and present our conclusions.

2. Environmental policy integration from a multi-level governance perspective

EPI 'refers to the integration of environmental aspects and policy objectives into sector policies' (Persson, 2004). This entails weighing those consequences as well as measures to prevent or mitigate them against other competing interests. Although many authors (for an overview, see Hamdouch and Depret, 2010) have shown 'win-win' situations to exist, trade-offs between environmental objectives and sectoral goals are inevitable (Jordan, 2008; Lafferty and Hovden, 2003). Adopting a normative perspective, the question has been raised regarding the relative weight of environmental considerations in these trade-offs (Jordan and Lenschow, 2010).

Conceptions of EPI appear to vary from 'weak', where environmental consequences are merely *considered* (Schout and Jordan, 2007), to 'strong', where environmental objectives are given 'principled priority'(Lafferty and Hovden, 2003). Moreover, from an analytical perspective, questions have been addressed as to where EPI occurs and which factors are conducive to EPI or, conversely, hinder efficient integration of environmental objectives into sector policies. With respect to the former, EPI literature distinguishes between horizontal and vertical environmental policy integration (Lafferty and Hovden, 2003). Horizontal EPI pertains to an overarching strategy for EPI by some central governmental authority, whereas vertical EPI concerns integration of environmental objectives throughout a particular ministry's sectoral policy. With respect to the latter type of questions, as to what types of measures and strategies may lead to EPI, Persson (2004) distinguishes normative, organizational and procedural factors. Among the normative factors are political commitment, societal backing and fundamental changes in political paradigms. Organizational factors are those pertaining to the architecture of government and non-government institutions. Procedural factors are tools that enable consideration of environmental consequences in decision-making, such as environmental impact analysis (EIA) and strategic environmental analysis (SEA) (Sheate and Partidario, 2010; Nilsson and Dalkmann, 2009), action plans and consultation procedures. Weber et al. (2010) essentially use the same categories.

Although little research has been done into the actual outcome of EPI in day-to-day decision-making, several authors identify an 'implementation gap' (Nilsson et al., 2009) between political rhetoric at the (supra-)national level and policy outcome 'on the ground'. In Finland for instance, integration of river basin planning and land-use planning was reported at the highest governmental tier, but practical implementation at regional and local levels was deemed to need further development (Alahuhta et al., 2010). In Great Britain, local climate policy was hampered by economic development

policy at the regional level (Bulkeley and Betsill, 2005). Conversely, European and national intentions for greening municipal waste policy were severely hindered by local dynamics of the sector in Great Britain (Watson et al., 2008) and Sweden (Nilsson, 2005). In analyzing EPI it is, therefore, necessary to take into account the mutual influence of distinct levels of government (Bulkeley and Betsill, 2005). A particularly useful framework to do so is the concept of multi-level governance, the 'reallocation of authority upward, downward, and sideways from central states' (Hooghe and Marks, 2003). Hooghe and Marks (2003) distinguish two types of multi-level governance: Type I concerns multiple tiers of government, whereas Type II is about the distribution of authority over different state and non-state actors and institutions. Nykvist (2008) terms this vertical and horizontal integration, respectively. Vertical integration in this sense is, however, not quite the same as the vertical dimension of EPI distinguished by Lafferty and Hovden (2003), which does not explicitly include multiple tiers of governance (Steurer, 2008).

A multi-level governance perspective might help understand how the existence and functioning of multiple tiers of government influences EPI at the local level. Such influence may be more profound when the amount of local autonomy, which varies between dimensions of sustainable development and policy sectors (Bulkeley, 2010), is high to start with.

3. EPI in compact urban development

Traditionally, local autonomy in the field of urban development is high. Local authorities are best placed to weigh local interests (De Roo, 2000) and therefore resolve the conflicts between economy, environment and social justice (Campbell, 1996). Campbell suggests that planning for sustainable cities amounts to negotiating three interconnected conflicts: between equity and economic growth, between environmental protection and economic growth and between equity and environmental protection. Clearly, solving the latter two conflicts can be regarded as EPI. In Campbell's view, it is in negotiating these conflicts that the road toward a sustainable city is thought to emerge. This would amount to a 'weak' mode of EPI, because it implies that environmental interests could 'lose'. Many countries have, however, adopted a far more 'strong' mode of EPI in that they have, at the national or, in Europe, at the supra-national level, put in place a system of environmental quality standards to be observed in urban planning, thus principally prioritizing environmental interests.

Many scholars and practitioners hold the view that the concept of the 'compact city' can contribute to achieving sustainable urban development. The term 'compact' does not merely refer to building in high densities (dwellings or workplaces) but rather encompasses intensive use of urban space characterized by: a mix of functions (living, working, leisure, amenities) in, indeed, high densities; a relatively small grain; and the proximity of nodes of (public) transport (Neuman, 2005). The 'compact city' concept could be helpful in preventing urban sprawl (Breheny and Archer, 1998; Breheny,

1997), as it has been in the United States' growth management (Janssen-Jansen, 2005). Compactness, however, also entails the risk of deteriorating environmental and spatial quality (Janssen-Jansen, 2005) and of exposing large numbers of people to natural and industrial risks. This has become known as the 'compact city dilemma' (De Roo, 2000; 1998; Bartelds and De Roo, 1995). The dilemma could be resolved by either relaxing national standards or by allowing local authorities, under certain conditions, to deviate from those standards (De Roo, 2000; Glasbergen, 2005), so as to negotiate a state of what is perceived locally to be 'sustainable', much as envisaged by Campbell (1996).

How do local authorities solve this type of dilemma? And how much freedom to manoeuvre is left to them by higher tiers of government? To answer these questions, one should investigate how each of the relevant interests plays a role in local decision-making and how national or regional regulations may influence the outcome of balancing these interests.

Assuming that EPI is more problematic in complex situations, we examined three cases of inner-city redevelopment near railways. Many comparable situations exist in the Netherlands and elsewhere, and the complexity is comparable to that of brownfield redevelopment, which is receiving attention worldwide as a contribution to sustainable urban development (Raco and Henderson, 2006). Characteristic properties of these urban sites are the coexistence of sources of noise and risk – due to the transportation of dangerous substances and a history of industrial land-use – to which large numbers of people are being exposed. Often, road traffic is intense, aggravating the environmental problems mentioned and adding a powerful source of air pollution.

4. Method

First, we derived from scientific literature those indicators of sustainable urban development which are relevant to EPI in the cases studied. For each of these indicators, we then identified regulations and requirements, set by European, national and provincial governments. Next, of each case, we analyzed the land-use plan, as we perceive it to be the codification of a decision-making process among stakeholders. In addition, we studied the underlying documents, such as ambition statements and preliminary designs. For each of the indicators identified, we established each municipality's objectives, as well as the consequences for decision-making of the restrictions imposed by higher tiers of government. In each of the three cases, we interviewed stakeholders, who could inform us about the way all interests were weighed: the alderman responsible for the project, the municipality's project leader, the project's environmental advisor and a representative of the developing company. These interviews were semi-structured. First, respondents were asked in what way 'sustainability' was made operational in each particular case. Next, for each operational aspect, those interviewed were asked in which way and to what extent they felt helped or hampered by provincial, national or even European government. The relevant indicators (section 5) were used as a checklist during the interview. All

interviews were electronically recorded, typed up and slightly edited, after which transcripts were sent back to the interviewees for comment. The results were used to elaborate our analysis of the land-use plans and underlying documents. We selected developments in three Dutch cities, namely Tilburg, Woerden and Zutphen. We chose cases that were well-documented, where land-use plans were recently finalized, in medium-sized cities (where integration appears not to be hindered by the sheer complexity of the administration). Furthermore, in order to be comparable with respect to the interests being balanced, developments must be mixed-function, within existing city limits and situated near railways on which both passengers and dangerous substances are transported. The cases are representative of many similar situations in the Netherlands and elsewhere.

5. Indicators of sustainable urban development

What are the indicators of urban sustainability and which of those are indicative of EPI? Several authors have suggested sets of indicators (Shane and Graedel, 2000; Shmelev and Shmeleva, 2009), ranging from air quality, energy consumption and resource use to liveability, health and preservation of cultural heritage. The European Commission's guidelines on integrated environmental management (EC, 2007) list a somewhat similar, although not exhaustive, set, which adds local governance and land-use planning. Finally, many Dutch municipalities use a location's sustainability profile consisting of 24 indicators, including the use of resources; local environmental quality; nuisance from noise and odour; safety and security; quality of amenities; access to public transport; green space; urban and residential quality; social cohesion; work; diversity; and IT infrastructure in the area (Nielsen and Jensen, 2010).

Clearly, not all of these indicators are helpful in studying EPI. Neither are all of them relevant to the type of development studied here. From the suggestions above we selected only those that are related to environmental interests and therefore indicative of EPI. Furthermore, we only included in our analysis those that are directly influenced by the redevelopment itself. We propose the following set of indicators: energy efficiency and clean energy production; building materials and waste; water management; urban transport; quality of air and soil; noise; risk; and green space.

Energy efficiency and clean energy production are obvious indicators mentioned by many scholars studying urban sustainability and are directly affected by urban design. A second obvious set are building materials and waste, also mentioned in all of the literature cited above. In our view, however, these are restricted to the development phase itself – hence the explicit term '*building* materials'. Water management, here, is about water *quantity*: allocation of space for infiltration and storage of rain-water put a direct claim on land-use; the collection of sewage and the quality of surface and ground water are regulated on the scale of the water system as a whole and therefore not of direct concern here. Since our objects of study are in close proximity to railway stations, it would be trivial to assess the dimension 'urban transport' by measuring distance to public transport. Instead, we look at urban design that favours transport by

bike and on foot, discourages local car traffic and stimulates the use of rental cars instead of private car ownership. Indicators for local environmental quality are also mentioned frequently in the literature cited: soil and air pollution, noise and industrial risks. These are deemed relevant because of busy road and rail traffic and former or possibly remaining industrial activities. The amount and quality of green and open space is a further obvious indicator, mentioned by many of the authors mentioned above. Density and the mixing of functions are a characteristic of the objects of study and therefore not discriminating. Biodiversity, which in itself is an important aspect of sustainable development, is deemed irrelevant in the case of inner-city redevelopment projects.

6. Regulations and requirements

For each of the sustainability indicators identified in section 5, we now turn to the restrictions imposed by European, national and regional tiers of government. These are summarized in Table 1.

Energy efficiency and clean energy production
The EU Energy Performance of Buildings Directive (EC, 2010) has been implemented in national legislation for new buildings, setting a minimum requirement for energy performance (EPC), which will be tightened over time (BZK, 2011).

Regarding the use of energy from renewable sources, the EU (2009) merely requires national action plans stimulating renewable energy sources..

Building materials and waste
The European Directive on Waste (EC, 2006a), does not specifically cover building materials. Dutch building regulations demand that emission of greenhouse gasses (during use) and depletion of resources are quantified (BZK, 2011), but no requirements are set.

Water management
At the European level, water management is governed through the Water Framework Directive (EC, 2000). At the national level, implementation resulted in a set of water quality standards and the obligations for municipalities, during the preparation of land-use plans, to identify the effects on water flow and quality and consult the regional Water Board on measures to mitigate these effects.

Urban transport
There are no requirements for urban transport at the European or national level.

Air quality
The EU Directive on ambient air quality and cleaner air for Europe (EC, 2008) has been implemented in national legislation, requiring municipalities to assess a development's contribution to ambient concentrations of certain air pollutants. European standards must be observed, although, temporarily, exceptions have been made possible.

Soil quality

The European Commission has put forward a proposal for a framework Directive (EC, 2006). The Dutch national legal framework consists of the Soil Protection Act and concomitant regulations, including standards for a range of pollutants.

Noise

The European Environmental Noise Directive (EC, 2002) aims at comparable methods for measuring noise in all member states and at informing the population about noise levels in their environment, but does not actually set noise standards. The Dutch Noise Abatement Act, however, does provide such standards, specified for particular types of noise. The legal framework contains a targeted noise level maximum and a range of exceptions, mostly for inner-city locations in the vicinity of railways and highways. Since the law was found to be inflexible in intensively used urban areas, local government was allowed to deviate from national standards, taking the so-called City and Environment approach in which nuisance by noise must be compensated by other qualities of the environment (Weber and Driessen, 2010). As a last resort, constructional measures can be taken to limit exposure to noise inside the buildings; these include the so-called 'deaf façade' – which has no windows or doors which can be opened – and a design situating living rooms and bedrooms on the quiet side of the building.

Risk

There is a strict norm for the probability of death due to a calamity involving use and transport of dangerous substances, which must be complied with in decision-making on urban plans. Moreover, a guidance value for societal risk[4] exists, exceeding which compels local government to account for the risk in relation to the societal benefits of the proposed development and the measures taken to reduce the risk and abate possible effects. In order to put an end to recurring conflicts between safety and urban development, national government has established transportation ceilings for most of the transport routes, including those influencing the developments studied here.

Green space

National spatial policy aims to guarantee a basic level of spatial quality (VROM, 2006), which includes issues covered by legislation on nature and environment. With respect to the amount of green space, a target value for new developments (of 75 m^2 per dwelling) is set.

[4] i.e. the probability that a group of people is killed as a direct consequence of a calamity, as a function of the size of that group.

	Regulations	Tilburg	Woerden	Zutphen
Energy efficiency and clean energy production	National EPC standard for new buildings. Experiments with GSHPs* enabled by CRA*. Provincial subsidy for sustainable energy.	PPP* sets EPC* lower than national requirement. Land-use plan enables GSHPs. PPS initiates local sustainable energy supply..	EPC as nationally required. Land-use plan enables GSHPs.	EPC lower than national requirement through CRA. Land-use plan enables GSHPs. Local sustainable energy supply commissioned.
Building materials and waste	No requirements.	PPP sets high targets for GPR* scores.	No explicit targets. Use of GPR is encouraged. GPR-score is high.	No explicit targets. Developer takes voluntary measures.
Water management	Water quality standards and obligation to consult regional water authorities.	Comply with national requirements.	Comply with national requirements.	Comply with national requirements.
Air quality	Air quality standards and possibility to temporarily circumvent these through national action program	Comply with national requirements Prevention of street canyons Limited increase near sensitive forms of land-use.	Comply with national requirements.	Comply with national requirements.
Soil quality	Soil quality standards. National and provincial subsidies.	Comply with national requirements. Remediation and experiments with GSHPs facilitated through CRA.	Comply with national requirements.	Comply with national requirements.
Noise	Ambient noise level standards and possibility to give exemption. Standards do not apply when certain constructive measures are taken at building level.	Comply with national requirements, including exemption and constructive measures at building level.	Comply with national requirements, including exemption and constructive measures at building level.	Comply with national requirements, including exemption. Support from Ministry in re-establishing industrial noise limits.
Risk	Standard for individual risk. Orientation value for societal risk.	Comply with national requirement for individual risk. Strong lobby for national measures to reduce societal risk, but still above orientation value.	Comply with national requirements. Societal risk accepted in view of national transport ceilings and local measures.	Comply with national requirements. Societal risk accepted in view of national transport ceilings and local measures.
Urban transport	No requirements. Guidelines for stimulating transport by bike and foot	New underpasses. Follow national guidelines. Stimulate rental cars.	Follow national guidelines.	New underpasses. Follow national guidelines.
Green space	Target value for green space.	Green public space. No quantitative targets.	Green public and private space. No quantitative targets.	Green public space. No quantitative targets.

* EPC = energy performance coefficient; CRA = Crisis and Recuperation Act; GPR: see text; GSHPs = ground source heat pumps; PoR = program of requirements; PPP = public-private partnership

7. Case studies

7.1. Tilburg

In Tilburg, with just over 180,000 inhabitants (CBS, 2008), an elongated strip of land along the railway adjacent to the city centre, is now being redeveloped into an area of metropolitan character. Plans feature transformation of the formerly industrial site into a high density mix of functions: offices and apartment buildings, some of them high-rise, as well as higher education, leisure and a conference venue. From the start, ambitions for quality and sustainability have been high. Tilburg municipality acquired the central part of the area at considerable cost and, in a public-private partnership (PPP) with a real estate developer, must now fit several functions into a patch of ground that is highly burdened by the railway.

Accomplishment of Tilburg's high ambitions for sustainable energy, building materials and urban quality, reflected in high targets for sustainability score GPR[5], is left fully to the discretion of the PPP. Other dimensions of sustainability require Tilburg to comply with national standards, as can be seen in Table 1, depicting the municipality's room to manoeuvre. Balancing high densities, which are consistent with metropolitan characteristics and necessary for commercial viability, with acceptable levels of societal risk and railway noise is posing a particular challenge. National transport policy, contributing to sustainable development from its own perspective, aims to intensify rail transport, both of passengers and goods. The expected increase in noise levels would complicate the projection of housing directly along the railway, as would the increase of societal risk caused by rail transport of dangerous substances. Planning for office space directly along the railway could

[5] GPR (gemeentelijke praktijkrichtlijn = municipal practical guideline) is a method for assessing the level of sustainability of buildings.

reduce noise levels in the remaining area and would reduce societal risk, but meets with poor market expectations. The volume of shops, leisure and amenities is simply not sufficient to fill out the portion of land that is most heavily burdened by noise. A key to solving the noise problem would be to create a university campus, which is desirable to both the PPP and the university, but would again influence societal risk. Furthermore, this option depends on the university's selling its current buildings at a reasonable price.

In view of the importance of rail transport of dangerous goods to societal risk, Tilburg and other cities along the railway have organized an intensive lobby for lowering transport intensities; this has resulted in transport ceiling values that national government, the province and the municipalities involved have now agreed upon. After completion of the development, however, societal risk will still exceed the guidance value by a factor of more than five. Tilburg municipality balances this risk by taking extra construction measures and incorporating safety features in the urban design. A considerable part of the dwellings realized are exposed to noise levels above the maximum exemption value and requires constructive measures to ensure adequate levels inside.

Those interviewed indicate that soil remediation is facilitated by allowing an area based approach (instead of a case based one). However, as little as possible soil will be removed that, due to national requirements and at considerable cost, would have to be treated before disposal or re-use. This, of course, restricts building design.

7.2. Woerden

Woerden has a population of about 33,000 (CBS, 2008). Along the railway, a city-owned strip of land was initially intended for building offices, partly to shield the existing residential area from railway noise. However, due to projected congestion on the incoming roads, the plan was abandoned. Instead, starting in 2007, when the market for office space had dwindled, a new land-use plan was made, providing space for compact urban dwellings, mixed with a small proportion of other functions. In its intended form, the plan could comply with national requirements on railway noise only by introducing a large, uninterrupted building block parallel to the railway tracks, entailing, however, an increase in societal risk, albeit below the guidance value.

The city council only recently realized that comparable initiatives had been simultaneously launched along the railway, thus providing too many apartments for the local market. The plan was again halted. A former military complex, across the railway and situated farther away from it, is currently being developed after a European procurement procedure. The original program goals included high ambitions regarding energy performance, GPR-score and noise. However, in the course of detailing and implementation, many goals were dropped, likely due to the unexpectedly high cost of soil remediation, retaining only the low energy performance coefficient. Interviews in this case suggest that the province's requirements for soil remediation are too strict and that more of the original sustainability ambitions could

have been accomplished if a longer period of time would have been allowed to accomplish the intended level of soil quality. The municipality's room to manoeuvre is being perceived as limited, although Table 1 shows that it is comparable to that of Tilburg.

7.3. Zutphen

Zutphen has about 43,000 inhabitants (CBS, 2008) and is situated along the river IJssel. Across the railway, which runs along the historic city centre, a large industrial area was established in the 1930's, originally hosting relatively heavy types of industry. In more recent times, some industrial companies have moved out of the area to make room for amenities such as a cinema, large-scale retail and an indoor children's playground. Part of the area is now newly parcelled out for commerce and industry, whereas the most southern part, 'Noorderhaven', situated between the railway, the remaining industry and the river, is reallocated for residential and mixed use. The plan entails medium-rise offices along the railway (as a shield against railway noise), as well as reduction of industrial noise. Part of an old harbour, now filled, will be restored and two new underpasses will connect the new quarter with the city centre, just across the railway.

Analysis of the land-use plan and underlying impact assessments reveals that only national noise regulations pose serious restrictions. Interviewees termed all other environmental issues 'business as usual'. Noise can, within national regulations, be dealt with in the urban design: closed building blocks and a row of office buildings facing the railway. Industrial noise is being reduced and zoning is re-established so as not to overlap Noorderhaven. Furthermore, road traffic noise will be limited by using silent materials and setting a low speed limit. Interviews revealed that development is being hampered by uncertainty regarding the plans of national authorities on the frequency of future passenger and freight trains. To a much lesser extent, the effect of the national plans on the risk caused by transport of dangerous substances by rail also posed uncertainty.

Zutphen has the ambition for the whole of the area to be CO_2-neutral. For Noorderhaven, specifically, an energy performance amounting to 75% of the value demanded by Dutch building regulations was laid down in the Crisis and Recuperation Act. The municipality has commissioned energy supply of Noorderhaven to a private consortium. The land-use plan provides for the use of GSHP's. National regulations regarding air, water and soil quality do not pose serious restrictions on Zutphen's autonomy to develop Noorderhaven, as is shown in Table 1.

7.4. Overall findings

Contrary to our initial assumption (see section 1 and 2), our findings do not indicate that implementing EPI through national standards is problematically restricting the room for municipalities to manoeuvre in balancing interests, with the exception of the very complex situation in Tilburg. Compliance with most national requirements can be accomplished in a 'business as usual' manner. Regulations on noise and risk do pose

restrictions that can, however, be dealt with in the urban design. This workability is a result of policy change with regard to those aspects of sustainability that the past has shown to be problematic: either national standards have been relaxed or authority has been devolved to municipalities, for discretionary implementation (De Roo, 2000; Miller and De Roo, 2004). For example:

- Prior to 1997, Dutch soil quality standards were aimed at achieving natural background values; since 1997, a certain amount of pollution is accepted, varying with the planned land-use (Boekhold, 2008).

- In 1989, societal risk was defined as a limit value , whereas in the late 1990's the limit was transformed into a guidance value (De Roo, 2004).

- Air quality near roads is no longer assessed at the kerbside, but at a point that is representative for a stretch of space along the road, maximally ten meters from the side of the road. Furthermore, if air quality standards will be exceeded as a result of a development, compensation in other areas or temporary exceptions are allowed.

- Until 2007, exemption values for noise had to be established by the province upon request, whereas a municipality can now itself set the value (Weber et al,.2011).

In both Tilburg and Zutphen, SEA was performed, but did not perceivably lead to weighing environmental interests with social and economic interests in decision-making. Rather, SEA seems to be a summation of sectoral impact studies, the main purpose of which is to ascertain that intentions are indeed feasible. Surprisingly, no use has been made of instruments such as LOGO[6] (Simeonova and Van der Valk, 2010; Simeonova, 2006) and MILO[7] (Runhaar et al., 2009; Weber and Driessen, 2010), that have been developed for supporting integration of environmental policy in the early stages of spatial planning.

Instead, prices of and demand for real estate appear to greatly determine the outcome of negotiations within Campbell's (1996) triangle. If, in the Tilburg case, for instance, it will turn out not be financially feasible for the university to trade its current property for a new campus in the Spoorzone area, either more dwellings will be built which will be exposed to undesirable levels of noise and risk or less real estate will be realized, possibly causing a considerable financial loss. By the same token, in the Woerden case the plan was halted altogether as a result of market expectations in the real estate sector. This dependency on the property market is also reflected in the explicit wish to maintain flexibility in land-use plans, leaving space for the developers to adapt the actual layouts – and thus the number of dwellings – to housing demand.

In all cases, uncertainty about restrictions was deemed more troublesome than the actual restrictions themselves. Rail transport intensities, determined at the national level, have long been uncertain, as well as the outcome of societal risk assessments.

[6] Locale Geiedstypologie en Omgevingskwaliteit = local area typology and environmental quality.
[7] Milieu In de LeefOmgeving = Environmental conditions in the living environment.

8. Conclusions and discussion

The aim of this paper was to explore how and to what extent a municipality's room to manoeuvre in local decision-making is restricted by sectoral regulations from higher tiers of government and how these restrictions influence the resulting land-use plans in terms of sustainable development. Our analysis suggests that requirements imposed by higher tiers of government do indeed ensure that environmental aspects are given 'principled priority' (Lafferty and Hovden, 2003), thereby narrowing the range of options in local decision making. The extent to which this restriction of local discretion is problematic, however, was found to depend upon the dimension of sustainability considered. For some types of environmental impact, standards are established that must be strictly observed and that, in practice, can be fully complied with. For other types, regulations are – or have been made – less strict or can be circumvented. These impacts, clearly, are being *considered*, but do not essentially alter the plans. As a consequence of merely marginal consideration of the standards, potentially unhealthy and dangerous situations are being accepted; this was found previously in the case of noise (Weber and Driessen, 2010) and that of risk (Ale, 2005).

Thus, looking at the normative meaning of EPI, a Type I multi-level governance perspective reveals that a national environmental quality standard, which can be regarded as a 'strong' normative interpretation of EPI, at the local level is principally treated as a boundary condition. If requirements are relaxed, allowing local government more freedom, the resulting room for manoeuvre appears to be used to support other than environmental interests. Such a normatively 'weak' interpretation of EPI, resulting from the perception that a 'strong' reading would be too restrictive, is not helpful in promoting sustainable urban development.

A further conclusion is that the concept of multi-level governance allows us to mark distinct differences between tiers of government in the normative, organizational and procedural factors distinguished by Persson (2004). In addition to differences in objectives between tiers of government (Bulkeley and Betsill, 2005; Nilsson et al., 2009; Watson et al., 2008), differences appear to exist in conceptions of norms and procedures. We found political and administrative support for national noise regulations, for instance, to be quite low at the local level. This is not to say that noise is not considered. Rather, it is considered to contribute to a rather vague conception of 'quality' of the living environment. Thus, instead of making an explicit trade-off between noise levels and other interests, balancing interests is done implicitly. This reveals another difference, namely that, at the local level, tools and procedures, specifically intended to facilitate explicit trade-offs (such as the City and Environment approach mentioned in section 6) or to formulate ambitions for environmental quality in the early stages of planning (such as LOGO/MILO, see section 7.4), in practice do not live up to the expectations with which they were conceived at the national level (see also Runhaar et al., 2009). The merely marginal way in which SEA is found to be used here – and elsewhere (Bina, 2008)– also indicates that, between distinct levels of

government, substantial differences exist in appreciation of impact analysis as a support for decision making. One could argue that this lack of integration is precisely the *effect* of the existence of national standards, as they are being perceived to be boundary conditions. In that case, however, it is hard to understand why, in the cases examined, no use has been made of tools that specifically create room for manoeuvre in situations where standards cannot be met. These observations confirm earlier findings that procedural measures are not very successful in bringing about EPI (Nilsson et al., 2009).

Lastly, we conclude that consultation with higher tiers of government, as on societal risk in the Tilburg case, is a key for municipalities to be able to treat environmental issues as an interest, rather than a boundary condition. In a comparable setting in Sweden, however (Polk, 2011), it was found that a network of civil servants, linking across governance levels, increased institutional problem-solving capacity in sustainable urban planning, but that radical solutions, including absolute standards, were not put into practice in the actual planning context.

What does all of this mean for achieving EPI? It could be argued (PBL, 2011) that non-negotiable, centrally established, norms should be abandoned in favour of an integral balancing of the quality of the living environment at the local level, while maintaining or even improving environmental quality. The evidence presented here suggests that this is unlikely. A combination of 1) centrally established norms, safeguarding a minimal environmental quality and 2) procedures to assess what level of quality above this bare minimum can be achieved and at what cost could overcome the pitfalls of relying solely on either approach.

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Housing Policy and social change in communist-run municipalities in the suburbs of Paris

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Introduction

The inner-ring first suburbs of Paris have changed dramatically in recent times. This area developed in late nineteenth and early twentieth centuries, as a result of rapid and massive industrialization (Rhein, 2005). The fast growing industry led to the settling of blue-collar workers and during the 1920s and 1930s many communist municipalities were elected in this area. The Communist-run municipalities of the so-called "red belt" built numerous social-housing units and developed public facilities for blue-collar workers. Since the 1960s the "red belt" has been deeply affected by deindustrialization and experienced economic and demographic decline. Despite a decrease of Communist vote, several communist-run municipalities retain the majority. Since the late 1980s, certain towns began to implement a new urban and housing policy, in an attempt to fight against pauperization and deterioration.

Saint-Denis, located north of central Paris is an archetype of the red belt. The town hosted the main industrial area in Europe in the late nineteenth. At the beginning of the twentieth century, a socialist mayor was elected. Then the municipality rejoined the Communist Party after the split between socialists and communists in 1920. From the late 1960s Saint-Denis has been experiencing deep restructuring and redevelopment. From the late 1980s, the communist "reformists" have been changing their municipal policies to attract private developers and middle-class newcomers. Nevertheless they are trying to maintain their low-income population at the same time, in an attempt to reach a type of "controlled gentrification". How are these ambivalent strategies implemented? More generally, what degree of control do local governments have on social change? Many studies emphasize the determining role played by local government in social change and gentrification (Lees, 2003; Smith, 1996), but very few focus on the restraints opposed to gentrification. We try to provide an overall view of local policies' influence on social change process, analyzing supports to the settling of middle-class residents as well as policy implemented to guarantee housing for low-income residents.

I. Social change and urban policy in Saint-Denis

1.1. Local policies' influence on social change processes

In French literature, the role of local policies in social change processes has been one of the major issues at stake in urban research during the 1960s and 1970s. At that time, several studies denounced "renovation-deportation" plans in old centers (Coing, 1966). On the

contrary, Anglo-Saxon research about gentrification has neglected local policies' influence for a long time (Lees, 2003). It finally became a research issue in gentrification debates during the 1990s. Many studies deal with local governments' supports and incentives to gentrification. Within the framework of neo-liberal policies criticism, several authors emphasize the alliance between local governments and private investors to evict working-class categories from inner cities and attract middle-class categories (Levine 1987; Smith 1996). Usually, academics tend to focus on one single aspect of public policies' role in gentrification: for example on official discourses on gentrification (Colomb 2006; Rose 2006), on particular urban plans within a neighbourhood, or on condominium developments (Davidson & Lees 2005). Nevertheless there is a lack of research addressing intricacy and diversity of political actions interfering in social change. There is a need for complete and precise analyses of public policies at the scale of local governments, taking into account the whole municipality's neighbourhoods and not only those experiencing gentrification. Moreover it is necessary to consider a detailed analysis of local policies, including housing policy as well as urban planning policy and land policy. Finally, although limits to gentrification are a recurrent issue (Ley & Dobson 2008), there are very few studies about restraints opposed to gentrification by local governments. Communist-run municipalities are particularly relevant to tackle such an issue because of their ambivalent political strategy.

1.2. Saint-Denis

Saint-Denis was founded at Gallo-Roman time and grew consistently in late nineteenth, as a result of rapid and massive industrialization. Saint-Denis' industrialization essentially took place in *Plaine Saint-Denis*, a 780 hectare plain because it offered huge land opportunities close to railroad tracks and Paris canal. From the late 1960s deindustrialization hit the town, leading to a loss of 25.000 industrial jobs between 1965 and 1985. At the beginning, the local officials tried to preserve industrial activity and working-class population: they prevented service-sector development and private-housing construction by means of zoning regulations (Albecker & Fol, 2010). Such a policy strategy was applied in the same way in other Communist-run towns (Collet, 2010). In the 1980s the local debate in Saint-Denis was focused on industrial wasteland's future, opposing a conservative view and a development-oriented one. Due to the increasing of communist "reformists"[1] within Saint-Denis municipality in the late 1980s, local policies radically changed, aimed at attracting service-sector businesses in the town. The *Stade de France*[2] building enabled the local officials to carry out their development plan for *Plaine Saint-Denis*. From the bargaining with the State for the *Stade de France* location, they obtained the funding for the highway's roofing, the building of two train stations, the extension of the subway line and for public spaces. These facilities made the town attractive to property developers, all the more so land values and property prices were very low. *Plaine Saint-Denis* is now the third center of service-sector businesses in Paris metropolitan region. But despite economic development, unemployment and pauperization continued to occur in Saint-Denis, due to the gap between the skill level required for the new jobs and that of the resident population (INSEE 2010). Furthermore, a boom of housing construction took place in *Plaine Saint-Denis* fostered by the local decision to promote owner-occupation, in contrast with a traditional preference for

[1] This Communist line emerged in the late 1980s and supported economic development around service-sector businesses. For example, Saint-Denis mayor between 1991 and 2004 (Patrick Braouezec) was a communist reformist, as Saint-Denis current mayor (Didier Paillard).

[2] The Stade de France is the national stadium built in *Plaine Saint-Denis* from 1995 to 1997 for the 1998 Football World cup.

social housing. Private housing's development is at the heart of Saint-Denis new housing policy promoting social diversity to fight impoverishment and housing deterioration. The goal of such a strategy is as a matter of course to attract middle-class newcomers but also to enable residents in upward mobility to home-buy. Nevertheless the local councilors try to avoid as much as possible the displacement of low-income residents, faithful to their traditional support to working-class and disadvantaged population.

The paper is based on a survey led in three Communist-run municipalities in the first suburbs of Paris: Saint-Denis and Bagnolet, located north of central Paris; Vitry-sur-Seine, located south of central Paris. The fieldwork combines interviews of local officials with study of urban planning tools. Purposely, the survey has not been restricted to housing policy, but also takes into consideration urban planning policy and land strategies. More precisely the research looks into means of social change control. In this paper, I will develop Saint-Denis' case.

II. Attracting middle-class newcomers while maintaining low-income population: a controlled gentrification?

In this section, I will expose the tension between both sides of Saint-Denis' housing strategy, combining promotion of owner-occupation to attract middle-class residents and supports to working-class housing.

2.1. Promotion of owner-occupation

Since the Communists gain the majority in Saint-Denis municipality they built numerous social housing units, essentially between 1949 and 1974. As a result Saint-Denis counts around 50% of social housing. During the 1980s a renewal plan took place in a part of the old center: insalubrious housing was cleared out and essentially replaced by new public housing (80% of new units). At that time the local councilors were still hostile to private housing developments. Their main goal was to provide quality public housing in a central location with many facilities, for working-class and secondarily for middle-class residents[3]. Such an ambitious plan was meant to attract some middle-class residents but after twenty years, many middle-class residents have left the neighbourhood (Raad, 2008).

In the 1990s Saint-Denis' Communist "reformists" decided to develop private housing construction, which represents a radical change in local housing policy. *Plaine Saint-Denis* was already attractive to property developers in service-sector businesses, so that housing construction increased very rapidly. The boom of housing construction was all the more striking that no housing was constructed in *Plaine Saint-Denis* during 1928 and 1990. Moreover it happened after a demographic decline unstopped since the 1960s. During the 2000s Saint-Denis was one of the most dynamic town in housing construction in Paris metropolitan region: 3.935 housing units were built between 2000 and 2007 in Saint-Denis. The majority is located in *la Plaine* neighbourhood (2.454 for the same period, representing 60% of Dionysian production). This housing production led to a dramatic population increase: between 1999 and 2008, Saint-Denis population increased from 85.994 to 103.742 inhabitants. In majority, the new housing units are designed for owner-occupation or private

[3] In France, social housing was at the beginning developed to house working-class people as well as middle-class. But from the 1970s, middle-class residents began to leave to buy their homes. As a result, public housing population got poorer.

renting. Local urban planning documents[4] set the proportion of each type of housing among new construction: in Saint-Denis the local councilors decided to build 32% of social housing, 5% of social home-buying and 63% of private housing. In a town with more than 50% of social housing, this shows a real change in housing policy. The urban planning councilor doesn't hide the desire to attract middle-class residents as its words show: "*When you decide to make 60% of home-buying housing, it means very clearly that we want to settle and attract what is called middle-class.*" (Interview with Stéphane Peu, 2009). Nevertheless, the support to private housing construction and owner-occupation goes together with social housing promotion: Saint-Denis produced a significant number of social housing units during the 2000s in opposition to the majority of Paris metropolitan region municipalities. Moreover, local councilors developed some tools to fight against developers' speculation in order to control the increase of property prices. These tools are to be seen in an emerging land strategy designed to maintain low-income population.

2.2. Emerging land strategy to control land prices

From the start Plaine Commune (the multi-municipal administration) introduced the *Building's Quality Agreement* that is a bargaining tool between property developers and local government. This document includes several instructions about housing's quality and recommendations particularly about land prices. Instructions about housing's quality aim to prevent new housing units from deterioration. For example it is forbidden to build condominium developments with more than 50 property lots. As for recommendations, the *Building's Quality Agreement* sets a maximum land price[5]. By such a control on land prices, the local councilors try to limit property prices. Indeed they presuppose that a low land price is going to be reflected in property prices and limit their increase. Saint-Ouen, an adjacent Communist-run town, has a different strategy: they preferred to control directly property prices. Their *Property Developers Agreement* sets a maximum property price and the municipality uses pre-emption to limit the increase in property prices. Saint-Denis opposes its anti-speculative strategy to Saint-Ouen's one, arguing it is better to control land prices than property prices. According to Saint-Denis administration, if the capital gain is not for the property developers when they offer for sale the housing units, the first buyer is going to win the capital gain when he resells its home. But Saint-Denis strategy doesn't completely guarantee that low land prices will be reflected in property prices. Nevertheless, Saint-Denis strategy is not only focused on property prices, insofar as the majority of its residents cannot buy a home at market prices[6].

The multi-municipal administration and the main social landlord in the area – *Plaine Commune Habitat* – developed in 2005 a cooperative society to promote social home buying. The housing units are first designed to *Plaine Commune Habitat* tenants and secondarily to other social landlords' tenants. Therefore the aim is to enable social housing tenants to buy a home at low prices. In France social home buying is not significant; many societies assert they develop social home buying but in realty, they only use tax advantages and zero interest loans[7]. *Plaine Commune Cooperative for Social Home-Buying* offers homes at a lower price and security for buyers. The multi-municipal administration sells land plots at low prices to the Cooperative in order to reduce home prices. Once again, what enable to produce cheap

[4] We mean Territorial Coherence Plan and Local Housing Plan that are multi-municipal urban planning tools.
[5] Land prices cannot exceed 450 euros/m2 of net floor area.
[6] Property prices for new housing goes from 4.000 to 5.000 Euros in Saint-Denis, compared to an average of 8.400 euros/m2 in central Paris.
[7] Zero interest loans are granted to households home-buying for the first time. The amount depends from the home's location and the households' resources; it can reach up to 38% of the total amount of the property price.

housing is low land prices. This is part of a more general land strategy aimed at controlling land prices.

According to Saint-Denis local councilors, low land prices are the solution to build cheap housing designed for owner-occupants as well as social housing tenants. Thus they chose to control land prices rather than property prices. Here we have to precise that after a stage of massive construction of social housing after World War II, the social housing construction has been very limited after 1977 particularly because of a reform of the housing's funding system. In such a context, the ability to produce social housing is particularly important in towns like Saint-Denis with a huge demand for social housing. As the territory became attractive to property developers, the local councilors particularly worry about limiting land prices. Moreover they are trying to anticipate *Grand Paris Plan* that is a huge transportation plan for Paris metropolitan region. In Saint-Denis two new subway stations will be opened: one resulting from the extension of line 12 in *Plaine Saint-Denis* and one forming a part of *Grand Paris Express* new line in the southwest of Saint-Denis (Pleyel). That is why the local councilors are thinking about introducing a *Strategic Land Plan*. First it has to locate strategic spots in the multi-municipal territory, that is to say places that are likely to develop in the future particularly because of transportation plans. The multi-municipal administration aims at buying land in those strategic spots, in order to limit land and property prices' increase and prevent working-class displacement. Besides land's ownership enables them to get the surplus back coming from transportation plans. For now Plaine Commune has an agreement with Paris metropolis Land Public Corporation, which allows it to carry land plots for seven years. But the *Strategic Land Plan* implies to create a new organization that enables land carrying for more time, from 15 to 20 years. Eventually Plaine Commune land strategy is essentially serving housing policy. According to local councilors, land prices' control is crucial to (1) enable sufficient social housing construction in the future, (2) build social home buying and (3) offer cheap private housing for owner-occupants.

Conclusion

Research about local policies' influence on social change processes tends to focus on supports to the settling of middle-class residents but rarely looks into restraints opposed to gentrification. We argue it is necessary to lead a detailed analysis of local policies in various fields at the scale of local governments to give an overall view of local policies' influence on social change. Even though theoretical debates about gentrification are focusing on land values and rent gap, it is surprising that gentrification fieldwork doesn't deal with land policies given the consequences for housing policy.

Saint-Denis local policy is ambivalent since it aims at attracting middle-class residents while guaranteeing housing for low-income residents. Saint-Denis housing policy rests upon land prices' control to enable construction of social housing and cheap private housing. Nevertheless the majority of Dionysian residents cannot buy a home at market prices. Even social home buying isn't affordable to many of them and only represents a small proportion of housing units. For the most part, low-income Dionysian residents cannot afford living elsewhere than in social housing or in private renting. According to local councilors, land prices' control enables social housing construction but given the huge demand in this sector, housing policy at a local scale may not be sufficient.

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Children's mobility patterns in the Urban Environment Case Study - Lisbon

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Abstract

Physical characteristics of Portuguese (mostly littoral) built up areas, as a result of its recent rapid urban expansion and population growth often away from adequate public transportation solutions led to a considerable change in mobility choices. As a rapidly motorising society, Portugal adapted its urban environment as well as traffic and pedestrian circulation conditions to benefit private vehicles and their higher speeds. Economic growth favoured the number of kilometres driven which, despite recent improvements, increased road accidents to unacceptable numbers. Responsibility for urban safe mobility is split amongst different institutions often not yet well coordinated. Road users, who have been adopted busier routines, still show poor awareness towards safer and sustainable road attitudes.

If adolescents' car-oriented lifestyle is to be reversed by making it more active and autonomous whilst still increasing real and perceived road safety and promoting the benefits of sustainable transport modes, a clear understanding of current mobility patterns and their relationship with the built environment and modern existence needs to be carried out. The objectives of the Portuguese research project "Children Pedestrian License" are to diagnose young road users' mobility patterns and to promote responsible, active and safe mobility for this generation. The applicability of some of the methodology developed for this project was examined in a practical way through a case study in Lisbon.

This study involved a comprehensive examination of current commuting patterns in the private school *Colégio Moderno*. This paper explains what data has been collected and describes an in-depth investigation of around 350 set of surveys applied to 3rd through 8th grade children and their respective parents. The analysis offers first insights into the identification of these urban adolescents´ mobility patterns and an understanding of the specificities of inner-city private school students. They tend to have longer commuting distances, regular access to several vehicles per household and stating preferences by bicycle rides which rarely fulfilled. This paper presents and discusses the results for children´s journey home from school and describes how they will be used to contribute to enhance urban mobility choices in Portugal. Lessons from this piloting work have already being used in a

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thorough implementation of the Children Pedestrian License to 120 students in a public funded school (*Escola EB1 n.º 2 da Parede*) in Greater Lisbon.

1. Introduction

Various factors have led to restrictions of movement of vulnerable road users, including perceived or real road safety and security risks, considerably easier access to private vehicles and physical or psychological barriers created by the built up environment (Wittink, 2001). In developed countries, children have been particularly affected by this phenomenon associated to: (1) shrinking number of children per family, (2) parents (particularly mothers) busier life style and (3) rising lack of informal social control.

Urban planning options (McDonald, 2005) – including primacy for networks dedicated to motorised vehicles, urban dispersion (Carvalho & Gomes, 2009) and increased daily commuting distances - associated to widespread access to home technological entertainments, people are been driving away from the public urban space as a place for (more or less) spontaneous social interaction. The environmental, economic, social, gender and age as well as physical and psychological health relationship with children car-oriented daily life, have been analysed through different studies across various disciplines (Hillmand, et al., 1990; Valentine, 1997; McKendrick, 2000; National Research Council, 2005; Pooley, et al., 2005; Johanson, 2006; Brown, et al., 2008; Fyhri, et al., 2011).

The reduced young road users´ exposure to road risk as pedestrians and cyclists has led to fewer child road fatalities in developed societies, like Portugal (ETSC, 2010; ANSR, 2012). However, in Portugal, the number of child road fatalities is still greater than the EU average (Figure 1).

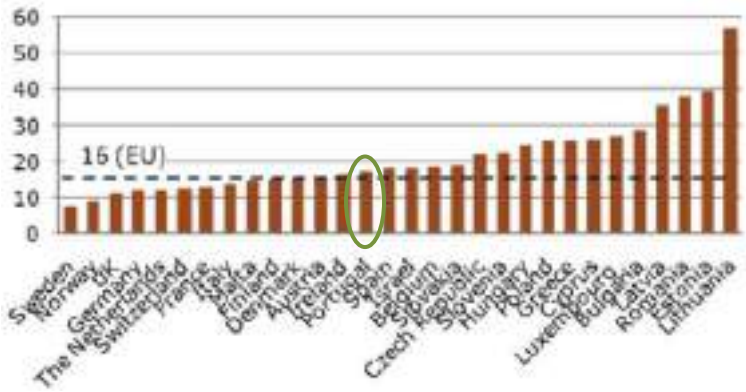


Figure 1. Child Road Mortality. Average values for years 2005, 2006 and 2007 (ETSC, 2009).

On the other hand, research carried out elsewhere shows that there is an association between the decrease in children´s pedestrian mobility and the deterioration of physical and psychological health as well as their social skills and autonomy (Cooper, et al., 2005; Mackett, et al., 2005; Viegas, 2010). An international report on children obesity shows that Portuguese children are amongst the weightiest in the world (Rito, 2009).

The authors are not aware of systematic studies on current mobility patterns of the Portuguese population. An accurate diagnose of the real situation including children´s and their care-takers´ preferences and motivations is required to set attainable mobility programmes and identify adequate measures to influence their mobility choices and complement a rare recent report (Cordovil, et al., 2011).

This paper reports on the preparation and establishment of the first pilot-study within the Children Pedestrian License project (Section 2), which is being undertaken at CESUR, *Instituto Superior Técnico* and *Associação Lavoisier*, benefiting from partial funding by *Fundação para a Ciência e Tecnologia*. The main output from this research project is expected to be a tool which, whilst increasing children and adults awareness towards the importance of walking safely and hence contributing to change their habits, systematically identifies children mobility patterns and supports the identification of appropriate engineering, planning and educational measures. The pilot study (Section 3), based at *Colégio Moderno* in Lisbon, was used: (a) to test, in practice, for the receptiveness of key parts of the developed "Children Pedestrian Licence" methodology, (b) to gain depth of understanding of some of its steps, and (c) to modify the initially proposed method where necessary. Data for the exercise was collected in-situ by means of a survey and an in-depth mobility investigation was carried out to assess the scale and nature of everyday travel and associated influencing variables (Section 4). Conclusions and identification of subsequent work are described in Section 5.

2. Children Pedestrian Licence Project

The main purpose of the Children Pedestrian License project is to promote responsible, active and safe mobility for young road users which in turn requires regular identification of their mobility choices in different urban structures. In order to achieve this, an initial methodology was developed against the vague background of a German programme with the same name.

The proposed framework incorporates mobility choices, perception of road safety and security, plus physical activity levels. The methodology is divided into four main phases:

1. *Project Statement*. Key outcomes from this initial stage are a formal agreement for the project implementation between various local organisations and the identification of required resources;
2. *Training Strategy*. Includes a course provided by the local police to roughly half of the children participating in the project. This training includes theory

and also a practical part in the vicinity of the school, with indication of the safest routes to school;

3. *Diagnosis of Mobility Patterns*. Data is collected by carrying out surveys to children and their parents on their perceived risks and mobility choices. Before and after the training by the police (Phase 2), surveys are applied to trainees and their parents as well as to a control group. Data collected is analysed for initial and changes in motivations and real choices, through descriptive and statistical analyses; and
4. Investigation of Relevant Measures. Relevant complementary remedial measures will be identified by multidisciplinary teams with a context sensitive approach.

Each project phase has been broken-down into steps. The subsequent activities to the four stages listed above are the choice of suitable measures and their implementation and monitoring. Each application of the project culminates (although does not finishes) with a public ceremony where trained children are granted a "Pedestrian License" (Figure 2).

Figure 2. Picture of the Children Pedestrian License (in Portuguese).

As part of the piloting application in *Colégio Moderno*, the study here reported was restricted to the Diagnosis of Mobility Patterns (Phase 3) which will be detailed in the subsequent sections of this paper.

3. Methodology

The process for developing the pilot study in *Colégio Moderno*, which focused on the Diagnosis of Mobility Patterns (Phase 3 - Section 2), consisted of three steps: (1) Assembling Data and (2) Data Analysis presented in this Section; as well as (3) the Identification of Mobility Patterns described in Section 4. The project statement, the training phases and the identification of relevant measures are not discussed in this paper as they were beyond the scope of this pilot study. As such, a control group was here unjustified.

3.1 *Colégio Moderno*: general description of its context

The mobility patterns of *Colégio Moderno* students are related to:

- social-economic context of its students;
- its geographic location; and
- urban characteristics of its surroundings.

Colégio Moderno, is located in the inner city of Lisbon, which is the capital of Portugal. The capital´s population is just over half a million with an average family size of 2.24 and an area of around 84 km^2. The Lisbon Metropolitan Area, has around three million inhabitants representing approximately 27% of the Portuguese population (INE, 2012)

The area surrounding *Colégio Moderno* is considered a typical (probably slightly bigger) inner-city affluent area of Portuguese urban areas. Indeed, *Colégio Moderno* is located in *Campo Grande* Parish, one of the 53 parishes of the capital. *Campo Grande* is a typical consolidated inner urban area with a mixed of residential, services (such as shops, companies and public institutions) and cultural areas (including the Lisbon University, museums and art galleries). Buildings are generally between four and seven floors high with streets catering for access traffic as well as long distance through traffic. The school neighbourhood has sidewalks with high degree of street connectivity. There are pedestrian crossing facilities, though markings are not always well maintained. In the public space, features for people with reduced mobility are irregular.

This area, which is generally flat, is well served with public transports including the underground, buses and commuting trains. Recent bicycle lanes, with little to none commuting use, have been introduced in the main roads of *Campo Grande*. Car parking is charged under a pay and display scheme.

Colégio Moderno is a private renowned school which, therefore, attracts students from a wider area than *Campo Grande*. Indeed, unlike state owned school, private schools area of influence is not regulated and the distance travelled by children as well as the means chosen to do so are potentially different. This school provides paid school bus service to students who request it. Lately a number of private organisations, such as the Automotive Club, have set up regular bus services which are also used by school children, including *Colégio Moderno*.

3.2 Assembling Data

Although an initial scheme for collecting and processing data had been designed within the Children Pedestrian License project, an opportunity arose to merge efforts with the international research project "*Independent mobility as a critical aspect of children development and quality of life- a longitudinal comparison over four decades in England, a cultural comparison over two decades with Germany, and an*

international extension to other countries" (Policy Studies Group, 2012) coordinated by the Policy Studies Institute at Westminster University, London. This project was being implemented in Portugal by *Faculdade de Motricidade Humana* (FMH). The authors considered that collecting the same variables (partly covering both projects at that stage) would facilitate national and international comparisons and the transferability of knowledge and experiences. They supported FMH in the general set up activities at national level, including survey translation, authorization request from the education ministry and initial survey application, as well being responsible for all the activities related to contacts, data collection and analyses at *Colégio Moderno*, which represents the inner-city study in Portugal.

The process for data collection at *Colégio Moderno* began with contacts establishment followed by delivery of survey forms to school psychologists. Children took home a brief explanation of the study together with the request to participate in it as well as the adults´ survey form. Children, who were allowed to participate in the study, filled in their forms at school and brought back from home their parents filled in forms, which were then collected from school.

Colégio Moderno insisted in collecting data with little support from the project team as a way of decreasing school academic activities disruption. Although their openness and willingness to collaborate is greatly appreciated, it led to one flaw which limited the analyses procedures. The code that should have been inserted in the surveys to allow matching children to their respective parents, failed to be filled in the forms. Information was collected for children and adults, but establishment of their relationship is impossible. Data for children and adults was managed and analysed separately. Although the loss is measureable, some important analysis and subsequent conclusions are still possible.

IST team coded and verified the collected data for *Colégio Moderno*. Data was collected for 327 children, aged 8 to 14, between 3rd and 8th school grades. Children surveys´ had 15 questions grouped into six major categories: journey to and from school; context sensitive walking permission; bicycle and public transportation riding permission and skills; household neighbourhood characterisation and; child´s age and sex. Response rates (94%) for adults' surveys were high; adding up to 306 forms with 17 questions each.

This paper focuses on the analysis of *Colégio Moderno* students' replies.

3.3 Data Analysis

Within the context of the collaboration with PSI/FMH, following initial descriptive analysis at IST, *Colégio Moderno* database was merged with the national database and joined analyses were carried out mainly by FMH with IST support and included in the European report (Cordovil, et al., 2011) (see Assembling Data). For the piloting study within the framework of the Children Pedestrian Licence project,

further analyses were carried out to the 327 questionnaires (4 excluded for missing data) applied to *Colégio Moderno* students, here described.

Most parents (83%) claimed that their choice of *Colégio Moderno* was related to the perceived better teaching quality from a high profile private school. Only 9% of the parents referred that it was the nearest school to their home which, most likely, impacts children journeys to and from school.

Descriptive analyses (Section 4) interpreted in the light of previous studies, as well as the school context, have led to the identification of a set of variables to include in two binary regression models considered focusing on their relationship with the students walking home from school.

One of the questions of the questionnaire was whether the child was going to return home from school walking all or most of the way (or was going to return home by any other mode on the day she/he answered the questionnaire). This resulted in a binary variable, Y, which was taken as a very close proxy for children that usually walk home from school. It was, therefore, chosen as the response (dependent) variable in the first binary regression model developed to identify which factors $\mathrm{x} = (\mathrm{x}_1, \ldots, \mathrm{x}_\mathrm{p})$ seem to be important in its explanation:

$$Y_i \sim Bin(1, \pi_i), \qquad \mu_i = E[Y_i|\boldsymbol{x}_i] = \pi_i,$$

$$logit(\pi_i) = log\left(\frac{\pi_i}{1-\pi_i}\right) = \beta_0 + \beta_1 x_{1i} + \cdots + \beta_p x_{pi}, \;\; i = 1, \ldots, 323$$

From within the list of available variables and their respective descriptive analysis, the first set of candidate covariates was constituted by those that were more prone to influence the usual student´s mode of transportation from school. The variables considered are presented in Table 1.

Table 1. Initial variables considered in the regression models.

Variable	Children´s characterisation
x_1	age
x_2	sex
x_3	allowed to cross alone a busy street
x_4	travelled on her/his own to school on that day
x_5	allowed to use public transportation by him/herself
x_6	travelled to school with her parents on that day
x_7	travelled to school with another adult on that day
x_8	travelled to school with older child(ren)/teenager(s) on that day
x_9	travelled to school with other same age or younger child(ren) on that day

Results from fitting this first model (Section 4) justified the development of a second regression model. This model adopted as a binary dependent variable, Y, whether the child "was going to return home from school walking (all or most of the way) or by public transportation" or else "was going to return home by any other mode". It was assumed that public transportation users are at a certain point of their journey also a pedestrian which is the base for merging both classes of road users.

Models were first estimated numerically by maximum likelihood, using the statistical software R-project. Afterwards an automatic variable selection procedure based on the relative goodness of fit measure Akaike information criterion, AIC, was implemented in order to choose the most relevant covariates (Akaike, 1974). AIC compares the goodness of fit of different models where each covariate is successively included and deleted.

These analyses contributed to the identification of key aspects of students' mobility patterns in their trip home from *Colégio Moderno*.

4. Results and their discussion

Roughly half (161) of the 323 surveyed children were girls. Two classrooms per grade participated in the study. As the students each grade are homogenous in terms of age, the distribution per age of the surveyed children is very regular between the usual 8 years-old third graders and 13 years-old typically in the eighth grade. For some analyses, three age-group classes have been considered: 8-9 years old (primary school), 10-11 years old (middle school) and 12-13 years old (high school). The sample has one child in the 3rd grade who were 7 years old and was merged with 8-9 years old group for analysis purposes, and twelve 14 years old and one 15 years old children whom for some reason have not progressed into subsequent grades and have been merged with 12-13 years old group for analysis purposes. The number of children per age group is as shown in Table 2.

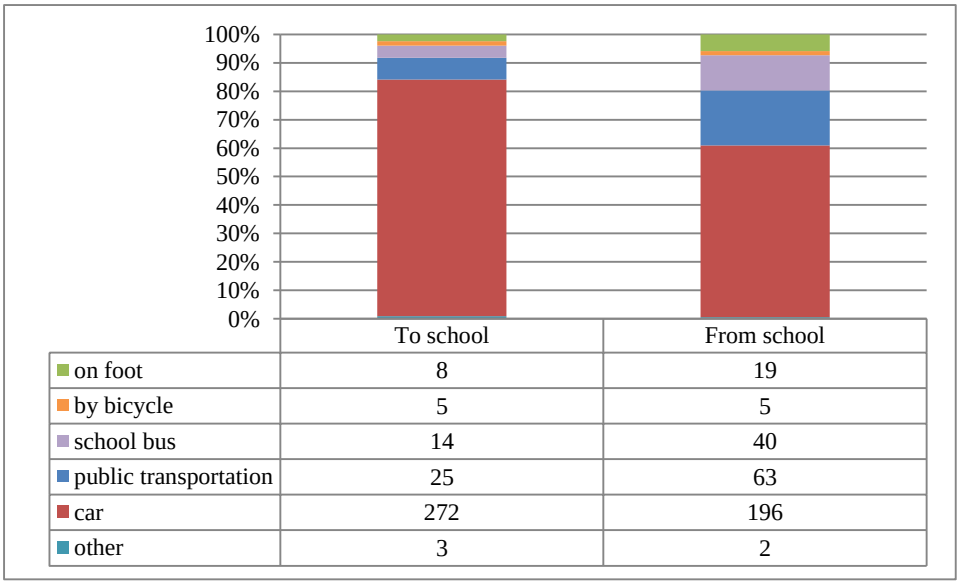
Table 2. Number of children surveyed per age group.

Years-old	Number of children
8-9	92
10-11	110
12-13	123

Analysis on mobility choices by children's gender has led that to no statistical significant differences in any of the age groups.

The survey considered various options for children to travel to and from school: on foot, by bicycle, school bus, public transportation (including local bus, train and underground), car, as well as other ("other" responses were identified as taxi and motorcycle). Answers on children´s modes used to go to school and from school are presented in Figure 3. Most children travel to and from school by car, 83.2% and

60.3%, respectively. Public transport is the second most used mode (7.6% and 19.4% on the journey to and from school, respectively) followed by the school bus which has a share of 4.3% and 12.3% to school and from school, respectively. Non-motorized modes (on foot and by bicycle) have lower modal share, 2.4% and 5.8% on the journey to and from school on foot, respectively, and 1.5% and 1.5% on the journey to and from school by bicycle, respectively. The differences in the transportation modes to and from school are statistically significant ($\chi^2(5) = 45.95$, $p<.05$).



	To school	From school
on foot	8	19
by bicycle	5	5
school bus	14	40
public transportation	25	63
car	272	196
other	3	2

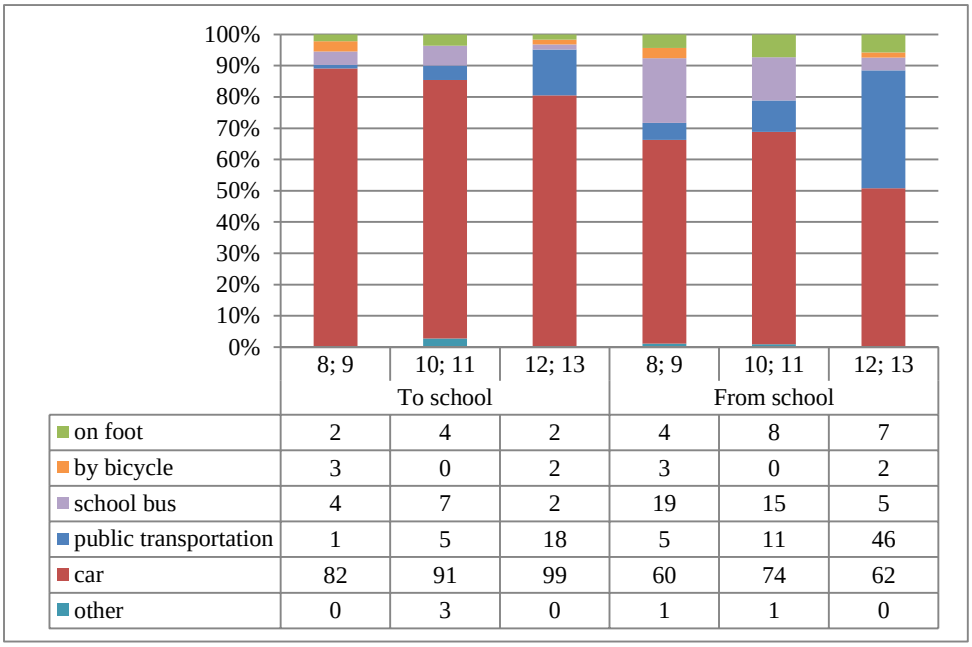
Figure 3. Travel modes, to and from school.

When asked how they would prefer commuting to school, about half (151 out of 320) of the children indubitably believe that bicycle would be their first choice. Car and public transportation (22% and 19%, respectively) were indicated as a second preference. Only 23 children would prefer walking. The difference in choice between the two more active travel modes (7% and 47% for walking and cycling, respectively) might indicate an accurate child awareness towards journey length. Indeed, according to parents´ surveys, 53% of the children travel longer or much longer to school than they did when they were their children´s age.

Interestingly, as children grow older they gradually and slightly lose interest by bicycles (58, 53 and 41 children for 7-9, 10-11 and 12-15 years old, respectively) and show increasing preference for traveling by public transportation (8, 19 and 35 for each age group, respectively) and private vehicle (11, 24 and 34 for each age group) instead.

Figure 4 shows that children´s age does impact their actual transportation mode to and from school. Comparing (A) the modes which allow autonomous mobility (on foot, by bicycle and by public transport) with (B) the modes linked to adult

supervision (car and school bus) there is a modal transference from A to B as the children grow older. For example, the car share in the journey from school of younger children (8 and 9 years old) is 64.8% and the public transportation share is 5.5% whilst for older children (between 12 and 15 years old) is 50.8% and 37.7%, respectively. The differences in the transportation modes to school according to age groups are statistically significant ($\chi^2(10) = 29.01$, $p < .05$), as well as the differences in the transportation modes from school according to age groups are statistically significant ($\chi^2(10) = 56.49$, $p < .05$).



	To school			From school		
	8; 9	10; 11	12; 13	8; 9	10; 11	12; 13
on foot	2	4	2	4	8	7
by bicycle	3	0	2	3	0	2
school bus	4	7	2	19	15	5
public transportation	1	5	18	5	11	46
car	82	91	99	60	74	62
other	0	3	0	1	1	0

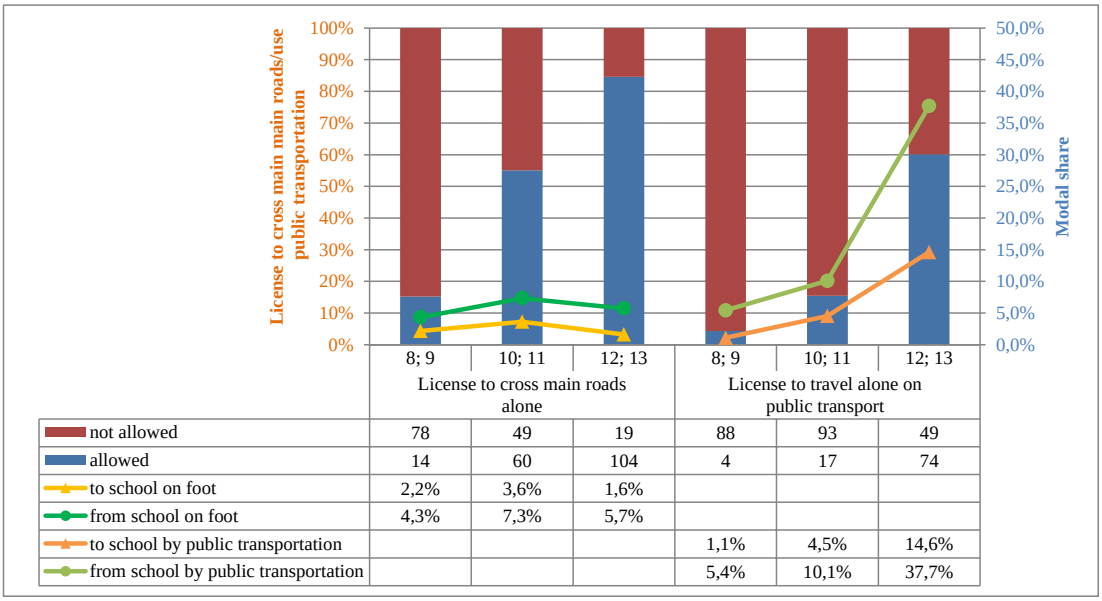
Figure 4. Modes to and from school by age groups.

The differences per age in mode of transportation used to commute is associated with children´s gradual increased authorization for being more autonomous road users in terms of crossing streets, using public transportation and travelling by themselves.

Figure 5 shows clear differences in children's license to cross alone by age groups, what they perceived to be, busy roads. Only 15.2% of the younger children are allowed to cross main roads whilst in the older age group this value raises to 84.6% (5.6 times more). The differences in license to cross main roads by age groups are statistically significant ($\chi^2(2) = 102.21$, $p < .05$).

Permission to travel alone on public transportation by age shows a similar pattern, increasing from 4.3% to 60.2% of children allowed from the younger age group to the older age group, respectively (see Figure 5). The differences in permission to travel on public transport by age groups are statistically significant ($\chi^2(2) = 94.52$, $p < .05$).

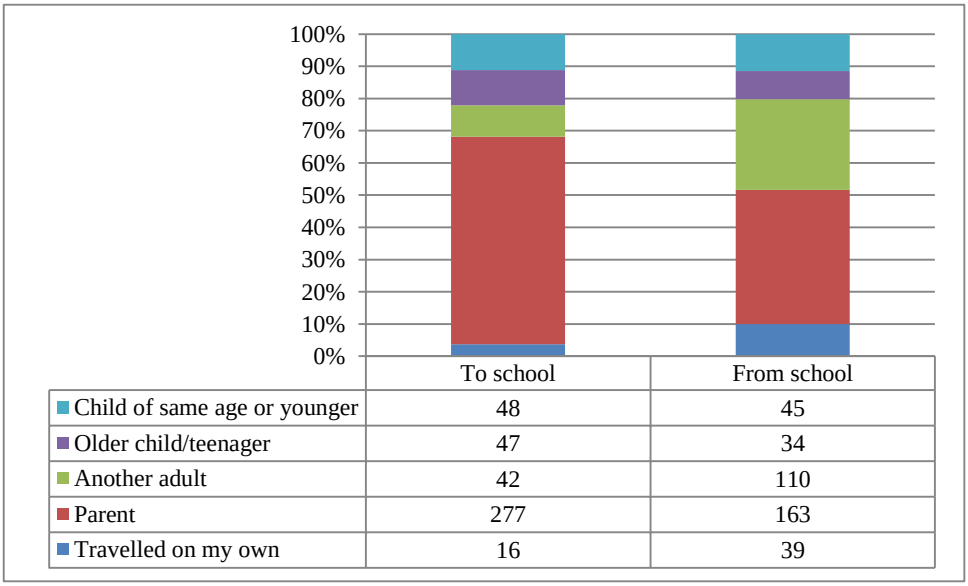
Although permission to cross main roads and use public transportation without adult supervision rises with age, the proportion of children who actually walk does not increase accordingly. On the other hand, there is a disproportionate increase of public transportation riding. Indeed, about 2/3 of children who are allowed, do use public transportation on their way home either with or without adult supervision (Figure 5)



	8; 9	10; 11	12; 13	8; 9	10; 11	12; 13
not allowed	78	49	19	88	93	49
allowed	14	60	104	4	17	74
to school on foot	2,2%	3,6%	1,6%			
from school on foot	4,3%	7,3%	5,7%			
to school by public transportation				1,1%	4,5%	14,6%
from school by public transportation				5,4%	10,1%	37,7%

Figure 5. License to cross main roads and to travel on public transportation alone by age groups (bars and Y-axe on the left) and modal share actually chosen (line and Y-axe on the right).

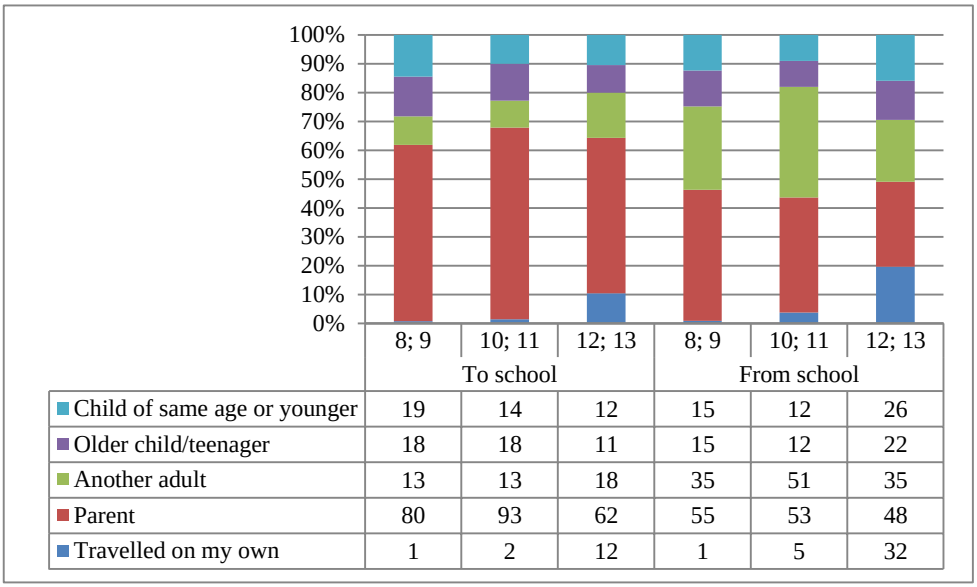
Figure 6 shows children travel autonomy from adult supervision on their journey to and from school for which differences were found between the two different journeys ($\chi^2(4) = 70.06$, $p < .05$). This was a multiple choice question. On the journey to school most children travelled with adult supervision (parents or other adult, 74.2%) whereas only 3.7% travelled on their own. However, on the journey back home there is an increase in the proportion of children who travelled on their own to 10.0%, as well as decrease in the children travelling with adult supervision to 69.8%.



	To school	From school
Child of same age or younger	48	45
Older child/teenager	47	34
Another adult	42	110
Parent	277	163
Travelled on my own	16	39

Figure 6. Travel autonomy to and from school.

An increase on the number of children who travelled on their own can be observed, on both journeys to and from school, as the children grow older (Figure 7). There are statistically significant differences both on their way to ($\chi^2(8) = 24.75$, $p<.05$) and from school ($\chi^2(8) = 49.43$, $p<.05$).



	To school			From school		
	8; 9	10; 11	12; 13	8; 9	10; 11	12; 13
Child of same age or younger	19	14	12	15	12	26
Older child/teenager	18	18	11	15	12	22
Another adult	13	13	18	35	51	35
Parent	80	93	62	55	53	48
Travelled on my own	1	2	12	1	5	32

Figure 7. Travel autonomy to and from school by age groups.

To enhance understanding on the role of the various factors in children´s mobility patterns suggested by the analyses just described, two binary models have been further developed (Section 4).

The first model focus on the relationship between "walking from school" / "not walking from school" and the described independent variables identified as the only relevant ones (see Methodology):
(1) the child is allowed to cross alone a busy street (x_3),
(2) the child did travel on her own to school on the questionnaire day (x_4), and
(3) the child is allowed to use public transportation on his/her own (x_5).

$$\widehat{logit}(\pi_i) = -1.37 + 1.38x_{3i} - 1.36x_{4i} - 1.44x_{5i}$$

Model 1 - "walked from school" / "not walked from school".

This final model was found to be a good fit through a Pearson qui-square test (p-value= 0.6644). It was further checked for anomalous high residuals or influential points and none were spotted.

Assuming, then, this model as adequate for the data under analysis, odds ratios were estimated for each variable and are presented in Table 3, together with corresponding credible intervals (CI).

Table 3. Estimated odd ratios for Model 1 and corresponding confidence intervals.

	Variable	Odd Ratio	Confidence Interval
x_3	allowed to cross alone a busy street	0.26	95%, CI: 0.06;1.33
x_4	travelled on her/his own to school on that day	3.97	95% CI: 1.12;16.17
x_5	allowed to use public transportation by her/himself	0.24	95% CI: 0.06;0.88

This translates in that, holding x_{3i} and x_{5i} fixed, the odds of a child returns home walking is 3.97 times larger if he/she had travelled by on his/her own to school and, holding x_{3i} and x_{4i} fixed, the odds of a child returns home walking is 0.24 times smaller if he/she is allowed to use public transportation. The odds relating to being allowed to cross alone busy streets are not significant as the correspondent CI includes the odds ratio value of 1.

As the number of children walking back from school all or most of the way (19) was small, a second model was considered for explaining the binary variable indicating whether children have walked or used public transportation in their way home (82 in total).

For this second model the variables that showed to be relevant are:
(1) age (x_1).
(2) the child is allowed to cross alone a busy street (x_3),
(3) the child did travel on her/his own to school on the questionnaire day (x_4), and
(4) the child is allowed to use public transportation on his/her own (x_5).
(5) the child travelled with parent to school on the questionnaire day (x_6).
(6) the child travelled with other adult to school on the questionnaire day (x_7).

$$\widehat{logit(\pi_i)} = -3.68 + 0.24x_{1i} + 0.67x_{3i} - 1.10x_{4i} - 2.40x_{5i} + 2.16x_{6i} + 1.96x_{7i}$$

Model 2 - "Walked or used public transportation from school" / "Not walked nor used public transportation from school".

This final model was found to be a good fit through a Pearson qui-square test (p-value= 0.431). It was also checked for anomalous high residuals or influential points and they were inexistent. So, considering once again this model as adequate for the data under analysis, odds ratios for each variable were estimated (Table 4).

Table 4. Estimated odd ratios for Model 2 and corresponding confidence intervals.

	Variable	Odd Ratio	Confidence Interval
x_1	age	1.28	95%, CI: 1.00;1.63
x_3	allowed to cross alone a busy street	1.95	95%, CI: 0.83;4.82
x_4	travelled on her/his own to school on that day	0.33	95% CI: 0.08;1.20
x_5	allowed to use public transportation by her/himself	0.09	95% CI: 0.04;0.20
x_6	travelled to school with her parents on that day	8.67	95% CI: 2.34;39.48
x_7	travelled to school with another adult on that day	7.09	95% CI: 1.62;39.17

This translates in that, holding x_{3i}, x_{4i}, x_{5i}, x_{6i} and x_{7i} fixed, an increase of 1 year in the child age results in an increase of the odds of a child returns home walking or public transportation of about 28%; holding x_{1i}, x_{3i}, x_{4i}, x_{6i} and x_{7i} fixed, the odds of a child returns home walking or by public transportation is 0.09 times smaller if he/she is allowed to go on local buses; holding x_{1i}, x_{3i}, x_{4i}, x_{5i} and x_{7i} fixed, the odds of a child returns home walking or by public transportation is 8.67 times larger if he/she child did travel to school with his/her parents; holding x_{1i}, x_{3i}, x_{4i}, x_{5i} and x_{6i} fixed, the odds of a child returns home walking or by public transportation is 7.09 times larger if he/she child did travel to school with other adult. The odds relating to being allowed to cross alone main streets as well as sex are not significant as the correspondent CI clearly includes the odds ratio value of 1.

Results here presented have confirmed expectations - which were both common sense and supported by knowledge developed in the literature (Section 1) - towards children's current dominant use (71.8%) of cars for commuting. The fact that 177 out of 305 of the surveyed households have regular access to two or more vehicles (while only 26 claim no systematic access to car) might have exacerbated this difference in relation to non-private schools. The same socio-economical basis might

have impacted other results (in relation to gender, available adult supervision and average travel distance) and will need to be compared with other national contexts. The willingness to participate in the project and the receptiveness to potential changes to mobility choices are further key aspects for which longitudinal cross-national studies are required.

5. Conclusions

Whilst private cars can have a positive role to play in children´s lives - facilitating safer and more comfortable access to many learning and leisure destinations, the problems generated by children car-dependency for daily commuting are leading to an increase of physical, psychological and social problems and a decrease in the quality of the urban environment.

This paper reports a stage in the development of a methodology aiming at contributing to children's safe autonomous mobility by both developing children´s skills and adults´ perceptions and willingness to accept children´s autonomy. The work summarises the framework´s most relevant characteristics and describes their partial use in a pilot study, in a private school, in Lisbon. The early results show a real prospect of achieving a methodology that will be adequate to current Portuguese context and transferable to other countries. However, at the present national economic circumstances, it is difficult to assess the extent of readiness to implement the complementary required planning, transportation and educational measures to attained noticeable changes.

The study provides a description of dominant variables influencing the choice of walking, both in isolation or combined with public transportation, of students at *Colégio Moderno*. Although 207 (67.9%) parents claimed to have walked or used public transportation to school when they were children, from analysis of children´s replies to the survey, it emerged that, in their way home from school, most are driven and only (5.8%) walk all or part of their way. Results show that age is the single most contributing factor of the variance in adult free supervision mobility. Results seem to point to commuting distances as a likely reason for students not to walk to school. Gender does not emerge as playing a role on mobility choices. Although there are significant differences between modes used by children to go and return from school (possibly associated to other family members schedules), the chances of walking home is higher if the child also walked in the morning.

It was acknowledge that the methodology is being applied from the scratch and that problems which could emerge from this pilot application would be used in the revaluation of the initial proposal. Based on in *Colégio Moderno* pilot study in 2010/11, the surveys were refined to include for example the distance household-school and more socio-economic variables. Data collection is being repeated in *Colégio Moderno* which will also going to allow matching children replies to those of their parents. An on-line version of the questionnaire, which has been recently implemented, is being tested.

The refined methodology, in its more complete version, is being replicated in a public funded primary school in *Parede* (Greater Lisbon) with the support of *Cascais* Local Authority. Data for the training and the control group are being collected and will be analysed. One important aspect of this project is to raise visibility of the travel behaviour of children and the roles of their parents in a country where that has not yet been a priority.

The Children Pedestrian Licence project and associated methodology has the potential to become a valuable tool for improving attitudes regarding road safety by providing children with skills for safe autonomous mobility for at least three reasons:

1) Firstly, human error is the biggest contributing factor to road accidents. It is, therefore, important to train children from an early age on the importance for adopting a safe responsible behaviour as pedestrians increasing later the probability of embracing a similar attitude as drivers.
2) Children are also a good vehicle to influence adults' behaviour and perceptions. Based on anecdotal evidence in other areas which required relatively quick change of adults´ habits (such as recycling and smoking), it is expected that this project will bring positive impacts not only on children but also on the school community, parents, teachers and citizens in general.
3) Thirdly, as it has a comprehensive set of questionnaires, it will be a good sourced for systematic monitorisation of travel patterns of children and their families. Comprehensive analysis of available data make deepen the understanding of physical environmental, social and individual contributor factors to parents´ choice for their child mobility which in turn generates better opportunities adjusting policies to prevailing circumstances.

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The changing scope of regional planning: From spatial to 'growth-oriented' planning in Denmark

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Abstract

Regional planning in Denmark originally emerged as a spatial framework to address socio-economic disparities and to provide physical arrangements in light of an equal development paradigm. As such, its socio-spatial foundations created a comprehensive structure for spatial development reflected in the advancement of several generations of legally binding regional plans. However, influenced by the outcome of a recent structural reform and due to a thorough amendment of the Danish Planning Act, the domain has been subjected to radical changes in the past years. Crucial amongst them is the fact that the spatial logic adhered to regional planning has been replaced by a space-less rationale geared mainly towards facilitating economic growth. Based on an in-depth analysis concerned with the history and evolution of Danish regional planning, this article qualifies a number of factors embedded in the transformation of the domain. The article concludes that several theoretical and practical implications emerge from the changed conception and institutional capacities associated with regional planning.

Key words: regional planning; spatial planning; spatial development; planning conception; planning logic; planning policy; Denmark.

Introduction

The planning domain in several European countries has been traditionally associated with the guidance of spatial development through the use of policy instruments embedded in hierarchical top-down structures (see European Communities, 1997). Planning at the national level in these contexts originally became key in allocating investments and social welfare resources throughout national territories. Within such regulatory and managerial framework, regional planning was primarily introduced as a coordinative tool and a cross-sectoral policy field and practice, which distinguished itself from other forms of planning due to its spatial nature and distributional character. In contributing to attain equal development, regional planning thereby fulfilled a series of functions aimed at the regulation of land uses, the balance of economic growth, the planning of infrastructure and the spatial coordination of many different sectoral policies.

However, spatial planning systems and policies have been subjected to radical changes during the past couple of decades (see Healey et al., 1997; Hajer and Zonneveld, 2000; Salet and Faludi, 2000). Amongst others, the structural shifts associated with this domain mainly concern its modified policy contents, its changing conceptual logics and its evolving institutional arrangements. Throughout Europe, it has been shown that these aspects of spatial planning tend to evolve in function of political and economic driving forces (e.g. Healey et al., 1999; Albrechts et al., 2003). In terms of Danish national planning policy, for instance, evidence shows that the traditional steering role of spatial planning that was originally established in pursuit of equal development has been supplemented or even substituted by balancing or strategic roles that rather align with environmental and globalisation agendas (Galland, 2011). At the regional level, the Danish statutory spatial plans formerly implemented via hierarchical mechanisms have been replaced by new development planning and growth-oriented policies generated by unprecedented institutional arrangements (see section 4 below).

In line with the above, Danish regional planning as a whole has been evidently subjected to profound changes particularly during the past decade. While its original scope intrinsically emphasised the management and control of spatial development based on an equal development orientation, recent shifts have caused the domain to align with growth agendas in pursuit of more 'appropriate development' in accordance to the Danish Planning Act. These shifts have generated important implications not only in regards to the contents and logic of regional planning but also in connection with its policies, institutional arrangements and roles. Based on this general context, the aim of this paper is to explore what actual shifts constitute the transformed conception of regional planning, how they take place and what potential implications emerge from them.

The paper is structured as follows. The first section theoretically describes the scope and functions that have historically characterised the field of regional planning. This is followed by an illustrative synthesis of recent shifts associated with the domain. The second section explores the underpinnings of regional planning in Denmark from a historical perspective. It describes initial attempts to carry out regional planning followed by an analysis of a highly influential structural reform, which ended up shaping the Danish planning system and thereby the institutionalisation of regional planning back in the 1970s. The third section delves into the evolution of Danish regional planning and discusses the contents and features pursued by the several generations of regional plans put forward since the 1980s until 2005. The fourth sec-

tion analyses the contents of a new structural reform and the implications that it brought along to the planning domain, including the creation of new policy mechanisms and institutional arrangements at the regional level. Finally, the last section assesses the different shifts comprising the transformation of Danish regional planning and the implications and challenges that emerge from these shifts.

This article builds on document analyses and retrospective interviews that have been conducted from 2008 until 2011. The description and analysis of the case draw from policy documents and reviews concerned with Danish spatial planning, regional plans, regional development plans and business development strategies. The analysis is further based on structured and semi-structured interviews conducted with national and regional planners involved in plan and strategy-making processes. In addition, interviews have been conducted with Regional Growth Fora board members representing regional councils, municipal councils, educational and knowledge institutions as well as local businesses.

1. The changing conception of regional planning

The genesis of regional planning as a field attracting policy interest can be traced back to the 1960s. Regional planning in countries such as Denmark, the United Kingdom or the Netherlands generally emerged in response to two major problems, namely the socio-economic disparities between regions and the spatial and environmental issues provoked by particular growing urban areas. In tackling the former, regional planning surfaced as a 'spatial framework for unequal development' with the aim to lessen major income inequalities among regions (Friedmann and Weaver, 1979). In confronting the latter, it arose to provide new functional arrangements to specific urban regions facing rapid population growth and increasing urban sprawl product of rising standards of living and personal mobility (Glasson, 1974, page 10).

The underpinnings of regional planning at the time were clearly embraced in the following definition by Friedmann (1963):

> *'Regional planning is the process of formulating and clarifying social objectives in the ordering of supra-urban space. The basic question, therefore, is: How are activities to be distributed in space so as to meet social objectives? Alternatively, what are the proper social objectives in accordance with which activities are to be allocated in space?' (Friedmann, 1963, page 171)*

In recognising the relationship between social welfare purposes and spatial arrangements, this definition evidently holds functional significance as to what regards the need to attain the spatial ordering and distribution of human activities. In a Scandinavian context and in Denmark in particular, this awareness was guided by the principle of 'equal development', which legally constituted the underlying orientation of regional planning. In connection with Friedmann's definition but also widening its scope, the Danish Town Planning Laboratory defined regional planning as follows:

> *'The purpose of regional planning is to provide a plan for the use of the land and the natural resources of the region on the basis of a general social view in which regard is being paid to the protection of the environment and the interplay with economic planning' (Danish Town Planning Laboratory, 1974, page 31).*

The inherent socio-spatial logic of regional planning embedded in the above definitions implied the coordination of multiple and long-standing sectoral policies and objectives to achieve a more even distribution of economic development between regions. As an overarching policy field, regional planning thus attempted to coordinate aspects of land-use allocation and their geographical distribution together with population balance. Spatial planning policies that demanded regional coordination evidently varied from country to country, but generally included housing and employment policies, transport infrastructure projects, urban and regional economic development measures, agriculture, the siting of waste facilities and the management of environmental resources, amongst others (Vigar et al, 2000; Tewdwr-Jones, 2001; Hajer and Zonneveld, 2000).

In Denmark, this coordination challenge was geographically implemented through the design of a hierarchical spatial arrangement of urban centres based on service provision and how such centres positioned themselves in relation to one another within their own regions. The spatial logic and cross-sectoral emphases associated with this rational form of planning aligned with the 'equal development' orientation of the domain and thereby also with the achievement of public interest objectives. Concerning its mode of implementation, regional planning was commonly exercised through regulatory mechanisms consisting of hierarchical institutional arrangements and provisions that lower levels were legally bound to comply with (see European Communities, 1997; Enemark, 1999). Indeed, the practice of regional planning was embedded in a system designed *ad hoc* to control and steer growth and development at different territorial scales.

However, planning systems and policies have been subjected to radical shifts during the past two decades (e.g. Healey et al, 1997; Albrechts et al, 2003), which have caused the spatial planning domain to adopt different roles (Galland 2011). In this sense, the overall conception of regional planning has also changed not only in terms of its logic but also in relation to its contents. For instance, the inclusion of more sectoral policies and (sustainable development) objectives (Haughton and Counsell, 2004) during the early 1990s certainly challenged the field to embrace and adopt new coordinative measures. By the late 1990s, the adoption of specific European directives made the field even more complex. At the same time, the continued move towards innovation and competitiveness in Europe caused the objectives of regional planning to skew more towards the pursuit of economic growth agendas (e.g. Amin and Thrift, 1994; Newman and Thornley 1996; Scott, 2000) in the 2000s. More recently in specific geographical contexts, several if not most planning responsibilities formerly adhered to regional level for the guidance of spatial development have been re-scaled (e.g. Gualini, 2006). In Denmark and Norway, for instance, planning system shifts derived from local and regional structural reforms implied the re-scaling of provisions, tasks and responsibilities once in charge of regional planning (see Østergård, 2005; Bukve et al, 2008).

The mode of implementation and the institutional landscape of planning have also been exposed to important adjustments (e.g. Albrechts et al, 2001). In Denmark as elsewhere in Europe, the traditional hierarchical structures and regulatory mechanisms of planning have been considerably replaced by new arenas shaped by a range of actors (e.g. Healey 2007; Nischwitz, 2007). Contemporary planning systems thereby tend to place the regional level in a position where authorities no longer seem to regulate or control lower levels through regional spatial plans but rather collaborate with other actors in establishing new initiatives for the management of regions (e.g. Hajer and Wagenaar, 2003; Healey, 2006). This whole situation concerned with shifts

in logic, contents and institutional arrangements inevitably raises a need to question the extent to which the tasks and achievements once delivered by regional planning still occur in practice. In what follows, the paper delves into the genesis and evolution of regional planning in Denmark to create an understanding of the domain based on its logic, contents, functions and roles.

2. Initial attempts towards regional planning and the genesis of the Danish planning system

2.1. The planning efforts of the post-war era

The underpinnings that support the Danish planning system lie on the awareness of creating functional cities through a comprehensive and enforced administration of land uses. These physical planning premises have traditionally entailed the enactment of town planning regulations and the zoning of urban districts since the first half of the twentieth century. For instance, the Planning Act of 1938, a planning by-law imposed on municipalities containing urban areas, provided the basis to regulate how towns ought to develop. The Act introduced the procedures for providing disposition plans (municipal plans) and town plans (by-law local plans) with binding effect for landowners (Gaardmand, 1993). These two types of plans were provided by the municipalities and adopted by a special department under the Ministry of Interior.

However, disposition plans were only provided for the major cities and the Act did not stipulate a legal basis to safeguard a clear demarcation between urban and rural areas or for controlling urban growth. The resulting urban sprawl of the following years eventually led to the enactment of a Town and Countryside Zoning Act in 1949 (Enemark, 1999, page 18). Aiming to preserve the open countryside, the Act introduced zoning as a tool to prevent further speculation in rural lands. Inter-municipal urban development committees were appointed with the aim to provide urban development plans, which were based on land use regulatory principles (zoning provisions) that deliberately projected specific areas for urban expansion in connection with the implementation of infrastructure development. Plans thereby identified three development zones, namely inner, medium, and outer zones (Gaardmand, 1993, page 40). Whereas inner zones referred to areas where development was allowed in adjacency to built areas, medium zones were considered as potential areas for expansion and outer zones banned development. At first, these plans were elaborated for the four largest cities (Copenhagen, Aarhus, Odense and Aalborg) but several other smaller urban areas followed suit throughout the 1950s and 1960s (Michelsen et al, 2005, page 8).

As it occurred in most of Western Europe, growth thinking based on industrial development significantly influenced the Danish cities of the post-war years. In Denmark, however, this paradigm was not unique. The realisation of the welfare state was being pursued in a parallel fashion, which sought for equal development in connection to delivering social goods (housing, education, careers, employment) for the whole population. But through disposition plans and urban development plans, however, these objectives only seemed sensible and appropriate for larger urban areas. Such plans could therefore be perceived as a rational attempt to create progressive and expanding cities based on the coordination of new developments with employment sites and service provision. While Denmark's largest cities were expected to benefit from

these considerations, it was only Copenhagen that seemingly accomplished these objectives notwithstanding the generation of a number of negative side effects.

Furthermore, while the planning regulations of first couple of post-war decades did not stipulate any considerations above the urban level, economic growth began to concentrate predominantly in Greater Copenhagen. In line with substantial industrial development and job creation, this urban area experienced significant net positive migration from 1950 to 1970 whereas most other regions in the country continued to lag behind (Studsholt and Hvidtfeldt, 1990). This situation led to a major political debate concerned with unequal development, which came to be known as 'the unbalanced Denmark' (Christoffersen and Topsøe-Jensen, 1979). Consequently, the need for more comprehensive planning in light of the accomplishment of welfare objectives was rendered essential. In what follows, some of the first attempts to carry out regional planning in Denmark are described as well as the contents of a highly influential structural reform of local government, which after its implementation during the 1970s ended up shaping the scope and functions of the first generation of regional plans.

2.2. The first planning exercises above the urban level

The renowned 1947 Finger Plan for Copenhagen was the first planning initiative above the urban level in Denmark. It came to represent the first comprehensive planning attempt to coherently address matters such as mass transport, industry development, housing and nature preservation in a supra-urban scale. Since the industrialisation of Denmark in the late nineteenth century, Copenhagen had begun to suffer from urban sprawl in several directions well beyond its urban core. Hence, the Finger Plan projected an ordered expansion of Copenhagen outwardly along five corridors (the fingers) into rural areas towards the west and north of the inner city and in direction of nearby towns. Each corridor allowed for urban development based on moderate population increases and housing stock positioned in function of suburban railway lines. The space between the corridors was preserved for agricultural and recreational purposes. Although the plan was not politically adopted, it was highly valued in the guidance of local development in the decades following its publication (Jensen, 1992).

(Insert Figures 1a & 1b about here)

Aarhus, Denmark's second largest city, was inspired by the Finger Plan to develop its own 'Regional Plan for Greater Aarhus' in 1954, which consisted on an expansion along two urban corridors in northwest and southwest directions from the urban core (Michelsen et al, 2005, page 10). Updates of both regional plans for Greater Copenhagen and Greater Aarhus were voluntarily prepared by these cities in cooperation with their neighbouring municipalities in the early 1960s. While these plans can be essentially considered as preliminary attempts to implement coherent planning at a supra-urban scale, a more formal basis for systematic and coherent regional planning was still needed in addressing the socio-economic and spatial issues stemming from the 'unbalanced Denmark' debate.

In addition to these plans, a first Regional Development Act was passed in 1958. The Act authorised the Ministry of Trade to provide financial aid to site industrial firms in regions undergoing severe economic problems and where employment op-

portunities were much needed. Most of the Jutland peninsula was targeted as an area for regional development, particularly North Jutland, where direct grants to assist capital investments were made possible (Danish Town Planning Laboratory, 1974). In 1966, a comprehensive regional analysis carried out for this region generated a physical plan specifying a regional centre, growth areas and developing cities as well as principles for the development of traffic infrastructure (Bredsorff et al, 1966). The plan projected the development of the whole region towards the year 2000 and it became distinctive from the former city-region planning exercises in that it was the first real attempt to generate a sound regional plan comprising urban, rural, coastal and potential growth areas in connection with infrastructure development and environmental preservation. Other Danish regions such as Funen and South Denmark followed suit some years after.

(Insert Figure 2 about here)

Also in 1966, the national Land Planning Secretariat published an influential report entitled 'Regional Planning and Regional Divisions'. This report designated cities and towns as national, regional, municipal and local centres, respectively, in accordance to the type of service functions that they were to deliver (Landsplanudvalget Sekretariat, 1966). Such urban pattern rationale (known in Danish as *bymønster*) followed a hierarchical spatial arrangement of urban centres based on service provision and how they positioned themselves in relation to one another over the territory.[1] Without attaining legal status in the immediate years following its publication, the logic of spatial intervention was rendered reliable preparatory evidence for the implementation of the 1970 reform of local government structure as well as the preparation of regional plans a decade afterwards (see next subsection). As a whole, this hierarchy of service centres aimed at providing a sensible solution towards achieving a more even spatial distribution of socio-economic growth throughout Denmark.

(Insert Figure 3 about here – Hierarchical pattern 1966 and 1981)

2.3. The 1970 structural reform and the consolidation of the Danish planning system

Denmark underwent a radical local government reform in 1970 that played a significant role in ultimately defining the scope and functions of regional planning in the future. The implementation of this reform was materialised through decentralising public sector tasks while reconfiguring the administrative division of counties and municipalities. Altogether, the transformation to the post-war welfare society in Denmark required a coordinated effort whereby municipal and regional planning would turn out to be fundamental. Local authorities took the initiative to materialise the structural reform where popularly elected members dominated a Local Government Commission founded in 1959. During the eleven years it took for the reform to concretise, the Commission's work focused on addressing inequality aspects stemming from rapidly growing towns such as the demographic unbalances and economic

[1] For example, to be a regional centre, a city should have comprised services and functions such as colleges, hospitals, retail areas, libraries, technical schools, and so forth. In addition to these functions, a national centre should also have a university, larger retail centres, hospitals with at least 12 specialties, and several other requirements.

side effects that jeopardised the future of rural communities at the time (Jørgensen and Vagnby, 2005).

The context for the execution of this structural reform was based on the recognition of planning as a societal need. The key structural expectations and challenges, amongst others, were constituted by the significant general population increase, a reduction of rural population due to mechanisation of the agricultural sector, the need for land due to rapid urban development (housing, transport, industry, service), a fall in average household size (from more than 3,5 to less than 2), a general increase in real incomes leading to a raise in consumption patterns, a significant rise in car ownership, and a significant growth in education, research and development activities (Vagnby, 2005).

Before 1970, Denmark was divided into 86 municipalities and 1366 rural districts contained within 25 county council districts. This demarcation showed a sharp distinction between the urban and the rural. Indeed, rural districts were too small (in terms of territory, civil servants and population) to handle local tasks effectively while the urban extension of many of the former municipalities had already spread outside their formerly defined boundaries. As a result, the 1970 reform amalgamated rural districts into 277 municipalities and reduced the number of counties to 14.

(Insert Figure 4 about here)

A continuous transfer of tasks from national to regional and local levels with regards to planning, social services, health care and education followed in the years after. The counties were strengthened financially and were made responsible for regional planning as well as health care amongst other tasks and responsibilities. In addition, a restructuring of the financial system took place where reimbursement schemes were replaced by block grants and financial equalisation schemes between the more and the less developed municipalities (Elbo, 1981). The structural reform also enabled the possibility of economies of scale and further savings. Once the reform was implemented, counties and municipalities were deemed sizeable enough to ensure that welfare provision was effectively dealt with. Moreover, counties and municipalities were also authorised to collect their own taxes (Jørgensen, 2004).

The reform was followed by the legal consolidation of the Danish planning system, whereby planning law reforms were implemented from 1970 until 1977. These reforms included the Urban and Rural Zones Act in 1970, the National and Regional Planning Act in 1973 and the Municipal Planning Act in 1977 (Enemark, 1999). The 1973 National and Regional Planning Act became the first statutory policy at the national scale, which made it compulsory for counties to submit regional plans to national authorities. On these premises, the principle of equal development was legally adopted and the Danish planning system was rooted on the basis of the principle of framework control, by which plans at lower levels must not contradict planning decisions made at higher levels (ibid., page 17).

(Insert Figure 5 about here)

The 1970 structural reform together with the creation of the Danish planning system significantly contributed to promote not only an overall decentralisation of industrial development but also of administrative infrastructure to safeguard a more equal socio-economic development across the country. Such decentralisation contributed to meet the developmental needs of more peripheral regions while enabling a better access to

public and private services that would have otherwise remained in larger urban centres. All in all, the rise and consolidation of the planning domain at the time can be portrayed as 'the spatial expression of the welfare state' (Jensen and Jørgensen, 2000).

3. The evolution of regional planning in Denmark (1980 – 2005)

The institutionalisation of regional planning in Denmark was the result of an attempt to implement coherent planning for areas above the urban level, whose first signs had already been witnessed in the cases of North Jutland and the city-region plans for Copenhagen and Aarhus that were delivered during the first two post-war decades. The passing of the National and Regional Planning Act in 1973 marked the initiation of regional planning in Denmark, which adopted a more tangible form after provisions for the establishment of regional plans were put forward in 1977.

The first generation of Danish regional plans was advanced in 1980. Since then, the domain adopted a cross-sectoral focus in attempting to coordinate the multiple objectives of spatial planning in coherence with welfare values and in pursuit of equal development. This was materialised through a physical-functional orientation embedded in the distribution of socioeconomic development objectives and the management of environmental assets. The spatial reasoning behind regional planning thereby sought to provide a coherent framework for municipal planning based on legally binding land-use provisions. As such, these provisions required the counties to advance regional plans that included the designation of zones for urban development, recreational purposes, nature protection, environmental resource management, infrastructure development and the siting of regional facilities (such as waste or energy facilities), amongst other relevant themes.

As a whole, the practice of regional planning in light of the above rationale was comprised by 7 generations of plans prepared by each of the 14 Danish counties from 1980 to 2005. Regional plans were advanced based on a time frame of 12 years, and were revised and updated at least every 4 years (typically after the election of county councils). The first generation of regional plans published in 1980 was followed by updated versions delivered in 1985, 1989, 1993, 1997, 2001 and 2005, respectively. The process for preparing the plans typically included two periods for public debate. The first hearing comprised a call for ideas and solutions open for civil society organisations, while the second concentrated on the draft plan to be discussed by county and municipal actors. The elaboration of the first generation of regional plans was rather lengthy and included several revisions before final drafts were adopted. For instance, the county of North Jutland put forward yearly detailed proposals since 1977 until the first regional plan was finally adopted.

There were three generations of regional plans advanced during the 1980s, which defined the hierarchical pattern of urban centres for each individual county.[2] The key

[2] Based on the 1966 report 'Regional Planning and Regional Divisions' described in the previous section, the Ministry of Environment published an updated version entitled 'Report of the Future Urban Pattern' in 1979. This report hierarchically defined the urban pattern of every Danish urban centre based on service provision. It then became legally adopted in the 1981 National Planning Report wherein national, regional and local area centres were defined. For a detailed overview regarding the evolution of Danish national planning policy, see D. Galland, 'Understanding the Reorientations and Roles of Spatial Planning: The Case of National Planning Policy in Denmark', *European Planning Studies* (Forthcoming October 2011).

roles of towns and cities with respect to service provision and infrastructure development were thus defined for every single county. Through the urban pattern logic, plans sought to ensure equal development by strengthening weak areas partly at the expense of stronger ones. Moreover, this set of plans put forward guidelines concerned with natural resources management while also highlighted aspects that addressed the open country and the designation of special natural and agricultural areas. Guidelines related to energy facility siting (i.e. windmills) were also supplemented in the latest generation of plans in that decade (1989).

Two more generations of regional plans were advanced in the 1990s, which were considerably influenced by shifts in national planning. A new Planning Act, which entered into force in 1992, integrated and simplified planning and zoning provisions that were previously addressed by the several planning acts originally advanced in the 1970s. This shift allowed for national, regional, municipal and local planning as well as zoning and the administration of rural areas to be merged into a single law. Beyond these functional adjustments, a highly remarkable shift was the Act's opening chapter stating that the purpose of planning was to aim towards 'appropriate development in the whole country and in the individual counties and municipalities…' (Ministry of Environment, 1992). This orientation shift came in direct contradiction with the 'equal development' paradigm that characterised Danish planning ever since it was conceived.

Regional planning provisions during the 1990s were made more complex due to the implementation of two legally binding national planning directives that were included as amendments to the Planning Act in 1994 and 1997, respectively. The first directive addressed the safeguarding of coastal zones, which made regional plans responsible of ensuring their protection. The second directive dealt with retail trade regulations, whereby regional plans were meant to pose restrictions regarding the location of these facilities, amongst other constraints. In addition, groundwater quality considerations were also given special emphasis, particularly in the generation of regional plans of 1997. Beyond these inclusions, the two generations of plans advanced in the 1990s continued to designate aspects related with the urban pattern, infrastructure development and the use of rural areas based upon socioeconomic considerations (i.e. demographic and labour market trends).

The final two generations of plans were published in 2001 and 2005. These plans differed from the former given the inclusion of environmental themes following the enactment of European Union directives. Environmental impact assessment became an additional responsibility of regional planning after the passing of a EU directive that had entered into force in 1999. Regional plans thereby acquired the duty of specifying guidelines on the location and design of projects that were likely to have significant effects on the environment. Moreover, special responsibilities concerned with water resources protection and water quality were similarly assumed by regional planning in response to another EU directive adopted in 2000. For instance, groundwater protection became a stronger consideration with the designation of nitrate-vulnerable areas while the protection of cultural history in the landscape was also embraced through the identification of valuable cultural environments in regional plans. The last generation of regional plans of 2005 was the last of its kind, which maintained legal status through a national planning directive that entered into force in 2007 (Østergård, 2005). The directive stated that the 2005 regional plans should be integrated into the municipal plans generated by the new municipalities.

Altogether, the regional planning domain became increasingly more comprehensive in the course of every decade. From three general themes (urban and infrastruc-

ture development, recreation areas and natural resources management) covered throughout the first three generations of plans during the 1980s, regional planning continued to add and orchestrate several other themes related to different sectors during the 1990s and early 2000s. However, the shift in the thematic character of regional plans also implied that the domain gradually placed more emphasis on environmental considerations rather than societal ones. This turned out to be particularly evident after the Environmental Law reform of 1991, the shift from equal to appropriate development stated in 1992, and the enactment of EU directives in 1999 and 2000. Whereas the first three generations of regional plans constituted a base for socio-spatial development, the latest generations showed that the spatial logic embedded in the hierarchical urban pattern of regional plans decreased in importance.

Regional plans became imperative not only as a binding instrument for municipal plans with sectoral interests and objectives, but also as a conciliatory tool to balance sectoral considerations. For instance, regional planning became useful in ensuring that a particular sectoral decision was not undertaken at the expense of another (e.g. a transport decision impacting heavily on environmental assets). Another capacity provided by regional plans was the coordination of municipalities in joint matters transcending their own boundaries. In this respect, the regional planning process proved beneficial in balancing conflicting interests and in coordinating objectives related with traffic services (such as harbours, railways and roads) as well as the siting of 'undesirable' facilities (e.g. solid-waste treatment plants, sewage disposal sites, petrochemical plants and even windmill parks) (Studsholt and Hvidtfeldt 1990). Furthermore, the process also enabled the possibility of stakeholder participation including negotiations between municipalities and counties as well as two periods of public debate regarding aspects of draft plans (Studsholt, 2000)

4. The new Danish planning system and the rise of 'growth planning' at the regional level

In 2007, the implementation of a new reform redesigned functional and territorial structures of local and regional governments based on the creation of larger municipalities and regions with different decentralised tasks and responsibilities. This section addresses the implications that this reform generated on the planning domain in general, and on regional planning in particular. The character and background of the reform are firstly examined followed by a discussion concerned with new policies, strategies and institutional arrangements that have emerged at the regional level since then. The main argument put forward is that the spatial character of regional planning has been replaced by a new space-less rationale largely dominated by economic growth objectives.

4.1. The 2007 structural reform[3]

A new structural reform of local and regional government created in 2002, enacted in 2005 and put into effect in 2007 resulted in the restructuring of the political and ad-

[3] This section partly draws from two reports published by the Ministry of Interior and Health in Denmark (2004 and 2006), respectively. The reports are entitled 'Agreement on a Structural Reform' and 'The Local Government Reform – In Brief'.

ministrative map of Denmark. The reform consisted of an updated territorial demarcation of municipalities and regions. While the former 275 municipalities were merged into 98 new ones, the 14 former counties were abolished and replaced by 5 new regions. Overall, the reform entailed a major redistribution of tasks as well as the creation of a new financing and equalisation system.

In determining the need for a new reform, a Commission of Administrative Structure was appointed by late 2002. With the support of ministries as well as regional and municipal entities, the Commission described alternative models for public sector organisation and concluded, by early 2004, that a whole reform in terms of territorial boundaries and transfer of tasks was needed. The Commission's final assessment deemed the reform necessary by evidencing several weaknesses associated with the former local government structure. More specifically, the Commission highlighted the inappropriateness of the territorial size of administrative units for task performance under the premise that overlapping responsibilities and functions between them created vast inefficiencies. In addition, the Commission was demanded to address matters concerned with economic sustainability, citizen participation, quality in service delivery and possible choices between service providers as well as coherence between technical competence and economic responsibilities (Ministry of Interior and Health, 2004, 2006).

An 'Agreement on a Structural Reform' was then made later that year between the government (The Liberal Party and the Conservative Party) and the Danish People's Party, which rendered the preparation of 50 bills on the division and distribution of tasks by level of government and sector. All bills were adopted by mid-2005, covering municipal, regional and state responsibilities in the fields of employment, business development, transportation and roads, culture, nature, environment and planning, taxes, social services, health care and education.

In accordance with the Agreement, the aim of this new reform was to '…maintain and develop a democratically governed public sector with a sound basis for continued development of the Danish welfare state' (Ministry of the Interior and Health, 2004). From an economic standpoint, benefits from synergy effects were to be obtained through merging local and regional administrative units via wage administration, customer service or the possibility of economies of scale, amongst other savings. Consequently, the new municipalities after the reform turned out to be significantly larger both in terms of squared kilometres and population, i.e. the merging of municipalities caused a raise in average population from 20,000 to 55,000 inhabitants.

In light of the above, the 2007 structural reform signified the outcome of a process mostly geared towards efficiency considerations and managerial effectiveness. While its mandate called for an assessment of several geographical criteria that could form basis for future decisions, no key recommendations concerned with spatial structure were delivered as such. In this sense, territorial considerations pointing towards classical peripheral problems of some counties, the functional relationships (e.g. mobility and commuting patterns) between them or the appraisal of other geographical criteria were entirely disregarded in the decision-making process (Jørgensen, 2004, page 11).

(Insert Figure 6 about here)

4.2. Shifts in the Planning Act, the emergence of regional development planning and the birth of Regional Growth Fora

Beyond the reorganisation of the political and administrative map of Denmark, the 2007 structural reform also resulted in a crucial amendment of the Planning Act. This modification brought along important shifts to the Danish planning system and its configuration, which prompted the making of new planning policy at different levels. An important outcome was the strengthening of national and municipal levels of planning at the expense of the regional level. In this sense, while the purpose of the Planning Act and its aims nonetheless remained unaltered, spatial planning tasks and responsibilities formerly adhered to regional planning were transferred to the municipal level. Some of these aspects included the designation of urban zones, the location of transport facilities, the administration of agricultural interests, the preservation of cultural and historical heritage, the use of water resources, and several other environmental management tasks. In obtaining the right for land-use planning in both urban areas and the countryside, the Act provided municipalities the necessary autonomy to generate proposals and make decisions.

Furthermore, national planning was similarly 'strengthened', mainly in relation to its capacities and institutional arrangements to overview municipal planning and local land-use planning. The Ministry of Environment adopted a monitoring role that allowed national authorities to intervene in municipal planning in connection to themes and projects of international, national or regional relevance. In doing so, the Ministry established a number of environmental centres across the country to secure the implementation of national policy objectives concerned with nature protection, water resources management, national infrastructure projects, coastal zone management, retail trade and environmental impact assessment (Østergård, 2005).

The Act's former chapters specifying regional planning provisions were thus repealed and replaced instead by regional development plans (RDPs).[4] These plans are aimed at describing the 'desired spatial development' of each region, which includes several themes formerly undertaken by regional plans, i.e. the development of cities and towns, rural districts and small-town peripheral regions, nature and the environment, business, tourism, employment, education and culture (Ministry of the Environment, 2007). The intent of the RDPs is meant to utterly break away from the legally binding mandate, aim and scope of the former regional plans. In principle, the RDP can thus be conceived as a 'soft' policy instrument for the new regions whose aim is provide an 'umbrella' for development initiatives to inspire and partially support the making of municipal plans. In this sense, the RDPs reject the idea that regional planning is still expected to manage spatial planning at the municipal level. This statement is illustrated by the following quote:

> *'The regional development plan will not be able to manage in detail and will not have the role of deciding where various functions will be located. If regional councils, the councillors and employees do not abandon the old way of thinking, the regional development plans will fail and remain sparse documents' (Nielsen, 2005)*

As strategic tools, the RDPs are the outcome of bottom-up, process-oriented, multi-stakeholder settings undertaken by regional authorities in close collaboration with municipalities, interest organisations, educational institutions and other actors in each

[4] Prior to the implementation of the reform and to determining the existence of regional development, the Danish Government had already appointed a Regional Planning Committee (*Regionplanudvalg*) in 2002 with the task to give recommendations to upgrade and simplify regional planning in Denmark. In doing so, the Ministry of Environment commissioned different international organisations to carry out studies of regional planning systems in other Nordic countries as well as in England and Germany.

region. So far, the only generation of RDPs was advanced in 2007, a time where municipalities were deeply struggling with implementing the structural reform and preparing a new generation of comprehensive municipal plans. This situation essentially limited the inclusiveness and ownership of several bottom-up processes and in many cases caused the municipalities to adopt an indifferent attitude when it came to implementing the RDPs.

In spite of these initial challenges and limitations, the rationale behind advancing RDPs portrays the regions as members of a partnership strategy aimed at supporting the central government's focus on strengthening Denmark's role in the global economy. The 2006 national planning report clearly positioned itself in accordance with globalisation by stressing the need to renew spatial planning as a prerequisite to pursue the growth and competitiveness demands. Based on this premise, the RDPs could be regarded as an attempt of the central government to improve Denmark's position in the global competition. In this sense, both regional and municipal levels are increasingly expected to become strategically co-responsible for a broader economic development, adjustment and adaptation (Ministry of the Environment, 2006).

In line with such positioning on economic growth and competitiveness and along with the creation of RDPs, the 2005 Business Development Act handed the new regions statutory responsibility to set up partnership-like entities known as Regional Growth Fora (RGF). Comprised by representatives from regional and municipal councils, local businesses, trade unions and knowledge and educational institutions, RGF have been in charge of fostering and advancing initiatives to improve local conditions for economic growth. In doing so, these agencies hold the task of preparing business development strategies based on the strengths of businesses in the regions, which focus on the government's four drivers of economic growth (adopted through the EU from the OECD): human resources, entrepreneurship, accumulation and sharing of knowledge, and access to new technology. The main role of RGF is to ultimately make recommendations to regional councils and the state as to what regards funding for specific regional development projects and the allocation of EU Structural Funds, respectively.

There is a high degree of interaction and co-dependence between the RDPs and the RGFs' business development strategies given the fact that both need to ensure full cohesion with one another. In accordance to the 2005 Business Development Act, business development strategies should constitute part of the foundation of the RDPs themselves. In view of the RGF's legal positioning and their inherently strong decision-making nature coupled with the seemingly fragile clout so far embedded in RDPs, the implementation of the latter is most likely to be conditioned by their strict alignment with the interests pursued by the former. This scenario has somehow struck the first generation of RDPs advanced in 2007, which in subsequent years saw a rather limited implementation of its proposed strategies. However, a new generation of RDPs is expected for 2012, which is likely to undergo quite a different process and thereby render distinctive outcomes. This is mainly due to the shifting preconditions to embark upon more inclusive bottom-up processes based on already existing municipal plans (2009) and business development strategies (2010). RDP processes are also likely to undertake an alternative cause given the fact that municipalities have already overcome the turmoil of implementing the structural reform and have thereby been presented a new opportunity to prioritise the making of RDPs.

(Insert Figure 7 about here)

5. Discussion and concluding remarks

The evolution of regional planning in Denmark leads to the general discussion that the overall conception of the domain has been significantly mobilised, which has thereby entailed a profound transformation of the domain particularly during the past five years. In this sense, the preceding analysis leads to three main conclusions. The first conclusion is that the contents and logics of regional planning have importantly shifted as a result of specific development orientations as well as other political driving forces. Regional planning was originally regarded as a societal necessity (to address uneven development) and as an orchestrated effort to alleviate the pressing urban and rural development issues of the post-war decades. This became evident in the advancement of (supra-urban) planning exercises seeking for the ordered expansion of city regions with respect to sectoral matters (i.e. mass transport, industrial development, housing and nature preservation). Moreover, in pursuit of providing a comprehensive framework for developing a whole region, the regional plan of North Jutland advanced in 1966 covered urban, rural and coastal development matters in correlation with infrastructure development and environmental preservation. These examples could be regarded as the first genuine attempts in pursuit of regional planning based on equal development and spatial coherence.

The cross-sectoral quality of these initial plans persisted throughout the consolidation of the domain in the 1970s and later with the advancement of regional plans. Of utmost relevance was the establishment of an urban pattern logic, which yielded hierarchical spatial arrangements within individual counties. This enabled a more even spatial distribution of demography, labour market and economic growth, which together with the 1970 structural reform contributed to secure a more equal socio-economic development across the country. In safeguarding the achievements made after the consolidation of regional planning, the same socio-spatial approach was pursued by the three generations of regional plans put forward in the 1980s. However, due to supra national and national interventions as well as the Planning Act's shift from equal to appropriate development, the contents of regional plans gradually placed more emphasis on environmental themes during the 1990s and early 2000s. Along with these thematic shifts, the spatial logic embedded in regional plans steadily decreased in importance.

The most radical shift, however, stemmed from the 2007 structural reform that abolished the counties and thereby most provisions associated with regional planning. This situation prompted the birth of five new regions with the task to pursue regional development planning instead. While contents wise the new regional development plans inherited most thematic aspects from the former regional plans, the spatial logic formerly embedded in the latter was replaced by a spaceless rationale geared towards the promotion of growth. This has entailed that the cross-sectoral nature of the plans be now exclusively regarded in light of drivers of economic growth while the balance of conflicting sectoral objectives appears to be largely overlooked. In other words, the conception of regional space once based on the equilibrium of socioeconomic aspects, environmental quality, land use and infrastructure development from inter-regional and intra-regional scopes has turned out to be fully dissolved. The absence of spatial thinking has thereby created an important policy gap, which could be likely to generate sectoral issues especially in connection with aspects transcending municipal boundaries (see third conclusion below).

The second conclusion can be explained through the outcomes of more recent shifts related with the policy mechanisms and institutional arrangements associated with regional planning. After its genesis and first decades of practice, regional planning in Denmark became consistently shaped by policy mechanisms designed *ad hoc* to yield legally binding physical land use plans. As of 2007, the statutory character of such mechanisms shifted into a new strategic scheme aimed at generating regional development plans. In contrast to the former, these new plans could be regarded as soft policy instruments geared towards generating visions for desired regional development. There is thus a general shift from coercion to guidance, implying that the allocative function once delivered by regional planning has ceased to exist.

In terms of institutional arrangements, the hierarchical structures previously in charge of plan making and implementation have also been considerably altered. The new Danish planning system currently relies on a much flexible version of the principle of framework control, implying that the regional level no longer directly imposes its provisions on municipalities. Although in principle the regional development plan does still hold a steering role over municipal plans (i.e. according to the latest version of the Planning Act the latter cannot contradict the former), it is precisely municipal actors who have significant influence in the process of defining the contents of regional development plans themselves. Besides, such plans are similarly meant to ensure cohesion with the growth fora's business development strategies, wherein municipal councils and private sector actors hold substantial decision-making powers. Therefore, the implementation potential of regional development plans mainly depends on the ownership that regional councils in liaison with municipalities and other groups of actors develop in supporting a common vision for the development of their regions. As only one generation of plans has so far been advanced, the extent to which these strategies are able to succeed remains to be seen.

The third conclusion concerns the shifting role of regional planning from being a 'Panopticon' to a facilitator of growth. The traditional structure of the Danish planning system based on the principle of framework control enabled the regional planning domain to ensure spatial coherence through the coordination of municipal and other sectoral plans. Through this mechanism, regional planning thereby originally adopted a 'Panopticon' role that directly intervened and safeguarded inter-municipal coordination in spatial development matters. Given the fact that the legally binding nature of regional plans has now been replaced by economic growth-oriented policies that neither oversee regional space nor hold a factual enforcing character, it can be concluded that the 'Panopticon' role of regional is no longer being assumed whatsoever.

The absence of the 'Panopticon' role may imply that municipalities face serious challenges due to their potential lack of collective expertise. This may actually hold true in cases where municipalities embark upon projects transcending their own boundaries or wherein an array of sectoral issues requires coordination for the sake of balancing regional space. An example is the implementation and maintenance of EU-sponsored development projects formerly endorsed and upheld through regional planning intervention. Another clear example where municipalities might encounter challenges concerns the management of environmental issues such as groundwater and surface water quality affected by the leaching of old industrial areas. Yet another case is that regarding the grants of special agriculture permits based on the compliance of *ad hoc* regulations, whose assessment is dependent on particular know-how and capacities that individual municipalities have not probably yet assumed. A further im-

plication is that regional population balance or labour market considerations are no longer overseen in unison with other sectoral plans.

The above implications suggest that the harmony provided by regional plans in bringing together different sectoral policies is currently at stake. Yet, the absence of this 'Panopticon' role could also entail a range of new opportunities for municipalities to generate innovative arrangements aimed at the implementation of inter-municipal networks. Through inclusiveness and ownership, for instance, municipalities still hold the possibility to advance a common framework of goals and strategies in relation with regional development plans and their implementation. In this sense, the extent to which regional development plans succeed to perform as real partnership strategies will potentially determine whether the domain recoups its former coordinative capabilities. But to do so, regional development planning as such will have to overcome the challenges of strengthening bottom-up processes while also being capable of generating a strong ownership amongst actors.

In sum, the whole conception of regional planning has experienced a substantial transformation in recent years. This concluding section has emphasised that such conversion is comprised by significant shifts concerned with: (i) the contents and logics of regional planning; (ii) the policy mechanisms and institutional arrangements associated with regional planning; and (iii) the role of regional planning in contributing to cater for development in the country. Several potential challenges and implications derived from each of these shifts have also been put forward. It is also concluded that the capacities and outcomes of regional planning as formerly conceived have ceased to exist. In this sense, regional planning as a comprehensive mechanism to deal with uneven spatial development has been transformed into a domain that mainly aligns with growth agendas. In addition, regional planning as a tool to ensure the ordered expansion of urban areas has been suppressed.

The endurance of regional planning values in the new regional development planning domain is likely to depend on the regions' ability to facilitate a sound symbiosis between the former values of regional planning and the growth values of business development strategies. This will therefore be contingent upon the regions' capacity to incorporate them in the on-going bottom-up development processes for the 2012 generation of plans. However, a successful symbiosis could be hampered by an increasing agenda on governmental austerity, which is currently causing that Danish municipalities centre even more on economic growth objectives to fill in budget potholes. In addition, with the strengthening of national and municipal planning and the significant clout that business development strategies possess at the regional level, the future of whatever is left of regional planning seems highly dependant on decisions that will be made beyond regional councils themselves.

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Figures

Figures 1a & 1b. 1947 Finger Plan for Greater Copenhagen (above) and 1954 Regional Plan for Greater Aarhus (below)

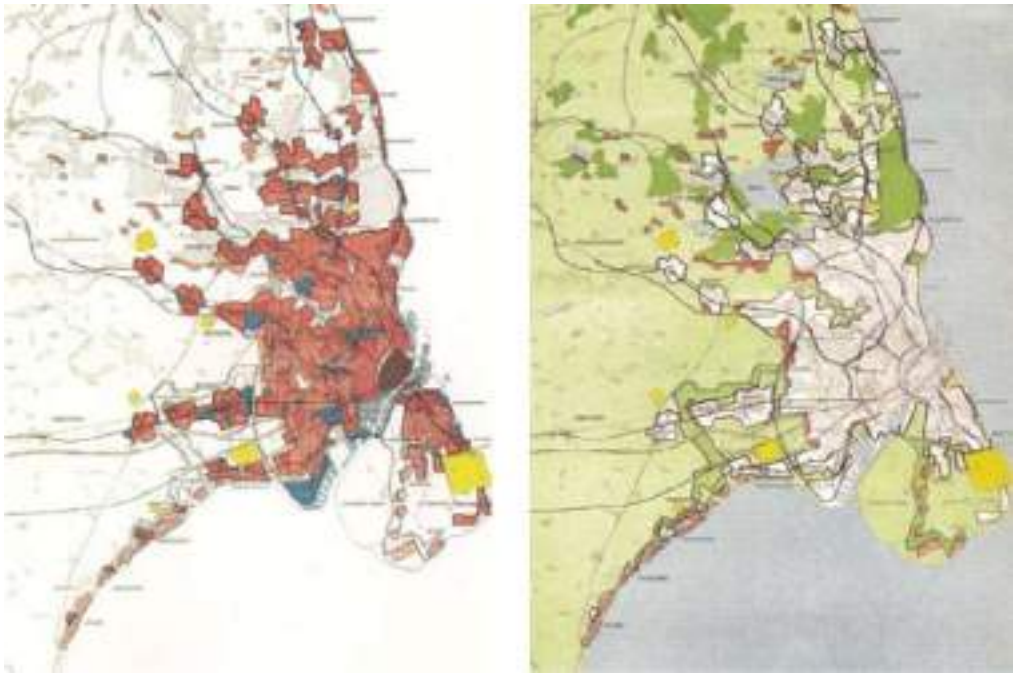


Figure 2. The 1966 regional plan of North Jutland

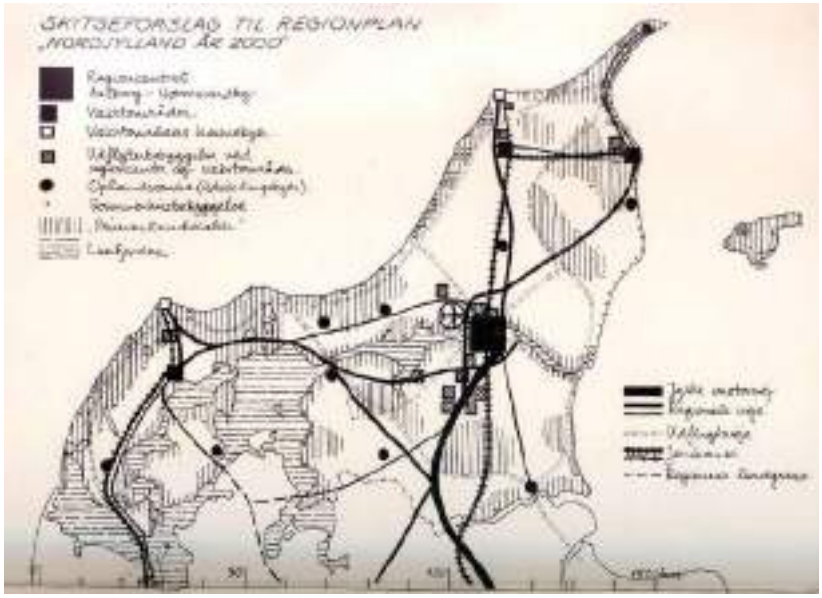


Figure 3. Hierarchical urban pattern: National centres (left) and regional centres (right) ca. 1965 based on 16 and 9 different service functions, respectively (Landsplanudvalget Secretariat, 1966, pp. 64, 67).

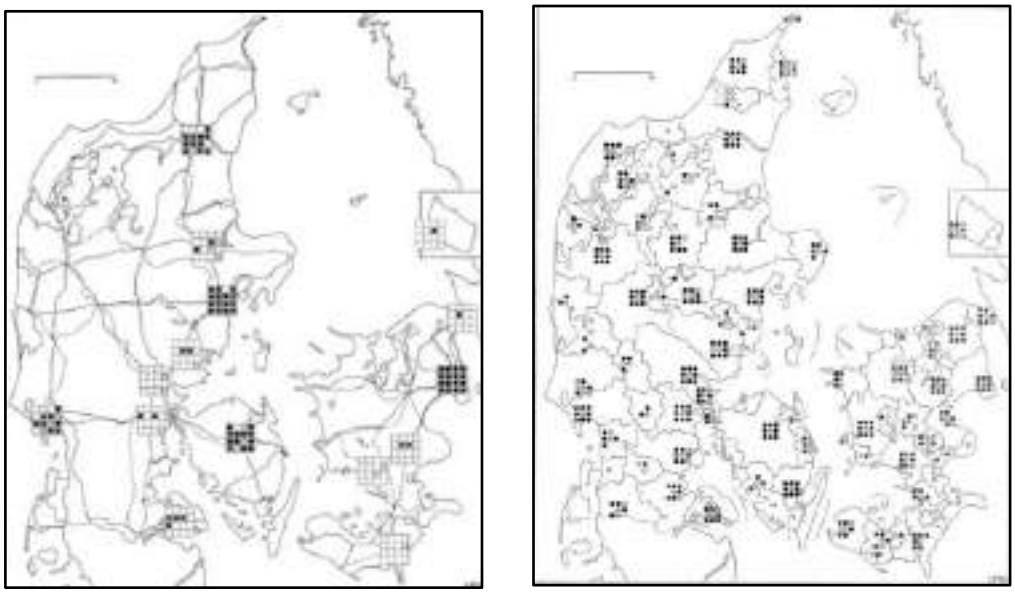


Figure 4. Danish counties and municipalities before and after the 1970 structural reform of local government (adapted from Jørgensen and Vagnby, 2005)

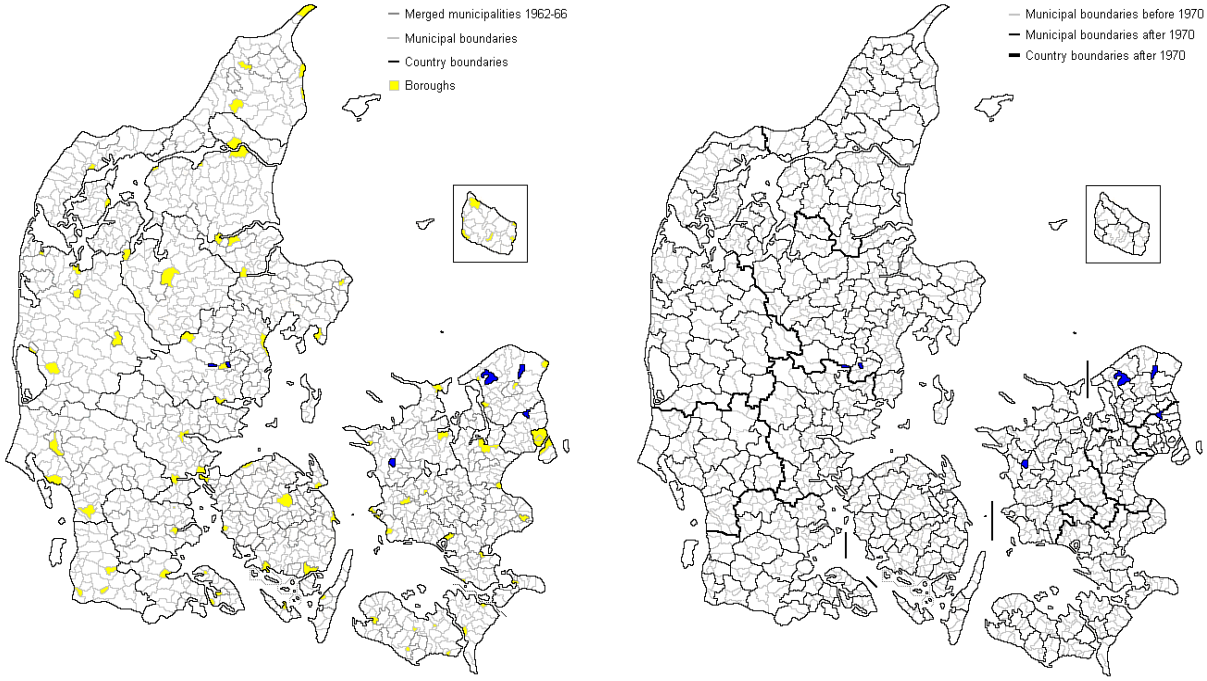


Figure 5. Overview of the Danish planning system and principle of framework control after the 1970 structural reform (adapted from Enemark, 2006)

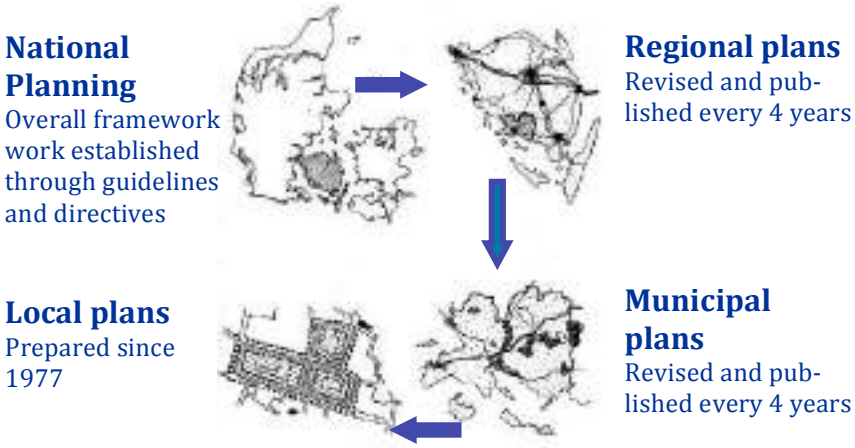


Figure 6. Danish regions and municipalities after the 2007 structural reform of local government (Nordregio, 2007)

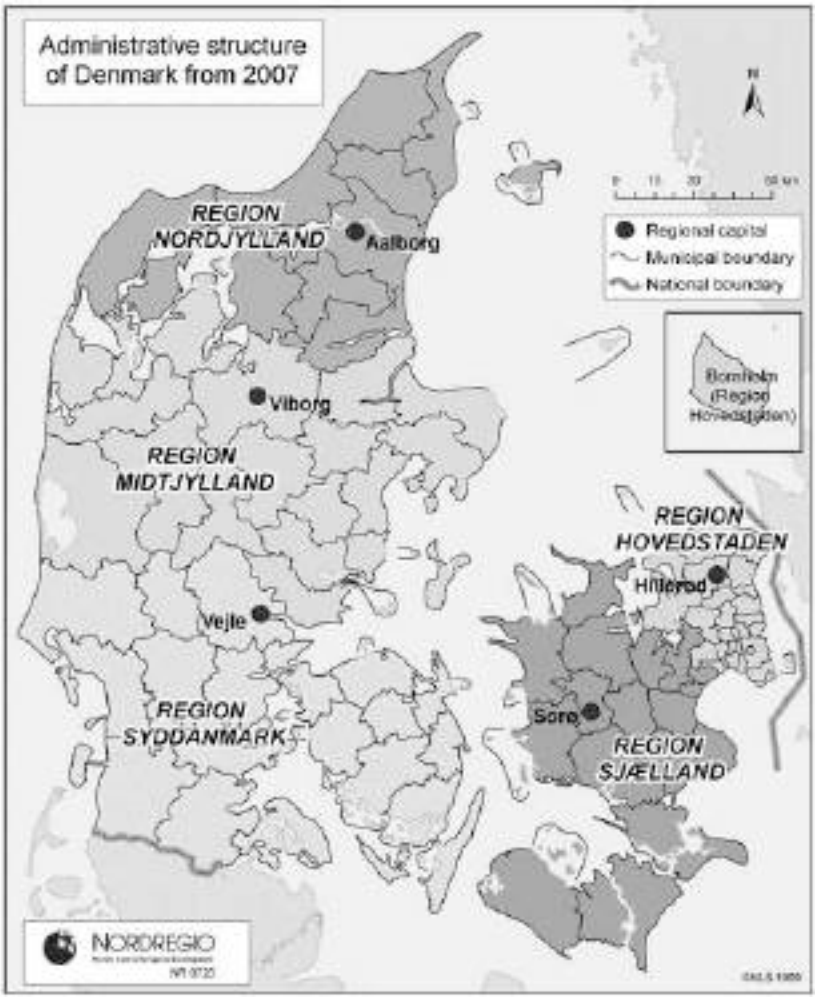
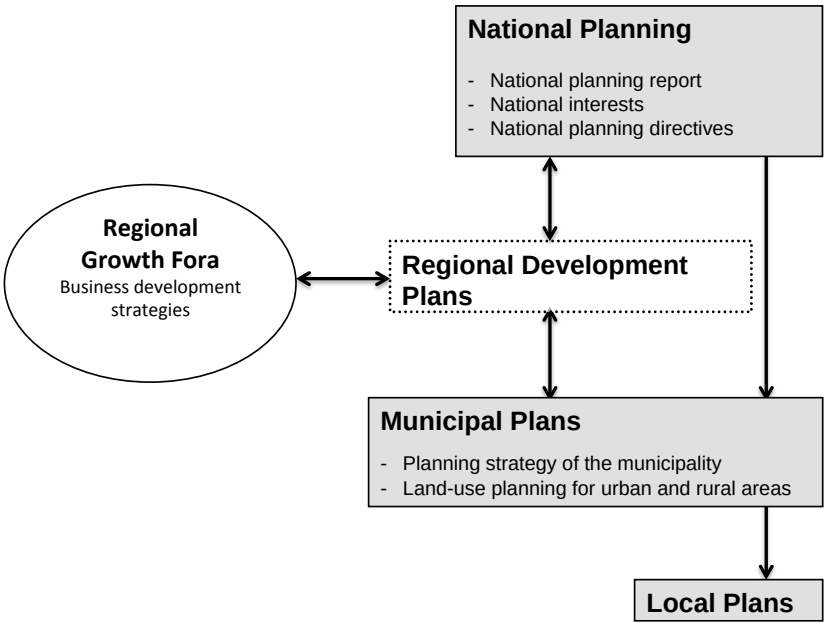


Figure 7. Overview of the Danish planning system after the 2007 structural reform (adapted from Østergård, 2005)



THE TRANSFORMATIONS IN LAWS BETWEEN 2002-2012 AND THE 'LEGAL' FUTURE OF TURKISH CITIES

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Abstract

Keywords: legislation, urbanization, urban planning, Turkish Cities

The laws that draw the frame of the urbanization and urban planning in Turkey has undergone a dramatic change in recent years. With housing and construction sector gaining ground in Turkish economy, the pressure over the legislation concerning urbanization and urban planning has been increased. The market demands more, so do the government. Within this context the legislation of urban planning and urbanization in general became more capital oriented and more centralized in political and administrative terms. Eventhough there is a tendency of decentralization originating from European Union Harmonization Process, decentralization remains superficial and most of the steps have been taken back with the recent changes in laws regarding planning authorities in central government and local governments.

These changes in laws will have varying impacts on cities and countryside, but the impact on the place and moment where those two, the city and the countryside, are juxtaposed, the impact is highly predictable: urban sprawl as a form of urban growth disorder (Yaşar, 2010). Within the framework of this paper, the legal background of contemporary urbanization in Turkey will be in focus. The laws and amendments to the laws made after 2002 up to now will be evaluated with reference to their observed and possible results in urban space, in Turkish cities.

The structure of the paper will be based on the laws; we will start with the study of the transformation taking place in the legal system after the elections held in 2002. Then, we will continue with observing the spatial results, the solidification of this legal framework. Last but not the least; by synthesizing all these analyses, we will discuss the issue in the theoretical level. In other words, we will start from the case, then attempt to build a stairway to the theory if possible.

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1. Introduction

"Answered prayers cause more tears than those that remain unanswered"[2]

From "with the aim of housing production in accordance with development plans" to "with the aim of housing production"[3]

We are in the course of wide and radical changes in legal framework. Every field is under a restructuration process; from health, education, public services in general to working conditions and rights, administration and distribution of authorities, and production of space. The elections done in 3rd of November in 2002 will probably be considered as a milestone in this process in near future when the results of those changes in society and in space are comprehensively grasped. Between 1991-1999 and up to 2002, Turkey was governed by eight different coalition governments or minority governments. This situation reduced the pace of possible changes and shifts, and decreased the decisiveness and power of the government in the restructuration process of legal framework. Especially after the coup d'état in 1980, the neo-liberalization process in Turkey is accelerated, but the legal changes to meet the needs of the neo-liberalization process has caught the needed pace with the single party government. In 2002, the leading party, Justice and Development Party (JDP) has been elected to take the control of the government, and majority of the Turkish Grand National Assembly has become members of JDP. In following elections the situation has not changed; A single-party government with a majority of chairs in the Assembly: strong and decisive. With this, the neo-liberalization process has been accelerated. As a matter of fact, amendments to the laws, as a way of changing how state and society behaves, has become the main agenda of assembly and government.

In recent years, urbanization and urban development have entered a new phase. Housing is highly commodified like it was never before; construction sector has become a core sector in urban economies. As a result, cities are widely suffering from the problem of urban growth disorder[4] showing symptoms of urban sprawl: excess production of developed urban land, dispersed peripheral settlements, fragmented cities, illegible macroform, consumed rural areas and housing problem. (Yaşar, 2010). To put bluntly, as we name it, urban growth disorder is one of the main problems that contemporary cities are suffering from. This disorder has some specific spatial features dominating the newly produced urban space. Nowadays the production of urban space is so mass in scale that this spatial feature dominates cities in general as well. One of the mainstream transformation taking place in the legal framework that is mentioned above is the restructuration of urbanization and urban

2 Saint Teresa of Ávila, in Capote, Truman.(2008) Answered Prayers.

3 "In Law No. 4706; e) The phrase in the article 7/B "with the aim of housing production in accordance with development plans" is replaced with "with the aim of housing production". Law No.5228 Bazı Kanunlarda ve 178 Sayıl Kanun Hükmünde Kararnamede Değişiklik Yapılması Hakkında Kanun (2004/07)

4 The concept, "urban growth disorder" is proposed by the author. (Yaşar, 2010).

development. The market pressure and government's perspective over urbanization is translated into the official language of government.

Within the framework of this paper, the legal background of contemporary urbanization in Turkey will be in focus. The laws and amendments to the laws made after 2002 up to now will be evaluated with reference to their observed and possible results in urban space, in Turkish cities. Ankara with her housing sector and periphery will be the reference of the observed results. The results are easily observable especially in the periphery of Ankara, where mass scale high-rise housing projects are taking place, high development rights are given (whether it be realized or not), and in where mass scale urban transformation projects are conducted (whether it be in the periphery or in the core) Streetless, centerless and endless, copy-paste housing areas in the middle of fields and in the middle of the city.

The legal framework of urbanization and planning is not a well-structured, legible one; with the transformation process mentioned above, it is becoming more and more chaotic. The transformation takes place in a fragmented way, bit by bit; therefore it is hard to decipher the direction that urbanization and planning heading to, and it is hard to understand situation comprehensively. In order to overcome this problem and make it more understandable, the laws and amendments to the laws, related with urban sprawl and housing will be classified with their emphases, and/or results. First of all, urbanization and urban development related laws are selected[5] and with a pre-reading the pattern of changes are noted. With reference to this pattern, a classification is produced. The laws can be distributed into three main classes which are: 1. restructuring the power and the authority; 2. restructuring the land market and land uses; and 3. restructuring the housing sector. These three, together provides the basis for urban development and urbanization. Some of the laws can be classified under more than one class due to their contents, yet most of them fall under one of these classes. A total of 17 laws, 2 draft laws[6] and 2 decree laws are selected and their related parts are classified and analyzed. Selections and classifications are made with reference to problem of urban sprawl and housing sector.[7]

5 It is crucial to note that the selection of laws and decree laws is made with reference to the relevance to production of urban space and the power relations in producing urban space. As a highly relevant and special case; the laws related to regulating housing sector are also included.

6 One of the draft laws is accepted in 16th of May, while this article was on the eve of completion; so, the number of laws under inspection becomes 18 and draft laws are decreased to one.

7 For a more deep and general analysis on the legal background of urbanization in the case of Turkey, the work of Balaban (2008), which includes the legal background of urbanization with all its aspects classified and the transformation took place between 2002-2007, can be seen.

2. Laws and Production of Urban Space: The Change in the Legal Background of Urbanization and Housing Leading to Urban Growth Disorder between 2002 and 2012

In this part, the way that the urban space is produced will be traced back in the transformation of the laws after 2002. Neo-liberalization is an ongoing process dating back to 1970s, and in this continuum, the years 1980 (coup D'état) 2002 (JDP - single party government) are significant points, that deserve to be considered as a breakpoint. After the elections held in 2002, National Assembly, with a strong and synchronized voice, fastened the process of law making, and a significant amount of them are on the production of urban space. It is also important to note that 2001 was the year when a deep economic crisis took place in Turkey.[8] It is easy to read the impact of capitalist demands from the government, from the laws. However, this is not a one-sided and one-way process; in the case of Turkey, the impacts of state interventions are highly effective over the production of space in the capitalist form of cities (Balaban, 2008). In other words, laws, as the official and operative language of state, are also effective over the way of the production of urban space.

Before proceeding to the evaluation of selected laws, it is crucial to keep in mind that not the whole of laws but selected relevant parts will be highlighted and for the sake of being perceptible, simplification and summation will be used. It is the pattern that should be deciphered, as a matter of fact; we will highlight the relevant parts. This paper should not be seen as a structured picture of planning system and urbanization today but instead considered as a picture of the pattern of change in the legal framework of urbanization in the case of Turkey. In order to take this picture in high resolution, a significant sum of laws are analyzed, the number of laws can be increased via expanding the frame, but for operational purposes we will focus on the ones related with urbanization and housing production. The classification of related laws by years can be found below table.

Table 1. Selected and Classified Laws by Years[9]

year		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Draft
Laws and Production of Space; Urban Growth Disorder: Changes between 2002 and 2012	Restructuring power and authority	.	5104 5162 5216	.	5481	5609	5793		5998	Decree Laws 644, 648	Disaster L.	Disaster L.
	Restructuring land market and land use	.	5104 5178 5216 5226	5403	5491	5578	5751	.	5998	Decree Laws 644, 648	6292 Disaster L.	-Disaster L. -Conservation of Nature and Biodiversity L.
	Restructuring housing sector	4966	5273	.	.	5582	.	.	.	.	Disaster L.	Disaster L.

8 According to Boratav (May 2010) in recent years, three similar crises are faced in Turkey in relation with global situation of economy and crises. These are 1994, 2001 and 2008-2009 crises. Moreover, the results of the global financial crisis of the year 2011, is not yet evaluated for the case of Turkey.

9 The laws will be explained in the following parts.

A special note on the table 1 and general frame of the work is the acceptance of the Law on The Transformation of Areas under the Risk of Disaster. With this law, the production of urban space in existing urban areas and in urban periphery/rural areas surrounding cities has been restructured radically.

2.1 Restructuring the Power and the Authority: Distribution of authorities between central and local governments and participation of public

The laws falling under this heading are analyzed in two dimensions implying two different sides of the tension. One is centralization-localization debate and the other one is enabling-disabling the participation. The balance between the local and the central bodies in production of urban space is not a clear and direct one. In other words with the changes in laws the authority is both centralized and localized at the same time. The second tension, the participation issue is clearer; most of the laws do not even mention it. With the law on the Transformation of Areas under the Risk of Disaster, the authority of central government has become indisputable and unquestionable. If a building is marked as under risk, demolition and transformation will take place within a short period of time without question and dispute. The participation to the decision making process is not in the agenda of the government and local governments previously, and the only way is to sue the decisions, plans etc. With the law it is now impossible to sue the decisions of demolition and transformation; in article 6, clause 9, it is clearly stated that *"Lawsuits and legal proceedings concerning the disputes related to the transfer transactions and the expropriation performed according to this article shall be executed and concluded only according to the value, and those related to the identification and the demolition works and processes shall be executed and concluded only according to the building and wreckage value."* With this law, the production of urban space has totally lost its democratic state that never has been acquired actually, and become an act of a powerful central government with an indisputable authority.

In the year 2004, a significant amount of laws are accepted. With 5216 - The Metropolitan Municipality Law (July 2004), the rural areas surrounding the metropolitan cities has come under the rule of the metropolitan municipality. A circle is drawn, taking governor's office as the center with a changing radius based on the population of the metropolitan city.[10] To put bluntly, the rural areas under control of government's provincial organization; governorship, has become areas controlled by metropolitan municipalities. This can be seen as a step to localization yet participation of people (residents of urban and rural areas) is still lacking. Also Localization only takes place in metropolitan scale, not in lower scales.

Another significant law is 5162, the one On Changing The Mass Housing Law (May 2004) is the first step of the inevitable rise of Housing Development Administration

10 Temporary Article No.2

(TOKİ). With Article No.4 TOKİ is authorized with making and approval of the development plans in every scale, in urban transformation zones and in areas defined as mass housing development areas or areas owned by TOKİ. In addition to this, TOKİ is equipped with extended expropriation authorities. This law is on the centralization side, also participation is not even mentioned. The control of TOKİ over the production of housing and urban space converges to absolute, and this creates a tension between the authorities of metropolitan municipalities and TOKİ.

The last related law of 2004 is 5104 North Ankara Urban Transformation Law, a law specifically made for Ankara. With this law, the authority of metropolitan municipality of Ankara over the urban transformation project conducted in the north entrance of Ankara without any proposed mechanisms of participation of residents. The approving authority of the development plans produced is the Ministry of Public Works and Settlement[11]. In the year 2006 with the Law 5481, Metropolitan Municipality has become the approving authority.[12]

In 2007, with 5609 The Law on Making Amendments to The *Gecekondu* Law (March 2007), TOKİ is equipped with wide authorities once in the possession of Ministry of Public Works and Settlement.[13] The transformation of *gecekondu* areas has become an issue of TOKİ with this law and the clearance and replacement of *gecekondu* areas with mass housing projects is fastened with this law. The empowerment of TOKİ continued with the Law 5793 (July 2008). The authority of TOKİ is increased in *gecekondu* areas[14], the areas under risk of disasters[15] and the public land subject to privatization[16].

In 2010 the authorities of municipalities over the production of space is increased with the law 5998 The Law on Making Amendments to The Municipality Law (widely known as Article No.73). The key point of the law is the urban transformation issue. Municipalities (and metropolitan municipalities where existent) has become the main actor in the projects transforming *gecekondu* areas, the old city parts, areas that are under disaster risk, the improved lands or unimproved lands; for the purpose of housing production.[17] However, it will be superficial to consider these changes as a sign of localization. It is true that municipalities and metropolitan municipalities are authorized over the production of urban space, with a nearly absolute control; bodies of central government are authorized as well.

With the last chain, the decree laws number 644 and 648, the distribution of authority has become more stratified. In the year 2011, after the national elections, the ministries in the cabinet have been restructured. The Ministry of Public Works and

11 Fused into Ministry of Environment and Urbanization in 2011.
12 April 2006. 5481, Article No.1
13 Article No.1
14 Article No.7
15 Article No.10
16 Article No.15
17 Article No.1

Settlement has become The Ministry of Environment and Urbanization and the authorities of the ministry, some of which were once passed to TOKİ, have given back to the ministry[18]. Moreover, the ministry is authorized with the control, acceptance and making of environmental plans and master plans (in accordance with environmental plans). The general decisions over the growth of the cities, over the housing sector, over the production of urban space in general, are now under the rule of the Ministry of Environment and Urbanization.[19] While this paper is in progress, the first draft law, Law on the Transformation of Areas under the Risk of Disaster, has passed[20]. With this law, urbanization, urban development and transformation will enter into a new stage. In 20 years 14 million flat will be evaluated, and if necessary demolished and rebuilt.[21] There is no control mechanism over the decision making process, not in national scale and not in local scale. The decisive authority is the cabinet and the decisions made are unquestionable.

Centralization of the authority of the production of space is the main result of the changes summarized above. However, significant sum of so called localization of authorities also has taken place, within this time period. It is a twin process, heading for both sides, however centralization dominates. But this does not imply that the localization and centralization processes are in conflict with each other. The metropolitan municipality, municipalities (where metropolitan municipalities are not existent), Housing and Development Administration and last but not the least The Ministry of Environment and Urbanization, these three bodies have powerful authorities over the production of urban space. The planning authorities given to metropolitan municipalities cannot be solely regarded as a step to localization and decentralization of power. This authority points out the direction of more urban development. Between central and local, there is a hidden and underlying consensus over the approach to the production of urban space in its widest sense. In addition to that, when the authorities of the local and central governments cross in production of urban space, or housing in specific; there is a consensus for more. In other words, there is no control over proposing more land development rights, housing areas or urban development in general. If the housing project proposed by TOKİ is conflicting with the master plan of the city, prepared by the municipality; this does not prevent TOKİ to produce housing in that specific area. Same goes for the Ministry of Environment and Urbanization, the transformation of existing urban areas and rural areas on the every part of the city will be considered on their own, isolated from the overall needs of the city. We are in the beginning of this new, highly powerful and widespread transformation era, and we cannot measure the impacts yet, but with the hint given by the changes of the legal framework after 2002

18 Article No.2, Clause ğ.

19 Decree Law 644 Article No.7 Clause a. (July, 2011); Decree Law 648 Article No.1 Clauses ç, h and ı.

20 16th of May.

21 http://www.hurriyet.com.tr/ekonomi/20585064.asp 19 May 2012; Kentsel dönüşüm ofisleri kurulacak, konutlara sertifika, mülk sahibine kredi verilecek, Hürriyet. Accessed in 19 May 2012.

and the urban space produced with reference to it, we can assume that this period will be more central, and more powerful enabling fast operations.

2.2 Restructuring the Land Market and Land Uses: Commodification and recommodification of space

The mechanisms controlling the outer limits of production of housing, developing lands and urbanization are under transformation as well; especially laws related with conservation are under reconstruction. In the year 2004, a significant amount of related laws are accepted. 5216 The Metropolitan Municipality Law (July 2004) is the most significant one. Within the circle defined in the previous part, metropolitan municipalities are authorized to produce plans of scale 1/25000 and 1/5000 in accordance with the Environmental Plan[22] (Ministry of Environment and Urbanization is authorized). Disaster issue is also mentioned in the law and metropolitan municipality is authorized to evacuate and demolish buildings under risk. Furthermore, with villages becoming neighborhoods, they have become possible further growth areas, as a part of urban areas. Even though those villages are not urbanized in its social, spatial and economic sense; they have become urbanized in administrative terms. They have become a significant part of urban land market and commodified in terms of urban land. Whether it be already developed or to be developed, these lands, that are on the outskirts of cities, are subject to land speculation. Agricultural production, in most cases is not enough to prevent land speculation and urban development. One of the most significant observance of the results of this law is the case of Ankara. In the year 2007, the Master Plan of Ankara has been accepted within the boundaries defined by the circle drawn by 5216 with reference to population. With the plan, the development plans proposed by district municipalities has become invalid, but in most of the part the previously given development rights are preserved. The population provisioned for the metropolitan area for the year 2023 is 7.5 million where the population for the year 2009 is 4 million. A population of 3.5 million has been turned into development rights on the rural periphery of the city.

Two other laws; 5226 The Law on the Amendment to the Cultural and Natural Heritage Protection Law and 5178 The Law on the Amendment to the Pasture Law are highly legible examples of the shift in the perspective in laws; “conservation” becomes “conservation while using, with the principle of sustainability”[23]. With 5226, conservation has become secondary to the “sustainable usage” of related areas while with 5178 pasture fields are opened to development. In both cases development and commodification of new lands become a part of the conservation laws. In other words, the antagonistic nature of conservation laws, antagonistic with reference to urban development, becomes synergist with development.

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22 Article No.7 clauses a and b.

23 A detailed work on the changes of the usage of the words can be found in Duyguluer, F. 2010, KBAM Conference Presentation, İmar Hukuku’nun Muğlak Kavramları.

With the law 5104, specifically designed for Ankara, focusing on the transformation of the northern entrance of the city, a massive amount of urban land, and *gecekondus* on it, has gone under transformation. In other words, previously urbanized land is recommodified and has become subject to transformation. In the year 2005, another significant law was passed, 5403, Law on Soil Conservation and Land Use. The aim of the law is described as "conserving and 'developing' land, with sustainable development principles which are undefined and obscure. Another significant part of the law is the definition of non-agricultural lands. These lands are defined as [24] areas planned as housing areas and for other uses. In other words, if an area is planned to be urban, than it becomes non-agricultural land. In addition to that, even the absolute agricultural lands and irrigated farming areas can be subject to housing development, if ministries considered development as public interest and produce projects accordingly.[25] With an amendment to this law made in 2007, Law No.5578 a temporary article authorizing the development over already developed agricultural land, granting pardon for development in exchange with a defined sum of money.[26] A similar law is passed in 2008, which now includes the pasture areas as well.[27]

In 2006, with Law No.5491, The Law on Environment has been changed, and the popular concepts, sustainable development and conservation-usage balance have taken their place in the law, and the authority on preparing environmental plan has been given to the Ministry of Environment[28]. In 2010, with the Law No. 5998, The Municipality Law has been changed. Widely known as Amendment of Article No.73 the commodification of surrounding rural areas has been fastened. Metropolitan municipality is authorized to produce plans of "Urban or rural, developed or non-developed land" and again the control mechanism over the 'overproduction of urban space is not in the agenda.

Decree laws 644 and 648 increased the authority given to Ministry of Environment and Urbanization, while bringing together the two different ministries theoretically working antagonistically to each other. As a matter of fact, conserving the environment is now in the hands of the urban development apparatus of state, which consequently fastens the process of urban development and which clears the way. This year, last month, to be specific, Law No. 6292, widely known as 2B Law, is passed. The forest areas that have lost their forest features, or so they say, are, from now on considered as possible urban development areas. It is crucial to remind that most of our cities, especially major ones are surrounded with 2B forest areas, which likely to be subject to urban development, most probably without a controlling master plan, or without considering the need. Supply is freed from need, and in some cases even demand. Another significance of this law is that, it enables the rent gathered from the sales of the 2B land be used in the massive transformation attack,

24 Article No.3 Clause i.
25 Article No.13
26 Article No.6
27 Article No.2
28 Which later merged with Ministry of Public Works and Settlement and has become Ministry of Environment and Urbanization (2011)

as well as being the reserve land stock. The acceptance of the transformation law (Law on the Transformation of Areas under the Risk of Disaster) has brought the issue on a far different level. A draft law are of significance here; The Draft Law on The Conservation of Nature and Biodiversity which perfectly shows the change in the conservation perspective. The antagonist position of conservation laws has been lost. Production of urban space prevails.

As we summarized above, the planning system in Turkey is not a well defined and comprehensive system with clear boundaries and authorities, and it has a tendency to increasing entropy. If we add the changing perspectives on conservation to this, the picture will get clearer. The changes made in laws are bit by bit and not so well designed or well written, yet they are ideologically consistent. More urban development, more housing, more rent is the core of the changes. The boundaries of development, the limits are abolished, once and for all. Endless cities are inevitable.

1.3 Restructuring the Housing Sector: Highly commodified housing and state as an entrepreneur in the sector

Ownership of housing and more development rights are what most of the society is 'praying' for; and answered prayers will cause more tear than that remained unanswered; tear for the future of the cities. 4966 is the number of law that can be considered as the first major step that has changed the housing sector dramatically. With this law, the law 2985, Mass Housing Law, has been modified, and the rise of the TOKİ has begun. Land office has been left under control of TOKİ, and TOKİ has been authorized to produce housing with wide authorities and housing projects for profit. Another significant authority given to TOKİ is the authority to give credit in demand for housing. The unstoppable rise of TOKİ has begun with this step. Following this, in the year 2007, a law on housing finance, law no 5582 has passed. With this, state now pursues not only the supply side but also the demand side, to assure the consumption of produced housing. Mortgage system is not as developed as the ones in western countries but the long term credits are gaining ground in housing market. The middle class, the real target of mortgage system is indebted for long term.

In recent years, the role of housing sector has been increased in economy. The sell and build structure in the market made it less risky to produce housing for the provider and the market is stirred with the help of changes in laws, and with acts and encouragements of government. While European countries one by one fall by crisis, this is the reason that Turkish economy has somehow survived: the late massive urbanization. As the mayor of Istanbul, Kadir Topbaş has said It is the achievements in the construction sector that enables us to say that we did not face the crisis that is

taking place in global scale[29]. But the future is not as bright as Topbaş and in general members of JDP are declaring.

The three axes of change in general lead to an increase in demolish and build urbanization. Existing parts of the cities are under transformation in mass scale and the surroundings of cities, the rural areas on the periphery are as well. This creates a specific form of development, which is repeating itself everywhere. In the following years the housing typology and urban space produced in this era will be named specifically and criticized most probably. Planning, as we barely know it, will come to an end, if the draft law on Transformation of Areas under Disaster Risk is passed.[30] As an underdeveloped country, with a state that does not have enough capital accumulation under its control; a strong and powerful planning process, and planned urban development is not what we have experienced. Moreover, it seems like we are not going to experience it in near future as well. Unplanned nature of Turkish cities, solidified in the case of Ankara, is brought into a new era with the mass housing movement and the housing sector following mass housing approach of TOKİ, in spatial terms. This time, the problem is not only basically the unauthorized housing, but also and mainly housing produced in planned areas. (Yaşar, 2010)

JDP has discovered the power of housing in discourse; in reproducing political power. State as a strong actor in housing sector, without a concern of solving the housing problem of society including poor, and with a market and profit oriented approach strengthens the power of government as we observe up to now. Later or sooner, with this pace of production, the housing sector will enter into a crisis, with an excess of supply, and with over-urbanization of land.

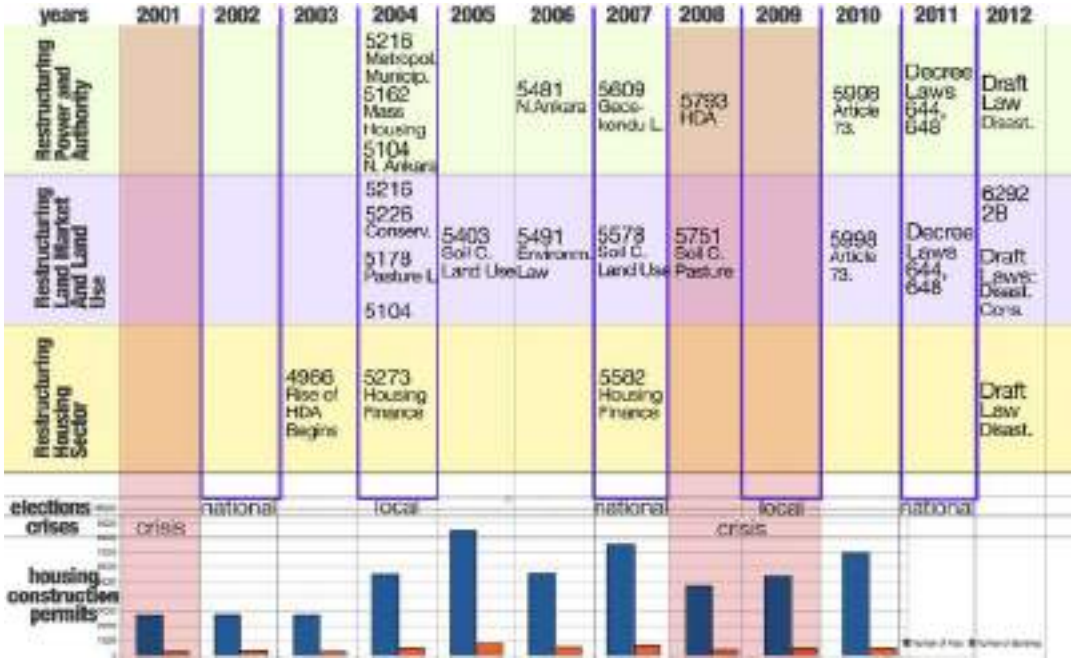
2.4 Laws and Context

Table 2. Classification of The Laws Analyzed, National-Local Elections, Crises and Housing Construction Permissions[31]

29 http://www.hurriyetemlak.com/gyoder_raporunu_acikladi/emlak-yasam-sektorden-haberler/F05M2G4j1Ks=/DjCVhESiNJk= 14.05.2012. Accessed in May 19th, 2012.

30 After we have written this paragraph, it is passed.

31 TUİK, 2001-2010 Housing Construction Permission Statistics, www.tuik.gov.tr, Accessed in May 8th, 2012.



The main breakpoint in the laws has take place in 2004, and right after that, the construction permissions have increased. In general, in years the permits are increasing in number, and with the acceptance of the law on the transformation of the areas under the risk of disaster, this will likely to boom. The crisis took place in 2011 all over the Europe, which is continuing, is not included in the table due to its lesser impacts on Turkey. Thanks to construction sector and the boom in the housing market, the arrival of the crisis has been delayed.

3. Space Produced In The Case Of Ankara: TOKİfication and Apartmenazed Cities

One most important result of these changes in the legal framework is the mass housing movement, taking place in national scale, transforming the housing sector widely and deeply. Not only TOKİ became the main actor in housing sector, but also the scale of the housing projects has been changed. Especially the mass housing provision for middle class has been accelerated, and a single form of stereotype housing dominates the market; that is: point block, generally high-rise, banal apartment blocks in the middle of car parks, without street and centers.

The legal framework of production of urban space and housing is as complicated as summarized above. However this complexity, in a sense, is not observed in the produced urban space. Same old story goes everywhere. Repetitive spaces without identities are the widespread result of demolish-build urbanization. Whether it be on the periphery, or core of the city; this fact does not change. In this part, the contemporary urbanization of Turkish cities, framed by the laws summarized above will be summarized in visual terms. The reasons and results of this form of urban

development, which is purposefully left outside of this paper, have to be debated as well. Within the framework of this study, we will focus on illustrating the urban space produced, with the legal framework drawn after 2002.

Figure 1. TOKİ Karacaören, North Ankara, G.Earth, Accessed in May 19th 2012.

Figure 2. Mamak Municipality, Mamak, , G.Earth, Accessed in May 19th 2012.

Figure 3. Ankara Metropolitan Municipality, Mamak, , G.Earth, Accessed in May 19th 2012.

Figure 4. Altındağ Municipality, Altındağ, G.Earth, Accessed in May 19th 2012.

Figure 5. Yenimahalle, North-West, , G.Earth, Accessed in May 19th 2012.

Figure 6. Ümitköy, West Corridor, G.Earth, Accessed in May 19th 2012.

Figure 7. Yaşamkent, West Corridor. G.Earth, Accessed in May 19th 2012.

Figure 8. Eryaman, 2010, Personal Archive.

Figure 9. Park Oran, 2010, Personal Archive.

Figure 10. TOKİ Turkuaz Konutları, West Corridor, 2010, Personal Archive.

Figure 11. Yenimahalle, 2010, Personal Archive.

Figure 12. West Development corridor of Ankara, From Yapracık, 2010, Personal Archive.

4. As a Conclusion: Bringing the Debate up to Theoretical Level

One of the most prominent writers in the field of urban geography, David Harvey, constructs a theory (on the Marxist ground) for understanding the urbanization under the capitalist mode of production. The flow of capital into the urban environment can be explained by the over accumulation in the primary circuit of the capital and the

flow of capital from the primary to the secondary circuit. (Harvey, D, 1985; pp.3-7) Production of urban space takes place in the secondary circuit of capital. In advanced capitalist countries, this theory can be applied for explaining suburbanization and urban sprawl. In the periphery countries, countries that are underdeveloped, it cannot provide a suitable explanation at first sight. As Balaban states (2008), it is rather through the interventions of state that capital flows to the secondary circuit of capital. In other words, it's not the over accumulation problem in the primary circuit but the state policies that has given rise to the production of urban space. With the laws explained and summarized above, this pattern becomes clearer. The question of the reason why state has chosen to encourage urban development is of importance here. State is not a self generated entity isolated from the capitalist society. State has impact on society and the reproduction of capitalism, yet it is also under control of it.

Several critiques are made on the theory of Harvey considering urban development as a secondary circuit of capital, where in the primary circuit of capital; excess surplus is acquired. Harvey was criticized by being too economic deterministic; ignoring the role of actors.(Balaban, 2008) Especially in the case of under developed, periphery countries such as Turkey, the process differs as we mentioned above. If the ideological apparatus of state, laws are considered as well, the reading will be more complicated. Is this the only way that capitalism realizes itself in the field of urbanization, urban development and housing in the form of laws and legal framework; or is this one of the selected possibilities? What is the impact of the changes on the future of our cities? Or on rural areas; the 'insignificant' rest? *"A general condition"* says Harvey (1985, p.7) *"for the flow of capital into the secondary circuit is therefore, the existence of a functioning capital market and, perhaps, a state willing to finance and guarantee long-term, large-scale projects with respect to the creation of the built environment."* Furthermore, a credit system, creating "fictitious capital" is also needed. In the case of Turkey, we have both, but some unique elements have to be mentioned. First of all, State (TOKİ) is the most important and one of the most powerful actors in the housing market. After the acceptance of the transformation law[32], Ministry of Environment and Urbanization and TOKİ have become much more powerful over the housing market. In other words, state rules the market, with a power converging to absolute; which is an altered form of capitalism, not liberal but capitalist. The second issue is, in the case of Turkey, the process in the provision of housing is reversed. It is not build and sell, rather its sell and build. To put bluntly, whether it be a housing area produced by public sector or private sector, the builders first sell the rights of housing and with the money they get, they build. This characteristic of housing production makes it less risky and more guarantied for the builder; and makes it more investment-like for the buyer. You pay for a house which does not exists yet, so you pay less, and in the following years, when it has been built and surroundings are urbanized, the price will increase dramatically. Commodification of housing as an investment good, together with state policies and sell and build production of housing, has made "the built environment for consumption" (Harvey, 1985) highly profitable that it has become

32 The Law on the Transformation of Areas under the Risk Of Disaster.

one of the core elements f the economy in Turkey. Harvey says, “the main thrust of the modern commitment to planning (whether at the state or corporate level) rests on the idea that certain forms of investment in the secondary and tertiary circuits are potentially productive”, in our case we are sure of this potential due to the state policies and the sell and build system, at least for now. The question, “where the capital embedded into urban land does come from?” is a vital one. Turkey is a country with high levels of foreign debts, and the debts are continuing to accrue. We can assume that, a significant part of the housing finance comes from external resources, which are the developed countries. If this is the case, Harvey's theory is applicable in global scale, from advanced to underdeveloped countries.[33] We can think in global scale and explain the flow of capital from the primary circuit to the secondary circuit with over accumulation, but accepting it and ending the debate here will be cutting corners.

In the case of Turkey, housing has become so central that construction sector is named as the locomotive sector. The built environment for consumption has become one of the most important commodities produced. It has nearly replaced the production taking place in the primary circuit of capital. But it is a very unique commodity; it consumes land. Land is becoming scarcer in time. Housing is not disposable and the numbers of flats are rising in time. Moreover, it’s a commodity that the potential buyers are strictly defined and grouped; not anyone can buy any house. It is a primal need as we all know, but this commodification has divorced the demand from the need. With this sort of unproductive production; a secondary circuit dominancy over the primary circuit, crisis is inevitable and close.

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b. 5104 – 2004/03 KUZEY ANKARA GİRİŞİ KENTSEL DÖNÜŞÜM PROJESİ KANUNU

c. 5178 – 2004/05 MERA KANUNU İLE BAZI KANUNLARDA DEĞİŞİKLİK YAPILMASI HAKKINDA KANUN

d. 5162 – 2004/05 TOPLU KONUT KANUNUNDA VE GENEL KADRO VE USULÜ HAKKINDA KANUN HÜKMÜNDE KARARNAMENİN EKİ

33 As in the case of Iraq war and the urban transformation taking place nowadays. War took place, cities are destroyed, and now they are under construction by the hands of companies mostly originating from developed, western countries. War has been fostered urban development and by doing this, has become a solution for the crisis for short term.

CETVELLERİN TOPLU KONUT İDARESİ BAŞKANLIĞINA AİT BÖLÜMÜNDE DEĞİŞİKLİK YAPILMASI HAKKINDA KANUN

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JAPANESE COOPERATION FOR URBAN PLANNING IN THE OLD CAPITAL OF DAMASCUS

A CASE STUDY OF "RESTORATION-TYPE" FAÇADE IMPROVEMENT

Matsubara Kosuke[1],

Abstract

Historic cities are cultural achievements that are gradually created by inhabitants over the centuries. In developed countries, the conservation of historic cities seems to be generally acknowledged as a method of community development that does not depend on huge exploitation. On the other hand, no sufficient countermeasures have been taken in developing countries because most native stakeholders are still interested in development. Here we could focus on so-called "International Cooperation", but urban conservation for historic cities where inhabitants actually live is still a minor consideration except for some government-based conservation projects for monuments and isolated examples of cultural heritage.

In this paper, I take the example of a conservation project which has been carried out by JICA (Japanese International Cooperation Agency) in Damascus, the old capital of Syria. The target area for the project is "*Qanawat* South". Although the origin of "*Qanawat* South" dates back to the Roman age, efforts for urban conservation have not been well organized, partly because the area is located outside of the so-called old city registered as a World Heritage Site. For example, the master plan of 1968 indicated the redistribution of the traditional quarters, while some conservation laws have been restricting the regeneration of the area. Moreover, there is not yet any consensus among the stakeholders concerning the historical value of the quarter; they are still questioning why the area should be conserved rather than being freely sold or developed and what and how they should contribute to conservation.

Based on analysis of the actual situation of *Qasr al-Hajjaj* Street, this paper examines a method called "restoration-type" façade improvement adopted by JICA, for which the final goal is not only to maintain the appearance of the street but also to activate the life of the habitants of the street.

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1. Introduction

Since the Japanese planner Gyoji Banshoya (1930-1998) elaborated in cooperation with Michel Ecochard the master plan of Damascus in 1968 (still active today), Japanese/international cooperation in Damascus has been ongoing as one of the rare cases in which Japanese architects and planners are working in the Middle East. The example reported here is the latest technical project named “Damascus Metropolitan Area Urban Planning and Development Project” which started in September 2009 and will be completed in August 2012. One of the principal objects of the project is to suggest conservation ideas for the local heritage area, "*Qanawat* South" (surface: 0.28 km², population: 8,870), and, in particular, those involved are suggesting a façade improvement project for a historic street called *Qasr al-Hajjaj*.

The problems with the degradation of the living environment along the *Qasr al-Hajjaj* Street are partly caused by the decrepitude of traditional houses made of woods and bricks. Although previous surveys did not aim for structural reparation, it is certainly recognized that one of the reasons for the degradation of the living environment is the fact that habitants easily abandon their houses and demand rapid re-development regardless of historical value. This is a vicious cycle that has continued for some decades but specialists participating in international cooperation projects cannot always interfere with this since the project terms are limited. What such specialists can do is give habitants an occasion or the awareness to be motivated to resolve the problems by themselves. Façade improvement is not a complete resolution of the problems but can be a first occasion to get habitants participating in the efforts. Specifically, it is expected that habitants start taking pride in their town and participate in the management of the living environment taking advantage of the apparent façade improvement. Here, specialists make proposals and contribute to this process within a limited term.

The object of this survey is to examine “restoration-type” façade improvement based on the analysis of the actual situation of *Qasr al-Hajjaj* Street. Some similar projects have been previously carried out in Syrian cities where many historic landscapes such as old city *souk* and historical road outside of city walls still exist. The difference between these previous projects and JICA projects is that they adopted drastic improvement methods such as the uniform replacement of zinc shutters and the standardization of the height of buildings, while JICA tries to re-discover and maintain the original state of the façade as far as possible, defining façade improvement as “restoration-type” façade improvement.

The methods taken in this survey are as follows: 1. Chronological survey of the reasons why restoration-type façade improvement is necessary (Chapter 2), 2. Elaboration and analysis of an integrated façade plan (Fig. 5 and 6) based on field surveys of façades in relation to spatial composition in plans and the extraction of the elements composing the façade (Chapter 3), 3. Clarification of obstructive elements in the original historic façade and analysis of their background and actual situation (Chapter 4) and 4. Suggestions to restore original façades based on the findings of this survey (Chapter 5).

2. Spatial Characteristics of the Street and the Necessity of Façade Improvement

2.1 History of the Urban Formation and Spatial Composition of the Street

The target area of "*Qanawat South*" is located in the south west of the old walled city of Damascus called "Old Damas". The fact that it is located outside the old city means that the area is not within the scope of the World Heritage Site which was registered in 1979. However, the area is still an important historic area which dates back to the Roman age and which was developed in the 16th century when the Ottoman Empire started to rule Syria.

There are two historical roads from the *Bab Srij* Gate which is the south west gate of the old city. *Bab Srij* Street was developed as a *souk* (traditional shopping street) connecting Damascus with the ports of the East Mediterranean, while *Qasr al-Hajjaj* Street, which was a transport road connecting to southern villages or even a pilgrimage to Mecca, was developed as a housing area for new residents such as Turkish bureaucrats. Nowadays the street is still a densely populated area with traditional houses with courtyards.

Although the street seems simply to be a crowded area, there is a kind of spatial order. *Qasr al-Hajjaj* Street is a north-south axis which is almost a straight line from the *Bab Srij* Gate to the south border of the area. On the other hand, there are small alleys that cross the north-south axis from east to west - 18 alleys in total, 7 of which are on the east side of the axis and 11 on the west. There are 2 blind alleys in the east (28.6% of all east alleys) and 8 in the west (72.7% of all west alleys), showing the difference between east and west. In the south of the area where modern apartments are rarely built, traditional spatial composition of housing as a "private space"

accessed with blind alleys can still be found.

2.2 Urban District Planning System and Changes in Street Landscape

Changes in streets caused by modernization include the re-construction of traditional two storey or three storey houses into modern apartments (4 floors maximum) implemented by the district plan. The actual district plan was elaborated by the Damascus governorate from the 1970s onwards based on the principles of the master plan of 1968. In the master plan, Ecochard and Banshoya predicted the decrepitude of traditional houses made of dry brick and suggested the renewal of some historic housing areas including the target area.

The district plan shows a clear road line to be respected for the new construction, followed by a strict rule of a 2m set-back from the original lot line. As a result, the street is now regarded as an “existing-misfit”(anomaly). In fact, this district plan is a system to allow the construction of modern apartments, which is more rational from the viewpoint of land use and adjusting the road line. With this system, the streets are widened and a modern block is created, almost automatically creating a modern built-up area. It is clear that the district system is based on modernist policies originating from CIAM.

2.3 Actual Living Environment and the Necessity of Façade Improvement

There are no ideas for conservation in the district plan adopted by the Damascus Governorate but the Department of Antiquities of the Ministry of Culture (MOC) has introduced some systems for historic conservation: 11 “historic monuments” were designated in 1964 and a historic protection area was designated for most of the buildings along the street. These conservation systems are quite strict and are given precedent over the district plan. As a result, re-construction in the protected area has become almost impossible even though the houses are severely damaged and should be renewed at least from the viewpoint of the master plan. In addition, achieving the mutual agreement of the habitants is difficult in general so the implementation of the district plan is now coming to a halt. In such a situation, the decrepitude of traditional houses has become more and more serious and various problems such as room deformity, wall and roof collapse and the unsanitary state of the dried brick walls have occurred. On the whole, habitants cannot re-construct houses in the protected area but some modern apartments with incoherent set-backs can be found outside of the protected area.

Basic actual land use is for housing but some houses have small shops on the first floor (Fig. 1). The street, which is 514m in length and between 4 and 6 meters in width, is a one-way street but traffic is heavy and it is not safe for pedestrians.

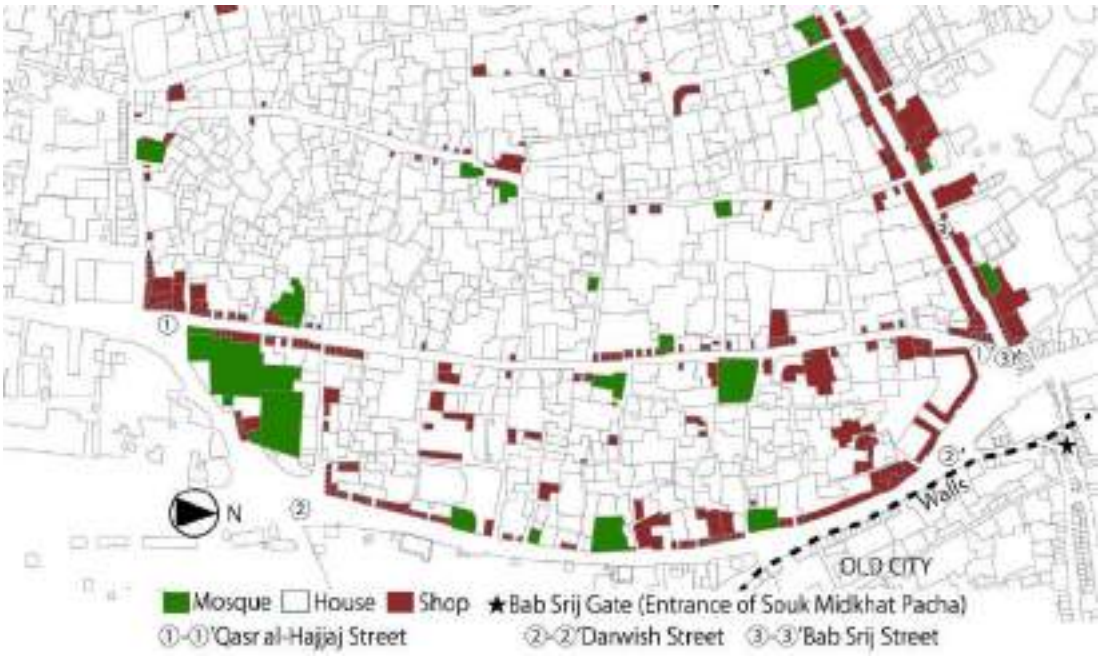

Figure 1: Actual Land Use along the Street

In fact, the situation on *Qasr al-Hajjaj* Street is quite different from that of *Souk Midkhat Pacha* which was the object of a façade improvement project in the past (Photo 1). Past projects included some radical methods such as replacing shutters with neo-traditional wooden doors or apparent unification of building heights and wall finish. However, these radical methods are still debatable since one of reasons that the old city is attractive stems from its spatial variety.

Photo 1. Case of *Souk Midkhat Pacha* (Left: Before Improvement, Right: After Improvement)

Even it is though connected with *Souk Midkhat Pacha*, *Qasr al-Hajjaj* Street is a modest curve and basically a housing area. It is not possible to neglect the small differences in houses and shops, the differences in building materials and the differences in height because these small differences are the characteristics of each building. The unification method is not appropriate for *Qasr al-Hajjaj*. It is necessary to search for a new method of authentic restoration of the original historic façades based on minor repairs conducted in the traditional manner but that also helps the habitants to improve their living environments.

3. The Façade of *Qasr al-Hajjaj* Street

3.1 Overview of the Façade

In the project, we made various plans and maps of *Qasr al-Hajjaj* Street. Here, I have unified a floor plan and a façade plan for research purposes (Figure 5 and Figure 6). The façade plan, created from the façade photos, describes all the elements of the façade.

Before I examine these elements, let's look at an overview of the street. Existing houses of 2 or 3 floors are sharing walls and are joined with each other. The borders of these houses are plastered with *Krusa* (الكلسة) in the traditional way it is not possible to distinguish between them on the façade plan. However, there are blocks separated by alleys: 8 blocks on the east side and 12 blocks on the west side of the street. Façade analysis will be conducted for each block as a separate unit for examination.

Modern apartments, which are the highest buildings except for the *minarets* of mosques, number 2 on the east side and 3 on the west. For example, apartment A is set back from the street and moreover its ground floor houses shops with a pillared corridor whose design originally dates back to the French mandate period. From the viewpoint of conservation, it can be said that this modern apartment building detracts from the traditional façade. Because of the existence of these modern apartments, traditional-type façade improvement is not possible.

3.2 Basic Elements of the Façade

Four categories of essential elements to be analyzed have been pinpointed on the

façade plan as follows (Fig. 2): 1. doors, 2. windows, 3. Shop shutters and 4. decoration (including traditional balconies called *Shurfa* (شرفة) , revealed beams etc.). Small and optional elements such as individual tiles, materials for finishing walls that are not part of the structure, modern equipment such as electric cables or exterior parts of air conditioners and greenery are excluded from the analysis. The elements of the 4 categories are subdivided into wood/iron and 1st/2nd/3rd floor, etc. in order to understand the number, surface and percentage of the elements as essential information for façade evaluation (Table 1).

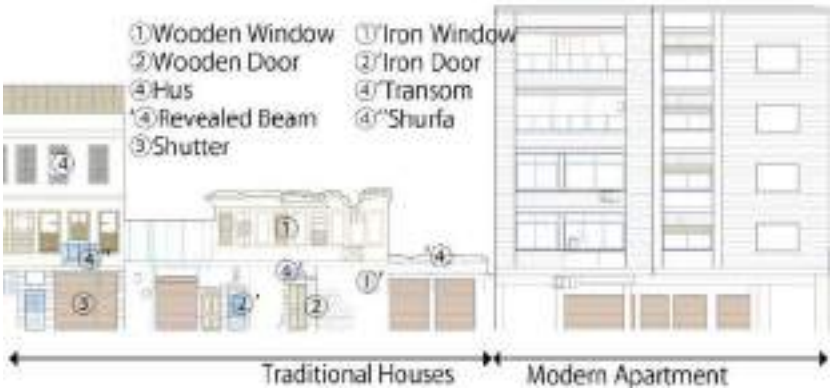

Figure 2: Examples of Façade Elements

3.3 Analysis of the Elements

Based on the essential information organized in Table 1 and Table 2, I examine the elements whether they are original or traditional elements of the façade or not. The viewpoints I take into account are the original state of the façade as an ideal goal of façade improvement and the traditional spatial composition of commercial and housing areas in relation to the floor plan. Illustrating some examples of elements in Figure 3 and Figure 4, and the overview of the façade plan in Figure.5 and Figure 6, the elements are analyzed as follows:

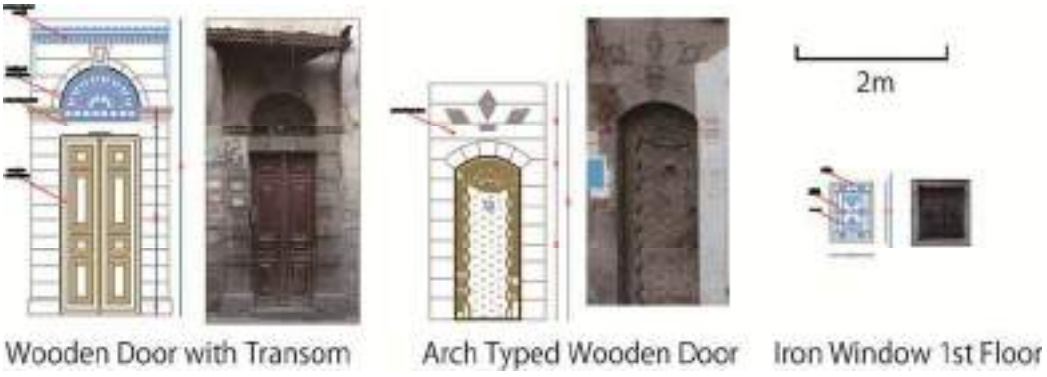

Figure 3: Examples of Elements (Doors and Windows on the 1st Floor)

3.3.1 DOORS :

The doors are openings on the first floor. There are 40 on the east side and 49 on the west side of the street. The average span of these doors is 10 - 13 meters but spans are not the same and are related to the composition of houses that have courtyards. In general, because of Islamic customs respecting privacy, the doors of a house located at the intersection of a street and a small alley tend to face on to the small alley as a private space and are not to be opened onto the street which is more a public space. Examining all the doors of the houses located at intersections today, most doors face on to the street regardless of Islamic custom, but a tendency to face doors on to alleys was observed in some cases in the south part of the street where traditional spatial composition still remains. Doors were originally made of wood but they are being replaced with new materials such as iron and over half of doors today are made from iron. Almost all doors are arched and 16.5% have arched transoms. Although there are only a few compared to the case of the old city, the arch is rarely a traditional element. On the whole, doors, which are positioned corresponding to the spatial composition of the street and traditionally decorated, are considered as an important original element to be restored.

Figure 4: Examples of Elements (Windows on the 2nd Floor and Decoration)

3.3.2 WINDOWS:

Windows are located on each floor but appearance between the 1st floor and other floors is different. Windows on the 1st floor (66 on the east side and 91 on the west) are relatively small and not unified in specific form. On the other hand, average height from the ground to the bottom of the window frame is about 200 cm which is quite high. This is due not only to the common custom in Damascus of raising the floor to avoid the cold, but also to the Islamic custom of privacy so that passersby cannot look in through the window.

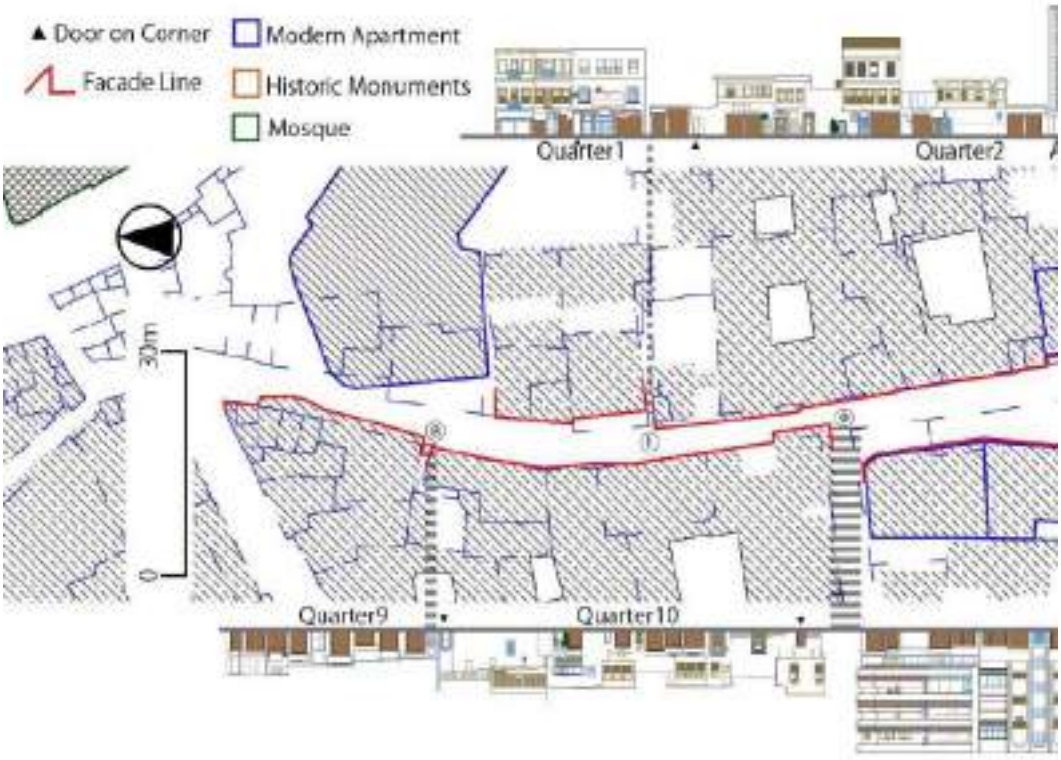

Figure 5: Integrated Façade Plan (Northern Part)

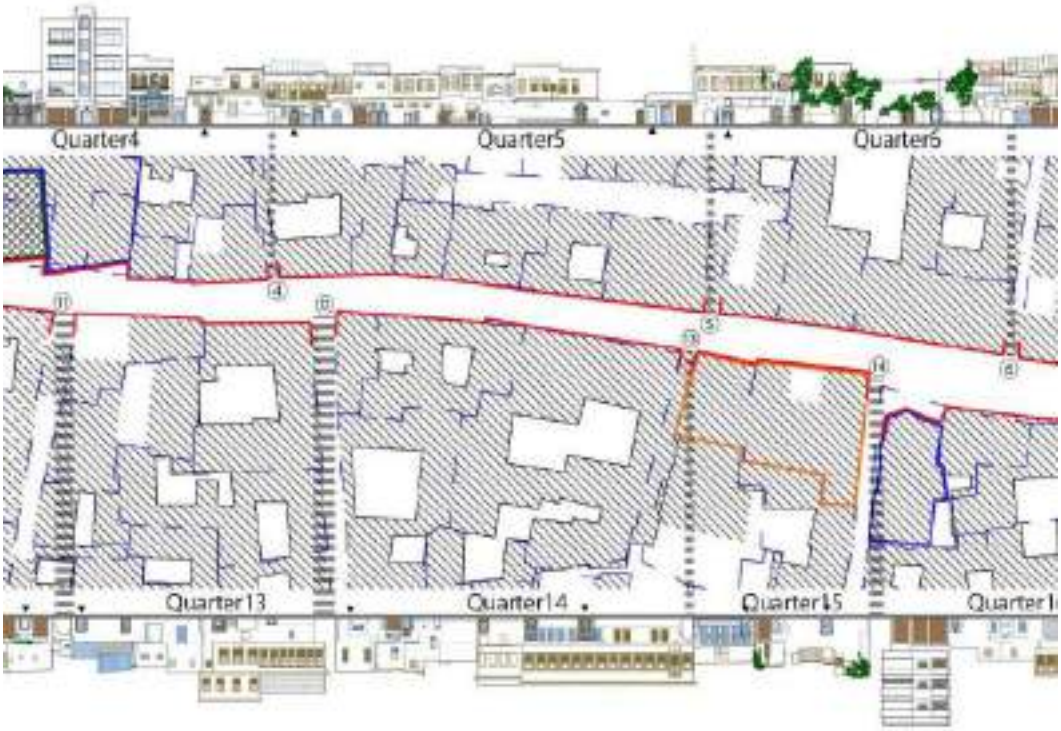

Figure 6: Integrated Façade Plan (Southern Part)

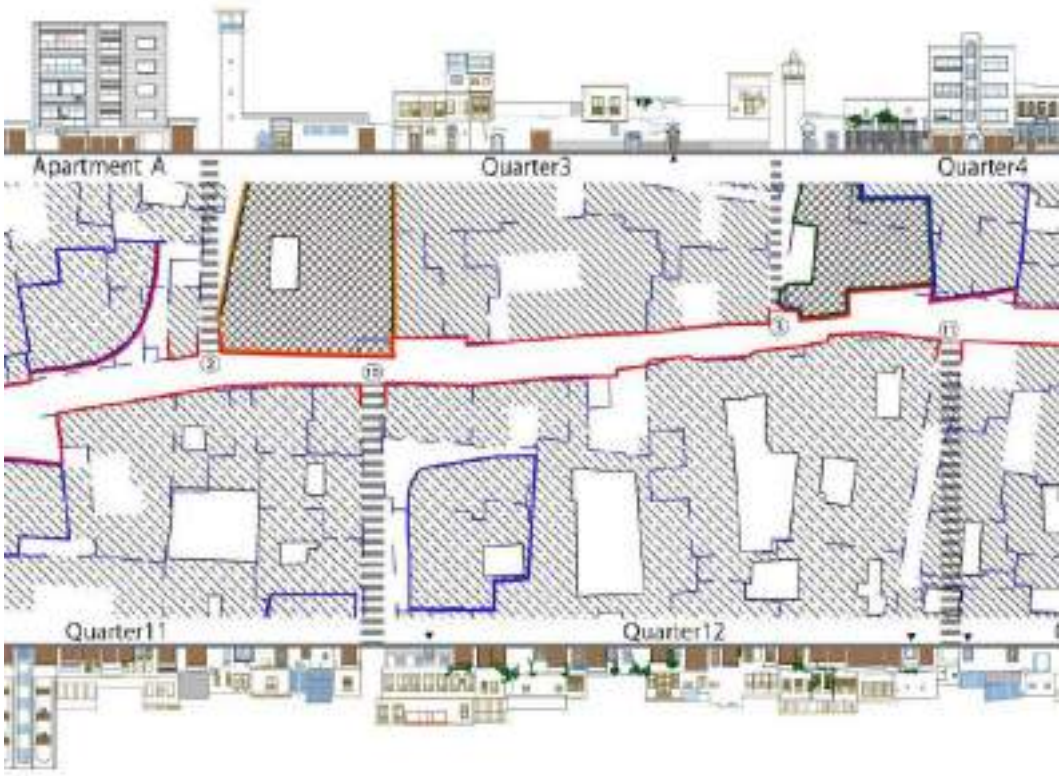

Figure 5': Integrated Façade Plan (Northern Part)

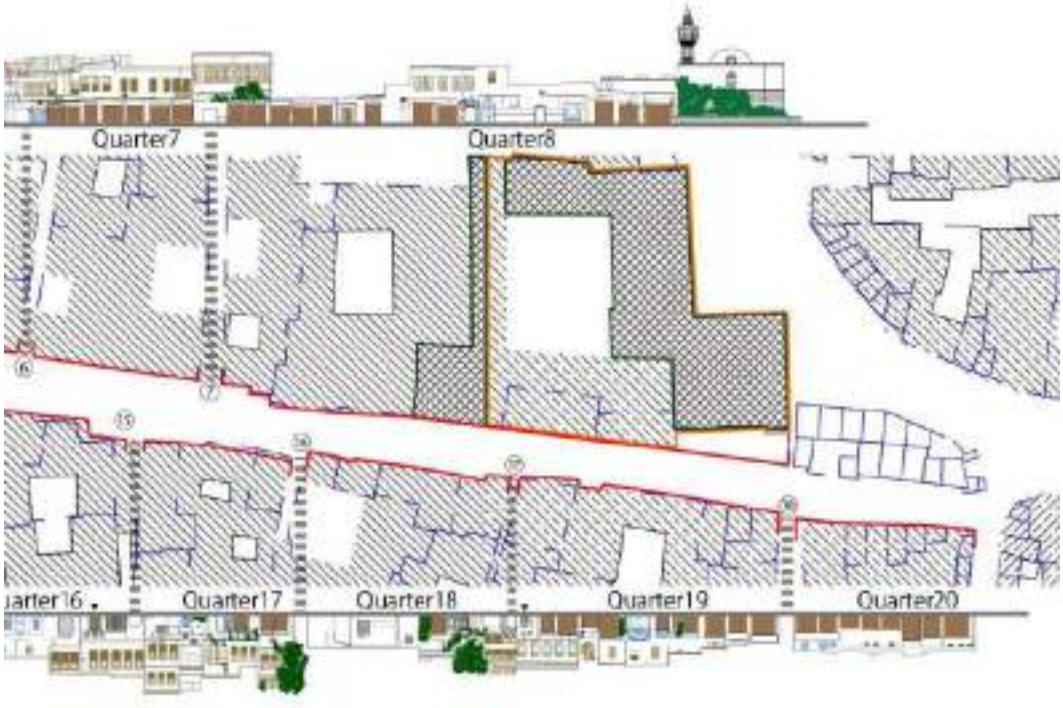

Figure 6': Integrated Façade Plan (Southern Part)

The windows on the second floor are many and huge; their total surface is the second largest element of the whole façade. There is unity of size and form and window frames are traditionally decorated. Movable wooden window covers called *Hus* (حص), which means "wooden sculpture", covers the windows. There are also bay windows which give the impression of three-dimensionality to the street landscape. Not so much difference is found between the windows of the 2nd floors and those of the 3rd floors. From the viewpoint of window frame materials, the number of wooden and iron windows are almost equal on the 1st floors, while there are many more wooden windows than iron windows on the 2nd floors. For this reason, it is assumed that people don't hesitate to replace wooden frames with iron frames for windows on the 1st floors (these being small and not unified) while they tend to conserve traditional style and materials on the 2nd floors. On the whole, windows, especially those on 2nd floor and above, are regarded as important original elements to be restored.

3.3.3 SHOP SHUTTERS:

Almost all the shops have shutters on their frontage and their total surface are is the largest in the whole façade. Although the number of shutters is lower than that of *Bab Srij* Street, the ratio of shutters on façades on *Qasr al-Hajjaj* Street is 6.9% on the east side and 9.9% on the west side. Shutters are found frequently in the south part of the street. All modern apartments have shutters on their frontage on the 1st floor. The shutters are made of zinc and their form is not traditional. Although the function of the shutters today cannot be ignored, it is difficult to evaluate them as an original element.

Table 1: Elements of the East Façade:m^2

		Quarter1			Quarter2			Quarter3			Quarter4			Quarter5			Quarter6			Quarter7			Quarter8			Total		
Surface of Façade		253.2			782.1			627.6			484.9			431.4			325.5			222.6			435.9			3563.2		
Number・Surface・%		N	S	%	N	S	%	N	S	%	N	S	%	N	S	%	N	S	%	N	S	%	N	S	%	N	S	%
1st Floor	① Wooden Door	0	0	0	4	8.6	1	4	11.9	2	2	4.2	1	7	11.4	3	4	7.7	2	0	0	0	1	2.9	1	22	46.7	1%
	① Iron Door	2	5.23	2	4	7.0	1	2	4	1	4	9.9	2	6	9.9	2	2	3.3	1	0	0	0	3	11	3	23	50.3	1%
	② Wooden Window	0	0	0	6	5.4	1	4	2.5	0	7	12.3	3	12	10.6	2	0	0	0	0	0	0	0	0	0	29	30.8	1%
	② Iron Window	3	14.0	6	6	3.1	0	6	14	2	***9***	15.8	3	7	6.4	2	5	2.4	1	0	0	0	1	4.7	1	37	60.4	2%
	③ Shutter	3	15.3	6	15	***81.7***	***10***	2	13.2	2	4	13.19	3	4	11.2	3	0	0	0	7	***39.4***	***18***	12	***73.2***	***17***	47	***247.2***	***7%***
	④ Wooden Decor	--	0	0	--	5.4	1	--	3.7	1	--	0.2	0	--	2.6	1	--	0	0	--	2.4	1	--	0.9	0	--	15.2	0%
	④ Iron Decor	--	0	0	--	0	0	--	0	0	--	0	0	--	0	0	--	0	0	--	4.2	2	--	0	0	--	4.2	0%
2nd Floor	② b : Wooden Window	***7***	***21.5***	***9***	***26***	48.9	6	***12***	***34.7***	***6***	**8**	14.9	3	***25***	***56.9***	***13***	***10***	***24.9***	***8***	***14***	**30.8**	**14**	**14**	32.8	8	***116***	***265.4***	***7%***
	② e : Iron Window	2	4.2	2	3	12.7	2	0	0	0	6	16.3	3	1	1.1	0	5	2.4	1	0	0	0	0	0	0	17	36.7	1%
	④ d : Wooden Decor	--	1.3	1	--	1.4	0	--	1.66	0	--	0.4	0	--	2.3	1	--	0	0	--	0.4	0	--	0.6	0	--	8.06	0%
	④ g : Iron Decor	--	2.1	1	--	10.9	1	--	0	0	--	1.7	0	--	0	0	--	0	0	--	0	0	--	0	0	--	14.7	0%
3rd Floor+	② b : Wooden Window	0	0	0	7	14.8	2	2	2	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	9	16.8	0%
	② e : Iron Window	0	0	0	7	28.8	4	3	12.4	2	7	***30.7***	***6***	--	--	--	--	--	--	--	--	--	--	--	--	17	71.9	2%
	④ d : Wooden Decor	--	7.1	3	--	15	2	--	11.7	2	--	3.3	1	--	--	--	--	--	--	--	--	--	--	--	--	--	37.1	1%
	④ g : Iron Decor	--	4.1	2	--	0	0	--	2.8	0	--	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	6.9	0%
	Total	17	74.8	32	78	243.7	31	35	114.6	18	47	122.9	25	62	112.4	27	26	40.7	13	21	77.2	35	31	126.1	30	317	912.4	26%

3.3.4 DECORATION:

Traditional decoration includes *Shurfa*, which are wooden window covers, *Hus* which are bay windows that allow people to see the street while being hidden themselves and *Hujur* (الحجر), which are traditional stone tiles that decorate the rims of doors. Some of these decorations have been replaced by iron materials. The bay windows of the 2nd floors and above give an impression of three-dimensionality to the landscape. The existence of revealed beams supporting bay windows and of wooden eaves also modulates the landscape. These elements are the result of extensions by the habitants and are a typical traditional townscape. Due to their delicateness and the vagueness of boundaries, it is difficult to grasp the exact number of these decorations. However, traditional decoration is certainly considered as an original element to be restored.

4. Obstructive Elements in the Original Construction

Shutters were not included in the original construction. Shutters were already regarded as obstacles in previous projects and they were uniformly replaced with wooden doors. However, this is not applicable to *Qasr al-Hajjaj* Street because of differences in the situation. In addition, there are some other obstructive elements such as those that were originally made from wooden materials but that were replaced by iron. It is necessary to take measurements for each obstructive element based on detailed examination.

Table2.Elements of the West Façade:m^2

Quarter9			Quarter10			Quarter11			Quarter12			Quarter13			Quarter14			Quarter15			Quarter16			Quarter17			Quarter18			Quarter19			Quarter20			Total		
155.6			447.5			859.4			680.6			324.3			433.8			173			323.1			216.1			173.8			233.8			129.6			4150.6		
N	S	%	N	S	%	N	S	%	N	S	%	N	S	%	N	S	%	N	S	%	N	S	%	N	S	%	N	S	%	N	S	%	N	S	%
0	0	0	3	6.9	2	3	5.2	1	6	11.8	2	2	2.8	1	3	5.7	1	0	0	0	1	2.3	1	0	0	0	1	1.9	1	2	3.5	2	0	0	0	21	40.1	1%
2	8.3	5	2	3.9	1	4	11.8	1	5	9.3	1	1	1.6	0	4	4.9	1	3	5.8	3	2	4.7	1	2	3.9	2	1	1.3	1	1	10	4	0	0	0	27	65.5	2%
0	0	0	6	6.1	1	11	13.3	2	4	4.5	1	1	0.9	0	13	19	4	0	0	0	7	6.3	2	3	3.9	2	0	0	0	1	0.3	0	0	0	0	46	54.3	1%
0	0	0	3	2.8	1	7	15.7	2	7	5	1	3	8.5	3	9	11.6	3	5	7.1	4	4	3.4	1	1	0.9	0	2	1.44	1	2	1.4	1	2	2.3	2	45	60.14	1%
8	***57.7***	***37***	**6**	**33.9**	**8**	***18***	***88.3***	***10***	***16***	***83.9***	***12***	0	0	0	1	2.9	1	**1**	**4.5**	**3**	**3**	**21.7**	**7**	3	11.5	5	1	4.8	3	***10***	***52.7***	***23***	***8***	***51.3***	***40***	***75***	***413.2***	***10%***
--	0	0	--	1.4	0	--	0	0	--	0	0	--	0	0	--	0	0	--	0	0	--	0	0	--	0	0	--	0.1	0	--	0.1	0	--	0	0	--	1.6	0%
--	0	0	--	0	0	--	0	0	--	0	0	--	0	0	--	0	0	--	0	0	--	0	0	--	0	0	--	0	0	--	0	0	--	0	0	--	0	0%
1	1.1	1	***17***	***41.4***	***9***	13	29.6	3	***35***	***83.5***	***12***	***13***	***30***	***9***	***23***	***70.7***	***16***	***5***	***5.8***	***3.***	***8***	***26.8***	***8***	***12***	***28.5***	***13***	**6**	**6.2**	**4**	11	17	7	0	0	0	**144**	**340.6**	**8%**
0	0	0	4	4.4	1	6	27.6	3	3	2.3	0	0	0	0	1	0.5	0	0	0	0	2	3.8	1	0	0	0	0	0	0	0	0	0	0	0	0	16	38.6	1%
--	0.7	1	--	0	0	--	0	0	--	0	0	--	0	0	--	0	0	--	0	0	--	0	0	--	--	0	--	0.1	0	--	5.2	2	--	0	0	--	6	0%
--	0	0	--	0	0	--	0	0	--	1.7	0	--	0	0	--	0	0	--	0	0	--	0	0	--	--	0	--	0	0	--	0	0	--	0	0	--	1.7	0%
--	--	--	--	--	--	0	0	0	3	8.2	1	4	8.3	3	--	--	--	--	--	--	4	7.7	2	3	5.9	3	4	6.6	4	--	--	--	--	--	--	18	36.7	1%
--	--	--	--	--	--	5	46.3	5	0	0	0	0	0	0	--	--	--	--	--	--	0	0	0	0	0	0	0	0	0	--	--	--	--	--	--	5	46.3	1%
--	--	--	--	--	--	--	0	0	--	0	0	--	0	0	--	--	--	--	--	--	--	0	0	--	3.9	2	--	0	0	--	--	--	--	--	--	--	3.9	0%
--	--	--	--	--	--	--	0	0	--	0	0	--	0	0	--	--	--	--	--	--	--	0	0	--	0	0	--	0	0	--	--	--	--	--	--	--	0	0%
11	67.8	44	41	100.8	23	67	237.8	27	79	210.2	30	24	52.1	16	54	115.3	26	14	23.2	13	31	76.7	23	24	58.5	27	15	22.4	14	27	90.2	39	10	53.6	42	397	1108.6	27%

4.1 Shutter Obstruction

Historically speaking, the frontage of shops was equipped with folding wooden doors. Although it is unknown when the wooden doors started to be replaced by shutters, there is photographic evidence from around 1860 showing shutters in *Souk al-Taweel* which are assumed to be the first shutters used in the old city (Photo 2). The use of shutters, which are superior to traditional wooden doors in terms of safety and ease of maintenance, rapidly spread throughout Damascus. It was accelerated by the introduction of modern apartments.

Shutters are hand-operated and rolled into boxes at the top of the frontage when the shops open. The boxes double as signs for the shops (Photo 3). The boxes are made of iron and there is no unity of form, color or size. However, they have the capacity to store a rolled shutter and this makes them protrude around 1m into the street. These boxes hide the arches or arch-type transoms recognized as original factors and as a result, the percentage of transoms is only 4.1 % of the number of all the shop frontages in the street. Moreover, the row of boxes, which are gaudy and not unified, also hide the revealed beams and eaves and spoil the three-dimensionality of the street landscape. These are the most serious obstructive elements in the original façades (Photo 4).

Photo 2: *Souk Al-Taweel* in 1860

Photo 3: Boxes as Signs

Photo 4: Boxes hiding Arches

Photo 5: Iron Door (right)

4.2 Obstruction from Iron Materials and Other Devices

Decrepitude causes materials to change. Doors and window frames that were originally made of wood tend to be replaced by iron (Photo 5). Makeshift repairs of collapsed walls using zinc or haphazard brick-laying is also regarded as an obstruction to the original façade. Even some traditional elements such as *Shurfa* and *Hus* have been replaced with iron or concrete materials. This change of materials must be based on demands for strength because these decorations have an aspect of practical use. However, these synthetic materials are an obstruction that do not match the wooden elements.

There are other obstructions excluded from the analysis in Chapter 3: the jumble of electricity cables on the walls of houses (Photo 6) and electricity boxes and exterior parts of air conditioners. Thick ducts on the walls of bakeries also obstruct the original façades (Photo 7).

Photo 6: Electricity Cables on *Hus*

Photo 7: Duct on Bay Window

In general, it has been necessary to take measures against the strong sunshine in Damascus. Today, people use zinc or even vinyl without hesitation as a material for eaves or arcade roofs. Sometimes advertisements are painted directly on to the walls.

5. Conclusion

The restoration of the original façade of *Qasr al-Hajjaj* Street is composed of the following elements: doors positioned in relation to spatial composition in the floor plan, decorated windows corresponding to the raised floor and reflecting Islamic customs, bay windows as a result of extensions by habitants giving an impression of three-dimensionality to the landscape of the street, and some small decorative and structural elements such as revealed beams or eaves, *Shurfa* and *Hus*. On the other hand, there are some obstructive elements such as shop shutters, iron materials and devices related to equipment used in the shops/houses.

The issue is that these obstructive elements (shutters/iron materials) are so important from the viewpoint of daily use that they cannot be easily removed. Restoring the original façade should be limited to the restoration of appearance in order to balance with the functions that are necessary today. The façade of modern apartments can also be improved using traditional style. What it is important to realize is that the principle is to provide wooden elements which have the same strength and ease of maintenance as iron elements and to prepare individual materials to suit the situation of the façade without just relying on uniform standards. We will need to resolve the issues surrounding budgets and staff. Fusion of traditional craftsmanship and new techniques and materials is also important. These efforts will contribute to habitants improving their living environments by themselves.

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A View From The Ground

Implications for the literature on the 'models of the development process' based on a model of praxis and an associated mapping study.

Jonathan Drane*

Keywords: Property development process, property developer, property development models

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Abstract.

This article identifies limitations in ontology and epistemology in the literature related to 'models of the development process', through a mapping exercise, which places existing views gained through visors of economy, political economy, institutional and social theory in perspective with a relative view of praxis.

Proponents of this field of study who have reviewed it over the twenty years since its contemporary categorical analysis (Healey 1991, 1992), (Gore & Nicholson 1991) suggest, in many cases, that they could gain collectively from an increased view of praxis in the property development mechanism, and associated empirical engagement with property developer actors.

A model of praxis in the commercial 'property development mechanism', is introduced which is founded on a taxonomy of 'lots and land parcels', 'value tension', 'arbitrage transaction', 'title distribution' and a 'plurality of developer types' who 'transition the parcel' within a series of alignments, both constrained and empowered by prior 'collective manifestations' by 'creating parties'.

The bookends of the literature used in this paper, are set at 1991 and 2012 over two decades, starting with Patsy Healey's articles on the development process (Healey 1991, 1992) and ending with David Adam's very recent article on 'notional property developers' (Adams 2012). The literature is first mapped, dissected and surveyed for limitations due to existing theoretical frames. The central tenets of the author's model are then used as a lens for clarifying inadequacies based on praxis.

The study discovers attraction to the topic by the most erudite of scholars, with often brilliant and revealing high level accounts, which are through sometimes conflicting visors. Amongst this chorus however, the voices are still trying to come to terms with what is really happening on the ground. The article provides increased definition of the property development process from a view of praxis, and an associated way forward for filling gaps in the knowledge base on this important topic.

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1.Introduction

Property development transforms the face of our cities, and is responsible for many of the physical shells that form our skylines and their sometimes grandiose building forms. The property developer is a significant transactional actor in this phenomenon, the often un-popular gatekeeper who commands the mechanism, and a member of our society who primarily holds a key to a growing channel through which much of our cities must pass, to change and grow. As such, despite it being the realm of what is seen often as remote, romantic and even dangerous 'archetypal' characters, this mechanism enjoys a powerful and unique position in our urban creation and associated societal processes.

The literature on the *'models of the development process*' [1] which describes the overall world and modalities of the property developer, whilst it once invested considerable effort into research into this enigmatic realm, in the past twenty years is lacking somewhat in collective terms with this same endeavor. Local authorities and their urban planners however, still continue to rely substantially on private commercial developers to provide new supply in housing and other building markets.

This paper both clarifies this, and uses a literature mapping study and a comparative model of praxis, as a means of quantifying other specific gaps and recommendations for moving forward with any future research.

The often recognized themes relating to inadequacy in the literature, include a lack of direct knowledge of commercial property development and paucity of engagement with developer actors as a source of empirical data. Of controversial deliberation also, is the incidence of conflicting theoretical perspectives, which have shown fashions and signs of bias to prior regimes and academic disciplines. This study will add to this chorus at conceptual level; the prevalence of amorphous descriptions of processes that are not grounded in any particular site, snapshot views where a time lapse approach is required, and a lack of mechanistic emphasis in favour of structural, institutional and sequential descriptors.

At the heart of the gap also, is a central theme related to the lack of detailed treatment of the dynamics of land parcels and title pattern transitions, which goes to the heart of the developer dynamic and mechanism, together with a disconnect with the literature in the area of commercial valuation theory and legal property rights, (generalist textbook accounts aside) which could help bridge this gap, and serve as a guide to further research in this area. These themes will be explained in some detail through the introduction of a model of praxis proposed by the writer.

For those unfamiliar with the term 'models of the development process', they chart or describe 'the realm of property developers' and its related actors, events, structures, roles, rules and relationships through either words or graphical means. It

[1] Terms noted in italics are defined in a glossary at the end of the article.

should be noted that the subject has courted continuous conflict and controversy in the field, due to the obvious disparity between visions (of city planners) and implementation (by developers).

Those from the planning and urban theory arena who have been credited with a central definition of this topic are Patsy Healey with her 'Institutional Model' (Healey 1992) and Michael Ball (Urban Development Theorist) with his 'Structures of Provision' (Ball 1998, 2002). These and others' works in the field will unfold through this article, as well as the limitations of the current models and their relevance to contemporary practice and industry structures, which have grown since the early 1990's.

For clarity also, the author's general area of study is 'the influence of the property development mechanism on the growth of cities'. A brief outline of the author's work is provided at the rear of this article in the appendix.

1.1 Some Definitional Matters

This paper explains the nature and extent of the disconnect in the literature, with essential aspects of the property development process, as well as other limitations due to historical and sometimes fashionable theoretical perspectives. The study involves a survey of the literature on the '*models of the development process*', with a graphical mapping output which brings this and other *ontological* and *epistemological* inadequacies to life. The writer guides this exercise also, through a proposed model of *praxis* that is founded on a *taxonomy* based on the nature of title, entitlement and the dynamics of land parcels and their distribution and transition, through what is termed *fallow*, (or obsolete/dilapidated) to a fully developed state.

The need to rely on terms such as ontology, epistemology and praxis arose from the increased awareness by the author of the range and difference in theoretical perspectives, the level of engagement with property developer actors, and the associated data collection methods, all of which are subsets or forms of either ontology and epistemology. A glossary (see appendix) was an inevitable result of this, and terms requiring definition are shown in *italics* in the text for the assistance of the reader.

For ease the term *epistemology* is used here in the context of 'how we source knowledge' and relates predominantly to data collection methods. *Ontology* is used in the context of 'theoretical perspective' or 'how we see the world'. *Taxonomy* is used in the natural sciences as a means of classification of organisms, and here is used in a phenomenological perspective, to classify different traits of what is termed the development mechanism and its central elements and forces. *Praxis* is defined as 'practical philosophy', or a concept or theory of actual practice (and is not framed in the Marxist context).

1.2 Basis of the Proposed Model of Praxis: Case Studies Townsville

The model of praxis introduced here is based on two case studies: The Palmer St Precinct and The Railway Precinct in a regional city- Townsville in Far North Queensland, Australia, where two separate *fallow* (or obsolete/dilapidated) precincts became the subject of intense commercial 'mixed re-development' stimulation, over a period of 5 years in 2003 to 2008. The study is part of a PHD dissertation by the author, who is a professional commercial builder, and a prior practising property developer.

Figure 1- Map of Australia & Townsville. (Google Maps)

Townsville is seen by Queenslanders as 'the capital of the north' and enjoys a mult-sector economy which includes, government, defense, tertiary education, resources and tourism, together with one of the major ports in Australia (Figure 1).

Figure 2- Aerial view of the Palmer St Precinct in Townsville. (Previously the old harbour area). (Google Maps).

The cases include interviews with developers and related actors, and reviews the transformation of the former historical harbour area in Townsville, into a mixed use precinct (Figure 2). One site within the Palmer St case study is used to bring the model to life called the Gateway Project, see Figure 2 above and photograph (Figure 3) below. The case studies are still in progress at time of publication.

Figure 3: Gateway Tower Project: 112 Apartments.

From its harbour origins the site was used first as a meat works then languished at its lowest point of dilapidation, where it became a temporary surface car park site. Between 2003 and 2008 it went through a series of transitions including a rezoning (related to the precinct), a title consolidation, a development approval and a series of market and financial pre-commitments, to become a 112 apartment mixed use tower as shown above.

The model is also grounded on the observation of several other commercial mixed use sites of this nature found in the two case studies, as they moved historically through phases from dilapidated to developed, the transitions of which are marked and measured by both value improvements and parallel 'title pattern transitions'. This observation of transitions by these two 'markers' in a 'time lapse' sense is seen as the central platform of the praxis model, around which all other activities, forces and plays revolve in cycles as depicted in Figure 4. The model is explained in more detail below.

1.3 Comparing The Praxis Model to the Literature

The proposed model is used with its themes and categories, as a lens to distil the state of the literature, and the areas that need to be addressed when moving forward. The limitations of a singular account of praxis, and the basis of two case studies is recognized, but strengthened by discourse based on the author's direct commercial building experience over the decades from 1976 to 2012, which parallels a large part of the study period of the literature (1954- 2012). The author was also directly involved in the Gateway Project as initiating developer.

2. A Model of Praxis: The Development Mechanism

The proposed model takes a different view of the development process, by depicting it more as a mechanism and phenomenon, driven by various actors in spasmodic intermittent interactions, which occur under certain circumstantial alignments and collective manifestations . Since land is the key resource to a property developer, the model focuses on land as the central platform for all the various plays and circumstances that occur. These principles are shown in figure 4 below, which centres on the land parcel, and the essential elements and dynamics that constitutes its transition from one titled state to the next.

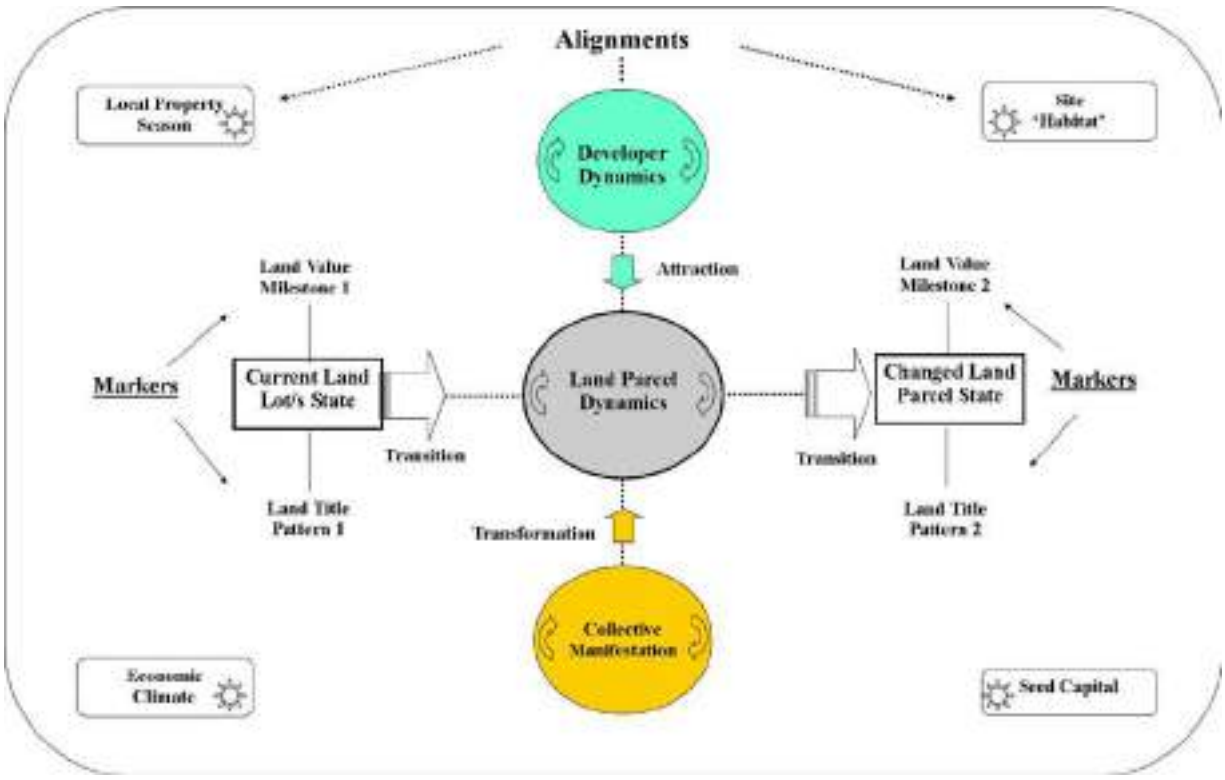


Figure 4 - A 'Three Elements' Model of Land Transition Leading to Construction & Titled Property.

Three essential elements rotate independently in their own spheres, and combine in an alignment of elements and other conditions, to create a transition in the land parcel, which together with other ongoing transitions, lead over historical time to a constructed building and titled property. These elements are 'Land Parcel Dynamics', 'Developer Dynamics', and 'Collective Manifestations'. These and their associated traits are expanded below and in a taxonomy later in the article.

The elements are depicted in terms of underlying forces behind the transition of land: attraction- the land parcel dynamics 'attract' developer types; transformation- creating parties manifest a vision for the land parcel and its surrounds; and circumstance- a series of alignments occur under certain political and economic circumstances which are identified by environmental factors including economic climate, local property season, developer 'site habitat' and seed capital. Developer habitat includes pre-conditions conducive to development including prior zoning, acquisition capacity and parcel potential. The three forces combine with the elements to transition the parcel to its next state. Taking these elements and forces in turn:

Land Parcel Dynamics: The model focuses fundamentally on the 'land lots' that constitute a potential land parcel which has commercial possibility and then viability, for the construction of a building which then becomes a titled property. For clarity, a land lot of itself may attract no commercial development interest, but its relationship and collection with other adjacent land lots forms what is termed here a land parcel. Like an animation of a stick figure which moves with the flick of pages in a note book , the model centers its view on the lots in the land parcel, and how they change title patterns and transition toward a construction state, based on the alignments noted in the model. Since the transitions rely on circumstance, they may take months, years (or even decade/s) to occur, and this concept is at the key of understanding the time lapse nature of the model of development (and as a mechanism and not just a process).

Developer Dynamics: The many transitions are effected by different 'developer types' who are suited (and attracted) to the stage of transition that the land parcel is undergoing. A developer might be suited to just purchasing, rezoning or 'optioning' a land parcel and consolidating title before holding it or selling it to another developer type or party. Similarly another developer might be suited to taking the consolidated site and obtaining a scheme approval with a local authority, before selling the site to another developer or party.

A central ingredient to all the transitions is the notion of *third party title distribution*, where existing title patterns are changed to achieve a greater yield of titles that are tradeable (without title, there is no tradability). A farm may be consolidated then subdivided into hundreds of sub-lots or titles, or a former city car park site may be schemed to achieve a multiple apartment block with numerous titles.

Alignments: The trigger for these separate actions is related to the notion of 'attraction' to the land parcel by the developer parties, 'arbitrage' and 'value tension' which relates to the differential potential value of the land parcel related to surrounding or 'influencing' parcels and 'amenity'. These factors will, together with conducive economic 'climate' and local 'seasonal' business factors, determine viability and eventual transition, but only at specific alignments.

Collective Manifestations: For the total historical length of the land parcel transitions, 'creating parties' such as city planners, public lobby groups and elected officials manifest the desired outcome for the land parcel, within the realms of city plans and visions, while developers adapt or reject the visions to their own ends! This 'troubled tango' appears to attract a great deal of the attention in the related literature on development and city planning.

The collective action of all the creating and developing parties acts as a 'collective manifestation' process which spans the historical period of the transition of the land lots.

Figure 5 below illustrates this mechanism in action for the Gateway Tower site. The figure charts the two key markers; land value change and title pattern change that occurred on the site over historical time from its 'fallow state' as a surface car park to its 're-titled property' state as a new apartment tower over a five year period.

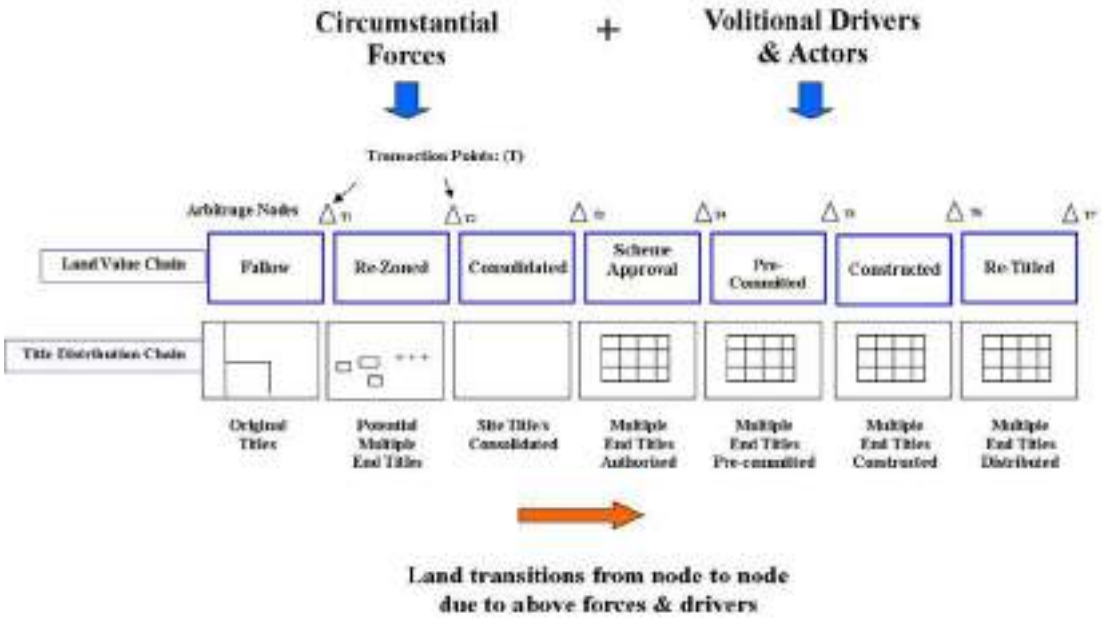


Figure 5 - Example of land transitions & value changes based on the Gateway Tower site, Townsville Australia (from the author's dissertation, in progress).

2.1 Central Themes of The Model of Praxis

The themes narrated to this point in this article and graphically depicted by figure 4, (above) are summarised in the following thematic statement, and used in the study as a basis for the model of praxis, and its comparison to the current models and theories.

Thematic Statement: *The model is founded on a taxonomy of 'lots and land parcels', 'value tension', 'arbitrage transaction', 'title distribution' and a 'plurality of developer types' who 'transition the parcel' within a series of alignments, both constrained and empowered by prior 'collective manifestations' by 'creating parties'.*

3. The Literature on 'Models of the Development Process'

Bounded by the term 'models of the development process', the survey of the literature was guided by three categorical articles on the subject (Healey 1991, 1992), (Gore & Nicholson 1991) which uncovered 26 relevant models to that date going back to 1954, (Form 1954) and ended with a very recent article by David Adams (Adams 2012). The period from 1991 to 2012 was surveyed based on key scholarly papers on the topic related specifically to models, including David Adams, Alan Hooper, Simon Guy, John Henneberry, Michael Ball and Eddie Coiacetto.

The survey was conducted (where possible) in date order of the articles/books, to obtain a sense of history and context, as well as the sequential development of models, through cross fertilization of ideas. Several texts of an historical nature were included in the survey, and provided the author with industry context and theoretical trends of the day. The more detailed findings and graphs are covered in the next sections, whilst this section is more descriptive of the nature of the models and their limitations.

Of interest is the fact that the 'trail nearly runs dry' in 1992, with the work of Patsy Healey and her, *"institutional model"*, (Healy 1992) which provided an intricate, potential commercial and social template for the development of a grounded model, based on both empirical and theoretical layers, guided by a 'Giddensian' lens, (Giddens 1984). Gore and Nicholson's advocacy for Ball's "*Structures of Provision*" model (Ball 1986) also has significant merit, providing a flexible modeling method based on changing process and contingent circumstance, the absence of which marks much of the literature. Although Michael Ball has held both a candle, (Ball 1998) and then a torch (Ball 2002), for his 'Structures of Provision', this also has not been the subject of further development except in its use by David Adams in his review of 'speed of supply of house building' (Adams 2009). From these 'beginnings', little eventuated except for ongoing erudite commentary and analysis of the state of the understanding of the development process, and the lack of empirical engagement (Adams 2012). Adams is even bold enough to say this year:

"The substantive academic account of what typifies the property developer has still to be written", (Adams 2012).

3.1 The Limitations of Theory

How is one to view a phenomenon, which for the majority of its existence remains either invisible, or observable to only a few actors, and then through the alignment of mere circumstance, and the power and action of 'creating and developing parties' manifests a structure (in this case a building then a titled property)?

It is often thought, and a key limitation of most of the models surveyed, that the 'development process' precedes the immediate construction of the building and ends with its completion. This misconception is perhaps understandable as the most visible and tangible stage of the process attracts the most attention, and so there is an impression across most of the models that the development process is represented as a finite set of processes which are captured in a snapshot when a time lapse view is more relevant.

There are those who would argue that those preceding processes are the subject of planning and city strategy, however going back in time on a building development that has just been placed on a 'land parcel', the common thread into deep history of this event is the actual series of original lots that eventually, by some folly, luck or design combined, or were combined and melded into the 'parcel' that became able to be commercialized, and which led to the subject building. It will be shown that this history constitutes in effect a collection of sub-projects and time-lapse transitions in the land parcel which in total, form the 'development mechanism' and result in the building's creation. The dynamics of interaction of each of these sub-projects has its own individual complexion and participants, some of whom may have no continuity and no link to actor parties in later or prior 'sub-projects'.

Another theme that predominates the literature is the notion of amorphous process descriptors, which occur without reference to a site or the history of these sub-projects, that occurred well prior to the final construction project, and on the very same site.

For now, the key explanation lies in the nature of available theoretical perspectives that prevailed in the period studied. Emerging from the 1950's where the key relevant academic disciplines were Economics, Geography, Architecture and Town Planning, and the primary theoretical stances were Urban Ecology, Marxism, and Classical Economics, the models were both enabled and constrained by these points of view.

Sociologist William Form (Form 1954) interestingly, broke ranks with the urban ecologists and advocates of classical economy, by establishing a sociological emphasis, developing a model which mixed four 'conjeries' (developer, industry, home owners and Government authorities) with six themes related to their political and organizational characteristics, yet his work remained substantially un-followed.

Instead the neo-classical schools predominated in parallel with the neo-Marxist views that emerged, the latter of which formed a ground wave it would seem in both the works of sociologist Anthony Giddens, (Giddens 1984) which influenced then geographer David Harvey (Harvey 1985). His three circuits of capital based on a Marxist and economic philosophy extended Marx's non spatial emphasis to an 'historical geography'. In viewing this model however it seems to 'hover' well above the cityscape at a theoretical level. Harvey's three circuits, although reaching into the realms of housing fabric and production/consumption landscapes, also provides an interesting precursor to a deeper understanding of what would become known as 'corporate real estate'. The 'circuits of capital' are seen here however to be more a macro, industrial, urban fabric creation model, than a direct model of the property development process itself (as outlined here).

The 'circuit broke' it would appear in the late 1980's, with the publishing of Susan Barrett and Patsy Healey's work on structure and agency (Healey 1990) which, together with McNamara (Healey et al. 1988) who critiqued the prevailing theoretical traditions (Neo-Classical and neo-Marxist), took the Giddensian notion of structuration, (Giddens 1984) and applied its central concepts to a model of development. Here it would seem the models were left in an unfinished state and woven into the ongoing works of Healey and others.

Theoretical assumptions	Economic processes	Event-sequence	Agency
Neo-classical	Fraser Harvey, J.	Munton and Goodchild	Kaiser and Weiss Drewett Barrett *et al.* 1978
Marxist	Harvey, D.	Boddy	Ambrose Ball

Fig. 11. Models of the development process[2]

Table 1- Patsy Healey's summary of theoretical assumptions and model categories (Healey 1991, p 236).

Healey captures the state of theoretical stances that underlie the models to that date in table 1, showing and further describing the limitation created by a lack of empirical engagement, as well as the constraint of theoretical visors used to chart the phenomenon.

Exceptions to the lack of grounding of the models in the concept of title and land parcels are prominently; Doreen Massey and Alejandrina Catalano's (Massey & Catalano 1978) work on exposing the rise and prevalence of 'landed capital', and the change in the nature of ownership of land from the earlier era of 'landed gentry'.

Her use of a Marxist visor clarifies the era of landed gentry, whilst oversimplifying the era of 'landed capital' but delves helpfully into the then, historical nature of ownership, and assists as an historical foundation of any ongoing development of a model in this area.

'Land use transition' itself is covered to a certain extent in the literature through Drewett's 'transition layers model', showing changes in state from rural to urban (Drewett 1969), (Hall et al. 1973). Kaiser and Weiss also illustrate land transitions from 'urban interest' to 'active development', and then 'residence', (Kaiser & Weiss 1970) although this does not concentrate on the complexity of title transition and associated interactions in the process. Other notables on land transition include Bryant, (Bryant 1982) who draws on Drewett's transition table, but informs on the nature of 'latent landscape', which alludes to the uncertainty of and potential for change in land parcels based on their existing condition, whilst Goodchild and Munton extend the understanding of the complexity of parcel transition, and the varying and contingent nature of different role plays and interactions (Goodchild & Munton 1985).

Property rights and the relationship to the development process are covered to some extent by Julie Grove-Hills (Grove-Hills et al. 1990) in the rural context, and suggest a useful research strategy which has seen no apparent ongoing development.

Refreshingly David Adams describes the principles of land title and entitlement in some detail through the 'Doctrine of Tenures and Estates', (Adams 1994) which forms an essential understanding of the foundations of the development process, missing in other accounts of development models.

Due to the number of models (26) and the body of articles and books that are related to the study, (103) the categorization and description of the difference and limitations of the models is best summarized in the following section, where the literature is mapped based on historical, geographical and theoretical perspectives, and data collection methods. It is also reviewed in light of the proposed model of praxis which is described in the next section.

4. Analysis

Literature mapping is a recognized method of analysis, involving the graphical depiction of themes and categories within literature sources through a mapping process. The process helps clarify and classify literature and establish commonalities, constraints and gaps (Hart 2005).

The analysis was based on the review of the literature of the 'models of the development process', and sought to discover the inadequacies due to both ontological (theoretical perspectives) and epistemological (sources of knowledge) factors through the following:

1. A Mapping Study: The dissemination of models and study types based on a categorical analysis, and associated graphical depiction through a series of literature maps.
2. A Proposed Model of Praxis which is compared to current models: The placement of existing models and studies gained through visors of economy, political economy, institutional and social theory, in perspective with a relative view of praxis (the proposed model noted herein) on a literature map.

4.1 Dissemination/Categorisation of Articles

The literature under survey involved 103 articles/books, and within these 14 'graphical models' and 12 textual models guided by Healey and Gore and Nicholson, as well as other key theorists works.. The articles chosen for study were based on the term 'models of the development process' and relevant cited references. These articles/books were classified into five types: graphical model, textual model, study, history and general (the latter including theoretical analysis/summary/text books) in table 2. These categories were used and identified by use of their own graphic marker across all outputs of the survey, including charts and maps (figure 6).

Table 2 below shows the 103 articles broken down into the various article types and figure 6 the graphical markers used to identify the various article types:

	Graphical Models	Models	Studies	History	General	Total
No	14	12	33	7	37	103
%	14%	12%	32%	7%	36%	100%

Table 2- Breakdown of literature by type of article.

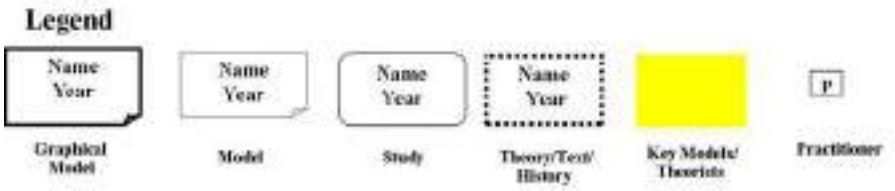


Figure 6: Legend for graphical mapping showing study and model types

The articles are drawn from academic literature, including books and journals that are recognized and referred to by the various key authors. Table 3 shows only six practitioners were noted within the author ranks. (See note 1 in appendix for list of practitioners).

	No	%
Academic	98	94%
Practitioner	6	6%
	104	100%

Table 3- *Breakdown of literature by academic versus practitioner.*

The topic of 'models of the development process' has been studied by five main disciplines as noted in table 4 below. Town and urban planning predominates at 38%, whilst economists (23%) and sociologists (10%) are also well represented. Of interest is the lower percentage of business and finance based articles (7%) although it is suggested that theory building of the nature found in the studied disciplines differs from the more financial and econometric nature (Harris & Cundell 1995) of the business literature, although Robert Beauregard breaks ranks with his rich depiction of the texture of property markets (Beauregard 2005).

A recent commercial article on the development process (Costello & Preller 2010) shows low intersection with articles studied here. This is however a subject for further study outside the bounds of this article.

	No	%
Economics	40	23%
Geography	13	7%
Town Planning	66	38%
Sociology	18	10%
Finance/Business	13	7%
General Text/History	26	15%
Totals	176	100%

Table 4- Breakdown of literature by disciplines applied to the articles.
(Please note the total exceeds the number of authors, because the above represents the number of times a specific discipline was used in articles).

The categorization of articles was based on identification of the traits shown in table 5 (below).

Categories										
Type	Theory/ Praxis	Position	Data Collection	Discipline	Theoretical Stance/ (Bias)	Sector	Participants	Town/City	Country	Geo Position
Sub-categories										
History	Theory	Academic	Theoretical Analysis	Economics	Classical	Residential	Polies	Place	Canada	CBD/Urban
Theory		Practitioner	Statistical Analysis	Geography	Marxist	Commercial	Planners		USA	Fringe
Model			Case Study	Architecture	Pol Economy	Industrial	Agents		UK	Regional
Summary (Text)			Survey/ Questionnare	Town Planning	Institutional	Mixed	Builders		Other	Rural
Study			Interview	Sociology	Morphology		Developers			
Mixed	Praxis		Focus Group	Finance			Mixed			

Table 5- Categories and sub-categories used in the mapping study.

The literature was read based on the above filters and (for economy) based on a 'search hierarchy' of abstract-section/chapter-relevant text, i.e. where abstracts did not provide the necessary information, chapters or sections then text relevant to the categories were read and filtered for relevant information. Key models were however all reviewed in detail.

A spreadsheet was used to record relevant chapters, text, quotes and charts. The information was distilled into the relevant charts in this article. Content analysis was therefore not based on purely technical computer searches of key words.

4.2 Mapping Typology

The mapping study was founded on the proposition that there were limitations in the literature due to existing theoretical perspectives and data collection methods. The research design included the potential revelation and quantification of these limits.

The following literature maps were devised as part of this design:

1. Theory-Praxis/Data Collection type.
2. History/Theoretical Perspective.
3. Geography/Sector/Country type.

(Please note that the maps have been designed to fit into the A4 portrait format of this article, however larger size versions are shown in the appendix in landscape format for the assistance of readers).

Theory-Praxis/Data Collection Map

The theory-praxis map (see figure 7 over page) distilled 'theory versus praxis' against a comparison of data collection methods, which ranged from purely literary/theoretical accounts, to secondary data collection, then actual engagement with actors through case studies, questionnaires, surveys and interviews. For clarity y-axis grading of 'theory' was defined by a more *objectivist* stance whilst praxis a more *constructionist* approach (Bryman 2008). See glossary.

History/Theoretical Perspective Map

The history-theoretical perspective map (see figure 8 over page) placed authors in a timeline across six decades from the 1950's to the current decade, (2010's) and within their theoretical category of Neo-classic, neo-Marxist, political economy, institutional, praxis and sociology. The grading of these categories from top to the bottom of the chart reflected an increased depiction of actors, and their associated drivers and relationships.

Geography/Sector/Country Map

The geographic/sector/country map (see figure 9 over page) identified actual field studies undertaken within the articles and plotted them by Country, City/Town and Sector (residential, commercial etc). It also created a concentric mapping pattern, emanating from the center of the map, which represented city studies, to outer circles which included fringe, regional and rural studies. This was designed to reveal concentration on particular sectors and geographical predilections.

Model of Praxis Versus Current Theory

The proposed praxis model was distilled from figure 4 and its key thematic statement noted earlier, which covered the essential components and themes of the model and its drivers and mechanisms. The taxonomy was divided into three 'phenomenal' elements: 'Land Parcel Dynamics', 'Developer Dynamics', 'Manifestations' as well as alignments as shown. Each of the underlined themes were split into traits which were placed on a matrix on the y-axis, and against a historical timeline on the x-axis.

Existing theories were then plotted onto the matrix based on author name and year, to show graphically the incidence of 'coverage' of a particular theme (of the proposed model) within the current theory, and within an historical period. Coverage could mean specific or general mention of such themes in the article or book. It should be noted that the review of all articles and books was based on distilling key aspects of the sources, to allow this process to be done effectively and economically, within the bounds of this article.

5. Results

The literature maps showed the changes, evolution, predilection and cross fertilisation of theoretical stances across seven decades, as well as data collection tendencies. Statistical table 6 draws from the Theory-Praxis map (figure 7) and shows the predominance of more constructivist theoretical stances (72%) to objectivist, (28%) however a high incidence of the use of secondary data and literature, (60%) compared to direct engagement (40%).

Data Collection Method	Objectivist	Constructionist	Totals	%
Secondary Data				
Literature only	6	11	17	
Statistical Data	11	8	19	
subtotal	17	19	36	60%
Direct Engagement				
Case Study	0	10	10	
Questionnare	0	5	5	
Interviews	0	9	9	
Subtotal	0	24	24	40%
Totals	***17***	***43***	***60***	***100%***
%	28%	72%		

Table 6: Statistical representation of theory types and data collection methods.

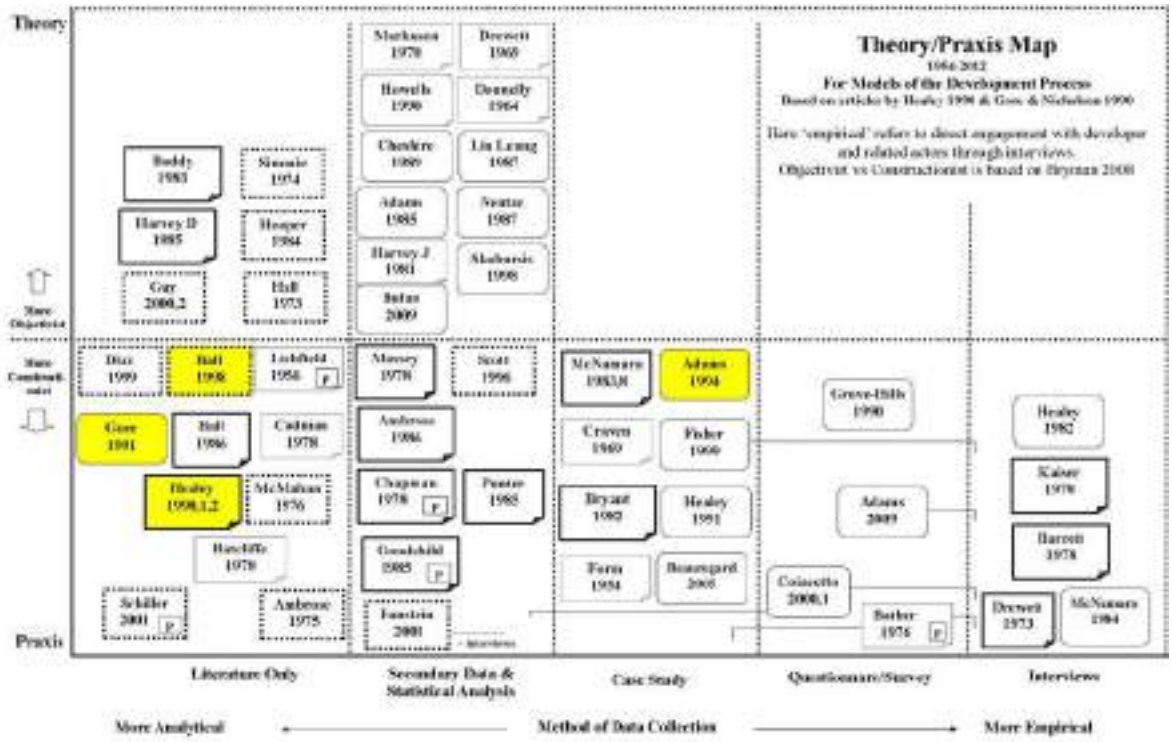


Figure 7-Theory/Praxis Map for Models of the Development Process 1954-2012.

Figure 7 illustrates 60 key author's out of the total of 103 articles, (based on their standing and relevance to the models studied) in the theory-praxis/data collection grid. Only 5 articles involved questionnaires and 9 articles the use of interview of developer related actors. Amongst the three forms of 'direct engagement', case studies were the highest form of interaction with 10 recorded. This however seems a low incidence over all.

Only three articles could be classified as a description of praxis (Bather 1976), (Drewett 1973 and (McNamara 1984) grounded by direct interaction with developers and related actors. Whilst Goodchild and Munton (1985) provided the closest model to a view of praxis (perhaps due to Goodchild's professional status as a chartered surveyor), it was not accompanied by direct engagement (except for Goodchild's obvious experience). Similarly Coiacetto's study (2000) revealed a more contemporaneous view of developer behavior, grounded by secondary data collection and interviews.

The vertical grading (theory/praxis) also served to filter out positivist approaches which relied on the statistical analysis of secondary data, which 'floated' to the top and middle of the chart. Collectively however, this and the other articles did not make for a substantial current depiction of either developer behavior, nor a development model.

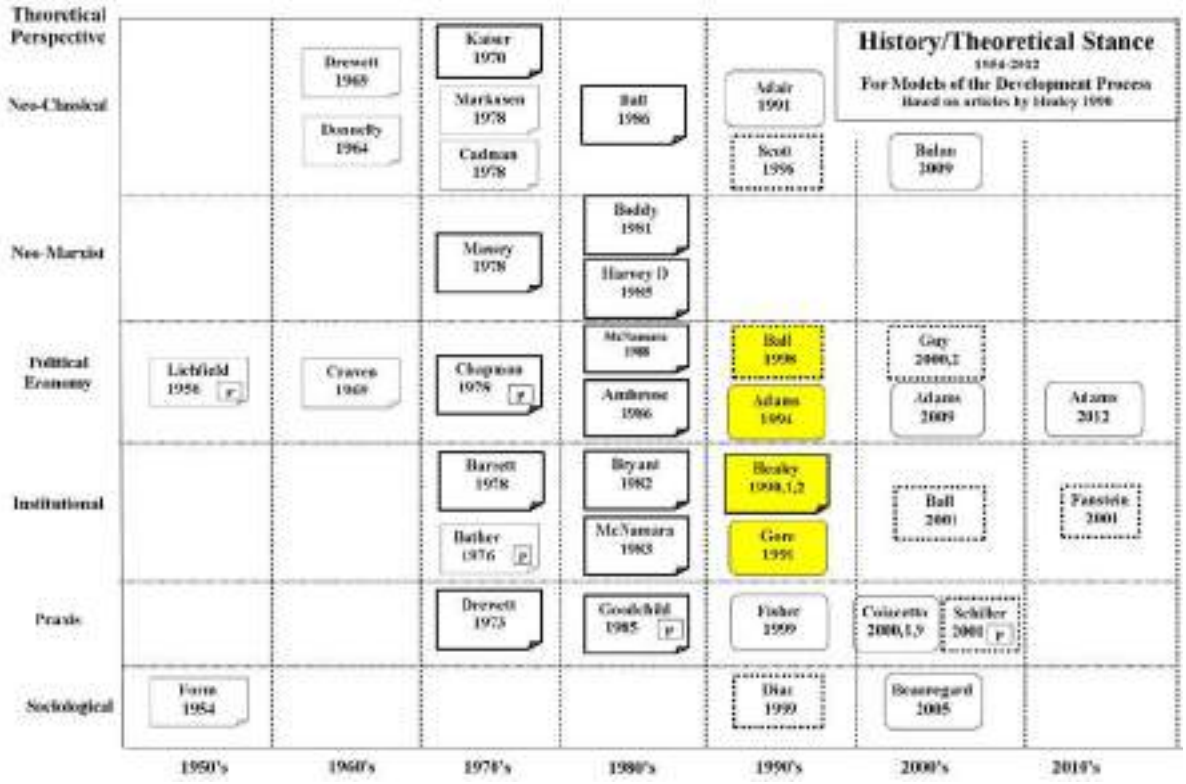


Figure 8- History/Theoretical Stance Map for Models of the Development Process 1954-2012.

The history/theoretical stance map, (figure 8) showed the limitations brought to the development of theory by a predilection toward theoretical visors with camps forming across neo-Marxist, Neo-classical and then institutional frames.

The map is useful in showing the fading of neo-classical and neo-Marxist emphasis over the decades, as the apparent ground wave of institutional and social frames invaded the theoretical landscape. All graphical or other models run dry however in the early 1990's. The remaining decades were spent in debates by the leading theorists as shown.

The geography/sector/country map, (figure 9) reveals an emphasis on regional and fringe studies, a paucity of both commercial and central business district studies, and the fragmentation of international research coordination. Residential studies dominate the literature and in fringe/regional settings. The UK leads in this research by study number, and there remains an apparent divide in theoretical perspective with USA's roots in a more neo-classical and statistical modeling tradition.

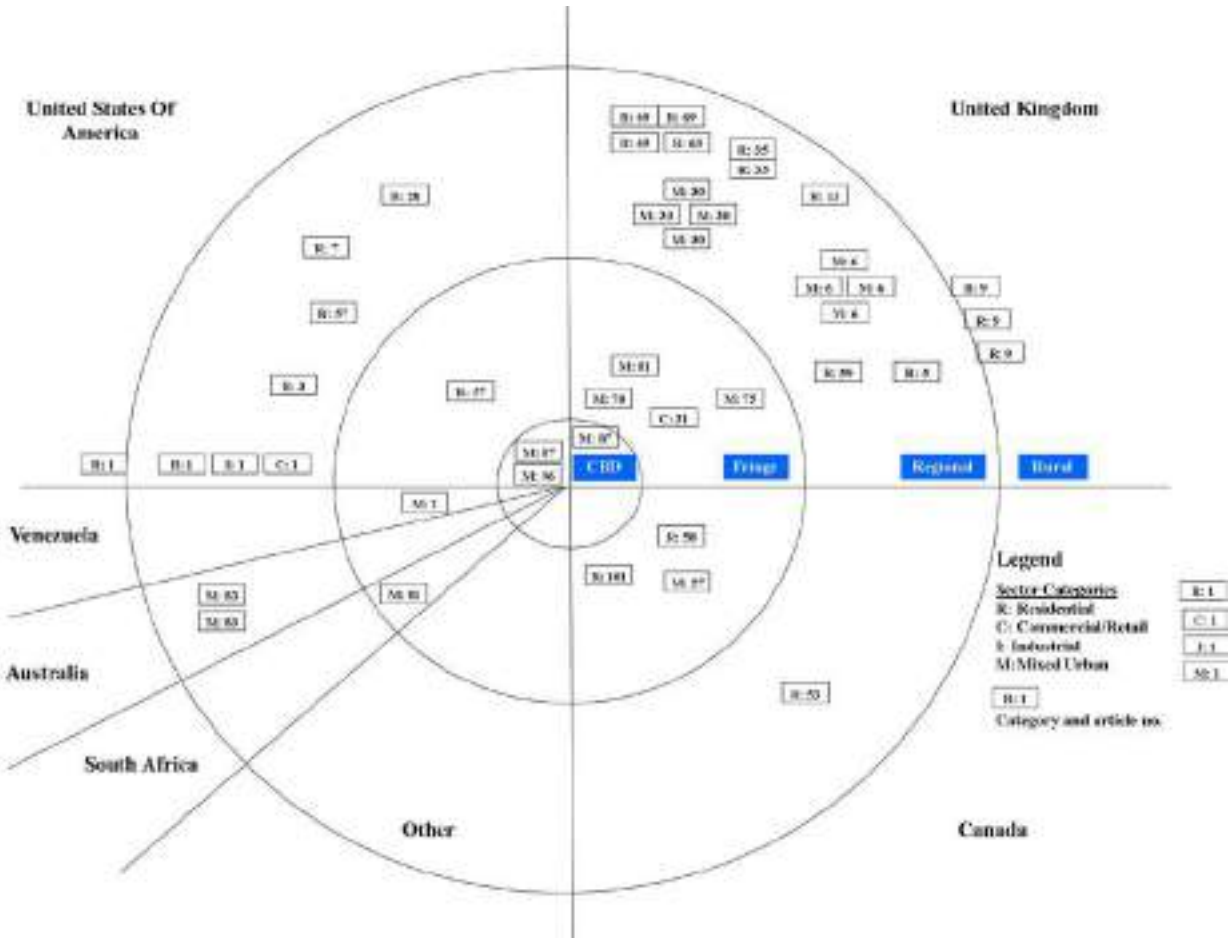


Figure 9- Geography/Sector/Country Map
for Models of the Development Process 1954-2012 (a register of articles on the map is shown in the appendix)

5.1 Praxis Matrix versus Current Theory- Taxonomy Tables

The taxonomy tables for the model of praxis showed how the existing literature 'covered' the various components and themes in the taxonomy. The areas shaded in grey highlight 'coverage'. The gaps are circled. It should be noted that the taxonomy diverges from typical 'process depictions' by establishing a foundation of dynamics and traits that underlie a mechanism. Another distinction which drives the descriptors in the taxonomy is the occurrence of 'conditions and factors precedent' to transition occurring, in favor of a sequential list of events. This introduces a mechanistic theoretical lens which is contingent and flexible.

Table 7 - Land Parcel Dynamics: Showing Gaps in the Literature (Circled).

Taxonomy (Elements-Themes-Traits)	Existing Theories						
1. Land Parcel Dynamics	1950's	1960's	1970's	1980's	1990's	2000's	2010's
Lots and Land Parcels							
Individual adjacent lots					Adams 1994		
Adjacent lot relationships- physical & commercial			Bather 1976		Adams 1994	Schiller 2001 Beauregard 2005	
Adjacent cityscape amenity relationships			Bather 1976	Bryant 1982	Adams 1994	Schiller 2001 Beauregard 2005	
Potential change in lot patterns- distribution or consolidation					Grove-Hills 1989		
Potential change in lot title and entitlements-change in use					Grove-Hills 1990		
Land parcel potential - initial and potential title patterns							
Land parcel potential transition							
Land parcel genesis							
Title Distribution							
Tradeable title patterns					Healey 1991 Adams 1994 Grove-Hills 1990		
Lot/title pattern change-distribution or consolidation							
Change in lot /title and entitlements-change in use					Grove-Hills 1990		
Parties to distribution- Ownership change			Massey 1978	Hooper 1984 5	Adams 1994	Schiller 2002	
Potential titled property/product						Schiller 2003	
Value Tension							
Differential adjacent lot/parcel values	Lichfield 1956	Drewett 1969		Adams 1985	Adams 1994	Schiller 2001	
Differential adjacent amenity values				Bryant 1982	Adams 1994	Schiller 2001 Beauregard 2005	
Commercial potential and viability- residual value			Barrett 1978	Hooper 1985	Adams 1994	Schiller 2001 Beauregard 2005 Adams 2009 Bullen 2009	
Attraction to transition status			Bather 1976			Schiller 2001 Beauregard 2005	
Arbitrage Nodes							
Arbitrage node based on differential value tension						Nauta 1987	
Transaction potential for transition		Drewett 1969		Bryant 1982			
Developer attraction					Adams 1994	Schiller 2002	
Third party attraction to transaction (e.g. purchaser/investors)					Adams 1994	Schiller 2002	
Volitional transaction potential							

Table 7 illustrates clearly gaps in the essential description of the dynamics of the distinction between lots and land parcels, parcel genesis and associated title transitions/patterns. The existing theory in effect is by this ruler, in its early stage of development in these areas.

Table 8- Developer Dynamics: Showing Gaps in the Literature (Circled).

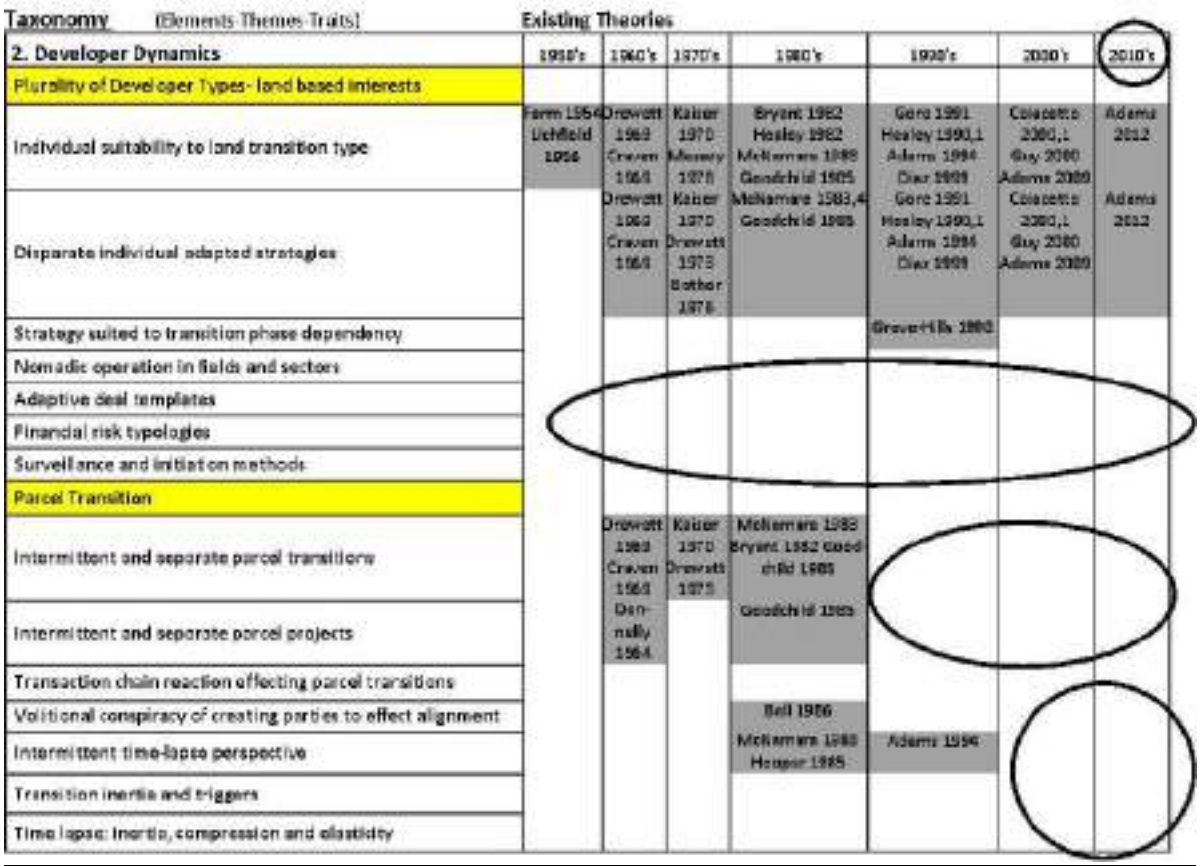
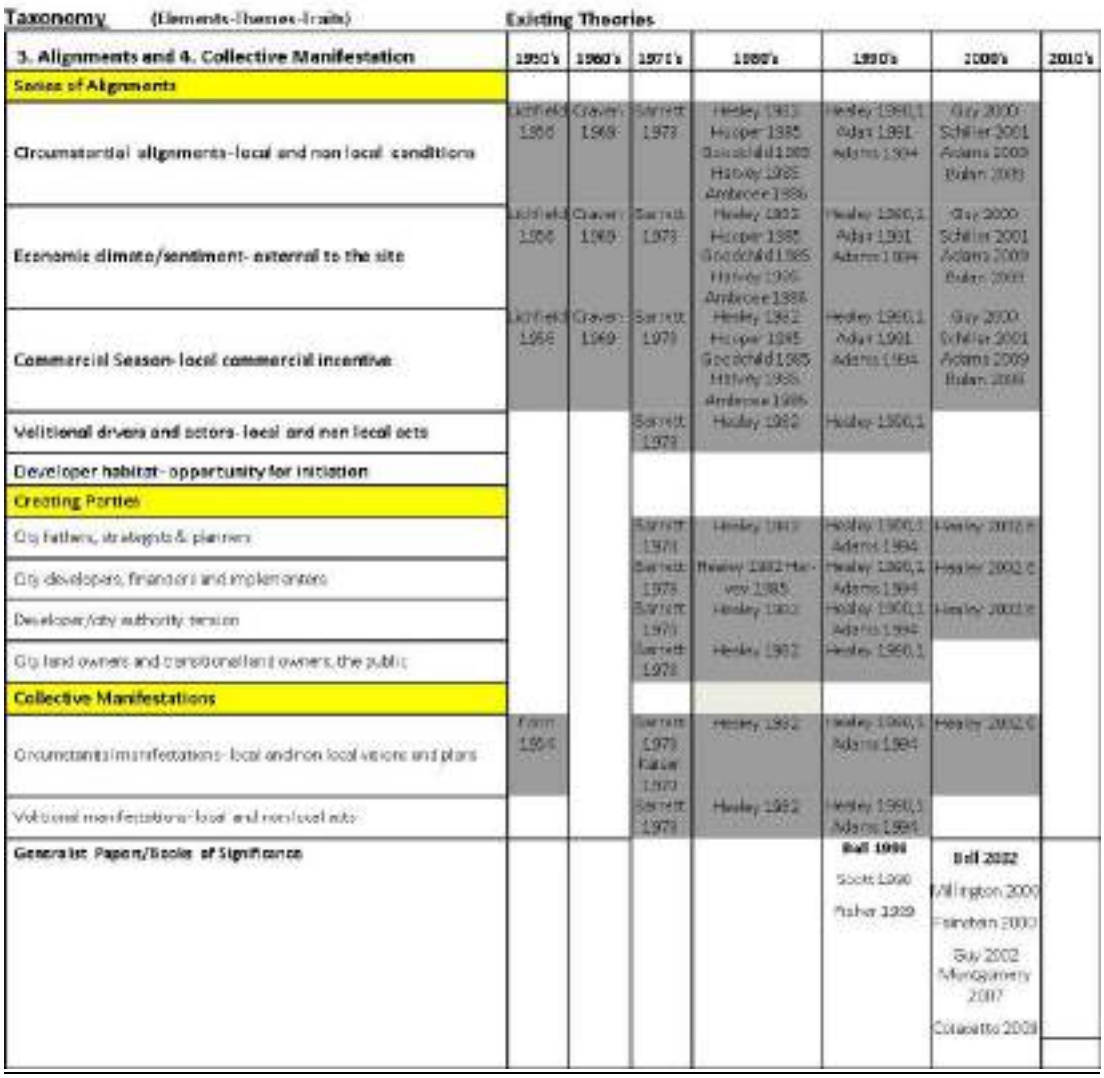


Table 8 illustrates that 'Developer Dynamics' are well covered in the understanding of the plurality of developer types and adaptation to different land uses and phases. However their essential nomadic behaviors and associated adaptive strategies types including nomadic site selection, adaptive deal templates, financial risk typologies and surveillance methods are not covered and particularly in the current context. Parcel transition and its both visible and invisible natures are not well identified.

Manifestations & Alignments

Table 9 shows an extensive coverage of the area of collective manifestation which is related to the collective visions of creating parties, as this is a central tenet of the architectural and urban theory areas. The notion of circumstantial and volitional alignment is also well covered although in a classical economic and econometric manner (collectively).

Table 9- Manifestations and Alignments: Showing Gaps in the Literature (Circled).



Taxonomy (Elements-Themes-Traits)	Existing Theories						
3. Alignments and 4. Collective Manifestation	1950's	1960's	1971's	1980's	1990's	2000's	2010's
Series of Alignments							
Circumstantial alignments-local and non local conditions	Lichfield 1956	Craven 1969	Barrett 1973	Healey 1982 Hooper 1985 Goodchild 1985 Healey 1986 Ambrose 1986	Healey 1990,1 Adair 1991 Adams 1994	Guy 2000 Schiller 2001 Adams 2009 Balen 2009	
Economic climate/sentiment- external to the site	Lichfield 1956	Craven 1969	Barrett 1973	Healey 1982 Hooper 1985 Goodchild 1985 Healey 1986 Ambrose 1986	Healey 1990,1 Adair 1991 Adams 1994	Guy 2000 Schiller 2001 Adams 2009 Balen 2009	
Commercial Season- local commercial incentive	Lichfield 1956	Craven 1969	Barrett 1973	Healey 1982 Hooper 1985 Goodchild 1985 Healey 1986 Ambrose 1986	Healey 1990,1 Adair 1991 Adams 1994	Guy 2000 Schiller 2001 Adams 2009 Balen 2009	
Volitional drivers and actors- local and non local acts			Barrett 1973	Healey 1982	Healey 1990,1		
Developer habitat- opportunity for initiation							
Creating Parties							
City fathers, strategists & planners			Barrett 1973	Healey 1982	Healey 1990,1 Adams 1994	Healey 2002	
City developers, financiers and implementers			Barrett 1973	Healey 1982 Harvey 1985	Healey 1990,1 Adams 1994	Healey 2002	
Developer/city authority tension			Barrett 1973	Healey 1982	Healey 1990,1 Adams 1994	Healey 2002	
City land owners and corporate/land owners, the public			Barrett 1973	Healey 1982	Healey 1990,1		
Collective Manifestations							
Circumstantial manifestations- local and non local visions and plans	Form 1956		Barrett 1973 Faludi 1973	Healey 1982	Healey 1990,1 Adams 1994	Healey 2002	
Volitional manifestations- local and non local acts			Barrett 1973	Healey 1982	Healey 1990,1 Adams 1994		
Generalist Papers/Books of Significance					Ball 1998 Scott 1998 Fisher 1999	Ball 2002 Willington 2000 Fainstein 2001 Guy 2002 Montgomery 2007 Cowlitto 2008	

6. Conclusion

Using literature mapping techniques, the study clarified limitations in the literature on the 'models of the development process', based on the nature and conflict of various theoretical perspectives, lack of empirical engagement with developers and related actors, the need for greater understanding of developer practice and a substantial lack of emphasis on commercial and city centre studies. Most importantly, in the last two decades there has been virtually no growth in research in this area, especially like earlier eras, which paralleled the booms of the 1970's and 1980's and their aftermath.

The model of praxis introduced a mechanistic view based on three key elements: 'Land Parcel Dynamics', 'Developer Dynamics', 'Manifestations' which rotated in their own spheres but aligned under certain conditions, to trigger transitions in land

parcels. This 'reactive' model is based on a more phenomenological and ethnographic representation and understanding of the contingent and mechanistic nature of property development. This was compared with relevant theories in the literature, and the area of land parcel dynamics and land title transitions is not covered in detail at site level, nor the nomadic adaptive tendencies of the developer.

Development theory is outdated and in need of placement in the context of the contemporary (current) property development industry. Since the time of creating such models (1991) for example property trusts, both un-listed and listed have been created as a receptacle for the distribution principles noted in the proposed model. Equity and debt funding has taken other dimensions with the invasion of the equity layer with 'mezzanine finance', clouding the notion of ownership of individual project investments, and luring unsuspecting members of the public into often dodgy 'second mortgage' funding schemes.

Parallel with any further concerted studies and theoretical representations on the development mechanism, a current depiction of industry structure (Coiacetto 2009) as well a current history of the industry is essential, since Scott's excellent history went only until 1996 (Scott 1996) and that was in Great Britain.

Patsy Healey's institutional model remains, even after two decades, an extensive important timeless framework for theoretical and empirical analysis, but sits in a state of suspended animation. Michael Ball's model on 'structures of provision' also provides another key contingent perspective that has not been adopted substantially. Both are compatible with the proposed model of praxis, and it is suggested that this paper perhaps form a catalyst and framework for further investigation into this important area.

Amongst all the articles and books however, one passage rings in the author's ears, and was said apparently only in passing by Alan Hooper to Patsy Healey (Healey 1991, p. 232);

"Hooper (personal communication) has described such models as a 'machine waiting for a power source'."

The proposed model of praxis is a first step in revealing and understanding the nature of this, as well as a focus on theoretical perspectives that recognize that although the overall property development mechanism holds within it structures, actors, institutions and associated behaviors, as well as the essence of economies and political economies, the overall phenomenon ultimately has at its central platform the time lapsed, spasmodic transition of titled land to titled property.

Any study and associated theory of this vast and complex topic therefore, should perhaps be founded in this perspective, in effect– a view from the ground.

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Notes

1. Practitioner Authors.

Name	Year	Profession
Lichfield	1956	Planner and consultant
Bather	1976	County Planning Officer
Chapman	1978	Town Planning Institute
Goodchild	1985	Chartered Surveyor
Collins	1999	Bank Professional
Schiller	2001	Property/Real Estate Professional

About Jonathan Drane

Jonathan Drane is a commercial builder, property developer and educator who started his career in 1976. In 2011 he was drawn to write about the property development mechanism and its part in the growth of cities, through a PHD candidacy at the Faculty of the Built Environment at UNSW, Sydney Australia.

His topic is named *The Seed in the Cityscape- A proliferation model of high growth cityscapes based on the property development mechanism*, and he is in his second year of candidacy.

His supervisors are Emeritus Professor Ian Burnley, Senior Lecturer, Associate Dean (Education) Nancy Marshall. His panel includes Professor Michael Neuman and Dr Jinu Kim.

Appendix

Glossary of Terms

Term. *(and dictionary definition where appropriate)*	**The concept relevant to this article.**
Academic	The author's discipline as noted on the relevant article as represented by an academic institution. Reference to prior other experience out of the academic field is not included (unless specifically noted).
Constructionism	*"Constructionism is an ontological position that asserts that social phenomena and their meanings are continually being accomplished by social actors. Also called constructivism".* (7, pp.19)
Epistemology *"the theory of knowledge, especially with regard to its methods, validity, and scope, and the distinction between justified belief and opinion."* (1)	Here it is used in context with *"Sources of Knowledge"*: how knowledge is gained through empirical or other forms of data collection. (2, pp.977).
Fallow	A 'fallow cityscape' is termed in context with the proposed model, and seen to be a dilapidated, obsolete or undeveloped area whose use is not consistent with the surrounding areas of the city, and which has not been rejuvenated for a long period. Put simply: (obsolete, dilapidated and at their lowest use).
Institutional Model	As defined under 'institutional theory' by Healey see below.
Institutional Theory	Refers broadly to a view of social systems and the relationships between structure and agency in the modern context. As noted by Healey: *"the link between structure and agency empirically through relating the construction of roles, and the strategies and interests of agencies, to the material resources, institutional rules and organizing ideas which agents acknowledge implicitly and explicitly in what they do"* (6, pp. 35).
Neoclassicism	Refers here to the return to classic economic theory in the mid to late 20th century by relevant

*"the revival of a classical style or treatment in art, literature, architecture, or music."(*1)	theorists and as noted by Healey: *"preoccupation with the processes and consequences of the formation of prices in markets".* (3, pp.232).
Neo-Marxist	*"an interest in the way markets are structured through the power relations of capital, labour and landowner".* (3 p232).
Models of the development process	Theoretical representations of key components and their relationships in either a graphical or textual format which offers insight into structures, roles, processes and behaviours of relevant actors in the development process.
Morphology	The study of cities through the charting and analysis of its 'face' and patterns.
Objectivism	*"Objectivism is an ontological position that asserts that social phenomena and their meanings have an existence* that is independent of social actors". (7, pp.19)
Ontology *"the branch of metaphysics dealing with the nature of being*". (1)	*"The nature of existence and the categorical structure of reality."* (2, pp.670). Here it is used in the context of the way we see the world through different theoretical perspectives.
Political Economy	*"The production, distribution and consumption of wealth*". (5)
Practitioner	Where the author is noted as representing a practitioner company or body on the relevant article. Reference to prior other experience out of the practitioner field is not included (unless specifically noted)
Praxis *"practice, as distinguished from theory". Accepted practice or custom".* (1)	*"Aristotle once refers to his whole "practical philosophy" as the part of philosophy concerned with the problems of man."* (4, pp. 11)

	Here it is used in context with the notion of a 'practical philosophy"- a 'model' or concept of actual practice which has theoretical significance.
Property Development	Relates to third party distribution of titled land and property, and excludes property investment for the sake of holding property and improving it without changing title structures.
Structures of Provision	*A structure of building provision refers to the contemporary network of relationships associated with the provision of particular types of building at specific points in time.* *Those relationships are embodied within the organisations associated with that type of building provision, and they may take a market or a non-market form. `Provision' encompasses the whole gamut of development, construction, ownership and use."* (Ball 1998)
Study	Studies involve an empirical study of an aspect of the development process.
Taxonomy *"the branch of science concerned with classification, especially of organisms; systematic"*. (1)	Here it is used in classifying the elements and forces involved in the mechanistic phenomena of the property development process.
Textbook	Involved a text book or similar approach. This involved purely descriptive accounts with a lesser emphasis on theoretical content.
Theory	Theoretical analysis that involved a review of the development process based on literature or theory alone.
Third party title distribution	The act of trading property title/s from one party to the other in the form of increased numbers and yields of title.

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Register of Field Studies : For Models of the Development Process.
(Refer to figure 9:) *Geography/Sector/Country Map for Models of the Development Process 1954-2012.*

Article No.	Year	Author	Title	Journal/Publisher	Data Collection	Discipline	Sector	Town/city	City	Geo Position
1	1954	Form WH	The place of social structure in the determinants of land use	Social Forces 32, 317-325	Case Study	Sociology	Mixed: Res,Retail, Industrial	Lansing	USA	Mixed: fringe, Rural
3	1964	Donnelly TG Chapin FS Weiss SF	A Probabilistic Model of Residential Growth	Centre for Urban and Regional Studies, University of Carolina, Chapel Hill NC	Statistical Analysis- variables nominated by actors	Economics/ Urban Theory /Town Planning	Residential	Greensboro North Carolina	USA	Regional Fringe
5	1969	Craven E A	PRIVATE RESIDENTIAL EXPANSION IN KENT 1956-66: A STUDY OF PATTERN AND PROCESS IN URBAN GROWTH	URBAN STUDIES Vol. 6 February 969 No. 1	Case Study	Town Planning	Residential	Kent	UK	Regional Fringe
6	1969	Drewett JR	A stochastic model of the land conversion process An interim report	Regional Studies Volume 3, issue 3, 269-280 , 1969	Statistical Analysis	Economics Geography	Mixed	Reading,South Hampshire,Coventry, Leicester, Manchester.	UK, Wales	Regional Fringe
7	1970	Edward J. Kaiser & Shirley F. Weiss	Public Policy and The Residential Development Process	Journal of the American Institute of Planners, 36:1, 30 -37	Interviews in-depth with decision agents	Economics/ Town Planning	Residential	North Carolina Piedmont	USA	Regional Fringe
9	1975	Hall P Gracey H Drewett R Thomas R	The Containment of Urban England: The Developers Vol 2: Decision Processes p163-193	Allen & Unwin London ; Sage Publications Beverly Hills	Survey/ Questionnaire, In- depth interviews	Geography Economics	Residential	Berkshire or the East Midlands, Cheshire -Lancashire border near Manchester	UK	Regional/ Rural
13	1976	Bather N J	The Speculative Residential Developer and Urban Growth	Reading Geo Papers, Dept of Geography, Uni of Reading, England	Case Study Personal interviews survey	Town Planning	Residential	Reading	UK	Regional
27	1982	Bryant CR	The Rural Real Estate Market: an Analysis of Geographic Patterns of Structure and Change within an Urban Fringe Environment,	Publication Series, Dept of Geography, Universit of Waterloo, Ontario Canada	Case Study	Town Planning	Mixed	Kitchener Waterloo Ontario	UK	Mixed on rural fringe with regional city
28	1982	Lauria M	Selective urban redevelopment : a political economy perspective	Urban Geography 3 (3), 224-239	Case Study	Economics Town Planning	Residential	Minneapolis	USA	Regional
30	1982	Healey, P., Davis, J., Wood, M. and Dixon, M.J.	The implementation of development plans, Report for the Department of the Environment, Department of Town Planning, Oxford Polytechnic.	The implementation of development plans,	Statistical Analysis / Interviews	Town Planning	Mixed	High Wycombe, Buckinghamshire, Workingham, Central Berkshire and Banbury, Oxfordshire	UK	Regional
31	1983	McNamara F	Towards A Classification of Land Developers	Law and Policy 6 (1983) 87-94	Case Study	Sociology	Commercial	Edinburgh	UK	CBD/Urban
35	1984	McNamara P	Land Release & Development in Areas of Restraint: Restraint Policy and Development Interests: Housing in Dacorum and North Hertfordshire	Oxford Polytechnic Department of Town Planning Working Paper no 76	Statistical Analysis & Structured Interviews	Town Planning	Residential	Dacorum & North Hertfordshire UK	UK	Regional

Article No.	Year	Author	Title	Journal/Publisher	Data Collection	Discipline	Sector	Town/city	City	Neo Post-tion
53	1987	Lin Leung H	Developer behaviour and development control	Land Development Studies, 4:1, 17-34	Statistical Analysis	Town Planning	Residential	Scarborough, Ontario, Toronto	Canada	Regional
57	1988	Gottdiener M	The Social Production of Urban Space		Theoretical Analysis Broad Case Studies	Sociology	Mixed	Levittown NY & Cedar - Riverside Minneapolis	USA	CBD Urban/ Regional
58	1988	Skaburskis A	Speculation and Housing Prices : A Study of Vancouver's Boom-Bust Cycle	Urban Affairs Review 1988 23: 556	Case Study Using Statistical Analysis	Economics Finance	Residential	Vancouver 1979-81	Canada	CBD/Urban
59	1989	Paul Cheshire and Stephan Sheppard	British Planning Policy and Access to Housing: Some Empirical Estimates	Urban Studies (1989), 26, 469-485 p 1989 Urban Studies	Statistical Analysis	Economics	Residential	Reading and Darlington	UK	Regional/ CBD/Urban
69	1991	A.S. Adair, J.N. Berry & W.S. McGreal	Land availability, housing demand and the property market	Journal of Property Research, 8:1, 59-69	Statistical Analysis	Economics	Residential	Belfast Londonderry Banbridge Limavady	UK Ireland	Regional
70	1991	Healey P	From shipyard to housing estate-The transformation of Hebburn Riverside 1979-1989; A Case Study	Project report, Newcastle University Newcastle upon Tyne	Case Study	Town Planning	Mixed	Hebburn Tyneside	UK	Fringe
75	1994	Adams D	Urban planning and the development process	UCL Press Ltd University College London	Case Study	Town Planning	Mixed	Greenwich Reach	UK	Fringe
81	1999	Fisher P Collins T	The commercial property development process	Propery Management, Vol 17, No 3, 1999, pp219-230	Case Study & Interviews	Economics	Commercial	Newcastel & Cape town	UK & South Africa	Fringe
83	2000	Colacetto EJ	Places Shape Place Shapers? Real Estate Developers' Outlooks Concerning Community, Planning and Development Differ between Places	Planning Practice & Research, Vol. 15, No. 4, PP. 353-374, 2000	Secondary data and Interview	Town Planning	Mixed	Ballina and Byron	Australia	Regional
87	2001	Fainstein S	The City Builders Property Development in New York and London 1980-2000 eds 2, edn 1:1994		Statistical Analysis Interviews	General	Mixed	London New York	USA UK	CBD
96	2005	Beauregard RA	The Textures of Property Markets: Downtown Housing and Office Conversions in New York City	Urban Studies, Vol 42, No 13, 2431-2445, Dec 2005,	Case Study	Economics Business Sociology	Mixed	New York	USA	CBD/Urban
101	2009	Bulan L Mayer M Somerville CT	Irreversible investment, real options, and competition: Evidence from real estate development	Journal of Urban Economics 65 (2009) 237-251	Statistical Analysis	Finance	Residential	Vancouver	Canada	Fringe

Historical Register of Articles Related to 'Models of the Development Process' 1954 to 2012

By Jonathan Drane UNSW Faculty of the Built Environment
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Year	Author/s	Title	Publication	Country
1954	Form WH	The place of social structure in the determinants of land use	Social Forces 32, 317-323	USA
1956	Lichfield N 1916-2009	Economics of Planned Development	Estate Gazette Books, London	UK
1964	Donnelly TG Chapin FS Weiss SF	A Probabilistic Model of Residential Growth	Centre for Urban and Regional Studies, University of Carolina, Chapel Hill NC	USA
1966	Weiss SF Smith JE Kaiser EJ Kenney KB	Residential Developer Decisions	Centre for Urban and Regional Studies, University of Carolina, Chapel Hill NC	USA
1969	Craven EA	PRIVATE RESIDENTIAL EXPANSION IN KENT 1956-64: A STUDY OF PATTERN AND PROCESS IN URBAN GROWTH	URBAN STUDIES Vol. 6 February 969 No. I	UK Kent
1969	Drewett JR	A stochastic model of the land conversion process An interim report	Regional Studies Volume 3, Issue 3, 269-280 , 1969	UK
1970	Kaiser EJ Weiss SF	Public Policy and The Residential Development Process	Journal of the American Institute of Planners, 36:1, 30-37	USA
1973	Hall P Gracey H Drewett R Thomas R	The Containment of Urban England: Vol 2: The Planning System	Allen & Unwin London ; Sage Publications Beverly Hills	UK, USA
1973	Hall P Gracey H Drewett R Thomas R	The Containment of Urban England: The Developers Vol 2: Decision Processes p163-193	Allen & Unwin London ; Sage Publications Beverly Hills	UK, USA
1973	Lukes S	Individualism	Basil Blackwell Oxford	UK
1974	Simmie J	Citizens in Conflict: The Sociology of Town Planning	Hutchinson Education, London.	UK
1975	Ambrose P Colenutt B	The Property Machine	Penguin Books UK& Maryland	UK
1976	Bather N J	The Speculative Residential Developer and Urban Growth	Reading Geo Papers, Dept of Geography, Uni of Reading, England	UK
1976	McMahon J	Property Development 2nd edn	McGraw Hill Publishing Coy	USA
1976	Rex J	Key Problems of Sociological Theory	Routledge and Kegan Paul, London	UK
1978	Massey D Catalano A	Capital and Land: Landownership by Capital in Great Britain	Edward Arnold Publishers London	UK
1978	Barrett S Stewart M Underwood J	The Land Market & the Development Process	School for Advanced Urban Studies Occasional Paper No2	UK
1978	Chapman H	The structure of the development process	Releasing Land for Building Development Seminar Paper	UK

Year	Author/s	Title	Publication	Country
1975	Markusen JR Scheffman DT	Ownership Concentration and Market Power in Urban Land Markets	The Review of Economic Studies, Vol. 45, No. 3 (Oct., 1978), pp. 519-526Published Oxford Journals Oxford Uni Press	Canada
1978	Cadman D Austin-Crowe L	Property Development	Spon London	UK
1978	Ratcliffe J	An introduction to Urban Land Administration	Estate Gazette London	UK
1978	Harvey D	The urban process under capitalism: a framework for analysis	Journal of Urban and Regional Research vol 2 101. 131	UK
1980	Bruton M Gore A	Vacant Urban Land in South Wales	Report to the Land Authority for Wales and Prince of Wales Committee	UK
1981	Boddy M	Urbanisation and Urban Planning in Capitalist Society: The Property Sector in Late Capitalism pp 267 to 286	Methuen London	UK
1981	Harvey J	Urban Land Economics	Macmillan London	UK
1982	Bryant C R Russwurm L H McLellan A G	The city's countryside	n/a	UK
1982	Bryant CR	The Rural Real Estate Market: an Analysis of Geographic Patterns of Structure and Change within an Urban Fringe Environment,	Publication Series, Dept of Geography, Universit of Waterloo, Ontario Canada	Canada
1982	Lauria M	Selective urban redevelopment : a political economy perspective	Urban Geography 3(3), 224-239	USA
1982	Harvey D	The Limits to Capital.	Blackwells, Oxford.	UK
1982	Healey P Davis J. Wood M Elson MJ	The implementation of development plans, Report for the Department of the Environment, Department of Town Planning, Oxford Polytechnic.	The implementation of development plans,	UK
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1983	Barrett S Whitting G	Local authorities and land supply	OP 10, School for Advanced Urban Studies, Uni of Bristol, Bristol	UK
1983	Healey P	Local Plans in British Land Use Planning	Pergamon Press, Oxford	UK
1983	Ball M	Housing Policy and Economic Power,	Methuen, London.	UK
1984	McNamara P	Land Release & Development in Areas of Restraint: Restraint Policy and Development Interests: Housing in Dacorum and North Hertfordshire	Oxford Polytechnic Department of Town Planning Working Paper no 76	UK
1984	Hooper A	The role of landed property in the production of the built environment	Proceedings of the Bartlett International Summer School on the Production of the Built Environment 4/17 to 4/21	UK
1984	Fraser WD	Principles of Property Investment and Pricing	Macmillan London	UK
1984	Giddens A	The Constitution of Society.	Polity Press, London.	UK
1984	McNamara PF	Restraint policy in action: housing in Dacorum and North Hertfordshire Oxford Working Paper No. 77, Department of Town Planning, Oxford Polytechnic.	Restraint policy in action: housing in Dacorum and North Hertfordshire Oxford Working Paper No. 77, Department of Town Planning, Oxford Polytechnic.	UK
1985	Barrett S Healey P	Land Policy: Problems and Alternatives: Priorities for research in land policy	Gower Publishing Coy UK & Vermont	UK & USA
1985	Hooper A editors Barrett S Healey P	Land Policy: Problems and Alternatives: Land availability studies and private house building	Gower Publishing Coy UK & Vermont	UK
1985	Gore T Nicholson D editors Barrett S Healey P	Land Policy: Problems and Alternatives Chpter 9 P 179 to 202 - The Analysis of public sector land ownership and development	Gower Publishing Coy UK & Vermont	UK

Year	Author's	Title	Publication	Country
1985	Adams CD Baum AE MacGregor BD	The influence of valuation practices upon the price of vacant inner city land	Land Development Studies, 1985, 2, 157-173	UK
1985	Goodchild R Munton R	Development and the Landowner: An analysis of the British experience	George Allen & Unwin	UK
1985	Harvey D	The Urbanisation of Capital	Blackwells Oxford, John Hopkins Uni Press Baltimore Maryland	UK, USA
1985	Punter J	Aesthetic control within the development control process: a case study	Paper presented to a conference on local landscape planning, Oxford Polytechnic, June; available from J Punter, School of Planning Studies, Uni of Reading, Whiteknights Reading	UK
1985	Ball M	Coming to terms with owner occupation	Capital & Class 1985 8: 15	UK
1985	Gilbert A Healey P	The Politicsl Economy of Land,	Gower Aldershot.	UK
1986	Ambrose P	Whatever happened to planning?	Methuen & Co Ltd London & New York	UK
1986	Ball M	1986a: Housing analysis: Time for a theoretical refocus?	Housing Studies, 1:3, 147-166	UK
1986	Ball M	1986b: The built environment and the urban question	Environment & Planning D, 1986, Society & Space 4, 447-464	UK
1986	Rydin Y	Housing Land Policy.	Gower, Aldershot	UK
1987	Lin Leung H	Developer behaviour and development control	Land Development Studies, 4:1, 17-34	Canada
1987	Neutze M	The Supply of Land for a Particular Use	Urban Stud 1987 24: 379	Australia
1987	Evans AW	House Prices and Land Prices in the South East: A Review , House Builders Federation, London.	House Prices and Land Prices in the South East: A Review , House Builders Federation, London.	UK
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1988	Gottdiener M	The Social Production of Urban Space		USA
1988	Skaburskis A	Speculation and Housing Prices : A Study of Vancouver's Boom Bust Cycle	Urban Affairs Review 1988 23: 556	UK
1989	Cheshire P Sheppard S	British Planning Policy and Access to Housing: Some Empirical Estimates	Urban Studies (1989), 26, 469-485 p 1989 Urban Studies	UK
1989	Soja E	Postmodern Geographies,	Verso, London.	UK
1990	Healey P Barrett S	Structure and Agency in Land and Property Development Processes: some ideas for research	Urban Studies, vol 27, No 1, 1990 89-104	UK
1990	Howells PGA Rydin YJ	The case for property investment and the implications of a unitized property market	Land Development Studies, 7:1, 15-30	UK
1990	Naharro R Healey P	Land and property development in a changing context	Aldershot, Hants, England ; Brookfield, Vt., USA : Gower c1990	UK USA
1990	Grove-Hills J Munton R Murdoch J	The Rural Land Development Process	Working Paper No 8, Countryside and Change Working Paper Series	UK
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1991	Gore T Nicholson D	Models of the land-development process: a critical review	Environment & Planning A, 1991, volume 23, pages 705-730	UK

Year	Author/s	Title	Publication	Country
1991	Healey P	Models of the development process: A review	Journal of Property Research. , 8:3, 219-238	UK
1991	Healey P	Urban Regeneration and the Development Industry	Regional Studies, 25:2, 97-110	UK
1991	Adair A.S Berry JN McGreal WS	Land availability, housing demand and the property market	Journal of Property Research, 8:1, 59-69	UK Ireland
1991	Healey P	From shipyard to housing estate ,	Project report, Newcastle University Newcastle upon Tyne	UK
1992	Healey P	Development plans and markets	Planning Practice & Research, Vol. 7, Issue 2	UK
1992	Healey P	An institutional model of the development process	Journal of Property Research, 9:1,33-44	UK
1992	Hooper A	The construction of theory: A comment	Journal of Property Research , 9:1, 45-49	UK
1992	Ross Goobey A	Bricks & Mortals- The dreams of the 80's and the nightmare of the 90's: the inside story of the property world	Century Business	UK
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1995	Harvis R Ian Cundell I	Changing the property mindset by making research relevant,	Journal of Property Research, 12:1, 75-78	UK
1996	Scott P	The Property Masters - A History of the British Commercial Property Sector	E & FN Spon	UK
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1998	Yiftachel O	Planning and Social Control: Exploring the Dark Side	Journal of Planning Literature, May 1998, vol 12, no 4, 395-406	Israel
1998	Healey P	Regulating property development and the capacity of the development industry,	Journal of Property Research, 15:3, 211-227	UK
1999	Diaz III J	The first decade of behavioural research in the discipline of property	Journal of Property Investment & Finance, Vol 17 No 4, 1999, pp 326-332	USA
1999	Fisher P Collins I	The commmercial property development process	Propery Management, Vol 17, No 3, 1999, pp219-230	UK & South Africa
1999	Hooper A Nicol C	The design and planning of residential development: standard house types in the speculative housebuilding industry	Environment and Planning B: Planning and Dikdan 1999, volume 26, pages 793-805	UK
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2000	Gieryn TF	A Space for Place in Sociology	Annual Review.Sociology 2000, 26:463-96	UK
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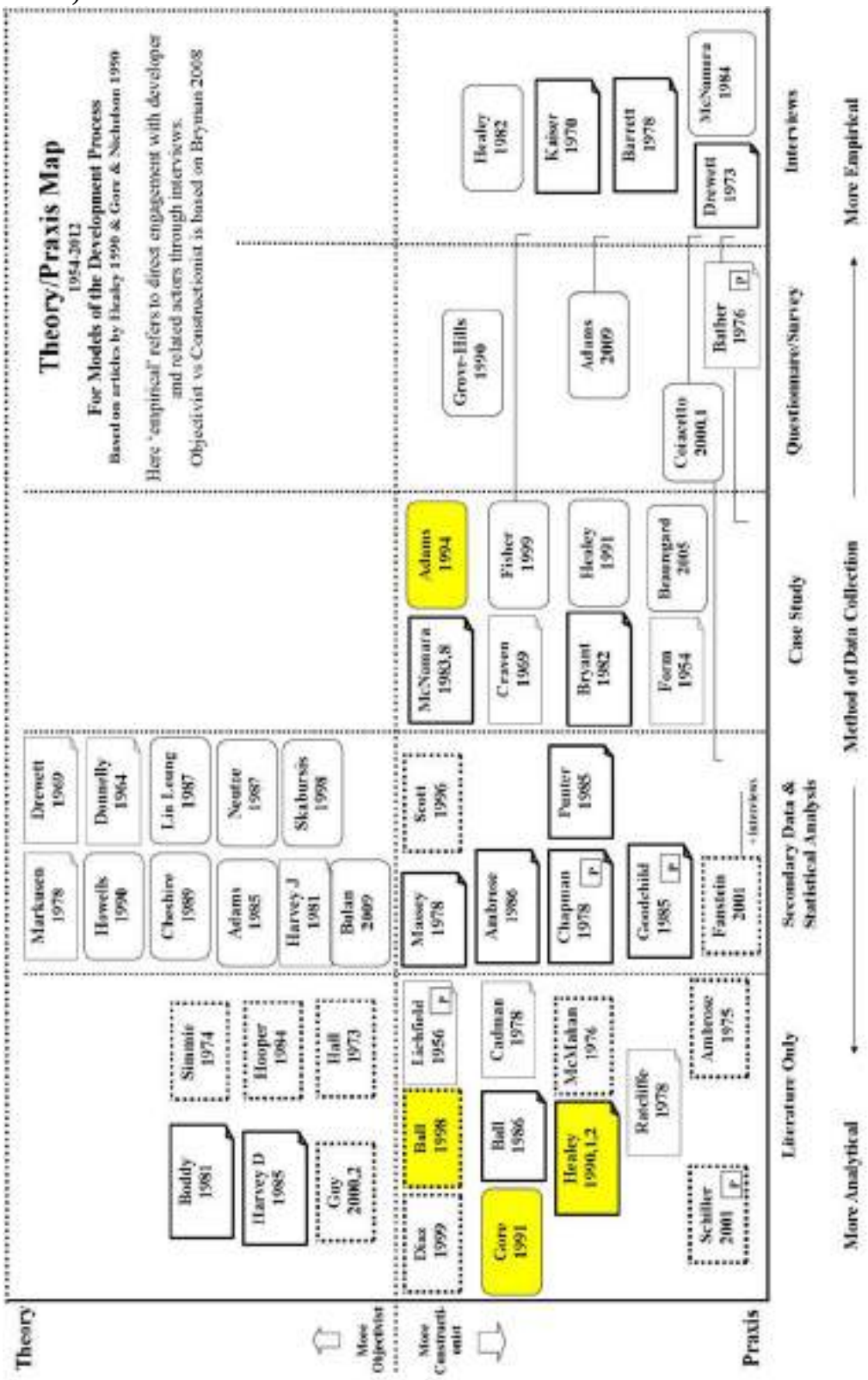
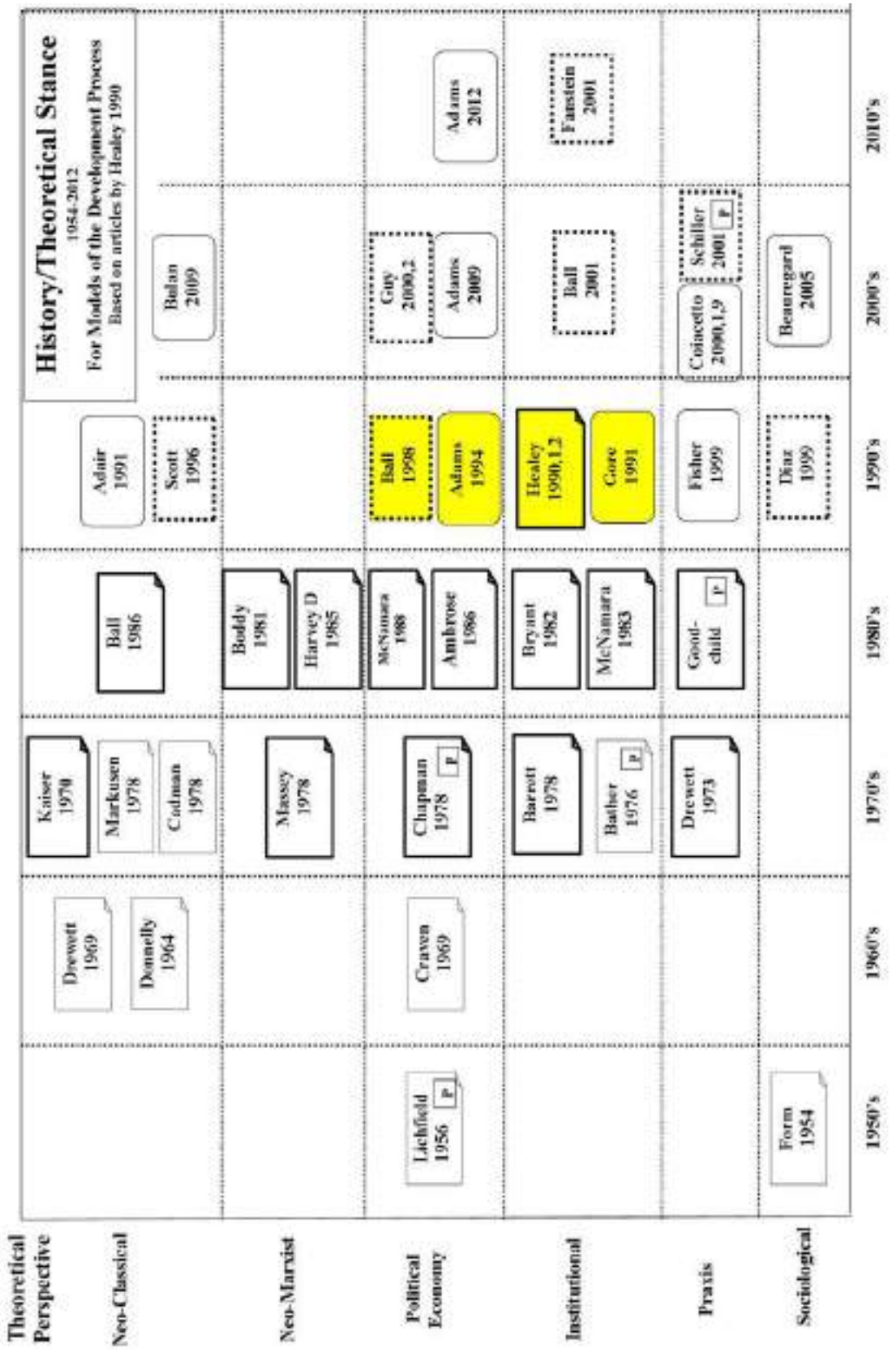
2001	Fainstein S	The City Builders Property Development in New York and London 1980-2000 edn 2, edn 1:1994		UK, USA
2001	Colaccito EJ	Diversity in real estate developer behaviour	Urban Policy and Research, 19:1,43-59	Australia
2001	Krupf K.S	Conceptions of change in the built environment	Urban Morphology, 2001, 5 (1), 29-42	UK

Year	Author/s	Title	Publication	Country
2001	Schiller R	The Dynamics of Property Location- Value and the factors which drive the location of shops, offices and other land uses	Spon London	UK
2002	Guy S Henneberry J	Development & Developers	Blackwell Publishing Oxford	UK
2002	Ball M	Cultural Explanation of Regional Property Markets: A Critique	Urban Studies, Vol 39, No 8, 1453-1469, 2002	UK
2002	Guy S Henneberry J Rowley S	Development Cultures & Urban Regeneration	Urban Studies ; Vol 39, No 7, 1181-1196, 2002	UK
2002	Healey P	On Creating the 'City' as a Collective Resource	Urban Studies 2002, 39:1777	Europe and UK
2005	Blundel GF Fairchild S Goodchild RN	Managing Portfolio Risk in Real Estate	Journal of Property Research, 22:2-3,115-136	UK
2005	Beauregard RA	The Textures of Property Markets: Downtown Housing and Office Conversions in New York City	Urban Studies, Vol 42, No 13, 2431-2445, Dec 2005,	USA New York
2006	Healey P	Relational complexity and the imaginative power of strategic spatial planning	European Planning Studies, 14:4, 525-546	UK
2007	Montgomery J	The New Wealth of Cities	Ashgate Publishing Hampshire	UK
2007	Massey D	Viewpoint: AESOP at twenty: Introduction	Town Planning Review, Vol 78, No 5, Sep 2007	UK
2009	Adams D Leishman C Moore C	Why not build faster? Explaining the speed at which British house-builders develop new homes for owner-occupation	TPR 80 (3) 2009	UK, Scotland
2009	Bulan L Mayer M Somerville CT	Irreversible investment, real options, and competition: Evidence from real estate development	Journal of Urban Economics 65 (2009) 237-251	USA New York, Waltham and Canada Vancouver
2009	Colaceito EJ	Industry Structure in Real Estate Development: Is City Building Competitive?	Urban Policy and Research,27:2, 117-135	Australia
2012	Adams D Croudace R Tiesdell S	Exploring the 'Notional Property Developer' as a Policy Construct	Urban Studies 1-20,2012	UK, Scotland

Literature Maps – Larger Size

(The charts from within the article are shown here in full size for the assistance of the reader).




History/Theoretical Stance
1954-2012
For Models of the Development Process
Based on articles by Healey 1990
Theoretical Perspective
Neo-Classical
Neo-Marxist
Political Economy
Institutional
Praxis
Sociological
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Beauregard 2005
Adams 2012
Faustein 2001

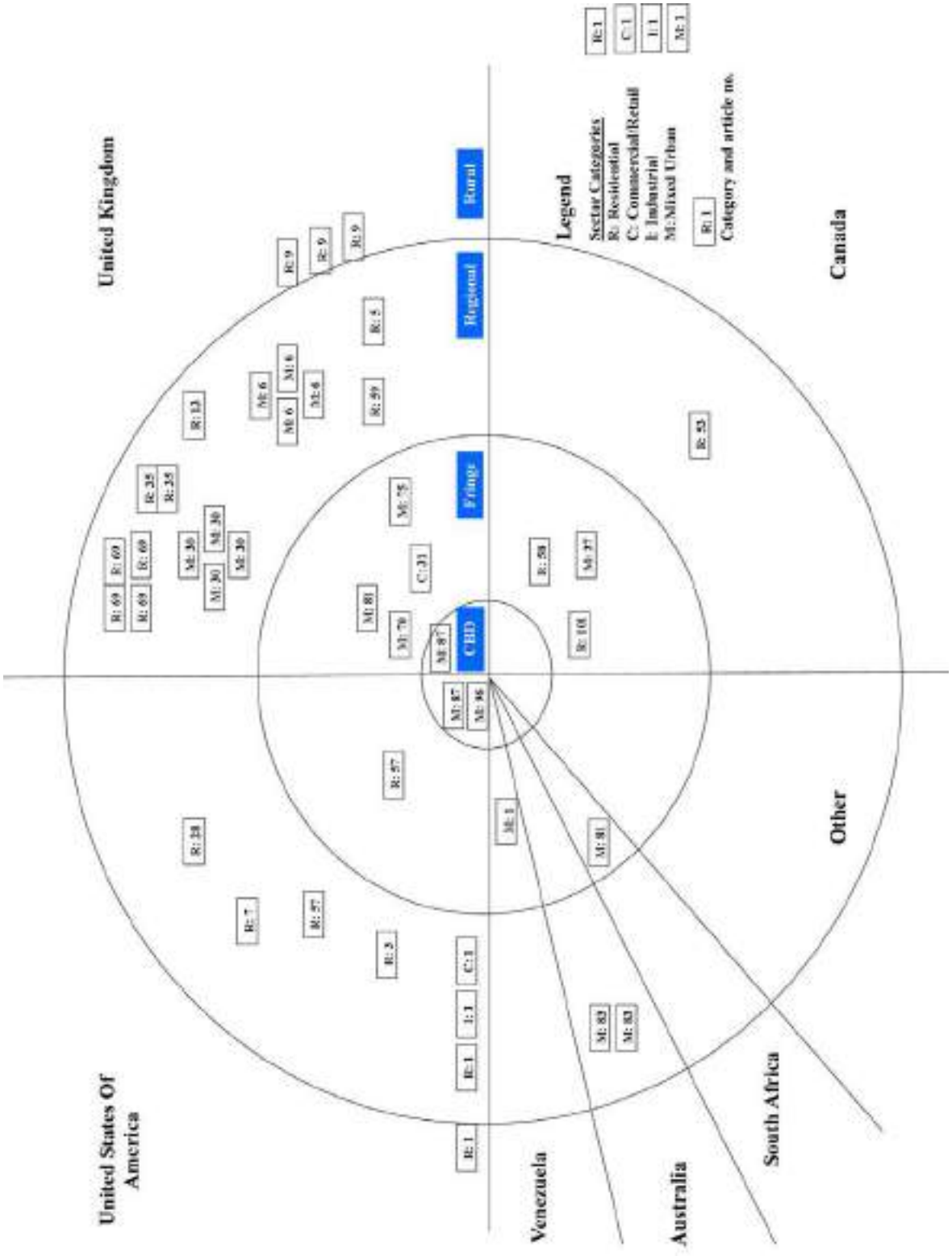

Figure 9 - Geography/Sector/Country Map
for Models of the Development Process 1954-2012

Smart cities in Japan and its application in developing countries

Noriko Kono[1], Aki Suwa[2], Sohail Ahmad[3]

Abstract

Smart cities, smartization and improved efficiency in managing utility like electricity, gas, water, waste, and transportation, are presently one of the most important keywords to city development. The concept is often thought as a panacea for the present global issues and inefficiencies, such as growing energy consumption, food wastes, rapid urbanization, industrial pollutions, endangered biodiversity, and traffic problems. Developed countries have discussed the concept profoundly these years in the context of green innovation, green economy, or green new deal.

Also, rapidly industrialized cities in developing countries are promoting smart cities. Nikkei BP (2011) estimates the smart cities makes the market potential of 52 trillion US$ by 2030, and most of the estimation came from developing industrial countries. Though the interests to smart cities are quite high, little literature has been published in the fields of urban planning and international development. This paper treats the smart cities as an important trend proceeding to the historical thresholds of urban planning such as streetcar city, dispersed city, linear city, and smart growth city.

The traits of smart cities has summarized in four representative aspects: energy management, waste management, water management, and transportation. Energy management includes: electricity smart grid with distributed power sources, and diverse energy sources including solar, wind, and hydrogen. Waste management includes: 3R and material cycle economies. Transportation includes: EVs and Hybrid cars, Non-motorized transport (NMT), and car sharing system. Finally Water includes: renewable energy sources for water facilities and looping water use. The authors compared these trends with Indian slum situation and discussed the application to these sites.

Through the analysis of a smart city in Japan, many new attempts are being pursued. However, some challenges exist due to well-established existing infrastructure and solid urban systems of Japanese cities. On the other hand, the great potential was found in developing country cities. Specifically in energy sector, through microgrids

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[3] United Nations University Institute of Advanced Studies (UNU-IAS)6F International Organizations Center Pacifico-Yokohama 1-1-1 Minato Mirai, Nishi-ku Yokohama 220-8502 Japan Email: suwa@ias.unu.edu

financed by microcredit system, slum areas could leapfrog to the most advanced smart cities. Introducing smartization of cities, slums or the poorest areas could be one good example where smart cities shifts could fit into.

1. Introduction

Smart cities, or smatization of cities, would be the most important buzzword for development field. The concept is thought as a panacea for the present global issues and inefficiencies, such as growing energy consumption, food wastes, rapid urbanization, industrial pollutions, endangered biodiversity, and traffic problems. Developed countries have discussed the concepts profoundly for these years in the context of green innovation, green economy, or green new deal. Also, rapidly industrialized cities in developing countries are promoting this concept.

Japan, where most of the related technologies patents exist, has been working hard to promote the environmental technologies, such as solar batteries and electric vehicles. These shares are now closely to 70 % and it is important for Japan to keep the edge as one of the most advanced countries for the model of smart cities. However, difficulties lie in many aspects, and most of the barriers are reputational and institutional, not technological (METI 2012).

This paper first examines policies of smart cities in Japan and summarized their typical traits relevant to representative fields. The paper also examines these policies in terms of regulations, standards, plan and administrative directions, economic measures, and voluntary actions and environmental ethics. Next the paper discusses the possible application to developing countries, especially in slums in India. Then it discusses how to lay microgrids in slum areas in both technological and financial aspects. Finally it presents a model for application of SC to developing countries.

2. Definition of SC and Case of Japan

2.1 The recent definitions of SC

According to Fukuchi (2009), a member of Nomura Research Institute-NRI, which has been involved in smart city research in the early stage, the definition of Smart City has not been established necessarily. In the literature of NRI define the smart city as "*A city which possesses an integrated infrastructure that supports urban life by the power of ICT, at the same time it contributes to sustainable growth as well as decreases the demerit of urbanization.*" However, this concept has not been established on where and how much the smarter a place should be.

According to Aida and Morozumi (2011), who are forerunners of smart grid, whereas the micro-power network for the entire power grid, and smart grid power

network and is including the entire side and demand-side network power, with respect to Smart City, presented a diagram like Figure 1.

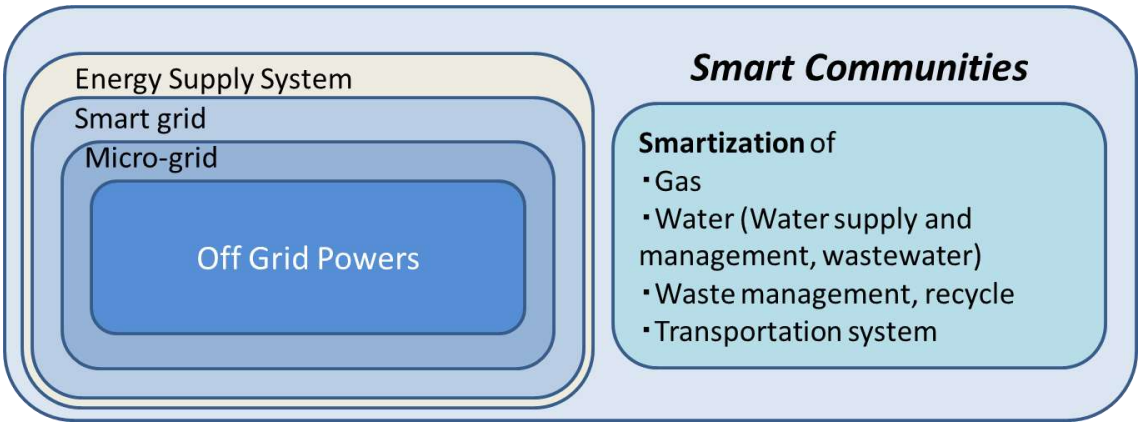

Figure 1: Smart Grid and Smart Communities
Source: Aida and Morozumi. 2010. Smart Grid Textbook. Tokyo: InPress Japan.

Although SC has advanced without standardization until now, in 2011, as for the smart city infrastructure evaluation-index international standardization domestic preparation committee and standards authorization innovation technical research association (IS-INOTEK) which are organized in the Japanese company and economic organization of 20, installation of the subcommittee within ISO was approved aiming at standardization. On the other hand, France and the World Bank agreed to put the SC criteria for selection in Global City Indicator as a standard of ISO at the period (Mochizuki, 2012).

Japan aims "measurement standard," for related products, while France and the World Bank aimed at "operating standards," which plans the state of the residents and administration in SC. In Japan, SC definition focuses on technical ones and in the West, the focus rests on soft elements, such as management and business mode.

2.2 Ecological implication of SC

The World Bank Urban group summarized a book called “Eco2 Cities: Ecological Cities as Economic Cities," meaning that a good city is both economically and environmentally (ecologically) feasible city. By this literature, in future cities, while it is important to connect linking artificial city infrastructure by using the advanced technology such as smart grids, it is also important to link new infrastructure to existing ecosystem.

Ecological implications such as looping and cascading the materials could strengthen the smart city ideas. For example, cascading of the water use: using graywater as other uses, should be appeared in modern water use. Also, looping waste

management by using the heat, wastewater, ashes, and so on could be one other option (Suzuki et al., 2010).

Chinese smart cities always refer to the ecological parts when referring the smart cities. Thus, this paper also includes these ecological concerns of the smart cities, referring to the efficiency in ecosystem.

SC definition can be a city which has efficient system in energy, waste, water and transportation by smartization and technological innovation and which become low carbon as well as ecologically feasible.

2.3 The four categories of SC

Aida and Morozumi (2010) has identified five areas; electricity, gas, water, waste management, and transportation systems. Moreover, the four pilot study areas of Japan has the projects of smartization of electricity, gas, transportation infrastructures and some cities broaden the areas to water and waste. In this paper, the definition looks at several important infrastructure sectors of SC.

Though the definition of the term smart cities, or smart communities, fluctuates presently, it is possible to gather some requisites. Through literature reviews, authors have summarized the typical traits of smart cities in four sectors.

Table 1. Traits of Smart Cities

	Energy	*Waste*	*Transportation*	*Water*
Special Traits	・Smart grid system with distributed power sources ・Ene-farm (self powerplant from hydrogen) ・Hydrogen reuse system ・Co generation	・3R (reuse reduce recycle) policies ・Co generation at the source ・Bio energy made from solid waste	・Using EVs and Hybrid cars for leveling off the peaks ・Car sharing or other volunteer car shares programs …make private property as public property	・Renewable energy sources for water facilities (solar power, wind power etc) ・Looping water use would be another solution (use of graywater)

3. Yokohama Case

3.1 Minato Mirai 21, Dawn of City-Smartization

Yokohama is one of the first Westernized cities in Japan and it had developed as a leading industrial city since the opening of Yokohama Port in 1858. During 1980s, it finished environmental enhancement in the CBD by industrial relocation to the suburbs and servicized its industry. Especially, Minato Mirai 21 is a project planned and built for the long period (approximately 50 years), as it is started as one of the "6

big declarations of Yokohama" in 1965. The establishment of the "utility tunnels" in the district can be called as the dawn of city smartization. Electric wires and telephone wires (optical fibers), waterworks, sewage, and garbage collection tubes are laid underground together, and community-central-heating-and-air-conditioning institution is managed by utility tunnel, which is energy-saving.

The electric power cable in utility tunnels is transformed by substation facilities within a power line from two plants in the CBD in Yokohama 500,000V, 154,000V, 66,000V, 6,600V, and 100-200V, and the electricity of voltage corresponding to each scale is sent to consumers. The space for substations was provided and what is called "smart power transmission" has been started since the start of the 1990s (Kishida and Uduki, 2008). Yokohama was the first runner of SC when the word did not exist yet in the world.

3.2 Global Warming Mitigation Policies in the Context of SC in Yokohama

By the "green innovation" determined by the Cabinet in 2009, "New growth industry strategy: towards bright Japan," the Ministry of Economy, Trade and Industry selected four “next-generation energy and a social system demonstration area” in 2010 and has tackled the promotion of smart-izing of the cities in Japan.

Yokohama was chosen, as one of the domestic four pilot study areas, along with Kitakyushu, Keihanna university town, and Toyota, and many ingenious industries of each city has followed. SC of Yokohama has the feature of the point which is a big city, the advantage of various industrial accumulation is employed efficiently and traffic infrastructure, and covered smart-ized item of each building comprehensively (Sasaki, 2012).

In this paper, developed countries' infrastructure maintenance as global warming policy of Yokohama was examined in the context of SC. In order to take a closer look, it was divided into four elements of energy, waste, traffic, and water and it analyzed by dividing into three policy fields: 1. Regulations, Standards, Plan and Administrative Directions Regulations, 2. Economical means, 3. Voluntary actions and Environmental ethics.
Table 2 describes the regulations, standards, plan and administrative directions. Energy sector is represented by the measure of smart grid and Yokohama Smart City Project (YSCP) Plan made in 2009 is in response to specification of the next-generation energy and the social system demonstration enterprise of the Ministry of Economy, Trade and Industry centering on three areas (Minato Mirai21 area, the Kohoku new town area, and the Kanazawa area) of the city.

There was The Great East Japan Earthquake in 2011, and the concerns of the stable supply of energy in and outside the country is very high, and the measure attracts attention from different parts of the world. The duty of the city in YSCP is to specifically distribute 6 billion yen of "the next-generation energy fund" from the

Ministry of Economy, Trade and Industry to participating companies (Toshiba, Meiden-sha, Nissan, etc.). Yokohama is performing control of a board of governors or a joint session in the YSCP promotion conference. The city plays a facilitator's role in this plan.

Waste category is characterized by citizens' cooperation at G30 plan, which is a general waste disposal master plan for 2003 - 2010. This plan is aimed at reducing the waste to be incinerated. At the "Yokohama 3RMu(dream) plan" from 2011, reducing the total amounts of waste including resources are mentioned.

Transport sector's emphasis is put on the modal shift. The goal setting was made in 1997 of 15-minute from every station plan, and station power, which is to make more amenity in the vicinity of every stations. This aim is completed 88.4% in 2006.

In the scope of YSCP, Yokohama smart mobility defines the various projects including promotion of EV, and promotion of paratransit. Although the means of transportation not using motor power [Non-motorized transport=NMT] promotion is encouraged, goal setting of the modal split for NMT is not performed. NMT promotion is on-going as the social experiment of community cycles. The Yokohama Bay Bike enterprise is undertaken by funding of NTT DOCOMO for three years during 2011 to 2014.

Water sector also has shown the policy of reserving the remote reservoir for years. The Waterworks Bureau submits the environmental accounting report every year. The guideline of environmental accounting is followed to the Ministry of Environment Plan and they include environmental preservation cost, the environmental preservation effect, and economic effects. The trial calculation is made by yen terms and t-CO2.

Table 2: Regulations, standards, plan and administrative directions

	Energy	*Waste*	*Transportation*	*Water*
Regulations, standards, plan and administrative directions	Smart grid (YSCP plan)	Yokohama G30 plan 2003-2010 3R dream plan 2011-	Promotion of Non-Motorized Transport ,smart mobility plan, 15-minute anywhere plan, and Station Power	Reservation of remote reservoir, Calculation of cost benefit environmental accounting

Table 3 explains the economic measures of Yokohama. Energy includes the Yokohama Green Power Model Project promoted by the city's own funding. YGP model project collected monitor households from the YSCP pilot study area and the

companies introduced HEMS and PV to these households. The charge systems in household waste are not introduced in Yokohama. However, the city charges the bulky wastes for a long time.

Transportation category introduces 100 yen buses on weekends and holidays. The buses run along the tourists' stops and they are all municipal buses. The discount system is hard among each line as seven private companies exist in the city, but the statistics say that 100 yen buses promote the transit usage.

Water system uses the step-up charge system based on the idea that daily use water should be used in low rate. As the system charge more to the people who use more, it is said to get demand management.

Table 3: Economic Measures

	Energy	*Waste*	*Transportation*	*Water*
Economic measures	Yokohama Green Power Model Encouraging the local industry to enter YPORT	No charge on plastic bags Bulky waste	100 yen bus, Support for community cycle project	Charge system Yokohama Water Company

Table 4 illustrates the voluntary actions and environmental ethics. Energy sector elaborates on the lectures on introduction on HEMS. Action Plan for G30 articulates on citizen partnership in recycling and separating, and the city officials are very satisfied with the results. Transportation sector has the visibility in the voluntary community cycle project Hama-chari, which was run by the NPO. There is an NPO that promotes the transit usage as well. Water sector include various citizen participated events to enlighten the importance of saving water, which was participated by many interested citizens.

Table 4: Voluntary actions and Environmental ethics

	Energy	*Waste*	*Transportation*	*Water*
Voluntary actions and environmental ethics	Lecture on introduction of HEMS	Action Plan for G30	Hama-Chari	Vaporization heat Practical use of a hydrogen hybrid truck

3.3 Summary and Challenges in Yokohama

Previously it explains that in Yokohama, there are the balanced policies in four sectors (energy, waste, transportation, and water) in three policy fields (1. regulations, standards, plan and administrative directions, 2. economic measures, and 3. voluntary actions and Environmental ethics). The city has many innovative plans

and regulations as well as well organized environmental education system and environment-conscious citizens. Given the fact that Japan is one of the most industrialized nations in the world, Yokohama is among the best smartized cities in the present world.

On the other hand, difficulties are found in this city. These are: the measures against surplus electric power at the time of photovoltaics spread, the storage battery / EV practical use by the side of demand, solar cell power generation control by AMI, demand regulation capability grasp by demand response, construction of the micro grid which held down cost, and difficulty to the large cost reduction by electric power supply increase in efficiency. These problems are raised because the present system of Yokohama or cities in Japan is too systematized or institutionalized to adapt a new system.

4. Conditions of India

4.1 Slums in India

According to 2011 census, India's urban population was 377 million, about 32 percent of total population of India (Census-of-India, 2011). About one-fourth of the urban population (≈93 million) live in 49,000 slums spread across the country (NBO 2010). Slums are the manifestation of housing poverty. The proliferation of slums and severe housing shortages (over 24 millions) give a panoramic view of the housing poverty (NBO, 2007). Various government reports show growth of slum population, housing shortages and urban poverty (head count) across the states are severe and pathetic conditions.

Table 5 presents changes in slum characteristics during 2002 and 2009 based on nationally-representative survey. In the span of six years (2002 to 2009), housing conditions have not improved radically; nevertheless, incremental changes have been noticed in almost all housing indicators, for instance, proportion of households living with more than three persons per living room decreased from 32 to 28 %. Though there is a slightly bright side in the change, but there still exist a number of challenges to overcome as international living standards.

Table 5: Changes in housing conditions of slum households, 2002 – 2009
Indicators

Indicators	2002	2008-09
Consumption expenditure (INR)	2929.97	3924.3
Living space per member (m2)	5.84	6.92
Households with more than three persons per living room (%)	52.72	42.92
Structurally bad dwelling (%)	24.28	23.54
Separate kitchen (%)	30.08	39.04
Tap as a drinking water (%)	78.72	77.23

Own toilet (%)	21.45	31.22
Motorable access road (%)	44.26	45.85
Sample size (≈)	6,130	8,273
(% of total)	14.64	14.68

Source: NSSO 2004; NSSO 2010

Note: A slum is a settlement with a collection of poorly built tenements, mostly at temporary nature, crowded with inadequate sanitary and water facilities in unhygienic conditions. Such an area was considered as a "slum" if at least 20 households lived in that area (NSSO 2010).

4.2 The four elements of infrastructure

To analyze slum household characteristics, a few indicators were selected from energy, water, waste and transport sectors. Although indicators are not comprehensive, it can give a fair idea about position of slum households in Indian context. Moreover, this is only a source at household level in urban India. The next section describes the each category in detail.

Table 6 presents three types of slums notified slum, non-notified slum and squatter. A comparison between non-slum and slum shows that slum households are relatively in poor condition. The table identifies the conditions of electricity, water service, and waste management. For example, though there are provisions of 95.5 % electricity of non-slum households, only 91.5 % slum households have electricity. Over 31 % of slum households have only temporary wiring.

74 % of non-slum households use tap/bottle water as a major source of drinking water and corresponding value for slum households is 77.3%.
Notably, 43.5% of slum households have access of drinking water within dwelling unit or premises, while 74.7% in non-slums. In same pattern, almost 29 % of slum households do not have garbage collection arrangement and while non-slum households 24.4%.

Table 6 Typologies of slums with characteristics, 2009

	notified slum (1)	non-notified slum (2)	squatter (3)	all-slum (4=1+2+3)	non-slum (5)
household (#)	3,957	3,553	763	8,273	48,085
Household have electricity (%)	94.19	89.36	87.42	91.49	95.51
If yes dwelling with conduit wiring (%)	33.3	22.17	16.94	27.19	42.41
If yes dwelling with fixed to the wall (%)	41.75	38.46	57.87	41.79	44.87
If yes dwelling with temporary wiring (%)	24.95	39.37	25.19	31.07	12.77

Electricity hours (median)*				18	21
Electricity Payment (median) (INR/month)*				150	200
Payment to SEB (%)*				84.6	75.84
Tap/bottle water as a major source of drinking water(dw)	83.04	74.19	61.21	77.27	73.93
Water within dwelling unit or premises (%)	49.47	34.64	54.07	43.52	74.74
Garbage collected by:					
Local governments (%)	62.84	47.26	42.6	54.28	56.92
Residents or others (%)	15.67	17.62	20.45	16.95	18.7
No arrangement (%)	21.49	35.13	36.96	28.77	24.37

Notes: Sources: NSSO (2010); * these figures is calculated from Desai, S. and R. Vanneman (2009); SEB: State Electricity Boards

Figure 2 shows the maximum distance to the place of work normally travelled by each household. Despite poor living conditions and low income of the slum households, most slum households travel relatively more than the non-slum households. Figure 2 also reveals that high proportion of non-slum households are in less than 1km travel, while the number of slum households that travel more than 1km are about 7 point bigger than non-slums. It can conclude that slum households are located near workplace. It also shows a great burden on mobility on slum households, given their low income and accessibility of job.

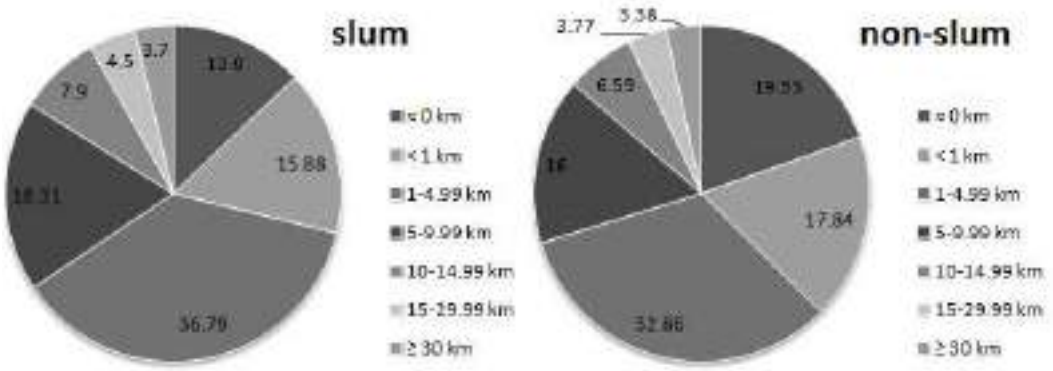

Figure 2: Maximum distance to the place of work normally travelled by any earner of the household
Source: NSSO 2010

Table 7 shows the firewood dominant as a fuel for cooking and kerosene for lighting in slum households from "Indian Human development Survey" a multipurpose household survey conducted by the University of Maryland and National Council of Applied Research. This survey is also based on nationally-representative survey. In non-slum, dominant form of fuel for cooking was LPG and Kerosene for lighting (Desai and Vanneman, 2009). According to the survey, 6.9 % of slum households

and 8 % non-slum households use their dwelling as residential cum commercial. It should be also noted that 37.2 % slum dwellings are bad ventilation while only 14.6 % of non-slum households are badly ventilated.

Table7: Fuel and energy use by slum and non-slum, 2005

Variables	Slum		non-slum	
	mainly cooking	mainly lighting	mainly cooking	mainly lighting
Number (#)	725		13,818	
Firewood (%)	45.69	0.41	21.38	0.14
Dung (%)	24.68	0	9.56	0.09
Crop residue (%)	0.55	0	1.3	0.04
Coal/charcoal (%)	4.83	0	5.66	0
Kerosene (%)	22.07	27.03	15.25	23.03
LPG (%)	33.38	0	54.11	0.53

Source: Desai, S. and R. Vanneman (2009)

Table 8 summarized the Indian slum conditions in India and summarized the four sectors in infrastructure: energy, waste transportation, and water. The slums can have the potential that they do not have proper system of anything. In other words, it could have some possibility, if guided properly.

Table 8: Slums condition in four sectors

	Energy	Waste	Transportation	Water

Special Traits of Slums	- There is a serious issue of energy security, limited hours of electricity supply - Households are connected with centralized grid system -LPG are used as cooking energy, however, significant proportion of households also use firewood and other traditional solid fuels for cooking energy.	- No proper system of waste management - Hardly any effort by local government for waste management. - Significant proportion of slum household livelihood depends upon the recycling of waste (an informal way). - Liquid waste (storm, drain and sewerage) management are in pathetic condition, needed great attention for better physical condition.	-Most of the slum dwellers are pedestrians, however, low percentage of them also use bicycle and public transportation for mobility. - They also use hawker cart for their informal economy.	- No regular water supply (w/s). - Community based w/s system available only for few hours in a day (say 2-3 hours daily). - They also use hand-pump for water, however, there is no satisfaction over the quality of water.

5. Application to India

5.1 Energy use in the poorest urban conditions

Previous section has shown that Kerosene and biomass are the main energy sources for cooking purpose in majority of households in Indian slums. This section illustrates the energy use in slums or in the poorest urban conditions. Kerosene is a standard fuel for cooking, but biomass is another source especially when poors do not have access to Kerosene. Kerosene is supplied with subsidized price, for ration card holders and often difficulty to have a ration card especially to new migrants. Biomass, on the other hand, do not need such proof, but burning of biomass often causes severe air quality problems, used both indoor and even outdoor when smoke generated in one time for cooking.

A closer look will reveal more characteristics on the fuel composition for households. Table 9 demonstrates different income level seems to influence on the choice of energy carriers. It shows biofuel is commonly used as a cooking fuel in low income level households than those with higher income. Electricity usage for cooking is highly limited both for low and high income groups. Electricity is

widespread for high income groups for lighting purpose, with less usage by lower income households (Reddy and Srinivas, 2009). Also Table 7 in page 11 shows fuel composition comparison between slum and non-slum for mainly cooking purpose. Firewood and biomass (e.g. dung) are more commonly used in slum area than non-slum area. LPG, on the other hand, is more used in non-slum area than in slum.

Table 9: Energy carrier mix for various end users (2004-2005)

End use	Energy carrier	% Of households using various energy carriers		
		Low income	Middle income	High income
Cooking	Biofuels	81.3	61.8	31.8
	Kerosene	8.0	5.2	4.5
	LPG	8.5	31.3	61.2
	Electricity/others	2.2	1.7	2.6
Lighting	Kerosene	29.1	15.2	6.1
	Electricity	69.5	83.1	93.6
	Others (including no lighting households)	1.4	1.7	0.3
Total households (million)		68.3	107.6	29.5

Source: International Institute of Population Studies 2003, adopted by Reddy and Srinivas, 2009

As also demonstrated by Table 10 on typologies of slums with characteristics, it is rather surprising that the slum households have relatively high electricity accessibility, though most of the slums in Delhi are unelectified. Even when there is a certain degree of accessibility to electricity, Transmission and Distribution (T&D) losses are generally large. For the OECD countries, the T&D losses are normally less than 10%, while the rate is more than 30% as average in India (Joseph, 2010). In India, one of the main reasons for the loss is attributed to power theft (Dhingra, et al, 2008). But some of the residents of slums acquire electricity through hooking or through paying contractors, thus the high access rate to electricity is sometimes characterized with illegal wiring.

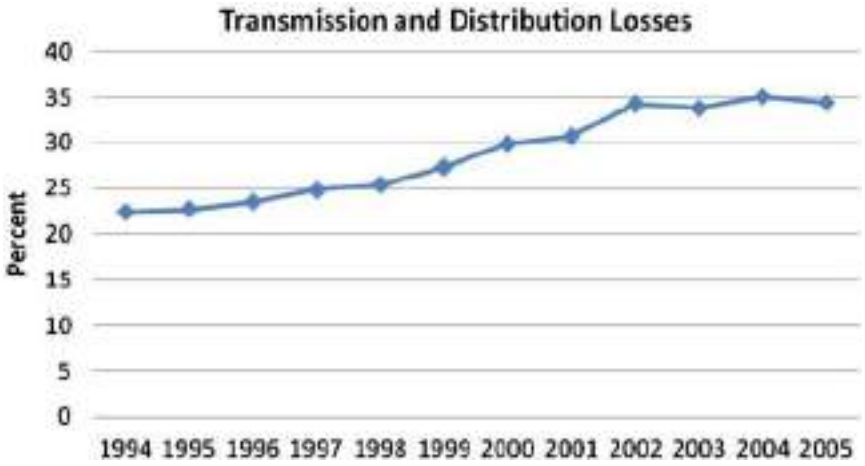

Figure 3: Average Transmission and Distribution Losses.
Source: All India Electricity Statistics, General Review. Central Electricity Authority: Delhi, 1994–2006, adopted from Joseph, 2010

5.2 Electricity in the poorest areas

As electricity, at the point of its use, do not emit harmful substance, it has potential to provide environmental and health benefits to the urban residents. Electricity, however, is not officially available in the most of the Indian slums as seen. When available, no matter if legal or illegal, electricity is generally used for lighting (Reddy and Srinivas, 2009). Using electricity for other purposes than lighting may be a too expensive option, since cooking and heating normally require higher caloric values, potentially leading to higher prices to be paid if electricity is used for those purposes. However, if electricity tariff is set as low as the slum dwellers may be able to pay, they may be encouraged to use electricity for multiple ends.

Currently, necessary political commitment, business interest and technological infrastructure are all absent to legally provide electricity to slum. These setbacks mean that there is a need to formulate a strategy to make the utilities and others to invest into the areas where normally neglected from commercial operation. It is also important to create a framework where these investments can be collected back in a sufficiently short period.

One way of doing this may be to focus on microgrid. Microgrid is generally referred as an aggregation of electrical generation, storage and loads. The generators in the microgrid may be micro turbines, fuel cells, reciprocating engines, or any of a number of alternate power sources. A microgrid can be a completely self-sufficient network. A device such as static switch can disconnects the grid from the main grid, so that it can operate in isolation. Microgrid demonstrates its primal features as enabling stable operation in the time of faults and other network disturbances. When the microgrid is separated from the main grid, microgenerators are supposed to sustain sufficient power quality within the grid. It comprises low voltage distribution

systems with integration of diverse energy sources, such as photovoltaic, wind, biomass, biofuel and fuel cell together with distributed storage such as flywheels, advanced power electronic conversion and control capabilities (Agrawal and Mittal, 2011). Thus renewables, such as solar and biomass, can be the energy sources for microgrids electricity, and environmental benefits are larger if the microgrid electricity is sourced from renewables.

Also, microgrid can be operated with smart grid gadgets. Once connected to smart meters to a central control system, households can be provided with a real-time view of the amount of energy consumption. More importantly, it creates more advantage to the grid owners to have improved energy management and control over the energy production/consumption. The smart meters are particularly associated with better charging mechanisms as they are supposed to identify non-technical losses on T&D on the grids, thus it has a potential to work against power theft (Depuru, et al, 2011).

While the concept of microgrid has been developed in case of emergency and power interruption in the main grid, there is a growing interest in applying the system as an effective solution of providing electricity to the areas that have been long unelectrified. Currently focuses are much more on its application in rural areas, where the distance from urban areas prohibits connection to main grids. One of the social entrepreneurs, Mera Gao Power (MGP), for example, started to provide extremely low cost lighting and mobile phone charging services to the households in Uttar Pradesh, through building and operating village-wide photovoltaic microgrids. Households will be given two LED lights and a mobile-charging point with a cost of 25 rupees (US$0,46) per week, and MGP is expecting that their investment in each microgrid collected back in around 18 months (de osta, 2012).

Funding agencies, such as US AID is also strongly focusing on microgrid provision in rural areas of developing countries. (US AID and microgrid in India).

5.3 Financing the microgrids

The microgrid has also a large potential in slums to connect the residents to electricity. As stated, the microgrid is an islanding electric infrastructure requiring relatively inexpensive investment than the main grid. Possibly combined with smart grid devices, the microgrid has a better chance to deliver electricity in specific areas in the urban areas of developing countries, as well as giving the utilities and investors the chances to control over technical and non-technical losses on T&D.

There is surely a problem of financing the microgrid in slum areas. Investing into these difficult areas may require, at least high social motivation, but also a skillful strategy to ensure return on investment. Collecting funds back from slum dwellers is a particularly difficult task for microgrid investors, as slum dwellers' willingness to pay could be a critical barrier. In rural areas, dwellers usually have higher sense of residentialship in their area, no matter how poor or not. In slums, on the other hand,

residents see their dwelling as temporally, particularly in non-notified slums and squatter settments thus it is highly difficult to expect them to invest into upfront cost for the lasting facilities. The legal status of the slum dwellers has been recognized as one of the major problems, and allowing them secure tenure status, regardless of permanent or temporally, is recommended to secure their accessibility to cleaner energy. In addition to giving them tenure status, it is possible to reduce the initial costs burden through installment payment. The suppliers have to reach out to the poor customers, breeding trust and integrate them as part of business portfolio and encourage them to be willing for legal connections (Dhingra, et al, 2008).

It is quite difficult to expect the existing utilities to take up the microgrid business. It has been well documented that Indian government adopted the Electricity Act 2003, which introduced significant changes to the electricity industrial structure. The background to the enactment of the act is a number of challenges that the Indian electricity industry were facing. In India, the electricity industry had been dominated by the State Electricity Boards (SEBs), vertically integrated monopolies, for decades. The SEBs are in a severe financial difficulty, to the extent they are lack of funds to even invest into maintenance of the currently available infrastructure (Bhattacharyya, 2005, Dubash and Rao, 2008; Joseph, 2010). Pouring money into the new microgrid in high risk areas would be out of their financial capability. New energy and electricity entities with viable financial capacity are required for investment into microgrid for the poors.

Microgrid shall find a better partner through social entrepreneurship. Social entrepreneurship is process whereby the creation of new business enterprise leads to social wealth enhancement so that both society and the entrepreneur benefit (NYU Stern, 2005). Social entrepreneurs usually apply practical, innovative and sustainable approaches to benefits society in general, with an emphasis on those who are marginalized and poor (Schwab Foundation, 2005). In general, majority of existing definitions suggest that opportunities for social change and benefits are explored through social entrepreneurship (Zahra, et al, 2009).

Social entrepreneurs are in a good position to provide social benefits through creating business models on the microgrids in slums. One of the social entrepreneurs' successes has been demonstrated as a case of Grameen Shakti, which provided solar powered facilities in Bangladesh with soft loans through installment. With the affordable price set, the installed number of Grameen Schakti's Solar Home System has risen from around 230 in 1997 towards more than 520,000 in 2010 (Asif and Barua, 2011). Its innovative business model and operational framework can be seen as a benchmark to be applied to other countries.

Foreign aids, majority of which are focusing on rural electrification, may also have to pay more attention to slum electrification. Urban air quality can be improved significantly, once microgrid is available to slums. There is an increasingly wider recognition that there is a strong linkage between global climate change (GCC) and local air pollution (LAP). Options to mitigate GCC may show strong co-benefits in

terms of less LAP and vice versa. Policies neglecting these co-benefits may be sub-optimal, as the co-benefit approach is to cope with the global and local emission control at the same time, where strategic design of policies is indispensable. Also, the international attention is moving more to integrate wider areas and measures to optimise the policy effects. Thus mitigating the slum air quality also needs to be placed in the context of urban co-benefits policy formulation (UNU-IAS, 2012). In addition, the microgrid will enhance accessibility and availability of electricity that would definitely ensure environmental sustainability in slums that is one of the key Millennium Development Goals (MDG).

An analysis demonstrated that mere top-down and technology focused approaches have limitations in making people willing to pay for electricity. Social elements, such as local norms, trust and sometimes sanctions, seem to work better for ensuring compliance (Winther, 2012). Nevertheless, the combination of technological solution, together with enhanced social contexts, would create an environment where cleaner energy may be accessed by the slum dwellers. The microgrid funded by social investors has a very large implication for slum/urban environmental benefits, through air quality improvement, and social benefits via energy and electricity provision to the poors. The role of the national government to play is ever more important, for the development of policy on the slum dwellers' accessibility to cleaner energy. The local government shall be equally imperative to encourage and cooperate with social groups and entrepreneurs to establish new business models for providing clean electricity, as also seen in Japan where the Yokohama city government' smart community initiative and its liaison with new business enterprises demonstrate.

6. Conclusions

6.1 Traits of Urban Development in Different Level of Nations

In this paper, the policy measures against global warming by Yokohama were considered from a viewpoint of SC, and each measure was analyzed in four categories and three fields. Here in conclusion, how to transfer SC to developing country cities is taken into consideration based on the experience of Yokohama in international development. Table 10 shows this image summarized by literature and interviews on each country-level situation: the poorest country cities, fairly-developed country cities, and advanced nation cities.

In this Table, it notes that there is a tendency for the cities of fairly-developed country to experience the peak of the Environmental Kuznets Curve (EKC) in their process of economic development. EKC was described on x-y coordinate, where x-axis is represented by the GDP per capita and the y-axis is shown as the environmental pollution level. It is said that it is shown with inversed U-curve, where the pollution increases as the GDP increase, peaks at the mid-income level, and decreases as the GDP approach to the highest point.

It can be said that technical innovations by efficiency are needed in the increase in efficiency using new technology, such as explosive increase in energy demand, excessive wastes and insufficient processing, increase in traffic and its involved externalities, and increase in water demand. Also the demanders' side needs environmental ethics to change their behaviors. It is important for developing countries to reach the SC situation like developed countries soon enough.

Table 10: Different Type of City Development in Different Economic Conditions

	Energy	*Waste*	*Transportation*	*Water*
Slums or the Poorest Economies	-There is a serious issue of energy security, limited hours of electricity supply - Households are connected with centralized grid system -LPG are used as cooking energy, however, most households also use firewood and other traditional solid fuels for cooking energy	- Hardly any effort by local government for waste management. - Significant proportion of slum households livelihood depend upon the recycling of waste (an informal way). -Poor liquid waste (storm, drain and sewerage) management	-Most of the slum dwellers are pedestrians, however, low percentage of them also use bicycle and public transportation for mobility. - they also use hawker cart for their informal economy.	- No regular water supply (w/s). - community based w/s system available only for few hours in a day (say 2-3 hours daily). - They also use handpump for water, however, there is great level of unsatisfaction over quality of water.
Mid-level courtiers	- In urban areas, it is begun to ensure a stable supply of electric power. -Improvement in the concern about pluralization of energy source. - Gap with farm villages.	- In urban areas, it is begun to carry out fixed recovery. - There is also a place where intravenous business is realized. - Gap with farm villages.	- Correspondence of the increase in the means of transportation with much GHG discharge by private cars. - Aggravation of traffic congestion or air pollution.	- In urban areas, stable supply of water. - uncertainty in sanitation. - Gap with farm villages.
Developed	・Smart grid system with distributed power sources ・Ene-farm (self powerplant from hydrogen) ・Hydrogen reuse system ・Co generation	・3R (reuse reduce recycle) policies ・Landfills are less GHG emitting than combustion	・Using EVs and Hybrid cars for leveling off the peaks ・Car sharing system or other volunteering car shares programs …make private property as public property	・Renewable energy sources for water facilities (solar power, wind power etc) ・Looping water use would be another solution (use of graywater)

6.2 Laying Smart Grid in International Settings

The power network of the present developed countries is at the zone A: concentrated type supply where the supplier (major electric power companies) has mainly participated in electric supply. The present U.S. policies are represented by the zone B: large-sized demanders (manufacturing industry) and restrictive suppliers' participation. Although there are small suppliers participation by solar and wind powers in Europe or Asia, zone C is still only advantageous to large-sized suppliers in terms of regulations and technologies.

Both zone B and the zone C are insufficient as new generation smart grid and to be distinctive as new deployment in Japan, not only the large suppliers, but the small suppliers, to be able to take full advantage of ICT technology and legal system (you can freely buy and sell electricity). The zone D should be aimed in order to be ahead of any other country (Kato, 2010).

Figure 4: The four type of Smart Grid Conditions
Source: Kato 2010

6.3 Planning Smart Cities in International Settings

In this paper, in relation to SC at large, a development model as shown in Table 6 is proposed using the model of the above smart grid model. In this model, x-axis: concentration vs distribution, and y-axis: demand person, and a supplier scrutinize the plane model (x-y coordinates) of separation vs one (one-way vs both directions). Concentration vs distribution, a service supplier, and a city resident are separation vs one. The model which applies and takes into consideration the quantity of each activity (z axis) on x-y coordinates was considered.

In the poorest country, an active mass is zero or that our country performs international cooperation on the occasion of the city development which goes to a fairly-developed country although it is very small, and thought that development in SC could be performed by what is called leapfrogging.

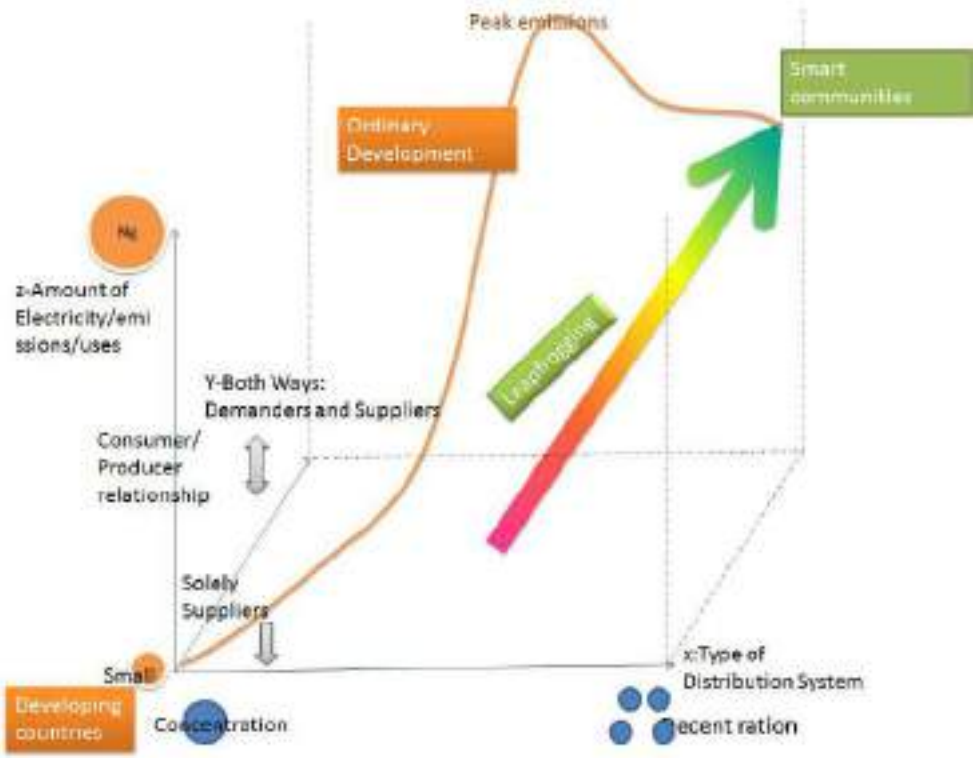

Figure 5. Model of Leapfrogging
Made from Kono, Suwa, Armad 2012

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SEEK RESILIENCE IN RECONSTRUCTION:

Towards a Resilient Post-disaster Urban Development in Sichuan, China

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Abstract
This article discusses the post-disaster urban resilience design framework in the case of post-disaster urban reconstruction in Sichuan after the Great Sichuan Earthquake (also known as the Wenchuan Earthquake) in May 2008 in China. The focus is on three main aspects of post-disaster urban reconstruction: socio-spatial coherence, temporal continuity, and multi-stakeholder integration and communication. Critical interpretation of the government-guided reconstruction reveals that reconstruction was limited to the generic production and implementation of top-down planning. From the perspective of urban resilience, and through an alternative design scenario developed in this research, this article highlights an urban resilience design framework based on post-disaster development in the Sichuan city of Dujiangyan. By identifying the deficiencies of the governmental reconstruction where in many aspects resilience has not been considered, and by proposing the alternative where resilience has been considered to develop a better living, this research seeks to integrate urban resilience as a key aspect in the Sichuan reconstruction and as essential for developing the post-disaster city towards a more coherent, sustainable, and integral urban future.

Keywords Dujiangyan, Great Sichuan Earthquake, post-disaster reconstruction, design for urban resilience

1 Introduction

"Cities always sought resilience to the hazards they have faced. In this sense, resilience has been core to urbanism" (Coaffee, Wood, and Rogers 2009, pp. 3). This article aims at examining the case of the Great Sichuan Earthquake reconstruction

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guided by the government from the perspective of urban resilience. It presents a contextual interpretation of the government-led reconstruction, in which urban resilience was not applied as an initial concept. The reconstruction has been used as an opportunity for territorial development, mostly focused on the extremely rapid economic recovery. In the city of Dujiangyan the generic top-down planning has caused socio-spatial incoherence; the prompt massive urbanization has created discontinuity in the city's development taking little account of its urban history. Cooperation among multiple stakeholders could have been much more extensively promoted, but its absence from government-led reconstruction efforts have created urban fragmentation and are thus problematic. This raises questions on how urban resilience should be developed in the reconstruction, and "*who* should recover *which* aspect of the city, for *whom*, in *what* intention and by *what* mechanism" (Vale and Campanella 2005, pp. 337).

Through a specific understanding of the concept of urban resilience in this relatively underdeveloped but rapidly urbanizing area in western China, the following discussion demonstrates that it is important to maintain the socio-spatial coherence of "urbanity"[i] in the existing urban area. It is also necessary to consider the history of the city over time. In addition, smooth communication among and integration of different stakeholders are fundamental to resilience building. By proposing a design framework based on the concept of urban resilience, this research presents an alternative integral design scenario for the post-disaster city of Dujiangyan, to integrate local resilience building into the government reconstruction process. With a perspective from urbanism, the scenario focuses on design proposals that contribute to the overall socio-spatial coherence and temporal continuity in the post-disaster urban development of the case study area. The design scenario also explores the potential of multi-stakeholder integration, which contributes to a resilient reconstruction.

2 Sichuan: Strategic Post-Disaster Reconstruction Guided By the Chinese Government

On 12 May 2008, the catastrophic Great Sichuan Earthquake struck some of the most inhabited regions in western China, mostly in Sichuan Province. With a magnitude of 8.0 on the Richter scale, this earthquake caused 69,226 deaths, 17,923 people were listed as missing, 374,643 were injured, around 7.79 million houses collapsed and 24.59 million were damaged, resulting in direct economic losses of RMB 845.1 million yuan (approximately USD 134.2 million)[ii] (UNCRD 2009, pp. 3). Due to the grievous losses and the severe impacts of the disaster, the region attracted a tremendous amount of national and international attention, resulting in a three-day national mourning period and unprecedented post-earthquake relief and reconstruction efforts[iii] led by the Chinese government. Different from any other urban

redevelopments in contemporary China, the post-disaster redevelopment of Sichuan has not only been a massive urban intervention to recover from the catastrophic impact of the earthquake on the Sichuan region and its local communities, but is also seen as a strategic opportunity for the territorial development of the area.

2.1 The Government Plan for Reconstruction

Within one month after the earthquake, a detailed ordinance of eighty bylaws in nine chapters, the *Post-Wenchuan Earthquake Restoration and Reconstruction Ordinance*, was approved for the Sichuan post-disaster reconstruction at the 11th executive meeting of the State Council of the People's Republic of China and was announced (State Council of the People's Republic of China 2008). With this Ordinance, the massive and rapid urban reconstruction process of Sichuan was officially initiated in a top-down fashion. The Ordinance stated the policies and schedules for the reconstruction in Sichuan. Policies for the reconstruction covers areas including spatial layout, urban housing, urban construction, rural construction, public services, infrastructure, industrial recovery, disaster prevention and reduction, ecological environments, mental care, policy measures, reconstruction funds, and plan implementation.

Each single bylaw in Chapter Four of the State Council Ordinance intends to guide a careful and strict planning scheme. Bylaw No. 31, for example, states that the establishment of post-earthquake recovery and reconstruction planning should integrate the relevant organizations and experts, and should sufficiently consult the post-disaster victims; significant decisions should be evaluated by corresponding experts in special discussions (State Council of the People's Republic of China 2008). Although the policy statements remained on an abstract level, they still clarified issues such as how the reconstruction planning should proceed, who should get involved at which stage of the process, and so on. In addition, this document proposed some innovative approaches to reconstruction planning, such as democratic decision making and a participatory process as suggested in Bylaw No. 31, as well as paying special attention to disaster risk areas, and suggestions to avoid future disaster risks as suggested in Bylaw No. 32. However, some of these suggestions remained as policy guidelines and was never reflected in detailed reconstruction planning and implementation.

This detailed official document was released by the central government within a short time after the disaster, which was incredibly efficient and fundamentally important for launching the reconstruction in a prompt manner. It also determined that the post-disaster reconstruction in Sichuan is an extremely organized and centralized planning action, principally led by the government.

2.2 Potential Mediators between Top-Down and Bottom-Up Initiatives

Although the post-disaster recovery of the Great Sichuan Earthquake is a government-led process, there have been various nongovernment organization (NGO) and nonprofit organization (NPO) involvements. In response to the practical demands, their assistance ranged from medical aid and finance management to technical expertise and knowledge provision, covering almost every area of disaster relief and recovery. The NGOs and NPOs have been constantly looking for possibilities and operating efficiently for constructive interventions. However, they have been excluded from the official reconstruction scheme, regardless of their areas of expertise. Our experience with some local NGOs during a planning workshop (Sichuan Workshop: Dujiangyan Dreams)[iv] suggested that this is a pervasive phenomenon in post-disaster Sichuan.

It is clear that NGO development in China was still at an early stage. But they could play an active role in integrating the top-down governance and bottom-up initiatives (Ge, Gu, and Deng 2010). Given the NGOs' power and efficiency in the relief phase and their huge and rapidly increasing number after the Great Sichuan Earthquake,[v] it is not difficult to see that NGOs could have been a powerful and efficient mediator among multiple stakeholders, to improve the communication between the government and the public. However, this potentially very important resource was only tapped into during the relief phase and largely ignored in post-disaster reconstruction.

2.3 Strategic Post-Disaster Territorial Development Programs

Post-disaster reconstruction should not stop at rebuilding a city to the state before it was destroyed by the disaster, but use the opportunity to improve the city and its infrastructure and urban environment for a better living in the future. Especially in the Sichuan Earthquake case, with massive financial and material support from governmental authorities, various institutions, and individuals across the country and from around the world, the reconstruction became a rare opportunity of territorial development for many places in Sichuan. Several strategic territorial development programs have been promoted by the governments of various levels to achieve the development goals.

2.3.1 Regional Development Plans

Since the Small Town Construction Program assigned by the State Council of the People's Republic of China in the early 1980s, by 2000 Sichuan had transformed 18,139 rural villages to small towns, pioneered a shift from rural to urban in the west of China, and developed a large number of small and medium enterprises in rural towns and villages. Sichuan was designated as a key region in China's West

Development Program under the National 10th Five-Year Plan in 1999. In the National 11th Five-Year Plan from 2005, Sichuan established its role as a primary region in the program of Building a New Socialist Countryside, which has placed a central focus on rural communities and harmonious societal development. These programs (Kuang and Jiang 2010) set the social, economic, and spatial development context of pre-disaster Sichuan.

Sichuan has been a very strategic region in the territorial development of China, even before the earthquake in 2008. Because of its strategic geographic location between the more urbanized regions in the east and the less urbanized regions in the west, Sichuan's development pushes the frontier of urban development from eastern China towards western China. Therefore, it has been significant to China's overall territorial tactics in the context of recent rapid urbanization. The opportunity of urbanizing through post-disaster reconstruction has great regional and local importance for areas severely affected by the earthquake. Other than achieving redevelopment in the damaged region, the reconstruction has also developed a visionary scenario for the region's long-term development. But the central planning approach continues to prevail—similar characteristics existed in urban development prior to the earthquake since the 1980s and the post-disaster reconstruction, particularly that the reconstruction applied the same top-down approach to its planning and plan implementation.

2.3.2 Post-Disaster Tourism

The Sichuan Earthquake, in spite of its immense damages and losses, has been recognized as a rare opportunity of development by the Chinese government. It represents a form of Chinese optimism in which Crisis equals Hazards plus Opportunity. The strategy of developing post-disaster tourism is an example of this view. It aims to integrate the rich ecological and cultural resources to boost regional tourism development for a prompt economic recovery.

In line with the principle of turning the post-disaster area into a land of opportunity, the national government announced a territorial strategy of post-disaster tourism, soon after the post-disaster relief had started. The first intention of this policy has been to quickly recover the economy and basic infrastructure in designated areas. The key of this strategy has been to attract mainly domestic tourists who are emotionally motivated to contribute to the post-earthquake recovery to visit the disaster area, and to understand the local situation through personal experiences. It also intends to bring large numbers of potential tourists to the region to help the local economy through tourism consumption. The strategy has both educational and economic values.

In order to implement this strategy, the national and municipal governments have

engaged many commercial developers for investment. The constructions started with recovering and upgrading the transport system and other urban infrastructure, then followed with tourism facilities, and finally opened up for commercial developments of related urban activities.

During the post-disaster recovery phase, which started approximately 3–18 months after the disaster, post-disaster tourism worked efficiently and successfully for the economic recovery. Through the implementation of this strategy, a major portion of the reconstructions on basic urban infrastructure and tourism facilities have been completed in a short time. The tourist center of Dujiangyan City, for example, was recovered in one year and was ready for post-disaster tourism activities in 2009. This approach aided the recovery process for post-disaster tourist cities.

2.3.3 One-on-One Assistance Reconstruction Programs

Another important strategy in Sichuan Earthquake post-disaster reconstruction is the one-on-one assistance program, which has played a critical role in the post-earthquake recovery. Different from previous post-disaster reconstructions, the central government of China appointed many municipalities of well-developed provinces and Direct-Controlled Municipalities (DCMs)[vi] from other parts of the country to assist the local municipalities in the disaster areas. Each of those external municipalities formed a one-on-one assistance partnership with one of the local disaster-affected cities and counties (Table 1) for the reconstruction. This has been the first, and so far the only, urban development strategy that cooperates on a territorial level on post-disaster urban reconstruction in China.

Table 1. One-on-one assistance partnerships for the Sichuan Earthquake post-disaster reconstruction

Disaster-Affected Cities and Counties	Supporting External Municipalities from
Sichuan Province	
An County	Liaoning
Beichuan County	Shandong
Chongzhou City	Chongqing†
Dujiangyan City	Shanghai†
Hanyuan City	Hubei
Heishui County	Jilin
Jiange County	Heilongjiang
Jiangyou City	Henan
Li County	Hunan
Mao County	Shanxi

Mianzhu City	Jiangsu
Pengzhou City	Fujian
Pingwu County	Hebei
Qingchuan County	Zhejiang
Shifang City	Beijing†
Songpan County	Anhui
Wenchuan County	Guangdong
Xiaojin County	Jiangxi
Gansu Province	
Seriously affected areas in Gansu	Shenzhen
Shaanxi Province	
Seriously affected areas in Shaanxi	Tianjin†

†: DCM.

Source: UNCRD 2009.

Under the one-on-one assistance program, competitions among the reconstruction teams composed of local and external partners were encouraged. The progress of all reconstruction teams has been presented on many public occasions. These teams were under great pressure to carry out a “best” paradigmatic reconstruction for the political achievement and social image of both the assisted and the assisting parties. For instance, the reconstruction team of disaster-affected Dujiangyan City and its one-on-one assisting partner Shanghai Municipality competed with that of Wenchuan County and municipalities from Guangdong Province. Competitions were through comparison of the reconstruction plans’ productivity, implementation efficiency, construction quality, and so on. Such competition forces the participating teams to come up with broad innovative ideas and to use the resources more efficiently. As a result, it has accelerated the reconstruction progress and led to an incredibly rapid recovery.

2.3.4 The Shanghai-Dujiangyan Urban Reconstruction Project

To evaluate the efficacy of such a top-down approach of territorial development in an area prone to frequent earthquakes, a review of this process from a risk management point of view is necessary. Also important is the efficiency of economic recovery and the consideration or lack of consideration for sustainable local livelihoods and cultural sustainability. The one-on-one assistance partnership has also introduced some external architectural characteristics to the local built environment through the reconstruction. Some of these issues can be examined through the Dujiangyan and Shanghai assistance partnership case.

Dujiangyan, a county-level city of Chengdu Municipality, is a very significant small

Chinese city of approximately 680,000 inhabitants (including 420,000 urban inhabitants), with a historic center based on the Dujiangyan Irrigation System that dates back to around 2250 years ago. The irrigation system, as the first man-made hydraulic irrigation system in human history, has been diverting water from the Min River to irrigate the West Sichuan Plain for thousands of years. The region has been one of the most irrigated and fertile territories in China throughout history. Therefore, the city of Dujiangyan is fundamentally important to the ecological landscape of the region and is tied to the region's agricultural profile because of its social and demographic characteristics, economic dynamics, and ecological settings. For its natural beauty and significance of hydraulic achievement, the Dujiangyan Irrigation System was designated a UNESCO World Heritage Site in 2000. It is a nationally renowned tourist site and has contributed increasingly to the tourism economy of the city as tourist activities have become more and more popular in China in recent decades. During the Sichuan Earthquake, many places in the historic center and within the first ring road of the city were seriously damaged; some districts within the second ring road suffered medium damages.

Appointed by the central government, Shanghai Municipality was responsible for assisting with the reconstruction of Dujiangyan during the first three years of the reconstruction period. The government authority that is responsible for executing the reconstruction launched an international competition on 12 July 2008, inviting ideas for Dujiangyan's reconstruction. Some of the proposals came up with an over-scaled waterfront development scenario (see example in Figure 1) to promote a new Dujiangyan as a regional center for international tourism and leisure. This kind of post-disaster reconstruction plan does not adequately take into account Dujiangyan's special and significant agricultural and ecological profile. Mega-structures of relief housing agglomerations (Figure 2) for tens of thousands of households now appear in some places in the relatively small city of Dujiangyan. Many housing projects were constructed neither at a moderate scale nor in the style of traditional Sichuan houses, but in the cosmopolitan and modern taste that is commonly seen and may well be appreciated in Shanghai (Figure 3).

Biçimlendirilmiş: Vurgulu Değil

Figure 1. Post-disaster reconstruction scenario for touristic waterfront of Dujiangyan, Sichuan Province
Source: Chengdu Planning and Management Bureau 2008.

Figure 2. Relief housing agglomerations beside transitional disaster shelters in Dujiangyan, Sichuan Province in 2009
Photograph by the author, 3 July 2009.

Figure 3. Post-disaster reconstruction housing project in Dujiangyan, Sichuan Province in 2010
Photograph by the author, 23 July 2010.

This kind of approach to reconstruction often leads to urban development at a scale and with a design that is out of context and lacks essential respect for the specific characteristics of a region. Such generic urban planning and design is context

ignorance and low sustainability based solely on a common understanding of urbanism. It would also increase the risk of disasters and vulnerability for those who inhabit in this urban space, as well as create massive chaos in the resettlement of disaster victims. Fundamental socio-spatial coherence is missing. In addition, the dominant top-down planning has always executed the reconstruction with a rapid schedule decided by higher-level government authority, in order to fulfill the emergent demand of recovery. This is associated to the competition for a “better” reconstruction that requires quick measurable results with an extreme emphasis on economic efficiency and construction productivity. With such a strong focus on efficiency and productivity in redevelopment urban reconstruction is often accelerated in ways that make it difficult to implement a holistic development approach that takes into account urban history and cultural traditions. Therefore, post-disaster planning has been inevitably limited to providing quantity of urban interventions, but has not provided quality of urban life. Furthermore, the lack of cooperation among stakeholders increases misunderstandings and conflicts. It does not help resilience building but makes communication between various stakeholders of post-disaster recovery problematic.

3 A Critical Concept: Urban Resilience

Resilience is a critical concept to guide urban reconstruction of a post-disaster territory and to reflect on the post-disaster urban condition of vulnerability. Examining the post-disaster urban reconstruction organized by the Chinese government in Sichuan from the perspective of resilience construction raises critical questions about the complex and paradoxical relationship between rapid urban reconstruction and urban resilience.

3.1 From Disaster to Resilience

Like disaster, resilience as a set of multidimensional concepts, tools, and characteristics, is site- and context-specific to various types of disasters in different places. To define resilience for urban projects, desirable characteristics for cities, and useful tools in a post-disaster practice, it is crucial to identify which type of resilience is key to the process of post-disaster redevelopment. It is important to specify urban resilience in a post-disaster territory.

Resilience was first defined by Holling as the time required for an ecosystem to return to an equilibrium or steady-state following a perturbation (Holling 1973; Gunderson 2000). This definition did not only view resilience in a systematic perspective, but it introduced resilience also with a temporal attribute. The push for resilience has been a response to existential or material vulnerability, insecurity, and change. Resilience can also be defined as a sociotechnical or even techno-centric

concept in many of its versions, from Timmerman's "capacity to adapt to stress from hazards and the ability to recover quickly from their impacts" (Timmerman 1981, pp. 5) to Pelling's "capacity to adjust to threats and mitigate or avoid harm" (Pelling 2003, pp. 5). Dovers and Handmer (1992), by reasoning on the resilience of social systems, distinguish the processes of adaptation of a society between proactive and reactive. A further distinction in conceptualizing socio-ecological system resilience is made between "specified" and "general" resilience. Specified resilience is the resilience "of what, to what" (Carpenter et al. 2001, pp. 765). General resilience is "the resilience of all aspects of a system to unspecified, including novel and unforeseen, disturbances" (Resilience Alliance 2009).

3.2 From General to Specific: Urban Resilience

While natural disasters and environmental hazards are far from being exclusively urban experiences, the recent surge in events affecting large-scale conurbations has led to a significant shift towards analyzing the adaptive capacity of governance institutions and communities and how this might be utilized in developing a new "urban resilience" (Bull-Kamanga et al. 2003; Pelling and High 2005). Social or community resilience is seen as the participation of citizens in the process of making the state of the society or community more resilient and in helping to manage threats and conditions of uncertainty, because shared and coordinated action can reduce collective vulnerability. At the urban level, the idea of critical infrastructure protection (CIP) or the protection of lifelines has become common. Godschalk argues that "resilient cities are constructed to be strong and flexible, rather than brittle and fragile. Their lifeline systems of roads, utilities and other support facilities are designed to continue functioning in the face of rising water, high winds, shaking ground, and terrorist attacks" (Godschalk 2003, pp. 137). Goldstein (2011) argues that the communication between different stakeholders is also fundamental to the social aspect of urban resilience towards disasters, conflicts, or urban security risks.

The contribution of these emergent interdisciplinary studies on resilience emphasizes emergency planning and disaster management as an integrative and holistic exercise, which is seen as a collective responsibility, and refines the concept of urban resilience as both reactive and proactive to disasters.

3.3 Urban Resilience in Sichuan Reconstruction

In developing their historic perspective on urban resilience, Coaffee, Wood, and Rogers argue that "resilience is most effective when it involves a mutual and accountable network of civic institutions, agencies and individual citizens working in partnership towards common goals within a common strategy" (Coaffee, Wood, and Rogers 2009, pp. 3). Vale and Campanella point out that "[…] the resilient city is a

constructed phenomenon, not just in the literal sense that cities get reconstructed brick by brick, but in a broader cultural sense. Urban resilience is an interpretive framework proposed by local and national leaders and shaped and accepted by citizens in the wake of disaster. However equitable or unjust, efficient or untenable, that framework serves as the foundation upon which the society builds anew" (Vale and Campanella 2005, pp. 353).

The debate on resilience and resilient city is helpful for finding clues on how cities could and should be recovered from disasters. Using the above frameworks to verify if the government-guided reconstruction in Sichuan has made the region more resilient, the following observations can be made:

Despite systematic organization and efficient implementation, several aspects of urban reconstruction can be better integrated in the process:

(1) From the perspective of urbanism, there should be more considerations of social and spatial coherence for the recovery or redevelopment of the urbanity of the post-quake cities, that is, comprehensive recovery of urban fabric (built structures), urban system (system that operates and organizes the urban dynamics), and urban livelihoods. While mentioned in the government's visions of the recovery plans these concepts have hardly been implemented in the government-guided reconstruction.

(2) A resilient reconstruction should also consider the specific urban profile and configuration of the place, to redevelop a site- and context-specific urbanity, instead of reconstructing everything with the generic vision of a top-down plan.

(3) Different processes of reconstruction and recovery should be more integrated with progressive collaboration; resilient reconstruction cannot be achieved by focusing on individual aims (in the case of Sichuan, the economic recovery) and implementing plans in a great rush or even at the same time as they are made.

(4) Improved integration and collaboration in terms of public-private partnerships would be very beneficial. The expansion of NGO involvement in the process of mediating, reflecting, and engaging top-down approaches and bottom-up initiatives would be beneficial. As concluded in a report on identifying resilience after the Sichuan Earthquake: "engineering management needs to include social metrics further if it is to achieve the outcomes that China now seeks" (Potangaroa, Wang, and Chang 2008, 6).

4 Seeking Urban Resilience: An Alternative Scenario for Development in Dujiangyan

From the perspective of an architect, in the following section this author focuses on how an alternative design scenario for the reconstruction can contribute to the urban resilience of the post-disaster city of Dujiangyan in Sichuan Province. The scenario development is guided by a post-disaster resilience design framework, which in the

aspects of urbanism focuses on socio-spatial coherence in the urban design, temporal continuity in the urban development strategy..

4.1 The Urban System before and after the Earthquake Impact

To find clues to urban resilience in the original setting of Dujiangyan, analyses in the alternative proposal started with exploring the urban system of the city, before and after the earthquake. Due to its unique UNESCO World Heritage Site status, its particular cultural landscape of hydraulics, and its demographic and ecological settings of agriculture, although relatively small in population and area, Dujiangyan as a city plays a significant role in the region. There are five types of urban subsystems to be noted: production, commerce, dining, leisure, and tourism. They represent the major urban activities of Dujiangyan. By mapping the facilities and related transportation networks in these five types of urban activities in the city (Figure 4), this work identifies the allocation of different functions in the original urban fabric. By overlaying the layers of the five urban subsystems, Figure 5a illustrates the original pattern of the urban system before the earthquake. From these maps, we can see that the city has a systematic and well-developed transportation network connecting to its surrounding rural areas, which represents a strong connection for agricultural trading activities. Yet, seeing from this figure, the two concentrations of the city's daily activities are around the historic center, where the irrigation system and the tourism center are close to, and around the intercity bus station that locates at the cross of the main axis formed by the highway (connecting the provincial capital Chengdu and the inner mountain region to Tibet) and the first ring road, where the city's main bus station is located. Both of these elements of the city, namely the places of daily activities and the route network that provides access to these places, are fundamentally important to the urbanity of Dujiangyan.

Figure 4. The original urban systems of Dujiangyan, Sichuan Province
Brown: production; red: retail; orange: dining; blue: leisure; green: tourism. The

transparency of the dots indicates the intensity of the activities, and the width of the lines indicates the intensity of flow.
Source: Guo 2010.

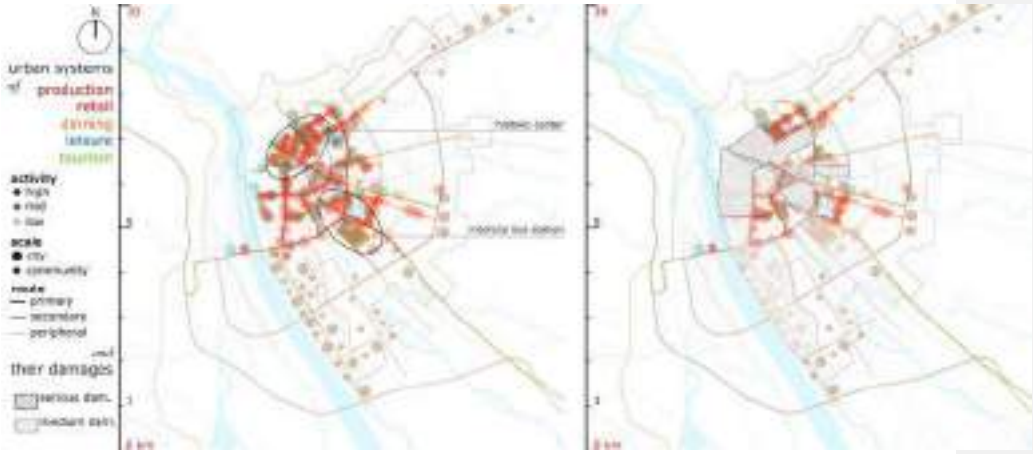

Figure 5. The original pattern of Dujiangyan's urban systems (a) and their damages after the May 2008 Great Sichuan Earthquake (b)
Source: Guo 2010.

Instead of just considering the damage of the urban fabric itself, this study pays particular attention to the damages of the urban system. Figure 5b indicates the extent of damages of the urban system after the earthquake. This set of mapping analyses together reveals a fact that although the serious damage did not necessarily affect all of the built urban fabric of the city and the rural areas, the majority of the most active urban area, the city center, has been mostly eliminated. This explains why the damage has not only largely ruined the urban fabric, but it has also severely destroyed the urbanity of the city. The argument is that, only repairing or reconstructing the built structures is not sufficient for rebuilding the resilience of the city from the physical damage of the disaster. It is also necessary to pay careful attention to the damage of the urban system and the urban livelihood and to redevelop the socio-spatial coherence of the place.

4.2 An Integral Scenario of Urban Resilience

"Disasters did neither inevitably destroy cities or societies, nor indeed produce decline. Cities are obdurate and resilience is there for perhaps as long as cities themselves exist" (Coaffee, Wood, and Rogers 2009, pp. 17). Yet, with the changes to urban form and civic governance structures in response to natural hazards, disasters can act as a stimulus to encourage post-disaster rebuilding and innovation. Urban administrations

often emphasize “that their city has come back stronger than ever” (Vale and Campanella 2005, pp. 17).

The alternative proposal (Guo 2010) investigates how to construct a resilient city from the disaster with an independent yet critical point of view as an urban professional. In this task, the goal is to seek integral development interests based on the resources that the government would provide, yet to fulfill the needs of the city and its social groups, by initiating new urban programs and designing urban projects to promote urban resilience. Figure 6 is a result of this design exercise, showing an alternative scenario to the vision of the government, to lead the city into a more resilient future through its transformation in the reconstruction. It tries to integrate the intention of the government on tourism development in the region based on the local resources, and to improve the urbanity by recognizing the original social and spatial quality, which has been considered as the pattern of the urban resilience that has existed for thousands of years in Dujiangyan. This interpretation of urban resilience pays extra attention to the city’s rural demography and economy and productive agricultural landscape, and tries to integrate it into the post-disaster urban transformation. The integration, between tourism development and the existing urban quality, between agriculture, ecological landscape, and the urban expansion, improves the social and spatial coherence, and defines the development for the specific urban profile. Yet the systematic and holistic approach opens up the possibility to continue the significant history of Dujiangyan in its future; that approach is the key of the design proposal.

Figure 6. An alternative scenario—Dujiangyan, Sichuan Province: an tourbanistic agropolis for 2012, which integrates sustainable agriculture economy and landscape development and the government’s touristic and urbanistic ambition into the urban future
Source: Guo 2010.

Given the fact that the future development of Dujiangyan inevitably involves urban expansion, the alternative design proposal argues that in order to use the resources for reconstruction strategically, urban projects should be located either in the extension parts of the city or along related routes to enhance the interrelation with similar facilities in the city; these projects should be located in the new settlements with direct connections to the existing urban route system, so that they create new urbanity by serving the inhabitants in the newly developed neighborhoods and extend the urban system by connecting the existing and new parts together. Urban projects at various spatial scales should create diverse densities of housing and commercial developments along the outer ring road: some with high density of social housing that accommodates the victims who have to move to the periphery of the city; others with larger-scale commercial and leisure facilities along the ring road and its major exits; and commercial and leisure developments on secondary streets or on the streets of neighborhoods that are relatively small in scale, to match the local urban and rural fabric of Dujiangyan, as well as to reduce the risk of disasters by dispersing settlement (Figure 7).

In order to make the city more resilient, a further phase after the reconstruction is also proposed, in a continuous line of urban development, to extend the road networks into the surrounding villages, following some corresponding small-scale developments of facilities and landscapes along the way. By reinforcing the connection between the urban and the rural, it integrates the urban inhabitants' and farmers' networks of daily exchange, trade, social contact, and participation in each other's lives—the city of Dujiangyan becomes a coherent and integral whole.

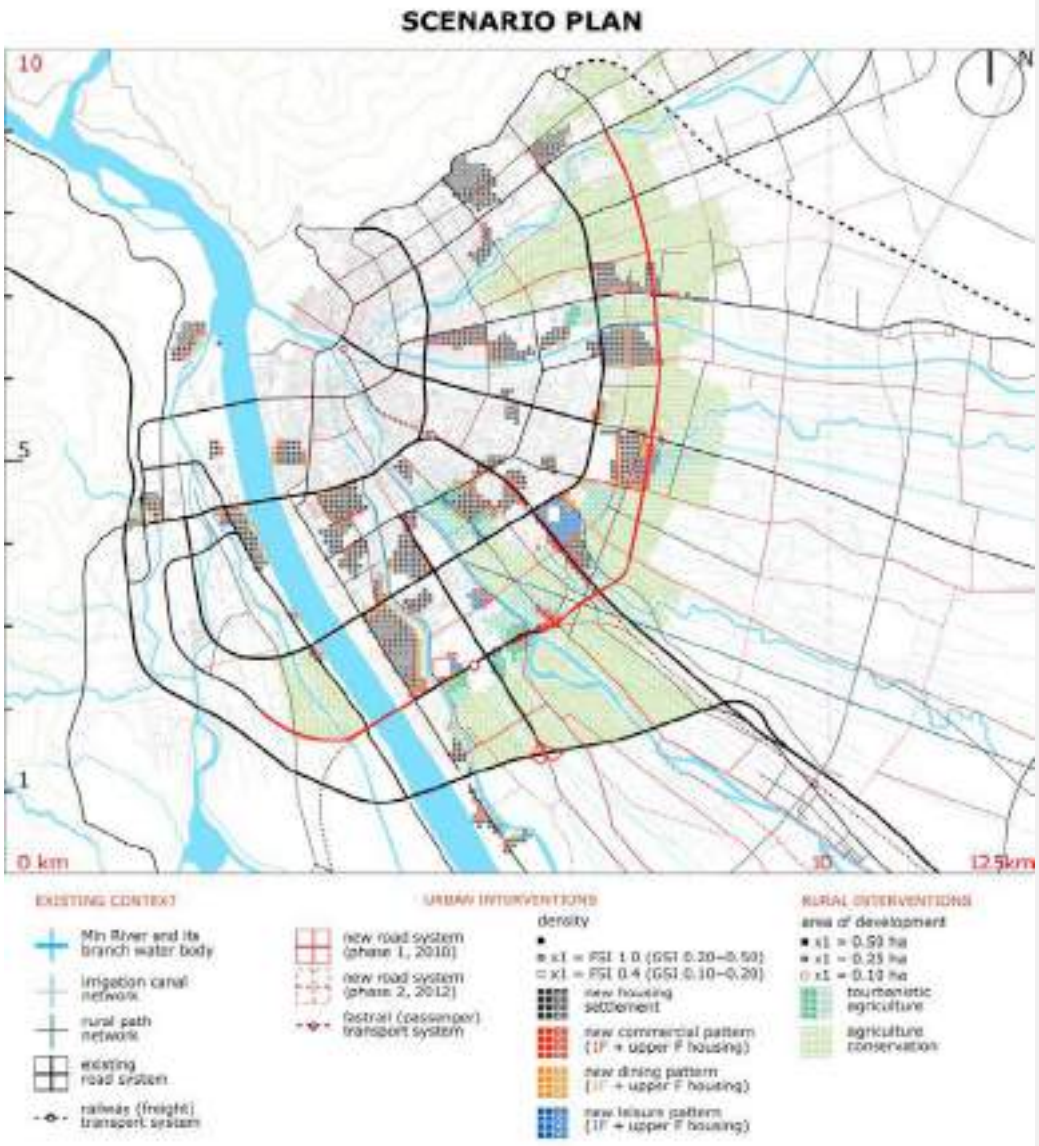

Figure 7. Alternative development scenario for Dujiangyan, Sichuan Province. FSI, Floor Space Index (also know as FAR, Floor Area Ratio) = Total covered area on all floors of all buildings on a certain plot / Area of the plot; GSI (Ground Space Index) = Constructed area / Surface area
Source: Guo 2010.

5 Conclusion

The post-disaster reconstruction in Sichuan guided by the government has been a notable success in many aspects, such as emergency response and relief, economic revival and construction efficiency, political achievement and social image promotion, as well as the fact that there was an innovative emergence and remarkable involvement of NGOs during the post-disaster relief period. For many remote rural places, it has been the opportunity of a lifetime to be part of the blueprint, which promises to upgrade the local built environment in ways none of its residents ever expected.

But none of the official documents or urban plans of reconstruction and redevelopment seems to indicate that urban resilience is treated as an intentional, integral part of the government vision. One of the keys to maintaining and improving the resilience of a city is the integration between top-down planning and bottom-up demands from relief to reconstruction phases, and it is missing in the Sichuan Earthquake case. Instead, the dominant top-down planning did not integrate, or not as much as expected, the bottom-up initiatives to reflect the cities' actual demand for development, but promoted a generic development at many individual post-disaster sites. Such ignorance of the local cultural context and site-specific resilience cannot be considered sustainable.

Developing urban resilience of a post-disaster city calls for socio-spatial coherence in the urban plans and projects, temporal continuity of the urban interventions, and inter-disciplinary and multi-stakeholder integration and communication. To achieve this, it is necessary not only to repair or reconstruct what has literally collapsed in the disaster. It is critical to interpret an urban resilience in the specific post-disaster urban context of the many urban components, elements, networks, dynamics, and capacities. It requires attentive and inclusive consideration in planning and design of the scales, tools, approaches, and intensity of the intervention, instead of rapid and generic urbanization or interruption to the urban system with radical social and spatial changes that decreases these systems' capacity to cope with future disasters.

Even though the achievements in Sichuan post-disaster reconstruction have been significant and the government interventions are technologically advanced and organizationally efficient, disaster recovery in China still lacks sufficient support for the integration of various stakeholders, as well as socio-spatially coherent and holistic redevelopment scenarios. Seeking urban resilience can be an arduous task, but the exploration of alternative scenarios indicates that it is possible.

Notes

[I] Urbanity is considered as a core concept in the field of urbanism. In general, it can be described as the characteristic of a city or the quality of an urban space. It has to

do with the "hard" entities, such as built form and spatial condition of the urban fabric; it also has to do with the "soft" aspects, such as demographic settings, social activities, political regime, and economic dynamics that are associated with the daily urban livelihood, which are held in the urban fabric.

[ii] Based on the March 2012 exchange rate of USD 1 = RMB 6.29.

[iii] Right after the Great Sichuan Earthquake, the government executed the post-disaster rescues and relief with impressive efficiency by coordinating military forces and an enormous number of volunteers. Approximately 4.9 million volunteers joined the relief effort (512 Help 2008). Soon after, 19 other provincial governments were ordered to assist the local municipalities with post-disaster reconstruction. This has been the most efficient post-disaster relief action in China, integrating governmental and military forces, NGO initiatives, technical experts, and business contributions in a very short time.

[iv] The Sichuan Workshop: Dujiangyan Dreams was an interuniversity and interdisciplinary summer workshop (19 July–6 August 2010) carried out in Sichuan, with a group of teachers and Masters of Science students in Urbanism, Architecture, Building Technology, and Real Estate & Housing from the Faculty of Architecture at Delft University of Technology and postgraduate students in the European Masters in Urbanism (EMU) from four leading European universities (Universitat Politecnica de Catalunya, Spain; Delft University of Technology, The Netherlands; Katholieke Universiteit Leuven, Belgium; and Università IUAV di Venezia, Italy), as well as teachers and undergraduate/graduate students in the School of Architecture at Southwest Jiaotong University, China. The workshop was initiated by the author.

[v] To optimize the efficiency of relief, the government introduced a strategic policy to involve NGO initiatives after the Great Sichuan Earthquake. With this support, the number of NGOs has risen to approximately three hundreds, involving three million volunteers. (Lin and Zhan, 2010).

[vi] Direct-Controlled Municipality (DCM) is the highest level classification for cities in China with a status that equals that of provinces.

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Preliminary Study on Spatial Structure of Xiushan Rural Areas in Chongqing Based on GIS Analysis

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ABSTRACT:

The rapid development of China's urbanization has led to rural industries decline, rural exodus and the growing gap between urban and rural. So China needs to find the new spatial strategies of development to achieve the goal of urban-rural integration. Then it is necessary to explore the rural areas' spatial structure and the affecting factors of its development. With its large rural population, Chongqing was chosen as the pilot zones for Urban-rural Integration Reform. So this paper chosen Xiushan county of Chongqing as an example to analyze the rural spatial structure and its affecting factors. Firstly, we develop a database which stores the information such as population, land-use and industry in a format supported by GIS (Geographic Information System) based on the questionnaire for the 260 villages of Xiushan. Secondly, with the aid of GIS visualization function，it is convenient to study the spatial distribution characteristics of administration maps of Xiushan rural areas from aspects of location, topography, population, industry, public services and so on. After a preliminary study on the inequality distribution of each villages based on the maps, the results showed that the terrain and the traffic play a notable role in the economic development of rural area in Xiushan. And there are some close relationships between the spatial distribution of population, land-use and Industrial structure.

KEYWORDS:

Rural transformation, Spatial inequality，Urban-rural integration, GIS , Urbanization of China,

1. Introduction

1.1 The Urban-rural Integration Reform in Chongqing

The rapid development of China's urbanization has led to rural industries decline, rural exodus and the growing gap between urban and rural. So China needs to find the new spatial strategies of development to achieve the goal of urban-rural integration. Then it is necessary to explore the rural areas' spatial structure and the affecting factors of its development. With its large rural population, Chongqing was chosen as the pilot zones for Urban-rural Integration Reform. So this paper chosen Xiushan county of Chongqing as an example to analyze the rural spatial structure and its affecting factors.

1.2 rural planning and rural survey

Rural planning is the comprehensive strategies about the village's social, economic, technological development, and also the basic guidelines for the rural development and construction. The plan includes the analysis and evaluation of economic and natural resources; the strategic objectives and the distribution of the rural social and economic development and last the implementation of the rural planning. Therefore, the rural planning should be based on its resources, the existing production conditions, the nation's economic development objectives and policies and then choose the optimal solution.

Through filed research，it is reasonable to identify existing problems in rural areas, and establish the main content of the Rural Planning , the framework of rural living environment improvement and municipal management model. With the establishment of Chongqing rural management system including the content of rural planning，the index system such as rural land use classification (as distinct from urban land use classification), land scale per person and the public facilities and infrastructure to explore the new paradigm of rural planning and new models of Chongqing rural construction, for example, the public participation, community planning. Chongqing, as the urban and rural reform experimental zone, its rural planning requires special consideration to the relationship of the villages with its surrounding cities in transport planning, industry, and functions of the floating population of migrant workers. The optimal hierarchy structure of the villages and the spatial pattern should be researched to achieve the urban and rural public service facilities equalization. The villages at different location advantages should take diverse planning strategies.

1.3 GIS analysis function

Geographic information systems (GIS) is a set of tools that captures, stores, analyzes, manages, and presents data that are linked to location(s). In the simplest terms, GIS is the merging of cartography, statistical analysis, and database technology. GIS systems are used in geography and urban planning. With the aid of GIS, it is convenient to study the urban space structure combined with the social and economic attributes. As in a thematic map, GIS requires both spatial data and attribute data: information attached to each object in a layer. Within the program the attributes most often are in spreadsheet format. The initial data consist of the map of the administrative regions and the attribute data such as GDP (GDP measures the value of all goods and services produced in the county during the year)，the total population and the proportion of Xiushan. Several datasets were used to generate variables that measure the geophysical and socio-economic attributes of each county. One of the distinguished properties of themiatic map is that it can provide an effective visualization of population density from statistical density functions of spatial distributions.

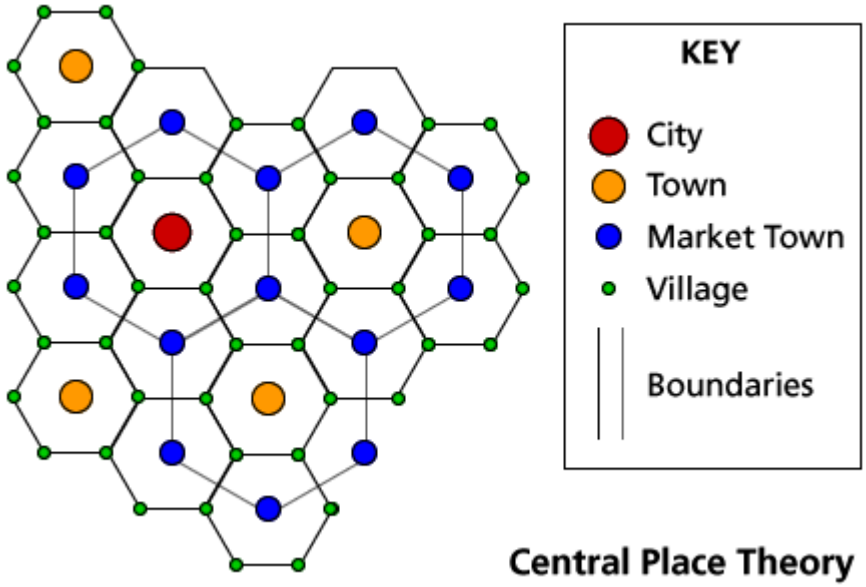
2. Theory

2.1 Central place theory

Central place theory is a geographical theory that seeks to explain the number, size and location of human settlements in an urban system. The theory was created by the German geographer Walter Christaller, who asserted that settlements simply functioned as 'central places' providing services to surrounding areas. The result is that a system of centers of various sizes will emerge. Each center will supply particular types of goods forming levels of hierarchy. In the functional hierarchies, generalizations can be made regarding the spacing, size and function of settlements.

The larger the settlements are in size, the fewer in number they will be, i.e. there are many small villages, but few large cities. The larger the settlements grow in size, the greater the distance between them, i.e. villages are usually found close together, while cities are spaced much further apart. The higher the order of the goods and services (more durable, valuable and variable), the larger the range of the goods and services, the longer the distance people are willing to travel to acquire them.

At the base of the hierarchy pyramid are shopping centres, newsagents etc. which sell low order goods. These centres are small. At the top of the pyramid are centres selling high order goods. These centres are large. Examples for low order goods and services are: newspaper stalls, groceries, bakeries and post offices. Examples for high order goods and services are: jewellery, large shopping arcades and malls. They are supported by a much larger threshold population and demand.



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2.2 G. William Skinner's Chinese rural hierarchy theory

G. William Skinner's groundbreaking research into rural Chinese economic systems displayed the value of spatially explicit theories such as central place theory in applied situations that served to explain or even fundamentally reshape our understanding of social and economic systems in a way that other approaches could not.At the root of rural economic activity in China was the village. The average peasant lived here with his family and engaged in a largely subsistence existence, producing goods for immediate consumption. It would be wrong, however, to view such a family or a village as being a closed system, entirely self-reliant. Excess food, clothing or other goods were produced. Such items flowed upward to the next step in the hierarchy: what Skinner dubbed the standard market town. "What [the village] household produced but did not consume was normally sold there," Skinner observed of the standard market town. In addition, "what [the village household] consumed but did not produce was normally bought there." The standard market town itself only had a limited range of goods available. Itinerant merchants would travel to and from intermediate market towns which represented the next level. At the top of the rural

hierarchy were the central market towns, which were the most rarified and had the most exclusive items available. Beyond the central market town, we move into local cities and regional cities, which were beyond the scope of Skinner's rural model.

3. Framework

3.1 Rural information questionnaire

This paper chosen Xiushan county of Chongqing as an example to analyze the rural spatial structure and its affecting factors. Firstly, we develop a database based on the questionnaire for the 260 villages of Xiushan and the formulation of rural basic information questionnaire will based on the direction and significance of the study. The content of the questionnaire was based on the social and economic structure of rural area including the indicators such as settlements in land area per capita, the public services and facilities per capita area， arable land change rate, rural population change rate, a production share of employment, agricultural real estate rate, agricultural labor productivity , etc.

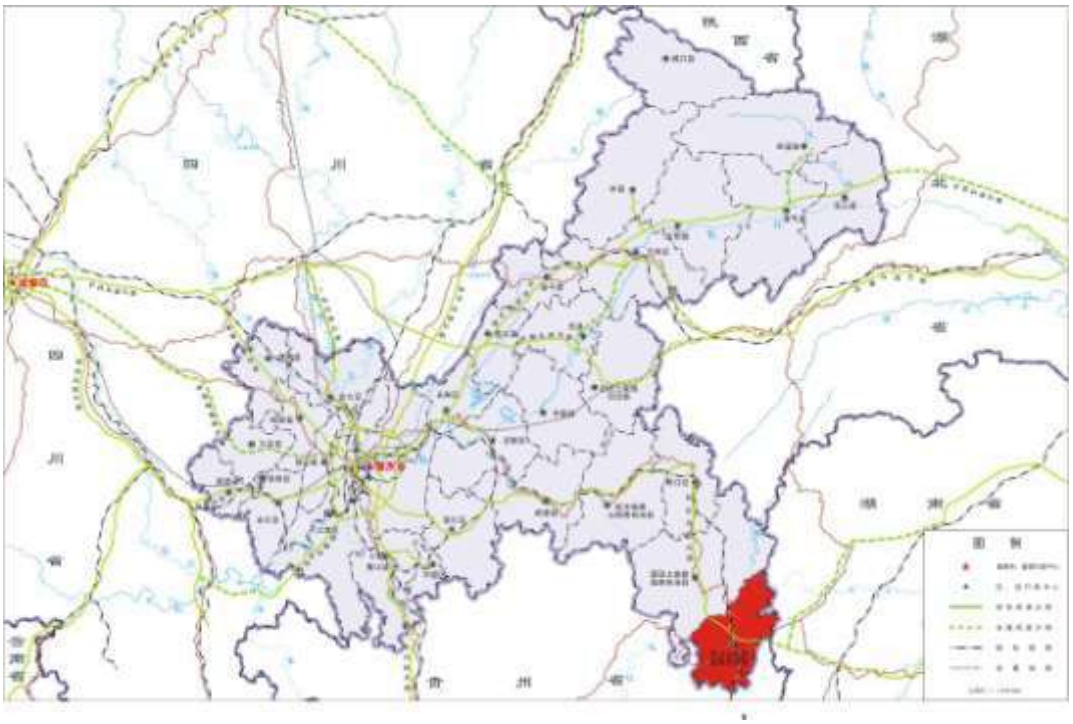
3.2 乡村地理信息系统数据库核心数据与指标体系

3.2 Rural geographic information system data index system

Rural geographic information system database core data index system		
空间数据 Spatial data	镇行政边界 Township border	
	村行政边界 Village administrative boundaries	
	镇政府位置 The location of the town government	
	县政府驻地 County Government Resident （区位）(Location)	比如秀山县城的位置 Such as Xiushan county location
	公路、铁路路线 Highway, railway line （交通）(Traffic)	比如秀山：国道 326、国道 319、包茂高速公路、渝怀铁路 Such as the Xiushan: State Road 326, State Road 319, the package Maoming Expressway Chongqing-Huaihua Railway
	地形地貌 Topography	比如山地、丘陵、平坝，山脉走向 Such as mountains, hills, flatland, the mountains toward
	河流走向 River toward	比如长江 Such as the Yangtze River

属性数据 Attribute data	**人口 Population**	户籍人口 Household population
		常住人口 Resident population
		进城务工人口 Migrant population
		常住人口密度图（即常住人口/村域面积）Resident population density map (ie, the resident population / village field area)
		进城务工人口密度图（即进城务工/村域面积） Migrant population density map (ie, migrant / village field area)
		人口迁出率图（进城务工人口/户籍人口*100%） Emigration rate map (migrant population / household population * 100%)
		人口流动性（进城务工人口/常住人口*100%） Population mobility (migrant population / resident population * 100%)
	产业 Industry	总产值（亿元） Output (million)
		农业产值 Agricultural output
		工业产值 Industrial output
		服务业产值 Services industry
		农业产值占比（农业产值/总产值*100%） Proportion of agricultural output (agricultural output value / output value * 100%)
		工业产值占比（工产产值/总产值*100%） Industrial output value accounted for (public production output value / output value of 100%)
		服务业产值占比（服务业产值/总产值*100%） Services industry accounted for (service industry output value / output value * 100%)
		人均总产值（总产值/常住人口*100%）Per capita output value (GDP / resident population * 100%)
		人均农业产值（农业产值/常住人口*100%） Per capita agricultural output (agricultural output / resident population * 100%)
		人均工业产值（工业产值/常住人口*100%） Industrial output per capita (industrial output / resident population * 100%)
		人均服务业产值（服务业产值/常住人口*100%） Per capita services industry (services industry / resident population * 100%)
	土地 Land	镇/乡总面积（平方公里） Town / rural area (square kilometers)
		农用地面积 Agricultural land area
		工业用地面积 Area of industrial land
		耕地面积 Arable land
		国有建设用地面积 State-owned construction land area
		集体建设用地面积 Collective construction land area
		宅基地面积 Homestead area
		农用地占比（农用地面积/村域面积*100%） Agricultural land accounted for (/ Village is an area of agricultural land area of

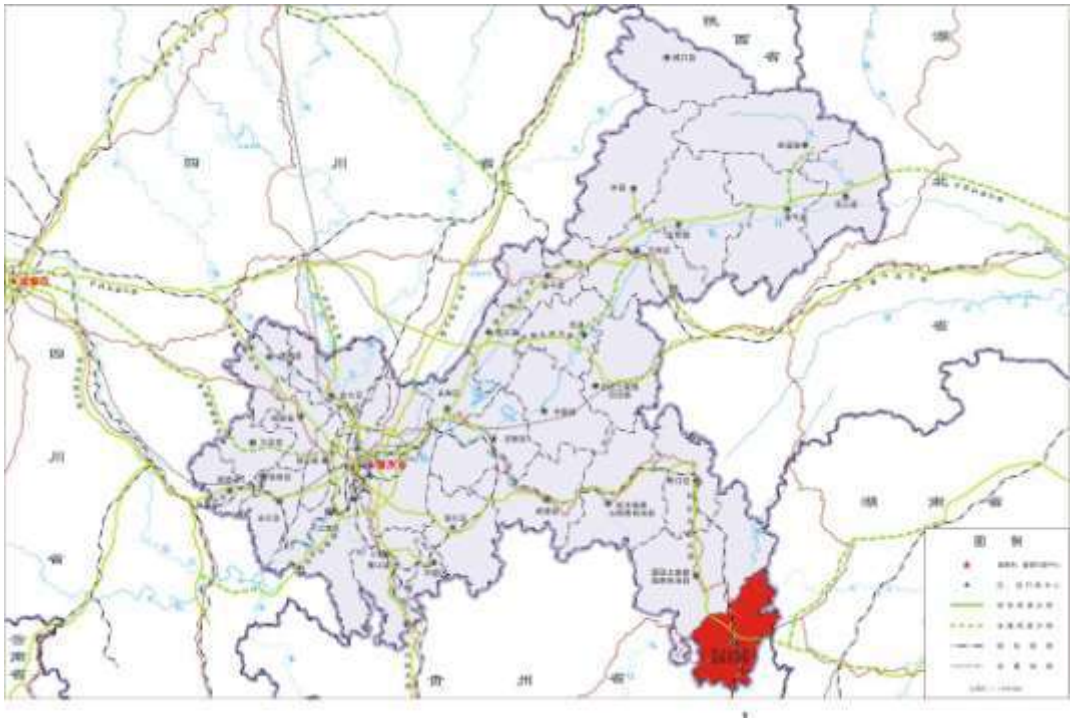
		100%)
		工业用地占比（工业用地面积/村域面积*100%）Proportion of industrial land (area of industrial land / Village is an area of 100%)
		国有建设用地占比（国有建设用地面积/村域面积*100%）Proportion of state-owned construction land (state-owned construction land area / village of domain area * 100%)
		集体建设用地占比（集体建设用地面积/村域面积*100%）Collective construction land accounted for (collective construction land area / village of domain area * 100%)
		宅基地用地占比 1（宅基地面积面积/村域面积*100%）Homestead land accounted for 1 (homestead area area / village domain area * 100%)
		宅基地用地占比 2（宅基地面积面积集体建设用地面积*100%） Homestead land accounted for 2 (homestead area of area of collective construction land area * 100%)
	公共服务设施 Public service facilities	变电站 Transformer substation
		垃圾处理厂 Garbage disposal plant
		体育设施 Sports Facilities
		公益事业设施 Public welfare facilities
		供水方式 Way of water supply
		污水处理厂 Sewage treatment plant
		中学 High school
		学校分布 Distribution of these schools
		小学分布 Elementary school distribution
		幼儿园分布 Kindergarten distribution



4. Analysis (case study)

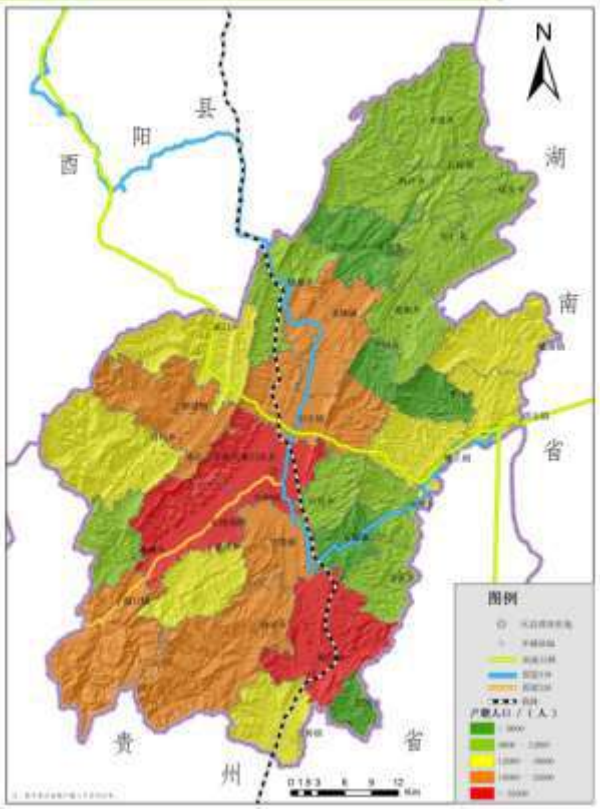
4.1 Location and introduction of Xiushan County

Xiushan Tujia and Miao Autonomous County, or Xiushan County for short(Pinyin: XiùShān) is located in southeastern Chongqing Municipality, China. Xiushan has a special location position among 38 districts and counties for it is at the junction of Hunan, Hubei, Guizhou Province and the No.326 and No.319 National Highway runs through the county. However, Xiushan county's terrain is mostly low mountains, valleys and the hillside area. The county accounted for 28% plains, hills for 29%, mountain for 43%. Hills account three quarters of the area. In particular, more than 10 surrounding townships are in a bad situation for the steep and inaccessible mountains. Paddy fields are mainly located in the flatland and hilly region.

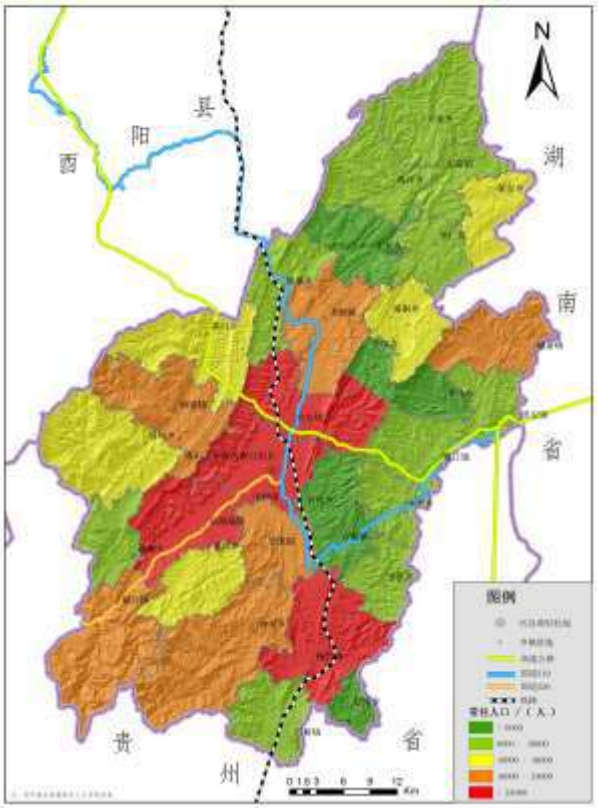


4.3 Population (such as Resident population, the total population, urbanization rate)

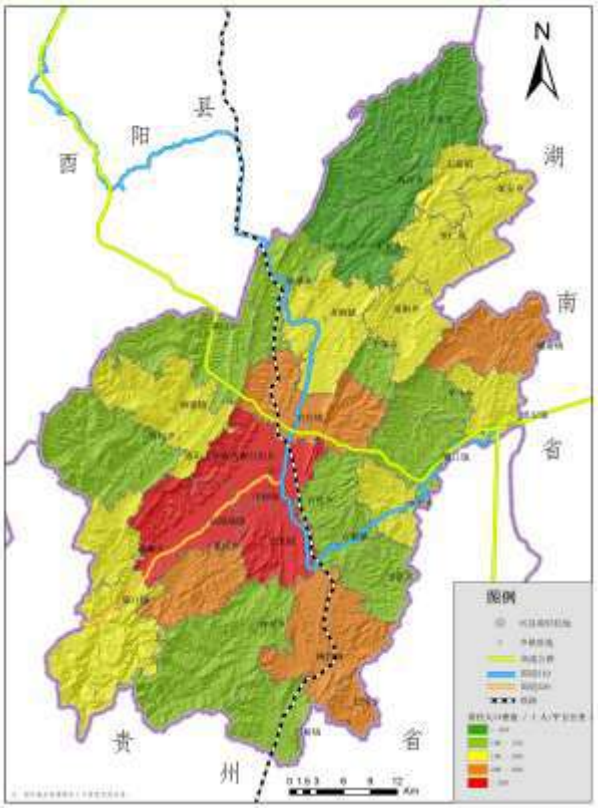
秀山县镇域户籍人口分析图



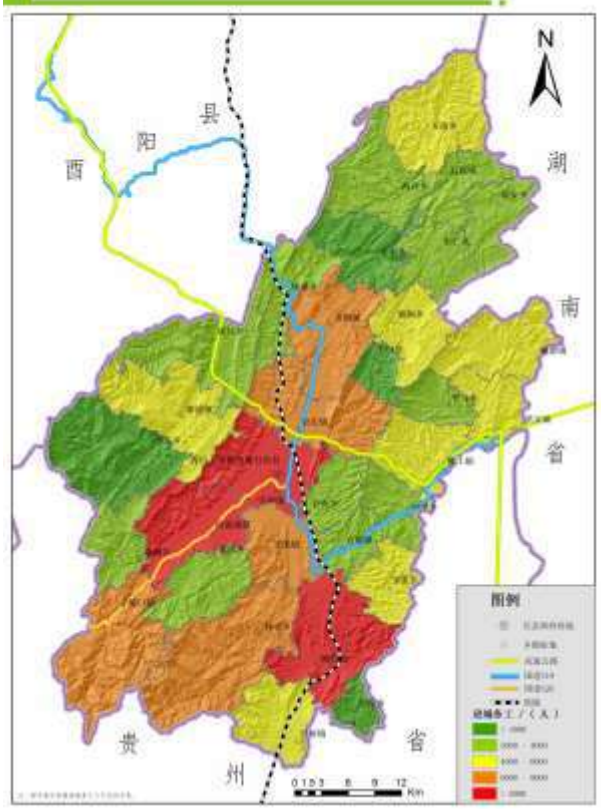
秀山县镇域常住人口分析图



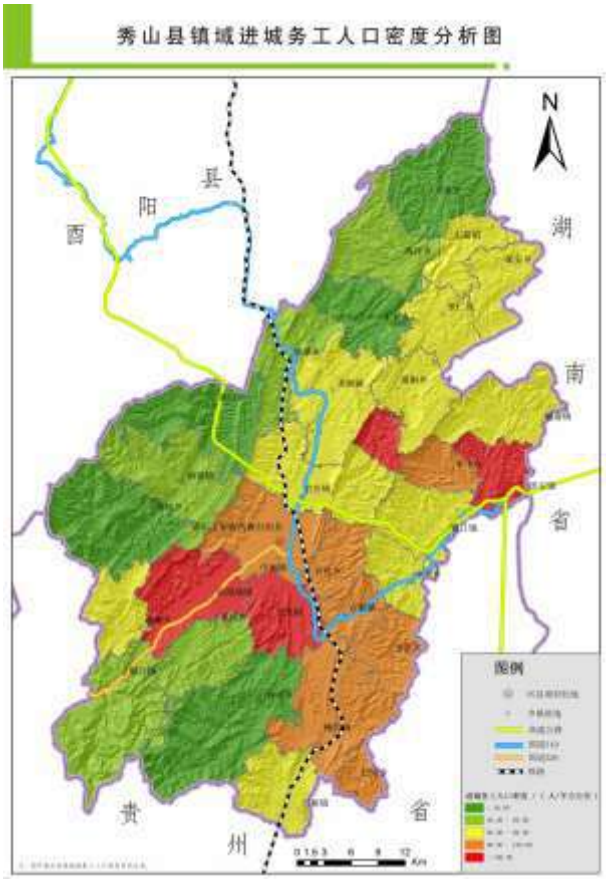
秀山县镇域常住人口密度分析图

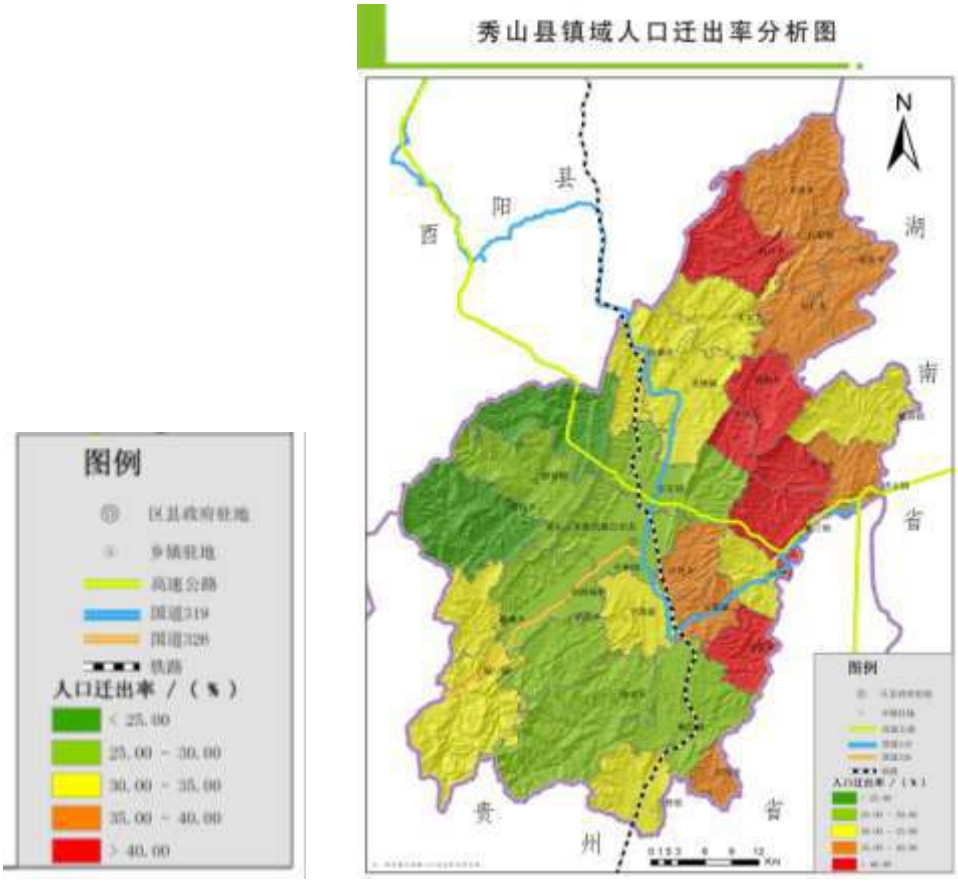


秀山县镇域进城务工人口分析图

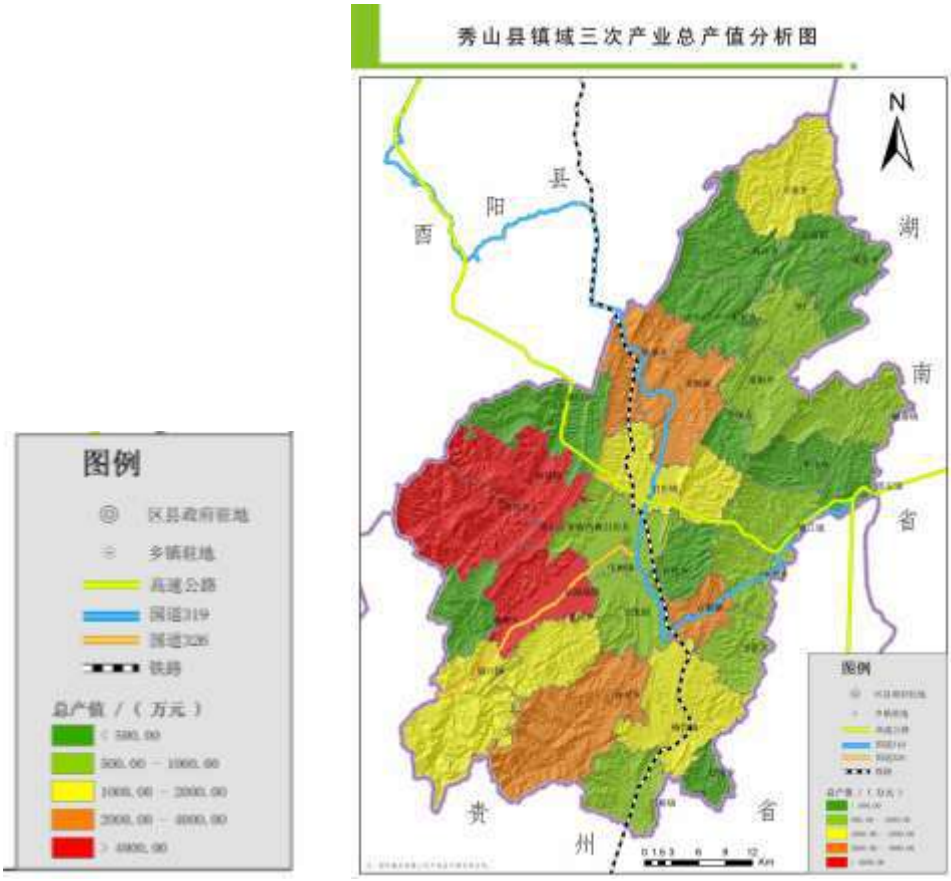


秀山县镇域进城务工人口密度分析图

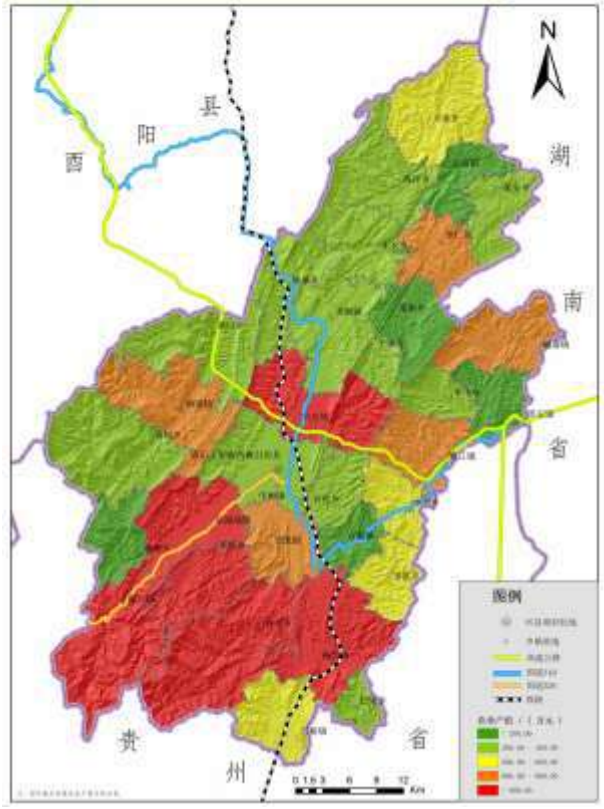


- 
秀山县镇域人口迁出率分析图
N
县
阳
西
湖
南
省
贵
州
省
图例
区县政府驻地
乡镇驻地
高速公路
国道319
国道320
铁路
人口迁出率 /（%）
< 25.00
25.00 - 30.00
30.00 - 35.00
35.00 - 40.00
> 40.00

4.4 Industry

- 
秀山县镇域三次产业总产值分析图
N
县
阳
西
湖
南
省
贵
州
省
图例
区县政府驻地
乡镇驻地
高速公路
国道319
国道320
铁路
总产值 /（万元）
< 500.00
500.00 - 1000.00
1000.00 - 2000.00
2000.00 - 4000.00
> 4000.00

秀山县镇域农业产值分析图



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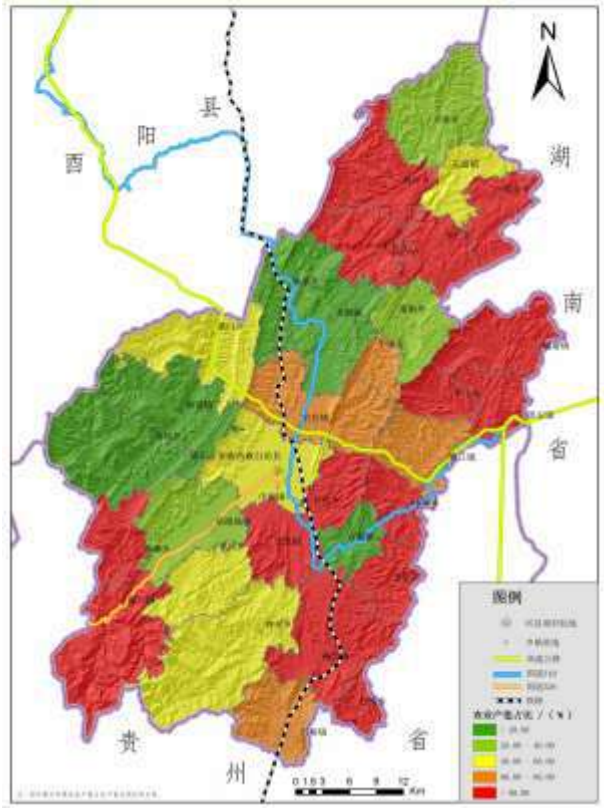
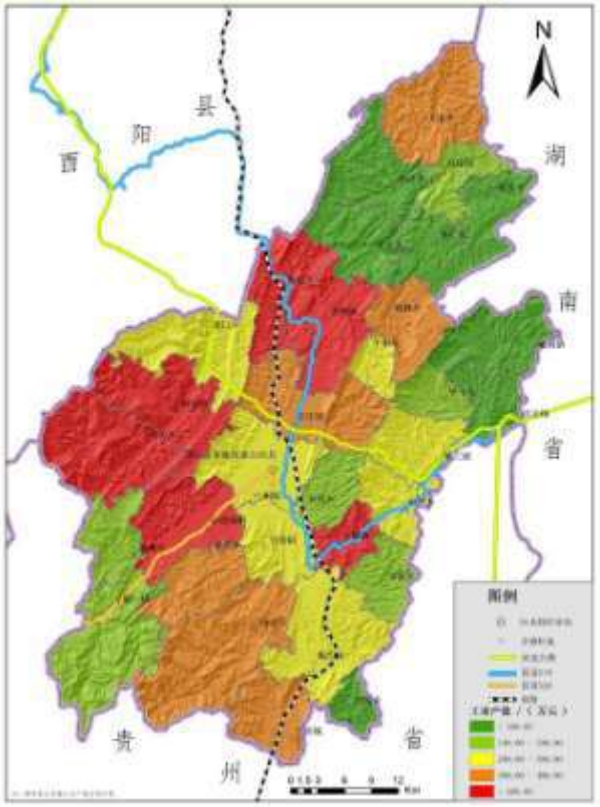
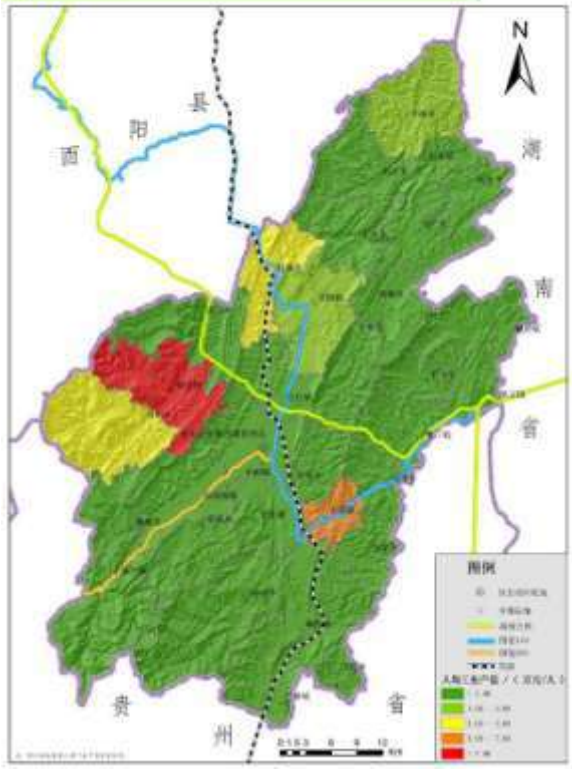


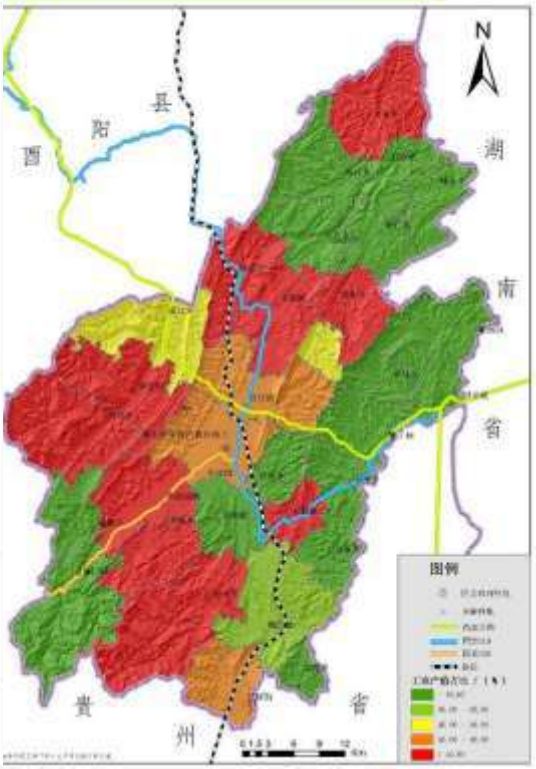
- 秀山县镇域工业产值分析图



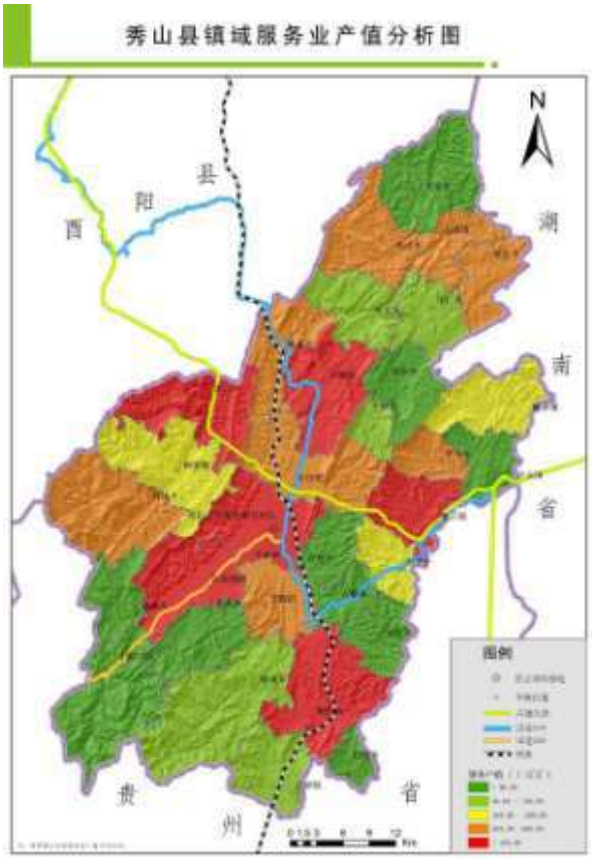
秀山县镇域人均工业产值分析图



秀山县镇域工业产值占总产值比例分析图



- 秀山县镇域服务业产值分析图



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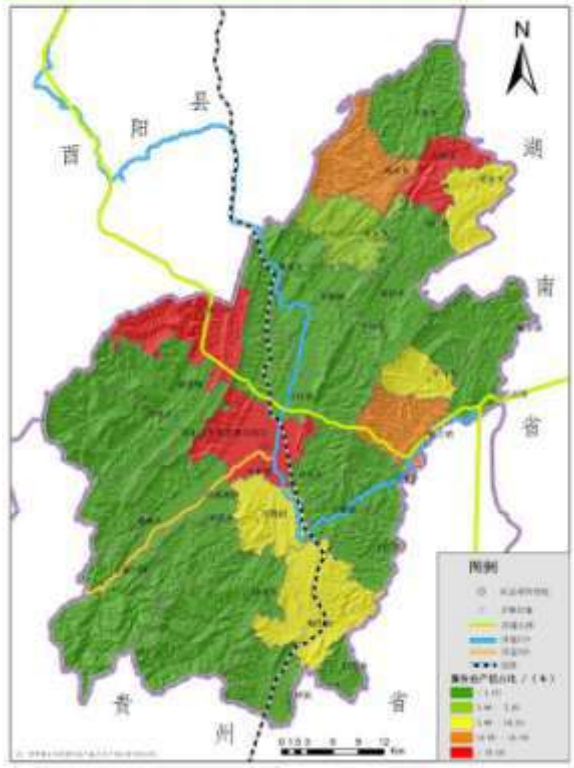
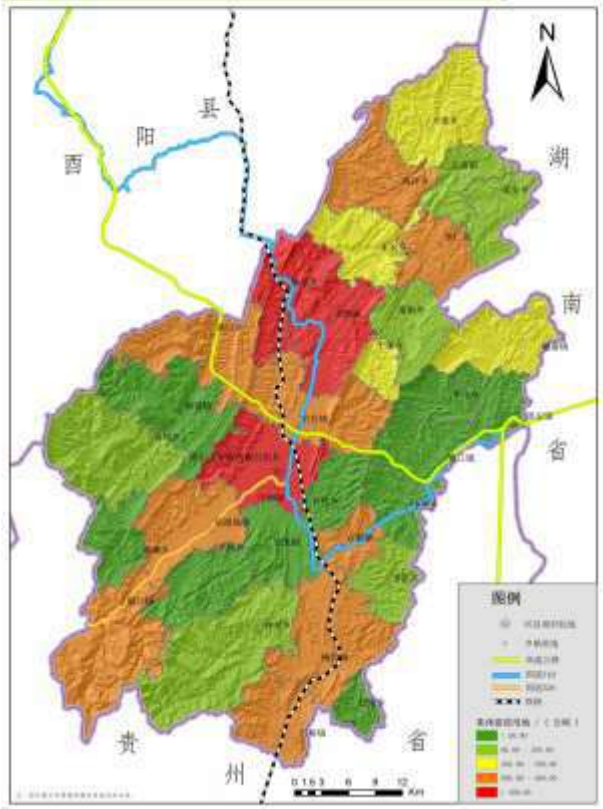


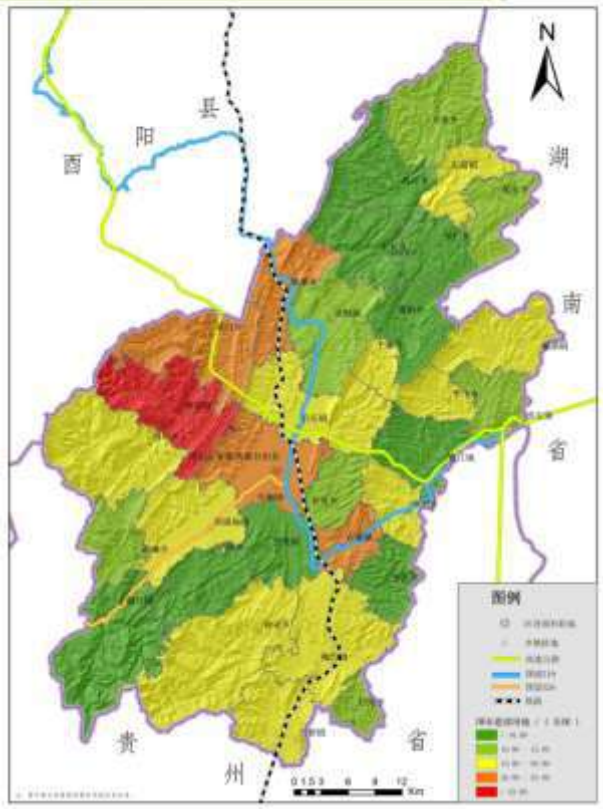
秀山县镇域人均服务业产值分析图

4.5 Landuse

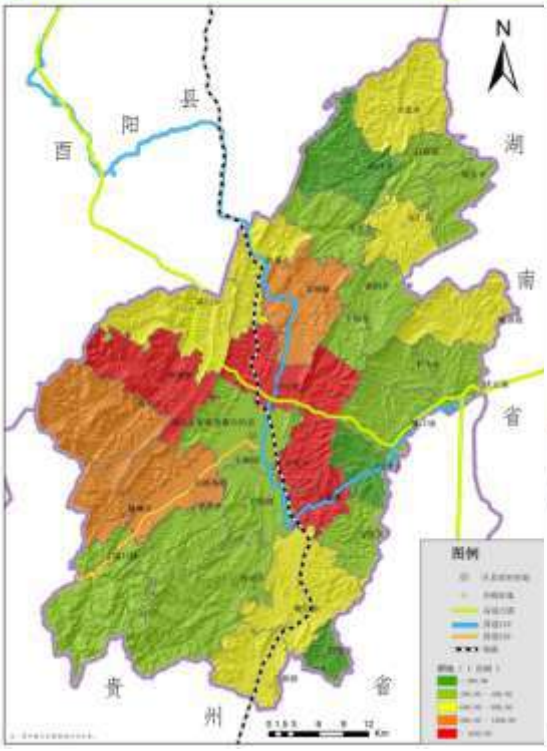
秀山县镇域集体建设用地分析图



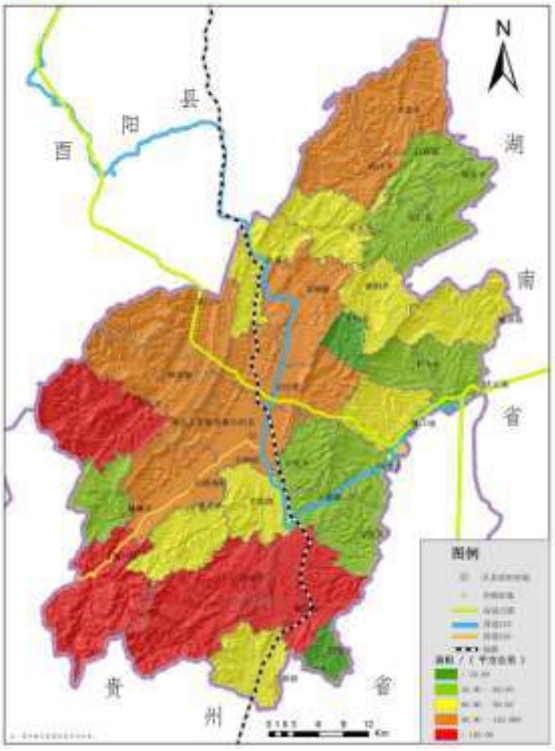
秀山县镇域国有建设用地分析图



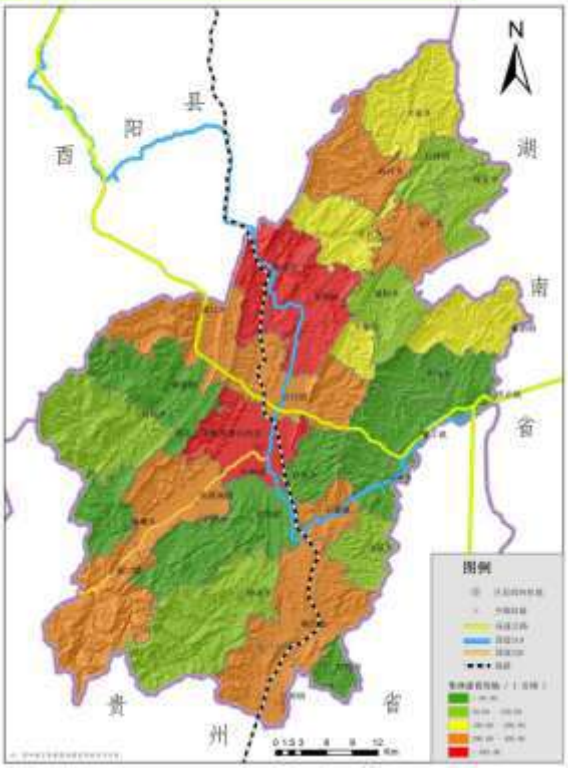
秀山县镇域耕地分析图



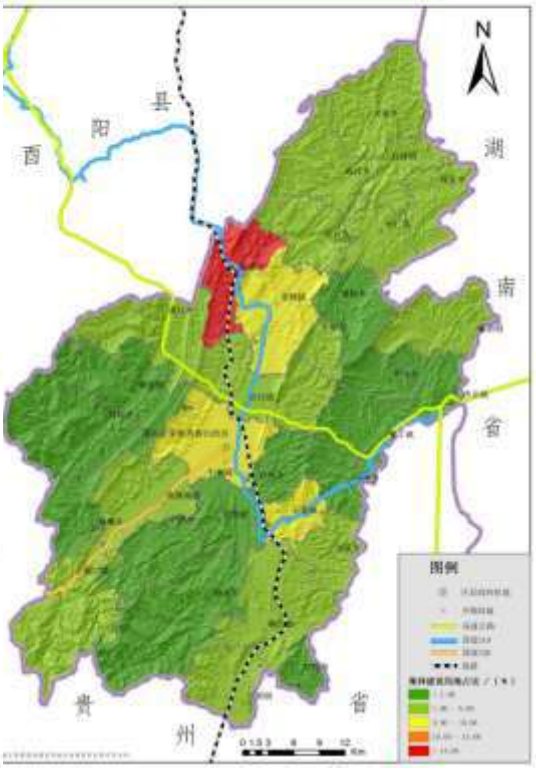
秀山县镇域面积分析图



秀山县镇域集体建设用地分析图

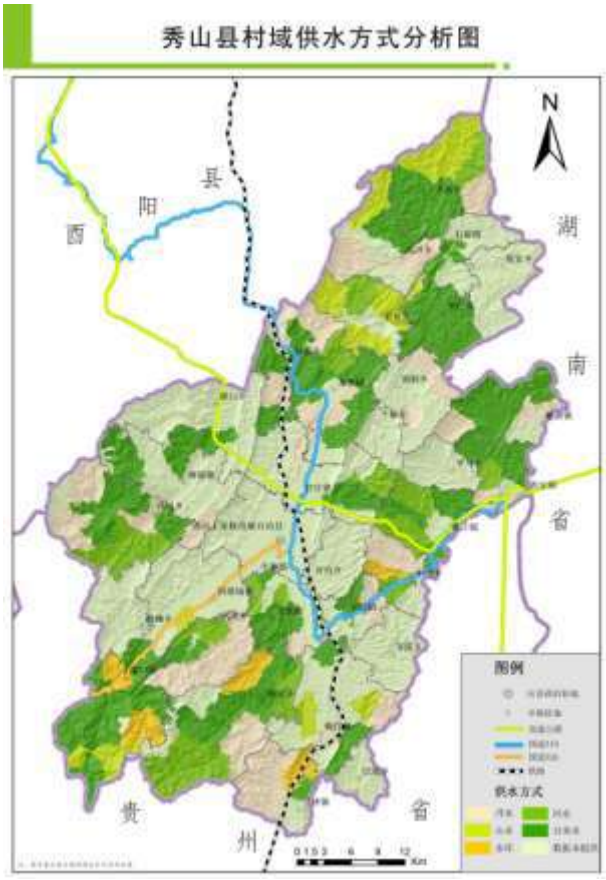


秀山县集体建设用地占镇域面积比例分析图

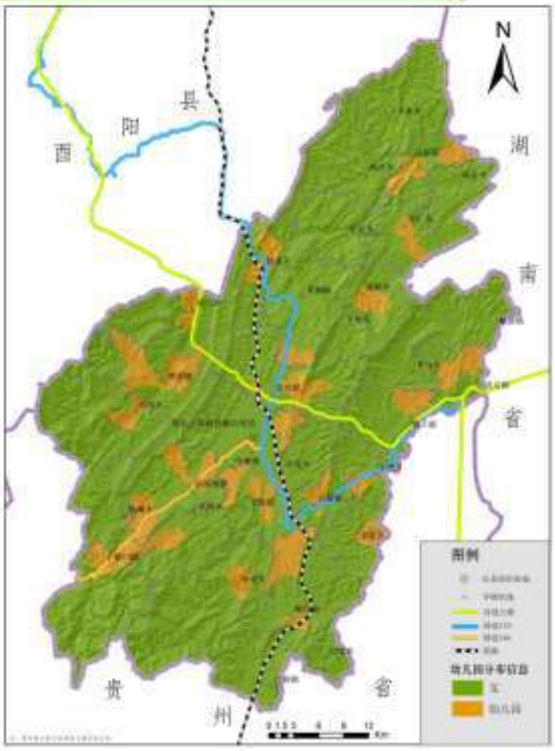


4.6 Public service distribution

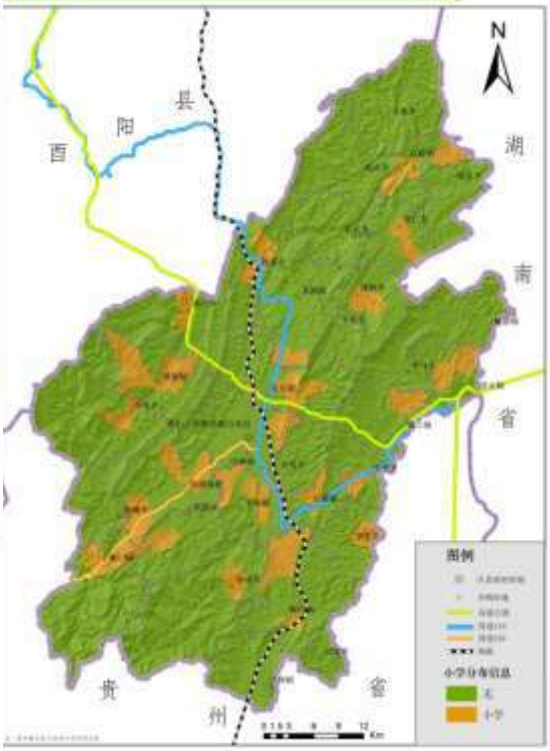
- 供水方式资料收集不全，大多没有统计。
- 有统计信息的地区主要以自来水和河水供水为主
- 中学分布较离散，分布密度相对比较均衡



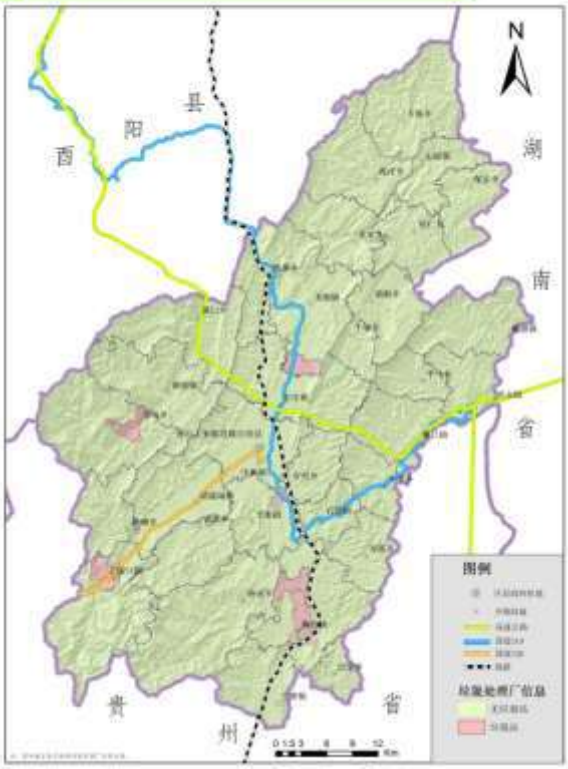
秀山县村域幼儿园分布图



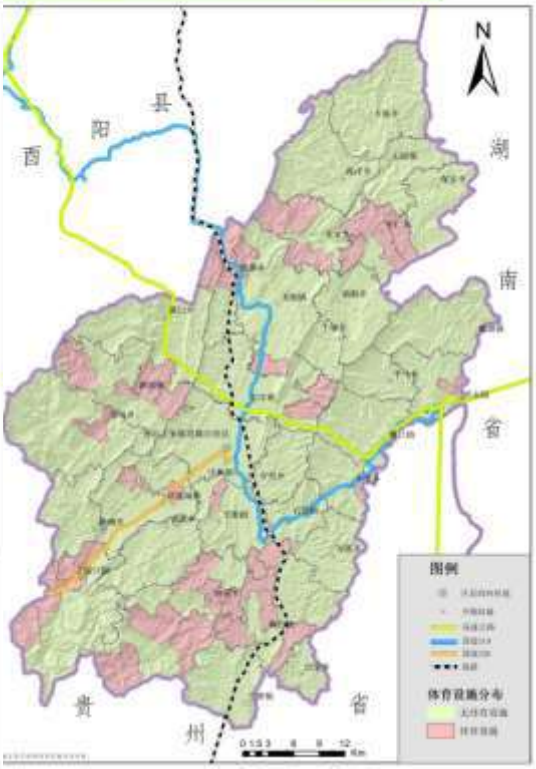
秀山县村域小学分布图

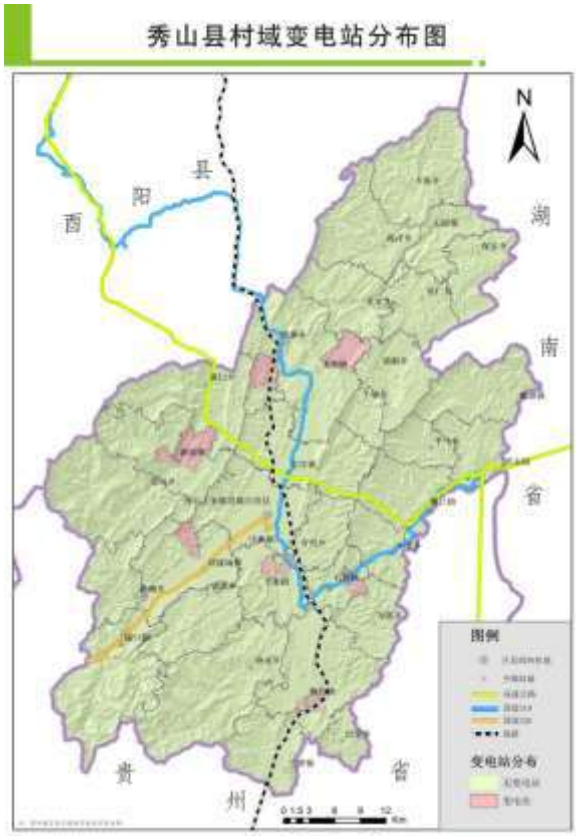


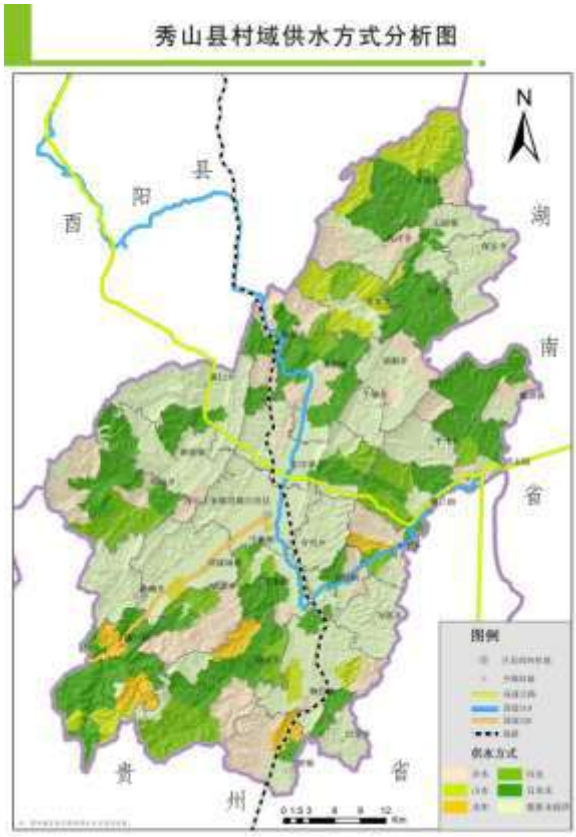
秀山县村域垃圾处理厂分布图



秀山县村域体育设施分布图







5. Conclusions

5.1 The Driving Forces of economic elements' distribution

(1) The traffic has a huge role in promoting the economics:

(2) The restrictive effect of the terrain:

(3) The unique role of the mineral resources, for example, the village near the mines often has a higher industrial output or GDP compared to other villages.

5.2 The characteristics of economic elements distribution

5.2.1 Population distribution:

(1) the resident population and the migrant population tend to located along the main roads;

(2) the transport and land terrain conditions have a great impact on the population density distribution, which was the core radial distribution pattern;

(3) the northern mountainous area has a high population mobility and the rate of moving out accounts for 35%;

5.2.2 Industry distribution:

(1) The output value of the western is higher than that of the east；

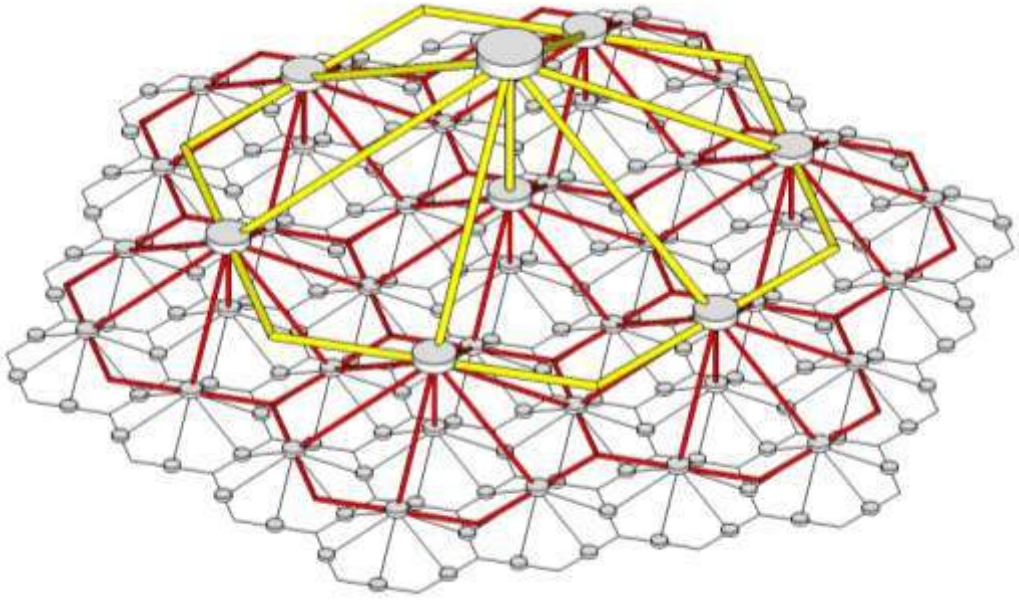
(2) Agricultural output in the south villages is higher than those in the north, the eastern mountains of agricultural output value accounted up to 80%, the main industry of Xiushan County is agriculture;

(3) The services is distributed along the roads.

5.2.3 Land use distribution:

(1) The distribution of the state-owned land for construction was associated with the industrial land layout, which was concentrated mainly in the western mountainous edge regions with rich mineral resources;

(2) The collective construction land of the villages distributes along the roads and has a close relationship with the transport, indicating that the farmers spontaneously gathered to the road;



6. Reference

Openshaw S, Veneris Y, 2003, "Numerical experiments with central place theory and spatial interaction modelling" Environment and Planning A 35(8) 1389–1403

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Trust – a 'new' institution to improve urban governance

Peter Edwards[1]

Abstract

With a participatory turn in planning having happened over a decade ago it is time to reflect on whether participation has delivered something new or whether it is simply more of the same with new labels. When we look at many of these participatory planning institutions against Arnstein's (1969) ladder of citizen participation, many of these new planning approaches were/are hardly new. There are very few planning authorities that are willing to redistribute their resources and the power that can be exercised from mobilizing these resources to enable citizen power. However, where some effort has been made to go beyond the 'informing' and 'consultation' rungs on the ladder, there is some evidence that these moves that incorporate community engagement can help develop trust. There may be anecdotal evidence that the farther one climbs up the ladder towards citizen power, the stronger the trust that can be developed.

The central theme of this paper is that through the development of mutual trust between communities and planning authorities, appropriate, quality and legitimate planning decisions can be made and implemented.

This work delves deeper into the institutional and governance aspects of the work by Edwards (2009) looking at how power and trust work in participatory planning exercises. Data has been collected through documentary analyses and follow up narrative interviews with selected actors involved in planning and community on the Gold Coast, Australia.

The author expects that by looking at participation through the lens of trust, will provide another perspective on collaborative planning other than power (c.f. Flyvbjerg 2003). While Stein & Harper (2003) claim that a focus on power can reduce trust, I believe that it detracts from the attention that trust deserves, particularly the role that trust plays in improving democratic legitimacy.

Keywords: trust, participation, power, democratic legitimacy, planning decisions

Introduction

Participation in urban planning has variously been called participatory planning, collaborative planning, and community engagement, among others. It has gained prominence over the past few decades from theoretical and practical perspectives – new tools for practitioners to developments on its fundamental basis in Habermas' communicative action theory, such as the work of Iris Marion Young. As Head

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(2007) notes, this is partially due to the insufficiency of formal institutionalized democracy as we know it. Participatory planning has been used at local, regional and national scales with varying levels of success, no matter what the scale. While there have been many participatory successes at varying spatial scales, there are many more participatory processes that have failed and further contributed to the divide between citizens, stakeholders and government (c.f. Innes & Booher, 2004).

While participation, and in particular meaningful participation, may have failed innumerable communities, there may still be hope that through conceptualizing the research undertaken in participation, there is hope that communities can once again feel that their governments have their best interests at heart. Through looking at trust and how the power relations in participatory planning processes relate to it (trust), it would appear to provide a productive way forward in planning governance. By developing trust between citizens, stakeholders and government agencies, even the limited way in which participatory processes are carried out may be able to improve planning processes and legitimacy.

The paper will set out what participation is, what ideal participation hoped to achieve and predominantly discuss how participation has failed. The failure of participation will be linked with the concept of legitimacy and how participatory planning has been unable to deliver legitimate planning outcomes. Legitimacy is also linked to the idea of trust. Trust will be explored, first introducing it, how it can be considered an institution and finally how trust as an institution can be used as a governance framework to develop legitimate planning decisions.

Participation and its failures

Wade Davis (2001) noted that "Every view of the world that fades away, every culture that disappears, diminishes a possibility of life and reduces the human repertoire of adaptive responses to the problems that face us all". While this speaks to a specific way that participation can provide a benefit to society, it has also been held up to provide a range of broader benefits. These benefits include good governance, modernizing government, and addressing a democratic deficit found in representational democracy and improving legitimacy of decisions and providing a better picture of what is happening in communities and neighbourhoods (Curtain, 2004; Nicholson, 2005; Edwards et al., 2008; Nienhuis et al., 2011). Innes and Booher (2004) further note that there are five purposes of participation, including allowing decision-makers to find out what the public wants, incorporating local knowledge, fairness and justice, legitimacy and legal requirements.

While some authors (ASR Research & Red Road Consulting, 2002; Giessen, 2008; Edwards, 2009) among many note that participation has delivered numerous benefits to citizens and communities, including additional or improved information, a dialogue between government and citizens/stakeholders (Head, 2007), deliberation between stakeholders, improving understandings between groups with differing interests ( ).

While Head (2007) notes that participatory democratic theory assumes that positive outcomes come from participation, there are numerous critiques of how participation has failed communities and neighbourhoods. Innes & Booher (2004) and Cheng & Mattor (2006) note that one of the root causes of failure is through having rigid, legally mandated participation. These rigid, legal requirements often result in the coordinating government agency 'going through the motions' to satisfy the requirement, while not concerned at all about the input from citizens and stakeholders. Additionally, the amount of time that these processes can take (approximately two years in several local government and almost eight years in a state government cases in Australia) (Edwards, 2009) make them unattractive to both governments and citizens and stakeholders, in addition to possibly ending in poor decisions (Innes & Booher, 2004).

Participation, therefore has overall not delivered on the grand promises made, simply 'greenwashing' over traditional styles of government policy and planning. Maginn (2007) notes that information sharing and data collection did not provide any meaningful participation from citizens and stakeholders in Perth nor did just going through the legal motions in Colorado (Cheng & Mattor, 2006).

Nienhuis et al. (2011) indirectly note that participation can fail in two distinct ways when they claim that process design and lifestyle choices affect participation. The first is through failure of the process, where the process employed has failed to work 'properly' (i.e. incorporating bias, exclusion, lack of independence, agenda control by policy-makers, etc.) (Head, 2007; Maginn, 2007; Bond & Thompson-Fawcett, 2007). The second way in which participation fails is through simply 'bad' participation. This is where citizens and stakeholders simply do not participate – through lack of time or connection to the community (Nienhuis et al., 2011), being out of touch with political and economic realities (Innes & Booher, 2004) or where the organising agency does not identify or reach 'hard to reach' groups (Bond & Thompson-Fawcett, 2007).

These failures of participation have led, in part, to a decrease in legitimacy of participatory processes. Beetham (1991) notes that legitimacy is derived both through process and norms – focusing on the process, it therefore must be inclusive and have outcomes that are binding on decision-makers. In many cases, neither of these criteria are met, making plans illegitimate in the eyes of citizens and stakeholders.

The failures of participation have led to unhappy experiences on the part of the citizens and stakeholders (Head, 2007) and letting the public believe that government at all levels is unresponsive to their concerns (Innes & Booher, 2004). They also note that citizens may not be in touch with the long-term outlook, political and economic realities of the area, however, it can be noted that politicians (who, in some cases, 'control' the planners, c.f. Edwards & Bond, 2011) do not look to the long term either, but simply the next election. Through these failures of participation,

citizens and stakeholders have found that their expectations of being heard and involved are not being met. The message here is that citizens and stakeholders are not able to share power with the planning authorities in planning processes.

Both of the threads above (legitimacy and un-met expectations) have several things in common – trust and power. Dunn et al. (2008) note that trust is a component of process legitimacy while Möllering (2005) and Bijlsma-Frankema & Costa (2005) note that as a generalisation, trust involves the meeting of expectations (with mistrust the non-meeting of expectations). Parsons (1986) and Misztal (1996) both note in general that legitimacy is closely linked to trust. Trust is a powerful phenomenon that can have far-reaching consequences for citizens, stakeholders and government involved in planning. Bijlsma-Frankema & Woolthuis (2005) note that trust is a superior form of governance than control, however, in terms of planning practice, this form of governance has not been adopted or trialed.

Trust as an institution

Approaching this idea from a normative direction, trust in (participatory) planning could become an institution. For this paper, I use a very broad understanding of norms and the normative approach. Norms can be simply the implicit or explicit laws that govern the behaviours of society or the community. These don't have to be legislated laws, they can be actions or values that are promoted in society and after repeated 'use', become universally socially accepted. The normative approach simply suggests that the values and actions that society considers ideal are encouraged and acted upon over time. As these values and actions are enacted over time, they become institutionalised in society, where Berger & Luckman (1967: 54) describe institutions as "stable patterns of social interaction" that come out of recurring encounters between individuals.

The social relations (actions) that result in trust (a value) could be quite easily institutionalised through repeated enactment. The actions or relations that work towards building trust include 'getting to know each other', knowledge sharing, dialogue, time and meeting expectations (Edwards, 2009). Citizens and stakeholders who are generally active in a community may know of each other, if not actually knowing each other through their active involvement. Those citizens and stakeholders who are not active or have most of their social interactions outside the community in question therefore may not be known. However, this is not the only building block of trust, although having something in common and knowing each other makes the development of trust much more likely (Uslaner, 2002).

Sharing of information and understanding where each citizen, stakeholder or government agency is coming from is another building block in the development of trust. Currently, parties may share information (informing or consulting on Arnstein's ladder), but there is only limited use of the information, and often no deeper understanding of why different actors have these views or how the knowledge that they have has come about. Sharing and understanding of knowledge comes

about through both dialogue and the amount of time that individuals spend together. Through dialogue and self reflection, citizens, stakeholders and government agencies have the capacity to gain a deeper understanding of others, as well as their positions and understandings as related to the others (Foucault, 1990; Edwards, 2009). While the amount of time that individuals spend in each other's company is important (Uslaner, 2002; Uslaner and Richardson, 2003), Edwards (2009) found that while the amount of time is important, how that time together is spent is also important. Getting to know people in a more social setting rather than simply a 'work' or 'official' setting is of great importance.

One of the most important actions that can be undertaken with respect to developing trust is the meeting of expectations. It can be seen allegorically through the following description. As someone who is willing to trust another, I make my expectations of what I want done clear to them. At that point, I have taken a 'leap of faith' – jumping out over the chasm-line unknown. If the other person does what I have asked them to do, they have positively met my expectations – I land on solid ground on the other side of the chasm. The next and subsequent times I take this leap of faith and find that my expectations are met by this person, the leap becomes smaller and smaller. I am building up a trust relationship with this person. However, should I take the leap of faith and find that they have not met my expectations, I don't land happily on the other side of the chasm, I fall into it, severely injuring myself. In this instance, I have been 'hurt' – my expectations have not been met. Because there is no meeting of positive expectations, I may give them one or several more chances, and start to build up distrust as they are unable to meet my expectations.

If we focus on this key aspect of positively meeting expectations, if citizens and stakeholders clearly let planners and politicians know what they want to see in the community and the planners and politicians get back in touch with the community through building up an understanding and rapport with the community (which they lack), (c.f. Innes & Booher, 2004; Edwards & Bond, 2011), community-wide trust may be developed. However, there is still another 'force' at play that can cause problems – power.

Trust and power – a brief note

Starting with participation, communication is at the centre of the 'cutting edge' of deliberative participation (Edwards et al., 2008). Communication, which is also one of the building blocks of trust, is infused with the exercise of power. The exercise of power, in the form of communication adjuncts, such as eloquence, rationalization and charisma can also lend the appearance of legitimacy to the speaker and their information (Flyvbjerg, 1998). While this paper does not focus on the exercise of power per se, Stein & Harper (2003) claim that by focusing on power in participatory planning processes, there is a 'muddying of the waters' surrounding trust, however, participation and trust are intimately linked to the exercise of power (Edwards,

2009). In an overall sense, power must be incorporated into any broad analysis of participation and trust (c.f. Edwards, 2009).

Trust as a 'new' form of governance

Bijlsma-Frankema & Woolthuis (2005) re-propose trust as a global form of governance, although they note there are some serious difficulties as globalisation and neo-liberalism make their inexorable march and organisations move towards networks and alliances, they are less and less embedded in communities where social mechanisms to ensure trust is maintained. While the global is not embedded in communities, planning at the local community or neighbourhood level can still be considered embedded in their localities.

Trust, however, can and should be used to govern and develop appropriate and legitimate planning decisions and outcomes at the local level. Local officials and politicians are supposed to represent the interests of their department or their constituents, however, Edwards & Kleinschmit (in press) note that bureaucrats and politicians may, in the end, be more inclined to represent their own interests, party interests or other special interests rather than the interests of their departments or constituents. As Innes & Booher (2004) note, bureaucrats and politicians have become distant from the people they are 'working for', leading to citizens and stakeholders not having their expectations met, and ergo a decline in trust. The introduction of trust as a mode of governance would therefore require behavioural change on the part of the politicians and at the very least getting back to the fundamentals of representational democracy. This would require bureaucrats and politicians to listen to constituents and take into consideration their input.

Best practice would be 'scale up' to at least the placation rung on Arnstein's (1969) ladder of participation. While placation is still within the tokenism range, citizens and stakeholders are able to provide detailed input into a plan or policy, however the final decisions still rest with the bureaucrats and politicians, who ostensibly have a wider spatial and temporal view than the community. This can help prevent fragmentation within and between urban areas.

A case in point is the Gold Coast Waterfuture process and other community engagement processes hosted by the Gold Coast City Council. While the decision-makers still retain the final authority to approve a plan or policy, citizens and stakeholders have been able to provide input and influence the final plan, generally shaped to the wants and needs of the community (Edwards, 2009). Edwards (2009) found that on the whole, the community trusted the City Council and its organisations to listen and incorporate citizen and stakeholder input to city planning decisions.

Conclusion

The focus on participatory governance in planning in order to get more legitimate planning decisions has not been the panacea that many authors have held it up to be. This paper and others detail many failures of both the processes used in participation and in participation itself. These failures of participation have led to unmet expectations and distrust of planners and politicians on the part of citizens and stakeholders. Power relationships between citizens, stakeholders and government officials play an important role in participation, trust and governance in local planning.

Trust has previously been proposed as an institution for governance by a number of authors, although not specifically in planning at the local level. Trust as a form of governance has been 'forgotten' in favour of more control-based mechanisms due to the increasingly globalised and networked society we have. However, at the local government or community level, there is still space for trust to become the governance institution of choice. There is great opportunity for citizens, stakeholders and government officials to interact, share knowledge and understandings and engage in dialogue to eventually to positively meet each others' expectations, leading to the development of trust.

One way forward is through getting back to the basics of representational democracy, where decision-makers represent the views, values, wants and needs of the community, rather than representing their own views, those of special interests or party interests. This may be possible through the elimination of party politics at the local level. This is one possible reason why the (previous) Gold Coast City Councils have such a deeply intstitutionalised participatory planning regime, that while only at the placation rung, still engenders trust – the Gold Coast City Council has been run by independent councilors, not representing any particular political party.

With some hard work on the part of citizens, stakeholders, bureaucrats and politicians, trust can become a governance institution for community planning.

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ABSTRACT
Public open spaces have taken on an increasingly complex role in the city. In addition to their social role as the site of urban public life, they are now considered part of the city's "green infrastructure," expected to provide a broad array of ecosystem services such as microclimate regulation, air pollution and noise reduction and water management (Bolund and Hunhammar, 1999). Additional goals include adaptation to climate change and linking natural areas to counter fragmentation and preserve biodiversity (Sylwester 2009). This approach to the planning and design of public open space (POS) has been adopted as urban policy by many cities, often within a suite of related policies. Some of the most prominent examples of green infrastructure guidance include New York City Department of Parks and Recreation's "High Performance Landscape Guidelines 21st Century Parks," (2010) and London's "All London Green Grid" (2011), a follow-up to the "East London Green Grid" (2008).

Green infrastructure is based on the goals of "protecting, restoring and interconnecting the city's ecological structure" (Girling 2005). The GI approach has three defining characteristics. First, the systems approach implicit in the concept of infrastructure stresses the interconnectedness of open spaces to achieve ecological functionality (Benedict and McMahon, 2006). Second, the emphasis on performance suggests that POS must be multifunctional rather than single-purpose, and third, they must be planned to function as a network at multiple, nested scales-- from the region to the neighborhood.

How do these characteristics of spatial distribution, multifunctionality and scale change the conception of POS and suggest new typologies of open space—introducing new forms, configurations and uses? This paper will focus on the relationship of sustainable urban water management (stormwater management, flood control, water supply and waste) to POS in the city.

Keywords: green infrastructure, sustainable water management, water sensitive design, public open space

Introduction: Infrastructure and Public Open Space

In 1904 the Olmsted Brothers produced a new park plan for Baltimore. Their sweeping proposal was to create a new valley park and parkway system along the stream valleys of Jones and Gwynns Fall, connected by parkways to be laid out in the lateral channels. The 1904 report is full of detailed photographs of Baltimore's rolling piedmont landscape, documenting each natural stream valley and noting their subtle differences -- their varied topographies and unique vegetation. (Olmsted Bros. 1904)

Bottomlands are typically the forgotten spaces of the city- wet, unbuilt, neglected, often inaccessible. The Olmsted Brothers' far-reaching recognition of the topographic and hydrological systems as an urban armature recognized the significance of urban stream valleys as a resource at a time when other cities were filling their ravines and culverting their streams in order to build new housing and transportation systems. Their approach represented a prescient floodplain protection strategy, but it also effected a fundamental change in the perception and experience of the city (Olson 1995). The park plan proposal transformed the stream valleys from inaccessible, neglected urban leftovers to unique and valued landscapes, inverting the topographic reading of the city, which, until then, had privileged the hilltops where its landmark buildings were located, and rendered the stream valleys invisible.

The Olmsted Brothers' park plan provides an early example of a hydrologically based urbanism. The management of water has always played a key role in the development and form of cities, whether for the supply of fresh water, the provision of drainage or protection against flooding. This basic relationship between water systems and urban form was eroded in the modern city. Modern water technologies are no longer legible; the visible elements that were once centers of social life—wells and cisterns, street fountains, and aqueducts—have been replaced by invisible systems, either remote or underground. The relationship between urban functions and the natural environment has become opaque. This is a result of a profound cultural change. If once engineering and urban design were intimately connected, became increasingly autonomous with the rise of professional specialization in the 20th century. Functionalism and efficiency were seen as ends in themselves, divorced from civic meaning. The planning and production of infrastructure has become increasingly technocratic and standardized, losing its connection to the environment (Shannon 2010).

With the increased scale and complexity of urban infrastructure projects, landscape architects have turned their attention to the reintegration of infrastructure with the city and its landscape in order to address ecological, functional, aesthetic and social concerns (Strang, 1992, Rosenberg 1996, Allen 1999, Raxworthy 2004, Belanger 2009, Shannon 2010, Hung 2011). The interest in infrastructure landscapes has emerged to reintegrate engineering and urbanism and "instill purpose, legibility and cohesiveness" (Hung 2011, 15) through site-specific solutions that are integrated into the landscape. This focus

parallels the development of ecological design, as influenced by the new conceptual frameworks introduced by the subdiscipline of landscape ecology in the 1980s.[1] The relationship of ecology and infrastructure landscapes reframes landscape architecture by foregrounding two key ideas: landscape *performance*, and the conceptualization of the landscape as a *network.* Performance characterizes the landscape as working landscape that can be empirically evaluated for achieving specific goals: "As a nonisolated system, landscape infrastructure has the ability to adhere to a set of requirements and achieve measurable results" (Hung, 2011, 17). The network concept stresses that landscapes operates as systems, not as discrete "objects" or "scenes." **"**Infrastructure is a connective tissue that brings together disparate elements, instilling cohesion and purpose. The sheer scale and vast resources spent on network infrastructure present tremendous opportunities to leverage unrealized potential in the urban environments. ." (Hung, 2011, 18)

A parallel discourse has developed among planners around the concept of "green infrastructure." Green infrastructure is 'an interconnected network of green space that conserves natural ecosystem values and functions and provides associated benefits to human populations' (Benedict and McMahon, 2002,12). The GI approach is based on

[1] Ecologist Y. Haila writes: "Landscape ecology originated as a new research program in the 1980s, in a way as an amalgamation of all these theoretical developments (Wiens 1995b): a uniform Cartesian space was replaced with environmental heterogeneity; equilibrium assumptions were replaced with spatial and temporal variability driven by nonequilibrium processes in various scales; and an unquestioned search for universal regularities was replaced with the acknowledgment of spatial and temporal specificity of ecological processes. New hypotheses were suggested about non-equilibrium processes determining landscape dynamics." (Haila 2002, 349)

the goals of "protecting, restoring and interconnecting the city's ecological structure" (Girling 2005). Although the term has a wide range of definitions (Sylwester 2009) it can be said to have three main defining characteristics. First, it is based on identifying and working with the city's existing ecological structure. The systems approach implicit in the concept of infrastructure stresses the goal of interconnecting open spaces to achieve ecological functionality (Benedict and McMahon, 2006). Open space must be planned to function as a network at multiple, nested scales, from the region to the neighborhood. Second, the emphasis on performance suggests that POS must be multifunctional rather than single-purpose.

Public open spaces have taken on an increasingly complex role in the city. In addition to their social role as the site of urban public life, they are now considered part of the city's green infrastructure, expected to provide a broad array of ecosystem services such as microclimate regulation, air pollution and noise reduction and water management (Bolund and Hunhammar, 1999). Additional goals include adaptation to climate change and linking natural areas to counter fragmentation and preserve biodiversity (Sylwester 2009). This approach to the planning and design of public open space (POS) has been adopted as urban policy by many cities, often within a suite of related policies[2]. This paper will discuss the emerging field of sustainable urban water management

[2] Some of the most prominent examples of green infrastructure guidance include New York City Department of Parks and Recreation's "High Performance Landscape Guidelines 21st Century Parks," (2010) and London's "All London Green Grid" (2011), a follow-up to the "East London Green Grid" (2008).

(stormwater management, flood control, water supply and waste) in relation to the planning and design of urban POS. As distinct from conventional approaches, the integrative perspective of sustainable urban water management, which brings together engineering, hydrological, ecological and urbanistic perspectives, demands new holistic frames of analysis (Hill 2009). I will look at how sustainable urban water management suggests new planning and design approaches to POS using the central tenets of green infrastructure, with a focus on hydrological functionality. These tenets are based on the following concepts: 1) landscape structure and the principle of decentralized spatial distribution; and 2) multifunctionality. I will show how these sets of ideas suggest the ways in which hydrology can become an armature for urban form and POS, and how, in turn, POS may take new forms and suggest new configurations and uses.

Sustainable Urban Water Management: WSUD/LID approaches

The growth of cities has had a dramatic impact on aquatic ecosystems. The substantial increase of impervious surfaces has had a direct effect on increasing urban runoff volumes, rates of discharge as well as overall affecting water quality. These three processes have in turn, decreased infiltration, caused erosion, sedimentation, and loss of aquatic habitats. Sustainable urban water management approaches have reoriented conventional engineering approaches to stormwater management from an almost exclusive emphasis on drainage and conveyance, aimed at flood prevention and protection of property, to broader set of goals based on ecological functionality of

terrestrial and aquatic ecosystems. (Prince George's County, MD, 1999). Several approaches developed in parallel. Here I will refer to the techniques of Water Sensitive Urban Design (WSUD) which developed in Australia (Wong 2000, 2006) and Low Impact Development (LID) which developed in Prince George's County, MD, USA (Prince George's County, MD, 1999.) The goal of LID is not only to reduce the negative impacts of stormwater runoff, but to create an ecologically functional landscape that mimics natural hydrological functions (discharge, frequency, recharge and volume) and seeks to replicate predevelopment hydrology by designing hydrological functions into the site design. LID is based on small-scale, "source controls" of runoff dispersed in the landscape that minimize the need for storm drain piping and pond solutions. Additionally, it encourages multifunctional site design that maintains and restores terrestrial ecological processes necessary to protect the ecological integrity of the receiving waters—stream stability, habitat structure, base flows and water quality (Prince George's County, 1999, 5). WSUD emphasizes the integrative framework of stormwater management with the broader planning and design of the contributing urban area. (Wong, 2000): it "provides a common and unified method for integrating the interactions between the urban built form (including urban landscapes) and the urban water cycle." WSUD considers the water network as a whole, including potable water supply, stormwater and wastewater. In addition to treating stormwater, WSUD aims to reduce potable water demand and encourage treatment of wastewater to a standard suitable for re-use. (Wong, 2006).

Landscape structure and hydrological function -decentralized spatial distribution

Similar approaches to water management have developed contemporaneously in the US, UK, Australia, Japan and Israel (Carmon and Shamir, 2009). However, the planners, designers, and scientists involved in its application frequently do not share the same analytical frameworks (Hill, 2009). Each tend to use a distinct frame to guide practice: the "regulatory frame," in which social and legal structures are mapped and assessed; the "site frame," which is focused on the design of site-scaled best management practices, and the "geography-based frame" which stresses the water system as a network within a dynamic mosaic (Hill 2009). Hill notes that although these frames are not necessarily mutually exclusive, they are often applied as if they were. She proposes a landscape-based integrative framework that creates overlap across all three, based on hydrological function. The model identifies three kinds of sites: *upland* (where stormwater is first generated); *network* (linear concentrations of flows, such as streets) and *shoreline* (receiving waters). This model references the flow of water and adds directionality to the system. It also expands the sites of intervention and identifies sites according to their strategic locations in the watershed. For example, while most interventions now take place at the source (upland sites), network and shoreline sites may offer greater benefit due to their larger catchment areas and thus reduce downstream impact.

This model identifies the strategic relationships between the site scale and the overall watershed, recognizing the essential interconnectedness of interventions at multiple scales

from the individual lot to the precinct, with regard to their corresponding scales of catchment: from micro-catchment to the watershed. This analytic frame also suggests that there may different kinds of design approaches to POS that correspond to the scale and location of each of the three types, with some being site-specific, one-off designs while others, such as the network type, may be more prototypic and system-wide. Examples of prototypic network applications in city streets are the Green Streets in Portland, and Street Edge Alternative (SEA) streets in Seattle, which began as a pilot project and has since been replicated and adapted throughout the city.

The decentralized spatial distribution that defines sustainable water systems lends itself to retrofits in existing urban voids, creating new interstitial neighborhood POS that can provide social or productive functions such as play spaces or community agriculture.

Multifunctionality

The principle of multifunctionality calls for enrichment of urban space with multiple programs and purposes. In his discussion of urban parks, Michael Hough highlighted the need for "multifunctional, productive working landscapes": "Urban land as a whole will be required to assume environmental, productive and social roles in the design of cities, far out-weighing traditional park functions and civic values." (Hough 1995, 31). This hybrid conception of urban space allows for new combinatory programs and imagines a new kind of mixing in which open space serves multiple roles. Thus, in

addition to providing storm water management, open space may also serve social, cultural, environmental and economic roles, by creating habitat and increasing biodiversity, controlling microclimate and contributing to community revitalization. (Wiggering 2003, Hung 2011).

Village Homes in Davis, CA, designed by Michael and Judy Corbett in the early 1970s, is an interesting early example of a sustainable community that was designed to promote energy conservation and use of solar energy, walking and bicycling, neighborhood agriculture and natural drainage. The community consists of 242 single- and multifamily residences on sixty acres. (Francis, 2002). There are several types of open space, including including private gardens, common areas, agricultural lands, and sports turf that incorporate the use of native or edible plants. All stormwater is managed in an open system as surface flows that allow for infiltration. The surface stormwater system structures the overall plan of the housing and open space network, providing pedestrian circulation and a continuous network of public open space. In the dry months this area doubles as children's play spaces (Francis, 2002). Other playgrounds use permeable surfaces (sand), and are intended to double as stormwater storage areas. Close to $200,000 in development costs were saved by eliminating conventional storm sewers, which covered most of the landscape costs (Francis, 2002). In addition, the planners fought hard to narrow the streets from the accepted standard widths of 44 ft. (13.4 m) down to 23 ft. (7 m.) in order to minimize impervious paved surfaces. Road surfaces amount to a total of 15% of the overall area, as compared to 22% average in the

surrounding area. The multifunctional approach to stormwater management allowed the system to provide an armature of POS to the community.

Conclusions

By approaching the design of water as an integral element of urban design , it can be reintegrated into the visual and spatial experience of the city. In this way, water infrastructure can once again become a source of civic meaning instead of being relegated to a separated functional realm: expressive, sensate, present. The return to the design of the utilitarian landscape celebrates the interrelationship between natural systems and everyday urban life.

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Place-Based Crime Prevention Planning: Cultural Constraints and Applicability in the City of Abu Dhabi, UAE

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Abstract

Place-based crime prevention planning approaches have been widely employed for combating crime and fear of crime in large metropolitan areas within the US and UK (Schneider and Kitchen, 2008). Despite their fair share of criticism, these approaches have demonstrated success in making communities safer, and have been utilized repeatedly by law enforcement agencies in tandem with urban planners to combat crime. During the last decade, middle-eastern countries and particularly Gulf Cooperation Countries (GCC) have witnessed an increase in crime rates as a result of tremendous growth in metropolitan areas. This growth has been accompanied by large increases in populations and changes in societal and cultural norms due to the large influxes of migrant workers. As a result, law enforcement and regulatory government agencies are paying more attention to crime prevention planning approaches such as CPTED. This paper examines the applicability of place-based crime prevention planning approaches within the cultural context of the middle-east. It explores if these concepts work, are effective, and to which extent could succeed in reducing crime rates. The focus area for the study is the City of Abu Dhabi - the capital of the United Arab Emirates. The city is growing at a rapid pace, and the population is expected to double within the next 15 years reaching a figure of 3 million people. The paper concludes that that place-based crime prevention planning approaches do have a potential to work within such contexts, yet do run into certain cultural barriers that prevent a direct application in favor of a more-customized application of these concepts.

Keywords: Crime Prevention, Abu Dhabi, Middle East, CPTED, Defensible Space

Introduction:

The United Arab Emirates – similar to other Gulf Cooperative Countries (GCC) - has historically had very low crime rates as result of its small population count, and high per-capita incomes due to its oil based economy (OSAC, 2011). During the last decade, the UAE gained importance as a as the result of the huge investments in infrastructure initiated by the government in an attempt to position the country to be an economic and

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cultural hub. As the growth continued, the country witnessed an influx of expatriates seeking employment opportunities, with the vast majority of these expatriates working in the construction, services, and banking industries.

The city of Abu Dhabi, the capital of the UAE has witnessed significant growth as a result of the aforementioned dynamics. The capital is home to around 1.2 million people as of 2011 (SCAD, 2011), and is projected to reach a population of 3 million by 2030 (UPC, 2008). With these current and projected increases in population, the city is growing in size at a rather fast rate, and the country's society is changing at an even faster one. With the large influx of people, the once traditional Emirati town has become a sprawling, diverse and multi-cultural city, along with a whole new range of urban challenges and problems- including crime.

In attempt to direct the city's growth, a number of government planning initiatives and agencies were established. More recently, more attention is being given by the authorities to the issue of crime prevention planning especially since long-range planning is currently underway. As a response, this paper attempts to shed some light on placed-based crime prevention planning approaches. The paper will explain some of the theoretical concepts behind crime as it relates to the built environment. It will also discuss relevant issues within Abu Dhabi's urban planning scene and society.

Theoretical Considerations: Crime and Community

High levels of crime continue to affect the quality of life for large numbers of people within large metropolitan areas, especially those living in neighborhoods exhibiting trends of decline. Traditionally, and especially in the US, higher levels of crime have been associated with neighborhoods of lower socio-economic status, (Bursik, 1988; Samposn et al, 1997). Still, research over the past few decades has shown that low socio-economic status is only one part of the bigger picture. Other important elements have to be present for the rapid decline, and the higher levels of crime to emerge. Furthermore, not all such neighborhoods are equal in the levels of crime; some have average crime rates when compared to other neighborhoods with more affluent inhabitants, even lower in some cases (Sampson and Groves, 1989; Bursik and Grasmick, 1993; Sampson et al, 1997).

Probably one of the most important elements affecting neighborhood decline and crime levels could be the strength of social ties within the community as outlined by the social disorganization theory and its supporters (Shaw and McKay, 1942, 1969; Bursik, 1988; Sampson & Groves 1989; Bellair, 1997; Sampson et al, 1997; Sampson and

Raudenbash, 2004). According to this theory, social disorganization takes place when social relations within a neighborhood weaken significantly; this leads in most cases to a failure of the informal social control process that would otherwise inhibit crime and disorder within the neighborhood community (Skogan, 1986; Sampson & Groves 1989). In other words, when social ties weaken within a neighborhood, residents no longer can act collectively to control what goes-on in the streets and public areas. The most crucial point here is the failure to supervise or discipline groups of young teenagers engaged in disorderly conduct within the public realm, or even identifying and challenging suspicious strangers within the area. Once this social control aspect is weakened or no longer exists, the area becomes even more welcoming for criminal behavior. Problems such as public intoxication and drug dealing usually become more evident making the area even more attractive for other offenders. This process usually forces residents to withdraw from communal life, and increases the levels of fear while further accelerating the neighborhood decline process. Physical signs of neighborhood decline such as graffiti and abandoned structures contribute greatly to this process also, as will be discussed later in this review (Shaw & McKay, 1942, 1969) Skogan, 1986; Sampson and Raudenbash, 2004).

As for the causes of the social disorganization process, Shay and McKay (1942, 1969) identified socio-economic deprivation coinciding with a concentration of immigrants (community heterogeneity), and residential mobility as the main ingredients for social disorganization. This notion has been supported by the literature over the years despite its fair share of critics, and it still seems to be gaining importance today (Kornhauser, 1978; Skogan, 1986; Bursik, 1988; Sampson & Groves 1989; Bellair, 1997; Sampson et al, 1997; Sampson and Raudebash, 2004; Martinez et al, 2008). Looking at these components closely, socio-economically deprived areas in western societies usually have a high concentration of lower income residents, especially immigrants, migrant workers, and minorities, in addition to female-headed families. Such residents lack money and resources, and are usually socially and economically isolated, therefore cannot easily come together for collective action within their neighborhoods (Sampson et. al 1997). They are also hard to mobilize and lack the ability to secure public goods and services from outside city agencies such as the police department or the city (Bursik and Grasmick, 1993).

On the other hand, it is very common to find a high number of new migrants, in socio-economically deprived or declining neighborhoods. The rental prices are usually cheap compared to other areas, and there is usually little documentation required to rent, with minimal intervention from the authorities. This heterogeneity of the community could

impede the residents' capacity to realize mutual values; it also makes communication between the different residents harder due to language and cultural differences. Furthermore, racial and ethnic tensions between the different neighborhoods groups could exist. This contributes to the weakening of the social-ties, and the increase in crime levels (Shaw and McKay, 1949, 1967; Sampson et. al 1997). It is important to note here that new immigrants in general tend to report crime less to authorities, as they are usually fearful of both the authority and retaliation. Also cultural considerations could make reporting certain crimes -such as rape- shameful, only to increase levels of crime and fear even more (Davis & Erez, 1998)

Finally, residential mobility is the third ingredient in the social disorganization theory. Residents of such disadvantaged neighborhoods usually consider them to be "zones of transition" until they can afford financially to move to a different area. This notion is especially true for migrants, whom usually have very limited economical standings initially. Neighborhood ties are very hard to emerge within such conditions since the residents are mostly un-interested in the neighborhood, and do not consider it home. Also, the continuous changing of residents within the area greatly weakens the chance of any significant ties to emerge, since such ties require a long time to emerge (Shaw & McKay, 1942, 1969; Korhauser, 1978; Sampson & Groves 1989)

Crime and the built environment: place-based crime prevention planning

"One broken window leads to many!" (Wilson and Kelling, 1982, p5)

The built-environment is an important element that could potentially influence crime levels, or fear of crime within city neighborhoods. Although not a cause of crime by itself, it could play an important role in encouraging it, or determining where it takes place, especially when the conditions for social-disorganization are ripe within an area. Over the years, a number of theories emerged that linked the built-environment to crime. Known as place-based crime prevention theories (Schneider and Kitchen, 2002; 2007), they hold a common premise which is the importance of community strength, involvement, and self-policing in the reduction of crime and fear of crime, in additional to the physical features and condition of the built environment.

One of the main theories linking the built environment to crime was Defensible Space theory, as first introduced by Oscar Neman (1973). Influenced by the writings of Jane Jacobs (1961), and Elizabeth Wood (1961), Oscar Newman developed Defensible Space after his studies of a number of public housing projects within the US. He noticed that certain design layouts and features seemed to contribute the higher levels of crime

within the areas of study. Newman suggested that designs which encourage territorial behavior and natural surveillance, while also having clearly defined areas of responsibility and good maintenance, could deter disorderly behavior and crime within the public space, especially since residents of such environments will have better control over them (Newman, 1973). The theory has had its share of critics (Mayhew, 1979; Booth, 1981; Merry, 1981), yet it has gained importance and acceptance over the years, with a number of real life applications especially in the public-housing sector (Cisneros, 1995).

A second major theory in place-based crime prevention is Crime Prevention Through Environmental Design, better known as CPTED. Developed by C. Ray Jeffery in 1977, and later expanded by Timothy Crowe (2000). Although distinct from Defensible Space, it shares similar concepts of natural surveillance, boundary definition and image enhancement, but is not specific to public housing or housing in general. The theory has had wide support and adoption from law enforcement agencies in the US and the UK, while also providing some significant real life results (Schneider and Kitchen, 2002). Originally, CPTED was considered to be more comprehensive than Defensible Space since it expanded beyond the environment-only focus to include issues of public-space management, activity generation, and communication between the different neighborhood parties (Crowe, 2000; Schneider and Kitchen 2002; 2007). Today, the CPTED theory and practice have been moving away even more from the limited built-environment only focus, to include themes such as sustainable design, urban meeting places, community and youth participation, and human scale neighborhoods. This expansion of the theory has been known as 2nd Generation CPTED (Cleveland & Saville, 2003, Schneider and Kitchen, 2007)

A third theory, and probably one of the most famous theories relating to crime and the built environment is the "Broken Windows Theory", by Wilson and Kelling (1982). According to its authors, the first signs of decay within the neighborhood environment, will soon lead to disorderly conduct and crime if remained unchecked and uncorrected. An unattended, crumbling built-environment or a building with broken windows will soon indicate that no one cares about the area; the same applies to the unchecked panhandlers on the street, or disorderly youth – all could be considered broken windows. Once these problems are not corrected, they could signal to potential offenders that the risks of being stopped, or held accountable within the area are low; in other words, no one cares within the neighborhood. This could increase crime and fear of crime rapidly within the area (1982).

The theories discussed here briefly are some of the most famous place-based crime prevention theories within the US context. A number of other theories/guidelines of equal importance have emerged in the US and Europe over the years. Examples of these are Situational Crime Prevention by Clarke (1997), Routine Activity Theory by Cohen and Felson (1979), and 'Secured by Design' program in the UK, in addition to others (Schneider and Kitchen, 2002; 2007). Despite their differences, they share some of the basic premises of the three theories discussed here, mainly that a poorly designed and poorly maintained built-environment could encourage delinquency and criminal behavior, increasing by that crime, fear of crime, disorder, and neighborhood decline.

Land-use and crime

When examining residential neighborhoods, the literature indicates that certain non-residential land-uses, could contribute to the neighborhood decline and higher levels of crime in some cases (Taylor and Gottfredson, 1986; Taylor et al, 1995; McCord, 1997). The impact level of such land-uses varies depending on the types and distribution of these land-uses. It also depends heavily on the context, neighborhood layout and design, socio-economic conditions, and existing crime levels. (Sampson & Raudenbush, 2004; Wilcox et al 2004).

The non-residential land-uses could contribute to the decline in a number of ways: First, and relating to informal social control networks, non-residential land-uses breakup or weaken these networks since they represent a break in the residential fabric. Generally speaking, a resident of the neighborhood will keep an eye on the area continuously vs. a business owner who only observes the vicinity of his business during business hours. Secondly, these businesses attract large numbers of strangers to the neighborhood, which usually undermines residents' abilities to identify who-is-who, especially identifying those with criminal or suspicious behavior (Brantigham & Brantigham, 1993; Taylor et al, 1995).

The type of land-uses complicates this issue even further; for example bars and shops selling alcoholic beverages contribute to the disorder within area as a result of alcohol consumption by their clientele, as could Motels. Vacant lots, parking garages, and abandoned buildings could become hangout spots for youths and a base for disorderly behavior; they also affect the area's image negatively. High Schools also are generators of groups of youths and have similar impacts. Finally, discount stores, pawn shops, and convenience stores are traditionally places for suspicious transactions, therefore could attract even more criminal activities (Brantigham & Brantigham, 1993; Wilcox et al., 2004).

Meanwhile, planning decisions, especially those relating to positioning transportation networks add to neighborhood problems in some cases. Crime rates are usually elevated near major streets and highways, or with grid-style roadway networks within residential neighborhoods. These transportation routes increase neighborhood permeability, and allow easy access and escape routes for strangers and offenders therefore contributing to disorder, and making it easier for crime to occur (Brantigham & Brantigham, 1993; Newman, 1996; Schneider & Kitchen, 2007). Furthermore, transportation hubs such as bus stations, metro, and train stations could increase the levels of crime and fear of crime within an area. These points represent what is known as crime 'hot spots', as they attract large numbers of offenders. For example metro stops potentially weaken residents' ability to recognize strangers and control their environment, due to the high traffic they create. They also attract criminal activity due to this high traffic which translates into more disorderly conduct and opportunities for crime. Examples of this would be an increase in pan-handling, public intoxication, drug dealing, pocket-picking, and violent crimes in the vicinity of transportation hubs (Sideres, 1999; Mcord et al, 2007).

Crime rates and law enforcement in Abu Dhabi

Detailed crime statistics are not available to the public in the UAE. Instead official crime rates figures are only released through official government statistics which do provide for a brief description of crime categories. Internationally, the UAE is consistently ranked in the lower percentile of countries throughout the different crime categories. For example, when comparing the UAE (Population 8.5million) to Sweden (Population 9 million) the robbery rate per 100,000 was (11.9) for the UAE vs. (94.4) for Sweden. This trend continues throughout most crime categories (European Institute for Crime Prevention, 2010)

In Abu Dhabi emirate, latest government statistics indicate that there were around 63,005 reported crimes, out of these 59, 673 were considered misdemeanors, and 1,791 were considered felonies. When looking at the city of Abu Dhabi only, the city was responsible for 63% of all reported crimes, which totals to around 39,693 reported incidents (SCAD, 2011). No break-down of crimes by type is available, but in general serious crimes (both violent and nonviolent) such as murder and robberies remain very rare and far apart.

Community characteristics with implications for crime

The community composition in Abu Dhabi is a complex one due to the large influx of expatriate workers seeking employment. Out of the total 1.2 million residents of the city

and its suburbs, only 20% are nationals - a figure which translates into roughly 200,000 UAE nationals and around 1 million expatriates (SCAD, 2011). Furthermore, the majority of expatriates in the UAE originate from South-Asian countries, including India (1.75 millions), Pakistan (1.25 millions), and Bangladesh (500,000). The remainders of the expatriate population are mostly of Arab, European, and North American origins (Gulf News, 2009).

In addition to this very diverse community, the income levels are also very different depending on profession and nationality in some cases. The UAE in general (and Abu Dhabi in particular) has one of the highest average per capita GDPs in the world (88,000$ as of 2009) (SCAD, 2009). The income levels for the nationals are significantly higher than the average national GDP due to major business activity and investments, in addition to government assistance and job placement programs. On the other hand, the majority of the expatriate workforce consists of blue collar workers - either skilled or unskilled- with most of the unskilled working in construction industries. These 'unskilled' workers receive very low monthly salaries in comparison to the national GDP, and mostly originate from the countries mentioned earlier. The professional expatriates though do receive competitive salaries which are on par with the country's nationals in some cases.

The substantial cultural differences between the country's nationals and this colossal group of foreign workers create significant tensions in the city's communities – weakening by that the sense of community. The presence of large numbers of mostly male, bachelor workers living next door to Emirati and other expatriate households has proven to be a point of discontent for the (Gulf News, 2012). In a country with traditionally conservative Muslim and Bedouin-derived traditions, gender sensitivities are expected to be adhered to within the public realm and issues like the harassment of women (even if minor and even if perceived) are not taken lightly. This tension has forced the authorities to intervene, and adopt extreme measures such as moving the workers out of the city and into worker only housing projects in the suburbs. Workers for the most part are treated with mistrust in the city, and are accused of being responsible for robberies, violent crimes, noise, littering, begging and even diseases in some cases, although as evident from the crime rates, such perceived threats are hugely exaggerated. One more important point to be added here is that most work contracts in the country are renewed on a three year basis –if not shorter, and there are no paths towards citizenship and permanent stay in the country. This is further complicated by housing market and rental value fluctuations. These conditions create a very mobile society, and make it very hard for strong communal ties to emerge. These elements

collectively create a classic scenario of social disorganization as described by Shaw and Mckay.

Built-environment conditions with implications for crime

Abu Dhabi is an island city, surrounded by water from three directions and has a very limited usable land-mass. Historically, city planning was not a top priority for the local officials, and zoning codes were very relaxed – only to start changing recently (UPC, 2007). As the population exploded during the last decade, the city became very congested. Buildings began expanding vertically especially with the limited available land. As a result, two main housing typologies appear to be the norm: residential towers which include a retail component on the ground floor, in addition to office space in some of the towers. Residential villas are the second main housing typology in the city. Villas are usually inhabited by the local population due to the higher cost and high rental values. In some cases, these villas are also converted in office space providing for no separation between residential, commercial, or retail land uses. This mix of land uses threatens the residential character of the different neighborhoods, weakens the sense of community, and makes it harder for communal ties to emerge. Residential neighborhoods are filled with shops, workshops, car repair facilities, and offices –even some government offices are located in some converted residential villas (Figure 1). Despite the convenience of these arrangements, this makes it extremely hard to recognize who is a resident vs. a passer-by or in the area for business reasons. This could lead to an increase of crime rates, especially as the population continues to increase, and if economic conditions take a turn to the worse.

Figure 1: Mixed land uses create a chaotic environment in the city. Source (author)

The transportation networks within the city are another challenging factor: the city as a whole is completely dependent on the automobile due to higher income levels, cheap gasoline, weather severity, and the absence of meaningful public transport networks. The street networks follow a grid system even within residential areas. Parking is a huge problem within the city due to the abundance of cars, and no requirements for parking garages in the residential towers until recently. This resulted in streets that are packed with cars parked on both sides and on the sidewalks or in the middle of the streets in some cases (Figure 2). These elements only add to the sense of chaos in residential neighborhoods, and lead to declining neighborhood images and signs of 'disorder'.

Figure 2: Car parking in the residential areas. The residential towers have no parking arrangements. Source (author)

The design of residential villas is also an issue with implications for crime. Firstly, adjacent residential plots are divided by a narrow right-of-way strip of land as dictated by the municipality requirements. This right of way requirement designed for utilities resembles an alley, and soon becomes an area of neglect and an access point for people filtering through the neighborhood (Figure3). In some cases, some residential villas use at a storage area which affects neighborhood images even more. Secondly, due to privacy and cultural constraints, residential villas are surrounded usually by high walls to maintain privacy. These walls act as a double edged sword since they block residents from observing their neighborhoods as encouraged by the concept of ‘eyes on the street’.

Figure 3: Typical right-of-way area between residential villas. Source (author)

Causes for reduced crime rates and is crime prevention planning needed?

Despite all the problematic aspects mentioned above, crime rates appear to be very low as discussed at the beginning of the paper. This is rather contradictory considering that the social and environmental conditions appear to be conducive of criminal activity. Crime occurrences remain rather rare, and fear of crime is not an issue often mentioned (further research will explore this in the future papers). The reasons for this could be multiple: Firstly, unemployment levels within the emirate of Abu Dhabi are relatively low, especially within the expatriate population (around 6% as of 2008) (SCAD 2011). This could be mainly the result of a solid economy and immigration policies where residency in the country is tied directly to employment. Secondly, most those living in Abu Dhabi and the UAE in general are residents of the country for economic reasons. Any criminal activity could lead to job loss and deportation (Ministry of Labor, 2001). Most of expatriates, even those on the lower end of the economic spectrum will most likely not risk losing their jobs since a good majority of expatriates support family and

investments in their home countries through remittances. Thirdly, Abu Dhabi has a modern, well equipped police force, with a strict law enforcement regime. Otherwise minor issues such as public intoxication could lead to jail time (The National, 2010). Finally, as a majority Muslim society with a strict religious outlook, certain cultural constraints such as the ban on alcohol consumption (for Muslims) and the ban on public drunkenness for could have an impact on crime. Dress code regulations, conduct in public places, and strict punishment are all elements that could help keep crime rates at bay.

Considering these previous points, crime prevention planning might not be an immediate necessity, but as the population grows and social norms change, and if the population of Abu Dhabi doubles by 2030 as expected, applying these principles in new developments could prevent future problems within the city. More importantly of some concepts in existing neighborhoods could help reduce signs of disorder which are rampant especially within the older residential areas.

Conclusions: limitations on current place-based crime prevention in Abu Dhabi

In order for place-based crime prevention planning to work as outlined by its principles and theories, the built-environment factors within the residential areas should be conducive to the strengthening of community ties. In the current conditions within Abu Dhabi, and if the principles were introduced into the existing built environment, they might have a very minimal impact – if any, and for a number of reasons. First of all, a separation of land uses within the residential neighborhoods is crucial. Though most modern urban planning theories encourage smart growth and the mix of land uses (Congress of New Urbanism, 2001), the current status in Abu Dhabi is rather odd as it has too many retail and commercial facilities within residential area (too many eyes on the street!). Secondly, overall improvements in the built environment should be introduced - these include parking solutions and open space improvements otherwise the signs of disorder will remain rampant. Finally, the traditional building practices and some current zoning and building practices should be revised. Residential plots should be adjacent and the neglected right-of-way parcels between residential villas should not be the norm. Also, regulations pertaining to the exterior of residential villas, especially the heights of outside walls and fences should be introduced.

As the built-environment issues are addressed, two main obstacles remain. First, the transient nature of the society and its large number of workers are serious impediments to community development. These will remain mostly unchanged unless serious changes to employment conditions and immigration policies take-place. This change is a highly

unlikely to happen within the near future. Secondly, crime prevention planning principles rely heavily on the activeness of the residents of an area, their sense of vigilance, and their willingness to come together with others living nearby. This might be the hardest element to materialize due to gender-related cultural constraints, language barriers due to the heterogeneity of society, extreme weather conditions which limit the usage of communal space and an added layer of maids, butlers, and drivers whom act as a buffer between different neighborhood residents. These cultural aspects are unlikely to change any time soon, and remain one of the biggest obstacles to successful implementations of crime prevention planning principles.

Nevertheless, planning for the road forward, and considering these principles in current and future developments within the city is the way to go. The principles are simple to apply, and have benefits beyond crime prevention. They are logical, and do improve the quality of residential areas. Most importantly, they help combat disorder in the built-environment, which is the biggest issue Abu Dhabi is currently facing.

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Centralization and Peripherization by Urban Renaissance Policies in the Polycentric Kansai Region, Japan

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Introduction

The structural dynamics of the Japanese urban and metropolitan development, similarly to many other highly developed countries in a post-industrial structural change of the national economies, is currently strongly influenced by a spatial and functional resetting, led by the urban renaissance (UR) strategies. In many cases, the UR analysis concentrates on the physical city core developments, without taking in account the larger metropolitan and governmental context. This paper is examining the emergence of new spatio functional disparities arising on behalf of centralisation and peripherisation within Kansai metropolitan area, occasioned by the implementation of Japanese national UR policy on the polycentric metropolitan Region of the cities of Ôsaka, Kyôto and Kôbe. The focus is initially directed on how the national government led UR policy influences the regional and local level. We further ask whether the UR policy on different governance levels of the polycentric structured Kansai-Region leads into new forms of regional and local peripherization and centralization of urban functions.

General conditions of the UR in current Japan

The UR policy is usually seen as a local, but state supported conceptual reaction on the effects of post- industrial structural shifts on central urban areas, where low dynamics of the urban economy at the beginning of the post-industrial era within highly developed economies, accompanied by changes in the traditional employment patterns based on the long-term-stability of industrial production and related services, and the peripherization of residential functions lead to a stronger social and economical disparity effects within central urban areas (cf. Allin et al. 2004; cf. OECD 2003). Parallel to this, a strong international competition among cities in the context of globalization creates a pressure on positioning on a global scale (BMVBS

2011). As redistributional means of capital are reduced due to economical stagnation, shifts in the urban and metropolitan governance arise, aiming towards a selective distributional pattern of large projects in order to create positive "hot spots" effects within the central city areas instead of aiming on an spatially even welfare redistribution and spatio-neutral urban development policy, using measures of deregulation and location-specific investment. It is defined as a property-led regeneration and often seen as "privatization of urban policy". (DiGaetano/Strom 2003). On the other hand, regional players often tend to ballance uneven development or ist negative effects by securing services for the public etc. However, usually central government plays a direct role in decisions regarding public and private stakeholders and enterprise zones participating in the UR process (cf. Hall / Tewdwr-Jones 2011; cf. Imrie / Thomas 1999).

In the Japanese case, the UR term is used widely as a tool of the state urban development policy, including the national housing policy estates, safety measures in catastrophe protection and many others. However differing the implementation is, the Japanese Urban renaissance law of 2002 defines two kinds of UR "policy": the machizukuri-type, aiming on a close cooperation with citizens in order to improve local quality of urban communities' life in cities of all sizes and locations, and the toshi-keikaku type, aiming on international competitiveness of large cities by fundamental urban restructuring in a close coalition with the private sector. In terms of investment volumes, centrality of location and the spatial as well as functional effects, the pro-growth toshi-keikaku type prevails, using, among others, special urban use zoning bonus and rules in order to steer private investments into centrally designated areas of a strong growth potential by offering closed-shop negotiations about FAR bonus between investors, the city authorities and the national government (cf. MLIT 2012).

Roots of the UR policy in Japan

As urban policy in Japan is traditionally closely connected to the economic policy, the role of the Japanese state in the planning always remains strong (Hohn 2000, Feldhoff 2002). During the post-war period, the policy of so called „Japanese developmental state" (JDS) followed by the Liberal Democratic Party (LDP), which was leading Japan nearly continuously between 1955 and 2009, was marked by a stable political-bureaucratic elite, strong enough to deter interest groups from undermining economic growth, a planning agency that guided relations between public and private sectors, substantial investment in mass education, equitable income distribution, economic intervention through market incentives and strong concerns with a

national security in the world order (cf. Johnson 1987 Fujita/Hill 2003, Fujita 2011). To a certain level, this policy was preventing from the peripherization of weak, mostly rural areas and the concentration of development and capital in the strong, mostly metropolitan areas, especially Tôkyô (cf. Seta 2002 & Sorensen 2011). On the other hand, the JDS was based on a strong japanese "iron triangle" (Feldhoff 2002) consisting of selected members of the parliament, high subgovernmental and private companies management officers, who coordinated the national and regional development by steering distributive state investment incentives. (Tsukamoto 2012). Such system also continuously strengthened the agglomerations and industrial areas especially within the Japanese urbanization belt between Kantô (Tôkyô) and the North-Kyûshû, including also the metropolitan Areas of Aichi (Nagoya) and Kansai. On the other hand, it depended on redistribution to prevent peripherization and therefore to ensure stable and enduring political preferences in the rural areas which, within the Japanese voting system, were privileged in vote counts against the city population.

Even before the introduction of the UR policy, the Japanese planning policies and laws showed a long deregulation tradition led by the developmental state, especially when it came to urban redevelopment. In 1961, the Special Block System[1] enabled to redevelop city blocks into large super-block projects, reacting on the most development difficulty caused by scattered use and ownership, mainly contributing to the reshaping of central areas of cities by larger mono- and polyfunctional modern structures. Three years later, a first Incentive System was introduced, aiming on the claim for open space and infrastructure by providing bonus FAR in exchange for building setbacks. The bonus system was the initial direct step towards an incentive planning deregulation policy in Japan, which until today remained one of the most fundamental steering tools of the Japanese urban planning system. Together with the Urban renewal Law of 1969[2], which regulated the replacement of previous structures by new using measures of ownership transfer, it allowed to reshape the urban area's city structure by concentration of urban functions such as residence, commerce and services into large multifunctional buildings especially in the central urban areas. A Comprehensive design system[3] added the negotiate agreement on FAR bonus (Hohn 2000).

[1] Kôdô ryô (行動用)

[2] Toshi saikaihatsu hô (都市再開発法)

[3] Sôgô tokku seido (総合特区制度)

Neoliberal Turn of the developmental state and Rise of the 2nd phase of the UR Policy

The effective state spatial development policy system of the developmental state was affected by a number of economical influences since the 1970's such as post-industrial structural changes and the oil crisis, which led into a slowing down of the GDP growth on one hand and to the rise of the state debts due to continuing intensive redistribution policy on the other. This period marks the beginning of a gradual reorientation of the Japanese policy towards neoliberal economic measures (Tsukamoto 2012/2012a). The initial concept of the neoliberal policy shift in Japan was inspired by Raeganism and Thatcherism, introducing a neoliberal position of a weak and small state, allowing the market to act freely with only the less possible interventions. Such neoliberal thoughts as "travelling concepts" became increasingly influential among high-developed economies since the 1970's due to the late phase of industrialization and global competition, which put pressure on the national protective state policies. The very beginning of institutional infiltration of neoliberalism into the developmental state in Japan can be seen as the growing influence of the non-governmental level with the JAPIC (Japan Project Industry Council) in 1979, directly connected to the liberalization efforts backed up by shared beliefs of industrial stakeholders and the high policy individuals under prime minister Nakasone (1982-1987). It can also be recognized as one of the fundaments of the bubble growth in the 1980's in Japan (cf. Sorensen 2012) and the first period of UR in Japan. Nakasone implemented an aggressive policy of planning deregulation and private sector mobilization in order to get the economy growth raised and the public debt of the still distributive developmental state lowered. The state a.o. sold publicly owned land in central areas in order to encourage private developers to invest. In 1988, the Urban renewal district plan was implemented in order to ease and force the redevelopment of such brownfields. The shift of the national plan strategies towards a „conception of cooperative network" in 1987 marks the shift in roles of the central government, the private sector and the public during the first phase of the UR policy. However, this phase of development effectively came to the end as the bubble economy collapsed in 1990 and many projects ended up in debts (Seta 2002).

Rescaling of the developmental state by devolution of the governmental decision power and responsibility towards local level

A further infiltration of neoliberal thoughts into the JDS organizational structures was led by the political turn towards neoliberal beliefs, which begun to reform the Japanese governance system by normative guidelines. To achieve the goals of fiscal discipline, the Japanese governance[4] system was set to undergo a graduate shift from an egalitarian distribution pattern towards a strategic spatial and selective concentration of state support, and therefore to a large extend also of private investments into specific areas and fields. The rescaling (Brenner 2004) of the Japanese state was a gradual process, as there were strong resistances along the financial distribution on the subgovernmental level. Attempts to slim the government were already made by Prime Minister Nakasone in the 1980's, when he "applied ‚small government' to control the LDP-bureaucracy subgovernments, mainly responsible for the clientelistic redistributive policy, in order to restore government efficiency. However, the subgovernments prevailed and continued clientelistic practices through the 1990's, which grew until 1995. Since the early 2000s, Prime Minister Koizumi (2001-2006) made frontal attacks on the subgovernments for a breakthrough" (Tsukamoto, 2012a), among others by cutting off financial sources by privatizing large national companies. A significant step in the urban policy was the devolution of state finances towards municipalities, a rescaling policy which replaced the central redistributional system, and the deregulation of urban land use in order to evoke local entrepreneurship. In the meantime, the emphasis was laid onto local self-sufficiency, based on public-private and non-profit sector, in order to strengthen the decentral welfare functions (cf. Tsukamoto 2012). Since 2003, Koizumi initiated laws which directly aimed on strengthening the self efficiency of local governments by significantly reducing tax payments to the national state by even stronger reduction of transfers from the state towards local governments. This led to lower incomes on the local level, which, in Koizumi's plan, was to be substituted by higher local taxes and better efficiency of the local government under the neoliberal premise of a „slim state". As smaller and mainly rural municipalities faced extreme financial difficulties, a five year municipality merge program was introduced in 2004 (Kitayama & Ryu 2005). In the sum, weakening of the national subgovernmental structures and devolution of responsibility towards local government institutions can be seen as the main structural effect of the „Japanese neoliberal turn", restructuring the JDS.

The second generation of the UR policy implemented since 2002 is fully conform to such measures. The local level of city administrations became

[4] The governance terminus in this paper is used in the definition by Gualini (2001) as stated in Salet (2004, 9).

main actors and partners of the national government by decisions in negotiating and implementing of urban development projects for the price of a self-standing responsibility and competition. Aiming mostly on stopping the fall of land prices by stimulating growth in the construction sector, it first partly re-emerged in 1997 when new rules for construction of high rise buildings in city areas were promoted. But by that time, still struggling with the consequences of the bubble economy blast, the policy of activating the private sector, as a system origining in the 1980's, showed no significant effects (Izumi 2011). Also, the financial crisis did not allow to steer the growth policy by sufficient public financial supports any more. In this situation, the national government took initiatives to concentrate public investment into selected metropolitan regions based on the paradigm shift from a balanced land development policy towards a policy in favour of potent key areas within large cities, and to steer more by deregulating thang pubic finance incentives. The decisive step towards an institutionalized UR policy was taken by Prime Minister Koizumi, based on an emergency economic plan. Deregulations in urban planning in GB, US and Germany and the designation of special economic zones in Ireland or China were taken into account when designing the UR policy (ibid.). Under conditions of fundamental differences between Japan and Asian states in levels of development on one hand and growth dynamics on the other, it was not possible to reach competitive advantages simply by raising national competitiveness of production. The challenge for Japan was not the national productivity and effectivity issue as such, but mainly the international and global competitiveness in the role of a high developed state, which it was loosing especially within East Asia as new young competitive economies raised. Under such conditions it was necessarily targeted on strengthening the forerunner role in highly specialized innovative fields, concentrated in specific areas of both innovation and space, where the potential to succeed is strong and the state directed incentives clearly addressed. In 2002, Koizumi enacted the UR Special Law, initially limited to 10 years, which focused on incentives by negotiable deregulations instead of public investments, including five main points:

1) Private investment in urban development was steered by the central government's UR Headquarter, founded 2001 and headed by the Prime Minister himself, towards 63 centrally designated Priority UR Development Zones in strategic locations of the leading Japanese cities and metropolitan regions. The concept strengthened the steering position of the central government against the gradual decentralization policy heralded already by the Urban Planning law of 1968 as well as the "watering-can principle" of redistribution by replacement with national policy which conformed and

targeted development steering towards the creation of internationally high competitive clusters of knowledge, culture, exchange and new industry.

2) Incorporation of previously informal procedures into the formal process of the negotiation and widening the palette of negotiating partners by incorporating the city governments into the process. This concept virtually legalized negotiations between the private and public sector within the process by giving them clear rules within the process, by the same time remaining "closed-shopped" and without a broader public participation. Negotiating became one of the fundamental tools in implementation of UR projects.

3) Within the Priority UR Development Zones, cities and private Developers were enabled to agree with the central government on the designation of particular projects or UR Special Districts, in which Exemptions of the planning laws, including especially the very significant extent of the FAR bonus (in Ôsaka up to 160 %), could be implemented on behalf of flexible negotiations between the city and the private sector. This further strengthened the city governments and the private sector in the UR process

4) By simplifying the urban designation rules, the final maximal reachable FAR bonus was set in advance of the negotiations in order to provide the private investors with planning reliability during the planning phase. Additionally, the administrative procedure was speeded up by a 6 months deadline for an urban planning decision in order to minimize planning risks, costs and negative effects of falling land prices for the private developers.

5) The abolition of the 1959 Location Control Law for Industry and Universities within the built up areas of the large metropolis of Tôkyô, Ôsaka and Nagoya in 2002 after more than 40 years opened the possibility for a re-centralization of know-how oriented institutions and new industries within the central urban areas.

These measures mainly aimed on fostering the international competitiveness of big cities by strengthening metropolitan gateway functions, building up international clusters of knowledge intensive and advanced industries, creating knowledge capes based on cooperation of private companies, universities and research institutes and improving the living quality of cities by reducing deficits of open and green spaces, providing high quality inner city housing and all kinds of urban amenities in multifunctional projects (Takahashi 2011, Izumi 2011, Kubo 2011). It was a policy of creating global hotspots which would be able to play a crucial role in bearing Japan's

competence by keeping the global pace in selected fields and areas of the hi-end industry and economy, functioning as an acupuncture revival strategy by "strenghtening the strenghts". Due to high public debts, the role of the public sector shifted at the same time from a direct steering by an active participation in investments towards indirect steering by zoning, linkage policies, bonus systems, tax incentives and financial guarantees in connection with deregulations. The financing and implementation of UR projects was put in the hands of the private sector. It can be summarized that the UR policy in Japan remained to be „government-controlled" and „corporate-made" or „government-steered" and „corporate-implemented". At the same time, the power of local governments was further raised by the UR law, being strongly included into the interest triangle of state and private stakeholders. This shows a fundamental difference to the previous centralistic managed deregulation policies and therefore the first phase of the first UR of the 1980's, and shifts the attention to the UR policy effects further towards the local and regional level.

As the driving decisional force remained on the national level, this policy did not affect the governmental power of the JDS as such, nor did it make subgovernmental structures disappear; it rather dissolved the subgovernmental political connections related to the redistributional functions by new selective local government partnerships, which were run under the self responsibility of the local governments and at the risk of the private sector (Okada/Yoneda 2011) without significant financial interests of the central government, especially when compared to the first UR phase, strongly based on the 3rd sector and PPP models. It led to a decentralization of the national subgovernmental redistribution power and responsibility for balanced development towards a decentral system of local responsibility, which was no more protected by redistributional financial measures of the central government, but dependent on local success within an international competition. The government steering and developer participation potential remained, but a new strong local governance base emerged, with an impact on the distribution of power between the former two and the strenghtening regional prefectural as wenn as municipal level.

Urban renaissance under peripherization and centralization – the central Kansai region case

During the first UR phase, led by the bubble economy of the 1980ies, the development of the central Kansai metropolitan region (Kinnai) was marked by decentralization of urban functions, mainly residence and additional

centrality functions such as office, entertainment and shopping, into the existing regional centres or new planned regional edge cities, flanked by enduring residential suburbanization. Accordingly, UR projects were dispersed in many areas of the metropolitan regions, respecting the still remaining structural and functional centrality hierarchy of the existing polycentric structure (cf. Todokoro 2000) on one hand and enlarging it by adding new locations such as of postindustrial waterfront and brownfield re- and development projects.

The focus of the second phase UR however brought a significant spatial and functional diversification within the metropolitan areas. First, together with strengthening the local governments since 2000, the communal law change of 2003 led towards a stronger competition in competence between the local and prefectural (regional) governments, as the prefectures had to give up a part of competences in common communal functions (Kitayama & Ryu 2005). Second, as cities in Japan savour a specific degree of independency from the national and prefectural government related to the number of inhabitants[5], larger cities directly join the urban renaissance decisive triangle together with the investors and the national government. Only cities under 500.000 inhabitants are subordinated to the regional prefectural government. As will be shown under, the most important projects of the urban renaissance are situated in central metropolitan areas of large(st) independent cities. This makes it generally difficult for smaller cities and the prefectural governments to take a significant part in the metropolitan renaissance policy. Such situation is well visible in the polycentric Kansai metropolitan region, where 21 UR priority zones with a total of 1710 ha have been designated by the national government in three out of the six calls undertaken between 2002 and 2012 by the national government. Out of these, totally 1.341 ha lay in 9 zones within the three largest cities of Ôsaka (796 ha), Kyôto (225 ha) and Kôbe (320ha).

To understand not only the spatial, but also the functional distribution of the urban renaissance designated zones for the state steered investment politics, Hall's definition of a global city region (2001) based on networked archipelagos of global development helps to understand the globalizing centralization and peripherization of the polycentric Kansai city region in order to monitor, typologize and hierarchize the project sites. Hall comes up with definitions for geographic structures of globally acting polycentric metropolitan regions, formed in order to compete and be connected globally:

[5] Seirei toshi; Designated City System (政令指定都市制度)

In the first urban renaissance call in 2002, four central locations in Ôsaka City with a total area of 490 ha were designated, including the very central Ôsaka Umeda station vicinity as (*defined by Hall*) the main *business center* of the city, including a 27 ha of enlargement brownfield area of a previous cargo rail yard. The area also included Nakanoshima island and the Midosuji Boulevard, both the most central and traditional *downtown center*. Four further locations in the Ôsaka Prefecture (total 188 ha) were designated, however, none of these bearing any global functions according to Hall's definition. The prefectural projects are located in the centres of regional cities of the metropolitan areas, bearing some regionally important functions, such as of transport node and new university location and apartment projects. The development of these sites were often planned long before, many of them, such as Sakai Station project, Sakai Bay project or Senri New Town centre project, as self standing edge cities in the context of the Kansai metropolitan region. The growth decrease after 1990 partly resulted into a centrality descaling of planned peripheral regional centres, which were also weakened due to the centralization strategies of the core cities due to the implementation of the UR strategy. This reaction, steered by the rising power of local governments of large independent cities under the centralization strategy of the Urban Renaissance law, enabled many central areas to functionally overtake their regional centres. As example, the Rinkû Town Airport City, situated next to the region's international Kansai Airport and planned as a new edge city during the 1990's, was on behalf of its strategic location and the role as a regional subcentre being considered to become Urban renaissance priority development zone, but then finally dropped according to its low potential for investment and far distance from the metropolitan core (Izumi 2011, Kubo 2011). Currently the role of Rinku Town degrades to a „background service area of the airport" (Kubo 2011). The core of the Sakai Bay man made island industrial brownfield area, situated on the south border to Ôsaka on the way to the Airport and planned as a new regional edge city centre with a new town for more than 5000 inhabitants during the 1980ies and 1990ies, was designated Urban renaissance priority development zone (90 ha), but finally only developed as a regional suburban shopping and entertainment area neighbouring a new Sharp company hi-tech production site, which probably could be seen as in by Soja (1995/ 2000) – mainly because only production and not innovation oriented – as a geography of metropolitan restructuring of a technopolis, but not as an edge city. Also together with Sakai Ôtori Urban renaissance priority development zone, designated in the first UR call just after the plan to locate the Kansai Universal Studios regional entertainment area there was changed in favour of Ôsaka City (Toshikouzoukaikakukenkyukai 2003).

2003), it shows a strong centralization process towards Ôsaka city: the Kansai Universal Studios were finally opened in the Bay of Ôsaka City in 2001, and Sakai Ôtori area was turned into a residental project, similar to many other large urban renaissance designation zones outside the Ôsaka city

UR Call	**LA (Local Authority)**	**UR stakeholder status of LA**	**Zone/Project Area**	**ha**	**1st room global (Hall)**	**2nd room regional**
1st 2001	Ôsaka City	Ôsaka City	Umeda, Umeda North, Nakanoshima, Midosuji	490	***Downtown Downtown*** *Business centre*	
1st	Ôsaka City	Ôsaka City	Namba, Abeno	57	*Specialized subcentre*	
1st	Ôsaka City	Ôsaka City	Cosmosquare Bay	154	***Internal edge city***	
1st	Moriguchi City Sakai City	Ôsaka Prefecture	Moriguchi Dainichi Sakai Ôtori	80 25		Housing and shopping
1st	Sakai City	Ôsaka Prefecture	Sakai Station	70		Regional centre housing, shopping
1st	Sakai City	Ôsaka Prefecture	Sakai Bay	95		Shopping and entertainment
1st	Neyagawa City	Ôsaka Prefecture	Neyagawa Station East	11		Regional centre university venue
2nd	Kôbe City	Kôbe City	Sannomiya Station			Regional busines centre
2nd	Kôbe City	Kôbe City	Port Island		*External edge city*	
2nd	Amagasaki centre	Hyogo Prefecture	Amagasaki Station North			Regional centre housing, shopping
2nd	Amagasaki Bay	Hyogo prefecture	Amagasaki Bay			Brownfield revaluation
2nd	Kyôto city	Kyôto City	Aburanokoji		*Internal Edge City*	
2nd	Kyôto City	Kyôto City	Kyôto Station South			Regional centre hotel and shopping
2nd	Kuze city	Kyôto Prefecture	Brownfield redevelopment area			Shopping and entertainment
2nd	Nagaokakyo City	Kyôto Prefecture	Nagaokakyo Station	8		Suburban development
4th	Takatsuki City	Ôsaka Prefecture	Takatsuki Station North			Regional centre

Table 1: The table shows that the designation of the urban renaissance priority development zones was mostly determined by following measures: local path dependency of the project, and - in case of the 1st room projects - a national strategy of global competition. There is no evidence of a regional balance policy and, with just very few exceptions, any redistribution welfare philosophy.

borders, such as the Moriguchi Dainichi brownfield redevelopment area (80 ha). As Rinku Airport Town did not prove enough vital force, the Abeno and Namba areas, one of Ôsaka subcentres located in the southern part of Ôsaka's downtown on the main train terminals to the airport, both designated UR zones in the first call, could strenghten their role of the city and region *specialized subcentres*, functioning as an airport entrance gate into the city and region instead of Rinku Airport town, and accommodating, among others, hi-end hotels, shopping and entertainment projects. On the other hand, within Ôsaka City municipal borders, the Cosmosquare Bay development area was designated an Urban renaissance priority development zone, strongly pushed by the Ôsaka metropolitan government and the Ôsaka Port and Harbour Bureau, even though it beared only low potential to become an *edge city (Hall)* due to its peripheral location and high land prices.

In the second call, only four projects in two zones in Kyôto City (225 ha) and two zones in Kôbe City (320 ha), the two second largest cities in the Kansai metropolitan region were designated, which marks the functional subordinace position of these two poles against Ôsaka City (796 ha and five projects) within the polycentric metropolitan region. According to Hall's definition, only one of the project zones of the second call takes the position of an archipelago within the region, which is the Kôbe Port Island project, functioning as an *external edge city*, a man made island re- and development by hit-tech and medicine cluster specialization, closely connected between the Kôbe Airport and the city centre. Just there it was able to effectively develop a global region archipelago outside Ôsaka city borders. An innovation hub became also the urban renaissance restructuring project Amagasaki Bay, located in the industrial by zone between Ôsaka and Kôbe, accommodating, among others, hi-tech productions of Panasonic, but similarly to the Sakai Bay, it is only limited on production without research and development functions (Kubo 2011, Yasuba 2011).
All other designations, including Kyôto city, and especially those of the third and last designation wave, including important further regional centres (Takatsuki, Senri Chuo and others, total 98 ha) within the imaginary triangle of Kansai regional metropolitan core area between Ôsaka, Kyôto and Kôbe centres, did not reach global but only a regional relevance, mainly as

additional suburban downtown housing clusters. Table 1 summarizes the classification of the Kansai Urban renaissance zones in two main groups: the specializing global regional city archipelagos ("First room UR zones") according to Hall, and the regional archipelagos ("Second room UR zones"), which do not fit into the international target of the urban renaissance policy. There are effectively no fully-fledged global locations outside the Ôsaka city existing except of the Kôbe Port island, which is functioning as an external edge city (cf. Izumi 2011).

The "first room UR zones" areas are located in areas with a high distinctive development competence within the national and international competition, and therefore mostly in Ôsaka City as the largest cities of the polycentric Kansai metropolitan region. Raeganism Further, they are located in Ôsaka's city core areas selectively chosen as those with the best development potentials. During the first phase of the UR, under the basic conditions of the bubble economy, the location of large project was coherent to the premise of expansion, with a concept of subcentres within the metropolitan area. Within the cities, the waterfront redevelopment as a reaction on the structural change of the industrialized bay played a crucial role for both Ôsaka (Cosmosquare Bay project) and Kôbe (New Waterfront). After the bubble era since 1990, in the period of economic deprivation, Ôsaka city government adjusted its polycentric development plan towards a more centralistic system of one main central urban development axis of downtown and business area by skipping 5 out of 11 specialized centres between 1991 (OMG 1991) and 2002 (OMG

2012), and started, as many other cities did, to promote inner city living, mainly on behalf the new construstion norms allowing high rise appartment buildings. With the exception of the Cosmosquare Waterfront area, Ôsaka City readjusted for only five most central areas during the first UR priority development zones call, skipping centres in peripheral locations. The city was about to centralize possibly most of development potentials into the centre in order to concentrate power to rebuild it under special urban renaissance conditions (Takahashi 2011). This induced massive investment of the private development sector in the city centre. However, as the economy power of Ôsaka is not growing, new developments started to compete with other existing locations, so critics see a threath of a real estate bubble (Koura 2011, Tôkyû 2011). Ôsaka started to welcome new redevelopment housing project in the city centre also in order to fill the evolving real estate market gaps (Takahashi 2011). Since 2005, after some decades of population decrease, Ôsaka's inner city population begun to grow (cf. Ôsaka 2011). These investments can be seen as a reurbanization and centralization shift within the city and the region, as the main functions of the

metropolitan area are concentrated into the Ôsaka City borders, and within Ôsaka City, into the central „hotspots“ of the downtown, the traditional business centre and selected specialized subcentres. On the other hand, the peripherization of the outer zones occurs. The policy of centralization still continues: in the first call after the 2002 Urban Renaissance law validity extension from 2012 to 2017, a new *internal edge city* was included among the Urban Renaissance Zones at the beginning of 2012: the Ôsaka Business Park, a business cluster development from 1980's and 1990's first urban renaissnace phase, located just next to the historical site of Ôsaka Castle.

As mentioned above, UR zones located outside large cities within the prefectures did mostly not aspire on a function of a global regional archipelago network of a national or international relevance during the second urban renaissance phase. Within the globalizing structure of Kansai metropolitan area, the „universal edge city“ concept related to the polycentric concept of the first half of the 1980's, where polyfunctional nodes were hierarchically sorted by their size and marked by a mutual interdependency and nourished by the suburban growth, was redeemed due to centralization into selected and specializing geographic structures which globally act within the polycentric metropolitan region (Hall 2001) by a new hierarchy. This hierarchy is based on relation to selected global nodes instead to the hierarchy of the polycentric network. This shift resulted into a peripheral role for the metropolitan region centralities: On one hand, they were not able to reach global hot-spot status, as it was reserved for the few most potential central areas within the premium centralities. On the other, the development shows a specialization on secondary functions such as housing and local supply functions, instead of functional diversification, which can be found within *downtown centre* and *business centre* urban renaissance projects in Ôsaka (cf. Hasegawa 2011, Kubo 2011, Yasuba 2011). Only two of 11 regional UR project zones actually became a place of innovative functions such where university or research venues have been realized. As many "second room" projects show a strong path dependency covering a large scope of individual characteristics, their participation in urban renaissance was most likely used as a „free rider effect“ and remained therefore strongly embedded in the local context than to reach national or international effects (Hasegawa 2011, Konishi 2011, Yasuba 2011). Their implementation stands for a path dependency of „regional spots“, based on the traditional regional hierarchy. Partly, the urban renaissance area status was an incentive compensation for projects already planned under the first UR phase of the 1980ies, still led by a comprehensive polycentric network strategy, which did not come out due to the decreasing growth power of the region since the 1990's (cf. Kubo 2011). This relation also explains how the centralization of

the global regional functions into a few strong areas, mostly located in the Ôsaka City centre, led into a graduate peripherization of the regional centralities since the the 1990's. A significant example of the peripherization and "free-rider effect" shows the refurbishment of the Senri Chuo New Town city centre located within the northern part of Ôsaka city urbanized area in the administration area of Ôsaka Prefectural government, which during the 1980's and 1990's was planned to become one of the regional edge cities, inhabiting also office building and research clusters. Since the 1990's, as back offices of many companies were abandoned due to rationalization and economy measures, it became loosing its role as an administration location. The development of new office space capacities in Ôsaka city centre further accelerated the diminishing of the office function from peripheral areas of the polycentric metropolitan area (Toyonaka 2011). The prefectural government as the owner of still vacant building lots in the central area made the local city authority to join the fourth Urban Renaissance priority development zones call in order to rise the own profit by selling the prefectural ground. The city joined the call, but finally did not make use of the possible high UR related FAR bonus in the planning permission, arguing that the local community and functional mixture would be affected by the potential mass of high-rise housing projects (Hasegawa 2011, Kubo 2011).

From the regional point of view, the shift towards a new regional geography of centralization an peripherization from 1960ies until the first two UR phases can be reinterpreted by Todokoro's explanation of regional nodal structure development phases in the Kansai Region (2000). It marks the development of metropolitan network structures from the city hierarchy towards a city network in four phases, where the fourth phase (1985-2000), covering the late first UR phase, is characterized by strong and equal interactions between all levels of centralities. By the centralization policy of the third phase based on the Urban Renaissance Law since 2002, there is a shift in the region's nodes hierarchy. If further developed on behalff of Todokoro's thesis, the new selective connections between the networked archipelagos of global development according to Hall (2001) and Soja (1995, 2001) became to overlay the existing spatio-hierarchic connections after 2000 (ibid.). This structure not only copes with the urban renaissance zone hierarchy, it also shows the strengthening role of global arenas within the polycentric geographic structure of Kinnai, located mostly in the central areas of the largest cities, mainly Ôsaka as the main economic hub, and some selected specialized centralities within the Kinnai central regional area. Most of the areas of the previous hierarchy based on traditional measures of size and distance are after 2000 experiencing peripherization if related to the

previous traditional regional functional distribution patterns of the Todokoro's large-middle-small city hierarchy.

Regional concepts of a new governance structure

The centralization and peripherization within the Kansai region have been influential to the regional governance policy. Regional organizations in the larger Kansai area (Kinki) were since 1965 when they started to issue Basic Development Plans for the Kinki Region, introducing own planning concepts tied up in accord to the periodically issued five national Development plans between 1962 and 1998. They were defining and providing detailed standards for the Suburban Development Areas, the Urban Development Areas and the Conservation Areas in order to reach a balanced development of the whole region (MLIT 2012, 2012a). Though focal points have been changing during the decades according to actual situation in economy, demography and land use trends, the issue of regional disparities and especially the widening gap between Ôsaka/Kyôto/Kôbe city cores and other areas on one hand and an equipoise to the trend of the relative weakining position of Kinki in a unipolar concentration of the national economy and central functions on the national and international main activity arena of the Tôkyô metropolitan area. Since 1978, proposals on improvement of vital force and catch up with internationalization and informatization on the other can be traced in Kansai. The influential "Subaru Plan", issued 1987 as an alternative plan against concentration in the Tôkyô metropolitan area, envisioned the "creation of an international economic cultural zone" within *the whole* area, proposing a multipolar distributed polycentric structure, conform with the expansion planning of the first UR phase during the bubble economy era of the 1980ies. For its realisation, three strategic project families were designated: 1. international exchange urban zone with the Kansai International Airport as a core, 2. Pioneering economy zone for cooperation with Asia and the Pacific areas, 3. Creative cultural zone of Kansai Cultural and Academic Research City (Keihanna gakkentoshi). The core projects of Kansai decentrally located projects of International Airport and Kansai Cultural and Academic Research City were opened in 1994. The heritage of the Subaru plan lies underneath the designation of the core area of Techno Port Ôsaka, founded in 1987, the Cosmosquare, as an UR priority development zone. The plan also directly pointed out the decline of industries in large cities in the south and north extremities of the Kinki region, which was already hit by the peripherization phenomena (City of Ôsaka 2000/2012).

The comprehensive regional planning for the Kinki region, targeted on developing the area as one polycentric global city, was evidently not directly conform with the spatially selective second UR phase policy of 2002. On the regional level, this policy opened a gap along the centralizing and globalizing Ôsaka City area and the spatially widely defined and peripherizing Kansai region. This gap became visible on the level of institutional governance mainly by the growing endeavour to establish an Ôsaka metropolitan prefecture during the first decade of the 21st century, as well as the foundation of the Union of Kansai Governments in 2010. For the former, Ôsaka City and the Ôsaka Prefectural Administrations proposed a plan for a larger than City government structure, which would more likely include the whole area of Ôsaka prefecture and so create a centralized metropolitan area, which until now was applied exclusively for Tôkyô. The idea of Ôsaka as a metropolitan government entity reaches back to the beginnings of Japanese modern state in the 19th century, guiding the city's enduring endeavour to replace the national monopolar centrality of Tôkyô by a bipolar system of Tôkyô and Ôsaka. After WWII, the graduate system of city independency on the national prefectural government relating to the number of inhabitants was established and conflicts decreased for some time. However, since the Ôsaka metropolitan area grew together on both city and prefecture territory during the 1960's and 1970's, challenges of overlapping administration came up again. Since then, Ôsaka city was proposing a merge into a metropolitan prefecture. The reason why this issue became highly actual again during the last decade, was nothing less but the stronger decentralization endeavour of the 1990ies and of the Koizumi national government since 2001, which started a significant devolution of planning competences to the regional and municipal levels. By changes in the City Planning Law in 2000, the decision-making powers of the designated cities were strenghtened especially in fields of urban redevelopment and infrastructure or zoning. A majority of urban decision-making powers shifted from prefecture to the Ôsaka city. Together with the UR policy it provided significant moves within the regional governance structure and enabled Ôsaka city to draw functional centralization on regional level as a strategy against its peripherization on the national and global level, also in order to accumulate growth power and to stop the economic outflux, which made it permanently weaker against Tôkyô's unbroken prosperity and global connectivity.

On the other hand, the Union of Kansai Governments became an official regional government in 2010 (by now the biggest regional administrative unit in Japan) by the National local government law, functioning as a special regional administrative unit. Its Kansai development strategy issued in the

same year replaced the official regional development plan. It was the first approach for an extended association bringing different prefectures together in Japan. Its foundation was strongly supported by the Kansai Economic Federation, representing the heads of the most important private companies in the Kansai region, also strongly lobbying for the implementation of a new federal system in Japan. This alliance shows a respectable political strength not only because of the long industrial tradition of the Kansai region, but also on behalf of the relatively weak regional political voice of Kansai, typical for polycentric regions if compared to the metropolitan policy of the monocentric Tôkyô capital region. In the process of current national decentralization, the Union overtook competences devoluted from the national level. On the regional level, it acts towards a decentralization strategy through a thematically focussed administrative cooperation within the region in order to prevent peripherization (The Union of Kansai Governments 2011 & 2012, MLIT 2012).

A third phase of urban renaissance

Paralelly, a third period of urban renaissance policy has started by the revision of the urban renaissance law in 2011 and its extension till 2017. The 11 so called "*Specified* UR Priority Development Zones" were designated, covering an area of 3,396 ha in 7 cities. Highly visible is the reconcentration of urban renaissance policy towards Tôkyô, where 75% of the designated specified area is located. In contrast to that, in the whole Kansai region only two zones were designated, situated in Ôsaka city and including the previous UR Priority Development Zones in Ôsaka Umeda (*downtown centre*) and the Ôsaka Port Town Cosmosquare area (*internal edge city*). By that means, the centralization of Ôsaka becomes even more evident. Those zones shall be successfully positioned in the competition with Asian cities like Shanghai, Hongkong, Singapore or Seoul. Beyond that, the revision of the UR law has led to an even more speeding up the urban planning decision process and to a continuation of the development path of deregulation (MLIT 2012).

However, besides the updated UR policy, a new economic promotion policy based on the new growth strategy of 2010 and linked to the designation of seven so called „comprehensive special (economic) zones"[6] in 2011 becomes important: In 2009, the Japan democratic party, ruling Japan since the post-growth period, was released by the Democratic party of Japan, which established a New Growth Strategy in the following year. Among 21 national

[6] Sôgô tokku (総合特区)

projects, it includes a “Comprehensive special zone system”, which even closely connected the existing urban renaissance sites with the national strategic economic promotion policy, based on a “selection and concentration of resources on areas with potential international or local competitiveness”. The system is not based on FAR bonus and exact geographical hot-spot determination, it rather works on tax reliefs and comprehensive fiscal and financial support for innovation clusters (PM 2012 & 2012a).

This current developments can be characterized as a Third phase of the UR in Japan, which shifts from physical to a more thematic-oriented regional intermodal connectivity among a selected mixture and interaction between strategic functional and physical urban renaissance zones and projects; next to the Hall’s global city region polycentric geographic structures, based on networked archipelagos of global development hot-spots, a non physical, thematically highly specialized network areas emerge, connecting the fragmented archipelagos of the existing UR priority development zones of all three UR generations with knowledge hubs such as the Kansai Cultural and Academic Research City. Doing so, it may contribute to a further diversification of the Kinnai regional landscape, creating centralizing node hubs of global prosperity and peripherizing areas situated not only on outskirts, but also in between and in a direct proximity of future prime centrality nodes.

Conclusions

The paper shows a change between the three phases of the UR in the Kansai region in connection to the relevant changes in national politics as well as the development and regional planning policies by marking implications on the strategies to steer distribution of urban development investment on the example of the polycentric Kansai area. Regarding centralisation and decentralisation, three phenomenons can be stated:

1. The UR Policy in Kansai is instrumentalized in order to profit from decentralization on the national level and to prevent peripherization of Kansai on the national and international level on both spatio functional and governance level.
2. There is an evidency of changes within the regional polycentric hierarchy of the region’s centrality, including the (re-)centralisation of Ôsaka City and Prefecture on behalf of large UR projects, in order to gain international competitive power in East Asia, a national competitive power against Tôkyô, and a regional competitive advantage against other centres of the polycentric area.

3. On the regional level, further peripherization is being prevented by regional cooperation within the large polycentric structure on the Kansai regional level.

During the first UR phase, an equal polycentric understanding of the region based on a redistributional policy of the JDS national government, regional development plans an the necessity to redistribute investive tensions by decentralization of urban functions, mainly centrality and housing. This led on one hand to a continuous urbanized area expansion, an equal strenghtening of existing regional centres and establishing new subcentres in transforming areas, such as waterfront, airport hubs or new science, research and development parks. Areas of functional peripherization were mainly recognized in larger peripheric locations.
During the second UR phase, the national redistributive policy slowly turned towards the policy of "strenghtening the strenghts", aiming on less support for redistributive spatila and economic equality and more on national and international competition in qualified, selective, high specialized fields by designation of UR priority development zones. In the Kansai regional area, the competitive situation between centralities and region led into a concentration of crucial economic functions in selected super-central urban or technology "hot-spots", which took over the polycentric hierarchy system of the industrial era, and became a multipolar system with specialized centralities.

In a third phase of the UR since 2002, a further centrality layer is being added, based on even stronger centralization by an updated UR national policy, further focussing on the main central areas, especially in Ôsaka city as the largest metropolis of the region. In order to institutionalize its centralization efforts, Osaka City and Prefecture endeavours to to merge into a larger and even stronger entity ("unique we are strong"). Similar tendencies, in order to protect from peripherization, can be recognized by other large, regional and smaller cities due to growing competiotion atmosphere. Regional stakeholders however react on preipherization by institutionalizing decentralization efforts through the establishment of new regional governance entitiy ("together we are strong") in order to strenghten the regional horizontaly interdependence and so to meet profits from further decentralizatrion efforts by the national government.

Since 2012, the new national government program marks a further spatio fuctional focus, based on the creation of thematically specialized economy condition zones or clusters. Geographically, they include broadly designated areas less spatially focussed than the UR policy, as the functional thematic

cluster connections are in focus. According to this, the hierarchy of the centralities and peripheries may may even more differentiate in the future by creating more thematically and less spatially defined centrality networks.

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WORKER RESIDENTIAL VILLAGES: THE IMPACT OF CULTURAL DIVERSITY

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Abstract

During the last two decades and due to its huge oil reserves and industry, United Arab Emirates has been renovated to an international hub for business and tourism. Such dynamics created a colossal influx of foreign workers to meet the huge demand for skilled and unskilled workers in the various economic sectors.

The State statistics show that the ratio of expatriates to UAE national is 80% to 20% respectively. This huge foreign workforce has created an unprecedented change in the UAE society, and challenged its traditional and relatively undisturbed values, even its day-to-day lifestyle in some cases. The large numbers of foreign workers, especially unskilled workers have historically lived in poor, unhealthy, and mostly overcrowded conditions within urban centers. In attempt to improve their living conditions, and to address internal societal challenges, the authorities opted to establish worker-only dedicated villages outside the major urban areas. In this paper, we scrutinize the concept of Worker Residential Villages (WRCs) within the Context of Abu-Dhabi, and investigate the applicability of Defensible Space (DS) theory to such model. Our results show that DS theory failed to provide a successful model to worker residential villages in UAE due to social and economic impairments.

Keywords: Worker Residential Villages, Defensible Space, Multicultural Societies.

1.0 Introduction

The abundance of oil and natural gas in the Arabian Gulf area has caused remarkable growth in infrastructure projects over the last few decades in most Gulf Cooperative Countries (GCC) in general and in the United Arab Emirates (UAE) in particular. More recently, the cities of Dubai and Abu-Dhabi have been the Mecca for construction companies and design firms alike. This has been in response to a construction boom resulting from the country's drive to become a commercial as well as a financial hub in the Middle East.

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The UAE has a population of approximately 8.9 million residents according to the latest government statistics. Out of this number, only 20% are UAE nationals (Emiratis) whereas the rest are expatriate workforce (UAE Government, 2009). Indian, Pakistani and Bangladeshi represent the largest expatriate communities in the UAE with nearly 1.75 millions from India, 1.25 millions from Pakistan, and 500,000 from Bangladesh. The rest of the foreign workforce originates mostly from European, Arabian, and North-American countries (Gulf News, 2009). This colossal foreign workforce has created an unprecedented change in the UAE demographic structure and its societal values and customs.

Although the expatriate workforce enters the country with legal and mutually agreed upon company or government contracts, and despite the government's attempts to regulate and safe guard the rights of temporary workers, the labor conditions leave much to be desired. The UAE has been criticized repeatedly by the international community for its treatment of the expatriates especially the blue-collar labor force, in particular for the treatment of the temporary workers employed by the construction industry (Human Rights Watch, 2006; 2007; 2009). Unskilled and semi-skilled foreign workers are usually subject to harsh working conditions, and infringements on some of their basic rights, mainly by their employers — the construction companies (Keane D. & McGeehan N. 2008). Some of these workers have their passports withheld by their employers to guarantee that they don't attempt to change jobs or leave the country without notice. Also, some of them experience extended periods of employment without pay and without any consequences for the employer (2008); others suffer from long work hours even in the extreme desert heat where the average summer temperature during July and august could range between 42-52 degrees Celsius (115-130 Fahrenheit).

One area that has received major criticism is the living and accommodation conditions of these workers (Gulf News, 2009). Historically, worker accommodations in Abu Dhabi have taken one of two distinct forms: first, employer sponsored on-site accommodations, especially for construction workers using temporary / prefabricated structures; secondly, private market accommodations arranged by the workers themselves, or by their employers in some cases. In the later scenario, the workers live within existing buildings or villas in the city or its suburbs. Both of these approaches have had their merits and demerits, but in both cases, the living conditions are usually extremely poor. Space shortages, overcrowding, and unsanitary living arrangements are very commonplace.

The problems associated with temporary-worker accommodations are neither new nor exclusive to the UAE or the GCC countries. A significant number of industrial nations have had their share of experiences dealing with such conditions. Examples from South Africa (Hartwig and Marais, 2005), Singapore (Phang, 1999), china (Ngai, 2007), and the US (Goodno, 2003) are testaments to the complexity of such situations. Most temporary-worker housing arrangements are plagued by poor accommodation

arrangements for the workers and abuses by employers and the authorities in some cases. Still, the heart of the matter is not necessarily housing availability, but the low wages and minimal rights such temporary workers receive. These problems are even more prevalent in the cases of unaccompanied (bachelor) workers whom are usually the least paid, and are the ones who are most likely to be treated with suspicion by nearby communities.

In an attempt to improve the living conditions for the foreign workers within the city of Abu Dhabi, and to curb employer abuses, the authorities set-out to establish new worker-only residential cities, with a goal of making this arrangement the sole form of worker accommodation. In this paper, we focus on these Worker Residential Cities, with a special focus on the cities within the metropolitan area of Abu Dhabi as an example.

The remainder of this paper is organized as follows: in section 2 we will present various international responses to worker housing projects in different parts of the world including some industrial countries. In section 3, background information about worker conditions and housing policies within Abu Dhabi will be provided. Section 4 will include discussion and analysis of the worker cities phenomenon in Abu Dhabi, and finally in section 5 we provide our conclusions.

2.0 International Responses to Worker Housing

Worker villages or cities are not a new phenomenon. The 20th century has seen numerous examples of worker encampments in different names such as worker camps and factory dormitories. In the US for example, housing of the seasonal farm workers has been a significant challenge for the authorities. Mostly workers are bachelor's migrants, and in some cases illegal immigrants, the living conditions of these workers have been extremely poor (Housing Assistance Council, 2001). These workers usually do not have stable incomes, and move from one area to another depending on the agricultural season. Locating accommodation is usually a great challenge, and most of them live in extremely poor conditions, with 10 – 15 individuals often sharing a room. Farm-owners sometimes provide them with on-farm housing in the form of barracks or mobile homes. In other cases, the workers have to fend for themselves, living in private residences, parks or in the open (2001).

The state of Florida has some of the largest seasonal farm-worker force with a population of around 200,000 each year. These workers work only during certain periods of the year depending on crop harvest cycles, and are mostly from South American origins. Due to their limited income they do not only struggle to find accommodation, but they have limited access to basic services such as health care and education (Flocks et al., 2002). The biggest expense they have to pay is money for accommodation, and the majority of them pay significant portions of their income to live

in low-quality, even run down housing, while usually sharing such accommodations with other - unrelated individuals. Although some of them receive on-farm accommodations from their employers as we mentioned earlier, but those who do not receive such arrangements are usually the ones who live the worst conditions (2002).

In an attempt to improve the conditions of workers, the US Department of Agriculture (USDA) through its Rural Housing Service (RHS) program has attempted to regulate the situation in order to protect the rights of such a crucial workforce. A number of federal programs target the issue of farm worker housing specifically, and the general direction of these programs revolves around two main concepts: grants for developers to build low cost-good quality for workers, and direct rental assistance subsidies for some of the workers. In some cases, the USDA also has developed some farm-workers only residential communities or villages. A good example of such development would be the Everglades village in Florida. Although most of these initiatives target workers with families, and they provide housing for single workers who represent the bulk of the population, they are still extremely complex, and workers remain living in sub-par conditions (Goodno, 2003). Despite the success of some of these programs, they continue hampered by insufficient funding to match the high demand, NIMBY issues originating from the communities where worker housing is needed, and resistance from some developers and landlords who risk losing some of their clients as a result of these government assistance programs.

South Africa has its share of farm-worker housing issues as well. Similar to the US, the large number of seasonal farm workers struggle to find decent accommodations for themselves and their families. The country is home to around 60,000 commercial farms, which in turn create work opportunities for around 900,000 farm workers (as of 2005). Historically, most of these workers receive little, if any, labor protection, and were subject to discrimination and unfavorable work and living conditions. More recently, legislation to protect labor rights has been introduced in the country. These new regulations focus mostly on wage and working hours, but not necessarily on accommodation, despite the fact that nearly 80% of these workers live on the farms according to employer arrangements. In some areas of the country, farmer - initiated off - farm housing projects have taken place. These projects are usually heavily subsidized by the local authorities, and provide very basic shelter units and amenities. Such examples are showing signs of success within the South-African context especially since they provide the workers with certain ownership rights. Yet, the cost issues keep amenities at absolute minimum, and the workers are relatively isolated from the surrounding areas and worksites, and have to rely a great deal on the availability of public transportation (Hartwig and Marais, 2005).

In China, the boom in the export-industry has created a tremendous need for labor force especially in the south of the country. In the 1970s, the Chinese government created a number of Special Economic Zones (SEZ) that acted as commercial or industrial

incubators for foreign companies. These special zones depended on manual laborers who were mostly migrant - female workers from the countryside and continue to be so. These migrant laborers live and work in these economic zones, and are given accommodations within these areas in a system known as the labor dormitory system. In this system, employers provide their workers with buildings or dorms in close proximity to the factories with an aim of increasing production and efficiency, while controlling the mostly rural migrant workforce. The workers are prohibited from living in urban centers, and are confined to these dormitories. Most of the dormitories are within walking distance from factories, which limits the need for transportation and thus effectively reducing cost for the employers. The dormitories also act as a pool for employers, and help them in securing fast, readily available workers to keep-up with the manufacturing process' rapid demands (Ngai, 2007).

3.0 The Labor Force in the UAE

Like all other countries, UAE labor force comprise of two types: (i) the professional white-collar workforce who earn decent income and on par with the national GDP; and (ii) the unskilled or semi-skilled labor workforce who earn very low income in comparison. In UAE, an unskilled construction worker could earn anywhere between AED 400 – 650 a month, whereas a worker with more experience could earn between AED 750 – 1,500 a month. These numbers are very low in comparison to the national GDP, yet due to the poor economic conditions and differences in the standard of living in the workers' own countries, the influx of workers continues, and most of the money they make finds its way to the countries of origin of these workers in the form of remittances (Gulf News, 2009).

Majority of the workers in the UAE are young single males. Married workers are forced to leave families behind due to the high cost of living in the UAE. Due to their limited income, workers usually seek shared accommodation in some of the older apartments and villas within the cities. It is not uncommon to find between 10 – 15 people sharing one room due to the very high rent prices in Abu-Dhabi. In some cases, employers do provide accommodation for the workers. Sometimes a flat could be provided and shared by a number of people. In other cases, the mezzanine level of a shop could be transformed into an accommodation of some sorts. Some large construction companies usually construct workers' accommodation on site using barracks or temporary structures, but the living conditions in such arrangements are extremely harsh, and such arrangements were mostly unregulated until fairly recently (Abu Dhabi Municipality, 2010).

The situation with workers' accommodations has created a number of problems for the city of Abu Dhabi. First, the presence of large numbers of mostly male, bachelor workers living next door has proven to be a point of discontent for the local population.

Traditionally conservative Muslims and with mostly Bedouin-derived cultural traditions, gender sensitivities are expected to be adhered to within the public realm and issues like the harassment of women (even if minor) are not taken lightly. Generally speaking, workers are treated with mistrust, and are accused of being responsible for robberies, violent crimes, traffic congestion, noise, littering, and even diseases in some cases — similar to some of their counterparts in other countries. Despite the fact the workers rarely cross any of the society's red lines due to fear of harsh punishments and employment termination, and despite the relatively low crime rates within the country (UNODC, 2008), the local families (or Emiratis) and some expat communities – have made their voices heard, and demanded that the authorities find a solution for what they viewed as a serious problem and threat to their communities.

Secondly, most employers are required to provide housing accommodations for their employees. Due to negligence and abuses by some, the living provisions are usually in very bad shape, if not dangerous in some cases. Overcrowded, dark, and unhealthy living arrangements are very common; workers are even forced to live in the business itself in some situations, with nothing more than a mattress provided (Abu Dhabi Municipality, 2010). These abuses harm the workers and complicate their lives, and have forced the authorities to crackdown on employers who do not provide adequate accommodations for their employees. Finally, the large concentration of workers in some buildings and areas has led to neglect by landlords, and caused the image and physical conditions of these buildings and areas to decline rapidly.

3.1 The non-existence of low-income class in Abu-Dhabi

Abu Dhabi is a growing city with nearly one million people. This population is projected to grow to three millions by 2030. The city has a severe shortage in rental apartments due to limited supply of new buildings to match the demand. What exacerbates the situation even further is that Abu Dhabi is located on an island, and is bounded by the see from three directions making horizontal expansion very limited. Due to the global economic downturn in last few years and the crash of the housing market in Dubai in 2009, the demand for housing in Abu Dhabi has increased drastically especially due to businesses and individuals relocation to the city from neighboring Dubai. Unfortunately, this increase in demand was accompanied by a slowdown in construction due to investor and financial institution fears. The new environment made Abu-Dhabi rental market a very expensive one - peaking in 2009. As of Q1 2011, the average annual rent for a single bedroom apartment in the city ranges anywhere between 30,000 AED to 120,000 AED ($8,000 – to – $32,000) depending on location and quality (Astecoreports.com, 2011). On the other hand, Abu Dhabi has the highest average per capita GDP in the world - estimated at around 325,000 AED per capita ($88,000) as of 2009 until present. These numbers could be a bit deceiving though as the wealth distribution is skewed in favor of the country nationals, which represent a minority at nearly %20 of the total

population in the Emirate as mentioned earlier. It could also be fair to say, that within the city's and emirate's nationals, a low-income population does not exist. In comparison, the average per capita GDP for some unskilled labors is around 13,500 AED, which translates into roughly 1,200 AED per month (Statistics Center – Abu Dhabi, 2009). Against these odds, the accommodation options for workers are extremely limited and most of them end-up sharing rooms in older run-down villas and flats and in very unsanitary conditions sometimes.

3.2 Abu Dhabi Middle Income and Housing Policies

Historically, and until this moment, most government housing policies focus on housing for the local population only (Abu Dhabi Government, 2011). These policies are also geared towards homeownership with no assistance for the rental market. The Emirati nationals receive land grants from the government, and are provided with generous and long-term interest free loans to build homes. Some are also granted a readily built house(s) assuming they meet certain age, income, and marital status criteria. On the other hand, expats are not allowed to own property within the emirate and are forced to rent properties from local landlords. More recently, some special development zones have been created where expats are allowed to own residential units, but with certain restrictions and for certain durations (2011).

In the year 2007, the government established Abu-Dhabi's Urban Planning Council (UPC) with a mandate to regulate and monitor the growth within the city of Abu Dhabi and the entire emirate. The UPC developed Abu-Dhabi's 2030 master plan and projected a population of 3,000,000 in the city by 2030 (UPC, 2007). The 2030 plan is a rather ambitious one and proposes significant growth to the capital in the coming years. One of the most recent regulations introduced by UPC as part of the plan has been the "Middle Income Rental Housing Policy" (UPC, 2010). This policy requires large-scale developers to dedicate 20% of the proposed total Gross Floor Area (GFA) in the form of middle-income housing. From the perspective of the middle-income residents of Abu-Dhabi, the policy could be a step in the right direction, and it is the first time that rental subsidies are provided in the state of Abu-Dhabi.

Unfortunately, the UPC and the 2030 plan are only requiring rental subsidies for middle-income households, but no provisions for low-income housing are included or even proposed. The irony of the situation is that UPC's policy appears to be derived from some of the American lower-income housing rental assistance programs, namely from the Low Income Housing Tax Credits (LIHTC) system (Orlebeke, 2000). In such systems, the developer provides a certain percentage of subsidized rental housing units and receives tax credits or other forms of easements in response. The LIHTC system aims at reducing expenses for the government, and at dispersing lower-income households throughout the society, as opposed to concentrating them and isolating them

in one location. It seems rather counter-intuitive for the UPC to exclude the lower-income segments of society from this new policy (2000).

On the other hand, most of the unskilled workers' income level is extremely low, and will not qualify them for any of these subsidies as they exist right now. In fact, within the context of the UAE, it could be fair to say that the unskilled/semi-skilled workers are exclusively the low-income segment of the society. Even in the unlikely case of qualifying for such assistance programs, the restrictions imposed on them by their employers, and the resistance from the community for having workers live amidst them could prevent them from benefiting from these programs.

This point raises a further important question about how these workers are viewed by the regulating authorities and policy makers. Similar to all expats in the UAE, most of the workers come to the country on contracts of three years duration, and usually end-up staying for more than one contract period. Some expatriates, especially those originally from neighboring Arabic countries, could live for decades in the UAE. Alternatively, most government policies are catered to the local population only in the first degree – and understandably so. Yet, what makes the situation rather unique and challenging is the sheer number of this foreign workforce, as they represent the vast majority of the population. It appears that this lower income class is viewed by the policy makers as a temporary class, and not as part of the overall housing policy.

3.3 Worker Residential Cities – Al Raha City Example

The mounting internal pressures for a housing solution to the expat workers, international criticism, and due to the absence of any lower-income housing policy, the government of Abu Dhabi set out to build new worker residential cities, WRCs, for the labor workforce. These WRCs are purposefully built residential areas located in the outskirts of Abu Dhabi, complete with housing, amenities and services. The government of Abu Dhabi entrusted Zones Corporation with the task of building and administrating these cities. The Higher Corporation for Specialized Economic Zones (Zones Corporation / Corp) is a government run agency established in 2004 to administer and establish economic investment zones within the emirate, and was later entrusted with the task of establishing these residential cities (Zonescorp, 2011). According to the corporation's publications, the WRCs are supposed to be built to the highest urban design standards, and are supposed to provide the workers with improved accommodations and ample amenities and services. The goal is to prevent overcrowding and sub-par living conditions for workers throughout Abu-Dhabi and reduce employer abuse while also limiting friction between the local and the worker populations (Khaleej Times, 2010).

Up to date, eighteen 18 WRCs have been completed within the city of Abu-Dhabi metropolitan area limits and its surroundings, with a capacity of 300,000 beds, and with a current population of around 149,000 workers. Out of these 18 cities, 3 are intended to be long-term villages, whereas the rest are of a more temporary nature surrounding major construction projects (Al-Etihad Newspaper, 2011). The numbers of cities are to be increased to house 800,000 workers by 2012 (Gulf News, 2008). To ensure quality control, the government authorities make regular inspections of the cities to make sure that the facilities are well managed and controlled. It is also a requirement now in Abu Dhabi for all construction companies to relocate their workers to these cities, with other industries soon to follow.

As part of this research, we were able to visit one of the WRCs named Al-Raha Residential Village (workercities.com, 2011). The city is a newly established worker community in the outskirts of Abu-Dhabi, located in Al-Wathba area approximately 40 kms away from Abu-Dhabi. The city is near completion with a full capacity of 34,000 workers. The current population of Al-Raha is around 22,000 workers and the total area of the city is around 5 km squared. Figure 1 shows the main approach way to the city. It is clear that the city is outside the city and in an isolated area. Company busing is the only available mean of transportation of its inhabitants.

Figure 1: Al-Raha Worker City main approach road

Al-Raha (translation: rest area) consists of a number of residential dormitory style buildings, some are open spaces, and some are common facilities. The common facilities

include a number of dining facilities, a shopping center, a small medical center, a mosque, a main security center and a banking facility among others. In house laundry facilities are also provided for the city's inhabitants. Figure 2 depicts the outside dormitory building of the Al-Raha city.

In our site visit, we found that most of these facilities and equipments are already visible and operational.

Figure 2: Overall view of some dormitory buildings

As part of the contract with the employers, the village management provides the workers with room cleaning services, 3 daily meals, and laundry services for an additional cost. The average cost for each worker is approximately AED 390 per-month per-bed, which is paid by the employers. The price includes coverage of electricity and water fees. The employers could also subscribe to a meal plan ranging between 400 - 450 AED per-month for each worker, although the subscription to this plan is optional. Finally, for an additional 50 AED per-month, laundry services could be provided for the workers, as the villages do have in-house laundry service facilities (Al-Etihad Newspaper, 2011).

In the villages, unskilled workers (the vast majority) have the least space allocation at 3 meter squared per person, and accommodation is usually in the form of one large room with 10 bunk beds as shown in Figure 3. Skilled workers receive a little bit more space at 9 meter squared per person, with 4 sharing a room. Finally, supervisors receive the most space at 12 meter squared per person, with 2 sharing a room and with a private small bathroom. Each floor in these residential dormitories has 12 rooms for unskilled

workers, 6 for skilled workers and 2 rooms for supervisors. With the exception of supervisors, all floor residents share a common bathroom facility.

Figure 3: Unskilled-workers' room with 10 bunk beds

4.0 Discussion and analysis

The Al Raha residential city and other similar worker cities in Abu-Dhabi represent a rather dramatic approach to solving a multifaceted and complicated problem. The design, facilities and amenities themselves are to be commended, and the cities could be considered an upgrade when compared to some of the run-down accommodations for workers within the city. The cities do provide the workforce with low cost accommodations, and help improve their living conditions. They also provide the workers with much-needed amenities and services, which are usually lacking in their current living arrangements. WRCs achieve another extremely important goal which is regulating the housing arrangements for such labor forces, since without this drive to regulate by the government, workers are under the mercy of their employers, and historically wide-spread abuses have been documented and represented in the poor living arrangements they are forced to cope with. By creating these cities, employers are forced to either allocate space for their employees in these cities, or provide accommodations which are at least of equal quality.

Looking at the extremely inflated rent prices in Abu Dhabi and the region in general, such cities make even more sense as workers cannot afford decent accommodation

arrangements based on their low wages and limited economic means. WRCs also limit the friction between workers and the local population, and address the cultural concerns of this population as indicated earlier. It is worth noting here that the general drive to improve labor work and accommodation conditions has been commended by international observers, even by the Human Rights Watch themselves (7days.ae, 2009).

On the other hand, and despite the positives of the WRCs approach and some improvements in the living conditions, a number of issues are important to consider. First, these cities isolate the workers from the surrounding communities. The access to the cities is controlled, and the workers are not free to leave at any time. They are expected to leave the cities only to work, and through employer arranged transportation. This is an issue with potentially serious ramifications for the workers as it does greatly limit their freedom. It also prevents them from mingling with the local communities, and socially isolates them from their surrounding and even other workers in other villages.

Secondly, the villages are located in the outskirts of the city, and mostly in desert areas with a harsher than usual climate. Aside from the climate, the geographic distances they have to travel every day to reach their employment sites takes a significant time out of their days, and only adds to their everyday harsh work conditions. It is also worth noting here that most buses that transport workers to and from construction sites are of poor quality, and appear to be lacking air-conditioning which is extremely important in such climate.

Thirdly, these villages are for males-bachelor workers only, and provide no arrangements for workers with families or even female workers. Zonescorp indicated their intention to establish family-oriented worker villages (Gulf News, 2008), yet none of these have materialized until this moment. Although most of the work force are male and bachelors accommodation arrangement for workers with families should be considered, and the dynamics of a family oriented community are much different than those of a male only community. Even more, these male only mandatory living arrangements prevent workers from hosting their families if their economic means allow for such arrangements.

Fourthly, looking at lower-income housing policies worldwide, and especially the American system, the model of isolated and concentrated living arrangements for lower-income segments of the society has proven to be a failure worldwide. It could create tremendous resentment within the worker population, and will most likely lead to complex social ills including crime and violence. Finally, these worker residential cities put the worker communities in an out of sight-out of mind status. It makes their needs and problems less apparent to the society, and only masks the greater problem which is their fragile existence within the UAE. It also makes them easily subject to infringements on their rights by the regulating authorities.

Conclusions

In this paper, we have presented Abu Dhabi's experience with workers residential cities. The residential cities approach is a commendable approach, though not without some areas of concern. It does assure a certain amount of protection for the workforce, and provides them with necessary basic needs which they could be otherwise lacking. Similar approaches have been used in other international examples, including some western democratic states. Probably the most positive aspect of this approach is that it brings the issue of workers' rights into the mainstream debate, and that it emerges from a general drive by the authorities to improve worker conditions in general.

Still, in the case of Abu Dhabi, we found that this approach points to a larger problem within the overall society, which is the attitude towards this workforce. It also highlights the low-income levels of such work force in comparison to the national levels – hence raising valid and just questions about fair compensation. The dynamics that create this situation are definitely unique: The small local population in the UAE, the relaxed immigration policies relating to workers and the dire economic needs of these workers in their home countries creates a huge influx of workers, and will continue to do so for the foreseeable future. This influx has changed the country's society, and has made this subject an extremely complicated and sensitive one. By creating these cities, some of the workers' rights might have been upheld, and the friction with local community might have been reduced to a certain extent. Still, this solution infringes on some of the workers' basic rights such as their freedom to choose where and how they live, their right to move freely, and the right to be active members in the overall society. These cities in the current format only complicate their lives even further despite their provision of basic and much needed services.

We believe that this worker residential cities approach is merely a band aid, and truly avoids the core question which is if this 'majority' population is a population of temporary residents with rights and obligations or is a population of temporary workers only. What is needed is to rethink immigration and labor policies in the country and in a way which better protects the workers' rights and addresses the labor needs within the UAE, while also protecting the country's interest and wellbeing. We also believe that general improvements in worker conditions and income levels are still needed, and recommend better enforcement of labor laws, with harsher punitive measures targeting abusive employers. Also needed are comprehensive and just lower-income housing programs - which are currently lacking in the UAE - and for the worker population to be included in policy formulation, especially considering their large numbers. Such housing programs if adopted could help reduce the need for such WRCs, and could even help address the residential needs of the middle-income expatriate work force and the countries nationals alike.

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Problematic Issues of Citizens Participation on Urban Heritage Conservation and Planning to Achieve Sustainable Conservation in the Historic Cities of Iran

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Abstract

The views with regard to citizens' participation in cultural heritage issues have become a worldwide issue as the bottom-up approach. It is penetrated across the field of urban heritage conservation and city planning. This paper aims to examine the problematic issues in citizens' participation in urban heritage conservation (UHC), of historic cities in Iran. The paper begins to highlight global and local concern on citizen's participation (CP) in built-heritage conservation and prepares a concept on the role of CP in decision making and planning, in Iran, and the other countries; then, it examines the experiences of UHC in the face of urban development trends in Iran and provides an understanding for the roles and effects of modernization trends on extensive damages of tangible and intangible heritages. In the next part, it investigates a historical study on CP, management system of urban planning, and approaches of urban planning system regarding to UHC in Iran. In fact, it provides a concept to appreciate conservation and planning process in Iran during contemporary period. This study found that development and conservation approaches have always been in serious challenge practically; the role of citizens' participation has been faintly in the making decision and planning process, rapid urban sprawl has had many impacts on valuable textures of historic cities in Iran, Therefore, integrated practices and interactive approaches between development and conservation together with public participation are successful approaches to meet sustainable conservation in the historic cities of Iran.

Keywords:
Citizens Participation- Urban Heritage Conservation- Urban development- Sustainable Conservation- historic cities of Iran,

1. Introduction:

This paper implies that the old and historic areas of cities are a significant part of historic cities, and it should be conserved for future generations. The historic urban area of Iran has been identified to be reviewed, because the world's oldest,

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continuous, major civilization has been appeared in Iran, and its historical and urban settlements date back to 4000 BC (Zarrinkoob, 2007). Literature in urban heritage conservation and urban planning suggest that historic urban fabrics in the most of historic cities like Iran in developing countries is currently faced with similar issues, which on one hand, they are experiencing a rapid population growth, high development pressure, rising area of historic districts and destruction of cultural heritage, and, on the other hand, they don't pay attention to the importance of citizen's participation as the most significant factor to solve their issues in the decision-making process. (Yung et al, 2011). Moreover, because of the long date of Iran, it can be an appropriate case in between developing countries to investigating the role of the public in the process of urban heritage conservation. By the study, of literature review can be find several evidences that they imply to increasing the role of public in the policy making process(Taylor, 2007). Therefore, an evaluative research on historic urban fabrics would lead to an empirical finding that show the role and position of people and some issues related it in the decision- making and policymaking process in the cultural and historic city of in Iran.

2. Issues and Problem Statement

1.1. Global concern on citizen participation in built-heritage conservation

According to UNESCO's definition, cultural heritage includes monuments, groups of buildings, and sites, which have historical values, in the other ways all tangible heritages which include natural and cultural sites and even all intangible heritages which are consisted of living dimensions of heritage and all aspects of the physical and spiritual relationship between human community and their local environment (UNESCO, 1972; Tweed et al, 2007). It is important to know that urban heritage also is an embodiment for values of traditional urban cultures which take place as the memory of mankind (ICOMOS, 1987). Nowadays, a lot of such cultural assets are being threatened, physically degraded, damaged at an alarming rate around the world as a consequence of a little or lack of consideration to their conservation by beneficiary people and practitioners and of course government (Tweed et al, 2007). These significant issues are not more complex nowhere as quickly as in developing countries and regions with limits of financial resources available (Yung et al, 2011). Although researchers and practitioners points are that there are many challenges on the issue of urban heritage conservation such as depopulation of inner city, development pressures, insufficient Legislations and poor enforcement, poor design new township, changing lifestyle and consumption patterns, tourist expectations, public awareness, and, etc, but since the last twenty years, lack of citizen participation has increasingly become a significant challenge throughout the world (Cohen, 1999; ICOMOS, 1999; ICOMOS, 2002; Engelhardt, 2002; Lane, 2005; Imon, 2006; Tweed et al, 2007; Sirisrisak, 2009; Yung et al, 2011). It is of the same opinion that one of the key elements in the successful at the sustainable development process is citizen participation, which has been neglected, or it was slightly considered in the planning process of urban heritage conservation (Tweed et al, 2007; Sirisrisak, 2009; Yung et al, 2011).

1.2. Loss of unique historical and cultural heritage in old cities of Iran

Challenge between urban development and conservation and lack or a little citizen participation in the process of preparation, approval and implementation of urban heritage conservation is controversial issues in Iran and other developing countries (Hanachi et al, 2007). In fact, strong development process and the relevant constructional operations have led to demolition of intangible and tangible heritage in the Iranian cities (Seyedian, 2003). According to some studies, UHC has been seen as an obstacle to progress and development, especially in developing countries (Idid, 2005). It is pertinent to mention that heritage conservation is always defeated in competition with the development and it will be seen that heritage conservation will get out of the pit (GCI report, 2009). Moreover, it will make another negative consequence when we see that authorities and practitioners don't believe to people contributions and their roles in the heritage conservation process.

Heritage conservation is an issue which needs to be protected by a power except governmental protection. According to the cultural heritage studies, if governments allocated so many budgets for heritage conservation without any accompaniment and determination of native people, these financial resources are certainly wasted. Despite the passing of almost five decades and earning many experiences for performers and providers, urban plans could not balance between urban development and urban heritage conservation in Iran (Poorahmad et al, 2006). Hence, a lot of evidences have shown by the studies that cultural heritage is being threatening and damaged by master plans without citizen participation (Habibi et al, 2002).

3. Analysis of the experiences of UHC facing with urban development trends in Iran

At the turning point towards UHC, we review some experiences related to it since the beginning of measures to now. With this review, it aims to examine conflict between development and conservation. Researchers believe that there are certain periods seven in interaction and conflict between development and conservation approaches.

First period, 1785-1906, from the beginning of Qajar dynasty rule until the Constitutional Revolution: What is considered in this period is the beginning of archaeological excavations; also Iranian people, especially western countries, would become familiar with Iranian culture and civilization. In 1895, the first formal agreement is signed for archaeological excavations between Iran and France (Hanachi, 2007). In this period, most of the monuments are used for daily living. Some of buildings which had not required performance were conveniently damaged. It was not mooted to conserving monuments and precious fabrics in this period. The pattern of demolition and renovation was crucial system during this period. Concept of conservation was only used for keeping antiques and expensive goods (Hanachi, 2007). It could be seen that the pulse of excavation and cultural preservation was in charge of the foreign experts in this period.

Although some serious measures are carried out for slow-growing development by famous people like AmirKabir such as construction of Dar-ol-Fonoon, reconstructing shops in the Naseriyeh Street, construction of Chehel-Sotoon

building beside Kolah Farangi building and so on, but likewise, the demolition was on the agenda of development planning (Habibi et al, 2002).

Second period, 1906-1922, from the Constitutional Revolution until Establishment of National Assembly of Monuments:

The popular movement, the Constitutional Revolution, with the slogan of democracy and parliament establishment was won by leadership of religious clergymen and political intellectuals in 1906 (Bahar, 1971). The king and his entourage had to take it, and the king issued the constitutional decree. It was the first time that people were allowed to participate in their own destiny. It had some advantages in the municipal heritage conservation such as (Hanachi, 2007):

- Increasing importance of UHC among the educated classes,
- Increasing public awareness led to establishing Antique Administration by The Ministry of Culture in 1910.
- Increasing involvement of Iranian experts in conservation era, which was only limited to preserve the antiques.
- Cultural heritage took on some importance in the minds of the general public and journalists.
- Legalizing urban development planning by permission of Baladieh Act in 1907.

Third period, 1922-1944, from the establishment of National Assembly for Monuments until the amendment for Act of National Monuments Preservation:

The beginning of this period coincided with two important events;

Firstly, in 1923, 'National Assembly for Monuments' was established by which precious historical relics were considered as a part of country's cultural heritage (Habibi et al, 2002). Unfortunately, as opposing to the previous rule, Qajar era's clues did not take place as cultural heritage, which provided simple conditions for their destruction. For example, a large part of Golestan Palace was destroyed in order to construction of the Ministries of Finance and Justice in historical fabrics of Tehran. It should be mentioned that a new Act was approved for that Qajar era's clues be placed as cultural heritage in 1944. It was a serious measure to promoting heritage preservation (Hanachi, 2007).

Secondly, first codified Act on heritage conservation was approved under the name of "The Antiques Regulation" in 1930 (Habibi et al, 2002). Up to this time, archaeological excavations were in the monopoly of French and then Germans. The fact is that a new Act of urban development under title of 'street modification and extension' was approved in 1933 which opened a way for widespread demolitions in the urban fabrics and monuments. In fact, The Act priority was for streets and cars and process of development was hurried which felt adverse effects across the old areas particularly on Bazar. For example, construction of 15 Khordad Street in Tehran, Emamkhomeini Street in Semnan, Zand Street in Shiraz, and even demolition of historic Ecbatana (Hegmatane) Hills in Hamadan by geometric patterns are as samples in this considerable damage to the cultural heritage throughout living textures (Habibi et al, 2002).

During this period, the demolition and renovation pattern was significantly increasing due to the following factors:

- Increasing technological developments and presence of new materials like Iron and cement,

- Increasing urban rapid development in the new part of cities by removing walls around the cities,
- Tending to modernism the west as a symbol of development.

Fourth period, 1944-1965, from Amendment to Act of National Monuments preservation until Establishment of National Center for Protection of Iranian Antiquities:

The landmark of the demolition and renovation patterns was created by the establishment of the Plan and Budget organization, which was the responsibility for providing the country's Development Plan in 1948 (Karimi, 1998). The first plan, 1955-1962, as before was focused on widening existing streets and roads while was not seen the necessary for heritage conservation in a certain plan. However, extensive damage in the historical and cultural textures caused to make out a regulation on heritage conservation in 1956 (Habibi et al, 2002). It should be mentioned that it could not be an obstacle for the damage because approval of 'Possession Act' provided a context for increasing the demolitions and declining the living quality in the old areas, in 1960 (Hanachi, 2007).

The country's Second Development Plan was formulated for a Seven-year period (1955-1962). Its main effect was preparation of the master plan by foreign consulting while development approach of dominated conservation and conservation concept was simply included buying monuments and maintenance of them (Habibi et al, 2002). At the end of this period, injuries resulting from development revealed a need for specialized devices for steering its process. As a result, the National Council Parliament approved to establishing 'The Ministry of Development and Housing' in 1965 and 'the High Council for Urban Planning and Architecture' in 1966 (Azizi, 2000). It is pertinent to mention that development process was targeted by these devices and through the master plans. It was interesting that the Ministry of Art and Culture' was established in 1966, which became the responsibility of heritage conservation.

Fifth period, 1965-1978, from the establishment of National Center for Protection of Iranian Antiquities until victory of Islamic Revolution:

Because of the tremendous loss of cultural heritage in the last periods, it was considered slightly more during this time. As, the parliament approved 'Act of Buying Lands, Buildings, and Utilities for Preservation of Monuments' in 1968 and 'Act of National Works Registration' in 1973 (Habibi et al, 2002). Subsequently, department of preservation was formally established to preserve monuments. In fact, preservation programmes found out a greater share in the programmes of macro policies in the society. Such attitudes led a certain consideration to precious monuments like Tekye-Amir-chakhmagh in Yazd, Green Dome in Mashhad, Sheikh Safi Tomb in Ardabil, and Imam Reza (A) Shrine. In some cases, the selected monuments turned into a museum such as Ghavam el-Saltaneh house which was become Abgineh museum by Hans Hollien (Hanachi, 2007).

However, it cannot be denied that urban development processes would still threaten heritage conservation during this period. Urban renovation was the main axis in the country's Third, Fourth, and Fifth Development Programmes from 1963 to 1977 (Habibi et al, 2002). Heritage was constantly under threat of destruction in the

historical textures in these years. These issues had brought up an understanding that there was a necessary for going toward a combined programme in Fifth programme.

Sixth period, 1978-1985, from victory of Islamic Revolution Until the establishment of Cultural Heritage, Handicrafts and Tourism Organization in Iran:

After the victory of Islamic Revolution, Iran was brought to an imposed war by Iraq, which contributed to intensify the demolition process of monuments and historic textures in the cities (Poorahmad et al, 2006). In addition to the war, some other factors like going out of foreign experts and lack of financial resources faced with a recession in the urban development and conservation programmes. From 1982 on, The Fluency Plans were provided and notified by the Ministry of Interior for confronting uncontrolled expansion of cities and preserving cultural heritage. These plans were merely succeeded as provisional and preventive measures for improving arterial roads (Ali Abadi, 2008). It is important to know that they damaged urban landscape and physical fabrics in the old areas. What was considered in the war forgot preservation issues of monuments and historic values in urban textures. In fact, they were unnecessary issues and outside the priority system. Furthermore, lack of legal requirements and weakness in the regulatory agencies caused to damage so many of historic works simply (Hanachi, 2007).

Seventh period, 1985-2011, from the establishment of Iran's Cultural Heritage, Handicrafts and Tourism Organization until now:

In 1985, the statute of Iran's Cultural Heritage, Handicrafts and Tourism Organization was approved which found a mission in order to the preservation, protection, and revitalization of monuments and historical textures (Falamaki, 2005). Seventh period was a turning point for urban heritage conservation in Iran. In this period, bureau of urban rehabilitation was established in the Ministry of Housing and Urban Development in 1985. In this respect, various plans had been implemented for urban heritage conservation such as rehabilitation plans (1987-1990), Plans of Historical-Cultural Axes (1990-1992), Revitalization and Reconstruction Plans or Aggregation Plans (1992-1994), Plans for Problematic Textures (1994-1997) (Karimi, 1998). Some these plans like Plans of Historical-Cultural Axes emphasized on museum preservation based on urban structure, which was not successful practically. Some another one like Plans for Problematic Textures focused on the destruction and renovation policy which led to tremendous demolitions in the precious textures (Hanachi et al, 2001).

However, the establishment of Urban Development and Revitalization Organization was the most important and effective program in U.H.C, in the old areas. It was toward implementing Clause 33 of country's Second Development Plan. This plan was particularly considered to old areas in two parts of housing and urban development. Some its objectives were (Hanachi et al, 2007):

- Constructing organizational homes in the old areas by funds of private sectors,
- Purging around monuments in the old textures based on heritage criteria,
- Constructing buildings in the extra lands in order to providing revitalization fees in these textures and encouraging residents to living there.

Third Development Plan of Iran was also pushed toward controlled and balanced development in urban regions in order to renovation and reconstruction in the old textures.

Table1. A comparison between concepts of development and conservation from 1785 to now

Period	Year (A.D)	Important Events	Concept of Development	Concept of Conservation
1st Period	1785-1906	**From,** the beginning of Qajar dynasty rule **To:** the Constitutional Revolution	1-Demolition of single monuments 2-Slow-growing development in the physical boundaries of cities.	1-Limited protection on antiquities. 2-Demolition and reconstruction in monuments
2nd Period	1906-1922	**From:** the Constitutional Revolution **To:** Establishment of National Assembly of Monuments	1-Continuing in the process of demolition and reconstruction. 2- Development of the physical range of cities.	1-Developing in the protection of antiquities. 2-Continue in the demolition and reconstruction in monuments
3rd Period	1922-1944	**From:** Establishment of National Assembly of Monuments. **To:** Amendment to Act of National Monuments preservation.	1-Extensive demolition of precious buildings, monuments and historic fabrics, and 2-construction of a wide street in the fabrics.	1-Very limited protection from single buildings, and 2-Lack of consideration to historic fabrics.
4th Period	1944-1965	**From:** Amendment to Act of National Monuments preservation. **To:** Establishment of National Center for Protection of Iranian Antiquities.	1-Decreasing in the monuments demolition and increasing in the demolition of fabrics. 2- Continuing in the hurried development of cities	1-Limited protection from single buildings, and 2-Lack of consideration to historic fabrics.
5th Period	1965-1978	**From:** Establishment of National Center for Protection of Iranian Antiquities. **To:** The victory of Islamic Revolution	1-Continuing in fabrics demolition. 2-Construction of historic buildings. 3- Continuing in the hurried development of cities.	1-Increasing in the scope of preservation from monuments. 2-The beginning of considering to urban fabrics.

6th Period	1978-1985	**From,** The victory of Islamic Revolution **To:** Establishment of *Iran's Cultural Heritage*, Handicrafts and Tourism *Organization*	1- The hurried development of cities. 2-Development of settlement and land	interrupting urban conservation of monuments and valuable urban fabrics
7h Period	1985-2011	**From** Establishment of *Iran's Cultural Heritage*, Handicrafts and Tourism *Organization.* **To:** Now	1- Increasing urban collections 2- Raising issue of sustainable development.	A variety of programs for conserving historic areas

Source: Hanachi et al, 2007

4. Historical study of citizen participation regarding urban heritage conservation in Iran

It cannot be denied in scientific assemblies that consideration to the local communities has been the most important ways for accessing to participation, realizing participatory planning, and urban sustainable development (ICOMOS, 2002). Todays, urban planning approaches have faced with various changes. It seems that planning in the local scale can be an appropriate choice for implementing participatory planning. Local community in urban planning is a device that can realize the real meaning for planning with people instead of planning for people (Taylor, 2007).

In Iran, patterns of citizen participation can be divided into two parts; traditional and modern. Traditional participation, which is based on religion, traditions, habits, and customs appear without any planned program. It so has a long history in the past centuries in Iran. In fact, government has not any control for conducting programs in this type of participation. The public is responsible for all affaires (Mohammadi, 2010). There are several examples for it such as celebrating religious rite for birth and death of religious Imams and prophets in special months and days, building mosques or schools forgivingly, and even forming a small group of individuals for traditional agriculture and animal husbandry (Alavitabar, 2000).

Historically, the modern participation patterns date back to Constitutional Revolution in 1906 (Alavitabar, 2000). In fact, establishment of the first parliament and approval of Constitution were the first participatory experience for Iranian people. This Constitution, which provided based on the European version, gave an extensive power to the State and Provincial Assemblies. However, the modern participation patterns can be studied at three different parts:

- Before the Constitutional Revolution(1906)

- Between two revolutions(the Constitutional Revolution in 1906 and the Islamic Revolution in 1979)
- After the Islamic Revolution from 1979 to now.

4.1. Before the Constitutional Revolution (1906)

There is no trace of citizen participation in the urban affairs before 1906. Indeed, a prince or a military man appointed by him as the governor was the only decisionmakers in the planning process. He did not allow people or a group of people participate in decision- making process. Therefore, the political system did not allow that the people participate in urban administration of the country, and dictatorship was being governed throughout the country (Madanipour, 1998).

4.2. Between two revolutions (the Constitutional Revolution in 1906 and the Islamic Revolution in 1979)

There are several landmarks for the beginning of citizen participation in the planning process during this period. Some of the important event are such as the establishment of parliament and approval of the Constitution which were granted a part of king power to the public following the democratic trends against dictatorships throughout the world (Alavitabar, 2000). In fact, the first participatory experience of Iranian people was established in a new pattern of citizen participation after the establishment of parliament and approval of 'Baladiyeh Act' in 1906 (Madanipour, 1998). Some characteristics of this period are:

- With the approval of this Act, the right of citizen participation was admitted for electing parliament's member to all people.
- The modern municipalities were established under the control of elected representatives as a town and city council.
- Urban administrative system was included some significant features such as full independence and elective basis of urban management, and also the mayor was under control of councils\, not central government.

In 1911, government was permitted to dissolve the councils by the parliament. There were some issues that led to this decision such as intervention of some of the local influential persons in the elections, lack of experience for actualizing this Act in the cities by the government (Alavitabar, 2001). In 1930, the second municipal Act (the second Baladiyeh Act) was approved instead of the first one. This Act turned into municipalities more dependent than the local agencies of central government. Some other characteristics of this Act are (Mohammadi, 2010):

- The influence of the Ministry of Interior increased by establishing municipalities, appointing their management personal, and also controlling their measures,
- The first effort was partly carried out for creating an autonomous urban government.
- The people could just elect five times representatives from whom the government would choose and appoint the member of the council.

After the Second World War and following a set of democratic activities, the third municipal Act (the third Baladiyeh Act) was implemented in 1949 which reverted to

the municipalities a degree of legal autonomy (Madanipour, 1998). Table number 2 compare some differences between the municipal Acts of 1930 and 1949 in Iran.

Table2. Differences between the municipal Acts of 1930 and 1949 in Iran

Acts / Characteristics	**1930**	**1940**
Conditions of Electors	The right for voting was only for landlords, businessmen, and merchants	Anyone who was living at least 6 months in the place of election or having a job there.
Conditions of Candidates	From particular classes	Anyone was known as a dweller or who was living at least 5 years in the place of election or having a job there.
Election/Appointment of the Mayor	Appointed by the Ministry of the Interior	The mayor was appointed by the Ministry of the Interior from three candidates who had been nominated by the city council

Source: Mohammadi H, 2010

Some amendments were carried out in the context of third municipal Act in 1952, 1955, 1966, and 1976. With these amendments, the municipalities would provide for more autonomy. Some of its characteristics are (Mohammadi, 2010):

- The members of the city council were elected by citizens for a period of four years. They had a wide power for appointment or dismissed of the mayor, the right to legislate and devise local taxes, controlling over financial and administrative affairs of municipalities, and so on.
- Citizens could protest to the council's decisions. It is predicted a way for corresponding citizens' protestation and considering their ideas.
- The number of council members depended on the population of each city which was from 6 to 25 people \, and it was just 30 people in Tehran.
- The representatives were elected from different districts of a city. In fact, it was due to having more direct relationship with their district's people.
- According to this law, the municipalities were formally established in a city with the population of 5000 people and more.

4.3. After the Islamic Revolution in 1979 to now

After the Islamic Revolution, there were fundamental changes within social and political structure. The most important these changes were in the area of establishment of local organizations and entrusted affairs to the people in the different levels (Madanipour, 2001). In fact, the Islamic city councils were One of the most important of Revolutionaries' aims was the presence of people for administrating urban affairs while the establishment of city councils was practically

remained on paper up to 1999 (Alavitabar, 2000). There were many factors that they led to postponement of establishing councils, but the imposed war was the main reason. In 1996, a law under the name of 'Organization, Responsibilities, and Authorities of Islamic Council Act' was approved by Islamic parliament. This law provided a context for establishing the 1999 Islamic councils' elections. Since 1999 up to now, councils' elections were held three periods in 1998, 2002, and 2006. Some of significant features of Islamic city councils are (Mohammadi, 2010):

- After over 20 years, Revolution, establishing councils provided a context for realizing slogan of democracy and decentralized the power of central government.
- With establishing city councils, urban management system has administrated as Mayor-Council system.
- The recent Islamic Councils Act, Article 75, have emphasized that the financial requirements of councils must be provided by the municipality's budget. So, it would be possible to make the councils more dependent to the municipalities.
- According to the organizational chart of Islamic Councils Act, High Council of the provinces supervises over the councils. In the other word, the councils are not subordinate to the central government. Nevertheless, the central government can dissolve the councils, if there is a serious diversion in their legal duties.
- Some of the main points of the Councils' 1996 Act were their legal authority concerning policymaking and decision-making for all urban institutes and agencies, while it is now seemed that it has reduced and limited only to the municipalities.
- It is now considered that the supervisory duties of city councils have divided in two different parts. The main part consists of mandatory supervision, which is restricted to the municipality's affairs such as supervision over their revenues, expenditures, and so on. The subsidiary part is included to consultative role, which is regarded government sectoral or inter-sectoral agencies involved in urban affairs.
- There are various committees such as public affairs, urban development, plan and budget, legal affairs, and so on in councils by which complex and divers responsibilities of councils are divisible in them.
- Although, it appears that city councils and neighborhood councils have been able to provide a level of participation in the Iranian society \, but the researchers have shown that they could not prepare a type of direct participation and involvement of all individual citizens.

Table3. Extent and mode of Citizens Participation in the experiences of urban planning management from 1906 to now

Row	Period	Extent of Citizen Participation
	Before the	No citizen participation on urban

1	Constitutional Revolution (1906)	administration, and just the executive head of the town (appointed by princes) was the actual regent of the town
		Establishment of Town and City Assemblies in 1907, formation of Parliament, and approval of the Constitution (the first Baladieh Act) are new pattern for the beginning of citizen participation in the decision-making process for town and city administration.
2	Between two revolutions (the Constitutional Revolution in 1906 and the Islamic Revolution in 1979)	1-The beginning of the throne of Reza Shah and a wide change with severe political centralization. 2-Approval of the second Baladieh Act. 3-The first effort to establishing an autonomous urban management. 4-Decreasing citizen participation with decreasing independence of Assemblies.
		1-Approval of the third Baladieh Act in 1949 which returned to the municipalities a degree of legal autonomy. 2-Increasing citizen participation with taking power by Town and City Assemblies. 3-Assemblies members had much social responsibility because they were voluntary and without any salary.
		1-Decreasing citizen participation due to the failure of Assemblies. 2- Factors of their failure were: -Lack of people awareness to elect competent members for Assemblies. -Intervention of local government officials in the elections.
3	After the Islamic Revolution in 1979 to now	1-Lack of citizen participation on urban affairs 2-Increasing citizen participation in religious activities and 3-attending in military applications against enemies.
		1-Establishing Islamic rural & city councils 2-increasing local power for monitoring urban affairs.

Source: Author studies

5. Management system of urban development planning in Iran

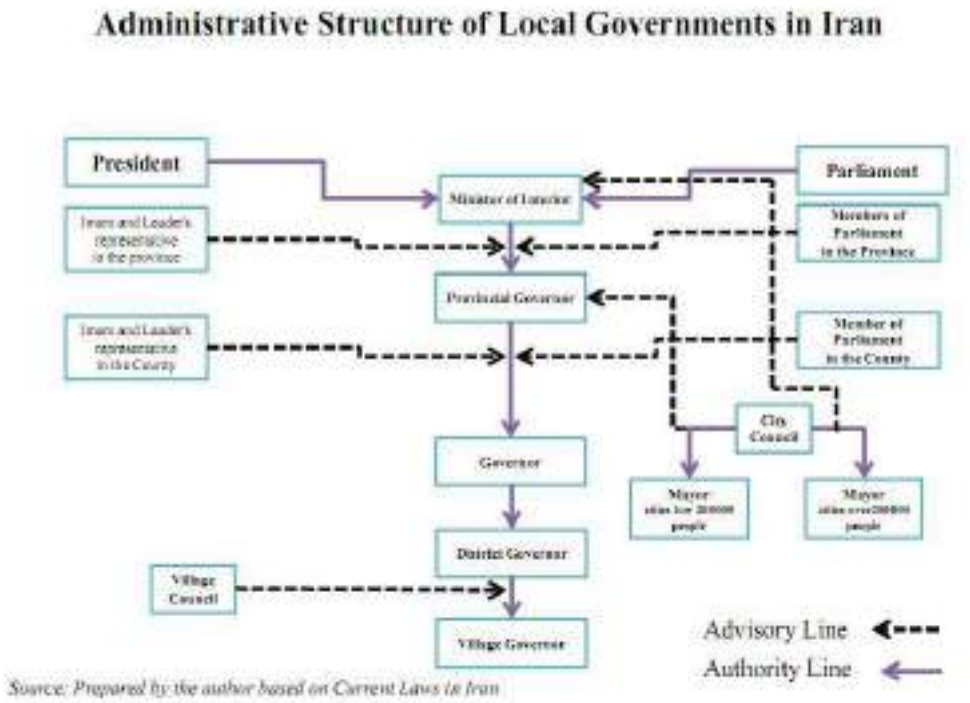
The responsibility of management of urban development planning is undertaken local government and organizations which consist of the municipality, Islamic City Council, and the other organizations. On the one hand, an up-down administration system has caused that the municipalities are under the control of central government (the Ministry of the Interior) and, on the other hand, they are under the supervision and control of the city councils (Mohammadi, 2010). It is difficult to believe that city council is independent of government administrative tools such as the executive, the judiciary, and legislative systems.

Main base of local government in urban governance are the municipality and city council while they are not only player this function. There are four different groups which are binding on the decision-making process of urban management such as:

- *Local government* consists of the municipality and city council.
- *Government intersectoral organizations* include Ministry of the Interior, Ministry of Housing and Urban Development, Governor Generals, and the High Council for Urban Planning and Architecture, Organization for Employment and Administrative Affairs.
- *Government sectoral organizations* consist of branches from ministries like Education, Energy, Industries, Commerce, and so on.
- *Non-governmental organizations* include Society of Urban Planners, Consultancy Engineers, and Iranian Construction Engineers Organization and so on.

The presence of multiple actors with different roles cause that the purpose of united urban management cannot comprehend, and function of the above organizations affected on the process of the making-decision, making-policy, management, monitoring, and implementation on the total of system(Madanipour, 2001).

Although it takes about five decades from preparation of master plans in the Iranian cities which aim to prevent unplanned development, also cultural heritage conservation but these plans could not comprehend the objectives, and we are observing inappropriate development and neglecting cultural heritage in the process of preparation, implementation, and monitoring on these plans.



6. The approaches of urban planning system in the face of cultural heritage in Iran

The tremendous loss of cultural heritage materials led to change concept of "a future for the past" in 1970s to the concept of "a past for future" in 1980s and nowadays, it means "to make the past part of our future" (Habibi et al, 2002). In Iran, some activities have been done by some governmental institutes like the Iranian national organization of conservation of historic works, which carried out after 1965, and some academic attempts which contributed to highlight the significance of historical and cultural values in the historic urban areas (Falamaki, 2005). According to Prof. Falamaki, due to lack of attention to "Heritage" as "cultural wealth", historic cities of Iran have faced with great damages, particularly, by the hands of modernization tendencies. It is obvious that the modernization trends have led to urban instability, especially, it has caused to create an imbalance between old and new areas. In recent years, these areas have been considered through compiling strategic planning in order to rehabilitation and conservation by municipalities and heritage organizations (Ali Abadi et al, 2008). These plans include a regular process of recognition, analysis and planning, decision making, and suggestions. They are seeking to control the physical development based on physical, historical, and cultural values and also assessing appropriate opportunities according to participation, management, and legal issues. Although these plans have brought up promising perspectives, but planning and heritage conservation approaches have still been summarized in zoning.

The following figure shows the structure of city management in which extent of citizen participation is less.

7. Conclusion

An overview of the results obtained in the previous section shows that historical cities of Iran have facing with unprecedented changes, which impacted the urban environment. These changes have derived from the modernizing tendency which was accompanied with the other impacts such as rapid, uncontrolled development, demographic changes, and economic pressures. In fact, these large changes have been the main factor for creating changes in the urban environment which directly impact the preservation of historic urban environments. In Iran like the other developing countries, on the one hand, historic cities have faced with great immigration, population growth, and a large increase in density in the old areas of historic cities, and, on the other hand, there have been a large migration, population decrease, emptying smaller rural centers. These opposing conditions that have led to urban sprawl and reinforce urban development trends, they caused to threat and damage many tangible and intangible heritage relics in Iran. Historical study of urban planning and conservation has shown that approaches based on development and conservation could not access to a constructive interaction. Therefore, there is still serious challenge between them. Some of selected achievements of this study are as follows:

- Despite, development and conservation approaches have been effective side by side in the experiences of urban planning and conservation in Iran, but both approaches have always been in serious challenge practically.
- The role of citizens' participation has been faintly in the making decision and planning process. There is no trace of the public and their ideas on the most of urban programs, which was done during last decades. Experiences of last decades illustrate that even the best planning programs will not succeed in the long-term without the participation, support, and initiative of stakeholders.
- Historical study shows that heritage conservation programs had succeeded when there was peace and stability in the area of the management system cities. In fact, mutual trust between people and authorities has assisted to conserve cultural heritage of countries, even though it was limited.
- The investigation has shown that rapid urban sprawl has had many impacts on valuable textures of historic cities in Iran. Hence, it seems that urban programs should not only rely on development approaches without conservational heritage ideas.
- However, it cannot be denied that museum conservation approaches have had numerous damages on valuable textures in these cities. Therefore, integrated practices and interactive approaches between development and conservation together with public participation are successful approaches to meet sustainable conservation in the historic cities of Iran.

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LEARNING BY DESIGN IN AN INTERNATIONAL URBAN PLANNING AND POLICY DESIGN MASTER PROGRAM

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Abstract

The paper illustrates an experience in the teaching of urban design and planning carried out at the Politecnico of Milano where the School of Architecture offer a two-year Master of Science program in Urban Planning and Policy Design open to international students. The master, organized by semesters, offers both introductory courses and topics of advanced research activities. In the first workshop, *Urban Design and Planning Studio*, the students are encouraged to challenge with experimental themes and innovative forms of urban design. In coherence with the recent experience developed at the Politecnico of Milano (Bologna and Milan, sharing the keyword "città di città"), the urban planning and design require a range of activities that generates knowledge, a survey conducted through design and imagination, through the ability to orient the information, systematise the data collected. This way of looking at the project activities means that the correlation between survey, urban analysis and project will not be linear and consequential. Therefore the teaching approach of the Design Studio simulate a highly complex professional design work and research situation, guided by a sequence of concrete, hands-on experiences: the objective is to introduce the student to a critical reading of the context, the identification of intervention priorities, the production of strategies and guidelines and territorial re-composition schemes.
The contribution is organised in three parts: an initial part deals with the School's specific approach to the teaching of urban planning and design (§ 2) and how this correlates with the recent internationalisation of the School (§ 1). The second part describes the didactic principles and practices underlying the activities of the Design Studio, a hands-on experience that brings together project and research (§§ 3 and 4). The third part is about the results of Design Studio activities, which are analysed from a critical perspective (§§ 5 and 6).

1. Introduction: teaching to international students at a polytechnic school

Since 2005, the School of Architecture of the Politecnico of Milano has offered a two-year Master of Science program in Urban Planning and Policy Design open to international students. This program is a challenge and lends itself to experimentation, on account of at least three of the conditions that characterise it: the

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integration of different disciplines, its international dimension, integration between teaching and research activities.
It is in line with the Politecnico's long-standing tradition in bringing together urban design, planning, regional studies and the social sciences, and its goal is to provide a broad education in planning and policy making. It lasts four semesters and is meant for students in possession of a bachelor's degree in a variety of disciplines: urban planning, architecture, landscape design, geography, economy and territorial engineering.
Five years on since the inauguration of the Master program, the student body is highly heterogeneous, in terms of country of origin and previous studies: more than 25 different nationalities and at least a dozen different educational backgrounds are represented among the approx. 80 students that enrol every year[3]. The courses attract many Erasmus students from architectural degree programs, whose presence contributes even further to the diversification of the student body.
For this reason, first semester courses are designed to set a common frame of reference and provide a common basis in terms of cultural and operative tools, whereas from the second semester on the students may opt for urban design oriented or planning & policy design oriented courses.
The *Urban Design and Planning Studio* is one of the entry courses of the Master program[4]. Its objective is to get across the basic knowledge and skills for the creation of structural and spatial design schemes in a contemporary urban context, and it constitutes the first, essential design experience offered to the students. The relationship between the polytechnic tradition of Italian schools and the diversification of the classes by skills and by origin is a challenge we have decided to take up by giving the course an experimental and research-oriented character.
For many students who come from different educational backgrounds and especially those who may have accumulated extensive professional and research experience, possibly according to more narrowly defined criteria, even getting an understanding of the goals and the scale of the project and the instruments available might prove difficult. In the minds of many students, in fact, and especially those coming from the Asian countries, urban design has a strictly morphological acceptation, to do with the conformation and the arrangement of the buildings and the infrastructures. For students who have studied in Europe, the dialectic relationship between planning and urban design, between architecture and the organisation of the functions and the economy of a territory is more elaborate. And there are also quite a few students coming from geography, economics and sociology studies who have no prior

[3] For instance, in academic year 2011-2012, the program is attended by students coming from the following educational backgrounds: planning, urbanism, philosophy & urbanism, architecture & urban planning, architecture, landscape architecture, restoration, management, sociology, environment engineering, architectural engineering, geography.
[4] The course was set up by Patrizia Gabellini together with Matteo Bolocan Goldstein, and Andrea Di Giovanni, and with Bertrando Bonfantini, Antonio Longo, Marco Mareggi who during the last two years have been responsible for the management of the course. Its structure is documented in (Di Giovanni, 2008). Nowadays the Urban Planning and Design Studio encompasses the subjects of Urbanism (Bertrando Bonfantini), Urban Design (Marco Mareggi), and Vision and Rendering Tools (Antonio Longo).

familiarity with territorial planning. In some of them this makes for an open, inquisitive mind, and therefore it is not necessarily a problem.

2. Urban Design and Planning at the Milan School of Architecture

Before we proceed with a presentation of the didactic activities of the program, we should take a look at the type of design and planning activities that are proposed to the students. Since a description of the multi-faceted characteristics of the "progetto urbanistico" in its Italian acceptation goes beyond the scope of this report[5], we can only provide a summary of the main points. Three keywords may help gain an understanding of some of the basic concepts that will be developed in the following paragraphs in connection with their educational implications: contemporary city, context, composition.

The first keyword, *contemporary city*, defines the urban field to which the project is applied. The reference space is the contemporaneity of the existing city, the real city in its historical evolution. The urban project for the existing city in Italy, albeit with different acceptations, has always devoted great attention to historic conditions, and has taken into due account both the heritage from the past and the current evolution of a city. Thus, the project develops in the manner of a work in progress, in close correlation with the physical, social and economic aspects of the existing city.

The second keyword, *context*, indicates that the project is not applied to a situation defined *a priori*, through a consequential relationship between analysis and project. On the contrary, the context is an artificial device, arising from the interpretation of the multiplicity of factors that characterise a city. It is made from a set of features that force themselves to the attention of the urban planner, which either emerge or are deliberately sought and picked out, and thus selected. Project activities, in their initial stage, mostly consist of working out the answers to a series of elementary questions: what problems come to the fore, what are the resources of the territory? What transformations are currently underway and, conversely, what elements are static, unchanging? What is the geographic scope of the problems observed? Are the client's requests clear, or do they imply other issues, other undeclared requests? To give an answer to these questions calls for a critical activity, a selective work through which the context is constructed, thereby delineating the urban field to which the project applies. The project is an activity that generates knowledge, a survey conducted through design and imagination, through the ability to orient the information, systematise the data collected. This *modus operandi* means that the correlation between survey, urban analysis and project will not be linear and consequential, but rather will consist of progressive adjustments and will be perfected through clues, trials, errors and iterations, reflecting the cyclic nature that is typical of the craftsman's work, as aptly described by Richard Sennet (2008).

The last keyword, *composition*, originating from the previous two, describes a process that is inextricably associated with the making of a plan for the contemporary city. Physical fragmentation, the acceleration/ slowdown of transformation processes, the multiplication of the subjects and the demands that animate the urban scene are

[5] For a general account of the Italian urban design and planning tradition, see (Palermo, 2006).

recurrent characteristics, together with a scarcity of territorial and financial resources, and the prevalence of existing elements to be reused and improved over new interventions. The urban project addresses these issues by making a combined use of techniques and approaches that pertain both to urban design and to planning, by working on different scales, and through the use of different techniques, that is to say, through an integrated vision of the social, economic and spatial aspects at stake, both in interpreting the phenomena observed and in defining the actions to be undertaken. In urban planning and design, composition is a work of selection and coordination, a form of design which is based on the ability to establish correlations and cause and effects relationships, and to give a new meaning to existing elements, as opposed to bringing in new elements, a form of design which interprets and uses the relationships between the individual parts, instead of introducing new structures (Gabellini, 2008; Bruzzese & Longo 2011).

3. The common area and shared theme of intervention of the Design Studio

Within the framework of the international dimension of the School, it was felt that to underscore the Italian approach to urban planning and design was the best way to satisfy the multifaceted demand for a broad educational program expressed by the students enrolling in the Milan Politecnico in recent years.
As mentioned before, the profiles of the international students are extremely heterogeneous and mature. The students are highly motivated in their choice of a multidisciplinary program, oftentimes they have gained extensive experience doing research and professional work, and have a strong propensity for mobility. These conditions require a taxing preparatory work to bring into alignment and share the language and tools of the urban project. Needless to say, to involve such a rich and diversified student body in a practical and experimental activity, which for many students amounts to exploring a hitherto unknown territorial field, calls for a clear identification of issues and objectives, mated, on the part of the teachers, to a good knowledge of the territory chosen as the planning and design experimentation field.
Accordingly, it was decided on the one hand to focus on a nearby territorial field that was alive and would provide opportunities to come to grips with dynamic phenomena underway, i.e., the Milan Urban Region, that was interpreted as a "city of cities". On the other hand, it was decided to thematise design research on habitability as a quality of the places that the urban project could affect and enhance.
Thus, the attention was focused on sections of the *Milan Urban Region*, the vast urbanised area that surrounds the city of Milan. It is a territory displaying many of the typical characteristics that are observed in Europe's major cities: administrative fragmentation (the Province of Milan includes 134 municipalities with 3 million inhabitants), unbalanced demographic dynamics (Milan, the regional capital, with 1,320,000 residents has been losing inhabitants and the demographic balance is compensated for only the by inflow of immigrants, while the population is on the rise in the other municipalities of the province), impoverishment of the farmlands and the landscape, in a territory that is one of the most fertile in Europe, loss of production activities as major manufacturers move out of the area and the size of companies in general declines, a drastic drop in the number of people employed, atomised decision

making and fragmentation of territorial resources, a geography packed with traditional ancient centres increasingly hemmed in by new residential and commercial centres.

Within this framework there is room for the most diverse types of settlement, which cut across the administrative boundaries and that hinge on a combination of factors to do with the economy, the settlement pattern and the history of the area. We are dealing with the so-called "city of cities", the expression coined for the Strategic Plan for the Province of Milan developed between 2005 and 2007 with the support of the Department of Architecture and Planning (DiAP) of the Politecnico of Milan, a strategic project that has into focus the settlement, economic and social geography of the contemporary metropolis of Milan (Balducci, Fedeli & Pasqui, 2011).

Equally important is the identification of a clear-cut thematic focus. The expression "city of cities" recognises a set of factors to do with mobility, access to healthcare, employment, culture, welfare, the environment, factors that, in their rich interrelations, define the concept of *habitability*; this concept refers to the quality of the habitat and establishes a close correlation between the way people live, their needs and the quality and forms of the urban space. The concept of *habitability* makes it possible to correlate the quality of life as experienced by the inhabitants and urban quality in the broadest understanding of the term. To use this concept as a basis for developing a strategic vision makes it possible to steer and guide projects, policies and initiatives. This approach was put into focus within the educational and research framework, during the same time period, by the group headed by Patrizia Gabellini (2006) who defined the purpose and the setup of the Design Studio and produced the thematic reference submitted to the students from the very start of the activity. Using habitability as the term of reference has many interesting ramifications. The theme was conceptualised in research works in relation to different but mutually correlated aspects (moving and breathing, innovating and operating a business, generating culture and enjoying it, producing urban welfare, residing, sharing spaces) that focus the attention on different places and infrastructures, derived and correlated issues, different types of inhabitants and living practices in the city. The habitability of places, seen as a multidimensional condition, enables the actions of a project to be defined as a function of the quality of life of the people.

From a didactic standpoint, choosing a nearby, accessible territory means giving the students a chance to visit, walk through and stop in the area, that is to say, to learn from a first-hand experience of the places. To work from the perspective of habitability has meant providing a clear mission to orient the students' planning and design activities, by focusing their attention precisely on the quality of living in a place on the part of the population, with their human bodies and different needs, and the way those inhabitants relate to the places and the urban policies.

Thus, the heterogeneous student body is provided with a common territory and a shared perspective, so that they may learn to formulate working hypotheses for the physical transformation of the land. On this common basis, the student may exercise their different outlooks, as determined by the different cultural and educational backgrounds. Possibly, it is thanks to the variety of skills and origins characterising the student body that this approach enables the individual students to assess their

skills and verify their background. Thanks to a common territory and a common theme, the difficulties that are encountered at the start appear as a viable alignment and setting modality to get the class started on doing design and planning group work.

4. Didactic organization of the Design Studio

The objective of the Design Studio is to introduce the students to a critical reading of the context, the ability to prioritise the initiatives, the capacity to produce guidelines and schemes for the territorial re-composition of an area.
Design Studio activities simulate a highly complex professional design work and research situation, to be addressed in a didactic setting. Clearly, it is associated with a form of practical knowledge and it is precisely through a guided sequence of concrete, hands-on experiences that the students are introduced to the task.
Work is carried out in the style of an atelier, in a dedicated classroom where it is possible to draw, both on paper and on a computer, with Wi-Fi connections, books and project documents available for consultation, where a large screen may be used to give theoretical and case lectures and show examples. The students are divided into groups responsible for different project areas within the Milan Urban Region, chosen from among five areas suggested by the tutors (Fig. 1). The five areas are

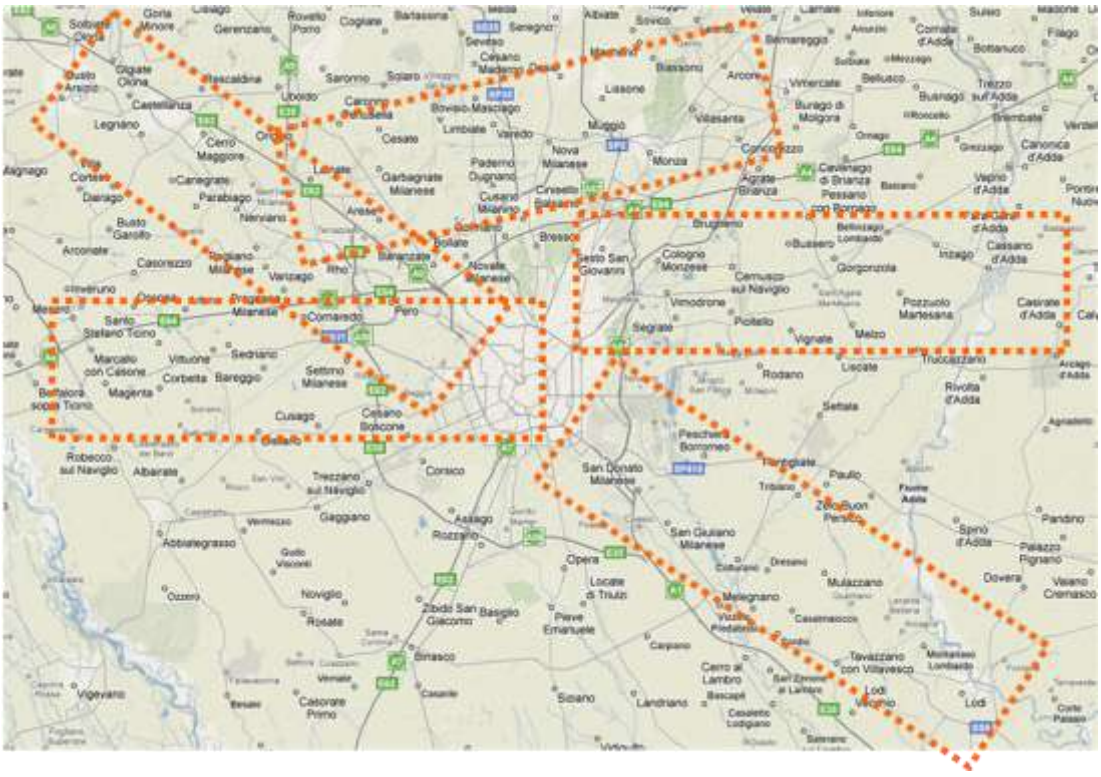

Figure 1. The Desing Studio program starts from the choice of five different parts of the Milan Urban Region where it is possible to find interesting conditions for the project exercise: from Legnano to Milan; from Treviglio to Milan; from Lodi to Milan; from Magenta to Milan; from Rho to Agrate.

urban sectors situated around the central core of Milan, measuring about 10 km x 30 km, characterised by widely differing geographic features and identified with the expression "in-between" (Milan and Lodi, Milan and the Adda river, …). A deliberately vague identification of the "urban field" assigned to the groups helps to prevent the attention from focusing on preconceived viewpoints.
Teachers and tutors are present in the classroom and discuss with the students sitting at a drawing board or in front of a computer. Meetings between the teachers, the tutors and the students are held on a weekly basis, accounting for a sizeable portion, a day and half, of the five-day week that characterises the students' schedule between October and January. Accordingly, it may be rated as the most demanding activity that students have to engage in during their first year of attendance. Evaluation seminars conclude the two steps of the didactic organization.
The workshop is organized in two steps: a first part, dedicated to describing the territorial field and a habitability profile, is followed by a second part during which the students produce schemes and guidelines for a re-composition of the territory assigned to them.
The hypothesis driving the work is that the project can be addressed only through the description of the urban and territorial field. The description of the context is a process of research and analysis that is not clearly separable from the project of transformation. The project itself represents a form of knowledge of the context and, similarly, the construction of the physical, social, economic conditions of the territorial field is essential to be able to identify the resources and the materials necessary to the composition of the project.

4.1. Describing the territorial field and a habitability profile

The goals of the first step of the learning process of the Design Studio are: the identification of the "territorial field" as the area of intervention, and the description of its profile, as necessary in order to define the transformative interventions to be undertaken. The definition of the territory and its description/interpretation is addressed from the standpoint of habitability.
A *territorial field* is a chain of spaces in which social practices establish urban-like relations in the use of open and built-up spaces, and which is perceived by its inhabitants (whether permanent or transitory) as a significant set. This portion of territory is not given beforehand and it has no clear-cut boundaries. It is defined through its description and interpretation. The territorial field shows a number of shared physical characteristics, some of the transformation phenomena underway, the mobility patterns affecting the daily life of the population. That is to say, it displays chains of spaces that may be viewed as "cities in the making" (Calafati 2009), to which the project is applied, and which the project can enhance, through replacement, addition, and rehabilitation interventions (Gabellini 2008).
The activity starts with a virtual exploration of the territory (using aerial photos and satellite photos from Google Earth and similar tools) with the aim to identify different urban patterns at an intermediate scale. In the «contemporary territory like milestones … we can observe settlements with distinguishable features and settlements: … historical centres, planned districts, … citadels, … clusters

(homogeneous nuclei) of what is referred to in Europe as "Diffused City" or "Dispersed City"» (Gabellini 2008). The survey is applied to the physical form and composition of the settlements and territorial infrastructures. Because of having to explore vast areas in a short time, teachers «suggest to use a … "by samples" survey … to explore an unknown territorial situation, catching and focusing its basic elements (materials), and also verifying and improving some starting hypotheses about its composition. The sampling operation is generative, and it is open to original running and interpretations by the different groups… The creation of a catalogue of patterns, is the first required "move" to draft an image of the considered territorial field» (Bonfantini 2011).

Starting from the catalogue of patterns recognized, through four operations the students are invited to consolidate the boundaries of their territorial field and to identify its salient features, by focusing on the characteristic relationships between space and society in order to recognize problems and opportunities. The surveys are conducted according to four different themes deemed useful in interpreting the habitability profile of a territory, and namely:

- urban material *facilities* (i.e., the physical equipment, features of buildings and open spaces) and their *performances* (the way in which territorial materials work, their usability, efficiency and effectiveness, their qualities);
- ways *of use*, the social practices in the space of different populations with different rhythms;
- *perceptions and memories*, how an urban settlement is perceived at present and how its past history persists in the memory;
- *construction sites and projects*, and disused and rundown areas, as opportunities for territorial transformation and their implications.

In the study of the four operations each group may decide which and how many surveys to do and to this end must define suitable boundaries and choose appropriate scales. In any case, institutional and technical standards are references for evaluating performances; data, inspections and chronographic research are ordinary tools for practices of use; interviews and historical documents can help understand perceptions and memories; journals, magazines, books, websites are references for construction sites and projects… The teachers give lessons on the specific tools and show examples.

The tight schedule suggests a selective strategy, to be defined by each individual group. The product of the first step is a report. The effectiveness of the report, i.e., the development of an impressive outline, is the core of the first step. With this operation the various portions of the Milan Urban Region are redefined and specified too, in preparation for the project to be developed during the second step of the Studio.

These operations may concern specific patterns/landscapes or territories, and may also suggest the presence of spaces where social and economic relationships are vibrant and able to compose urban settlements as new "cities in the making".

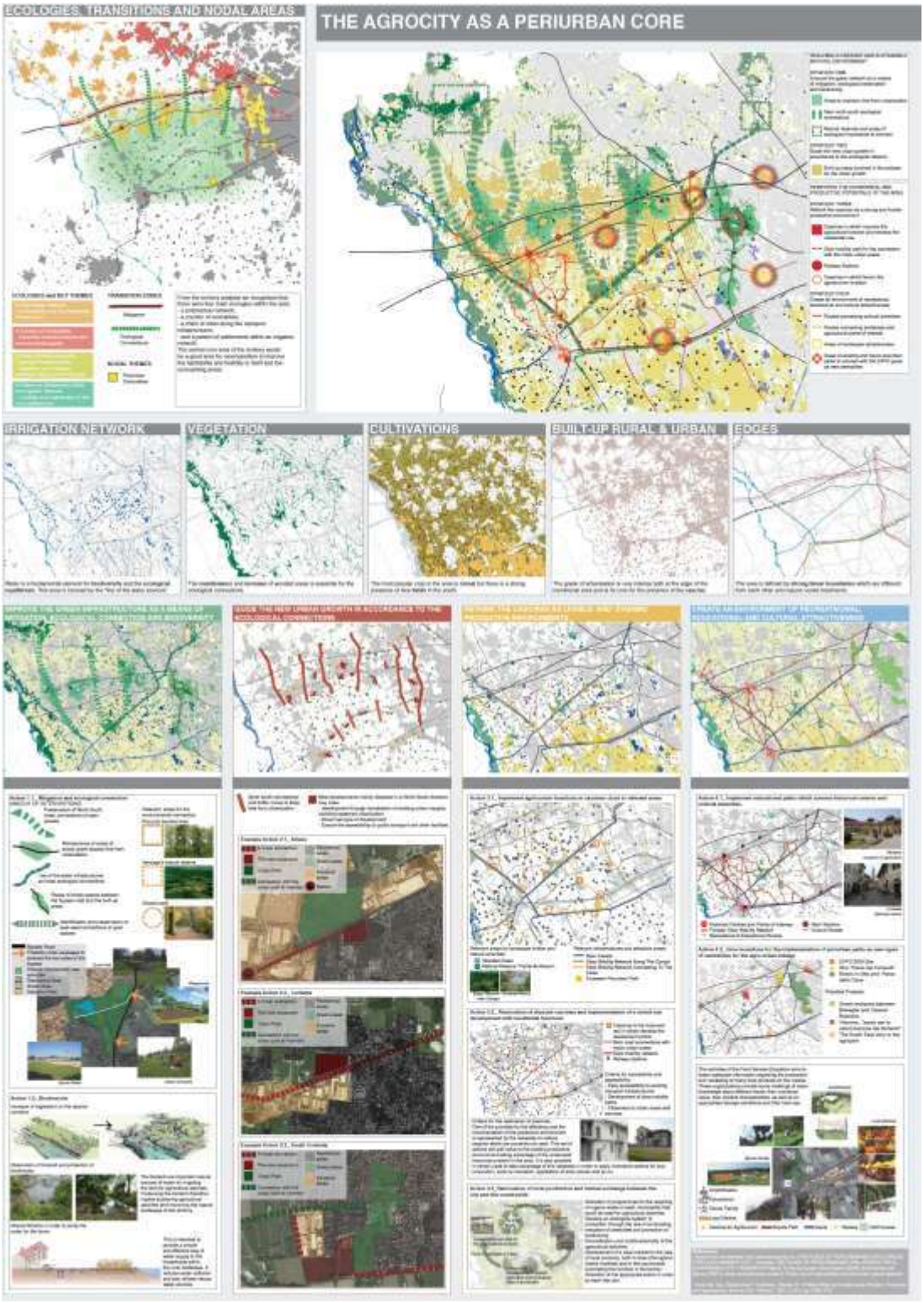

Figure 2. The Desing Studio program finish with the poster on re-composition schemes: proposal for Magenta to Milan.

4.2. A territorial re-composition scheme to outline the project

The aim of the second step of the Design Studio is the development of a re-composition project for the territorial field in question, based on the outcome of the first one. The re-composition project consists of the definition of schemes and guidelines for the same area, developing the profile outlined, geared towards formulating the project of a new city.
Each group needs to work to define an overall vision for the territorial field and, at the same time, to identify ad hoc strategies to modify individual and different parts and situations.
Some suggestions for a work of re-composition can be: proposing a *concept*, a vision for a perceivable aim, which means suggesting some *figures* able to support the urban practices of specific populations; specific *rules* and, sometimes, *models* for improving synergies and avoiding conflicts between different uses of the space; selecting suitable *infrastructures* to support efficient and effective relationships between different materials, and creating connections and opportunities for use. Open spaces, as a chain of different materials for leisure time activities as well as work (parks of various kinds, agricultural fields, natural reserves and oases, environmental corridors, urban green spaces, forests…), may become an uninterrupted sequence of built-up areas, acting as an infrastructure[6].
In the project, the infrastructural space, considered in a broader sense as the reframing element of the territorial composition, will be an essential element to redefine the relationships between the different parts identified in the first step and recognized in their qualifying themes: to connect them, re-link, integrate, separate them as the case may be. The spaces in-between the different settlement patterns are the "infrastructure" to be designed, for example: mobility spaces, formation and texture of the open spaces, water system, ecological network, minor routes network (secondary roads, footpaths, rural tracks), collective spaces and centralities, service systems (public, private and semi-public spaces).
To develop the project, the students must combine two different learning activities. The first is to look for, and learn about, past and present experiences and international good practices in the area of composition/re-composition projects. Professors and tutors, and also each group of students, give public lectures on this topic to create a large shared *repertory of cases*. The second learning activity is the nature itself of the traditional Architectural Studio as described by Donald A. Schön (1983; 1987), in which a project is constructed through an ongoing process of

[6] «The term infrastructure should not be construed in a reductive sense, should not be limited to technical artifacts, whether a canal, a road or a railway line, but rather should be conceived in a broad acceptation, as a support to the fast evolving processes of social reproduction currently underway» (Secchi, 2010, p. 13). «Equipment, roads, collective spaces and centralities, ecological networks, water system and sewage networks: for the term "infrastructure" we must go back to the original meaning, it is what allows and facilitates the continuance of social reproduction, i.e. the pursuit and development of production activities and social practices. So in this sense the concept of infrastructures is much wider than what is normally understood by the term. The infrastructure of a territory is made up of environment elements as well as roads, communal or provincial technical offices, professional organizations, the hospitals, schools, universities, railway and roads systems» (Viganò & Secchi, 2001, p. 119).

reflection-in-action with the people involved (in the school, students as architects and teachers as personal trainers) *and with the situation*. The design discussion process is a sequence of moves involving the students and the teachers, as well as the project drawings. No situation is like any other and it is not just the individual moves and the sequence or the scale of the moves that differ. The whole approach is open. During the group discussions in the classroom, teachers, students and tutors practice the design research to formulate intervention proposals.
The outcome of the second step is an A0 poster with a short report summarising the purpose and the features of the proposal. A proposal usually contains: main goals, general strategies of intervention (and sometimes the policies of intervention), territorial schemes on different scales, sketches of local and spatial solutions, basic rules or ways of intervention (Figure 3, 4 and 5). The outcome of the second step looks like a policy design output with a spatial dimension; it encompasses both action guidelines and a territorial scheme.

5. Results

What are the educational results obtained in three years of experimentation with the Design Studio having the characteristics described so far?
It should be kept in mind that the objective of *Urban Planning and Design Studio* is to introduce the student to a critical reading of the context, the identification of intervention priorities, the production of guidelines and territorial re-composition schemes.
In the course of the semester, the students have learned to:
- Identify, name and classify urban materials according to a physical-

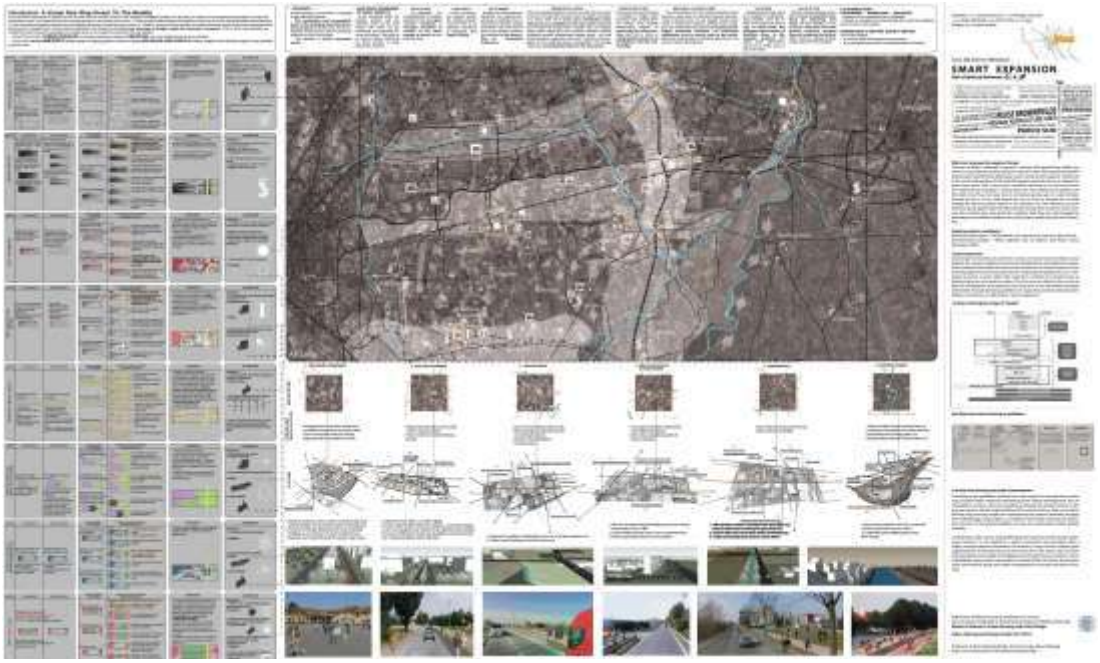

Figure 3. The Desing Studio program finish with the poster on re-composition schemes: proposal for from Treviglio to Milan.

morphological approach. Being the entry activity of the Design Studio, this becomes a way to accustom the students to observe the physical aspects of the territory, an activity that is able to promote the definition of viable large-scale initiatives and policies during the proposal stage;

- Conduct structured surveys. Walking, passing through and stopping in the area, and talking with the inhabitants, i.e., learning from the naked eye observation of the places and from listening with one's own ears (Secchi 1995; Scalvi 2000), enables the designer to acquire a sensitivity for and a knowledge of the real-world;
- Produce good descriptions of the allotted territory. The descriptions formulated by the students identify viable modalities to illustrate the transformations taking place in the territories, by taking into account a multiplicity of physical and social factors, some of them also tied with the economy and the history of the areas. In particular, great value is ascribed to the capacity to acquire skills and innovative modalities for the identification and representation of the population, and, in some cases, the capacity to analyse the rhythms that characterise specific places (Mareggi 2012). It is a description that can return a good selection of data and interpretations in relation to the short time available for its formulation;
- Collaborate with peers coming from different cultures and backgrounds. This result stems from the composition of the class on the one hand and from the explicit intention of the faculty to form groups composed of students of diversified geographic and professional origins;
- Identify the project not on the basis of a predetermined form and style (e.g., a planovolumetric masterplan, a spatial concept, an open space landscape project, an environmental network, an infrastructural scheme, a hierarchy of places and centralities), but rather by indentifying, case-by-case, what form is best suited to address a set of themes and problems. During the course of its five years of activity, the Design Studio has proposed the same territorial fields to the students and has obtained extremely different results, sometimes fairly elementary, sometimes highly advanced, but invariably original in generating project forms and action scales carefully calibrated as a function of the problems identified;
- Present the project through a complex logical organisation, communicated with the aid of posters that include maps, short descriptive texts, charts, and all sorts of graphic representation modalities as may be necessary. The poster format eliminates the possibility of using a close, linear narrative form, and encourages the students to produce open texts, veritable theme maps, that may serve as a support to the discussion, when talking with the teachers and in the final presentations;
- Acquire a capacity for dialogue through the project, and dialogue as tool to enable a project to evolve: within the groups, in their dealings with the teachers and discussants, and, in future, in their relations with organisations, offices and citizens.

It should be noted that in the first step the studies may be heterogeneous and differ to a considerable extent in terms of depth; while, at the proposal and intervention stage (second step), the design solutions leave unanswered questions to do with the

definition of the interventions and, only in rare instances, formulate detailed proposals of standards for the implementation of urban plans.

6. Conclusions

In concluding this report on a didactic experience, we deem it useful to set forth a few considerations that bear out the notion that the Design Studio is a place and a moment of learning by design.

1. The scientific rationality of the survey "by sample" is typical of design and planning disciplines and perfectly suited to architecture and city planning, two fields that find it hard to achieve a "neat" accumulation of knowledge and know-how. In 1989, architect and urban planner Giancarlo De Carlo acknowledged the difficulties encountered in «reading a large city in depth. But even this may be accomplished by considering that a large city is always made up of many different layers: it is not a monolithic city, but rather a blend of situations that are homogenous in themselves and more or less inhomogeneous with respect to one another. … Having identified the parts that, within an overall framework of non homogeneity, display a measure of homogeneity, it becomes possible to consider them in isolation, but only for the time it takes to study them and get to know them, and after that they must be returned to the whole as quickly as possible. I claim that this process is scientific... in as much as this is the way scientists proceed when they isolate a part to examine it more thoroughly, knowing full well that what they are looking at is not reality, but merely

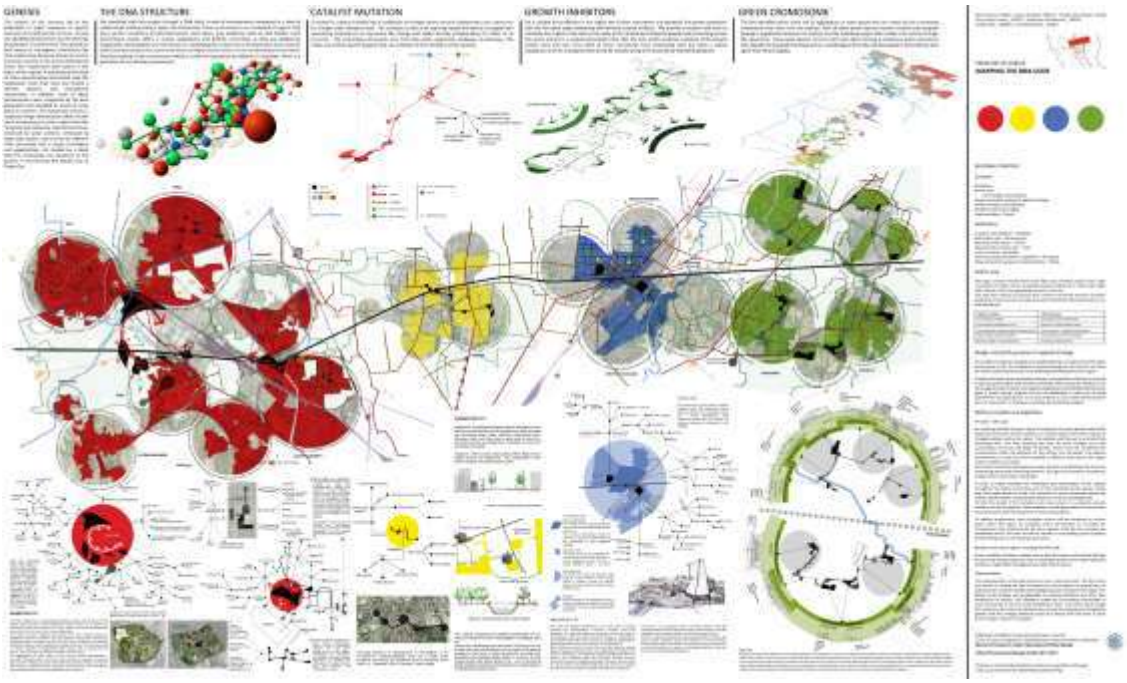

Figure 4. The Desing Studio program finish with the poster on re-composition schemes: proposal for from Rho to Agrate.

a provisional schematisation, which, nevertheless, is meaningful, in that it supplies information that is helpful in gaining an understanding of the whole of which the individual element is part » (De Carlo, 1989, p. 17).

2. The Design Studio is at once an equipped space for design review activities and the design review itself. It is at once the venue and the time both for a discussion of the territorial interpretations suggested and for the graphic formalisation of the proposed interventions; moreover, it is the place that, through gradual moves, identifies persuasive words to advocate the solutions that emerge during the course of the design process. The Design Studio is organised around groups composed of students acting professionals and teachers acting as personal trainers. In some instances, the skills of the international students with longstanding professional experience will reverse the roles of the participants, whereby, temporarily, the students will take on the role of trainers. It is a didactic approach that enables the students to learn from guided experiences, where the teacher behaves like a trainer, an approach that Donald A. Schön referred to as «educating the reflective practitioner» (Schön 1983). Thus the Design Studio is at once a teaching and a learning context.

3. Although the exercise performed by the students identifies two development steps, there is no clear-cut separation between the analytical-descriptive part and the part that puts forth the transformation proposal. In fact «describing means selecting according to some specific criteria which correspond to the reason of the description … [and] the description does not follow the change, but it helps to produce it» (Dematteis 1999, pp. 117-118) and to orient it towards specific direction. This approach does away with any conflict between urban design and planning and the need to reformulate the paradigms of the project for the city. Moreover, with this working method the unnecessary distinction between “planning to achieve” and “planning to avoid” is circumvented.

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Credits

A. Longo author of paragraph 1, 2, 3.

M. Mareggi author of paragraph 4, 5, 6.

From spatial planning to socio-spatial activation

Emerging new planning approaches in post war housing estates in Flanders – the case Luchtbal

Luuk Boelens* & Tom Coppens**

Abstract

In this paper we reflect upon emerging planning practices based upon an actor-relational approach of planning in the case of Luchtbal Antwerp, in Belgium. This approach draws on recent insights in planning theory, grounded in a relational understanding of space, Latours actor-network theory and urban regime theory. It breaks with traditional government-centred forms of planning and stimulates the formation of associative governance networks around spatial issues; hence the label socio-spatial activation.

The case concerns a deprived high-rise social housing estate in the northern fringe of Antwerp. Since 2005 the city of Antwerp and the social housing company have been taken initiatives to restructure the area, with the goal to increase the social mix of the area and to attract new inhabitants. Although a considerable effort had been made to develop a physical masterplan for the area, the implementation of the plan was very weak.

The failure of traditional physical masterplanning in this area led to the development of new and innovative approaches. Instead of relying on traditional resource-intensive physical approaches, following a technical and government-centred approach, the city opted to develop an approach focused on identifying and activating socio-spatial networks in and around the area.

In this paper we will discuss the context of the case, experiences with this actor-relational approach and its preliminary outcomes. This paper is written from an insiders' perspective of two practitioners. Whereas Coppens has been involved as the project manager within the administration of the city of Antwerp, Boelens has been involved as a planning consultant for the city of Antwerp.

Keywords: Actor-relational planning, social housing restructuring, socio-spatial activation

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Introduction

The revitalization of post war social housing estates has been a major concern for Belgian cities over the last 20 years, as in many other European cities. During the heydays of the European welfare state, many social housing estates have been built in reaction to the steep increase in housing demand, caused by a combination of a booming demography, economy and the need to sanitize the existing older inner city housing stock. Once attractive places to live in, many of these areas have changed for the worse. General impoverishment, ethnic tensions, high levels of unemployment, crime, social exclusion and physical decay have turned these areas into the most problematic neighborhoods in the European cities (Van Beckhoven and van Kempen, 2006). Already 15 years ago Peter Hall (Hall 1997) identified four typical interrelated problems regarding post war housing estates, including physical, social, amenity and economic problems. The physical problems not only relate to building technology failures, but also to the planning policies of the post war era. Planned as dormitory areas, post war housing estates often lack qualitative amenities and - due to the prevailing CIAM zoning models at the time - a local economic base providing job opportunities and local private services. Furthermore social problems have accumulated because of the attraction of the most marginalized social groups to these areas over time. The global migration processes forced many newcomers in European countries to settle in the least wanted parts of the cities, such as the post war housing estates, resulting in significant concentrations of ethnic minorities. That is what Doug Saunders (2010) recently called ‘Arrival Cities’, clusters of urban newcomers, struggling to survive and hoping to establish a new social and economic live; and if they do so moving out, creating room for the next wave of migrants and leaving the most disadvantaged behind. This concentration of the poor and hopeless people is further related with high levels of crime, and low career prospects for the younger. It has triggered social tensions and unrest over the years in Europe’s major cities, as demonstrated for instance by the 2005 riots in the Paris suburbs, and the 2011 riots in London.

Unlike neighboring countries such as the Netherlands, France or the UK, post war housing policies in Belgium however, and especially in the Flemish speaking part, prevented large concentrations of post war social housing estates. The number of social rental dwellings per 1000 inhabitants is for instance 32 units, which is low compared to the UK (80 units), France (86.5 units) and the Netherlands (138 units) (Pittini and Laino 2012). Housing policies over the last century in Flanders have been primarily oriented to the acquisition of private property on individual parcels, and have inherently supported a process of suburbanization (De Decker and others 2005), avoiding strong concentrations and high densities of social houses.

Nevertheless, some of the larger cities such as Ghent and Antwerp, and some regional cities such as Leuven or Genk do have significant concentrations of social housing estates, facing the same challenges as in many European cities. One of these neighborhoods is Luchtbal Antwerp.

Introducing Luchtbal - From model city to problem area

Luchtbal is an post war social housing area with about 2500 families in the northern fringe of the city of Antwerp, bordered by large infrastructures such as the High speed train railroad and the ring road in the East, the Albert Canal in the south, the Noorderlaan and the port area in the west, and the A12 highway in the North (Figure 1). The social housing company "Woonhaven" (which is a fusion of MGH and Huisvesting, see below) owns about 90% of the housing stock, whereas 10% stock has been sold in the past to private owners, mainly the renters of these houses. Situated on a water-sick soil of a former polder landscape, the area was uncultivated until the 19th century. However, when in the early 20th century the port of Antwerp extended to the north, the water-sick northern polder area was reclaimed and sold to the Catholic housing company *Maatschappij voor Goedkope Huisvesting* (MGH) to house the dockers working in the port. Following the principles of the garden city, about 350 single family houses had been constructed in the 1920's, together with public facilities such as a school, a church and outdoor sport facilities. After the second World War, another socialistic housing company - *NV Huisvesting* - developed new houses, mostly apartments, to meet the fast growing demand resulting from the postwar economic and demographic growth, and the need for new laborers in the harbor-area. *Hugo van Kuyck*, who had studied at Yale during the war and was very much inspired by CIAM and post-war America car-based urban principles, delivered the extension plan. The plan consisted out of largely standardized, high-rise housing ensembles in an open plan layout with large green collective spaces, and amenities such as schools, sport infrastructure and shopping facilities along the Noorderlaan. At the time the apartments of the high rise buildings were considered very modern and convenient, certainly when compared with the 19th century dens and low quality housing stock in the inner city of Antwerp. Therefore, Luchtbal with its spacious and modern apartments was considered as a premium residential location in the 60ties, attracting not only workers from the port area, but also middle class families from Antwerp.

However, over the years, the reputation of Luchtbal dramatically changed from model city to an unpopular area. The relation between the workforce of Luchtbal and the port area gradually faded away, as the workers retired and the harbor area extended towards the Sea and on the leftbank of the Scheldt. As the first generation inhabitants aged, died or moved away, immigrants replaced the inhabitants. Although Luchtbal can't be regarded an 'Arrival

City' while it's tenants need to live in Belgium for several years to be eligible for social housing, the one-side supply of social dwellings and the social housing allocation policy resulted in a constant import of relatively poor families in the area, and a fast and dramatic change in the social-economic and ethnic composition of the area over the last 20 years. The once almost mono-ethnic neighborhood changed rapidly into a diverse cultural neighborhood with about 47% of the population having its roots in various parts of the world, mainly North Africa and central Africa, and to a lesser extend from Asia and east Europe (Stad Antwerpen 2012). As a result social tensions in the neighborhood have increased, as well as the physical examples of decay and unemployment towards 18% at the time (Stad Antwerpen 2012). Given the demographic boom of immigrant families in the area, there is fear for a further spiral of negative decline (Sociale Planning 2009).

The failure of the masterplan Luchtbal

Although international scholars have stressed time and again the need for a long term, local embedded and integrated physical, economic, social and cultural approach in these areas, and have stressed that physical improvements alone are unsustainable helping to solve the problem (Christianse et al, 1993, Parkinson 1998, Hall 1997, Musterd et al. 1999, Andersen 2001), until now basically two main strategies have been applied by the Flemish government, the municipal governments and the social housing companies. The first strategy has been the physical regeneration of these housing areas. Many of the houses from the interbellum and the post war era no longer meet modern comfort, technical and safety standards. The necessary renovation of the housing stock mostly not only aims to increase housing comfort, but is also used as an opportunity to change the mix and typology of dwellings and to invest in the public domain and additional amenities.

The second strategy has been "social mixing" (Loopmans and others 2010; Decker and Pannecoucke 2004). "Social mixing" refers to the idea that a change in the social composition of such a neighborhood could reduce the concentration and accumulation of social and economic problems and contribute to the liveability of social housing estates. The previous Flemish decree on social rental dwellings (or "huurbesluit" of 20 Oktober 2000), made an explicit link between livability and social composition, stating that *the care for liveability might require to aim for a social mix*. A social mix strategy thus tries to prevent concentrations of lower incomes, elderly people or ethnic groups, meaning in practice for many social housing estates the import of middle class, 'white families' into downrun areas. And although it must be noted that Flemish housing policy from 2007 gradually started to abandon the social mix matra in the preparation of the new Flemish decree on social housing

(Heylen and others 2007), until now municipal governments still stick severely to the “social mix” strategy.

As such, the Masterplan Luchtbal, which De Nijl Architecten put up during 2005-2007 in assignment of the social housing company, the city of Antwerp and the Flemish agency for social housing, still consisted of both strategies mentioned before (Figure 2). On the one hand the masterplan opted for the regeneration of the existing housing stock, including the improvement of the existing public realm, the restoration of the spatial coherence of unfinished Van Kuyck masterplan, and the concentration the amenities in new so-called ‘centralities’ according to the present needs. On the other hand the masterplan opted also for an improved social mix by densifying existing open areas, especially along the Noorderlaan, with housing for new middle and high-income groups (De Nijl Architecten 2007). However due to the lack of a sound complementary social strategy, initially the masterplan was not fully supported by the city and the housing company. Therefore the social department of the city of Antwerp decided to make up their own strategy based on some interviews with several inhabitants and stakeholders. It resulted in an action plan of twenty ‘actionpoints’ in the social-cultural and spatial realm, and on the short and middle long term (Sociale Planning. 2009). But again, it didn’t consisted of an integrated physical, economic, social and cultural approach, while at the same time all the actions where very much dependent on the investment willingness of the Antwerp municipality.

Therefore, and after the masterplan together with the social action plan was approved, additional surveys in 2010 with regard to the expected traffic noise and market conditions made clear that the proposed densifications would hardly attract the intended target groups. The bad reputation of the area, its spatial isolation, its exposition to severe noise loads from large infrastructure and the improper potentials of the densification areas for new attractive housing typologies, made the area hardly competitive in reference to housing projects elsewhere in Antwerp. Even scarce new cheap housing projects and apartments, developed by the city, and put on sale below construction costs, are currently hardly sold. Moreover the rigid zoning scheme – which characterizes not only the current layout, but also the New Masterplan - makes the area hardly attractive for organic, self-organized, co-evolving urban regeneration processes. For this reason it became doubtful whether the strategy of ‘social mixing by densification’ would actually result in the desired social uplift of the neighborhood and its residents. Perhaps it would result into a subsequent internal social and ethnic segregation and a potential further economic impoverishment of the area, as Dutch research had shown in similar restructuring projects of post war estates (Kleinhans 2005; Ouwehand and Davis 2004). Moreover, big infrastructure projects in the direct surroundings of the neighborhood result in a growing social unrest, encouraging new resistance- and

actiongroups with new interests and ambitions. With this new information, the Masterplan Luchtbal got into a deadlock. Despite the fact that some parts of the masterplan were indeed implemented, the general strategy of "mixing by densifying" was obviously failing.

It was felt that the area needed a new, integrating, but open and communal investment strategy, not so much based on a municipal plan or municipal subsidies, but on a co-evolutionary strategy between the various public, civic and business stakeholders in and around the area from the bottom-up. And although Doug Sanders (Saunders, 2012) claimed that such an embedded, organic strategy would only be feasible when one could get rid of the rigid high rise post war housing areas all together, the challenge would be to implement such a bottom-up, organic approach within the existing layout. Otherwise physical, municipal, one-sided improvements would still precondition such a strategy and would need massive financial means. Therefore the main question was: would it be possible to develop embedded, organic, co-evolutionary planning strategies in post-war housing areas to improve resilient living conditions in as well a social, economic, cultural and physical sense? How would such a planning look like and in which way would it be different to existing strategies?

Actor-relational approaches

That kind of planning strategy is very much inspired by the poststructuralists ideas on geography (Thrift 1999, Graham and Marvin 2001, Belsey 2002, De Landa 2006, Murdoch 2006), in which space is not so much seen as a ‘container’, a prefabricated décor or platform upon which social, economic and/or cultural activities appear, but as an actor itself capable of influencing and stirring other actors, as that it is stirred and influenced by those actors and others spaces itself. Space is therefore not closed or contained in a pre-given three dimensionality, but it is made of relations; or in other words it is relational. The possible spatial developments of Luchtbal and its social-cultural practices are in this respect very much intertwined, as that they are related to general economic developments and institutional changes within and around the neighborhood. Moreover, especially over here it is connected to the increasing transnational settings of the people and communities living in the neighborhood (Appadurai 1996, Anderson 1998). Luchtbal, as space in general, could therefore be regarded a multiplicity, that is made of differing, spatial practices, (degrees of) identification and forms of belonging. Especially in cases like Luchtbal there could be acute struggles over who’s reading on space should take priority, leading to new controversies and/or riots. But, if intertwined, it could possibly also lead to new ‘openings’, innovations and forms of spatial practices. In David Harvey’s terms (Harvey, 1996) these new practices could

possibly evolve into ‘temporarily permanences’, meaning that they only stabilize provisionally, and need to be made and remade by various actors continually. Moreover in our differentiated and volatile society several of such continually changing ‘temporarily permanences’ exist next to each other - autonomously or interrelated - developing dynamically towards new, surprising and often unexpected (temporarily, but if possible resilient) urban assemblages (Farias & Bender 2010).

That kind of spatial planning goes beyond the plan, and takes the ongoing complexities and non-linearities of present day networked societies serious (Hillier 2007, Boelens 2009, De Roo 2010, De Roo/Boelens 2012). It is always focused on ‘becoming’, not on ‘how to get to a prefixed ideal situation’ (that is in essence ‘ the plan’). Its main drive is focused on facilitating a translation towards (temporarily) innovative, more resilient assemblages in space, embedded in specific local settings, but with an open eye to changing, reciprocal adaptive circumstances. That kind of planning goes beyond a simple engagement with new objects of analysis or with a broader orientation on various social, economic, morphological or political landscapes of concern, as that it goes beyond simple action research (Coppens 2011) or participatory, collaborative planning (Healey 1997). Instead it refocuses on, as that it takes part in the actual actor-networking between the various interests and space itself.

In this respect, that kind of actor-relational planning comes very near to the Actor-Network-Theory (ANT) of Callon (1986), Law (2004) and Latour (2005). Like ANT it is no longer focused on the sociology of the social, or the ‘planology’ of planning, but it goes back to very core of engaged spatial planning itself; that is the best reciprocal adaption of space and society, such for the sake of society (Van Veen 1973). However there is no such thing as ***a*** society (anymore), nor ***one*** prefixed idea of space. There are several societies and various interconnections to space, and therefore various spaces, evolving autonomously, next to or at its best intertwined to each other. Moreover, we have got business societies with a principal focus on money making in last instance, public societies with their representational democratic principles, institutional means, laws and regulations and focus on periodic (re)election, as that we have got civic societies with their struggles for survival, daily experiences, growing (multi-media) self-organizations around specific, common interests and/or civil disobediences. Each of these societies identifies itself to space differently, showing various forms or ambitions of belonging.

Therefore this kind of planning goes also beyond the restrictive confines of governments (Boelens 2009, Boonstra/Boelens 2011). It is not so much focused on collaboration or coproduction around specific issues, objectives or ambitions of representative governments, from the inside-out, such for the sake of the public interest in general. Instead it is focused on

co-evolution of the various forms of spatial belonging mentioned above, from the outside-in. While it is convinced that this kind of coevolution between leading actors of the business, public and civic society, in reference to the specific institutional setting and local situatedness, promises the most sustainable, innovative and resilient cross-overs. These kinds of co-evolutions evolve along the four phases of translation of ANT: problematization-interessement-enrolment-mobilization (Callon 1986), or the four collectives wonderment-consultation-hierarchization-institution (Latour 2004). However, while ANT particularly proves its strength in retrospect, and planning is mainly a prospective operation, several adjustments of ANT to an Actor-Relational-Approach (ARA) are introduced to deliver a suitable strategy for spatial planning (Boelens 2012).

One of the first is the interpretation of ANT's notion of 'all (heterogeneous) actors are equal'. Although ARA takes non-human actors very seriously, while it is convinced that collective actions are not only dependent on the interests and ambitions of humans, but also on the specific conditions of the soil, the morphology or the characteristics of the build environment, existing plans and the like; it is also convinced that in prospect these non-humans are always meditated by humans in some way or another. In our case it would mean that the specific morphological, social, economic characteristics of post-war housing areas, including the specific layout of the garden city and high-rise Luchtbal, condition the specific possibilities and even changes of co-evolutionary planning over here. However these characteristics (their flexibility to adapt, stay foot or change) are highly mediated by the respective home-owners, spokespersons of the housing corporations, municipality, architectural organizations, inhabitants etc. To coevolve with these non-human actors, would therefore mean coevolving with those intermediaries.

About the normative grid of ANT: although Latour (2004) has highly disputed the normative characteristics of ANT, Callon (2009) and Venturini (2010) recently produced the idea of hybrid forums, bringing opposing forms of delegative democracy and dialogical democracy together in order to constitute collective decisions, without excluding the continuous exploration of possible worlds and new identities beyond those decisions. But while Venturini and Callon remain very vague what this would mean exactly and seem to be convinced it would be possible within the existing realms of representative democracy, it remains unclear how these ideas should be implemented. How could representative delegates, locked-in by the path dependencies of their delegative powers, still explore all the identities en possible innovations beyond those restrictive confines? In this sense representation, or more specific representative democracy – on which planning relies heavily – is already strongly and widely

disputed (Harvey 1989, Cohen & Rogers 1992, Gans 2003, Hirst 2001, Swyngedouw 2004, Purcell 2008). Representative democracy would widen an already enormous gap between the representative democratic bastion and the daily lives of citizens and businesses, mediated through a growing bureaucracy. The middle of the road, 'one-size-fits all' policies of representative democracies wouldn't be no longer adequate for a growing pluralism in present day society. Furthermore representative democracies would always relate to a nice, but precisely bounded, organizational hierarchical stratified piece of land, while in present day societies many (spatial) questions cut right across different levels or just fall in-between. In the last decades many alternatives have been sketched to deal with those issues in a better way. But here we take the stance that a more associative democracy would fit in with the non-linear and co-evolutionary approaches described before, while associationalists plea for a more direct self-organized (in)formal governance, promoting an organic representation of currently underrepresented interests, and thus encouraging the formation of pluralists, independent associations around specific interests.

Although associative democracies could occur (not instead, but) next to representative democracies, for planners it would mean to move more and more beyond representative governments, and to serve emerging self-organizing (if necessary multi-level) actor-networks around specific issues from the outside-in. It would be consistent with the pleas of Elinor Ostrom (1990) with regard to common pool resources management and the collective self-governance, in which she identified eight design principles. But that would also mean that planners would become less spatial driven, but more and more issue and involved actor-network driven. Nevertheless, their 'spatial instruments' – their design researches, spatial explorations, plans, graphs and the like – would become important tools (instead of means or objects) helping to discover new possibilities, innovations an crossovers in those co-evolving assemblages. Following Deleuze & Guattari (1980) and Jean Hillier's (2011) 'strategic navigation towards a speculative future', at least four alternative kinds of decisive planning documents are distinguished in its proceedings, intended to stimulate so-called 'tipping points' in the formation of new alliances (Sanders 2009, pp. 166-179):

- tracing documents, exploring the potentials of the site or of the planning challenge involved;
- mapping documents, tempting an educated matchmaking between the potentials traced and possible actor-networks;
- diagram documents, following the transformations of actor-networks and their fields of influence during the proceedings and

- agency documents, the potentially more binding and passive elements for actor-networks, such as laws, regulations, contracts, arrangements, etc.

Each of these documents plays an important role in each of the aforementioned translation phases of possible co-evolving networks.

Applying ARA to Luchtbal.

Bearing these ideas in mind, let's go back to the planning practice of Luchtbal. Faced by the deadlock of the master plan, we engaged the municipality and housing company to explore new approaches, by which the inhabitants themselves would be activated to (self)organize their living environment, if necessary or possible with help of other stakeholders, like the government, (new) entrepreneurs in and around the area etc. Urban Unlimited executed this program in cooperation with the Flemish consultancy firm Omgeving, in assignment of AG Stadsplanning Antwerp, the Flemish Government and the housing cooperation Woonhaven, with help of the Universities of Leuven and Antwerp. Since November 2011 they applied the aforementioned new relational co-evolutionary ideas to an experimental planning strategy for Luchtbal Antwerp. Until now it has consisted of four phases, navigating through the complexity and multiplicity of Luchtbal

- tracing the unique selling points of Luchtbal by design research
- exploring the needs and ambitions of the civic, business and public society within and round Luchtbal;
- roundtables with regard to first ideas on communal, coevolving opportunities based on those (mono-, bi- or trilateral talks)
- ideas for a communal investment strategy in reference to that.

Tracing Unique selling points

First we executed a short inquiry into the Unique Selling Points (USP's) of Luchtbal. On first sight, Luchtbal is a generic social housing estate, following the rigid CIAM-principles. However, going beyond the clichés of post war housing estates, we searched for elements that differentiated Luchtbal from its look-alikes. To do this, we used various interpretative methods of analysis, such as mapping and ethnographic methods, each of them revealing specific assets and opportunities of the area, trying to understand Luchtbal from an insider's perspective. In our analysis, we have involved Master students of the Master Urban and strategic planning (MAUSP) of the KU Leuven in the analysis, as part of their curriculum.

Because of the international orientation of the Masterprogram, some students came from the East and North Africa. This helped in overcoming cultural and language barriers. And from these embedded analysis we eventually found four unique selling points that provide opportunities for the near and long future, including a) the relation with the port, b) public space, c) the mix of public facilities and d) finally the relation with large infrastructures.

Relation with the Port

Pivotal in the history of Luchtbal has been its relation to the port and the port-related industries. In fact, Luchtbal owns its existence to the port. The sand dug out for the enlargement of the port and the construction of the new docks in the early 20th century was used to reclaim the water-sick land of the area. Moreover, the large scale and labor-intensive Fordistic port production activities of the post war area provided jobs for the new residents in the early history of Luchtbal. One of the main employers has been for instance the plant of General Motors, sited along the Noorderlaan, and one of the largest car constructors and employers in post war Belgium. However, over time, the link between the social housing estate and the production activities gradually weakened. When the global crisis of the Fordistic mode of production hit the port area, more and more industries closed their doors. As the Noorderlaan is a main traffic road within the Antwerp agglomeration for car commuters, new large scaled commercial activities, large facilities such as the fire station, sports retail, car retail and the biggest multiplex cinema of Western Europe replaced the production halls. Next to that new, temporally and informal uses are gradually taking up the new voids. But these facilities attracted not so much employment for the old Luchtbal dockers, but attracted large crowds, providing the area with potential visitors from all over the region, even from across the Flemish borders. Opportunities exist for the retail and construction companies at the former port plots to cooperate with the planned technical campus in the area, and to provide a link between education, innovation and practice. The lost link between Luchtbal and the port could therefore be reconnected in different ways, in finding both new employment and education and new relations with visitors and customers. Renewed alliances at the local level between inhabitants of Luchtbal and investors in the port might result in a new dynamic for the larger area. Also, the vast amount of unused space along the Noorderlaan might accommodate new informal economic activities and entrepreneurial opportunities for the residents of Luchtbal.

Public Space

A second important selling point is the vast amount of green spaces in Luchtbal. Designed as a modernist city, Luchtbal still has many open - though formal - green spaces. It is further connected to a larger green corridor along the ring Road relating the inner city with its

hinterland. Despite the abundance of open areas, the formal public space seems however to be underused and hardly appropriated. Although some 5500 inhabitants live in Luchtbal, there is hardly any public outdoor life. In the history of the Luchtbal, open spaces within the northern garden city played an important role in the social and spatial fabric of the neighborhood. Semi-public inner yards were used for recreational uses, and the semi-private gardens created a collective good for its inhabitants. The larger open area of the Schijn was used for agriculture for some time. Different sport, social and cultural clubs rooted in the area, organizing festivals and markets up until the seventies. But over time, the uses diminished as clubs disappeared and as the population shifted and ethnic diversity increased. Our analysis showed a very specific use for different ethnic and age groups, mostly outside the formal public spaces of Luchtbal. (see Figure 3). A renewed use or a new collective appropriation of public space in the area again could initiate a new dynamic in Luchtbal. The immigrants in Luchtbal don't tend to apply and pay for traditional Flemish club memberships, but they are interested in informal or free activities concerning urban gardening, exotic food markets and sport activities specifically for women. These kind of activities fit well within the original spatial structure of Luchtbal as a kind of 'garden city'.

Mix of public facilities

Third, unlike many other social housing estates in Western Europe, there is a large supply of public facilities in the area. There are many schools in the neighborhood, including a sport school and a swimming school, a community center, a cultural center, a child daycare center, a home for the elderly, a sports hall, and sport fields. The city is also investing in additional public facilities such as a large playground, a small sports hall and a youth center. From the analysis, we noticed that many of the existing public facilities have users outside Luchtbal, and that users from Luchtbal do not always make intensive use of the facilities, such as the cultural centre. On the other hand, contrary to the abundance of public facilities, there is a lack of commercial private facilities, certainly for daily needs. There is a large discrepancy between the large retail facilities at car commuters, and the lack of shopping facilities in the area, oriented at the residents themselves. Nevertheless, the abundance of public facilities can be seen as a specific asset for Luchtbal. Luchtbal provides a high level of cultural and sports programs and physical space for a large city audience, thereby escaping the isolation or possible ghettoization of the area. At the moment it provides a destination for visitors outside Luchtbal, but the actual audience doesn't mix with the Luchtbal people. It is a challenge to match the programs to the local demand without losing the city audience, vice

versa. Some of the public facilities could provide supra-local services, entangled with the outside attraction and the inside embeddedness of the area.

Good connections

Last, as already mentioned, Luchtbal is surrounded by large infrastructures: the Noorderlaan in the west, the A12 in the North, the ring road and main railroads in the east, and the Albert Canal in the South. Although these large infrastructures decrease in many ways the environmental qualities of Luchtbal, they also provide many opportunities. The main infrastructures make Luchtbal highly accessible by various modes of transport: it has two railway stations, it is a main entrance point of the city and in the future, a new tram connection with the city and the northern village of Eekeren will improve these conditions even further. However, in relation with the Noorderlaan the car has always been the main mode of transport. Worth mentioning is the fact that the plan of architect *van Kuyck* contained one of the first car-oriented shopping centers of Belgium along the Noorderlaan. But within Luchtbal, an over-abundance of asphalt is apparent; while at present an increasing number of inhabitants do not even own a car. Next to that, Luchtbal is also situated near the nature reserve of *Oude Landen*, providing a unique ecological background to the intense accessibility.

These USP's of Luchtbal provided us with additional information about the factors of importance (the so-called non-human actors), which could play a decisive role in our exploration towards possible new embedded innovative urban assemblages, e.g. actor-networks. But are these USP's also recognized by the inhabitants and other (mediated) human actors themselves? Therefore we proceeded to the interests, needs and ambitions of those human actors in our quest through complexity.

Exploring the needs of various societies

As mentioned before, here we distinguish the needs, interests and ambitions of the civic, business and public communities, while – differentiated in their primordial drives - we are convinced they could be complementary and co-evolve beyond more or less one-sided operations towards more resilient alliances.

Civic Society

Firstly the interests of the residents of Luchtbal themselves; that is those of the civic societies within the area. They are multiple and highly divers. And since the introduction of participatory, communicative and collaborative planning approaches, these interests, needs

and ambitions have been put foremost on the agenda, trying to stimulate inclusionary plans. As such, these ideas have also guided the masterplan Luchtbal mentioned before, including other plans in the wake, like housing renovation programs, plans for new playgrounds, the neighborhood traffic circulation plan etc. Nevertheless – and although they have climbed Sherry Arnsteins (Arnstein, 1969) 'Ladder of Participation' profoundly - these participatory, communicative and collaborative approaches still receive persistent critiques. They would be time consuming and only result in another *Diktatur des Sitzfleiches* (Weinrich 1987, Schaap & Van Twist 1992, Frissen 2007). They would be foremost focused on process and hardly on content (Wigmans 1982, V.d. Cammen 1995, Bakker et al. 2006), and would not genuinely improve the quality of planning decisions that matter (Innes & Booher 2000). They would only meet a specific kind of citizens with time and know how (Flyberg 1996, De Graaf 2007, Van der Arend 2008) and therefore evolve in a kind of 'public support machine' (Pløger 2000, Hendriks & Tops 2001, Woltjer 2002). Therefore they would be indeed procedural, thematic and spatial inclusive, framing spatial developments in the public path dependencies of governments, and excluding novel, innovative and self-organizing activities in potentia (Boonstra and Boelens 2011). And precisely some of those features also occurred with regard to the spatial planning in Luchtbal. Experiencing and attending some of the participation meetings with regard to upcoming venues, revitalization programs, the neighborhood circulation plans etc., it became very much clear they attracted only the native, Dutch speaking, somewhat elderly residents, because they would have the time and preparedness for long lasting participatory processes and familiar with the options, rules and institutional (im)possibilities of the planning conditions in question.

Therefore we had to invent alternative ways to get a more genuine picture of the residential needs, interest and ambitions, of the growing immigrant population too, including their possible already strong self-organizing networks. For that purpose, in cooperation with the social faculty of the University of Antwerp (UA), we organized a half-our long door-to-door inquiry among some 800 random households (of the 2500 in total), with regard to a) their housing history and possible relocation ambitions, b) their appreciation of the neighborhood on several aspects, c) their functional, social and economic networks within and around the area and d) ideas about a possible future investment program (financial, in time, experience, physical, organizational) and their willingness to contribute themselves. It was executed by 17 bachelor-students (second year) of the Faculty of Social & Political Sciences of the UA. In addition, and in cooperation with the Catholic University Leuven (KU-Leuven), Faculty of Architecture, Urbanism and Spatial Planning, we organized with some 15 (research)master students 5-10 minutes long, so-called location-inquiries to by-passers at the small shopping

center in Luchtbal, the central pub, library, cultural center, elderly center, kindergarten, schools, mosque, church and the like. Eventually they got a response of some 250 inquiries.

Although the response with some 125 door-to-door inquiries was a little bit low (even compared to other surveys in immigrant neighborhoods), together with the location-inquiries and the periodic city-wide digital inquiries of the municipality we got a more or less accurate idea of the opinions, needs and ambitions of the residents themselves. It confirmed the notion that Luchtbal isn't an arrival neighborhood (see Figure 4). Moreover, overall, residents liked to live in Luchtbal, and responded that it was a nice, green and quiet neighborhood, although it is surrounded by main and massively used infrastructures. There are hardly any relocation ambitions on short and mid long terms because of the neighborhood itself; if there are any, reference is mainly made to the existing small apartments and the ambitions to live in bigger houses due to the number of family members. However one wouldn't recommend family, friends or other acquaintances to come and live in Luchtbal also (see Figure 5). One is worried about a possible negative spiral of the neighborhood. Here we can distinguish three populations camps: natives (mainly living in the garden city part) who are more or less intolerant to immigrants, immigrants (mainly living in the high rise part of Luchtbal) who have the perception that they are discriminated, and another group - natives and immigrants – (luckily still the vast majority throughout the neighborhood) who experience a lack of good communication among each other and look for opportunities for a better dialogue to live together. Surprisingly (in reference to the large number of transnational communities), the residents are also highly focused on the neighborhood itself; only with regard to work, shopping and other non-daily activities they orient themselves to (the greater region of) Antwerp as a whole (see Figure 6). Accordingly, concerning a possible future investment program, the respondents are mainly focused on improving the public, communal space; firstly (18 to 21%) with regard to better and more appropriate shops in reference tot the changing population and needs, and furthermore in better sport facilities (7%), economic activities and small business opportunities (6%), activities for the elderly, young people (5%) and investments in the maintenance and security of the public domain (4%) (see Figure 7). Approximately one third of the respondents would be willing to contribute (their spare time, experience and knowledge) to this program.

Business Community

Parallel to these inquiries, we explored the ambitions of leading actors in the business communities as well. It was executed by Urban Unlimited, firstly through an extensive actor-analysis on internet (investigating year reports, investment strategies, news items etc. on possible involved actors within and around Luchtbal in reference to the unique selling points

of the area) and secondly in primordial bilateral interviews with some twenty of those leading actors. From these explorations we concluded that there were hardly any leading business actors within the neighborhood itself; leading defined as those business actors who are willing and also able to (financially) invest in their physical, business, socio-cultural etc. environment in order to benefit from it by itself. Nevertheless we also concluded that in the (direct) surroundings of the neighborhood, several leading actors in the business society could be identified, which could possibly be involved in the investment strategy for Luchtbal at the right time and/or under precise conditions. Although the project was restricted by the municipality by the main infrastructures mentioned before, we decided to open up and extend the assignment beyond those borders (see Figure 8). Here we interviewed the directors of the St. Jozef schools and DAG/WAG organizations; two main actors in the broader Antwerp-region to organize education and after-school work and internal housing for physical en mental disabled people. They opted for an appropriate extension of their infrastructure, together with new amenities for their promising candidates for the Paralympics. Next we talked to the director of the International Seamen Hotel who had to move his hotel to the outskirts of Luchtbal en was looking for new promising arrangements with surrounding actors. Moreover we spoke with representatives of Kinepolis (the biggest multiplex cinema in Western Europe) who wanted to extend its program towards a 24-hours activity confronted with a downfall of traditional cinema visitors; or with those of Decathlon (a major European retailer of sportarticles), tempting to extend its interest in outdoor sport activities, also as a try-out zone for their products. We talked with the CEO of BRICO-Plan It (a major retailer in construction materials and garden supplies) to discuss if they were interested to invest in the greeneries of Luchtbal; with two main car retailers in Antwerp (Beerens-Audi and Jorssen-BMW) who wanted to revitalize the old, empty GM factory building at the Noorderlaan into a main leisure, car-selling center – Autostad – also as a new training and internship possibility for young, unemployed people from Luchtbal. We have discussed with the four directors of the secondary technical profession schools in Antwerp – who wanted to concentrate their activities in a Polytechnical campus in the north of Luchtbal – the possibility to erect new incubators, as well as the co-use of necessary amenities. We have talked with the regional director of the NMBS (the Belgian Railways) about the possibilities to extend and rearrange their two stations and station-areas nearby, according to a possible new investment program for Luchtbal. Etc.

Nevertheless, already during these open, primordial investigating talks it became clear that traditional bureaucratic, political ideas about predefined, restrictive planning blocked some of these discussions; partly because they were surpassed and partly of non-transparent internal

deliberations. These internal public path dependencies, or better still ‘lock-ins’, need to be overcome in order to stimulate a real open and innovative actor-relational progress.

Public Society

Therefore and in the third place, we organized several brainstorms with the main servants and officials of the involved departments of the public society; that is with Housing, the Economic and Shopping department, Mobility & Infrastructure, Youth & Education and the Public Domain. The main objective of these brainstorms was to inform and to be informed. Secondly we opted for an open mind, discussing possible new and/or innovative solutions. As such these brainstorms seemed to work. Especially with regard to the public domain and the youth & education workshop new ideas evolved with regard to a so-called ‘green Luchtbal carpet’, including a varied involved management of the different open areas depending on the social ‘situatedness’ of these areas within the neighborhood, block-wise urban farming experiments, community schools, additional sporting facilities and a more efficient reciprocal co-use of the available amenity spaces, during the day and week. The same occurred within the economic and shopping workshop, with regard to for instance the realization of a containerpark for start-ups and incubators, new financial models for self-producing neighborhood retail, Mediterranean markets, repair stores in combination with a new and already existing recycling shop, additional services around the planned bicycle highway etc. Next to that extra emphasis was put on an integrated event programming, in combination with a geared new image branding of the neighborhood. Nevertheless, especially with regard to the Mobility & Infrastructure Department main blockades became apparent; particularly with regard to main infrastructure projects, induced by the Flemish Government and De Lijn (The Flemish Public Transport Organization), like the Oosterweel connection and Brabo2 (reconstruction of the Noorderlaan). But also with regard to the domestic neighborhood circulation plan, which is in fact the responsibility of the northern district of Antwerp. Apparently it is hard for stratified governments and straightforward functionalistic and technical departments to deal with a more open, volatile and therefore non-linear process. However, while these infrastructures are conditional for the changes discussed, we needed to find a new balance between more objective and more intersubjective planning approaches.

Opportunity Maps and Roundtables around promising features

Nonetheless, at that moment we managed to get a sufficient insight in the actor-network possibilities, constraints, challenges and threatening deadlocks for ‘temporarily and/or resilient Luchtbal assemblages’. There is a real threat for a further isolation of the neighborhood as a result of the so-called ‘urban spine’, of the Structureplan of Antwerp,

including its adjoining revitalization of the Noorderlaan (Brabo 2- project), Oosterweel connection, restrictive planning measures in Luchtbal its direct surroundings and the like. There could occur an ongoing negative spiral of the neighborhood, due to its bad image, the increasing concentration of the disadvantaged, low opportunities for work, non-adaptive public spaces, growing immigrant youth, acute struggles for belonging and riots in space. But it became also apparent, that there were several changes for new cross-overs, new innovations and embedded openings for resilient spatial alliances between several heterogeneous actors; improving the spatial conditions of Luchtbal not only for the inhabitants themselves, but also for visitors and new investors. We listed some 50 of those appealing practices, differentiated by the short, medium and long term. Provisionally we clustered some of those most relational and promising practices within three opportunity maps with regard to sport/leisure, relational green spaces and new adaptive challenges for work, retail and centrum facilities.

The sport/leisure opportunity map (Figure 9) concentrated around the existing, but down run athletic course in the South of Luchtbal, with relational connections to the Sports retailer Decathlon, the Multiplex Theater Kinepolis, the primary School Sportomundo, the Luchtbal Theater and the International Seaman House. Intention was to:

Short term (2012-2015)

- Revitalize and upgrade the athletic course for multipurpose sportactivities for the (young) inhabitants themselves, but also as a try-out course for the customers of Decathlon, the school and semi-pro soccer teams of visiting footballers from elsewhere;
- Extend the existing sporthal with a new entrance, and an adjoining Decathlon sportarticle lend center, annex cloth change and shower rooms
- Develop an outdoor cinema/playground/café, including climbing tower with Kinepolis/Luchtbal Theatre at the residual spaces next to the athletic course and Sporthal;
- Organization of a yearly Streetolympics in three age-categories (6-12, 12-18, >18) sponsored by the stakeholders mentioned above.

Medium term (2015-2020)

- Improve/realize a safe pedestrian crossing between Kinepolis/Decathlon over the Noorderlaan with the athletic course Luchtbal, including new biking routes with the International Seaman House;
- Rearrange the neighborhood traffic circulation adapted to the new developments above and the rearrangements of the Noorderlaan;
- Redesign of the public space between the Luchtbal Theatre/Sportomundo and the athletic course, partly also as the starting point of a neighborhood runcourse to the nature reserve ‘Oude Landen’ and back;

Long term (>2020)

- Development of a waterramp and climbing course towards abandoned and residual places in the Harbour area
- Revitalize the old Sporthal
- Intensifying the leisure/sporting program with additional facilities/sporthousing.

The Green Carpet Luchtbal opportunity map (Figure 10) concentrated on a renewed use and a collective appropriation of the public space in the area, to initiate a new dynamic outdoor daily live in the neighborhood again. It focused on:

Short term (2012-2015)

- The development of a flower carpet around the Towerblocks of Luchtbal, designed, planted and maintained by the residents themselves;
- A change of ownership of the courtyards in the Gardencity of Luchtbal – from the Housing Company to the residents themselves – to stimulate urban farming, including improved pedestrian routing through the neighborhood;
- Redesign of the agora to an adventure park, next to the cultural center, by the growing immigrant youth according to their own ideas, needs and interests;

Medium term (2015-2020)

- Reorganization and refurbishment of the green areas between the Longblocks in the South of Luchtbal by the residents according to the principle of participatory budgeting
- Development of a green (car free) bike/pedestrian route along the neighborhood runcourse ‘Oude Landen’ (see above)
- Improvement of a green corridor between Luchtbal and Oude Landen, including green allotments and an improved entrance for the railway station Noorderdokken;

Long term (>2020)

- Revitalization of the Old Luchtbal Park in the north of the neighborhood, possibly intertwined with the new neighborhood circulation plan, a new appropriation of the adjoining Swimschool and the housing reconstruction on the south-side of the Park.

And finally the work/center opportunity map (Figure 11) concentrated on improving the possibilities for new start-ups and incubators in cooperation with the planned Polytechnical Campus in the North of Luchtbal, including the concentration of the dispersed shops, the week market and a new supermarket in the center of the neighborhood. Among others it consisted out of the following projects:

Short term (2012-2015)

- Development of a new neighborhood office for the Housing Corporation ‘Woonhaven’, including a ‘Job-’ and a ‘Recycle-shop’;

- Development of a polyvalent containervillage for new (neighborhood) start-ups and repair workshops, connected to the Reclycle-shop mentioned before, with an average container rent-rate (80 m2) of € 1200,-/year;
- Extension of the horeca-facilities of the existing Luchtbal Centrum Pub, in reference to the developments above and in relation to the new Playparc;
- Implementation of new facilities for the weekmarket, including stands for the urban farmers (activity 12) and room for a periodic recycle/flee market and other venues;

Medium term (2015-2020)

- Revitalization of the old GM-factory towards a poly-functional CarCity (with Jorssen-BMW and Beerens-Audi), including polytechnical interships for young Luchtbal inhabitants and a new pedestrian/bicycle crossing of the Noorderlaan;
- Development of new incubator facilities along the central Tampicosquare, in cooperation with the planned Polytechnical campus

Long term (>2020)

- Development of a new pedestrian/bycicle bridge between Luchtbal and its neighboring village Merskem as part of the bycicle highway Essen-Antwerp;
- Integrated redevelopment of the old shopping center of Luchtbal, including a further densification of the area.

Each of these opportunity maps have been discussed in three roundtables of some 12-15 leading actors, roughly divided into 1/3rd of the business society, 1/3rd of the civic society (that is the Luchtbal inhabitants themselves) and 1/3rd of the involved public society and/or its civil servants. Criteria for invitation was if they appeared to potentially evolve into a kind of 'leading actor' from the first investigations mentioned before. We were looking for new cross-overs between each of these possible 'leading' stakeholders, challenged by the proposals in the opportunity maps. And although these 'leading actors' hardly knew each other or had spoken each other before, each of the roundtables resulted into a lively debate about the projects and possible spatial presented. Some of these proposals could only count on little support, but others were firmly embraced, or even extended and/or elaborated according to each and communal views. Therefore and on the whole, form each of these roundtables emerged a new dynamism and buzz, crossing old (physical, functional and social) barriers, with new perspectives for communal, innovative and even surprising development proposals. At the moment we facilitate this new buzz by elaborating integrated short term investment proposals in money, time, expertise, law, institutional arrangements and the like, in which each of the aforementioned 'leading actors' could perform its own role. Additionally and for the medium term we elaborate at the moment proposals for communal preparatory studies/measures in order to prolong the buzz after 2015 and for the long term a kind of co-evolutionary route how to proceed out of the self-reinforcing negative spiral. And although

this route could hardly be planned, let alone prefixed towards of a clear or promising future, we will present all three proposals for a broader public of involved stakeholders in August this year, as a possible more resilient and innovative way to go. At that time, it will become clear if the prominent old plan stakeholders, would like to co-evolve with the broader public and investors along this route, or that they will stick to the traditional planning path-dependencies with their apparent clear roles, jurisprudence and stratified means, but including its constraints and sometimes even lock-inns.

Conclusions with regard to post-war area planning strategies

Due to this ongoing process and at the moment of the writings of this paper, the results of the new strategy are still unsure. Moreover the proof of its effectiveness will only be given over time, when resilient and robust new alliances in Luchtbal have formed and resilient new socio-spatial practices have emerged. Nevertheless, without being able to present at the moment hard evidence of ARA for post war housing estates, some concluding remarks could be given from the current insights and already evolved broad and enthusiastic buzz of the process.

The shift from physical masterplanning with an underlying social engineering strategy within the administration and the Housing Company of the municipality of Antwerp towards an embedded strategy within evolving and possibly extended actor-networks of the community itself, is a major achievement on its own. As Christiaens, Moulaert and Bosmans have argued in their analysis of recent urban policies in Antwerp, these policies reflect a “physicalist” and “new economist” approach that favors top-down, City-Hall-controlled territorial division of labor, rather than a real partnership with civil society organizations (Christiaens et al, 2007). Urban planning or urban regeneration within the government in practice is too often still a technocratic top-down enterprise, seeking to control according to a prefixed ideal world, rather than to enable an open-ended resilient and robust spatial development. Government planners work too much accordingly to their own problem definition and their own set of predefined solutions, leading to one-dimensional and one-sided planning proposals, such as the masterplan for Luchtbal, rather than being sensitive to the multifaceted socio-spatial relations that unfold before them. Also during the round tables and brainstroms in the Luchtbal it became clear that traditional bureaucratic, political ideas about predefined, restrictive planning concepts blocked some of these discussions. These internal public path dependencies, or better still ‘lock-ins’, have and still are frustrating a real open and innovative actor-relational progress.

Certainly for post war housing estates, such an inside-out approach could be detrimental to the multifaceted opportunities that are hidden behind the surface. As Doug Saunders (2010) recently stipulated again, amongst and on top of a vast and ever growing group of scholars studying transnational communities (Andersen 1983, Appadurai 1996, Blokland 2008), to conceive migration areas as just areas of problem concentration doesn't do any justice to the diverse opportunities and self-organizing dynamism these show below the apparent surface accordingly. The same goes for formalistic, high rise postwar housing estates, which seem to be very mono-functionalistic at first glance, but over time hide a tremendous diversity, (non-) human capital and range of possibilities when examined in more detail. The range of (partly self-organized) activities, ambitions and programs described above proofs all that. It is more than ever our duty as planners to look them up, trying to engage them within and through more institutional modes of planning vice versa, in order to deliver more resilient urban assemblages in our times of an ever-growing complexity, volatility and cross-bordering challenges. The ARA approach holds significant advantages on this respect. It tries to capitalize on the diversity of and within transitory communities, by activating and forging heterogenic alliances between different social groups, aimed at the collective remaking and governance of space. It seeks to bridge the cleavages between government, market and society to set up self-governing assemblages between social networks and spatial configurations. And it seeks to restore a new, relational civism, rather than a preconceived static and passive citizenship. Time will learn in the very near future, if we are able to connect the upcoming fruits of this and these kinds of embedded, organic approaches with the more traditionalistic and path dependent planning programs of the current Antwerp municipality. Not only high rise post-war housing estates in general or Luchtbal in particular, but also the new generation of evolutionary, relational and actor-oriented planning of a complex future are in need of that.

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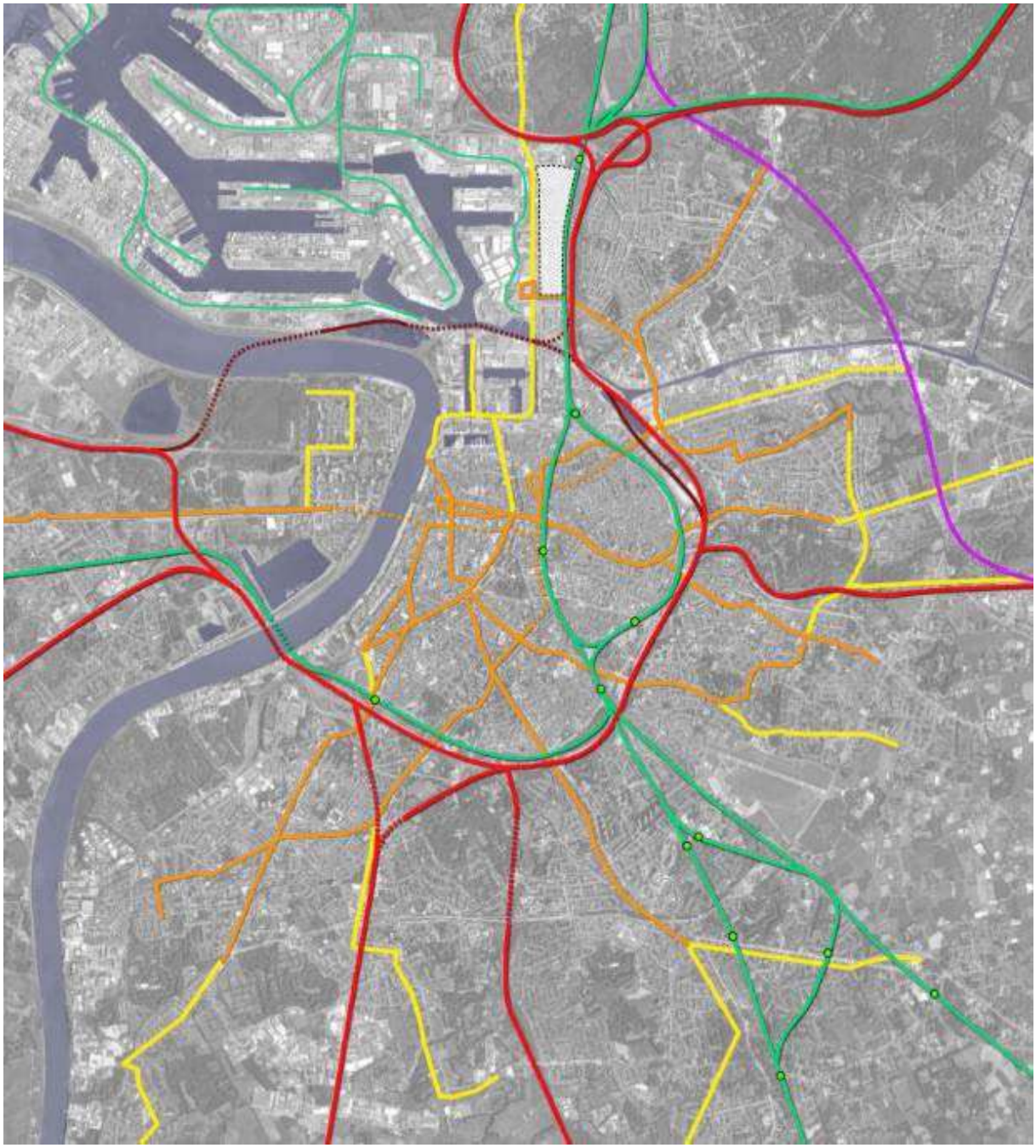

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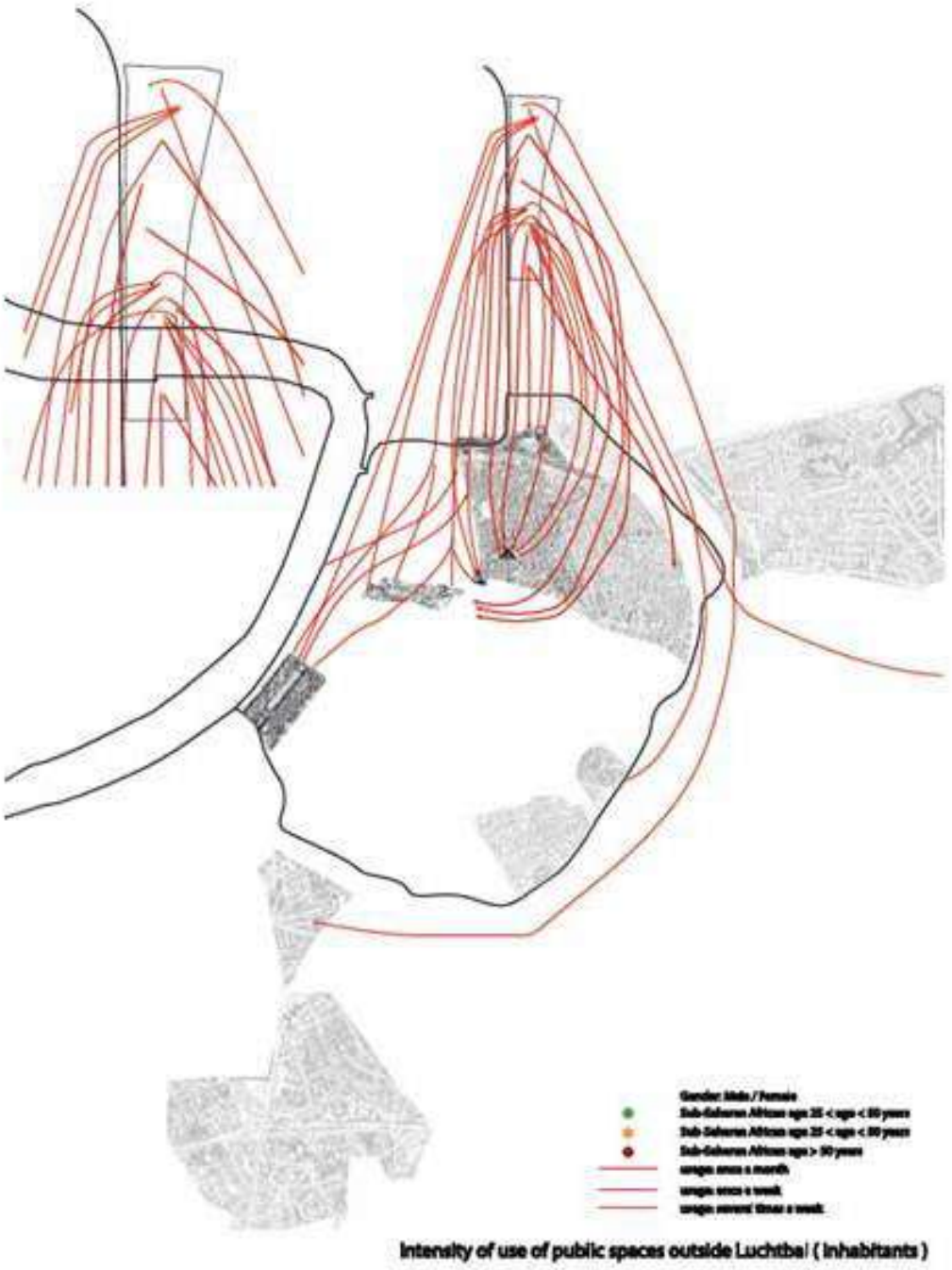
Figure 3



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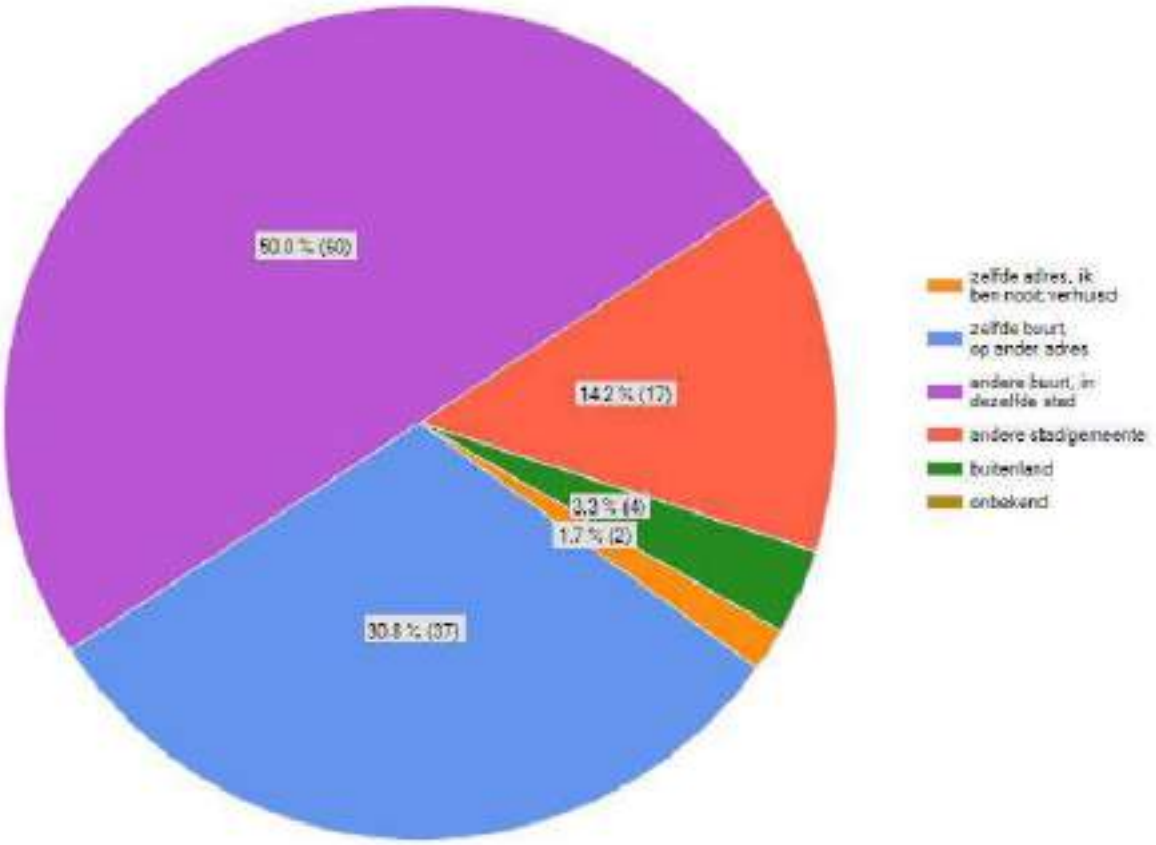


Figure 5: response to 6 statements

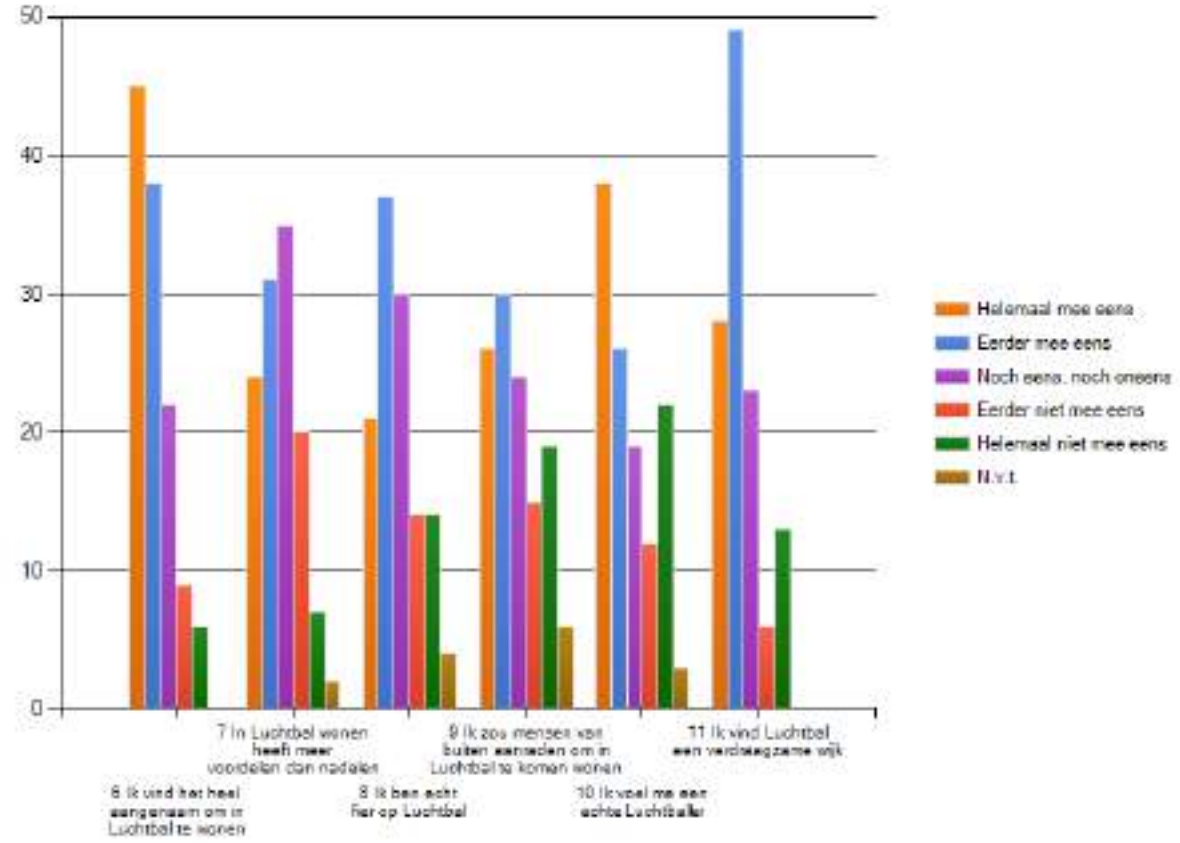


Figure 6: Orientation of the Luchtbal residents for daily facilities

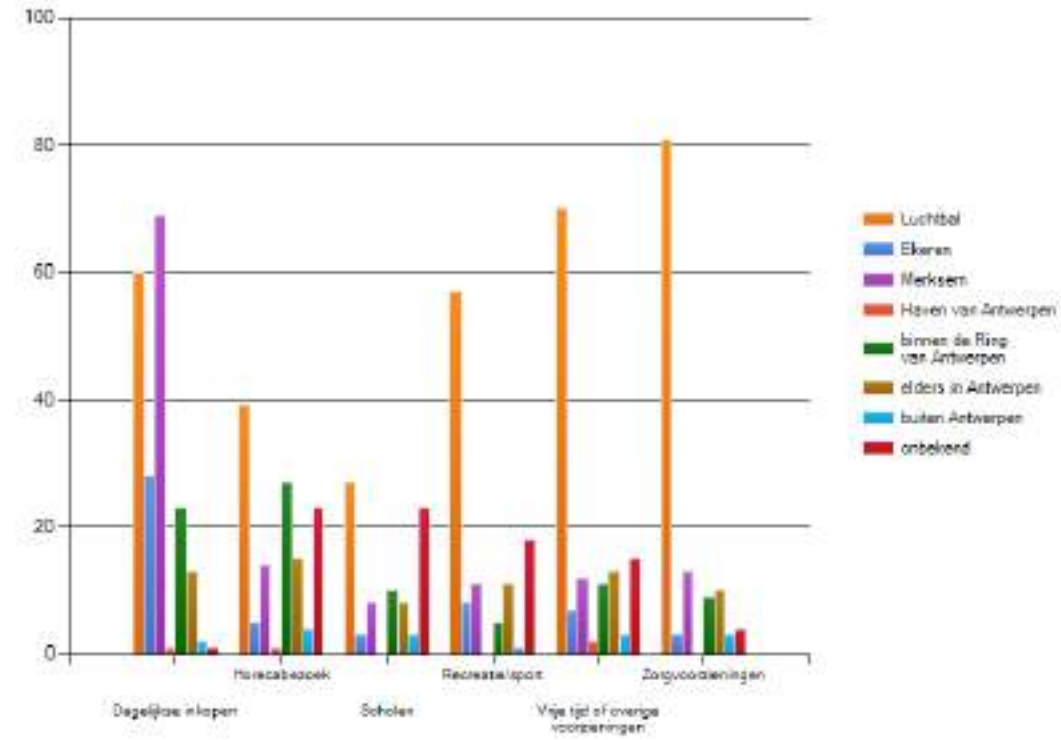


Figure 7: Investment wish list Luchtbal residents

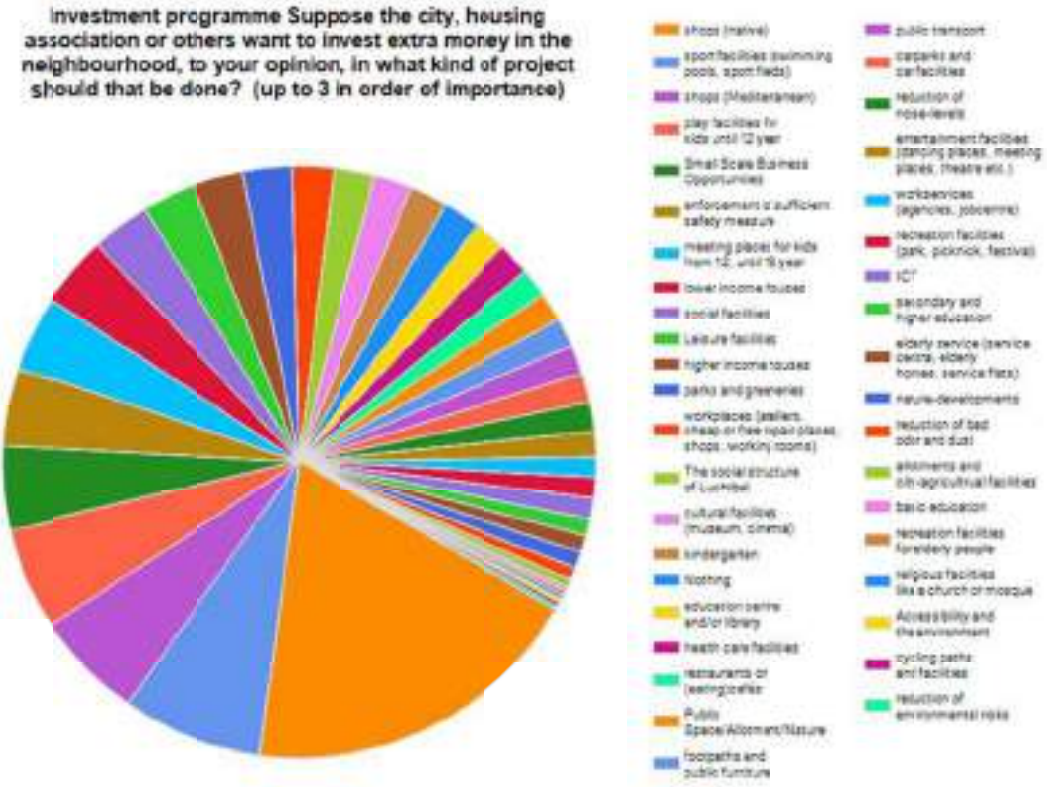


Figure 8: Overall view leading business actors around Luchtbal

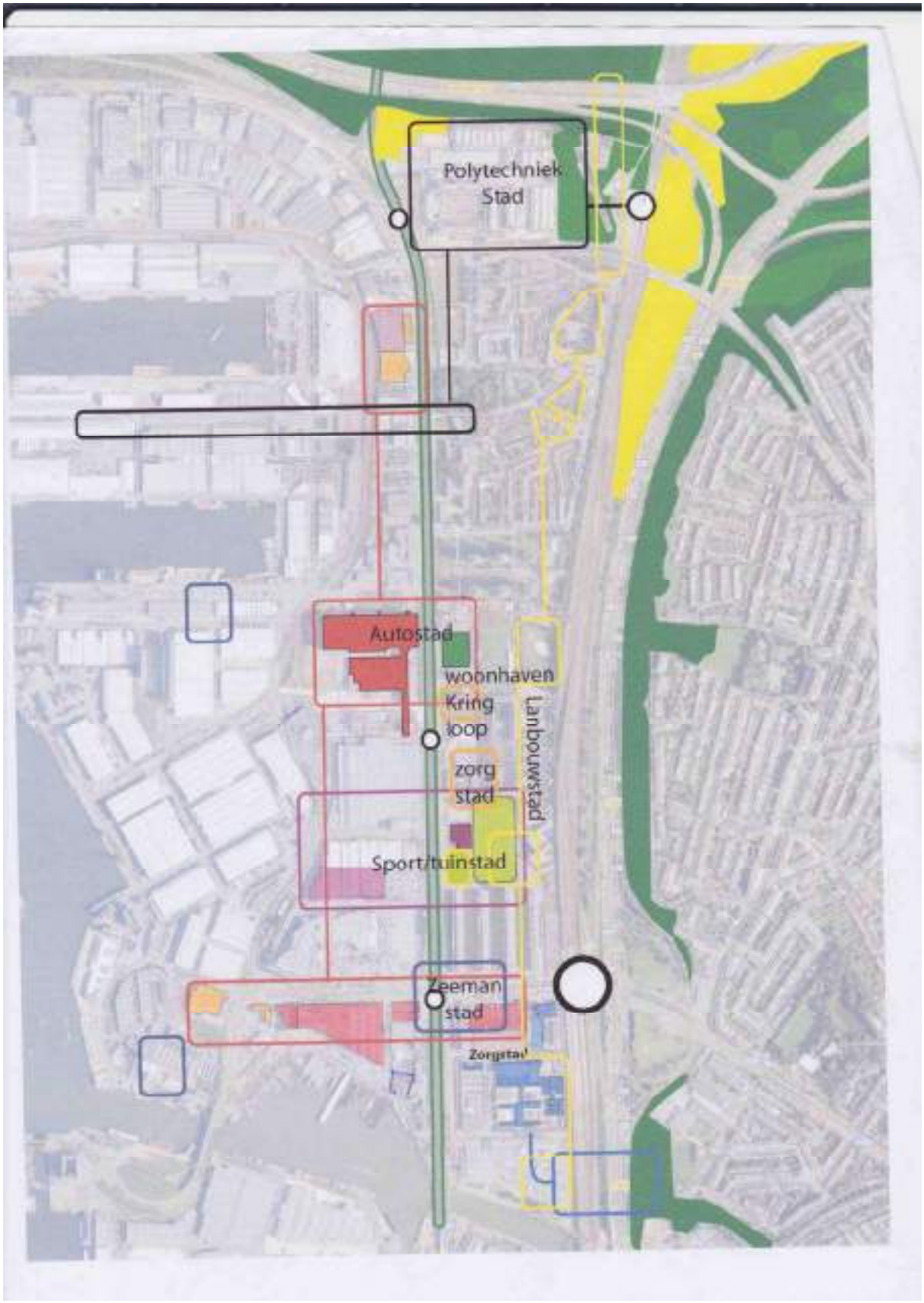
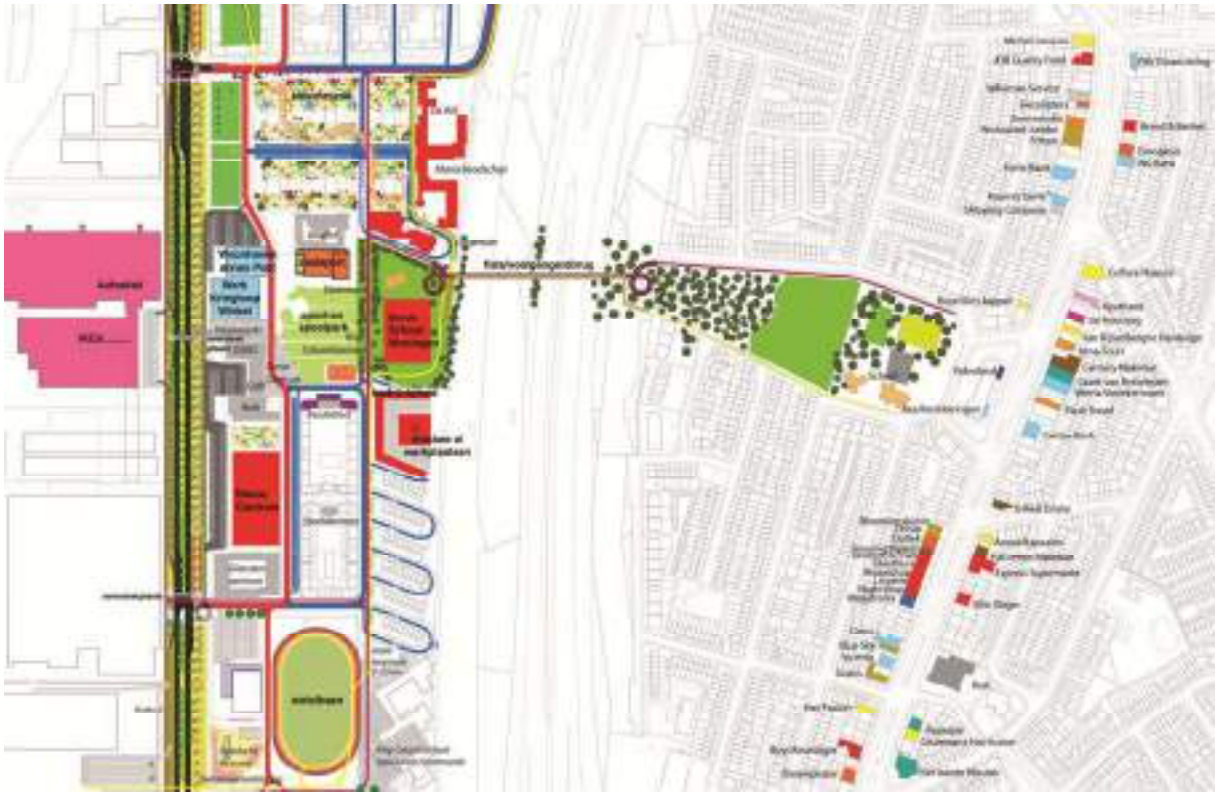


Figure 9: Opportunity Map Sport/Leisure Cluster

Figure 10: Opportunity Map Green Carpet Luchtbal

Figure 11: Opportunity Map Centre cluster



Between landscape rhetorics and 'scalar traps': the asymmetric governance of contentious urban development

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One day in February 2001, the street-walls of Rome have been filled up with posters celebrating the safety of Tor Marancia estate, a broad green area strategically positioned within the city centre of Rome, which was expected to be the site of a high-density development project.

These placards have been signed and placed by each single political party, NGO, and civil society association, exulting for having saved the estate, and claiming credit for the result.
A question obviously arises: if everyone was happy for the conservation of the estate, who wanted its exploitation? Tor Marancia was saved from whom?

At the time, I was doing a research project on the relationship between landscape and planning, and I was interested in deepening the actual role of the landscape within planning processes and tools.

Because the supposed victory against the building exploitation of Tor Marancia was said to be determined by its importance for the urban landscape, and its protection established according to its landscape and heritage values, it caught my attention.
It was really because of the landscape that the motleys of actors involved in the decision process converged toward the same understanding, and succeeded in erasing 2 millions of cubic meters of building rights? Have they been erased, or what else happened to them? Which kind of process determined that result? What happened exactly, how and why?

Unfortunately, that day of 'collective celebration' was not the end of the story.

Aim of this paper is to present the results of two research pathways which converge on, and through, the case-study of Tor Marancia.

The first one is dedicated to the forms of governance which can (or are expected to) be activated on landscape issues, and to the actual role played by the landscape in governance

processes, considering their outcomes. It is also related to the question of the implementation of the European Landscape Convention (ELC), particularly in its explicit reference to participation and governance. The relationship between landscape and planning - the meaning and role that the landscape assumes within planning theory and practices - and the actual role played by the landscape within planning processes and tools provide a background.
The landscape is intended here as:

- a field for experimenting forms of inter-institutional cooperation, participation, civil society commitments, and governance (as normatively stated in the European Landscape Convention - ELC);
- a tool for measuring and/or a field for improving institutional capacity and the effectiveness of what is (at least by words), normatively assumed.

The implicit assumption is that the landscape mirrors the space-society relationship, and that once the rhetorics which commonly shadow its actual role within planning are unveiled, it can be useful to understand and to deepen these relationships in their power and hegemonic meaning.

The second one is a still on-going multidisciplinary research dedicated to the forms which neo-liberalization is assuming at local level[1]. It focuses particularly on the changes they determine in the public discourse on land use, and on their translation into urban policies: how they affect socio-spatial configurations, which is their spatial meaning and outcomes, their impact on the formation of coalitions, and on democratic decision processes (Harvey 2005; Brenner and Theodore 2002; Peck, Theodore and Brenner 2009; Brenner, Peck and Theodore 2010). These policies, which can be referred to forms of neo-liberalization, make recourse to spatial and political re-scaling (Brenner 2000, 2001, 2004), while often hiding actual interests and values through 'main issues' – those issues which always appear as priorities in the political agendas at all level – such as that of environmental sustainability, or, as in this case, that of landscape protection.

The case-study of Tor Marancia - one of the most controversial cases in the recent planning history in Rome - allows to put together these questions and to unveil rhetorics, asymmetries of power in governance and planning processes, and the 'scalar traps' they produce.
In fact, it is precisely because of the recourse to the landscape, for the specific meaning that the concept of scale (and of scaling) it embodies, that actual interests and powers can be disclosed. The case enlightens problems of power as related to knowledge, of 'transparency' of decision processes, and the actual meaning of participation and governance in neo-liberal socio-political contexts. But it also shows how through the landscape, declamatorily used by the different coalition discourses, the contradictions between planning objectives and results, between the advantages and disadvantages at stake and those actually produced, are clearly revealed.

Although 10 years have elapsed since the planning controversy concerning Tor Marancia has been legally solved, the whole story with its territorial consequences at the urban and metropolitan scale are still largely unknown, and quite underestimated.

[1] The research group is composed by Ernesto D'Albergo and Giulio Moini (dept. of Social Sciences), Barbara Pizzo and Giacomina Di Salvo (dept. of Planning), La Sapienza Università di Roma.

A brief 'case history'

Tor Marancia estate is a broad green area (200 hectares) at the border of the 'Parco dell'Appia Antica' (whose it is considered as a 'natural' extension): since the '50ies, through the political action of an important group of intellectuals led by Antonio Cederna[2], it has been the object of a strong civic battle for landscape protection. But the land-use statute of a half of the site (114 hectares) was that of a building site, deriving from precedent land-use regulations (the prevision dated 1962 was of 4 million cubic meters of new buildings, for 40.000 inhabitants, afterwards it has been considered as over-dimensioned, as well as the whole 'old' plan). In the '90ies the estate became the field of a long-lasting conflict which opposed public institutions at all levels, land-owners and real-estate investors, NGOs, associations and the civil society, together with representatives of all political parties.

The actors involved (institutional and non institutional) were divided into two opposite coalitions, whose unbalance has been displayed later. More precisely, an historical reconstruction of the case (Pizzo and Di Salvo 2011) showed that there were two different arenas: one in which the actors played the role they publicly have assumed, the other in which positions were much more unstable and fluctuating, capable to change according to the context's changes. Furthermore, not every actor had access to both arenas demonstrating deep asymmetries of power in the governance setting, while the City Council and the Executive played an ambiguous role: seemingly that of *super partes*, while negotiating with land-owners and real-estate investors[3].

The conflict lasted more than 10 years, and was almost causing the failure of the on-going redaction of the regulatory plan for the city of Rome.

The solution which followed consisted in 'compensations': the building rights (which meanwhile had been reduced to less than 2 millions of cubic meters through 'protection variants'), have been shifted to other parts of the city - precisely to 16 rural areas, enormously re-increased thanks to forms of reward[4].

Within the years 1999-2002, the choices which mostly influenced the course of the conflict have been taken.

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[2] Antonio Cederna (1921-1996), archaeologist, journalist and political activist, co-founder of Italia Nostra, spent his life studying, disseminating and fighting for the protection of Italian cultural and environmental heritage. The Committee against the development of Tor Marancia estate, was named 'Comitato Cederna' in his honour.

[3] A more complete and detailed history, already presented and discussed in conferences and seminars, will appear in forthcoming publications.

[4] Regarding the mechanism of compensations, it can be briefly highlighted that it was already foreseen by the preliminary 'Plan of Certainties' (Piano delle Certezze) in 1997, as part of the technical norms of implementation of the Regulatory Plan. This tool allows to 'transfer' development (building) previsions involving protected or high-value sites (from an ecological or landscape point of view), to other sites: the former land-owners would be refunded for their lost ownership and rights and also rewarded for accepting to move, not in monetary terms but through an increase of building rights. It was presented as an alternative solution to expropriation for public utility. Moreover, it was implemented through a simplified administrative procedure, and precisely through the 'Accordo di Programma' (Program Agreement) established at national level (Legislative references are: L. 142/90; D.lgs. 267/2000 art. n. 34), which permits individual, one-by-one agreements. The point here is clearly how this tool (of compensations) has been used, and what its use meant in planning and in governance perspectives.

- The Ministry of Cultural and Environmental Heritage, imposed a restriction on the land use of the area, while the Archaeological Office ('Sovrintendenza') asserted the incompatibility of any building exploitation with its landscape and heritage values. But in 1999 the City Council approved the building plan named 'Parco Numisia' ('Piano di lottizzazione').
- In 2001, the Region declared the estate as part of the 'Parco dell'Appia Antica' – changing it into a Regional Park. According to the Italian planning legislation, it means that no form of refund was required.
- In 2002, the City Council, from the part of the City of Rome, decided for the public acquisition of the estate through compensations. As explained before, this was not compulsory with the restriction imposed by super-ordinates institutions (the Region). Anyway, it was presented as unavoidable in order to convince owners and investors to 'renounce' to the building rights they claimed; according to the City Council, the decision was consistent with the Major engagement for Tor Marancia, which was finally 'saved'.

The 'mechanism' of compensation produced an increase of buildings rights which turned out to be more than the former previsions of 1962 - whose over-dimensioning had been commonly recognized. Furthermore, the land-use of 16 rural areas all around the sub-urban region have been changed into development areas, and their potential to seriously compromising the whole 'urban balance' is very high.

I want to underline here that each decision has been taken 'in the name of the landscape', and justified through a 'landscape discourse'. In fact, except for a preliminary phase in which the mobilization was addressed at defending the estate as an open space against the risk of a further increase of the building and urban density, the civil society engagement was in landscape protection. Each public institution, notwithstanding their own different understanding and behaviour, declared to aiming at that same objective, and also the owners and real estate investors, in presenting their development project under the name of 'Parco Numisia', cunningly allude to its environmental value (they wanted it to be intended as a 'park'), and to its historical and archaeological value (the name makes reference to an ancient roman family, that of Numisi).
But the same landscape, which was a main issues in the public discourse on Tor Marancia and, more generally, in the discourse which was used to sustain planning choices, now openly shows the contradiction between discourses and actions, objectives and results[5]. It reflects the policies that have been actually implemented, what kind of socio-economic interests have been taken into consideration, and which kind of socio-spatial configurations have been actually produced[6].

[5] Shifting the attention to the whole regulatory plan whose redaction was on-going while the story of Tor Marancia estate developed, the two main planning strategies of the rail-road network, known as 'iron therapy', and of the ecological network (the 'green wheel'), which had a strong meaning and value for the urban landscape and its inhabitants, tended to hide millions of cubic meters of new buildings realized through various forms of public-private negotiations in order to get private financing for public spaces and public goals – while a general look to what the plan actually produced until now shows the well-known gap between private and public advantages.

[6] As to landscape as a 'by-product' of the interaction of different policies and actions, intentionally and even un-intentionally produced, and as its capacity of mirroring socio-economic and socio-spatial relationships, see: Pizzo B.

Tor Marancia was safe and included within the 'Parco dell'Appia Antica', but the very principles which guided the mobilization against its exploitation have been negated. We may say that the ideological position of the landscape and environmental associations has been used by the counterpart in order to exacerbate the conflict and obtain the maximum result for private investors. In fact, if the goal of the mobilization was the protection of the urban landscape and the environment, we may now say that this objective has been undoubtedly not reached. The same can be said focusing on land-use and urban expansion control as main objectives: the case of Tor Marancia contributed in determining an impressive waste of land, a reckless exploitation of the soil, so that the 'Campagna Romana' has been deeply jeopardized.
Obviously, this do not necessarily mean that the local associations were wrong in promoting their action, or that the very action was wrong in expressing just local interests (a kind of NIMBY reaction), but just that it did not result into a victory.
On the contrary, the case demonstrate of the lack of a consistent policy of landscape and environmental protection – in counter-tendency with a general orientation at European level at containing land consumption and urban expansion.
Moreover, it can be said that the problem was not 'solved', it was just moved - from a highly conflictual context to a very broad context (16 areas in the suburbs) where no immediate opposition, nor conditions for contestation, were to be expected; and that won who had well-defined but non site-specific, 'un-spatial' interests, as required by the present forms of the Market. In fact, unlike the people involved in the mobilization who were fighting for a certain site, real-estate interests could have been moved almost anywhere within the metropolitan area, as the Public Administration itself helped to do, through the mechanism of compensations.
The case displays how the landscape, interpreted as a by-product of policies and actions, mirrors space-society relationships in their socio-economic and socio-spatial features, thus showing the contradiction between objectives and results in spatial planning and policies, and helping at unveiling actual power relations orienting or even driving governance processes.

About landscape and *governance*

There are some fundamental reasons for relating landscape issues to that of governance.
For my present purpose particularly, they concern first of all the related conceptual developments of landscape and of scale, which have been provided by (critical) human geography.
In my view, landscape studies gave a fundamental (even if very often implicit) impulse to the problematisation of geographic scale which has been seen, before the last two decades, as pre-given and fixed. This derives from landscape's trans-border nature, from its aversion to be constrained within pre-defined borders, and even more from its intrinsic trans-scalarity which combine a geo-spatial dimension and a social dimension. It is also related to the rather acknowledged trans-scalar definition of its values and interests, which brings about the problem of establishing to whom the landscape is (must be) referred.

2005, 2007. A fundamental reference for this approach to landscape studies is E. Sereni (1961), *Storia del paesaggio agrario italiano*. Roma−Bari: Laterza.

So the quest for trans-scalar understanding, and for its political meaning and implications, is particularly important for tackling landscape issues, thus implying multi-level decision making and governance.

Landscape governance / landscapes of governance

Iridescent concept, vague meaning, 'empty signifiers' (Offe 2008): these are just a few among the definitions used to refer to the highly disputed nature of the concept of governance, which also fit for the landscape.

Notwithstanding the definitions of both concepts seem to lean toward their intractability, they are at the core of the reflection and of the scientific production of many disciplines since decades –as literatures fully shows–, broadly and commonly used and, more recently, also in joined forms.

For my present purpose, I need to point out here just two problems, also for the relevance they assume within the selected case study:

1. Disciplines which have a normative and operational dimension require operational concepts. The question arises of how can the landscape be adequately operationalized, and which operational definitions reveal to be the more useful in a planning perspective.
2. A step toward the operationalization of too theoretically rich concepts is that of joining them with, and constraining them within, a defined operational approach. Is it the case of landscape and governance? Which are, or could be, the operational implications of threatening the landscape through forms of governance?

1. It is long that the landscape has a predominant position within different disciplines, where it assumes a broad range of meanings. What would differentiate planning in threaten it, is that it could not simply accept its ambiguity as constitutive. More precisely, accepting it does not mean necessarily and directly that the concept of landscape can be used with each one of its manifold nuances for each different purpose. As for planning in particular, it means that for each different approach and planning tool (e.g. regulative, structural, strategic), must correspond one precise definition/interpretation of the landscape. The alternative to this basic rigour is the intractability of the topic, and the related (inevitable) dissatisfaction for the results of planning policies and actions (Pizzo 2005, 2007). Experience shows rather a different trend. The fields (of both research and practice) where the concept of landscape is used are still increasing, not implying a progressively more specific
differentiation and disciplinary framing, but a further stretching of its semantics instead.

2. Given the highly contentious nature of the concept of governance, it is rather clear that its combination with that of landscape hardly can bring towards a higher accuracy.
However, their use in combined form is increasing. The question can be analysed in a double direction: how and why governance enters into the landscape discourse, and how and why landscape enters into the governance discourse, and precisely:
a) The turn toward participation *and* governance is a fundamental content of the European Landscape Convention (ELC), and also a priority for its implementation. So that it is more than

a decade that the discourse on landscape is developed in relationship with one concerning socio-political and institutional settings and behaviour. b) Landscape enters in the field of Governance contributing to its further extension, also suggesting the wide range of governance approaches and styles; in particular, c) Landscape Governance can be interpreted as a broadening of the field of action of Environmental Governance, appeared in the '90ies, with which it shares similar problems (those problems which cannot be tackled within predefined borders, nor just within the realm of public actions). Emphasizing the need for a more integrated approach of nature and culture (Whatmore 2002), or the socio-cultural construction of the very concept of nature (Castree and Brown 2001), it allows a more specific focus on socio-cultural aspects.

I will summarize here some of the more interesting case-study results, highlighting what we can learn from the story of Tor Marancia about the actual role of the landscape in planning and governance processes, proposed as conclusions.

In the name of the Landscape

Within planning processes the landscape is very often presented as a 'main issue' as well as a shared common interest and as a 'common good' to be strenuously defended – hardly ever explicitly clarifying what is really at stake under such a broad and multifaceted concept, and to whom the same landscape is referred.

The title / legitimacy which is given for justify public or collective choices, in a system where democratic representativeness is often questioned for its weakness and limits, became progressively decisive. While a recent essay titled 'In the name of whom?' (T. Vitale, 2007 - original title in Italian), there is a broad and differentiated 'Not in my name' movement (largely diffused through the web) which refuses institutional positions as non-representative of the citizens will, while reclaiming the right of individual expression.

The political and sociological critique about this question is here intertwined with the one related to planning, to space and territory which represent the object and also the field of the conflict which, 'mediated' through the landscape, concerns socio-economic and socio- spatial development models.

The case of Tor Marancia enlightens that the claim to landscape goals, and the recourse to the concept of landscape for sustaining the political discourse on spatial planning did not contribute in considering the decision as a political construction; on the contrary, it left space for 'naturalistic' explanations, technical judgments and expert solutions which hidden elitist economic interests and the political dimension of the question.

In the name of the landscape, every kind of spatial policy can be promoted. In most cases, it is not the landscape the focus of the interest: it is rather the medium through which some kind of public discourse on territorial development (urban, metropolitan, regional) is conducted.

To whom does the landscape belong?

In the European Landscape Convention (ELC) perspective, member states are asked to establish procedures for the participation of the general public, of local and regional authorities and all interested groups in decisions processes related to the landscape, implicitly assuming the competition among different interests. From an ELC point of view, which is

strongly locally-oriented, participation and governance on landscape matters are recognized as able to re-built social relationship and sense of community, local identity and exchange, to tackle conflict and to strengthen democratization, legitimacy and social justice (Jones and Stenseke 2011; Jones 2011; see also: Pedroli B. and Van Mansvelt D.J. 2006; Prieur M. and Durousseau S. 2006).

The case presented here demonstrates that all these potentialities must be seriously revised, at least when overcoming the local dimension, which is usually the case, particularly considering that globalized neo-liberal policies are trans-scalar by nature (as the landscape itself). Participation and governance should become rhetoric, which mystify power relations, tend to erase or to soften inequalities of knowledge, power positions, interests and motivations of the different participants, and can led to manipulation by the strongest among stakeholders.

To be assumed as a field for practicing forms of governance, also in the sense of ELC, a 'non-naturalistic' definition of landscape would be preferable, such as that of 'strategic construct' (Pizzo, 2005, 2007). This would highlight the nature of social construction of the landscape, and of the choices it requires as political.

Landscape and 'scalar traps'

ELC focuses particularly on the local dimension and scale, thus contributing in diffusing the interpretation of the local level as the more adequate and preferable for tackling landscape issues. This because of their nearness to the population effectively involved into decision processes and affected from the choices related to their 'living environment'.

This can led to what has been called 'the local trap': a prejudicial consideration that localized decision-making is inherently more socially just or ecologically sustainable (Brown and Purcell 2005).

The case of Tor Marancia shows that the landscape has been able to widely mobilize the civil society at local level. But because of the incomplete knowledge owned by the involved actors about the factors and variables at play in the controversy, and because of the weak understanding of its multi-scalar implications, it brought, through a 'scalar trap', to results which are definitely far from what the civil society movement, NGOs and associations ever expected.

The landscape has the power to activate mobilization but people involved do not always have the knowledge/power to understand what was going on, and particularly in a trans-scalar perspective, for which they often demonstrate insufficient cognitive, and an even more poor strategic capacity or understanding. The fall into a 'scalar trap' is often the case. Moreover, a paradox emerges: the wider is the impact of the issue, the weaker the mobilization could be. (D'Albergo, Moini eds. 2011. See Moini pp. 17-43, and Inwinkl pp. 101-123).

The need of a cognitive and a strategic trans-scalar capacity

Landscape can be dealt with governance (multi-level governance particularly) assuming its social construction and its socially constructed political scales. From this perspective, the focus of ELC on the local scale represents a critical point, since the same ECL can be interpreted as an example of the trans-scalar dimension of landscape governance. In fact, while ELC concentrates on local landscapes, recognized and defined as such from their inhabitants, in

that they are the object of a Convention at trans-national level, signed by a supra-national institution (European Commission), and from its Member States (national level), they inevitably assume a trans-scalar character.
This address the reflection toward the role of transnational organizations (also NGOs) and corporations which, together with the most powerful among the National States, play a decisive role in the governance processes at all levels.
The relationship between the rise and diffusion of the concept of Governance with that of Globalization, interpreted as a re-articulation of politics at different spatial level (Brenner 1999, 2000; Jessop 2003) is of primary importance for the argument proposed here.
The case presented here clearly shows how the more preferable solution at the local scale (envisaged also by the local community) is no more likely to lead to the preferable outcome for the landscape, in general terms, than one at any other scale: instead, it should have unexpected negative effects at a different (wider, in this case) scale. Moreover, scales are always the product of political struggle, and, as the case rather clearly shows, the same power positions which determined a certain solution define also the proper scale for that solution, so that political rescaling cannot in any case be disregarded, on the contrary it has to be the focus of critical inquiry, also (and particularly) when talking about the landscape.

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Urban design, public space and the dynamics of creative milieus: a photographic approach to Bairro Alto (Lisboa), Gracia (Barcelona) and Vila Madalena (São Paulo)

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Abstract
Drawing on some results of the research project "*Creatcity – A governance culture for the creative city: urban vitality and international networks*", the aim of this paper is to discuss the relation between urban design and the creative dynamics in cultural districts. Assuming a perspective focused on the understanding of the spatial conditions that support creative clusters and the vitality and sustainability of "creative milieus", an analysis of the appropriation and production of public spaces in the "creative quarters" is made, departing from 3 case studies of creativity-led territorial systems in Lisbon, Barcelona and São Paulo metropolitan areas. The specific conditions and ambiances which seem to be determinant to embed sustainable creative processes in these areas are studied, aiming to explain the development of "creative milieus" situations and their relation with the urban socioeconomic and morphological dimensions. The main concern is centered on the governance and the sustainability of these territorial dynamics, at the light of the research framework pursued in this project.
The general conceptual and empirical framework of this project is briefly presented and the methodological approach that was followed is described. Then, attention is focused on 3 of the 10 case studies analyzed on this project, three cultural quarters, one in each city (Bairro Alto, Lisbon; La Gracia, Barcelona; and Vila Madalena, São Paulo). The main characteristics of each of these territorial systems are briefly presented, as well as their main regulation mechanisms and the main conflicts verified.
A comprehensive photographical approach to those public spaces and those dynamics, assumed as central in the empirical work conducted in each quarter in each city, is the departing point for the specific analysis presented in this paper (which is complementary to diverse other methodologies used in the overall project). The analysis and discussion of more than one thousand images allowed characterizing each district through 15 different analytical dimensions, covering material aspects of those spaces, their human appropriation and livability and the symbolic dimensions of this appropriation.

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The main characteristics and dynamics of each of these experiences are discussed, evidencing how urban morphology, features of "physical" place and potential for public space appropriation are determinant to the vibrancy and liveliness of these areas. Departing from a discussion on the boundaries of public spaces and their relevance for the creative dynamics (through the conviviality and sociability they promote), it is argued that the characteristics of urban design, specific place morphologies and typologies are determinant for the attractiveness of creative activities and for the appropriation of these areas. They are also discussed as central at the light of the main challenges to the sustainability of each of these areas as "vital" and "creative" centers in their cities. Finally some concluding policy-making guidelines are drawn out from the analysis.

Keywords
Creative milieus; Creativity; Cultural quarters; Public spaces; Photography.

1. Introduction

This paper aims to discuss the relation between urban design and the creative dynamics verified in cultural districts. In recent years multiple territories have stood out as 'creative milieus' as they offer a specific atmosphere or certain conditions required to embed and develop sustainable creative processes in cultural activities (see Camagni et al. 2004; Cooke and Lazzeretti 2007; Costa 2007; Costa et al, 2011; or in a wider perspective, O'Connor and Wynne 1996; Scott 2000). This "creative milieus" configure very distinct situations and usually are based on specific governance mechanisms that play a key part in most of those success cases. In this paper we focus specifically on the "cultural districts" or "cultural quarters" case (cf. Costa et al, 2008).

Our analysis draws upon some of the results of the research project "*Creatcity – A governance culture for the creative city: urban vitality and international networks*", which focused on the understanding of the spatial conditions that support creative clusters and the vitality and sustainability of "creative milieus". An analysis of the appropriation and production of public spaces in the "creative quarters" is made, departing from 3 case studies of creativity-led territorial systems in Lisbon, Barcelona and São Paulo metropolitan areas. Through a photographical approach that complements other methodological approaches to these experiences, and departing from the study of the specific conditions and ambiances which seem to be determinant to embed sustainable creative processes in those areas, we aim to explain the development of these "creative milieus" and their relation with the urban socioeconomic and morphological dimensions. The perspective is centered on the governance and the sustainability of these territorial dynamics, at the light of the research framework pursued in that project.

The general conceptual and empirical framework of the project is briefly presented on section 2 and the methodological approach that was followed is generally

described on section 3. We focus on 3 of the 10 case studies analyzed, one cultural quarter in each city (Bairro Alto, Lisbon; La Gracia, Barcelona; and Vila Madalena, São Paulo). The main characteristics and dynamics of each of these territorial systems are discussed, evidencing how urban morphology, features of "physical" place and potential for public space appropriation are determinant to the vibrancy and liveliness of these areas. Departing from a discussion on the boundaries of public spaces and their relevance for the creative dynamics (through the conviviality and sociability they promote), on section 4, we discuss how the characteristics of urban design, specific place morphologies and typologies are determinant for the attractiveness of creative activities and for the appropriation of these areas. Consequently, on section 5, we debate their importance at the light of the main challenges to the sustainability of each of these areas as "vital" and "creative" centers in their cities. Finally some concluding policy-making generic guidelines are drawn out from the analysis.

2. The *Creatcity* project framework

The aim of the 'Creatcity' project ('Creatcity: A Governance Culture for the Creative City: Urban Vitality and International Networks'), funded by the Portuguese Science and Technology Foundation (FCT/MCTES), was to discuss territorially based creative dynamics and their governance mechanisms in diverse urban contexts. Drawing on the 'creative cities' debates, it sought to further knowledge and to build strategic action guidelines on governance mechanisms and dynamics that promote and embed urban vitality, creativity and competitiveness. It combined a conceptual and empirical component, focusing on the cities of Lisbon (Portugal), Barcelona (Spain) and São Paulo (Brazil), where ten empirical case studies were selected for in-depth analysis.

The project was based on a transversal analysis of creativity in the three cities with the aim of drawing strategic policy-acting guidelines for the Lisbon metropolitan area. It encompassed several thematic dimensions: (a) systematizing contemporary economic restructuring and territorial challenges in each metropolitan area; (b) mapping their creative activities and resources; (c) analyzing the relation of these creative dynamics with material space, urban morphology and social appropriation of urban areas; and (d) examining local policy actions for internationalization.[3]

In addition to specific case studies, other methodologies were applied (desk research, both empirical and conceptual, etc.). Complementary empirical analyses were made in the three cities (data series, statistical analysis, etc.) as well as extra fieldwork in some case studies (urban, functional and morphological analyses, photographic survey, image examination, etc.). In articulation to all these, the main core methodological framework combined two steps:

[3] For more information see http://creatcity.dinamia.iscte.pt.

(i) A set of exploratory interviews: twenty-two exploratory interviews (ten in Lisbon, six in Barcelona, six in São Paulo) with local/regional/central government authorities in different fields from urban, cultural and economic policy areas; with experts in consultancy and the academic world; and with some prominent creative/cultural institutions (cf. Seixas and Costa, 2010 for details).

(ii) A set of case studies: ten case studies in the three metropolises (using nearly seventy in-depth interviews and other methodologies), i.e. Bairro Alto, Almada, Alcântara and Martim Moniz areas in Lisbon; Gracia district, 22@ urban renewal operation, and Palo Alto Association in Barcelona; Vila Madalena district, the event São Paulo Fashion Week event, and the institution SESC (Commerce Social Services) in São Paulo (cf. Costa 2012, 2012a for details).

A comparative approach was taken in just three of these case studies: Bairro Alto in Lisbon, Gracia in Barcelona and Vila Madalena in São Paulo, all of which are 'conventional' creative districts or cultural quarters. Despite slight differences and nuances, and quite diverse historical and institutional backgrounds and urban characteristics, they share an analogous situation: 'creative' segments of the population (artists, bohemians, cultural activities, nightlife and other conviviality and sociability nodes) were going through a process of 'taking over' traditional residential areas in the three cases. Moreover, they are now all experiencing growing gentrification processes and a sort of shift from production to consumption, or from traditional cultural activities to more commodified market based aesthetic-driven activities (with the progressive replacement of performing and visual arts with design shops and nightlife, for instance). Like many other cultural and creative districts all over the world, there are also strong use conflicts between residents and users, night-time and daytime activities, traditional and new residents, traditional and new activities, etc. These conflicts, most of them expressed in daily life and on the public space appropriation by their diverse users, play an essential role in the governance of these districts and on their sustainability challenges (see Costa et al, 2010; Costa 2012a, 2012b for details).

A comprehensive photographical approach to those public spaces and those dynamics, assumed as central in the empirical work conducted in each of these quarters, is the departing point for the specific analysis presented in this paper. The analysis and discussion of more than one thousand images collected in the 3 case studies allowed characterizing each district through 15 different analytical dimensions, covering material aspects of those spaces, their human appropriation and livability and the symbolic dimensions of this appropriation. That is what we will go through in the subsequent sections.

3. A photographic approach to the three districts: methodological approach

There are several ways to analyse the public space, and many were used by us along this *Creaticity* project. This photographic approach is part of the analyses conducted in these 3 districts, which aimed to compare the different realities founded in each of them, following a set of pre-systematized criteria.

Through a wide range of images collected in a photographic survey, realized alongside other surveys and other kinds of approaches aimed at the systematic collection of qualitative and quantitative empirical evidence on the same locations, we sought to understand the creative dynamics and the appropriation of public space concerning 15 thematic issues, grouped around a restricted set of broader dimensions of analysis.

The photographic survey obeyed a set of rules and presupposed certain objectives for the fullest possible coverage of the dynamics verified on these neighborhoods. For each quarter, six streets or squares, with diverse uses and users, were selected. We tried to cover with that selection the different dynamics pre-identified in the area.

Throughout two specific days of the week (Thursday and Friday), and on three different moments (morning, afternoon and evening), photos were made in those six places pre-chosen in each quarter, by five elements of the research team involved in this task. As aim of this specific work it was to make a photographic survey assuming the personal interpretation that each elements of the team brought about that public space.

In any perspective, we would need to learn how the appropriation of the public spaces of the quarter is done and how this affects the social, economic and cultural practices that take place in them.

For such, bearing in mind the "documental" side about the reality that each one would want to convey, it was necessary to identify a group of outlining aspects of each one of these quarters and their everyday life, from the diversity of its users and regulars (in its various times and spaces) to the multiplicity of existing spaces (morphology, physical characteristics, materials, urban furniture, etc.); from the plurality of uses, experiences and appropriations possible to recognize in there (forms of using, coding, etc.), to the conflicts of use and the problems associated to occurring externalities; or also to the variety of signs and symbols, direct or indirect, which can be associated to existing social practices in those spaces.

On the basis of a conceptual framework that looked to these spaces in a triple perspective (crossing morphology, forms of appropriation and governance forms), we built a set of variables that were taken over as key to the analysis of the urban vitality of these areas, aiming to cover aspects as diverse as the social and functional diversity, accessibilities, identities and social capital, the “quality” of place or the local creativity.

Within this framework, we defined three broad dimensions for analyzing public spaces:

A) **The material space**: the way natural and built space conditions the activities and functions that take place on it;

B) **The living of the spaces**: the way it is experienced and appropriated by its diverse users (residents, workers, tourists, etc.) and the conflicts that this engenders;

C) **The symbolic dimension:** the way it is perceived and represented and how it conditions and multiplies its appropriations (and the symbolic and cultural accessibility into it).

These three major dimensions were decomposed into themes, from which the photographic collection was conducted and the scan was completed, using the images. We opted to add a fourth dimension of analysis to those 3, focalizing on cross-cutting themes, and embodying the very dynamics of these quarters in their diverse times and spaces, that is, their multiple (but coincident) temporalities and spatialities.

Nº	Dimension	Theme
1	A – The material space	**The materiality** (morphology, volumes, topography,...)
2		**The urban facilities** (urban equipment, public furniture)
3		**The green spaces**
4		**The "light"** / the luminosity / the "ambiances"
5	B – The living of the space	**The functional diversity in the neighborhood**
6		**The social diversity in the neighborhood**
7		**To "dwell" the neighborhood**
8		**To "circulate" in the neighborhood**
9		**To "live" the neighborhood**
10		**The use conflicts**
11	C – The symbolic dimension	**The signs and symbols**
12		**The identity characteristics of each quarter**
13		**The spaces of inclusion and exclusion (symbolic/cultural)**
14	"Transversal" dimensions	**The different times / rhythms of the quarter**
15		**The different "spaces" of the quarter**

Figure 1: Dimensions and themes for photographic recollection

4. Public space appropriation and creative dynamics in the 3 cases

Public space is an arena for several appropriations, place of exchanges, meetings and sociability, one of theaters of everyday life. It is traditionally characterized for being a collective place that doesn't belong to anyone and belongs to everyone, usually managed by a public entity that has the duty to administer it and the conflicts that take place in there. If in beginnings, from an urban-morphological perspective, they could be characterized by being only the leftovers spaces between the buildings, where one could circulate, or the market squares at the city gates, where trade took place, rapidly and encompassing evolving civilization they assume another importance in cities, becoming privileged places for power demonstrations, for worship, for trade, for traffic or for conviviality and social representation.

Thus, naturally, this basic concept which could be characterized as a space of inclusion and citizenship, where all citizens could access, quickly is diluted by the hierarchical and social construction that takes place in all societies, and that is being complexifyied by evolution and technological progress. However, "the notion that the public space should be an equal space, not exclusionary, and of free access to all individuals is a central idea of the current theoretical debate in the city" (Balula, 2010, pp. 44).

In effect, those are central issues on contemporary discussions on public spaces and public sphere in the city. Public space is not as easy concept to operationalize, particularly on present-day societies. In the framework of this research we discussed

and assumed a concept that is embodying the crossing of three different layers (i) the public/private or collective/individual property and management of those spaces; (ii) the public/private interests around their development and use (e.g., public/private goods); (iii) and the collective/individual appropriation of them (e.g., on their access). The crossing of the several possibilities in each of these layers gives us the wide diversity of situation that characterizes contemporary polemic on public spaces definition and their boundaries (e.g. public streets in private urban resorts; public spaces in private-managed shopping malls; private management of public facilities, and so on). It is not our intention to in-deep this debate here (cf. Costa, 2012a on that), but just to frame briefly how we got an operative tool to analyze these spaces in our photographic approach.

The Italian architect Giambattista Nolli was the first to introduce in a plant from one city the question of the limits and boundaries of the public space, when mapping the city of Rome, in 1748, has represented the urban spaces of public sphere of Rome in the same way that the conventional public spaces[4] (e.g. church interiors). That arose naturally the question about where begins and ends the public space, which is a debate that continues until today, as seen above. However, assuming that the public space is a diffuse place, with rather uncertain and changing boundaries, and expressed in quite undefined spaces within the core of increasingly "privatized cities", it interested to us in this work to photograph and analyze the appropriations that occur in spaces in the urban public sphere, that, regardless of belonging or being managed by "public" or "private" entities, could be freely or easily appropriated by the population. Also, it interested to us to assume the public space appropriations which have a direct influence on "conventional" public space, by their own nature, such as ground floor business, car's parkings, gardens or cultural facilities, which regardless to need an invitation, authorization or economic transaction to be used, can be appropriated essentially in a "democratic" way. If we just call "public space" to places which could be appropriate by all, without any schedule, economic or social restriction, we could call urban spaces belonging to the public sphere to those others. Thus, we felt the need to extend our research to those "urban spaces of public sphere" because increasingly we see a relative decline of the importance of "traditional public spaces" in the life of society. Furthermore, these places affect directly the vitality of public spaces adjacent to it, functioning as its extension, where boundaries and borders disappear. In the presence of this decline of importance of archaic public space, other seem to arise, as shopping centers or other, that simulating the appearance of traditional public spaces, offering a controlled environment, and easy access by car, give the possibility to find a large agglomeration of services, differently from what we have in the city. Despite this more mediatized panorama on many contemporary cities, it continues to coexist with areas that due to their characteristics and peculiarities keep particularly vital, and the case studies in our analysis area good example of that.

In effect, cities are regulated by segregation systems. Through various ways it is possible to mediate and control the modes of city appropriation, at diverse scales.

[4] Assuming "conventional public space" as places where anyone could access without any kind of restriction, as city streets or squares.

That always happened in such a way, as Balula describes in relation to social segregation of Greek Acropolis, according to the social status of the population, or in numerous other conviviality spaces throughout history: "As the Greek polis, many of the public spaces of the past – as Roman Forum, the medieval market, the monumental squares and boulevards of the Renaissance, the bohemian cafes, or the salons of Enlightenment – were in fact places relatively few inclusive, in the modern sense of the term" (Balula: 2010, 44).

Creative dynamics often take place and develop in this threshold ground, in the diffuse field of the places of conviviality, in the urban spaces of public sphere. Multifunctional places in the city, dense, and composed by several layers of segregation, which are being permanently de-codified and appropriated by different audiences, which face these areas as great showcases for visibility, away from traditional circuits. The urban creative milieus and particularly the cultural districts are good examples of this.

Characterized by being places of the city where there is more freedom for speech and for expression and creation, with fewer levels of social control and often greater tolerance to informality, consequently, they left more opportunity for space appropriation, and mostly for diversity and heterogeneity of appropriations. This makes these urban spaces of public sphere areas of major importance for a sector like cultural activities, where not only is important to think about places of production (which in most cases does not even occur in these areas, with the exception of fields such as street art or urban artistic intervention in visual and performing arts , that have ample importance and visibility in these territories), but also as fundamental arenas for developing conviviality nodes, mediation activities and to occur affirmation within artistic circles. In parallel, but also for all these, they easily assume their liminal character, being particularly attractive to transgression, experimentation and all kinds of social mobility (cf. Arantes, 1997).

In these spaces the symbolical sphere plays an important role and its importance is fundamental for understanding the existing fragmentation. The ones who come to these spaces are looking for a constructed image (of the place, of themselves, of their groups, of what they want to be), they are looking for symbolism. These are particular places for representation, for the assumption of specific lifestyles and ways of life (Cf O'Connor and Wynne, 1996) and therefore, the concept of urban theatricality is sharp in these territories, and along with the liminality processes, we can watch to a natural segregation of practices and people in the different spaces (or even in the same places, each with several codified layers of representations, differently de-codified by their different audiences and users). Often, this process is based on auto-segregation, but sometimes it naturally also involves conflict between the diverse potential users and power relations that take place and develop within that system or with external regulation.

It is therefore usual to watch, in all the three cases studies, to a constant appropriation of urban spaces belonging to the public sphere, as uses are evolving and changing through time and users and audiences also evolve, adapting to the new ways how these spaces are being appropriated. This mix and this continuous social and cultural

negotiation leads naturally to permanent (but evolving) use conflicts, that are particularly notices in each of this cultural districts. When in the same area of the city we can watch different times and rhythms throughout the day, or even co-existing parallel dynamics in the same moment at the same place, that would be perfectly natural. But these dynamics existing in these areas is an intrinsic part of its vitality, and the changes and tensions in the public users and in the uses of those areas are one key-issue for the neighborhoods to keep always its life and its liveliness.

A transversal pattern in all these districts is accentuated by the calm rhythm met by the mornings in contrast with the rush that these spaces stage by nightfall, when the local traditional commerce start to close its doors and in counterpoint come to life the locations of conviviality and bohemia such as restaurants and cafes, and the "alternative" or "fashion" shops that are increasingly replacing former areas of artistic production or commerce of proximity. This panorama is a well known part of the particular processes of gentrification occurring in those kinds of districts, all over the world, and is probably natural in the evolution of cities and their revitalization processes. These territorial systems evolve, with their changing dynamics, the evolution in the dominant uses and the replacing of their regular users, and in some cases it may put in cause these dynamics as we knew it (Costa, 2009, 2012). As we defended somewhere else (Costa, 2012a), if this situation may not be problematic when there are other areas in the city with the same dynamic as in the Barcelona and in São Paulo cases, it may be more worrying in terms of the sustainability of the "creative system" in the Lisbon case, when we do not identify another area with the same dimension, density and heterogeneity of relations and other characteristics essential to maintain this agglomeration of creative sector's activities.

In conclusion, we noticed in this section that several factors influence how urban spaces of public sphere are appropriated and shape the social relations that take place on it. The morphology and the urban design of these territories have also a particular importance in the sustainability of these dynamics and in the vitalization of these areas as cultural districts and attractive arenas for cultural production consumption and mediation processes. We will explore that in the next section, but before that, we suggest a digression through these spaces in our 3 case studies, by observing the selection of images presented in Figures 2, 3 and 4, which give us some brief insights on the reality of each of those experiences. That is with that ground that the discussion of the next section will be held.

Figure 2: Photographic approach to Bairro Alto (I)

Figure 2: Photographic approach to Bairro Alto (II)

Figure 3: Photographic approach to Gracia (I)

Figure 3: Photographic approach to Gracia (II)

Figure 4: Photographic approach to Vila Madalena (I)

Figure 4: Photographic approach to Vila Madalena (II)

5. Urban morphology and sustainability of each area

Urban morphology conditions the way how the spaces are lived and appropriated by the population and the way social practices take place on it. The urban design, the characteristics of the public space, and the private spaces of public use are then some of the main factors that contribute to the development and sustainability of creative dynamics.

Concerning our specific case studies, as Balula puts it, they "seem to confirm the argument of Gert-Jan Hospers (2003), when he affirms that creativity doesn´t occur in vacuum, and that some urban contexts, rich in historic sediments, are the places – the physical and social supports – by excellence where creativity finds its roots." (Balula, 2010, pp. 55). All the quarters analysed are the construction of an identity that is composed throughout its centuries of history. The continuous overlapping of these layers gives at these places of the city a great functional and social diversity that sustains the development of this kind of dynamics. The essential characteristics that are in the genesis of creative dynamics (Costa et al, 2008) are more likely to develop in such conditions (Scott, 2000). Like Richard Florida notices "the urban places more attractive for the creative clusters are those that offer a diversity of experiences, and a variety of activities, and enable different lifestyles" (Florida, 2002: pp.11). This affirms undoubtedly the importance of the multifunctional urban areas against monofunctionals, as in the later the margin for interaction of different publics, styles and uses is naturally less common.

Thus, it will be interesting to give a brief framework of the historical evolution of these districts in order to understand better their current contextualization. We start the framework by the historical period of their implementation, when each area appears, in the cities of Lisbon, Barcelona and São Paulo. All the three case studies were located in the periphery of the cities on the occasion of their implantation and then they were progressively inserted in the urban core with the development and growth of the respective cities. Despite having an area of implantation and an "image of the city" that are very diverse, deriving from the different realities and historical periods in which they developed, "the three quarters have a similar morphology, being formed entirely by irregular orthogonal grid" (Balula, 2010, pp. 49). But in addition to the morphological aspects we should note that the analysis of urban morphology cannot be dissociated "of the moving parts of a city especially people and their activities, [that] are as important as the physical and real estate" (Lynch, 1960, pp.11).

The Bairro Alto was the first urban core built outside the city walls, dating from the early 16th century, being located near to one of the Lisbon "city doors" at the date. Its drawn adapts to the topography of the terrain, being the one of the three cases analyzed in which the orthogonal grid is more organic. The quarter is characterized

by its narrow streets composed majority by buildings of *Pombalino* period[5], and despite the numerous renovations and additions, keeps essentially the historical and picturesque image of the quarter over the years. Its streets are paving by stone, the floor is irregular and away from modern mobility rules, the sidewalks are narrows our inexistent. The traffic is closed inside part of the quarter (just in recent decades), where just is possible access on the part of residents or to "charge and discharge". So the main car traffic is carried by the peripherals limits of the quarter, being just possible to cross it by Rua da Rosa that divides the quarter into two parts with different characteristics, being the Western zone mostly residential, and the Eastern zone characterized by functional diversity, and where occurs the majority of functions with social character. This is the one of the three quarters that presents a smaller area of public space[6], existing only in the streets that cross the quarter, and its peripheral limits. Thus, the streets assume the function of "living room of the quarter" to the regulars who wander and chat there during daytime and for those who flock at the quarter at night, standing or sitting along the streets. The urban furniture for permanence is practically non-existent within the quarter, as well as green areas or public spaces with great dimensions (all in the outskirts of the quarter), because this this was not a concern at the time of its construction. Considered marginal, insalubrious, and poor in habitability conditions in the mid-20th century, it led to that projects for demolition of the quarter and the construction of a new one following news urbanisms patterns were proposed. However this did not occurred, which allowed the deployment in this area of the city of a series of activities that took advantage of the fact that it was a central and relatively low-priced economic zone to develop, such as the case of the printing cluster. Is following this logic that the contemporary creative industries begin to develop in the territory, articulating the axis Chiado – Bairro Alto, and exploring the long-term inter relation and complementarity between the institutional-daily pattern of Chiado (the side "inside" the ancient walls and institutional cultural pole of the city) and the alternative-marginal-nightlife image of the Bairro Alto area (Costa, 2007, 2009). This proficuous relation, exploring also the transgressive tradition in terms of sociability and conviviality in Bairro Alto, feed the area as the main cultural area of the city. The artistic universities placed in Bairro Alto as in Chiado increased the critical masses of who lived and attended the activities in this district, and it was in this general context that this part of the city affirmed itself over the years as the cultural and creative place for most cultural activities in Lisbon, although in recent years, this centrality has shifted progressively for consumption-oriented and social and conviviality-based activities, also essential for the structuring of the creative activities cluster, but not centered on cultural creation and production.

The Gràcia was also result of a development and urban planning outside the city of Barcelona. Distanced approximately 2 km of the walled city, it developed as an autonomous "Pueblo", which structural characteristics still remain until today and

[5] It is included in the "Pombalino period" all the work done in the scope of the period after Lisbon 1755 earthquake, on the regia of King José I, where Sebastião de Carvalho e Melo, Marquis of Pombal was Secretary of State of the Kingdom, having promoted a wide reconstruction plan, with very distinctive character.

[6] Consult data in Balula, 2010, pp. 53.

that is reflected also in a strong sense of local identity in its population. It's encompassed in the city of Barcelona after the Cerdà[7] plans. The quarter has a superior population density when compared with Bairro Alto, as happen with its implantation area and the height of the buildings. The narrow streets are usual framed by builds between 4 and 5 floors, around two more floors than the buildings of the Bairro Alto. The orthogonal grid is interrupted several times by squares, where people meet, which are the main public spaces of the quarter, equipped with plenty of urban furniture and shaded from the sun by trees. These are the scenario for the public convergence of people with a high degree of heterogeneity, assuming the role that in Bairro Alto was confined to the streets. Gràcia characterizes for being an autonomous "small city" within Barcelona. It is perfectly possible to live, to work and to access to cultural events without leaving the quarter. This mix of "needed activities", as well as both of "social" and "optional" nature (cf Balula, 2010, pp. 50), confer to the quarter a vitality and a dynamic throughout the day, being the one of the three cases which presents a better balance between the three groups. The circulation in the quarter is organized and some streets are closed to traffic, while in others one can only circulate motor vehicles and bicycles. With these three kinds of circulation in correct hierarchy in the quarter, cars, motor vehicles and pedestrians, this doesn't reveals so much the circulations problems founded in the others quarters. The issue of parking also seems in this case somehow solved, as the car parks situated beneath the numerous squares respond to local needs, contrary to what happens in Bairro Alto as in Vila Madalena where the users take hours to park their vehicles. The sidewalks are regular and prepared for the movement of persons with reduced mobility, it's usual to found the sidewalk in the same plan the road to resolve the previous problem of the narrow streets; with this solution and the traffic controlled the major part of the time most of the streets are large sidewalks. Today, we can find a quarter accessible to any citizen. For this, the characteristics of the territory and city's town planning rules contributed a lot. The quarter doesn't have significant topographical variations; it presents a slight pending throughout the territory, however this does not feel the scale of person when compared with the others cases. The pavement of the streets and sidewalks is in most cases the same, polished stone, larger than the ones that we found in Bairro Alto, although the streets with more car traffic are paved in asphalt.

In Vila Madalena the aspect of street pedestrianization seems to be one of the most problematic to the quarter. In a place where there isn't an entity responsible for the organization, construction and management of the sidewalks each person is responsible for the construction and maintenance public space adjacent to its housing. Without any explicit planning rule about that or restrictions about mobility, the landowners build as they well understood. The quarter is implanted in topography of pronounced slopes which by itself would easily render its users. In addition to this factor, the hardly considered sidewalks configuration makes that it would be impossible to move around in the quarter some person with reduced mobility, although the sidewalks are large, and they are assumed as the places appropriated for

[7] Author of the expansion plan of the city of Barcelona out of the walls in the 19th century, giving to the city the distinctive urbanism that we know today

the costumers who come to the zone. Contrary to what happens in other cases, in this quarter the hierarchy of streets is less marked; cars can circulate in all of them, as after all it is really an important piece to live in the quarter, contrary to what happens in the other two cases where the access to the various services is easier moving by foot or by public transport. That is one of the biggest counterpoints to those who live and go to this quarter.

Vila Madalena starts being as a small group of houses out of the city of São Paulo (such as Gracia in Barcelona). Only in beginnings of the 20th century, with the construction of the railway line that would connect the small cluster of houses to city centre, and later in the 70's with the transfer of the Arts University of São Paulo for a near neighborhood, is that this area starts to assume the setting that we find today. Like São Paulo itself, it is characterized for being in constant mutation. It is a quarter with little more than 100 years of history. It displays an urban drawing of wide streets to automobile scale, contrary what happen with the others, which grew up before its appearance. From the beginning it was a quarter composed mostly by single-family homes. Today, it is in quite advanced state of gentrification and many of the single-family building that composed (and symbolized) the quarter has been replaced by buildings with more than ten floors. These urban changes are disfiguring, in physical terms, the "old" artist quarter (that itself is a gentrification of the precedent blue-collar workers neighborhood, although in that previous case the change did not reflected too much in the buildings characteristics). As Samuel Dias states, "in São Paulo, it was built up on top instead of building next to" (Dias, 2010, pp. 20), and we can say also at high speed, due to the economic and demographic expansion, that progressively get new areas of the city. The municipal master plan allows the replacement of the old builds by others with completely different characteristics, contrary to what happens in the Spanish and Portuguese case, where the regulations don´t allow this kind of modification in the characteristics of existing edification, with more restrictions in the Portuguese case and a more flexible paradigm in the Spanish case. These kinds of alterations in edification typologies of Vila Madalena are changing the intrinsic characteristics of the district, due to the changes in uses and in the population that these restructurings generate. The old buildings are mostly replaced by private condominiums that not only involve lesser levels of public space appropriation as also do not guarantee the same mix of activities that was present in the old structure of the quarter. That have being conducting to a certain lost of vitality, contrary to what seems to happen in both the other districts, where the strategy has been keeping mixed uses in the buildings and multifunctional areas, in spite of the use conflicts that this can also generate.

The private spaces of public use also diverge between the different cases. Different uses and spatial typologies affect the way how the public space adjacent is appropriated, depending on the characteristics of the activity and how they develop, and these diverse situations generate different appropriations of public space by breaking the boundaries between private space of public use and public space, originating in some cases (noticeable the ones related to conviviality or some artistic interventions on these spaces) considerable use conflicts between users and residents. When economic and cultural activities leave private space of public use and implant

themselves in the public space, they became the center and target of polemic and divergent opinions, typical in this kind of quarters, marked by the heterogeneity of resident population and regular or occasional users, which make themselves evident, at different rhythms, throughout the day. This kind of dynamics are one of the most visible “brand images” of these kinds of districts, where it is not unusual to find many of the public spaces regularly occupied by multiple passersby, who fill the streets and sidewalks in Bairro Alto, the squares in Gràcia and the large sidewalks of Vila Madalena, making part of the urban landscape of these places, and being the main actors on the stage where most of interpersonal contacts take place.

In addition to the physical and material appropriation, it is important to mention how private spaces of public use show themselves and make themselves evident throughout public space, assuming a great importance in those places. The images that can be perceived through the shop windows, the light that is reflected in public spaces, the sounds and the smells, among many other, are all fundamental elements that contribute to the identity of the these places. The Bairro Alto and the Gràcia with its mixed-use buildings and the commerce along the streets turn out to be an element of great attractiveness, “enriching" the experience of walking and wandering through each of these quarters. On the contrary, in Vila Madalena, being a quarter marked by more monofunctional buildings, it can become a more tedious or at least less surprising experience, as activities are a little more divided between the different territories. This can lead to lower conflicts of use in this place, when compared with the rest of the cases; however, it can represent also a certain loss of one of the great virtues of these territories, that is to enable the confrontation of different people and uses, that by their diversity enriches the city and the lives of who uses it.

This kind of districts, as already explained, has at its disposal a diverse range of qualities and cultural offers that make them most desirable in the city. Joining to this factor its centrality, this leads to that they can mobilize a strong demand, even in central functions of high level, with larger demand thresholds. However, it is not always easy to an old quarter to continue offering the best commercial typologies, residential conditions or access to public facilities, while technological evolution, city spread and people’s expectancies and ways of living constantly evolve. The three districts are all good examples of this, with difficulties in accompanying these structural changes, at least for some markets (mostly the more generalist and mass-based ones, both at residential and commercial levels). However this can be one of the main factors that contribute to the sustainability of the activities that keep in the quarter and to the dynamics of the area as creative system (Costa, 2012, 2012a, Costa et al, 2010). If the commercial typologies would be more versatile, like the ones found on a shopping mall or on other commercial centers of the same city, they would be quickly occupied by other economic activities, with more financial capacity to pay that place, as soon as they become more mainstream in people’s practices and in people’s representations. That would rapidly conduct to the decrease in the specificity of the offer of products found in this type of quarter, with the subsequent consequences in the field of the symbolic and the representations, with greater impact in the cultural related activities (cf. Costa, 2012). By the same token, if the housing stock would be all equal, this would encourage a more egalitarian city,

with more similar rhythms and life styles, and daily lives, turning these areas into a less attractive kind of city for whom looks for it today, and to a place that would not be lived at all the different times of the day, as it happens in many suburbs of the same cities.

Summing up, as can be seen for all that is said in the precedent paragraphs, w3 can assume that the characteristics of urban design, specific place morphologies and typologies are determinant for the attractiveness of creative activities and for the appropriation of these areas by sustainable dynamics on the cultural and creative sector. That is a conclusion that we could draw from the empirical analysis of the 3 quarters that were studied in this project. As seen before (Costa et al, 2010; Costa, 2009, 2012, 2012a) these are not sufficient conditions for the development of those dynamics, and moreover, for their sustainability through time. But they are important conditions for the development of these systems, for the functioning of their governance systems, and for their sustainability. The gentrification processes in all of these quarters would be far more extent now if there wasn't some of the strong morphological (and urban planned-based) conditions that regulate their development. For instance, in the case of Bairro Alto (where planning conditionings are stronger and these effects are mostly noticed) if we would not have those kinds of streets, dwelling conditions or traffic structure, for instance the selective gentrification process that took place, privileging creative and artistic oriented lifestyles, would be far gone. At the moment that houses or shops could be bigger, with different typologies, that they could have a lift, that the car could be parked near the door, that the multiple conflicts in the public space decrease, that the diversity of the people present in that public space decrease, probably other social segments would take the place of the artists and the creative people in this part of the city, as recurrently happened in other cities before. Both by the effect in land prices and the effect in the symbolic mainstreaming of the quarter, the artists give place to the ones that have the power to keep in the area. And on that moment, the sustainability of the area as creative system is clearly challenged.

6. Concluding note

This paper aimed to discuss the relation between urban design and the creative dynamics in cultural districts. Urban morphology clearly takes a relevant place in this relation. Departing from a discussion on the boundaries of public spaces and their relevance for the creative dynamics (through the conviviality and sociability they promote, which is a key feature to creative dynamics - cf Scott, 2000 - and to the reputation and gatekeeping mechanism essential to cultural activities development – cf. Costa, 2012 -), it was discussed how the characteristics of urban design, specific place morphologies and typologies are determinant for the attractiveness of creative activities and for the appropriation of these areas. The uses, practices and symbolic representations that take place in those areas, as well as the use conflicts that arise on those multiple arenas (e.g. between nightlife users and residents that want to sleep, between grafitters and property owners, between street performers and residents,

between traditional activities and newcomers,…), are essential for the balances on the evolution of these territorial systems, and often are key-factors associated to their governance systems. As consequence of this, these morphological aspects should be also discussed as central at the light of the main challenges to the sustainability of each of these areas, when we think of them as "vital" and "creative" centers in their cities.

Not being our intention to discuss here in more detail the governance of these systems (see Costa, 2012, 2012a), or even the general regulation and governance of the public spaces of these areas (cf. Costa et al, 2010, Costa, 2012), we just want to sum up some ideas about the particular issues on the governance of these systems that are specifically related to urban morphology and to the design of public spaces.

As we have seen, the situation is very different in each of the 3 cases. While in São Paulo the action of the diverse stakeholders is much free than in the other cases, and the planning procedures are much softer, in the Lisbon case we have the opposite situation, with strict regulation, about what can be done (or not) in private and public spaces (although many times not fully effective…). In the Barcelona case, with an intermediate situation in terms of policy-orientations and planning practices, other factors, such as associative tradition and social composition of the district, play a major role in the governance of the area, and the results are many times more efficient than in Lisbon.

Facing several common problems (infrastructure congestion, use conflicts related to different interest on public space utilization, and so on), local stakeholders negotiate diverse situations and policies through time: e.g., closing streets to traffic or not; investing in public facilities on public space; controlling building permits or not; limiting nightlife schedules mechanisms; managing permits and licensing for the several kinds of economic and cultural activities functioning conditions; allowing or nor more deviant behaviors towards social norms, and being more or less tolerance regarding diversity manifestations in public places; being more strict or less strict concerning the accomplishment of all legislative and security criteria for all activities; approving the construction of private managed *condominiuns* in the area; managing commercial or artistic use of public squares and streets for events; managing permittivity to wall appropriation, for artistic or communicational purposes; managing of urban hygiene problems due to the pressings over these systems; and so on. Some of these actions can be translated in common procedures in terms of urban planning in the 3 cities (concerning traffic regulation, parking, noise, schedules,…), but other represent very diverse approaches to planning, some of them due to the diversity of the degree of those problems and to the diversity of planning frameworks (urban licensing, hygiene, security).

Two main ideas result from this diversity. One is that we need to understand that these areas are naturally marked by conflicts between agents with diversified interests. Such conflicts may be minimized in order to promote well-being and quality of life in the area, to their residents, activities and users, and this is a role that public authorities must try to accomplish. But sometimes that conflict can be also important to maintain the diversity of this site, to be possible to that system to

sustain, to that place to renew and reinvent itself, and to keep always its vitality. Activities rarely maintain over long periods of time in the same place, which increases their rotation, and makes those places living organisms, with a local dynamic themselves, distinctive in their city. Regulation must go through an attempt to leave these spaces living by themselves, giving room for happen different things, differently to what happens in the rest of the city, giving space for greater freedom. By their own nature, creative activities are anti-institutionalization, and more open planning instruments, dealing with creative solicitations from society, will be certainly more efficient that too rigid ones.

The other idea in terms of the concluding policy-making guidelines that are drawn out from the analysis, is that we can never forget the diversity of this situations and non-transferability of policy instruments or policy agendas. As it is also clearly demonstrated in these 3 cases, even with many similarities in this 3 cultural districts and the challenges that all of them are going through, with their transformation and gentrification risks, the fact is that the sustainability of each of these territorial systems is dependent of the specific actors and specific processes that take place in each situation. Policy responsible authorities have to understand the specific governance mechanisms that are the driver of each system (that are very diverse in each of these 3 cases), and then act specifically considering what are the real possibilities, instruments and objectives that they can manage and negotiate with all the other involved stakeholders. It is easy to design and set up a "creative city" strategy in each of these districts or even in other part of these cities. The difficult is to do that without destroying all the mechanisms that were underneath the creative dynamics that previously existed in those places, and without putting at risk the mechanisms that enable the sustainability of that system as a creative one. And for that, amongst many other things, we need to fully understand the morphology of the area, the urban design, and the way it interacts with the social and cultural practices that took place in it, and the interaction with the symbolic system that is inherent to it.

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Urban and architectural design and scientific research: how to save an arranged marriage?

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Abstract:

As a result of the Bologna treaty, many architectural and planning schools are in transition in Europe. As the educational landscape is changing, new standards are set to meet the criteria of scientific research based on higher level education. The demand to integrate scientific research in the curricula and the demand to develop a scientific research programme into planning and architectural schools is a real challenge for many planning and architectural schools, that are traditionally centered around studio work and design. Moreover, the criteria on which research output and research excellence are measured traditionally seems unfit to grasp the specificity of urban and architectural design research and education.

For some design teachers this transformation should not affect at all the primary focus on the tacit, practical nature of design study. This position postulates that practice in itself offers a sufficient condition for validation. Others advocate to revise the traditional criteria for research validation and to broaden the scope and nature of scientific research in order to reconcile science and architectural or urban design.

In this paper we argue that neither a strategy of business as usual, nor a strategy of stretching up science are a defendable approach to the demands of a transforming educational landscape. We propose that instead of altering the criteria of scientific

excellence and output, design excellence and output should be assessed by its own specific criteria and institutions. We develop a framework in which a distinction is made between different forms of knowledge, and suggest how different criteria can be applied for design excellence and output.

Introduction: The arranged marriage of science and design

As a result of the Bologna declaration of 1999, many architectural and planning schools are in transition in Europe. The declaration of 1999 aimed to develop a uniformed structure of higher education in Europe, making academic degrees comparable and promoting mobility between European institutes. The declaration set in motion a reform process of education towards a system based essentially on two cycles: a first cycle geared to the labor market and lasting at least three years resulting in the degree of Bachelor, and a second cycle conditional on the first one, resulting in the degree of Master[1].

Although Universities in Belgium have been able to transform their education structures successfully, the University Colleges (*Hogescholen*) are still undergoing a reformation process. Some of the former Colleges in Belgium, provided a two cycle education programme, and are considered *de iure* as academic courses. However, the Flemish Government which is competent for education in Flanders, had devised a process of "academization" in order to increase and strengthen the connection between academic research and academic education in the university Colleges. Together with this academization, the Flemish government decided to rationalize the educational landscape and set in motion a process of the integration of the former two cycled courses of the Colleges into the Universities. As the former architecture

[1] The European Higher education area, 1999, The Bologna Declaration of 19 June 1999

college schools (including interior design and urban design) also provide a two-cycled system, they are now in this process of "academization".

The process of academization of Architectural Schools proves to be an all but smooth process. The demand to integrate scientific research in the curricula and the demand to develop a scientific research programme into planning and architectural schools turns out to be a real challenge. Many planning and architectural schools are traditionally centered on studio work and design. Academic research was nearly absent in former *practice based* design teaching, and the staff of the former architectural schools did not have track record of traditional academic output, such as peer-reviewed articles, peer-reviewed academic books or conference proceedings. When assessed by traditional indicators of academic production, the architectural schools therefore severely underperform.

Confronted with the poor research assessment outcomes, the academization process (re)started in the Flemish architectural schools a fierce discussion on the nature and the role of science and academic research within architecture, and related disciplines as urban design and interior design. Within this discussion, broadly two basic viewpoints can be traced. One viewpoint is seeking to conform to the traditional media of scientific output, oriented to journal articles, books, conference proceedings etc. and to shift the research focus into more vested research disciplines, which have vested methods and established media for academic output. Such a strategy of academization might be successful for a part of the staff that focuses on supporting disciplines of architecture and Planning such as architectural history, construction engineering, environmental psychology, political sciences, building economics, process management, cultural theory…. However, this strategy is largely unattractive for the majority of the teaching staff in Architectural schools that lack any track record in research, is design oriented and faces a fierce competition with more established institutes in these disciplines on research funding. Moreover, such a research program is felt as an alienation from what is often considered as the core of the discipline, namely the design process.

Therefore a second viewpoint increasingly emerges, which aims to transform the vested methodologies in validating and assessing academic research output. Central to this approach is the idea of design based research. Illustrative for this viewpoint is the declaration of the European Association for Architectural Education, which confirms that "*architectural research has a particular knowledge base, tools and methods*" (EAAE, 2011). It therefore calls for a "*recognition of all appropriate areas and modes of architectural research, for better definition of context and scope and acknowledges research by design as part of the diversity of valid methods with which to research, practice and study architecture"*. A similar viewpoint comes from the UK Research Assement Excersise (RAE, 2006). Panel H, responsible for the RAE of Architecture and the Build Environment defines research output as "*any form of publicly available, assessable output embodying research as defined for the RAE may be submitted, as may confidential outputs that are not publicly available (p10)*". The Panel declares that "*In addition to printed academic work, research outputs may include, but are not limited to: new materials, devices, images, products and buildings; intellectual property, whether in patents or other forms; performances, exhibits or events; work published in non-print media"* (p10). The appendix of Panel H also specifies how research excellence should be assessed. It provides a peer review process of research output, assessing with criteria of originality, significance and rigor. Significance will be assessed *by dissemination and impact, and the work will be assessed on actual and/or potential significance, in recognition of the time-frame over which some work reaches and influences its audience*. In panel H no bibliometric data will be used to assess the impact. Rigor is defined *as including research processes which are* ***not necessarily systematic or linear****, yet demonstrate intellectual precision and material integrity, and innovations in process and/or product in relation to its context (p 24, emphasis added).*

Panel H holds an extremely relativistic approach on the nature of scientific knowledge and scientific output. The basic motto seems to be: everything goes, as long as it is confirmed by peers. It is therefore assumed that a consensus between panel members on originality, rigor and significance is sufficient to demarcate scientific work from non-scientific research. But in the first place, these criteria do

not reflect a coherent conception of scientific research or output. Its incoherence is easily demonstrated when rigor is defined as “not necessarily systematic or linear”, implying thus that rigor can be unsystematic, which is a contradiction by itself. Furthermore, correspondence with truth or experience (external validity) seems not to be a criteria of research output. Thus according to the Panel, original, significant but not necessarily systematic, ideas that are plainly wrong can be considered as valuable academic output.

But even if the demarcation criteria between science and non-science were clear, the proposed assessment method of panel H is likely to result in severe bias. Panel H is overwhelmingly silent upon the many potential failures of panel judgments such as group think (JANIS, 1972), peer pressure and power relations. Certainly if research outcomes cannot be validated or reproduced by other researchers (such as images or buildings), there is no external impetus to be self-corrective on the longer run and to separate scientific findings from non-scientific findings. Power relations between institutes, norms of reciprocity between the assessors with affiliation to the institutes all might trigger strategic behavior in these panels, rather than a sincere, neutral evaluation of research output. Sure, the traditional peer review process of journal articles follows a similar procedure and might have a similar bias. However, the anonymous peer review process of journal articles is only one step in the validation of scientific output, and the fallibility of the review process is backed up by bibliometric citation patterns, but also the tendency to self-correct over longer periods when research outcomes cannot be reproduced by other researchers or do not match new findings (KUHN, 1972).

One might argue that the demarcation between scientific output and non-scientific output is artificial or old fashioned. However such an argument would contradict the process of academisation itself, and would raise serious questions on the role public funded universities and academic institutions in society. If the academic institutes mission is to produce scientific research output, but if there is no demarcation between science and other forms of knowledge or action, than the purpose of academic institutions is obsolete and there is no legitimation for their existence. Any

assessment method which is not based upon a philosophy of science and a set of demarcation criteria is therefore doomed to fail. The real basis question for Architectural Schools is thus not how to assess research output, but how design output can relate to scientific output?

Design versus science

Obviously history repeats itself in the course of this debate. In the former century, academic discussion on design and research appeared, faded away for a while to re-appear again. The discussion develops mainly along two lines *art versus science* on the one hand and on the other hand the *Practice based research (PbR) versus academic research.*

Nigel Cross observed a 40 year cycle of alternating pro's and con's concerning the possibility to 'scientise' design. (N. CROSS 2001:49) Already in the early twenties of the former century the 'Stijl' movement questioned subjective speculations in Art and design. The movement aspired for more objective methods in the design process. A similar aspiration occurred in the 'design method movement' during the sixties of the former century. Objectivity, rationality and method were key issues at the 'Conference of the Design Method' in 1962.

In the broader 'planning community' similar movements can be traced during the fifties and sixties with – in the footsteps of Wiener - the introduction of the computer based 'cybernetic' models, elaborated by Chadwick and Mc Louglin during the heydays of synoptic planning. A setback came in the seventies with, for instance, Christopher Alexander – although a former adept of a rational, methodological approach in design - questioned the plausibility of an objective method in the design process. Alexander affirmed:

" I've disassociated myself from the field… There is so little in wat is called 'design methods" that has anything useful to say about how to design buildings that I never even read the literature anymore…I would say forget it, forget the whole thing" (quoted by N. CROSS 2001:50)

Also Christoppher Jones deplored *" the machine like language, the behaviorism, the continual attempt to fix the whole of life into a logical framework". (quoted by N. CROSS 2001:50)*

Cross justly places these statements in the social and cultural climate of the late sixties with the rise of radical political movements on campuses. Needless to remind that a then dominant positivist current in social sciences had to deal with a same kind of criticism. A new turning tide appeared in eighties en nineties with emergence of new journals of design research, theory and methodologies creating a new forum for reflection on 'scientisation' of design.

Cross suggested new categories in order to break through obstinate obscurities in the debate among 'believers' and 'non believers' concerning the place and the meaning of research in design matters. According to Cross, 'Design science' stands for a belief in a rational method, 'Science of Design' should focus on the study of the nature of the design process and the 'Design discipline' emphasizes the specific nature of a design practice. (*CROSS 2001:51-53*) In his conclusion Cross sees broad opportunities for design knowledge in the specific object of the design discipline:

"What designers especially know about is the 'artifical world' – the human-made world of artifacts. What they especially know how to do is the proposing of additions to and changes to the artificial world. Their knowledge, skills, and values in the techniques of the artificial (Not 'the sciences of the artificial'). So design knowledge is of and about the artificial world and how to contribute to the creation and maintenance of that world…." (*N. CROSS 2001:54*)

Question is whether the definition of this supplementary category of a 'Design discipline' can completely dispel the confusion. The 'artificial world' can hardly be considered as the privileged territory of a design discipline. Close encounter with sociology, cultural anthropology, literature and linguistics and so on and so forth, seems to be inevitable within this field of 'study' and the introduction of this new

category does not clarify the particularity of the ‘discipline’ like approach of the former against the ‘science’ like approach of the latter.

Cross’ reference to former discussions about art vs. a scientific practice then centers around broad dichotomized categories like art vs science, fact vs. value, truth vs. opinion, positive vs. normative, rigorous vs. intuitive etc. For the believers of ‘scientization’ of design the challenge then is to push research practice to the other side of the opposition.

More recent reflections in favor of a ‘scientisation’ of the design discipline clarify the fundamental requisites for a science image modeling of design research. De Jong and Van der Voordt for instance underline in a quite exhaustive reader on design and research the importance to adopt *methodological* standards in design research: 1) reliability or the possibility of repetition of measurement under unchanged conditions; 2) validity, dealing with adequate measurement of concepts 3) open to criticism; 4) scientific relevance, or the perspective of deepening the development of the discipline in question.

“If a (tentative) design applies for being branded as result of scientific activity, it should comply with general requirements put to the scientific approach, to wit: inter-subjectivity, reliability and verifiability in an empirical sense. ‘Inter-subjective’ was defined … as ‘interpreted by different people in the same way’… Verifiable points to the description of the design in terms of the grounds on which the decisions have been taken, including validity and tenability. Additionaly, ‘verifiable’ includes, that the design can be specified according to concrete situations and can be generalized to possible applications in different situations or contexts. (De JONG T; VAN DE VOORDT T 2002: 25).

The position of these scholars is quite radically stated in the introduction of the reader:

“If design is left to creative powers and does not need to comply with scientific criteria, each and every university education lacks it’s right to exist”. (DE JONG; VAN DER VOORDT 2002: 12)

But conclusions of De Jong and Van der Voordt remain ambiguous. The authors admit that *hard* criteria of science cannot in all situations be met in design research. The standard of reliability becomes precarious when multi-functionality leaves open more possibilities than predictable during research; design is context sensitive, hence resistant to validity claims and to the possibility of generalization. Moreover, if reflection would be broadened – which is mostly not the case – to methodological differences between the three families of science –exact sciences, social sciences and design sciences- , other questions might support the effort of comparison and demarcations. What about for instance the status and the role of theories in design research? Taking into consideration the context sensitivity of design 'discipline', are under certain conditions nomothetic statements conceivable in design research or not? Is the inevitable use of normative theories (not *what is*, but what should *be*) in design research part of the restriction to the applicability of the hard science model in design research? Reminiscence of analogue questions in the history of social and human sciences – the so called 'methodological struggle' is inevitable.

It is striking that comparisons of scientific research with design research refer either to an undifferentiated image of science or restrict to a sole comparison with the logic of research in exact sciences. Reflection on a possible common ground with the methodological ambiguities in social and human science - the so called double hermeneutic (GIDDENS,A., 1976) – is scarce, though it might deepen insight in similarities or distinctions in the logic of research within the three science families on one hand and designingly research on the other hand..

Differentiation of the practice of scientific research can be conceptualized on four dimensions – epistemology, theory, techniques and morphology (DE BRUYNE P; DE SCHOUTHEETE, HERMAN J., 1974). Similarities and differences in research practice are roughly schematized under these four dimensions.

		EPISTEMOLOGY	THEORY	TECHNIQUES	MORPHOLOGY
'Exact sciences'	Goal Means *World Orientation*	Objective 'truth' seeking as an open system Probability Hypothetical – deductive ' Mind to world'	Explanation Generalization about how the physical world behaves Empirical concepts	Quantitative Measurement Statistics Experimental Quantitative	Coherent, logical consistent statements; Predictive statements Symbolic mathematical formalization Quantification Output: peer reviewed articles; books manuals
Social/human sciences	Goal Means *World Orientation*	Objective 'truth' seeking as an open system Probability Hypothetical – deductive **or** interpretative, heuristic ' Mind to world'	Explanation (causality; correlation) or understanding (verstehen); ideal types about how the social and meaningful world behaves Hypothetical – deductive method or 'ideal types' Empirical concepts	Measurement or classification; typology statistics Experimental; quasi experimental Or heuristic Quantitative or Qualitative	Coherent logical consistent concepts and statements Discursive; narrative; metaphorical Output: peer reviewed articles; books; manuals
'Design discipline'	Goal Means *World Orientation*	Normative, action oriented Possibility Testing design solutions World - to - mind	Normative (normative) Spatial concepts Spatial vision	Scale modeling Drawings; Typôlogy	Visual Narrative Metaphorical Prescriptive statements

Inevitably, for the sake of clarity, the scheme offers only a basic comparison, further differentiation can/must be made within the 'traditional' science families. A psychological aspect, a mental state, the intentional orientation to the world, is placed in this scheme under the epistemological dimension due to epistemological implications. Unquestionable a fundamental similarity between the three science

families is what Heilighen, Cavallin and Bianchin – inspired by J. Searle - call a 'mind- to- world direction of fit'.

"…The mental activities of a scientist are characterized by a mind-to-world direction of fit. Researchers seek knowledge as an end in itself…The beliefs and insights they produce may be true or false, and it is their responsibility to match the world in order to be true and therefore successful (A. HEYLIGHEN, H. CAVALLIN, M. BIANCHIN 2009:97)

By contrast, a designer's mental activities seem to be dominated by a world-to-mind direction of fit. Designers are concerned not only with what is, but with what should be. Their attention is focused on possibility, "*the search for new or better solutions to problems encountered in everyday living*". *Thus, even if architectural design contributes to the creation of knowledge, the knowledge created is usually a side-product of an activity with another aim. Moreover, the solutions designers produce cannot be true or false*" (Ann Heylighen, Humberto Cavallin, Matteo Bianchin 2000:98). The mind – to – world direction of scientist is founded on theory based research, generating hypothetical statements about the behavior of the physical or social world[2], and structuring research activities aiming at the corroboration of those statements.

A clear distinction between the 'exact' sciences on the one hand and 'social sciences' on the other hand involves the status of theories (range of explicative power; predictive power etc.), the nature of corroborative procedures (hypothetical testing vs ideal type understanding) and the nature of discursive argumentation (use of mathematical models; role of narrative etc.). A fundamental demarcation between the three science families vs. 'design sciences' is the (mainly) world-to-mind mental activities of designers, focusing on possibilities, on the search for better (spatial) solutions. It explains the normative nature of its theoretical frameworks, the action oriented spatial concepts and the highly *prescriptive* character of design statements vs. the *descriptive or predictive* character of scientific statements. (LADRIÈRE, J., 1969). Obviously, claiming a scientific status for design research, by solely referring

[2] In his 'road to reality' the mathematician and physicist Roger Penrose states that modern scientists avoid the 'what question' (what the world is; or why the world is what it is) but prefer questions in terms of how reality behaves (Penrose: :1028)

to a necessary adoption of *methodological* criteria like validity and reliability is not a sufficient condition to legitimize this claim. Epistemology, theory, morphology and adequate techniques are inseparably linked. Whether one wants to explain (causality; correlation) or to understand (heuristic) will affect forms of exposition and chosen techniques (qualitative or quantitative). The nature of involved theories will structure the whole research strategy, being a consistent set of methodological decisions, in the blueprint of the research process.

Up to now, an important *missing link* in the discussion about design research as scientised activity is the role of theories in structuring the practice of (academic) design research. Especially the notion of validity is interwoven with theory based research in common scientific practice. Internal or external validity refers to theoretical concepts and to more or less adequate operationalization of those concepts through index construction and measurement.

Clarifying the shift from art to science on a continuum, with art on one extreme and science on the other, earlier mentioned scholars Van de Voordt and De Jong consider typological studies in architecture and urbanism and 'research by design' as examples of a scientific form of research. The concept of 'research by design' is an interesting case. It gets privileged attention in the present discussion on 'academisation' and 'scientisation' of the education program of architecture and urban design. Tough definitions of this type of research can still vary from scholar to scholar the definition of Van de Voordt and De Jong will probably be endorsed by many. They define study by design, or research by design as "t*he development of knowledge by designing, studying the effects of its context, and studying the effects of its transformation…*" (Van de Voordt; De Jong; 2002: 455). An important element is the research like character of design, operating in function of research not in function of a design program.

Subtypes can be distinguished according to the degree in which the objet and context (space, time, programme, boundary conditions), are constant or variable. Some scholars will add the importance of participation of involved users or stakeholders in the design process. In that case it is considered as a form of action research, quite

similar to this research method used in social sciences. Emphasis on the primordial role of knowledge development (design in function of research) explains the privileged attention for this kind of research. However, considering the *pure methodological* nature of this form of research it is quite unclear – taken into consideration the variety of contexts and the singularity of situations - how this *design driven* methodology might develop to a theory driven scientific practice. The morphological dimension of research (morphology in the sense of forms of expositions, of syntax etc.) is rarely subject of investigation, though an essential part of the process. Examples in social sciences are semiotic approaches by Greimas and Landowski in their discourse analysis of social science discourses (A J.,GREIMAS, E. LANDOWSKI, 1979) and McCloskey's illustration of the role of the narrative aspect in economic expertise (D N. McClOSKEY 1992) Morphology is the place of articulated objectivity. It forces the researcher to place his/her subject of research in a 'configurative space' of presentations, of discursive articulation of research concepts and research elements (DE BRUYNE, HERMAN a.o.). Forms of exposition (e.g. style), relational statements in terms of causality or correlations, information about the objectifying process such as the chosen research strategy, are important aspects of this configurative space. In the first place one thinks about the end product of research: the output, be it a research report or a scientific publication. Their 'convincing' qualities depend on the excellence of exposition which is in the end are an essential part of evaluation by peers. But the same requirements must be met at the very beginning of the process: the elaborated proposal of a research project. In design study – unlike in fundamental science - a pragmatic approach in argumentation and persuasive rhetoric is a necessary component in looking for and presenting *the best design* solution (R. Foqué 2003: 3). In consequence this leads to a shift of meaning when terms like 'testing' and 'hypothesis' are used in a designing context. In this context testing a design assumption is not a matter of being true or false but - given a particular spatial context - a matter of being the 'best' solution based on vision and believes. (R. FOQUE 2003: 3)

"Testing a design hypotheses is therefore unextricably bound up with the ethical normative framework of society and with its epistemological principles. In addition

the testing can only be done within a well determined context which is both physical and non physical. Non physical because design is embedded in a formal, legal and historical context; physical because every design is related to the constraints and characteristics of a context, being a real site or an imaginary or virtual one" (R. FOQUE 2003: 2-4)

In a scientific context testing a hypothesis means confronting statements about an assumed relationship between phenomena with empirical facts. Ignoring this fundamental distinction of meanings runs the risk to formulate pseudoscientific statements[3] by paying lip service to a scientific syntax though deprived by means of testing in the scientific sense of the word.

This might explain why, at least in our experience, quite some *design based* research proposals seem to fail for a positive judgment in order to grant research funding. Critical reviews by academic peers applying the regular standards for eligible research proposals, often mention the absence of essential ingredients for the elaboration of consistent research proposals: the lack of a theoretical framework, and the absence of empirical measurable concepts. Some might put forward that this situation is inevitably part of typical discomforts of a maturing discipline, but, taking into consideration the essential theory driven character of scientific research and the design driven character of design research it is equally justified to question the compatibility of a scientific logic of discovery with design logic of enquiry. As Heilighen and others put it:

"By consequence, very different logics of discovery may be at work in design practice, and the way they are mixed varies from one case to another. However, this variation cannot be used to question the fundamental distinction in principle between design and research. For whatever the mix, you still need a theory to account for what happened, and this is something that just continuing designing will not be able to give you. You need some theoretical model, concept, strategy, or the like to come to grips with what has or has not worked and to explain why. In more technical words, you need an

[3] Wikipedia defines pseudoscience as; "a claim, belief, or practice which is presented as scientific, but does not adhere to a valid scientific method, lacks supporting evidence or plausibility, cannot be reliably tested, or otherwise lacks scientific status.[1]

explicit interpretation of what constituted the tacit understanding just displayed by your practice". (A. HEYLIGHEN, H. CAVALLIN, M. BIANCHIN 2009:104)

Practice based vs. academic research

A second line of discussion centers around the poles practice based (design) research (PbS) vs. academic research, focusing on the issue whether knowledge-gathering *in professional experience* can be integrated in academic research (BIGGS AND BÜCHLER 2008). As design teaching in university colleges is up to now mainly practiced based teaching this question is not of minor importance. It touches interests in terms of staff recruiting policy, funding channels and allocation of recourses and consequently also in terms of the nature of research output

The path of this discussion and of conclusions will be influenced by (inter)national differences in the organization of higher education and funding policies of research, as Biggs and Büchler made clear in a comparison of the British, the Brazilian and the Swedish case. (BIGGS AND BÜCHLER 2008); When for instance in 1992, the British polytechniques were accorded university status, it could establish discipline-specific regulation to define research. According to the authors the consequence was that criteria for research practice that previously seemed to be clear and universal in most disciplines, such as: knowledge, creativity, reference, method and audience , were put into question and generated, as they call it, 'hybrid' concepts like 'tacit' and experiential knowledge, reflexive method, grounded theory and 'knowledge – in – action'. In terms of the assessment of research quality, diverse and alternative concepts of quality and understanding were used, together with a variety of Phd models, ranging from traditional bound textual documents to the possibility of submitting a work of art or an exhibition. The Swedish case is comparable with the British case when it comes to adapted standards of research output in design disciplines. On the other hand, in the Brazilian case, the structure of higher education divided disciplines dealing with fundamental and theoretical issues from those having more a technical or productive character, design included. This distinction bears consequences for the access to research funding as professional developed

research has to rely on other than academic resources for (less substantial) financial support.

Briggs and Büchler defend practice based research as 'subcategory' of academic research and suggest the adaptation of the conventional criteria of academic research to the specific nature design practice provided that three fundamental criteria of academic research are respected: 1) dissemination of knowledge; 2) originality and 3) context. They consider these criteria as necessary and sufficient conditions for any form of academic research, whether practice based or not. Disseminating research is, according to Biggs and Büchler, necessary because the produced knowledge must influence actions of other practioners, here considered as the advancing aspect of knowledge. The opposite would be a situation in which everyone is originating knowledge for themselves which might lead to something like reinventing the wheel. Originality is necessary and sufficient. Produced knowledge must be new for an audience and not just for the researcher. Contextuality places the outcome in a critical context by making clear in which way knowledge develops or departs from existing modes of understanding. One can concur with the necessity aspect of these fundamental criteria, but the sufficient condition is not thoroughly clarified in order to consider practice based design research as a *subcategory* of academic research. Whether they are sufficient or not will mostly depend on dominant institutional definitions of academic practice, which – hardly surprising - tend to model these definitions according to the image of scientific practice.

In regular science dissemination refers to a well-defined research product belonging to what Karl Popper called world 3. (K. POPPER; 1974:210). Popper's world 3 is the world of statements in themselves[4]. Statements that stand in logical relations to each other. Dissemination then must occur in some more or less permanent form, as Popper puts it: "A written form will be preferable to a spoken form and printing may be better still". (K. POPPER; 1974:213). Furthermore disseminated statements of world 3 are inseparably related to theories as a more or less consistent system of

[4] In Popper's view world 1 is the external physical world and world 2 refers to the thought *process*, psychological in nature.

statements, which brings us back to the research structuring role of theories in regular sciences and to the question what this can mean in practice based design research as an academic subcategory.

Another important aspect of dissemination in regular science is the role of specialized scientific journals. The ideas of Thomas Kuhn became a common property when thinking of the paradigm concept – whether properly interpreted or not[5] – less quoted is the crucial role Kuhn assigns to specialized journals for the formation of a discipline or subdiscipline and eventually for the acceptance of a unified paradigm. (KUHN1972: 34) In the present integration process into the university this is not a minor issue, taking into consideration that chances for research funding are related to this kind of textual based output. Given the established university regulations about the controlling audience for assessing a claim of originality, the audience, the peers, will presumably have to match the strongly institutionalized criteria for the eligible audience. In most Flemish universities acknowledgment of *practiced based excellence* without Phd references will not fit to the standard credentials.

Last, what Biggs and Bühler consider as the fundamental necessary and *sufficient* context criterion under the label of a subcategory of academic research supposes the inscription in a firm tradition of specialized research, which is hardly the case in design research, first because any form of research tradition is lacking, second because the fairly idiosyncratic nature of practice based research complicates the creation of a common ground for a research tradition.

Integrating "design" in academic curricula

Obviously, from the above discussion, a rather pessimistic view emerges on the ability of design to ever become a vested scientific method, in the sense that design research can produce valid scientific knowledge about our external world. At best design and design research are pseudosciences, mimicking the semiotics of scientific

[5] Searching for paradigms in other than exact sciences looks like a production in line work, especially when it is interpreted in an in appropriate way. Often one seems to forget that Kuhn preferred to keep a keen distinction between 'exact' sciences and human sciences. (Van Bedegem 2009: 55)

methods, but failing to address the basic criteria for reliable scientific knowledge. The gap between design and science is simply too large, and design research methods fails to produce a logical and internal consistent epistemological framework.

But one might wonder whether design should be a scientific discipline at all? It seems to us that the discussion on design and science has simply started on the wrong footage. In fact, we believe that the career opportunities of the architectural school staff and the distribution of funds for education and research among institutes are really at the heart of the discussion, rather than a sincere and genuine discussion on the relation between design and research. There is for instance remarkably hardly any internal controversy among design researchers about the nature of their research, although the topic in itself could trigger substantial discord as we argued above. A genuine discussion would allow dissonant voices to come in, certainly when arguments from the design side often lack internal consistence and rigor. Of course, one cannot ignore that most participants in the debate have a direct stake in the issue. The new academic institutional context in which the former staff of the architectural schools will have to operate is hostile to them, and their academic position is threatened in many ways. Making design count as research would be a convenient way to accommodate to this new environment without large sacrifices.

The result is that the arranged marriage between architectural design and scientific research presumably pushes and pulls the discussion about the nature of design based research into a *logic of scientific discovery*, and that the meaning of scientific knowledge is therefore stretched beyond a meaningful concept. Such a shift is not innocent, since it leads to an institutionalization of a pseudoscientific practice within the academic institutes. One might wonder for instance how master students in architecture schools, that are supposed to have skills to use and process scientific knowledge production, will develop an understanding of science if the teaching staff holds at least a confusing viewpoint on the matter, and how this will affect architectural practice? One might wonder how the precedent of institutionalizing design research might open the way to institutionalize other forms of pseudoscientific methodologies at academic institutes. Our arguments do not

however imply that architectural schools, or design schools should not have a place within the academic institutes. The profession of architect for instance requires more competences than design only, and many of them – such as building and material technology, building physics and building economics – are firmly grounded in academic research disciplines. In an academic environment it is also recommendable that courses on research methodology are incorporated in the curriculum in order to stimulate insight in the different logics of research. We agree with Heylighen that the product of design is not a truth seeking effort, but a possible solution to a specific social demand in a very specific cultural context. This should be a value on its own. Therefore it must be acknowledged that design skills are off utmost importance for Architectural schools and that design staff should have proper means of evaluation of their design expertise and teaching abilities.

In order to save both research and design, we advocate therefore a strict intellectual hygiene. Blending scientific knowledge production and design in one institutional measurement system does not really contribute to both. Nor would a *scientification* of design practice do right to the art of design. The unique *world-to-mind orientation*, the ability to integrate various demands into original and creative design proposals, and the cultural embeddedness of design would hardly gain from the methodological approaches from the scientific discovery. If we accept that architectural design values and norm deeply embedded cultural norms in practice, practice based education such as studios should have a firm position in the curricula of architectural Schools.

A possible and more productive strategy for the integration of architectural design into academic institutes would therefore include a proper acknowledgement of design competences without necessarily being based upon scientific research. This would require a multidimensional measurement system of the performance of design-oriented fields such as architecture, both in term of career development as in for the purpose of allocating funds. Such a multidimensional evaluation could make a distinction between research output on the one hand, and design excellence on the other hand. The traditional parameters for the measurement of scientific research

output are already established. What is needed is to develop and acknowledge criteria for design output and excellence. Architectural designers produce designs of interiors, buildings, landscapes and urban configurations. What could generally be regarded as design excellence is the cultural impact architectural work has on other architectural designers in the first place and society at large in the second place. This cultural impact could be measured by indicators such as the number of key-note lectures on the work and the audience, the number of publication on the work of an architect and the number of exhibitions on the work of the architect. No doubt, this will pull back a broader spectrum of design practice into to the realm of academic performance and offer the perspective of a marriage by consent.

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PLANNING ON SAFER URBAN MOBILITY THROUGH SPATIAL ANALYSIS: APPLICATION TO VILA REAL, PORTUGAL

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Abstract

Land use and transportation interactions have been subject to different studies. Analytical studies on synergies between road safety and the road environment is also very relevant yet less common. It has long been known that urban road accidents tend to cluster in particular sites and that this often indicates an inadequacy between the urban road environment and its current functions (Levine *et al*., 1995; Elsenaar and Abouraad, 2005; Elvik, 2006). Improving the road environment where accidents road users' behaviour to prevailing circumstances. Designing self-explaining roads (Theeuwes and Godthelp, 1995) can contribute to increasing road safety for drivers and vulnerable users (e.g. pedestrian and children) whilst improving cities general environment.

An efficient approach to reduce the number and severity of urban road accidents is the identification, analysis and treatment of road sites where road accidents tend to aggregate, i.e., hazardous road locations (HRL) (CIHT, 1990). However, no commonly accepted definition for HRL has been established. Moreover, many countries – like Portugal – do not systematically apply HRL programmes and, indeed, have insufficient resources allocated to road safety.

The aim of this research project described was to compare and discuss the applicability of different existing HRL definitions as well as their respective identification methods given the current availability of road accident and exposure data and resources in Portuguese local authorities.

Within this context, three types of HRL identification methods were applied. Analyses were carried out using two spatial analysis software packages for road accident data from the Portuguese city of Vila Real. Application of the different methods and their respective parameterisation led to the identification of different numbers and locations for HRL; however, a considerable number of HRL was regularly identified using distinct methods and/or parameter values.

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The adequacy and effectiveness of the diverse methods is analysed. Results indicate the suitability of the applied methods and their potential as tool leading to the identification of measures to improve road safety in countries with limited availability of resources available to significant urban environmental changes. The study here described also suggests that the integration of HRL identification and treatment with the general transport and land use policies will be beneficial by promoting best use of resources.

1. Introduction

Urban road accidents are responsible for considerable human and material losses all over the world, of which a large proportion occur in urban environments (ECMT, 2006; WHO, 2011). The need to seriously address this situation led the UN to launch the Decade of Action for Road Safety in 2011.

An efficient approach to reduce the number and severity of road accidents as well as their casualties, in particular in urban areas, is the treatment of locations(s) where these tend to aggregate, the HRL (CIHT, 1990). Despite its effectiveness, this approach has not been systematically implemented in many countries, including Portugal. As there is no commonly accepted international definition for HRL (Geurts and Wets, 2003; Geurts, *et al*., 2005; Cheng and Washington, 2008; Anderson, 2009), this work intends to compare and discuss the implementation of methods and definitions that enable its identification in countries within this context. A case study has been developed in the Portuguese city of Vila Real and took into account the current road accidents and exposure data availability and quality and scarce resources allocated to road safety by Portuguese local authorities. Dealing with HRL entails their identification followed by ranking, detailed analyses (see section 2.2) and identification and implementation of corrective road safety measures. This study focuses on the first stage.

To apply such approach spatial data analysis software, such as Geographic Information Systems, are commonly applied. Those spatial tools are also used for many purposes, including helping urban planners to identify, analyse and promote corrective interventions to solve urban problems. As urban characteristics have influence on road safety, planning and road safety approaches should be combined in order to seek solutions taking into consideration a wider perspective of the complex urban problems.

2. Hazardous Road Locations

2.1 Identification

Road accidents often accumulate in particular sites, the hazardous road locations. The investigation of factors which lead to accidents' clusters is an important topic in the road safety activity (Moons *et al*., 2009), since it is a strong indicator of a road related problem (Elsenaar and Abouraad (2005).

Several different methods have been applied to identify these locations (Retting, *et al*. 2001; Hauer, *et al*. 2002; Flahaut, *et al*. 2003; Brijs, *et al*. 2007; Elvik 2008; El-Basyouny and Sayed 2009; Pirdavani, *et al*. 2010).

Elvik (2007), based on an OECD report, proposed a distinction between the different definitions of HRL into:

- *Numerical*: locations where usually the recorded accident number or rate (e.g. accidents per traffic flow), during a period, is higher than a threshold;
- *Statistical*: locations where the recorded accident number or rate is significantly higher than the usual, taking into account the type of location (e.g. an intersection). Examples of this type definition can be found in Elvik (2008) and Erdogan *et al*. (2008);
- *Model-based*: locations identified based on the recorded and expected accident number taking into account the characteristics of the place. The expected number of accidents is obtained through an accident prediction model. There are several of these models (Lord and Mannering, 2010).

Generally, the identification through *numerical definitions* can be applied with information only about the road network and accidents, including their location. These definitions identify sites where the recorded number of accidents (or their rate if an exposure measure, such as traffic flow, is also available) during a period, is higher than a threshold. Examples are presented in Table 1. The remaining types of definitions require complementing information, such as traffic data, which is often not available, especially in countries where road safety programmes have not been recurrently applied (Sørensen, 2007). For this reason, *statistical* and *model-based* definitions were out of the scope of this work.

Table 1. Some of the operational numerical HRL definitions found in literature

Definition	ANSR	Belgium	Flanders	Hungary	Germany	Norway
Period of records	1 year	Over 1 year	3 years	3 years	3 years	5 years
Location (road extension)	100 m	50 m	50 m	50 m	50 m	50 m
Severity index (SI)	SI=100F+ +10SerI+ +3SliI	-	SI=5F+ +3SerI+ +SliI	-	-	-
Criterion 1: No. of accidents	≥ 5	≥ 3 serious	≥ 3	≥ 4	≥ 5 with casualties or ≥ 3 serious	≥ 4
Criterion 2: Severity index	∑ SI > 20	-	∑ SI ≥ 15	-	-	-

Definition	ANSR	Belgium	Flanders	Hungary	Germany	Norway
Source	ANSR, 2011	Flahaut *et al.*, 2003	Elvik, 2007; Geurts *et. al.*, 2006	Elvik, 2007	Elvik, 2007; 2008	Elvik, 2007; 2008

Legend: F – fatal injury; SerI – seriously injured; SliI – Slightly injured

Besides the abovementioned definitions, other practical methods were applied in this study with the purpose of identifying HRL (Retting *et al*. 2001; Mungnimit *et al*.,2009; Xie and Yan, 2008). Examples are the *Kernel Density Estimation* and the nearest-neighbour methods (Anderson, 2009; Nicholson, 1998).

To apply these definitions and/or methods, the use of spatial analysis software has been suggested (Elsenaar and Abouraad, 2005). Specialised literature lists a range of available options (TRL, 2011; TES, 2011; Jarvis and Kamal, 2009; BioMedware, 2010, Levine, 2010), including the two (ArcGIS™ and CrimeStat®) adopted in this study (see section 4.2).

2.2 Subsequent steps of a HRL programme: HRL ranking detailed analysis

After the identification of HRL, these sites are usually ranked in order to select a few priority sites for further detailed analysis. Possible ranking criteria are accident frequency, accident rate, proportion of accident types considered susceptible for treatment and severity of casualties. The selection, often made by local authorities, includes political, economical or logistical aspects. Selected sites are particularly analysed in order to understand what may be the causes of road accidents, and which might be suitable for treatment. These analyses often include site visits or production and analysis of stick diagrams which identify common patterns among accidents that occurred in the same place, contributing to the elaboration of countermeasures. There are cases that a special focus is given to particular type of road users (e.g., children, elderly, vulnerable road users) or a specific road accident type. It is, however, important to state that accident analysis may not lead to the finding of common contributory factors to road accidents in a HRL, as they might be an outcome of random circumstances.

3. Methodology

The proposed innovative methodology aims at comparing HRL identification procedures, which can be adopted with limited resources and information, usually available in Portuguese local authorities. Each tested approach is required to be applicable to any urban area using basic generically available accident and road data and common software (GIS or other programs with analytical capabilities for spatial data). This work comprises: (1) data collection; (2) implementation of different methods to identify HRL; (3) discussion of the results, and (4) detailed analysis of the accidents that occurred in selected HRL.

3.1 Data collection

The first step of the methodology is the delimitation of the urban area under analysis. For this area indispensable datasets are identified, and after a formal request have been accepted, road accident data and road network information is collected, homogenised and (when needed) georeferenced. If complementary data is available (such as road traffic data and geographic data) it can be integrated in the analysis stage. Road network should be analysed in order to establish the city functional road hierarchy, as it might have an important role in the problem diagnosis and in the recommendation of solutions related with the enhancement of road safety. Usually, this procedure is defined based on the traffic and pedestrian information as well as experts' knowledge, and must be independent of the accident historical information.

3.2 Identification of HRL

In the proposed methodology, the identification of HRL consists in the implementation of three types of methods: (i) methods based on definitions applied in some European countries; (ii) methods based on the Euclidean distance between points; (iii) methods based on the point density.

Methods based on definitions applied in some European countries

These methods have the purpose to reproduce *numerical definitions* (see section 2.1) applied in some European countries to identify hazardous road locations. Chosen definitions were those from: Belgium, Flanders, Germany, Hungary, Norway and Portugal (ANSR), as these are not based on traffic flows (as they might not be available in some countries – see section 2.1), consider the universe of injury road accidents and provide a noteworthy differentiation between them (see Table 1). To replicate these definitions, two methods were created, here named I and II.

On Method I the number of recorded injury road accident data in each definition is previously selected; for each road accident a severity index (SI) is calculated (according to the definition); a radius is fixed, corresponding to half of the road section length present in the definition; the centre of the circle is applied to the entire urban area according to the cells of a grid, with a specific spatial resolution. Then, two calculations are executed: (i) the number of accidents in each circle and (ii) the sum of the severity index in each circle, resulting in two grids. These are then aggregated and a reclassification is made according to the criteria of the definition in practice to identify the HRL.

On Method II the number of recorded injury road accident data in each definition is previously selected; for each road accident a severity index (SI) is calculated according to the definition; along the segments of the road network, regularly distanced points are set; a fixed radius, corresponding to half of the section length of road present in the definition, is considered; a circle with this radius is centred over the regularly distanced road network points; in each circle road accidents are counted

and the values of the severity index are summarised; finally, areas within the circles which verify the correspondent criteria of minimum number of road accidents and sum of the severity index given by the definition in use are selected as being HRL.

The definitions which use the definition of *serious* road accident were applied according to the definition adopted by ANSR (2011). Relatively to the Belgian definition, two periods of records were considered: one and five years as that corresponds to the smallest period allowed by this definition and the larger period, taking into consideration the available dataset.

Methods based on the Euclidean distance between points

This type of methods encompasses those that only require the Euclidean distance between points (road accidents) to identify locations where points are spatially aggregated. Examples are:

- *Count coincident points*: when there are more than a specified number of coincident (road accident) points, such location is considered as a HRL;
- *Count points within a neighbourhood of each point***:** (road accident) points within a neighbourhood area of a road accident location (point) are counted; areas where the number exceeds a threshold are selected as HRL; the procedure is repeated for all road accident locations.
- *Identify spatially close point groups*: the Euclidean distance between points (road accidents) is compared to a threshold distance; pairs of points closer than this distance are aggregated and define a spatial cluster); point aggregations are then selected according to an established minimum number of elements. This value does not interfere with the shape or size of point aggregations which are dependent on the value of the threshold distance. The threshold distance can be either defined by the analyst or based on a random distribution of points for which the area and number of points are equal to the case study.

Methods based in density functions

These methods are based on a point density function calculated for all the cells of a grid (after setting a spatial resolution value) covering the entire area under analysis. Cells exceeding a cut-off point density value are identified as HRL. This value is chosen by the analyst and can be adopted according to the size of the identified HRL (e.g., it can be determined according with the maximum distance between the HRL boundary from a road network centreline).

To represent this type of methods, the *Kernel density estimation* (KDE) was adopted. Its application requires these steps: (i) definition of the extension (area of study) and spatial resolution of the grid; (ii) selection of a density function (e.g.: based on the Normal distribution) and a bandwidth value; (iii) application of a symmetrical surface (defined by the selected density function) centred on each injury road accident location point and dependent on the bandwidth value; (iv) calculation, for

each grid cell, of the sum of the abovementioned density surfaces' value producing a single surface (kernel density surface) covering the area under study. After this calculation the cells with density over a cut-off value are selected as being HRL.

3.3 Choice of hazardous road location for detailed analysis

After the identification of HRL, these are ranked to prioritise locations for detailed analysis and subsequent identification and implementation of corrective physical schemes. Criteria to rank the identified HRL are: (i) the coincident identification of a particular HRL by different methods; (ii) the number of road accidents that each HRL contained (accident frequency); (iii) the severity of accidents in a particular HRL; (iv) the focus on a particular type of accidents or road user involved in accidents; and (v) the opportunity to collaborate with urban maintenance, improvement or expansion programmes.

3.4 Detailed analysis of a hazardous road location

Within the framework of this study, stick diagrams analyses are carried out. These are analytical tools which present the road accident information in a diagram form supporting the identification of common characteristics between the accidents, including those which can be improved by the implementation of physical alterations of the urban environment (see section Abstract).

4. Application to Vila Real

The methodology presented in the previous section was applied to the City of Vila Real (described below) and led to the identification of several HRL in Vila Real (section 4.2). It also allowed comparison between different definitions and methods currently used in Europe as well as other that have been sporadically used (see sections 2 and 4.2 – Discussion of results).

4.1 Description and data collection

Vila Real, a medium sized city located in the interior north of Portugal, was chosen for the application of this research work. Its hilly urban area has an irregular shape covering 12,8 km^2. It has an organic urban morphology which has evolved from the historical central area in an amphitheatre shape. Technicians of Vila Real local authority identified three functional road levels in its road network. Injury road accident data in Vila Real (2004-2008) were collected from the national database and complemented with information from the local traffic police departments. 381 injury road accidents were georeferenced in the road network.

4.2 Identification of HRL

Methods based on definitions applied in some European countries

Some parameters were adopted in Method I and II, both applied using ArcGIS™ software: Method I was applied using the *Point Density* function to produce a density grid with 10 m-sided cells whereas in Method II equidistant points (distanced of 20 m) were placed along the centrelines of the entire road network.

Firstly, Method I was applied to reproduce the definition of ANSR (Portugal), leading to the identification of 1 to 3 HRL per year (from 2004 to 2008). The same definition when reproduced by Method II led to the identification of 3 HRL (a single HRL in 2004, 2005 and 2007). The comparison between these two results and taking into consideration the computation process of Methods I and II let realising that the latter allows a more accurate reproduction of the definition as explained in the "Discussion of results" section. For his reason, for five definitions only Method II was applied (Table 2). Figure 1 illustrates the results of the Norwegian definition for Method II.

Table 2. Number of identified HRL by Method II for each applied definition

Years	Definitions					
	ANSR	Belgium	Flanders	Hungary	Germany	Norway
2004	1	0	0	15	8	25
2005	0	0	0	19	8	
2006	1	0	0	7	3	
2007	1	0				
2008	0	0				

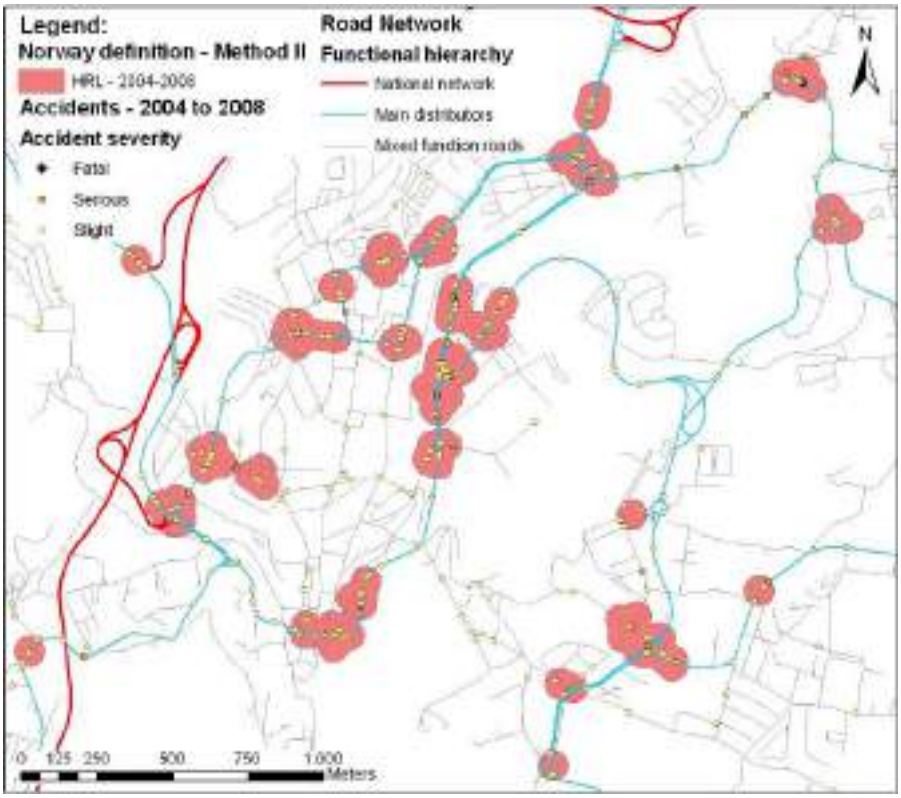

Figure 1. HRL identified with Method II applying the definition of Norway

Methods based on the Euclidean distance between points

The analysis of HRL based on the Euclidian distance between road accident location points was carried out using *CrimeStat*®, a software that includes three routines based on the Euclidean distance between points, usable to identify point agglomerations: (1) *Mode*: counts coincident points; (2) *Fuzzy Mode*: counts points within a neighbourhood of each point, and (3) *Nearest Neighbor Hierarchical Spatial Clustering* (*NNH*): identifies spatially close point groups based on a random distribution of points within the same area and the same number of points as the case study. Its calculation is described in section 3.2. All were applied to the dataset of injury road accidents that occurred between 2004 and 2008 in Vila Real.

In the *Mode* routine only locations with at least three road accidents were considered as hazardous. This criterion was adopted as the occurrence in the exactly same place of three accidents in five years might indicate road safety issues; on the other hand this value, although not isolated, is also used in other definitions (see Table 1). This routine identified one location with four coincident accidents and 4 with three accidents.

In *Fuzzy Mode* routine, a minimum of 4 accidents were adopted as the selection criterion to the HRL identification and two values of searching radius were applied:

50 m and 100 m These values were considered adequate for this purpose and it has been applied for the same purpose, as Table 1 shows. For example, for the radius of 50 m, this routine led to the identification of 19 HRL.

The *NNH* routine was computed considering several values for the minimum number of points as presented in Table 3. One of these solutions is illustrated in Figure 2.

Table 3. Number of HRL obtained with the NNH routine

Minimum number of road accidents per HRL	5	7	8	10
Number of identified HRL in Vila Real	20	12	9	3

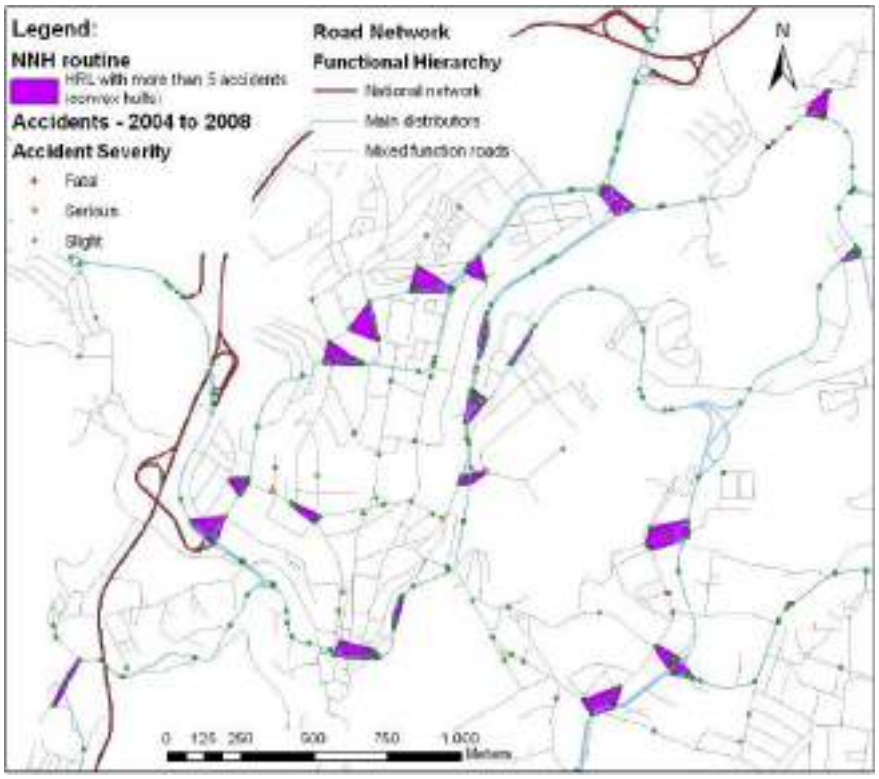

Figure 2. HRL identified with NNH routine

Methods based in density functions

Kernel Density Estimation (*KDE*) was the adopted to identify HRL. This routine requires a set of parameters, displayed on Table 4.

Table 4. Input parameters of KDE routine in CrimeStat®

Parameter	Adopted option
Interpolation function	based on Normal (or Gaussian) distribution
Bandwidth type	adaptive
Bandwidth criterion	minimum number of road accidents of 10, 5 and 3
Cutoff value (density)	0.0002 points/m^2 (corresponds to a 50 m limit away from the road network centreline)
Cell size	10 m

Table 5 presents the number of HRL according to the tested bandwidth values. One of the results is illustrated in Figure 3.

Table 5. HRL identified with *KDE* routine for different bandwidth values

Minimum no. of points to include in the bandwidth	10	5	3
Number of HRL	2	12	28

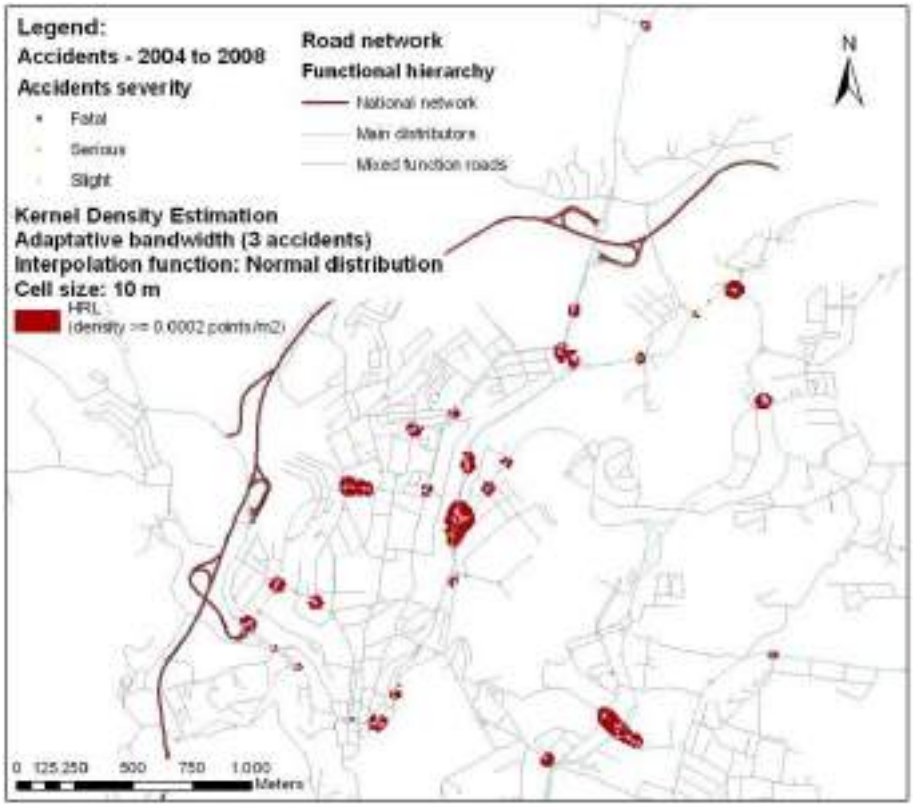

Figure 3. HRL identified with KDE routine
(with a minimum three accidents adaptive bandwidth)

Discussion of results

Results suggest that Method II allows a more accurate reproduction of the selected definitions (see section 2.1) because it considers only an area around the road network avoiding the identification of HRL outside road network, while Method I applies a grid into the entire area, regardless of the road network location. Despite Method II being superior to Method I, it still presents some limitations to the strict application of European definitions (e.g. it applies a searching area instead of a road section). The HRL identified by Method II depend on the definition applied; indeed, some definitions did not identify any HRL (such as the Flemish, Belgian) whereas the Norwegian led to the identification of 25 HRL (see Table 2). This might indicate that some definitions can be more suitable than others to particular city circumstances (from urban layout to data availability). For cities with a larger number of injury road accidents, the Belgian or Flemish definition might be more suitable to identify locations with more severe road accidents, than the remaining applied definitions.

Also, results obtained from the application of different definitions adopted in various countries might be an indication of the road safety performance in each country. For instance, Method II applied to the Norwegian definition led to the identification of more HRL in Vila Real than the remaining definitions. Analyses must keep in mind that results are also dependent on the parameters adopted in Method II, as well as the method itself, which is not an accurate reproduction of the various definitions.

The *Mode* routine reveals low suitability for HRL identification, at least in this case study, because it only identifies locations where road accidents are exactly in the same place (point). Furthermore, its results might be considerably influenced by the georeferencing options that are adopted (e.g. snap the road accident points to the centrelines of the road network and minimum spatial unit used).

Fuzzy Mode routine and Method II showed some similarities, when similar parameters are adopted. It was possible to conclude that, for the same searching area and minimum number of accidents per HRL, Method II identified more HRL than the routine, as it focus the HRL identification process over each point regularly distanced (of 20 m) over the entire road network, whereas the routine only focus over the location of road accidents.

Results show that the *NNH* routine might lead to the identification of HRL which shape corresponds to a long road sections containing a chain of road accidents without length limit. This is suitable for other road safety approaches, such as *route analysis* (CIHT, 1990), but is not adequate for HRL analysis.

Results from the *KDE* routine, show that the specification of the bandwidth has a large influence on the number of identified HRL. Smaller bandwidths might have a tendency to identify more locations.

In general, all methods are relatively simple to apply and require only few calculation minutes; however, other characteristics, capabilities and consequences might influence the choice of a method for identifying HRL and the interpretation of its results. For this reason, a brief comparison was performed between Method II and the *Fuzzy Mode*, *NNH* and *KDE* routines, summarised in Table 6. Method I and the Mode routine were not included in this comparison, as they were considered to perform worse than other essayed methods, as mentioned in this section.

Table 6. Main comparative aspects of Method II and *Fuzzy Mode*, NNH and KDE routines

	Method II	*Fuzzy Mode* routine	NNH routine	KDE routine
Parameters and analysis dependence	Searching radius; Selection criterion; Period of data records; Step of sliding window.	Searching radius; Selection criterion (no. of accidents); Period of data records.	Value of study area; Minimum number of points per agglomeration; Period of data records.	Cell size; Minimum number of bandwidth; Cut-off value; Interpolation function; Period of data records.
Consideration of accident severity	Yes, according to the definition	No	No	No (although possible, not applied in this study)
Some adopted parameters	Time period of accident records; Radius and selection criteria according the applied definition; Step of sliding window: 20 m	5 years of accident records; Radius: 50 m Selection criterion: ≥ 4 accidents with casualties	5 years of accident records; Threshold distance based on a random distribution; Minimum of 5 accidents per agglomeration	5 years of accident records; Cell size: 10 m; Adaptive bandwidth; Cut-off density: 0.0002 points/m^2; Interpolation function: Normal
Shape of HRL	Buffers along the road network centrelines	Buffers along the road network centrelines	Convex hulls	Grid cells with density above the cut-off value

	Method II	*Fuzzy Mode* routine	NNH routine	KDE routine
Main advantages	Allows the definition application; Applies a sliding window; which in the same conditions of *Fuzzy Mode* routine identifies more HRL	Identification HRL centred on road accidents	Requires calibration of few parameters; Identification based on statistical evidence; HRL size dependends on area/number of accidents;	Promotes identification on areas where more road accidents occur (adequate to *area wide analysis* where HRL have to be identified)
Main drawbacks	Results varied according to the applied definition; Implementation proceeding more susceptible to errors: Measurements through Euclidian distance	Choice of search radius and criterion for HRL identification; Measurements through Euclidian distance	Delimitation of the study urban area without considering its shape; Choice of minimum number of accidents in the HRL; Measurements through Euclidian distance	Choice of cut-off value which interferes with the number and shape of HRL; Need of bandwidth determination; Isolated aggregations of accidents have less density value than those surrounded by areas with more accidents.

Although Method II and the *Fuzzy Mode*, *NNH* and *KDE* routines all present advantages and weaknesses, for Vila Real circumstances *NNH* would be a recommendable approach for systematic application.

4.3 Detailed analysis of a hazardous road location

Several locations were identified as hazardous: some of them are consistently recognised by different methods. One of them was identified with seven essays and as it had the highest number of injury road accidents it was chosen for detailed analysis. It corresponds of a road extension of about 250 metres, includes a roundabout and contained 18 road accidents, which 9 are *running over pedestrians* (mainly located over crosswalks) as Figure 4 illustrates.

The analysis of this location was based on stick diagrams (see section 3.4) with the purpose of finding possible problems susceptible of being treated through engineering road safety measures. The analysis of road accidents which often involved one single vehicle (*running over pedestrians* and *run-offs*), indicated a possible problem related to exceeding speed. The analysis of the remaining 9 road accidents did not enable the finding of a common pattern between them which could be indicated as probable causes for their occurrence.

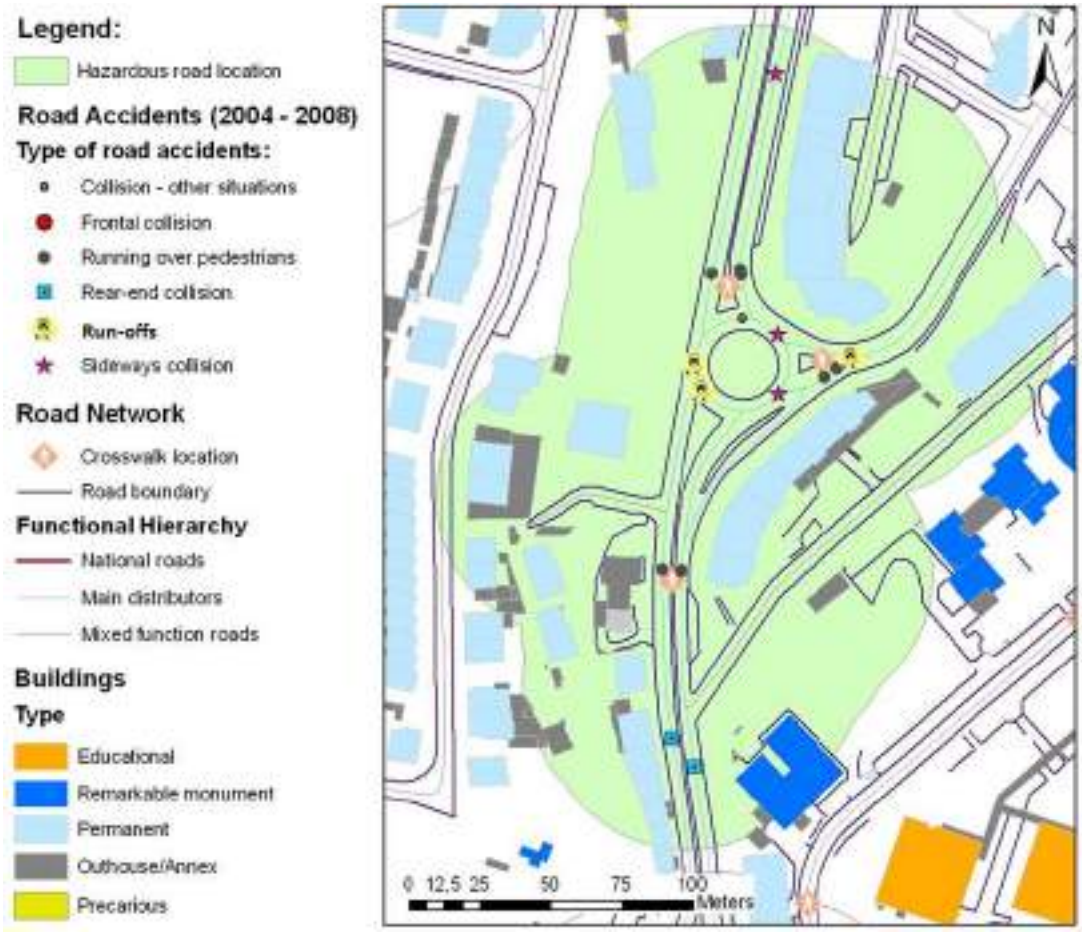

Figure 4. Location of the road accidents in the HRL selected for detailed analysis

The identification of the correct road measure to be applied should take into consideration the safety characteristics and requirements of this site as well as urban function of this area. Possible unwanted side effects of any identified measure, for instance increased noise levels or additional accessibility difficulties for vulnerable road users, must be considered. These sorts of analysis clearly illustrate the multidisciplinary of required working teams including road safety, urban planners and environmental experts.

5. Conclusions and Discussion

The central aim of this work is to compare different methods to identify HRL for which an internationally accepted definition is not available. The treatment of such locations is suitable to be integrated with other types of interventions (e.g., in urban planning) which, for instance, potentiate the optimisation of resources (e.g., in the problem analysis and intervention phases), and promote a wider comprehension of the complex urban road problems in different perspectives which in turn might contribute for integrated/globally better interventions. The work is focused in urban areas taking into consideration the limited resources (including data) that exist in countries where road safety programmes have not been systematically applied. In the scope of this research project different approaches are proposed and implemented: methods I and II and routines *Mode*, *Fuzzy More*, *Nearest Neighbor Hierarchical Spatial Clustering* (*NNH*) and *Kernel Density Estimation* (*KDE*). Spatial analysis software, ArcGIS™ and CrimeStat®, was used.

Results showed that the number and location of the identified HRL in Vila Real between 2004 and 2008 varied depending on the applied method, definition or routine. Amongst all the identified HRL, a considerable number was systematically produced by most methods and/or routines. Results indicate the identification of HRL from 0 for the definitions adopted in Belgium, including Flanders, (reproduced according with Method II) to 28 for the KDE (considering adaptive bandwidth including at least 3 road accidents, the Normal distribution as interpolation function, 10 m cells and a cut-off density value of 0.0002 points/m^2). The differentiation between results also stresses that the establishment of the parameters used in the several methods or routines might influence considerably the identification of HRL. In general, all the methods identified HRL of different sizes and shapes, mostly located on intersections of the highest road functional hierarchy levels suggesting that traffic data would be important to recognise accident rates.

The comparison between methods and their results highlights that *Mode* routine seemed to be inadequate for the HRL identification and Method I showed to perform worse when compared to Method II to reproduce the applied European definitions. The NNH routine is the least dependent from parameters established by the analyst as it has a statistical basis of spatial randomness. However, its calculation does not consider characteristics such as the shape of the area under analysis and relies on the assumption of a homogeneous space (see section 4.2 Discussion of results).

Some of the applied methods and/or routines (Method I and II, Fuzzy Mode, *NNH* and *KDE* routines) consider that space is assumed to be contiguous and homogeneous. This might lead to the identification of HRL containing road accidents that occurred in non-contiguous roads, which is undesirable, as local characteristics might be different from case to case, and the possible underlying problems of road accidents might also be different. Another aspect that should be taken into account in the analysis of the results is the possible error of location of injury road accidents, in particular in the georeferencing process.

To cement conclusion, the implementation to other contexts is recommendable (e.g. larger and smaller cities, with different road accident rates, different types of urban tissues, reflecting its diverse history and complemented with information about *only damage road accidents* as well as exposure data from vehicles and pedestrians).

The suggested methods can be implemented in urban areas in a short term (even if no traffic data is available). Previous studies have demonstrated that perception of the road surrounding influences the road user behaviours which in turn impacts road accident records. Hence, urban interventions should integrate the impact on road safety, in order to improve the entire public space in terms of use and safety. Urban changes should be supplemented with educational, encouragement and/or enforcing road safety measures.

This type of road safety methods/approach is suitable to be integrated with different policies beyond the road safety or oriented to specific targets. Also they might be an important tool to be integrated in a big restructure of a part of an urban area or in other policies, such as: health (promoting safer and pleasant road environment to walk), educational (safety near schools) or intelligent transport systems. Such interventions should include multidisciplinary working teams.

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HOUSING AS AN APPROACH FOR THE BROWNFIELD REGENERATION KNOW-HOW TRANSFER

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Abstract

Regeneration of brownfields is nowadays a welcome approach mainly in the urbanised areas of the city centres. Mainly the cities of the Central-East European countries suffer from the lack of housing opportunities in the city centres as a result of the former socialist system and the strong suburbanisation in the following decades. Due to this urbanisation processes people started to leave the urbanised cores of the cities and even more new brownfields have emerged. Nowadays, not only due to the crisis but as well due to the reurbanisation tendencies in the cities, brownfields are seen as a new potential for the housing in the many times neglected areas of the cities. The process of the brownfields redevelopment contributes to better use of space and brings a new life to the upgraded areas. Improved organisation of the space linked with the new use of the space – housing – communicates better with the other parts of the city.

Improvement of the brownfield sites can be perceived not only through the physical change of the space. Gentrification as a social process is one of the possible options how to enrich the process of transformation on the brownfield areas. The regeneration process takes usually many years and the process of gentrification and the presence of alternative entrepreneurs ensures stable development of the site visible in many cities around Europe. This is a reason why in the study programme "Spatial Planning" redevelopment of brownfields should be included, based on transfer of know-how and experience from other countries. The focus of the work is therefore put on the brownfield regeneration based on the housing examples from the European cities focusing mainly on the example of Bratislava.

Transfer of Innovation is a new project under the Lifelong Learning Programme – Leonardo da Vinci No. 11310 1614 on "Brownfield Regeneration Know-How Transfer" (acronym: BROWNTRANS) that has started with the support of the CEE countries (CZ, SK) and will disseminate the gathered know-how and experience into several professions that deal with brownfields. This project runs in 2011-2013 in the frame of Leonardo da Vinci and summarizes knowledge and know-how on brownfield redevelopment in the modules that deal with economic, financial, legal, technological,

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managerial, social and cultural and environmental aspects. Outcomes in the form of a handbook will bring substantial increase in the skills and knowledge potential of human capital involved in cross-professional activities. There is a unique opportunity to communicate results from praxis within the theoretical teaching process as well as to use the theoretical approaches to improve production processes of the brownfield redevelopment from the European perspective.

1. Introduction

In this paper I would like to make a brief overview of brownfield sites regeneration approaches in the urban space. Creativity has always been a capability and privilege of a human being. It can be followed many aspects of our lives. In the past, nowadays city centres were usually on the edge of cities itself which gave them the ideal position for situating working opportunities in the form of diverse industries. After the WWII and later after the Velvet revolution followed by the political changes many of those industrial areas did not survived and brownfield site arose. In many countries especially these sites, nowadays centrally situated, were recognised as a potential for cities and shortly afterwards were converted into diverse uses. In many cases this process of regeneration was not straight but catalysed by the activists operating in those spaces using them on the temporary basis, later on converted to the housing use. In meantime we can find some successful conversions in Slovakia too.

Methods used for this work were of an analytical nature, applied in the theoretical part as well as in the part where good-practice examples from the city Bratislava are introduced. In the theoretical part the focus is mainly on the analysis of the existing literature on manifold aspects related to the gentrification and brownfield regeneration in urban space while synthesising the knowledge along with the personal experience from the research. The second analytical part is a base on the analysis of existing projects of brownfield sites conversion made in the recent time and at the same time being used by the creative class and the housing approach is visible.

2. Gentrification

The origin of the word “gentrification” derives from “gentry” (French origin “genterise” denoting “of gentle birth” and “people of gentle birth”). In England (“landed gentry”) it denoted the social class, consisting of “gentlemen” (wikipedia, 2012). As described in the book Gentrification by Loretta Lees (Loretta Lees, Tom Slater and Elvin Wyly, 2008), the term gentrification was for the first time defined in 1964 by the British sociologist Ruth Glass who is perceived as one of the pioneers of urban sociology in Europe. She used the term gentrification to describe distinct processes of urban change affecting the inner parts of London. Nowadays, the changes described, are known as the classical gentrification. She has investigated this process on disinvested inner-city neighbourhoods which are upgraded by pioneer gentrifiers where the indigenous

residents are displaced and working-class housing becomes middle-class housing in London. Throughout the history we can follow several waves of gentrification (Table 1).

Table 1: Waves of gentrification

1950s – 1973	**First-wave gentrification – Sporadic gentrification**	Prior to 1973, the process is mainly isolated in small neighbourhoods in the north eastern USA and Western Europe.
	Transition – Gentrifiers buy property	In New York and other cities, developers and investors used the downturn in property values to consume large portions of devalorised neighbourhoods, thus setting the stage for 1980s gentrification.
1970s – 1980s	**Second-wave gentrification – The anchoring of gentrification**	The process becomes implanted in hitherto disinvested central city neighbourhoods. In contrast of the pre-1973 experience of gentrification, the process becomes common in smaller, non-global cities during the 1980s. In New York City, the presence of the arts community was often a key correlate of residential gentrification, serving to smooth the flow of capital into neighbourhoods like SoHo, Tribeca, and the Lower East Side. Intense political struggles occur during this period over the displacement of the poorest residents.
	Transition – Gentrification slows	The recession constricts the flow of capital into gentrifying and gentrified neighbourhoods, prompting some to proclaim that a "degentrification" or reversal of the process was afoot.
Mid 1990s –	**Third-wave gentrification – Gentrification returns**	Prophesies of degentrification appear to have been overstated as many neighbourhoods continue to gentrify while other, further from the city centre begin to experience the process for the first time. Post-recession gentrification seems to be more linked to large-scale capital than ever, as large developers rework entire neighbourhoods, often with state support.

Stage model of Gentrification according to Hackworth and Smith (Jason Hackworth and Neil Smith, 2001)

Gentrification, even 50 years later after the first definition by Ruth Glass, is still a current topic in urbanism. It is mainly perceived as a transformation of a working-class or vacant area of the central city into middle-class residential and/or commercial use. It is a process that has attracted the attention of the media, local governments, urban planner, architects and developers, businesses, city stakeholders, and political activists. In the 1990's in several works we can follow the shift from the classical gentrification to the new-build gentrification described by Neil Smith as a much broader phenomenon. He perceives it as a highly dynamic process where the reinvestment of capital at the urban centre which is designed to produce space for a more affluent class of people than currently occupies that space (Smith, 1996).

The city of Newcastle upon Tyne can be perceived as an example for new-build gentrification. The city council introduced a citywide regeneration strategy named "going for growth" that sought to remodel low-demand housing areas in inner-city Newcastle. One of the objectives was to rebalance the population of disadvantaged and stigmatized communities by building housing that would attract the middle classes into these areas. Gentrification that took place here, was not on the former brownfield site, rather it took place on pre-existing residential land. This new-build gentrification was about social engineering aiming to attract the middle classes to parts of inner-city Newcastle with the aim to socially rebalance these areas (Loretta Lees, Tom Slater and Elvin Wyly, 2008). Example of the city Newcastle shows how the city can make an advantage from gentrification and at the same time obtaining the status of a creative city (see Chapter 2).

3. Temporary use of brownfield sites

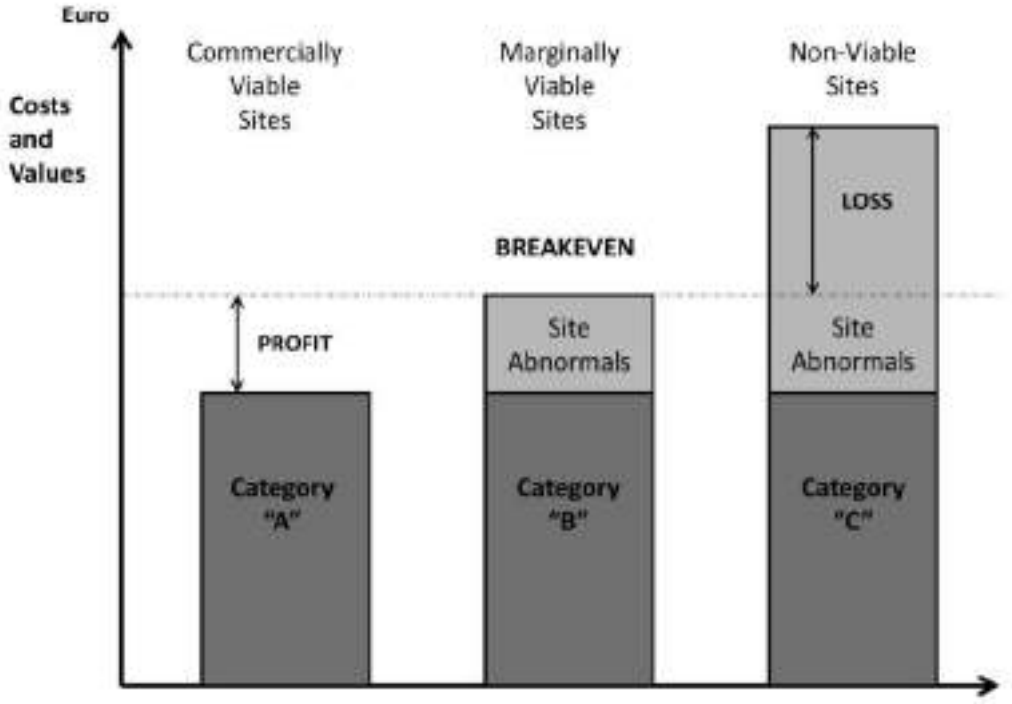
3.1. Brownfield Sites

Urban derelict sites are results of changes in functional use of the sites. The loss of main functions of the area leads to the degradation of the environment and further loss of the reputation and attraction of the sight from the point of view of users. Brownfields are predominantly perceived as a result of industrial destructuralization and wave of the recession. Brownfields regeneration is very often very complicated with respect to the strict legislation and environment protection as well as with the respect to the housing market and banking sector. Sustainable way of regeneration requires the integration of social, cultural, economic and environmental aspects(BRIBAST, 2010).

Integrative approach to regeneration lies in a sustainable way in implementation of combinations revitalization strategies based on the knowledge of mutual links among economic recession, degradation of the physical environment and social stress factors. Strategy for brownfields regeneration depends on external and internal framework conditions for the process of regeneration. One of the key factors for strategy selection is the possibility to gain the financial support for regeneration of external resources and

total costs for the regeneration of the site (Picture 1). Application tools for the brownfield sites regeneration can be divided into passive (e.g. local taxes, intervention for investors) and active (e.g. improvement of the infrastructure, social infrastructure, transport, social infrastructure, environment, economic activities) financial interventions. The legal framework of the environment, lack of trust and practical experience in majority of the sites is a limit for the private-public-partnership, but the cities should look for other forms to how to use this approach for their advantage(BRIBAST, 2010).

Picture 1: A-B-C Model for the site regeneration



A-B-C-Model for the brownfield site regeneration according to BRIBAST (BRIBAST, 2010)

3.2. Creativity, Culture and Creative Cities as an Approach for Brownfield Site Use

Creativity itself has a very long history and therefore we can find thousands different types of creativity and always from a different point of view. In general it is very difficult to define the creativity. We can understand it as a capability to create new and genuine thoughts, which were before unknown for the definer (Zlatá, 2011). As many authors as many definitions. Robert Weisberg perceives creativity as a work of the

history´s most creative personalities and innovation (Weisberg, 1993), and John Howkins links the word with the spiritual and very personal point of view (Howkins, 2005).

Culture is an important source of creativity. Creative industries foster on the rich core of the cultural heritage, gifted artists and culture professionals. This core is linked with connected innovative services bringing creativity to the market (Zlatá, 2011). Many professionals consider linkage of arts and creativity with innovation crucial for the creative potential of the place. Richard Florida, the author of "Creative Class", sees the connection of culture with economic growth by producing incentives that promote effort, thrift and hard work. Culture according to his view motivates economic growth by focusing human energy and effort on work and away from the pull of distraction(Florida, 2005). Charles Landry describes creativity as historical evolution, while understanding a place from which culture comes from. This attitude creates a potential for a city to rethink its attitude and vision for the future. Landry, as the inventor of the idea of "creative cities", sees a hidden potential in each city. This concept is a positive one; he assumes that ordinary people can make extraordinary happen if they receive a chance to do so(Landry, 2008).

Creative cities are spaces you want to live in, places to be visited (Hartley, 2005). Often they possess various characteristics as: vibrant arts and cultural sector, capability to produce employment, distribution of resources, etc. As summarized by Jinna Tay, "creative cities" is about how local urban spaces can be remained, rejuvenated and re-purposed within a competitive global framework. Traditionally the city has been studied from disciplines as architecture, sociology and urban planning, developing ideological concerns. Concern over how the new economy may impact on the local has also played a part in directing attention toward the city as a possible site for social and economic renewal. The establishment of a creative milieu is frequently identified as the means of meeting development outcomes. Cities are sites where shifts in social and economic processes, development strategies and emerging spaces can be observed. Creative cities highlight the significance of consumption-led economics, cultural production and urban space designing (Tay, 2005).

The concept of the creative city can be replicated but the success itself is depended on how it deals with long-term development questions, such as economic and social sustainability, gentrification and local displacement, exclusionary practices, and local identities. Creative expression may come up against conservative systems or ideological cultural bias, which may act to smother the natural diversity of creativity (Tay, 2005). This renewed focus on social identities also manifest in lifestyle and service consumption as cafes, restaurants, bars, tourism, the nigh-time economy. Cities that offer lifestyle and creative sector but at the same time they provide affordable loft spaces and heap drinks will always be greater attracter for creative workers and diverse communities. This social aspect of the creative industries links the cultural network to

economic and creative production and the city of Newcastle upon Tyne can be perceived (Ward, 2002) as an outstanding example able to compete world-wide known centres of culture.

3.3. Temporary Use of Brownfield Sites

Temporary use describes the interim stage when a sites original purpose has been abandoned, its future development is still uncertain, and it can be used on favourable terms. It refers to an extremely wide range of concepts and timeframes, from single events through to seasonal projects and creating the field for the permanent establishment. This term is not a new social phenomenon: temporary ventures have always been a feature of cities that were conceived and built for the long-term. Temporary uses are now becoming more diverse, leaving their foot print on the city locations, mostly on derelict sites becoming a structural component of urban development. Temporary uses today are the product of structural changes in the economy (ed., 2007). Older industries that occupied extensive sites are disappearing. The main criterion when choosing a new production location is its accessibility. Thanks to new technologies goods can be supplied whenever needed. Former industrial premises, disused railways and rail-freight yards, or wastelands created by the demolition of large housing estates are spreading mainly throughout the inner cities.

There is a growing demand for free and affordable space mainly by artists, creatives, social initiatives, youth and sport projects. Facing the problem of derelict brownfield sites, people involved in such developments reintegrate apparently redundant spaces into the urban structures. These “space pioneers” (they discover abandoned sites and reinvent them), often perceived as temporary users, are evidence of a trend to greater social commitment (ed., 2007), to more participative approach (BRIBAST, 2010). Such creativity has a chance to blossom on disused sites and in vacant buildings. The aim is to initiate a temporary use at a suitable site or premises. At the same time, the concept of many temporary use projects rests on the liberty of organizing everything oneself (ed., 2007). Space pioneers, as mentioned above, apply particular criteria to their search for the right location. Alongside the characteristics of the location itself, a personal commitment to work, available networks, mutual voluntary support, creativity and a love of experimentation, all play a role at the start of a temporary use project. They re-cycle the structures for little cost trying to compensate the deficits of a peripheral location by actively networking with other temporary users. Shared locations help to create creative clusters and support the creative environment of the site.

By helping temporary use projects settle at such locations, local authorities can regenerate the latter as a part of a lively cityscape. The potential of these sites is a chance for young creative start-ups as well as voluntary workers, to implement their ideas without making major financial investments and subsequently, to contribute to the

social and economic foundations of urban society. Particularly in a projects initial phase, conditions for rapid “cellular growth” tend to be ideal.

4. Case studies from the city Bratislava, Slovakia

The topic of brownfield sites regeneration under the Slovak conditions has been a relatively new topic. By now we have had relatively little experience with regeneration of brownfield sites in our country, however, the quantity of them, the economic situation in the country and the (lucrative) position of brownfield sites within the towns obliges us to be increasingly interested in the issues of how to transform and bring them back to life. It is not a simple task, given the fact that former industrial buildings and other underused areas are frequently perceived as underestimated and investors as well as municipalities often do not consider their importance and value of their cultural heritage. The general attitude is rather to "erase" brownfields, eliminate any traces of the past and reshape the land for “empty site” and start to build from on the greenfield site. In Slovakia, majority of the unused brownfields are considered only as a great potential for the future and they still wait for their chance, but some of them have already been successfully rebuild and some are currently undergoing important changes towards the new future. Examples introduced are from the city capital of Slovakia, Bratislava, where many brownfield sites have been already demolished, focusing on three examples of successful conversions through various approaches at different stages.

4.1. Design Factory (Bottova ulica)

Design factory is one of the few examples how old industrial places can be transformed into cultural place. The building is situated in the area of a former industrial zone in Bratislava where a Kablo factory of a 15 000m2 size was situated(Wikipedia, 2011). Originally this site was suggested for a transformation into a multifunctional complex Twin City, the plans have changed several times, by now no investment except demolition has been made. In the area were located some valuable objects possessing the potential to be listed as technical monuments and at the same time to be protected from dereliction or further demolition. Inflexibility of authorities led to the decision to demolish the former valuable industrial buildings with the excuse of a bad technical state of art and threat to the population (Mistrík, 2011).

Nowadays the former industrial building where the Design Factory is situated serves as an exhibition space, gallery, cafe and ateliers for 3 architects who were behind this conversion. After its opening in 2005 design factory won several awards for design and architecture. Atmosphere of the place aims to be the intermediary between business sector and cultural happening, an example where history meets creativity and culture. Design factory is only a small “island” of creative industries in the area possessing a significant potential to become the creative centre of Bratislava (designfactory, 2005-

2012). The site has got a good location close the city centre, neighbouring with the site where the Slovak National Theatre is located, called Eurovea.

4.2. Cvernovka

Cvernovka is an example how the former industrial site, where knits were produced, can be transformed into a centre of culture based on a temporary way. At the beginning of the 20th century the factory had already eight buildings. In 1948 the factory was a part of socialization process while in the 1960's the production has reached its maximum with up to 2,500 employees. Goods, mostly sewing and knits were exported all over the world. Due to the economic reasons in 2004 the factory was closed, industrial buildings remained (Mistrík, 2011). Nowadays these buildings are used for cultural purposes. In the entire area of Cvernovka about 300 companies, including paintball arena, bookstore, alternative workshops and Gallery of Cvernovka, have found its place here. Nevertheless, Cvernovka is very well known for the location of creative ateliers of painters, architects, interior designers, photographers, fashion designers, graphic and industrial designers, including lofts.

The second building is located on the block of the streets Trnavská, Záhradnícka, Miletičova and Jégého. The architecture of the building is very valuable and atypical for an old industrial architecture. Nowadays the area is used for cultural purposes. After PKO (Park of Culture and Leisure) was closed it became a popular space for cultural events, concerts and exhibitions.

4.3. Eurovea

Eurovea is the name of a new international trading centre in Pribinova Street on the left bank of the Danube River, between the Apollo bridge and the Old bridge in Bratislava, in the vicinity of the new Slovak National Theatre building and office building Tower 115. Thanks to its location in the city centre it connects the river embankment with the old town and extends the offered open public space. The whole area of Eurovea is a former brownfield site. An oil refinery was originally located in this place, which was founded in 1885 and produced gasoline, kerosene, paraffin, candles, mineral jelly and asphalt. In 1944, during World War II the refinery was bombed and 80% of the factory was destroyed and continuously caused contamination of soil. All refinery activities were definitively shut down at this place in 1963 when the plant moved to other location in the outskirts of the city. In July 2006, the execution of the first phase of the project began. Eurovea (phase I) was opened in spring 2010 and in an area of 230,000 square meters it offers 60,000 m2 of shopping spaces, leisure facilities and entertainment as well as other area over 60,000 m2 of office spaces, hotel facilities and apartments (wikipedia, 2011). The completion was possible thanks to foreign capital of the Irish developer who cooperated also with Slovak architects on the final design. It is

considered to be a successful urban extension of Bratislava´s (relatively small) historic city centre.

An important part of the project, in terms of the brownfield regeneration, is the Warehouse No. 7 object. The reinforced concrete structure was built in the 1920s in a functionalist style, as a reminiscent of the classical style. The industrial nature is enhanced by the railway track leading directly to the object, still preserved, which originally connected the entire embankment of the Danube from the refinery to the contemporary port. The building was completely renovated and nowadays it houses an exhibition related to the Eurovea. The role of the Warehouse No. 7 should increase its importance in the near future, when the transformation to the city auditorium, as an alternative to the former PKO (Bratislava's Culture and Relaxation Park), will be finished.

5. Conclusion

This contribution shows how the underused areas and spaces, situated mainly in the city centres, can be repeatedly used and successfully converted into housing. These conversions of former brownfields are influenced by several conditions one of which is gentrification as sociological changes in urban space. The process of gentrification is often used together with the approach of a temporary use of the site through interventions, actions, acts or events. Three on-going projects from Bratislava were described as an example of successful brownfield sites regeneration in the urban space showing the capability to transform the former brownfield sites into successful projects in the Central Europe.

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Party-politics and planning. Mapping political values for a better understanding of decision-making on spatial development

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Abstract

Over past few years, political support for spatial planning has evaporated in Dutch politics. The ministry of housing and spatial planning is abolished and central government involvement in strategic planning is to be decentralised to the regional government tier. These sudden changes to the Dutch planning system have surprised many practitioners, as well as scholars, that appear to have little understanding of the party-political dimension of spatial planning and policies.

This paper presents the outcomes of a research of party-political values relevant to the field of planning and discusses the research methods used. The variety of Dutch political points of view on spatial planning and policies are defined in terms of political values. A mind-mapping approach was used to make a practically useful representation of the variety of political values found. A map of party-political values was designed as a tool for improving decision-making on spatial development issues.

1. Introduction

Spatial planning has become contested ground in Dutch politics. For decades, there was to a broadly shared belief in strategic spatial planning by central government, as well as a strong position for comprehensive local and regional public spatial planning approaches. Over past few years, political support for spatial planning has evaporated. Two years ago the ministry of housing and spatial planning was suddenly abolished by a new government coalition. With this change, the traditionally crucial link between the housing policy and strategic spatial planning by central government was cut. Central government involvement in strategic planning is to be decentralised altogether to the regional government tier and planning legislation is to be reformed and simplified.

These sudden changes to the Dutch planning system have surprised many practitioners, as well as scholars. An important reason for this surprise is that the party-political dimension of spatial planning and policies were never studied, the dominance of certain political values rarely explicitly recognised as a possible issue

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for scientific debate and that changes in political thought were not foreseen. Yet, these political changes did not come out of the blue.

Planning practice has been going through a fundamental change the past decade. Collaborative planning approaches have emerged, in which government agencies need to cooperate with private parties, social organisations, individual stakeholders and other interested citizens. In complex processes of joint fact-finding, spatial planning and design, negotiation and decision-making take place. This often means that in strategic planning processes as well as concrete projects, each time a new and basic decision on the preferred spatial development needs to be made. Such a basic decision is a deliberation of values, or in other words as a normative or political decision. Spatial development issues and planning therefore transcend the confined arena of professional planners and have (re-)entered the party-political arena.

The Dutch political arena traditionally is varied, multicolored and some say fragmented. Like many other European countries, new political movements and parties have emerged over the past decade of a left and right wing populist variety, that compete with mainstream social-democratic, liberal an Christian-democratic parties. Despite the new spatial development practices and despite these general political changes in the Netherlands, the knowledge of political thought on spatial development issues and spatial planning is limited amongst practitioners and scholars.

This paper presents the outcomes of a research of Dutch party-political values relevant to the field of spatial development approaches and planning. In section 2, the pluralist theoretical perspective is defined that underpins the value-oriented approach to spatial development and planning. Section 3 presents the research strategy that was followed to gain insight in political values and the research method that was chosen. Section 4 presents the outcomes of the research, and shows how the categorisation of the variety of political values has been used in a mind-mapping approach with practitioners on two cases. Section 5 discusses the relevance of the outcome in the form of a map of party-political values as a tool for improving the practice of decision-making on spatial development issues.

2. A pluralist approach

Spatial planning is an instrument for making well-informed decisions on our physical environment (Friedman 1987). These ‘well-informed’ decisions are the result of careful preparation and consideration of various proposals, for which a logically argued preference is reached following a functional or technical-instrumental rationality (Nozick 1993). In practice, planning nowadays is more than a technical analysis of the spatial development issue at stake and the best-designed solution. In contemporary process-oriented spatial planning approaches, methods of analysis and design are combined with participation of stakeholders, methods of negotiation and procedures for joint decision-making (Healey 1997, 2003; de Roo & Silva (eds.) 2010).

In policy arenas that emerge around urban and regional development challenges, none of the participating actors is able to deal with these challenges on

their own behalf. Being mutually interdependent, the participating actors need to make a joint effort to define what is the spatial development issue at stake and decide upon the preferred solution (Buunk 2003: 126-133). This inevitable means that existing planning policies may need to be set aside in favour of new custom-made ways of working, which in the end require a basic or political decision.

With comprehensive planning policies in place, for a long time the final political decision on a spatial development issue may have been a formality. A mere confirmation of what was decided upon in earlier stages, along the line of strategic planning guidance. This is no longer the case, as basic decisions need to be made in each collaborative process. Despite sophisticated and professional planning approaches, the final decision on a spatial development issue may often seem illogical or riddled with situational or even emotional arguments. Planning researchers and practitioners alike, need to be gain a better insight in how these basic decisions are being made.

2.1 Technical-instrumental rationality

Planning practice and planning theory has long been dominated by a technical-instrumental rationality. Robert Nozick even calls the theory of instrumental rationality the "default theory, the theory that all discussants of rationality take for granted" (Nozick 1993: 133). The idea of instrumental rationality is that actors are supposed to choose rationally between instruments or measures that to the best of their knowledge helps to achieve the aims that are set. The rational approach to planning was later refined by approaches of planning as a process of communication that follow a communicative rationality (Fisher & Forester 1993; Forester 1999). In this perspective, planning is seen as a process in which rich and multi-layered policy stories are formed that help understand spatial development issues and define the preferred way of dealing with them. But when it comes to those seemingly random or odd decisions on spatial development issues that often astound the practitioners that have been working hard to help prepare for proper rational and logical decision-making, the communicative rationality also falls short in understanding what is happening.

Whatever the planning approach followed or whatever professional techniques applied, in the end a decision needs to be taken about what is considered to be the best solution to the perceived problem. Despite the variety of techniques of urban and regional planning and collaborative processes that have been developed over the years, there seems to be little insight in the nature of these supposedly well-informed decisions. These decisions often appear – at least in part – to be an expression of somewhat random normative or political preferences, rather than of professional planning approaches and well-considered policies (Flyvbjerg 1998). Even after extensive participative process, a final decision may differ considerably from what was expected to be a rational or logical outcome of the process, and therefore was prepared by planning practitioners or expected by participants.

The problem with these seemingly random or odd decisions is not their inherent lack of logic, but the kind of logic planners and planning researchers apply in their scientific and analytical methods. The question therefore needs to be raised

whether the technical-instrumental and the communicative perspectives are sufficient to understand all aspects of the planning processes. The technical-instrumental approach to planning, as well as the communicative approach, both presume logical ways of reasoning and argumentation when it comes to decision-making. In order to gain a better understanding of seemingly random or odd decisions on the spatial development, and on the design and use of land or urban territory, a different research approach is required (Flyvbjerg, 2001; Buunk 2010). An approach in which seemingly random or odd decisions on spatial development issues, can be understood better.

2.2 Value-oriented research

Theory driven research that assumes planning processes follow a scientific logic, needs to be complemented by a value-oriented approach. Flyvbjerg (2001) even calls for a completely different social science that not focuses on theory building like the natural sciences do, but that is geared predominantly to contributing to practically applicable insights: "...we must drop the fruitless efforts to emulate natural science's success in producing cumulative and predictive theory; this approach simply does not work in social science. [...] we must take up problems that matter to the local, national, and global communities in which we live, and we must do it in ways that matter; we must focus on issues of values and power (Flyvbjerg 2001: 166). When the focus is on the value issues, it soon becomes clear what problems planning practitioners often face.

Flyvbjerg states that the purpose of social science is: "...not to develop theory, but to contribute to society's practical rationality in elucidating where we are, where we want to go, and what is desirable according to diverse sets of values and interests" (Flyvbjerg 2001: 167). He sets out what he calls a phronetic approach, following Aristotelian distinction between scientific knowledge (episteme), technical ability (techne) and prudent use of knowledge and technology (phronesis). Flyvbjerg defines this as a value-oriented approach to social science: "Phronesis thus concerns the analysis of values - "things that are good or bad for man" - as a point of departure fo action. ... It focuses on what is variable, on that which cannot be encapsulated by universal rules. Phronesis requires an interaction between the general and the concrete; it requires consideration, judgement, and choice" (Flyvbjerg 2001: 57). The role of values and judgments of actors are distingued from other factors like institutions or procedures. Flyvbjerg's call for social scientists to reflect on the practice of argumentation and the prudent use of knowledge in practice further focuses on the relation between knowledge and power, rather than elaborating on the judgemental aspect of argumentation and the role values.

In order to make an analysis of political values that play a role in decision-making on spatial development issues and in planning, a value-oriented rationality research approach is followed. Following a value-oriented rationality means that planning is seen as normative effort, in which moral or ethical aspects of choices are made on spatial development issues. Such a perspective is rare, although there are some examples in adjacent fields (e.g. van Wee 2011). Below, this normative approach is further explored with a view to the research strategies needed to gain

insight in underlying values of planning, in order to help practitioners to find ways of contributing to a proper deliberation of values.

2.3 Ethical pluralism

The assumption behind proper value-oriented research approach is that 'good' decision-making requires that all relevant values are explicitly considered – as far as possible – in decisions on spatial development, design and use of land or urban territory. This is not a judgement of decision in terms of their outcome, but in terms of the decision-making process. It is a procedural valuation with a normative point of departure that follows the principle (or value) of ethical pluralism of Isaiah Berlin (Berlin, 1969 and other years, in; Hardy 2002). Berlin, as characterised by Blokland, throughout his work argues that there are many values worth pursuing, yet that they more often than not are incompatible, which means we need to choose (Blokland 1997: 169). Berlin saw this as a tragic situation that we experience on a daily basis, yet we need to do it anyway in a search for a better life.

A pluralist approach is therefore necessary. Alternatively, a monistic approach that would favour one normative perspective over others, would drastically limit the insight in possibly relevant values. Such a perspective would not lead to better decision-making. Political scientist Hans Blokland (2001) sees this as a challenge for the political system of democracy. A pluralist approach is needed to improve our insight in and our ability for proper democratic decision-making, not only in formal political institutions but also in all sorts of participative local processes. A value-oriented research into spatial planning and decision-making on spatial development issues requires a pluralist approach, which accepts that there will always a variety of values at stake.

With a social science that, according to Flyvbjergs, needs to contribute to prudence and to practical wisdom to find ways of dealing with issues, a research strategy is required that focuses on judgmental processes in the way spatial development issues are dealt with. Flyvbjerg suggests three questions to guide such research: "1. Where are we going? 2. Is this desirable? 3. What should be done?" (Flyvbjerg 2001: 60). He later adds a fourth question, "Who gains and who loses; by which mechanisms of power?" as he is mainly interested in dominance of ideas, knowledge and judgements. Here, the focus remains with the processes and mechanisms of judgement, in which values can be seen at work. Unlike Flyvbjerg, who doesn't define values, nor appears interested in finding out what values guide these judgemental efforts in practice, the aim of research here is to find and define the variety of values that are being used.

3. Finding values

Studying values is the field of moral philosophy, which is enjoying something of a revival. Frontman Alisdair MacIntyre stresses that “every action is the bearer and expression of more or less theory-laden beliefs and concepts; every piece of theorizing and every expression of belief is a political and moral action” (MacIntyre

2007: 61). Understanding moral concepts is considered necessary, as these are used by all sorts of social actors in the choices they make as “his or her reasons, motives, intentions and actions, and in so doing generally presupposes some claim that these concept are embodied or at least can be in the real world” (MacIntyre 2007: 23). Analysing values from a perspective of morality may seem farfetched, but dilemmas of spatial development often have an unspoken moral or ethical dimension.

A question like "what is a just housing program?" will help clarify underlying dilemmas of an urban transformation project. Planners are not used to explicitly debating such questions, as long-term policy aims - such as the aim for 30% social housing - are considered to be a broadly accepted expression of a moral stand. The question is whether this is true. Or to turn it into a moral issue, the question is whether this is just. Moral philosophers and moral psychologists, such as Shalom Schwartz and Jonathan Haidt c.s. plea for a better understanding of the moral dimension in actions people take and choices people make. This plea is answered here by concentrating research on the variety of values that may play a role in spatial planning processes.

3.1 Defining values

A value can be defined here as an expression of a deep-rooted belief, motive, incentive, desire, or ideal for spatial development, and for the design and use of land or urban territory. Values have no meaning for practice or for scientists alike, when they are a mere dead letter in a book. Values only have a true meaning when they are recognisable in social interactions, as the underlying motivation of actors in their judgements for action. Similar to the political scientists' concept of power or social scientists' concept of meaning, values are only real in their application in social interaction. In interaction, values are found as words. Words like 'justice', 'pride' or 'urban density' that have a specific meaning in social interaction. Discourse analysis is the appropriate research method to unravel the meaning the specific meaning of in their social context.

With the communicative turn of spatial planning, planning research has adopted methods of linguistic analysis, following great philosophers like Lyotard and Foucault (Hajer 1995; Torfing 1999). Discourse analysis as a qualitative research method helps to insight in the frames and storylines by which actors create their view of the world, and of spatial development issues. Discursive analysis of text and talks looks for specific words that are used often or that seem to specify certain meanings. Looking for signal words or phrases helps finding dominant storylines that show what preferences actors have and how and why they will act on the issue at stake.

For a value-oriented research, the challenge is to reconstruct the underlying values and sets of values behind these storylines. These values are concepts (in abstract terms of concrete) can be found by further examining the signal words and their use in building arguments and judgements behind choices that are made. Values are defined as specific phrases or sentences that are considered to characterise the deep-rooted belief, motive, incentive, desire, or ideal behind a storyline.

However difficult it may seem to reconstruct underlying values of texts, it is not more difficult than selecting sections of text of which a researchers thinks they

are typical for the dominant discourse. In the end, it is all about gaining insight in the categorisations, judgements and preferences of actors in social and political processes: "... values, pragmatic considerations, and strategies for action are a prerequisite for, and part of, the method, and hence, do not stand in opposition to the understanding-oriented project" (Flyvbjerg 2001: 126). The most difficult part of the analytical work is to focus on discursive elements, on sections of text and on words that appear to bear a specific meaning of deep felt desire about what is good, for that is what values are.

3.2 Abstract and concrete values

The choice for a pluralist approach requires a research strategy that distinguishes between values. A first distinction can be made between abstract and concrete values. Abstract values are often related to virtues, like temperance or courage. With a view to basic decisions on the spatial development, design and use of land or urban territory, values like justice (the just division of land) and aesthetics (the perceived beauty of the countryside) play a role. The Dutch Scientific Council for Government Policy (WRR) comes to the conclusion that values can take concrete forms, dependent of the object to which someone refers.

Anything can be the object of valuation, such as things, cultural heritage, individual people, the nature of relations between people (e.g. trust), or social principles (e.g. freedom) (WRR 2003: 46). Concrete values are readily recognisable from a spatial planning perspective, like specifically defined key natural resources that define the natural values worthy for conservation. These key natural resources are laid down in nature conservation legislation in scientific terms of species and habitats. Other values can concern the quality of land for various purposes of land-use, which may simply be defined as land value in terms of money.

Other distinctions can be made between types of values. Values can be nested in deeply rooted religious beliefs or can be moulded by political frames. Values can be personal and therefore objective, or can have a joint cultural origin. The latter will considered as being values of a general nature. Values may refer to substance or to more procedural matters, such as routines or ways in which we wish to do things properly.

Values therefore are abstract concepts expressing an ideal for what is considered to be the ‘good society’. Abstract values are beliefs. Deep felt opinions or desires for what is considered ‘the good life’. Certain values are recognisable as political values. These values are principles concerning the desired mechanisms and structures of society that can be related to views of political parties or political social movements. In the practice of spatial planning and ways of working to deal with spatial development issues, may be specific process values can be discerned. Guiding principles on the way in which the desired spatial development, design and use of land or urban territory needs to be realised. Or procedural principles, which reflect the preferred role of government and its instruments, such as statutory planning, that usually concern the desired division of responsibilities between government and private developers or individual citizens.

3.3 Sets of values

One of the pitfalls of value-oriented research is that it may appear attractive to design a hierarchy of values, e.g. based on the distinction between concrete values and abstract values. In such a hierarchy, abstract values would than be ranked higher than concrete values. Concrete values are often considered being derived from an abstract value. Urban density can be a value that guides decision-making on an urban redevelopment scheme. In spatial planning this normally means that a densely built-up area is thought to create a distinct metropolitan atmosphere. The abstract value behind it can be 'diversity' or 'growth', as denominators for a highly dynamic, busy and mixed city life.

In the reality of the practice of planning and decision-making on spatial development or urban design, actors will draw upon a mixture of concrete and abstract values. High density as something that creates a good and vibrant city may be linked to a preference for innovative and modernistic designed high-rise buildings, as well as with a specific notion of mixed residential use, corporate businesses and small-scale creative industry. Density may even be defined as a concrete norm, in terms of the number of dwellings per hectare, yet may be combined with rather indicative design references. In actual decision-making, actors may wish to deliberate on these values and norms vis à vis values that are linked to concerns with global climate change or social cohesion.

Defining a hierarchy of values is principally impossible and add will no new insights. The distinction between abstract values and concrete values in the value-oriented research approach is therefore analytical distinction only. It helps to construct the relevant sets of values that play a role in basic decisions on spatial development issues. Values can be grouped in terms of their substantive similarities, creating an insight in more or less congruent sets of values that appear to be applied in basic decisions on spatial development and the design and use of land and urban territory. For this particular research, one of the main challenges was to define a categorisation of possible sets of party-political values.

4. Value-oriented research strategy

In order to find the sets of values that are relevant in a process of dealing with spatial development issues, two research strategies can be followed. First, a rather strict empirical research strategy can be followed for analysing a spatial development process. Based on document analysis and loosely structured interviews with key actors, the dominant storylines of an elaborate policy process can be described. After that, the challenge for the researchers is to identify the underlying sets of values for each of these storylines. Experience with practice of planning processes and insight in a broad field of related policy fields such as transport, nature protection and recreation and rural development, also in terms of research, will be necessary to select the viable textual elements for defining values.

This may prove to be a laborious research strategy, but with little previous value-oriented research in the field of spatial development processes and planning this may seem to only viable research strategy that helps avoid bias. Yet, another research strategy can be considered. In this strategy, a categorisation of values or types of values is defined beforehand on the basis of theory, relevant literature from other fields and/or outcomes of related research. This then should help to find the

sets of values in further empirical analysis of spatial development issues and planning. In order to prevent a bias to predefined values, it should be avoided that it becomes a theory-driven research. Theoretically defined types of values of value categories need to be used heuristically, to help understand the empirical material.

In the research of party-political values, the research starts with a categorisation as such. Not all social and professional values concerning spatial development and planning are searched, but political values. This is a first defining effort that helps limit the field of research. Further theory and literature is available to help define possible categories of political values or sets of political values. For this reason, this second research strategy was followed, in which practical political experience was structurally mobilised as part of the analysis in a series of expert meetings in which political thought on issues was analysed and preliminary outcomes tested.

4.1 Categories of political values

The research into the most relevant party-political sets of values on Dutch spatial planning started off with some exploratory interviews with national and local politicians and with practitioners and scientists with links to political practice[2]. Next, a large number of political documents were analysed (around 80). By the start of the project it proved difficult to continue on a preliminary indication of four dominant storylines on spatial development issues and planning of the four political 'families' (Buunk 2010: 34). Instead, the document analysis looked at five elements: (1) the preferences on spatial concept or urban development pattern (if at all), (2) political problem definition of the underlying social issues behind perceived spatial development issues, (3) the role of central and/or local government vis a vis private parties or social organisations or individual citizens, (4) preferred instruments and (5) specific moral-ethical anchorage for spatial development issues and planning.

In two sessions with representatives from political parties and civil servants and policy advisors, the political views on different cases that are typical for Dutch spatial planning on a central government level and on local government level were discussed. With the use of mind mapping software, the landscape of political values on spatial development issues and planning was mapped. The main challenge proved to be finding the backbone of this map, the legend so to speak, by which political values can be categorised. With the rich body of political thought, categories like 'socialist', 'social-democrat', 'liberal', 'green' and 'christian-democratic' appeared inadequate. A variation of three citizenship styles defined by Dutch research bureau Motivaction (Gijsbers & van der Lelij 2010) and the German research bureau Sociovision (de Vries 2006) was considered. This notion of the variety of attitudes people can have towards government and society, daws on extensive lifestyle research with long-term surveys that produce cross sections of socio-economic stratification and moral orientation. In confrontation with the analysis of political

[2] The research was carried out by the author of this paper, together with Marloes van der Weide Msc and with support by De Argumentenfabriek, a consultancy agency specialised in analysing complex issues with mind mapping software and clearly designed overviews of results.

documentation, five categories of political values were constructed but finally rejected as inadequate for a categorisation of party political values.

The choice was finally made to take basic moral orientations as starting point for categorisation. Moral judgements, it is often thought, in essence concerns what is considered the just course of action. In this line of thought of what is 'just', the concept of justice is the dominant value. Justice is often seen as pivotal, as the mother of all values in modern society (Sandel 2011). Ancient societies were characterised either by honour and respect (Greek and Roman ethics), or by guilt (Christian ethics). In modern society, justice is a formal principal in legislation, rather than guide choices in day-to-day life (Kinneging 2005: 100-114). Political philosophers like Michael Sandel show how competing definitions of justice are visible in legislation and in the way society is used to deal with dilemmas. There is one school of thought in which welfare is considered important, another in which freedom prevails and a third in which it is all about personal virtues. For making proper choices in their own lives and in society, people need to be aware of these fundamental differences and need to reflect on that (Sandel 2011: 26, 306).

The variety of party-political values that may play a role in basic decisions on spatial development and on the design and use of land and urban territory are wider than three varieties of the concept of justice. Two approaches were considered. The first is the model of ten or eleven personal moral values by Schwartz c.s. (2003, 2006). The distinction proved hard to apply to the variety of political values, notably because political values are predominantly about what desires people have towards group dynamics or how they desire society to be organised. This is somewhat different from the personal moral values, aimed at ones own behaviour or attitudes that Schwartz emphasises. This insight led the researchers to the work of moral psychologist Jonathan Haidt c.s., five basic moral positions can be defined, which people can hold distinctly in their judgmental argumentation: (1) the position in which *care* for others and preventing from *harm* being done to others dominates (2) the position in which *fairness* dominates, also in the meaning of *reciprocity* of behaviour, (3) the position in which *loyalty* to ones own group (*ingroup*) dominates, (4) the position in which respect and authority are dominant, and (5) the position in which the *purity* of ideals and the *sanctity* of beliefs are dominant (based on Haidt & Graham, 2007: 105-106. Also see Haidt & Kesebir 2010: 822)[3].

4.2 Normative positions in political views on spatial policies and planning

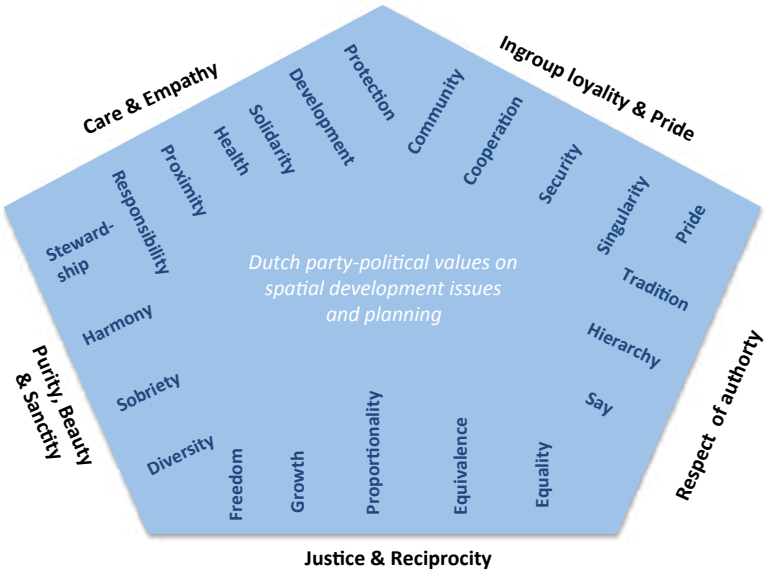
With five basic normative positions it appeared possible to analyse the empiric material of the document analysis of some 80 political documents of all Dutch parties represented in parliament. These documents were first analysed looking at their preferences for the spatial development pattern (if at all), the issues that are defined in terms of spatial policies, the preferred policy instruments for spatial policies (such as the instrument of planning) and the scope of government influence,

[3] Haidt c.s. have based their distinction of five categories of normative positions on insights in human driving forces in their social behaviours as found in psychological surveys in combination with moral philosophy and evolutionary biology. They have hypothesised these basic normative positions and keep testing them in moral psychological research.

and the political/moral/ethical views that are expressed in relation to spatial policies and planning. This material was then re-analysed with the five normative positions as a frame of reference by the researchers, and further refined in two working sessions with representatives from political parties and practitioners that are used to work on the fringe of practice and political decision-making[4].

The five basic normative positions were thus reformulated with a view to the Dutch political landscape of spatial development issues and planning. On the basis of expressions that were found in political documents or that were expressed in the working sessions, a set of 23 political key values could be defined in the normative playing field that is demarcated by the five normative positions (figure 1).

Figure 1 Dutch political values on spatial development



Each of these values is concisely defined in one word and a short explanation to further typify it. For the purpose of this paper they will not all be mentioned here, but a short indication is given for each of the five normative positions.

Care & Empathy is a normative position that is reflected in political ideals of solidarity, caring for others as recognisable in preferences for social housing, in protecting weak interests in spatial planning (e.g. *Protection*) or in urban design of neighbourhoods (e.g. *Proximity*) that allow people to care for each other (e.g. *Solidarity*);

Justice & Reciprocity are reflected in notions of fairness of the regulatory land use mechanisms (sometimes critically) (e.g. *Freedom*), fairness of housing allocation (e.g. *Equality*), as well as notions of spatial development opportunities for (economic) growth and individual freedom in landuse

Loyalty & Pride are reflected in loyalty with the own community, neighbourhood or town (e.g. *Cooperation*), and feelings of security that go

[4] Using the mind mapping software in a series of more than ten iterations in preparation of the sessions with politicians and in reporting on the results, the research team has selected these 23 key values.

with that. It concerns notions of regional identity and pride on ones own living environment (e.g. *Singularity*), and in negative terms a fear of changes to that.

Respect for authority may be generally not be a stronghold in Dutch political thought, yet is clearly reflected in the acknowledgement of state involvement in planning issues and in the relatively strong ideas of the hierarchy of the spatial planning system, albeit in different preferences in terms of the extent of central government involvement (e.g. *Say* for individuals vis a vis government).

Purity, Beauty & Sanctity is recognisable in a variety of rather distinct ideals, such as Christian notions of stewardship and of harmony that needs to be restored (e.g. *Sobriety* for an eco-friendly living standard), holistic ecological political ideals (e.g. ecological *Diversity*) and the beauty of architectural or urban design. The concern is with the integrity of the ideal as such and the adaptation of human behaviour it requires.

The 23 key value s – as an expression of a political motive, incentive, desire or ideal – is characterised by the researcher by a word that is always not necessarily found in the documentation or expressed explicitly by interviewees, but which the researchers consider to be representative. Each of the 23 key values (words) is further described by a sentence that indeed was found or can be found in similar form in documents of political parties or was expressed by interviewees.

5. Reflection

The research has resulted in an overview of the key party-political values of Dutch politics that can expected to play a role in decision-making on spatial development issues, projects and in processes of planning. This is particularly the case, when this decision-making takes place in the formal institutional arenas of political debate in municipal councils, regional councils and parliament. In order to support this practice, a clearly designed map of the Dutch party-political landscape is made[5]. This is meant to help analyse and understand the background of political questions and the course of political debate. The results of the research and the use of this overview deserve some remarks and caution.

The 23 political key values only characterise the Dutch political landscape. In other countries, the result of such an analyses will be different, if only for the choice of words that can be considered suitable to characterise a similar sort of value. The five basic normative positions may prove to be useful frame of reference for interpretation more or less similar to this Dutch research.

The 23 political key values should not be seen as being derived from a basic normative position. Values like 'protection' of weak interests and 'solidarity' with those that have a weak social position are merely a (more or less strong) reflection of the normative position of care, depending on the way such a value is expressed and used by someone. Whereas 'say' for individuals in matters of land use vis à vis central or local government shows a concern with issues of hierarchy and authority,

[5] To be published on http://www.windesheim.nl/lectoraatareadevelopment

it is weak or even negative reflection of the normative position of respect for authority.

The 23 political key values are the result of interpretation of the researchers. Values are words that can (and will) have a different meaning to different people in different contexts. In practice, many varieties can be found of similar normative meanings with different words. It requires some practice to recognise what is meant. Politics is often rhetoric. Questions are answered by questions, or with many words not answered. Sometimes the opposite is said of what is meant. Recognising the underlying value(s) will always require interpretation. Politicians and other people have flexible minds and hearts, and may be ambivalent in their preferences or adhere to seemingly contradictory preferences, desires and underlying values. Points of view, such as a support for sustainable development, may be linked to rather different underlying values (e.g. *Diversity*, *Solidarity*, *Sobriety*, *Fairness*).

The political turn in the Netherlands in government views on spatial development policies and planning suggest a break with a longstanding support with a core element of the Dutch planning system: the comprehensive strategic spatial planning approach by central government. With a view to the key political values, this tradition is understandable as it can be linked to six key values. The political document reveal as underlying values for spatial planning that *Protection* of weak interests of social democratic and socialist parties, *Stewardship* and *Harmony* of the Christian political tradition, the acceptance of *Hierarchy* in this policy domain (all parties, even liberal parties), and the strive for *Equality* of the social democratic and socialist parties and *Equivalence* (liberal parties). These values can be recognised form 4 of the 5 basic normative positions. Despite this almost all round support, it also reveals that is not supported by one recently more influential set of political values that can be recognised from the basic normative position of *Ingroup loyalty* & *Pride*. This seems to be a normative position and set of values to which spatial policies and planning and its practitioners have little linkages to. An insight that may give rise to many more new research questions.

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THE RURAL VILLAGES IN PERIURBAN SUZHOU. BEYOND THE COUNTRYSIDE MODERNIZATION OF CHINA

Giulio Verdini [1]

Abstract

Among the top priorities of the political agenda set by the Chinese government during the last years, there is a rising need of achieving a balance between economic growth and environmental protection reducing, among the other things, urban–rural conflicts and building a "new Chinese countryside".

Especially in coastal China, and in the area of Suzhou that is used as a case study, a strongly land-consuming urbanization model is affecting the residual agricultural areas with a drastic reduction of farmland, causing at the same time a process of decline of a complex system of rural villages still existing around or within the urban areas (Liu et al., 2010; Verdini et al., 2011).

While the task of urban growth containment in China has already been addressed and, given the complexity of the issue, some strategies have been put forward (Zhao et al., 2010), the goal of a "new countryside" is still quite controversial. Behind the willingness of achieving the efficiency of agricultural areas creating meanwhile "clean and tidy villages" and a "civilized social atmosphere", lies the obsolete ideology of countryside modernization (Long et al., 2010).

The aim of the present paper is to point out the contradictory effects of these actions in the peri-urban belt of Suzhou in Jiangsu Province, reporting the preliminary results of a research work supported by the Suzhou Social Science Foundation in 2011, which is still ongoing. According to the fieldtrips and the first questionnaires realized in the summer and autumn 2011, an articulated and transitional reality becomes apparent. The system of villages studied reveals how most of them are threatened today either directly by the urbanization pressure or indirectly by the application of relocation schemes for local villagers. Moreover, the social structure is facing a problem of gradual expulsion of the young workforce towards the urban areas that will cause a phenomenon of the local population ageing in the medium-long term.

The understanding of the social and economical issues of the system of peri-urban

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villages can be considered a first and important step for outlining the potentials of these areas setting new policies for a real urban-rural integration of functions between the current model of urbanization of the Asian city and the surrounding rural fringes. The maintaining of a system of rural settlements can be strategic for reducing the social pressure exerted in some central and over-crowded locations of the city, moreover keeping the human-scale and the complexity of social formations of this kind of environment.

From this perspective it seems urgent even for the Asian city to rethink the paradigm of urban growth, reconsidering the role of rural settlements around the city.

1. Planning the urban fringe in China

The studies devoted to the understanding of the governance structure for farmland conversion at the fringe in today's China demonstrate that the system appears land consuming, strongly centralized and relatively complex, despite efforts by the central government to reduce rural areas being converted into urban areas, and to protect farmers' land rights by promulgating new laws and directives (Feizhou Z., Bourguignon C., 2009). The planning system is still mainly based on command-control planning instruments (Pieke F., 2002) and moreover it seldom encourages people's participation in the decision making process without avoiding the widespread and dramatically long-lasting phenomenon of illegal farmland conversion.
In China the quota systems, controlled by the upper levels of (provincial and national) authority, and the featuring of "acquisition with compensation" do not guarantee an equal distribution of advantages and disadvantages of development among farmers but often generate discretional allocation of land with a strong attribution of power to rural committees unable to ensure transparency to the rural-urban conversion process.

Urban fringes in China, especially in coastal areas, belong to a complex and transitional area between the city and countryside hosting the major contradictions of the so called "countryside modernization". Several rural villages, around the dense urban areas, are still densely inhabited by local villagers or new migrants, living, in some cases, in poor housing conditions. The proximity to the city can guarantee, on the one hand an alternative household income not just depending on agricultural production but, on the other hand, urban demand for underdeveloped areas can be a pre-condition for a relocation scheme supported by local government.

From this perspective the goal of urban growth containment and open space preservation (say farmland protection in some official documents of the Chinese government) seems to be, for example, in open contradiction with the several schemes of relocation, often put in practice by local government as in the case of the city of Suzhou.

In the prevailing literature on urban growth management in Western Countries urban containment policies have for a long time been at the centre of attention. This is due to the widely recognised negative impact of urban growth on farmland reduction, unsustainable urban sprawl, loss of environmental quality and rural landscape transformations (Altermann, 1997; Pendall, 1999).

Nowadays this has apparently emerged as a new concern of the China public agenda of sustainability, producing, among the other things, a huge reform of the national land management law by the end of the '90s with the clear purpose of drastically reducing urban growth.

In spite of this, the conversion from rural to urban land use in the Eastern Coastal Area of China seems to continue unabated due, in particular, to the dangerous combination of a land-consuming economic growth, more evident in areas like the Yangtze River Delta in Jiangsu and the peculiar urban policy structure that encourages local governments in transforming land, often illegally, increasing their revenues from the transaction itself (Lichtenberg E., Ding C, 2006; Huang, 2011).

Considering the current high rate of economic growth of China and the forecast of growing countryside-city migration, this will be clearly one of the most critical side effects of the urbanization process for coastal China.

The future of fringe rural areas lies at the crossing of different but interrelated strategic questions still open: the challenge of urban-rural governance in China inside a centralized land management system; the raising of a still timid local demand for inclusion in the decision-making process, especially in the rural villages or peri-urban settlements around the cities; the still unclear definition of urban-rural integration policies and countryside modernization, today unable to distinguish between underdeveloped areas in the west and more complex transitional rural areas in the urbanized east of the country (Long et al., 2010).

2. The system of rural villages in peri-urban Suzhou: recent trends

The area of Suzhou currently classified as "urban district" is almost 1/5 of the entire prefecture-level city (Fig.1)[2]. In the recent years the districts of Suzhou have concentrated most of the population growth of the entire area. From 2001 to 2008 the districts' population increased from 2.094.600 to 2.382.100 (+ 13,7%) while the "non agricultural population" rose from 1.170.600 to 1.580.600 (+ 35%). These data register not only a high rate of immigration but also a strong process of internal conversion of land from rural into urban. For example in the case of the recent development of the Suzhou Industrial Park (SIP), only in this area almost 60.000 farmers' households, equal to 200/250.000 people have been relocated in a

[2] The current administrative structure of the prefecture-level city is formed by 5 counties plus 5 urban districts: Xiangcheng District, Suzhou New District, Old City, Suzhou Industrial Park and Wuzhong District, together equal to 1.650 sq.km.

neighborhood called Lotus Village nearby the new industrial areas of the city.
In general terms the dramatic reduction of cultivated land from 1996 to 2010 can be estimated around 1/3 of the former agricultural area of the whole region[3].

If obviously the core of the city has been strongly affected by the urbanization process, an important part of the urban districts, especially at the fringe is still characterized by agricultural activities and by the presence of a complex system of rural villages, functionally integrated in the city of Suzhou but still keeping a strong local identity.

Figure 1. The prefecture-level city of Suzhou: counties and urban districts.

The entire loss of rural villages (Xiang), within the urban districts, is impressive. From 2001 to 2010 the number of villages was reduced from 720 to 213 (-70%), merged in the new urban areas or were simply demolished and are today waiting for a new land use. Just in the SIP area 72 villages have been demolished and today officially there are no longer villages in that area apart from some scattered relicts of rural housing.

[3] The cultivated land in 1996 was equal to 3.300 sq.Km decreasing to 2.216 sq.Km in 2010 (Prefecture-level city).

But while the SIP area is located in a highly urbanized area in the middle of the Suzhou–Shanghai conurbation, the west part of Suzhou is characterized by a different environmental and morphological structure, being close to the natural area of Tai Lake.

According to the current Master Plan of the city of Suzhou approved in 2007, there is an entire green buffer zone, along the lake coastline where several villages are still located. This area is delimited by a clear buffer between the built areas, especially of the Suzhou New District and the lake, statutorily not involved in the new urban development process of West Suzhou.

If the risk of urbanization is relatively low and not comparable with the trend of those areas located along the development corridor Wuxi-Suzhou-Shanghai where it's still easy to find "ghost villages" recently abandoned (Fig. 2), some relocation schemes have been applied or are willing to be applied even along the lake.

Figure 2. The "roofless village" in north of Suzhou Industrial Park. Picture: Qianqiu Li, July 2011.

It would be rather difficult to have a comprehensive picture of the technical or political motivations behind these choices, given the scarcity of information, but the case study of Jinshi Village and its surroundings, close to the lake and belonging to the Suzhou New District, has in the last years surely provoked strong local protests against the relocation (Fig.3).

However, the tourist potential of the area and consequently the real estate development that is taking place require a suitable environment producing, on the one hand, a high competition for land use allocation. Hotels, housing developments for holiday and leisure time, parks and greenery, infrastructures, amusements parks, but also technological parks and new residential areas no longer match the local agricultural landscape and, consequently with the relatively poor living conditions of the rural villages. On the other hand, it is rather clear that several economic activities

still ongoing in the area like local food production, fishery, embroidery, just to mention a few, are particularly in demand by the local tourism economy.

Figure 3. The riots between the police and the villagers during July 2010 in Tong'An Town and the surrounding villages due to a rising dissatisfaction for the compensation policy. Source: Jinan Times, Local Newspaper of Shandong, 18th Aug 2010).

Is not the goal of the present paper to evaluate the potential benefits of the residual rural areas in Suzhou for strengthening and diversify other forms of economic activities more embedded in the local development path and more sustainable from the socio-environmental point of view, as this has been explored elsewhere (Wang Y., Verdini G., 2012).

The intention of this paper is to reflect upon the rationale behind the "modernization" of the countryside" prioritizing the social impact of the rural villages' abandonment and considering whether the maintaining of a system of peri-urban settlements can be strategic for reducing the pressure exerted in some central and over-crowded areas of the city. Moreover it is intended to link the issue of relocation to the topic of population ageing, that will strongly affect China in the next 15-20 years, arguing whether improving or even upgrading the current situation can be considered suitable for the complexity of the existing social formations, keeping the human-scale of the environment and the social networks of local residents.

3. The case of Jinshi village: results from 14 in-depth interviews

During the last year a research group of the Department of Urban Planning and Design of XJTLU has been involved in several activities aimed at achieving a deep knowledge of the fringe areas of Suzhou and especially of the study case of Jinshi Village under the jurisdiction of Tong'An Town.[4]

[4] The research group is coordinated by Giulio Verdini (PI) and Yiwen Wang (CI) with the support of several year 3 students involved in the undergraduate programme of Civic Design at XJTLU. The work is supported by the "Suzhou Social Science Programme 2011" (11-B-08). The

The area where the village is located is one the cases selected for the high risk of abandonment and relatively high multi-functional value[5]. The village, as most of the similar settlements of the region, developed historically in a linear way along a canal directly connected with Tai Lake (Fig. 4).

Figure 4. The current land use of Jinshi village and a picture of the historic part of the village (Source: Planning Methodology. UPD Dept. XJTLU, Year 3 students, Group A Poster, Dec. 2011).

The old part is today semi-abandoned while more recently, in the last two decades, new scattered developments have flourished around the village together with a new commercial area along the main north-south road connection. The population trend shows a strong increase of population till the beginning of the 80s (+ 36,4% between 1964 and 1982) and a gradual decline afterwards (Table 1).
During the 80s the population is almost stabile, with a decreasing rate of population equal to – 1,1% and a relatively stable household's size (around 4 members each family). In the last two decades the village has lost more than 10% of population each decade, counting 2.149 inhabitants in 1990, 1.901 in 2000 and almost 1.706 today. In the last ten year the loss of household has been even more critical: from 560 to 484 with a reduction of the household's size up to 3,5 members each.

research granted is "Assigning open space non-market values as a tool for planning the urban-rural fringe of Suzhou. Moreover the selected study case of Jinshi Village has been the case of the Module "Planning Methodology", during the first semester of the academic year 2011/12, coordinated by the two lecturers, with the involvement of 24 students.

[5] One of the outputs of the first research report presented in November 2011 is the comparative evaluation of the environmental, agrarian, aesthetical and recreational value of a number of rural villages in Suzhou. Jinshi Village has been classified, using a multi-criteria matrix of evaluation among the category of "high risk, high value" (Verdini et alii, 2011).

Table 1. Population and household's size trend from 1964 to 2010

Jinshi Village (population and total amount of households)	**1964**		**1982**		**1990**		**2000**		**2010***	
	1.592	383	2172	541	2149	521	1901	560	1706	484
Household's size	4,2		4,0		4,1		3,4		3,5	
Trends	\	\	36,4	41,3	-1,1	-3,7	-11,5	7,5	-10,3	-13,6
Source: Suzhou Statistics; www.dfzb.suzhou.gov.cn										
*Estimation (the official data is still not released)										

While during the last year Suzhou, as most of the metropolitan areas of China, has experienced a strong population growth in the urban and peri-urban areas, especially in those urban settlements in rural areas driven by the Township enterprises (The "Zhen" normally addressed in literature as "Town") Jinshi village has declined both in terms of population and households. According to the series of pilot interviews, conducted at local level, a gradual expulsion of population towards the central locations of the city has been taking place and moreover the village has been also affected by some relocation schemes. The combination of the two processes has left locally an aged population no longer involved in agricultural activities, very often retired or employed in informal jobs. Most of the agricultural land around the village in fact is today rented outside to migrant workers while the young people are almost all employed in the local factories.

In order to have a better understanding of the current socio-economic condition of the village, the results of 14 in-depth semi-open interviews to local households are reported here. The methodology uses is the household survey based on a sample of 14 households randomly selected. The information obtained from those interviewed about their relatives (considering only the people sharing the same house) allows, moreover, the sample to be extended up to 51 people, adopting the logic of the "snowball" survey.

The surveyed household size is 3,7 which is in line with the current situation of the village, and slightly higher than the Suzhou average size of 3,2. Furthermore, the pro-capita income is almost 1.173 RMB/month, in line with the per capita net income of rural residents of the city of Suzhou (1.221 RMB/month)[6]. The average age of the people included in the survey is 40,7 and 13 households have at least one family member older than 50.

[6] Even if some of the people interviewed are currently employed in the secondary sector, most of them are involved in informal or not stable work. This is the reason why the average income that comes out for the survey is far from the average wage of staff and workers at the city level (3.797 RMB/month), regardless of their status of rural or urban residents. Actually the majority of people living in Jinshi Village seem to own an urban *hukou* (residents permit). In general terms the correspondence between the household's size and net per capita income is assumed as a provisional indicator of reliability of the selected sample.

The proportion of the employees by type of industry is as follows: 21% working in primary industry (almost all in fishery due to the proximity to the lake), 41% in secondary and 38% in tertiary (in this case mostly involved in small retail at local level). A number of people, even if formally unemployed, are involved in home-based informal jobs (37 % of the total amount of working force surveyed) like tailoring or embroidery, particularly flourishing in the whole area. Another source of household income is from pensions or rural insurances.

As shown in the table n.2 the total monthly income of the sample comes mainly from formal jobs (77 %) nonetheless with a considerable component coming from informal jobs (almost 11 %). The welfare system accounts for another 11,3% of the disposable income of the local population. Considering only the formal jobs most of the income is produced either by industrial (33,1 %) or tertiary activities (39,5%).

Table 2. Surveyed working force of Jinshi Village (46 people). March 2012.

Employment structure 2012	**Surveyed working force**		**Total monthly income**		**Income produced in Jinshi Village**		**Income produced outside Jinshi Village***	
	N.	%	RMB	%	RMB	%	RMB	%
Employed	**29**	**63**	**48.350**	**77,7**	**16.950**	**35,1**	**31400**	**64,9**
Primary	6	21	3.200	5,1	3.200	100,0	0	0
Secondary	12	41	20.600	33,1	7.500	36,4	13100	63,6
Tertiary	11	38	24.550	39,5	6.250	25,5	18300	74,5
Unemployed/informal jobs	**17**	**37**	**6.800**	**10,9**	**6.800**	**100**	**0**	**0**
Total working force	**46**		**55.150**		**23.750**	**43,1**	**31400**	**56,9**
Retired	5		7.050	11,3	7.050	/	/	/
Total	**51**		**62.200**	100	30.800	**49,5**	31.400	**50,5**
Source: Research Report, SSSP 2011 (11-B-08).								
* Income produced outside Jinshi Village refers to the income of commuters who spend from 20 to *Fom 20 to 60 minutes daily to go to work.								

One of the central research questions raised during the fieldtrips is about the level of integration (or self-containment) of the local economy in the surrounding areas or, in other words, the amount of income produced outside or inside the village.

In order to calculate this, the income of local commuters who travel 20 to 60 minutes daily (one way) to go to work has been compared with other workers who are employed locally. Most of the income produced in the factory system comes from the industries located either in Tong'An or Dongzhu Town (63,6%) and this is even more evident in the case of the tertiary activities (74,5%) despite the fact that some of those interviewed run their own shop in Jinshi

Village. This depends on the low profitability of local commerce that pushes the villagers to have other source of income, like in the case of a family owning a small centrally located grocery, who also host on the second floor a Mah-Jong club, (a traditional Chinese game).

In general terms the total income produced outside from formally employed working force is equal to 64,9%. Considering on the other hand the informal component, that is entirely produced internally, the ratio between inside and outside income changes substantially bringing the outside quota to 56,9%. Eventually adding the component coming mainly from pensions the quota reaches 50,5%. In a way the total income is almost equally dependent on inside and outside activities.

4. Some considerations and some preliminary conclusions

The results of the 14 in-depth interviews demonstrate that the economic life of Jinshi village seems to be functionally integrated with the surrounding productive and economic system, keeping at the same time a certain level of autonomy.

The model of development of the Chinese fringe driven in the last twenty years especially by the township and villages enterprises, has created a scattered development of industrial areas across the countryside especially concentrated in the towns. This model, highly impacting from the environmental point of view, as pointed out in literature, has kept alive a system of pre-industrial settlements that today, even if threatened by some internal (ageing) or external factors (urban development), retain their own identity.

In the case of Jinshi village it means that some local activities like fisheries, to some extent certain residual agricultural activities, and especially home-based embroidery still count in the final household's monthly income (16% in the selected sample). These activities are locally embedded and hardly replicable elsewhere due to contextual factors.

The case of the embroidery is particularly interesting because it is developed all over Suzhou in productive clusters, some of them located in some semi-peripheral areas around the city centre and some of them in smaller clusters in the Tai Lake area along the west fringe of Suzhou, as shown below (Fig. 5).

The physical removal of the villages might mean the disappearance of these alternative sources of income especially for some marginal households. In these families the quota of income coming from embroidery can in fact vary from 15% to 30% of the total household's income. Moreover, it can erase part of the cultural capital of the villages, being difficult to reproduce the same local conditions elsewhere.

Figure 5. The clusters of embroidery in Suzhou (Source: Planning Methodology. Group B Poster, Dec. 2011).

The paradox of relocation can be clearly seen in the extreme case of Mr. Yang who was interviewed the 5th of March 2012[7]. The family was relocated in 2003 according to the last relocation scheme applied in the village. By that time the husband, who is now 57 years old, was running a family metal workshop located in Jinshi village nearby their home. Nowadays, the household lives in Tong'An Town, the daughter is employed in a local factory such as the daughter's husband while her father became a commuter spending every day 20 minutes by e-bike (almost 8-10 km) to reach his workshop in Jinshi.

The relocation that is normally associated with a sense of displacement, shows in this case a certain lack of planning rationale. If this can reveal just a paradox, that might occur under the application of these kind of schemes today at the fringe of Suzhou, the data provided before show that part of the income locally produced cannot be replaced elsewhere, being locally embedded and moreover representing an important intangible cultural asset, potentially strategic for a more equitable and sustainable local development in the near future.

It was argued that underlying the idea of countryside modernization is an obsolete ideology of clearance of the rural villages, today still associated with poverty and deprivation and definitely in contrast with the image of the new China. It's also clear that a sacrifice for modernization requires the fast transformations of huge portions of land and this is the case of the new Suzhou Industrial Park given the high rate of disappearing of rural villages in the last ten years.

[7] The name is invented. The household got as a compensation two medium sized apartment in Tong'An Town of 90 sq.m. and 60 sq.m. plus 220.000 RMB. During the in-depth interview the husband declared his unsatisfactory due to the economic treatment and for the distance that today stands between his working and living place.

What is under discussion is whether some of the already developed areas of the east, strongly urbanized, have now reached their limit of sustainability given the emerging contradictions that have been pointed out. If this is true, then there is a clear need to introduce a new paradigm for understanding the urbanization growth of the east of China in order to avoid just a mechanical reproduction of the models so far applied.

This might mean reconsidering the role of the scattered villages around the city as a suitable living place for a variety of social formations: from aged households still active in informal jobs and involved in the local community life to households sharing their working and living time between the village and the urban edge of Suzhou. For those situations the relocation of these people to urban areas might mean the cut of some of their cultural and also some of their socio-economic roots, creating in the long term an increasing dependency on the new "urban life style".

The degree of adaption to the new living environment deserves an ad hoc investigation, especially for those areas which have been inhabited by displaced farmers for a long time, but it seems evident that keeping the same trend can generate problems and, especially for the more fragile social formations, less willingness to readjust to the new environment. So far the problem of ageing has not been clearly pointed out, especially in China, but it is clear that the effects of the "one child policy" applied in the last years will soon become apparent. At that time a deep consideration of the spatial implications of ageing will lead to a rethinking of some of the current policies, and among them the gradual urbanization of the rural villages at the fringe of the Chinese cities, which are still suitable living places for most of the local inhabitants.

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How to benchmark public transport accessibility in European cities

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Abstract

The development and communication of land use-transport integration measures has become increasingly critical for successful stakeholder engagement in sustainable transport planning in recent years. Similarly, the dissemination of best-practice examples in public transport infrastructure and service planning and delivery has been an important contributor to improvements on the ground that led to a growing share of public transport in the mobility mix in many European cities.

In this paper, we will provide an overview of different strategies to implementing best practice in public transport and land use integration at the scale of entire urban networks, in their real-world context of urban settlement patterns. We draw on the first comparative results from an application of the Spatial Network Analysis for Multimodal Urban Transport Systems (SNAMUTS) tool to a sample of six European cities between 2009 and 2011 (Amsterdam, Copenhagen, Edinburgh, Hamburg, Oporto and Zuid Holland).

Highlighting some of the challenges that accompany the collection of public transport supply and land use data that is robustly compatible between different cities, we will outline a categorisation of the nine cities with regard to the policy environment determining land use planning and public transport provision, as well as accessibility outcomes that can help test the efficacy of such policies. This context will also illustrate and critically review elements of best practice in land use-transport integration from the nine cities, and conclude with some reflections on the relevance of international benchmarking exercises in this field.

Keywords: Accessibility, Public Transport, Land Use-Transport Integration, Benchmarking

Introduction

Successful European cities, like their overseas counterparts, are experiencing deteriorating road congestion as well as increasing public transport usage as a result of growth in population, greater spatial clustering of economic and discretionary activity, as well as intensifying regional and international inter-dependencies between cities. These trends translate into mounting pressure on cities to expand the capacity and improve the service quality of their transport networks. In this context, allocating a greater proportion of limited investment funds for public transport projects offers a critical alternative to continued reliance on a dominant role for the

car in urban mobility. It is recognised that there are significant opportunities for public transport to gain further market share from the car, thus reducing road congestion as well as addressing the social and environmental impacts associated with excessive car dependence.

In many European cities, growth in public transport usage has outpaced population growth over the past decade. This trend is an expression of a fundamental transformation, following the growing recognition of public transport by all tiers of government as a critical and desirable contribution to people's mobility within cities, and its evolution from a dual orientation, focussed on central city job commuting and the provision of a social safety net, towards a service that is capable of catering for all urban passenger transport needs across metropolitan areas (Mees, 2010).

Several cities have set specific, numeric targets of increased mode share for public transport in the urban mobility mix. These are set within a new understanding of the need for transport planning to deliver accessibility rather than simply mobility. Policy aspirations for city planning framed around accessibility rather than mobility have long been promoted by the academic community (Cervero, 1998; Vigar, 2002) and are now being embraced in planning practice. Mobility planning assumes that city dwellers will gain access to services required to support their daily needs through a transport system based on high levels of mobility by car, regardless of the relative location of land uses. In contrast, by planning for accessibility the approach considers proximity of land use as well as the transport network itself.

City planning framed around public transport accessibility raises the question of what quality of public transport system can deliver this objective. Public transport for urban mobility in developed cities varies greatly, from just over 2% of all trips in Atlanta and Los Angeles to between 26-31% of all trips in Barcelona, Vienna and Singapore (Kenworthy and Laube, 2001). The European cities discussed in this sample have public transport mode shares in the 10-20% range and thus does not (yet) contain the 'top performers' mentioned above. The variation in public transport mode share is influenced by historic and current policy priorities for infrastructure and service development as well as settlement form, and the competitiveness of different transport modes (Newman and Kenworthy, 1999; Mees, 2000; Mees, 2010).

To meet such an objective where public transport can offer a real alternative transport mode choice to the car requires a new approach for planning and evaluating public transport accessibility. It requires a method that can also serve stakeholders and decision makers as they deliberate on the best public transport network configuration, service levels and capacity upgrades. In many cities, however, there has been a relative absence of such an approach designed to usefully inform key policy objectives about the future public transport network in relation to accessibility improvements (Curtis et al, 2010). Instead strategic planning for public transport has often been unambitious, with most proposals offering incremental improvements to existing networks based on demand forecasting rather than future planning in the context of meeting policy objectives (Curtis et al, 2010).

There are parallels here to the situation in Australia, where the development and establishment in practice of methodologically robust and user-friendly accessibility tools for integrated land use-transport planning in Australasian cities and regions has become an urgent endeavour in the context of recent changes to policy priorities at Federal and State level (SSCRRAT, 2009). Only during the last five years, the Commonwealth Government has identified the significance of public transport

investment in cities and stated its intention to greatly increase its contributions for funding these pivotal items of infrastructure, while clearly tying such contributions to a satisfactory integration of strategic planning in land use and infrastructure at state level (IA, 2009). This contrasts with the situation in Europe where national and EU-level contributions to public transport infrastructure development in cities have been commonplace for many decades. However, such European funding schemes face a similar challenge to their Australian counterparts in incorporating the more recent principles of land use-transport integration and accessibility performance within their parameters. Given the multi-billion dollar/euro scope of infrastructure proposals, the substantial costs to regional economies and the environment implied in making sub-optimal or poorly informed decisions for infrastructure investment (where it fails to deliver alternative accessibility to the car and therefore fails to reduce car-based transport emissions and other externalities), this quest for greater rigour of assessment is vital to allow for the most efficient allocation of government resources and the greatest benefit to the public. Our ongoing work in the development of a new accessibility tool provides one way of evaluating the extent to which cities offer the potential for residents and employees to have accessibility by public transport (Curtis and Scheurer, 2010). The application of our tool in planning practice in Perth and Melbourne has demonstrated its useful role in forging constructive collaborations between transport and land use planning agendas. Considering this work within the context of the above national and super-national policy agendas for evidence-based public transport investment has brought to the foreground the need to establish appropriate benchmarks for public transport accessibility for cities world-wide.

As we explore the notion of benchmarking we expose many different ways of considering it. To go back to basics, benchmarking can be defined as, “a standard or point of reference against which things may be compared” (Oxford Dictionary). At this level of definition we might be asking simply – how do the public transport systems of European cities compare? To take the idea a step further, in the context of the policy imperative ‘future public transport planning’, the definition, “a standard of excellence, achievement etc., against which similar things must be measured or judged” (Online Reference Dictionary) adds the dimension of excellence or best practice. So in the context of this paper this suggests the need to establish a benchmark, or metric, for an excellent public transport system.

The idea of benchmarking in this paper is conceived in two dimensions: current and future. In the first, our interest is in how current public transport systems in European cities compare. Exploring this dimension enables us to assess the merits of the SNAMUTS indicators in different contexts and with differing data availability. In this way we can consider whether it is even possible to apply a universal benchmark. In the second dimension, our interest is in what the benchmark, or standard of excellence, for a public transport system in European cities should be. Our overarching metric is derived from regional, national and European policy objectives and our interest in sustainable accessibility, in this case a public transport system that provides an alternative mode choice to the car for the city’s metropolitan residents.

While our benchmark is based on public transport accessibility for all, others have chosen different metrics. For example, it is common for governments to use ‘public transport patronage’ as a measure that reflects the concern that investment in the public transport network ‘paid off’, or that demand forecasts were met. Others might focus on the cost of operating the public transport network, or the costs of

construction. We assert that the choice of metric is dependent on what policy objective is being considered. All too often the choice has been based on the cost of public transport framed around the storyline of 'public transport subsidy' (Curtis and Low, forthcoming) rather than being based on the need to implement policy imperatives.

The context: Public transport usage and mode share patterns

An important consideration in understanding any application of a benchmark must be to consider the SNAMUTS outputs for different cities in their broader context (Table 1). Before presenting our SNAMUTS outputs, therefore, we compare population, employment, the geographic size of the city, the intensity of residential and employment uses. All of these factors have an impact on the public transport task and are important considerations in the context of our later accessibility findings. In addition we report mode share and public transport use; both factors may well be the product of the extent to which public transport accessibility is achieved.

Table 1: Metropolitan population and jobs, urban density and public transport boarding and mode share data from seven Australasian cities in 2006 and 2010.

Contextual Data	København (2009)	Hamburg (2010)	Amsterdam (2010)	Zuid Holland (2010)	Edinburgh (2011)	Oporto (2009)
Metropolitan population	1.85m	3.37m	2.16m	3.46m	1.27m	1.23m
Metropolitan employment	0.99m	1.66m	0.96m	1.30m	0.58m	0.52m
Urbanised land in sq km	734	1,492	952*	919	342	360
Residential density per urbanised hectare	25.2	22.6	32.0*	37.6	37.1	34.2
Employment density per urbanised hectare	13.5	11.2	14.2*	13.1	17.0	14.4
Annual PT boardings	397.6m	676.3m	NA	NA	149.0m	NA
Annual PT boardings per capita	215	201	NA	NA	117	NA

* Urbanised area figure relates to the entire provinces of Noord Holland and Flevoland, which stretches beyond the Amsterdam metropolitan area definition (combined residential population in 2010: 3.04 million).

Some of the data presented in Table 1 is not beyond contestation in terms of compatibility between cities. It is likely that there are differing definitions on what constitutes a job (full-time, part-time, self-employed, marginal employment) and on what is counted as urbanised land and what is not, the detailed exploration of which is beyond the scope of this paper. However, the figures can be taken as a general guide to highlight the differences between cities or, to be more precise, metropolitan regions. The two northernmost cities, Copenhagen and Hamburg, are characterised by the lowest settlement density in the sample, while average densities in the Dutch cities, Edinburgh and Oporto are remarkably similar. The largest conurbations in terms of population are Zuid Holland and Hamburg, though they differ quite dramatically in settlement form: Zuid Holland is a polycentric region with two

separate primary urban centres (Rotterdam and Den Haag) and a number of secondary ones (Leiden, Delft, Zoetermeer, Gouda, Dordrecht). In Hamburg, the hierarchy of centres, while not free from polycentric elements, is far more traditionally structured with the primary centre at the geographical and functional heart of the metropolitan area and the secondary ones acting as satellites. Amsterdam, too, shares some multi-nuclear settlement characteristics with its immediate neighbour, while similar-sized Copenhagen, located on an island, only developed a significant functional interdependency with neighbouring Malmö during the last decade, following the opening of a fixed crossing across the Øresund. Edinburgh and Oporto are the primary centres of metropolitan regions of roughly similar size, though Edinburgh shares commuting catchments with neighbouring Glasgow in ways that have no equivalent in stand-alone Oporto.

Robustly comparable public transport usage data remains patchy at this stage, but it is obvious that Copenhagen and Hamburg can boast of a much higher rate of public transport journeys per capita than Edinburgh. However, at a level of just over 200 per year the two Northern cities (as well as Amsterdam and Zuid Holland, which we expect to have roughly similar usage rates to their Danish and German counterparts) are still likely to be 'mid-fielders' in a European comparison, where figures of 300 or more journeys per capita per year are not unheard of in places such as Vienna (Kenworthy and Laube, 2001).

SNAMUTS: An overview of the accessibility tool

This section is intended to provide the reader with a broad overview of the tool prior to the discussion on 'current benchmarks'. A full explanation of the tool can be found in Curtis and Scheurer (2010). The Spatial Network Analysis for Multimodal Urban Transport Systems (SNAMUTS) is a GIS-based tool designed to assess centrality and connectivity (primarily) of urban public transport networks in their land use context, and in their market position among multimodal travel options. In particular, SNAMUTS endeavours to identify and visualise a land use-public transport system's strengths and weaknesses of geographical coverage; the ability and efficiency to connect places of activity; the strategic significance of routes and network nodes; and the speed competitiveness between public transport and car travel in a coherent mapping exercise. The tool is intended to aid discussion and to lend weight to decision making within the fields of land use planning and transport planning, particularly where outcomes leading to more sustainable transport options are needed.

The tool is designed to reflect a vision of world best practice in public transport that has consolidated from the contributions of numerous scholars and practitioners over the years and is most comprehensively documented in the European Union HiTrans project (Nielsen et al, 2005). In geographical and operational terms, the most critical success factors relate to the integration of public transport services as a coherent, legible network, offering travel speeds competitive to the road system and service frequencies on a significant number of routes that make timetable consultation unnecessary (see also Mees and Dodson, 2011).

SNAMUTS breaks down the land use-transport system into a set of activity nodes and route segments derived from the hierarchy of activity centres identified in strategic planning documents, and the location and service standard of public transport routes. In particular, SNAMUTS makes the following definitions:

Minimum service standard

SNAMUTS defines a minimum standard for inclusion of a public transport route into the analysed network, normally requiring a service frequency of 20 minutes (or better) during the weekday interpeak period (about 10.00 to 15.00) and 30 minutes (or better) during the day on Saturdays and Sundays. This level is referred to as SNAMUTS *20* and has been used in all international SNAMUTS comparisons to date. It was chosen to reflect a reasonable minimum for public transport to be perceived as having a full-time presence and attracting usage for a variety of both planned and spontaneous journey purposes.

Activity nodes

These refer to a list of higher-order activity centres across a metropolitan area that appear in strategic planning documents or have been identified by on-site observation, with some adaptations to the configuration of the public transport network in order to also capture major transfer points and some linear corridors along high-frequency surface lines. Each activity node is assigned an exclusive catchment of residents and jobs located within walking distance from the associated rail station(s) (800 m) or tram/bus corridors (400 m). Wherever two or more of these catchments overlap geographically, the residents and jobs are distributed in equal parts among the associated activity nodes. In effect, every resident and job within walking distance from a minimum-standard public transport service has been assigned to one, and only one, activity node catchment.

Travel impediment

SNAMUTS measures spatial separation, or spatial resistance (a proxy value for distance) by relying on the units that are closest to the user experience, namely travel time and service frequency. Each route segment is labelled with an impediment value consisting of the average travel time divided by the number of services per hour, separately for each direction, and multiplied by a factor of 8 to arrive at more readable numbers. The travel impediment (proxy distance) between any two activity nodes on the network is thus made up of the sum of the impediment values on each route segment traversed along the path.

Weekday interpeak

SNAMUTS' network performance measures refer to the service levels offered during the weekday interpeak period (roughly between 10.00 and 15.00 on Mondays to Fridays). This is considered to be the time when the greatest diversity of travel purposes over a daily and weekly cycle coincide, and when the potential of public transport to offer a viable alternative (or not) to the 'go anywhere, anytime' convenience of the car is most critically determined.

Benchmarking: How do current public transport systems compare?

Applying SNAMUTS to European cities incurred the consideration of varying methodologies on how transport operators and public agencies in different cities report (or do not report) public transport and land use data, and the challenge to convert the findings into a format that allows for valid and robust comparisons between cities. These data items include public transport timetables and maps, geographically fine-grained records of the location of residents and jobs, and some

operational parameters such as average load factors on different public transport modes.

Timetables and maps

SNAMUTS timetable databases are compiled from public-domain material. This is a deliberate choice as the intention is to evaluate public transport accessibility from a user perspective. It is therefore important to rely on the passenger information that all users can access. In each European city in the sample, such material is available both as printed timetable brochures as well as an online format. However, only in Hamburg are timetables and maps published in an annual, network-wide compilation across all public transport operators covering the entire metropolitan area. In the Dutch cities, a similar booklet is available for the regional and intercity rail system, while timetable folders for urban public transport are usually only available on a line-by-line basis, and in some cases only in electronic format. Similar standards prevail in Edinburgh, Oporto and Copenhagen (though in the latter case there are also folders covering the entire rail system, or the entire express bus system).

Definition of activity nodes

SNAMUTS indicators are derived from an origin-destination matrix based on activity nodes, ie. places with geographical concentrations of trip origins and destinations (urban activities) that are linked through the public transport system. The number and location of relevant activity nodes requires careful definition and needs to contend with the differing urban structure and public transport network configuration in each case study city.

In the denser inner sections of European cities where mixed land uses prevail and there is thus a more or less spatially contiguous presence of trip origins and destinations, it is usually most straightforward to define every intersection of public transport routes as a separate activity node. In more suburban locations, however, particularly those from the post-war era when segregation of land uses was the norm, it is necessary to be more discriminating. In the Danish, German and Dutch cities, it was found that most post-war suburban housing estates contain shopping and service clusters that usually offer good walking and cycling access within the neighbourhood and are also generally well served by centrally located public transport stops. Such centres were included on the list if they either had a significant spatial concentration of residents – manifest, for instance, by clusters of multi-storey apartment blocks – or a concentration of employment that went beyond that of a service and retail centre with an exclusively local catchment area (for example if there was a hospital, tertiary education facility or business district in the same neighbourhood). In Edinburgh, the spatial co-location of housing and non-residential uses in post-war city extensions appears to be much weaker than in the continental cities: many housing estates appear to lack even basic shopping and service facilities, while on the other hand, there are numerous larger commercial centres outside an easily walkable context from residential areas, but often supplied with dedicated bus terminals. In Edinburgh, activity node allocation outside the older parts of the city thus refers more to such ‘stand-alone’, mono-functional facilities. In Oporto, there is a greater mixed-use building tradition even in suburban areas than in the northern cities as well as the presence of some large-scale retail centres, meaning that the technique from the inner cities of defining public transport interchanges and termini as SNAMUTS activity nodes could generally be extended to the entire network in the Portuguese city.

In some cases, activity centres that are located on the public transport network have multiple, not always functionally connected access points (such as where spatially separate rail stations and tram or bus corridors service the same activity centre within walking distance). In such cases a separate activity node was assigned to each of these access points, resulting in the division of some suburban activity centres into two or three SNAMUTS activity nodes.

Geographical distribution of residents and employment

A SNAMUTS land use database ideally consists of residential and job figures at as fine-grained a geographical level as possible, to allow for a best-fit allocation of their locations to the 400/800-metre catchment areas of public transport access points.

The Danish, German and Dutch cities conduct the continental European tradition of a council registry, ie. a local government office where citizens are obliged to register their residential address and which in turn enables the collation of a frequently updated and quite accurate database of residential population and its geographical distribution. Employment data, in turn, usually relies on business surveys taken at less frequent intervals. In Copenhagen and Hamburg, residential and employment output data is available at a sufficient level of geographical detail, based on travel survey zones. In Hamburg however, whose metropolitan area stretches over three federal states and two state statistical departments, the reporting standards differ from one jurisdiction to the next, and privacy legislation prevented the release of the full list of job figures per statistical unit within the territory of the city-state of Hamburg. In these circumstances, we resorted to estimates based on average job densities in the surroundings of the missing units in Hamburg itself, and to an assessment at the municipal scale for data in the surrounding states of Schleswig-Holstein and Lower Saxony.

In the Dutch cities, residential data is available at an exceptionally detailed geographical scale based on six-digit postcode areas, each of which sometimes only extends to a single city block and occasionally only a single building. Employment data, however, is only available for free for statistical units based on the first four digits of the postcode.

In Edinburgh and Oporto, we relied on census data for both residential and employment counts. While both cities delivered this data in sufficient geographical detail for SNAMUTS purposes, the level of spatial precision was much higher in Oporto than in Edinburgh.

Current Benchmarks – Comparing European Cities

This section presents the results for six SNAMUTS indicators: service intensity, closeness centrality, degree centrality, network coverage, contour catchments and nodal betweenness. In so doing we highlight important differences and similarities between the eight case study cities, allowing for a new understanding of public transport accessibility and for the identification of specific trends and patterns in land use and transport integration.

Service intensity

The SNAMUTS timetable database, compiled for each case study city at the SNAMUTS *20* minimum service standard during the weekday inter-peak period, provides us with an estimate of the numbers of public transport vehicles that are

required to be in simultaneous revenue service in order to deliver the public transport network that is operated at this standard (Table 2). Note that the figures for the actual numbers of vehicles required by the operators are somewhat higher than that, as the SNAMUTS calculation does not make provision for service breaks at the termini, contingencies for delays or disruptions, non-revenue journeys, and for vehicles undergoing scheduled or unscheduled maintenance. Nor do these figures reflect the usually greater numbers of vehicles required to operate peak hour services.

Table 2: Service intensity in the European case study cities

SNAMUTS *20*	København (2009)	Hamburg (2010)	Amsterdam (2010)	Zuid Holland (2010)	Edinburgh (2011)	Oporto (2009)
Number of trains/ S-Tog/S-Bahn	81	47	50	36	13	4
Number of metros/ U-Bahn/LRT	16	54	23	36	-	30
Number of trams	-	-	136	182	-	1*
Number of buses	329	439	398	308	158	271
Number of ferries	2	5	1	-	-	-
Number of services (total)	426	545	607	562	472	305
Metropolitan population	1.85m	3.37m	2.16m	3.46m	1.27m	1.23m
Services per 100,000 inh	23.1	16.2	28.1	16.3	37.2	24.8

*Cable car

The SNAMUTS *20* standard imposes a restriction on what proportion of each city's public transport network actually enters the analysis. For instance, in each European case study city, there are regional rail lines that are operated at frequencies of 30 minutes or 60 minutes and thus do not meet the minimum service standard. The same is usually true for a sizeable proportion of the bus network, especially outside the contiguously urbanised areas. Conversely, metro, light rail and tram routes generally consistently meet the SNAMUTS *20* standard, with only a few minor exceptions in Oporto.

Relative service intensity (ie. 'services per 100,000 population') reveals some variation across the sample. The most frugal cities on this index appear to be Hamburg and Zuid Holland, while Copenhagen and Oporto occupy an intermediate position. Of the continental European cities, Amsterdam has the highest number of public transport vehicles in simultaneous revenue service per capita, while the highest level in the sample, by quite a significant margin, is on record for Edinburgh.

The service intensity indicator is influenced by the propensity of public transport agencies and operators to provide resources to run the system as well as by its efficiency: a dominant role for fast high-capacity modes, particularly heavy rail, will depress relative service intensity figures, while a large number of high-frequency, slow-moving surface routes tends to inflate them. The intensity figure also increases where settlement areas are dispersed or separated by geographical barriers, thus

lengthening journey distances and times between places of activity. High service intensity scores are therefore not necessarily indicative of better service. It is, however, reasonable to suggest this indicator as a benchmark, hereby using it as a focus to examine the public transport effort in cities with low service intensity scores. The examination could be conducted by cross-reference to other SNAMUTS indicators (see later) to ascertain whether accessibility benefits in relation to operational inputs into the public transport system could be lifted to a level commensurate with peer cities.

In this context, it is unsurprising that Edinburgh, home to the most bus-dominated public transport network in the sample, comes out with the highest service intensity figure and Zuid Holland, the most rail and tram-dominated region, comes out with the equal lowest. Part, though not nearly the full extent of Edinburgh's steep figures on this index are related to the deregulation regime governing public transport delivery across the UK, leading to the provision of competing services by several bus operators along some of the same corridors. The difference between Copenhagen and Hamburg, however, both of which have comparable roles for rail and bus-based modes, is mostly due to Copenhagen operating a far denser and more multi-directional bus network than Hamburg, an observation that will occupy us further in subsequent steps of the analysis.

Closeness and Degree Centrality

These two indicators are designed to capture the structural properties of the public transport networks; they do not incorporate a land use dimension beyond defining the number and location of activity centres. Closeness centrality considers accessibility in a way most closely described as 'ease of movement'. An average score for travel impediment (travel time divided by service frequency), or ease of movement, is calculated between any two activity nodes on the network. The final figure for each activity node represents the average impediment score for all journey possibilities between this node and all others on the SNAMUTS *20* public transport network. Degree centrality considers accessibility by public transport from the perspective of number of transfers required to make a journey between any two centres. The figure given for each node thus describes the average transfer intensity for journeys to or from all other nodes on the network (Table 3).

Table 3: Closeness and degree centrality in the European case study cities

SNAMUTS *20*	København (2009)	Hamburg (2010)	Amsterdam (2010)	Zuid Holland (2010)	Edinburgh (2011)	Oporto (2009)
Number of activity nodes	128	176	132	205	97	94
Average Closeness Centrality	25.6	35.3	36.4	45.1	47.0	35.8
Closeness (lowest value)	14.3	19.6	20.6	26.5	24.8	19.6
Closeness (highest value)	78.9	92.9	89.9	146.6	125.7	122.0
Average Degree Centrality	0.80	1.07	1.14	1.60	0.99	0.91

For both indicators, lower figures indicate greater metropolitan public transport accessibility in principle. Comparisons, however, need to be seen in a broader context to allow for valid conclusions across the sample. Firstly, on both closeness and degree centrality we should expect average results to increase with city size (measured here by the size of the public transport network and its number of activity nodes within the 20 minute service frequency zone) and the resulting complexity of the public transport network. On this basis, all other things being equal, smaller networks will invariably return better average, lowest and highest closeness values than larger networks, as well as lower counts of degree centrality (ie. transfer intensity). From this perspective, it should come as no surprise that Edinburgh and Oporto, the two smallest cities in the sample, return lower average degree centrality values than their larger Dutch and German counterparts. Similarly, smaller network size explains part of Copenhagen's superior performance on the closeness index compared to Hamburg and Zuid Holland. But even within this limited six-city sample, there are a lot of deviations from this pattern.

Other factors influence the closeness centrality score and can provide a useful insight into where improvements to accessibility can be made. Closeness centrality is measured by travel impediment, which in turn is composed of travel time and service frequency. Cities where activity centres are spaced further apart (in terms of public transport travel time, not necessarily metric distance) or in other words, cities with more dispersed settlement patterns and more convoluted links between places of activity are at a disadvantage for public transport accessibility compared to more compact ones or ones with faster public transport systems. Compactness, in this context, is not necessarily equivalent to density: Part the reason for Copenhagen's low (good) average, lowest and highest closeness scores can be found in the city's location on an island, whose coastline effectively contains the settlement area and ensures that outward growth can only occur within an approximate 135-degree segment of a circle. While all the other case study cities also have coastal access, nowhere else does this circumstance provide such a compelling constraint to urban expansion as in Copenhagen.

Conversely, the relatively high (poor) average, highest and lowest closeness centrality scores in Zuid Holland are linked to this conurbation's multi-nuclear form without a single overarching centre. Since the closeness matrix treats every origin-destination pair on the network as equally weighted, the spatial separation between dispersed centres, even where these might have compact and contained settlement areas in their own right, is making itself felt here. This is also manifest in the high average transfer intensity of Zuid Holland's network, where several individual cities (Leiden, Den Haag, Rotterdam and Dordrecht) operate self-contained urban networks which are only connected by a limited number of rail and metro lines between them at a regional scale.

On the other hand, it is such fast rail connections that work to bring the closeness average down in each case study city where they exist, and thus compensate for the effect of settlement dispersal to some extent. Copenhagen and Hamburg stand out on this aspect as their rail and metro systems are not only speed-competitive with road travel, but also operate at very high frequencies during business hours (5 minutes or even better throughout the inner areas). In the Dutch Randstad, such frequencies are only achieved on metro trunk lines (in Amsterdam and Rotterdam) whereas the regional rail system operates a mix of overlapping all-stop and intercity trains, which each stopping pattern typically operating every 15 or 30 minutes and

thus usually adding up to frequencies of between four and eight trains per hour on each route (less for minor intermediate stops, some of which consequently do not meet the SNAMUTS *20* standard). In Edinburgh and Oporto, the maximum rail frequency tends to be four trains per hour, and there are several suburban lines that operate only half-hourly and thus do not enter our analysis. The low frequencies on the rail system, as well as on bus routes to outer suburban and regional centres, also explain the breakout highest closeness values in the two smaller cities, which overall appear to be less successful than Copenhagen, Amsterdam and (to a lesser extent) Hamburg in offering a uniform standard of public transport accessibility throughout their urban region. Instead, they seem to be allowing some outlying areas to contend with long travel times and/or low-frequency services, a situation that helps to push up average closeness centrality values for the entire network.

Oporto's advantage over Edinburgh appears to be almost entirely related to the presence of a light rail network in the Portuguese city, with two mostly underground inner-city trunk lines providing travel speeds through the urban core that have no match in the congested streets in the centre of the Scottish capital, some of which need to cope with more than 200 bus movements per hour even outside the peak period. Also incorporated in this index, though with only minor effects in this case, is the circumstance that Oporto offers fully integrated fares with free transfers between light rail and buses, while in Edinburgh most fares are operator-specific, ie. even a transfer between bus routes of different operators incurs an additional cost to the user.

Lastly, Copenhagen's top performance on the degree centrality index merits an explanation, given that the public transport network in the Danish capital, not unlike Hamburg's, is organised around a hierarchy of modes where rail picks up the primary corridors and buses the secondary ones, as well as feeder and distributor functions to the rail system. But why does Copenhagen outperform Hamburg (as well as Amsterdam) so dramatically on this index? In Amsterdam, the core explanation can likely be found in a circumstance similar to what was said about Zuid-Holland earlier: the metropolitan region is multi-nuclear, and the neighbouring secondary centres of Haarlem and Almere operate their own, relatively self-contained urban bus networks that are connected to Amsterdam only through rail links and some express buses, resulting in the near-inevitability of two or more transfers between places located in different cities away from the rail network. But in Hamburg, the greater transfer intensity can primarily be traced back to the much lower density of the surface network in the inner areas, as well as the less developed nature of orbital bus links in the outer areas than in Copenhagen. This observation is also supported by the lower service intensity figure for Hamburg. Both Nordic cities converted their once-extensive tram systems to bus operation in the 1960s and 1970s, but while Copenhagen retained practically each and every former tram route as a bus link (and then added some further ones), Hamburg abandoned a significant number of tram routes without full bus replacement, 'thinning out' its inner urban network in the process and making public transport movement much more dependent on transfers between modes, even for some relatively short journeys, than its Danish neighbour. Or in other words, Copenhagen's bus network alone provides a 'random-access grid' (Nielsen et al, 2005; Mees, 2010) across the inner area and supplements this function with fast, high-capacity rail and metro links servicing some of the same corridors, while in Hamburg, only the interplay of rail and bus modes on different corridors achieves a comparable network configuration.

In contrast, the uneven comparison of both cities' outer urban orbital bus networks boils down to geography rather than policy (notwithstanding the fact that there remains scope for some easy-win network extensions in Hamburg). Hamburg's only significant geographical constraint to outer urban expansion is the linear Elbe estuary which connects it to the North Sea nearly 100 km to the west, and which has no fixed transport crossings west of Hamburg. This leaves nearly 360 degrees of a circle for orbital travel in outer suburbs, compared to, as mentioned above, only around 135 degrees in Copenhagen. The provision of a full set of orbital links is thus much easier to achieve in the Danish capital than in its southern neighbour.

Network coverage and contour catchments

The network coverage indicator is designed to query the land use patterns of the metropolitan area in question, and in particular identify those parts of it that are serviced by public transport at the minimum service standard. It measures the percentage of residents and jobs that are located within walking distance (800 metres around rail or metro stations and ferry terminals, 400 metres along tram and bus corridors) of at least one public transport service that meets this standard, and expresses them as a percentage of the total metropolitan number of residents and jobs.

The contour catchment index uses the same approach to measuring land uses, but identifies the average percentage of residents and jobs that can be accessed from each node by way of a public transport journey of 30 minutes or less. This time window can include up to one transfer as long as both legs of the transfer journey are operated at least every 15 minutes, and with a penalty deducted that is equivalent to the average transfer time across the network from arrival of the first vehicle to departure of the second vehicle. The index adds a further dimension to the network coverage assessment, in that average 30-minute contour catchments are also influenced by the density and concentration of urban settlement, the speed of public transport and the spacing of activity nodes within the metropolitan area, which can be read as a proxy measure to its degree of compactness or dispersal (Table 4).

Table 4: Network coverage and average 30-minute contour catchment in the European case study cities

SNAMUTS *20*	København (2009)	Hamburg (2010)	Amsterdam (2010)	Zuid Holland (2010)	Edinburgh (2011)	Oporto (2009)
Network Coverage	1,927,000 (71.9%)	2,749,000 (54.6%)	2,446,000 (78.3%)	2,965,000 (62.3%)	1,037,000 (55.9%)	1,086,000 (62.0%)
Average 30-min contour catchment	879,000 (32.8%)	880,000 (17.5%)	599,000 (19.2%)	521,000 (11.0%)	259,000 (14.0%)	346,000 (19.7%)

Across the sample, network coverage ranges from a low of 55% and 56% in Hamburg and Edinburgh, respectively, to a high of 72% in Copenhagen and 78% in Amsterdam. Some of this variation is explicable when considering the figures in conjunction with the service intensity index discussed above: cities that put more resources into public transport operation should be able to provide a larger network (relative to city size) that services a greater percentage of its urbanised area. This pattern is clearly present in the comparison between Copenhagen and Amsterdam with Hamburg. But it does not yet explain why Hamburg falls even behind Zuid Holland despite having a comparable level of service intensity. A possible reason,

also observed in future SNAMUTS case study cities such as Vienna and Munich, is that historically, public transport provision in Hamburg has been a local government responsibility, meaning in this case the city-state of Hamburg which in 2010 comprised only just over half of the metropolitan area population. Hamburg may have been a pioneer in the conception of the first integrated public transport agency as far as back as 1965; however, only during the last decade did this governance model grow significantly beyond the city-state borders to encompass the seven neighbouring counties in Schleswig-Holstein and Lower Saxony in their entirety. And while some metro and regional rail services have since been improved and extended to regional centres, on the whole the outer metropolitan area remains characterised by a legacy of urbanisation that was either focussed on regional rail services with frequencies too low to meet the SNAMUTS *20* standard, or without much public transport orientation at all. Zuid Holland is by no means free of comparable settlement and public transport service patterns, but its multi-nuclear nature ensures that there is a lower number of regional centres than in Hamburg without services that meet the SNAMUTS *20* standard, and that these tend to be smaller than their northern German counterparts.

In Edinburgh, the second lowest network coverage figure paradoxically coincides with the highest service intensity figure, for reasons that resemble those discussed in the context of Hamburg: a high level of penetration of the core city with bus services at reasonable frequencies is countered by a very patchy network in the wider metropolitan region, including only a minority of regional rail lines that meet the SNAMUTS *20* standard.

On the average 30-minute contour catchment size, Copenhagen delivers another breakout performance within the sample that reflects several observations already made earlier, namely the high speed and frequency of its suburban rail and metro network and the dense grid of bus routes in the inner area. The combination of these two factors maximises both the number of destinations that can be reached within the time window, and the number of trips for which no transfer is necessary. At considerable distance, the figures for Oporto, Amsterdam and Hamburg are relatively similar, considering that this index, like closeness centrality, can be expected to decline with growing city size and geographical complexity (and the ensuing difficulty to provide short travel times across a large settlement area). The reasons why Edinburgh and Zuid Holland trail the sample on this index are also quite straightforward: in Edinburgh, the slow average speeds on a bus-dominated network and the patchy configuration of public transport services outside the core city conspire to depress the average contour size, while in Zuid Holland, the dispersed nature of settlement across a multitude of spatially separated urban centres is the key driver for the low figure.

Betweenness centrality

The last SNAMUTS index compiled for all six case study cities tries to measure the geographical distribution of travel opportunities across the networks' nodes and route segments as generated by the land use system and the configuration and service levels of the public transport network. Betweenness is a dynamic index, acknowledging that fast and frequent services between a pair of centres will be more attractive for urban movement than slow and infrequent services between another pair of centres of similar size. The index is designed to highlight which centres and public transport routes are 'at the crossroads' of movement across the metropolitan

area, and how well different modes fare in terms of attracting such movement opportunities, not least with a view to their varying passenger capacity. The global betweenness index represents an attempt to benchmark the attractiveness of the public transport system as a whole to facilitate movement and accessibility across a case study city, and may allow for an insightful comparison within our six-city sample (Table 5).

Table 5: Betweenness centrality in the European case study cities

SNAMUTS *20*	København (2009)	Hamburg (2010)	Amsterdam (2010)	Zuid Holland (2010)	Edinburgh (2011)	Oporto (2009)
Global betweenness index	2,173	1,612	1,726	844	677	736
Average nodal betweenness	83.4	51.6	55.2	24.1	33.3	34.5
Average catchment (residents and jobs) of typical path length	74,000	88,000	78,000	85,000	51,000	51,000
Segmental betweenness – | rail/S-tog/S-Bahn	49.3%	27.8%	24.5%	32.4%	8.7%	1.9%
Segmental betweenness – metro/U-Bahn/LRT	10.6%	33.5%	14.1%	17.6%	-	27.3%
Segmental betweenness - tram	-	-	21.9%	30.7%	-	0.0%*
Segmental betweenness - bus	39.1%	38.3%	39.4%	19.4%	91.3%	70.7%
Segmental betweenness - ferry	0.0%	0.3%	0.0%	-	-	-
Segmental betweenness – CBD area	32.0%	24.6%	29.1%	21.3% (Rotterdam) 18.9% (Den Haag)	44.0%	46.9%

*Cable car

The global betweenness index appears to divide the sample firmly into two groups. It suggests that Copenhagen, Amsterdam and Hamburg (in this order) are characterised by a much higher presence of public transport travel opportunities throughout their metropolitan areas than Zuid Holland, Oporto and Edinburgh (again in this order). In the case of Zuid Holland, this is not surprising, since this index strongly rewards compact, dense and contiguously urbanised settlement areas and penalises spatial discontinuities, regardless of whether they are generated by topographical constraints or result from policy decisions or historical trends. On the other hand, the poor results for Zuid Holland as a whole could also be read as an indication that the region is characterised by two dominant and only partially compatible public transport accessibility trends: on the one hand, it continues to provide quite favourable conditions for intra-urban public transport movement within each of its centres, especially Den Haag and (to a lesser extent) Rotterdam. On the other hand, the proximity of these centres to one another generates a high volume of inter-urban travel flows. This observation invariably raises the question, already posed in previous work (Scheurer and Straatemeier, 2011) on which scale of public transport accessibility is in fact the most relevant for the Dutch Randstad in representing a ‘daily urban system’: the core city, the sub-region (Amsterdam or Zuid Holland in this sample) or the Randstad region in its entirety?

Yet, the difference in the figures between Zuid Holland and Amsterdam, where polycentrality is less pronounced than in Zuid Holland but still a critical feature of the

settlement pattern, remains striking. With a view to with Copenhagen's outstanding performance on this index, it is likely that both cities benefit strongly from a relatively intact interplay of a dense surface public transport network (dominated by trams in Amsterdam and buses in Copenhagen) and a functional pre-war, originally transit-oriented, mixed-use settlement pattern in their inner areas. In contrast, Rotterdam and Hamburg, both extensively damaged during World War II, significantly departed from this pattern during post-war reconstruction in favour of a more functionally segregated urban form with reduced urban density compared to the pre-war stock.

The influencing factors of land use density and network compactness/dispersal can both amplify and neutralise each other on this index, for which reason it is useful to devise a measure that is capable of separating the two. This is being attempted by the 'catchment of typical path length' index, which multiplies the average nodal catchment across the network by the number of activity nodes an average weighted node-to-node path passes through (a number that varies between cities according to the spacing of activity nodes, the travel impediment between them and the ability of the network to provide a choice of routes). This measure thus compensates for the compact/dispersed properties of the network in question and focuses more exclusively on land use concentrations and network coherence. As a result, Hamburg and Zuid Holland have a narrow lead over Amsterdam and Copenhagen (both pairs in this order) precisely because their networks (in the case of Zuid Holland, particularly the Rotterdam component) are configured to facilitate longer journeys on faster modes rather than the short-range opportunities that central Amsterdam's and Copenhagen's extensive surface networks excel in. Edinburgh and Oporto, where slower modes dominate to an even greater extent, follow the larger cities at a quite considerable distance on this index.

It is remarkable that Copenhagen and Hamburg have a near-identical distribution of travel opportunities between rail and bus modes, underscoring the aforementioned significance and superior service standards of the suburban and metro systems in both cities. In contrast, in Amsterdam surface modes play a much greater role, which may be partly related to a comparatively small heavy rail network length (in relation to population) in Amsterdam as well as in neighbouring Zuid Holland. Zuid Holland, in contrast, appears to have relegated buses into an auxiliary role while Den Haag's and Rotterdam's extensive tram systems clearly dominate travel opportunities among surface modes.

Edinburgh and to a lesser extent Oporto remain strongly dependent on buses for the bulk of their public transport system's ability to service mobility needs arising from the land use system. In Oporto, the metro system, developed only over the last 15 years, arguably remains incomplete and is in fact subject to ambitious expansion plans. In Edinburgh, the role of its relatively extensive heavy rail infrastructure for frequent suburban services remains underdeveloped, though here too, plans are underway to address this (as well as introduce a light rail system).

The segmental betweenness scores for the CBD area – percentage of travel opportunities to, from or passing through the central city - can be expected to drop with growing city size and polycentrality, as well as a network configuration that offers attractive alternative travel paths for cross-suburban journeys. Within our sample, high-capacity orbital transport links are arguably best developed in Amsterdam, yet it is Hamburg that comes out with the lowest segmental betweenness figure for the CBD, perhaps primarily due to its larger size and a flatter

hierarchy in network significance (nodal betweenness) between the dominant CBD node (both cities' respective Central Station) and other rail hubs in its vicinity in Hamburg than in Amsterdam.

Discussion and Conclusions

The SNAMUTS analysis of the land use-transport systems in six European city regions has shown Copenhagen to achieve a top ranking on every accessibility indicator with the exception of network coverage, on which it comes second after Amsterdam. But does Copenhagen's stellar performance in this assessment elevate the Danish capital to the status of a model city, a benchmark for European best practice in public transport accessibility?

Some of Copenhagen's success factors can be traced to more immutable features of urban form, such as its position on an island which effectively limits its possible outward expansion to less than half the city's circumference, and the absence of major geographical or administrative barriers on the land side of the island that would impede the existence and effectiveness of high-quality orbital links to complement the radial corridors that shaped the city's historic development.

But there are also public transport network and service planning choices behind Copenhagen's good standing in the comparison of SNAMUTS results. The three most critical factors in this regard appear to be:

- the presence of an expansive heavy rail (suburban rail and metro) network with high service frequencies – every 5 minutes or better during business hours on all routes in the inner area, and every 10 minutes or better practically everywhere else – a standard that out of the six-city sample, only Hamburg can match;
- the presence of a random-access grid of surface routes covering the medium- to high-density, mixed-use inner neighbourhoods without leaving deliberate gaps where parallel rail lines exist – a standard also found in Amsterdam and Den Haag (mostly tram-based), Edinburgh and Oporto (mostly bus-based), but not in Hamburg and Rotterdam.
- the presence of fast orbital routes in middle and outer suburbs whose service frequency matches that of radial train lines, and whose travel times are shorter than those of transfer trips through the central city using the radial routes.

This is not to say there was no room for improvement in Copenhagen's public transport system – there remain conspicuous geographical gaps in the rail system, and some bus routes are congested or insufficiently prioritised over motorised traffic. Some of these shortfalls are being addressed by metro extensions currently under construction, and by plans to convert the busiest orbital bus route to light rail.

The comparison between the two medium-sized cities, Oporto and Edinburgh, demonstrate some of the shortfalls associated for cities in this category from relying excessively on buses for urban public transport. Edinburgh has by far the highest operational input but produces what is arguably the poorest accessibility profile in the sample. A comparative look at Oporto illustrates the efficiency gains in terms of operational resources as well as accessibility performance that can be achieved by

introducing light rail as a higher-capacity mode for the city's key corridors (a step Oporto only took during the 1990s and which remains far from complete).

Some open questions remain. For instance, what would be the outcomes in terms of accessibility performance if public transport service intensity per capita in Hamburg was lifted to the level of Copenhagen (a more than 40% increase)? Would Hamburg draw even with or even outperform its northern neighbour? And further, how does Rotterdam's and Hamburg's failure to provide a full random-access surface network across their inner areas relate to the unique characteristics these two cities share – namely, accommodating Europe's two largest seaports within their boundaries as well as, out of the sample examined in this paper, being precisely the two cities that suffered a major discontinuity to their urban development in the mid-20th century due to wartime destruction and subsequent rebuilding in a very different form?

Future SNAMUTS investigations and an expansion of the European sample to incorporate Barcelona, Munich, Vienna and Zurich will serve to address these questions in more detail.

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The European Union and Major Infrastructure Policies: The reforms of the TENs programmes and the implications for spatial planning

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Abstract

The EU has been involved in influencing major infrastructure in the fields of transport and energy mainly by means of the TENs programme begun in the 1990s. Other macro planning and wider spatial planning exercises, including the ESDP, made reference to such infrastructure systems, particularly in relation to the need for connectivity and mobility, but normally did not attempt to intervene in an area seen as one of the prerogratives of national states. Much more important have been the wider programmes of liberalisation pressed by the EU since the 1980s, but these have had no specific geographical content.

A revision of the TENs programmes since 2008 has led to proposals to increase the role of the EU, by drawing up continent wide schemas indicating needs for future investment in many fields of both transport and energy, and introducing new procedures to streamline decision making by designating projects as of European interest. The initiatives in transport and energy are described here, including the two Regulations currently under discussion within the EU institutions. These include major proposals for cross European multi modal transport corridors within an EU core network, and regional schemas for energy drawn up primarily by energy industries and government counterparts. Both are likely to be of real significance for spatial planners throughout the continent, and have major impacts on the shapes of future infrastructure networks.

These proposals are analysed, as cases of the rescaling and re-ordering of government, giving more force to the EU in these fields, and reinforcing sectoral or silo based decision making. The relationships to spatial planning are examined, partly in terms of the degree of "soft" planning styles. It is argued that somewhat different outcomes will result in the few areas, such as the Baltic, where long term macro-regional collaboration has been present, from the rest of Europe, where these sectoral programmes may complicate further the mix of planning impacting on each region, making even more confused the accountability of governance. Suggestions are made for the careful assessment of these schemas by national and regional governments, and for the creation of some spatial planning analytical capability at

EU level, which could examine proposals such as these with powerful spatial impacts.

Introduction

Large schemes to transform transport and energy infrastructure have been recently under consideration across Europe, following national level investment in several fields since the 1990s – in high speed rail, motorways, ports and airports, as well as gas, wind and other energy generation sectors. Whilst such continental wide schemes have a long history[i], the present round was spurred in part by the highly successful pressure of leading business executives in the 1980s, who identified "missing links" in all European transport systems (European Round Table 1984, 1991). The making of the single market project thus came to carry with it an interest in boosting the capacity of European transport systems. This combined with, or in part was inherent in, the liberalisation of the industries, mostly state owned, which for several decades had managed these infrastructure systems. This liberalisation became a core EU goal in the 1990s. Other more material factors were involved of course, such as the increasing freight movement across the world, impacting on ports and much else. One result was the creation of the TENs programme in the early 1990s, seen as a part of the Delors package which sought to modify or tame the single market programme. Unlike the social programme also promoted by Delors, which was beaten off by neoliberalising governments, the TENs packages were progressively detailed and, on the transport side, given significant EU funding support. In 1994 priority transport schemes were listed. Most of this top set were rail schemes, with limited support for road and aviation, although these figured strongly in the sets of schemes in the rest of the listings. This leaning towards more environmentally desirable modes was another part of the political drive of the policy zone, ensuring some support from political groups interested in environmental gains. The TENs scheme for energy also advanced through the 1990s, but with less political drive and little financial support.

At the same time, spatial planning was making its bid to impact on EU policy making, by means of work on a cross European spatial framework, finally issued in 1999 as the European Spatial Development Perspective (ESDP), as well as through work on mega regional planning overviews, and support for cross border iniatives via INTERREG programmes. The now clear accounts of this story (Duhr et al 2010, Faludi and Waterhout 2002, Faludi 2010) show how variable and often limited the integration of this spatial planning work was to key policy areas – the big funding programmes, transport and energy policies, competition policy and so on. However, the work on spatial planning, now generally rebadged as territorial cohesion policy, continued through the 2000s (CEC 2008c), and so was present when the moment

arrived, when a major review of the TENs policies was launched, in 2008. The first purpose of this paper is to investigate any links between the continuing aspirations for some sort of territorial integration in the EU, and the TENs reforms which were worked up in 2008-2011 and are now in the process of being hardened into firm policy, including Regulations in the transport and energy fields. A second purpose though, even in the absence of such linking, is to reflect on the importance of the TENs reforms for the changing European geography, that is to think about what major initiatives like this do "behind the back of planning", in generating the future shapes of urbanisation and environmental futures, and how the future territory of Europe is imagined.

Understanding the changes

A third purpose, alongside these more policy or substantive concerns, is to discuss how we may best understand these policy developments, from the range of lenses available from diverse disciplines. Geographers and political scientists have long considered the shifting of scales underway since the 1980s (Brenner 2004, Jessop 2002, 2008), whereby the EU has taken on more "meta governance" roles, whilst leaving the states, and in some cases regions and city authorities, with major powers over the levers of economic and social change in their territories. The single market project, and the associated "annexes" mentioned above, were critical ingredients of this shifting kaleidoscope which has made the EU such a core element of government in the last two decades – as the post 2008 economic crisis has made ever clearer each year. This rescaling is linked to the dynamics of declining democracy underway during the same period, and can be seen as an attempt to depoliticise key decision making areas. As was argued long ago, rescaling is often deeply political (Swyngedouw 1997). This change in vertical articulation of governing can also be usefully linked to the horizontal question at the core of all planning, given the powerful "silo" effect in most governing systems, which, we will see, is strongly present in the TENs reforms. Between them, changes in scaling of governing and the extent of sectoralised policy making are critical dimensions of the way major infrastructure is governed in present day Europe. This assemblage of mechanisms, which work to some extent together, forms the first lens used later for reflecting on the case considered here.

A second lens will be useful in helping to understand the style and characteristics of the planning emerging or which may emerge. Given that this is sectoral planning, the question is how that form is understood, as well as how that relates or may relate to spatial planning in the more integrated sense. I will consider here the usefulness of conceptualising this in terms of "soft" processes or spaces, a perspective enjoying some interesting development at present in planning theory. It has been argued that

soft processes (Faludi 2000) and soft spaces are becoming more influential within states (Haughton et al 2010), and that this can be usefully linked to policy making at EU level (Faludi 2012). Such soft approaches are open to quite varying definitions, emphasising different aspects. Often soft spaces are seen as "in-between" spaces of governance existing alongside or beyond formal, statutory or official spatial planning, with planning less and less applied to fixed areas, and more fuzzy in its application. Faludi (2010) considers that at the European scale, planning can only be soft, if it is to be anything at all – a relevant argument, given the locus of TENs policy making. A further relevant discussion is that of Metzger and Schmitt (2012), looking at recent EU leadership in the Baltic Sea Region. They emphasise the time dimension of changes in such harder or softer planning, seeing the EU Baltic strategy as solidifying earlier soft spaces. They also suggest that planning can in such cases become an important element in regionalization, or the constitution of new metagovernance of regions, in part by processes of institutionalization. They note the importance of the EU coordinator roles in this case, something we will see echoed in the TENs packages – possibly a soft governance form with some harder edges. This lens therefore has several dimensions which can together help to put some aspects of the TENs reforms in a wider perspective.

With these two lenses we can see how new forms of policy making are being institutionalised and naturalised, by the shifts in scalar governance, and by the forming of organisational structures, deliberately created as policy silos. It can be argued, at the highest level of generality, that this policy making form is a good fit for the regime of politics dominant in Europe in recent years, and which has always characterised the EU – weakly democratic, dominated by economic goals. Clearly this is a political interpretation which will not be to the liking of all readers, and cannot be proven within a short article, or even probably within a massive tome. All analysis in planning is framed by political stances.

The rest of the paper is in three parts. Firstly I give a relatively concise description of the reforming of the TENs programmes, and their (non) linking to spatial planning thinking. This is followed by interpretations of this process, relating it to the themes discussed above. The concluding section reflects on where the overall forging of infrastructure systems is going, under the impact of the TENs reforms and other forces, and how this might (or might not) be usefully linked to some input from spatial planning ideas of some kind. The paper is based on interviews conducted in the European Commission in Brussels in late 2010, some updating discussions in early 2012, and analysis of the extensive documentation of the EU directorates involved.

Reforming the TENs systems 2008-2012

My original interest in TENs was to see whether they might, in reformed guises, make up for the weak major infrastructure steering capacities or desires in most European states. Such weakness was observed in Germany for example, where the planning of energy systems showed little direction, arguably hindering the possibility of serious progress to a lower carbon society. Equally there were many German criticisms of government inability to adopt a more strategic approach to transport planning, as against the business as usual of the federal transport plan (BVWP).

This is examined here separately for transport and energy (telecoms is omitted, much less significant from a planning perspective). The idea behind TENs was that more traffic of all kinds would flow between countries and that transport and energy systems, like productive systems, ought to be harmonised and opened up to competition, to cope with the greater movement. In 1994 a priority list of 14 big transport projects, mostly for high speed rail but also with one airport scheme and some road projects, was agreed. There was a commitment to some financial support, mainly via loans – in fact the EU paid 29% of the total invested 1993-2006, with a similar proportion expected in 2007-2013 (CEC 2008a). Apparently the EU was committing 230 billion euros to transport infrastructure between 1996 and 2013 – a major contribution, most channelled by regional funding (CEC 2011e). As Duhr et al explain: "The process of selecting priority projects was a highly political exercise 'from the bottom up', characterised by pressures from national governments or industrial lobbies pushing for their national wish lists" (2010 p. 300, also Peters 2003).

The energy TENs were less high profile, but gradually picked up momentum, mostly to ease cross border links in gas and electricity transport, to facilitate the single market in these products being introduced at the same time. Both programmes had a "fill the gaps" approach, rather than one in any way related to strategic cross European planning. Given the slow progress with even this level of intervention, there was for years quite enough for the EU to do in trying to get effective implementation. By 2008 some of the original priority projects had still hardly begun. Nevertheless, it was felt the time was right to review progress and adopt a more ambitious approach. The account here reflects policy making up to April 2012.

Transport

The TEN-T programme review began in 2007-8, and resulted in a final Commission proposal for a new policy in 2011 (CEC 2007, 2008a, 2009a, 2010b, c, e, 2011a, b, Fischer and Sykes 2009). The primary innovation was the making of a "core network" of routes, in multi-modal form, across the EU and connecting with third countries. This would supercede the project based approach used since the creation of the TEN-T in the early 1990s. The core was to include all modes, with a study

identifying 57 ports or port complexes which should be the key port links to the terrestrial transport system (NEA 2010). The 30 projects agreed at the last revision in 2005 would mostly slot into such a core network, along with some more, but this time the result is supposed to be a genuine base network for the whole continent, not a patchwork of projects. Underlying this, the "comprehensive network" will continue, slightly amended, this being the main existing transport systems marked on a map, and showing the "missing links" still seen as needing connections or improvements. It must be remembered that this is a substantial existing project, which there is no intention of reducing, on the contrary it will be added to somewhat. As a working document (CEC 2010e) said:

"*Today the comprehensive network comprises altogether 95,700 km of road links, 106,000 km of railway links (including 32,000 km of high-speed links), 13,000 km of inland waterways, 411 airports and 404 sea ports. It has to be noted that most of these links and nodes already exist. However, almost 20,000 km of the road links, over 20,000 km of railway link (overwhelmingly high-speed lines) and 600 km of inland waterway links remain to be built or substantially upgraded*".

The choice of the core network was based on a much more planned approach, through a methodology worked up in 2010-11 by an expert group, essentially based on linking key nodes of the European transport system. This meant in particular a big emphasis on ports and on freight, and the resulting ten corridors concentrate especially on rail links, with a major aim to encourage modal shift from road to rail and water. The core network was to be given priority, with a chance to get some of the 50 billion euro Connecting Europe Facility announced at the same time (31 billion for transport, 9 billion each for energy and telecoms). It was also targeted for completion by 2030, as against 2050 for the comprehensive network.

The new way of dealing with the core network was through the creation of "Corridor Development Platforms", consisting of a European Coordinator appointed by the EU to lead the work on that corridor, and of member states and relevant interests. They were to draw up a corridor development plan within six months of the entry into force of the Regulation. This was to be submitted to the Commission, who would give its opinion, and particularly say in what way it was going to support implementation. As an example, Corridor 2 runs from Warsaw to the English Midlands, and needs upgrading of rail lines along much of the route, as well as inland waterways works in Germany and at the Amsterdam locks, and port and multimodal platform works in England. Here four states will be involved, but in some corridors such as the north-south ones, governance will be more complex still.

This is a major new initiative which is itself a sort of spatial planning and will impact on spatial planning. The system design from above, on a relatively rational planned

basis, is a radical departure for the EU, as is the form of implementation. Clearly it is an essentially transport silo/sectoral initiative, which will empower the rail and port operators and transport ministries in particular, but the planners on each route will surely also wish to be involved in the platforms, to adjust the plans to their objectives, or learn how the transport schemes impact on other proposals. Although routes and implementation will be contested, it is most likely that planners will have to take these schemas as a committed starting point, as they are used to doing in most states when handed down big transport decisions by national governments. But they will sometimes be able to adjust schemes, especially when these become politicised and negotiating on land use issues becomes critical.

These transport infrastructure proposals (and much more) are now presented in a Regulation, the form of EU legislation which, if approved, becomes directly binding on members. There will then be little scope for deviation, in principle, and all future investment should be guided by or be taking note of the TENs schemas – in principle for the coming decades, though we may fully expect regular revision. Of course the Regulation may not be approved, at least in its current form, though for the moment the timetable is for passing it by the end of 2012. Under the co-decision procedure, first the European Parliament needs to give its approval. At the time of writing there were several elements that looked controversial, with the Council preferring a more government (transport ministries) centred governing mechanism, and pressures from Green interests in the Parliament against other elements of the package.

In substantive terms, it is important to note that the Commission and the EU remain very much on the "missing links" track, rather than seeking a radical comprehensive low carbon mobility strategy for the long term. Certainly parts of such an agenda are referred to in the transport White Paper (CEC 2011a), but rapid growth remains a core part of the EU approach, which appears very hard to square with low carbon rhetoric. Such contradictory aims have equally been at the heart of the Lisbon and Europe 2020 strategies created to guide the EU overall since 2000 (CEC 2010a).

Energy

For the TEN-E field, policy development began by 2008 (CEC 2008b, Ramboll/Mercados 2008) and Commission documents were published late in 2010, including on energy infrastructure (CEC 2010f, i, j), followed by the final policy package in October 2011 (CEC 2011c). The final TEN-E proposals are wide ranging and significant, though in a different way from those for transport given the very different context of energy policy making. The infrastructure strand of energy policy relates strongly to the coming into force early in 2011 of the Third Energy Package liberalising fully European energy systems (full unbundling of transport systems in particular). Here there are two strands of special interest to spatial

planners (CEC 2011c, the proposed Regulation, contains most details, but much related documentation is on the Energy directorate webpages for the October 2011 announcement). The first strand is the designation of projects of common European interest (PCIs) and how these are identified. This is again a strong stepping up of the EU role, responding to the worry that a liberalised pan European energy work will simply not have the technical infrastructure to work, particularly given the low carbon and security goals that the new competitive industries are also supposed to achieve. The projects are chosen by the Regional Groups for each fuel body, those created under the Third Package, ENTSO-E for electricity and ENTSOG for gas. These groups have been doing planning work since their formation in 2009, in the Gas Regional Investment Plans (GRIPs) for example, and this is set within the overarching Ten Year Network Development Plans (TYNDPs) now prepared for both electricity and gas by their respective bodies (Entso-e 2010, Entsog 2011). ENTSO-E is working on the second iteration of its TYNDP, due to be finalised in mid 2012. So the energy field also has priority corridors, based on the ENTSO work, there being 4 for electricity, 4 for gas, and one for oil, as well as three thematic areas, for smart grids, electricity highways (a long term super grid) and a cross border carbon dioxide network.

The TYNDP for gas of 2011 (Entsog 2011) followed the Entso-e approach the year before by not just listing the responses of the transmission operator of each country, but carrying out a "top down" research of the matching of supply and infrastructure systems to 2020. It admitted this was full of important uncertainties, but concluded that if the committed investments went ahead, there were only relatively limited areas of major risk in the event of disruptions, mainly on the eastern borders affected by Russian gas risks. These "Plans" were described in the gas case as intended to "provide stakeholders with signals that can be further investigated in their decision-making processes for market triggered investment or for European funding" (Entsog 2011 p. 51). But the evidence now is that the planning is getting a little less cautious, reaching at least indicative status, even though the TYNDPs are definitely not binding documents. In due course it is expected that the Entsos will be able to take over all the planning and prioritising role, though in 2010 their limited resourcing (30-40 staff for electricity but only 4-5 for gas) did not allow this.

One key is attempting to leave the planning, or at least parts, to the private industries required to cooperate in the Entsos. Another is the regionalising approach, identifying areas like the North Sea, south west Europe, central and south eastern Europe and the Baltic as areas where European "added value" was most obvious or feasible. The regional approach leaves scope to play across to the regional iniatiaves of DG Regio (see below) or perhaps in due course to elsewhere. However it was clear that the Commission is operating largely by individual sectors. Certainly all

Commission work is relatively collegiate, working by inter-service groupings, with all COM documents agreed across the Commission. But the regional cross-sectoral implications are not considered much by the Energy directorate in this reform drive. The main aims are sectoral, rather than integrated or territorialised.

It is clear then that the process is somewhat different from that for transport. The work is ongoing, less a "big bang" one of setting of future directions at one moment. These dierections for energy are set essentially by the industries themselves and brought together by the Commission, and depend on the Regional Groups for both designing priorities and implementation. The extra element is some funding help, for the priority corridors. It is more difficult to gauge the significance of interaction with spatial planning concerns, though these are clearly present, for example in marine spatial planning, and in the implications for the long run sustainability of different sorts of regions. It is not so likely that planners will get involved in these regional groupings which are likely to be dominated by the major companies, and their ministry expert counterparts. However, when difficulties emerge in implementation, planners may find themselves involved. This is particularly the case given the second important strand in the package, on permitting.

Energy companies, and to some extent governments, have long been pressing loudly their concerns at delays in giving consent to schemes which they see as essential to getting relevant new investment, especially in electricity transmission lines. Several national governments, including the UK, Netherlands and Germany, have reformed their procedures to make such permitting easier and quicker (at least that is the aim). This can involve the appointment of "independent" authorities, as was tried with the Infrastructure Planning Commission in the UK, aiming to depoliticise decisions. This therefore links directly to one wing of neoliberal thinking, to remove key decisions from electoral democratic arenas, as in the creation of autonomous central banks. The EU decided to make this a big element in its infrastructure package, and commissioned a study in 2011 from Roland Berger, a management consultancy, to work out how this might be done (Roland Berger 2011 for their final report). The result is a section in the Regulation to alter procedures in all EU states, towards what is seen as best practice, including a one stop shop for authorisation, cutting overall maximum authorisation periods to three years (including one year for the offical consent process) and introducing more effective overseeing of the processes at both national and EU level. There is scope for an EU appointed coordinator to intervene in cases where delays are serious, for projects of common European interest. Much of this is advisory, as it would depend on national legislative change, but it represents a strong push to the sort of approach implemented in the UK with the Planning Act 2008, seen by the consultants as very much a template for desirable reform.

From a planning perspective, this is a very interesting initiative, representing one of the first times that the EU has dared to tread into such national regulatory territory. Whilst it is likely that a relatively soft approach will be used, perhaps not forcing member states in such permitting reform, a style of procedures is likely to be set by the Regulation which will gradually infiltrate national practice, especially where EU funding support is hoped for, support which will doubtless be dependent on moving towards the recommended model. The energy corporations can be expected to put maximum pressure on states who do not move to an expedited approval model. Whilst this is unlikely to be the precursor for the much discussed harmonisation of national planning regimes across Europe, it does represent a significant step for this rather special category of projects.

As in the case of transport, the Regulation is not yet approved. But there is a very considerable head of steam behind this reform, with the European Parliament committees having already in June 2011 given a more or less green light to the proposals. It may be even more likely than with transport that the essence of the Regulation will be approved within 2012.

It may be noted that a significant exercise in institutionalisation has been taking place in this policy process. Both fields will now have European coordinators, with potentially strong brokerage power. The Corridor Development Platforms for transport and the Regional Groups for energy are important new bodies. The Commission will be advised by a new committee for TEN-T, and the energy field already has ACER, the grouping of European national regulators. The European Railway Agency created in 2006 is the nearest thing to institutionalisation in the transport field. The drive for a single national competent authority for infrastructure projects will affect national institutions as well. All this is strongly sectoralised, and largely invisible to the public view, as is the norm at EU level, but they are already, or will be, important actors in infrastructure making.

So the EU approach in this field is potentially powerful, creating a genuinely multi-level system for energy network planning, with the locus of much decision making probably shifting for some countries to these collaborative European institutions. Countries like France may resist such a shift, but given liberalisation and takeover processes affecting the network industries, such resistance may not be long lasting.

In terms of substance, the schemas point in mixed directions: to a considerable extent to business as usual, continued growth in the physical networks, but with some emphasis on the promotion of modal shift in the core network, away from the highest carbon generators (road and air). Similarly in energy, there is big support for fossil fuel generation systems (gas, oil), as well as nuclear, but equally a drive to promote

transmission support for renewables. Clearly this fits the double sided EU objectives, for growth but in principle with low carbon goals too.

The extent of integration with the concerns of the Regional Policy directorate (Regio) and with spatial planning

We now turn to the question of the linking to spatial planning, by examining first the position of the regional directorate in the Commission, which has been the one dealing with territorial issues, and so to some degree, touches on spatial planning, and then thinking about what other ways spatial planning may interact with these new policy directions. The main focus is on the regional strategies developed in recent years, and what their relationship is to the evolving infrastructure fields.

The regional directorate of the Commission is in some ways a powerful one, given its large budget, and the task of ensuring this is spent, and spent well. But it is clear that DG Regio is not seen as any sort of planning body in a substantive sense. The DG was hoping in 2010 to be able to strengthen its position within the Commission by aligning regional policy more tightly with the Europe 2020 strategy (CEC 2010a, g). The DG's role is primarily procedural, ensuring the guidelines are followed, and cooperating with sectoral directorates like transport and energy to make sure that they are content that the criteria they set for their areas are also observed. There was little sign of much cooperation on energy issues with that directorate. With transport there was some contribution to the working on the recent TEN-T reforms, with Espon material drawn to the attention of the policy makers there. Given that Regio has itself no independent remit on which to take a view of the proper spatial development of Europe, there was no strong base on which to advise Transport in its drawing of the core network. However, Espon did provide some valuable data foundations.

The direct input to the TENs reforms from Regio was thus limited, even though normal lines of consultation remained fully open. The linking of Regio to the reviews was primarily in relation to its core concerns of funding regional policy, and hence to major parts of the EU's support for infrastructure. So the discussion of the new funding instrument (Connecting Europe Facility), and how this related to the 2014-2020 budget, was a very important cross Commission theme, much more significant than any geographical implications.

The greatest hopes have been in macro regional working, which has been seen to give real scope for integration in the future (CEC 2010h, l, m). The Baltic strategy is seen as the model here, being the first of a new breed (it was hoped by DG Regio) of macro regional stategies (CEC 2009b, 2010d). Faludi (2010 p.182) calls it "an exemplar in planning for soft spaces". It was prepared by a score of directorates-

general in the Commission, with DG Regio as moderator – the ideal institutional architecture for EU action, in Faludi's view. This built on a lot of work in the region since the 1990s, some of which has had a strong spatial planning component. Baltic state planning ministers had started on a Vision and Strategies for the Baltic Sea Region (VASAB) in 1992, completing the strategy in 1994, and pressing on with much use of EU funds to the present. The latest VASAB strategy (VASAB 2009, 2010) had energy and transport as part of its three core areas, and laid out long term perspectives to 2030. The EU Baltic strategy benefitted from this spatial planning tradition and did have significant transport and energy elements. In the transport sphere this involved re-emphasising long standing priorities like the Rail Baltica link up from Germany through the Baltic republics, and the Fehmarn-belt link from Denmark to Germany, as well as stressing shipping improvements, but with VASAB's help this was placed in a spatial planning context. Nevertheless, as so often, when one examines the regional policy funding, the biggest sums go to road building (over 18 out of 27 billion euros in the 2007-13 ERDF were for this purpose – CEC 2010n). For energy the Baltic Sea Region Energy Cooperation, set up in 1999, had also prepared the way, and the Baltic Energy Market Interconnection Plan of 2008 was a cornerstone, intended to reduce the energy isolation of the Baltic republics. So in both areas the spatial elements and understandings were well developed, and a supranational sphere does appear to be in real flow, even if resulting actions are judged to fall well behind these understandings.

A Danube strategy was launched at the end of 2010, at the request of the European Council. This may also develop important implications for the transport and energy fields, though at present the content of the Action Plan concentrates on issues easily linked to the Danube itself, such as the river's navigation, and hydro power possibilities of tributaries of the river (CEC 2010k). One does not get the impression of anything like the same developed spatial elements as in the Baltic. Given that many of the bordering states are not EU members, and with the more difficult cohering role of just a long and winding river, this is not surprising. Experience will show whether this second macro region develops a strong momentum, particularly in being able to cohere infrastructure plans. The Baltic may be odd. Larger states like France, Germany, Italy, Spain or the UK are not likely to be cooperative in this way, and they naturally dominate many of the powerful networks in the continent. For the moment it looks as if seas may be the most fertile places for regional cooperation (Baltic, North Sea, possibly parts of the Mediterranean).

However the TENs reforms are far from the final steps in policy making around new infrastructures and cross European policy changes. The schemas laid out in both transport and energy are indeed much more detailed than those attempted before, and, if these survive the process of horse trading between member states, and

pressures from other lobbies, this does leave rather less scope for subsequent detailing for planners at regional and urban levels. However such scope will still exist, and will be played out over the coming years as schemes get near to implementation, whether through the leadership of states, developers or in some cases EU brokered deals. This will in many cases mean that the integrating skills of spatial planners will come into the frame, as a major infrastructure scheme for say a rail line or transmission line, only sketched in broad terms in the TEN-T or TEN-E core networks or regional corridors, comes into the political jurisdictions of particular states or regions or cities. So even in the majority of the EU where no stronger macro regional working is present, there are likely to be opportunities for modest input to detailing of TENs schemes, and sometimes, where conflict emerges, more major roles.

Interpreting the TENS reforms in relation to territorial futures

Significance

I would argue that these reforms are highly significant for planners – and for all citizens. They lay out geographical templates in a way that has never been done before at the continental level in Europe. The move to designate a core network in transport, and articulating this as corridors, and the making of regional schemas in electricity, gas and to some extent for oil and for forms of storage, places an infrastructure overlay on the map of Europe. The authors of the ESDP might be green with envy, had they been able to integrate such an overlay with other forces affecting locational change. Transport infrastructure in particular could be extremely important over coming decades in locking in certain geographical patterns and dynamics, giving locational advantage to some regions and disadvantage to others. The same will apply in the energy field, but how this plays out is very uncertain, as the marketisation of energy investment is considerably more advanced than in the transport field. Although the potentially radical decisions affecting any transition to a low carbon Europe will be extremely important in the long run, I have doubts whether the TEN-E process will actually lead in this direction, rather than solidifying existing fossil fuel based and to an extent nuclear geographies. Decisions in the key national states will be vital, especially in Germany and France, influenced by their large energy corporations.

So, potentially, this is a major shift in the governance of two key features of the future of Europe. Following on from the single market drive of three decades, and the liberalisation drive of roughly the same period (above all in infrastructure industries), these schemas give the EU an important role in the way big systems evolve in the future. As usual, this is not creating a direct transfer of powers to the EU, but increasing the diagonal nature of decision making, whereby states,

Commission, major corporations, and other important lobbies interact in the advancing (and inevitable modifying, as circumstances change) of the investment streams proposed. The reasons this became necessary were precisely related to the single market and liberalisation drives, which left European states without instruments to guide investment in these key industries to achieve their key goals – maintaining supply, skewing to low carbon priorities, and increasing competition where practicable, including between suppliers of the major fuel, gas. The 2012 packages, if passed, are intended to provide the new instruments, alongside the efforts of the states and corporations. There may be doubts as to the efficacy of these instruments, but ineffectiveness will be in a sense a political failure by the states, not supporting what they have created.

Rescaling, democracy and siloised governance

Rescaling is variable across policy fields, as any text on the EU makes clear. What we see here is a move to recalibrate governance in one field, and one relevant to the interests of planners and territorial specialists. The peculiar melange of forces that is the polity of Europe (states plus the EU's institutional formulas and behaviours) has moved on again – in my interpretation completing the work of the 1980s and 1990s. Seen as a whole, this can be seen as a further distancing of decisions from wider political and democratic control. This is inherent in the project of neoliberalisation, which is in its essence hostile to properly democratic control of major decisions – such as the future shapes of countries, industries, ways of life. If these can be hived off to economic decision makers remote from electoral or pressure group influence, and where necessary, if powers can be allocated to governance assemblages and polities which are equally difficult to understand, track and affect, then there is more scope for the "powers that be", and less for "the many" within that governance machine. As I see it, the new structures created in the TENs systems have much of this character.

It may be said that schemes will be locally resisted, that depoliticisation never really works, that pressures pushed aside at one level will burst out elsewhere. This may be true, but it leaves a highly uneven spread of resistances, which may have high societal costs, and may result in a pattern of investment to the liking of hardly anyone, and inefficient in achieving wider agreed goals. The result may not be depoliticisation of investment decisions in the full sense, but certainly the removal of effective democratic steering over the key long term patterns of life. In the long run, de-democratisation generates depoliticisation, or perhaps simply the narrowing of political life to the activities of a small range of elites.

There is a great deal more to be said on the issues of democratisation or otherwise in the EU and in planning, going beyond the discussion of representative and

deliberative elements, to consider the claims of different publics and actors (Saward 2010), but this is not the place to enter these complex areas of political discussion.

The strongly siloised or sectoralised character of the TENs schemas is another major ingredient which acts to form the governing ensemble managing infrastructure sectors now. In this it mimics normal state behaviour (Marshall 2012a). It is normal for policy making for energy or transport to be highly sectoralised, often subsectoralised (for just roads, rail, ports, or just for gas, nuclear, renewables, oil etc). There are exceptions, where a more integrated approach has been taken, as in the famed Dutch national spatial planning, or the work of the Grenelle in France to try to integrate across sectors. It is true that the EU TENs efforts have strived to at least integrate above subsectors. The TEN-Ts schemas are remarkable for really trying to integrate freight routes, linking rail and ports above all. And the energy schemas do try to make connections between different fuels and storage needs, going above the individual fuel sectors. But, as we have seen, there is not much integration beyond this in a geographical sense, so sectoralism remains dominant.

Soft spaces and silo governance

As with all fresh conceptual development, discussion of soft processes and spaces has elasticity, in fact it may be seen as conceptually soft. My interpretation is that where these characteristics are present, they represent a weak form of planning (if they really qualify to be called such), with loose framing, fuzzy relating to precise geographies, and loose implementation structures, often highly dependent on private developers, generally large corporations. As such perhaps the London Docklands in the 1980s might be seen as a forerunner of soft spaces, responding to the ups and downs of market actors. This sort of planning may be especially characterised by siloised governance, which avoids integrated debate on alternative futures, and so is disconnected from the decisions of elected democratic authorities. The National Infrastructure Plan 2011 in the UK takes this form (Fischer 2012, Marshall 2012b), treating each area of infrastructure largely on its own and avoiding links to any explicit geography.

First of all, how far does this apply to the TENs schemas in themselves? Sectoral planning, like spatial planning, may have softer or harder features. I would judge that both in energy and transport, there is a mix of characteristics. Simply because they are EU level policy initiatives, they have a certain soft form, dependent on indirect implementation mechanisms, and consisting of carefully crafted text and macro sketching on maps at large scales, making exact geographical impact sometimes hard to identify. Faludi's insistence that spatial planning can only be soft at the EU level applies in part, for the same reasons – subsidiarity, essentially. And

the Regulations concerned may get softer during the discussions of 2012 or even 2013.

However, it can also be argued that the reforms have a hard edge, like many EU sectoral instruments, and that for perhaps the first time, this has a major geographical component. Identifying quite clearly ten continental transport corridors is not really soft planning, any more than the drive to persuade states to reform their planning processes for critical major infrastructure - here not so geographical, but impinging on what is normally seen as the domestic policy sphere of planning systems. The policy making for TENs is marked by weak links to formal democratic structures and a tendency to bypass standard national or local decision making approaches. They are definite top down interventions led by EU and national governments together. A phrase like "the hard fist in the soft glove" comes to mind to try to catch the mix within this sectoral planning (and there are of course significant differences between transport and energy, which could be detailed from the account above).

The second question is then: how does this mix relate to the spatial planning with which it comes into contact and which it is going to affect? I have suggested that this is going to be an important encounter in many parts of Europe. On occasions it will be with the soft styles of macro-regional planning (Knippschild 2011, Stead 2011), where there has surely already been implicit two way interaction between these EU stimulated soft spatial strategies and the TENs corridors and regional programmes, and that such a two way process will continue. The harder edge elements of the TENs schemas may further the process of solidifying of macro-regional strategies identified by Metzger and Schmitt (2011). There may be an interesting, possibly not entirely smooth, relationship between the more integrated approaches being developed in the Baltic and Danube cases by appointed coordinators, and the more single minded goals of transport corridor coordinating groups or individual transport or energy coordinators. Of course where no macro-regional strategies exist, such scope for possible friction will not exist.

Elsewhere the encounter is with in part "standard" spatial planning, the regional or even national planning strategies of a hard kind, alongside the softer forms perhaps emerging in many city regions around Europe. Here I would argue that the effect will be to further "soften" planning, in the sense of making it more difficult to tell, for citizens, where policy is decided and who is to be accountable for it. Areas with "hard plans" may find themselves in a stronger position (just as currently in England, where local authorities with approved plans will be able to resist imposed developments more easily than those without up to date formal plans). But even here localities may find their planning softened up for development, with national governments seeing good reasons to go with the flow of the TENs schemas.

In part therefore here I am using the distinction to point to the possible hopes of developers to find soft territories, giving little resistance to major transport and energy developments. Spaces may thus be made soft by non-integrated planning and top down corporate led governing arrangements, where the major actors are ultimately the largest energy and transport corporations and agencies, backed by governments. Clearly this is giving the concept multiple layerings of meaning, but this appears appropriate when applying in this case: soft in definition, soft in process, soft in (expected) impact.

Referring back to the Metzger and Schmitt discussion of regionalization, the TENs transport corridor institutional development may build its own dynamic of cooperation and lobbying geographies, though perhaps not with the same force that something like the Baltic strategy work has had, building as it did on multiple forms of cooperation regionally over many years. The energy regions may over years build up some regionalizing force, at least within the policy community of specialists, whereby companies and governments come to know the regional systems well within that zone of Europe, and are to a degree less linked to other regions.

So as a whole the TENs schemas may be seen as complementing and possibly reinforcing the tendency to soft space styles of planning present in some European planning contexts, whether locally or at the mega-regional scales. Putting it the other way round, they probably on balance give little comfort to those who might wish to reinforce more classical forms of firm national or regional spatial planning. The point is made tentatively, because, as the above discussion indicated, there are two or more steps in the process, with softer and harder forms of both sectoral and spatial planning interacting to create the overall effect in any national or regional context.

Impacts on ideas and imaginaries

The "real" impacts on geographies are likely to be very considerable, if these packages are approved and implemented over the coming decades. They are meant to be for the long term, with schemes to be reviewed in 5-10 years time, but looking at the horizons of 2020, 2030 and 2050, as is no doubt appropriate for investments of this range and type. Given the long life of most infrastructures of this kind, they are likely to be therefore framing life into the twenty second century – or involving some extremely costly write off of mistaken investments, which took the continent on multiple wrong tracks. Many of the elements of the schemas are likely to be contested, from contrasting positions on the political or philosophical spectrum – too green, not green enough, too directive, not market sensitive enough and so on. However, if approved, they may over time impact on the shape of the continent and also how people think about that shape and shaping. If one imagines the changes

wrought in recent years by essentially unplanned changes in the transport systems, such as low cost flights from different national locations, or the evolving high speed rail networks, it is clear that these have changed how we think about Europe (Jensen and Richardson 2004, McNeill 2004). The freight corridors and proposed energy geographies may be somewhat less near to the thinking of most people or opinion formers, but over time, the fact that say half the energy supply came from wind farms on and off shore, often within the jurisdiction of other countries, would create one way of thinking about our interdependencies, as would a similar shift to locally based solar or related electricity generation – a downscaling of imaginaries and spatial linkings.

My study of national planning and its absence made me reflect about the forming of such ways of thinking about big scale geographical change. Such thinking appears to have a continuing national presence in some countries, such as the Netherlands and France, and, if in much more negotiated and conflictual ways, in Germany and Spain, reflecting their federal or proto federal natures. It is generally resisted in the more peculiar mongrel UK state, as in some other countries which cannot perhaps "afford to" speak or think openly about their geographical nature and balances. The impossibility of an intelligent debate about the HS2 project (high speed rail line) in the UK, in the absence for over three decades of a mature spatial framing, shows how critical such absences can be in real world decision making. At the continental level, there is little, I would imagine, in the way of a shared imaginary, with horse trading between member states largely taking the place of any explicit consideration of what could or should be done where – hence the nature of EU spatial planning or its absence. However, the TENs schemas do seem to be a first example of placing very definite prioritising of corridors on maps. In debating them, fighting them, implementing them, many people will come into contact with the idea that say the north-south freight route across the Alps is important to European functioning, and its planning might usefully be shared (Hesse 2010). Equally, a shift to a genuinely low carbon future has a massive geographical component, alongside the issues of principle about fuels, external security and so on. If there is to be a sensible use of the energy potentials of the North Sea, for example, planning will be unavoidable – though that does not mean that such planning will occur, as the large obstacles in its path make clear (House of Commons, Select Committee on Energy and Climate Change 2011). Maritime spatial planning is emerging as a new practice, and though it will have specialised and technical elements, the effect over time on how everyone thinks about seas and their "services" to states near them, must change our geographical imaginings. I am not arguing that the TENs schemas in themselves will start to make explicit thinking about geographies more central to politics. I suspect that such thinking goes too near the bone of numerous power interests and threatens to open too many democratic and radical questions to wider view. However, the

simple fact of the EU getting involved in such areas may impact on what national states (or regions) feel they may need to do – perhaps even reinventing national spatial planning in the Dutch or Scottish mode. The making of National Infrastructure Plans in the highly liberalised UK may be one sign of an understanding of the need for new kinds of national steering (HM Treasury 2010, 2011).

Responding to the TENs reforms

This paper is not primarily intended to sketch possible responses to these new ways of managing infrastructure investment in these two fields. Like many observers, I am sympathetic to some of the substantive content (such as the goal to shift freight to more environmentally friendly modes, and some aspects of the facilitation of a low carbon energy world), less so to other parts. The question here is rather what links to spatial planning might be valuable, if any, and how that might be progressed. The difficulty here is that the European polity is such a difficult species, that it is hard to think of a way that might usefully link together real life concerns of populations and their democratic representatives and these very high level proposals. In principle both the whole schemas and the details in each corridor should be examined by national and lower authorities, in the full view of the public sphere. This would, in many countries, be very difficult to do with any real evidence base, given the dismantling of planning capacity at most levels in many cases. If critical views were extensive, this would be a message that the schemas needed reworking, making more integrated links to national and regional development aspirations. Again, such reworking would be difficult, as now I suspect that many European states and regions do not have clearly based goals formed from competent spatial planning processes. Such national and regional strategies would be needed, in principle, so that the corridor proposals could be checked as to their sense in relation to these schemes – in the same manner as the Raumordnungsverfahren process in Germany. Another way of putting this would be to subject the schemas to Territorial Impact Assessments, if such an instrument ever comes to exist (Bohme and Eser 2008).

Beyond such a procedure, it would clearly be valuable if the EU developed some analytical spatial planning capacity in order to influence the making of such sectoral schemas. Whilst this might have been seen as an unnecessary luxury in the 1990s, the degree of impact and intervention envisaged in the TENs reforms does point to the value of such a capacity. Although for the moment this might be a case of closing the stable door after the horse had bolted, there may well be further such initiatives with major spatial implications, and the formation of such planning capability, well beyond the valuable but essentially research based input of Espon, would easily prove its worth in that case.

Macro-regional strategies, as mentioned above for the Baltic and Danube, might be one ingredient of a more integrated approach, but it is unlikely that such strategies will become widespread, given the logical resistance of larger states to such stronger collaboration. A fuller examination of the Baltic case and the links to current TENs packages should reveal the value of a continuing integrated spatial planning over many years. But we should not hold our breath with the idea that such strategies will emerge elsewhere as containers for future planning of big infrastructure. If that is to happen, it is more likely to occur at the national level, through a return to some sort of national spatial planning. In a neoliberalising world, however, we know the real and ideological barriers to such a return.

Of course at a wider level, the debate is always a political one about what sort of Europe is desired. Should it be a minimal budget and economy-driven model as at present (the Anglo Saxon form blended with some Rhineland elements, as Faludi and Peyrony 2011 have it), or something more like their European model, with far stronger EU policies and territorial cooperation? Should it be economic growth driven and based on market dominance, or with more social and environmental priority? Infrastructure industries are increasingly in the marketised zone, and so more resistant to spatial planning, and so the current TENs packages fit into these givens of the EU political economy. For the moment realities seem to be that the main scope for a meeting with spatial planning will be in the detailed regional working – the Corridor Development Plans, the regional energy packages. Planners would do well to keep their eyes on how these new forms develop.

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[i] See the fascinating historical excavation by the Making Europe project, including Badenoch and Fickers 2009, Schipper and van der Vleuten 2008 and van der Vleuten and Kaijser 2006.

AWARENESS-RAISING FOR EUROPEAN TERRITORIAL COHESION IN PLANNING EDUCATION - WITH REFERNECE TO ITALIAN AND GERMAN EXAMPLES

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Abstract

In recent years the "territorial cohesion concept" found its way to the centre of the debate over European spatial planning, until its inclusion in the recently ratified Treaty of Lisbon as a supplement to the economic and social dimension of the EU cohesion objective (Treaty on European Union, Art. 3 (3)). In turn, this strengthened the importance of spatial planners among the experts in this field of action, putting them in charge of the realisation of territorial cohesion. The fact that planning professionals are more and more involved in EU initiatives in their everyday practice and have the chance to take over leading roles in related EU policies and programming should find adequate expression in spatial planning study programmes. This contribution aims to explore whether and to what extent young planning professionals are nowadays trained to play a role within the European territorial cohesion process and related programmes and projects. It shortly introduces the actors that may potentially play a role within the heterogeneous European spatial planning network, and analyses the appropriate knowledge they should bring if they have to contribute to the realization of EU territorial cohesion. Selected Italian and German spatial planning education programmes are analysed in the light of these information. A mixture of both quantitative and qualitative analyses is adopted, focussing both on the number of obligatory and facultative study courses dealing with EU spatial planning related issues in Bachelor and Master Programmes as well as on the different ways EU-related issues are accommodated and integrated within these course and programmes. The provided evidences suggest that, despite the progressive homogenisation of the organizational framework of spatial planning education programmes in the EU as a consequence of various pan-European initiatives – e.g. the Bologna process – a real 'European turn' in terms of contents is still far from occurring.

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1. Introduction

Graduates in Spatial Planning are active in the public service, in semi-public and private institutions as well as in professional and non-governmental organizations. They work on different spatial levels (from city neighborhoods to regions, to the state level, to the transnational and global contexts) and in different professional fields (land use planning, urban design, urban development, regional development and formal regional planning, sector planning disciplines e.g. transport, landscape planning, promotion of businesses, real estate management, etc.). Within the public sector they are employed in a highly heterogeneous set of bodies (e.g. planning departments, environmental departments, promotion of businesses, etc.) of municipalities, county administrations, regional authorities, national and federal ministries as well as European institutions. In private institutions they may hold positions in large companies as well as in small planning, architecture or engineering offices, in real estate companies, housing associations, consultant firms, site select consultants, research institutions etc.

Despite the lack of formal competences on the matter, the influence of the EU on the spatial development of its member states and regions is enormous. On the one hand, such influence is exerted through the continuous production and re-production of ideas, concepts and storylines by mean of an ever-expanding set formal and informal strategies and documents that are then often taken on board by Member states' actors (at the various territorial level) during the formulation of domestic policy documents and initiatives.[3]On the other hand, the EU contribute to influence Member States planning and development through economic conditionality, i.e. by providing economic rewards attached to the fulfillment of specific substantive and procedural conditions (as for instance through the former Community Initiatives and through the EU Cohesion Policy. Cf. Schimmelfenning and Sedelmeier, 2005; Adams et al. 2011). Last but not least, additional pressure derives from those EU's sectoral policies that, despite not being strictly 'spatial' in their focus, results in a series of planning and development constrains and impact once they are taken on board in the various Member States' domestic contexts (Cf. Dühr, S. Colomb, C., Nadn, V., 2010)

Keeping in mind the above considerations, it is possible to agree with Dühr et al. when they argue that "the European dimension in spatial planning has become an essential part of the work of planning practitioners and academics" (Dühr, S. Colomb, C., Nadn, V., 2010, p. 1). It is therefore relevant to explore whether young planning professionals are nowadays trained to play a role within the described ever-Europeanized professional scenario, in other words to what extent are they equipped with the necessary means to interface with the whole set of implications brought about by the consolidation of the EU territorial cohesion process. To shed some light

[3] For a detailed analysis of the process of discursive integration and the influence of the European spatial planning discourse in the Member States see: Bohme 2002; Adams et al. 2011; Stead and Cotella, 2011.

on this issue, the present contributions briefly introduces the possible professional careers of spatial planers focusing on their European dimension as well as on the related necessary knowledge that should be provide by universities (section 2). It then present some general information on the present situation of planning education in Europe (section 3), to provide the background for the empirical analysis that follows. Sections 4 and 5 analyse the activities of four planning education faculties (two from Germany and two from Italy) focusing both on the number of obligatory and facultative study courses dealing with EU spatial planning related issues in Bachelor and Master Programmes as well as on the different ways EU-related issues are accommodated and integrated within these course and programmes. A conclusive section rounds off the contribution, reflecting on how the analysed spatial planning education programmes meet the introduced requirements, and suggesting possible ways forward.

2. There is nearly no way around EU initiatives for planning professionals!

Spatial Planners working in public services on local, regional or national levels in the above mentioned positions need to deal with the spatial impact of EU policies, as well as with the operational implications that EU programming initiatives have in their everyday practice. There are some sectoral policies with direct impacts on spatial planning and development, like e.g. environmental policy and its transformation in legislations with impacts on all spatial levels, competition policy and its impact on building activities etc. Additionally, there are sectoral EU policies with an indirect influence on spatial decisions like e.g. energy and transport policy. And a strong influence on spatial planning and development is exerted by the EU through its regional policy as well as through its territorial cooperation initiatives and urban programmes.

Concretely, due to the increasing internationalization of location decisions of residents and companies they need to manage the competition between cities and regions and elaborate strategic concepts about the positioning of there are of competence. To be able to succeed in these new tasks, they need profound knowledge about how to develop, manage and implement those strategies, in other word to prove able to attract funding and to manage them effectively in times of ever-decreasing public budgets. Because of increasing opportunities to participate in consultation processes in the elaboration of objectives and regulations e.g. concerning the new cohesions policy period 2014-2020, planners active within the various domestic contexts also need to know the architecture of this policy area. Additionally, as numerous local and regional authorities and respective spatial planners are partner in transnational, cross-border or interregional cooperation projects developed within the framework of the European territorial cooperation objective, in order to be able to participate in those projects one needs to know how to network with the other partners active within a potential cooperation areas as well as how to prepare projects' applications and to successfully manage projects as well as their implementation and financing.

Practitioners active in the private sector work either in specific fields like real estate development, housing associations etc. or act as external experts or consultants for public administrations. In the latter case they need the same knowledge that spatial planners being employed in public administrations plus perhaps knowledge about the management of projects in the European Territorial Cooperation because often public lead partners of the projects contract private consultants to conduct the project management. As practitioners in a specific sector they should be able to assess the impacts of EU policies on the sector and know basic rules for accessibility to EU funding. This extends to spatial planers working for non-governmental organizations too.

The short review of fields of work, possible positions and functions of graduates in spatial planning on the one side and of the corresponding necessary knowledge in EU issues shows, that there is a certain need for spatial planning education programmes to provide at least the basis for a preliminary understanding of the new opportunities and constrains brought forward by the EU in the field. Despite one could always argue that not everything can be covered by university courses and that training activities and actual work may fill-in the gap, the provision of some fundamentals should indeed be present.

2. A brief glimpse at the planning education in Europe

In 1995 AESOP recommended a list of core requirements for a high-quality European planning education based on the understanding that AESOP should provide "orientation for the elaboration of programmes or defining core qualifications which need to be achieved in individual programmes" (Ache, 2008). An orientation for the restructuring of degree courses following the Bologna 3+2 or 4+1 cycle was regarded as useful not only to ensure a certain quality of education but also to ease mobility of students. The list is divided in three parts:

- acquisition of due knowledge in e.g. the nature, purpose, theory and method of planning; the history of planning; cultural differences in planning in Europe and international, economic and social impacts of planning; the political, legal and institutional context of planning practice at national and EU level; instruments of planning and planning implementation.
- development of practical competences in e.g. methods for problem definition and problem-solving in multidisciplinary settings; thinking in terms of concepts, instruments and measures; techniques for data collection, for data analyses, valuation etc.
- development an attitude i.e. a feeling for the cultural embedding, the value dimension of planning, the orientation towards solving the needs of the society etc. (Geppert and Verhage, 2008).

For the purpose of this article, it is important to stress the point that AESOP recommended that students in planning education programmes should acquire due knowledge in "cultural differences in planning on a European and international

level" and in the "political, legal and institutional context of planning practice both at the national level and at (evolving) international i.e. European level" (Geppert, and Verhage, 2008, p. 24).

At this point, it should not be discussed whether the implementation of the Bologna Process in planning faculties lead to better or worse education programmes and graduates or whether the Bologna objectives were achieved or not. More relevant is that, while restructuring the degree courses to Bachelor and Master according to Bologna, the European planning faculties should also define new, consistent education programmes aiming at providing graduates for professional life after three or four year courses with the option of an additional two or one year Master. The question here is whether in those new education programmes the two above named qualifications are considered or not.

In 2006 and 2008 AESOP realized two surveys mapping the experiences AESOP member schools had had with the new structured degree courses according to the Bologna Declaration (Ache, Jarenko, 2010). The 2008 survey results in the reported advantage of the process, the need to rethink and the possibility to internationalize curricula. On the other hand, a reported negative effect is that in several cases the domestic, cultural flavour resulted of the programmes resulted severely weakened (Ache, 2010). These two issues stressed in the report's summary give rise to the assumption that cultural aspects in planning on European level and the political, legal and institutional context of planning at European level is part of the education programmes and planning graduates have due knowledge to be active parts in the implementation of European territorial cohesion, to shape European policies and programmes and to use those programmes in planning practice.

In order to verify this assumption, planning education as it manifests within four different university institutions (two from Germany and two from Italy respectively) will be reviewed in the following sections, paying particular attention to the obligatory and facultative contents offered in the respective Bachelor and Master degree course.

3. The EU dimension of planning education in Germany – Evidences from Dortmund and Kaiserslautern

Two spatial planning education faculties in Germany will exemplarily be reviewed concerning to European Spatial Planning and European Cohesion Policy contents of the provided study courses. The faculties are introduced briefly before the provided study courses are short and crisp displayed and analysed whether there are obligatory or facultative offers for students in the regarding field.

The reason for the selection of the two case studies is motivated by the fact that each of these two Universities host a faculty of spatial planning offering distinct study courses in spatial planning since more than 40 years. Both have some years of

experience with the Bachelor and Master system, so that Master courses are already running.

4.1 Education in Spatial Planning in Dortmund[4]

The Faculty of Spatial Planning at the University of Dortmund consists of fourteen departments. Measured against number of students and number of departments the faculty is currently the largest educational institution for spatial planning in Germany. Its educational profile is characterized by a multidisciplinary and integrated understanding of spatial planning and is organized as a so called "project study" course. In the winter semester 2010/2011 the faculty had 1,260 registered students, where circa 150 students start each winter semester.

In implementation of the Bachelor –Master system, the Faculty of Spatial Planning at the University of Dortmund decided for a 4+1 cycle format. The Bachelor of Science in Spatial Planning is a four years (eight semesters) programme in which the students need to mature 240 Credits according to the European Credit Transfer System (ECTS). Graduates which wish to proceed with a Master at the Faculty have the choice between a one year Master of Science in Spatial Planning with six different areas of specialization, a two year Master in Spatial Planning for Regions in Growing Economies (SPRING) and a one year Master in Spatial Planning in Europe.

4.1.1 Bachelor of Science in Spatial Planning at the University of Dortmund

The Bachelor of Science in Spatial Planning at the University of Dortmund covers all spatial levels (neighbourhood, city, region, state etc.) and content areas of spatial planning. It qualifies students for working in the field of spatial planning and accomplishes the requirements to subsequently register to the Chamber of Architects (Urban Planer). It enables students also for further studies in a Master degree course. The Bachelor degree course is structured in basics, sector planning issues, cross-section modules, methodological and practical modules. Currently the Bachelor is structured in a four year course, subdivided in a first part (1st till 4th semester) and a second part (5th till 8th Semester) and is completed by a Bachelor Thesis.

Table . Bachelor of Science Spatial Planning at the University of Dortmund - Structure

	Modules		ECTS	
Part 1 Semester 1 to	1	Introduction in Spatial Planning	8	125
	2	A-project	19	
	3	Basics in Spatial Planning I: law and environment	11	
	4	Basics in Spatial Planning II: Society	9	

[4] All information concerning the Bachelor and Master degree courses underlain this chapter, are published on the web page of the faculty http://www.raumplanung.tu-dortmund.de/rp/wichtigbsc.html, (accessed 5 May 2012).

	5	Basics in Spatial Planning III: Economy	10	
	6	Empirical analysis and inquiry	10	
	7	Computer graphics and analysis	11	
	8	Regional planning	9	
	9	Urban and regional concepts	12	
	10	Land policy and management	9	
	11	Concepts for city quarters	12	
	12	Study fundamental	5	
Part 2 Semester 5 to 8	13	F-project	22	115
	14	Research methods in spatial planning	8	
	15	Cross-section module: theory of spatial developments	9	
	16	Cross-section module: planning theory and planning processes	12	
	17	Cross-section module: methods, processes and instruments	9	
	18	Sector planning	12	
	19	Current challenges for spatial planning	8	
	20	Urban design	11	
	21	Spatial planning from experience (internship, excursions etc.)	12	
	22	Bachelor Thesis	12	

During the first part students receive an introduction in spatial planning and work in groups with average twelve to fourteen members in a so called A-project to solve a problem- and practice-oriented spatial question (Module 1, 2). The basic modules (3, 4, 5) explain fundamental relations between landscape ecology, environmental protection and spatial planning, introduce students in juridical, sociological and economic issues of spatial planning. In Module 6 and 7 attain knowledge in choosing and implementing suitable inquiry and analysis approaches and in computer graphics and analysis (GIS, CAD and cartography). The development of regional and city quarter concepts is core topic of modules 8, 9 and 11, while in module 10 necessary aspects for implementation of these concepts is imparted. In module 12 students can choose any courses that are provided at the university according to their interests.

The second part of the degree course is different structured. During the fifth and sixth semester, students work on the F-project (advanced project). In the cross-section modules the specific and methodological competences are trained according to the needs of planning processes in real live. Sector planning is provided as an offer of six possible areas (e.g. landscape planning, transport planning, gender planning etc.) from which three needed to be chosen. Urban Design is obligatory and covers also urban design history and cultural heritage preservation.

It has become apparent that – analyzing the information material in the internet – the Bachelor degree course at the University of Dortmund contains not directly a lecture or course in European Spatial Planning or European Cohesion Policy. Nevertheless especially the F-project (advanced project) offers the possibility to integrate those contents in the Bachelor programme.

4.1.2 Master of Science in Spatial Planning at the university of Dortmund

As already described above, the faculty currently offers three different Master degree courses:

A. Master of Science Spatial Planning (one year programme, 60 ECTS) with six possible areas of specialization:
   1. Strategic urban- and regional development
   2. Urban design
   3. Local and regional economic policy
   4. Real estate management
   5. Comparative European Planning studies
   6. Planning in developing countries

B. Master of Science Spatial Planning for Regions in growing Economies (SPRING), two year programme (4 Semester)

C. Master of Science Spatial Planning in Europe (one year programme).

Unfortunately the Master Spatial Planning with the specification in Comparative European Planning studies will not be offered from winter semester 2012/2013 on. The Master of Science Spatial Planning in Europe is not yet running and no information material is provided on the web page. The Master Spatial Planning for Regions in growing Economies (SPRING) has a different focus and is a cooperation project with partner universities in Tansania, the Philippines, Ghana, and Chile and closely linked to growing Economies.

The Master Spatial Planning should prepare students for leading positions on all planning and decision making levels. It enables students to take over the leadership in multidisciplinary teams and allows students a research career and the possibility to make a PhD. It consists of four modules in which 60 ECTS need to be acquired. The new description of the modules for students which will start the Master degree course Spatial Planning in winter semester 2012/2013 contains a new structure and provides not any longer the possibility to choose the specialization in “Comparative European planning studies”. It will be structured as follows:

- Module 1 impart knowledge of current spatial research and planning on regional, national and international level (8 ECTS)
- Module 2 is the master project or master concept (selection of project or concept) in which complex problems in spatial planning should be solved with scientific methods. The master project put am emphasis on theoretical-analytical or conceptualization of a current question in spatial research and planning. The master concept stresses more the conceptualization and a practical design task. (12 ECTS)
- Module 3 is the specialization module in which students can select: transformation of post-industrial regions, strategic urban- and regional development, urban design, environmental planning, spatial and mobility research, real estate management, renewable energies.

- Module 4 is the Master thesis (20 ECTS).

The module manual of this new structure is not fully developed and described so far, so that only rough information about contents of the specializations is provide. Currently only in the specialization module transformation of post-industrial regions the description of contents names “European experience in transformation processes”. But it is likely that the facultative offered courses of today will be offered from winter semester 2012/2013 on, too. In this list of facultative courses one can find: Urban Regeneration in European Countries, European Spatial Planning, national planning systems in Europe.

The number of ECTS and related the effort students put to European contents in this Master of Spatial Planning with the specification in “transformation of post-industrial regions” cannot be quantified yet. The number of students dealing with EU contents can be much higher than the number choosing the specialization, considering the fact that also Master project and Master thesis can deal with European issues.

4.2 Education in Spatial Planning at the University of Kaiserslautern

The Faculty of Spatial and Environmental Planning at the University of Kaiserslautern consists of ten departments and educates students in spatial planning since 1971. It provides multidisciplinary and cross-section oriented study courses in spatial science: Bachelor of Science Spatial Planning, Master of Science Urban and Regional Development, Master of Science Environmental Planning and Law, Bachelor of Education Geography (the last one will be not part of the review in this article). People with their spatial requirements which find expression in the basic needs like working, living, recovering and supplying are central for the degree course design. Since the winter semester 2007/2008 the faculty have provided the Bachelor Spatial Planning, since the winter semester 2010/2011 the Master in Urban and Regional Development and since winter semester 2011/2012 the Master in Environmental Planning and Law. Currently circa 450 students are registered while the Bachelor usually starts with circa 90 students, and the Masters with 25.

In implementation of the Bachelor – Master system, the Faculty of Spatial and Environmental Planning at the University of Kaiserslautern decided on a 3+2 cycle format. The Bachelor of Science in Spatial Planning is a three years, six semester programme in which the students need to get 180 Credits according to the European Credit Transfer System (ECTS). Graduates which want to proceed with a Master at the Faculty have the choice between the two already mentioned two years Master of Science (120 ECTS). The review will focus on the Bachelor Spatial Planning and the Master Urban and Regional development, because the Master Environmental planning and Law is conceived as a specialized Master, educating experts in environmental planning, concepts and resource protection. Nevertheless, students studying this Master obligatory need to attend a lecture in European Regional Policy.

Graduates are like the ones from the University of Dortmund active in public, semi-public and private institutions and have jobs not only in traditional planer contexts but also in the real estate market, in promotion of trade and industry, in transport, research etc. But it should be mentioned, that Bachelor Graduates prefer to proceed with a Master because the new graduation system is not fully accepted by the employers, yet.

4.2.1 Bachelor of Science in Spatial Planning at the University of Kaiserslautern

The Bachelor of Science in Spatial Planning at the University of Kaiserslautern should equip the students with competences as planning professionals for all spatial levels and for formal as well as informal planning cases. Additional to the basic skills for spatial planers knowledge in planning and environmental law, environmental protection, real estate management, and sociology are also gained as sector planning issues, like transport, sewage etc. The Bachelor degree is a first qualification for the planning profession and enables students also for further studies in a two year (or 120 ECTS) Master degree course.

The Bachelor course is structured in 17 modules (two of which are facultative), one study project and the Bachelor Thesis. The modules are divided in urban planning, regional planning, general conditions and key qualifications.

Table 2: Bachelor of Science Spatial Planning at the University of Kaiserslautern - Structure

	Modules		**ECTS**	
Spatial planning at urban level	I	Planning methods, concepts, basics in landscape planning	10	40
	II	Basics in architecture, urban environment, urban land-use planning	10	
	III	Design, concepts, strategic environmental assessment	10	
	IV	Informal planning instruments, governance, urban planning and law	10	
Spatial planning at regional level	I	Settlement development, socio-economic changes and demographic development, basics in spatial planning	9	27
	II	Spatial planning law, concepts and instruments, new informal instruments	9	
	III	Analyses of spatial structures, processes, locations, valuation methods, basics in regional economic	9	
International spatial planning		international urban planning (1,5), international planning systems (1,5), European Regional Policy (3), planning in developing countries(3) (students need 6 from 9 ECTS)	6	
Legislation	I	Land use planning, European law, administrative law	11	21
	II	Urban planning legislation, environmental law	10	
Economy		Regional economy, regional policy	7	59
Sociology		Regional and urban sociology, empirical research	8	
Environmental		Ecology of/in settlements, green space concepts	9	

planning				
Infrastructures		Transport, sewage, water supply systems, waste management	11	
General conditions for spatial planning		Real estate developments and financing, climatic geography, climate modeling	8	
Key competences	I	Presentations, press release, media, moderation, mediation	6	
	II	CAD for urban and regional planning, statistics, GIS in urban and regional planning	10	
Bachelor project			13	
Bachelor Thesis			14	

In the modules spatial planning at urban and regional level necessary knowledge is imparted concerning methods, instruments and conceptualization of spatial planning inclusive links to sector plans. Multidisciplinary aspects are included in exercises and the Bachelor project. In the Bachelor project students apply the gained competences and knowledge to solve a practical planning problem in a group of up to ten persons. In this context students should also train social competences, team management and presentation techniques.

During the Bachelor degree course at the University of Kaiserslautern students have the opportunity in the module international spatial planning to choose facultative a course in European Regional Policy. This is the only offer with reference to European issues. But the Bachelor project offers the opportunity to integrate European spatial planning issues in the study programme, also the Bachelor thesis.

4.2.2 Master of Science Urban and Regional Development at the University of Kaiserslautern

The Master Urban and Regional Development is the consecutive continuation of the Bachelor Spatial Planning. The four semester course prepares students for high-qualified jobs, the leadership of teams, a research career and is the precondition for a doctoral dissertation. It is structured in ten modules, a master project and the master thesis. Students need to collect 120 ECTS.

The modules are structured in spatial planning specific modules concerning urban and regional planning and development to deepen and round out the already gained knowledge. Scientific methods, the design of adapted planning processes in different spatial contexts (from rural areas to metropolitan areas and from urban to European levels) and the implementation of urban and regional development strategies and concepts are the main focus. Additional economic, social and legislative aspects to deal with multidisciplinary tasks in spatial developments are imparted.

Table 3: Master Urban and Regional Development at the University of Kaiserslautern – rough structure

	Modules	**Contained European or international contents**	**ECTS**
	Urban development	International urban development	27
	Regional development	Spatial development in Europe	18

	Economy		8
	Sociology	International developments	8
	Legislation		10
Facultative (1 of 3)	Economy 2	European Regional Policy	9
	Real estate developments		9
	Mobility and transport		9
	Key competences		12
	Master project		12
	Master Thesis		16

In one of the modules in regional development one lecture is about "spatial development in Europe". One of the ten modules is to be chosen out of a choice of currently three (from summer semester 2013 on four) facultative modules: economy 2, real estate developments, mobility and transport, (international planning systems from 2013 on). The module economy 2 contains one course in European Regional policy. The planed module "international planning systems", starting in summer semester 2013, will consist of three courses: international urban and regional development lab, European Spatial Development: Policies, Concepts, Strategies and methods of comparative planning.

The number of ECTS and related the effort students can put to European contents are in obligatory courses 2 ECTS (from 120 ECTS – 1,7 %) and in facultative courses currently 4 ECTS (together 6 ECTS – 5,1%), (from 2013 on 5 ECTS are possible – together 7 – 5,8%).

5. The EU dimension of planning education in Italy - evidences from Torino and Milano

Following the presentation of the spatial planning Bachelor and Master programmes activated by the above German universities, the present section focuses on two Italian universities: Politecnico di Torino and Politecnico di Milano, this being both the main Technical University of the country as well as among the few Italian University institutions running both Bachelor and Master programmes related to the field of spatial planning[5]. As with the German cases discussed in the section above, the provided study courses are presented after a short introduction of the institutional contexts they are active in. In particular, the extent to which Bachelor and Master programmes in these institutions includes elements related to European Spatial Planning and European Cohesion Policy will be explored.

However, before moving to the case studies, it is necessary to mention that the contextual conditions for spatial planning education (as well as for spatial planning profession) in Italy substantially differ from the German context. Here the planning

[5] In the academic year 2001/2012, as few as XX University institutions were running autonomous bachelor and master programmes in planning (Together with Politecnico diTorino and Politecnico di Milano: XXXXX)

field developed as a declination of the professional figure of the architect and continues to be strongly attached to,and competing with the latter. Since its inception, the emancipation of the urban planner as an autonomous professional figure has been subjected to more or less open conflicts, and the first planning courses appeared in Italian univeristies only since the end of the 1970s. Within this context, Architecture faculties become the stage of a more or less explicit clashes focusing on the opportunity to revise the role of urban planning within or outside architecture education. Beside its cultural roots, this position is also underpinned by issues related to professional accreditation, as within the Italian legal framework, architects are officially entitled to redact and sign urban plans.

5.1 Education in spatial planning at Politecnico di Torino

As far as the Politecnico di Torino is concerned, spatial planning education is promoted within the two former Faculties of Architecture (Faculties were abolished as a consequence of the Higher Education reform on 2011) through two different channels: (i) through specific Teaching Units that constitute essential part of the pedagogical experience of the Bachelors and Masters degrees in Architecture and (ii) through a Bachelor and a Master course specifically dedicated to the education of spatial/urban planners (respectively accounting for XX and XX students in the academic year 2011/2012). A synthetic description of the main features and elements that characterize the latter is provided in the text below.

5.1.1 Bachelor of Science in Territorial, Urban, Environmental and Landscape Planning at Politecnico di Torino

The course is intended to train “territorial technicians” able to collaborate in all activities of territorial, urban, landscape, strategic and environmental planning, using the tools – programmes, plans and design projects – that serve to define and manage the organisation of a city or territory, and that guide the use of resources, environment and landscape[6]. Taking into account the expanding changes that urban, territorial and landscape planning must address, students graduated from this course are expected to work together with different specialists, and hence needs a multidisciplinary background that enables them to understand the languages of the various specialists and work with them in an integrated manner. Course graduates will be able to collaborate in the preparation of plans and programmes, to undertake the necessary analyses semi-autonomously, with particular attention to environmental and landscape aspects, to manage technical and administrative procedures, and design and manage territorial information systems which are today an indispensable means for the conduct of any planning activity.

[6] For full syllabus see:
https://didattica.polito.it/pls/portal30/gap.a_mds.espandi?p_a_acc=2011&p_id_cdl=&p_sdu=82&p_cds=5&p_header=&p_anno=0&p_info=&p_lang=EN

Graduates seek employment with local authorities (municipalities, provinces, regions), municipal utilities and companies, professional firms and engineering firms operating in the field of territorial, urban, landscape and environmental planning. They can also pursue free-lance activities and enroll, after passing a state exam, in section B of the professional order of Architetti, pianificatori, paesaggisti e conservatori with the title of " junior planner", and are qualified to conduct research on or to apply existing knowledge to planning, conservation, restoration and renewal of urban areas, territory and landscape.

The programme follows three tracks, providing core modules on key disciplines as well as practical hands-on experience: (i) territorial government and town and land-use planning, (ii) landscape and environment and (iii) geographic Information Systems. It is organised in two series of teaching modules:

a) Teaching units, which cover foundation subjects of a mono or multidisciplinary nature;
b) Teaching units consisting of multidisciplinary ateliers. These focus on activities relating to actual local situations, allowing students to apply knowledge acquired in the Teaching Units. The ateliers are coordinated by a central disciplinary area, but contain other subject input as well. They last one semester and conclude with a single examination.

The relationship between core knowledge provided in the Teaching units and its application in the Atelier characterises the approach of the degree course.

The objective of the first two semesters is twofold: i) to teach the student that territory, city, landscape and environment are complex phenomena, the product of different forces, to be investigated from various disciplinary viewpoints, and ii) to provide the first analytical tools. The necessary background in the evolution of urban thinking, in planning tools and the institutional system for territorial government, is accompanied by history and geography studies addressed to the analysis of landscape and environmental characteristics, the fundamentals of mathematical tools, representation and cartography. The first year studies conclude with a practical experience in the Atelier, which allows students to apply the knowledge gained. The third and fourth semester activities provide students with skills in urban design (proportionate to the employment opportunities provided by the three-year BSc degree), an understanding of the field of territorial planning and its practices, and the other needed skills. These include the ability to set up a statistical survey and interpret the results, and the techniques and methods of spatial analysis using GIS. Urban design skills and knowledge relating to territorial planning practices are developed through two interdisciplinary ateliers, the first dedicated to urban design, with input from the fields of infrastructure planning and urban morphology, the second dedicated to regional planning, with elements of ecology and hydrogeology. These experiences are supported by two multidisciplinary modules providing basic knowledge, one in energy efficiency of human settlements and their environmental impact, the other in mobility and transport. The fifth and sixth semester activities help students to understand the complexity of implementation processes and to

acquire the necessary skills in this field, to experience real working conditions through an internship, and to develop a capacity for independent work in the final exam. The experience gained in the interdisciplinary atelier about local development and urban regeneration programmes is supplemented by units providing skills for evaluation of economic feasibility and strategic environmental assessment of plans and programmes, and basic knowledge of social factors that influence the territorial organisation and of the role of social participation in defining and implementing programmes.

The actual number of ECTS credits devoted to European/International issues is hardly quantifiable. However, some modules touch upon these issues and contribute to provide at least for some basic elements of EU and international planning, often in relation to their local declination. For instance, the module "institutional system for urban and territorial governance introduce the different territorial level somehow having a say in the planning activities among which the EU. Furthermore, the Atelier "Integrated programmes for local development and urban regeneration" focus on programmes of clear European inspiration. Additional insights on EU Environmental regulation are provided by the unit focusing on strategic environmental assessment.

Table 4: Bachelor of Science in Territorial, Urban, Environmental and Landscape Planning at Politecnico di Torino - Structure

Year (term)	Module	ECTS
1(1)	Planning Thought and Practice	6
1(1)	History of architecture and cities	6
1(1)	Geography, environment, landscape	6
1(1)	Representation	6
1(1)	English Language 1st level	3
1(2)	Calculus	6
1(2)	Cartography	6
1(2)	Institutional system for urban and territorial government	6
1(2)	Describing, Analysing , Interpreting (Atelier) • Analysis of the settlement and infrastructure system • History and interpretation of territorial processes • Geographic and economic factors in cities and regions development	14
2(1)	Energetic efficiency of the built environments	8
2(1)	Statistics	6
2(1)	Urban Design (Atelier) • Urban design • Urban morphology analysis and design • Mobility infrastructures analysis and design	14
2(2)	Mobility and land use	12
2(2)	Spatial analysis using GIS	6
2(2)	Territorial Planning (Atelier) • Territorial planning • Landscape Ecology	14

	• Hydro geological issues in territorial planning	
2(2)	Free choice course	6
3(1)	Plan and Project Appraisal	8
3(1)	Urban sociology	6
3(1)	Strategic environmental assessment	6
3(1)	Integrated programmes for local development and urban regeneration (Atelier) • Integrated programmes and urban regeneration • Architectural aspects of urban regeneration • Territorial resources for local development	14
3(2)	Free choice course	6
3(2)	Professional Training	8
3(2)	Final essay	7

5.1.2 Master of Science in Territorial, Urban, Landscape and environmental Planning at Politecnico di Torino

The Master-level course trains "planners" able to coordinate design teams engaged in territorial, urban, landscape, strategic and environmental planning[7]. As most of the key issues concerning people's lifestyles and development prospects nowadays involve urban, territorial, environmental and landscape planning and their ability to respond to crucial problems in the environment, planners' training focuses on the development of a solid multidisciplinary background that may provide them with the capability to facilitate cooperation among the various approaches, integrating the contributions of each and managing the resulting complexities. Besides, the growing importance of development models that enhance local identities in response to globalization processes, requires that planners develop strategies, policies and projects for urban and territorial transformation focusing on a proper use of local resources and involving all stakeholders (institutional, economic, social). The planner must therefore also be able to interact with non-experts and encourage their participation in the planning process. Thus the course objective is to train a figure with a broad, multidisciplinary background and a solid awareness of all the economic, social, institutional, environmental and ethical factors involved in a planning process. Graduates must pay particular attention to innovations in the institutional and regulatory frameworks governing the activities of administration, planning and design of cities, territory and landscape in both national and European Community contexts, as well as the consequent redefinition of planning processes and tools and their relationship with local development programmes.

The typical fields of activity for MSc-level graduates are free-lance practice and employment in public, private and non-profit organisations involved in the transformation and government of cities, territory and environment. Employment opportunities include local authorities (municipal, provincial, regional), municipal

[7] (For full syllabus see: https://didattica.polito.it/pls/portal30/gap.a_mds.espandi?p_a_acc=2011&p_id_cdl=&p_sdu=82&p_cds=9&p_header=&p_anno=0&p_info=&p_lang=EN)

companies, engineering firms operating in the fields of territorial, urban, landscape and environmental planning, as well as free-lance professional practice. The programme trains professional figures able to undertake research activities, or to apply existing knowledge in the fields of planning, conservation, restoration and renewal of cities, territory and landscape, performing functions that involve supervision, management and coordination of activities.

The programme centres around two formative experiences: urban planning and landscape and territorial planning. The professional profile outlined above requires the training programme to provide students with a variety of disciplinary input, as well as develop their capacity to integrate these into a global vision of complex problems. With this aim the programme is organised in two teaching modules:

a. Teaching units providing systematic knowledge that builds and expands on the diversity of disciplinary approaches needed; these units may be monodisciplinary or consist of integrated multidisciplinary courses leading to a single examination;
b. Multi-disciplinary ateliers focusing on the definition of tools for planning at different scales, and simulating, by means of input from various subject areas, the integration of a plurality of viewpoints which is required of planning teams. The ateliers have strict attendance requirements and lead to a single examination.

The activities in the first semester are designed to give students a solid background in areas closely related to the formulation of local planning policies: regulatory issues associated with planning activities, urban and regional geography and sociology of the environment. Students must also understand aspects of network and single-point infrastructures linked to solving energetic, acoustic and environmental issues, and how to integrate these infrastructures into the urban fabric. In the second semester students will simulate a process for drawing up a plan at the local level, in addition to completing their knowledge in subject areas closely related to the formulation of planning tools, such as transport planning, and gaining a solid understanding of the role of the European Union in urban and territorial policies.
During the third semester, students will gain specific knowledge in the field of land protection and water management, allowing them to address regional and landscape planning issues and interact with specialists. They will also expand their knowledge of policies and processes for territorial and strategic planning, and will simulate a process for drawing up a territorial and landscape plan. The fourth academic period is wholly dedicated to thesis preparation. Students are given an alternative between a theoretical thesis or a practical thesis which entails an internship period.

Also in this case the focus on EU and International planning issue in spread among several modules. However, it is interesting to notice how, the Master programme features also specific modules with a clear EU and International focus, as for instance Urban and Territorial Policies in Italy and Europe and Policies and tools for environmental sustainability (suggested).

Table 5: Bachelor of Science in Territorial, Urban, Environmental and Landscape Planning at Politecnico di Torino – Structure

Year (term)	Module	ECTS
1(1)	"Inclusive planning and environmental sociology"	6
1(1)	Urban and territorial geography	6
1(1)	Energetic and environmental sustainability of the territory • "Sostenibilità energetica ed ambientale del territorio" A • "Sostenibilità energetica ed ambientale del territorio" B	8
1(1)	Planning rules and institutional context	6
1(1)	*Free choice course*	8
1(2)	Urban planning Studio • Urban planning • Evaluation and economic feasibility • Urban morphology analysis and design • History and critics of urban and territorial heritage	14
1(2)	Urban and Territorial Policies in Italy and Europe	6
1(2)	Transports Planning	6
2(1)	Landscape and territorial planning Studio • Landscape and territorial planning • Landscape analysis and design • Landscape Ecology • Mathematical models for decisions	16
2(1)	Territorial and Strategic Planning	6
2(1)	Soil defence and water management	8
2(2)	Thesis research/Internship or Theoretical thesis	30
2(2)	Public Policies Analysis (suggested)	6
2(2)	Policies and tools for environmental sustainability (suggested)	6

5.2 Education in spatial planning at Politecnico di Milano

5.1.1 Bachelor of Science in XXX at Politecnico di Milano

5.1.2 Master of Science XXX at Politecnico di Milano

6. Do the reviewed Spatial Planning education programmes meet the requirements concerning necessary EU knowledge? Conclusive remarks and future perspectives

Before formulating some conclusive remarks, it is worth to shortly assess and compare whether EU spatial planning and regional policy issues matter in the reviewed education programmes in a way that they provide graduates with basic knowledge.

An overview about obligatory and facultative contents about required knowledge in “cultural differences in planning on a European and international level” in “political,

legal and institutional context of planning practice at international and European level" could be gathered from the table below:

Table 4: Summarized results of the case studies – AESOP requirements

Case studies	**Cultural differences in planning on a European and international level**		**political, legal and institutional context of planning practice at international and European level**	
	Obligatory courses	**Facultative courses**	**Obligatory courses**	**Facultative courses**
University of Dortmund				
Bachelor	None (E) (I)	None (E) (I)	None (E) (I)	None (E) (I)
Master*	None (E) (I)	Yes (E) (I)	None (E) (I)	Yes (E) (I)
University of Kaiserslautern				
Bachelor	None (E) (I)	Yes (E) (I)	None (E) (I)	Yes (E) (I)
Master*	Yes (E) (I)	Yes (E) (I)	Yes (E) (I)	Yes (E) (I)
Politecnico di Torino				
Bachelor	YES (E)	None	YES (E)	None
Master*	YES (E)	None	YES (E) (I)	YES (E)
University of …				

*reviewed is the future situation starting in winter semester 2012/2013
Yes(E) – yes for European Level None (E)
Yes(I) – yes for international level None (I)

All in all, contents in the study programmes dealing with international and European issues are less marked than expected, though present to a reasonable extent. In the German Bachelor degree courses, Spatial Planning students are not necessarily confronted with European Spatial Planning or European Cohesion Policy issues. There is the opportunity that facultative, if a certain interest is existing, projects and/or the Bachelor Thesis can deal with those topics. With regard to the fact that Bachelor graduates can decide to start professional life without continuing studies, it is questionable if this arrangement provides them with the necessary knowledge and skill to deal with EU level issues. On the other hand, without offering any specifically devoted module, Italian Bachelor seem to be more sensitive to these issues, that are touched upon within the framework of several teaching units. This difference between the two national realities may depend both on the role planners play within them as well as on the traditional features of planning education. Furthermore, it has to be stressed that it is very rare that Bachelor graduates in planning terminate their studies, as their employment possibilities are very low due to the peculiar Italian situation.

Master programmes offer, in the German case, contents to gain knowledge in cultural differences in planning on a European and international level and in political, legal and institutional context of planning practice at international and European level, but also to a very limited extent. As far as the analysed Italian Master programme is concerned, it presents several modules touching upon EU issues, together with two

specifically dedicated modules. Whereas this provides graduates with a solid knowledge background on EU Cohesion Policy and related programmes and projects, it has to be noted that only one module is characterized by a broader perspective that goes beyond the EU borders. In respect of leadership roles of Master graduates in spatial planning working, it is strongly advisable to provide obligatory due knowledge in European spatial planning and regional policy.
In conclusion, the contents of the reviewed spatial planning study programmes seem to stress the need for specific, methodological, multidisciplinary and national legislative knowledge and turned so the scales of European contents in the new Bachelor – Master programmes. This is partly also a result of existing and binding standards study programmes need to meet concerning national associations and standards for public careers.

Nevertheless, at the next opportunity it is advisable to check whether European content could be strengthened in the curriculums. Evaluations of degree courses and graduates-surveys are good opportunities to ask students and graduates if and if yes how contents could be changed to have space for obligatory European contents.
Especially graduates-surveys should be used to get to know if they missed European issues or if training omn the job was an appropriate approach.

A short-term realizable approach to get degree courses more strengthened in terms of European issues, is to provide targeted Bachelor and Master projects and thesis topics linked with European spatial planning and cohesion policy

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POLICY STRATEGIES AND DESIGN PROCESSES: COMPETING LOGICS?

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Abstract

The future urban environment comprises the political trademarks of sustainability; renewable energy, high performance architecture and low carbon transport (DECC, 2008). Although polling confirms public agreement with the requirement for such trademark sustainable practices (Carrington, 2011), their physical manifestation in the landscape is often contentious and unpopular. Society's unwillingness to accept some of the more obvious impacts of sustainability policies on lifestyle and the visual appearance of their surroundings is especially illustrated by the reaction of individuals and organisations to wind farms (Chancellor, 2011; CPRE, 2010) and eco-towns (Peterkin & Hope, 2008). This dissension highlights a cultural disconnection between the causal drivers of sustainability policy and the design solutions those policies deliver.

Policy strategies for sustainability are intended to eliminate the risk of further environmental degeneration. However, written in isolation, policy objectives often incentivize sustainable economies (DCLG, 2012) relegating culturally meaningful design in favour of profit (Carmona, 2009). The effect of these priorities leads to design solutions that, although satisfactory in terms of policy requirements, foster cultural ambiguity, and are subsequently rejected by society (Hatherley, 2010). Whilst it is increasingly feasible that development in technologies, materials, infrastructure and techniques, can satisfy the performance requirements of sustainability policies, the questions remain: What are the consequences of target driven design? How does policy inform the practice of design? And, how are these schemes received by society?

Moreover is our sustainable future destined to be a windmill shaped cliché, or, can design make a difference?

1.0 Introduction

Sustainability is a principal concern in the production of architectural and urban form. Although it would be difficult to place an architectural practice that did not "profess passionate commitment to 'green' buildings" (Sudjic, 1996, p.7), as a mark of contingency and commitment toward climate change, planning policy advocates regulations and codes that set benchmarks for building design.

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Regulations and codes comprise “a combination of written and graphical rules” (Street, 2006: 7) and, with regard to the design of architectural and urban form, are formalised during the design processes conducted by architects and designers. Rowe (1987, p.1) identifies that “the design of buildings can be viewed in a number of ways”. In general terms he suggests that “design appears to be a fundemental means of inquiry by which man realises and gives shape to ideas of dwelling and settlement” (ibid). To do this, design thinking requires the ability to synthesise, evaluate and resolve often conflicting requirements and objectives that comprise the design problem.

Inevitably, the products of architects’ practices are manifest in urban form and therefore have indirect implications for the societies and cultures supported by it. This raises the following questions: What impact does sustainability policy have on architectural and urban form? How does it affect architectural and urban form in terms of typology and materiality? And what are the implications for cultural representation and social use?

Historically, inquiry into the consequences of policies, codes or political ideologies has relied on the retrospective evaluation of the architectural edifices and urban patterns they have informed. Carmona & Dann (2007) note a rise in support of supplementary codes in planning policy. Often these are place-specific codes with the intention of creating desirable place (real-estate). Ostad-Ahmad-Ghorabi & Collado-Ruiz (2010) articulate that the pivotal need to address sustainability issues has led to the unquestioned application of performance-based parameters, without any indication of the efficacy of these, or, how they reconcile with the processes of the designers that formalise them.

Parallel to this, Guy & Moore (2007; also see Guy, 2000; Moore, 2007) propose that sustainability has been dominated by technical and economic performance parameters evident in policy. Principally, they suggest that this detracts attention from the social and cultural implications of design and therefore question whether performance parameters are commensurable with end use. Viewed in this way, sustainability has many dimensions and Guy & Famer (2000) indicate that for these reasons it is not measurable with the simplicity that policy implies.

Circumstances such as these indicate the imminent need to examine the effects of sustainability policy strategies ahead of retrospective opportunity (Imrie & Street, 2011). This research contributes to study in this area by examining the structure of sustainability code in the context of the design process. The research draws analogies between the structure of policy strategies and modernist rational design processes. It considers possible tensions between the two paradigms, looking specifically at the consequences of this for typology and materiality of design solutions.

2.0 The Structure of Policy Strategy

Stemming from a global concern for climate change, the need for sustainable architecture and urban form originates in international agendas to reduce harmful emissions. At the building scale, this has resulted in the emergence of regulations and codes that set performance efficiency benchmarks as an aid to substantiate claims of 'green' building. According to the Building Research Establishment [BRE], their Environmental Assessment Method [BREEAM] is the "leading and most widely used environmental assessment method for buildings" (BRE, 2012a). Dwellings are commonly assessed using the Code for Sustainable Homes [CSH], also initially developed by BRE. Both are endorsed by legislative planning policy (DCLG, 2012; BRE Global, 2010), which encourages their adoption in the early stages of building design.

BREEAM	Score
Outstanding	85
Excellent	70
Very Good	55
Good	45

CSH	Score
Level 6	90
Level 5	84
Level 4	68
Level 3	57
Level 2	48
Level 1	35

Category	BREEAM	CSH
Management	12	10
Health & Wellbeing	15	14
Energy	19	36.4
Transport	8	na
Water	6	11.2
Material	12.5	7.2
Waste	7.5	6.4
Land Use & Ecology	10	12
Pollution	10	2.8
Total	100	100
Innovation (additional)	10	

Figure 1. BREEAM performance ratings, categories and credit weightings.

The categories presented in figure 1 provide the framework for a point-based system that measures performance. The system has "three main functions: simplification, quantification and communication" (Kirkpatrick, 2009, p.18). Effectively, they are designed to provide a comprehensive construct of reality (ibid) and in doing so it is assumed that point-scoring is causal. This means that the complexity of reality is reduced to a linear system in which the code implies more points equate to greater sustainability, regardless of design processes or subsequent utilisation (Carmona, 2004).

In summary, sustainability codes are "de facto measure[s] used to describe a building's environmental performance" (BRE, 2012a). To do this they simplify and quantify expectations of reality in order to make predictions about the performance of a building; offering certainty that emissions will be reduced and therefore the resultant building minimizes its negative impact on the environment. In turn, this validates that progress is being made towards meeting overarching targets such as the Climate Change Act. In short, the relationship between cause (the targets of

objectives) and effect (the consequences of meeting targets) is linear for the purpose of comprehensibility and predictability: The primary effects of objectives are therefore the raison d'être of policy, explaining the significance and emphasis of codes as planning and design devices.

3.0 The Structure of Design Processes

Design process refers to the sequences followed by designers to arrive at a design solution. Design methods are descriptions of the tasks performed during the sequences. Whilst "designers are traditionally identified not so much by the problems they tackle as by the solutions they produce" (Lawson, 2006, p.53) the design process initiates with the design problem.

For architects, the client commonly delivers the design problem. Lawson (2006, p.58) points out that, "design problems are both multi-dimensional and highly interactive" and he suggests that the requirements of the client form only part of the problem, with other stakeholders in addition to the site context and policy requirements contributing to the many dimensions and the complex relationships between them. Forty (from Clark & Brody, 2009, p.16-19) adds to this his conception of design solutions as expressions of society and politics: He considers the designer as the translator of these ideas into objects. From this, it is visible that there are many considerations and constraints in the design problem; too many to map, and some that are never consciously conceived.

During the mid twentieth century, a body of research emerged that specifically addressed design problems in a search to establish a universal method for problem resolution (see, Broadbent, 1969; Moore, 1970). This was sparked by Herbert Simon's (1947) conviction that the human mind was limited in its ability to resolve multifaceted problems that arose in modernizing society. Consequently, a plethora of theories emerged; from Alexander's (1964) formulaic tracing of all components and subcomponents in a problem, to Rittlel's (Protzen & Harris, 2010) concept of wicked problems that acknowledged large areas of uncertainty in design problems. This modernist movement of design methods seemed to prove that the human mind was not necessarily limited in its capacity to solve problem, as much as it was limited in its ability to identify every aspect of large complex problems.

Wahl & Baxter (2008) identify that the wicked nature problems (in terms of problem ambiguity) is still prevalent in design issues that arise from the desire for sustainable architectural and urban form. Defining design solutions is therefore an ineffable task that involves complex, non-linear thinking (see Teal, 2010) to resolve multiple constraints.

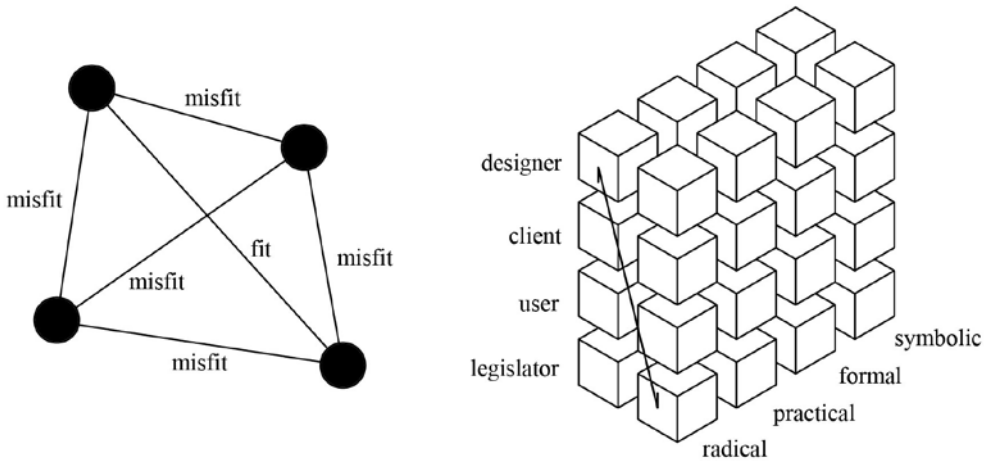

Figure 2. Paradigms of Design Problems
Left: Christopher Alexander's perception of design problems (1964, p.2).
Right: Lawson's model of constraints that structure design problems (2006, p.106).

4.0 Comparing Structures

The view of the architect as "heroic form giver" (Bentley, 1999, p. 28) supports the misconception that the architect operates autonomously. This is a sentiment recently resonated by Professor Carlos Ratti where he described the Le Corbusier as having the "hand of god"[4] (Ratti, 2012). The purpose of this was to point toward increasing integration of technology in design process and inevitably in design solutions. In a similar vein, Yaneva (2009, p.102) conveys; "the master architect is not a lone genius", they are in fact supported by the design team that surrounds them and importantly for Yaneva, the materials they use.

For Imrie (2007, p.926) this misconception of the role of the architect obscures the reality that architects and urban designers are dependent on external forces (discussed in section 3.0) and with this he makes specific reference to the "rules and regulations that codify and regulate architects' practices". These two perspectives present "architecture [as] a dependent discipline" but also "as [a] profession and practice … which does everything to resist that very dependency" (Till, 2009, p.1): A paradox which suggests that design and policy have perennially been at odds.

[4] Professor Carlo Ratti put forward this view of Le Corbusier in a presentation made at the Smart Cities Conference, University College London, 20th April 2012.

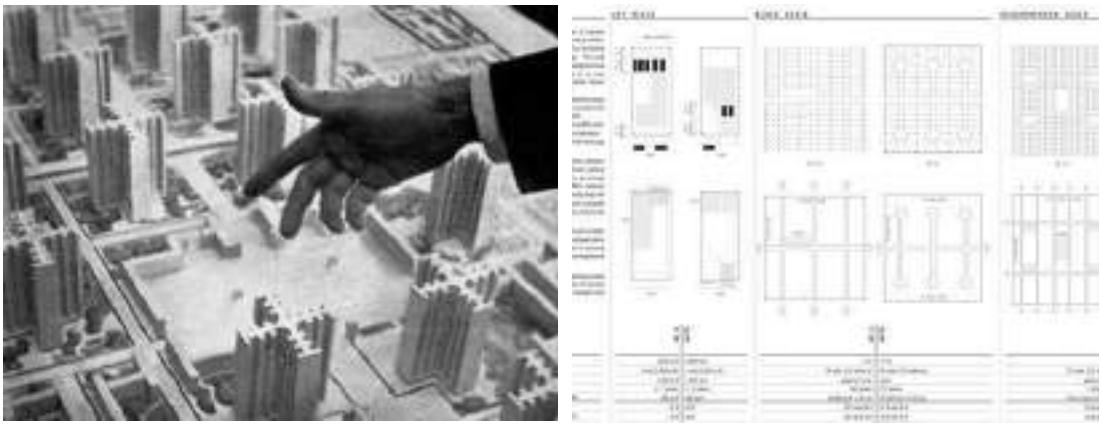

Figure 3. Who's in Charge Here?
Left: La Ville Contemporaine, Le Corbusier.
Right: Extract from New Urbanism Public Streetscape, Duanny Plater-Zyberk & Co (2002, p.31)

Section 2.0 presented the structure of policy: Revealing how current objectives for sustainability are predicated on comprehensive, deterministic logic and deriving optimum solutions. In this regard, it addresses the design process as a 'black box' (Jones, 1992), and assumes that the output from the box will perform in the manner anticipated by the input.

Section 3.0 presented the ineffable nature of design process: It showed that present understanding of design problems were predicated on models that referred to the relative flexibility of constraints within those problems, of which, legislation was the most rigid.

This builds up a picture of two contrasting logics: Of the linear and deterministic objectives of policy, and of the entangled complexity, minimally structured, processes of design. Furthermore, it is a contrast analogous to the tension between "biological determinism … and free expression" that Colquhoun (1969, p.73) observed during the height of the modernist design methods movement.

Rational design methods, Colquhoun identified, were derived from biological determinism: This is the idea that the genotype of an organism is the sole informant of its behaviour and its development. It contrasts with the findings of D'Arcy Wentworth Thompson's (1917) allometric study, which indicated that environmental forces were determinants of an organism's structure. Nature, seen to 'design' itself (freely self-regulate and adapt), has frequently served as an ideological model of design as both noun and verb. Therefore, applied to design method, for design theorists such as Tomaś Maldonado (1972) biological determinism defined the need to map the genetic makeup of design problems in order to derive the optimum solution.

The problem with this was that the process of defining the whole design problem was untenable. The consequence of this for design solutions was that "without sharper tools for analysis and classification, the designer tends to fall back on previous examples for the solution of new problems" (Colquhoun, 1969, p.71). Putting forward a remedy, Colquhoun contended that the "exclusion" of conventions, would challenge the "reduction" of traditional typologies that prevailed in solutions.

"*The process of change must involve a dialectical relationship between those parts of the system that are resistant to change (because they are conventional) but changeable (because they are arbitrary); and those parts of the system which depend on natural laws which progressively come to light under the pressure of new technology*."

(Colquhoun, 1969, p.74)

In contradistinction to Simon's (1947) conviction that human intuition was incapable of dealing with the complexities that comprised modern design problems, Colquhoun proposed that intuition, unleashed from convention could address consistently changing circumstances.

Policy criteria could be considered analogous to Alexander's (1964) rational methodology: In *Notes on the Synthesis of Form*, the design problem is aggregated into constituent components that make up the whole. Any sub-problem in this system can exist in the binary states; 'fit' or 'mis-fit'. Each problem must be resolved to an equilibrium in which all components 'fit'. Although Alexander later readdressed this proposal (Alexander, 1966), Lawson (2006) discredits the original for its equal weighting of problems because he considers that designers often make unconscious judgments about the relative significance of issues to be resolved.

Whilst rational design methods may have been discredited, their formulaic approach to design is analogous to the performance-based parameters defined by sustainability polices and codes. Referring to the US LEED system, Garde (2009, p.438) points out that assessment methods for sustainable development often evaluate factors of the built environment equally, "because it is difficult to determine the relative importance of criteria" out of context: He conveys that the variation in location and design requirements make it difficult to tell how much specific objectives in the code will contribute to sustainability in a specific circumstance. Notwithstanding this, the point based system of codes weigh parameters equally.

Parallel to this, Wahl & Baxter (2008) argue that the parameters set by sustainability policies pursue environmental performance objectives potentially at the expense unquantifiable requirements. They recognize that the environment undergoes continuous adaptation, identifying that sustainable development is commonly appreciated as equilibrium between society (and its systems) and nature: It is considered a process of communication and adaptation analogous to that of evolution. In this respect sustainability cannot be explicitly determined as a sequence of objectives that represent social, economical and environmental requirements,

because the nexus of values it constitutes are constantly evolving. (ibid, p.72-73)

5.0 Design Workshops

Taking precedent from studies of the effect of constraints on the design process (see, Chan, 2001; Ostad-Ahmad-Ghorabi & Collado-Ruiz, 2010) a series of workshops were conducted to gather data that would allow further inquiry into of the implications of policy strategies and design processes.

Three workshops were held in 2009 and 2010. Two of the workshops involved undergraduate, cross-disciplinary art and design students in their second year and one comprised postgraduate students in architecture who also had experience in working practice. Many of the postgraduate students studied part time, working in practice for the majority of the week. Postgraduate and undergraduates participants were specifically sought for their anticipated distinction experience and knowledge.

Workshops took place in the first semester of the year and spanned a twelve-week period, meeting for three hours each week. During the meeting hours, design activities were conducted, which included group discussions and brainstorming for generation of ideas. Participants were provided with a framework within which they would generate their own design brief including the context which it addressed. This was intended to resemble the format of the RIBA Plan of Work (2007; illustrated in Figure 4).

	RIBA Plan of Work (to stage E)		Workshop Framework
Preparation	A	Appraisal	Define Sustainability
			Acknowledge Legislation
			Explore Problems
			Examine Precedents
	B	Design Brief	Compare Problems and Precedents
			Identify Design Task
Design	C	Concept	Generate Design Proposals
	D	Design Development	Design Development
	E	Technical Design	Solution Justification

Figure 4. Workshop format in the context of the RIBA Plan of Work (2007).

Outside of the workshop hours participants progressed their designs, documenting thoughts, research and analysis that helped formulate ideas and formalize design solutions in design reports. Progress was presented and discussed each week. Finally, at the end of the workshops, participants produced a 500 word summary of their design and the reasons they considered their design to be sustainable in accordance

with the code. These presentations and written statements form part of the data, combined with notes that document verbal presentations.

Central to setting their own design brief, participants were required to identify the problem to be addressed. At the outset, this involved asking participants to provide personal definitions of sustainability. Parallel to this, all participants were encouraged to consider what sustainability meant for society in the context of urban form. No limits to the term 'urban form' were implied and as a result of this, the solutions produced were naturally varied. A total of 31 projects were produced, of these, 17 concerned building production or physical changes to urban form. This equated to 50% of undergraduate designs critically focussed on built form, compared to 80% in postgraduate proposals.

Figure 5. presents key information about workshop participants and the solutions they produced. Firstly, it provides a breakdown of the mix of disciplines involved in the workshops. Over half the participants involved studied architecture, and although roughly the same amount of designs produced concerned architectural and urban form, the type of solution produced did not necessarily correspond to the discipline of the participant.

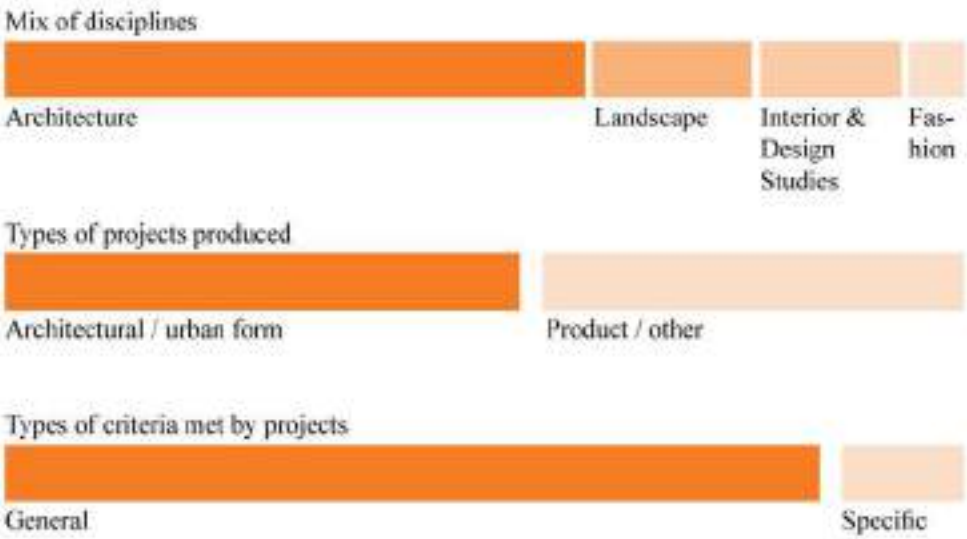

Figure 5. Quantitative summaries of participants and solutions.

Solutions could be divided into those that met general criteria, and those that were more specific about responding to particular regulation and code criteria. Here, 'specific' refers criteria derived from the technical documents of the Building Regulations, BREEAM and CSH. 'General' refers to umbrella targets, such as the Climate Change Act (2008).

5.1 Outcomes of Specific Criteria

Postgraduate participants took a greater interest in the specifics of code, with a 50/50 split between general and specific in this group. It is assumed that this related the more advanced experience and knowledge of practice and the discipline in general of postgraduate participants: Therefore, the codes they explored and the solutions they proposed were a consequence of the nature of the problems they typically address on a daily basis.

Only one undergraduate project met with specific criteria. This project met specific criteria by making a polemic statement about the nature of policy: They projected that the most simple method by which to meet policy criteria was to replicate existing precedents. In this case the participants proposed that new buildings could be designed by compiling elements already proven to satisfy regulation, taking into account only generic contextual conditions, most of which related to climatic conditions. Additionally, their work stretched to suggest a sample of retrofitting techniques that could bring existing building stock up to current specification. Building variations and components were proposed in a catalogue from which prospective clients could affectively assemble their own building from prerequisite, BREEAM certified parts. Solutions that comprised contextual interventions were not so far removed from this polemical statement:

The Compositional Paradigm
Materials and technology were prevailing concerns in three of the four projects that followed specific criteria. From the projects collated, it was clear that in addressing specific criteria certain building materials and technologies implicitly related to meeting particular code criteria: In these circumstances, the process of design becomes one in which relevant materials and technologies are assembled in the best possible way in relation to the site. A compositional design paradigm, therefore, provides the predictability necessary to acknowledge (measure) direct links between input (code) and output.

From the workshops it emerged that there were two consequences of this (see Figure 6): Designs either appear indistinguishable; often adopting desirable vernacular typologies and relying on materials to improve energy efficiency and performance, or, design adhere to contemporary typological conventions, incorporating often visible, technological additions that satisfy policy criteria. This is an observation which is not only visible in the design solutions produced in the workshops, but on that is also prevalent in built examples of sustainable architectural form, in particular the examples displayed at the BRE Innovation Park (see Figure 6).

Figure 6. Exemplar sustainable homes at the BRE innovation park:
Left: The undistinguishable - The Prince's House, The Prince's Foundation (BRE, 2012b, p.26-27)
Right: The conspicuous - The Sigma House, Rexel Energy Solutions & Stewart Milne Group. (BRE, 2012b, p.20-21)

5.2 Outcomes of General Criteria

Consensus among projects that explored general criteria acknowledged sustainability as a need to reduce greenhouse gas emissions. Not only did they generalise their proposals to this broad target, but also in doing so, they adopted or challenged no more than four approaches to reducing emissions (see Figure 7).

With general criteria, there was also a clear link between input and output, which drove subsequent design processes. Participants defined sustainability at the outset of the workshops in one of two ways: Providing descriptive definitions of problems, or by identifying precedent solutions. Those that provided descriptive accounts of sustainability tended to focus on society's relationship with emissions. Much of this work made observations about the tensions between the need to propose fundamentally different strategies for future living, within the existing urban context. Solution-orientated definitions in many cases included popular building precedents marketed for high BREEAM, LEED and Green Star ratings.

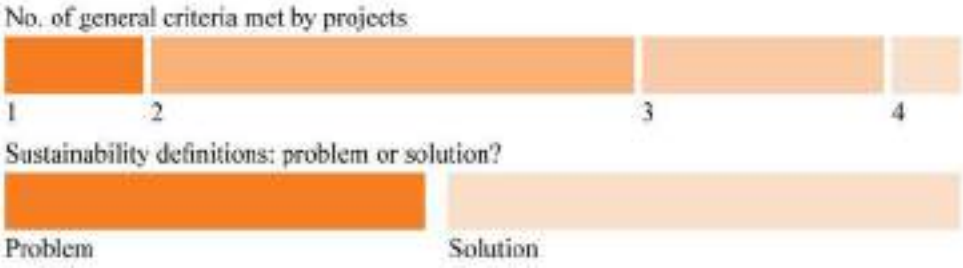

Figure 7. Sustainable criteria and definitions

Participants with descriptive accounts commonly observed problems and proposed problem specific solutions. This paradigm will be referred to as the observational paradigm. In contrast, participants that provided solution-orientated definitions of sustainability went on to produce designs that that shared remarkable similarities with the precedents identified and explored in the first week. This paradigm will be referred to as the iterative paradigm.

The Observational Paradigm

In the observational paradigm participants examined existing theories and definitions of sustainability in the first week, expressing tensions between these and current social and cultural attitudes towards sustainability. Design processes in this paradigm examined the tension identified and explored a variety of design fields searching for precedents of similar problems, rather than looking for solution precedents (as can be seen in the iterative paradigm). The outcomes in this paradigm displayed varied characteristics and consequently, these types of solutions divided relatively equally between built and urban proposals and otherwise, though this corresponded to 55% of participants producing a solution that didn't reflect their original discipline (see Figure 8).

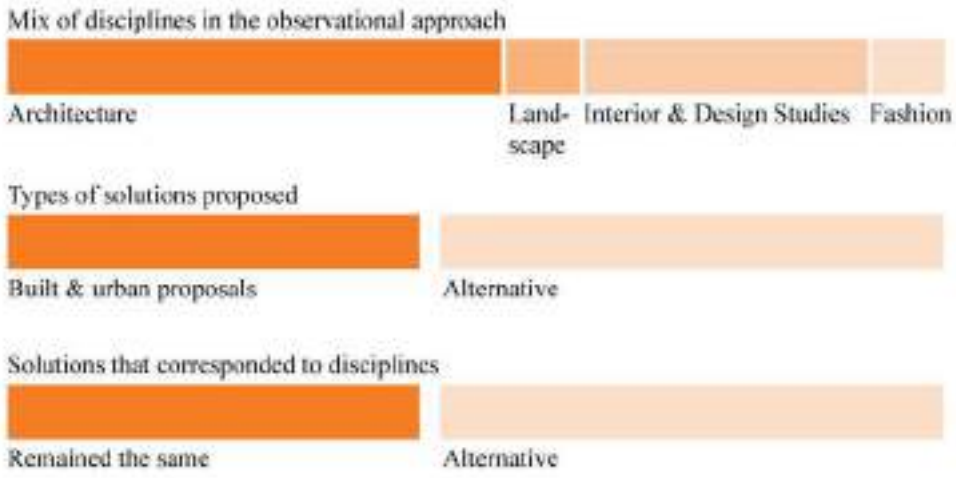

Figure 8. Solutions and comparative disciplines of the observational paradigm.

The Iterative Paradigm

Designers that followed the iterative paradigm presented solution-orientated precedents of design (in a variety of scales and products; from buildings to household items) already nominated 'sustainable'. They tended to present key facts concerning these artefacts and edifices, as though these were definitive descriptions of, or solutions to, sustainability. Following their exploration of sustainable precedents in the first week, designers that followed the iterative paradigm sequentially produced variations on the themes addressed by their selected precedents. Notably, their design

solutions, deconstructed into components, showed in many cases, marked similarities to the images that had been presented at the outset. Accordingly, solutions tended to be built or urban forms since built form prevailed at the outset. In marked contrast to the observational paradigm, participants that demonstrated the traits of the iterative paradigm, tended to produce solutions within the realm of their original discipline.

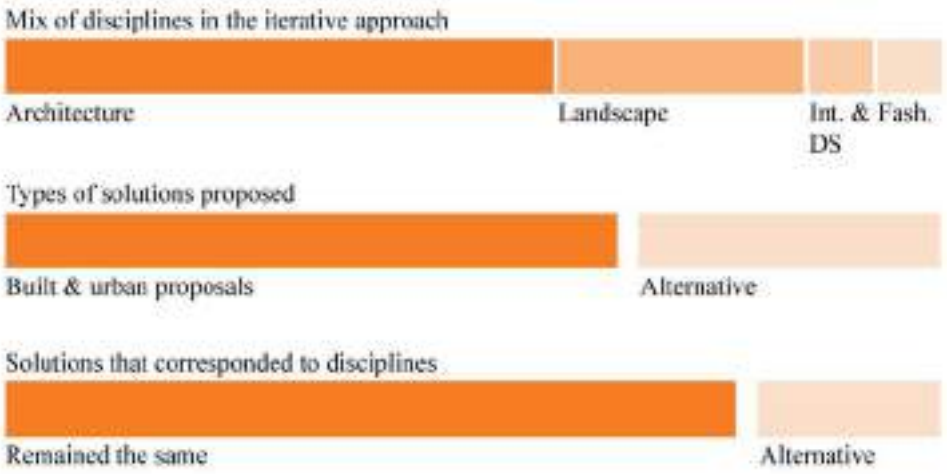

Figure 9. Solutions and comparative disciplines of the iterative paradigm.

5.3 Discussion and Evaluation

Coleman's (2005) inquiry into *Utopias and Architecture* articulates how design ideals for architectural and urban form are preoccupied with uniting fragmented theories and forms as well as providing contingency. The theoretical appetite for coherency stems from the often incomprehensive-messiness of reality (in this case specifically of cognitive design processes. Till, 2009). Referring to Zygmunt Bauman (1991), Till (2009, p.28) argues that ideals are born out of a fear for uncertainty, therefore, the ordering of architectural and urban form is a means of making sense of civilization and shaping a more predictable future (Bentley, 1999, p.27). The results of workshops carried out support the principle that codes and coherency are idealistic bedfellows.

In similar research, Clevenger & Haymaker (2011, p.449), in addition to Ostad-Ahmad-Ghorabi & Collado-Ruiz (2010), provide statistical analysis to show a link between sustainability codes and a reduction in creativity. Their statistical approaches require the quantification of creativity, and as such these examples have particular interests in examining the cognitive processes as much (if not more) than the outcomes of those processes. They consider that the nature of design policies, as "incremental approaches" is isolated from the creative and predominantly social process of design (ibid, 2010, p.480). They argue that design policies for sustainability are predefined by existing technological conventions that influence typology, materials and function. They suggest that policies (or 'eco-design strategies' as they refer to them) are driven by economics and the requirements of the

market. As such, these forces encourage the specification of materials, the reduction of material consumption and performance targets such as strength or capacity to retain heat. Simply put, they infer that the object to be designed is often predefined and that code is simply used as a means of environmentally considerate refinement and measurability.

Predictable design outcomes are useful for measuring sustainability. However, as Guy & Farmer (2000) indicate, it does not necessarily respond well to user requirements or future needs, nor, as this study has shown, do they produce the most innovative results.

6.0 Conclusions

The research set out to examine the consequences of sustainability codes for design. It identifies that codes present well-defined problems. For example, they refer to specific building elements, and impose targets or limits on the performance of that element. In this regard, sustainability codes are predicated on a form of logic that demands linear and causal outcomes, enabling design solutions to be measureable against those outcomes. In contrast to this logic, the paper has also shown that the design processes of architects and urban designers are ineffable activities in which sustainability codes are formalized. This presents a 'black box' in which code is input in the setting of the broader design problem, its constraints and requirements.

Workshops provided a test bed for the hypothesis that architects and designers in the construction industry would produce more predictable outcomes when responding to policy criteria. Trends in the data indicate the validity of this hypothesis, and suggest that certain methodological approaches to design, in addition to cross-disciplinary influence, tend to produce more innovative solutions to sustainability policies. It follows from this that the logics of policy strategies and design thinking play a principal role in driving sustainability. Consequently, this paper suggests that the complex and non-linear process of design thinking could be said to conflict with the linear mechanisms and causal expectations set out in design codes:

Research findings suggests that where a greater number of specific design codes are imposed on the design process, the design outcome appears to be more predictable (conventional), meaning that the design solution often looks familiar and uses technologies and materials in a intended manner. Where targets were less specific, design solutions tended to demonstrate a broader exploration of the fundamental problem and propose designs based on observations of how domestic and urban environments were currently utilized by society. Rather than exploring how to apply conventional technologies and materials, designers appeared to explore alternative fields in order to produce unique solutions. This aligns with Lawson's (2006, p.43) view of design as a solution finding process. Lawson proposes that, by comparison to scientists, who tend to "[focus] their attention on understanding the underlying rules" architects can be seen to focus on "achieving the desired result" and with this

technique, designers are suited to solving ill-defined problems (see, Horst Rittel's definition of wicked problems in Protzen & Harris, 2010).

The results of this research show that codes, set out in a format that specifies many specific performance requirements, encourage the scientific problem solving method: This means that code, forces designers to pay attention to the underlying rules (defined by the code) of sustainability. In this context, codes are supplemented by guidance produced from within the professional institution and elsewhere that indicate suitable approaches, technologies and materials that can help meet code criteria. Consequently, design outcomes embody these techniques and at the same time are constrained by the possible combinations of solutions offered by these techniques. The benefit of this is that design is more easily measurable, but nevertheless, predictable.

Predictability, as Colquhoun (1969) proposed can be considered as the repercussions of the competing logics of rational methods (in this instance policy) and the reliance on the knowledge of past solutions as function of traditional design technique. In contemporary circumstances it could be argued that precedents and tradition are further encouraged by guidance provided professional institutions and QANGO's.

Sustainability requires drastic change. However, policies pursue rather incremental changes. If design process and code remain in conflict such changes are unattainable. This research provides proof of principle that design can make a difference.

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Integrating the water demand approach in the planning practices to face drought risk in the Potosí district (Bolivia)

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Abstract

There is not agreement with reference to drought definition (Palmer, 1965; UNCCD, 1994; Wilhite, 2002; Mishra and Singh, 2010) and it has direct consequence in the lack of a common and shared strategy to cope with such hazard. Nevertheless, drought can be considered as a typical slow-onset phenomenon, which operate at different temporal scales, from days to years and these are relevant depending on water resources and uses of interest. The traditional supply-driven water management approach views the water needs of the community as "requirements" that must be met and not the "demands" that are changeable (Gleick, 2000; White, 2006; Kampragou et al., 2010). This traditional approach has led to over-use of the resources, overcapitalization, pollution and others problems of varying severity (Pahl-Wostl, 2007). With reference to our case study, we illustrate the analyses of different applied measures related to the water demand approach to increase the resilience of the community in the area of Uyuni and Tomave (Potosí district, Bolivia) to face droughts and desertification. On one hand, the local knowledge integrated with expert knowledge have been used to develop an early warning system in order to monitor and provide early warning of an emerging drought to avoid or reduce the impacts of a drought event. On the other hand, within the water demand approach, a water pricing policy and a water meter campaign have been put in place to count the amount of water used by different users and to reduce wastage of water. Moreover, international support programs are implementing both irrigation systems to support the rain-fed agriculture and a more sustainable land use management to cope with future drought events and climate change effects affecting, in particular, water availability in this area. Consequently, the study highlights how the need to built resilience in water demand poses the challenge of building integration between the water sector and development planning, which are traditionally separated domains. Moreover, it underlines the importance of a shift from a reactive approach, which is still widely applied in Bolivia, to a proactive hazard management in order to cope with future events.

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1. Introduction

A clear, universal and shared definition of what can be labeled like drought has not been achieved yet (Palmer, 1965; UNCCD, 1994; Wilhite, 2002; Mishra and Singh, 2010). Nevertheless, looking into drought definitions, two main categories can be highlighted: conceptual and operational definitions. The former states in relative terms (e.g., a drought is a long, dry period), while the latter aims to identify the onset, severity, and termination of drought periods. Drought is often referred to as a creeping phenomenon due to the fact that the onset as well as the end of a drought are difficult to determine, the impacts of a drought increase slowly, often accumulate over a considerable period and may stay for years after termination. Consequently, it is necessary a change in the way of managing water as well as its integration within a participated spatial planning to assess the implications for water of new developments, proposed changes in land use and to adopt a proactive approach in order to face such risk.

2. Description of Study Area

The municipalities of Uyuni and Tomave lie in a plain at an elevation of 3,700 m above sea level in the (Potosí district, Bolivia) in the Southern Bolivian Altiplano. The altitude of the plateau as well as the presence of the Uyuni Salt Flat with a surface of 12.500 km2 affect the weather and define many of the ecological aspects of the area. The area is characterized by an arid climate, with extreme temperatures that range from -20°C to 30°C. The air is thin and transparent, thus the irradiation is high, while humidity is low reducing heat diffusion. Furthermore, winds in the region are very strong (can reach speeds exceeding 90 km/hr) all year, which have a relevant impact in terms of soil erosion. Consequently, a negative evapotranspiration and a deficit in rainfall (around 150mm per year) bring prolonged drought, cause a very irregular rainfall. The probability to have a drought event in this area is one every two years (Statistic Service of Potosí District, 2011). Moreover, a high solar irradiation combined with wind cause rapid evaporation.

3. Climate Change Effects

The Bolivian population has always been exposed to extreme hydro-meteorological and climate variability, particularly the influence of El Niño (ENSO), which regardless of climate change occurs periodically in different areas of the country (World Bank, 2010). According to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), arid and semi-arid regions are particularly sensitive to possible decreases in rainfall. The IPCC (2007) estimates that increasing the temperature to South America will be between 1.8°C-4.5°C and precipitation changes from -12 to +12% by 2080. Although the manifestations of climate change in Bolivia are still little studied, the contributions are based on: a) scientific observations point b) local perceptions little systematized, and c) generated according to climate models that still have high levels of uncertainty. Besides

demonstrate acceleration in the increase of temperature, Vuille & Bradley (2000) and Francou et al. (2003) observed a clear relationship between the melting of glaciers and El Niño events. Also, a study of the National Climate Change (NPCC, 2007) complements this temperature rise in the Andes from observations on the incidence of malaria in highland communities. The IPCC (2007a) adds that the increase in atmospheric temperature has led to an acceleration of glacier retreat in the Andean region, with consequent impacts on water availability and the generation of hydroelectric power. According to Ramirez et al. (2001), higher temperature increases in the coming years will affect considerably the Andes. This statement has is sustained by a recent report regarding the effects melt glacier phenomenon on the communities living in the Bolivian Altiplano (Agua Sustentable, 2010). Whereas, in a study related to the impacts of climate change on the rainfall trends in Bolivia, Seth identifies a decrease in precipitation in spring (September-November), which would affect the water resources. This trend is coherent with what has been observed by a study conducted by the PNCC (2000) based on the Normalized Difference Vegetation Index (NDVI) showing a reduction between the months of September to October and increased in the month of November, which evidence of a shortening of the rainy phase. Consequently, such decline would be exacerbated by lack of management strategies, information on climate change and institutional constraints. Therefore, in this context, mitigation and adaptation mechanisms for sustainable management of water resources are critically needed.

4. Water Management: Changing Paradigm

The traditional supply-driven water management approach views the water needs of the community as “requirements” that must be met and not the “demands” that are changeable (Gleick, 2000; White, 2006; Kampragou et al., 2010). Gilbert White (2006): “The old paradigm of designing the cheapest reliable supply with little attention to demand determinants, pricing structures, and financing policies is no longer suitable. Moreover as it has been recognized that the traditional approach is unable to cope with rising water demand and meet changing standards in water uses (Kampragou et al., 2010). This traditional approach has led to over-use of the resources, overcapitalization, pollution and others problems of varying severity (Pahl-Wostl, 2007). Gleick (2000) underscores the significance of demand management, as a tool for adaptive water management, since the construction of large-scale water supply is hindered by social, economic and environmental constraints. Furthermore, given the nature of developing nations, much of the “saved” water will immediately be used by others, most obviously by “tail enders” on the irrigation canals or those with inferior riparian rights, or by women and small farmers who previously had less water than they needed for their livelihoods (Gumbo et al., 2005). A shift toward a water demand management approach may produce important impacts, such as enhancements in economic, social or gender equity, although the direct outcome is not an absolute reduction of water use. Hence, WDM do not aim just to change quantities and distribution of water, but if realized in appropriate ways it may have even impacts on the environment as well as enlarge participation in decision-making process.

4.1. Water Monitoring and Water Pricing

In the planning documents of the municipality of Uyuni which defines the vision for the future of the city, it is underscored how the sustainability of the water distribution service is still very fragile due to lack of investment to cover the largest percentage of claims and further the cost of water is based only on a low water consumption (PDU, 2007). Any differences in prices due to water usage in peak-hour usage or exceed amount of water consumed can be underlined and such regulatory practice is not taken in consideration for the future. Water pricing should be considered as a mechanism aiming to financial sustainability instead of a tool to regulate water allocation. Only if the financial costs are recovered can an activity remain sustainable (Savenije and van der Zaag, 2002). In 2007 the Water Cooperative of Uyuni (WCU) distributed through the pipeline water to 3,300 homes with a fee of 6.00 bolivianos (Bs) per five cubic meters of water. As underscored by WCU during the interview (09.2011), since 2007 to July 2011 the fee increased to 10.50 Bs for 8cm3, while, today, the price has risen at the quota of 13 Bs per eight cubic meters of water, which is the monthly average consumption per a family composed by (4-5 people). Furthermore, in 2007 only the 30 % of beneficiaries had a water meter, whereas since July 2011 a project (ending in 2013), which aims to install water meters in order to cover all the beneficiaries and to monitor the water consumption, has been up in place in Uyuni. Indeed, as pointed out by WCU the actual fees do not cover service costs. Thus it is necessary to regulate consumption (billed authorised consumption and unbilled authorised consumption) and revised the apparent losses unauthorised consumption and metering inaccuracies due to lack of investment to cover the largest percentage of claims and the cost is considered low for water consumption.

4.2 Education and Capacity Building

The Water Cooperative of Uyuni in collaboration with the municipality of Uyuni have identified and listed the priorities both for urban and rural area which aim to strength drinking water requirements, minimum equipment support for operation and maintenance as well as tracking and monitoring to ensure water quality (drinking). While, in rural as one of the main priority is to develop information campaigns to improve the sustainability of water projects and to involve a wider number of communities to contribute to exchange experiences between different programs working in drinking water and sanitation in the rural area. Notwithstanding, as stated by Gumbo et al. (2004), an important element in water demand management is to examine skills and the training needs of who compose and carry out water management programmes. Consequently, trained users and manager are a key factor to develop a worth conservatory plan. Since 2011 a project to increase the awareness of stakeholders, mainly with reference to householders and tourist facilities owners, has been promoted by the Water Cooperative of Uyuni. The campaign based on advertisement shows how the water-saving devices can contribute to saving water and promotes their installation. Awareness of rights and obligations by water users is

usually not so high. Thus, information campaigns on water-saving options at home, education programmes in schools and financing educational programmes among different stakeholders can stimulate a more active public participation in water-saving effort.

4.3. Water Management: The issue of water quality

The difficulties in the lack of coverage and quality of drinking water is a cause for the municipality low health profile, even if some differences can be highlighted between urban and rural area (PDMU, 2007). In the municipality of Uyuni the percentage of potable water coverage by pipes is around 69.32% while the different boroughs have the following drinking water coverage: 48.33% Coroma, Chacala 50%, 25% and Pulacayo Sows 90% (INE, 2005). Furthermore, the water supplied is not secure, there is neglect in the chlorination and disinfection, residual chlorine do not guarantee a permanent, operation and maintenance are not adequate, which means a growing deterioration of drinking water systems. Water pollution is one of the main problems and due to it is estimated that 80% of diseases are waterborne, childhood diarrhea are the leading cause of death (PDMU, 2007). Uyuni belongs traditionally to the mining sectors and the characteristic of such activity is to have a highly polluting discharges of acid mine drainage.

UYUNI						
	1992			2001		
Houses	**Total**	**Urban**	**Rural**	**Total**	**Urban**	**Rural**
number of home (Hogares)	7001	3191	3810	7203	3522	3681
number of housing (Viviendas)	4864	2655	2209	5130	2810	2320
Services						
with kitchen and bathroom	879	745	134	1536	1236	300
with kitchen or bathroom	2846	1312	1534	2867	1274	1593
no kitchet and no bathroom	1139	598	651	727	300	427
Water source						
piped	3363	2457	906	3556	2746	810
tank truck	72	19	53	2	0	2
well	959	72	887	1234	21	1213
Stream (or water surface)	365	12	342	288	1	287
other	105	84	21	50	42	8
Water toilet drainage						
drainpipe	262	162	100	636	580	56
septic room	273	262	11	144	119	25
other	556	516	40	966	706	260
no toilet	3773	1715	2058	3384	1405	1979

Table 1 – Housing Conditions in Uyuni (INE - Statistic Municipalities Atlas, 2005)

Furthermore, as it can be seen in the table 1 there is a relevant lack of a proper sanitary sewer system. In the town of Uyuni the extension of the water net is around 33%, while household connections reach 22% and the municipality does not have any wastewater treatment. It is worth noting that, on one hand, the municipality does

not have any wastewater treatment; while, on the other hand, even if 60% of the garbage is organic matter, the remaining 40% is composed mostly by solid waste such as household, commercial, hospital, industrial, which are deposited in rivers, streams aw well as vacant lots and uncontrolled dumps resulting in an overall deterioration of the environment. While in the rural area *"curaca cobrador"*, who is elected by the community and is in charge for one year, has to manage and control of water distribution. In the rural area of Tomave, water to people living in villages is provided by two different systems: on one hand, piped system distribution, which delivers water to 1671 houses located in a village (44.8%); on the other hand, *"mingitores rusticos"* (well), which serves 685 houses located in a village (18.3%); whereas people do not live in villages extract water mainly from streams (36.1%) or *"ojos de agua"* (springs) (Table 2).

TOMAVE						
		1992			**2001**	
Houses	**Total**	**urban**	**Rural**	**Total**	**urban**	**Rural**
Number of Houses (Viviendas)	4861	0	4861	5014	0	5014
Number of Houses (Hogares)	3150	0	3150	3726	0	3726
Services		0			0	
with kitchen and bathroom	175	0	175	221	0	221
with kitchen or bathroom	2363	0	2363	2877	0	2877
no kitchen and no bathroom	612	0	612	628	0	628
Water source		0			0	
Piped	627	0	627	1671	0	1671
Tank truck	18	0	18	0	0	0
Well	551	0	551	685	0	685
Stream (or surface water)	1945	0	1945	1346	0	1346
Other	9	0	9	24	0	24
Water Toilet drainage						
drainpipe	29	0	29	23	0	23
septic room	6	0	6	17	0	17
Other	172	0	172	229	0	229
No toilet	2943	0	2943	3457	0	3457

Table 2 – Housing Conditions in Tomave (INE - Statistic Municipalities Atlas, 2005)

Furthermore, the data related to number of houses having a kitchen or a bathroom should be read in favor of the presence in the house of a kitchen as result by informal interviews done to local people in 2011 in the municipality of Tomave. Quality is a major problem even in the rural areas due to lacks both of quality management trainings to people and water quality instruments. The quality of water distributed is low because of its provenance from wells or springs and so it result not to be drinkable (chlorine) and to be sources of infection for people living in this region. Moreover, a decrease in precipitation, along with climate warming, may affect negatively the quality of water in rivers. Reduced water levels mean that pollutants

from point sources will become more concentrated. Consequently, in an area where the availability of water is already scarce, the amount of water available is unknown and a such situation of low water quality, an early warning system plays a key role in order to reduce the degree of the impact of a drought event, which has a probability to occur one every two years in this area (Statistic Service of Potosí District, 2011).

5. Quinoa, land degradation and desertification

Contemporaneously, the cultivation of quinoa, a grain-like crop farmed primarily for its edible seeds, is provoking changes in the land use with direct effects on the quality of the soil and indirect effects increasing drought vulnerability. Quinoa has been one of the main ingredients at the base of the Andean farmers' diet for thousand of years. Traditionally, the cultivation of quinoa was aimed at auto-consumption and the whole production process was conducted manually according to a well-defined methodology, which schedules to leave the land uncultivated for a long time. Such fallow period, around one year, has different purposes, such as restore soil fertility after harvest, and reduce the probability of disease. Although the most relevant is to accumulate water in the soil in order to sustain quinoa production characterized by using 2 years of rainfall during its growth period. This process requires at least 10 years due to the slowness of biological processes at this high altitude (Joffre and Acho, 2008). Nowadays, the role and the strategies to cultivate quinoa have been changed completely. Nevertheless, as consequence of this appraisal, a remarkable spread of the cultivation is imposing a relevant transformation in the land use of the countryside and in the social behavior. The high demand of the international market for this crop has increased the international prices. The price of quinoa sold by the farmer has almost tripled from 1999 to 2008, up to USD 2300/t (MDRyT, 2009). It pushes the producers to an extensive and unsustainable exploitation of soil and water due to a widespread and intensive one-crop agriculture in favor of the quinoa's export. Consequently, farmers' communities are loosing the sense of being a community, which was characterizing this region, in favor of a more individualistic (or family) interest. Further, farmers prefer selling it and buying less nutritious food for themselves (Hellin and Higman, 2005). Moreover, people attracted by the high price at the market of this product comes back in their villages of origin from the Bolivian cities for some months to cultivate quinoa to gain some money by selling this product without any kind of respect for this vulnerable land. Such attitude belonging to these people leaves the local communities to deal with the consequences of an inappropriate way of cropping, which is reducing the pastures and water for lama as well as accelerating the land degradation and desertification process. As result from the study developed by the Ministry of Planning for Development (Ministerio de Planificacion del Desarrollo), the desertification phenomenon covers 100% of the Potosí Department (MDSMA, 1996). Furthermore, to satisfy the rising world market demands the cultivation strategies have been changed. Firstly, crop-farming approach is moving from the ancient manual practices toward mechanized production system. Secondly, the increased use of tractors, especially with the disc plough and the sowing machine, has led to a severe degradation of soil fertility (PIEB 2009). Such practises have triggered a series of

changes that have aggravated the problem. These changes are: a) the rapid expansion of the agricultural frontier, b) the degradation of the vegetation and soil, increase in wind erosion, c) changes in surface albedo, d) increased frost and increased attacks on crops from pests and insects. All this has had adverse effects on agricultural yields and has also contributed to the process of desertification (Monasterio and Andresen, 1996). In 2010 several local institutions in coordination with local farmers have developed a project base on the plantation of *thola*, a native shrub that covers much of the southern Altiplano plain, to face the situation of accelerated degradation of soil and natural resources in the region due to the common erosive winds. Moreover, in 2012, two organizations of quinoa organic producers (ANAPCHI and ARPAIAMT) have defined for their affiliated farmers a set of rules and standards of production with reference to organic farming. Such norms tie the purchase of quinoa from these two organizations to the way of cultivation. Thus, a maximum extension for the cultivation of quinoa (30% for cropping and 70% for grazing) is established in order to reduce soil erosion and degradation. Those agriculture practices should be able to reduce in the long run the velocity of the process of soil compaction, which would permit a better percolation of water through the soil. Nevertheless, It is worth to underline that 20% of quinoa has been produced according to organic practices between 2010 and 2012.

6. Drought Early Warning System (DEWS)

It is often possible to provide early warning of an emerging drought due to the characteristics of such natural hazard. This information allows for a shift from reactive to proactive hazard management and represents a change in focus from disaster recovery to disaster prevention. A survey conducted by ISDR Platform for the Promotion of Early Warning discovered that early warning systems for drought are more complex than those for other hydro-meteorological hazards and are consequently, relatively less developed globally (ISDR, 2007). Augmenting forecast and early warning information with decision support capabilities to provide information on options for reducing vulnerability to drought enhances local coping capacities and provides an important mechanism for reducing drought risk. Promoting the inclusion of indigenous or local groups and knowledge in drought monitoring and early warning systems is essential for developing appropriate local drought indicators, verifying the occurrence of drought, and communicating the warnings to local populations. Furthermore, although all types of droughts are due to a precipitation deficiency, it is not sufficient to rely exclusively on this climate element to evaluate severity and subsequent impacts because of factors identified previously. Effective DEWS must combine rainfall and other climatic parameters with water information such as stream flow, groundwater levels, reservoir and lake levels, and soil moisture into a comprehensive assessment of present and future drought and water supply conditions. With reference to the case study, in 2009 the Potosí district developed an Early Warning System which provide hydro-meteorological information regarding the probability to have a natural or human induced disaster, which could have impacts on a municipality, a region or the whole district, in order to be able to face such event in an organized and appropriate way.

Such system is based on three levels (FAO Bolivia, 2009). The first level is composed by the institutions that generate information through monitoring points (weather stations or others) that are in various communities in the department. This level includes the National Service of Meteorology and Hydrology (SENAMHI), which monitor the weather conditions of the department. On the second level there is the Departmental Monitoring Centre, which belongs to the Department of early warning system, implemented within the Risk Management Unit of the Prefecture. This unit is responsible for the reception and dissemination of meteorological and hydrological information as well as of disseminated the alert level at the departmental and municipal levels. The third level is made by the users of the System Department of Early Warning System, Municipal Early Warning, communities and those responsible, who are the Prefect of the Department and the Mayor, according to the law 2140, for the activation of operation centres (EOC's) at the Departmental and Municipal level. The developed early warning system has been applied to crop-graze production in various municipalities of the Potosí district and between those even Uyuni and Tomave. Such system combines the expert knowledge with the local knowledge (COMPASUR, 2011). The former bases its assessment on ten weather-monitoring stations, which check: a) weather temperature; b) precipitations; c) wind. Furthermore, through 120 stations widespread in the land dedicated to farm quinoa the susceptibility to wind erosion and the soil humidity are evaluated. Whereas, the latter takes in consideration with reference to a monitoring calendar forty-three bio-indicators divided in three categories: 1) vegetation; 2) animals; 3) clime and stars. Currently, an emergency plan to respond to the EWS alerts is what is lacking.

7. Water and Spatial Planning

Land uses and water have been strongly interconnected in the past but somehow such link has lost its relevance that nowadays water sector and spatial planning are deemed as two domains traditionally separated. The lack of a truly territorial approach in which water and spatial planning could be integrated and considered interdependently has been due to a traditionally sectorial view of hydraulic policies (Valenzuela Montes, 2008) as well as to uncontrolled growth and an unplanned development. Available water resources are menaced by human activities in different forms, such as diffuse agricultural, urban pollutions and over abstraction of groundwater. Hazards related to climate change, which will influence the hydrological cycle of different regions in different countries, may intensify water resource challenges in the future. Hence, a shift towards a planning system based on a proactive approach is necessary (Carter, 2007) not to be only aware of water and correlated problems (environmental, economic and social) but to act in order not to restrict development activities and opportunities in the future. The Bolivian National Developing Programme recognizes the basin river management and the integrated water resource management (IWRM) approach as processes that promote a coordinated development between water, land and related resources to maximize social and economic equity in order to guarantee the sustainability of vital ecosystems (PND, 2009). Notwithstanding such integration has not been

accomplished yet and the IWRM has not been applied yet due to many difficulties. Firstly, a too large scale which does not fit in a region where day-to-day decision-making on water development and management are in the hand of users and communities. Further, local communities do not know and they do not know the modality to express their ideas and concerns when they have to refer to an authority, which is not close to their reality. Thus, it would be necessary a lower scale in order to be able to attract interest of different stakeholders and to manage possible conflicts in the water management. IWRM should not be applied only to river basin management unit, but it should be applied to all different scales (from a village to trans boundary level) cause water stress reveals itself at all levels and needs to be addressed through a combination of bottom-up and top-down measures (Lenton and Muller, 2009). Secondly, a lack of decentralization and cooperation among the different sectors as well as of a fully defined legal framework are at the base of problems in applying such policy. Furthermore, at the national as well as at the local level, policies and solutions are still established to solve punctual or emergency issue lacking thus of a long-term planning vision. With reference to the policy of "Para el Bien Vivir" (for Living Well), the National Plan for the Integrated Territorial System of the Central-Sur Altiplano (Complejo Territorial Integral de La Region del Altiplano Centro – Sur) developed in 2009 draws a strategic agro-industrial development (MPD, 2009). It is based on the combination of enablement of 1 million hectares of agricultural land for organic production of quinoa to reach a production of 1 million of tons per year, production of compost thanks to lamas' droppings, tourism activity, petrochemical production and lithium abstraction in the Salar of Uyuny. Such plan do not consider at all the high drought risk which characterized the regions and the impacts of the increasing water demand due to tourism and land use changes as well as the effects of the implementation of a petrochemical and lithium abstraction systems on the aquifer and superficial water. Furthermore, both of investigated municipalities, which will be part of this project, lack of a proper planning system, environmental control system (according to the Environmental Law 1333), stakeholders participation despite of the law 1551/94 (Ley de Participación Popular) which promotes it widely.

9. Conclusions

Climate Change and the high drought risk call for a change in the Bolivian water management. The adoption of the river basin management approach as leading policy marks a relevant step for the future water management in Bolivia and for a more integrated development. Notwithstanding, the selection of a more operative scale would be helpful in the process of participation and decision-making. Indeed, the IWRM should not be considered as a box of reforms and rules but more as a philosophy, which should influence the strategy of projects and programmes instead of being built on them. Furthermore, the high awareness of Bolivian people towards the environmental issue should be valued as a resource to build an integrated system and no as an obstacle to this and to the development. Therefore, more space and chance should be given to local communities to express their ideas and concerns regarding the future development and water management in order to support a

bottom-up approach. Participation could be strength, further, linking sanitation and hygiene sector to IWRM, since such themes claim the attention of people, in particular in developing countries, since they improve enormously the quality of live. Consequently, local initiative should be encouraged by the government in order to invest in a cooperative approach between top-down and bottom up policies. In turn, if on one hand, international development projects in developing countries could represent a valuable tool to favour an improvement in the participation of the communities in the decision making process and in the collaboration among various entities; on the other hand, those projects are characterized by a short-, medium-term plan and are developed mainly in areas where the success rate is higher. Consequently, a shift from a planning and management system based on punctual and emergency interventions to a system based on a more strategic and long-term vision is needed in order to create a room to foster the construction of connections and coordination between the different elements composing the system. In turn, it is not possible to predict in advance that such coordination will be sustainable and equitable but lighter forms of integration (which could be seen as early wins) could constitute the base on which build a higher-level of integration, as in the case of water management and spatial planning. Furthermore, a shift from a reactive approach, which is still widely applied in Bolivia, to a proactive hazard management, is essential in order to cope with future events. According to this, a drought emergency and a communication plans should be developed and linked to the existing early warning system in order that the EWS works at its best and accomplices its functions to warn the population about the risk and to put in place the necessary measures to face the emergency.

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HOUSEHOLD RELOCATION AND THE RESTRUCTURING OF SOCIAL RELATIONSHIPS: INSIGHTS FROM SHARJAH, UAE

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Abstract

Over the span of a few decades, cities in the Arabian Peninsula have not only grown in size but they have also changed qualitatively. In a recent study set in the city of Sharjah, Al Harmoudi (2010) found a significant deterioration of the public realm in residential neighborhoods. In this paper, we provide some preliminary assessments of how the social health of residential neighborhoods has also changed, and how these changes might be related to changes in the physical fabric. We report on a study of 11 households that relocated from an old Sharjah neighborhood in the 1970s and 80s to newer neighborhoods. We find a significant diminishing of social capital accompanied this relocation that appears related to changes in lifestyle and physical fabric and interactions between the two.

1. Introduction

Herbert Gans (1959) documented how changes in the physical fabric of the city, in the form of havoc rendered by urban renewal projects in American cities, had major negative consequences for social relationships and individual welfare in those cities. Across the world, the physical fabric of cities continues to change in ways that could likewise weaken the social fabric and diminish welfare. Unlike the case of urban renewal, however, dramatic changes may be experienced by people and households voluntarily relocating to neighborhoods that are very different from where they used to be located.

Over the span of a few decades, cities in the Arabian Peninsula have witnessed an astonishing transformation. They have not only grown in size but they have also changed qualitatively. Elsheshtawy (2008) and others have studied the role of globalization in this transformation. The city of Sharjah, the third largest in the United Arab Emirates, is no exception to this trend. While house form and urban fabric have changed dramatically over time, this evolution has also been accompanied by transformations in social relationships and lifestyles (Mahgoob, 1999; Coles and Jackson, 2007; Al Harmoudi, 2010).

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In a recent study, Al Harmoudi (2010) found that residential neighborhoods in the city of Sharjah from three different eras spanning six decades have very different morphological characteristics from each other. The net result of these changes appears to be a significant deterioration of the public realm. Al Harmoudi (2010) speculates on some of the factors driving these changes: rising expectations as a result of increasing affluence, the push for modernization, and the approach to urban planning in Sharjah. She left for later a set of questions regarding the consequences of these changes.

In this paper, we provide some preliminary assessments of how the social health of residential neighborhoods has changed, and how these changes might be related to changes to the physical fabric. We report on a study of 11 households that relocated from an old Sharjah neighborhood in the 1970s and 80s. We establish through structured interviews the social relationships that existed when they were resident in the neighborhood and how these were tied to the physical fabric of the neighborhood. We identify their new locations in the city and explain the factors driving this relocation. We then assess a number of aspects of their current situation: What is the extent and nature of social relationships within the new neighborhoods? How is this tied to the morphology of the new location? What are their interactions with their former neighbors?

In the next section, we briefly review the evolution of Sharjah and its neighborhoods, the literature on measuring the social health of neighborhoods, and linkages among social health, physical fabric, and lifestyle changes. In Section 3 we lay out the question that motivated this study, explore our methodological choices, and describe the research design underlying our work, which is summarized above. Section 4 presents details of what we learned about the spatial patterns of relocation and the experiences of women who moved between these neighborhoods. We conclude with what we learned about possible drivers of changes in individual social capital through relocation, some policy and planning responses, and an agenda for future research.

2. Background

In this section, we provide background on the city of Sharjah as well as the morphological evolution of residential neighborhoods in the city. This raises the question of the social consequences of this evolution. We briefly look at the literature on how the social health of communities has been characterized. This leads us to consider the links between social capital, the physical fabric, and lifestyle.

2.1 Sharjah and Morphological Evolution

Sharjah is the principal city in the Emirate of Sharjah, the third largest of seven emirates that make up the United Arab Emirates. Sharjah's economy was traditionally based on pearl harvesting in the gulf waters, nautical trade, and a small amount of farming and animal breeding on the scarce arable land surrounding the city. This changed when oil

was discovered in the region in the early 1970s, and the region grew wealthy as a result. Federation of the seven emirates in 1971 reinforced this inflection point in Sharjah's development trajectory as the new nation gained economic and political stature. Three decades later, a massive growth in the UAE's sovereign wealth resulted from a surge in oil prices. As a relatively stable setting, the UAE attracted much outside investment in real estate and other businesses. Dubai was the principal beneficiary of this boom, the effect of which was also felt in next-door Sharjah, where many of those employed in Dubai make their home.

In this timeframe, Sharjah has grown physically in a linear fashion from the original settlement, located along the shores of the Arabian Gulf, inland towards the desert. Older neighborhoods are closer to the shore and newer neighborhoods are further away. Neighborhoods along the shore, however, have been largely demolished and redeveloped as high-density residential areas; only scant traces remain of neighborhoods from before the discovery of oil. Sharjah's residential neighborhoods are quite segregated even as its public places reflect the great diversity of people and families drawn from around the world. UAE citizens, or *Emiratis*, live in neighborhoods made up of single-family dwellings. Expatriate households are typically located in neighborhoods with multi-family dwellings.

Sharjah neighborhoods have changed over time. When Emirati households are granted land in new neighborhoods at the edge of the city, they rent their current houses to expatriate families and move into newly constructed houses. As houses in old neighborhoods age further, expatriate families move out and are replaced by increasingly large groups of single expatriate men who work as laborers. When these houses are extremely dilapidated, they are torn down and replaced by multi-story apartment buildings.

Rapid economic and physical development in Sharjah has been accompanied by dramatic social change. The traditional, simple Emirati lifestyle has acquired many trappings of the West. Modernization, growth and consumerism in cities crowded with modern buildings or skyscrapers, polluting industries and huge shopping malls. Stable, historic neighborhoods are threatened by the sprawl that resulted in order to accommodate the growing demand for all forms of land uses, new modes of travel, new house forms, and new expectations.

Al Harmoudi (2010) studied the morphological evolution of residential neighborhoods in Sharjah. She demarcates three eras in this evolution using two inflection points: 1.) discovery of oil accompanied by unification of the UAE, and 2.) the spurt of wealth and development at the turn of the 21st century. In her morphological comparison across these three eras she found that 1) the organic pattern that is observed in older neighborhoods becomes much more regular and of a much coarser grain in newer neighborhoods, 2) houses and lots are much larger in newer neighborhoods and meet the need for privacy in different ways, 3) the connectivity of the street decreases with each passing era and neighborhoods appear less internally

integrated, and 4) the shorter and more connected streets in older neighborhoods generate more interesting dynamic experiences than is the case when moving through newer neighborhoods. The net effect of these changes is a diminishing of the quality of the public realm even as it is occupying a larger portion of the neighborhood. Al Harmoudi (2010) speculates that this evolution was driven by rising expectations caused by increasing affluence. The rising expectations were shaped and directed by a push to be modern. Finally, this push for modernization was manifested through the particular approach to urban planning that has been prevalent in Sharjah.

Al Harmoudi (2010) leaves for further research the question of the social consequences of this morphological evolution. There is anecdotal evidence that the public realm is playing an increasingly smaller role in the social lives of neighborhood residents. For example, children are less likely to be found playing in public areas in newer neighborhoods. Conversations with residents of the newer neighborhoods suggest that they are less socially connected with their neighbors than in the past. Not all these consequences can be linked to changes in the physical fabric. Some of these are probably driven more by changes in lifestyle. Most activities that used to take place in the public realm in residential neighborhoods are now conducted either within people's homes, which are walled off, or in privately-controlled public areas such as shopping malls which are away from the neighborhoods. Another observation to be found in Al Harmoudi (2010): households in the older neighborhoods were likely to be from the same family or at least the same tribe. This is much less true in the more recent neighborhoods.

2.2 Social Health of Neighborhoods

How might we measure the social consequences of these changes? Along what dimensions might these changes be measured? There has been a large amount and a wide range of research on the social health of residential neighborhoods in the United States and other western contexts that could provide a degree of guidance in answering these questions. Some of the constructs used to measure social health include neighborhood satisfaction, sense of place or community identity, and social capital. As the following discussion shows, each of these constructs seems to progressively shift the focus further up Maslow's hierarchy of needs.

Neighborhood satisfaction appears to be the earliest of these constructs to be deployed in measuring the social health of neighborhoods. Speare, Jr. (1974) proposes the notion of residential satisfaction, which is undergirded by individual or household characteristics, location characteristics, and social bonds. Social health plays only a small part in this measure; the index that emerges from a regression analysis does not include any explicit measures of social bonds. More recently, neighborhood satisfaction has become one of the bases for comparing urban quality of life in several world cities. Oktay et al. (2009) describe application of this measure to Famagusta in North Cyprus. In addition to

individual, household, and location characteristics, that study measures community participation and involvement, neighboring, and safety.

The notion of sense of place includes a greater focus on social health of the neighborhood. Shamai (1991) expresses dissatisfaction with earlier formulations of sense of place but does not break down the construct any further. He proposes an ordinal seven-point scale to measure sense of place using linguistic categories: ranging from no sense of place to located, belonging, attached, identifying with, involved, committed (in ascending order). Deutsch and Goulias (2009) use a formulation that subsumes the notion of neighborhood satisfaction. They also use measures of neighborhood attachment (person-environment bond), dependence (person-place association), and identity. Tapsuwan, Leviston, and Tucker (2009) use a similar set of measures and explain that identity refers to feelings about the physical fabric and how it provides meaning and purpose. Cuba and Hummon (1993) find that participation in the social life of the community is essential for community identity. Axford and Hockings (2005) use an expanded set of measures that additionally includes sense of belonging and commitment to the neighborhood.

Despite intellectual roots that reach back to Adam Smith and Max Weber (Bjørnskov, 2006), social capital is the more recently formulated measure of social health. It is also one of the few that has been applied in the Arab world (El-Said and Harrigan, 2009). Bjørnskov (2006) traces the term social capital to James Coleman, though it gained wider circulation through the work of Robert Putnam. At its simplest, social capital is the net effect of trust, reciprocity, and association with others; like other forms of capital, social capital is generally thought to facilitate economic advancement including the production of public goods and services such as health; Ferlander (2007) notes that social capital may have negative consequences. Much of the research based on this construct attempts to put a number on this net effect. Extensive critical discussions about social capital and its possibilities and limitations can be found in Durlauf (2002), Ponthieux (2004), and Ferlander (2007). Ferlander (2007) distinguishes between two levels (individual and collective) and two forms (bridging and bonding) of social capital.

El-Said and Harrigan's (2009) contribution is particularly useful because they provide a fascinating qualitative discussion of the evolution of social capital in Jordan starting from the tribal society that existed before independence from Britain in 1946 up until the present. They do not quantify social capital but the rich descriptions they provide are hugely valuable to those who seek to study social capital in Arab societies. They introduce two terms in Arabic that to a large extent represent social capital: *wasta* (political influence; a form of bridging) and *takaful al Ijtima'I* (social solidarity; a form of bonding). They list a number of components of social capital: "satisfaction with life; formal and informal associations and membership in and quality of participation in local community; generalized norms of trust and reciprocity; political engagement and perception of government institutions; communications (including variables related to media and proximity variables); everyday sociability; family, friends, and neighborhood connections; and the level of safety and crime" (p. 1237).

In the context of this list, the literature on neighboring could be useful. Key (1965) provides an early list of signs of neighboring: speaking acquaintanceships, casual visits, visits in the home, borrowing or lending things, doing other favors, parties and activities outside the neighborhood. Skjæveland, et al (1996) find four factors that subsume individual measures of neighboring: supportive acts, annoyance, attachment, and social ties. Lee, et al (1991) use a survey instrument with four categories of items: acquaintanceships, content and frequency of contacts, dealing with neighborhood problems, and judgments about neighbors. Campbell and Lee (1990) find that women exhibit more signs of neighboring.

2.3 Links to Changes in Physical Fabric and Lifestyle

The literature on the social health of neighborhoods contains virtually no discussion of how this might be related to the physical fabric of neighborhoods. One exception we encountered was in Kuo, et al (1998) who argue that neighborhood social ties may substantially depend on the informal social contact that occurs in the public realm of neighborhoods. The data they gathered on residents of urban public housing projects suggested that the use and characteristics of common spaces may play a vital role in the natural growth of community.

In this context, the detailed observations that Al Harmoudi (2010) presents on the ebb and flow of the level of privacy afforded in the neighborhoods she studied could be relevant. In pre-oil Sharjah, the neighborhood did not afford a great deal of privacy and there did not appear to be a great need for privacy. The mixing of families and tribes in post-unification neighborhoods triggered a greater need for privacy that was reflected in the configuration of houses and walls. Contemporary neighborhoods allow greater surveillance of the public realm from within the house but the houses themselves are still very private because they are set back and have tinted windows. It would seem likely that these changes have affected neighboring and social capital.

Despite these possible links, the literature points mostly to lifestyle drivers in changes to social capital. For example, Putnam famously refers to the propensity for Americans to go bowling alone rather than in groups. He also points to longer commutes as diminishing social capital. Care must, therefore, be taken to ensure that any findings of links to the physical fabric of neighborhoods are not confounded by parallel changes in lifestyle. Figure 1 captures the relationships described here.

Hunter (1979) warns of another way in which links to the physical fabric might be confounded. He writes of studies that focus too narrowly on the neighborhood and do not grasp the effect of its context end up with descriptions not explanations for observed phenomena. When societies evolve from rudimentary occupational, transportation, and communication systems to more complex systems, Schwirian (1983) writes that such cities witness greater social and spatial differentiation with profound implications for the social make-up of neighborhoods. If any changes are found in the social health of neighborhoods, some of these changes may be driven by evolution of the broader system rather than observed changes to the physical fabric.

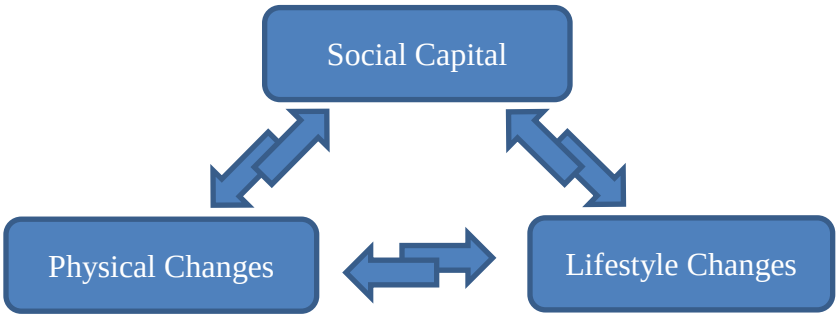

Figure 1: Inter-relationships among social capital, physical changes, and lifestyle changes

3. Research Questions and Method

The primary question we seek to address in this paper is as follows: What have been the impacts of morphological changes in Sharjah neighborhoods on the social health of neighborhoods? Al Harmoudi (2010) has already delineated some of the changes to the physical fabric. To understand how changes to the physical fabric in Sharjah neighborhoods have affected social health, we must identify and measure the changes that have taken place in social health of neighborhoods.

Two research designs for answering this question present themselves. The first would involve measuring social health in two or more neighborhoods with different physical fabrics. (This would be along the lines of Al Harmoudi's [2010] research design.) This design has the advantage that broader contextual factors remain comparable when measurements are taken. A second research design is made possible by the pattern of residential relocation common among Emirati families in Sharjah. As discussed earlier, families that lived in pre-oil neighborhoods relocated to newer parts of the city to take advantage of new housing or grants of land and money for new house construction. Recounts and assessments by individuals of their experience in different eras would provide data that can be used for comparisons between the different neighborhoods they lived in and inferences about the changes.

We opted for the latter research design primarily because there are no prior studies of social capital in our context, and there is not an available instrument we could apply. Our research requires generating hypotheses rather than testing them. We expected to gather richer data to generate hypotheses through this research design. In the 1970s and 80s, the area of Sharjah we chose to study was a tightly knit neighborhood that has today been completely replaced by high-rise apartment buildings. Families that used to live in the neighborhood have now moved to other parts of the city. We located 11 of the approximately 30 households that used to live in the neighborhood. We gathered two types of data. First, we traced the relocation pattern for each household. The locations of each household during each move were recorded on Google Earth. These data points

were then imported into ArcGIS and some very elementary spatial metrics computed: area of spread, average distance between locations, etc.

Next, we assessed any changes in social capital that paralleled this relocation. To do this, we recorded the experience of one woman from each of seven of the 11 households. We interviewed women because they exhibit the most signs of neighboring (Campbell and Lee, 1990) and are the ones to most likely feel the impact of changes in social health. Interviews were carried out in Arabic and then translated into English with every effort made to capture the spirit of the original. We engaged the women through semi-structured interviews, which sought to ascertain:

- What social relationships existed when they were resident in Al Nabba?
- How were these relationships tied to the physical fabric of the neighborhood?
- What factors drove their relocation?
- What is the extent and nature of social relationships within the new neighborhoods?
- How is this tied to the morphology of the new location?
- What are their interactions with their former neighbors?

Our conversations with these women attempted to cover the measures included in the idea of social capital. Among those constructs reviewed above, social capital is likely the best fit for our purposes because it covers more of Maslow's hierarchy of needs and focuses outside the realm of physiological needs. However, a major obstacle in using social capital as a measure is the lack of prior experience with applying it in our context. It is also typically applied using broad metrics generated from national data sets. Still, we believed that conducting this research would bring to the surface several hypotheses about social capital in this context that could be tested and refined in future research.

4. Results

In this section, we summarize the two sets of data that we gathered. We first report on the spatial patterns that we found, and then on our assessment of change in social capital.

4.1 Spatial Patterns of Relocation

Recording the different places where households have located since they moved from the original neighborhood reveals spatial patterns and allows us to see some similarities and differences in these patterns. Figure 2 summarizes these patterns. All distances mentioned below are approximate, measured as the crow flies and not along the road network.

The 11 households originally clustered in area roughly 125 x 200m. After the first move, 7 of these families clustered in a new area roughly 250 x 500m (more than four times as large as the previous area). Two families were within 500m of this cluster. In a second wave of moves, members of some families began to live in separate households. Four of these second-move families clustered in an area roughly 125 x 200m (just over a third of

number originally but in the same area) with a fifth family 700m away. A second group of four families clustered in an area roughly 60 x 80m (about the same density as originally) with a fifth about 600m away. The original 11 households are now 17 households.

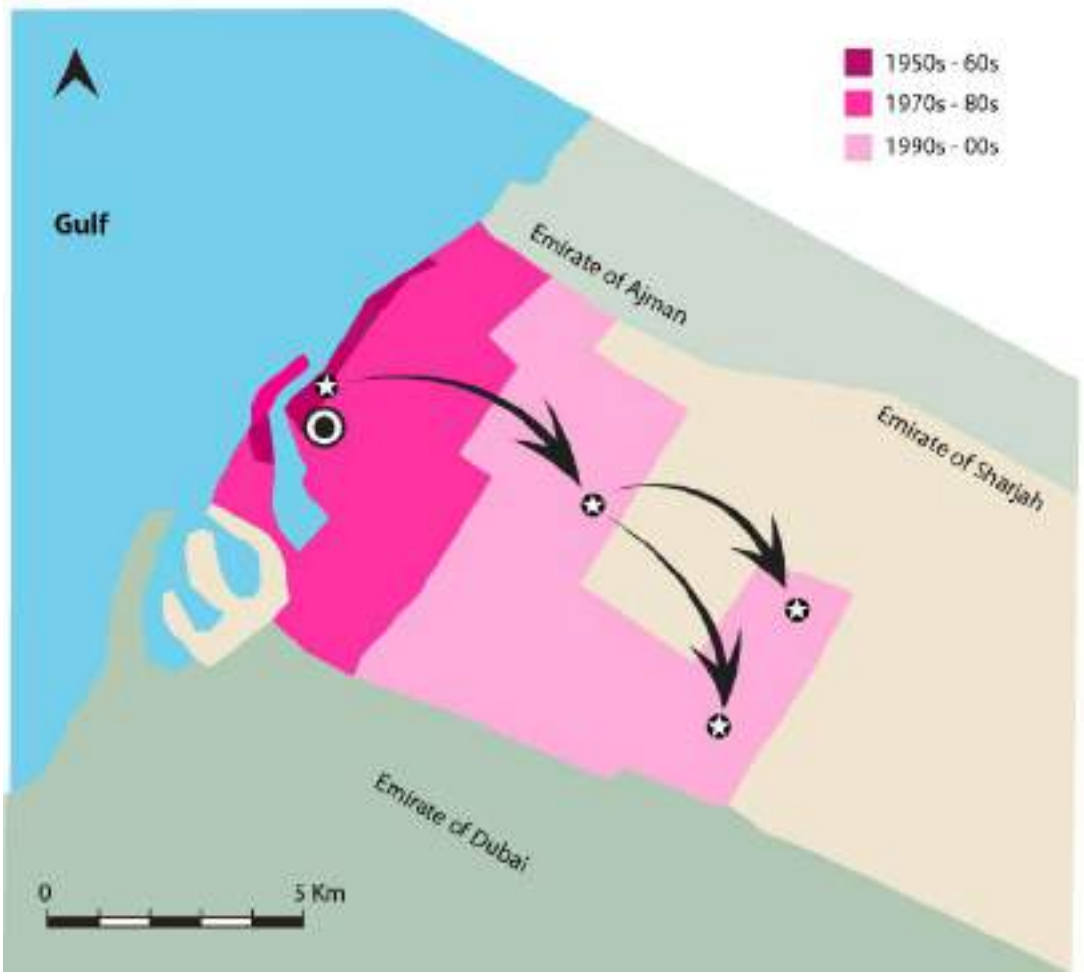

Figure 2: General Relocation Pattern

Five of the households we studied (2, 7, 9, 10, 11), just under half, moved only once and they moved to roughly the same location. Of these five, four remain clustered but not as tightly as they used to be. The average distance between these four families was just over 100m in the old neighborhood but now is more than 4 times that (about 440m). The remaining six households moved more than once, typically two times. As mentioned earlier, members of four of these households began to live separately. Three households in this group (3, 5, 8) are living increasingly apart from each other. Originally, they were on average just over 100m away from each other; after the first move, they were about

220m away from each other, and today are about 1,740m away from each other. The maximum number of moves was four and only one family moved this many times.

One household remains an outlier in that it has a much more complex relocation pattern than the others we studied and this is captured in Figure 3. This household was the first to move out of the old neighborhood and it was to a different area than that to which the other families moved. Two members of this household formed separate households and located away from each other. In their next move, they relocated close to each other and to other offshoots from one of their former neighbors in the original neighborhood. One of the two separate households then relocated one more time back to a location close to the old neighborhood.

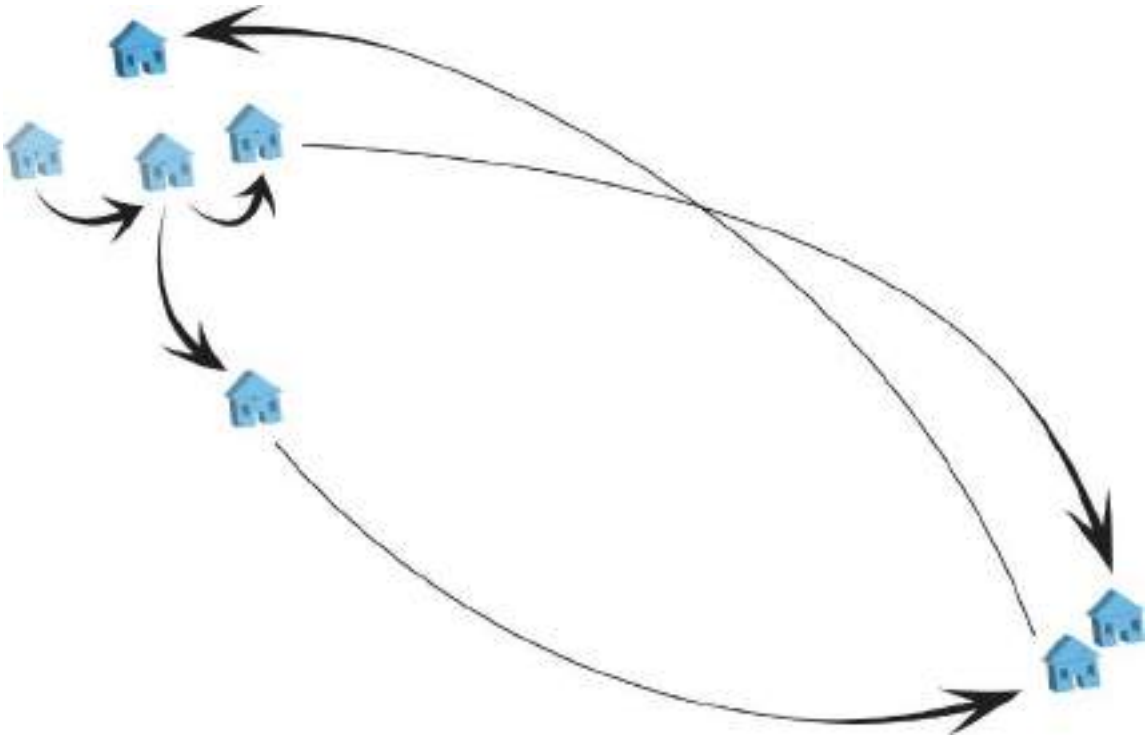

Figure 3: Relocation Pattern for Family 1 (Lighter is Older)

While the overall pattern from these results suggests a spatial fragmenting of the set of households we studied, the results also indicate a surprising amount of clustering. Many of the households ended up close to each other but not as close as they were originally.

4.2 Changes in Social Capital

The overwhelming sense from talking to women in these households, who experienced this relocation first-hand, is of a significant loss of social capital.

4.2.1 Original Social Relationships

All the women we spoke to recalled their days in the old neighborhood with fondness and great affection. Participant 5 noted, “Our neighborhood was home; it was our shelter. We felt we were a big family living in a big house.” Participant 1 recalled, “We spent most of the day socializing with others, sharing news and stories.” Some adjectives frequently used to describe the neighborhood: nice, interesting, friendly, simple, exciting.

The bonds between households were strong, and there was a high level of trust and reciprocity. Participant 2 remembered, “When my brother-in-law returned from a fishing trip, we would share fish with all of our neighbors. My husband used to be a trader, so whenever we got new goods we would share some with our neighbors.” Participant 3 noted, “If you didn’t show up at a neighborhood gathering, your friends would be knocking on your door asking about you, worried that there might be something wrong with you or your kids.”

The relationships among households ran very deep. Several respondents noted how in the absence of the man of the house, other men in the neighborhood would provide support. Participant 6 recalled, “My husband was in the armed forces and used to be away from home for long periods. I never felt lonely or in need. Everyone, from the grocer to the eldest man in the neighborhood, helped me and took care of me and my children.” This was particularly important in the case of households headed by women who were widowed or divorced.

Not everyone saw this as being completely positive. Participant 6 described social relationships differently, “But there was no privacy, as I said earlier. People knew every tiny detail about your life. They used to get involved in your problems and private matters.” Participant 4 was more positive about this, “We had a lot of quarrels but they were easy to solve.”

4.2.2 The Physical Fabric

We found that the women we interviewed were generally unable to make direct connections on their own between social relationships and qualities of the neighborhood’s physical fabric, even when pressed. However, many women talked about walking around the neighborhood, and how this affected the quality of social relationships. Participant 1 recalled, “We used to walk on our errands and talk to people that we passed by even if they were men.” Similar remarks were made by almost all the other women, some of whom noted it was different for young, unmarried women whose movements were restricted. The public realm appears to have played a role in enabling and fostering social relationships.

To help participants make the link between social relationships and the physical fabric, we asked them about some specific physical attributes that Al Harmoudi (2010) mentioned: proximity of houses; high boundary walls; quality of the public realm. With these prompts, participants were able to make some connections. All participants without exception described how having houses close to each other helped them feel

connected. Participant 7 said, “The houses were small and close, as if we were all living in one big house.”

Participant 3 provided more detail, “Houses were close to each other: a door next to a door and a window facing a window. It was easy to communicate; we did not need phones. We would chat with each other standing on the roof of our houses; that’s when we arranged to meet later in the day. The houses were that close!” She explained that the roofs of houses were used for drying laundry, drying dates and onions for use out of season, and for sleeping on hot nights. Participants 4 and 6 linked proximity and spatial configuration to sense of safety. For example, “Our doors faced each other and the street separating us was very narrow… [this made it] easier and safer to communicate and visit.” Another commented that because of proximity “it was very easy to visit our neighbors. It also made me feel safe when my husband was away. I never felt as though I was alone in the house.”

Almost all participants acknowledged the role of the height of the boundary wall; they mentioned that having low walls facilitated communication and made them feel close. Participants 1, 3 and 6 recalled that they were calling each other across the wall, chatting or asking for help. Participant 6 said, “If I needed anything, all I had to do was to shout to them; they could easily hear me and would come straight away.”

When women were asked about open space in the neighborhood they immediately made the connection with social relationships associated with children playing outside the house. Almost all of them noted how children played outside the house because it was safe and there was natural surveillance. Participant 4 recalled, “The *baraha* (open space) in front of our house was easily watched by all of our neighbors. Even if I was busy doing something, I knew that someone else would be watching, whether it was women from the rooftop of the houses or men sitting in chairs next to main door of the house.” She explained that all houses had one or more chairs outside next to the main door. Men used to gather and sit there after they had their afternoon nap. Participant 1also recalled children at play, “They used to play with rocks and sand as well as cans [for football]. It was very simple but they enjoyed it a lot.”

4.2.3 Reasons for Relocating

Without exception, participants cited the need for more space as their reason for relocating. Participant 6 told us, “Our house was very small and we were a big family. One room for four kids was very uncomfortable. We didn’t have much privacy in the home.” While we did not ask directly why they did not just construct larger houses in their original neighborhood, most provided us the reason: new housing was provided at no cost by the government. One participant gave us the sense of a slightly different motivation. Participant 6 said, “We wanted to experience the new lifestyle.” This suggests a desire to be modern.

4.2.4 New Social Relationships

All participants spoke of declining social relationships in each successive move. The first move saw a slight decline in the quantity and strength of social relationships. Participant 1 explained, "The second neighborhood was like [the first] but it was more private. We used to socialize, but only with close neighbors." After the first move, there was still quite a bit of socializing outside the house. Participant 7 recalled, "We used to socialize every day in the late afternoon while our children played outside together." But there was a decrease in the amount of time spent outside. As Participant 5 remembered, "We were less comfortable about kids playing outside; this decreased our daily meetings with neighbors."

As some participants tell it, bonds were almost as strong as in the old neighborhood but were spatially limited. Participant 7 observed, "The bond was very strong…but only with families that lived around our house." Participant 2 also felt there were limitations on social bonds. She referred to "a lot of new families that we did not know." She maintains that women were comfortable with other women of the new neighborhood but not the men.

After the second move, the decline in social relationships is more pronounced despite, as Participant 6 noted, all the new communication tools available. For one thing, most participants felt that maintaining social relationships is becoming hard work. Participant 4 told us, "We rarely see each other unless we receive an invitation. After issuing an invitation, people spend a lot of time and effort preparing for the visit. Visitors responding to an invitation also go to great lengths to get ready for the visit. All this makes visiting less pleasant. In the past, we only had to knock on the door and we were made comfortable." This view resonated in responses from other participants.

We also found many participants now spend less time in the neighborhood outside their houses because they 1.) do not feel safe, and 2.) use their cars to move around. Participant 2 said, "Now it's not very safe to [walk in the neighborhood]. There are a lot of laborers working in and walking around the neighborhood. I never let my daughters walk outside the house." This fear of strangers and outsiders pervaded our conversations with most participants. Participant 3 appeared less concerned about safety but told us "We drive cars. In a car, we are less likely to meet others and chat." With regard to mobility, Participant 6 noted that women nowadays have a greater spatial range of movement than they did in the past. This broadening of vistas was noted by Participant 4 when talking about young women, "[These days] they talk to men at work and in the market, but they never talk to their neighbors. It doesn't make sense!"

We followed up with participants about the quarrels that used to take place in the old neighborhood. Are there still quarrels in the new neighborhoods? All participants agreed that there are fewer if any quarrels between neighbors in the new neighborhoods. Only two participants, however, thought this is a good thing. The other participants thought that the quarrels were not very serious. Participant 3 recalled, "[The quarrels] were actually part of our lives. One day we get angry, the next day we are drinking tea and eating dates together." For them, the value lost in neighboring outweighed the value gained through fewer quarrels.

4.2.5 The New Physical Fabric

As indicated earlier in Section 4.2.2, when reminded of some of the morphological changes in neighborhoods, participants were able to describe ways in which they see these changes relate to changes in social capital. A number of participants linked the changes described above to the growing degree of separation between houses. Participant 1 noted, "Houses nowadays feel more separated; perhaps because of the high walls and the big front and backyards?" Participant 2 added, "It used to be very easy to visit your neighbor seven houses away. Nowadays, because of the size of the land and houses, going three houses way is quite a journey!"

Participant 7 highlighted the role played by wide streets. She said, "Nowadays the houses are … separated by roads. It has made the houses very separate and private. It's not nice this way." She also appeared to the very linear configuration of the public realm: "Nowadays the houses are … all lined up next to each other." How this is tied to the sense of separation is among houses is not very clear.

Women were asked to talk about the reason behind children playing indoors more often than in new neighborhoods. Without exception, all of the participants related it to the danger in playing outside due to the presence of paved roads and cars. Participant 1 noted, "They still love to play outside but the problem is with roads and cars. It's not safe at all; we don't allow them to play outside the house." Participant 2 complained, "The neighborhood is filled with cars and crazy drivers." Participant 4 noted, "Only two men in the old neighborhood had cars. When they drove, the kids used to run after the car. It was like a game to them." Participant 7 was particularly angry about the current situation, "How can they play outside? The roads are full of speeding cars. In the past, the *baraha* was sandy; it was not paved. The worst injury was being hit by a rock. Nowadays we hear about all kinds of accidents. That's why they play inside and get fatter and fatter. Poor children!" Could it be because of indoor forms of entertainment? Participant 6 did not think so. She said, "They always want to play football [outside] no matter how many video games they have."

Some participants seemed to think that increase spatial extent of the neighborhood played a role in this change. They mentioned that the new neighborhoods appeared bigger, accommodating a larger number of families that they did not know. Participant 2 said, "The [new] neighborhood was bigger with a lot of new families that we did not know well."

4.2.6 Interactions with Former Neighbors

Most participants said that they rarely interact in person with their former neighbors. They only meet face-to-face at family events such as weddings, births, and funerals. They call each other once every two weeks if they belong to the same family, whereas they talk only once or twice a year to former neighbors who are not family. By way of

explanation, as alluded to earlier, these interactions feel more and more burdensome because they have become more formal.

5. Discussion and Conclusion

Our conversations with the women who lived in neighborhoods from different eras reveal an extensive degrading of social relationships and social capital over time. These changes parallel the morphological changes that Al Harmoudi (2010) revealed. To simply attribute the former to the latter, the earlier reviewed literature suggests, would be naïve. Any such inferences would be confounded by the influence of 1.) lifestyle changes and 2.) social changes driven by evolution of the broader context, the city, from rudimentary to complex.

The city of Sharjah has grown tremendously over the past four decades. As Schwirian (1983) predicts, this growth was accompanied by a transformation from a more rudimentary to a more complex urban system with greater social and spatial differentiation. This is reflected in the mixing of households in new neighborhoods referred to by many of the participants. As importantly, we believe it is also reflected in the lifestyle changes they describe. As a result, we propose that the model in Figure 1 is sufficient to explain the changes in social capital. This suggests three possible explanations for observed changes: they are because of 1.) physical changes alone, 2.) lifestyle changes alone, and 3.) the combined effect of physical and lifestyle changes.

Let us first consider the lifestyle changes that have driven down social capital. First, an increasingly auto-oriented lifestyle has meant less face-to-face contact but greater spatial reach. Social relationships reach further distances but are less intense. Second, more formal standards of etiquette have meant that social relationships have become more burdensome and there is less motivation for engaging others. Third, there is a pervasive fear of strangers and others, and becoming a victim of crime, which makes people less inclined to venture out into public. In the past, construction and maintenance work used to be done by men of the neighborhood. Now, most of this is done by low-wage expatriate laborers who as a result have access to residential areas. Overall, there appears to have been a shift from outdoor living (use of roofs and public open spaces) to indoor living.

Let us next consider how two changes in lifestyle interact with changes in the physical fabric. First, a significant change has been wrought by an auto-oriented lifestyle but in a manner different from that discussed above. The public realm in neighborhoods increasingly privileges the automobile, discourages pedestrian use, and displaces activities, primarily involving children, which help build social capital. The automobile also diminishes social capital through its impact on the public realm. Second, the sense of fear discussed above may be related to the spatial structure of neighborhoods. Al Harmoudi (2010) found that old Sharjah neighborhoods were more spatially integrated with the surrounding urban fabric while new neighborhoods are more segregated. One possible explanation for heightened fear in new neighborhoods: Hillier and Shu (2000) find that integrated areas of a city had fewer crimes. But Nubani and Wineman (2005)

find these areas have more crimes, and suggest the difference could be because the areas they studied are automobile- rather than pedestrian-oriented. We did not find studies that looked specifically at fear of crime.

We can next consider physical changes that appear for the most part to have directly diminished social capital. The changes that have had the most impact appear to be those that have increased the physical separation among households: larger plots, wider streets, high boundary walls. Diminishing of social contact is only to be expected as a result of these changes and participants confirmed this expectation. Some participants also perceived newer neighborhoods as larger, which diminished the sense of belonging. In this case, perception is indeed reality. The city block containing the original neighborhood is just 0.10 sq km in area, while the first neighborhood to which households moved is in a block just under 0.50 sq km, and the most recent neighborhoods are in 1 sq. km superblocks.

The spatial patterns of relocation that we recorded lead us to a final conclusion. While the overall pattern we observed suggests a spatial fragmenting of the households studied, the results also indicate a surprising amount of clustering. As noted above, several families (2, 7, 9, 11) located close to each (though more spread out than before) after they moved for the first time. Despite this proximity, the women in these households still feel that social capital was diminished after the move. Al Harmoudi (2010) pointed out that a major difference between the old and new neighborhoods lies in the proximity of households from the same family or tribe. Our finding here suggests that the forces of change described above were probably of greater consequence than proximity.

Lifestyle changes discussed above are not easily addressed through public policy and design initiatives. Changes to the physical fabric, on the other hand, are probably more likely to be amenable to policy and design intervention. The design of streets, the public realm, and land parcels can be altered to reduce the sense of separation among households. Design controls can encourage better visual connections among houses. Policies of households growing in place rather than relocating may also help build social capital. Ultimately, however, the impact of lifestyle changes may be too great to overcome by managing physical changes. Recently, the Ruler of Sharjah announced that housing plots from now will be allotted so as to locate members of a family close to each other. Our research suggests that proximity cannot overcome physical barriers or lifestyle pressures.

The loss of some valuable aspects of social relationships noted above must not diminish the value of progress made in other respects. As participants pointed out, they now live in houses that better accommodate their families. Increasing affluence today means the new generation does not have to experience some of the hardships faced by the previous generation.

Our research has uncovered several hypotheses about relationships between social capital, lifestyle changes, and physical changes that must be rigorously tested. A series of related unanswered questions also deserves attention. As noted earlier, the fear of

being victimized in the public realm appears to preoccupy the women we surveyed. Is this fear of crime based on perception or reality? What factors underlie this fear? To what extent is fear of crime related to the spatial structure of neighborhoods?

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Targeted Public Participation in Sustainable Mobility Planning: A Case Study of Aalborg, Denmark

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Abstract

There has been consistent agreement in both the academic literature (e.g. Banister, Pucher, Tolley) and in the policy guidance literature from the European Commission (e.g. PILOT, CIVITAS, Eltisplus) that broad public participation and stakeholder involvement in sustainable mobility planning projects is necessary in order to ensure their successful implementation and to generate sufficient political support for further measures. However, the results of a recently completed case study of the planning and implementation of a high volume cycle 'motorway' in Aalborg, Denmark, suggest that targeted public participation may be more widespread than is commonly presumed. This raises important questions about transparency, efficiency, democratic process, and fairness that will be outlined within this paper.

Through a study of relevant planning documents at the municipal, national and supra-national levels and in-depth interviews with the planning staff working for the city of Aalborg, the authors found that the planners responsible for the implementation of the bicycling measures implement through a EU-funded sustainable mobility project possess a more nuanced appreciation of the need, relevance and usefulness of public participation than is commonly thought to be the case within academic, planning, and policy communities.

Key words: public participation, sustainable mobility planning, bicycle infrastructure

1.0 Introduction

Across many European countries, extensive public and stakeholder involvement within sustainable mobility planning processes has been promoted as a way to build political legitimacy and increase the acceptance of sustainable mobility measures (Banister, 2008; Pucher & Buehler, 2008; Wolfram & Bührmann, 2007). Some of the more common rationales for doing so include: 1) public participation and stakeholder involvement strengthens democratic planning, in turn supporting a more engaged populace; 2) more transparency in the decision-making process yields more widespread acceptance of contentious policy and planning measures; 3) the knowledge exchanged within the public participation process helps to strengthen the policies and plans by exposing them to public comment, criticism, and revisions; and 4) public participation and stakeholder involvement builds trust between planners, politicians, and citizens.

Policy guidance from the European level also mirrors much of what the academic literature advocates. For example, The GUIDEMAPS handbook from the EU CIVITAS sustainable mobility project asserts that:

'There is a growing belief that communities would support transport schemes more readily if they were more actively involved in designing them. They would better understand the need for the project and perhaps be more willing to accept compromises, and they would be able to suggest ways in which the

proposals could be better adapted to meet their local needs. In short, they would 'own' the scheme, instead of regarding it as having been 'imposed' on them from above.' (Kelly, Jones, Barta, Hossinger, Witte, & Wolf, 2011, p. 20)

While there may be elements of this sentiment that hold true, much of the rhetoric surrounding public participation and stakeholder involvement often belies reality, particularly when it comes to the ways in which planners themselves perceive public participation (Bickerstaff, Tolley, & Walker, 2002). While limited consultation and one-way communication with affected communities is a relatively low-risk proposition for planners, more extensive power-sharing processes that allow citizens to actively shape plans, procedures, and outcomes tend to inflame latent tensions between competing roles that planners must negotiate today between what Tore Sager terms the dialogic ideal and neo-liberal reality (Sager, 2009).

It is within this space, between the communicative ideal of the deliberative practitioner (Forester, 1999) and the actual practices of planners today, that this paper will explore. Despite the extensive amount of research and policy attention that has been directed toward the issue of how planners *ought* to perceive public participation and stakeholder involvement, to date there has been comparatively little attention focused on how planners *actually* perceive public participation and to what extent it is desirable or effective (Laurian & Shaw, 2009), particularly in the field of sustainable mobility. This matters for two reasons. Firstly, many of the measures necessary to achieve sustainable mobility, such as congestion road pricing, capacity reductions for motorised transport, modal shift to non-motorised forms of mobility, and parking restrictions, are often politically unpopular (Isaksson & Richardson, 2009; Lee-Gosselin, 2010; Driscoll, Theodorsdottir, Richardson, & Mguni, 2012). Therefore the encouragement of public participation may in fact retard more progressive sustainable mobility strategies that seek to lower greenhouse gas emissions, decrease social exclusion, encourage compact urban development and reduce air, noise and water pollution from motorised transport. Secondly, the shifting (and often countervailing) tensions in planning as practised opens up a more nuanced theoretical space in relation to what the authors have termed targeted public participation, where the planners are able to exercise their expert judgement in choosing which particular "publics" that they choose to engage with.

In this paper, the authors are particularly interested in cycling since, despite its importance within a sustainable mobility strategy, there remains a lack of in-depth research regarding participation in planning of cycling infrastructure. Moreover, public participation within planning has still not been widely accepted among many EU countries, particularly among the southern and eastern EU member states. One of the goals of the paper is to contribute to a better understanding of the role and significance of public participation within the sustainable mobility planning process in a Scandinavian context. Additionally, understanding planners' perspective on public involvement is important for the research community since planners often have a very different perception of public participation than researchers and policy analysts do. Although there have been previous studies on planners' perception of public participation in transport planning (Bickerstaff, Tolley, & Walker, 2002; Laurian & Shaw, 2009), the literature review did not reveal previous peer-reviewed studies into the planning process of bicycle planning and public participation.

The remainder of this article is structured into four main sub-sections. Firstly, a state-of-the-art review of the literature pertaining to sustainable mobility planning and public participation is developed. This includes documents such as EU White Papers and other policy guidance from the European Commission and the EU-funded CIVITAS and Eltisplus sustainable mobility projects as well as peer-reviewed literature. Secondly, the main research methods used in the data collection and analysis are presented, including key limitations of the study. Thirdly, the relevant outlines of the case study are analysed and discussed, including a comparison of the normative participatory framework and the actual practices of the planners. Fourthly, and finally, three main conclusions will be established that are relevant to researchers, planners, and policy makers going forward: 1) planners' own perceptions of public participation differ in important ways from the manner in which they are typically presumed; 2) the use of targeted public participation is a defensible, although ethically sticky, means of guiding sustainable mobility strategies and plans through the thicket of potential opposition; and 3) that for more far-reaching measures that reduce individual mobility options, particularly car-based ones, it is practically unavoidable that planners will more and more be faced with the 'tension of inclusivity' as to who and how the "public" will be involved in the decision-making process.

2.0 Sustainable mobility and public participation: The state-of-the-art

What is sustainable mobility?

For the purposes of this article, sustainable mobility is defined by the European Commission White Paper 'Roadmap to a Single European Transport Area-Towards a competitive and resource efficient transport system' (2011) that states the sustainable mobility challenge *"is to break the transport system's dependence on oil without sacrificing its efficiency and compromising mobility"*, with a notable emphasis that "*curbing mobility is not an option*" (European Commission, 2011a, p. 5). Leaving aside the question of the feasibility of achieving such ambitious (and contradictory) policy goals, such as a reduction of greenhouse gas emissions from the transport sector by 60% in the 2050 without significant reductions in overall mobility levels or the imposition of road pricing, sustainable mobility is understood as a system of movement that is not reliant upon fossil fuels, but also takes into account relevant social and environmental considerations such as equal accessibility, safety, and reduced air, noise, and water pollution.

Interestingly, a search of both the White Paper and the accompanying Impact Assessment (European Commission, 2011(a)(b)) revealed that neither document mentions public participation in any form in within the policy recommendations or strategic aims. In a comprehensive review of sustainable transport planning in the United States, the European Union, and Canada, researchers claim that "*acceptability is an essential (yet often neglected) element of sustainable transport*" (Banister, Pucher, & Lee-Gosselin, 2007, p. 36). Within the European Commission, this message apparently has yet to be heeded, for perhaps understandable reasons. People generally react quite strongly and aggressively toward travel demand reduction measures that restrict their personal mobility, in the absence of emergency situations such as wartime rationing or energy shocks such as those experienced in the 1970's (Lee-Gosselin, 2010). Although there are notable differences between North America and Europe regarding public acceptability of state regulatory interventions, even

within the EU there is frequently strong resistance to impositions and restrictions on mobility, particularly if private motoring is at stake (European Commission, 2011b).

The lack of public engagement and absence of participatory mechanisms within the European Commission in relation to transport planning is not mirrored in the guidance and policy documents that are produced by the European Parliament. In a 2010 report delivered to the Committee on Transport and Tourism entitled 'Sustainable Urban Transport Plans', the authors state that:

One of the core elements of SUTPs [Sustainable Urban Transport Plans] is public participation in its preparation. Undeniably, ensuring comprehensive citizens' involvement at the planning and evaluation stages offers the opportunity to raise awareness of the objectives and substance of the strategy and measures of SUTPs. Besides the contribution in terms of transparency and accountability of the process, public participation may facilitate mainstreaming, ensuring a common approach to policies that affect residents' quality of life and the urban area's growth perspectives. Finally, with respect to SUTPs, public involvement should also be aligned to the modalities of public participation set out in Article 2 of Directive 2003/35/EC (EC, 2003). (Trasporti e Territorio, 2010)

Here the linkage between public participation and sustainable mobility is claimed to be essential. Many of the rationales (transparency, awareness-raising, accountability, and acceptability) are frequently encountered in both academic and policy circles, with little in the way of critical assessment of what type of public participation is being discussed and how exactly the planners themselves encounter and perceive public participation.

What is public participation?

Following Sherry Arnstein's (1969) well-known conceptualization of the ladder of citizen participation, public participation here is understood as citizen involvement in the actual decision-making processes with the underlying goal of affecting the outcomes and influencing choices (Arnstein, 1969). There is a key distinction to be highlighted in Arnstein's work, that public participation in the broadest sense is not equivalent to holding workshops, communicating with affected citizens, and producing promotional brochures describing the benefits of a given plan or strategy. Rather, it is the more radical notion embedded within the progressive planning tradition that citizens have the right and the responsibility sit at the same table as politicians and planners when decisions are taken. Within the European Union, there remain large differences in how municipal planners understand and apply public participation in sustainable mobility planning, and the idea of citizens wielding real political power within the planning system is still quite a radical notion.

There is a spectrum of citizen involvement that covers a distance from manipulation to one-way distribution of information from the authorities to the citizenry, through widespread inclusion of the public during the entire process of formal decision-making, to handing over authority to the public to decide how plans will be decided upon (Arnstein, 1969, p. 217). However, as noted in the EU-funded CIVITAS handbook on stakeholder involvement, "*politicians tend to have an ambivalent attitude towards participatory approaches*" (CIVITAS Secretariat, 2011, p. 8). In fairness to politicians, they are not the only ones with ambivalent attitudes towards participation. Much of the planning guidance to be found on how to engage with citizens to develop and implement sustainable mobility plans also demonstrates a certain wariness as to who, when, and how planners should pick those who participate

in the process. Within the same CIVITAS handbook on stakeholder involvement, planners are encouraged to screen the potential actors using a two-by-two influence/interest matrix (see Table 1 below for an example). Not surprisingly, most of the measures discussed in the handbook, ranging from mobility management, clean fuels, bicycle measures, collective transport, and safety measures, listed public authorities, politicians, and transport authorities as the key stakeholders in the "high influence/high stakes" category that are central to a public involvement strategy (CIVITAS Secretariat, 2011).

Table 1: Sample influence/interest matrix

	Low influence	**High influence**
Low stake	• NGOs • Consultants	• Presidents of local associations and organisations • Local celebrities • EU • Citizens
High stake	• Trip generators (schools, hospitals, etc.) • Companies • Public transport providers	• Local government • Politicians • Transport authorities • Media

The stated purpose of such a screening process is to help planners decide how to target the different "publics" that are relevant to a given sustainable mobility measures. Additionally, such practices reveal what Bickerstaff, Tolley and Walker call the 'tension of inclusivity' (Bickerstaff, Tolley, & Walker, 2002, p. 71), where planners face difficult dilemmas concerning representativeness (how can they be certain that special interest groups speak for society at large, and how can the presumed or actual spokespeople of the special interests groups speak for the group?) and inclusiveness, since it is practically impossible to include every potential stakeholder and affected citizen at each stage of the planning process. This raises an uncomfortable issue regarding the ability of well-connected, articulate minority groups to capture the agenda when it comes to participation and planning, something that Todd Litman, among others, contends can lead to biases and distortions favoring mobility over accessibility and an undervaluation of non-motorised forms of travel (Litman, 2002). Lastly, the tension of inclusivity also opens up sticky ethical and moral questions such as: 1) within which planning contexts is it justifiable for planners to selectively engage the public; 2) what are the implications for democratic decision making, transparency, and fairness when planners actively suppress participation of citizens that are opposed to certain measures or goals; and 3) is it justifiable that planners engage in targeted public participation in order to achieve sustainability goals that would otherwise be disrupted or destroyed by wide-spread public engagement (for example, road capacity restrictions, road pricing schemes, removal of free parking, and increased fuel taxes).

What is targeted public participation?

For the purposes of this article, targeted public participation is understood as a selective approach by planners to engage specific segments of the public for specific purposes at specific times.

3.0 Methodology

The research design is a single critical case study using qualitative data sources including: relevant local planning documents and reports, European Commission documents, and expert interviews with three planners directly involved in the planning and implemenation of the planning connected to the construction of a 'cycle motorway' within ARCHIMEDES[1] project (Achieving Real Change with Innovative transport MEasures Demonstrating Energy Savings) in Aalborg, Denmark. What makes this case critical is the bringing to empirical ground some key theoretical assumptions about the way in which planners ought to perceive public participation in sustainable mobility projects. Furthermore, Denmark has a well-deserved reputation for strong public and state support for sustainable mobility planning in general and bicycling provision in particular. One of the guiding hypothesis of the research is that given the positive pre-disposition toward sustainable mobility strategies and plans, coupled with strong traditions of democratic control and transparency, then planners in Denmark should possess strong inclinations toward extensive public participation.

The interviews were semi-structured and lasted for approximately 1 hour. All interviews were recorded and transcribed. In addition to the responses of the participants, background data on participants (educational background, position and main responsibility, time spent in current position) was collected. The analysis and interpretation of the data was conducted through the use of structured queries developed by the authors using a syncretic method combining EU-level policy guidance and best practices for sustainable transport/mobility planning in combination with an analytic frame derived from key academic contributions in the field of sustainable mobility planning and public participation.

3.1 Limitations of the study

As with any case study, particularly single case studies, there are of course issues with the generalizability and validity of the findings. The transferability of the findings from a Scandinavian context is also untested. One of the next steps in the research is to extend the methods to a number of different bicycling projects that have been realised within the CIVITAS program, looking at cities that have different levels of transparency, divergent planning cultures, and differences in political and social systems. Another caveat to this study is that since the planners interviewed were working within an EU funding framework, it is not entirely clear that ordinary municipal planners working on other sustainable mobility projects have similar attitudes to targeted public participation.

[1] ARCHIMEDES is a part of larger EU-funded CIVITAS sustainable mobility project

4.0 Case description and analysis: Planners' perception of public participation in bicycle planning in Aalborg, Denmark

Even though Denmark is one of the most bike-friendly countries in the world, with excellent cycling infrastructure and strong public support for bicycling among citizens, planners and politicians, the overall levels of cycling in many Danish cities has been generally stagnating or declining while car ownership rates and per capita vehicle kilometres travelled are rising (Statistics Denmark, 2010; Lautrup, 2011). In order to reverse this trend, many Danish cities have implemented various plans and strategies that address barriers to cycling. Aalborg, the fourth largest city in Denmark with a metropolitan population around 120.000, is one of those cities. The Municipality of Aalborg developed a Cycling Action Plan in 2008 with the aim to prioritise a list of cycling infrastructure projects to be completed by 2020. The plan was approved by the City Council at beginning of 2009. Also, in the same year, eager to demonstrate a strong political commitment to cycling in the city, the city council approved the project Cycling City Aalborg, co-financed by the Danish Ministry of Transport. The project focuses on commuting cyclists, aiming to provide high-class cycling commuter routes.

Additionally, Aalborg has participated in multiple generations of the sustainable mobility project CIVITAS (CIty-VITAlity-Sustainability), funded by the European Commission. The project was launched in 2002 in order to encourage cities to introduce transport measures and policies that support sustainable urban mobility. The City of Aalborg has participated in two out of three phases of the CIVITAS project (CIVITAS I from 2002-2006, and CIVITAS PLUS 2008-2012). Each CIVITAS project involved between 4-6 European cities in research and demonstration projects. In the CIVITAS PLUS project, Aalborg participated with 5 other cities within the ARCHIMEDES project. One of the primary goals of the ARCHIMEDES project for Aalborg is to put a particular focus on cycling mobility aiming to become a Cycling City. One of the key measures related to cycling improvements that Aalborg implemented is the construction of a cycling motorway.

Through this cycling motorway, the city centre is linked with University campus located 6 km to the southeast. This stretch of the cycle motorway was chosen since it represented one of the primary routes for cyclists traveling on the city centre-university axis. Prior to the construction of the grade-separated bicycle motorway, there were only painted cycle lanes, creating shared space between motorised and non-motorised traffic. An investment for infrastructure work, of approximately 1.2 million Euros has been financed outside of the ARCHIMEDES project (Lautrup, 2011). However, the project contributed through staff time to design, plan and manage the implementation of the measures.

4.1 The need for public participation

Unlike binding legal requirements for Environmental Impact Assessments or Strategic Environmental Assessments, there are no EU requirements for public participation or consultation in transport projects (Trasporti e Territorio, 2010; European Commission, 2011b). When planning the cycling motorway project in Aalborg, the planners interviewed stated that they did not have a binding legal requirement to include the public in the planning process of building the cycling motorway.

However, in light of the fact that the project was nested inside of a larger cycling strategy, Cycling City Aalborg, there was 8 weeks of public comment/communication space set aside where planners held workshops and other public events to communicate the goals of the cycling motorway. As noted by one of the planners within the municipality, *[t]his is part of an EU project and we do not have any requirements for doing this [public participation] in particular. But of course, the European community is very interested in having these experiences with citizen engagement. And that way we are kind glad that we did this. Because, now we can say in Europe, this is the way that you can have a good process about planning for cyclists* (GF).

Another rationale for public participation that is often put forward is that involving the public can *"get new ideas for the project but also to hear whether there are certain specific problems that were relevant for the people that are cyclists within in city*" (AMLN). In the case of the cycle motorway, the planners interviewed agreed that public involvement here was also important to avoid costly and divisive conflicts further down the road. As one of the planners explained:

'*If you do not spend the time and money at that point (early planning) you could easily spend later on. Because if you do not involve people in the beginning of the planning process then you could easily spend all the time and money on people complaining. You have to respond to every complaint that enters the municipality. So, in that way you will spend the time in some point anyway. Why do not do it at the beginning where it is positive involvement, instead of the negative feedback later on...It takes some resources but you would have spent, from my perspective, these resources anyway.*' (MV)

4.3 Targeted versus comprehensive public participation

"I think this might sound weird if you have a theoretical background in public participation, but if we had a very large number of people who will just come in because we had a public advertisement for this for instance, we would also have a lot of ideas that would not be practically possible. We could not stand with one hundred different ideas out of workshop. So we worked with small target groups – to make it more specific."(GF)

While our research shows a high degree of agreement with much of the academic and policy literature on the value of public participation for conflict avoidance and engaging citizens in planning, it is when we turn our attention to which publics participate and in what fashion that the empirical evidence tells a different, and more nuanced, story. The quote above illustrates quite clearly the 'tension of inclusivity' (Bickerstaff, Tolley, & Walker, 2002), whereby planners are often restricted in their ability to have a completely open process due to time, resource, and practical constraints. Since most of the ARCHIMEDES projects were already committed to specific outcomes prior to the public consultation period, the planners decided to forego more open public consultations that would have elicited ideas and comments that were unworkable or impossible to implement given the project schedule and budget. So whom to choose and how should they be chosen? A response that emerges from this case study is that planners use a combination of expert knowledge and agenda-setting power to include the groups that fall within the high influence/high stakes end of the sustainable mobility stakeholder matrix: professional planning staff,

consulting engineers, transport authorities, and key civil society interest groups that have a strong disposition toward supporting the project. The list of stakeholders that participated in the planning process of building the cycling motorway is shown in Table 2.

Table 2 Stakeholders involved in the cycling motorway project

Government/Authorities	Businesses / Operators	Communities/Local Neighbourhoods	Others
Local transport authority	Engineers/contractors (COWI - consulting firm)	Local interest groups (Vejgaard Samråd)	University (Aalborg University)
Traffic police	Transport operators/providers (Public transport unit, Aalborg municipality)	Cycle group (Danish Cyclists' Federation)	
Planners		Transport users	
Professional staff (designers, engineers, health and sustainable departments)		Citizens	

When questioned as to how participants were invited to a workshop organised by the municipality in order to finalise the design and placement of the cycle motorway, a planner for the municipality noted that "*it was very pragmatic process of choosing who should be in it, and it was made in the Archimedes Project Secretariat at that time, and we decided who should be invited in the workshop. And they were invited directly. It was not that we made a broad announcement of the workshop-it was made internally*."(GF) The use of targeted public participation in this context can be seen as a good strategy to engage specific citizen groups and stakeholders that have a strong interest in realising the project while avoiding the typical pitfalls of open-ended public participation processes of multiple rounds of discussions, meetings, map making and the like that ends up ultimately being ignored when the plans are decided between the technical and political actors within the municipality and powerful stakeholders. Another reason that the planners gave for using this type of engagement is that they frequently encounter a lack of interest from the public, and therefore more precise engagement with motivated actors avoided long delays in the planning process. The workshop was the most proactive point of interaction of the project team with public and stakeholders.

As to the question of when the public was included within the planning process for the cycle motorway (see Table 3), it is readily apparent that there were relatively few opportunities for active public involvement over the 4-year project time span. In Arnstein's ladder of public participation, this type of involvement could be reasonably located within the degrees of tokenism, somewhere between informing and placation.

Table 3 Stages of planning and public participation for the cycle motorway project

Stage/ Name	Actions	Stakeholders	Time
Stage 1 **Development of "tool box" with innovative bicycle initiatives**	• Collection of possible initiatives (measures) on the route • Inspection of the topology of the route in order to get 'an impression' of the route and possible initiatives. • Vision workshop with different groups of stakeholders and public	Representatives of all four stakeholders group (see Table 2)	Autumn 2008 / Summer 2009
Stage 2 **Design of the route and project engineering.**	• Finalizing the planning and drawings • Contacting the manufacturers of technical equipment and signing the contracts • Sending the application to the Danish Road Directorate in order to get approval for the lane light project (since this initiative, as a new and untried solution, needed an exemption from existing Danish legislation to be implemented) • Obtaining the approval to implement the project for a test period • An ex-ante count of cyclists	• Professional staff • Project managers • Danish Road Directorate	Autumn 2009 / Summer 2010
Stage 3 **Implementation**	• Establishing of the initiatives on the route • Informing the citizens	• Engineers/contractors (COWI - consulting firm) • Project managers • Transport users • Citizens	Summer 2010 / Summer 2011
Stage 4 **Evaluation**	• An ex-post count of numbers of cyclists • Evaluating average speed of the cyclists • Evaluating cyclists' attitude about implemented measures	• Project managers • Professional staff • Transport users • Citizens	Summer 2011 / spring 2012

Using the framework of the decision-making process set up by (Kelly, Jones, Barta, Hossinger, Witte, & Wolf, 2011), the role of the public and stakeholders in this project is identified. As Table 4 shows, in the process of decision-making (problem definition, option assessment, and formal decision-taking) there were little to no public participation, other than small groups engaged by the planners themselves. Even if the theory suggests that engagement is desirable in all stages of decision making process, here, in this case could be seen that from the planners' perspective, there was little compelling reason to engage the wider public in any significant way.

Table 4 The Stages of the decision making process and main actors involved

Stage	Actors
Problem definition	Project team
Option generation	Project team, stakeholders (targeted)
Option assessment	Project team
Formal Decision taking	Project team
Implementation	Project team, stakeholders (targeted)
Monitoring and evaluation	Project team, stakeholders (targeted)

5.0 Discussion

A reasonable person may ask: so what? What are the practical ramifications for planning that emerge from this study? The answer (or set of possible answers) has a few dimensions worth noting. Firstly, it may be necessary to re-visit both the theoretically- and policy-driven guidance regarding public participation and stakeholder involvement in sustainable mobility planning. Despite more than two generations of exhortations from planning researchers and practitioners, participatory approaches to planning have limits and those limits ought to be more clearly discussed as to how, when, and where public participation is employed. Transparency and fairness (both perceived and actual) are important planning values, but they should not come at the expense of abandoning professional expertise and insight developed through years of experience. One of the interesting tensions that emerged from the study is that the planners who were responsible for the cycle motorway project were all younger planners educated at a program at Aalborg University that places a strong emphasis upon on public participation and collaborative decision-making. Yet when faced with the constraints of real-life planning, there was little visible reluctance to engage in a much more specific and narrowly defined version of public participation, whereby the planners themselves chose which publics should be heard.

Secondly, the relentless focus the presumed need for public participation as a means to secure political support for sustainable mobility measures ought to be examined more critically. While this may be true for small-scale changes in transport modal shifts, when it comes to more contentious issues such as road pricing, removal of parking and capacity restrictions for motorised transport, broad public participation will likely encourage a continuation of the status quo rather than a shift toward non-motorised and energy-efficient modes of transport. If urban planners are serious about realising sustainable mobility goals, then they will have to, sooner rather than later, become more comfortable with the idea that large segments of the population will be strongly opposed to ANY restrictions on personal freedom in the material expression of the automobile. The recent planning disaster in Copenhagen regarding the

proposed implementation of a congestion ring neatly illustrates the point. The idea generated virulent opposition not only from predictable political corners, such as the conservative, free-market parties, but also from many of the Social Democratic municipalities that are located on the periphery of Copenhagen. Despite strong central government support, the city had to abandon the plan due to overwhelming public opposition.

Thirdly, and finally, there are a number of ethical paradoxes that are raised here. Denmark, along with the rest of Scandinavia, has a long history of democratic governance, and public participation and engagement have been integrated into planning system for many decades. The planning culture in Denmark recognises the significance of public participation, even if there are no legal requirements for doing so. Customs and norms of democracy and participation are also embedded in planning practice, even in the absence of formal legislative or regulative measures. Moreover, Danish citizens generally have a high level of trust in authority and there is culture of communication between citizens and planners at the local level, creating more space for planners to operate and decide without constant consultation with citizens and stakeholders. In political cultures that are more corrupt, contentious, or litigious, targeted public participation can easily assume a more ominous character, where existing power imbalances between the expert and the citizen are amplified by the ability of the planner to freely choose the particular public that they wish to engage.

Conclusions

How planners actually perceive public participation and how they ought to perceive it, according to both policy guidance and scientific literature, is not necessarily the same thing. One of the main conclusions to be drawn from this study is that from both a research and practice perspective, more empirical work needs to be conducted that seeks to understand how exactly planners today engage with the public. If we collectively are to realise our goals of living and moving in a more sustainable manner, then radical changes will have to be made in our current patterns of mobility and consumption. These will not be popular changes in the near term. Empty exhortations of “collective decision-making” and “public participation” often serve to mask the reality that the key decisions have often already been taken and what is required from the crowd is merely to give the thumbs-up or thumbs-down. Human beings are quite clever is sorting out the rules of the game and most people do not really enjoy being a part of a consultation process that is, at root, a charade of democracy.

The tension of inclusivity is also emerges quite strongly in the current paper. In the space between the communicative ideal and the difficult choices that need to be made in real life, what kinds of tools, practices, and ethical guidance will be required to make these difficult choices in a defensible manner. There may be little in the way of clear-cut right and wrong, but if planning wishes to move away from an elite exercise, then more work needs to be done to clarify exactly how and in what ways the public ought to or even wants to be involved in these decisions.

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PLANNING FOR SUSTAINABILITY IN NORDIC TOURISM DESTINATIONS: Case Ylläs, Lapland, Finland

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Abstract

Many tourism destinations are struggling with simultaneous needs to protect natural environment and to meet the needs of tourism. Depriving natural assets, growing numbers of visitors, and fast construction and development all strain the carrying capacities of these communities. Planners are working in the crossfire of different demands, interests of several operators, and needs to preserve nature and its limited resources. Yet, planning for sustainability in tourism destinations remains rather vague.

MATKA Sustainable Tourism Destinations - Land Use, Architecture, and Energy (2009-2011) was a multidisciplinary research project investigating sustainable solutions for Nordic tourism destinations in terms of land use planning, energy systems and architecture. MATKA project aimed to…. MATKA was a joint project between the Aalto University Departments of Architecture and Energy Technology, and Finnish Forest Research Institute (Metla).

The case study site of this project located in the Finnish Lapland, Ylläs – one of the fastest growing ski resorts in Finland. The case study site was a roughly 1200 ha new development next to the existing ski center on the northwest slopes of Ylläs fell. At the time of the research, a master plan for the site had been prepared and approved by the municipality, and it waited to become legitimate. The municipality, together with other developers of the site, held a planning competition in 2010. The goal of the competition was not only to get a variety of optional plans for the site but also to find new solutions for a sustainable tourism resort. In 2011, planning the site continued with the winning team.

This paper will describe the results of the MATKA project together with the design process of the competition proposal and the further developed plan for the site. Furthermore, this paper will describe the observations drawn from reflecting the research and practice. Authors of the paper represent both ends: the research as well as the practice. Key questions of the paper are:

- How the research and practice met in this particular case study, and

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- How did the different demands for sustainability integrate in planning the new resort community in Ylläs?

The analysis of Ylläs case study showed that meeting the demands of sustainability easily become secondary to the variety of short-term stakeholder interests, and that moving towards detailed planning the aims for sustainability do not concretize. The analysis suggests that strong cooperation between planners and researches from early phases of planning until the more detailed planning would be one way to ensure that aims for sustainability are considered through out the process. Also, this way the conversation between different stakeholders and decision-makers could be facilitated by the researchers, and therefore the possible disputes in the community lessened.

1. Background

Global concern on the sustainability of our development began already in 1960's with better understanding of the environmental changes and the effects of these changes on our living environment. Despite of being recognized and discussed already for decades sustainable development remains a vague concept and difficult to apply in practice. The aims for sustainability and the tools to achieve these aims are a challenge for everyday life as well as for policies, decision-making and land use planning.

There are many guidelines and criteria for sustainable planning (LEED etc.), and these guidelines are appreciated as tools for planners and designers. However, applying those to the often very specialized conditions and demands of tourism destinations may be difficult or even impossible. Many destinations are located in extraordinary natural environment, which is sensitive to erosion, and slow to restore. In addition, Nordic resort communities are often rural and remote destinations.

Natural environments as well as communities are in a constant change. There are many reasons for change, and not all is due to our actions or under our control. In resort communities the change is driven e.g. by customer demand, growing numbers of visitors, increasing traffic and fast construction which all have direct and indirect effects on the environment. With nature and landscape as their main assets, they struggling with simultaneous needs to protect natural environment, to meet the growing needs of tourism and to assure the social and economic well-being of the community (Shawn & Williams, 2004). With development and new construction tourism destinations reach for increased economic benefits and better competitiveness. But the growing numbers of visitors and fast construction strain the natural as well as the social carrying capacities of the communities. Changing environments require systemic approach to planning, and new thinking is needed in order to review the values behind development.

1.1 Case study: A new resort community in Ylläs, Lapland

The case study site of MATKA project located in Ylläs[3], in the western parts of Finnish Lapland (Fig.1). The site lies next to Äkäslompolo village and Ylläs-Ski ski center on the northwestern slopes of Ylläs fell. Ylläs fell (718 m.s.l.) is part of the third largest national park in Finland, Pallas-Ylläs National Park. It is the most southern fell of the park. The fells in Lapland create a unique mountainous landscape in Scandinavia, and also Ylläs is appreciated for it's far-reaching scenery and extraordinary Nordic nature. Like in many Nordic destinations, tourism in Ylläs is based on the exclusive natural environment.

Figure 1. Location of Ylläs (source: Google maps)

The case study site was altogether a roughly 1200 ha indicated for new development (Fig. 2). At the time of MATKA research, a master plan (Ylläs II Master plan) for the site had been prepared and approved by the municipality, and it waited to become legitimate. The master plan together with other legal documents and strategic plans

[3] Ylläs is one of the most visited ski resorts in Finland. Of the individual ski resorts in Lapland, Ylläs has had the second most registered overnight stays during 2004-2010. In 2011 Ylläs held over 12% market share of the nights spent in Lapland. (Statistics Finland & Regional Council of Lapland, 2011; 2012)

indicated the aims for development and growth for the site. The master plan consisted of a dense new village center connected to the existing ski center and an altogether 334 ha holiday housing and accommodation area. For hotel, tourism businesses and services the master plan allows up to 284 000 sq m of new construction (10 200 bed units), and for holiday housing approximately 50 000 sq m (2 500 bed units). Other guidelines for planning were set by the existing topographical, ecological and micro-climatic conditions of the site (Fig. 3).

Many strategic plans and development projects considering the future of the Ylläs site have been made during the last years and decades. Part of the long-term development was a planning competition that was held in 2010. The goal of the competition was not only to get a variety of optional plans for the site but also to find new solutions for a sustainable tourism resort. In 2011, planning the site continued with the winning team. Based on the winning entry, a *resort master plan* for the site was finalized in December 2011. A resort master plan is a combination of guidelines of the legitimate master plan, aims of the service providers and other actors. In the near future, the development of the site will continue with detailed planning.

Figure 2. The part of the Ylläs II Master plan that concerns the new resort development site as it was at the time of the MATKA project. (Source: Kolari municipality)

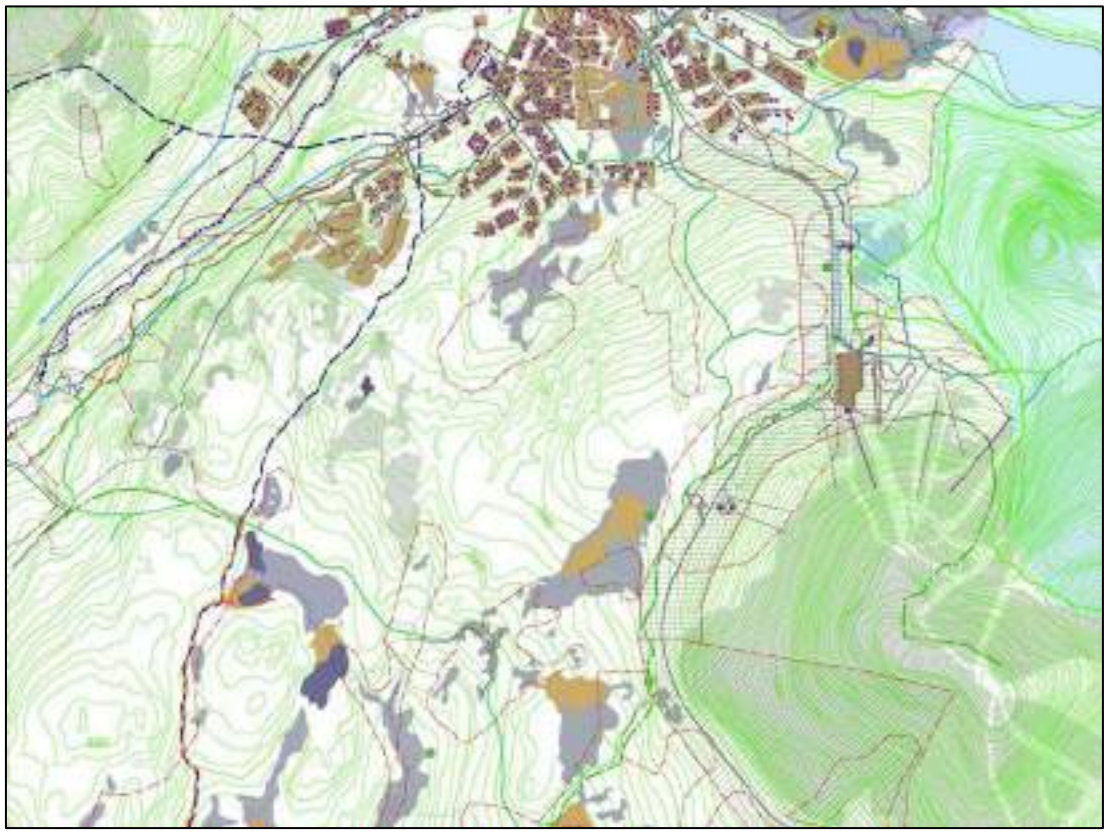

Figure 3. Ylläs case study site's topography and ecological conditions together with the existing infrastructure.

2. Methodology

MATKA project was based on pragmatic action research methods. During the project, MATKA researchers worked together with the project partners[4] that represented the entire value chain of stakeholders of the case study site. The ongoing planning process of the case study site framed the research through out the process. Different planning documents, policy papers and other relevant agreements, plans and reports were studied and analyzed in terms of sustainability. In addition, local actors and residents were interviewed, and a visitor survey conducted, in order to find out a shared vision for the development of the specific site. (Merikoski, 2010; Staffans & Merikoski, 2011)

[4] The project partners were Kolari municipality (the planning authority), Laatumaa (land owner), Lapland Hotels (tourism industry, one of the key developers of the site), Lemminkäinen Talo Oy (holiday house constructor and developer), and Fortum Power & Heat (energy company).

MATKA project was also linked with a planning competition held for the site. The aim was to enhance understanding in integrating sustainability in planning, and to find solutions for evaluating and comparing alternative plans. The researchers created principals for planning the site in a sustainable way for the competition program, and evaluated the proposals in terms of the given guidelines. For the evaluation it was considered how the given principals were articulated in the proposals, how the different dimensions of sustainable community were emphasized, and how had the guidelines been translated into planning solutions. Features, such as land use and infrastructure, of the proposed plans were investigated by layering the features of different proposals on top of each other. This way the differences between proposals were easier to understand and the effect of visual representations alleviated. (Fig. 4)

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Figure 4. Features, such as land use and infrastructure, of the proposed plans were investigated by layering the features of different proposals on top of each other.

For this paper the results of MATKA project were examined together with the design process the case study site. Authors of the paper represent both ends: the research as well as the practice. The authors aimed to identify some of those factors in a planning process that support long-term sustainable development.

2.1 Design sciences

Since this paper describes research and conversation over a planning process, it is necessary to have a look at *the design sciences* as a concept. Van Aken (2004) distinguishes three categories of scientific disciplines: *the formal sciences*, *the explanatory sciences*, and, *the design sciences*. By design sciences, van Aken refers to academic disciplines such as engineering and medical sciences. The design sciences aim to develop knowledge for the design and to solve or improve problems in e.g. construction or planning (van Aken, 2004). As van Aken indicates (2004, pp. 225), the final objective in design sciences "…is to develop valid and reliable knowledge to be used in designing solutions to problems." where as formal sciences such as philosophy or math aim to build systems propositions that are internally logical and consistence. Explanatory sciences, on the other hand, aim to describe or explain observable phenomena. (Van Aken, 2010, pp. 224).

Straatemeier et al. (2010, pp. 578) note that research in planning is not only concerned with understanding the current practices and processes but also with creating change. They argue that in order to generate innovations in planning, a particular research approach is needed. The traditionally used research methodologies (e.g. comparative case study analysis) are static and do not allow interactive development processes that are necessary in order to generate change.

Straatemeier et al. (2010) introduce a methodology called “experiential case-study analysis”. The methodology suggests that innovations for planning practices can only be developed through iterative testing, reflection and adaptation. (Straatemeier et al., 2010)

3. Key findings of MATKA project

MATKA project was a multidisciplinary research project investigating sustainable solutions for tourism destinations in terms of *land use planning*, *energy systems* and *architecture*. In terms of integrating sustainability in planning tourism destinations, the key findings were:

- A shared vision is needed in order to identify common values that all stakeholders and community members are committed to promote
- There is a need for more flexibility in detailed planning, and more commitment to value-based, strategic planning
- Competitions offer a viable tool to investigate sustainable planning solutions but it has to be ensured that they respond to the current needs and the ongoing planning process

3.1 A future vision of a sustainable community

Vision integration is being adopted for strategic development and planning in many cities and municipalities through various methods and with divergent results. It has been understood that evaluation of future direction in planning is often based on an analysis of the process that has lead to the current situations, and planning responds to guidelines set by the past. However, future community planned this way may not be the one we envision for ourselves. (Staffans et al., 2008; Merikoski, 2010) A shared vision is seen as a tool to "create the future we [the community] choose" (RMOW, 2007).

Figure 5 illustrates how the vision of a sustainable community was understood as a combination of national and global aims for sustainability and local condition and values in MATKA project. What the local community and stakeholders need and value in their business and living environment set a local frame for *the features for sustainable communities*. Together with the global demands for sustainability they form a framework for *a future vision* for the community. A shared vision responding to the key features of sustainability is a tool to identify objectives, and to develop criteria for planning and design principals. The built environment and its use and maintenance need to be monitored in order to verify the results and effects. Vision becomes reflective to new knowledge and results of implementation due to the ongoing evaluation. (Staffans & Merikoski, 2011; Merikoski, 2010)

Figure 5. Key features for a sustainable community are a combination of local values and global aims for a sustainable community. The features are necessary for envisioning a sustainable future for the community. Guidelines for planning can then be created based on the shared vision. (Source: Staffans & Merikoski, 2011)

Tourism destinations are communities with a variety of stakeholders. In addition to residents, tourism industry and municipality, the stakeholders include visitors, seasonal workers, second home owners and the services and business outside of tourism sector. Therefore, planning and developing these destinations means balancing between many different, and even conflicting interests. (Beritelli, 2011; Merikoski, 2010)

The discussions with Ylläs stakeholders indicated that in the end, interests of different stakeholders were not as conflicting as they were perceived. Old disputes in the community reflect on current atmosphere for cooperation and discussion. Sometimes the key aims are not heard or they are misunderstood by others because of prejudice or merely because common discussion turns into an argument on secondary topics. When future visions and development interests were discussed in small stakeholder groups common understanding as well as different points of views were easy to identify and the discussion was open minded. On the other hand, these discussions showed that in the end, the key interests were shared (Table 1).

Table 1. Shared values identified from stakeholder discussions in Ylläs. (Staffans & Merikoski, 2011)

LOCAL ENVIRONMENT: NATURE, LANDSCAPE, COMMUNITY **Respecting and protecting the natural systems**	
BUILT ENVIRONMENT	**COMMUNITY AND WELL-BEING**
A well-planned community (quality of	Needs of residents, community life and

planning, design and construction)	well-being
Sustainable mobility, trails (promoting car-free travel)	Partnerships and participation
Architecture	Identity, culture and cultural heritage
Sustainable energy solutions	Methods of guidance, know-how (towards sustainability)
Managed and controlled growth and development (carrying capacities of the community and nature; year-round tourism)	Tourism as part of larger economic system
Successful operational environment for tourism	Healthy and diversified tourism economy
SUSTAINABLE COMMUNITY, QUALITY	

A shared vision can be seen as a common agreement on the basis of future development. It is also a link between the often quite abstract aims of sustainability and the local context. However, these value-based key interests as guidelines for planning and development require commitment from all stakeholders. In addition, it is necessary that the stakeholders are able to trust on each other's commitment. The trust can be created only by long-term cooperation, and the experience from MATKA project suggested it might be enhanced by research partnerships.

3.2 Commitment to strategic planning

The National Building Code of Finland underlines the different aspects of sustainability, and all planning and building construction should promote ecologically, economically, socially and culturally sustainable development (MRL 2000, 1 §). Nevertheless, in land use planning as well as in building construction the legally binding, quantifiable regulations are only barely met, and it is left to the commitment and will of stakeholders whether they will aim more ambitiously towards sustainability.

Ylläs case provided examples on how aims for sustainability do not concretize towards detailed planning. The site for the new development sits next to the Pallas-Ylläs National Park, and the unique natural features typical to the area exist on the site as well. National parks in Finland are well protected by the law and the natural values of the site have been recognized in the Ylläs II Master plan as well: several levels of protection give guidelines for future planning. However, only a few of them are obligatory, and e.g. wetlands are only partly appreciated. Meanwhile, wetland and water body conservation is a required feature in many internationally renowned indicator systems, such as LEED 2009 for Neighborhood Development (USGBC, 2012). (Merikoski, 2010)

For successful resort development, the shared value-based aims for sustainability have to be identified and supported by all actors and stakeholders. Also, due to the lack of means to bring sustainability into practice in detailed planning, there is a need for more flexibility in order to implement new technologies and to promote innovations (Fig. 6). (Staffans & Merikoski, 2011)

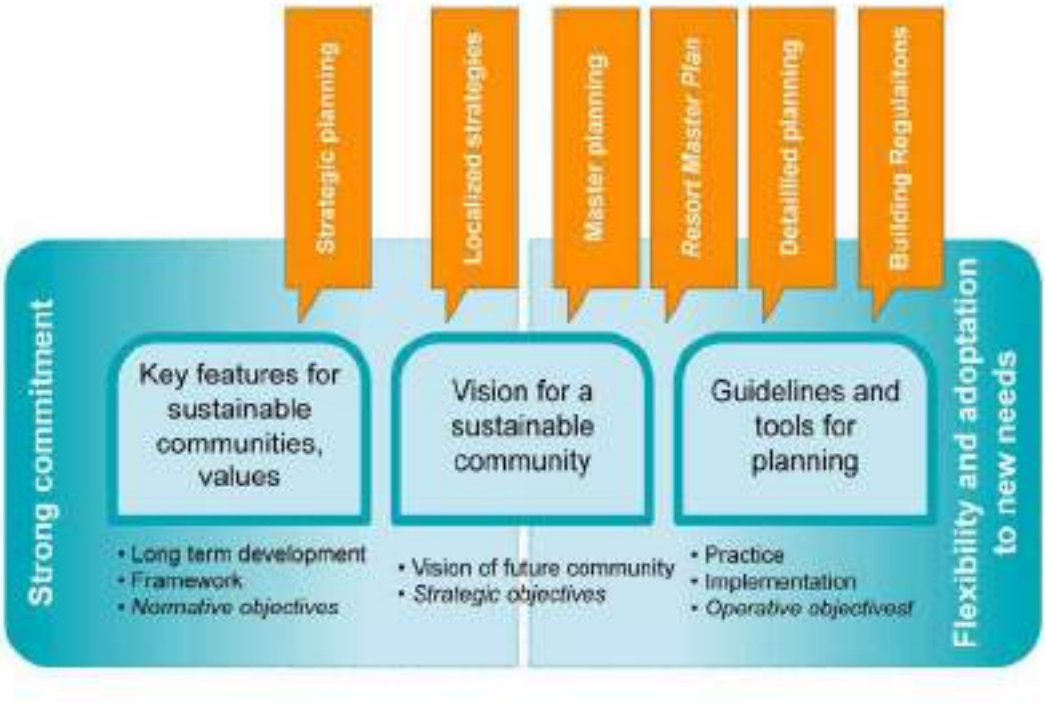

Figure 6. Current land use planning in Finland puts emphasis on detailed planning by legally binding regulations and rather slow transformation processes whenever revision is needed. More commitment is needed to strategic planning, and at the same time, more flexibility in detailed planning. (Staffans & Merikoski, 2011)

3.3 Competitions as tools for sustainable development

Design and planning competitions seem to offer a viable tool for investigating sustainable solutions for one particular site. (Staffans & Merikoski, 2011; Merikoski et al. 2012) With a competition, different options can be studied and stakeholders will understand already before the commission what to expect. Nonetheless, competitions have to be programmed in a way that the results respond to the current planning process and to a particular need. It has to be understood what can be solved with the competition, and clarified what is sought after. (Merikoski et al. 2012) It seems that in Ylläs, the planning competition would have been more successful if it had been held earlier in the process. Now, although considered flexible the legitimate master plan for the site set major limitations for new ideas for sustainability.

(Staffans & Merikoski, 2011) Figure 7 shows how Ylläs competition was positioned in the long-term planning process for the site.

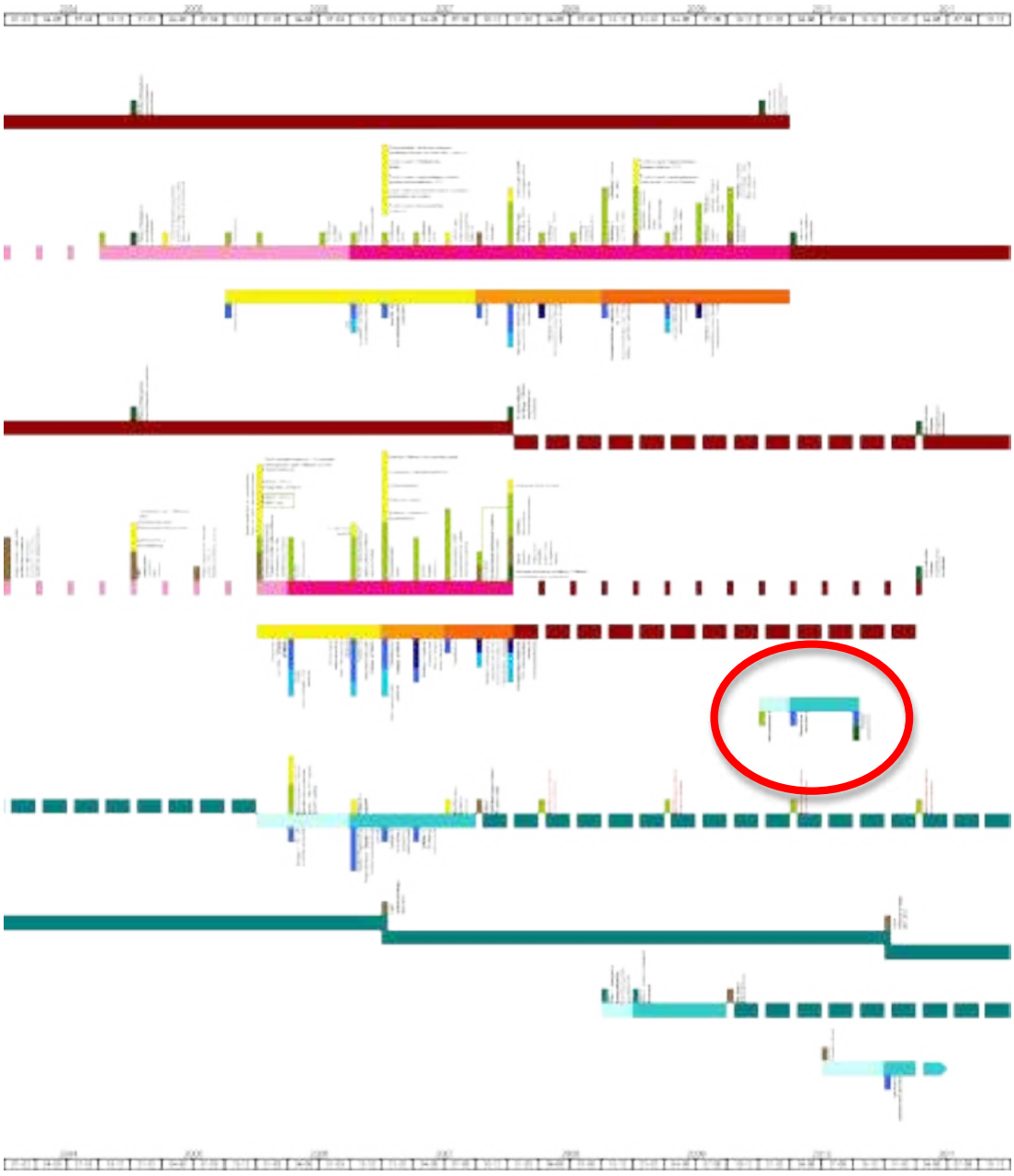

Figure 7. The evaluation of the Ylläs competition suggested that it might have been more successful in terms of finding innovations for sustainable resort communities had it been held earlier in the planning process. (Staffans & Merikoski, 2011)
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4. Ylläs competition: guidelines for sustainability

Ylläs planning competition was launched in April 2010. The objective of the competition was to investigate optional planning solutions for the new resort community. Five multidisciplinary design teams were invited to propose a plan for the site, and to find new solutions for a sustainable tourism resort.

MATKA project took part in programming the competition by introducing a vision and key principals for sustainability as guidelines for planning the site. These guidelines were based on six features for a sustainable resort communities identified in MATKA project (Fig. 8). The vision was developed together with the various stakeholders of the case study site. In all, five group discussions were organized with different stakeholders: municipality representatives, business and tourism industry representatives, residents, land use and infrastructure actors, and second homeowners. During the process, local values, sustainability objectives and the future vision of the site were discussed.

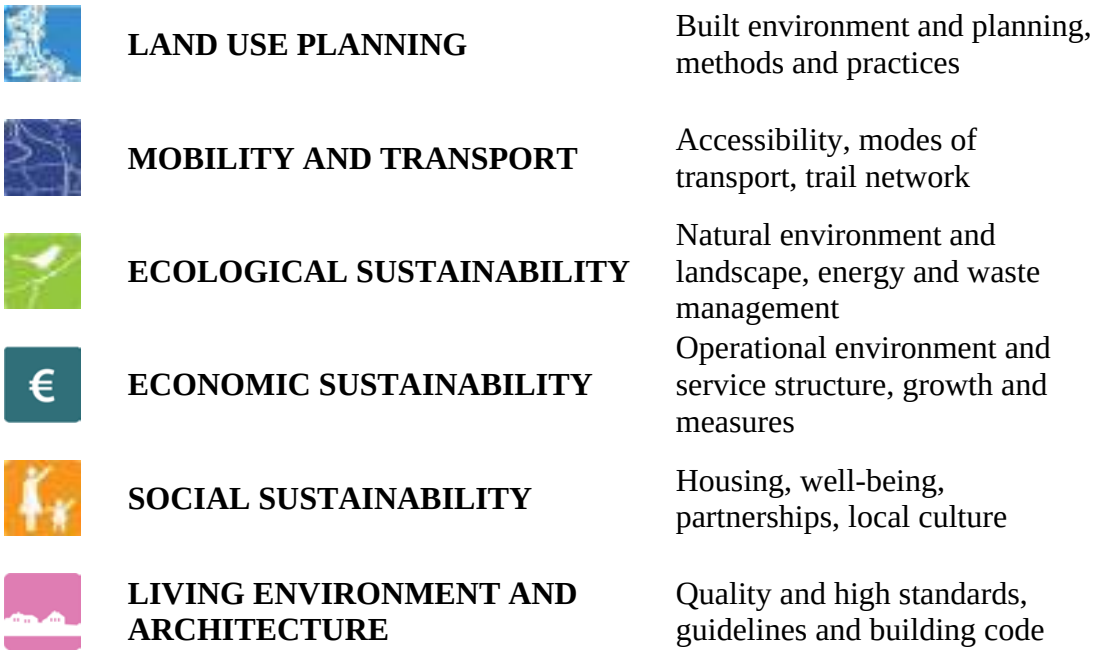

Figure 8. Six key features for a sustainable Nordic tourism destination identified in MATKA project. (Staffans & Merikoski, 2011)

Decisions made during early phases of **land use planning** have long-range impacts in terms of sustainability. Regional structure and built environment effect on future opportunities to adopt sustainable solutions. Planning also affects on how natural resources are employed and what kinds of uses and activities are encouraged – or

feasible. Planning practices are linked with social sustainability through participation and open communication.

Needs of **mobility and transport** in tourism destinations are two-folded: accessibility of the destination and mobility within the community. All stakeholders in Ylläs mentioned traffic planning, sustainable modes of transport and accessibility as key elements for a sustainable future. The trail networks (cross-country skiing, hiking, motor sleds, dog sleighs, etc.) were considered as one of the core attractions of Ylläs. Within the resort, accessibility includes physical and visual access to nature, as well as pedestrian environment (allowing access to tourism services and encouraging car free tourism). Sustainable mobility in a resort community has to respond to the needs of the residents and workers as well - in addition to visitors. The built environment sets the frame for different modes of transport: what kind of mobility is possible, and how sustainable and soft modes of transport can be adopted. Fast and sustainable transport (such as rail connection) to a destination will be an asset in the future because of the significant environmental effects of air and car traffic. (Staffans & Merikoski, 2011; Merikoski, 2010)

Protecting biodiversity and sustaining ecosystems are global concerns but for nature-based Nordic resort communities, **ecological sustainability** also means ensuring their own success as tourism destinations. Strong winds, heavy rains and weather conditions that change quickly require climate responsive planning and architectural solutions. (e.g. Luthe, 2009) Pollution, waste and other substances spread and stored in water, ground and air have a direct effect on the attractivity of the destination (RMOW, 2007). In addition, climate change needs to be considered in Nordic tourism destinations. It may mean changes for winter activities and the possibilities to perform different winter sports. If winters become more moderate in the future, year-round visitors and activities will become more important for ski resort communities. (Luthe, 2009) Already ski resort communities in Finnish Lapland struggle with significant imbalance between seasons that are not **economically** or **socially sustainable**. At the same time the operational environment has to support tourism business and encourage the sustainable practices, as well as economically profitable activities. The growth of the resort has to in balance with the carrying capacity of the natural environment and the community. Finally, in tourism destinations, the well-being of the local community is important also for tourism. The residents as well as the visitors will appreciate high quality **living environment** that reflects the local culture. As an example, the key objectives for *sustainable land use planning*, *mobility and traffic*, and *ecological sustainability* summarized for the competition are listed in Table 2.

Table 2. The key objectives for *sustainable land use planning*, *mobility and traffic*, and *ecological sustainability* summarized in MATKA project.

Sustainable land use planning	• A shared vision for sustainable future
	• Balanced development: new

	development, existing conditions and carrying capacities
	• Nordic nature and conditions as the basis for planning
	• LCA / Regional life cycle assessment
	• Multidisciplinary expertise integrated in all planning
	• Communicative planning and participative methods as a common practice
Mobility and traffic	• Sustainable access to resort
	• Balanced transport and route planning: carrying capacity, future demand, flexibility
	• Ensuring routes and trails for all users
	• Physical and visual accessibility of nature
	• Encouraging sustainable mobility and car free tourism
	• Accessibility and pedestrian environment
Ecological sustainability	• Protecting natural environment and biodiversity
	• Planning from local conditions: ecology, climate, topography and landscape
	• Energy and material efficiency in planning and construction
	• Local and sustainable waste management
	• Landscape-based planning

Although different dimensions help to understand the complex aims and demands of sustainable communities, they are interconnected. Moving towards a sustainable community in long-term may mean tradeoffs in short-term development. It means that taking a step forward in one area may mean lack of development on another area - or even negative impact in terms of sustainability. These tradeoffs must be recognized, and they can be seen as stepping-stones toward long-term sustainability. (RMOW, 2007) Vision-based planning is a feasible approach in order to illustrate and understand these interconnections and trade-offs.

Figure 9. Competition proposal “Luppo” suggested a strong ecological approach. This proposal left most of the site untouched and suggested radically less construction than Ylläs II master plan allowed. It was found unrealistic in terms of the site developers’ aims especially since it left the highest parts of the site – with the most sensitive nature – unconstructed. In the master plan, half of the resort center and a 10 000 sq m hotel are to be built to these parts of the site.

The competition proposals were submitted in early fall 2010. MATKA researchers analyzed the proposals in terms of the given guidelines. Overall the proposals suggested only variations of plans that were fitted well into the Ylläs II Master plan. Innovative approaches to sustainability were not found and only one of the five proposals, “Luppo”, suggested a plan with a strong statement for sustainability. It proposed radically less construction than the master plan allowed leaving as much land unconstructed as possible (Fig. 9). Even so, it was considered unrealistic in terms of developers’ aims for the site. “Noitarumpu” offered an interesting approach to organizing traffic and the core of the resort (Fig. 10). However, the proposal was not economically feasible.

Figure 10. In the competition proposal “Noitarumpu” the center of the resort was resolved in a very characteristic way. It was found interesting and reflecting the local culture in an innovative way but considered economically unrealistic to realize.

The competition was resolved in December 2010. The analysis and findings by MATKA researchers were available also for the competition jury to support their decision-making. “Kuura” by Eriksson Architects was announced as the winner (Fig. 11). It was considered the best compromise of all the guidelines and aims. The plan was carefully studied and it responded well to the architectural guidelines for sustainability, such as the composition of buildings in the landscape and topography. However, it was considered too spread out in terms of land use, and the jury suggested that in the future, it would need to be developed more compact. Further planning of the site was commissioned to the winning team, and the resort master plan finalized late in 2011 was based on the winning proposal.

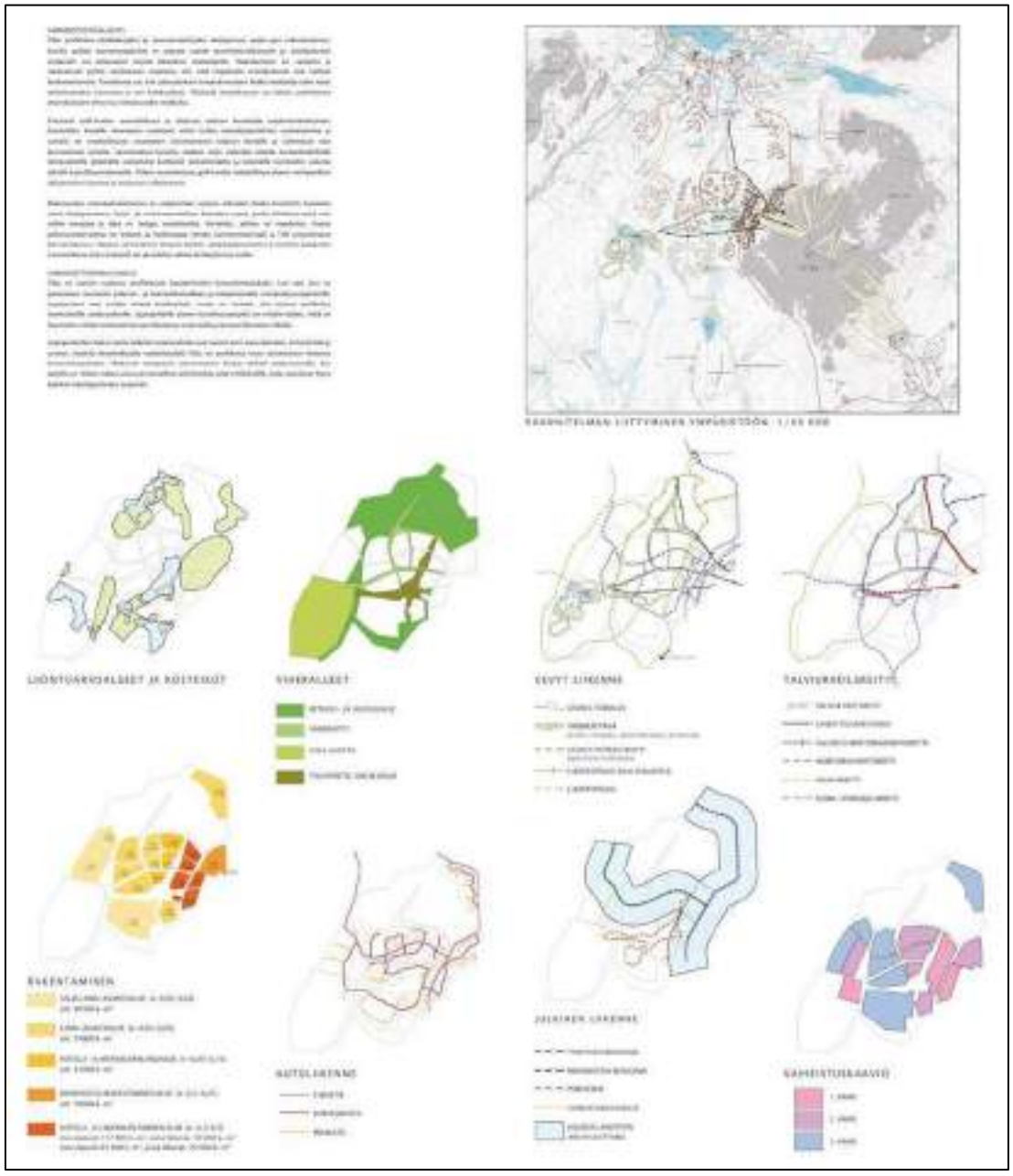

Figure 11. Competition proposal “Kuura” was considered carefully studied, and it responded well enough to all the different aims and guidelines of the competition. MATKA researchers appreciated the proposal for taking well into account the architectural guidelines for sustainability such as the composition of buildings in the landscape and topography.

5. Planning process

5.1 The competition proposal

The guidelines for Ylläs competition included the existing Ylläs II Master plan and the principals for planning a sustainable tourism destination given by MATKA researchers. The master plan was considered flexible but at the same time problematic in terms of the aims for sustainability. For instance, the different densities of construction set by the existing plan were seen problematic: in certain areas the density seemed too low for an effective infrastructure or public transportation system. On the other hand, the dense new resort center was to be built on the most challenging topography and the most vulnerable natural environment.

In planning competitions, the teams balance between the restrictions set by realism and the totally new approaches to planning the site. Proposing a plan that offers a new approach includes a risk of not becoming rewarded. Often competing teams aim for a compromise where the proposal is a combination of realism that the organizers are assumed to be looking for, and new thinking to some extent (Merikoski et al., 2012). What the approach will be in a particular competition is a decision that has to be made in a very early phase of the design process.

In spite of the aims for sustainability that might have provoked for new thinking, as well as the challenges in the existing master plan, in this case, the planning team still chose to follow the major guidelines of Ylläs II Master plan as it was given as the base for the planning.

Figure 12. Winning entry “Kuura” by Eriksson Architects Ltd.

One of the challenges of the competition was how to ensure easy access to sustainable modes of transport and to different trailheads as the new construction and development would take more and more land area. Guidelines such as limiting new construction within walking distance from main roads were suggested in the Ylläs competition program. It was demonstrated by the MATKA researchers that while it would still allow same amount of development (sq m and bed units) with the same average density as the current master plan, public transport would be accessible, and nature and trailheads would be always at walking distance. (Staffans & Merikoski, 2011; Merikoski, 2010)

Nevertheless, the planning team deemed that new ideas for sustainable transportation and traffic came out easily for the competition proposal. In the proposal, access to pedestrian, skiing, hiking and biking routes was kept easy with the aim to reduce the need for a car. Two lifts were also placed on the resort area to enable the ascent to the slopes directly from holiday accommodation. Reindeer and husky taxis were proposed as alternatives for traditional taxis. It was also easy to use creativity in the energy issues in the competition phase as the planning team included an energy expert: for instance the energy collected by cooling the slopes was proposed to be utilized in heating the holiday houses.

The most challenging task in the competition – and also later in the planning process – was to place the required amount of square meters of new construction on the steep slopes of the site. These northwest slopes will be challenging to construct but they are also valuable in terms of nature and landscape. However, the amount of new construction was justified by the close proximity of tourism services and lifts that made the new center easily accessible.

In the proposed plan, the given densities were mainly achieved. The best possible solutions to place the maximum capacity of construction on the site were studied, and the main idea was to leave as many of the unique geological formations untouched as possible. The existing master plan included instructions to leave “the most valuable parts” of these geological formations untouched, yet it didn't state which parts of the slope these actually were. There seemed also to be a conflicts between the allowed square meters, given floor heights and the overall area of the site. It was almost impossible to leave parts of the site unbuilt with the required amount of square meters.

Although considered flexible, Ylläs II Master plan set major limitations for new sustainable ideas. The planners found it difficult to follow the given guidelines for sustainability while the existing master plan was in so many ways contradictory to them. The widely spread structure of new construction and the dense new center situated over the most vulnerable and geologically valuable environment, were considered as the most challenging components of the existing master plan. The biggest change to the existing master plan in the proposal was the relocation of the

new main road connecting the village and the new resort together. The road was moved further north in order to leave the most central area of the site for pedestrian and recreational use only. This green corridor, "The Winter Park", also included a ski-in-out route and a lift that permitted straight access from the cabins to the slopes. This solution made the pedestrian traffic superior compared to vehicle traffic, and was considered one of the most important ecological components of the proposal.

When the proposal "Kuura" was announced as the winner of the competition, the same challenges, the lack of preserved natural areas and the fragmentation of the land use, were criticized in the jury's feedback. The timing of a planning competition in terms of the long-term planning process seems to be crucial when new and innovative planning solutions are sought after. The realism and the knowledge of the ongoing planning process may limit the competitors' will to take risks and propose something against what has already been decided.

5.2 Further planning: a resort master plan

Further planning of the site was commissioned to the winning team, and the resort master plan finalized in late 2011 was based on the winning proposal. A particular *resort master plan* is used in planning resort communities, and it means a comprehensive development plan of a center for travel, leisure, trade, business or another action. It typically consists of a study and a plan of the needed investments, economy, financing opportunities, marketing and sales of an area, as well as the locations of the main facilities. However, the Ylläs resort master plan was not realized to that extent. It concentrated on the volumes of the new infrastructure and the viability of planning solutions for the areas that were to be realized first.

The feedback from the jury of the competition as well as some useful ideas from the other rewarded competition proposals were utilized in the resort master plan as much as possible. Yet, some ideas proposed in the competition, especially considering the sustainable lifestyle of the new resort, seemed to be unrealistic at this stage. Many of the earlier strategic plans of Ylläs, and the different interests of operators were also studied more carefully at this point. In addition, the results of the MATKA research project were available. However, further cooperation with the researchers was not possible because of the schedule and the limited resources.

The goal of the resort master plan was to concretize the long-term goals of sustainability and create a base for the detailed planning in the future. Even though, many of the questions remained unresolved and were left for detailed planning. The future will show how the long-term aims for sustainability will become visible in the new resort.

For planners, working in the crossfire of the different demands of sustainability and the aims of several operators is challenging. Many times the final plan ends up a compromise, and not the first priority of anyone. The demands of sustainability are easily left secondary to the other interests. The further the planning process is from

legitimate and detailed planning, the easier the goals of sustainability can be seen. The commitment to sustainability is tested when the actual resources for implementation become at stake. There are no means to bind these aims legally when moving towards detailed planning and construction. If there are no measurable qualities, it's also hard to evaluate how well the goals of sustainability are reached in the plan (e.g. Junkkonen, 2011).

Figure 13. Resort master plan by Eriksson Architects Ltd. finalized in December 2011.

6. Analysis: how the research met practice in terms of sustainability?

During the research (2009-2011) and after it, the discussions for creating a new *sustainable* resort community in Ylläs faded gradually. After the competition and the researchers involvement the focus in planning shifted towards short-term stakeholder interests. Also, the discussion continued involving only the active partners of the new

development instead of all community members. At the same time, tight schedule for planning did not leave enough room for planners and architects to further investigate how to combine the aims for sustainability and the demands of stakeholders in the new resort master plan. Architectural and planning offices, even if specialized in sustainability, can develop their knowledge only to a certain extent. Therefore cooperation with researchers in planning would offer a way to gain access to latest research in integrating aims for sustainability in planning.

The analysis of Ylläs case study suggests that meeting the demands of sustainability can easily become secondary to the other stakeholder interests. In the competition, innovative approaches for sustainable communities had been left second to the demands of the existing master plan. The further the planning process is from legitimate and detailed planning the more aims for sustainability are present. At the same time there are no means to have these aims legally binding and they do not effectively transfer into practice when moving towards detailed planning and construction. The closer the process gets towards realization the more regulations begin to emphasize measurable and quantifiable qualities. For sustainability, it means that only regulations such as for energy systems or energy efficiency can effectively be included.

7. Conclusions

Planning sustainable tourism destinations requires a combination of different fields of expertise, such as land use and traffic planning; energy systems engineering; architectural design, landscape planning and ecology expertise; climate planning; tourism sector; and understanding in cultural and social environments. Planning means compromises and trade-offs, and it is case-related what kind of emphasis is put to the aims for sustainability. Nevertheless, planning sustainable Nordic tourism destinations begins with protecting natural environment and biodiversity.

MATKA project argued that new guidelines for planning are needed, as well as knowledge of sustainability and how to bring it into practice. Especially municipalities in remote areas with small resources may have a limited access to the information and skills needed to develop local sustainability. At the same time these communities may depend on tourism that appreciates the nature, as it is the case in Ylläs. Resort communities also have a plethora of stakeholders, and therefore a mutual understanding of the terms of development may be difficult to find. All have their short-term interests, and the compromises may mean mediocre design. Aims for sustainability are easily left secondary when stakeholders insist on their own interests without committing to common values. At the same time, many decisions made during early phases of land use planning have long-range impacts in terms of sustainable development. Regional structure and built environment create the frame for future opportunities to adopt sustainable solutions.

Working in the crossfire of different stakeholder demands was more than enough for the design team. Tight schedules do not leave opportunities for the planners and

architects to effectively introduce latest knowledge and research of sustainability into their work. Strong cooperation between planners and researches from early phases of planning until the more detailed planning would be one way to ensure that aims for sustainability are considered through out the process. Also, this way the conversation between different stakeholders and decision-makers could be facilitated by the researchers, and therefore the possible disputes in the community lessened. Interests of different stakeholders may not be as conflicting as they are perceived.

It can be argued, that at least in Finland developing new tools and methods for planning for sustainable communities depend much on research projects. Planners, municipalities and stakeholders lack the time, financing and other resources for effectively develop the practicalities needed. It is critical to look at the points in planning processes where research projects end: how the planning continues and how the findings in research are implemented. Unfortunately, quite often the development does not continue and the results are not undertaken. To solve this we'd need to ensure that project's ending does not mean the end for cooperation. Also in term of design sciences and the academic benefits of design research, long-term cooperation and iterative process development are needed.

There seems to be many opportunities in developing partnerships where design research could develop new ways of interaction and cooperation through iterative processes as well as investigate the integration of aims for sustainability in land use planning. Correspondingly, planners, architects as well as all stakeholders would have the latest research knowledge at their reach. Competitions offer one tool for these partnerships. However, interaction should be taken further and continued after the competition is resolved. Researches can provide material and guidance for the competition and throughout the process. In addition, involving research partners directly in planning processes, and exceeding the cooperation in one particular project, offers another approach to a more intensive conversation between planners and researchers.

MATKA project and Ylläs case study could be seen as part of an experiential case-study analysis (see Straatemeier et al. 2010), and the next step would be to adapt the methods to another case study. Only then the lessons learned and reflections done would help to further develop the practices for cooperation as well as the vision integration in order to consolidate and implement aims for sustainability in planning.

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PARTICIPATION ENCOURAGED BY LAW – INTERVENING NEIGHBORHOODS, MUTUAL LEARNING AND EMPOWERMENT

Sandra Viña [1]

Abstract

Neighborhood, community and city development have become a matter of growing interest in terms of investigation and practice throughout the last decades (see e.g. Thackara, 2005; Fuad-Luke, 2009; Augé 1995; Carmona et. al, 2003; Gehl 2010). However, one of the challenges of city design deals with the application of participatory design and user-centered design approaches and, in making governments to accept the importance of user involvement in design activities and community development.

The paper aims, above all, to discuss how a political top-down decision in the higher educational system of Venezuela could bring about new perspectives, discourses and ways of doing in the field of architecture. In 2005 the government of the Bolivarian Republic of Venezuela decreed a new law: the community service for higher education students. The law aims to regulate community service work for students of higher education that, at undergraduate level aspire to practice any profession. The community service work is understood by the activities students should develop in communities by applying the knowledge acquired during their studies for the benefit of neighborhoods. The new discourse focuses on local development and neighborhood empowerment based on social design and participatory approaches. The paper illustrates three intervention cases which are part of the service community work by students of architecture and urbanism of the Central University of Venezuela (UCV). The cases illustrate the relation of the local macro-micro level changes especially in the field of design and architecture and their relation to community development, empowerment, and social design.

The three case studies shed light to design interventions as a tool to reflect and build dialogue through participatory means. It facilitated mutual learning between ordinary people and students of architecture about concepts and practices of architecture and cultural heritage. The design interventions offered locals a possibility to reflect about their local environment and the importance of social and cultural events as part of their identity and value in the society. It empowered people from the neighborhood to deal with local knowledge and local development.

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1. Introduction

Neighborhood, community and city development have become a matter of growing interest and research in terms of investigation and practice throughout the last decades (see e.g. Thackara, 2005; Fuad-Luke, 2009; Augé 1995; Carmona et. al, 2003; Gehl 2010). However, one of the challenges of city design deals with the application of participatory design and user-centered design approaches and in making governments to accept the importance of user involvement in design activities and community development. The aim of this paper is above all to discuss how political and top-down decision-making can help to generate new perspectives and ways of doing in the higher educational system of Venezuela, the field of architecture in particular. The new discourse seems to be focusing on local development and neighborhood empowerment based on social design and participatory approaches. This paper shows through three design interventions how mutual learning between future professionals and local people develops; reflections on the notions of architecture; and, community empowerment. The three intervention cases are created by students of architecture and urbanism of the Central University of Venezuela (UCV), they illustrate the relation of the local macro-micro level changes especially in the field of design and architecture and their relation to community development, empowerment, and social design. The paper also presents how top-down decision-making can help to discover new methods, methodologies, approaches and experiences in the area of design for social well-being. According to John Thackara "we need to design macroscopes, as well as microscopes, to help us understand where things come from and why" … "Macroscopes can help us understand complex systems" (Thackara, 2005, p. 6). Thus, a zoom is required to look how changes take place at all levels of social change and communities collaboration.

Generally, the regeneration of a city looks into ways to rebuild and redefine the city image through new urban entrepreneurialism or city marketing (Paddison, 1993). However, the new renaissance of cities is connected with the social and cultural aspects of regeneration, thus questions of heritage, tradition and authenticity are putted forward. In late 1960s a reaction against modernist environments took place and new policies came into existence that protected historic areas, and thus preservation became an integral part of urban planning. Cultural and historic buildings and environments were observed to serve and support urban life and activity in contrast to modernist environments. These experiences also gave light to the uniqueness of places, styles, their history, and a great concern about contexts, continuity of local patterns and typologies. (Carmona et al, 2003).

Research in the contemporary landscape of urban politics or urban governance uncovers a decline in the community power, urban managerialist and collective consumption debates. The current post-political consensus appears to be absorbed with economic growth combined with an explosion of entrepreneurially oriented governing regimes (MacLeod, 2011). Nevertheless, what seems to be lacking in the current understanding of city development and community building is a stronger

discussion on how and why designers/planners and architects ought to utilize participatory design approaches, social design thinking and design interventions as part of their learning design process. Moreover, it is relevant to study the relation between macro level decision-making and changes in the micro level of the professional field, as urban planning and architecture in this case.

Throughout the presidency of Hugo Chávez Frías the constitutions and strategies of the country have changed. The shift moves towards the 21st Century socialism, which is a revolutionary socialism directly linked to the philosophy and the Marxist economy. The vision of the current government is to establish, promote and support participation and collaboration among different communities. In the year 2005 a new presidential decree was decided in the Bolivarian Republic of Venezuela: the law of community service for higher education students which runs under the country's constitutional principles of solidarity, social responsibility, equality, cooperation, responsibility, participation, humanitarian assistance and otherness. This decree attempts to drive changes in the structures, functions, knowledge systems and knowledge sharing of communities, giving strength to local knowledge, empowerment to communities and local development. It focuses on the practice and implementation of interventions as driver of change, participation and for growing awareness about the new discourse.

At the macro level this nationwide change towards citizen participation through the presidential recognition of participatory approaches to drive social cohesion and well-being bring about the discussion of scale and social design in city design and local development. Participatory design deals with considerable challenges not only in new processes of formation and education but also in the paradigm shift of higher educational disciplines and governmental system. Participation encouraged by a presidential decree to students of higher education can be seen as design, social and participatory design moving into the public space, into the area of social innovation, social change and social well-being.

According to Björgvinsson, Ehn and Hillgren (Proc. PDC 2010, p. 41) a major challenge deals with what is being design as an object or service; or, as a "sociomaterial assembly that deals "matters of concern"". The shift of design towards sociomaterial touches upon communities and the engagement with environments where user centered and user inspired design can develop. Taking participatory design to the streets and to public spaces has the fundamental difference of working with the public and communities rather than within organizations. Ezio Manzini's experiences, in the so-called developing countries, during his workshops appoints new attitudes and designs about daily life where objects are being replaced by fascinating events. The shift towards a more sociomaterial thinking includes the design of "activities and environments in which energy and material consumption is modest and more people are used." (in Thackara, 2005, p. 6).

Within the law community is illustrated in the social context of national, state or municipal level where the institutions of higher education will actualize the

community service. Community is thus defined, in its widest sense, as a group of interacting people living in some proximity; or, sharing common values. The cases illustrate in this paper were explored through on site visits, interviews to students, community members and professors and, the analysis of students' reports. Each group focused on one community or concern within the area of San José situated in Caracas. The first group concentrated on a public primary school and worked with teachers, staff and children in order to make sense of cultural heritage and the service community work. The second group intervened the school of medicine of the UCV and involved various groups of students in the sector. Finally, the third group of students functioned as supporters, catalysts and promoters of their classmates' interventions and San José's cultural and social richness.

2. Demanding participatory democracy, social integrity and changes in the higher educational system

The law of community service for higher education students decreed by the President of Venezuela Hugo Chávez in 2005 brings forth a great variety of experiences for students, professors, and the communities where the service community work is delivered. The decree is an incentive by the government of Venezuela to drive change in this decade. The vision of the government is to move to a social model that drives principles of self-development and independence through incentives and subsidies for the growth of productive and educational activities to overcome the traditional livelihood systems and, to increase social well-being especially in rural and low-income communities.

The social model of the country is the 21st Century socialism, which sustains four axes: the regional democratic development, the economy of equivalence, participatory democracy and protagonist and, grassroots organizations. This vision is also a product of Karl Marx on the social dynamic and the class struggle. Also, the country supports independence from capitalism by promoting cultural independency; moral power; politics of liberation; and, the growth of the country must be in complete unity. The ideology structure of the revolutionary socialism lies in self-management and the idea of creative communities and sustainability, ideology by Ezio Manzini and the Design for Social Innovation towards Sustainability (DESIS). Thus, there is a strong link between politics and design; ideology and product; intellectual and practical knowledge. The current shift in Venezuela tries to move individuals and communities towards sociomaterial interactions; participatory and proactive approaches; and, puts emphasis on local culture and local development as foundation for social cohesion and wellbeing.

According to Tony Fry (Fry, 2011, p. 38) "what design brings into being not only influences the nature of the world we human beings inhabit but equally affects what we become as actors within that world as its makers and un-makers." We can also think of individuals as being passive, active and pro-actives. Reaching social stability, wellbeing and harmonious conditions with nature and the built-environment requires proactive communities and "a radical mind that moves away from the notion

of perceptual growth towards a situation in which quantity is displaced by quality (itself redefined, elaborated and culturally infused)." (Fry, 2011, p. 64). The implementation of the service community work as a top-down approach to neighborhood regeneration and community building can help to re-establish values and principles in the country. The political vision also comes together with practical tasks that tackle the micro level, participatory and inclusive performances, and social design thinking that future professionals should gain knowledge of and consider for future design interventions; and, in the macro level a re-conceptualization of production and consumption of places, as it is articulated to what Fry describes as "responsibility for what is produced (contributing not just to sustaining the bio-physical environment but equally to skill and knowledge, and thus to a social ecology)." (Ibid.)

The law of community service for higher education students positions individuals, communities and especially students in a design effort that contributes to the transformation of Venezuela. I can suggest Fry's 'design as politics' where "design-led changes is tremendously important, and will become ever more so – as a means to essential change." (Ibid, p. 3) Fry proposes that "design has to be made overtly and proactively political. Design has to become a politics. For design to become politicized, it has to directly confront politics." (Ibid, p. 7). Integrating the power of design as an agency of social transformation in the strategy of a country is already a huge step to a friendship where politics and design communicate.

Thus, one can regard designers, planners and architects as 'actors' of social change. According to Bruno Latour "An 'actor' in the hyphenated expression actor-network is not the source of an action but the moving target of a vast array of entities swarming toward it. … To use the word 'actor' means that it's never clear who and what is acting when we act since an actor on stage is never alone in acting. … By definition action is *dislocated*. Action is borrowed, distributed, suggested, influenced, dominated, betrayed, translated. (Latour, 2005, p. 46). In this sense, one of the challenges of the service community law relates to its fully recognition among teacher, professors, students and researchers. Some teachers feel that the service community project is an obligation rather than an opportunity to explore the design field and come about with new methods and methodologies for instance. Also, some students feel as 'actors' forced to behave in a certain way (interacting and exchanging with specific local knowledge and communities); performing in a stage not familiar or out of their preference (usually low-income communities); and not fully understanding the core story (design as agency of change).

The new opportunities of design in the public sector open doors to a great extent of emerging areas in design that can be explored. According to a survey done by Design Council in United Kingdom the 22% of the complete clients for design businesses are public administration, health and education. Moreover, there is a "rise in the number of design business doing work for public sector and non-profit clients over the past few years." (Julier, *Proc. NORDES 2010, p.* 77). The rise of design expertise in the public sector can be seen as part of a package shift in the public sector in

which citizens become consumers of state services, (Julier and Moor, 2009), protagonist of participation in design and, overall helps to build platforms for students and professionals to collaborate and learn with ordinary people about real problems and design opportunities.

This new opening to students of higher education shows the idea of design moving towards an innovative and distinguished practice, which also become embedded into governance. We can steadily recognize then, that the local government and authority of Venezuela are moving forward greater systems of innovation based on building synergies between communities and social design approach. The shift of design practice and design initiatives in the public sector is also visible in the Reforming Higher Education by the UNESCO in 2009:

"*Higher education itself is confronted therefore with formidable challenges and must proceed to the most radical change and renewal it has ever been required to undertake, so that our society, which is currently undergoing a profound crisis of values, can transcend mere economic considerations and incorporate deeper dimensions of morality and spirituality."*

Design education and governance as actors of social integrity, social change and social well-being touch upon the shift of higher educational paradigm. Young-Gil Kim proposes (Kim 2010, p. 76) that "revolutionary change of educational paradigm with scientific development from the industrial era to the knowledge age of the twenty-first century, toward a trans-disciplinary education which integrates rather than isolates the academic disciplines." Also, the shift integrates three essential attributes of the twenty-first century education: "*globalization, humanization,* and *futurization*". (Ibid. p. 75) *Globalization* refers to "the movement from finite-borders to infinite-borderless", *humanization* defines "human advancement beyond materialism", and *futurization* puts "an emphasis on future-eternal values rather than immediate results."

3. Law of community service for higher education students

In 2005 the government of the Bolivarian Republic of Venezuela decreed a new law: the community service for higher education students. The law aims to regulate community service work for students of higher education that, at undergraduate level aspire to practice any profession. The law is ruled by the constitutional principles of solidarity, social responsibility, equality, cooperation, responsibility, participation, humanitarian assistance and otherness. The vision of the current government is to establish, promote and support participation and collaboration among different communities. The geographic scope of the community service comprises areas in the national territory that each institution of higher education determines.

The community service for higher education students is understood by the activities these students should develop in communities by applying the knowledge acquired during their studies for the benefit of communities and, to cooperate to achieve social well-being according to the establishment of this law in the Bolivarian Republic of

Venezuela. Students of higher education should apply their scientific, technical, cultural, recreational and humanistic knowledge during the service community interventions.

The law defines community in the social context of national, state or municipal level where the institutions of higher education will accomplish the community service. The community service can be eligible after the actualization of, at least, 50% of the total academic load; the community service consists of 120 hours of work and it is mandatory for obtaining the degree of higher education. The community service aims to: 1) nourish solidarity in the student and the responsibility with the community as an ethical and citizen norm. 2) Create an act of reciprocity within the society. 3) Enrich the higher education activity through the service-learning period and apply the knowledge acquired during the studies years. 4) Integrate institutions of higher education to communities in order to contribute to the development of the Venezuelan society. 5) Educate through the service learning the national social capital.

The law also brings about changes in the area of teaching and training, it touches upon the role of professors in particular, as they are required to be pro-active in the search and understanding of communities and their requirements. Professors work as mediators between students and communities, and they are responsible for teaching new approaches and topics of interest. Overall, they can drive social change. Moreover, professors and the administration of higher educational institutions are responsible to develop seminars, workshops and/or courses that deal with the topic of communal reality. These aim to educate the academic staff and students about their responsibilities, the viable execution, coordination and objectives of the community service.

The projects execute during the community service should be elaborated answering to the necessities of the community, offering solutions of methodological scope, and considering municipal development plans, at state and national levels. There exists various ways how to originate a community service project, the following entities can be the drivers: 1) The ministry of higher education; 2) Institutions of higher education; 3) Students of higher education; 4) Trade associations; 5) Public institutions; 6) Private institutions; 7) Organized communities. Each community service project should deliver a report where the problem is illustrated, how is approached and solved. The report also should include a justification, objectives and a methodological focus together with any specific requirement demanded by the educational institution.

4. Context of design interventions and methodology

Following I present three case studies accomplished during the year 2010-2012 by one of the service community classes of the School of Architecture and Urbanism of the Central University of Venezuela. This class was selected because the projects and design interventions where happening during my stay in Venezuela and they were dealing with social and participatory approaches. The projects were examined by the

realization of interviews to students, professors, and people from the community where the service was delivered; on site visits to the community was helpful to understand the conditions of the neighborhood; and, a study of students' reports also assisted for this investigation.

The three intervention projects were accomplished in the area San José situated in central-north part of Caracas. San José has a population of approximately 40.000 inhabitants, and it was funded in 1889. The realization of the community service in this community originated in response to the specific necessity of saving San José's flower market in 2009, which was thread to be demolished by governmental entities in order to construct the main stop of the Bus-Caracas. Under this circumstance the community of San José approached the school of architecture and urbanism (UCV). The school organized a forum where experts, intellectuals, people from the community affected and the municipality discussed matters of cultural heritage and how it relates to the possibility of destroying the flower market. The decision to demolish the flower market was dropped, bringing forth dialogue about the essence of the flower market as a cultural heritage and, its meaning to the community.

In first place the community of San José wanted students of architecture and urbanism to design a new building for the flower market. However, the current value of the flower market does not reside in the edifice as such but in the activities generated and social dynamic in it, also the essence of flowers as being ornamental and medicinal. Nonetheless, the service community class began by examining the case of San José, not only the flower market but the entire neighborhood, they focused on the notion of patrimony starting with an open discussion of what cultural heritage means not only in the architectural or physical level but also in the immaterial one. This can also be translated to the soft assets and hard assets describe by Thackara (2005, p. 79). "Hard assets include natural beauty and features; shopping facilities; cultural attractions; and building, museums, monuments and the like. Soft assets are all about people and culture: skills, traditions, festivals, events and occasions, situations, settings, social ties, civic loyalty, memories and the capacity to facilitate learning of various kinds."

After the concept of heritage was discussed the class made an excursion in the community of San José with the professor and the local tutor. This is the first real contact with the community, students were invited into peoples' houses and key places in the area were visited, the local tutor told stories about the community and he explained the importance of places to the community and outside of it. After meetings of discussion to evaluate and understand the essence of San José and map how design interventions can be useful in the community, the community service group decided to create a series of interventions that could inform the general public about the existence and importance of the flower market and other valuable assets and, disseminate San José's tangible and intangible cultural heritage in various ways. They came up with the idea to study and construct with the community the concept of San José's cultural heritage. The class of students divided into four groups in order to go deeper into the topics of hard and soft assets that fully consider the local

culture and local development of the neighborhood. Simultaneously, each group selected particular communities within San José in order to develop the concept of their design intervention. One of the four groups designed a new building for the flower market; they delivered three-dimensional drawings and a small-scale model together with a description about the work. This case is not presented here because it is considered to be an ordinary project within the professional career of architecture and urbanism in Venezuela. The focus of this paper is about the use of design interventions as tools of reflection and for comprehending new discourse and approaches in the professional field of spatial planning.

The methodology utilized by the professor in the service community class consists of participative, reflective and socially oriented approaches. The methodology also resides in handing down the information gathered and created by one group to another. The projects in the service community class are encouraged to be continued by a following group, in this way there is not need to start from scratch, making it possible to achieve a proper design intervention and connection with the community. Information and experiences are recycled and used later by different students in the community service class. This methodological approach has a re-interpretative character as different student groups have to make sense about the project and find (new) ways to sustain it. Also, it drives community service projects ahead, towards concepts and happenings into communities that cannot be actualized in only 120 hours. The cases illustrated in this paper are initiators and others followers. The course holds a total of four generations of work; so, four communal service classes took place in the community of San José dealing with aspects of cultural heritage and social wellbeing in the neighborhood.

4.1 Case I: medicinal garden for the school of medicine, San José

This case was carried out by two groups in two different classes. The initial group started the community service in San José in 2010. Currently, the second group is finishing the actual design intervention, which is the beginning of a new initiative in the area. The first group interviewed the director of the school of medicine and other professors in order to map out the problems and necessities in the school's facilities. The group decided to retake an old project about a medicinal garden in the abandoned internal garden of the school of medicine proposed by an architect in the year 1997. This group generated besides the final report also a catalogue where the design idea was illustrated, this worked as a tool to present their idea to the community. It included a selection of medicinal plants, budget plan, concepts, improvements from previous plan, and further development. One student of architecture donated to this group a series of modular structures made of cement, which were meant to function as plant pots and furniture for the medicinal garden. These were the material gathered for the next group to continue.

Thus, the follower-supporter group was from the beginning clear of their aim: revitalize the internal garden of the school of medicine by making a medicinal garden with and for the community. The personnel and students of the school of

medicine of the UCV responded actively and supportive to the second group. The only challenge was the lack of economical resources to construct the garden. Thus, students of medicine collected money by asking people from the community to collaborate. (see picture 1).

4.1.1 The design intervention

The effort of both groups to complete the medicinal garden can be broke down in two phases; the investigation and design phase and, the implementation and maintenance respectively. The first group set the problem and how to solve it, delivering an informative brochure about the area of San José, and an accurate plan about medicinal plants and a budget plan for the construction of the medicinal garden. Moreover, the cement modular structures were available for the construction phase. The second group thus, dedicated time and effort to make and sustain the medicinal garden.

In the participatory opening of the medicinal garden (see picture 2) the cement structures were placed; and the ecological brigade of a nearby school came to plant the plants together with the local tutor and students of architecture. Every Tuesday, Thursday and Friday students from nearby primary and elementary schools will visit the garden to learn about agriculture, gardening, medicinal plants and to maintain the garden. The space will also be used for other recreational activities.

Figure 1. Intervention for money collection.

Figure 2. Participatory opening of medicinal garden.

4.2 Case II: planimetric survey of O'Higgins school

This group contacted the Bolivarian Primary School "Bernardo O'higgins", where they wanted to accomplish their community service project. They taught children in the school about cultural heritage and they studied together the colonial architecture of the school building. It was built in 19th Century and was the house of the Dr. José Izquierdo who was the funder of the School of Medicine of the UCV in about 1910. Thus, the house was designed to serve as a familiar residence rather than a school.

The methodology applied consists of interviews to the personnel and documentation of the building with the help of children. Questions helped students, teachers and personnel to reflect upon the notion of cultural heritage and its value in the area.

4.2.1 The design intervention

The group approached the service community project from an architectural point of view, starting to observe, document and illustrate the colonial elements in the architecture of the school building. The group created documents where specifications, functioning and valuable elements of the house were illustrated. Their report also includes a historic review of the building, its current conditions and ways to improve it. They illustrate the house and how its different constructions through years have transformed the essence of colonial architecture into a mixed of styles and uses. Thus, its status as cultural heritage has been damaged. The group aimed to create awareness to the community about the school's value as part of Venezuelan cultural heritage. A floor plan and architectural drawing were also created and delivered to the university and the school Bernardo O'higgins.

The design intervention was based on educational material; the group gave a lecture to children about the history of the house, the function of spaces, Venezuelan colonial architecture, its value as cultural heritage and in the sector San José and, ways to preserve its value. The group also supported local events by documenting them. For further development teachers of the primary school suggested students of architecture to develop a game around a small-scale model of the school that can be utilized as educational material for children, as they can exercise and learn aspects about Venezuelan colonial architecture and its significance.

4.3 Case III: Disseminating information on capital and social assets

This group aimed to disseminate the values of San José's cultural heritage, both tangibles and intangible. The community of San José did not fully recognize their immaterial cultural values. Thus, the group was challenged to utilized design interventions to make local people understand and realized their intangible cultural assets. For this they appointed the identity and cultural assets of San José through residents' testimonies. The specific programs of the group were, first of all, to ensure a positive impact into the community through events developed with and for the community.

4.3.1 The Design Intervention

The group delivered a series of design interventions, results and products. 1) Visual tools: informative brochures communicated historical reviews and current perception of tangible and immaterial local patrimonies; game cards for children were designed, they promoted the search for local heritage in San José. Also, posters representing the current areas of work by the community service class were illustrated. 2) Recreational games: this helped students of the community service to reach the younger people in the area to communicate in a didactic and recreational way the

values in it. 3) Supportive actions: facilitated to have a real contact with the community, it consisted of documentation and communication of local events through different social networks in the Internet (blog, facebook and twitter) emphasizing the cultural and social dimension of San José. Moreover, this group helped to clear out the site and uproot the old plants for the construction of the medicinal garden (case I). The group also organized educational and playful material including a workshop. They appropriated traditional games, which were adapted to topics of cultural patrimonies and aimed to inculcate children about the integrity and preservation of cultural and social capital. The group also created a mural in the public library of the community.

5. Design interventions as drivers of reflection and action in the higher education system – towards integration, participation, social well-being and new ways of doing and learning

This paper aims, above all, to discuss how a political top-down decision in the higher educational system of Venezuela could bring about new perspectives, discourses and ways of doing in the field of architecture. Based on the cases presented previously one can position architecture and urbanism moving towards the re-arrangement of activities and surroundings focusing on social matters, local development and local knowledge in neighborhoods for example. In the three cases presented, students of architecture reflected through their design interventions that the role and notion of architecture is not only the profession of designing buildings, as it is often understand, but architecture as the structure or design of anything. The art of architecture and its wide range of meanings consist of the arrangement and organization of things. This can be the re-structure of the discipline itself; organization of spatial arrangements; or sociomaterial assemblies that deal with relevant issues for the society and culture as shown in case I, II and III. It includes the architecture of communities, open areas and other artificial constructions and environments. Usually, architecture deal with aspects of aesthetical effect, however, the current shift in the field of architecture is towards social and participatory design, being humans and their interactions at the heart of design. It also is viewed from the perspective of human activities and environments rather than material consumption and style.

Taking design to the streets, so to speak, have the powerful character of design intervening with the public, with communities, ordinary people, and entities. Conventional ways of learning are usually interactions in the classroom and based on individual work rather than teamwork and in real context situations and with real people. The implementation of the service community work is a new way of teaching and learning; it provides professors, students and researchers to make sense of the field of study in a wider perspective as it explores new functions, capabilities and relevance to the society and, neighborhoods in particular. At the macro level, the community service for higher education students not only serves to re-conceive the role of disciplines as such, but also contributes to build new ways of exchange between future professionals and “ordinary” people. The community service focuses

on the public sector rather than the private; common people and communities rather than investors and clients; usually low-income neighborhoods rather than wealthy communities; and it is based on social and collective responsibility rather than individual and commercial benefit.

At the micro level, the community service for higher education students in the field of architecture bring forth new way of doing and acting which is based on design interventions, an approach and tool that facilitate designers to directly interact with the public, and try out ideas. Helping to improve people's everyday life in neighborhoods through design interventions is a new way to perceive and experience the world, especially in regards of the study field. The three case studies have shed light to design interventions as a tool to reflect and build dialogue through participatory means. It facilitated mutual learning between ordinary people and students of architecture about concepts and practices of architecture and cultural heritage. The design interventions offered locals a possibility to reflect about their local environment and the importance of social and cultural events as part of their identity and value in the society. It empowered people from the neighborhood to deal with local knowledge and local development, as seen in case II. Also, students learnt besides the regular research and design process also the implementation and maintenance of the design work. In case I students dealt with logistics, budget plan, making and community building. In case II students learnt how to deal with new topics and practices in architecture as it is the realization of planimetric study. This serves as a justification and starting point to the school Bernardo O'higgins to request the municipality the renovation of the building. Also, this group learnt the importance of architectural education to audiences not familiar with the topic. Moreover, the case studies illustrate the significance to communicate information about design through design. Above all, design interventions in the area of community service work make small-scale architecture and significant ideas palpable, visible and able to be experienced and evaluated. There is a long journey to fully understand the role of social design and participation in architecture in the southern hemisphere. Decision making in relation to the macro-micro perspective, local and global experiences can help to make sense of new discourses and practices in the conventional professional field.

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PLANNING LAW AND THE RIGHT TO CITY PLANNING: A CASE STUDY OF 'WALLED BUILDINGS' IN HONG KONG

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Abstract

Planning-related laws as part and partial of a planning system could be a double-edged sword: they could guarantee people's planning rights but they could also behind the 'equality before the law' façade privilege certain actors' rights at the expense of others. Hence, the coverage and ingredients of planning-related laws could be potential subjects of contention. This paper attempts to tell the story of 'walled buildings' in Hong Kong through the lens of planning-related laws and people's awakening to their right to city planning.

Walled buildings are not new in compact Hong Kong. However, "high-density slab-block style buildings" in new reclamation areas maximizing stunning harbour view, depriving old lower-rise urban areas of natural ventilation and sunlight, is a relatively new phenomenon. Through a critical examination of the delayed amendment of an outdated Town Planning Ordinance (originated in 1939 and amended partially to broaden participation in 2004) and a Buildings Ordinance that 'promises' huge development potential, this paper first investigates the conditions that have given rise to the "walled building" phenomenon in Hong Kong. If "walled buildings" are common place in Hong Kong, then what are the specific circumstances that have led to the emergence of a right to city planning movement to counteract this faulty urban form? The paper adopts a three-pronged approach to answer this research question: the role of the 2005 amended Town Planning Ordinance in sensitizing people of their right to city planning; the roles of networked stakeholders in mobilizing information, resources, opinions in re-problematizing the "walled-building" phenomenon; and the wider evolving socio-economic context with embedded transforming hard and soft institutions that increasingly recognise people's right to the city.

1. Introduction

The following first discusses the relationships between planning law and the right to city planning, followed by an overview of the characteristics and evolution of planning-related laws and regulations in the city of Hong Kong that render

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substantial development rights to property developers, very often at the expense of the urban environment. Through a case study of a 'walled building' controversy, the paper examines the significance of the community's awakening to their right to city planning and the implications to the established institutional setup.

2. Laws and the right to city planning

Alexander (2007, p.114) identifies two types of planning rights: positive planning rights are recognised claims in a planning system through 'laws, regulations, and court decisions that have set the norms of institutional practice' that are different in diverse constitutional, political, legal and institutional contexts; potential planning rights are claims that have yet to be 'recognized or proven through legal confirmation, enforcement or practical effectuation'. Socio-political transformations may be required to translate 'potential planning rights' into 'positive ones' (op cit., 2007, p.114).

Wesley Hohfeld (2000) identifies four basic legal rights: claim rights, liberty rights, powers and immunities, the latter two being 'secondary rights' for 'individuals and groups to alter, override, or ignore existing legal entitlements'. This argument can be compared interestingly to what Attoh (2011) describes as 'a moral right to break the law' or what Dworkin (1977, p.672) argues that 'rights are best understood as trumps against democratic tyranny'. And in certain situations these rights are necessary to realize the potential planning rights of citizens.

Besides breaking laws or challenging the tyranny of the majority, perhaps rights to city planning can be seen as a way to realize 'generational rights' (Waldon, 1993). Waldon (1993) argues that first generation rights, traditional human rights, which would mean very little without second generation rights such as rights to housing… to mobility, employment etc. (all related to urban planning) or what Attoh (2011, p.672) calls 'socio-economic entitlements' especially for the disadvantaged. In discussing what constitutes the right to the city, Harvey (2008, p.23) argues that 'it is a right to change ourselves by changing the city' through 'greater democratic control over the production and utilization of the surplus' (p.27). Purcell (2002, p.102) puts forward two principal rights: 'the right to participation and the right to appropriation' and the latter includes 'the right of inhabitants to physically access, occupy and use urban space' (p.103). Agier (1999) simply calls it a right to 'invent' the city (cited in Capron, 2002, p.222). But to borrow from Alexander (2007), these can be called 'potential planning rights'.

Borja (2001) suggests four approaches to transform 'potential planning rights' to real planning rights: grassroots struggles against marginalization; empowering grassroots initiatives; implementing the right to the city through the legal framework; and public policy and planning. And the processes would involve patient explanation of the values that underlie these rights; civic mobilization to create and legalized the institutionalization of effective rights; and a political-

institutional process 'to formalize and consolidate these rights' in order to implement them! All these point to the moral obligation of those who possess such reflective knowledge to act as 'advocates for potential planning rights'!

3. Planning-related laws and regulations in Hong Kong

Hong Kong is a densely populated city. A population of seven million occupying a land area of about 1,108 km^2, population density is often quoted as 6,318 per km^2. However, reference to Table 1 below shows that less than 25 per cent of the land in Hong Kong is built up land and in fact, public housing that accommodates about 48 per cent of the population used up only 1.4 per cent of the land, giving rise to a density of 210,000 per km^2. As can be seen below, Hong Kong has a rather crude urban land use zoning system without detailed urban design rules or regulations.

Table 1. Land Use Distribution (as at end-2010)

Class	Approximate Area (km²)	%	Remarks
Residential			
Private Residential	25	2.3	Residential land developed by private developers (except village houses, HOS/PSPS and temporary housing area)
Public Residential	16	1.4	Includes HOS/PSPS and temporary housing area
Rural Settlement	55	5.2	Includes village housing and temporary structures.
Commercial			
Commercial/Business & Office	4	0.4	
Industrial			
Industrial Land	7	0.6	
Industrial Estates	3	0.3	
Warehouse and Storage	16	1.4	Includes open storage areas.
Institutional/Open Space			
Government, Institutional & Community Facilities	25	2.3	
Open Space	24	2.2	Includes parks, stadiums and playgrounds.
Transportation			
Roads	40	3.6	
Railways	3	0.3	
Airport	13	1.2	
Other Urban or Built-up Land			
Cemeteries and Crematoriums	8	0.7	
Utilities	7	0.6	
Vacant Development Land/ Construction in Progress	16	1.4	
Others	21	1.9	
Agriculture			
Agricultural Land	51	4.6	
Fish Ponds/Gei Wais	17	1.5	
Woodland/Shrubland/Grassland/Wetland			
Woodland	254	22.9	
Shrubland	303	27.3	
Grassland	178	16.1	
Mangrove and Swamp	5	0.4	About 4 km² of Mangrove and Swamp, which is below the High Water Mark, is included in this figure. This 4 km² should not be counted in the total land area of the Territory.
Barren Land			
Badland	2	0.2	
Quarries	1	0.1	
Rocky Shore	4	0.4	
Water Bodies			
Reservoirs	25	2.3	
Streams and Nullahs	5	0.4	
Total	1 108	100.0	According to Lands Department, the total land area of the Territory, i.e. land above the High Water Mark, is 1 104 km²

Source: Planning Department
(Enquiry Telephone No. 2231 5000)

3.1 Development density controlled by Buildings Ordinance not Town Planning Ordinance

Positive planning rights are rather limited in Hong Kong. The Town Planning Ordinance (TPO) was first enacted in 1939 when the plot ratio then was set around 3 (80 feet in height with less than five stories) by the 1935 Buildings Ordinance (BO) (HKBRTPI, 1973, p.1). Population in the 1930s was less than one million while the city's current population is seven million. In other words, the urban context has been completely transformed. Yet, the TPO even with the latest amendments has not been fundamentally changed. Throughout these decades, the Town Planning Board (TPB) has been entrusted to 'make provision for the systematic preparation and approval of plans' only but NOT the power to implement its plans. As argued by Cuthbert (1997, p.299), the Planning Department 'is not allowed to implement the plans which it prepares… Implementation procedures are enshrined with the Buildings regulations and Crown lease conditions, and there is no mandate that statutory plans must be carried out'.

As stated in the Hong Kong Planning Standards and Guidelines, 'the Buildings Ordinance, including its associated Building (Planning) Regulations, is the only statue which explicitly sets density limits and provides for their enforcement (Planning Department, Chapter 2, p.3). As a result, 'population estimates and the resultant provision of services and reservation of land for road, government, institution and community purposes have had to be based upon full development under the Buildings Ordinance' as no one would doubt that developers will not build to the maximum density permitted by law (HK Branch of RTPI, 1973, p.42). So how reasonable is the BO in guiding urban development and growth?

As mentioned above, the 1935 BO allowed for a plot ratio of 3. However, this level of development could not satisfy the needs arising from rapid urban growth in the post war years. For instance, in 1945 Hong Kong's population dropped to 0.6 million and then in 1956, the number rose to 2.4 million. As a result the Building (Planning) Regulations (B(P)R) was changed in 1956 and building height then was controlled by the width of street, that is, the wider the street, the taller the buildings and development bulk. Hence, the permitted development plot ratio was extremely high: about 18-19 and the subsequent population density of about 7,000 persons per acre, a big challenge for the Government then to provide enough land for social amenities (HK Branch of RTPI, 1973, p.2).

Because of this, the B(P)R were changed in 1962 and instead of having a fixed development height, it became a function of plot ratio and site coverage. Hong Kong was divided into three density zones (Figure 1, Planning Department, 2012, p.28) and site coverage and plot ratio were defined according to three

classes of sites (Table 2, op cit., p.19) and Figure 2 (op cit., p.19). As a result permitted maximum development was reduced by about 25 per cent. This slashing of development right was not implemented immediately. In fact, a long grace period of four years were given for implementation and in the interim, the number of private resident units shot up from 11,300 in 1962 to 29,000 in 1965, an increase of 160 per cent (Fung, 2011, p.96). This development gut had led to a banking crisis in the mid-1960s, a time of turmoil in China and other parts of the world. It should be noted that the First Schedule of B(P)R (Table 1) was enacted in 1976 and the specification more or less stopped at 61 metres (about 21-storey) as buildings higher than that level was hard to imagine then. Hence, while the B(P)R are outdated, these have continued to be used as the basis to direct urban growth and development, sustaining an ultra-high density regime in the urban areas.

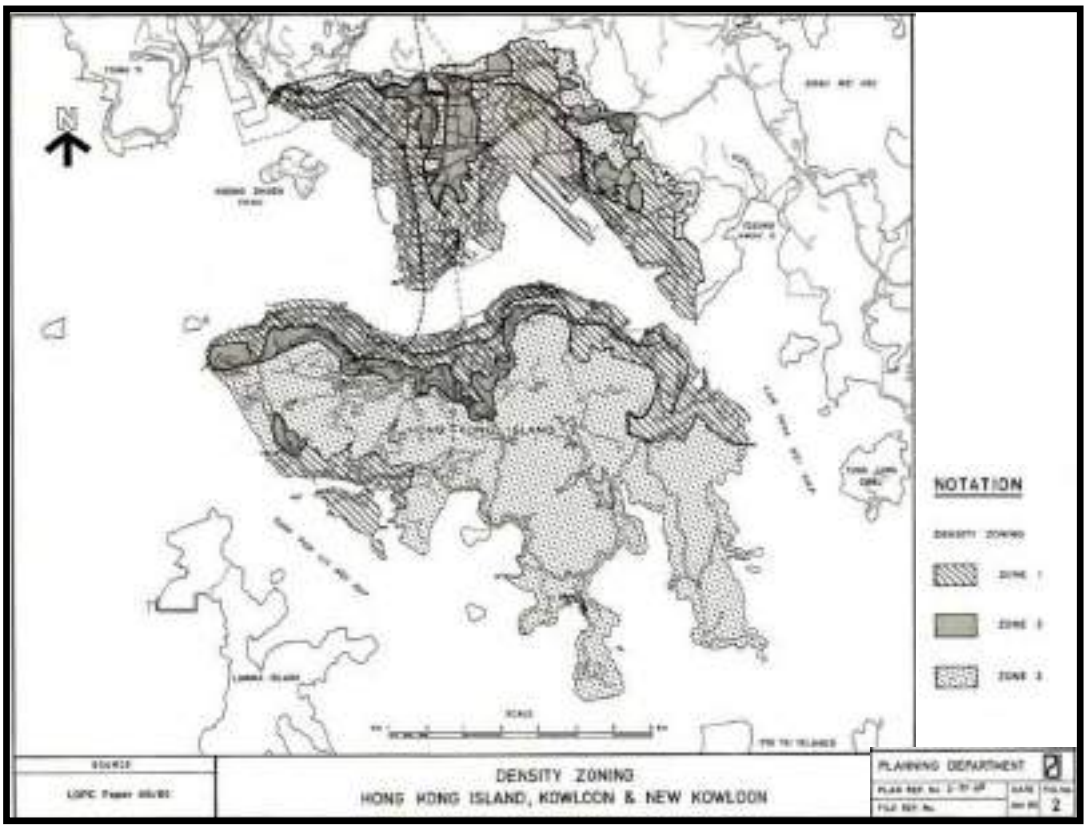
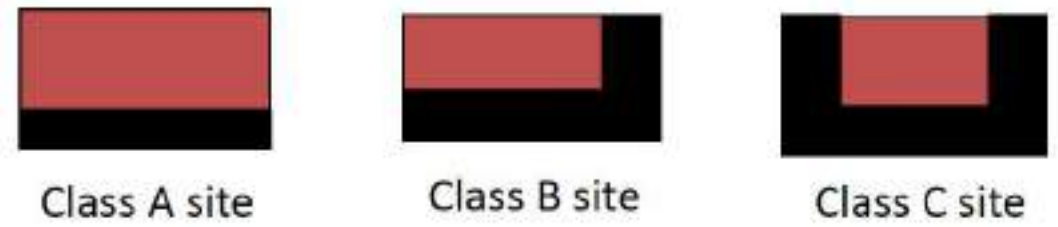


Figure 1. Density Zoning in Hong Kong

Table 2.Maximum permitted site coverage and plot ratio in relation to building height for domestic buildings under First Schedule of B(P)R

Height of building in metres	Maximum site coverage (%)			Maximum domestic plot ratio		
	Class A Site	Class B Site	Class C Site	Class A Site	Class B Site	Class C Site
up to 15	66.6	75	80	3.3	3.75	4.0
up to 18	60	67	72	3.6	4.0	4.3
up to 21	56	62	67	3.9	4.3	4.7
up to 24	52	58	63	4.2	4.6	5.0
up to 27	49	55	59	4.4	4.9	5.3
up to 30	46	52	55	4.6	5.2	5.5
up to 36	42	47.5	50	5.0	5.7	6.0
up to 43	39	44	47	5.4	6.1	6.5
up to 49	37	41	44	5.9	6.5	7.0
up to 55	35	39	42	6.3	7.0	7.5
up to 61	34	38	41	6.8	7.6	8.0
over 61	33.33	37.5	40	8.0	9.0	10.0



- Class A site means a site, not being a Class B site or Class C site, that abuts on one street not less than 4.5 m wide.
- Class B site means a corner site that abuts on two streets neither of which is less than 4.5 m wide.
- Class C site means a corner site that abuts on three streets none of which is less than 4.5 m wide.

Figure 2. Classes of sites in the First Schedule of the B(P)R

Besides relying on the B(P)R to 'guide' the formulation of the level of development intensity in the statutory plans, the implementation of plans also

depends on the Building Authority who can disapprove a building plan if 'the carrying out of the building works… result in a building differing in height, design, type or intended use from buildings in the immediate neighbourhood or previously existing on the same site' (Section 16(1)(g), BO). The Building Authority, however, possesses discretionary power in exercising his/her development control responsibilities and the guideline is not particularly useful in green-field sites such as newly reclaimed land.

3.2 Failed attempts to introduce implementation and enforcement power to the Town Planning Ordinance

The problems of the TPO have long been identified by planners in the city. As early as 1973, before the introduction of the development application system to the TPO, the Hong Kong Branch of the Royal Town Planning Institute undertook a thorough review of the TPO and put forward a number of pertinent recommendations which are still valid to this very date. In 1991, after the establishment of the Planning Department (before this, urban planning was housed under the Works Department), a comprehensive review was done by the Government and many suggestions were put forward to enhance the 'openness, fairness, certainty, efficiency, effectiveness, affordability and comprehensiveness' of the TPO (PELB, 1991). Unfortunately, as can be seen in Table 3 below, most of the recommendations of these two thorough reviews have not been accepted in the various minor and major amendments of the TPO.

Table 3. Amendments made at the 2004 Town Planning (Amendment) Bill when compared to suggestions put forward in the 1973 HK Branch of RTPI Report and the 1991 Comprehensive Review of the TPO

	1973 HK Branch of RTPI Report	1991 Comprehensive Review of the TPO	2004 Town Planning (Amendment) Bill
Planning study	The public to be consulted before & during the preparation of plan… period of public exhibition to be extended to 3 months	A planning study to be prepared & published for 3 months for public comments	n.a.
Submitting representa-tion	n.a.	Any member of the public would be able to submit representations to be published	Any member of the public would be able to submit representations to be published

	1973 HK Branch of RTPI Report	1991 Comprehensive Review of the TPO	2004 Town Planning (Amendment) Bill
Exhibition time	n.a.	Would be extended from 3 to 6 months	•2 months for making representations •3 weeks for commenting on the representations
Plan review	To be reviewed at least once every five years	n.a.	n.a.
Planning permission	Regulations to be introduced to replace the notes… requiring material changes of use… to be submitted to the planning committee	•Written consent or notice to owners required •Planning applications published for public inspection & comments •Consideration from 2 to 3 months	•Written consent or notice to owners required •Planning applications published for public inspection & comments •Consideration within 2 months
Interim develop-ment control	n.a.	Deferred consideration for sites as subject of objections	n.a.
A register of all planning applications	n.a.	A register available for public inspection	A register available for public inspection
Established use certificate	'Established use certificates' to be issued by the planning authority	Planning related provisions in the BO should be consolidated in the new Planning Ordinance. Planning certificates issued by the Planning Authority	n.a.
Building density	Include density and development control etc. in the TPO	Control on development density (reg.19 to 23 & B(P)R)… consolidated in the new Planning Ordinance	n.a.

After a thorough consultation of the general public on the 1991 Comprehensive Review, the Secretary for the then Planning, Environment and Lands Bureau (PELB) reported that there were 65 written representations and except the developers, the general public supported wider consultation in the preparation of statutory plans and in the planning process (HK LegCo, 1992, p.1355). Secretary for PELB also pointed to the 'misguided fear' of the proposed planning certificate system and explained that the proposal was simply to 'enable the Planning Authority to deal directly with the planning aspects of buildings works rather than indirectly through the Building Ordinance as at present' (op cit., p.1356). Five years after the 1991 Comprehensive Review came another consultation document the 1996 White Bill which maintained most of the recommendations put forward in the previous review. Legislator Albert Chan then questioned strongly the Government's change of attitude and queried why a consultative White Bill instead of a promised Blue Bill was published (HK LegCo, 1996, p.147). To the Democratic Party that Chan then represented, 'the proposals [in the White Bill]… still lack transparency with regard to the composition of the Town Planning Board, the decision-making process in planning and the appeal procedure… it is imperative for the Government to introduce… the Blue Bill into this Council for scrutiny asap' (op cit., p.150). Other legislators criticized the design of the whole mechanisms as biased towards the interests of 'the Government, the public utility organizations and the property developers' (op cit., p.155).

The long delay in introducing an amended TPO also prompted the Hong Kong Institute of Planners (HKIP) to question 'the Government's sincerity of introducing new planning legislation to revamp the much out-dated TPO' (HKIP, 1996). However, on the contrary, the Hong Kong Institute of Architects, Hong Kong Institute of Engineers and the Hong Kong Institute of Surveyors put forward a joint paper criticising the White Bill (1997, pp.1-7):

1. The White Bill would delay the development process.
2. The White Bill would create uncertainty because of the discretion power left to the TPB.
3. The White Bill would deprive landowners of proprietary rights without compensation.
4. The White Bill would impose from above another layer of bureaucracy in relation to land development.
5. The White Bill would provide excessive power to the Planning Department.
6. The White Bill would be an expensive endeavour though there was no financial and economic assessment of the proposal of White Bill.

And naturally, these Institutes suggested that planning permission should only be required 'in exceptional cases' and that 'no planning certificates should be required' (op cit., p.7). In other words, these professionals with their vested interests in the development rights of land owners guaranteed by the existing BO and the B(P)R had joined force to thwart attempts to return the

responsibility of urban planning to the planning profession. Although the HKIP urged repeatedly (1997, 1998) the Administration to release the compiled public views on the White Bill and publicize the Blue Bill as early as possible, the requests were not entertained.

In 1998, an interim amendment was made to the TPO to expedite the drafting of plans through limiting the processing time of objections to nine months (LegCo, 2003, p.1). The HKIP declared that it would only support the Bill in principle if the Administration undertook to introduce a major Bill to revamp the TPO in the first half of the following legislative session and requested once again the release of assorted views expressed on various controversial issues related to the TPO (Provisional Legislative Council Secretariat, 1998, p.2).

In 2000, a Legislative Council Brief on the TPO reported that:

> 'Green groups, Municipal Councils and District Boards, professional institutes and the Law Society support proposals that would make the statutory planning system more open and involve the public more extensively in the entire planning process… Real estate developers, business sector and other professional institutes such as the Hong Kong Institute of Surveyors, Hong Kong Institute of Architects, Hong Kong Institute of Engineers have expressed concern over whether a more open system would lead to further delay to the development process' (p.2).

Because of these controversial stances, the Government had continued to consult, review and address the concerns of different parties and hence the revised Bill was not tabled until 16 February 2000, four months before the end of the legislative session. At the 9th meeting, the Bills Committee came to the conclusion that 'it would be unrealistic to complete the scrutiny of the Bill within the current LegCo Session' (2000, p.4). That was extremely unfortunate though instead of the shortage of time, the crux of the matter was probably due to the fact that 'while planners called for the early enactment of the Bill, architects, surveyors and real estate developers had indicated their preference for adhering to the existing legislation over putting in place a new Bill hastily passed without careful scrutiny' (op cit., p.4).

When the Town Planning Bill was raised again in the Legislative Council, it was 2002, 11 years after the publication of the 1991 Comprehensive Review of the TPO. This round, the Government's determination to introduce comprehensive changes had evaporated. Instead of enacting a comprehensive Bill, the Government proposed to amend the TPO in stages and planned to introduce the relevant legislative proposals into LegCo in March 2003 (PPLW, 2002, p.6). The amendment was eventually passed by the Legislative Council on 7 July 2004. As can be seen in the Administration work schedule in amending the TPO below, the prospect of placing development control and implementation mechanisms back to the hands of urban planners is dim (HK LegCo, 2003, p.2):

(a) Stage One - to streamline and shorten the town planning process, enhance openness of the planning system, and strengthen enforcement control on unauthorized developments;

(b) Stage Two - to amend the TPO regarding the operation of TPB, designation of Special Design Area, Environmentally Sensitive Area and Designated Development; and

(c) Stage Three - to review the highly controversial proposals such as interim development control and planning control on building development.

Again, the HKIP was the lone voice to urge the Government 'to include issues covered by Stage Three amendments in Stage Two and streamline the whole amendment process' (2003, p.1). And in fact, since the stage one amendment of the TPO, the issue of further amending the TPO seems to have faded away in the agenda of the LegCo.

As can be seen in Table 3 above, while the 2004 Town Planning (Amendment) Ordinance has indeed made the plan making and development application systems more transparent, the fact that TPO lacks implementation power persists and the city has continued to rely on the BO and the B(P)R in directing high density development. In other words, the 'positive planning rights' rendered by the planning-related laws and regulatory regime even after the fight by the planners and some of the democratic legislators have not much been expanded. In the long and rather futile road to amend the TPO and behind the facade of many technical jargons, complicated procedures and behind the scene administrative practices, Hong Kong saw the rise of many 'walled buildings' in the newly reclaimed areas, scrambling to capitalize on the stunning sea-view of Victoria Harbour but shutting off the older more modest urban fabric from natural air ventilation, sunshine, visual and physical accessibility. While the professional planners have failed to regain their planning power, the civil society has mobilized itself to fight for its own right! The following uses one such case to illustrate the civil society's efforts in expanding/regaining their right to city planning.

4. 'Walled buildings': the case of Tai Kok Tsui

The case in point lied on the western part of the West Kowloon reclamation, a massive piece of then newly formed land from the sea in 1990 the size of which amounted to one third of the Kowloon peninsula. It was one of the ten core Airport Core projects undertaken by the Government in the late 1980s as a 'rose garden project' to boost the confidence of Hong Kongers after the June Forth massacre in 1989 in Beijing (Ng, 1993). The reclamation served strategic planning purposes (TDD, 1992, p.2-3):

- To provide space for the construction of two Airport Express stations which serve to bring the Airport in Lantau Island back to the heart of the city in 25 minutes.
- A strategic transport corridor linking Hong Kong, Kowloon and the northwest New Territories including the Lantau Island.
- Re-provisioning of waterfront facilities.
- New secondary office and hotel centre.
- Housing land.
- Solution space to restructure land uses including the 'thinning out' of congested residential and industrial areas in old Kowloon.
- Meeting local district level needs to make up deficiencies in open space, GIC uses, etc.

However, as statutory plan lacks implementation power and has to rely on the BO for development control, residential developments on the reclaimed land where there was no neighbouring uses were therefore allowed to develop to its 'fullest extent' allowed in the First Schedule of the B(P)R. Figure 3 is the statutory plan for the site and the reclaimed areas are zoned into distinctively massive blocks very different from the human scale street blocks in old Kowloon. Worse still, when monstrous residential tower blocks emerged and very often, on podium structures, their prominent presence turned the old Tai Kok Tsui inland into a 'walled city', being 'robbed' of sunlight, ventilation and visual access. Figures 4 and 5 show the various phases of high-rise development in the reclaimed areas and the corresponding birds' eye-view. Figure 6 is a photo that shows the location of the site, described as the only breathing gap for the old urban area. The emergence of these massive property developments and socio-economic changes in the post-colonial city saw the rise of civic activism that criticizes the 'walled buildings' severely.

Figure 3. Statutory plan showing the study site

LEGEND:

Study site

1998 Year of completion of the real estate

Figure 4. Development of 'walled buildings' in Tai Kok Tsui

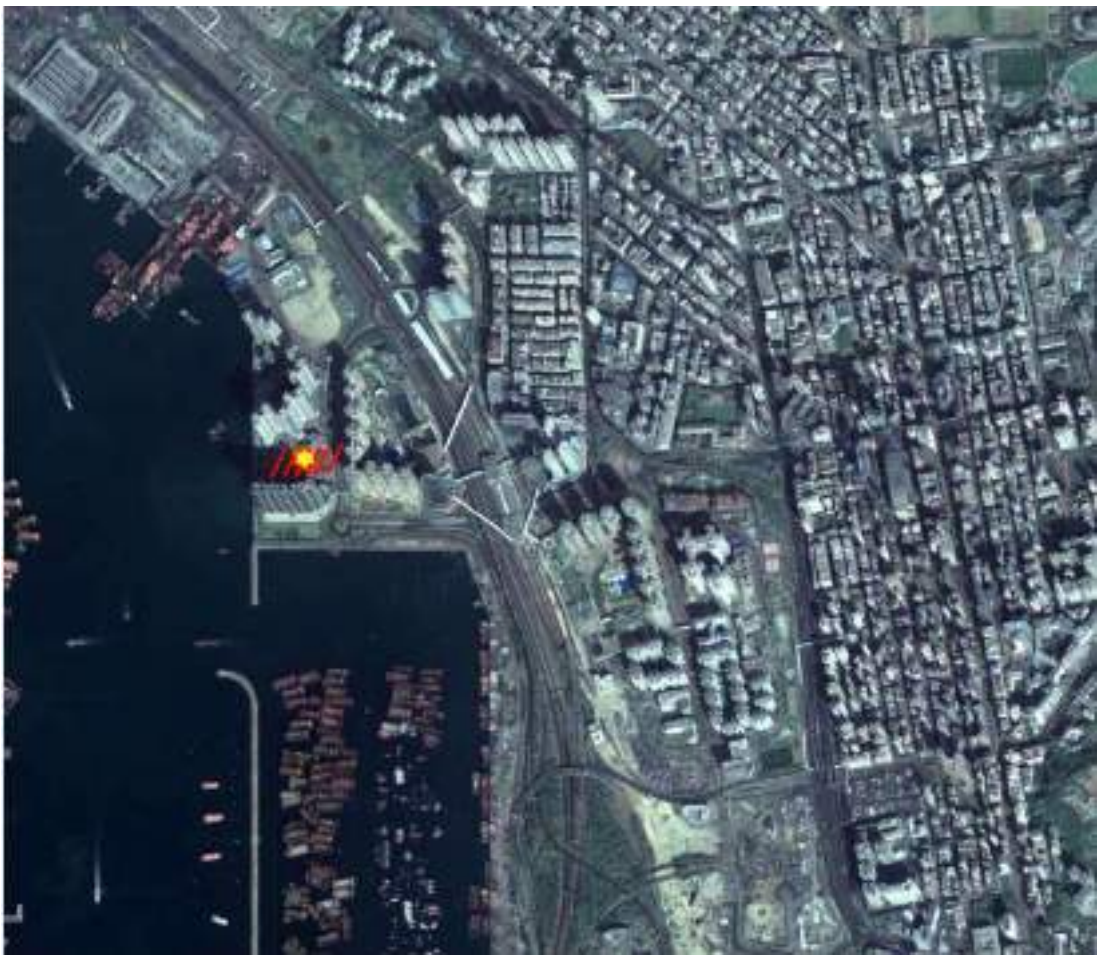


Figure 5. Walled buildings in Tai Kok Tsui.

Figure 6. The subject site described as the only 'breathing space' for old Tai Kok Tsui

Many people in Hong Kong think that the founder of a civic group, Green Sense, Roy Tam coined the term 'Walled Buildings' (direct translation from Chinese should be 'screen' buildings but 'walled buildings' are more popular in the English media). However, according to our interview with him, he first noticed a similar term in another protest activity surrounding the Hopewell Mega Tower where the proposed development was described by local residents as a 'screen' blocking their views. And his concern about 'walled buildings' was triggered by a picture that he saw on the newspaper about another site above a mass transit station (Figure 7). He found the proposed development unreasonable and was concerned about its impacts on the surrounding community and this concern triggered his campaign, among others, against 'walled buildings'.

Source: http://simg.sina.com.hk/cp/0/0043/7688/2/p.jpg

Figure 7. Above station development in Nam Cheong, West Kowloon

The late 1990s and early 2000s was an interesting era in the ex-colony. The return to Chinese rule in 1997 coincided unfortunately with the Asian Financial Crisis and Hong Kong entered into an economic recession that was further hit by the SARS crisis (Ng, 1995; 2000; 2008a, 2008b; 2011). The economic downturn allowed many to have time to reflect on their life styles, the city's mode of urban development and their rights to city planning. The dense urban living and the ideology of growth at all costs have increasingly been challenged and questioned by the general public especially among the younger generations,

commonly called the 'post-80s' (born after 1980) who do not have the tolerance of the previous generations towards the Government and refuse to give it the credit in transforming Hong Kong from a poverty-stricken refugee-filled city into a modern metropolis. Hence, the city's economic downturn was contrasted with the rise of civic activism challenging the conventional wisdom of development such as harbour reclamation, urban redevelopment and the removal of heritage sites to further growth. And it is against this background that the battle to save the last breathing space in Tai Kok Tsui took place.

The campaign started in 2003, before the enactment of the Town Planning (Amendment) Ordinance when there was no provision in the TPO for rezoning of land uses in statutory plans. The application of rezoning the residential site into open space was made to the TPB administratively and was rejected as according to the Board, there was enough public open space and the site should be used for residential purposes 'to optimize the use of valuable urban land'. In 2004, the local advisory District Council passed a motion to request the change of land use from residential to open space or government/institution/ community (GIC) use (Green Sense, 2009). In 2005, the site was included in the List of Sites for Sale by Application, that is, the site was ready for sale by auction should a developer opt to put a price to the land lot that was agreeable to the Government. With the Town Planning (Amendment) Ordinance in place, the local resident filed in two more planning applications to change the residential site into either open space or GIC uses but both were rejected by the TPB.

In 2007, the Lands Department announced that the site was successfully triggered for sale under the Application List system with a price of HK$4.2 billion (HK Government, 2007). Local district councillors on one hand petitioned the Lands Department and on the other hand organised various civic actions including the launching of the 'Blue Windwill Action' to protest at the land sale; Green Sense filed yet another rezoning application to request the reduction of plot ratio and appropriate air ventilation (Green Sense, 2009); and the filing for a judicial review by a local resident which was refused by the Court as information provided was too sparse and unclear. Nevertheless, the land was successfully bid by a developer and building plans were submitted in July 2007.

In August 2007, a professional town planner belonging to the Democratic Party and a representative of Green Sense submitted yet another planning application requesting the maximum permissible domestic plot ratio to be reduced from 6.5 to 5 as well as introducing a 10-metre wide wind corridor but both requests were again rejected. Eventually, in 2008, the building plans were finally approved and the building height was reduced to 130 to 140 metres with 32 to 34 stories, about 10 stories less when compared to neighbouring sites. The Chairman of the TPB, a government official, made the following remarks:

> '[Th]e OZP might not be the most suitable tool for the control of the design of individual buildings. As building design and layout were largely

> governed by the Buildings Ordinance, the Buildings Ordinance might need to be reviewed and, where appropriate, amended to give regard to air ventilation factor… the proposed 10m wide non-building area… was provided voluntarily by the developer' (TPB, 2008, p.14).

To the civic activists, this cannot be a victory but to the developer, perhaps this was a big concession. The developer's willingness to make such a concession might have to do with the fact that the bid price was much lower than its neighbouring sites due to uncertainties introduced by local civic actions (Sing Tao Daily, 2007).

5. Conclusion

Where does Hong Kong stand with reference to the earlier discussions on laws and the right to city planning? Obviously, the recognized rights to city planning offered by the planning system through laws and regulations are rather limited. In fact, as can be seen in previous paragraphs, the procedural TPO offers no statutory power for implementing the formulated plans. And the scale and intensity of development allowed in the plans are constrained by the First Schedule of the B(P)R which have been taken as the promised development rights by the built-environment related professionals. Indeed, the vested interests of developers and related professionals (except some of the town planners) have led to the delay of the amendment of the outdated TPO and the resumption of the urban planning responsibility to the planning profession. In other words, the planning profession has failed to help realize the 'potential planning rights' of the citizens as the Government seems to have sided with the interests of the developers.

On the other hand, civic activism sprang up to try to challenge the biased system at the grassroots level. Various attempts were made to use the amended TPO to change the land use zoning but to no avail. Although eventually, the community actions had succeeded in lowering the height of the development project and enforcing a 10-metre wide ventilation corridor, the fundamental of the biased planning and building regime remains intact.

This story shows us the importance of having conscientious professionals who are willing to put public interest before self-vested interests. In other words, to borrow from Alexander (2007), Hong Kong needs 'advocates of potential planning rights', planners or related professionals who are willing to use their knowledge to patiently explain the 'hegemonic bias' (Borja, 2010, p.24) of the current system and to point out the importance of institutionalizing planning considerations in the development process, the return of planning authority to professional planners, the review of the First Schedule of the B(P)R, the empowerment of the civil society of their rights to city planning and the

formalization of appropriate mechanisms to facilitate their participation throughout the plan and decision making processes.

This paper has attempted to reveal the mechanisms that have given rise to 'walled buildings' in compact Hong Kong and hopefully, it also points to a need to explore possible alternative futures that will simultaneously be contested but open to democratic control and management!

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Urban network, regional change and regionalization process in Turkey

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Track 7. Regional Change and Resilience : Plans, Institutions and Concepts

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Abstract

Turkey has undergone since 1950 a vigorous urbanization process resulting in a well-developed and hierarchized network of urban central places, with a strong trend towards metropolization in favour of the three biggest cities Istanbul, Ankara and Izmir. Thus a number of metropolitan and regional centres have progressively shaped, through regional directions of administrations and high level commercial, health and education facilities, *de facto* polarized regions, whereas several regional development plans have been engaged by the State Plan Organization, but without creating regions as political units and territorial collectivities. In response to European Union incentives, Turkey has adopted in 2002 NUTS 1 and NUTS 2 regional units and created Regional Development Agencies at the NUTS 2 level. The paper will analyze the criteria used to delimit these units and discuss how far the implementation of Development Agencies in this framework can be a first step in a regionalization process in Turkey.

Keywords : urban network – regionalization – NUTS 1 and 2 – Regional Development Agencies – Turkey

1.Introduction

This paper intends to explore the links between urbanization and regional development in Turkey. This country has undergone a vigorous urbanization process which has not only reversed the urban/rural ratio but also created a hierarchized network of urban central places **(2)**. How far has this process led to the rise of regional identities in a cultural area where regional units were an almost unknown concept ?. Beyond broad natural regions, could the higher levels of the urban hierarchy develop *de facto* polarized regions, and did the government take such units

into account as a framework for development projects **(3)** ? Among a great number of reforms adopted in Turkey in order to meet the standards for entering the European Union, NUTS 1 and NUTS 2 statistical units have been created, and the latter have given the spatial framework for Regional Development Agencies. How far can these constitute a first step towards a true regionalization process in a country with a strong tradition of centralization **(4)** ?

2. A vigorous urbanization process leading to a well-developed urban system

Like many other developing countries, Turkey has started in the 1950s a strong urbanization process which must be analysed both in its quantitative dimension, the global growth of urban population **(2.1),** and in its qualitative one, the differenciation of several hierarchized levels of central places **(2.2).**

2.1 The global shift from rural to urban

Although a significant number of urban places had shown a remarkable continuity since the Antiquity, the young Republic of Turkey, proclaimed in 1923, was fundamentally a country of peasants, with 75 percent of the population living in villages at the time of the first general census of population in 1927. This rural/urban ratio remained the same until 1950, while the total population of the country gradually increased from 13.6 million to 20.9 million. In 1950 started both an acceleration of the global annual increase rate (from 2.17 percent in 1945-50 to 2.77 percent in 1950-55 and 2.85 percent in 1955-60) and an outmigration movement from villages to cities, resulting in a sharp discrepancy between the annual increase rates of urban and rural populations, respectively 5.57 and 1.75 percent in 1950-55 and 4.92 and 1.95 in 1955-60. Some peasants had already experienced seasonal or temporary work migrations to cities, especially from the Black Sea region towards Istanbul, as observed by Xavier de Planhol in 1950. Thus a “chain migration” process was developed, the first migrants helping relatives or neighbours to come.

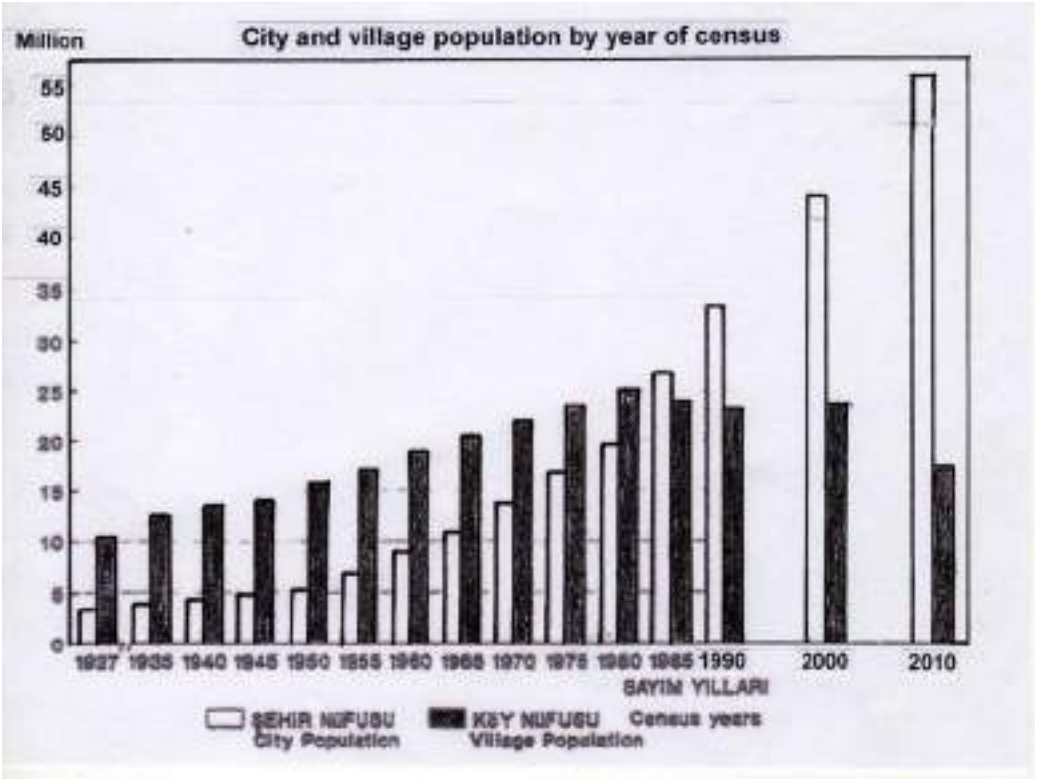

Fig. 1 – Evolution of the urban and rural population of Turkey (source DİE)

During the two next decades, this rural/urban migration process went on, not only towards Turkish towns and cities but also to foreign countries, mainly Germany together with other West European countries and oil-producing Arabian countries. The rural population as a whole was still growing, but much slower than the urban population, and reached its maximum at the 1980 census with 25 million people (56 percent of the total population of 44,7 million).

Then the rural population began to decrease, rather distinctly between 1980 and 1985 because the administrative reform creating the metropolitan municipalities for the biggest cities revised their limits in order to include actually urbanized former villages. Thus at the 1985 census urbanites became the majority, being 53 percent of the total population of 50.6 million. The rural population stabilized for a while between 1985 and 2000 and underwent a sharp decrease during the 2000 years, falling to 17,5 million, while the urban was strongly increasing, up to 56,2 million out of a total of 73.7 million on 31/12/2010, i.e. 76.2 percent of the total population. Actually, a new method of counting the population has been used since 2007, the Address Based Population Registration System, one may question wether it has introduced some discontinuity in statistical series or not. Anyway, as a whole, the proportion of villagers and urbanites has been reversed in just forty years.

2.2 The development of a hierarchized urban network

This urban growth has been distributed between a great number of cities, big and small, with differentiated functions, many of which give them the role of central

places for bigger or smaller areas : administration, education and health services, commerce, personal services. Turkey has thus built the most developed urban network of the Near East (Bazin 1997), the only Middle Eastern country having a comparable hierarchized urban network being its eastern neighbour Iran.

The first publication I devoted to this question (Bazin 1986) distinguished five levels in this hierarchized urban network :
a) The two capitals: At the top of the pyramid, the Turkish urban system appears to be bicephalous., due to recent history : Ankara has been appointed as the capital of the new Republic of Turkey in 1923, but the former Ottoman capital Istanbul, as a bimillenary world city (Stewig 1964), has kept a great part of its functions and demographic importance. Thus nation-wide functions are shared between the two cities : Ankara is the official political capital, with the Presidency of the Turkish Republic, all the organs of government, the Great National Assembly and the foreign embassies, and also the center of military power and of State-owned economic sector, whereas Istanbul has kept the roles of first harbour and commercial place, first industrial center, capital of the private economic sector and capital of academic, intellectual and artistic life. Of course, Ankara, being a very small town (25,000 inhabitants) when it became the capital, has undergone a very rapid growth (Pérouse 1997) while Istanbul, a city with more than 600,000 inhabitants when it lost its title of capital, was growing at a much slower pace until it accelerated its growth in the 1980s (Yerasimos 1997).
b) Regional metropoles: Three big cities following in the size-ranking list, Izmir center of the Aegean façade of Turkey, Adana in the Mediterranean region and Bursa in the southern Marmara region, have all begun to develop their industries together with their commercial role in the late Ottoman period, and have kept their advance.
c) Regional centers: a dozen of cities were identified as exerting a number of higher level functions, with regional-rank administrations, universities, a large hospital and many specialized services, and a strong commercial center. Contrary to the two upper levels present only in the western half of the country, they were scattered all over the national territory, and completed by half a dozen of centers with a less complete set of such functions.
d) Province (or Departments) centers: The province (or rather Department, *il* in Turkish) is the basic administrative unit in Turkey and corresponds to the French "Département" since Atatürk followed the French model of the Third Republic when he reorganized the administrative grid of the country. All these departements but four are named after their chief-town, which plays a prominent role in spatial identities : when a Turk says "I am from Sivas", this means that he lives either in that city itself or in any township or village located in the department, and uses the numerous administrations, services and facilities of the city. Thus the remaining department centers (i.e. those having no significant regional-rank equipments) constitute the basic level of the urban network. The State is represented at that leve by the *vali* or "prefect".
e) Districts or "arrondissements" centers: under the departemental level, Turkey is also characterized by the great number of small towns and townships, chief-towns of the inferior administrative unit called *ilçe*, equivalent of the French

“arrondissements”, the towns being the equivalent of French”sous-préfectures” hosting a subprefect. The multiplication of these smaller agglomerations is quite important : having a few administrations, a grammar school, a health center, a weekly market and a group of permanent shops, they offer to the inhabitants of surrounding villages the first contact with urbanity. Some of them have grown bigger thanks to the presence of industrial plants or touristic activity.

Compared to this situation of the mid-1980s, the urban network has kept its main characteristics and undergone a number of significant changes.

- The metropolization trend has boosted the biggest cities, governed since 1984 by metropolitan municipalities (*Büyük Şehir Belediyesi*, “municipality of the Great City”), especially Istanbul, now a megacity of 13.3 million inhabitants (end of 2011, see www.citypopulation.de) with important international functions, but also the capital Ankara with 4.3 million people.

The “club” of regional metropoles can now include, together with Izmir (2,7 million), Bursa (1.7 million) and Adana (1.6 million), a new member, Gaziantep (1,376,000) as a very important industrial center and the leader of developing Southeast Anatolia.

Most of the regional centers have reinforced their role and become quite large cities, five of them have more than 800,000 inhabitants : Konya (1,073,000) and Kayseri (844,000), “Anatolian tigers” with great industrial development in a socio-political conservative atmosphere ; Antalya (964,000), motor of the touristical boom ; Mersin (859,000), major industrial harbour, and Diyarbakır (875,000), leading city of the Kurdish Southeast. Some cities classified as uncomplete regional centers in 1986 have completed their functions, like Denizli in inner Aegean (511,000), Adapazarı east of Istanbul (429,000) or Van in remote mountainous Southeast (353,000). Only two of these cities have undergone demographic stagnation or slight decrease, Zonguldak with the decline of its coal mines and Edirne facing conjonctural changes at the Bulgarian boundary.

As for the province chief-towns, their total number (including the three above-mentioned categories), after having remained stable between 1955 and 1989, has increased in successive stages from 67 to 81 in 2000. Most of these are mid-size cities, or even very small, like Bayburt (25,000 inhabitants) or Ardahan (18,000), often at the head of a small declining area, and generally owe to political considerations their accession to this higher rank.

The number of smaller district centers has gone on increasing as well, they are more than 700 now, including in 2011 22 mid-size cities between 100,000 and 200,000 inhabitants, mostly industrialized cities, and 192 towns between 20,000 and 100,000 inhabitants.

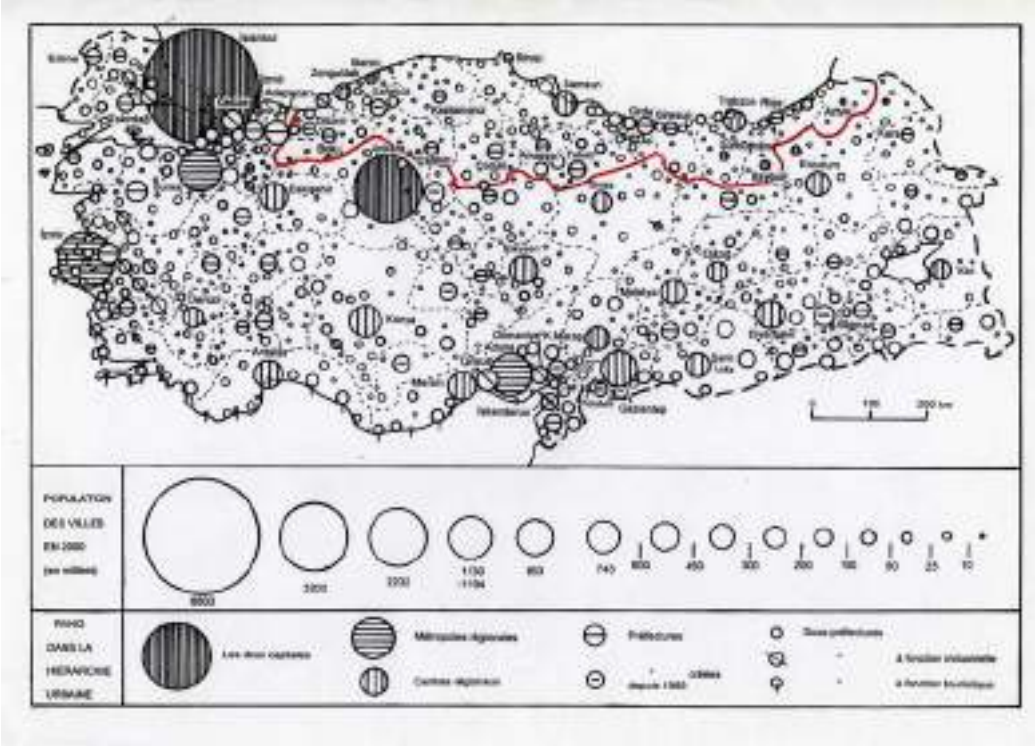

Fig. 2 – The urban network of Turkey in 2000

3. Regional centers and regional identities

The paradox of Turkey is that this country has numerous and strong regional centers, but no regions, or more precisely no regions identified through the influence of urban centers, but only natural regions **(3.1)**. To what extent can these dynamix regional centers contribute to develop regional identities **(3.2)** ? A step further has been attained by a number of development projects at a regional scale **(3.3)**.

3.1 The “unknown region”

I used this expression (in original version “La région, cette inconnue...”) to underline the lack of regional units in Turkey and the Turco-Iranian cultural area (Bazin, 2000), an analysis which was more recently invoked and completed by Benoît Montabone (2011) in his excellent PhD thesis about the stakes of regional development in Turkey. In fact several words exist in Turkish to designate intermediate spatial units between the local place of everyday life and the national territory. The most often used one, *bölge*, is a neologism derived from the verb *bölmek*, “to divide”. Another word derived from the same verb, *bölüm*, is used for smaller units, especially subdivisions of the latter. *Yöre* is in turn used for even smaller local units.But if several common nouns designate different levels of spatial entities, very few specific proper nouns are in use. Administrative units themselves are usually named after their chief-town, it is the case of 77 of the present 81 provinces (*il*) and of the totality of the districts (*ilçe*).

However, a few regional nouns are used in Turkey. In fact the lack of such names had led orientalists and cultured travellers to use regional names of the classical Antiquity, such as Lydia, Phrygia, Cilicia etc. For instance, the thesis of Xavier de Planhol *De la plaine pamphylienne aux lacs pisidiens* (1958), which marked the beginning of his rich work on the cultural geography of the Middle East, was devoted to Pamphylia and Pisidia which had no other contemporary names than “the plain of Antalya” and “the lake district” or the “provinces of Burdur and Isparta”. Most of those antique names had totally disappeared from the daily use of people, to the exception of Thrace, *Trakya* in Turkish, which had remained well identified within the Ottoman empire for its partly Greek population, and has kept its name after the exchanges of populations in 1923. Other antique names have been brought back into use for regions having a high touristic value, first Cappadocia (*Kapadokya*) with its unique association of natural landscapes carved in volcanic tuffs and cultural heritage of medieval Christian populations, which you can admire now from the nacelle of a balloon, and later Lycia (*Likya*) for its original funeral monuments which you can discover by walking along the pedestrian Likya route : antique names as a marketing argument for new products !

Another name, purely Turkish, designates a very well identified regional unit: it is the Çukurova, the”hollow plain”, i.e. in the heart of the antique Clicia a large alluvial plain surrounded by the chains of Taurus and Amanos and irrigated by the two rivers Seyhan and Ceyhan, mainly for the intensive cultivation of cotton. Thus it associates clearly perceivde physical features and agricultural speciality, well-known through the novels of Yaşar Kemal.

In fact, one set of regional units has been identified for the whole national territorry, by the first national congress of Turkish geographers held in Ankara in 1941, and is still taught in elementary and secondary schools, memorized by all the population, and used in everyday life, for instance in the meteorological bulletins : seven natural regions (*doğal bölge*) characterized by a combination of physiographic and bioclimatic features (fig. 3). Four maritime regions are named after the four seas around the country, Black Sea, Marmara, Aegean and Mediterranean regions, and three interiol regions are all called Anatolia completed by an adjective of position : Central Anatolia, Eastern Anatolia and Southeastern Anatolia.

Fig. 3 – Natural regions of Turkey

This definition and delimitation of seven natural regions has been validated and precised by Oğuz Erol (1983) who used a modern approach based on the identification of geosystems and established a subdivision of every *bölge* into three levels : *bölüm, yöre* and landscape units. This division into natural regions is systematically used as the framework for regional descriptions of the country in atlases and handbooks. For instance the *Büyük Atlas* (Great Atlas) first produced in the late 1930s by Prof. Faik Sabri Duran and constantly reedited since that time, reported at once the limits of the natural regions on the four regional double pages (Duran, 2010, pp.24-31). Similarly, a new atlas of Turkey for the general public (Çiringel, 2010) devotes a substantial second part (pp. 53-85) to the presentation of the seven regions, the limits of which are also superimposed on most maps of the general part. Giving the first role to these natural divisions - which have not produced any administrative entities - underlines the unitarian vision of the Turkish territory.

3.2 *De facto* polarized regions versus centralization ?

However, the affirmation of regional centers rests upon a number of realities which are gradually building *de facto* polarized regions : people from the surrounding departments increasingly frequent these bigger cities for administrative affairs, for educational and health services, for shopping and leisure.

If the department (*il*) remains the basic level of administration in Turkey, with departmental directions (*X... il müdürlüğü*) for every State administration and public organizations, this scale has been quite early judged too narrow to treat many problems. Thus a number of State administrations and public companies have created regional directions (*Y... bölge müdürlüğü* or *baş müdürlüğü*) covering a number of adjacent departments. Although the need to address to this supradepartmental level is not very frequent, it gives a reason to go out of the usual departmental environment to a bigger city.

FIG. 3. — Erzurum, capitale régionale.

1. Et ve Balık Kurumu (usine de viande, aire d'approvisionnement). 2. Raffinerie de sucre de Ilıca (aire d'approvisionnement). 3. Toprak Mahsulleri Ofisi (produits de la terre). 4. P.T.T. 5. Devlet Su İşleri (eaux). 6. Toprak Su (Sols). 7. Karayolları (Ponts et Chaussées). 8. İller Bankası (en partie aménagement du territoire). 9. Orman Baş Müdürlüğü (Forêts). 10. Merkez Bankası (Banque Centrale).

Fig. 4 – Administrations and public organizations bound to Erzurum in 1966 (Bazin, 1969, p. 293)

However, as I checked it in the case of Erzurum in my first research work (Bazin, 1969, pp. 292-293), all these regional directions did not cover the same area – that was the same situation in France under the Fourth Republic -, which obliged the population to frequent several urban centers for different purposes. But this may have begun to be at least partly harmonized since that time.

High level social services such as most specialized health equipments or higher education can also play a significant role to make the population of an area to focus on a regional center providing these facilities. But in the Turkish case, the situation is quite different in these two fields of services. Actually, the contribution of universities to a regional identity is weaker in Turkey than in many other countries, for two opposite reasons. On the one hand a recent boom in higher education has led to the multiplication of universities : there were in 2011 (according to a list given on the website of the French embassy in Ankara) 75 universities and other higher education institutions located in 38 different cities, i.e. not only in regional centers, whereas the three main cities still concentrate more than half of these institutions (25 in Istanbul, 10 in Ankara and 5 in Izmir). If universities are almost exclusively hosted by regional centers in Black Sea region, Eastern Anatolia and Southeastern Anatolia, in the western part of the country a number of mid-size province centers have also their own university now, for instance Çanakkale, Kocaeli, Bolu, Kûtahya, Kırıkkale, Niğde or Isparta. On the other hand the repartition of students between the universities is still organized in a much centralized way through a national interdisciplinary and interuniversity competitive exam. Thus every university receives students from all the regions of Turkey, and some of them a significant number of students from foreign countries as well. In fact, it always contributes to enhance the social animation and cultural life of cities, but only very partly in relation with its regional environment.

Health services, on the contrary, follow a logic of relative proximity, except for very rare illnesses. Big public and private hospitals are more numerous and have a bigger capacity and more complete equipments in regional centers, which offer as well a larger panel of specialists. The same logic applies to commerce and private services too. Together with concentrations of shops in the city center, which may be partly in a traditional bazaar and partly along the main avenues, important cities have begun to widen their commercial offer to two new forms : hypermarkets on peripheric locations and big commercial malls called *alış veriş ve yaşam merkezi* ("Shopping and lifestyle center), often with a monumental architecture like the glass pyramid of Zafer Plaza in Bursa.

An important condition to the development of this regional attractivity is to improve the accessibility of these cities, and Turkey has in fact seen during the last two decades a real boom in transportation facilities. In terms of time-distance, in the 1980s regional centers were central places which one could reach in one day, nowadays you can go there, do your business or administrative formalities and come back home within the same day.

But shifting from this *de facto* growing polarization to a true regionalization reveals to be quite difficult. Centralization is deeply rooted in the political tradition of the Turkish Republic, and any attempts to decentralization are quickly perceived as a threat to the unity of the country. It is symptomatic to notice that the first step towards decentralization has been undertaken at the lower scale of departments by transferring some competences to "departmental special administrations" *(İl özel idaresi*) and to metropolitan municipalities.

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3.3 First experiences of regional development projects

In a more pragmatic way, a number of regional development projects have been undertaken, still in a centralized context under the impulse and control of the State Organization of Planification (*Devlet Planlama Teşkilatı,* DPT).

The most ancient one was also the most ambitious, the Southeastern Anatolia Project (*Güneydoğu Anadolu Projesi,* GAP), an hydraulics-based integrated development project which has been subject to passionnate discussions. It was launched in 1977, soon after the completion of the Keban reservoir-dam at the junction of the two upper branches of Euphrates, the Karasu and the Murat Su. The idea was to built a system of 22 dams on upper Euphrates and Tigris and tributary rivers combined with 19 hydro-electric power plants – including the biggest one in Turkey, fed by the Atatürk dam on the Euphrates, with an installed capacity of 2,400 MW -, in order to turn into intensive irrigated lands some 1,800,000 ha of extensive pluvial fields and steppic pastureland and to develop industries transforming regional mineral resources and agricultural products, especially cotton.

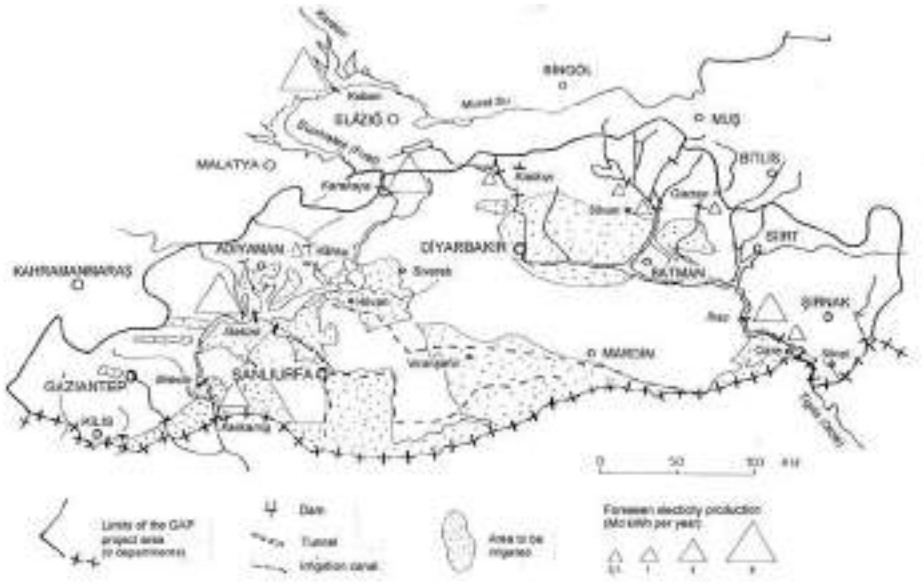
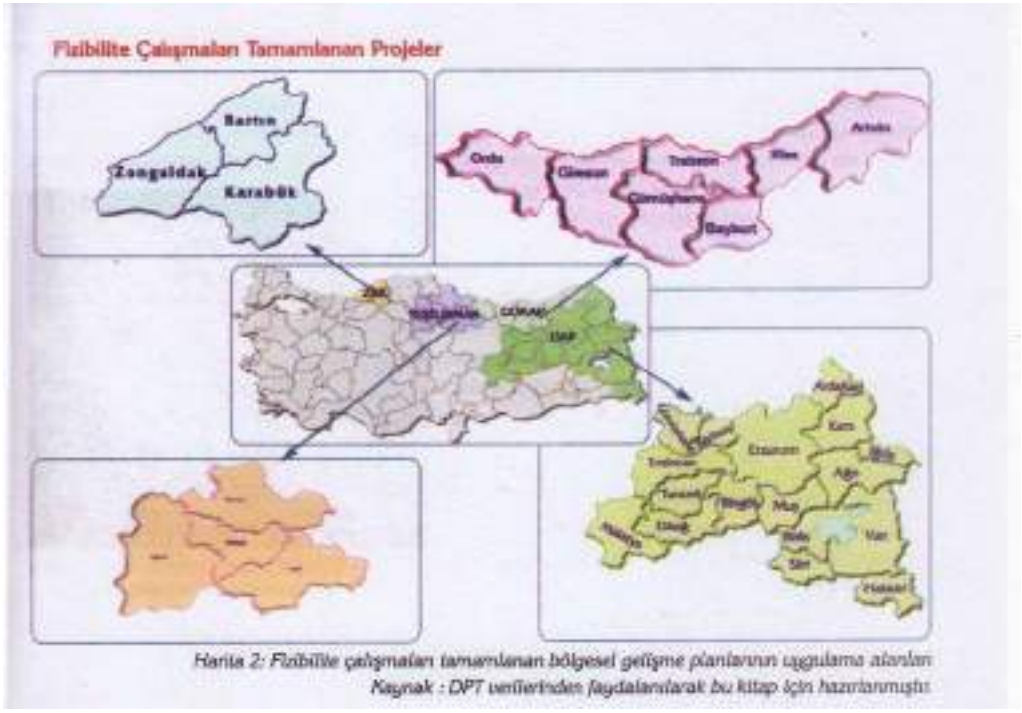


Fig. 5 – The Southeastern Anatolia Project (GAP)

The main objective of GAP was to seek a global remedy to the deep underdevelopment of Kurdish Southeast and to reduce spatial unequality by providing new infrastructures, increasing agricultural production thanks to irrigation and developing industry thanks to hydroelectricity. If the hydraulic programme and the extension of irrigated land is not achieved yet, Southeastern Anatolia has engaged deep changes, especially along the axis linking Gaziantep to Şanlıurfa.

Another set of more sectorial plans have been implemented during the successive five-year plans since 1970. Six rural development projects have successively been engaged by the Ministry of Agriculture and Rural Affairs, and more precisely by its General Direction of Rural Services, in order to favour the growth of agricultural production by improving infrastructures, in areas covering one or two departments each, all in the northeastern part of the country. The last one, designed for the Erzincan-Sivas area (2005-2012), shows a new trend towards support to small familial holdings and sustainable development (Montabone, 2011, pp. 146-148).

The most interesting initiative, once again engaged by the DPT, concerns four Regional integrated Development Plans (RDP), all located in the north and east of the country (fig. 6) and adaptated to the specific problems of these areas (Montabone, 2011, pp. 148-152) :



Harita 2: Fizibilite çalışmaları tamamlanan bölgesel gelişme planlarının uygulama alanları
Kaynak : DPT verilerinden faydalanılarak bu kitap için hazırlanmıştır

Fig. 6 – Regional development plans as presented in a secondary school handbook

-The Zonguldak-Bartın-Karabük RDP(1996) aims to favour the restructuration of coal mines and iron and steel industry.
- The Eastern Black Sea RDP (acronym DOKAP, 1998) is a long-term plan prepared with a Japanese cooperation agency, based on a detailed territorial diagnosis and proposing ten structural programmes.
- The Eastern Anatolia RDP (acronym DAP, 2001) encompasses the poorest areas of the country. Elaborated by a pool of regional universities, it has ambitious but very general objectives of sustainable development and reduction of unequalities.
- The Yeşilırmak Basin Development Project (2004) takes its originality from its pecular logic : organizing a catchment basin in order to lessen the pollution discharged into the Black Sea, which compels by retroaction to improve numerous aspects of economic and social life. Alas, it includes only the four departments located downstream, but not the upstream valley located in Sivas department.

As a whole, these plans have suffered from questionable delimitation, from the incapacity to mobilize the necessary financing resources, and form the lack of an institutional body ready to implement the plans, that remain virtual as for now. But they have opened an interesting way towards regionalization.

4. From new statistical units to a real regionalization process ?

In the framework of the large pre-adhesion process engaged to meet the Copenhague criteria for claiming membership in the European Union, Turkey has adopted two levels of supradepartmental units NUTS 1 and NUTS 2 **(4.1)**. Although their

delimtation is criticizable in many cases, all the NUTS 2 units have been provided with Development Agencies **(4.2)**. Can we consider the creation of these DA as the first step towards a real regionalization **(4.3)** ?

4.1 The introduction of regional units between EU incentives and national concern

As in many other fields, Turkey has been facing strong EU incentives concerning the chapter 22 – Regional policy of the pre-adhesion process. The first *Partnership for adhesion* adopted in March 2001 indicates namely among the three priorities concerning the development of an efficient regional policy the elaboration of a NUTS classification. This objective met some actions separately engaged in Turkey, such as the above-mentioned Regional Development Plans and reflections about a reform of governance.

Thus two levels of statistical units have been defined and delimitated in 2002 between the State and the existing departments, that have been subsequently labelled NUTS 3 units. The result is the official Classification of Statistical Regions (*İstatistik Bölge Birimleri Sınıflaması,* acronym İBBS) and the corresponding maps (fig. 7) :
- 12 NUTS 1 (*düzey* 1 = level 1) big regions, which respect as much as possible the contours of the 7 natural regions and are named after them ;
- 26 NUTS 2 (*düzey 2*) regions, counting from one to six preexisting departments ;
- and 81 NUTS 3 (*düzey 3),* the existing departments.

Fig. 7 – The new NUTS 1 and NUTS 2 regional units in Turkey

The delimitation of NUTS 2 regions has apparently obeyed to several conctradictory logics : having a comparable demographic weight ; constituting an homogenous natural or economic entity ; being polarized by one big city. The combination of these criteria results in a rather confused typology :
- Regions made of one single department : the three metropoles Istanbul (TR10), Ankara (51) and Izmir (TR31), a choice which avoids too big regions, but cuts the metropoles from their immediate environment ;
- Regions polarized around one single regional center : TR21 Edirne, TR22 Balıkesir, TR32 Denizli, TR33 Manisa (not so clear), TR52 Konya, TR61 Antalya, TR81 Zonguldak, TR83 Samsun, TR90 Trabzon, TRA1 Erzurum, TRB2 Van, TRC1 Gaziantep ;
- Bipolarized regions (often with a different weight of the two cities) : TR41 Bursa + Eskişehir, TR42 Izmit (Kocaeli) + Adapazari, TR62 Adana + Mersin, TR63 Kahramanmaraş + Antakya ; TR72 Kayseri + Sivas, TRB1 Malatya + Elâzığ, TRC2 Diyarbakır + Şanlıurfa ;
- Little polarized interstitial regions : TR82 Kastamonu-Çankırı-Sinop, TR71 Kırıkkale- Aksaray-Niğde-Nevşehir.
- Little polarized peripheric regions : TR42 Kars-Ardahan-Iğdır-Ağrı, TRC3 Mardin-Batman-Şırnak-Siirt.

4.2 The creation of Development Agencies

After having been for some years just a new statistical grid – adopted at once by the Turkish Statistical Institute (*Türkiye İstatistik Kurumu,* TÜİK) -, this new territorial division of the country has suddenly increased its importance with the creation of Development Agencies (DA, *Kalkınma Ajansları*) in the territory of the 26 NUTS 2 regional units, in three steps : two pilot-agencies were created in 2007 in Izmir (TR31) and Adana-Mersin (TR62) ; 9 others, including Istanbul, in 2008 and the remaining 15 in 2010. Thus these new institutions cover the whole national territory. Benoît Montabone has focussed his research on this innovative institution (2011, chapters 4 and 5, pp. 155-217). The law n° 5449 published in the Official Journal on July 6, 2006, which has launched their creation defines their main functions: planification at the regional scale, including the elaboration of strategic plans : financial support to development projects ; support to innovation and external investments.

Initially called Regional Development Agencies (*Bölgesel Kalkınma Ajansları*), these DA have followed – after a number of preparatory visits and inquiries, for instance in West Midlands and in Alsace – an international and especially european model, defined by Halkier and Danson (1997) as private or semi-public organizations gathering together strategic stake-holders of a territory in order to favour innovation and improve economic governance. Several new members of E.U., such as Poland, Czech Republic and Hungary, have in fact adopted this formula during their pre-adhesion period. But Turkish DA also take place in a much wider legislative package

launched in 2004 and aiming to give more autonomy to local levels like Departmental Special Administrations and Metropolitan Municipalities. They can thus be interpreted as the result of a convergence between a european demand and a national evolution.

One of the most important innovative features of DA is the creation, beside the usual Management Board (*Yönetim Kurulu*), of a consultative Development Council (*Kalkınma Kurulu*) of 100 members representing the economic and social forces of the region. In addition to the institutional personalities present in the Management Board, i.e. the prefects of all the departments composing the regional unit, the mayors of the chief-cities of every province, the presidents of the Departmental Special Administrations and those of the Trade and Industry Boards, they include representatives of municipalities, of State local administrations, of Trade and Industry Boards, of Organized Industrial Estates, of professionnal associations, of universities etc. Resting on the experience of a few pre-existant growth coalitions, for instance in Gaziantep, these new DA allow bottom-up mobilization for nation-wide recognition of regional competitivity and attraction of investments.

4.3 A first step towards real regionalization ?

If Elise Massicard (2008) remained somewhat sceptic about the trend towards regionalization, speaking of "impossible regionalism" and "improbable regionalization", her study dates back to the very beginning of the creation of Development Agencies., and she had not had the possibility of appreciating the first results of this innovation process, as Benoït Montabone has done.

The latter has chosen three examples to make field studies and inquiries, the DA of Istanbul, Izmir and Karacadağ covering the two departments of Diyarbakır and Şanlıurfa. The two former examples have in common the fact that the choice of a NUTS 2 unit limited to one single department weakens the possibilities of strategic planification which should be elaborated for a much wider metropolitan area. In fact, in the case of Istanbul, where the authority of the metropolitan municipality covers now the whole territory of the department, the DA stands in concurrence with the Istanbul Metropolitan Planification board (*Istanbul Metropoliten Planlama*, IMP) directly bound to the municipality, which has actually produced a reflection at a much wider and more appropriate scale, that of the whole Marmara basin (fig.8).

In Izmir, where the DA was installed earlier, its strategic development plan has taken into account documents previously elaborated by the metropolitan municipality and by the Board of Trade, and explicitely proposed to extend the reflections to all the departments of the Aegean region, actually under the metropolitan influence of Izmir.

As for the Karacadaĝ DA, its territory depends greatly of development programmes engaged at the broader scale of GAP, which encompasses as well the two neighbouring DA of Gaziantep (*İpek Yolu,* "Silk Road") and Mardin (*Dicle*,

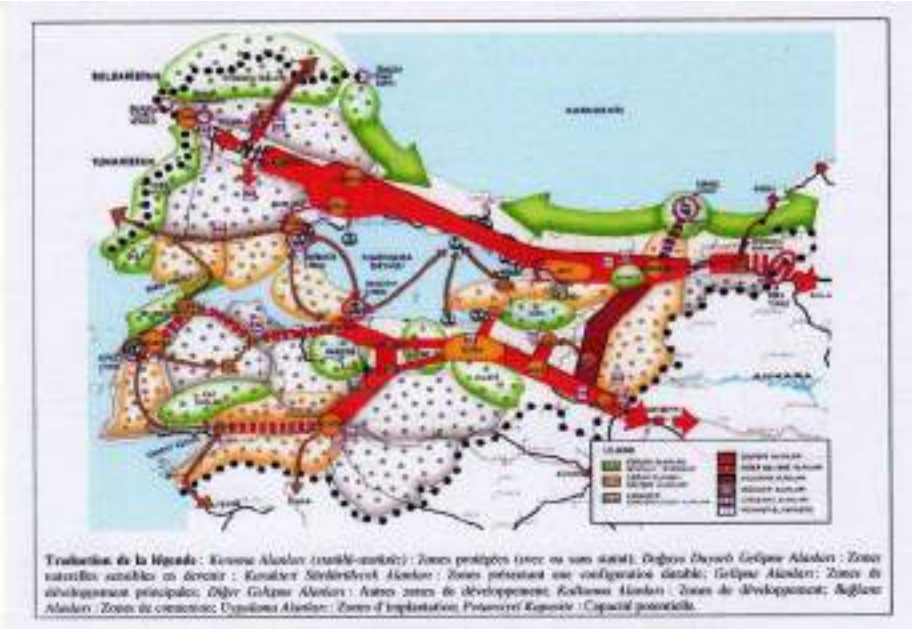


Fig. 8 – Spatial vision of the Marmara region proposed by IMP, 2006 (Montabone, 2011, p. 265)

"Tigris"). It suffers also from the political rivalry between its two big cities, Şanlıurfa with an AKP (the party of the present govertnment) municipality has been chosen as the regional center and the seat of DA although Diyarbakır is quite bigger (875,000 inhabitants against 515,000) but has a mayor from the pro-kurdish Party of Peace and Democracy (*Barış ve Demokrasi Partisi,* BDP).

In spite of these difficulties which result from the delimitation of the three above-mentioned DA rather than from their organization, the 26 agencies as a whole have begun to play a significant role in involving regional actors in development projects and favouring territorial appropriation. Thus, they can, in my view, be a starting point to a gradual evolution towards regions as true territorial collectivities. I invite the pessimists to consider the example of my own country, France, where regions were first created in the late 1950s as "Circonscriptions d'Action Régionale" (Regional Action Areas), so with a regional planning approach in a strongly centralized state. Who could have imagined then that they would become, a quarter of century later, the masterpiece of the decentralization process in France ? So, good luck to "alaturka regionalization" as well !

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Hierarchy, Negotiation, Competition and Protest:

Multi-Actor Interaction in Building High-Speed Railway Oriented New Town in China

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Key Words:

High-Speed Railway oriented New Town (HSR-NT), Actor-centered Institutionalism, Interaction mode

Introduction

High-Speed Railway station area development might be a platitude in the practice and academia of the western world (Peters and Novy, 2012). Those cases in Europe are evolving from property capitalization towards urban mega-project and till TOD (Transit Oriented Development) (Bertolini, et al, 2012). However, the similar topic in Chinese context can be interpreted differently into local scenario.

HSR-New Town Nationwide Fever

The strategy of using the railway station as a growth pole of a new town/district in China is considered as the major policy response to HSR embedding. With the operation of HSR stations, the processes in majority of cities have moved onto the actual implementation phase. However, this HSR-New Town (HSR-NT) development is gradually turning from a heat to a 'nationwide fever'. Before excavating the insight, it is important to be aware of the problematic situations in the planning and implementation of current HSR-NT in China as follows:

- Tendency of turning from a golden opportunity for city re-construction to just a gimmick of land enclosure:

  Since most of those HSR stations have been put in to use recently, the majority of the land and road system around stations are almost ready for secondary land development (if there is such). In other words, the land enclosure in urban periphery has been almost finished. The institutional parameters that drove local government to keep the 'production line' of urban space are revealed.

- Lack of sustainable engine for further urban development:

  The increasing fiscal burden to pay back mortgage in the primary land market is strongly restricting the land development around station. Not to mention with the challenge of changing political and financial background, the missing market interest is gradually growing. The international crisis is exacerbating domestic inflation in China, while the Chinese national policy on housing and land is tightened up. Therefore, what is the future sustainable engine to keep the 'growth machine' running?

What caused the current problematic situations? Who are hidden behind the curtain? What collective action problems are involved in the process of planning and implementation? Those raise the necessary of getting anatomy insight of the process of making HSR-NT. In order to actor-centered institutionalism will be introduced. The main research question will be formulated as: **How can interactions between actors**

embedded in the Chinese context effect the decision-making and implementation process of making High-Speed Railway oriented New Town? The case of Wuhan station area development will be taken as a case study. Two trips of fieldwork to Wuhan have been conducted. One was from October 2010 to February 2011, and the other is from January to February 2012. Twelve structured in-depth interviews to key actors involved in this case have been made, including transport planner, urban planner, civil servant, urban designer, and architect, etc.

Wuhan railway station area development: a new sub-city center

Wuhan, the capital of Hubei Province, locates at the inner part of China. The urbanization history can go back to 3500 years ago. It was merged from three counties - Wuhanchang, Hankou and Hanyang - on both banks of Yangtze River in 1949. According to the old version of City Master Plan (1996-2020), it is regarded as an important city in central China, vital industrial base and transportation node (B1). The population was planned to be 5.05 million by 2020 within the area of 8467 km2. In the reversion of City Master Plan (2006-2020) its position has been raised to be a central city in central China, a national historical city, vital base for industry and science education, and integrated transportation node. Wuhan has been playing more and more important economic and social role in nationwide. It is one of the two metropolitan areas, which are approved to be the comprehensive pilot area to build 'Two-type Society, that is Resource-saving, and Environment-friendly Society' in 2007. Two years later, it is regarded as one of National innovation pilot cities.

Wuhan holds a strategic position within national water and railway transportation network. It is planned as one of the four national conjunction nodes in the National Railway Network Plan. Billions has been invested into the twelve railway related infrastructure projects in Wuhan during the 11th Five-year Social and Economic Development Plan, including the case of 'Wuhan Station' to be discussed here. There used to be two railway stations, Wuchang and Hankou stations. Although Wuchang station is not connected into HSR network, it is considered as the nodal station organizing multi-direction railway transportation to all over the country. Hankou station is connected into the HSR network, providing the CRH trains which head for Yangtze River Delta in the east. The name of the new 'Wuhan station' emphasizes the symbolic importance of Wuhan station as a municipal transportation node. The high-speed trains departing from it will head for north and south. This new periphery station is far away from the city centers: 17 km away from Hankou station, 12 km from Wuchang city center, and 22 km from Hanyang city center (see Fig. 1).

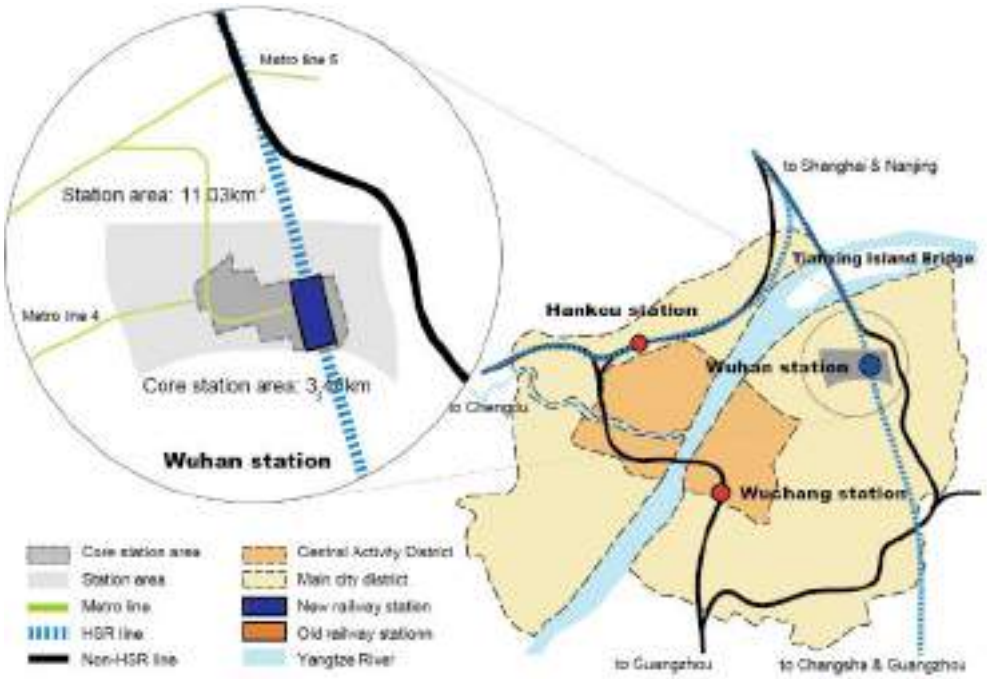

Figure 1: Wuhan railway network and location of Wuhan Station (source: author made)

The whole process from 1995 until January 2012 involved at least 13 official plans or researches. They are 1 architecture design, 4 infrastructure plans, 2 city master plans, 3 conceptual plan and urban designs, and 3 regulatory plans. Two more plans (research) are being conducted at the same time. During the past fifteen years, there were some crucial moments that determined the direction of decision-making process (see table 1). One is the official approve for the final proposal of Beijing-Guangzhou High-Speed railway line as well as the Wuhan Station by MOR and National Develop & Reform Commission in 2004. Another is the official statement of building Yangchun-lake sub-center around Wuhan Station in the revision of City Master Plan of Wuhan in 2006. (The detailed illustration of timeline can be found at http://timeglider.com.) The whole process can be divided into three phrases according to the crucial moments: First is the planning of HSR route and location of station from 1995 to 2004. Second phase is the making of spatial plan of station area and construction Wuhan station from 2004 to 2008. Last but not the least is the preparation of Wuhan station and implementation of station area plans from 2008 until now (May 2012).

Time	Event	Significance
09/1997	MOR's approve on Wuhan Railway Network Plan	Decision on plan and construct Tianxing Island Bridge and the new Wuhan Station
17/05/ 2004	Official approve by MOR and National Develop & Reform Commission (the first agreement between province, municipality and MOR was reached on 26/09/2003)	Final decision-making on Beijing-Guangzhou HSR route and periphery location of Wuhan Station
2006	Official approve for City Master Plan of Wuhan (2006-2020) by State Council	Firstly establishing the planned role of Yangchun-Lake sub-center, in order to form multi-centered metropolitan area in Wuhan
2007	Integration of five plans after the international competition of urban planning and design	Plan for Yangchun-Lake sub-center settled down and the future vision began to take shape
12/2009	OCT Co. Ltd. won the land, P(1009)113, with the function of 'housing, entertainment & tourism' in the bidding by 4.3 billion RMB	Official involvement of Wuhan OCT project

Table 1: Crucial moments in the process of Wuhan station area development (source: author made)

Key Collective Action Problems in Making HSR-New Town

Context matters in defining the key collective action problems in the HSR station area development. There are some shared commonalities. Based on the European experiences during last two decades in 20th century, a series of relevant dilemmas were elaborated. For instance, Bertolini and Spit summarize the spatial, temporal, functional, financial, and management dilemmas (1998). As the economic and political context change, new dilemmas emerged during the past decades, such as the discussions on the difference of TOD and TAD (Transit Adjacent Development), understanding the failure of some station area development projects, and decline of lesser stations. Etc. (Peters, D., Novy, J., 2012; Speck, 2012). This paper sets forth four collective action problems that are characteristic in Chinese context: location and route choice of railway line and station, transport intermodality with other transportation modes, functional diversity, and social integration with local context. And specific features defer in individual

cases. In this case of Wuhan, the ecological accountability stands out as the fifth issue. The majority of those issues are attached to the acclimatization of this new potential 'growth pole' into existing Chinese city context.

- Where to locate the HSR and station?

  The decision making of the route of railway and location of station layouts the keynote of future station area development. The choices include redeveloping/enlarging the existing central-located station, building a new central-located station, and building a new periphery located station, etc.

- How to connect railway with the other transportation modes?

  The buzzword of 'intermodality' is one of the most important issues which all sectors need to take into consideration. It not only refers to the connectivity with other transportation, including airplane, metro, city bus, inter-city bus, private car and pedestrian from station itself, but also the accessibility to station from surrounding area.

- What functions to be facilitated?

  Functional diversity in urbanized area is no doubt the key for spatial quality as J. Jacob indicated. But it might be opinionated to come to the judgment that it is always necessary to promote diverse space in station area. The situation differs depending on the orientation of station itself, which can be pass-by station, property-led station, and nodal integrated station, etc.

- For whom is the plan made for?

  Social integration is a common issue to produce spatial quality in new towns. It indicates the identity of local residents, the external image of community, as well as the embedding of new dwelled community with original ones, etc.

- To what extent can environment vulnerability be taken into consideration?

  With the growing emphasis on ecological sustainability from either normative or political motivations, the accountability of urban plans for protecting public resource becomes more out loud, especially in such a hilly and lochy city like Wuhan.

Chinese Characteristic Action Arena for Building a HSR-NT

Actors embedded in institutional settings

The theoretical approach in this paper is mainly adapted from the 'Actor-centered Institutionalism' from Scharph (1997) and 'IAD (Institutional Analysis and Development framework)' from Ostrom (et al. 1994).

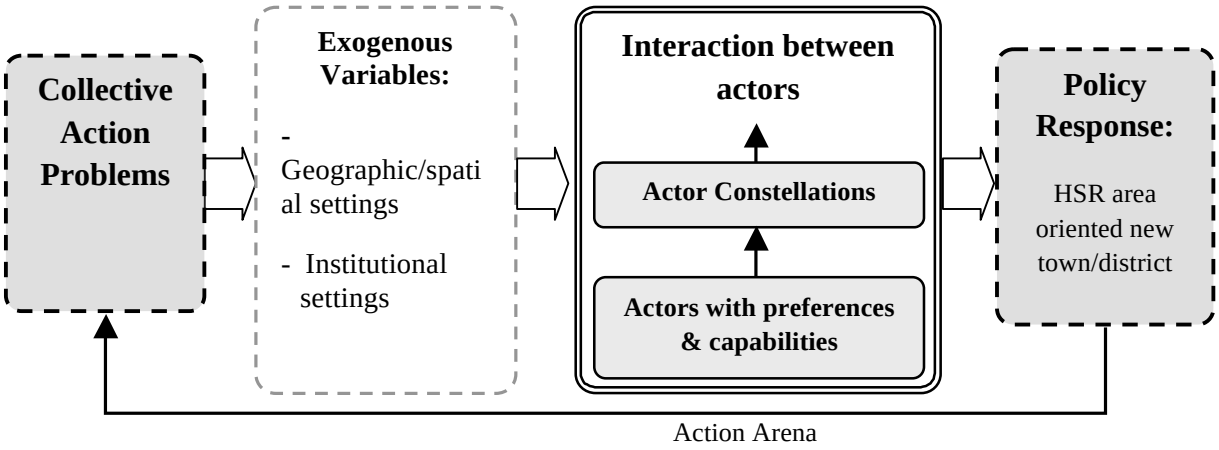

Figure 2: Conceptual framework (source: author adapted from Scharph and Ostrom)

The general institutional arrangement of transportation and urban (spatial) development in HSR station area development in China is shown in table 2. The power and interest continually shifts not only on scalar dimensions, but also at differentiated phases along the process of planning and implementation. The horizontal continuity shows the involvement of public and private sectors, while the vertical axis represents the time sequence of process. This shares some commonality with other mega-project development in the centralized institutional arrangements of China.

	Transportation development (As 'node')				**Urban development (As 'place')**			
	Actors			**Accountability**	**Actors**			**Accountability**
	Macro	**Meso**	**Local**		**Macro**	**Meso**	**Local**	
Decision-making & planning	MOR	--	--	Make plan for HSR route and station location	MG	--		Make spatial plan for station area development
Implementation & construction	MOR	--	--	Construct railway track and station architecture	--	--	MG, DG, ASDO	Municipal government entrusts construction office and district governments to conduct
Management & service	--	LRD		Maintain daily function of station and the commercial space within it	--	--	MGP	Attract investment and provide preferential policies for station area

Table 2: General actor constellation of mega transportation infrastructure in China (source: author made)

(MOR: Ministry of Railway, LRD: local railway department, MG: municipal government, DG: district government, SADO: station area construction office, P: private developer/investor)

Preferences and Capacities of Actors

Built upon the understanding of institutional settings, different preferences (individual and organizational self-interest, and normative obligations and aspirations) of actors and their capacities will be explained.

- Dominant position of public actors

Firstly, the dominant role of MOR in the decision-making process for location and route is un-doubtful. Unlike in the other countries, MOR is independent of Ministry of Transport. It is responsible for the formulation of the railway network planning, the implementation and the evaluation of railway infrastructure, and the management/ regulation of state-owned railway property. It is known as the most enclosed 'kingdom' left by the Socialist Planned Economy, which means the system of decision-making and implementation is relatively independent from other social and economic sectors in Chinese society. Wuhan has its own subordinate office, which directly runs the railway investment and construction company in cities around Wuhan. It is famous for the capability both in technique and political aspects because of the extremely strategic position of the city in national railway network. Another hidden factor is that the director of Wuhan Railway Bureau is the younger brother of Minister of Railway, which provides possible closer relationship within ministry. To conduct the practical financing and investment of railway infrastructure construction, Wuhan-Guangzhou HSR Ltd. Co. is established. The whole line is financed by Guangdong, Hunan, and Hubei province, and Wuhan municipality entrusts district governments to take in charge of replacement and demolishment. The argumentation of 'three pillars' (Amos, P. & Bullock, R., 2011) can be seen as the vivid metaphor for the governance and structure of railway industry into Chinese context: not enough join-up governance of the transport sector in a single ministry; the separated roles of policy-making and transport services delivery (in all modes, including railways), and independently regulate the industry (whether by ministry or agency).

Secondly, local Wuhan subordinate railway Office acts with its own interest during the implementation of plans. One typical example is the 'illegal ' restaurants and shops under the ramp of Wuhan station in east square. There was no such commercial space in the legally approved architecture design. However, the Wuhan railway office realizes the huge hidden profit margins of involving retail and restaurant, as well as the consumption demand from the passengers. Another example is the changed function part of Wuhan station area management office building. The building was originally oriented for only the office function. However, the management office changed part of building into hotel without application for official approval from Wuhan government. It is obviously illicit but accepted throughout the time.

Thirdly, Wuhan municipal government entrusts the construction office to be in charge of the land development. According to the Constitution, the government is not allowed to participate in the market activity directly, which raises the necessary of Wuhan City Construction & Investigation Ltd. Co. It is the subject who is in charge of the financing and developing real estate of the land except the station as representative of government. The similar state-owned enterprise exists almost in every city and has been considered as the main financing platform for urbanization in China. In the case of Wuhan station area development, a Wuhan Railway Stations Construction & Coordination Office was founded to organize the spatial development as well as municipal facilities around the three railway stations. Wuchang (2008) and Hankou (2006) station are located within the third ring road, and therefore, Municipal City Construction Committee is in charge of them. And Wuhan station is under the charge of Municipal Transportation Committee for it is located outside of third ring. The mechanism is as follows: The land around the station was collected into the Land Reserve Center of Wuhan ever since the decision-making of periphery location was made in early 2000s. Cooperating with Land Reserve Center, the City Construction & Investigation Company hypothecates the state-owned 'raw land' to banks in order to get mortgage as investment for site development, such as road and sewage construction. After repaying the mortgage and finishing the site development, the company then leases the 'mature land' to developers. In this sense, there is no specific procedure of station area that is differentiated from other land development. One unforeseen event, the Wuhan OCT thematic park project, needs to be mentioned. This project changed the mechanism of the Staion Area Construction Office: In order to re-capture the new potential profit from land price appreciation brought by OCT, Wuhan municipal government withdraw the development right of the station area besides the core area back from the office.

Last but not the least, district government has slightly saying in the decision-making process but significant role during implementation. The station area involves two administrative districts, which are Hongshan District as the main part and Qingshan District involved just a tiny proportion. Only the west part of this area is urbanized with the majority community of industrial workers ('Danwei'), such as

Wuhan Steel Plant as well as other factories. This area used to be one of the fully facilitated neighborhoods when the factory workers were the middle classes in Chinese society back then. Nowadays, this area is considered as not so popular in housing market because of the industrial pollution and social segregation. During the whole decision-making process, neither of the district government was involved. However, since they have the land or administrative power to operate the development, it is difficult for Wuhan Railway Stations Construction & Coordination Office to implement the plans in practice. Therefore, in this stage, district (esp. Qingshan district) is involved. Their role is to operationalize the demolishment and replacement of residents and functions under the order from Wuhan Railway Stations Construction & Coordination Office (A9).

- Missing the coalition or platform between spatial development and railway sectors

However, the role of a collaborate coalition or network platform in this case is missing. First of all, there is slight negotiation between spatial and railway sectors. The typical example is the decision-making of the location choice in the early phase. Only in some rare cases, most of which are mega cities with bigger right in anatomy, spatial actors can negotiate with transportation actors in the decision-making/planning phase. It is indeed this case that the municipality and MOR succeeded to achieve a relatively win-win situation. But the whole process was fragmented and not so transparent. During the phase of construction, they also do not cooperate well. City public facility departments complained that they always need to wait for the final plan from railway sector to start their own construction. The competition/fight for the shared construction site also happened sometimes (A9). Another typical un-cooperated example is the transfer between different transportation modes. The planned two metro lines are still under construction two years after the establishment of station. And the bus connection provides less capacity than nowadays demand, not to mention the requirement of the planned sub-city center.

Secondly, there is also missing cooperation between spatial development sectors on both city and regional level. At city level, the whole land operation procedure is planned on the city level and managed through Wuhan Railway Stations Construction & Coordination Office. It has higher legitimized power than two involved district governments, Qiangshan and Hongshan District. The speed and quality of district government's work on clearance of land in advance will strongly affect the implemented outcome of the plans. Besides, at regional level, the relationship between cities on the HSR corridor still remains as competition rather than cooperation.

Thirdly, the land ownership is quite tricky. Generally speaking, there is clear definition for the station area according to the national regulation that is the railway sector can obtain the ground land of the station architecture from local authorities. In this case, Wuhan railway department required a bit larger area around the station for the construction of ticket office in the contract with local government. In total, it covered 330-thousand m2 land with 120 thousand m2's floor area. And Wuhan government owned the land excluded that part in the station area. However, during the practice, it turned out that the land needed for ticket office was exaggerated. Therefore, the actual development right of the extra land was given back to Wuhan municipality and Wuhan railway department is only in charge of drip line area of the station architecture.

- Bonded market behavior of public actor with private actor

The public-owned company makes the government's participation in market realized and legalized. As both rule-maker and participants in this game, public actor is acting just like other profit-making private actor. Real estate developers and enterprises are only brought in the game during the public bidding for leasing land use right after the infrastructure is implemented. Unlike some other station area development, there is no specific legitimated coalition or platform to facilitate private market behavior. The main reason of it is that only two relatively economically 'weak' districts are involved in the process, which seems no necessary of creating new coalition. It also shows that the ever-surviving developers in Chinese re-structured market in the post-financial-crisis era are mostly public-owned. They also want to bond their

own interest with public actors so that they can participate earlier in the process of primary land market in order to gain more profit from land leasing. It is a huge gap that they haven't been involved more in-depth for they are the actually users of the potential boomed urban space.

- Strong intervention of flagship project developer

Wuhan OCT project is the biggest investment in the history of OCT company as well as in Chinese entertainment tourism industry. After attracting such a flagship project, Wuhan government, especially municipality, shows clear confidence in realizing this Yangchun-lake sub-center. The government came to be aware of the possible enormous profit hidden in the rise of land price of this area in the coming future. The interesting response is that the land development right around the station was then taken back to municipal authority (municipal land resource center) from the Railway station area construction and coordination office in the middle of the development process. The frequency of politicians' inspects on the progress of the project and the countdown sign in the OCT construction site show the high attention from government.

- Slight involvement of civic actor

The interests of civic actors, such as local community, industry or NGO are slightly involved. Most of the local communities are the farmers living on the collective-owned land. They are asked to move out of origin housing to a new collective built public housing by local government. The same situation does not apply to the big industry within the site, such as Wuhan Steel Plant. Unfortunately, there is no such NGO involved in the whole process. It is a relatively a supply side approach. The opportunities for housing and office development in the station area seem to sprout from the planning perspectives. The content of the plans seems to be very much driven by design and regulation oriented planning as opposed to forms of interactive or communicative planning.

Furthermore, the previous mentioned media attention on Wuhan OCT is the only case that the voice of civil actors could be heard. And their opposition, to some extend, contributed to the positive change of the way of dealing with public space in the future Yangchun-lake sub-center (A12). However, the reliability of the media reports still needs to be further invested. Because of social contradictions in rapid urbanization, this type of critic on government and real estate developer is easy to resonate citizens. In this case, there is not enough evidence that can fully prove the report.

Facing Collective Action Problems in Wuhan Yangchun-lake Sub-center

The five previously mentioned collective action problems are involved on different levels and will evolve with the change of exogenous variables in institutional settings. They are assorted according to both temporal and scalar dimensions (see Fig. 3). The scalar dimension (vertical axis) refers to the governance level from national, regional, municipal till project levels, while the temporal dimension (horizontal axis) indicates the three phases from planning, implementation and management. The actor constellations and the interaction among them in those five issues will be described as follows.

Figure 3: Important issues in temporal-scalar scheme (source: author made)

Location choice

Location choice is the most fundamental dilemma. The outcome lays out the keynote of future development, on which the others will be path dependent: The discussion dated back to the vision for railway network in City Master Plan in 1995. The idea is to build the new Wuhan-Beijing Passenger-dedicated Line as one of the major north-south corridors. It was planned to be laid next to the old Beijing-Guangzhou line. And a new station, Wuhan North Station, was proposed on the second road ring in the

northeast part of Wuhan. It was not considered as High-Speed line yet. At that time there was only one vehicular bridge available for railway to cross over the Yangtze River, that is, Wuhan Bridge. In this version of City Master Plan, the new Tianxing Island Bridge for both railway and car was planned. It is then known as the main channel connecting the HSR Wuhan station to the north bank of the river nowadays. However, the abuses of that proposal gradually emerged. Four specific problems were discussed: The technique criteria of railway construction become the first problematic issue: the western proposal would go through the highly urbanized area and might limit the high-standard designed train speed. The second problem is from the ecological perspective: it would affect the ecologically sensitive environment along the corridor. Wuhan is also known as 'City of Hundred-lakes' and therefore it is famous for the rich ecological resources. The west route is rather close to the beautiful inner city lake, Sha-Lake, where locate the Museum of Hubei Province, Hubei Provincial Government, Wuhan University, as well as other exclusive hotels and housings. Railway station is always not the favorite public facility in the civic opinion for the old negative image, such as unsafely, insanitation, and disorder. Not to mention the possible noise, air and visual pollution caused by the project. Protests from academia, politician and citizens have been heard after the publicity of that plan. Thirdly, correspondingly to the second problem, cutting through the existing blocks would leave even more inefficient and fragmented land ownership along the corridor. It requires large amount of demolition or replacement of housing, universities and office, which will raise the fiscal and time cost. On the contrary, northeastern periphery area connecting directly with Tianxing Island Bridge is still vacant with no complicated land problems. Last but not the least, the original intension of the central location within the city was to attract more internal passengers of Wuhan. However, considering the unexpected rapid growth of regional transfer, it might lose the external regional passenger from other cities around Wuhan in the bigger picture. Therefore, a new east (periphery) proposal route was then raised. It is proposed to locate the station at northeastern outskirt and to lay the HSR line along the east side of the biggest inner city lake, East-Lake. Not only the route choice but also three possible options for the station location were intensively discussed.

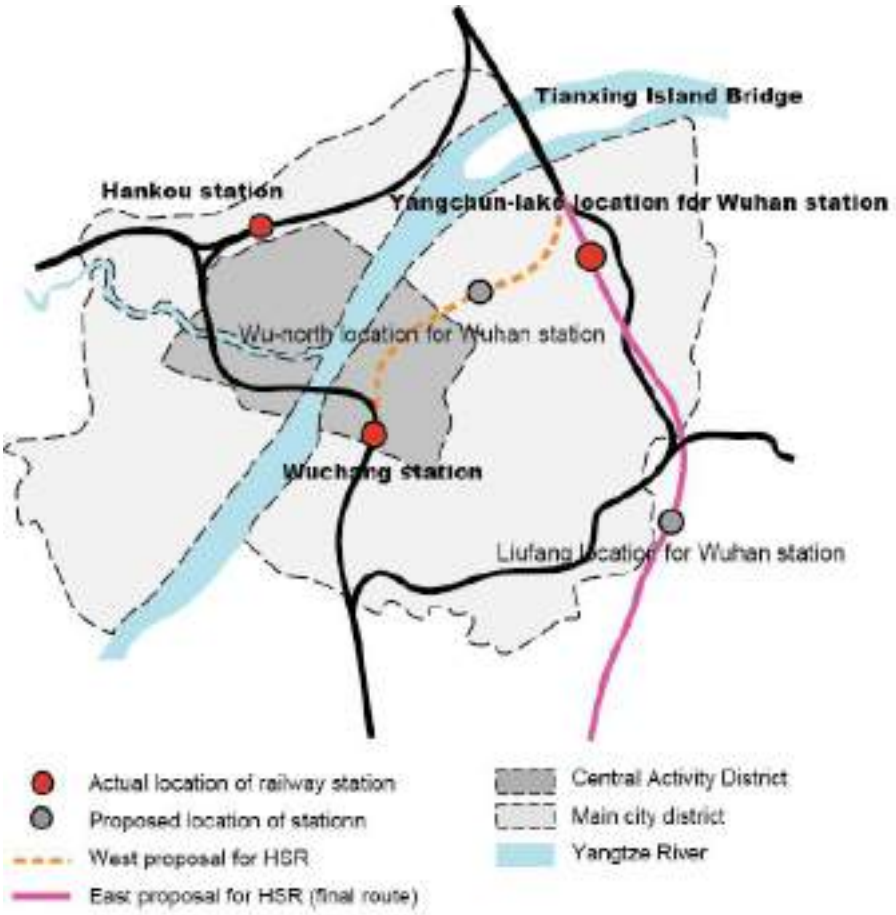

Figure 4: Two proposals for route and location for Wuhan station (source: author made)

The major discussions were focused on the following issues: From the technique perspective, east proposal is easier to operate to HSR than west line for it's new railway track. The high frequency of CRH trains in every 10-15 minutes might strongly restrict the city public transport, visual connection, and spatial expansion toward the east. And the turning radius of west line is not easy to be realized and be sufficient than east line. From the implementation perspective, west line can provide better accessibility to the urban center but more difficulty for construction. From the connectivity perspective, the east line is farer away to central city road system but easier to connect the three major parts of Wuhan by the third ring express road. Besides, it makes few sense of re-using the old Beijing-Guangzhou railway corridor since the old line has already been planned to remove in the long-term perspective anyway. In the revision of Wuhan Network Plan, the eastern periphery route was officially chosen under the condition of keeping environmental balance of East-Lake. On 17th May 2004, MOR and NDRC (National Development & Reform Commission) officially approved the proposal of locate HSR station next to Yangchun Lake in the northern edge of city. The new station is named as 'Wuhan Station' in order to distinguish from the existing two central stations, Hankou and Wuchang (see Fig.4).

Why and how did the crucial change from central to periphery location happen? As shown in Fig. 5, negotiation is the most effective way of communication between railway and urban sectors in this case. Of course, the negotiation here is different from the western definition. Its Chinese conception combines two types of activity: 'mobile warfare' and 'joint quest'(Faure, 1998). It is interesting that the frustration continued for 2-3 years and was soon replaced by the rational reasoning on the possible east alternatives until coming to the final agreement. the involved actor constellations include railway and urban sectors on municipal, regional, and local levels. The superficial reason is that the specific regional department, who makes the plans, locates right at Wuhan. That provides much more opportunities for both sides to communicate. However, the deep reason is their shared interests:

On one hand, the Ministry of Railway (MOR) plays as almost the role of top-down decision maker left by the previous planned-economy. The most important orientations are to maximize the space enclosure, minimize the fiscal and technical input of construction, and eventually maximize railway revenue. It It is one typical fossil of 'Danwei'. Even after the economic reform since 1978 and several attempts of internal institutional innovation since 1980s, it remained its independency by owning the subsidiary regional department/office, public security, judicature agency, hospital, school, and research institution. It is also separated from Ministry of Transport (MOT). MOR makes decisions in the planning of passenger and freight railway transport on national level, while the regional departments are in charge of the construction, management and daily service on local level. They have the legal ownership of land in the railway corridor and under the roof of station. The revenue of MOR mainly consists of the construction fund from freight railway transportation, ticket profit, mortgage from bank by impawning land, social insurance fund, insurance company investment, etc. Therefore, at the beginning the west central proposal is a bit more preferred for it re-uses the old railway track corridor and can therefore minimize the demolishment and construction cost. Besides, the eastern part of Wuhan is rich in landscape resources and knowledge industry. This sensitive eastern proposal next to the national scenic park, East-Lake Park, might make the construction more difficult if the balance between infrastructure and ecological environment is asked to achieve. However, the criteria for location choice changed and made. Firstly, it is better that the HSR line to cross the Yangtze River at the new Tianxing Island Bridge for the old bridge is not qualified for the new HSR from the technique perspective. Secondly, the integration between railway station and metro line as well as other transfer modes has also been taken into consideration. Thirdly, the new location should also provide the best connectivity and accessibility as terminal and nodal station in the national railway network. Based on those criteria, two optional proposals for the line route and three proposals for the station location were proposed. One was the west line (also called Sha-lake line), which use the original Beijing-Guangzhou railway corridor through the old town of Wuchang. The other choice was the east line, which will avoid the existing urbanized area and go through the east side of East Lake.

On the other hand, urban development sectors have their own orientations. Despite of the rather top-down process, the voice of Wuhan municipal government and Hubei provincial government can still be traced. From the normative obligation of Wuhan government, the east periphery proposal is more acceptable. Because the railway station is always considered as one rare opportunity to re-organize the urban structure and optimize the spatial extension. It is especially crucial for the metropolis like Wuhan, which covers the area of 8494 km2 with the population of 9.79 million (November 2010[1]). From the self-interest of local governments, even if the development might not be realized according to the plans, the enclosure of cheap rural land will bring big fortune to local government (G.Dai, et al, in press). To conclude, the Chinese version of negotiation within top-down institutional setting plays the major role in making the decision for peripherylocation.

Figure 5: Interaction between actors on problem of location choice (source: author made)

Transportation intermodality

The word of 'intermodality' not only refers to the connectivity with other transportation (including airplane, metro, city bus, inter-city bus, private car and pedestrian) from station to city center, but also the accessibility from surrounding area (namely the planned Yangchun-lake sub-city center) to station itself. Firstly, the interchange with other transportation modes is not sufficient enough. Take metro as an example. The plan for metro system was earlier than plan for Wuhan HSR line and it was not integrated considered at the beginning. Eventually two lines are connected to the underground of railway station and the construction caught up with each other under the coordination of municipality. However, the detailed plan and construction were almost separated. Wuhan metro company owns the land in the underground, which is part of the Wuhan Municipal Transport Group. And the land above ground of station architecture is owned by railway sector. During the construction, both groups even 'fight' for the construction site. The railway station was put into use for two years while the metro line is still under the phase of facilitating metro equipment and decoration. Secondly, the accessibility from surrounding area to station requires enhance as well.

Fig. 6 illustrates the involved actors in promoting transport intermodality, which are Wuhan government, municipal transport company, Wuhan Railway Department. The communication channel on the same level is sometimes blocked and it is somehow even more efficient to deliver the message through higher authority. The lack of corporation between transport and urban sectors on the local level reflects the segregation between MOR, MOT and MOHURD (Ministry of Housing and Urban-Rural Development) on national level. The major hidden mechanism is that the accountability systems in MOR and MOT are differentiated: On one hand, within the centralized MOR system, the local railway departments are the direct detached offices of MOR on meso and local level. The organization of local offices is not necessarily correspondent to the municipals. For instance, Wuhan Railway Department is in charge of the planning, construction and management of six provinces around Wuhan metropolitan area. There are twelve local offices over the country in total. Therefore, the Wuhan Railway Departments in this case is only accountable for MOR instead of Wuhan municipal government. On the other hand, the local departments for other transportations are less dependent on the MOT but more relied on the local economy development. In the sense, they are more accountable for being consistent with municipal government. As to the role of urban sector in the interaction process, is more likely as a coordinator in between. To conclude, the actors' corporation in making the transportation intermodality of Wuhan case is not effective enough.

Figure 6: Interaction between actors on problem of transport intermodality (source: author made)

Functional diversity

[1] See online data of 6th National Population Census from Hubei Provincial Bureau of Statistics, http://www.stats-hb.gov.cn/structure/xxgk/tjgb/rkzw_347_1.htm

Fig. 7 shows the actor constellations embedded in producing functional diversity. Municipal government and its construction office, the metro company, as well as the Wuhan Railway Department are the involved actors. It can be interpreted from the following three aspects in Wuhan case: introducing flexibility in land development, flagship project benefiting from/to station area development, restrained involvement of commercial space in station.

Figure 7: Interaction between actors on problem of functional diversity (source: author made)

- Introducing flexibility in land development

It can be seen as the amendment or supplement to the hierarchical way of arranging actors' behavior. The basic idea of flexibility in the program was developed from the key concept of 'white land' in the international competition for the station area. And it was adapted into the regulatory plans, namely the un-fixed land use. It shows the local government's concern that to what extent can the station attract local and even regional economic dynamic, and how big is the role of regional function of station area should play within the agenda of sub-city center. The flexibility is reflected in the 'dual-core' structure of central station area in the plan: one core is aiming for the local function of sub-city center such as local cultural facility, sport and medical facility, commercial retail, and housing, the other core is oriented for regional activities, such as headquarter office, high-end hotel, and tourism (theme park) etc. The layout of public facilities relates to this basic idea. However, to conclude, this interaction between actors remains within the restriction of traditional centralized 'blueprint' planning. Very few developer or any other market forces are involved.

- Flagship project benefiting from/ to station area development

Since the developers are mentioned in last point, it is inevitable to discuss their interaction with other actors. The flagship project has mutual beneficial with HSR station: On one hand, it is attracted by the accessibility improvement brought by HSR station. It was originally persuaded by Wuhan government to move from other alternative locations to this area for two reasons: Firstly, Wuhan Station is providing good accessibility for customers from other cities to the theme park. Secondly, East-Lake's environmental advantage will attract further interest for the future housing development. It is the outcome of competition with other economic active pole, such as CBD.

On the other hand, it will trigger the development of sub-center around the station area. It seems that apparently not all sub-city center functions will be realized within the boundary of station area according to the direct implementation of the sub-city center plan. Instead, the spatial development starts from the flagship project outside the station area. The crucial example in this case is the OCT project, namely 'Huaqiao City'. OCT Enterprise Co. is attached to the State-owned Assets Supervision and Administration Commission of the State Council (SASAC). It is known as the leading enterprise of cultural tourism, which refers to the combination of Chinese theme park tourism as well as related cultural and service industry. The cultural industry development started from the foundation of Chinese first cultural theme park-Splendid China in 1989. After that, it has successfully built a series of theme parks such as Chinese Folk Culture Village, Window of the World, and Happy Valley, etc. Besides, it also established cultural facilities, such as Chinese Art Center, He Xiangning Art Museum, OCT creative cultural park, and Chinese art gallery, etc. Its successful marketing has been copied to other major Chinese cities. On 26th December 2009, the Wuhan OCT started its formal operation, which includes the theme park of Happy Valley, water parks, metropolitan entertainment and casual zones, themed hotels and housing. It stresses the combination with local historical culture of Chu. It is the biggest investment ever and one of the most important links in the chain operation involved in the company's development strategy in central China. The detailed program of OCT can be seen from its official website[2]. To conclude, competition is the thematic way of involved actors to realize functional diversity by introducing flagship project.

[2] See the official website of OCT, http://www.octwuhan.com/

- Restrained involvement of commercial space in station

The mixture of commercial space is also considered as one of successful operationalization of functional diversity. The former minister of MOR, Mr. Liu Zhijun, was in favor of efficiency for mobility. That is because to solve the problem of crowd in station area during the Chinese New Year is considered as one of the most important political achievement as well as a normative mission. Pure transport function and huge scale of waiting space in the hall is the corresponding result. The idea of adding up a whole floor of shops was vetoed because the unique architecture structure requires much more cost than usual design. And the huge parking space is regarded as the major profitable space rather than retail space in the mind of railway sector. Therefore, in the early version of station architecture design, there was only a few retail shops planned in the underground floor (A8). However, the there is indeed enormous demand for more retail function: on one side, the passengers have the demand to eat or communicate or just shopping while waiting for train at hall. On the other hand, the involvement of more commercial space will surely bring more profit the landowner, which is the local railway sector. Therefore, the idea of mixed function was adopted a bit during the implementation. One main way is to add more restaurants in the second floor of waiting hall. However, the indoor ventilation system for smoke and oil is not qualified enough for too many commercial function. Then, another 'illegal' way emerged: the local Wuhan Railway Department added two small buildings under the ramp of entrance of east square with the 4000 m2. The restaurants such as KFC and other quick food shops are providing place to eat and relax for the passengers. Those shops are always full once it was put into use. This situation is known by urban planning sector, but they couldn't response because the land under the ramp is still owned by local transport sectors. That situation becomes more and more common. To conclude, the missing platform between transport planner, urban planner, and developer makes the making of commercial space quite secretive.

Social integration and ecological accountability

The building of local identity in this new sub-center is not explicit yet for there has not been a solid local community of HSR-NT. However, the involvement of Wuhan citizens in the seemly scandal of privatization of public waterfront in thematic park reflects some tension of social integration. Therefore, the social integration and ecological accountability are discussed together in this case. Specific geographic location of Wuhan makes the ecological accountability a significant element in conducting the Yangchun-lake sub-center. The attentions for environmental sensitivity and public resource from government are especially significant in this case. From political perspective, it can be seen as a spatial operationalization of the political promotion of 'Two-type Society', Resource-saving, & Environment-friendly Society, in Wuhan. Fig. 8 illustrates the interaction between actors on these issues. Protest is the main interaction mode between actors to pursue the social integration and ecological accountability. The centralization feature of Chinese planning and political system prevent this kind of interaction mode from the other dilemmas of collective actions. It can be reflected in two sub-issues: one is concern on the ecological sensitivity around East-Lake park in the thematic park (Wuhan OCT), the other is the discussion of the (re) placement of heavy industries in the east.

Figure 8: Interaction between actors on social integration and ecological accountability (source: author made)

For the first issue, As the national scenic park, East-Lake is labored to be city brand of Wuhan, the 'city of lakes'. The East-Lake Management Committee was set up to make future trajectory and to manage the daily issues of this area. Master Plan of East-Lake was made and approved by State Council in 2009, in which involved the potential economic effect of Yangchun-lake sub-center development. When Wuhan OCT project was proposed to the public, there was a big debate among civic, government and Wuhan OCT developer on whether the case should be located at such an ecologically sensitive location. It started with one journalist's exposure of a seemly scandal of privatization of East-lake shore on 25th March 2010. That report claimed that the land and even lake in between Wuhan station and East-lake was leased to OCT for a profit-making urban function without taking civic interest into account not all. Then it attracted a series of media attention. After the explanation in press conference and field tour for public, the program

of this thematic park and housing development began to be more transparent and more public facilities such as art museum and concerts are planned. And the final plan was adapted according to the Master Plan of East-Lake Park. It furthermore labeled itself to be the 'eco-cultural tourism park' of China by planning to open public facilities next to the park. To conclude, the outcome of this interaction, to some extent, contributes to the possibility of avoiding an exclusive, elite-oriented community.

As to the other sub-issues of (re) placement of heavy industries in the east of station, it is also considered as crucial issue in all plans of station area. Different from other Chinese HSR station area, this area involves heavy industries, such as state-owned Wuhan Steel Plant, which is important backbone for Wuhan local industry. Besides, there are also small-polluted industries such as cement factory, construction material factory, and landfill, which are planned to be removed from this area. The statements of cleaning up the factory chimneys and high-voltage electricity wire in station area can be seen repeatly in the planning documents. However, to beautify the skyline can be quite different from to actually decrease the productivity of industry. It relates to the future industrial structure of the Yangchun-Lake sub-city center. On that issue, no civic or other voice has been heard.

Conclusion and Discussion

This paper starts with the two major problems of the 'nationwide fever' of using HSR railway station as a growth pole of a new town/district in China: the tendency of turning from a golden opportunity for city re-construction to just a gimmick of land enclosure, as well as the lack of sustainable engine for further urban development. Wuhan Yangchun-lake sub-city center development is taken as in-depth case study. Five collective action problems are characteristic in Chinese context: location and route choice of railway line and station, transport intermodality with other transportation modes, functional diversity, social integration with local context, and the ecological accountability. Those five are inter-related on both temporal and scalar dimensions. In order to dissert the process of decision-making and implementation of HSR-NT, the actor-centered institutionalism perspective is introduced. The specific institutional settings in Chinese infrastructure project shape the orientations and capabilities of actors involved in the action arena. The features include: the dominant position of public actors, the missing the coalition or platform between spatial development and railway sectors, bonded market behavior of public actor with private actor, strong intervention of flagship project developer, and slight involvement of civic actor.

The action arena and interaction modes between actors (constellations) differ in each collective action problems. Firstly, hierarchy remains the major featured interaction modes in Chinese mega infrastructure development and the spatial development around it. MOR and municipal governments are playing the dominant role in this infrastructure-driven spatial development. In the process of railway infrastructure development, MOR is the sole decision maker despite of the few involvement of local government in the location choice. Once the choice for location is made, the construction of infrastructure is completely exclusive towards the other actors. The situation is similar in the implementation of urban plans. Bottom-up actors are restrained at the end of the 'production line' of urban building environment. Small private developers as well as the other market forces are excluded in the key process of land development. Only state-owned developers are likely to hold more secured position in making the decision whether to invest, because they could be closer to more information from public stakeholders. Therefore, even there are indeed some interests from developers and rigid consumption demand for housing from young couples, developers show even more cautious when the policy atmosphere starts to change and market demand starts to shrink.

Secondly, negotiation exists between transportation sectors and urban sector. On the dilemma of location and route choice of railway line and station, it is interesting that it took not so long time of frustration to come to the agreement on the periphery location between MOR and local government because of the shared interests of both sectors. On the dilemma to gain functional diversity, the transportation sector, including metro transport, inter-and inner-city bus system, and road transport, have the chance to negotiate with each other on sub-issues, such as the integration of metro space, the involvement of the commercial

space in the station architecture, etc. Most of those negotiation processes are realized under the coordination of municipal government or the Railway Construction Office. Of course, the actors involved are not totally free to express their preference. The extent of expressing either self-interests or normative obligation differs. In this case, the outcomes of negotiation on both dilemmas are relatively positive.

Thirdly, competition usually exists within the same institutions without long-term vision. That could lead to malignant outcome. Within transportation system, the railway sector namely MOR and other transportation sectors MOT and its local institutions are always under the competition for land, investment, and even political priority. The most direct result could be the low intermodality of station area. Even within urban development system, competitions also exist on many levels: At the municipal level, the planned new sub-center has to compete with the existing CBD as well as other economic active spots within the city. At the district level, the pressure under the pro-economic growth baton from municipality make the district governments take into account of the financial balance while implementing HSR-NT plans.

Last but not the least, protest only happens on the recessive dilemmas, such as social integration and ecological accountability. The top-down feature of Chinese planning and political system prevent this kind of interaction mode from the other dilemmas of collective actions. The outcome of this interaction, to some extent, contributes to the possibility of avoiding an exclusive, elite-oriented community.

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CONTOUR. Consolidate ownership negotiation tool for urban restriction. The case of Põhjaväil.

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Abstract

This paper, based on the author's entry in the Street 2020 competition, explores possibilities for a new urban development model in Tallinn. Using the planned urban highway Põhjaväil as our case study, we provide insight and fresh thinking in studying the city and the site to find its real potentials, and addressing the gaps and weaknesses of the current planning system and real-estate process to delineate a new tool of urban management. We call this tool CONTOUR, a localised, actor-oriented tool to foster public good. While the concept is new, the tool is based on solutions and regulations that, in other contexts, have managed to mediate public and private interest and ensure high-quality urbanism. In the site of the "Street 2020 competition - the case of Põhjaväil", the question is how to turn the threat of unnecessary inner-city highways into an opportunity to create an attractive urban area reaching to the seaside. The spatial solution, based on interlacing flows, is the driver for a rich variety of urban landscapes and programmatic mixes.
The economic incentives and negotiation tools of the proposed CONTOUR facilitate the preservation of key values of the site, while opening new development opportunities. The process is characterised by managing built volume and land rents to reach a win-win for landowners and the broader public.
Public projects, such as public space and transport, or art and events, sustainably receive their share of the added value.

Key words: urban planning, transfer of development rights, Põhjaväil, negotiation, planning tools, Tallinn.

1. Introduction

The Põhjaväil, as shown in the competition background documents, is framed by the city centre, Kadriorg district and the sea, making the site one of the most lucrative in whole Tallinn. Despite the competition was closed in the summer, the

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inner-city highway project was already visible on the cadastral map of Tallinn months before. Some landowners along the planned road have united their plots to be able to propose larger single projects, such as a massive 5-story shopping centre, or housing.
Furthermore, Tallinn harbour (starting point of the road) is experiencing growth in traffic volumes, not least because of the Helsinki-Tallinn twin-city scenario. Part of this growth will focus on the city centre harbour (passengers and Ro-Ro), while part will go to Muuga (cargo). For tourists, the site is the gateway to Tallinn and the face of the city. The harbour administration has strong interested in having this road as main exit of the port to drain out cars and trucks unloaded by the Ro-Ro ferries.

In our site observation of the seaside, we recognised three types of mobility: pedestrian, biking & sports, and cars. These flows naturally have different speeds but, more importantly, they transform different types of environment and atmosphere from alternative, even marginal, to urban. In Goffmannian terms, the site has both ‘front’ and ‘back’ side, increasing its urban variety. The three flows are a key potential towards varied streetscape. Tourists are a very visible and important flow, and the current situation of unsolved and empty transit space between terminals and the city is bound to change. Harbour, Tallinn University and WTC add clear international connectivity, flows of money, ideas and people.
The built environment has both practical and symbolic / heritage values. The building stock is analysed in terms of historical and cultural value (red), potential when change of use (orange), potential and historical value when renovated (brown) and others, such as TLÜ camps (yellow).

The site has some of the last remaining old limestone harbour buildings. Some of these are listed, but the urban potential as a dense network of small streets and squares remains to be recognised. The area has also a number of singular buildings of high quality and symbolic value, such as 1950s Seamen’s dance hall, 2000s synagogue and the Tallinn University complex built in several phases.
Tallinn University campus has a certain quality already, to be developed further.
Seaside park from Russalka statue towards the harbour edge is actively used. It is a natural connection from the historic Kadriorg park to the sea, but also has its own character as a somewhat wild and unregulated urban greenery. The park lane from Russalka towards Tuukri Street is the start of an active biking and sports route. The old harbour buildings and yards at the western edge of the site, an ‘atmospheric jungle’, have great local potential to be enhanced as urban park.

Figure 1. Map of potentials

2. A future scenario

The area described above is regulated by detailed plans, like the rest of the city. Building such a big scale infrastructure as this urban highway has not come together with the introduction of special tools or comprehensive plan that we may expect in such a case. As detailed plans are submitted by developers to the City administration, approved and made public one by one, our first aim was to collect those developer's proposals and picture them together along the planned highway, an attempt to understand how the new "city assembled" will look like.

Figure 2. Scenario, based on approved detail plans - June 2011

3. Gaps

Using the ordinary planning tool established in the city of Tallinn together with lucrative private initiative, we can observe 2 main Gaps resulting in the case study of Põhjaväil:

3.1 Gaps in the planning system

By looking deeper at the volumes and characteristics of those detail plans attached to Põhjaväil, it emerges how all the developers had the freedom to fulfill their properties with housing and commercial activities, regardless of anything but their

own economic interests, without considering other issues like public interest and sustainability.

The roots of this speculative phenomenon had to be observed thorough history: along with the dissolution of the USSR in 1991, a new planning system had to be thought. The process of independence led to change the all-soviet centralized planning system into a market based mechanisms, offbeat with the previous establishment. “The reform of urban planning has been a difficult and controversial task. Market euphoria and the consequent support for a sharp reduction in public administration had been defeated, eroding the legitimacy of planning" (Thornley, 1993), giving the opportunity to developers themselves to lead the city planning.

Still today the master plan of Tallinn in force is a coarse 1:45000 map with related documentation and studies, giving outlines for macro zones. The regulations expressed by the master plan find the most visible gap in its facility to be changed and being “developer ruled”. Indeed, by detail plans, developers can propose variations to the master plan, that we observed were easily granted. District focused plans have been released this year but clearly those are reports of developers intention, following the detail plans submitted to the city administration. The approbation machine can be shortly summarized here:

1) Developers present the intention to realize a project

2) city administration gives out the guidelines to draw the first detail plan draft, announcing it on at least one main local newspaper and one daily national newspaper or webpages to facilitate the discussion.

3) Developers submit the first detail plan draft to the city administration

4) Citi administration review the detail plan and sends it back to developers with corrections and changes

5) Developers submit the corrected detail plan to city

6) City administration announces a public meeting to show the detail plan for open discussion

7) If there is no argument against it, the City administration proceeds to approve the plan.

9) In case strong arguments against the plan persists, then the City administration is sending back the plan to developers for other correction and changes.

10) When the latest detail plan drawing is presented to city, the project can be officially approved is all the arguments are clearly solved. In particular case or sensible areas, another public meeting can be arranged.

Acknowledging the real complexity of this procedure and the actual timespan from start to end, participation here is meant only as second voice or reviewer of the plan. This kind of inclusion of the public opinion is quite generic and simplistic as the opinions are not actively included in the public debate. In order to reach a smarter and a more adequate practice to face current demands and problems of the city, it is crucial to include NGOs, locals’ association, visionaries and experts’ knowledge in the planning process itself.

Other perspectives aiming to have a more touristic focused seaside are forgotten here, apart for the vision made in Paljassaare (on the eastern side of the city), where mixed uses, wide promenade, sailing harbour, mall and other potentially touristic-focused services will give added value to the project, in terms of creating jobs, having better utilities and perhaps having a new thriving centrality beside the city centre.

3.2 Gaps in the landscape

Gaps in planning system, generates gaps in the urban landscape.
When the project it is designed to give benefits only for its own purpose, all other typical aspects distinguishing the surrounding are left apart. Parks and shores are considered just as local elements for real estate speculation but nothing is done to preserve and include them in the project vision. Mostly the edge buffers of those projects are likely to suffer the lack of a comprehensive vision, as the boundaries are not defined considering the landscape but by rather mere ownership net borders.
The planned road of Põhjaväil in this segment defined in the competition, will be the most representative gap for the site and perhaps for the urban shore of Tallinn and its users. According to the detail plans and the expectation of the city administration, the road will be designed for 3plus3 car rows with related safety spaces and pedestrian way. This urban highway that can be 45meters wide, will run for one fourth of its length on top of the current shore and rocky shore, passing just in between the water and a spectacular urban park. It will not only turn the rocky shore into concrete but it will significantly break the peculiar dune buffer between the park and the sea. This intervention is aiming to have better and more fluent exit traffic from the harbour and reduce traffic jams of commuters coming up east from Viimsi municipality.

4. Gaps for good

4.1 How gaps in the planning system can be used for good practices

Gaps and weaknesses off course are the leak in the system but as developers can exploit them for economic interest, in the other hand, cracks can be used to infiltrate good practices and smart solution in the process of planning, according to overcome restrictions and incapability to handle negotiation.

4.2 C.O.N.T.O.U.R. - Consolidated Ownership Negotiation Tools to Overcome Urban Restrictions

At first, planning can start from a larger scale in order to describe and understand the overall scenario and relate the single plans to the bigger vision of “opening

Tallinn to the sea side". Plans and actions on the coast from Viimsi to Kakumäe (West and East end of the city) are organised through thematic development agencies, aiming for spatial innovation and public social good. We call these agencies CONTOURS – Consolidated Ownership Negotiation Tools to Overcome Urban Restrictions.

Each CONTOUR is a public-private enterprise with both social and economic aims. All landowners touched by the proposed street have to join. Also other actors can become active stakeholders with the same rights and obligations, if they are linked to the theme of the particular CONTOUR.
Landowners and other stakeholders pool their resources, so that each CONTOUR has real powers to partake in public discussion, make investment decisions, negotiate land rights and curate public programmes and space, independent of plot borders. Through pooling of resources, including social and cultural capital, each agency is expected to produce added value to all stakeholders, thus becoming real driver of the development of urban landscape.

Connectivity along the seaside is the common thread of all CONTOURS. Through a combination of urban design to reach unique local aims and policy-measures to encourage public transport and light traffic along the whole seaside, they can negotiate complex and sometimes conflicting desires, building a positive alternative to the unnecessary inner-city highway project (Põhjaväil).
Thus, the street is not only an element of urban landscape, but rather becomes its driver. The proposed tool has potential to define the conditions of the production of urban space, reaching towards new model of planning and real-estate development in Tallinn.

4.3 Localised TDR

"Local governments undertake transfer of development rights (TDR) programs to use the market to implement and pay for development density and location decisions. TDR programs allow landowners to sever development rights from properties in government-designated low-density areas, and sell them to purchasers who want to increase the density of development in areas that local governments have selected as higher density areas. TDR programs appear to offer many advantages to local governments that want to control land use but also compensate landowners for restrictions on the development potential of their properties. TDR programs can be easier to implement than typical zoning programs; they make development more predictable and use the market to compensate landowners for lost property value. TDR programs are also more permanent than traditional zoning regulations. Although TDR programs appears to be a potentially powerful land-use tool, few communities have had success in

using these programs because of the associated challenges . TDR programs do not reduce the need for zoning and can actually be more complex to administer. Communities may not support TDR programs, and local governments may have to invest in community education programs to explain them to the public. Lastly, although the permanency of TDR programs can be an advantage, it may also be a liability, since a community's land use needs change over time"(Transfer of Development Rights Program - Jason Hanly-Forde, George Homsy, Katherine Lieberknecht, Remington Stone).

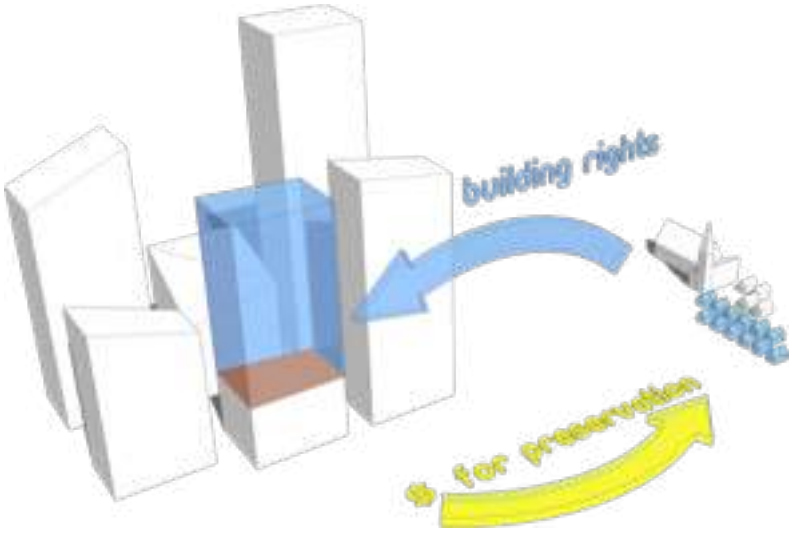

Figure 3. TDR

The concept of TDR will be localized within the CONTOUR boundaries as key tool to negotiate the land use and using incentives for leading developer to preserve values and potentials that locals' associations together with activists and experts together will identify on the site. Therefore the areas or objects to preserve will be the Sending Site (the slice of land from which development rights will be transferred) of those rights, that together with an added incentive component, will be transferred to the Receiving Site (sites to which development rights are transferred or added to existing ones).
Building rights sent by a Sending Site and incentives should be transferred to a Receiving Site with strong market demand in different fields like commerce, real estate, tourism or production in order to guarantee economic efficiency and mixed uses.

Figure 4. Localised TDR

4.4 Building rights

Managing the building rights in an equal and economically beneficial way is a key element of the process. The distribution of built volume starts from the theoretical FAR 2.0 for each plot. The building right is then shifted inside the COUNTOUR to reach both optimal new urban qualities (based on varied FAR co-efficients for different types of street exposure) and agreed preservation targets. An incentive of 10% is given by the Board of the CONTOUR in case of shifts for preservation. Land rent is managed by the CONTOUR and distributed following the theoretical building right of each owner, including the City. Thus the CONTOUR provides sustainable funding for public projects for public space, public transport, art and events.

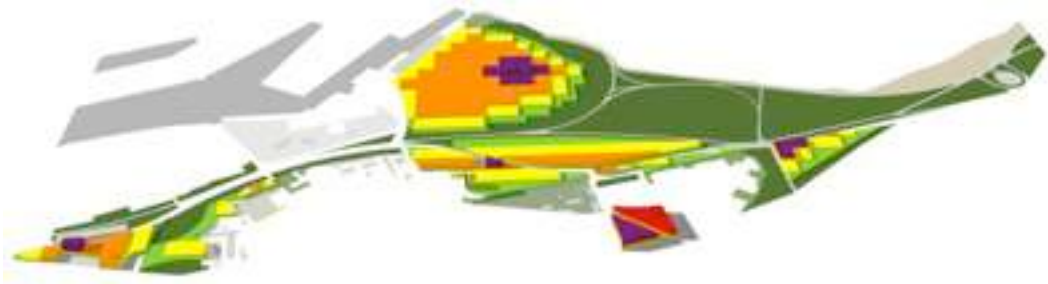

Figure 5. Building rights matrix

4.5 Mixing programs between public and private

Programmes are located to support street and park-level activities regardless of land-ownership. Special focus is given to the Tallinn University Knowledge Campus and attractively urban street sequences where many user-groups can

meet. Taken together, the process, as exemplified by this thought-experiment, will lead to a diverse set of urban districts: Urban Synapse, Knowledge Campus, New Seaside District and Parklife.

Figure 6. Resolution, flows interlaced

Figure 7. Resolution, flows interlaced

5. Conclusions

5.1 Unifying land for comprehensive plan

Unifying land to design a comprehensive plan of larger scale is going to create better possibilities in many aspects regarding the plan. Spatial planning will be able to feed landscape with volumes demanded in more efficient way and international competition should be set to guarantee the openness of the process. More significant ideas can be found to follow the ongoing city administration's vision "Opening the city to the sea side". Infrastructure projects will be more efficient in serving the different developments taking part of the CONTOUR with smart ideas to manage traffic flows, proposing new ways of mobility rather than bigger roads that would not exclude any side of the build, avoiding dark zones. It would be fundamental to have projects like a sea promenade (already proposed by the city administration) or green

corridors to reconnect the vegetation patterns currently blocked by the central figure of the port. Realizing them with the current trend of developing plot by plot, however, sounds nearly impossible. Following the logic of unifying the land onto a CONTOUR will give the right environment and tools to define greater ideas. When the area begins to be considerable big in the city scale as the COUNTOUR defined by us is, public interests is going to be more active, giving more guarantees on the legitimation of the plan.

5.2 Resolution example. Flows interlaced

In the spirit of Street 2020, the varied, locally embedded and regionally connected network of streets, bike routes and pedestrian paths is the driver of developing the site. Each plot offers multiple faces to the streets and routes, creating gradients in density and programme. Different types of mobility require different environmental qualities and benefit from different types of connectivity. The car streets are as central and rational as possible, while seaside pedestrian routes may be oblique and leisurely. In the most urban parts of the site, different mobilities converge to create full-blown urban streets with elements of shared space.

5.3 Building on key values

The analyzed values of the site in terms of Green, Built, Flows and Interests are the starting point of development process. The negotiations of the CONTOUR should always enhance values, modifying and re-placing programs according to need.

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Shared creativity – a driving force of urban development

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Abstract

This paper aims to investigate the design thinking strategies that are applied to solve growing urban conflicts in developing countries as an unavoidable side-effect of urbanisation throughout the world. This analysis is based on the human factor as an inter-medium, thus becoming a design element in the process of urban development. Furthermore, the individual is viewed not as a mere passive pawn, but rather as a potential vector of spontaneous social change. This can be summarized in: "How to transform the negative into the positive from what occurs as an unavoidable large-scale side effect and to make such an effect an overall positive aim by engaging average citizens to deal with urban conflicts, express their creativity and diversity, and initiate an impetus of development?"

Rapid globalisation in the 20th century has considerably changed the morphology of cities in developing countries. Based on the assumption that the western urban planning paradigm proves inefficient in developing environments, these cities tend to lose their substance as an urban phenomenon through the ill-decoded application of western models. Moreover, modern urban thought could be stuck in this rut, inducing negative background effects on the strategy and management of urban planning. A possible solution lies in involving the entire community into these processes, on grounds which exclude a specific "plan", as its statutory basis derived from urban planning examples of developed countries, and beginning to investigate less formal methods (creativity, knowledge, skills and originality), on which developing environments could be constituted, by altering the traditional structure and concept of cities. This issue is rooted in the idea that the benefits and prosperity of cities could be derived from resources such as style, brand, design and aesthetic values. What may be even more challenging is embracing uncertainty as a formation which seeks out opportunities to add value to "options" in order to represent these as a range of "opportunities" that are not static but iterative.

This new pattern of "participatory urban design" presents a community-driven, flexible method of small steps with the aim of finding compromises and consensuses between urban actors, all of whom are mobilized to willingly integrate their customs

and needs in order to creatively track their cultural identity and to contribute to a common base of knowledge on urban patterns and processes, so as to initiate "positive feedback" in the city's self-creation as an organic, and not mechanical, surface. This is achieved through an open and dynamic system, which integrates different scales and partial urban actions in the creation of urban spaces, events and experiences.

The method outlined herein constitutes a challenge in the redefinition of the scientific approach to urban conflicts through a creative, dynamic and iterative process of design thinking within developing environments. Its technique – involving holistic thinking, flexibility in developing strategies as well as human-centred and user-friendly concepts – blurs the boundaries between various disciplines and stakeholders, rendering a wide range of potential solutions for recombination and application, and finally generates a new vision of cities that better suits developing environments.

1 Introduction

This paper aims at investigating design thinking strategies applied for solving current urban conflicts through participatory processes. The analysis is based on a participatory action research process (**of)**which focuses onhow the individual perceptions of average city dwellers and their creative potential could be applied in the creation and re-creation of city structures and urban planning procedures. This concept is further elaborated through a methodology of participatory design thinking workshop. This issue is grounded upon current trends, which suggest that the city encompasses culture and creativity and applies it in physical and social regeneration through participatory urban design processes.

A new era dominated by creativity, knowledge, skills and originality has totally changed the traditional structure and concepts of development and has become a new research focus. The modern definition of society therefore focuses on a simultaneous orientation towards these capacities as the resources of the future through innovative and creative investigations and actions. In these terms, society is interpreted as something organic, constantly mutating and emitting new elements; a living system through which new combinations are brought, fragmented and recomposed. This drivingforce within an urban environment is shaped and formed through cultural activities. The city acts as a playground for creativity, while culture is a part of the city's soft infrastructure (Louise Nyströom, City and Culture: Cultural Processes and Urban Sustainability). Furthermore, culture is here meant to include values, assumptions, norms and behaviours that define life situations in particular settings, which also includes* people's feelings, wisdom, intelligence, knowledge and scientific methods (Fred Fisher: Building Bridges through Participatory Planning).

Meanwhile, the focus of these processes and their immediate effects have moved to less developed and poorer regions of the world as a potential market for material and intellectual goods, as well as alternative places of production. According to the imbalance of circumstances between "the old and new world", urban processes must address developing problems, which may be identified as the following: economic problems of imbalanced development, spatial problems of rapid urban growth, environmental deterioration, and cultural collisions caused by the juxtaposition of tradition and modernity. Although the urban conflicts faced by developing countries seem particularly serious and complex, the possible solutions are not radically different from those in developed countries. Moreover, the principles and aims are the same.

Finally, urban conflicts can be resolved through creativity, by applying various understandings, perspectives and interpretative keys. From this standpoint, changes and involvement in city development should not be spectacular; they are more often the results of everyday work. This is a creative process, which involves inhabitants and encourages them to participate in designing the place/environment where they live. Additionally, it provides the opportunity to rescue citizens by inserting them into society, including them into economic affairs and drawing assets from their background, culture and roots. This concept engages ordinary people from a social and cultural point of view: it involves their identity and individuality (i.e. their feelings, intellect, morals, knowledge, memory and every other human capacity), fosters positive emotional response (enjoyment, excitement, feeling of freedom, self-importance and affiliation within society) and demonstrates the coherence and cooperation of inhabitants with their immediate surroundings.

2 Analysis

2.1 Conceptual framework

- *Theory about urban development and developing environments*

The rapid development of cities in the 20th century has considerably changed the morphology of cities. What is therein produced is a city as "a collection of conceptually ill-decoded enigmas" which in the process of planning has lost its substance as an urban phenomenon*(Jean-Claude Bolay 2004).* Moving forward from this concept, the city is defined as "the point of maximum concentration for the power and culture of a community"*(Mumford 1961).*

According to one of the leading urban theories of David Harvey and Manuel Castells, urban planning cannot be seen as an autonomous process, but as one that is constantly overlapping with current economic and social changes, which are

momentarily grounded in the development and expansion of industrial capitalism, neo-liberalism and consumerism. Urban areas are and have always been the spatial and symbolic manifestations of broader social forces *(Giddens and Birdsall 2001).*In the scope of the rise of liberal capitalism, economic conditions are the most common triggers of social actions, which increase or reduce social and environmental well-being. Production, exploitation and consumption of goods arethe generators of social relationships and possible conflicts.

Therefore, the city is regarded as the most complex social phenomenon on one hand, and on the other, it is a highly-structured economic phenomenon. Every urban issue (spatial distribution, social relations and social structures) is inextricably linked to the economy, as today cities are exposed to global economic changes. Since they host the largest concentration of finance, industry and manufacturing and constitute primary markets for all products, cities are viewed as the main driving forces of development *(Sassen 1991).*

- Developing environments

The formation and re-formation of modern cities unfold through urbanization (territorial and social), globalization (of the economy, of culture, of ideologies) and change (social, innovative, potential change and spatial, territorial change).An urban setting in a broad sense, and a city as its physical and social manifestation, outwits any human attempts to imagine it. Within the compass of developing countries' environments, cities are viewed as multi-dimensional integrated systems composed of qualitatively different and semi-autonomous processes.

The theory of the modern city lends dynamism and innovation to cities of the Western World (developed countries) while modernity in cities of the South is almost exclusively reduced to development (Robinson 2006). According to the latest statistics, about 2 billion people now live in the urban environment of developing countries and almost one third of this population is estimated to be poor. Development may be therefore circumscribed as an initiative to improve the life of the poor in these cities. Moreover, the scope of the Millennium Development Goals (Goal 7 target 11) emphasises the importance to relieve the basic precarious conditions (access to water, sanitation, secure land tenure, and adequate housing space), which these poorest city dwellers live in.

Such an approach addresses the poor as a problem in urban environments and reduces their role in the urban environment and society they live in. Conversely, if they could be seen as a human capacity, which aggregates the diversity and complexity of cities, their competences and capabilities would be considered in addressing current urban conflicts and in planning the future of their cities.If every

city is a complex polygon of interactions between urban actors and actual space, then urban life is the sole product of the inventiveness of urban dwellers.Circumstantially, the city is a place which tells the story of one society and its development, its framework for social life and its subsequent collective identity milestones. It is a cultural phenomenon which, in terms of incompleteness of cities in developing countries, gives them the opportunity to constantly renew themselves.

2.2 Contextual analysis

- *The constitution of a modern urban actor*

The core definition of society refers to social actors, social practices (policies and processes),and the production and reproduction of social order.The role of an urban actor is constituted on these basic items; our reality is in constant constitution and restitution and while we continuously transform the world, we also transform ourselves *(Slater 2003).*These processes in an urban environment imply production anddealing with urban conflict, which thrive on inequitable power relations, cultural differences, and a set of colliding perceptions within a city and germinate from an individual level towards a socio-urban dimension.

Individuals or constituted groups within the city are the actual actors of these urban conflicts. They produce their urban environment, governed by their different values, their logical processes, influenced by their relationships and representations and driven by their aspirations. This may refer to the city as an urban phenomenon and "as the objective product of the reciprocal actions of the actors involved." [1]

This conceptof society is conspicuously dependant on communication and the process of exchanging goods and knowledge, which requires the creation of networks of objects and subjects constantlyin flux. Such social structures are dynamic, potent and open-ended systems, ready for any kind of innovative activities providing that they do not jeopardize their functional balance.

- *Culture and Creativity – a personalized engine for urban growth*

Modern society has evolved from a relatively rigid system to multi-dimensional and unstable social, economic and industrial entities. These systems require a new approach based on dynamics so that they can)operate in their full complexity. Conversely, culture is a focal point, the "knowledge in context", which simultaneously relates to new information and communication technologiesand substantially addresses modern social conflicts in a real context.

[1]The definition of George Simmel interpreted by Yves Pedrazzini, Jean-Claude Bolay in Social practices and spatial changes(Jean-Claude Bolay 2004)

Generally speaking, human creativity exceeds the singularity of personal production of novelty and actually arises from the synergy of many different sources. It is a systematic rather than an individual phenomenon, which evolves from the interaction between personal activities and a socio-cultural context, and is directed towards a positive future,social change and the satisfaction of human needs *(Csikszentmihalyi 1996)*. Effectively, creativity attempts to impose a human vision of the future on reality, to reformulate everyday forms of life, and struggles to respond to social problems and to build a better society.

Creativity is a process, not a status. Society is the venue where creative actions are concentrated,induced and gradually built, and creativity can be observed only in the interrelation of the system within the social boundaries where it manifests itself *(Csikszentmihalyi 1996).*Intellectual and social networks are the core stimulus of applied creativity, with adequate social mechanisms that exceed known patterns, recognize creative potential and spread innovative ideas. Creativity therefore thrives in places where there is an overall understanding of new ideas. A complex, stimulating environment, with a greater density of interactions of novel and original ideas and information, is a common ground for new insights, an inspiring setting for pursuing creative endeavours, and a stimulating factor for an open-ended approach towards the richness and complexity of the future. So, creative powers tend to gravitate toward nodes of vital activity and spatiotemporal contexts, where their capacity to generate a positive future is more likely to succeed.

Creativity thus re-shapes immediate surroundings, activities and patterns, and affects the cultural patterns in which in which it takes place. Conversely, traditions are in essence conservative in their tendency to preserve the achieved social order. So, it takes effort to allow creativity to express itself and to make it accessible to a broad base of people, and to prevent the stagnation caused by centrality within tradition. The process of continuous flows of information as well as active, formal and informal learning leave open the possibility to generate and develop creativity.

- *The modern city – a venue for applied creativity*

The city slowly developed into a place of consumption as soon as it started to decline as a manufacturing centre. In due course, the city has become the spatial expression of globalisation, attaining in this process its economic independence and importance*(Miles 2010).*Society and social development are gravitated by: non-material goods, commodity aesthetics, mediation of goods and non-material functions of production, and the city is a respective venue for people to express themselves ascitizens of a consumer society*(Slater 2003).*

On the other hand, the city of consumption represents a city of built environment. As Marshall Berman puts it, the city is a symbolic expression of our present time, and human factor in the city is represented in the places we build. Consumption plays a mediating role between our human self and society and provides a bridge between the social and the individual. Consumption dominates the city, and it seems that the individual experience of that city is filtered through the processes implied by consumption*(Miles 2010).*

This apparent domination of the non-material transforms human encounters with cities into a sheer perception and representation of images: a never-ending circulation of signs*(Slater 2003).*This commodification robs cities of their particular identities and turns them into clones*(Miles 2010).*Conversely, "the city has always been the world's incubator of innovation" *(Savitch and Kantor 2002).* If innovation is defined as a design approach inside material culture, the city may be presented in light of the "creative city", where innovation is generated and exploited through the incessant process of subject-object interrelations, based on the process of generating and exploiting knowledge as a non-renewable resource. City provides a quality base for the exchange of ideas and information.

Cities as creative centres provide an integrated, open, free and diversifying"habitat", where all forms of creativity (artistic, cultural and technological) can take root and flourish. Culture should expand, share and celebrate humanity and human values *(Rifkin 2000),* should be more accessible for an average user/citizen. In other words, culture and the arts, the fields of expressed creativity, constitute the identity of cities and make them competitive on the global stage.

- *Design thinking activates urban actors in the urban realm*

In view of the accelerating development of modern society and liberal capitalism, the traditional role of the designer needs to be reviewed to respond to a growing number and widening range of needs. The design process has henceforth been slowly and gradually reformulated to designate human-centred, creative activity within the modern consumer society, which aims at tackling complex social problems and conflicts in order to create an even better system. In order to achieve such high-standard demands, design has become both a problem-seeking and a problem-solving activity; a complex, future-orientated decision-taking procedure with one ultimate goal: to improve the quality of human life.

By placing the human in a central position, design thinking occupieswith not only detecting and responding to a wide range of consumer-related and social needs, butit is also actively engaged in formulating their needs, as part of current subject-object relations. This interrelated process favours social interactions, continuous adaptivity

and perpetual innovation. It represents a modern “social game”, where human creative and emotional powers are captivated to identify social pattern, express the innatepart of human nature and apply functional solutions to social problems or conflicts.

Design thinking corresponds to the group and develops within groups, but in a way that liberates individual creativity instead of suppressing it through the group’s united spirit. This emphasizes a high level of effectiveness, where collaboration is carried out transversally among equally valuable fields and individuals, enabling free access and open–mindedness. Correspondingly, ideas are common property and responsibility. Problem-solving extends beyond specialized fields and urges to find collective solutions that work as bridges for realms of ideas*(Brown and Katz 2010).*

3 Explanation of the methodological approach

3.1 Generating creative activity

In terms of thesubject-object relationship (product/designer) and vice versa,creativity can be defined as an activity which generates new working (operational) problem-solving concepts*(d'Agostino 1984).*The integration of design in the knowledge economy isa challenge, which affects the physical environment, reflects human needs and generates a more vibrant built environment.

All urban actors integrate their customs and needs from their past in order to creatively trace their cultural identity. Yet, what is necessary in actual urban environment is to activate such unconscious creativity and develop it through adequate professional supervision *(Nyström 1999).* But the major problem in participatory urban planning is to providea common base that is suitable for integrating comprehensive and interdisciplinary, explicit (expert) and tacit (local stakeholder, experience), knowledge on urban patterns and processes. Professionals should only coordinate and articulate this process of collective planning procedure (Bolay 1996) byconducting/ teaching in order to initiate “positive feedback” in city self-creation, dependant at least as much on the individual's direct experience, as on a sense of well-being. Defining the identity of a city and leading its own development is a way to actualize the self-understanding, self-creation and self-representation of an operating urban environment. What may be crucial here is that through social practices, individuals can be indirectly thought to take an active part in urban developing processes and in the design of structures and spaces within a city.

3.2 City as a system based on creativity

The prerequisites for the development of creativity include an open-minded approach, risk-taking, clearly focused long-term goals with an understanding of strategy, the capacity to embrace local differences and cultural diversity, and willingness to accept continuous change and learning. These strategies are approaches that use participatory processes to generate an action plan for city development to achieve an agreed vision, goals and priorities for a city, a set of strategies and action plans, and to establish institutional mechanisms for implementation, monitoring and evaluation.*(Fisher 2001)*

The design thinking approach in urbanism aims at the maintenance and development of certain indicators which denote urban quality: social order, production of space/place, continuity of development, richness of experience, completeness and belonging*(Peter Buchanan, (What is Urban Design? 2011))*[2]. On the other hand, planning has hitherto been mainly concerned with urban forms: analysing, organizing and shaping them in order to respond to inhabitants' needs.

Bearing in mind that the design process has already surpassed its traditional scope and it actively serves in forming modern society, the shift in urban planning towards participatory design could offer more flexibility and involvement through the summary of small movements, partial approaches and real-time responsive actions. Therefore, the ultimate goal of "designing the urban" is to solve urban conflict and produce a better city. Concerning consumer society and its needs, this process is actually a dynamic interdependence and mutual development of both city and citizens.In other words, creative interventions guide cities' growth and change, giving them unique identities.The inclusion ofdesign within cities enhances the quality of lives and multiplicity of lifestyles, fosters cultures, promotes artistic activities, enablesinformal learning and generates development.

Participatory urban design involves obeying to economic currents, cooperation and partnership among different actors and stakeholders and setting up guidelines and standards for zoning, building, historic revitalization and reconstruction. Moreover, it is a collaborative and interdisciplinary process of shaping not only a physical, but also a social, component of cities. Design in an urban contexttransfers the spatial component into a broader framework in reference to time.[3]It exceeds its main purpose of place-making and encompasses all the activities and events which denote a certain space.

[2](*What is Urban* Design*?* 2011)

[3]Peter Webber defines urban design as 'the process of molding the form of the city through time'(*What is Urban Design?* 2011)

From this standpoint, the city is not merely a venue but a dynamic and complex system – a network of subjects, objects and activities where the human component is nestled. City is a reality, a situation where social practices take place and where urban design structures these activities, frames them and puts them in a wider spatial and social context. So, participatory urban design actually is the articulation of human life in an urban realm which urges for active citizenship.

In terms of the already mentioned variability of modern contexts and the importance of individuality and humanity in all of this, finding such a way of fighting urban deterioration with appropriate non-intrusive, creative measures can only be obtained with a clear understanding of every particular context: society/ city and its actors/ their social background. Moreover,indirect conducting/teaching through participation encourages individuals to take an active part in urban developing processes, which cohere with society's scientific and technological advance and the design of structures and spaces within a city.Additionally, the aesthetic factors of a city's architecture and space design is responsible for qualitative actualisation in urban development. As soon as international design fails to respond to one's local comprehension of needs and demands, the design should indicate that a different course is necessary. In this way, continuous and simultaneous participatory actions and interpretation based on momentum and flexibility allow not just for a visual solution, but also one that includes time, action, and uncertainty.

4 Application of participatory urban design

4.1 Design thinking methodology

Design thinking is an exploratory process for transferring and adjusting ideas into models that are compatible with reality while constantly examining, re-evaluating and validating them. This method treats reality as a dynamic system of interactions among individuals and groups, which aims at generating a common behaviour to complement human needs and desires. It should encompass a range of plans and actions, from managing risk to fostering innovation in order to, eventually, lead to a set of opportunities. Finally, when it is socially-orientated, the core (crux) of design thinking is in fact a social problem/conflict to be resolved through this process.

In current social contexts, such a process should be organized as a project with a clear goal, operational framework, action plan and corrective measures for process updating. Clarity, goal-orientation, definition of weaknesses and boundaries, constant evaluation and updating, inclusion of risk and serendipity at any point of research and creation process are the qualities which enable a project to generate and maintain creative energy and to apply it effectively in practice.In order to choose the model

which best corresponds to the defined social problem/conflict, a design thinking process is coordinated in three overlapping and back and forth looping stages:

- *Inspiration: motivating the search for solutions from a hierarchical set of mental constraints*
- *Ideation – Conceptualization: generating, developing, and filtering,testing and iteratingideas*
- *Implementation – Realization: prototyping and turning ideas into actual products and services that are again tested, iterated, and refined.*

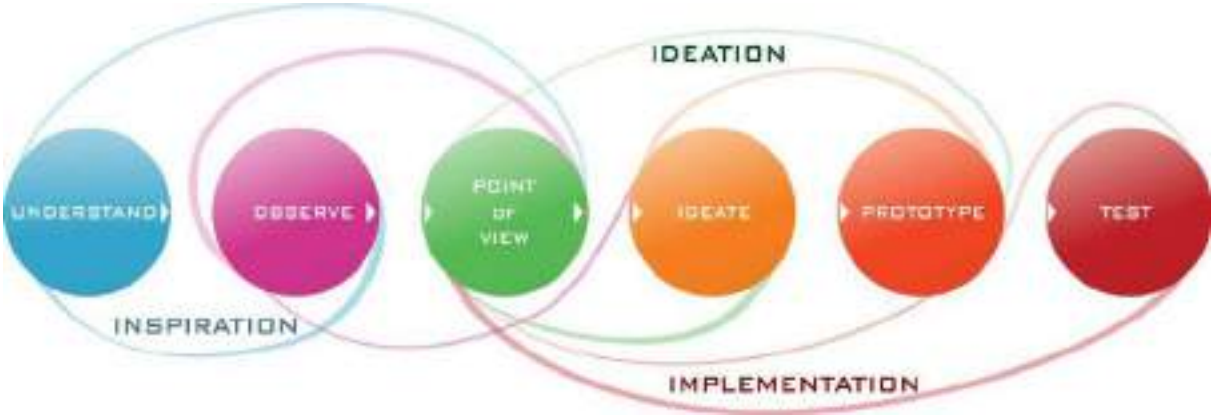

Figure 1: Process of Design Thinking. Original picture available at: http://www.pferdt.de/archives/572[4]

The final step is orientated towards a communication strategy, particularly through multimedia, which makes the solution accessible for a diverse set of stakeholders. To sum up, design thinking uses designer's sensibility and methods to match human needs with what is technologically feasible and economically viable*(Brown and Katz 2010).*

4.2 Ideology of design thinking in urbanism

Design thinking aims at articulating the spirit of a place, while leaving its realization to consumers / citizens. In urban terms, it may signify that it is design which leads to planning and then to development, integrating decision making to maximize innovation and render opportunities*(Professor Laura Lee,(Value of Design 2009)*[5]).In this sense, urban planning is reduced to branding: it defines the spirit of a place and then lets others (consumers / citizens) articulate that spirit.Citizens/urban dwellers are engaged within their environment, and professionals develop only a set

[4](Pferdt 2009)

[5](Value of Design 2009)

of performances based on outcomes that foster a dynamic model rather than automatically assume a product*(Professor Laura Lee,(Value of Design 2009)*[6]). The idea is to exchange the notion of a place for (the) place itself; space is not a product of creative process, but a venue for creative experience.

The design thinking method in urbanism could be seen as a step forward from a traditional planning process – instead of designing the urban in reference to space, this new instrument articulates the urban in reference to time, which energizes a public process of urban planning by using the lowest common denominator; an active urban actor. This means that an average urban actor is encouraged to participate in the decision-taking process concerning its immediate surroundings and to take an active part in designing it.

In order to achieve it, design thinking addresses individual cognitive potential by involving urban actors in the "story" and the "scenario" of place-making. It tells a story about what space could be and initiates the empathy and emotional correspondence of all participants in urban planning and designing processes.This story signifies the cooperation between professionals and average city dwellers (consumers), erasing the differences between them and making them equal in the process of place-making.

This collaboration in a wider sense shows what transdisciplinary approach in urbanism may be – a field between the abstractions of planning and the concrete specifics of architecture and design. Not only defines it that aesthetics and consumerism is a new driving potential for solving urban problems, but also it is the emphasis of collective intelligence, common logic and broad-band solutions which lies in the heart of the design thinking approach to this new paradigm of urban development.

4.3 Implementation of design thinking in urbanism

The main idea of the implementation of design thinking in urbanism is based on the statement that design is a creative and productive activatorfor articulating human needs in a certain built environment. Put differently, the value of design lies in catalysing the impact of built environment on the quality of urban life and activating creative human potential for solving urban and social conflicts. This actually means that "participatory urban design" refers to strategic planning not as a procedure for generating a product - "urban plan", nor as architectural aesthetics of cities, but as an integrated process of timing, rating and locating urban development in accordance with human needs and desires in order to generate an integrated vision, strategic

[6](Value of Design 2009)

techniques and viable opportunities in urban planning, and to produce a functional and aesthetically valuable built environment.

According to the herein elaborated theory of creative potential as an impetus for solving social problems, the design thinking process is used to producea creative environment, a place-shaping framework, a creative experience and an incubator for ideas.Design thinking makes the process of urban development and the production of social order feasible in such a way that ideas arepitched and then city and citizens respond to them in their own way.

In accordance with Sorkin's assumption that urban planning tends to prove inefficient on a very large scale and that urbanism could be stuck in it, the shifting point of "participatory urban design" is a functionalist idea of the city as a symbolic concept - an open and dynamic system of integrated scales*(Interview: Michael Sorkin 2005)*[7]. It practically means that the urban development of a city as a whole is brought through small-scale, partial urban actions and urban venues of different scales, which take care of the social and the public and create urban spaces, places, events and experiences.

In the course of urban planning, design thinking therefore encompasses a range of scientific and practical activities that all together form the continuum of innovation for solving urban conflicts. These activities are clearly structured in three stages within participatory urban design processes:Problem definition,Problem solving strategyand Product identification.

These successive stages serve to facilitate and improve identification and agreement over: an integrated human-centred vision of built environment or socio-urban context, explicit objectives of different time-frames, guiding principles for achieving them as well as tools, strategies, and methods to most effectively deliver them.The quality of such a gradually developed and looping process lies in its flexibility and dynamics to allow for a wide range of modifications or replacements to easily take placeand change the course of the project and final product according to human needs and desires or to restrictions and constraints.

- *Problem definition - Identification of an urban conflict*

The initial phase of the process consists of agreeing on the vision of positive urban future, identification of an urban conflict to be treated and solved, analysis of all urban actors involved, the input of guiding principles and the definition of long-term and short-term objectives.Regarding the scale and the character of these conflicts,

[7](Interview: Michael Sorkin 2005)

urban actors involved in the process are identified among average urban dwellers, different public and private stakeholders and professionals.[8]

In line with legal, economic and social constraints, urban actorsagree upon guiding principles and develop objectives. In general, they have to fulfil these basic requirements of participatory urban design ideology: high aspiration commitment (cultural identity, sense of place, human-centred considerations), collective and collaborative actions, constructive engagement and constructive criticism, knowledge network and integrated design education (ensure environmental experience literacy for urban actors), practice-based/use-inspired (optimistic approach to existing reality) and intelligent investment. These principles should be well accustomed to each case individually andits current socio-urban context, they should address all socio-economic aspects and foster innovation and development in a defined urban environment.

- *Problem solving strategy- definition through action-orientated methodology of design thinking*

Problem solving in design thinking is processed in three steps (inspiration, ideation and implementation), which are included in a circular process of solution generation. All of these steps should involve reflection, contextualization and action on different models for problem solving. This process isdivided in six sub-actions:collaboration on idea, acceptance with empathy, synthesis through integrative thinking, stoke ideas, positive approach toward the selection of ideas, experimentalism in prototyping and testing results. This looping procedure iterates until the best solution is found.

[8]Now, if this pattern is applied, the actors of these cities (seen in a great number as being poor, excluded, marginalised, outsiders) can also be the actual “makers of the city”(Jean-Claude Bolay 2004).

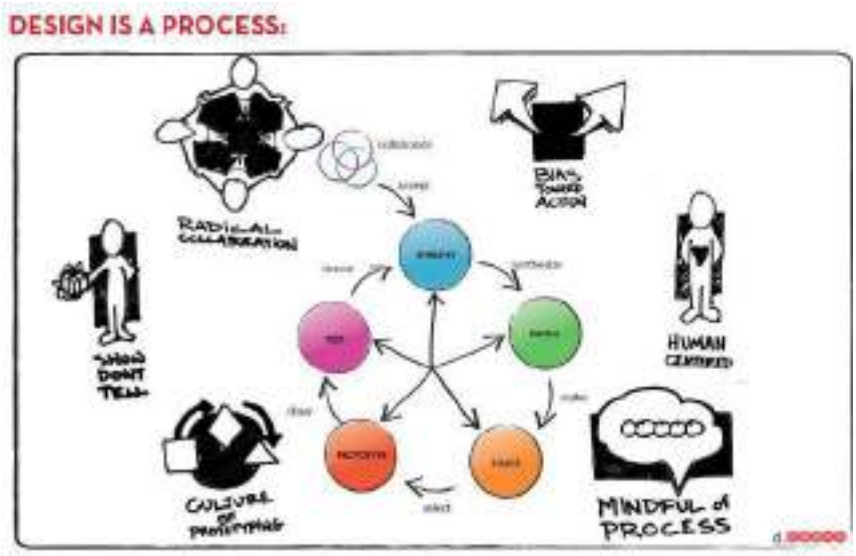

Figure 2:detailed procedure of design thinking[9]

In urbanism this process is transferred in a model of six basic steps[10]:

Step 1 - Research: explore spatial factors (urban environment) and investigate social aspects (human experience). These activities may be depicted through Lynch terminology and methodology (interviews and spatial landmarks)*(Mary Foyder / courtesy IDEO*).

Step 2 - Case Studies: communicate the essence of space or community through a creative process of functional analysis of human needs and urban identity of the environment, in order to define the issues at stake in very simple terms.

STEP 3 - Design Brief: translate ideas into action so as to experiment with possible solutions in the current context, while preserving positive aspects, cultural heritage and identity and promoting collaboration, creativity and a do-it-yourself approach.

Step 4 - Design Principles: transform the passive and ignite the active through the participation, densification and diversificationof cultural models and identities in a spatial framework. The essential broad principles are to be articulated as specific guidelines and then broken down into services or strategies.

Step 5 - Design in reference to time: design around the behaviour and experience of urban actors

[9](Ford 2009)

[10]The variations of this model have already been used in the urban design approach of the city of Adelaide in Australia (Value of Design 2009) and in urban designs of IDEO group in Kansas City(Mary Foyder / courtesy IDEO) .

Step 6 – Design in reference to space: reflect understanding of human desires and correspond to human needs concerning spatial aspects.

Figure 3:participatory urban design process. Based on integrated design thinking process for the city of Adelaide, Australia[11]

- *Product identification– decision making and place-making in urbanism*

This final stage articulates the chosen model in practice in order to achieve reliable long-term results. Depending on the nature of the problem (urban conflict), applied methods and tools, these models could be implemented in decision-making or place-making strategies in urbanism.Additionally, according to these factors, models are formulated in terms of performance qualities, facilitation of innovation and impact in order to address the target group and produce the best outcomes.

5 Discussion – Wider social context

5.1 Results

Following the thesis that our current social context can be identified as a consumer society in a postmodern framework, it becomes apparent how economic values come to triumph over social ones in the practice of everyday life. Such social framework

[11](Value of Design 2009)

imposes pressure on the human environment, threatens social order and performance of social practices and produces social conflict. When we refer to these problems inside any urban environment (city), we define it as an urban conflict, a rupture in an urban system – symbiosis made of human environment in a built environment framework. These systemic problems need systemic solutions, which address not only spatial and social conflicts, but problems of urban actors as well.

Participatory urban design relies on human capability to generate novelties (new systems, organizations or fields) by using a wide range of human capacities (ability to be intuitive, to recognize patterns, to construct ideas that have emotional meaning as well as being functional, and to express in media other than words or symbols)*(Brown and Katz 2010).*Accordingly, urban actors are actively involved in processing scenarios for solving urban conflicts. When this individual potential is carefully directed toward solving individual social conflicts in an urban environment, it may produce benefits for individuals (by involving them in meaningful social practice and encouraging them to solve social conflicts) and for society (by forming a built environment and producing social order). The idea is such that urban actors participate in creating a harmonious, meaningful environment in space and time, one that will correspond to their needs and desires and obey the scientific and social rules defined by professionals.

The social goal is not only to validate best ideas and produce best results in the urban environment but also to inspire people to live a creative personal life and to be useful to their community and urban environment. Moreover, letting people intervene in their immediate surroundings produces positive social effects: it gives meaning and importance to their human existence, reduces the effects of alienation common in modern consumer society, and involves them in informal learning which broadens their human capacities and improves their lifestyles. Conversely, they will act upon their immediate surroundings and participate in production in the urban environment that best fits their requirements and in doing so reduce urban problems and social conflicts.

5.2 Impact

The key issue that participatory urban design could reduce the negative effects of consumerism, a by-product of liberal capitalism, is elaborated by emphasizing the importance of individual creative potential in solving current urban conflicts. This idea presents the “urban actor potency” to freely influence and choose its immediate surroundings.

Furthermore, according to new visions of urbanism in relation to consumer culture, the issue at stake is an “urban consumer” – an individual between citizen and

consumer – and the collision between the roles of an urban actor and a consumer.In brief, this is a social struggle of 'ethics' and human nature over the production of everyday life, which challenges the modern social discourse.The sphere of cultural reproduction is also coming to be overflown by the postmodern pursuit of the self, where social relations, activities and objects are offered to be consumed as commodities*(Slater 2003).*

Namely, individuals unavoidably tend to conform to the expectations of their immediate social surroundings. In their pursuit of identity, self-realization and self-fulfilment, they are torn between the limits or boundaries of their needs and the possibilities to satisfy them, so that the whole system functions in a vicious, never-ending loop*(Slater 2003).*In terms of urbanism, there may be a risk that urban actors fail to participate actively in the herein presented new approach to strategic urban planning.

Additionally, consumer culture has already spread its tentacles into visions of the modern city.We witness nowadays the transformation of cities into products of consumerism and for consumption, venues for the production of public spectacle. Citizens/ individuals are not only the human capacity which build cities, but they are also consumers of cities. This relation identifies the city as a place of consumption, entertainment and services.In sucha diverse urban realm, already threatened by liberal capitalism, participatory urban design could be, conversely, seen as a strategy that crosses the traditional boundaries between public, for-profit and non-profit sectors, and introduces a new transdisciplinary field which can be applied to all realms of city planning.

The other crucial point of this methodology is its participatory nature– the idea of urban development as a democratic process, where the "user-orientated" strategy surpasses the decision-making process and aims at involving users in an empathic version of place-making*(Brown and Katz 2010).*

On the other hand, its potential flaw lies in the question as to whether this form of economy is really a solution for urban problems and to what extent this concept is actually applicable in different environments.Namely, a human-centred approach and orientation toward a unique cultural context conspicuously bring social benefits; its experimental nature is a source of personal development through learning for urban actors who participate in the process. But it is actually difficult to assess whether the specificity of solutions and possibility of failure in experimentation prove to be profitable as well.

Finally, individual human potential could also be interpreted as a possible threat. In terms of the evolutional development of human race, the importance of novelty has

been recognized as a propensity to explore and invent in order to better cope with the unpredictable conditions that threatens its survival. But the force of entropy, another antagonistic force that also strongly motivates humans, tends to prevail over the urge to create. The collision of these forces may also reduce the success of this method when it comes to application in practice.

6 Conclusion

Participatory urban design poses a challenge to the redefinition of a scientific approach to urban conflicts and corresponding urban planning procedures, through a creative, dynamic and iterative process of design thinking within an urban setting. Participatory urban design – a human-centred, user-friendly concept, which fosters holistic thinking and flexibility in developing strategies – blurs the boundaries between various disciplines and stakeholders, as well as their mutual endeavours to provide a wide range of potential solutions of recombination and application in certain environments, and finally, generates a new vision of the city that suits current scientific and cultural trends.

Key words: "participatory urban design" method, design thinking, creativity, developing countries

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Sticky stories: how civic initiatives connect to regional planning agendas

Hetty van der Stoep [1], Noelle Aarts [2]

Abstract

In this paper we aim to contribute to understanding complex change processes that result from a myriad of social, physical and political processes in which both governmental and non-governmental actors try to achieve ambitions. We focus on the role of self-organizing civic initiatives and how they relate to the construction of regional planning agendas by local and regional governments. How do civic initiatives connect to local and regional governments and how can we understand the consequences?

We addressed these questions by focusing on whether and how civic initiatives enable issues and ideas to spread through social networks and mobilize supporters. Agenda-setting theory and framing theory point to the construction of realities in social interactions. Strategic framing of issues, selecting certain aspects and ignoring others, is considered a powerful agenda-setting strategy. When framing gets the form of 'sticky stories' chances are enhanced that promoted issues reach a tipping point.

The findings of two case studies in the Netherlands suggest that stories become sticky through an interplay between conversations (that enable the construction and travelling of stories), concurring circumstances, and 'connectors' (people who are able to connect people, ideas and informal and formal contexts). Civic initiatives can perform crucial roles in the generation and spreading of 'sticky stories'. They are sometimes better than professional planners and policy makers able to create the right contexts, to connect the right people and storylines. 'Adaptive' attitudes of planners, asked for in debates about dealing with complexity in planning, may involve embracing and enabling forms of self-organization and connecting to unfolding 'sticky stories'.

1. Introduction

Collaborative planning faces dilemmas with respect to the promises of a more democratic practice, more efficiency and effectiveness. Some authors speak of a new crisis in planning in which new ways out are searched to deal with increasing complexity (non-linearity) of socio-spatial changes (for example De Roo, 2010). In such a view, change is viewed as the highly unpredictable and often unintended outcome of a myriad of social, physical and political processes in which both

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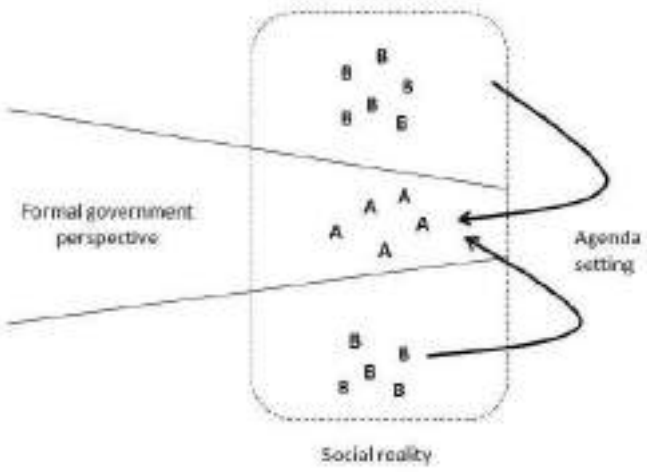
governmental and non-governmental actors try to achieve ambitions (Innes et al, 2010). The challenges for planning and governance lie in the understanding of complex change processes as well as developing 'adaptive' attitudes to deal with complexity.

We aim to contribute to a 'complexity perspective' on (collaborative) planning by focusing on understanding socio-spatial change from the perspective of local-regional civic initiatives who engage in local-regional planning practices. Civic initiatives for improving the quality of public space sprout everywhere as potential 'seeds of change' in urban and rural planning (for example Horlings, 2010; Boonstra and Boelens, 2011). We assume that they contribute to spatial change and change of planning agendas in more or less subtle ways by their efforts to get (government) support.

Some of these initiatives successfully connect to other (government) initiatives to get access to required resources and regulations. Other initiatives are not so successful and fade away. It is argued that most civic initiatives will at some point need a form of engagement of government actors to achieve goals (Aarts et al, 2007; Horlings, 2010). But getting attention of government actors is often a difficult process (Wagemans, 2002; Turnhout et al, 2010; Jones and Baumgartner, 2005). Government only has eye for that part of social reality that has meaning within the perspective of government. This is illustrated in figure 1. Initiatives B are not part of the perspectives of the government and therefore they are, to the government, irrelevant and meaningless. If initiatives want to be heard, they need knowledge of dominant policy frameworks as well as a great deal of "communicative skills, creativity, and guts" (Turnhout et al, 2010).

Figure 1. Self-referential perspective of government on social reality and effort of civic initiatives to get inside that perspective conceptualized as agenda-setting (adjusted from Wagemans, 2004)



This raises the question of what civic initiatives do to achieve goals. How do they connect to governments and how can we understand the consequences in terms of agenda setting? How do ideas and issues of civic initiatives 'travel' to policy arenas (Healey, 2006) sometimes leading to policy and governance change?

2. Theoretical and methodological approach

2.1 Storytelling and framing

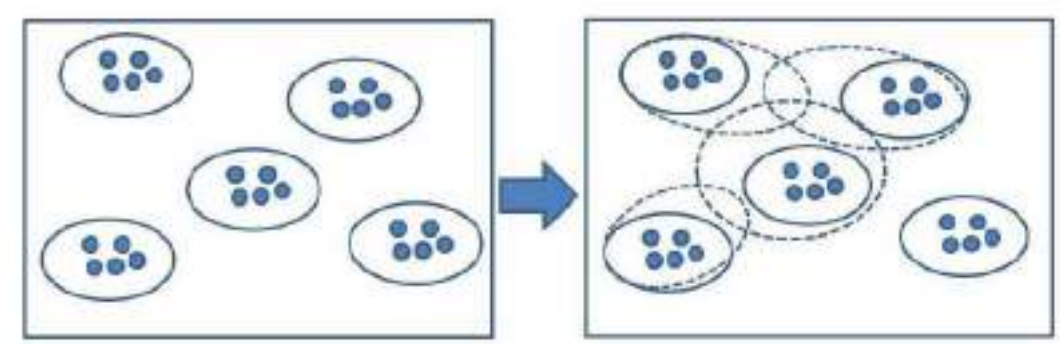
We addressed the questions above by focusing on whether and how civic initiatives enable issues and ideas to spread through social networks and mobilize supporters in a process of agenda-setting. Agenda-setting theory and framing theory point to the construction of realities in interactions. Strategic framing of issues, selecting certain aspects and ignoring others (cf Entman, 1993) is considered a powerful agenda-setting strategy (Jones and Baumgartner, 2005; McCombs and Shaw, 1993). Issue frames are continuously produced, reproduced, transformed and replaced in social interactions (Gray, 2002; Benford and Snow, 2000; Dewulf et al, 2009). Consequentially, a study of agenda-setting should not only focus on the role of trigger events and policy entrepreneurs in the opening of 'windows of opportunity' (cf Kingdon, 2003), but should also address a micro-level analysis of framing processes in social interactions.

Through the process of issue-framing a 'normative-prescriptive' story may emerge that provides a sense of what the problem is and what should be done about it (Rein and Schön, 1996). Storytelling plays an important role in disseminating a vision or a message and is considered a potential catalyst of change (Throgmorton, 1996; Sandercock, 2003; Baker, 2010). Storytelling is a way of ordering and constructing shared meaning (Hajer and Laws, 2006). Stories contain a plot with a more or less logical course and coherence of events. Such a structure provides an explanation to listeners about 'what happened' or 'what can happen if' (Baker, 2010). It is a framework for interpretation that invites listeners to attach their own understandings, experiences and emotions (Baker, 2010). This way, storytelling, the interactive framing of issues into plots, enables dealing with ambiguity and coordinating different realities (Throgmorton, 1996; Van Dijk, 2011). Stories also contain moral tension and motivation for action (Sandercock, 2003; Hajer and Laws, 2006). Therefore, the packaging of ambitions into clear stories can mobilize or 'galvanize' people into action (Bate, 2004; Rein and Schön, 1996; Hajer and Laws, 2006).

Although stories have various properties that influence policy making and the construction of social realities, they cannot cause change themselves. The concept of storytelling emphasizes that stories emerge in interactions between people and that they are constantly being reshaped in those interactions (Hajer and Laws, 2006). 'Stories are elastic' (Baker, 2010: 169) in the sense that listeners and tellers reshape stories while (consciously or unconsciously) interpreting and discussing them in interactions. Listeners are invited to incorporate the story within their own frames

and then pass it on to others in ways that are meaningful and relevant to them. Elasticity enables stories to travel through a wide network. In the context of policy agenda setting, elasticity is a critical condition because novel ideas need to 'fit' into current policy 'stories' to get inside of the self-referential view of policy makers (Jones and Baumgartner, 2005; Van Dijk, 2011). New stories may need to be stretched to fit into prevailing policy stories. This is visualized in figure 2.

Figure 2. Interactive alignment ('fitting') of frames and stories to build supporting coalitions



The activity of 'fitting' and 'stretching' stories can be understood as frame alignment strategies (Benford and Snow, 2000). The four basic alignment strategies are: bridging (linking ideologically similar frames), amplification (idealization, exaggeration, or reinforcement of frames), extension (including concerns of potential supporters which extend primary frames), and transformation (changing frames into new understandings and meanings). Storytelling can involve each of these strategies depending on the level of receptivity of targeted actors. Sometimes stories do not have to change much to persuade listeners to join in while sometimes the plot needs to be transformed to get the required (political) support.

Alignment of stories can thus be enhanced by framing stories into the 'latitude of acceptance' of listeners. This is done by providing credible, salient, concrete and emotive stories (Benford and Snow, 2000; Heath and Heath, 2007). Stories are perceived as credible when they are consistent with everyday experiences, and when storytellers are considered credible (cf. Benford and Snow, 2000). Salient, 'memorable' stories, connect well to the personal beliefs, values and experiences of listeners as well as the culture with which listeners identify themselves ('cultural resonance').

In the context of agenda setting, issue proponents face the challenge of fitting their stories to the existing policy stories by using alignment strategies. The mechanism of 'strategic fitting' (Benford and Snow, 2000) implies that stories are continuously reproduced, adjusted and 'resemiotized' (Van Herzele and Aarts, forthcoming 2012) through social interactions. Some stories become 'sticky' (Heath and Heath, 2007; Gladwell, 2000) in the process of storytelling and frame alignment, while others fade

away. We analysed the process and conditions in which stories become sticky with the help of two case studies about civic initiatives who tried to bring unsolicited proposals for local-regional development to the attention of relevant governments.

2.2 Case-studies: civic initiatives in Heuvelland and Gouda-Krimpenerwaard

As examples of agenda-setting processes in which local-regional civic initiatives bring forth unsolicited proposals that concern agendas for regional development we selected two case studies in the Netherlands: New Markets Heuvelland (Heuvelland) and Landscape Development in the urban-rural Fringe Gouda-Krimpenerwaard (Gouda-Krimpenerwaard). In table 1 we have summarized the characteristics of the two cases.

In the cases we first identified tipping points in the agenda-setting process[3]. Next, we analyzed what preceded tipping points: 1) the construction of stories around the proposed issues through the interactions between initiatives and potential supporters in the region; 2) the events and contexts that enabled the spreading of stories, and 3) the role of individual agents who connected people, frames, resources, and contexts, and thereby also enabled spreading of stories across a wider network. The analysis of framing processes, and roles of events and individual agents was executed through interviews with key actors and content analyses (policy documents, newspaper articles, reports of meetings of initiatives, and e-mail and letter conversations).

In short the plots of the cases can be summarized as follows: The initiative of citizens in the Gouda-Krimpenerwaard fringe area led to successful agenda-setting of landscape values throughout a period of 20 years. The initiative started when there was only fragmented attention of governments for the area at stake (‘tunnel visions’) which the initiative perceived as a big threat for natural and historical landscape values. After twenty years attention and support of local and regional governments was mobilized which resulted in the investment of millions of euros in the protection and development of landscape values. The Heuvelland case actually contains two stories that in the end competed with each other for attention and (financial and political) support. Both started with the New Markets initiative to build a community of ‘capital rich’ entrepreneurs who would invest in landscape qualities through new product-market combinations which were assumed to generate economical returns (improved tourism). However, this initiative could not sufficiently mobilize support of entrepreneurs and relevant governments and stagnated while at the same time a story about Regional Branding emerged around which the participating entrepreneurs self-organized. This latter initiative was very successful in mobilizing support and, like the Gouda-Krimpenerwaard case, resulted in investments of millions of euros into a regional branding campaign.

[3] Tipping points, agenda-setting factors and framing processes are described in detail in ‘case narratives’ in Van der Stoep (doctoral thesis, forthcoming in 2012).

Table 1. Characteristics of the two case studies of civic initiatives

Cases / characteristics	Gouda-Krimpenerwaard	Heuvelland	
Where?	Southern urban-rural fringe of city of Gouda, connecting to polder region Krimpenerwaard Local-regional level	Region South-Limburg Regional level	
Initiative (labels used in this paper)	Citizens: "WGK-initiative"	Experts, entrepreneurs: "New Markets initiative"	Entrepreneurs: "Regional Branding initiative"
Reason for starting initiative	Lack of government vision for urban-rural fringe Gouda-Krimpenerwaard	Lack of government vision on how economical activities can improve landscape quality	Strategy for regional (economical) development should be based on a good marketing (branding) strategy
Ambition	Getting attention and (financial and political) support for the protection of landscape values (nature, historical landscape structure, monumental lock)	Integrated improvement of (tourist and rural) economy and landscape quality: founding of a business community around New Markets	Establishing a regional brand and a 'branding' campaign to attract businesses and employees (dealing with shrinking and 'silvering' population)
Ambition achieved?	Yes	No	Yes (branding campaign was performed)
Connection to what sort of government agendas?	Local and regional development plans	Regional development plans	Regional economic development visions
Duration of process	1985-2010	2006-2009	2007-2012

In the following we aim to explain these outcomes by analyzing and comparing how and why stories did or did not become sticky over time.

3. Case study findings

3.1 Stories and ambitions that 'fit'

In the theoretical part we suggested that clear ambitions are an important part of bringing across messages and constructing a strong plot of a story. In the Gouda-Krimpenerwaard case this condition was met very well. Initiatives in Gouda-Krimpenerwaard had a clear and stable ambition throughout the 20 years of campaigning. Even though the story shifted to an emphasis on the advantages of landscape protection for economical and nature development, the original ambitions,

that is the plot of the story (renovation historical lock and nature-oriented recreational development) remained the same. Many of the ideas that were developed in the 1980s were achieved throughout the 2000s without serious alterations.

The New Markets initiative in the Heuvelland-case however had many difficulties in establishing a clear ambition. And as there were no stable ambitions, no sticky story emerged from the interactions between the participants. There was continuous discussion and disagreement between entrepreneurs and experts about the organization of the project which deviated attention from constructing an ambition for development of landscape qualities and economical activities. No storyline or plot emerged from the discussions. Finally, entrepreneurs self-organized around another storyline: that of regional branding of the region. The regional branding story became very sticky and not only the initiating entrepreneurs, but also other entrepreneurs and local and regional governments clustered around it. Once the regional branding story had 'tipped', many resources and supporters flowed to it from all kinds of budgets for regional development. The story, with the motto "Zuid-Limburg: Bright site of life", became a million-euro-story.

It was suggested earlier that to get inside the self-referential perspective of governments, stories have to be fitted to existing policy stories. This idea was confirmed in both cases. In both cases initiatives connected their ambitions and stories to governmental agendas for regional economic development. Strategies of initiatives were aimed at stretching 'the latitude of acceptance' of relevant government actors. Initiatives did not present their stories as alternative ideas, but as something that fitted into existing policy frames. So initiatives focused on 'bridging', 'extending' (Benford and Snow, 2000), or in other words 're-semiotizing' (Van Herzele and Aarts, forthcoming 2012) their stories and frames to connect to existing policy frames. New ideas and stories were connected with and fitted to 'existing stories' (cf. Van Dijk, 2011). Through this process, existing policy stories were reconfirmed and reproduced. Existing policy stories only became a bit 'wider' to include new ideas as part of the story.

Besides having 'clear ambitions' and 'a fit' with current (policy) stories, another condition for a successful story was assumed to be found in the qualitative properties of the story. It was suggested that stories, in order to be attractive, should be experienced as clear and concrete, credible, salient and emotive. These conditions were not met for the New Markets-initiative in the Heuvelland case, but they could be recognized in the Regional Branding initiative and the Gouda-Krimpenerwaard case. The regional branding story won at the cost of the Transforum-story because it was considered more attractive by entrepreneurs. The message of Regional Branding connected well to their personal concerns and ideas about what the regional economy needed. Moreover, the Regional Branding initiative and the civic initiatives in Gouda-Krimpenerwaard used many symbols that spoke to the imagination of the listeners. For example for the Regional Branding initiative, the regional products (beer, sirop etc), culture (gastronomy, festivals, art) and the name of the group of entrepreneurs (Black Riders, after the local beer brewery and pub where they met

each other). For the Veenvaren-initiative in the Gouda-Krimpenerwaard case, a strong emotive symbol was the historical boat in which one of the initiators sailed the waters of the polder Krimpenerwaard representing the ambition of reintroducing boating in the polder.

These examples show the relevance of using symbols to construct strong appealing stories to connect to the personal life experiences of targeted audiences. The active construction and shaping of stories shows that credibility, salience, emotion etcetera are never inherent qualities of stories. A story is not sticky in itself. A story becomes sticky because of what people do with it. When we want to trace how a story becomes sticky, we should ask 'who is telling what to whom, why and in which context?' In the following we focus attention on interactions and other conditions in which stories become sticky.

3.2 Conversations that trigger change

The case findings suggest that stories are made sticky by creating and using various opportunities for conversation which enables learning about different 'life worlds' and frames. Reframing and re-semiotization (Van Herzele and Aarts, fortcoming 2012) in conversations increase the chances that frames are aligned and that stories become sticky.

In the Gouda-Krimpenerwaard case many opportunities for conversation were used and created. The strategy of civic initiatives was aimed at conversing at all times everywhere and in every way. Throughout 20 years of campaigning, proponents of the initiative to protect landscape values in the fringe attended many meetings in the region about related topics, they talked informally on the street, they wrote letters to governmental representatives and potential supporters, contributed to newspaper coverage, held informal meetings, used channels of formal public participation, and more. This resulted very slowly in resonance of the story in a large network of regional stakeholders. In Heuvelland, one of the problems for the initiative of the experts to advance a sticky story about area development was a lack of opportunity to discuss it in formal or informal conversations. There were some formal meetings, but process managers were not able to create conditions for informal conversations with entrepreneurs in which decisions in formal meetings could be prepared. In fact, they were excluded from informal conversations between the engaged entrepreneurs. As a result, stories of the experts and entrepreneurs developed separately and competed with each other. Ambitions did not become clear so a story could not emerge from the interactions that did take place.

The spreading of a story through a network on the one hand requires a quantity and variety of conversations, but also asks for certain connecting qualities of conversations. Through framing processes alignments are established between stories and frames of issue proponents and the 'life-worlds' and stories of targeted audiences. In conversations reframing takes place as the intended or unintended result of framings of conversation partners. This is how stories can shift subtly.

Baker (2010) argues that conversations can 'catalyze change' when they provide a context of trust, respect, curiosity and hope. Other conditions are acceptance of differences and patience with respect to the process. Such properties of conversations are supposed to create an advantageous situation for people to open up their minds, become receptive and come out of their comport zone. The case study findings confirm that acceptance and curiosity towards differences as well as patience were important in frame alignment and coalition building. It requires from conversation partners to take time to ask questions, listen to responses, share experiences and share stories to illustrate ideas, and access intuitive and tacit knowledge.

We found in Gouda-Krimpenerwaard case that frame alignment was achieved when conversations provided room not only for telling stories, but also listening. Connecting to personal 'life-worlds' of targeted listeners requires a certain amount of empathy and ability to 'listen'. Successful storytellers were very empathetic with prospected supporters and could relate to their everyday lives very well. By listening tellers became knowledgeable about the frames with which they had to align their own story. Storytelling requires a great deal of listening. Or in other words, strong sticky stories are told by great listeners.

In contrast, the analysis of Heuvelland suggests that the process managers, the experts, were focusing too much attention on building the right coalition according to their own beliefs, and were unable to create a situation in which they could 'listen' and 'empathize'. Although meetings and an interactive website were set up to organize joint fact finding and to provide a platform for the articulation of concerns, interests and ideas, this did not give enough opportunity for listening and storytelling. In Heuvelland, informal 'one-on-one' conversations were an essential vehicle for creating sticky stories and connecting different 'worlds' and networks. The process managers did have the intention to carefully listen to concerns of entrepreneurs, but they were excluded from those informal conversations with entrepreneurs. The findings suggests that the closedness of the community of entrepreneurs and government executives was hindering 'outsider' actors to 'listen' and 'empathize'. This way 'outsider' participants were unable to align frames and start a 'sticky story'.

These conclusions about conversations show parallels with a growing body of literature on the role of conversations in organization management (Ford, 1999; Baker, 2010; Van Herzele and Aarts, forthcoming 2012). The activity of conversation is viewed as the key process through which forms of organizing are reproduced and changed. We can conclude that conversations are needed to start, shape and spread a story. Conversations have to provide room for both telling, listening and empathizing to achieve frame alignment. It depends on the context what type of conversation works best and whether and how one will be considered a good conversation partner. Building on the empirical findings as well as literature we argue that stories are made sticky in human interactions through 'catalytic conversations' (Baker, 2010). That is, conversations in which people are open to new perspectives for several reasons and take time to listen and 'empathize'.

3.3 Concurring circumstances

The cases showed that specific circumstances and contexts played decisive roles in enhancing the stickiness of stories. For example, the opportunity of the 'crisis law' in the Gouda-Krimpenerwaard case, enabled the attachment of emotion and urgency to the story of the civic initiative by stressing that 'it was now or never', a unique opportunity which could not be missed. This enhanced the perceived urgency of the issue (to local and regional governments) to such an extent that the story about renovation of the monumental lock became sticky and 'tipped'. In Heuvelland triggering events could also be recognized. In the case of Regional Branding changes in political circumstances were used to make the story more sticky. The story aligned well with the existing policy story about the regional economy that was faced with the threat of young people leaving to other parts of the country.

In both cases we found that 'trigger events' could only trigger because they were interpreted by people as triggers (windows of opportunity). Trigger events are given meaning as triggers in light of previous events and interactions. They can trigger change when they concur with past events in the eyes of people who frame a particular event as a trigger event, a window of opportunity. To other people, the same events may have no meaning at all. This means that a triggering events are preceded by a large number of events and interactions that happened in the past. It is a matter of 'filling the cup', or in the words of Kingdon (2003), a matter of 'softening up' prospective adherents. When the cup is filled, it only takes a small drop more to make the cup run over. This is in line with a complexity perspective on change. Small and seemingly irrelevant or unimportant changes can have large effects (Morgan, 1986).

In the case of Gouda-Krimpenerwaard the initiators used various opportunities to bring alternative plans for the fringe area to the attention. Over a period of 20 years they used design competitions, formal participation procedures around government plans for the region, the project Masterplan Stolwijkersluis, as well as their own yearly 'dawn walk' to suggest alternative plans and many other occasions. The variety of contexts in which they prompted their ideas enabled a slow 'softening up' of the policy system. The only thing required to actually implement the ideas was resources that had to flow from the provincial government. That happened when the province realized they needed just a few hectares more to achieve their ambitions for nature development. To solve that 'problem' the provincial government could use the ' solution' that had already been floated by the civic initiative in the fringe area. The province's sudden interest in the area was the small drop that was needed to make the cup run over and implement the ideas for a nature-recreational development of the fringe area. But it was preceded by a filling of the cup with many small drops. This was achieved by introducing small novelties in many different places and moments which could then reinforce each other. The right context was created to make the story stick.

The analysis of Gouda-Krimpenerwaard provides many examples about changing circumstances and events, also the more subtler and smaller circumstances that could still trigger change. One of these is the role of the discussions and heavy debates about the construction of the bypass around Gouda in the tipping of ideas about renovation of the historical lock and reintroducing boating in the polder Krimpenerwaard to give an economic stimulus. The passionate engagement of the citizens group "Werkgroep Gouda-Krimpenerwaard" led them in a coalition with stakeholders from the polder Krimpenerwaard. These contacts remained and helped the "Werkgroep Gouda-Krimpenerwaard" to know a lot about the beliefs, concerns, interests and values of people in the Krimpenerwaard. They understood through ongoing conversations with Krimpenerwaardians over a longer period of time that the nature-agriculture controverse was the major concern also for the province who were responsible for solving the conflicts. So they knew exactly how to deal carefully with the political culture in the Krimpenerwaard and how to use that to get to the province. Their engagements in the Krimpenerwaard led them to contact and alignment with the "Veenvaren"-initiative. A sticky story was created out of it in which renovation of landscape values in the fringe (such as the monumental lock) and recreational possibilities were connected to a story about the economical opportunities of introducting boating in the polder Krimpenerwaard. At first glance, the conflicts and discussions about the bypass by the end of the 1990s and the beginning of the zeros seem to have little to do with the story about "Veenvaren" and the restoration of the lock. However, the story of Veenvaren and the role of the lock in that story could only become sticky as a result of the previous engagements of the "Werkgroep Gouda-Krimpenerwaard" with Krimpenerwaardians around the issue of the bypass. Often little things matter a lot!

3.4 Connecting stories, people, events and resources

In the case of Gouda-Krimpenerwaard we found that special individuals, who we call 'connectors', are able to connect ambitions, storylines, people, resources, and events and contexts. Those 'special individuals' resemble 'innovation brokers' (for example Klerkx, 2009) and policy entrepreneurs (cf Kingdon, 2003), but as we emphasize 'connecting' qualities we prefer to use the term 'connectors' (after Gladwell, 2000). By these connecting activities they enable the emergence, strengthening, spreading, adapting and fitting of stories. In other words, connectors can make stories 'sticky' in a number of ways.

First, the cases contained connectors that had central positions in networks and could therefore connect different networks and groups. Examples in the Heuvelland case are the 'leading' entrepreneurs who used their informal executive networks effectively. They were able to bridge the entrepreneurial network and the relevant policy networks. In the Gouda-Krimpenerwaard case we found that connectors can also be people who just like to spread and share knowledge with many others and this way make ideas spread rapidly through a wider network (similar to Gladwells 'mavens', 2000).

An individual can also operate as a connector when he or she is considered a credible storyteller by other people or when they are able to mobilize credible storytellers ('frame articulators'). In Gouda-Krimpenerwaard we identified a number of credible frame articulators who had status or were considered experts in the field and as such were able to persuade influential actors in their network. However, credibility of storytellers was not only exclusive to people who were considered to be authorities. Sometimes, storytellers had a good claim to a hearing because they were considered genuine as their background and knowledge was consistent with the culture and concerns of people living and working in the region. The Gouda-Krimpenerwaard case provides the example of the initiator of "Veenvaren" who was considered as a credible conversation partner by crucial political actors in the Krimpenerwaard. This way the Veenvaren-initiative enabled an effective connection between decision makers in the Krimpenerwaard and the civic initiative in the Gouda-Krimpenerwaard fringe area.

In Heuvelland credible frame articulators were people that were assigned with authority. This worked out positively for the Regional Branding initiative. Tor the New Markets initiative this was a delimiting factor as the experts themselves were not part of the select club of individuals who were considered to have authority. Here, they would have needed other connectors that did have the right cultural background and position and that could reinforce the story and pass it on.

A third 'connecting' quality is being able to empathize and listen to stories of conversation partners (see also section 3.2). In Gouda-Krimpenerwaard we see that also regular citizens, who were not part of a powerful managerial network, could operate as connectors. Crucial connectors were people who could empathize with and listen carefully to potential supporters. Moreover, key players were connectors who liked to share information and knowledge to help other people. And by being very knowledgeable about different contexts they could bridge different networks and reach other connectors whose connecting qualities lay more in 'selling' and 'networking' the story.

A fourth 'connecting' quality is being sensitive to circumstances and contexts that provide opportunity to connect and align stories and people. For example, the self-organizing entrepreneurs in the Regional Branding initiative were continually scanning the context and looking for the right circumstances. They built an informal network and provided for a suitable context for informal conversations. They seized political opportunities and tried to create ('nudge') the right context. The same happened in the Gouda-Krimpenerwaard case in which initiatives continually searched for contexts to promote their messages and tell their story. Awaiting, searching and creating the right (conversational) context required a great deal of knowledge and sensitivity about various contexts as well as patience and perseverance. Connectors know how to 'nudge' contexts, that is signal, use and create context to a certain extent. This way, connectors are critical agents in the construction of a sticky story or the other way around, they may also weaken a competing story. That said, connectors are always dependent on the interactions in

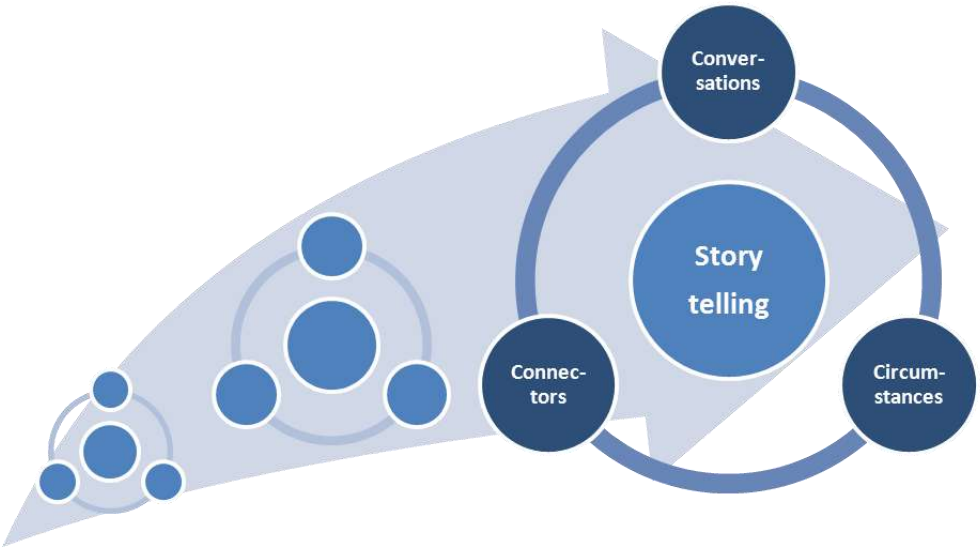
the wider network of which they are part, so 'nudging' is all they can do. Still, 'nudging' may be all that is required to 'tip' a story.

It is impossible for a single person to have or perform all qualities discussed above. Connecting qualities in the Gouda-Krimpenerwaard case varied from person to person but together they created a strong spreading effect for the story about landscape values in the fringe. Therefore we conclude that the label 'connector' is not exclusive to a particular person but depends on the context (time and place). Persons can perform as connectors at certain moments while at other moments leaving others to this task. There can be several connectors at one time. There is no single change agent that can be identified. Individual people can perform as connectors at different moments depending on the specific context and the qualities that are needed at a certain moment.

3.5 Sticky stories: conversations, circumstances and connectors

Sticky stories that are remembered and that connect people and ideas to each other in coalitions become sticky through human interactions. Our empirical findings demonstrates that stickiness is influenced by an interplay between (everyday) *conversations* that enable the construction and travelling of stories, concurring *circumstances*, and *connectors* who are able to connect people, ideas, events and various conversational contexts. This interplay is schematized in figure 3.

Figure 3. The process through which a story becomes sticky



The previous sections demonstrated that social interactions in the form of conversations matter a great deal in the mobilization of support. Conversations form the vehicle for framing ambitions into stories. Conversations provide means to listen, empathize and tell and thereby to connect stories to the emotions and frames of

conversation partners. Therefore, conversations are an essential condition in the unfolding of a sticky story. Creating opportunities for conversations in which knowledge and information are shared can enhance innovation and self-organization of people around stories that link various ambitions. Conversations open up windows to new possibilities in particular situations and contexts which can be created to a certain extent.

Conversations can bring forth sticky stories in particular circumstances. Many conversations together build up a momentum, they 'fill the cup', and when this concurs with a triggering event the cup will run over, or in other words the story becomes so sticky that it ‘tips’ and leads to change. ‘Connectors bring together people, ambitions, resources and meaningful events through conversations in specific (concurring) circumstances. Connectors do not only connect people and ambitions, but they also connect ‘events’ and construe them as ‘windows of opportunity’. Moreover, connectors develop an antenna for creating a conversational context that enables collective storytelling and coalition-building, or in the words of Baker (2010), that ‘can catalyze change’.

4. Conclusion: storytelling and adaptivity

In this paper we discussed how we can understand the process and outcomes of attempts of civic initiatives to connect to local and regional governments to achieve goals. The comparison of two case studies resulted in an analytic model in which successful agenda setting and mobilization was defined in terms of storytelling. A successful story is a story that can self-multiply and travel rapidly through a wider social network, or in other words a story that is ‘made to stick’. Stories become sticky in a process of ongoing social interactions in which (interplaying) conversations, concurring circumstances and connectors are critical conditions.

Successful initiatives in the cases were able to achieve goals and change planning agendas by navigating on the self-referentiality of governments. They managed to get inside the self-referential view of governments on social reality, while governments embraced ideas as part of prevailing policy stories. Beneath the surface new coalitions between government actors and civic initiatives emerged out of interactions, and stories shifted slightly. Initiatives and formal plans of governments were ‘enriched’ with ideas of civic initiatives. Change happened, but it was subtle and non-linear.

Apparently the ‘world out there’ about which government has a self-referential view provides opportunities for change and innovation. The case findings confirm that it is not a static world that can be mended to governments ‘will’. Civic initiatives try to achieve goals and try to be noticed by governments. The interactions that flow from these efforts leads to generation of new stories and reproduction or adjustment of existing stories that guide action. So what can we learn about planning in complex change processes from the findings and the proposed model for analyzing agenda-

setting and storytelling? What starting points were found for more 'adaptive attitudes' of planners called for in the planning debate?

Planners may try to develop an antenna for self-organization of people (public and private actors) around emerging stories and make use of these self-organizing movements to connect own ambitions to them. If planners also look for stories that will 'stick' and guide change, then the conditions for stickiness may be helpful in deciding on actions. That means that planners, like civic initiatives, could try to create and engage in 'catalytic' conversations in which there is room for differences, diversity, and for 'listening' and 'empathizing'. They could try to signal events that provide momentum for action or try to create the right context for constructing a story and making it sticky in conversation with other actors ('nudging contexts'). And related to 'creating the right circumstances' and 'engaging in catalytic conversations' planners could identify and make use of 'connectors' that can link stories from different social networks and 'life worlds'. The research suggests that connectors, may be people with authority (in line with studies about policy entrepreneurs) but just as important are 'local' people who are very knowledgeable about various relevant contexts (historical, policy, political, social, geographical) in the area and who like to share knowledge with other people.

Creating and engaging in catalytic conversations, looking for and using connectors and 'nudging contexts' are adaptive attitudes that can contribute to a form of planning in which complexity is not considered a problem but an opportunity for innovation.

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Culture Counts – How Cultural Differences impact Strategic Planning Processes towards Urban Resilience

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Abstract

Against the background of global change and transformation processes and an increase in international and interdisciplinary cooperation, the need to better understand cultural differences in strategic planning processes towards urban resilience becomes apparent. In particular, with regard to climate adaptation, cities and regions around the globe are looking for alternative approaches and new strategies in order to strengthen their resilience and their capability for innovation.
Based on the definitions of the key concepts "culture" and "resilience" as well as on the planning model of the "third generation" (Schönwandt, 2002) and the "cultural values model" (Stephenson, 2008), this paper discusses the impact of cultural differences on strategic planning processes towards urban resilience.
Examples from regional workshops on climate mitigation and adaptation in South-West Germany illustrate how these concepts are actually lived in strategic planning processes and how diverse planning cultures and approaches influence the different planning steps, starting from the definition of the initial problem up to the development of solutions. Appropriate tools and approaches that can help to overcome cultural misunderstandings and barriers are presented. Finally, the cultural determinants of strategic planning processes are analyzed and recommendations are deduced in order to raise cultural awareness in international and interdisciplinary planning projects as well as in political decision-making.

1. Introduction

Strategic planning processes have gained new popularity against the background of climate change adaptation and resilience of urban areas. Since these challenges can be no longer solved on regional (or national) level or by a single discipline only, international and interdisciplinary cooperation has increased significantly. This goes along with multiple cultures and approaches which are characterized by manifold mental models, values, attitudes and interests.

In order to cope with the complexity of transformation towards a resilient and climate friendly society the German Advisory Council on Global Change ("Wissenschaftlicher Beirat der Bundesregierung Globale Umweltveränderungen") has recently called for a knowledge-based process on transformation, inter- and

trans-disciplinary cooperation, a systemic perspective, social and technical innovations, and more research and education on transformation processes (cf. WBGU 2012). The need to further consider cultural issues in political governance and decision-making has been lately emphasized for example by a policy statement of the United Cities and Local Governments on "Culture as the Fourth Pillar of Sustainable Development" (UCLG 2011). Both documents underline the need for an intensified cooperation between science and society, including diverse disciplines and manifold stakeholders. Hence, the need to understand cultural differences and to find a common language will further increase.

This paper aims at analyzing the interrelation of culture and resilience in strategic planning processes based on the definition of the key concepts "culture" and "resilience" and theoretical foundations. Examples from regional workshops on climate mitigation and adaptation illustrate the diversity of planning cultures. Suitable tools and thinking approaches how to overcome cultural misunderstandings and barriers are presented. Finally, the results are reflected and used for recommendations on cultural awareness in planning and decision-making.

2. The Interrelation between Culture and Resilience – Core Concepts and Theoretical Foundations

The concept of culture has diverse meanings in different countries ranging from achievements in science, technology and art, via social boundaries due to different interests, attitudes and values, to "culture as the fourth pillar of sustainable development" (UDLG 2011). In our context we use the concept in the sense of "planning culture" which can be considered as a discipline-specific sub-culture within the overall concept of culture. In this sense, "planning culture" is associated to those occupational groups who deal with the design and future development of space and environment, e.g. spatial planners, urban and regional planners, architects, landscape planners, and neighbouring professions such as geographers, civil engineers, sociologists etc. They are characterised by a more or less common framework on how to deal with planning issues. Knieling & Othengrafen (2009a) explicate that these members of the planning profession "[...] are producing and sharing cognitive frames, practices, knowledge, beliefs, norms and rules, values and codes. […], all actors involved in planning processes are conditioned by the system of planning they act in, including the acceptance of rites and power structures etc. [...], planning is embedded in a specific cultural framework, which is composed of interactive processes among involved actors, their cultural cognitive frames and the particular planning procedures and instruments. In this sense, planners and planning systems need to be responsive to their cultural contexts." (Knieling & Othengrafen, 2009a, pp. 42-43) These professional biases of planners, i.e. certain planning approaches they use, narrow the perspectives and quite often hinder them to develop alternative solutions. Because these "glasses" through which a planner sees a given situation determine the way he/she constructs the problem, analyses the causes of a problem and deduces strategies and measures to solve the problem (Kuhn, 1981; Bunge, 1996; Schönwandt & Voigt, 2005).

These cultural issues also affect strategic planning processes that aim at enhancing urban resilience. Originally, the concept of resilience stems from the science of ecology and describes the ability of ecosystems to absorb shocks and other disturbances and to further exist preferably without prejudice (Holling, 1973 and Folke, 2006; in: Birkmann et al. 2011, p. 17). In recent years, the concept has been further developed and applied to socio-economic and socio-ecological systems (cf. Birkmann 2008). In the context of climate change the concept is often understood as "robustness" or "resistance", i.e. the ability of a system to sustain its central functions even after the occurrence of natural hazards. Moreover, a second essential feature of resilient systems is the ability to restore the initial state after external disturbances or shocks. The concept of "engineering resilience" emphasizes the "coping capacity" (Hollnagel et al., 2006) that measures the time period until then the initial state is recovered. The more resilient a system is, the faster it recovers from the impact of a crisis. Previously focusing on robustness and coping capacity, the term has been recently extended to the learning capacity of a system (among others Folke, 2006), i.e. that the system is able to learn and to adapt itself to changing environmental conditions. Hence, a resilient system or a resilient society possesses a high capacity for adaptation and has the ability to adapt itself reactively and proactively to changing environmental conditions. Therefore, a resilient spatial planning aims not only at the development of robust and resistant structures, but should - in the sense of reorganisation - support changes towards an adjustable spatial structure (Birkmann et al., 2011, p. 17). Finally, the debate on the notion of urban resilience is still ongoing. Generally, the concept is understood "as the degree to which cities are able to tolerate alteration before reorganising around a new set of structures and processes" (Seventh Framework Programme, 2011).

In order to capture the influence of culture on strategic planning processes towards urban resilience, the planning model of the "third generation" is used which was elaborated by Claus Heidemann (Heidemann, 1992) and further developed by Walter Schönwandt (Schönwandt, 2002). This model is based on systems theories and helps to analyze the determinants of strategic planning processes by mapping the planning cycle and its steps of procedure. Thereby, it is essential to note that the several components that together make up the "third generation" planning model never exist in isolation but always interact with one another (see figure 1): Based on their individual and discipline-specific mind-set (methods, concepts, theories, world-views etc.) planners build a "planning world" that is composed of specific approaches and operates within the environment of a "life world". This "life world" is where particular agendas, i.e. several points of political discussion or dispute, are worked out by actors in an arena. This interaction of "planning world" and "life world" forms the basis of a planning cycle that we can deconstruct into the following interconnected steps of procedure: "comprehension of the situation", "elaboration of instructions", "communication about behavior", "interventions", "spatial, social, ecological, economic, and political-administrative settings", as well as "outcomes". The outcomes can give rise to a new comprehension of the situation, which, in turn, can initiate a new planning process (for further details see Schönwandt, 2002, pp. 30ff; Schönwandt, 2008, pp.19ff). Since the understanding of these steps and the specification of the related attributes usually differ in diverse cultures, there is the

need for an overall theoretical framework that can integrate these. Due to its systemic approach, the planning model of the "third generation" provides an appropriate analytical tool to map the manifold aspects related to the concepts of resilience and culture. Further details on this issue and illustrating examples will be outlined in the following chapters.

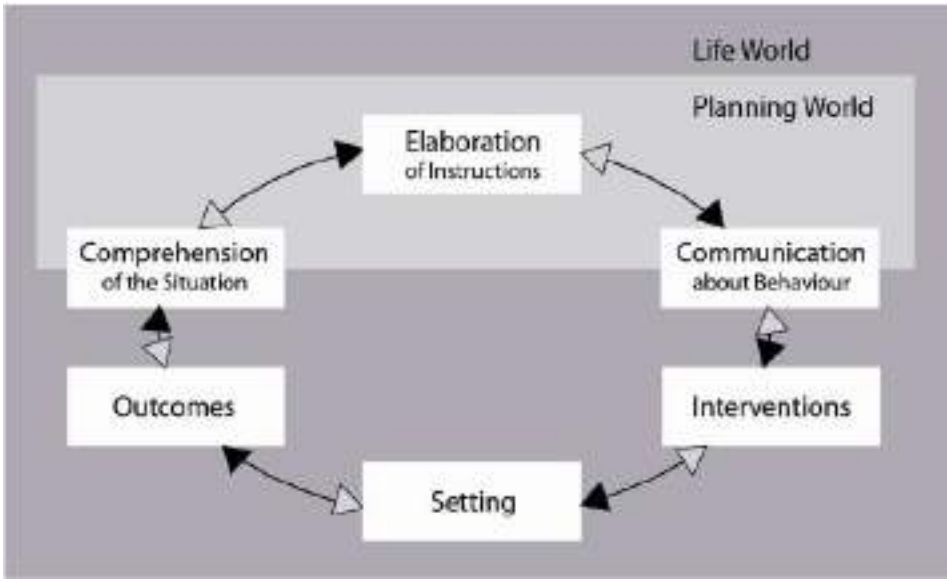

Fig. 1: A planning model of the "third generation" (Schönwandt, 2002, p. 47, modified)

With regard to cultural differences and their impact on the adaptation to environmental conditions, quite often non-European countries have more and longer experience, because they have faced the challenges of large-scale migration much earlier and those migrants have been exposed to extreme environments. For example, Stephenson (2008) studied how the Maoris and the European settlers in New Zealand perceive their environment and everyday landscape. She found out that the settlers mainly realigned to the "surface values" (perception of physical landscape elements, forms, relations and practices), whereas the natives oriented themselves more on "embedded values" (awareness of inclusive values, narratives, symbols, memories and emotions). Based on the results of her empirical study she developed the "cultural values model" (Stephenson, 2008, p. 136; see fig. 2) that incorporates three basic landscape constituents (forms, practices/processes and relationships) as well as temporal aspects (cultural dynamics and relationships). Such case-studies in non-European countries can serve as laboratories that can provide knowledge and lessons learnt with regard to cultural diversity.

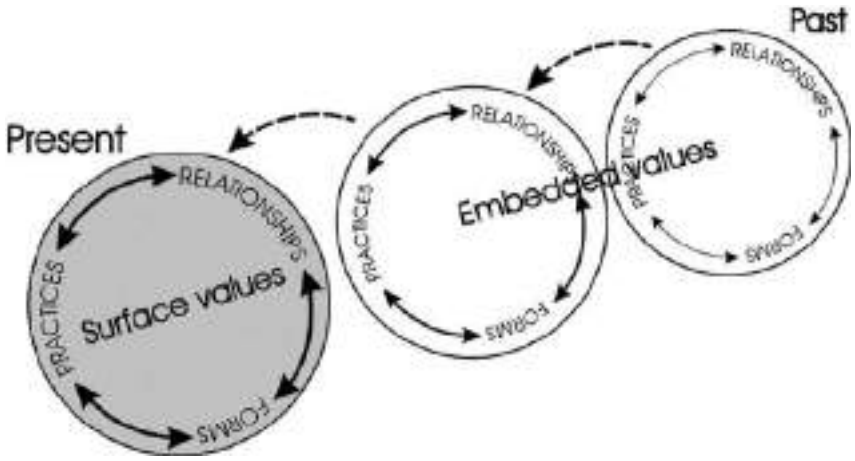

Fig. 2: "Cultural Values Model" (Stephenson, 2008, p. 136)

Taking recourse to the planning model of the "third generation" (Schönwandt, 2002) and the "cultural values model"(Stephenson, 2008), the interlinkage between the concept of culture and the concept of resilience can be explained in more detail: Firstly, there are cultural differences in the way planners think and act, i.e. there are diverse planning approaches depending on the knowledge and professional background of a planner. Secondly, the "life world" consists of manifold stakeholders with diverse interests, attitudes, and values that act within different arenas and incorporate diverse agendas. Thirdly, within the planning cycle itself there are cultural differences with regard to the comprehension of a situation and its assessment (problem definition), the communication of the behavior, and the implementation, i.e. the interventions (for further details see Jung, 2008). Fourthly, planning never takes place in a vacuum, but is situated in certain cultural contexts that can change offer time, especially when new individuals or group of individuals enter the scene; thus planning issues are treated in different ways in diverse cultures and over time.

Keeping this in mind, it can be concluded that tension arises between the aim of finding common or transferable solutions for resilient urban areas and of considering cultural differences. For the development and implementation of strategies and measures towards urban resilience that respects cultural features, we have to be aware of the common characteristics of the two concepts of culture and resilience; they:

- are multilayered, i.e. a high number of aspects are to be considered;
- focus on the process;
- are temporal dynamic (not static);
- comprise interrelated components that depend on each other;
- involve a high number of stakeholders with competing interests.

Restrictively, it has to be mentioned that the interrelation between (planning) culture and resilience needs to be further explored. Can resilience really be attained by (formal) planning? Or is it more or less the result of a sum of determining factors,

among others the culture of a region/country or a specific discipline? So far it can be concluded that the characteristics listed above underline the high complexity of strategic planning processes. This aspect can be regarded as one of the main reasons why the concepts of planning culture and resilience are less incorporated in planning practice until today. In the following chapter we will exemplify this intermediate result by providing practical examples from the workshops conducted within in a project on climate mitigation and adaptation.

3. Initial Tools and Approaches in Strategic Planning Processes and their Practice within the Project ClimateMORO "Spatial Development Strategies for Climate Change"

The impact of cultural differences on strategic planning processes towards urban resilience can be exemplified by three initial tools that determine these processes and can be a source of misunderstanding between diverse stakeholders involved; these are:

a) the problem definition and the problem shifting (part of the planning step "comprehension of the situation in the planning model of the ´third generation´"),
b) the use of key terms / language that plays an important role at all planning steps and
c) the planning approaches which are the core element of the "planning world" in the model.

Some cognitive tools or thinking approaches can help to overcome difficulties evoked by cultural differences. These tools were taught to the participants of three workshops on climate change adaptation with relevant stakeholders in the region of "North Black Forest / Middle Upper Rhine", South West Germany. Those workshops were part of the project "ClimateMORO" (2009-2011) which was commissioned by the German Ministry of Traffic, Construction and Urban Development. Examples from the discussion are given below (cf. Hemberger, forthcoming; see also RV NSW/MO, 2011).

Ad a) In the beginning of a planning process it is necessary to clearly define the problem to be solved. Otherwise we cannot develop a coherent argumentation from the problem to its solution. In our understanding a problem is the description of situation (A) plus the negative assessment by an individual resp. group of individuals – in short: A(-). Thus, the assessment of a problem is a subjective interpretation, i.e. it is "socially constructed" and depends on the perception and the background of the stakeholders involved (profession, ethnic group, etc.). At this point the cultural differences regarding values, attitudes, interests etc. become apparent (see above chapter 2).

If someone does not consider the components of this simple thinking approach, A and (-), it will certainly result in difficulties: For example, during one of the three workshops on climate change adaptation mentioned above the topic was discussed

that the arboreal range of species will change due to climate change. But what is the definite problem thereby? After a long discussion it turned out that different reasons were relevant for the stakeholders in order to assess this fact as problematic/negative; these were:

i. the existing technology of the wood-working industry cannot cope with the type of wood that is produced by new tree species (economic reason);
ii. the loss of the traditional landscape scenery (cultural reason);
iii. the decrease of tourist numbers due to the loss of the landscape scenery they are used to (economic reason);
iv. the changing arboreal range of species itself is seen as a problem (ecological resp. ethical reason).

Each of these problem definitions (respectively negative assessments) depend on different planning cultures and will lead to different action and specific measures in order to solve the problem. Planning cultures that are determined by the conception that nature is an economic resource for business (see above point (i)), will lead to measures that adapt the equipment and machines of the wood-working industry to the new conditions. In contrast, those who judge nature as a value on its own (see above point (iv)), will develop measures for the protection of the existing arboreal range of species. Hence, within interdisciplinary planning processes it is important to precisely define the problem to be solved and to attend the respective cultural imprint of the stakeholders involved. Only to examine the same state (arboreal range of species) is – as shown above ! – not sufficient, in order to clarify the problem and to introduce appropriate measures.

In addition, it might be helpful not only to define a problem, but to shift it by analysing the possible outcomes of this particular problem. For example, with regard to climate change the strategies and measures will firstly focus on avoiding or decelerating this phenomenon, e.g.:

i. avoiding climate change by reducing CO2 emissions;

However, if we consider the complex interrelations of this problem and its causal effects, for instance the heat island effect in urban areas and its effects on the health of elderly people, we will certainly come to further and more specified strategies and measures, e.g.:

ii. technical and other planning solutions such as air condition, white coloring of the buildings and facilities, tree planting to increase the coldness by evaporation;
iii. physical training, especially of elderly people, to make them more resistant against heat effects.

The first strategy (i) includes an approach of avoiding negative impacts of climate change, the second strategy (ii) focuses on technical solutions, and the third strategy (iii) ask for the capability of the people to adapt to the changing environmental conditions. Each of these approaches is determined among others by the diverse

cultural expressions of the stakeholders involved which make its implementation a challenging task.

Ad b) Another essential task is the appropriate handling of the language and the definition of key concepts. Since in international and interdisciplinary projects planners will meet a great variety of stakeholders from diverse backgrounds, it is necessary to define key concepts and terms. In doing so, the communication on the contents and the procedure of the project is facilitated. Such definitions must be beneficial to the key question or the problem examined because they determine the planning actions by opening or closing search areas for solutions. Today, planners too often suppose that the professional concepts they use are well-defined and understood in the same way by all parties involved. Moreover, planners have to be aware that concepts are not "true" or "false", but rely on agreements and on the backgrounds of the people who use them (for further details see Schönwandt, 2002).

An example from the workshops mentioned above is the definition of "age" regarding sensitivity against heat. During the discussion it turned out, that not the age counted by years is meant, but an umbrella term that cumulates certain attributes related to the heat sensitivity, i.e. lack of fitness, being bed-ridden, poor living situation, dehydration, lack of air condition in retirement homes, social isolation etc. Because the data collection is less costly for only a single indicator these attributes are summarised and ascribed to all people at the age of >75 years (PIK, 2005). In this way, the relevant data can be easily collected from the statistical offices and forecasted by demographic scenarios. However, for architects and planners this low level of granularity is a disadvantage because it hinders the development of suitable measures aligned to the more detailed attributes mentioned above, for example installation of air condition, physical training of elderly people etc. Often certain disciplines, in this case architects and planners, borrow broad definitions from other disciplines without being aware of the potential for further solutions if a more detailed level of definition would be used.

Hence, it is important to find the appropriate level of granularity for each discipline, in order to sharpen up communication in international and interdisciplinary projects and to reach successful cooperation and results in planning processes. With increasing complexity, this is even more important for strategic planning processes towards urban resilience.

Ad c) A planning approach comprises a set of four bonded and interdependent components: the problem(s), the objective(s), the method(s) and the specific background of a planner, particularly his/her ethical positions, values etc. (Kuhn, 1981; Bunge, 1996). Planning is never based on objective world views, as these depend on the observer and his/her point of view – the "glasses" through which planners see a given situation. According to the paradigmatic approaches of their discipline, planners construct the problem, the factors that cause a problem and the deduced strategies and measures in a discipline-specific way. This professional bias leads to the narrowing of perspectives since each planning approach only allows for a limited range of problem definitions, objective settings and problem solutions (Schönwandt & Voigt, 2005). Moreover, planning approaches can transform over

time, when the underlying philosophical and ethic positions change. For example, Davy (1997) discussed the controversial viewpoints of "social justice" and "liberalistic justice" (Davy, 1997) that affect many planning topics regarding the living conditions in regions and municipalities. Such paradigm change often modifies the understanding of planning and the development of strategies and measures.

To exemplify this, we revert to the example given above with regard to problem definition (ad a)), where the diverse viewpoints on the value of nature play an important role. On the one hand, there is the position that nature possesses an intrinsic value and men should protect nature (see above the protection of a certain arboreal range of species). On the other hand, there is the position that men are superior and nature presents a useful resource to him (forestry and wood-working industry). These opposed positions illustrate the diversity of values and how they influence planning (see also fig. 3).

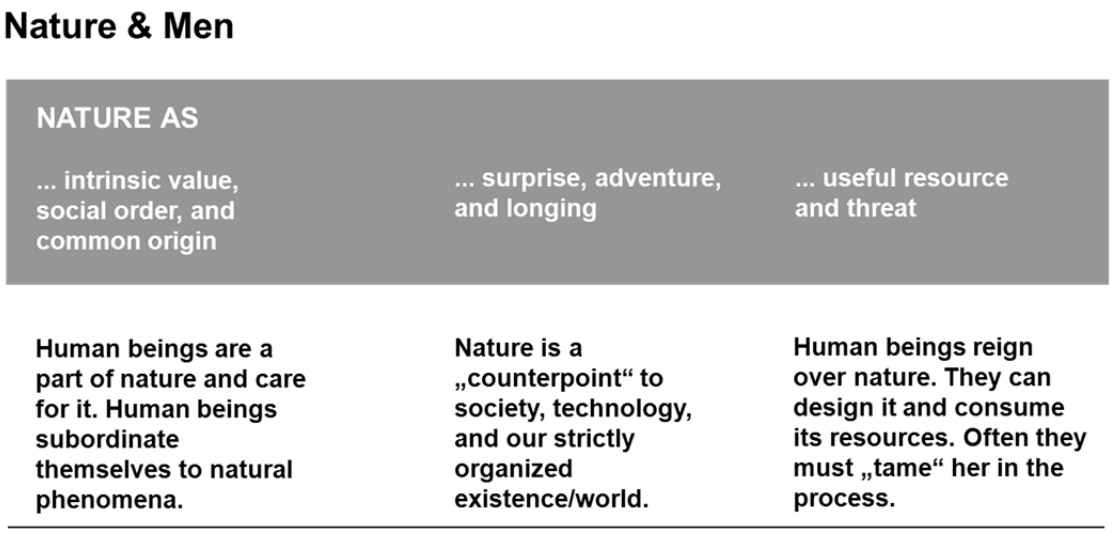

Fig. 3: „Nature and Men" (Gill, 2003, p. 54; modified)

With these three initial planning tools – problem definition (comprehension of the situation in the "planning model" above), key concepts, and planning approaches – cultural differences go along. As shown above, they can be a source of misunderstandings between different stakeholders in planning processes.

4. Cultural Determinants of Strategic Planning Processes towards Urban Resilience

There are several links where cultural issues interact with the pursuit of resilient urban areas and societies. Facing the challenges of climate change adaptation and urban resilience, innovative strategies and measures are necessary. With the

increasing number of stakeholders and interests included the complexity of strategic planning processes increases significantly. The cultural factors that determine these strategic planning processes can be summarized as follows:

a) the background of the individual resp. group of individuals involved (education and profession, mental models, values, attitudes, interests) - see workshop examples above;
b) the interaction of the personal and social identity, the belonging of an individual to a certain group, and the "collective memory" of a society influenced by historical experiences and traditions – these issues and their influence on spatial planning processes has been studied for example by Hasselsberger (2010) who analyzed two regions at the Austrian-Slovenian and the Austrian-Italien border (cf. Hasselsberger, 2010).

In addition, with regard to strategic planning processes towards urban resilience other cultural factors become apparent:

c) the institutionalization of values in planning processes (legal framework, rites etc.);
d) the political will for adjustment and innovation; and
e) the cultural context in which a planning process takes place.

How diverse the latter is in different countries and how much this determines the basic pre-conditions for strategic planning can be imagined if we look for example at the different education systems that provide (or does not provide) knowhow and skills to the stakeholders (cf. OECD, without date). Another determinant is the sense and handling of time which differs to a large extent in diverse cultures as it has been studied for example by Levine (2004) who analyzed the speed of pedestrians in different cities around the world (cf. Levine, 2004). Summing up, both aspects – education and sense of time - will certainly influence the way, how the stakeholders involved can develop and implement strategies and measures towards urban resilience.

5. Conclusions and Outlook

Based on the planning model of the "third generation" (Heidemann, 1992; Schönwandt, 2002) and the "cultural values model" (Stephenson, 2008) as well as on the definitions of the core concepts (culture and resilience), this paper explicates how cultural differences, both in terms of ethnic and discipline, influence strategic planning processes towards urban resilience. Examples from workshops with practitioners illustrate this issue. Moreover, certain tools are introduced that show how international and interdisciplinary cooperation can be enhanced.

From the aspects outlined in this paper it can be concluded, that if spaces often form physical barriers for a certain behavior, multiple planning cultures add yet another barrier to planning processes, because they steer the thoughts and actions taken. Planning cultures always comprise a set of social perspectives of a problem, the

envisaged objectives, the methods used to solve a problem, and the ethical positions and moral concepts of the stakeholders involved. With cultural plurality these elements of planning cultures are going to increase.

Due to the cultural plurality as well as the multilayer structure, processing, dynamics, and interrelation of components, strategic planning processes towards urban resilience are getting more and more complex. This concerns both the tasks of spatial planning as well as the framework conditions. The latter includes the multiple planning cultures which vary according to ethnical, discipline-specific, value driven, historical and other factors. According to each planning culture the action a planner takes will differ. Particularly with regard to complex problems, such as the interdisciplinary planning of a resilient city, the high diversity of planning cultures needs to be paid more attention to. Because more and more disciplines and thereby planning cultures work on more complex and cross-linked planning problems.

In this process, certain cognitive tools and thinking approaches can help to put away or at least to diminish cultural barriers and further obstacles. For example, the professional bias regarding the value of nature certainly impacts the planning result. Finally, for planning processes, political decision making, as well as international and interdisciplinary cooperation this means that

- more effort should be spent on cultural awareness in planning and decision-making;
- planning processes must consider more intensively the diverse backgrounds and approaches of the stakeholders involved;
- possible misunderstandings and barriers must be traced right from the beginning of a planning process;
- beyond the tools and approaches mentioned above, further work techniques and ways of proceeding should be researched in order to avoid such misunderstandings and to initiate learning processes among stakeholders;
- a paradigm change in society needs to be fostered that assess cultural plurality as enriching and a potential basis for innovation.

However, open questions remain that need to be further explored:

- Can urban resilience really be attained by (formal) planning? Or is it the result of a sum of determining factors including culture that can hardly be influenced?
- Are there groups of stakeholders, e.g. certain professions or ethnic groups that present typical mental models, interests, attitudes, and values? And how do these components of diverse planning cultures affect the thoughts and action of these stakeholders?
- Which policies and best practices to achieve urban resilience are already used in different regions and countries and how are they evaluated?
- How probable is the development and implementation of an integrated transition strategy towards urban resilience against the background of diverse cultures and approaches?

These questions and other topics will be further studied in the ongoing research projects COST IS1007 "Investigating Cultural Sustainability" (www.culturalsustainability.eu/; cf. COST Secretariat 2010) and FP7 "TURaS – Transitioning towards Urban Resilience and Sustainabilty" (www.turas-cities.eu/; cf. Seventh Framework Programme 2011).

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REGIONAL PLANNING FACING GLOBAL CHALLENGES: ISSUES AND PERSPECTIVES IN THE ITALIAN CASE

Giuseppe De Luca[°] e *Valeria Lingua*[°°]

1. Introduction

This paper focuses on the models and practices of regional spatial planning activated in Italy in recent years, in order to evidence the innovations that occurred and challenges that Regional planning institutions are facing. Just after the devolution of local power in Italy in 1977, spatial planning competences began being organized into Regional Institutions. Each of the twenty new Regions must make a Territorial Regional Plan (Piano territoriale regionale) together with a Regional Landscape Plan (Piano paesaggistico), possibly in connection with a Development Regional Program (Programma regionale di sviluppo).

The first experiments in regional planning, carried out in the 1980's and 1990's, have led to the formation of territorial plans with an indicative planning setting, the development of special regional areas, and the planning of infrastructure, such as road networks and railways.

The new millennium opened with two important changes that have considerable influence on the nature and form of regional planning:

- the amendment to Title V of the Constitution (2001) that, by incorporating the principles of subsidiarity, adequacy and differentiation, has reversed the institutional hierarchy in favor of municipalities, making it urgent to reflect on the role of the Region and its planning territorial instruments;
- the approval of the National Landscape Code (2004), which has modified the landscape issue in the statutory of national and regional regulation.

These changes have generated important revisions of legislation at the regional level. A review of the regional spatial plans reveals that although the plans have different forms and work according to different timelines, they address one common need: to overcome the traditional approach to regional planning system with a set of innovations.

In this direction, the latest experiments abandon the traditional approach to regulatory coordination, turning to a regional territorial plan . A mixed model, characterized as strategic, structural and operational at the same time, the regional plan is required to convey an idea of the future, a common goal, and a shared vision. It is supported by a set of guidelines for the protection and enhancement of the elements of identity in the region and is made explicit in specific territorial projects. From a multilevel governance perspective, the local and provincial bodies are called on to share and specify both the regional

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scenario and the operational scenarios. This specification must also be accomplished through the coordination of bottom-up and sector-based planning in terms of coherence and conformity to the directions defined at the regional level.

Together, various cases of recently formalized planning (Veneto, Emilia-Romagna, Lombardy, Tuscany), some cases-in-progress (Friuli Venice-Giulia, Piedmont), and the case of an interregional experience of coordination of regional spatial strategies carried out by eight Regions under the name of *Padano-Alpine-Maritime Area* can provide a framework for these reflections.

The paper addresses these innovations.

2. Nature and form of the new Italian regional planning

Through experiences in regional planning coming to fruition at the turn of the late 1990's and the new millennium, we can identify three major trends:

- the first, expressed mainly by Regional Territorial Plans of the Valle d'Aosta and Umbria, seems to still be strongly anchored to the model envisioned by the traditional Law no. 1150 of 1942: a unified plan to coordinate and address, giving an overview of the issues of territorial government, through a subdivision of land for fields and an explanation of the program lines in the region, in close connection with the regional program development
- the second, a strategic concept of regional planning, is made explicit through the construction of shared vision and cooperation of the scenarios of perspective, as in the case of the Territorial Indicative Plan in the Marche Region and/or of the Piedmont Regional Spatial Plan
- the third, a structural approach to regional planning, is one in which the regional plan is considered a real "warranty" actor for all of the choices which are considered to be priorities for the land, landscape and environment. The indications of the plan are aimed to build consensus among the institutions in order to ensure resource quality and resilience of the reference system. This approach is developed in the experiences of the Tuscany and Liguria regions.

These three trends give rise to different forms and characters of the regional plan, as well as different modes of interaction, each having various limitations and opportunities.

All offer meaningful forms of interaction: the first, a hierarchical system, allows a clear distinction regulatory apparatus which enables public and private entities to have a clear awareness of their responsibilities and the scope of their autonomy. The second involves the construction of a coherent vision of the region among the various institutions, reinterpreted in a unique strategic vision. The third identifies factors to be considered as spatial structures of territorial identity (be they physical or intangible resources, social or cultural capital) and, as such, be subject to rules and performance criteria to allow for protection and reproducibility over time.

In all cases, the interaction required to give form to the regional plan involves critical issues: the joint rules of the Regional Territorial Plan of the Valle d'Aosta and the Regional Territorial Plan of Umbria assume that all of those involved in the governance of the territory are cooperative and willing to work together. This is because the objectives are not local, but

are of general interest. It also requires that the regional and local authorities take an active and constructive role in the process of transformation and development.

In the case of strategic regional planning, the likely limits are related to present interests within the political market, without taking into account possible future interests. While moving away from more traditional territorial coordination plan, in fact, collective interest can be considered as pertaining only to the interests of so-called "strong", that is, those who are organized and structured.

Structural regional planning also tries to consider the interests of the weaker parties. This gives rise to an instrument consisting of a set of elements characterized by the nature, dynamics and different degrees of uncertainty and inconsistency. As a result, the instruments sometimes penalize the design aspirations, reducing them to tools for defining "structural invariants".

However, the latest plans, newly approved or soon to be adopted, appear to show a decided movement toward the reconciliation of these trends in the same instrument landing. A new trend may herald the desired formation of a mixed system of planning that contains within it both structural and strategic elements.
The "mixed" nature of the regional plan seems to resolve the dichotomy between strategic and structural planning which is highlighted in the experiences at the turn of the 20th century and the beginning of the 21st century. Rather than being considered an element of incoherence of a structural plan, the presence of elements with cogency and different degrees of uncertainty creates a point of strength when inserted in a strategic plan. The term strategic refers a sharing process which helps define a shared regional vision. It also refers the product of such sharing, that is, a plan which is broken down into strategies, goals and actions to be followed accordingly, in a more or less prescriptive manner.

In this sense, it is possible to find consistency between a strategic vision which is more focused on economic development and visions which are more oriented to the protection and enhancement of the environment and landscape.

Most recent regional plans, therefore, are not only strategic or structural, they have a mixed valence in which there is predominant tendency i towards a balance among the different natures. Balance that comes from "eclectic" processes of formation of the regional facility, which offers some form of institutional cooperation, participation and inclusion of very different interests, results not only in creating regional legislation, but also the political and technical imprint given to the plan.

In relation to finding a balance between the three dimensions of the regional planning (strategic, structural, land-use oriented), we will highlight some common issues and experiences in the emerging regional planning in progress, all converging towards the identification of appropriate forms of cooperation:

- the construction of strategic vision with multimedia tools and methods, as is reflected in a plan aimed at defining the vision, objectives and actions that revolve around the strategies outlined in the form of intriguing slogans (as in the case of Emilia-Romagna and Veneto) and involve the interests increasingly marked by experiment, in addition to traditional instruments (Lombardy), and modes of participation involving citizens in a broader sense (Veneto, Apulia, Tuscany).
- the relationship between spatial planning and landscape planning, which assumes very different shades because of how the two dimensions are conceived in the regional legislation. The regions, in fact, may choose to provide a landscape plan in addition to the regional spatial plan, or they may choose to merge the two

dimensions (landscape and territory) within the spatial plan. In any case, to avoid the excesses typical of strategic planning (non-inclusion of weaker interests and future interests), the identification of identity elements (structural invariants) and the definition of strategies for the protection and enhancement (landscape quality objectives and guidelines) involve a wide cooperation and the capability of acknowledging and addressing the complexity of territorial interests.

- finally, the operation of the plan is resulting in the identification of design areas at the regional level (Lombardy, Marche, Campania, Liguria) which are able to stimulate public interest and private agencies, both in terms of the local practices of area-wide planning (inter-municipalities, unions of municipalities, etc.) and through the identification of possible areas of inter-institutional cooperation (Friuli Venice-Giulia, and Piedmont).

The current experiments evince a new turn towards co-planning, and while the activation of widespread participation practices is still in an embryonic stage, there are episodes of great interest. In particular, the theme of the landscape seems to imply a close search for consensus on the resources to protect that, at the regional level, requires more consideration of both the weaker and more general interests. It should be noted, in light of the first experiments, that the regional level necessarily implies a selection of interests and actors through a process which can occur in several ways:

- through self-selection, when meetings, conferences, etc., are called which involve institutional entities, citizens and associations. As already noted for conference services, the very act of attending the conference and presenting the plan would entail the consideration of its contribution, while non-attendance has the value of self- exclusion
- randomly, when the process is based on the extraction of a larger representative sample of participants, as in the case of the town meeting
- through a combination of the aforemented approaches, for cases in which sample-areas and pilot projects are identified, and the use of localized participatory practices is activated.

Finally, the operation of the instrument is one of the main characteristics of the newest generation of the regional territorial plan. This involves implementing strategies which more and more oriented to the identification of contexts for regional or thematic projects.

In most cases, the regional level foreshadows programs and integrated projects covering a range of topics and areas of particular weaknesses and particularly problematic. If at first, this orientation to the project seems more evident in those plans that promote a strategic approach to planning, it is now an integral part of most more recent regional plans. Already, the regional territorial plans of Liguria, Marche, Umbria and Campania provided for an extensive use of operational tools with multiple definitions and objectives (regional initiative projects, pilot projects, integrated projects, project areas in the Regional Territorial Plan of Liguria, shipyard projects in the Marche region, field projects in the Campania Regional Territorial Plan, and plans and programs in the Umbria Region). Today, the latest plans make extensive use of tools and programs that include character design, as well as inter-institutional cooperation and the intervention of the private sector.

It is clear that the identification of areas of regional planning involves the activation of a direct relationship between the region and the specific interests that focus on the design theme identified on the scope or area defined in the plan. Strongly related to this way of understanding the operation of the plan, through thematic or territorial projects at the

regional level, is the identification of areas for for intervention or co-planning above the local level.

In some regions, in fact, there is an evident link between territorial cooperation and the operation of the regional plan, for which the identification of geographical areas based on historical characters, and socio-economic identity is not only aimed at the specification of objectives and policies of the plan, it is also the basis for how to activate co-planning and institutional cooperation. It is the case, for example, in the Piedmont Regional Territorial Plan (PTR), approved in 2011, which identifies 33 Areas of Territorial Integration (AIT) and defines them as supra-regional systems. These areas represent the aggregation of systems against economic social, and territorial decline.

To these areas, the plan takes an compliant approach to urban spatial planning , in order to provide for "government guarantees" (environmental protection, standards, monitoring tools, etc.). This is a multilevel governance which activates a process of interpretation-design-decision to be implemented both in each regional system and at the local level. Decisions may result from governments' specificity, from traditions and from values expressed by local communities.

In summary, the current experiences show a common issue related to the possibility of implementation of the regional plan: the strategic vision conveyed by the spatial plan necessarily requires an effort of integration among policies for large areas, including financial policies. The Regional Spatial Plan, in fact, suffers from two problems. Firstly, it needs to include estimates of regional development in a framework that offers increasingly globalizing trends. On the other hand, the regional plan is affected by difficulties affecting some industries more than others, difficulty reconciling the need for effective correspondence between the policies of the regional plan and the provisions of the Regional Development Plan (PRS). The political will to implement certain actions rather than others still determines the emergence of the strongest themes (mobility, living, renewable resources, etc.), since they are better funded and supported at the political level, as opposed to issues such as weak rural areas and the landscape.

In this case, the experiences in Tuscany and Piedmont seem the most interesting while the regional program development one developed in Apulia is more strongly bound to the political landscape with.

The years 2007-2013 were marked by a strong period of ~~of~~ hybridization between the two dimensions in the construction of regional strategic frameworks. While in some regions (Emilia Romagna and Lombardy), the strategy was built through policies and actions related to the programming of resources to planning, in other cases (as Tuscany, Umbria and Marche) the strategies were built together, so there has been a real territorialization of policies. Throughout this last experience, however, the relationship with the State has been inconsistent and sometimes it did not take into account both the national strategies and the possible interregional strategies.

Despite being characterized by advanced tools, spatial planning systems (Plans and regional) of the regions of central Italy failed to generate a collaborative process. Collaboration was not possible even when the Ministry of Infrastructure and Transportation had proposed "regional platforms" as strategic areas of cooperation, within the *National Strategic Framework 2007-2013*.

3. Horizontal forms of governance: the inter-regional table of *Padano-*

Alpine-Maritime Area of the North Italy

The definition of an interregional experience of coordination of regional spatial strategies was mainly driven by the need to shift some weight away from the European context. The approach can be considered a particular and significant one for the evolution of the regional plan in Italy: the process of collaborative governance organized around an Interregional Table which aimed to develop a Padano-Alpine-Maritime Zone in Northern Italy.

The Interregional Table was created in 2007 and included the regions of Veneto, Emilia-Romagna, Friuli Venice-Giulia, Piedmont, Lombardy, as well as the autonomous provinces of Trento and Bolzano. It served as a moment to capitalize on the institutional learning conveyed by their participation in the EU's Metrex network. This new cooperative form was intended as a technical working community, firstly aimed to build a shared cognitive framework within which strategies could be generated for the sustainable development of the first so called "Adria-Po Valley".

The Interregional Table is a committed that was designed to identify a system of coherences and to promote the competitiveness of the regions concerned, both in the new context of European development and within the media planning. In practice, it was created as a space for discussion and exchange of knowledge in the process of construction of instruments of regional planning, with the aim of promoting, on an ongoing basis, initiatives for the comparison of relevant inter-regional issues.

The Interregional Table also aimed to acquire a role as a forum for the sharing of a common position regarding the construction of the Territorial Agenda of the European Union, an agenda which is also based on the sharing and dissemination of results of trans-national and trans-border cooperation activities .

This committee, politically motivated, is supported by a technical committee which prepares materials and activities for the Interregional Table itself: in fact, after the signing of the Charter of Venice, it soon became clear that the real promoters of the Table were those of the technical regional administrations, appointed for the formation of governmental instruments for the territory (regional territorial plans and regional landscape plans).

The Interregional Table forAdria Po Valley was then immediately established for a "technical discussion", in which the revision of spatial planning instruments became the common theme of the exchange. Many regions were preparing the new regional territorial plans and this forum facilitated comparison during the meetings, as evinced by the themes for discussion: «the protection and enhancement of the natural environment and the strengthening of the economic system and the networking of excellence; the development of cities as engines of the future; strengthening the connections and intangible assets; the promotion of innovation activities and research and the promotion and enhancement of best practices to reduce energy consumption and combat climate change» (Interregional Table, Venice Charter, 2007).

The first results of this experience, presented in July 2008, led to the creation of three landscape- related charters for a shared vision of the Padano-Alpine Area, concerning the system of ecological structures, the layout of infrastructure networks and the system of urban polarity.

This vision was built expressly to form an intermediate level of knowledge between the European level (usually borrowed from the ESPON program) and the regional level. For this purpose, there has been an analysis of the area of the relationships and influences of some urban centers and infrastructure systems and systems of other nuclei and, in general, the

spatial contexts of belonging, which often go beyond the regional borders. The vision, which has been defined as a “gentlemen's agreement”, was inserted directly in the planning tools through a sharing process at the technical and political meetings, which were held in each region. Between 2008 and 2009, those regions with more active participation have formalized their instruments: Veneto, Emilia-Romagna and Lombardy have received approval, and Piedmont has adopted the plan. In all cases, the scenarios prepared have been incorporated into the plan, particularly in the cognitive frameworks.

The year 2009 is considered a stagnant period, due to a change of legislature in almost all regions which led to a lack of sharing at the political table. After launching a committee which emphasized balance between politicians and lobbies at the European level, the political participation (and therefore the interest) seemed to slowly wane. The technical component, however, continued to meet regularly, both for the promotion of initiatives in cross-border and transnational cooperation (participation in tenders ESPON and Interreg), and for the sharing and dissemination of the results of project activities. In addition, interregional coordination (in its technical component) has been indicated as a reference for the ministerial committee appointed to integrate the requirements of the Leipzig Charter.

The technical component has thus promoted the continuity of the committee, which first took the political path on October 12, 2010 through the signing of the *Pact for Sustainable Development of interregional Padano-Alpine-Maritime Area*, and then through the signing of *Bologna Agreement*, January 27, 2012. In fact, a new program of committee activities is set to begin under the new administration , based on the following objectives:

- promoting the area of the Mediterranean basin as the most important macro-region for central Europe (with its 120,000 square kilometers and 27 million inhabitants, the production of more than 54% of Italian GDP, the largest share of research and for its innovation)
- sharing policies for the regional territory and the landscape, through the definition of strategies and objectives for the recognition of the importance of macro-alpine region of the Po Valley in the European context and at national level, in particular relating to landscape matters
- implementing coordination in the strategic planning of large areas, which comprises development, environment, landscape, location of major functions and infrastructure, defining common rules to ensure efficient use of resources, and the containment of land consumption
- building a map for landscape identity in order to link the policy of protection and enhancement of landscape with strategic environmental assessment
- spreading good practices.

The final goal, therefore, is the certainly the need to transform a common vision (at the time, more oriented towards knowledge than to projects) in a model of self-representation and of a strong and valid territorial marketing in order to compete in the European space.

It is necessary that this vision be reinforced by other Italian regions, especially those of Central Italy, even if it is not yet fully realized.

4. Conclusion

The focus of the paper are the theories and practices of regional spatial planning activated in Italy in the last 20 years, in order to evidence the innovation which occurred and the challenges that regional planning institutions are facing.

Compared to a theoretical framework and regulatory environment that tends to separate the different areas of planning (landscape, land, cultural heritage), the evolving experimental framework outlined by the most recent experience of regional planning is characterized by pluralistic approaches in which, in the face of the widespread use of strategic rhetorical orientation, different aspects of planning seem to prevail at various times (alternatively, strategic, structural, or both).

The new regional plans, therefore, are not only strategic or structural, but have a mixed valence in predominately striving for a balance between the different natures. The balance comes from eclectic training processes of regional facility, which offer some form of institutional cooperation, participation and inclusion of very different interests, resulting not only in regional, policy and technical legislation, but also the political and technical imprint given to the plan.

The problems of consistency of views on the one hand, and social equity and distribution on the other, seem to find a synthesis when the following elements are identified within the same regional territorial plan:

- a vision for the future with fewer in strategic objectives, so the nature of the regional plan has a long-term time horizon
- structural elements which are required for performance and quality criteria, with medium to long- term horizons, especially in reference to the system of landscape protection understood as a cultural product and identity;
- operative projects and programs that collect instances of the territory of the meeting and therefore involve a feasibility of short-medium term.

In a context dominated by globalization, the future vision, as well as operational programs and projects, necessarily require a leap in scale that allows for movement outside the regional boundaries and into to macro-regional areas located in a specific European space. In this sense, regional authorities have already recognized that the notion of 'legal region' is weak; and that a new "soft" association is the future strategy. In this context, interesting examples of intraregional and interregional cooperation are maturing: the example of the Interregional Padano-Alpine-Maritime Area in Northern Italy is one that has possibilities.

The experience has provided a unique opportunity to activate a process of co-planning at the supra-regional scale- planning that is characterized as bottom-up and not imposed from above. The simultaneous preparation of spatial plans in each region allow for the representation of the area as macro-region through a shared vision and common indicators. At the same time, it allows regions to work together on common themes, translating them into a set of skills and strategies that have a common language for all the regional instruments.

However, the potential of this approach does not seem to be fully explicit: the regional planning documents, for the most part, treat the vision as a piece of a cognitive framework, without a real inclination to the project. This is due to the lack of an approach geared to action, which will lead to an , effective coordination expressed by the various plans, if not an actual strategic plan. While this coordination is indicated in the objectives of the new cycle of the Interregional Table, it should have emerged earlier during the phase of drafting the instruments- instruments that are by now institutionalized and, therefore, not subject to

revision.

If this weakness emerges at the national level, within the EU, it is likely to be amplified. The degree to which weakness will be amplified will depend on the nature of cooperation, the size and characteristics of the partnership, and relations with the European Union.

To free itself from the characterization as a community-based project and really project itself in Europe, against the local marketing done by creating a shared vision, there should be a strong political marketing operation of the committee, to boostits value and capability as an instrument of interregional co-planning in the broader landscape of European development...

In this sense, institutional arrangements for the partnership must be established. These may be based the European model of the EGTC, or even without creating new institutions, as envisaged in the recent macro-regional experiences. Such arrangements will give legs to the table, through formal agreements on inter-regional strategies that are able to project Northern Italy in the the competitive system of the European Union.

The other regional experiences seem too weak and little prepared to set up macro-planning experiences in Central or South Italy. In this sense, only the Northern macro-region, which has already taken wing, can be a real example of competitiveness in the European system.

Competition must be built, nationally and across regions, through a substantial effort to integrate the regional spatial planning and development policies so that there is a profitable relationship between local-regional and global.

In this framework, the Regional Spatial Plan can play a key role in providing a regional development strategy for the next season of the Structural Funds (2014-2020. It is the tool that - when integrated with the Regional Development Plan - can provide a territorialized vision of development strategies, to meet the objectives of territorial cohesion with place-based strategies (Barca Report, 2009) and inter-regional strategies, based on shared projects and geographical areas that go beyond the institutional boundaries.

To take on this ambitious task, the Regional Spatial Plan can only assume a cooperative nature, made explicit through processes marked by inclusiveness and capable of :

- systemizing, the different options of the regional government, in particular the different interests and the different governing options they have pursued;

projecting these options into the broader framework of the relevant macro-reference area (in Italy we can speak of north, central or south) through inter-regional planning experiences like that of the Po Valley -Alps-Maritime. A thorough national strategy based on its regional cooperation will facilitate entrance into the system of European territorial cohesion.

Stronger political support, as well as the development of innovative practices provided by operative interregional projects, can play an important role in improving and strengthening the interregional tables, leading to a real cooperation of a scope in which geography and economy converge to develop the necessary requisites of competitiveness and sustainability in an European and global panorama.

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URBAN POLICIES AND PLANNING DURING THE GREEK DICTATORSHIP (1967-1974). CONTINUITIES AND RUPTURES IN POST-WAR DEVELOPMENT OF THE GREEK CITY.

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1. Abstract

The Greek dictatorship has been a particular form of authoritarian regime. Many scholars question its totalitarian dimension and underline its military and oppressive character and its ideological contradictions. Its ideological premises were mainly shaped by post-war Greek-orthodox nationalism and a vague idea of economic modernization. Expressing certain interests of economic elites as well as the need for political legitimization, the regime appeared as the guarantor of capitalistic growth, promoting the idea of a private-sector-driven economy. The spatial consequences of such a political agenda have been crucial.

The dictatorship influenced in various ways the identity of Greek cities, their built and cultural environment. With the country already going through a phase of unprecedented economic growth and intense urbanization, the major role of the construction sector in economic activity was further promoted. An overproduction of legislative regulations, resulting in the loosening of public control, encouraged the intensification of investments of small and large capital in land and construction. Cities expanded, densities and building heights increased, industrial complexes and huge hotel buildings rose in ecologically sensitive areas of the country. Regarding urban planning, the regime's contradictory ideological background favoured a variety of proposals, from those reflecting a superficial perception of local identity to strictly technocratic ones.

Through an interdisciplinary approach, the research seeks the connections between the socio-economical, political and cultural transformations of the time and the mutations in urban theory and planning. In this context, it approaches the specific dynamics of the urbanisation process and the new trends in urban space production, by using material from the public discourse-media, bibliographic sources and planning projects of that time. The central question regards the continuities and

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discontinuities in urban space production related to the violent political change from a democratic state to an authoritarian regime. Did the conditions for planning and implementing plans change and in what way? What has been the actual role of planners and the scientific community in this context? And, finally, in what ways have the policies of the dictatorship affected the public discourse on the city and planning in particular, after the return of democracy and during the period of democratic consolidation?

These questions refer, on the one hand, to the particularities of the historical and geographical context of Greece in the post-war period. On the other, they provide some key elements for discussing critically the political nature of spatial transformation, an issue highly important today.

2. Introduction

This paper is part of my ongoing PhD research on the crucial, for the Greek urbanisation process, post-war period, focusing on the years of the dictatorial regime, from 1967 to 1974. In the following pages, I will try to give an outline of my research plan and my theoretical and methodological choices. My focus here is on discussing the existing historical/academic knowledge for the period, on presenting the main questions that arise from a critical perspective of our recent history and on proposing a research process for answering these questions. Finally, I will give a brief outline of specific case studies so as to describe how this research framework is applied in certain cases. I should also note that since my research is still in progress, the paper has a "non-finito" character and the conclusions are more likely to be questions open for discussion.

2.1 Post war period and the urbanization of Athens: a general context.

Before moving to the issues described above, I will give in points a general framework of the first post-war urbanization of the Athens area. My emphasis is on the processes and dynamics I consider important for understanding the urban transformations and the planning ideology and practices, during that time.

Despite its ancient history, Athens as an urban system did not have a continuous, "glorious" history in time. The urban complex of Athens is actually a new city, built, mostly, during the 20th century and the post war decades (Biris, 1966). During that time it expanded rapidly, and to some extent uncontrollably, due to massive internal migration for economic and political reasons.[2]

[2] For demographic data, tabulations and mapping of the post war urbanization of Athens see the official source of the National Statistical Service of Greece (NSSG), and the work of research centres like the Center of Planning and Economic Research (CPER), the National Center of Social Research (NSGR) or the Athens Center of Ekistics (ACE). Lila Leontidou gives in her book on the urbanization of Athens a fascinating description of Athens' changing geographies by combining

This demographic and spatial transformation happened amidst an unprecedented dynamic of economic growth, starting in the early 1950s and lasting for almost two decades, until the international crisis of 1973. An extensive program of public investments in basic infrastructures steamed a particular process of spatial and economic modernization, while new fields for private investments opened in tourism, industrial activities and the service economy. The construction sector and the housing market obtained a central role in this process (Antonopoulou, 1991; Stathakis, 2000; Iordanoglou, 2003). Although the Greek "economic miracle" resulted in an overall rise of economic indicators, it also led to various forms of social and spatial imbalances, expressed in all different scales, from national territory to particular urban areas. As Lila Leontidou notes

> "Greece developed not through the organic transformation of indigenous productive forces, but from the penetration of capitalism of developed countries. This produces a polarization of its economy expressed in the national territory and intensified in the last 50 years. […] We witness in Greece a process of economic polarisation which is the exact opposite of the process of rationalization observed in the West." (Leontidou, 1977)

Important characteristics of Greece's particular modernization process have been the co-existence of a "modern", "formal" economic sector with a "traditional", "informal" one: the first, represented symbolically by large scale capital investments in public infrastructure, industry or energy production, while the second by a highly dispersed, small scale, private entrepreneurialism. These two "economies" developed over time a variety of interrelations and along with the administrative role of the capital city, explain Athens' strong attraction to new populations. It is not my intention to describe the structure of Greek post-war capitalism at this point, though its understanding is a precondition for discussing the state's spatial policies. I am referring instead to the crucial differences of Greek regional and urban structures from the cities of western or northern Europe. In the case of modern Athens the role of informal economies, of small scale land ownership and small construction capital has been decisive.

The rapid urbanization of Athens (and secondly Thessaloniki) has been a significant, though neglected by traditional economic research, factor of the "Greek economic miracle". According to recent research, its role in boosting the Greek economy, by channelling small and medium size capital in a chain market that involved from construction-materials industries to small time contractors, technicians, workers etc, has been crucial (Stathakis, 2000). In Greece, like in many countries of the "south", urbanization did not come as a consequence of the concentration of economic activity, but, rather reversely, through the concentration of people and capital it created the conditions for economic growth. This particular nature of the Greek post-

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statistical with qualitative data and by emphasizing on strategies of allocation, and social and economic segregation (Leontidou, 1990).

war “urbanization without industrialization” is a key in understanding the state’s spatial interventions and policies over time (Leontidou, 1990).

Under the pressuring needs of this social, economic and spatial transformation, a “planning ideology” gradually gained support, initially among technocrats, then in certain political circles and eventually in public administration (Vasenhoven, 1995). Special reference should be made to Konstantinos Doxiadis and his pioneering work on the post-war reconstruction programs from 1945 to 1951. These programs, though, were policies dealing with a state of emergency (Vasenhoven, 1995).Again, it was in the 1960s that this “planning ideology” was recognised as an element of official policy making. The Centre of Planning and Economic Research (CPER) was established in 1959, and in 1964 its objectives widened so as to include the preparation of short, medium and long-term development plans, regional plans etc.[3] Around the same time academic institutions like the Laboratory for Urban Planning Research in the National Technical University of Athens launched their first regional development proposals (Vasenhoven, 1995).

The possible futures of the growing region of Athens became a serious issue among specialists from the late 1940s, when Constantinos Biris and Doxiadis presented their first proposals. In 1959 Professor Prokopis Vasileiadis was assigned to elaborate the Regulatory Plan of Athens and in 1960 Doxiadis presented his first plan for Athens implementing thus his theory of “Ecumenopolis” (Technical Chamber of Greece, 1974). In 1964 the American firm Wilbur Smith and Associates was invited by the government to elaborate a Transport Plan for Athens (Sarigiannis, 2010; Mitaraki and Basoukea, 2001). An active society of planners, many of whom were transferring their knowledge and experiences from abroad, was growing, promoting the idea of a systematic regulation of urban space to administrative circles and the public. Numerous plans for cities around the country were presented from 1960 until 1967, and issues of urban development and planning increasingly found their ways to the technical press and the public media.[4] This public debate had its “symbolic moment” in the 5th National Conference of Greek Architects under the title “The Problems of the Greater Athens’ Area”, where the alternative and sometimes opposing scientific and political proposals were presented (AGA, 1974).[5] The conference took place in Athens in the winter of 1966 just one year before the coup.

[3] The CPER was established by Prime Minister and iconic leader of the Right Konstantinos Karamanlis. Karamanlis invited Professor Andreas Papandreou, from Berkeley California, to be the first President and Scientific Director of the Center. http://www.kepe.gr/EN_Pages/home.htm.

[4] For a presentation of this public discourse as well as some of the development proposals of the time see the 1977 Annual Review of *Architecture in Greece*, in the chapter City and Regional Planning in Greece - a historical survey.

[5] D. Filippidis makes a distinction between a “rightwing” and a “leftwing” planning ideology. The first constructs “ideal models of modernization and national development with a gigantic capital city as the symbol of progress and dynamism”, while the second, “isolated from the centers of political power”, either totally denies central planning or introduces alternative perspectives with an emphasis on decentralization, spatial justice, reorganization of production activity and redistribution of resources. The first is politically dominant through the 50s and the 60s and between 1967-1974, while the second appears in a coincidence with the periods of social movement and claims in the mid ‘40s

This intensive activity of the planning community was perfectly reflecting the general context of the time both in Greece and abroad. On the social field, the rise of the newly urbanised populations and the consequent changes in the production structure, consumption patterns and social expectations coincides with a wave of social, political and cultural radicalization. This wave made a dynamic appearance in the urban public sphere from the early 1960s, pushing for progressive reforms of political and economic life, and consequently leading to the destabilisation of the traditional political system.[6] It was interrupted in many ways by the coup in 1967, to return as a historical factor in 1973, and during the years of the democratic consolidation (Hatzivasiliou, Rigos and Seferiades, 2008) But when discussing the conditions that allowed the establishment of a planning community and ideology in Greece in the first post war decades, we should also consider seriously the international context. Modernization as "Europeanization" has been a dominant political and technocratic conception in Greece throughout the 20th century and this had a serious impact on the ideology and the practice of urban planning. It has been noted that Greek planning has been a systematic import of ideology, methods and practices, from the context of the "advanced West capitalism", to a social and geographic formation that has been the outcome of highly differentiated historical processes (Leontidou, 1990; Vaiou, Mantouvalou and Mavridou, 2000).

This condition created over time a particular status which has been described as a clear disparity between theory and practice, between the produced plans and the actual spatial transformations (Filippidis, 1990). The post-war urbanization of Athens has been a characteristic example of this "not planned" spatial growth. Despite the intensity of the city's growth and despite the highly elaborated proposals for a city master-plan even from the early 1960s, the first (and last) Regulatory Plan of Athens was established only in 1985. This mismatch would consequently lead us to a problematic concerning the actual role of the central state and the local authorities in the building of the Modern Greek city. And as I am not keen in adopting the popular simplistic concepts of the "absent or weak or incapable state", I propose that we should look for the alternative political and economic mechanisms that were introduced to handle urban growth.

2.2 "What for?" Some thoughts on the objectives of this particular research.

The aim of this short introduction is to highlight the complexity and the multiple implications of post war socio-spatial transformations in a country of the European

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and the mid '60s (Filippidis, 1990, p. 16). Although this distinction may be schematic, it describes a range of approaches characteristic of the scientific and ideological discourse of the time. This range of approaches was fully exposed in the 1966 Conference, in the form of highly elaborated proposals, a proof in all of the dynamism of the planning community at the time.

[6] It would be impossible to describe this progressive pluralistic social movement and the violent reaction of the coup without referring to the structure of political power and political representation that was inherited from the past and crystallised after World War II and the civil war that followed. A political state that has been described as a "cachectic democracy" (Nikolakopoulos, 2003) characterised by the systematic violation of political rights and a permanent status of institutional crisis (Alivizatos, 1986).

south like Greece, with a focus on its capital city, Athens. The main question of my research is what has been the role of the violent institutional change in this process and what have been the consequences from the implementation of the authoritarian regime to urban politics and planning, of the time. This question sets a theoretical challenge, since the thematic opens up equally to theories originating from various disciplines. It requires a conception of space as a field of social, political and economic relations with historical, ideological and aesthetical dimensions and not just as a technical construction. Additionally it refers to major discourses, like the spatial dynamics of modernisation in the countries of the "periphery", or the spatial politics of the totalitarian regimes of the 20th century. Therefore, I am following an interdisciplinary approach, drawing material and methodological tools from social, economic and political sciences and of course geography, urban history and theory of urban planning. I prefer the term "spatial politics" than the term "planning" as it highlights the profoundly political character of the post war urbanization of Athens and is in accordance with the fact that the city grew besides the norms of official planning.

Concerning the handling of historical time, the analysis uses the notion of continuities and discontinuities, which I find appropriate for deconstructing the popular and simplistic perception of the dictatorship as a "parenthesis" in our modern history. It is also a schema that allows correlations between different periods of recent history and thus introduces historical research as a critical tool for the understanding of contemporary and future possibilities (Hobsbawm, 1997). We could also see in this perception of history an implementation of the theoretical and methodological idea of genealogy that would translate here to a genealogy of post war spatial politics and planning ideologies.

In this context, I mention four reasons why I find the study of the dictatorial regime's urban politics, still fruitful for a contemporary discussion, in a "greek context", but probably in a comparative perspective as well:
- The first one being that it, obviously, highlights the socio-political parameters and thus the complexity of spatial politics and urban planning in particular. The coup d' etat has been arguably the most violent political rupture in the second half of the 20th century. A comparative approach of the authoritarian versus the democratic state offers an ideal context for the evaluation of the role of the central state in the production of urban space. What makes the story even more interesting is the contradictory evaluations of the period of the junta concerning urban and environmental issues.[7]

[7] The idea that the period of the Junta has been a "catastrophic" one, considering urban environment and the identity of Greek cities and natural landscapes throughout the country, is widely accepted and commonly expressed by the majority of professionals, academics and the public. At the same time, the opposite argument is commonly expressed by those nostalgic for the era and some ultra conservative social groups. The slogan "the Junta constructed roads and brought electricity to every village of the country", has been as famous as the one praising the "law and order ideal of the colonels". But we can also trace much more sophisticated "disagreements", which are right to the point of this study. Like, whether the period between 1967-1974 has been a "productive" one, concerning the reformation of the legislative framework and planning proposals (Filippidis, 1990), or not.

- Secondly, urban space as a material, social and economic field, still carries distinctive and in many cases binding elements of the regime's policies. Extensive urban areas in Athens and elsewhere have been constructed or transformed during the period of the Greek dictatorship, or due to legislative regulations proposed at the time. Certain legislative arrangements, even today, are rooted in the dictatorial period.
- In connection to the above, it is interesting to evaluate if and how the specific politics of the period of the junta have affected the wave of reformations that followed, in the period of the democratic consolidation and even later.
- Lastly, there is a theoretical and political aspect that surpasses the boundaries of the specific historical geographical context and is becoming highly important today, once again: it concerns the technocratic ideal of governance and its interrelations with different forms of political authoritarianism.[8]

In this direction, in my research I have been working on questions like the following:
- What have been the ideological background and the hegemonic complex of principles and ideas of the regime? In what ways has this background affected specific policies, especially the ones concerning spatial and urban planning?
- How did the constitutional change affect the process of designing and implementing spatial policies?
- What has been the scientific and political personnel involved in this process during the years of the dictatorship and under what conditions and terms have they executed their work?
- What kind of public consciousness and public dialogue around the issues of the city and spatial policies has been constructed?
- Finally, what have been the continuities and discontinuities in the field of urban policies, considering the preceding period and the one that followed immediately after, during the years of the democratic consolidation?

Another reason for working on this thematic, one that I consider really important, is a clear historiographic interest. I could even describe it as a sense of "historiographic duty", as there is hardly any attempt of documenting historical information for the period. Very little research has been done on certain policies, on the process of producing and implementing spatial planning, on the specific political and scientific actors involved. There is minimum academic work and relevant literature, with the exception of dispersed references in general studies for the Modern Greek city.[9] Furthermore, Greek historians and political scientists (among others Konstantinos Tsoukalas, Ilias Nikolakopoulos and Christina Koulouri) have pointed out that this lack of historical knowledge for the junta is a general phenomenon and that the

[8] We could examine, for example, how the heterogeneous works on reactionary modernism (Herf, 1993), totalitarianism, "Bureaucratic Authoritarianism" (O' Donnel, 1977), "Authoritarian Statism" (Poulantzas, 1980) find meeting points with the problematic of the democratic deficit in "neoliberal times" (Harvey, 2005).
[9] Again, particularly interesting information is provided in the work of Lila Leontidou (Leontidou, 1990), and that of Dimitris Filippidis (Filippidis, 1990)

period of the dictatorship is, from a historiographic point of view, one of the darkest periods of our recent history. According to Christina Koulouri:

> "Up to this time, the approach of the dictatorship is attempted through two main roads: Through the published testimonies of people who lived during that time and were involved in the resistance against the regime, or by political scientists in a perspective of comparative analysis with the regimes of Latin America and southern Europe. Historians have not dealt with the period… and we should also examine what this seven years period passed over to the following one". (Ta Nea, 22/04/2005)

An important part of knowledge for the period is in the form of public history. The period is still present in collective memory, as broad social groups had an immediate experience of it. This consciousness, of course, is fragmented according to a range of different experiences and backgrounds: from the "silent masses" in rural and urban areas of the country for example, to the technocrats who collaborated with the regime and those who participated in the resistance, were arrested, tortured and exiled. The experiences of these people are an extremely rich but also "vulnerable", non-documented source of public history.

The lack of systematic knowledge has been a great burden but at the same time a challenging condition for the process of my research, as it has /led me to various sources of primary material, like the state's archives, the public press or interviews with the "protagonists": planners, academics and members of the state's apparatus. The collection and documentation of this material constitutes a first goal of my research project.

3. Building an approach: between historiography and theory.

The aspects mentioned in the previous chapter describe a perspective that stands between a historical analysis and a theoretical approach of urban transformations and politics. The research is organised in four sections:

a. In the first section, the socio-economic framework of post war urbanisation is examined in relation to a corresponding system of political and technical mechanisms. The material for this study comes from bibliographic sources.[10] I keep two important outcomes from this section. The first refers to the particularities of the urbanization process of the city of Athens as opposed to a dominant north-western example. As mentioned in the introduction, significant elements of this particularity have been the dispersion of small scale land ownership, small construction capital and the co-existence of "modern" and "pre-capitalistic" forms of housing production.

[10] A number of researchers in the late 1970s and early 1980s contributed largely in documenting the process of this cumulative, spontaneous development of the Greek city and introducing a theoretical perspective on the geographies of Greek capitalism. Particularly helpful in my study has been the work of D. Emmanouil, D. Economou, C. Hadjimichalis, M. Mavridou, M. Mantouvalou, D. Vaiou.

The first dominated by private building activity under the mechanism of "antiparochi" and the architectural form of the multi storey block of flats (Papamichos, 2000), and the second expressed in the extended areas of illegal housing (Leontidou, 1990). The second outcome is the need for a distinction, between the actually implemented urban policies and the rise of a planning ideology in circles of academics, technocrats and some members of the political system (Vaiou, Mantouvalou and Mavridou, 2000). In the first category we should include political tools that had an immediate and organic role in urban development, like the tax system, the general building regulations, the introduction of financing mechanisms in the house market, the political handling of informal activities like illegal housing, programs of public or social housing etc. If we wish to examine the consequences of the Greek dictatorship in the urbanization process we definitely need to turn to this category. "Official" planning, on the other hand, although it seemed to express the dominant post-war discourse of modernization or even a possibility for redistributional policies, remained an external factor to this process, as it was not connected with economic and social interests of certain groups.

b. In the second section, I approach the different historical and political interpretations of the coup, and the recent literature on the regime's ideological characteristics, political practices and relations with the pre-existing social, political and economic system. This study allows for the urban politics to be evaluated as a part of a broader political program and social context. Furthermore, it has been important, from a theoretical and methodological point of view, as it introduces the possible frameworks for a comparative analysis of the Greek case. For example, would it be a justifiable choice to compare the Greek junta with the European totalitarian regimes rooted in mid-war fascism? For those regimes, by the way, there is a rich academic literature and ongoing research, concerning spatial policies, urban planning and architecture.[11] However, the analysis of the junta's policies and ideology have shown that it has been a particular form of authoritarian regime, with a military and oppressive character on the one hand, but bearing more differences than resemblances to fascism, on the other.[12] Most notably, it lacked a structural relation with the Greek society, in the form of a political party, a labour organization or an organised youth sector, all characteristic elements of fascist regimes. And although the colonels defined the coup as a "National Revolution", they never expressed the will for a radical social and economic change. Instead, the faith in the "primal role of the private economic sector" and the "principle of free competition" were repeatedly expressed in public speeches and programmatic documents.[13] The regime appeared as a guarantor of the "proper function" or even the "modernization" of certain fields

[11] For a comprehensive analysis and literature on urban development projects and unimplemented planning proposals in the case of fascist Rome, see the recent work of Federico Caprotti (Caprotti, 2007) and Aristotelis Kallis (Kallis, A., 2011).

[12] For a review of the theoretical and historical interpretations of the Greek regime see (Sakellaropoulos, 1998)

[13] See, for example, the introduction in the Program for the economic development of Greece, 1968-1972 (Ministry of Coordination, 1968).

of the Greek capitalist economy. It adjusted rapidly to the basic economic principles all post war governments had followed (Iordanoglou, 2003), it "adopted the European perspective" of the country (Pesmazoglou, 1999) it maintained the basic structure of public administration (Meletopoulos, 2000), it reproduced the organic relation of the state with the economic elites and further introduced a paternalistic clientelism as the dominant form of relation with the middle and lower classes (Sotiropoulos, 1999). It did so in a violently imposed context of "silence, order and security", of hysterical anticommunism, of persecutions and censorship. The regime attempted to impose total control in the public sphere, including the media, the universities, the trade unions, the structures of local representation. And while the state apparatus continued its legislative, judicial and executive work, these basic functions were isolated from participation or public control mechanisms.

c. Although telegraphic this description implies some answers to the main question of this paper on the continuities and discontinuities of spatial politics of the dictatorship. And along with the idea of the parallel contexts of actually implemented spatial tools and official planning ideology, it has provided me with certain logic for the third, and main, section of my research. This third section approaches the policies of the regime that were immediately related to the production and regulation of urban space.

Additionally to the limited relevant literature, I have been using three main sources of primary material:

- Relevant articles from selected editions of the technical press ("The Newsletter of the Technical Chamber of Greece", "Architectural Issues"), the economic press ("Economic Postman") and the daily press ("To Vima"). Especially for the "Economic Postman" -a significant edition on economic, technical, and administrative issues, with a continuous history over the post war decades- I have made a systematic documentation over the complete digitised archive for the period from 1965 to 1975. The outcome of this work is a register of almost 600 articles, in chronological order and organised in 4 thematics (Urban planning, Economic and Regional Planning, Housing Market, General technical issues).

- Archives of various branches of public administration (like the Technical Services of the Municipality of Athens or the Ministry of Public Works), the proceedings from the meetings of the Consulting Committee of the Junta (in the Central Library of the Greek Parliament), and material from the private Archives of Konstantinos Doxiadis.

- A series of semi-structured interviews with people that held a significant role in planning and policy making around the period of the dictatorship (members of research institutes (3), academics (3), professionals working in the private sector (2), members of the Ministry of Public Works (1), the Office for the Regulatory Plan of Athens (1) and the Ministry of Coordination (1).

My study up to this point has focused on:
- Reformative attempts concerning the land and construction system and the housing market.
- Specific proposals for the restructuring of the urban area of Athens, with an emphasis on attempts to introduce a representative architecture or urban planning, particular to the period of the regime.
- Changes in the legislative framework of planning, particularly concerning the Regulatory Plan of Athens
- The "active subjects", people or groups of people that were involved in spatial policy and urban planning. Their experience and evaluation of the period and the conditions under which they performed their work

The facts show that the state apparatus during all seven years of the dictatorship was particularly active in reforming the legislative framework that actually affected the development of the urban area of Athens. Furthermore, the model of speculative urban growth was systematically exported to all regions of the country, particularly in the middle-size peripheral towns and tourist resorts.(Filippidis, 1990). Over the post war period some issues have been particularly decisive for the housing market and the construction economy: the regulation of building heights, the General Regulatory Plan, and the incorporation of peripheral urban areas in the official city plan. Only one year after the coupe the regime introduced the Compulsory Act 395/68 "On buildings' height and unrestricted construction building". According to the CA 395/68 the Floor Area Ratio (FAR) increased from 25% to 40% in urban areas around the country, adding more floors to existing buildings and increasing the heights of new constructions. As expected the construction sector was triggered end the private housing market boomed. In 1972, a new General Regulatory Plan was implemented. The implementation of the CA 395/68 has been used as a particular case study of my research as it reflects all the range of issues discussed in this paper.[14]

Equally decisive has been the policy of the regime in the case of informal settlements and illegal housing: In three years only, from 1968 to 1971, about 2.700 ha were integrated in the city plan of Athens, involving more than 150.000 people[15]. Leontidou describes this "legalization" process as a successful instance in the 'modernization' and expansion of Greek speculative urban capitalism. A success, of course, that involved the repression of settlers, demolition and arrests (Leontidou, 1990). The expansion of the structured urban market was related to the systematic promotion of credit financing in the housing market and contributed to the rise of a competitive speculative construction sector. Law 1003/71 "On active urban planning", was another tool for facilitating this construction sector and further

[14] In what could be called as "the genealogy of the CA 395/68", I am working in the register of articles and in other archives to document the process from the early appearances of the issue in public discussion - to the formation of certain social pressures - to its official implementation – to an evaluation of its impact.
[15] Data from the common study of the National Statistical Service of Greece (NSSG) and the National Center for Social Research, elaborated and presented by L. Leontidou (Leontidou, 1990).

attracting the investment of large scale private capital in urban development. Its logic was transferred faithfully in Law 947/79 of the second democratic government.

4. (c) Conclusions

The building euphoria lasted until 1972. In 1973 and in the context of the international crisis the construction sector collapsed. Around that time the consequences of the construction frenitis were obvious in the urban environments. A renewed interest appeared in the public sphere and the media, on issues of environmental protection, historical identity and quality of life. This turn was later expressed in the progressive Constitution of 1974 and the reformative wave that followed during the first two years of the democratic consolidation. The state's efforts turned to other directions and emphasized on more democratic methods of implementing policies. But the "modernization" of this particular urban capitalism remained the structural dynamic that transformed the Greek city.

As this research is still in progress, the questions of continuities and ruptures in the period of the dictatorship are still open. Up to this point, the analysis of the legislative framework, of the actually implemented policies and the micro-histories of people or social groups involved, reveals the existence of persistent dynamics and processes that cross the boundaries of different political periods.

Indeed the dictatorship continued the 'modernization' of the speculative land and construction system, which of course was not a neutral process but a conflictual political one. The most obvious difference in the case of the regime has to do with the loosening of social control that led to a rise of arbitrary practices. The regime introduced an idea of laissez faire to favour all kinds of investment activities, partly as a mean for gaining the necessary legitimisation

Another point has to do with the "scale" and intensity of urban transformation processes. This doesn't simply imply the "natural tendency" of authoritarian regimes towards gigantism (a tendency that had its reflections in the form of proposed development projects for Athens too). It may refer for example to the systematic promotion of large-scale capital investments in an urban economy that was traditionally characterised by small scale and self-financing practices.

Furthermore, the idea that the negative consequences of the dictatorial policies were the outcome of technical and administrative inefficiencies of the government or the state apparatus, although very popular, proves to be misleading: the urban policies of the period should be judged in relation to their actual objectives and social functionalities. But this, of course, is a major challenge in general.

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Digitized Archives

Doxiadis Archives
http://archive.doxiadis.org/document.asp?doc_id=31611

Center of Planning and Economic Research (CPER),
http://www.kepe.gr/EN_Pages/home.htm

Economic Post
http://www.tovima.gr/Premium/Archive/

Capitalist logic and the production of spaces of inequality: the case of organised food retailers in Ankara

Based on the works of Marx (1859, 1867), Engels (1845, 1873), Harvey (1973, 1982, 1985) etc. the present research has the major assumptions that the capitalist system, from its nature, has always the tendency to produce socioeconomic crisis and inequalities. Although within capitalism there are some moments where these crises and inequalities were masked by collective efforts (like at the moment of 'Glorious 30s'), the system continuously produces its contradictions. The neoliberal era is considered as a specific moment within the long history of capitalism in which special advantages are given to specific parts of the societies so that the accumulation of capital continues. With reference to some particular researches this paper first tries to illustrate how urban space is utilised within the capitalist system. Secondly, the research focuses on the signs of social and economic injustices that became subject of different urban researches. Finally, the case of organised food retailers in Ankara is analysed through a series of statistical procedures if this specific case can be seen as a contemporary example in the production of urban injustices.

1. The capitalist logic

The classical interpretation of capitalist system, mainly based on Adam Smith's ideas, provides an early picture of a political economic system which emerged in the last few centuries. Classical economics conceptualise the capitalist system as a circular system whose main actors are capitalists, labourers and landlords. As time passed, new facets of capitalism were discovered and political economists interpret these new facets according to different viewpoints. Karl Marx made a major contribution to the understanding of capitalist system by making the 'critique of the political economy'. He falsified the circular logic of capitalism and introduced a linear logic which is based on exploitation of labour power. Within this conceptualisation the accumulation of wealth is realised only in one direction and due to its unequal nature the system is assumed to be prone to perpetual crisis. Marx's objections on classical economic interpretation of the political economy have both theoretical and practical bases. On the theoretical side, not separate from practical observations, Marx questions the creation of surplus value and its distribution among classes. This constitutes the primary source of inequality in Marxist understanding which leads to the creation of supporting institutions, social and economic crises, and temporal solutions to these crises. On the practical side, Marx focuses on social and economic inequalities that affect the living condition of millions of workers in industrialised countries like Germany, France and England. Human exploitation under the cover of economic freedom and the production/consumption processes leading most of the populations into misery backed his theoretical formulations. The way how Marx conceptualise the capitalist system not only helps to the realisation of a more accurate description of capitalist system but also shed light on the nature and logic of capitalism. Application of this perspective becomes essential to the present research primarily because it is argued

that the locational inequalities are internally based on the capitalist logic guiding that guide the spatial strategies of organised (food) retailers. Secondarily, Marxist perspective provides a framework to distinguish the role of state mechanisms and more specifically the role of planning, as ‘external factors’ influencing retailers' spatial decisions.

The capitalist system has a major linear form indicating production, circulation and consumption of commodities on one side and the accumulation of wealth and labour power towards the other. This general process continues until capitalists find ways to extract more surplus value (profit) out of the production/consumption process. This move out of primary circuit has two other paths that capital can follow. In the secondary circuit, the capital is diverted to the space, in the form of investments invested in the built environment. These investments are thought indirectly beneficial to the primary circuit as they enhance the production and the consumption sides of the primary circuit. Through the investments in the built environment (as will be discussed more in the following section) capitalists diminish the spatial barriers. Sometimes space is considered as a commodity and investors benefit from its exchange value. The third circuit of capital has two target areas. In the first one, the third circuit investments are directed to overcome the problems directly related to the production process that lies at the beginning of the primary circuit. Through the development and application of new technologies and organisational structures the efficacy of the production process is enhanced. The cost of production may decrease and potential for excess profit may increase. The second option within the third circuit covers the investments directed to social expenditures. These investments, rather than focusing on the production process, target the consumption part of the system. Through these investments, the reproduction of labour power is enhanced and sometimes investments aim to enhance labourers’ purchasing capacities as a part of welfare policies (Harvey 2006(1982)).

(Graphic 1) and (Graphic: 2)

1.1. The space in the accumulation of capital:

> "Land serves not only as a means of production but also as a 'foundation, as a place and space providing a basis of operations', space is required as an element of all production and human activity" (Capital Vol.3: 774).

For Marx space, mostly referred as land, plays a double role both as a condition and as a mean of production. Through this dual role, space becomes the symmetrical image of the capitalist system and reflects i) circuits of capital, ii) perpetual crises, and iii) patterns of exploitation and injustices. Policies developed to sustain capitalism not only aim to increase efficiency and utility of the system but also to facilitate the extraction of surplus value from space through its commodification. This focus on efficiency and profit, as seen before, becomes the source of increasing inequalities and injustices, and makes space one of the key areas to observe these externalities.

From its nature, space is a functional necessity for the basic movement of labour, commodities and money. In other words the circulation of capital within the primary circuit (encompassing production, exchange and consumption - line 1) can only realise on space. Harvey (1985) giving a more detailed explanation on the utilisation of space for the capitalist accumulation, argues that depending on the level of development of societies, capitalism creates the necessary spatial composition that meets its needs and that enables the circulation of capital in the most profitable way. The technological capacities together with the material possibilities of the society determine the character of the necessary spatial structure. Harvey further argues that, in the course of time, the requirements of capitalist system change. Once-enabling physical structures start to limit the flow of capital along space and force capitalists to create new spatial organisations. At these times of constraint, demolition of old spatial elements, production of new ones, and consequential restructuring of urban structures (often called "creative destruction" of the built environment) becomes unavoidable for the future of the capitalism.

The effect of space is analysed in detail within the secondary circuit of capital. As now known, the productive capital stuck within the primary circuit can be diverted into the secondary circuit, in the form of investments in the built environment (line 2). On the side of production, as a part of fixed capital, such investments contribute to the enhancement of the production processes. Construction of new production centres together with the production of necessary infrastructure for the production, and renewal and upgrade of these facilities are the examples of fixed capital investments concentrating on the built environment. At the more concrete level, production of newer facilities, newer product and organisational designs and application of more efficient production mechanisms together with the utilisation of more responsive transportation and communication systems that respond to the needs of the new mode of production can be seen as parts of the fixed capital investments. Such developments of the built environment are not only realised within the sphere of production. The sphere of consumption offers alternative built environment investments to capitalism as well. (Re)organisation of everyday life around shopping centres, introduction of e-retailing (decreasing the fixed costs of construction), appearance of new small-scale retail formats, their diversification and specialisation are the effects of spatial investments aiming to revitalise consumption of commodities. Through such investments in the built environment, the capital originally following the path of the primary circuit moves out of the circuit but is always utilised for obtaining the surplus value. The only difference for the capitalist is that such investments in the built environment necessitate longer turnover times than are required for the production and consumption of most commodities. For this reason, capitalists first try to function within the field of primary circuit of capital and move to other circuits only when these circuits become more advantageous considering turnover times and profit levels.

In his analysis of the circuits of capital, Harvey separates the investments

contributing to the production and consumption of commodities (secondary circuit) and those serving the reproduction of labour power (tertiary circuit). Within the framework of this research it is also argued that it is not easy to separate the consumption for reproduction from other consumption activities. This not only includes utilisation of services like schools, libraries, sport facilities, green spaces, etc., but also covers the consumption of goods (as in the case of retailing). In addition and far beyond the necessary consumption of basic needs, in a consumerist society the activity of consumption starts to occupy an important position in people's lives and contributes to their reproduction from a much broader perspective. On the side of the utilisation of space, as mentioned within the spatialisation of primary and secondary circuits, capital directed to the tertiary circuit need to be spatialised as well in order to be concrete (line 3).

(Graphic: 3)

The utilisation of space out of the circuits of capital is realised during the moments of crises. As mentioned previously, the capitalist system is always prone to crisis and spatial interventions are frequently utilised by capitalists to overcome such moments of crises. According to Harvey the ‘spatial fix’ is necessary for the continuation of capitalism and especially important to overcome the location specific character of all the crises of devaluation (Harvey, 2006[1982]). For Harvey, after the investments on production and consumption, spatial investments are seen as a second option to solve the problem economic crises. These interventions can take different forms. Creation of new urban structures, elimination of spatial barriers and spatial integrations made to increase mobilisation of capital on the land can be seen as possibilities to overcome the crises happened in first and second cuts. On the side of excess surpluses, both the capital and labour power are all spatial entities. Both of them can be 'disposed of and remunerated by entering into external relations with other regions' (Harvey, 1985b)

1.2. Capitalist political economy and its reflections on space:

Marx and Engels, later Poulantsaz (1968, 1973), Lefebvre (1972, 1991[1974]) and Harvey 2006[1982], 1985) argued that the capitalist economy which had many contradictions needs to be backed with a political system. This system not only provides solutions to economic problems and crises but also guarantees necessary spatial policies that contribute to the accumulation of capital through various ways. The theoretical framework provided above is utilised for the very brief analysis of the neoliberal policies that started to be enacted with the 1980s. Additionally, the framework provides the basis for the understanding of food retailers’ economic and locational behaviours.

With the 1980s, neoliberal policies started to be implemented in most of the developed countries which are then followed by many other countries aiming to follow the path for the ‘development’. Although the implications of neoliberal doctrines differ according to “scale and scope of state intervention, forms of labour

market regulation, the constitution of institutions of social regulation, patterns of historical resistance and political incorporation, and do forth" (Peck and Tickell, 2002: 387-8), researches illustrate that neoliberal political economic restructurings are commonly consisted of policies aiming the deregulation of state control over principal industries, reactions against organised labour, reduction of corporate taxes, decreasing the functioning of public services and their privatisation, dismantling of welfare programs, facilitating the mobility of international capital, increasing competition between localities, and criminalisation of urban poor (Brenner and Theodore, 2008[2002]:3).

1.3. The production of retail environments, continuation of inequalities:

> "theorising retailing contributes to our understanding of the whole capitalist system" (Ducatel and Blomley,1990:207).

Conventional interpretation of retailing considers the activity as a self-governing system that is based on the efficient usage of distribution channels and that connects producers to consumers. With the advances in the production and diversification of demand, the existence of intermediary agents became necessary. Distributors and retailers have become vital for the continuation of the economic system. With the advances in the capitalist economy, specialisation on retailing increased. This brought further efficiencies within the circuit of capital, facilitated consumption and indirectly contributed to the continuation of production. Despite its unique and important position within the economic system it will be misleading to consider retailing as a pure economic activity only linking production and consumption processes. Here, the retail activity is selected as a special case as it is believed that retailing represents more than a simple economic activity. Here, it is argued that the contemporary shape and dynamics of the retail system is capable to reflect both social and political aspects of capitalism and its contradictions.

Similar to other layers forming the urban landscape (like industry, housing, infrastructure, etc.) retailing on the one side contributes to the continuation urban daily life and on the other side, plays a key role for the (re)production of the capitalist system. Social importance of retailing, especially the one of organised food retailing is discussed in relation with the social production of wants and needs in contemporary urban societies. To begin with, I would like to focus on the commercial capital or more precisely on retail capital which determines a specific instance within the general circuits of capital (Marx, Capital vol:3/17; Lamarche, 1976; Ducatel and Blomley, 1990). By realising this, it becomes possible to contextualise urban retail systems within the general political economic discussions. And, after reaching this point, the problems related to social needs and injustices can be identified accurately and solutions to such problems can be developed much correctly.

As in other branches of activity, retailing is a sector in which there is a tendency to the concentration of capital: some capitals expand by taking over or

displacing smaller ones. There is evidence that the concentration of capital (and thus of power) in retailing tends to be particularly marked and this in turn can weaken the relative power of upstream capital (agricultural and other food producers) and of (downstream) workers who are the consumers of the retail product. These concentrations of power have an evident spatial dimension and it is spatial monopolies and oligopolies which affect consumers and perhaps spatial monopolies which affect upstream capital.

1.4. The retail system within the circuits of capital:

When Marx refers to commerce, he calls all commercial activities 'parasitic', considering that merchants obtain profits just through organisation of services without directly contributing to the production process. But in practice it is seen that retailing occupies an important role not only in the production process but also in the continuation of capital accumulation. Retailing represents specialisation within the circuit of capital and increases efficiency by reducing the costs of producers, by internalising the commercial functions and by decreasing the turnover time. Ducatel and Blomley (1990). Before selling the product in the market the retailer makes an investment and takes risk by directly buying the commodity from producer. The risk that retailers took through this exchange returns them as profit and the risk involves the key features of the consumptive sector which are the volatility and unpredictability (Harvey, 2006[1985]: 215).

The importance of retail activity for the capitalist economy can also be understood on the basis of its positions within the circuits of capital and its functionality during the moments of crisis. On the circuits of capital, it is possible to position retailing at all three circuits. The primary circuit of capital is about the production of goods and their consumption. The continuity of the circuit necessitates good functioning of the activities of production, distribution, selling (for the part of retailers) and consumption (for the part of consumers). The contradictory activities of production and consumption are existing in a dialectical way and linked to each other through the activities of distribution and retailing. In the normal functioning of the activities and in normal conditions of accumulation money invested in the means of production, labour power and raw materials return to producer capitalists with some surplus value and this becomes their basic motivation. But the necessary conversion of commodity capital into money capital becomes a point of friction for producer capitalists needing to use money capital for productive purposes or as the basis for further investments. So, the commodity capital that represents an intermediary stage needs to be transformed into money capital to become efficient for the circulation of capital. It is the merchant capitalist that facilitates this duty of transforming commodity capital into money capital.

(Graphic: 4)

Retailing in the primary circuit of capital: From the point of view of circuits of capital, it is possible to observe that retailing's contribution to the accumulation of

capital is not limited with the increasing efficiencies and decreasing turnover times. At the moments of crises, the capital, which is stucked in the primary circuit of capital, needs to be diverted to other circuits so that the accumulation of capital continues. For the case of secondary circuit, it can be transferred to the productive processes in the form of fixed capital or to the consumption activity in the form of consumption fund. Investments directed to productive materials to increase the productive efficiency are out of the focus of this part (despite its important spatial implications). Instead, here it is argued that those investments grouped under the name of consumption fund have direct effects on retail practices. Construction of shopping centres and retail outlets together with infrastructures that such buildings need can all be seen investments directed to increase consumption of commodities and reproduction of labour power.

Retailing in the secondary circuit of capital: The primary circuit of capital offered the most direct way of surplus creation. As mentioned previously, due to the internal contradictions of the capitalist mode of production there happens some moments (i.e. at the moments of crises) that investments in other circuits is considered to be more profitable. Those investments made for the enhancement of the production and consumption side of the circuit of capital. As seen before, Harvey separates those investments into two, one side being the fixed capital investments realised on the production side and the other side consisting of investments on the consumption fund. To be more precise I would like to focus on the part of consumption fund separated for the construction of built environments and the appearance of retail activity as a part of it. Investments on retail environments can also be beneficial for the production as they enable the discovery of new markets and new consumption patterns and may help reduce costs for the transportation of goods. Through such developments on the one side producers find new ways to eliminate over produced commodities but on the other side and may be more importantly investors discover new investment opportunities that have higher rates of return on investment with their excess capital (Feagin, 1987; Harvey, 2006[1985])

Despite having the capacity to offer solutions against the effects of the crises in the primary circuit of capital the secondary circuit has its own set of contradictions. Heavy and fast investment in the built environments combined with the deregulated legislative framework can cause another crisis of overproduction, at a different circuit. On the side of retailing it is possible to observe these dynamics. Considering the limits of the purchasing power, overproduction of shopping malls leads to higher vacancy rates on older ones and causes the disappearance of small scale retailers who cannot resist on conditions of crises. Different from housing sector and office construction, retail sector represents more dynamism and adaptability to the changing economic conditions. Although for some capital-weak retailers the crises represent a drastic moment, for more powerful ones these moments offer opportunities for development through mergers and acquisitions.

Retailing in the tertiary circuit of capital: At the moments when primary and secondary circuits are less profitable, investment opportunities covering

technological and social investments are considered as a third alternative for the accumulation of capital. Although, compared with primary and secondary circuits, the turnover time of the third circuit investments is long, capitalists accept to divert investments into the third circuit and agree to receive revenues in the long run in order to avoid devaluation of their capital at the present time. Considering the case of retailing, the third circuit of capital becomes important both in direct and indirect ways. In the direct side, technological developments and investments to enhance the human capital working in the retailing sector covers considerable part of organised retailers. The competitive nature of the sector necessitates these kinds of investments as they can bring long term competitive advantages to retail firms. On the side of indirect relations, investments in the retail sector, especially in food retailing can be considered as investments contributing to the reproduction of labour force especially when they are addressing disadvantaged neighbourhoods. Despite the emphasis given to major public services like education, health, etc. considering the contemporary importance of consumption, accessibility to retail facilities becomes as important as accessibility to public services. These issues will further be discussed within this section under the title of the social production of needs.

The third circuit of capital encompasses social investments and investments in science and technology. Leaving aside the investments in science and technology I would like to focus on the social investments which basically aim at the social improvement of working classes, their more active participation to the economy and enhance their contribution to the flow of capital in an indirect way, from the point of view of capitalists. Out of capitalist point of view, benefiting from such investments is considered to be a precondition for a just urban living with equal accessibility to social amenities and unrestricted participation to socio-cultural practices. Despite the acceptance of interrelation between different circuits of capital and their influence on the retail development process, the research emphasises the importance of the third circuit of capital in the reproduction of labourers. Knowing that in the world of advanced capitalist societies the (in)accessibility to retail facilities causes the formation of food deserts, disadvantaged consumers and various health problems, putting the problematic of accessibility at the core of the research was necessary. To underline the importance of this part and despite the risk to move focus away from the production of urban retail environments, the author wants to discuss the activities of consumption, its relation with labourers' reproduction and the social production of needs and wants; before returning to the point of urban land rents and formation of values which is considered to be the principal factor affecting locational choices of retailers and thus to their accessibility.

2. Food retailing, disadvantaged consumers and food deserts:

Due to the collective nature the activities and in relation with the ways of provision of these activities, Marxist literature focuses more to the collective means of consumption than individual ones. Two writers' works are important considering the establishment of the interrelationship between urbanity and means of collective consumption. Both Lojkine (1977) and Castells (1977), following the path of the Marxist approach, define the speciality of urban space as being the place of

concentration of services of reproduction. Considering the provision of food products, this was something historical and started with two processes happened hand in hand: the maturation of capitalist political economy and development of the industrialisation of food markets. Steel refers to the Charles Booth's survey 'Life and Labour of the People [of London]' dated 1903 and points out that 97.5 per cent of city's population lived in grim conditions whereas 30 per cent of them had to live under the bread line. She than concludes that:

> "What was becoming clear was that leaving the food supply solely to the 'hidden hand' of commerce had its downside. While the nascent food industries were very good at producing and transporting food, feeding the urban poor was not their goal. Left to their own devices, they naturally sought to maximise profits, which meant targeting those who could afford to pay."
> (Steel, 2008:92-3)

Today, in advanced capitalist societies the food provision is mostly realised through capital intensive, chain stores that dominates greater parts of the national food markets. Supermarkets offer wide range of fresh products and unprocessed food at less expensive prices than convenience stores are important source of affordable and nutritious food (Smoyer-Tomic, 2006). And as the importance of food distribution in contemporary cities is recognised by many, the issue enters into the agenda of not only urban planning but also public administration, public health, retail geography and welfare geography.

In the literature, accessibility to supermarkets and their relative advantages are discussed on the basis of food deserts (mainly for the cases around UK) and food insecurity (for the cases from USA). Researchers identify those people having lower access to modern food retail providers and the reasons decreasing their ability of accessibility. Although there is a common ground about the reasons which are accumulated around combination or individual presence of financial, physical and mental barriers the question of food deserts is far from being concluded. It is believed that a research based on the political economy of capitalist system may contribute to our understanding. Considering that despite the diversity of cases and variety of geographical reflections the capitalist logic stays the same among cases and it can be seen as one of the major functions creating injustices through different spatial representations (about the North American experience see: Mayer and Scammon: 1993; Alwitt and Donley: 1997; Lewis et al.: 2005; Porter: 1995; Raja et al.:2008; Powell et al.: 2007; Smoyer-Tomic: 2006) about the UK experience see: Bowlby: 1979; Guy: 1984; Williams and Hubbard: 2001; Whelan et al.: 2002; Clarke et al.: 2002; Phillips and Williams: 1984; RTPI (Royal Town Planning Institute): 1988).

Although not dealing directly with the food insecurity and problems of accessibility to food retailers, I would like to separate David Harvey's work Social Justice and the City (1973) Harvey considers the real income, as an outcome of the production processes, as the central matter of justice as it enables the command over resources and thus becomes a function of locational accessibility and proximity (ibid:

69). From this point of view consumption is analysed as an outcome of productive forces, as a need-creating activity to ensure the necessary effective demand for products. Consequently, the idea of social justice becomes as a contingent matter produced out of the social processes operating in society as a whole. Regarding the scientific activities dealing with urban issues, Harvey concludes that the main objective has to be the elimination of the conditions giving way to the formation of those situations described in liberal formulations. The focus on descriptions can only inform us about the existence of problems but elimination of mechanisms generating these situations, and thus the theory. Furthermore this new emphasis will not only contribute to the transform of the results but also and leads to the formation of new, may be revolutionary theories helping to the production of just urban spaces.

3. Political economy of Turkey: Establishment of the neoliberal basis

Boratav (2010) divides the analysis of the Turkish economy into 5 parts and the last part starts with the implementation of new liberal and anti-labour economic policies backed with the military intervention. From that time on, the capitalist class were able to change the context for their benefit. As a reflection, the economic decisions (known as the Decisions of 24th January) started to be implemented at the beginning of 1980 and constructed the basis of neoliberal policies that have ruled Tukey's political economy since that day. According to Boratav, increased foreign dependency, deregulation of economic barriers and break of resistances were the three major characteristics of that era (ibid: 150).

Despite the general propaganda of neoliberalism which emphasises the distribution of wealth in much more egalitarian ways, the spread of prosperity and development to all sections of the society; unregulated capitalism mostly imposed by foreign institutions produced unprecedented inequalities. The state expenditure on structural programmes (like social security, education and health) had to be cut due to IMF and World Bank policies. The marginal sections of the society that could not participate in the economic system had to rely on unproductive money transfers from the State (or from EU funds but again through the intermediation of the State) which just contribute to their survival. This dependency relationship between poor sections of the society and the state not only became a strategic bargaining point during political elections but also led to the creation of religious organisations and charities. According to Boratav the present situation in Turkey is very similar to the condition in England two hundred years ago when "poor laws" were produced to contain unjust consequences of unregulated capitalism (Boratav: 175).

On the side of urban planning this new political economic approach produced a new planning paradigm for Turkey. According to Tekeli (2009: 134), the change represents the shift from viewing planning as a practice of technical rationality to an approach to planning as a democracy project. This transition is still happening with a lot of compromises. Previously implemented left wing "urban managerialism" movements underlined the use value of urban lands and considered cities as living spaces. The neoliberal governments of the 1980s underlined the exchange value of urban spaces and considered the development potential of cities as a source of

surplus production and profit acquisition (Şengül, 2009:143-4). In return, the social and economic polarisation in cities increased. According to Sönmez (1998) in 1990 the richest 20% of Istanbul's population was obtaining more than 57% of the city's income while the poorest 20% of its population could only obtain 4,6% of Istanbul's income.

The new economic restructuring, emphasising the dominance of capital in the urbanisation process, redefined the relationship between the primary and secondary circuit of capital. This redefinition emphasises a change in the established balances favouring the primary circuit of capital since the creation of the republic and a restructuring in favour of the secondary circuit of capital. As a result big cities become the target of most of the private and state investments. While infrastructure, transportation and housing investments change the urban landscapes, it is acknowledged that cities are no longer the space of small scale capitalists. Large capitalists first started to take part of state investments and then invest independently. During this period through the elimination of political resistance and legislative barriers, the capital becomes able to reach every corner of urban life and establish its hegemony over urbanity (Şengül, 2009:139). Urban entrepreneurialism that became the management strategy for urban areas also initiated at the beginning of 1980s. The local political strategy aiming the provision of services considering the urban poor and the idea of maintaining social services was completely abandoned and replaced with the idea of service provision through economic enterprises (ibid). Urban investments became the major instruments of the transfer of resources from central or local governments to private firms (Eraydın, 1988; Şengül, 1999). In return massive construction of shopping malls, five star hotels, convention and business centres dominated urban landscapes.

3.1. Examining the retail change: another reflection of neoliberal capitalism?

Positive economic indicators in relation to Turkish retailing sector can be linked to the modernisation of the retailing in return to diversified and expanded demand. In contrast to general belief, the retailing sector in Turkey is still dominated by large number of small, independent, and single-location retailers named as: *bakkal* (corner store), *manav* (grocer), *kasap* (butcher), *tuhafiyeci* (draper) and others. These small capital, technologically weak and less organised retail formats serve to their localities and brought commodities to people despite quality and variety deficiencies. Considering their locational choices, different from complicated site selection methods of organised retailers these small and independent formats "make their location decisions in the face of uncertainty, and essentially on the basis of intuitive judgement, experience, familiarity and coincidence. They only consider areas in which they themselves live, or with which they feel familiar. The spatial decisions can be understood simply in terms of size, type of business, or existing spatial structure. Once the decision is made, independent retailers become location-bound".

In the face of changing social political and economic dynamics Turkish retail structure started to change. Being the leading sub-sector of the retail economy, food

retailing is transforming rapidly. As identified by Kumcu and Kumcu (1987), before the 1990s, the Turkish retail structure was highly fragmented and was neither horizontally nor vertically integrated. Small-scale, capital-weak, independent, and family owned retailers dominated the trade (Samli, 1964, 1970; Kaynak, 1982, 1986). During the 1990s the transformation process speeded up and despite their dominance both in market share and number of stores, conventional food retailers started to lose their shares in favour of organised retail formats. Different sources provide different information about the contemporary condition of market shares and number of retail stores belonging to traditional and modern retail types. According to the information provided by AC Nielsen Market Reports, the number of food retailers larger than 30 square meters increased constantly in number from 1998 to 2008 (below left). From another source of AC Nielsen, reflecting the numbers between 1996 and 2003, it is observed that the number of hypermarkets and supermarkets is increasing while number of small corners shops (bakkal) is in steady decrease(below right). As a result the former group increased its number up to 60% whereas the later decreased in number to 20%.

(table 1)

Increasing number of modern retail types has implications on the market share statistics. The gaphics focusing on the sale of FMCG (fast moving consumption goods) between 2002 and 2006 illustrates the growth of supermarket's market share with comapre to other formats (figure below left). at the market share of supermarkets is increasing while the market share of medium size markets and groceries, Bazaars, Kiosks, and other retail types is decreasing. Another figure (below right) comapres the market share of retail chains, non chain formats and discounters. Non-chains having the largest market share concerning FMCG protect their position with increase while national and local chains keep going at the same market share, 8% and 4% respectiveley. Dıscount retailers on the other hand increase their share from 4% to 6% within the considered period of time.

Accessibility to healthy food products has always been considered to be a very important component of human life and it is unfortunately not possible to find any reference to this point when the reports about the food retail sector are considered. From Maslov pointing out the importance at the individual level to Malthus underlining the importance of food production for the continuation of human race, history of humanity provides great variety of researches identifying the relationship between food and man. Although the consumption habits of mankind changes to a considerable degree, the 'basic need' on food did not change as much. Furthermore, with the social division of labour man first became more dependent on food producers than to food providers to fulfil its need. Regarding the present situation, in most of the advanced capitalist countries organised food retailers dominate the food market and become responsible to meet physiological needs of societies. The market system which intensifies competition between retailers put unbreakable barriers between social needs and food providers. With the analysis of the supply side of Ankara's organised food retail system and through revealing its connection with the

socio economic status of neighbourhoods this research aims to prove this break, and if possible tries to provide alternative solutions.

3.2. The case of organised food retailers in Ankara:

Ankara can be considered as a city in transition. Despite the dominance of its traditional retail structure the development of shopping centres establish pressure over old retail styles. As a result of the shopping centre development for example, the brand quality of traditional city centres (Ulus and Kızılay) decreased and their retail and service composition change considerably. Considering the case of food retailing, still the traditional formats like corner shops (bakkal) and street bazaars (pazar) occupy important positions not only in terms of number but also in terms of market share. It is not possible to talk about a purely standardised capitalist form of retail provision as retailers (including organised food retailers) benefitting from provision of products regarding the needs of districts or neighbourhoods. Despite the power of the traditional retail structure it is hardly possible to defend the view that the retail structure in Ankara keeps protecting it homogeneity as before 1980s.

According to the retail activity reports prepared by private companies the modern retail types in Turkey general are increasing their importance to a considerable degree (see the tables below). Reports indicate that from mid 1990s to mid 2000s supermarkets and hypermarkets increased their numbers in the overall retail market first from 0,5%(1) to 2,4%(1) and than to 3,1%(2). Considering the market share the increase is much significant. The 12%(1) share of mid 1990s increased to 33%(2) in one decade. These changes are supported by the case of Ankara through a single available indicator which shows the retail centre supply and GLA per 1000 habitants. Ankara comes just after Istanbul considering the gross leasable area (GLA) but occupies the first position when city populations are included. According to Pamir & Soyluer (2008), Ankara has the largest GLA/1000 inhabitants in Turkey.

Considering the social and economic justice in Ankara, with the neoliberalisation of the economy the retail structure in big cities changed (details are discussed in previous chapters) and supply side diversifications happened with respect to socio economic characteristics of the demand side. This makes some consumers advantaged while some others fall into a position of relative disadvantage. In a direct way; to meet their basic needs disadvantaged consumers need to spend more of their material resources for a relatively limited variety of products. Different from advantaged areas where retail diversity create a kind of competitive environment for quality, variety and price of products disadvantaged areas have less of this competitive environment and are more dependent on what is existing. Furthermore the lack of competitive power of small retailers over big ones causes the closure or weakening of traditional retailers and this situation aggravates the disadvantage of such areas. Handicaps are not limited with direct consequences. Indirectly, to access more advantaged locations disadvantaged consumers need to spend more of their resources. Utilisation of more time and energy for grocery

shopping can be quantified when converted to fuel or money but social and cultural negativities such as alienation and exclusion are hard to concretise.

4. The Data:

Description: To prove the main hypothesis of the research (which is the consideration of urban retail production as a layer contributing to the development of urban inequalities) and also to provide an initial knowledge about Ankara's organised food retail geography this research is focused on 18 major organised food retailers having 516 stores functioning in metropolitan area of Ankara. These firms represent different retail capitals having different development stories, functioning at different spatial scales and having different spatial strategies. All these issues can be chosen as a special research topic but for the purpose of keeping the track on spatial injustices, author prefers to consider them equal entities whose presence in a neighbourhood satisfies the condition of standardised food accessibility. Shopping centres are excluded from the research as their purpose cannot be limited with food retailing but more importantly because their attraction range does not match with the scale of this research which is the neighbourhood scale. Lastly, it is important to remind that the research represents a picture in the history of capitalist development in Turkey which has a definite time (the year 2007) and a definite space (the city of Ankara). Considering the dynamic character of the retail environment at the time when the research is finishing the author recognise that the retail geography of Ankara has already been changed. Considering the year 20012, the question on inequalities is still persistent and can be the motivation of another research.

(Table 2)

Study area: Based on firms' web pages, addresses of the stores are found and their location is identified. Stores are then tagged on a GIS map covering metropolitan area of Ankara (green dots on the map). Because of the existence of some misinformation, sometimes due to technical impossibilities but mainly as a consequence of the geographical focus of the research (which is the metropolitan area of Ankara) thirty-eight stores had to be taken out of consideration. Despite these exclusions, the research covers 95% of considered organised food retailers. On the side of neighbourhoods, some of them need to be taken out of the consideration (orange coloured neighbourhoods) for two reasons. Firstly, some neighbourhoods, although appears within the boundaries of the metropolitan districts could not be considered as part of the metropolitan Ankara due to their rural character and poor connections with the city. Secondly some areas had to be removed as the major function they inherit is not housing. Military lands, Ataturk's Forest area and lands belonging to governmental institutions are examples of the second group of neighbourhoods which are excluded from the research.

(Image 1 and Image 2)

Socio Economic Indexes and retail / neighbourhood relationship: The research starts with the preparation of indexes. For the construction of indexes, socio economic indicators showing significant influence in the previous section and mentioned as important in the literature are taken into account. By doing this the importance of less significant indicators eliminated. After determining the most significant indicators, normalisation process starts1 with reference to group's minimum and maximum values. At the end, 11 indicators covering 65 information items are summarised in five indexes. DEMOG index is constructed with the combination of two significant indicators, the ratio of 1 person households and the ratio of households having more than six persons, are taken into consideration. For the formation of EDUC index three indicators are utilised. In addition to the ratio of high school graduates, the proportion of illiterate population and illiterate women ratio are brought together. ECON index is the most composite index among all. It includes information from position in the job market, status in the job, economic activity and occupation. The employed population ratio, the proportion of workers in the finance, insurance and real estate, the proportion of construction sector workers, the number of scientific and technical personnel over all occupation categories, the ratio of employees and ratio of employers over active population are utilised as key indicators for the construction of economic index. Good amount of information and indicator are eliminated before the construction of the building index BLD. At the end of different calculations considering all physical information, it is observed that the proportion of flats not having a kitchen, toilet, shower and flats having all these amenities outside the living unit is thought to be a good indicator that can be used to differentiate neighbourhoods. Finally the price index P is constructed on the basis of average land prices in the neighbourhoods.

(Table 3)

Formation of neighbourhood groups: In this step of the research descriptive statistics and box-plot analysis are presented for the initial exploration of the data. Similar to the construction of indexes, a simple data reduction method is utilised to group neighbourhoods. Neighbourhoods are grouped according to the organised food retailer number they include. First group is composed of 133 neighbourhoods having 0 organised food retailers within their borders. This group is assumed as the most deprived group of all. Second group is a group of 181 neighbourhoods having 1 to 5 food retailer inside. Neighbourhoods forming this second group are considered as 'normal' neighbourhoods having neither significantly less or significantly low number of food retailer. The third group represents the most advantageous neighbourhoods where the retail presence changes between 6 and 11. In this last group there exist 23 neighbourhoods. To be able to reach much more definite answers and a neat conclusion the research focuses on the first and third group of neighbourhoods representing 'extreme' sides of the organised food retailer presence.

[1] Normalisation formula (N): N(value X) = (value X – column minimum) / (column maximum – column minimum)

These two retail groups' statistics are analysed on the basis of socio economic indexes.

4.1. Data processing I: descriptive statistics and box plot analysis:

Considering the descriptive statistics, when one moves from first group to the third, mean values of the indexes increase without any exception. This can be seen as a sign of relative advantage of well of neighbourhoods as index numbers increase with the socio economic advantages. Different from other groups, in the first group index ranges vary considerably. For example, while for the BLD index the range is 0.81; the range of EDUC index is 0.91. This shows how neighbourhoods within this first group differentiate among each other. With a lot of outliers and extreme values, the one and only low range index is the price (P) index which indicates average land values. P ranges from 0 to 0.55 but has a mean of 0.06. This illustrates how similar the neighbourhoods of the first group in terms of average land prices.

The third group is characterised with lowest ranges among index values and illustrates significantly higher mean values for all indexes when compared with other groups. With relatively low number of outliers and no extreme values, this group is considered as more monolithic than others having much more outliers and extreme values. When general Ankara profile is considered, Education index EDUC which stays higher than other indexes reaches its peak in the third group with a mean of 0.78 and with a standard deviation of 0.14. Similar to other groups' profile, the price index P stays low with reference to other indexes (with mean: 0.18 and SD: 0.14). But different than others the range of P index varies between 0.03 and 0.53. furthermore the price index forms a much normally distributed quintile range. These specialities of the third group can be interpreted as the group is composed of neighbourhoods having various average land prices and the variation of prices is not skewed to any side and evenly distributed among neighbourhoods.

With the utilisation of socio economic indexes it becomes one more time possible to trace how the distribution of organised food retailers is dependent on socio economic profiles of the neighbourhoods. At one side, advantageous neighbourhoods in socio economic terms are one more time proved to be advantageous when retail distribution is considered. On the other side, socio-economically disadvantaged neighbourhoods experience another level of disadvantage with the uneven distribution of organised food retailers.

(Table 4, Table 5 and Table 6)

4.2. Data processing II: Correlation matrices and correlation coefficients

The third step towards GWR consists of statistical prove of the relationship between socio economic indexes and retail distribution. To this end correlation analysis is utilised. Correlation analysis is composed of two components: correlation

matrices and correlation coefficients. In statistics, correlation analysis gives information about the sign and degree of the relationship between two variables. This information is supported with an indicator of significance (R square).

Correlation analysis starts with the construction of scatter plots which graphically illustrates the relationships between variables. Then, with the correlation matrices relationships are analysed quantitatively. Regarding the scatter plot distribution of different socio economic indexes with reference to retail number it is observed that all the indexes have positive correlation with the retail number. In other words it is possible to say that there exists a general tendency that the retail number at neighbourhoods increases together with increases in those neighbourhoods' socio economic profiles. To be more concrete about the amount of increases and the relationship between retail number and socio economic characteristics, one needs to look at correlation coefficients[2]. For all the indexes the correlation analysis gives significant results. In the analysis it is seen that the coefficients change between 0.282 P (price) and 0.415 EDUC (education). According to correlation coefficients, the education index is seen to be the most influential index that contributes to any positive change in the retail number. On the other side of the index influence, the effect of P (average land price) in changes in the retail number stays very low. Among the most influential indexes, education is followed respectively by economic, demographic and building indexes.

(Table 7)

4.3. Data processing III: Regression analysis

Traditional regression technique is utilised to determine relationship between two numerical variables. Different from correlation analysis which is principally concerned with the determination of the relationship between variables, regression technique is utilised to predict values of one variable with the help of the values of the other variable. this relationship is expressed with a formula representing the relationship between variables. In graphical terms, the regression graph differ from correlation graph as the points forming the regression line do not produced from the variables forming X and Y pairs of a point. Instead, regression lines are produced so that the distance between every value and the regression line stays at the minimum when squared and summed. While the scatter plot of (x , y) pairs resumes the distribution, the best-fit line is viewed as a descriptive summary of an approximate relationship between x and y values in the data set (Devore and Pack, 1986:441). As a result the conventional regression equation becomes:

$$Y = a + b X$$

where X is the explanatory variable and Y is the dependent variable
(linear regression equation)

[2] Pearson Correlation Indexes and scatter plots are calculated with the help of SPSS 15 Statistical Software. During the calculations 7 outliers are identified and excluded from the analysis to protect and reflect the general trend.

With the utilisation of regression analysis it is intended that the relationships revealed trough percentages brought to a much more statistical and quantifiable level. With this, it becomes possible to distinguish variables according to their effect on the change in the retail geography. Furthermore, regression analysis enables the inclusion of all neighbourhoods without any classification. Through this, the analysis includes each and every individual case's socio economic information and retail specification. Another important implication of the regression analysis is that in multiple modes it becomes possible to reveal the relationship of different variables (dependent variables) over one variable (independent variable).

$$Y = a + b_1 X_1 + b_2 X_2 + b_3 X_3 + \ldots$$

where X_i is the explanatory variable and Y is the dependent variable
(multiple regression equation)

The regression model creating the relationship between socio economic indexes and retail number has a significantly low R^2 and R values. R^2 is the overall measure of the strength of the association between dependent (retail number) and independent variables (socio economic indexes). The R^2 score of 0.18 indicates that the global regression model including all indexes is not a very powerful model explaining changes in the retail number at neighbourhoods in Ankara. Additionally, the R value 0.425 which signifies the correlation between dependent and independent variables stays also quite low as underlined in the correlation analysis. Because the intention here is not to use the regression model for predictive purposes the R and R^2 can be considered acceptable to identify the influence of each index on the retail number.

When one moves beyond global model, the regression model confirms that retail number in the neighbourhoods positively related with the indexes reflecting socio economic status of the neighbourhoods. This means any positive increase in the indexes has an increasing effect on the retail number. Different from correlation coefficients the regression model explains the influence of each index in the number of food retailers. B coefficient of the model indicates that education (EDUC) has the highest influence on retail number while building characteristic (BLD) has the lowest influence. The EDUC coefficient 2.56 signifies that every unit increase in the EDUC index has a 2.57 increase in the number of retailers in any neighbourhood. For the case of BLD index, any single unit increase in BLD index causes 0.8 unit increase in retail number. The importance of education is followed by neighbourhoods' economic condition (ECON), average land prices (P) and demographic characteristics (DEMOG).

Although the OLS regression model reveals important relationships and helps to identify how much each index contributes to the changes in retail number, all indexes stay outside confidence intervals when their significance is considered. Together with low R and ^{R2} values, the low level of significance can be the result of some factors. First of all, despite normalisation the value range of organised food

retailers in any neighbourhood do only vary between 0 and 11 whereas indexes have much broader ranges depending on concerned populations living in neighbourhoods. As a result of the mismatch between the range of the dependent variable and independent variables the regression model may not be able accurately reflect the dependence between indexes and retail number. Secondly and may be more importantly the change in the retail number can better be explained with an omitted variable which is not concerned in this research. Because the research intents to reveal the influence of some specific factors, namely socio-economic characteristics, despite the low level of significance the results of the regression analysis can still be considered as valuable within the limits of the specific purpose of this study.

(Table 8)

5. Conclusions:

The political and economic crisis of 1980's shaped the coming social and economic policies. In this period of socio economic turmoil imposed neoliberal policies legitimised with few opposition and started to shape urban environments. The presented written material and many others from different cases can be seen as evidences confirming the validity of crises prone nature of capitalism and its dependency on space. Not only to understand the validity of the third assumption about unjust nature of capitalism but also to strengthen the link between first and second assumptions some basic statistical methods were implemented.

Statistical tools brought the verbal evidences into the field of quantifiable entities and illustrates that capitalist logic effecting organised food retailers (at a relatively unregulated planning environment) is highly sensitive to socio economic characteristics of the inhabitants. On the side of inequalities, this finding need to be understood as new retail formats are highly dependent on socio economic characteristics and socio-economic inequalities can be aggravated once more through the locational practices of food retailers. Another contribution of this research is the decomposition of the socio economic characteristics. With the help of this, it becomes possible to differentiate the interrelationship between different socio economic condition and locational preference of observed organised food retailers. Both the correlation analysis and the regression model underline that first the education (EDUC) and than the economic (ECON) variables are highly correlated with the retail presence considering the case of Ankara. Interestingly, average land prices (P) and the index of buildings' physical condition do not have significant influence on the presence of organised food retailers.

The findings and conclusions of this research can further be developed. globally proved relationship between the spatial character of the capitalist system and its influence on organised food retailers can be analysed in detail with different statistical methods decomposing the area of investigation into different much smaller fields (ie: neighbourhoods). By doing so it becomes not only possible to increase the statistical significance of the tests but also provide an understanding how different the effect of socio economic factors along the space. In other words, neighbourhoods

where education index has a more determinant role in the distribution of food retailers separate from the neighbourhoods where average land prices' influence is more. Apart from mere statistical practice, on the retail planning side, such differentiations would be beneficial to eliminate retail based inequalities once locally determinant socio economic factors are known.

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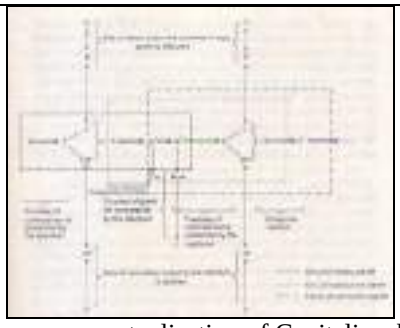
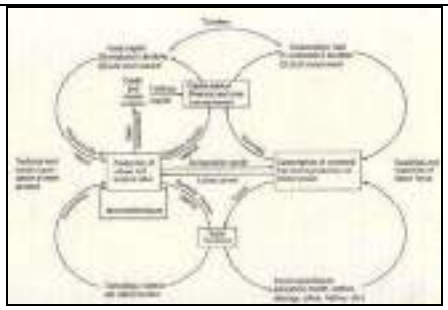
Graphic 1 and Graphic: 2

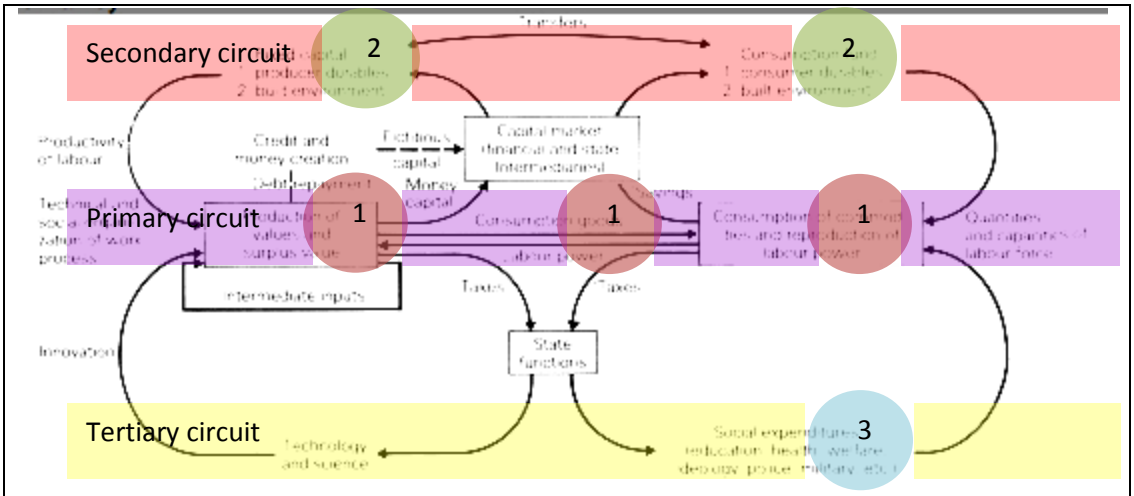


Linear conceptualisation of Capitalism by Marx
Harvey 2006 1982 .



Circuits of Capital
Harvey 2006 1982 .

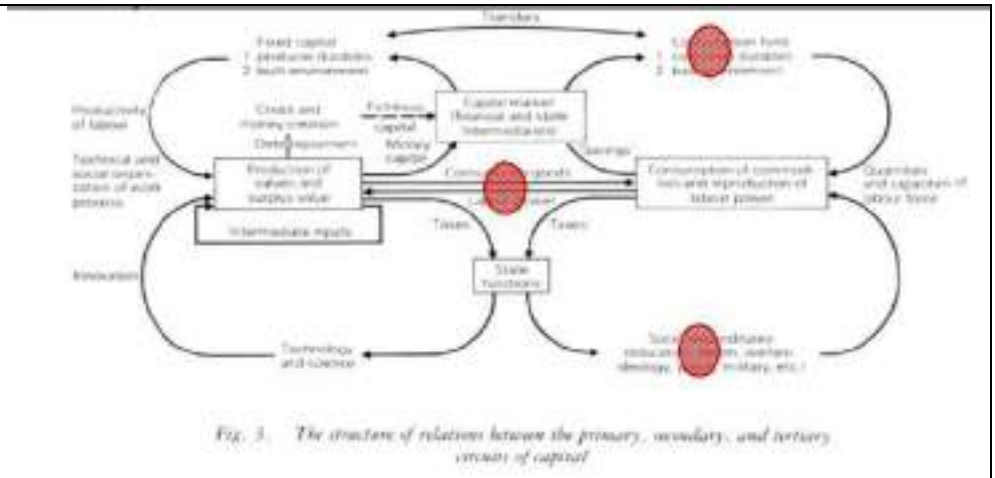
Graphic 3



Moments of space usage within the circuits of capital:

1 utilisation of space in production, consumption and exchange primary circuit
2 utilisation of space for production and consumption secondary circuit
3 utilisation of space for the reproduction tertiary circuit

Graphic 4



Retailing within the circuits of capital adapted from Harvey 2006

Table 1 and Table 2

Table 2: Evolution of the number of food retail outlets in Turkey (1998–2008)[4]

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Hyper, Chain and supermarkets	2,135	2,421	2,979	3,640	4,005	4,242	4,809	5,545	6,474	7,221	8,252
Hypermarkets >2 500 m²	91	110	129	149	151	143	152	160	164	178	183
Big Supermarket 1000–2500 m²	210	251	306	357	368	367	396	454	504	568	623
Supermarket 400–1000 m²	464	567	726	835	909	968	1,082	1,258	1,567	1,712	1,902
Micro supermarket ++ < 400	1,370	1,493	1,818	2,299	2,577	2,764	3,179	3,673	4,239	4,763	5,544
Mid-size market 50–100 m²	12,192	13,247	13,232	13,210	13,555	14,537	15,197	15,076	14,775	14,876	15,273
Grocery <50 m²	155,420	148,925	136,763	128,580	122,342	124,283	122,781	120,397	116,857	115,220	113,295
Total organized firms	169,747	164,593	152,974	145,430	139,902	143,062	142,787	141,018	138,106	137,317	136,820

Source: Nielsen, 2005, 2007 and 2009 (Fast Moving Consumer Goods-FMCG Retail Market Reports).

Hipermarket- Süpermarket Sayıları ve Gelişimi

	1996	1997	1998	1999	2000*	2003*
Hipermarket ve süpermarket	1.316	1.682	2.135	2.421	2.979	3.500
Hipermarket (2500 m²)	37	51	100	105	142	159
Büyük süpermarket (1000-2499 m²)	95	135	178	227	302	350
Küçük süpermarket (400-999 m²)	289	414	487	571	717	793
Süpermarket (100-399 m²)	895	1.082	1.370	1.518	1.493	2.198

Perakendeci Sayıları ve Gelişimi

	1996	1997	1998	1999	2000*	2003*
Hiper/süpermarket	1.316	1.682	2.135	2.421	2.636	3.500
Market	10.755	11.417	12.192	13.247	13.795	16.000
Bakkal	164.366	159.171	155.420	148.925	147.715	131.000
TOPLAM	176.437	172.270	169.747	164.593	164.146	150.500

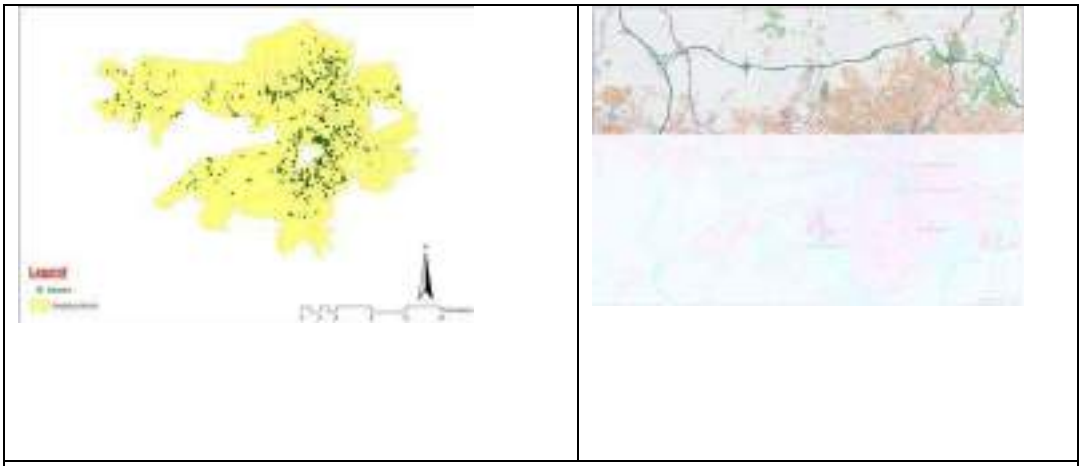
Evolution of the number of food retailers in Turkey 1998-2008 and chnages in food retailers' share in retail purchases
Sources: AC Nielsen

Table 3:

	firm name	firm presence	total number of stores	stores covered	missing stores	percentage covered
1	migros-tansas-sok	international	68	68	0	100
2	kiler	national	55	50	5	91
3	bim	national	126	115	11	91
4	peynirci	local	36	36	0	100
5	makromarket	national	63	55	8	87
6	cagdas	regional	34	32	2	94
7	yunus	regional	24	24	0	100
8	altunbilekler	local	32	32	0	100
9	akyurt	local	24	24	0	100
10	carrefour	international	12	12	0	100
11	metro group	international	3	2	1	67
12	tesco-kipa	international	1	1	0	100
13	soykan	regional	34	33	1	97
14	gimsa	local	10	10	0	100
15	celikler	local	17	17	0	100
16	basgimpa	local	19	19	0	100
17	sekerciler	local	8	8	0	100
18	macit	local	8	8	0	100
19	shopping centres		37	35	2	95
total			**611**	**581**	**30**	**95**

Organised food retailers covered within the research

Image 1 and Image 2



Distribution of organised food retailers in Ankara with the Map of Ankara

Table 4

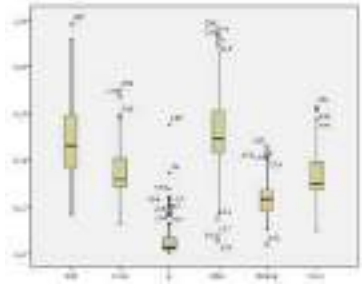
Socio economic indexes and their content

Table 5, Table 6 and Table 7

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
bld	133	,168841	,979656	,49009816	,163335036
econ	133	,124555	,698828	,34855146	,097932041
p	133	,000000	,549583	,05910394	,075212988
educ	133	,053948	,960113	,51795526	,176472792
demog	133	,039904	,457153	,23514128	,070900566
toto	133	,095539	,626194	,33017005	,096037890
Valid N (listwise)	133				

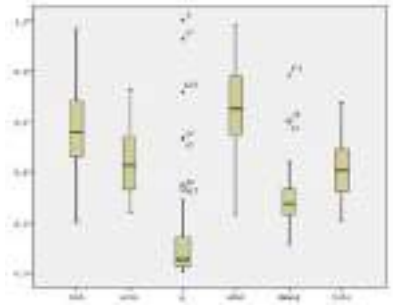
Descriptive statistics and boxplot analysis for the first group of neighbourhoods with 0 organised food retailer



Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
bld	181	,202374	,968583	,56987903	,145260489
econ	181	,241494	,727177	,44680824	,122134825
p	181	,003423	1,000000	,10232606	,132998946
educ	181	,231216	,982719	,66996155	,152671051
demog	181	,114544	,780495	,28514704	,085275172
toto	181	,206220	,673364	,41482443	,098704078
Valid N (listwise)	181				

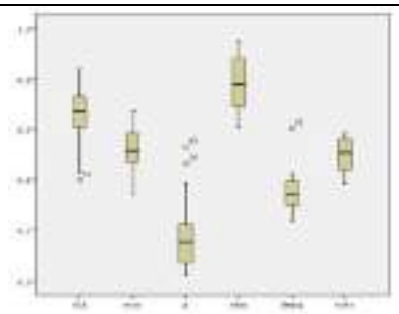
Descriptive statistics and boxplot analysis for the second group of neighbourhoods with 1 to 5 organised food retailer



Descriptive Statistics

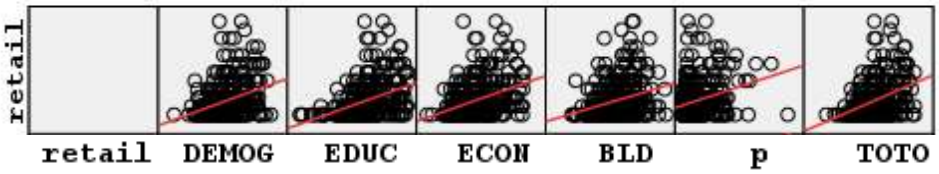
	N	Minimum	Maximum	Mean	Std. Deviation
bld	23	,396883	,838257	,64778374	,119157750
econ	23	,342383	,673336	,52576987	,089060378
p	23	,026633	,529784	,17826357	,137761393
educ	23	,607521	,947503	,78020383	,106056421
demog	23	,235076	,600853	,35042896	,079844812
toto	23	,382885	,583212	,49649000	,069433581
Valid N (listwise)	23				

Descriptive statistics and boxplot analysis for the third group of neighbourhoods with 6 to 11 organised food retailer



descriptive statistics and box-plot analysis

Table 8



		retail	DEMOG	EDUC	ECON	BLD	p	TOTO
retail	Pearson Correlation	1	,32 *	,45 *	,42 *	,34 *	,25 *	,42 *
	Sig. (2-tailed)		,00	,00	,00	,00	,00	,00
	N	35	35	35	35	35	35	35

*. Correlation is significant at the 0.05 level (2-tailed).

Correlation matrixes and correlation coefficients seven outliers excluded

Table 9

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,425[a]	,181	,168	1,942481314

a. Predictors: (Constant), demog, bld, p, educ, econ

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	-1,527	,448		-3,411	,001
	bld	,810	,909	,060	,892	,373
	econ	1,788	2,192	,104	,816	,415
	p	1,247	1,043	,069	1,196	,232
	educ	2,567	1,427	,218	1,799	,073
	demog	1,120	2,105	,045	,532	,595

a. Dependent Variable: retail

Regression model and regression coefficients

THE ENERGY SELF-SUFFICIENT CITY

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Abstract

The concept of an "energy self-sufficient city" involves a decentralised energy production system with energy extraction in neighbourhoods or villages which are interconnected in a "thermal smart grid". Regional renewable energy sources are to be given priority for energy production (electricity, heat, cooling). Current energy provision on the basis of fossil fuels in centralised thermal power plants involves a considerable negative impact on the environment. Traditional concepts require energy to travel large distances to reach the consumers. A solution to this problem is the conversion of a centralised energy supply system to an integrated network of local or regional energy suppliers. Such a decentralised energy system results in a regional "thermal smart grid" which operates on the basis of renewable, local energy sources (biomass, refuse-derived fuels, solar power, geothermal energy, etc.). The objective is to devise a regional energy supply system which integrates decentralised energy plants in various types of settlement. The energy supply concept is assessed and developed on the basis of model cases. The settlement types chosen for in-depth study are "city", "urban settlement", "rural settlement" and "neighbourhoods with a specific type of use" (light industrial district, heavy industrial district, mixed-use zone). The principle of a "thermal smart grid" is potentially feasible for each of the settlement types mentioned above. The methodology developed enables spatial planners to make quantitative and qualitative statements about the potential energy self-sufficiency in a defined settlement area and to develop concepts for an optimisation of settlement and spatial utilisation structures. Investigations into the achievable levels of self-sufficiency for the four model cases shows energy self-sufficiency is strongly dependent on the surface available for biomass cultivation.

1. Definition of the problem and approach to a solution

At present, the Austrian energy sector is largely dependent on non-renewable fossil raw materials imported from abroad. In addition to this dependence, the use of fossil fuels entails a considerable negative impact on the environment. To date,

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the energy required in settlements has usually been generated in a centralised system of thermal and other power plants, which are frequently located on the periphery of settlements. Traditional energy concepts require energy to travel large distances to reach the consumers. In this context it is accepted that up to 20% of the energy generated is currently lost again. In Austria, a more pronounced environmental awareness has taken shape in the course of the Kyoto Protocol process and in response to the strong fluctuations in the price of fossil energy sources. For many years now, Austria has been pursuing a forward-looking course aimed at using renewable sources of energy.

One approach to solving the problem outlined above is to convert the centralised energy supply into a network of local or regional energy suppliers. This would bring the energy producer into the immediate proximity of the consumers, which means that energy would be generated at the place where it is needed. This integrated network of decentralised energy systems creates a regional "thermal smart grid" (the main focus being on management of thermal energy) which operates on the basis of renewable local energy sources (biomass, refuse-derived fuels, solar power, geothermal energy, etc.). This grid should be capable of covering the heating and cooling needs of the entire catchment area. The energy supply concept outlined entails a change from the centralised energy production practised to date to a decentralised energy supply tailored to local conditions and based on renewable energy sources. Regional resources such as biomass, solar power, refuse-derived fuels, hydropower, etc. should be used to operate small-scale power plants.

2. Objectives and methodology

The technical feasibility study[4] on which this paper is based aimed to devise a detailed spatial energy supply concept which would establish the extent to which decentralised energy production facilities could be integrated into various types of settlement in different model regions in order to raise energy self-sufficiency to 95%. Within the framework of this feasibility study an intelligent thermal network, the "thermal smart grid", was to be developed on the basis of decentralised energy production plants using renewable energy sources, so-called energy hubs. The aim was to network the load graphs of the energy producers and consumers so as to amalgamate the daily, monthly and yearly load graphs. In addition, the study aimed to ascertain and evaluate options for achieving the highest possible level of self-sufficiency in the regional energy supply for each of the four defined settlement types. Possible regional and local energy sources for the production of heat and/or electricity are biomass (wood, maize silage, oilseed rape), solar power (solar thermal energy and photovoltaics), wind power, geothermal energy, small-scale hydropower plants and waste-to-energy plants. A further objective was to develop a combined energy and spatial utilisation concept

[4] „Neue Energien 2020“ ("New Energies 2020"), a project funded by the Österreichische Forschungsförderungsgesellschaft mbH (Austrian Research Promotion Agency, FFG)

based on sustainable spatial energy planning taking account of the daily, monthly and yearly load graphs.

The energy supply concept posited as an approach to solving the problem was verified on the basis of a model case for each of four settlement types and then developed further. The settlement types chosen for in-depth study were "city", "urban settlement", "rural settlement" and "neighbourhood with a specific type of use" (light industrial district, heavy industrial district and mixed-use zone).

As a further focus of the technical feasibility study, the energy consumption for mobility in the various model cases was investigated. The mobility of the population essentially depends on people's individual needs and the options available. The mobility cost results from the distances that have to be covered in order to satisfy these needs and depends on the starting location and destination as well as on the availability and accessibility of transport infrastructure (transport networks).

3. Key terms

An "*energy self-sufficient region*“ is a settlement structure – consisting of natural and open spaces, spatial infrastructure (incl. transport infrastructure) and settlement units ("energy self-sufficient cities") – which is capable of covering the energy requirement for heating, cooling and electricity, incl. mobility of the local inhabitants, for its area and population, based on the load graphs (daily, monthly and yearly) for the energy sources available within the boundaries of the spatio-functional system.

The "*thermal smart grid*“ is fed by several basically independent, decentralised energy hubs based on renewable resources (biomass, refuse-derived fuels, geothermal energy, solar power, etc.). These are operated all year round (8,000 operating hours per annum) at optimum capacity, or as close to it as possible. This networking of consumers and producers ensures that all energy generation plants are used as economically and eco-efficiently as possible. Economically means continuous operation, and thus shorter amortisation periods than with the duty cycle and intermittent partial load operation used before. Continuous operation results in a longer service life due to the reduced corrosion rate of the boilers. In terms of eco-efficiency, the non-intermittent operation of waste-to-energy plants results in lower emissions of harmful substances, the reason being that in waste-to-energy plants the highest concentrations of pollutants are emitted during the warm-up and cool-down phase.

4. Quality criteria for settlement areas

Humanity and the natural world as an integrated system should be the benchmark for technological and economic development, not the other way round. The way we live should be geared towards securing a high quality of life for the human population through long-term preservation of natural resources.

In all activities, the burden on people's health and on the environment should be minimised by using processes which largely avoid production of harmful substances and exploitation of the Earth's natural resources (raw materials and energy) by establishing closed cycles wherever possible.

The utmost goal of spatial and urban planning must consist in creating conditions that foster people's well-being. Giving due consideration to the social impact of all technical solutions is an essential prerequisite for this. The built environment should foster the development of a form of community which encourages communicative coexistence and guarantees the highest possible level of safety and security (prevention of accidents, protection against violence). The interplay of a large number of individual measures within the framework of an integrated ecological structure should restore the settlement areas' attractiveness as a living environment.

1) The principles of spatial organisation for an energy self-sufficient urban and settlement structure are based on the following considerations:

2) Maximum possible preservation and further development of viable natural spaces and countryside forms the basis for sustainable spatial development.

3) The infrastructural framework for forward-looking, sustainable settlement development is a smoothly functioning public transport system.

4) The twin foci of natural spaces and public transport allow a settlement concept based on key areas along the existing and planned public transport axes. These key areas are designed in accordance with the "city of short distances" model in the form of an "EcoCity".

The functional mix forms the basis for the spatial distribution of all everyday activities. The optimum organisational form at supra-local and local level is decentralised concentration.

The "city of short distances“ entails the creation of compact, space-efficient and hence energy-efficient settlement structures, a structurally balanced mix of compatible uses, and everyday amenities and recreational facilities that are within walking distance supplemented by less frequently used facilities that can be easily

reached by public transport. Careful, economical use of the non-renewable resource of land is the guiding principle.

In terms of population, the settlement units of the "EcoCity" are designed so that they allow the establishment of economically viable facilities for all essential functions (lower limit) on the one hand, while on the other hand guaranteeing that all these facilities are within walking distance (upper limit). The guiding principle of a "city of short distances" is thus the underlying spatial organisation principle of an "EcoCity".

The spatial quality criteria cited above, plus high energy efficiency and settlement units with low energy requirements together comprise an exemplary conceptual model of sustainable settlement development that can be referred to as a "smart city".

5. Model regions / cases

Two different patterns of settlement development can basically be distinguished, depending on topography and climate:

A) those in valley locations (in both Alpine and non-Alpine regions) and
B) those in lowland plains

The above giving rise to two different types of settlement development:

a) ribbon development in the valley locations, and
b) nucleated development in the lowland plains.

To allow an analysis of as many different permutations as possible, four model cases of settlement types in different model regions were selected for the present study:

+ the city in the lowland plain (Vienna Basin)
+ the urban settlement in an Alpine valley (Inn Valley)
+ the rural settlement in a non-Alpine valley (Pulkau Valley)
+ the neighbourhood with a specific type of use in the lowland plain (Vienna/Marchfeld)

The settlement types are based on Austrian parameters and comprise:

+ cities with a population of approx. 40,000 to 100,000,
+ urban settlements with a population of 1,000 to 5,000,
+ rural areas with fewer than 1,000 inhabitants per settlement, and
+ neighbourhoods with a specific type of use.

On account of the complexity of their structures and the low number of them in Austria, cities with populations of over 100,000 were not included in the study from the outset. The results for the settlement types "city" = medium-sized town or city and "urban settlement" should be transferable to small towns with populations of between 3,000 and 40,000 inhabitants, which make up the majority of urban settlements in Austria. Other energy supply concepts are – obviously - to be elaborated for isolated, entirely dispersed settlements.

6. Results and need for further research

The investigations into the achievable levels of energy self-sufficiency for the four model cases showed that energy self-sufficiency is strongly dependent on the surface available for biomass cultivation. Furthermore, the forms of an energy self-sufficient region in the various model cases investigated differ primarily in terms of topographical conditions, settlement structure and compactness and organisation of spatial functions and uses. In the present technical feasibility study, one of the criteria for defining regional energy self-sufficiency is a positive thermal and/or power balance for every month of the year. Calculating the thermal balance over the entire year does not appear useful for defining the concept of an energy self-sufficient region because there is only very limited potential for storing the surplus quantities of thermal energy obtained over several months in the summer.

Detailed analysis of a centralised energy supply concept permits the conclusion that it makes sense to keep any energy losses as low as possible. The energy loss of the thermal distribution network should not exceed a maximum of approx. 10%.

To summarise, a need for further research can be identified, particularly in the following areas:

A) "New" mixes of uses: definition of a concept for a balanced mix of uses for each type of region and settlement and a corresponding spatio-functional organisation of uses from the point of view of energy-conscious spatial planning;

B) Agriculture and forestry: elaboration of concepts for the reconciliation of competing needs (e.g. conservation of landscape ecology, food production, renewable energy sources) in the spatio-temporal use structure;

C) Inter-community and regional concept: inter-community and regional concept of energy supply as a spatio-functional partnership between predominantly urban and predominantly rural settlement areas;

D) Availability of geodata / spatial and usage data: comprehensive provision and availability of spatial geodata and data on usage behaviour to allow detailed

assessment of the status quo (volume of built-up area used for energy production and surface available for energy production) by urban area and elaboration of the necessary comprehensive energy concepts for specific regions or for Austria as a whole.

The research should focus on pilot plans for specific demo regions to explore the current findings in greater depth. In particular, the quantitative assumptions relating to settlement structures and structures of built-up areas should be reviewed, the energy and spatial utilisation concepts elaborated in more detail and the feasibility of implementing them tested by means of an appropriate study. Cooperation with planning practitioners (regional and local authorities, communities) and local and regional energy suppliers is a key prerequisite for this.

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ASSESSMENT OF BROWNFIELDS REDEVELOPMENT PROJECTS IN PITTSBURGH, PA WITH THEIR ECONOMIC, SOCIAL AND INSTITUTIONAL DIMENSIONS

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Brownfield redevelopment has been considered as one of the major environmental and social concern since 1980s all around the world. The revitalization of these sides includes diverse set of issues and understanding their complex dynamics requires theories, concepts and methods of different academic disciplines. There is no doubt that revitalization of brownfields not only brings improvements to the urban structure but also economic, social and environmental benefits. It is also acknowledged as an important tool to achieve development which is sustainable.

Brownfields can be found in almost every community in the U.S. and can impact communities in variety of ways. The environmental and public health threats, safety problems caused by brownfields. Their huge impact on the environment and communities triggered the governments to constitute new regulations which motivate the communities' participation and define the liability issues more clearly at federal, state and local levels.

There are numerous definitions about brownfields, but anybody who starts to work in brownfield arena generally find the USEPA's official definition: real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutants, or contaminant".

In this context this study aims to take a picture of brownfields redevelopment in U.S. with particular focus on Pittsburgh, Pennsylvania. Pittsburgh has a strategic location at the southwestern Pennsylvania. During its history it has had greatly influenced by the three rivers and the regions' rich and plentiful natural resources. Both of these physical properties have had a significant role in the region's development. However, the structural changes in the regional economies due to the changes in manufacturing industries, to post-Fordist production and the rise in transportation technologies affected the Pittsburgh Region beginning from the late 1970s. The city of Pittsburgh represents a good example in transformation from a heavy manufacturing city to a magnet for education, health care, financial services and

advanced technology, the collaboration of different stakeholders and the support of governments beginning from federal level to local level.

The brownfield revitalization attempts in Pittsburg Region can be considered as one of the most remarkable institutional attempts all around the nation. There are three institutions which played important roles in Pittsburgh brownfield redevelopment: 1-Regional Industrial Development Corporation (RIDC), 2-Urban Redevelopment Authority (URA) and 3- Allegheny County Economic Development. These institutions play unique roles as initiators, catalysts, coordinators, planners funding agents, providers of technical assistance and land assemblies. Especially URA has been the key facilitator not only in funding but also in implementing the City's overall economic strategies.

This paper tries to examine the past and current brownfield redevelopment projects which have been achieved by these institutions according to their environmental, social/community, economic, legal and physical concerns through a comparative approach and addresses the question of what is essential in a successful brownfield redevelopment project. Furthermore, the barriers and assets of brownfields redevelopment in Pittsburgh, PA are determined with SWOT analysis.

Key words: Brownfields redevelopment, Pittsburgh/PA, sustainability, transformation.

1. Introduction

The structural changes in the regional economies due to the changes in manufacturing industries, to post-Fordist production and the rise in transportation technologies affected the Pittsburgh Region beginning from the late 1970s. Shifting from industrial economy to service sector based economy draws attention all around the country. (Deitrick, 1999:10)

During the industrial age, Pittsburgh became the seedbed of innovation and technological advances. However, these large industrial complexes along the riverfront ant rail lines that serviced them caused the isolation of the community from the waterways. (UP, 1998:7)

Since World War II, two developments have noticeably reshaped Pittsburgh's landscape. The first one, which took a series of redevelopment and known as Pittsburgh Renaissance, was the reformulation and involvement of public and private partnership (Muller and Tarr, 2005:35) Alterations under Renaissance programs involved the construction of new skyscrapers, downtown parks, automobile parkways along the rivers and clearing of structures and railroad tracks that damaged Pittsburgh's historic Point. (Muller and Tarr, 2005:35)

By the early 1980s, another tragedy struck Pittsburgh region again. Due to the lack of capital investments, increase in demands of unions, and fall in competitiveness in a world economy, the steel industry collapsed and many of the industrial complexes

closed. By the collapse of manufacturing in the early 1980s the region's employment fell 6.8% between 1980 and 1986, while the recovering national economy expanded by 11.4% (Deitrick, 1999a:16). Fortunately, Pittsburgh achieved to reverse the economic decline in manufacturing industry into a new development trend in service sector with a well-defined urban strategy in a short time.

Revitalization of the brownfields which were occurred as the result of economic decline was considered as advantages for reversing the city's bad situation with the sprawling office parks, retail shopping centers, and residential developments through urban periphery. Clearing of the brownfield sites began slowly during the latter part of the 1980s and the 1990s (Muller and Tarr, 2005) The Urban Redevelopment Authority (URA), private salvaging firms and regional nonprofit organization called Regional Industrial Development Corporation (RIDC) worked together under the direction of county government to undertake redevelopment of brownfields around the county. The primary goals were to attract new residents and provide new taxes and jobs.

2. The Institutional Structure of Brownfield Redevelopments in Pittsburgh

The brownfield revitalization attempts in Pittsburgh Region are the most remarkable institutional attempts all around the nation. There are three institutions which played an important role in Pittsburgh's brownfield redevelopment: 1- Regional Industrial Development Corporation (RIDC), 2-Urban Redevelopment Authority (URA), and 3- Allegheny County Economic Development

1)Regional Industrial Development Corporation (RIDC): The Regional Industrial Development Corporation of Southwestern Pennsylvania (RIDC) is a private, non-profit organization that focuses on a regional approach to economic development which was established in 1955 for fostering new employment opportunities and diversifying the regional economy of southwestern Pennsylvania (Muller and Tarr, 2003:37, RIDC. 2011). As a corporation, working under the direction of county government in Pittsburgh region, the RIDC undertook redevelopment of brownfields around the county (Muller and Tarr, 2003:37). However, its single-minded focus on economic development resulted in the sweeping demolition of the old industrial landscape and, except for a few isolated structures, almost a complete disregard for the history of the region (Muller and Tarr, 2003:37).

2)Urban Redevelopment Authority (URA):The URA, one of the first redevelopment authorities in Pennsylvania, was first incorporated in 1946 to take advantage of a new state law permitting municipalities to create redevelopment authorities for the purpose of acquiring and clearing blighted land through both negotiations and the use of well-known domain (Stewman and Tarr, 1982).

URA is still the major agency for the economic development of Pittsburgh city. Its goals are stated as creating jobs, increasing the city's tax base, and improving the vitality of businesses, neighborhoods, and the City's livability as a whole (URA, 2011, http://www.ura.org/about/about_us.php). Since the mid-1980s, The URA took on new responsibilities in addition to its traditional activities of land acquisition and clearance. As a joint developer with an economic stake in projects, its impact is varied through encouraging tourism, monitoring projects that could take advantage of the riverfronts for recreational use. By the early 1990s, URA had a role as a facilitator of major economic development initiatives, by 1996; it was involved to 31 major initiatives including riverfront development, industrial site reuse, downtown development, and neighborhood development (Stikkers and Tarr, 2000). URA's original purpose to eliminate slums and urban blight has been expanded over the years to encompass revitalization and expansion of Pittsburgh's economic base. This role led the URA into active revitalization of brownfields through land acquisition, clearance, planning, site preparation, marketing, financing and project management. (Stikkers and Tarr, 2000) Today it became an authority which is assisting low income clients to attain homeownership, recovering brownfields for new developments and helping communities reinvent themselves (URA, 2011)

3) Allegheny County Economic Development (ACED): Allegheny County Economic Development (ACED) determine its mission as managing economic and residential development for the County (ACED, 2007). ACED also serves a s the catalyst for public-private neighborhood partnerships. Federal government and the Commonwealth of Pennsylvania are their most important partners. In addition, in order to create Tax Increment Financing Districts, ACED partner with local governments and school board

3. Pittsburgh's Brownfield Projects

The brownfield projects realized by those institutions generally take place along the riverfront in Pittsburgh (Figure 3.1, Figure 3.2)

Figure 3. 1. Brownfields at Pittsburgh and its surrounding regions. (WPBC, available at http://www.cmu.edu/steinbrenner/brownfields/Case%20Studies/nav1a.html)

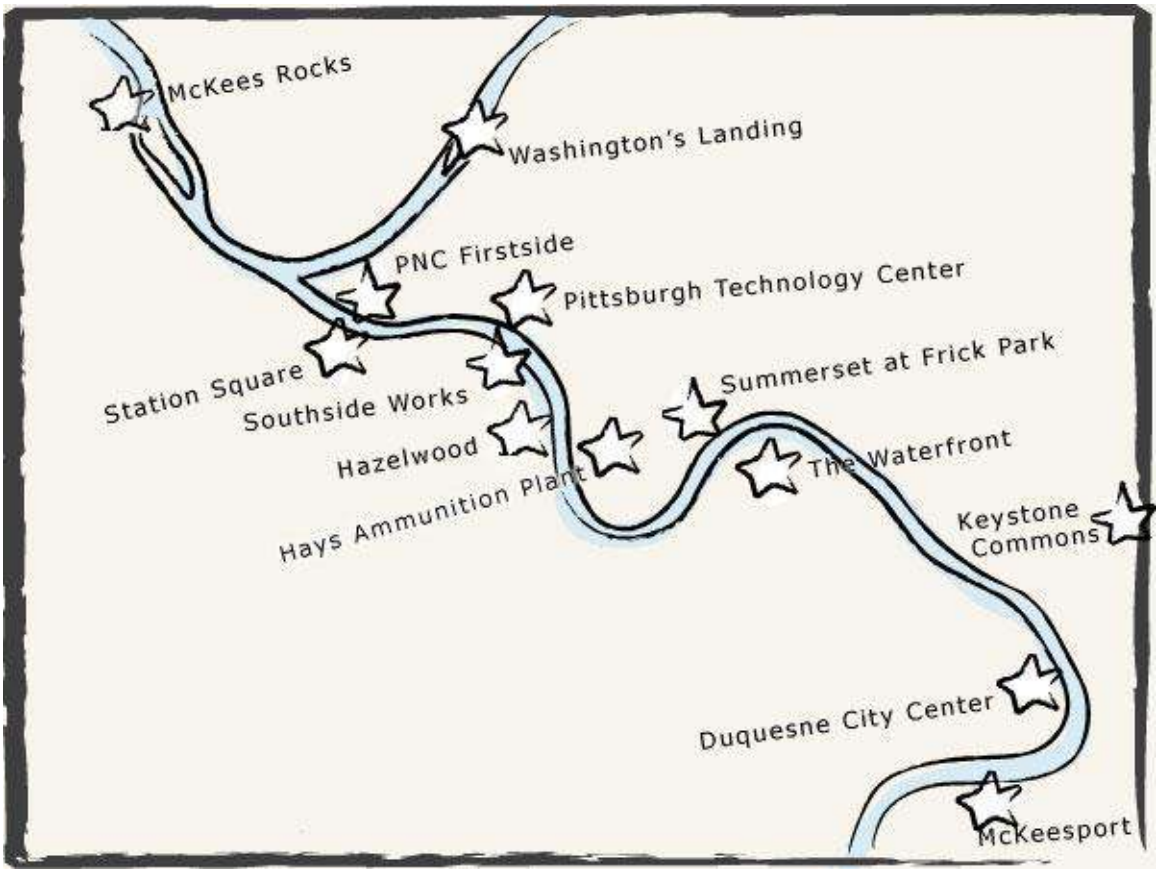

Figure 3.2. Some important Pittsburgh brownfield redevelopments (WPBC, available at http://www.cmu.edu/steinbrenner/brownfields/Case%20Studies/nav1a.html, August 6, 2011)

3.1. RIDC's Brownfield Projects

3.1.1. Industrial Center for Mckeesport

The Industrial Center of McKeesport was once home to several metal tube and pipe mill companies (Figure 3.1). In 1984, RIDC started working with the McKeesport Area Recovery Plan on a strategy for the distressed urban communities in the Mon Valley. (RIDC, 2010)

The Industrial Center of McKeesport offers land, water, and rail access. It is close to the turnpike and next to the river; although rail access competes with ground transportation (such as trucking) due to obstruction of passing trains (WPBC, 2007a).

RIDC undertook all the environmental threats since 1990s at the site. According to the Act 2 the developer of the site is responsible only for mediating immediate and direct threats to public health. Most of the contamination on the site was due to fuel oil and heavy metals. Starting in 1990, phased plans for environmental remediation, selective demolition and sale of miscellaneous scrap were undertaken.(RIDC, 2010)

The community's input is considered as the key factor for the success of the site. Particularly, the West-to-West Coalition was formed in order to serve as an economic developer for this and many sites. The Coalition represents 21 communities and has been selected to receive (WPBC, 2007a).

The RIDC used the Department of Community and Economic Development's (DCED) Industrial Sites Reuse Program funds for environmental assessments and for cleanup projects. Also, $8.0 million in loans and grants from the U.S. Department of Housing and Urban Development (HUD) were sent to redevelop the City Center of Duquesne and the Industrial Center of McKeesport. The Allegheny County Department of Economic Development worked with the Redevelopment Authority of Allegheny County (RAAC) and the Regional Industrial Development Corporation (RIDC) to take advantage of HUD's Section 108 Loan Guarantee Program, which enables public entities to leverage Community Development Block Grants into additional funding (WPBC, 2007a). Some images from the past and current use of the site can be found on Figure 3.1 and Figure 3.2.

Figure 3.1. Past and current uses of McKeesport Brownfield redevelopment site. Available at http://www.ridc.org/files/a_files/Case%20Study%20-%20McKeesport%20-%20red.pdf

Figure 3.2. Images from current use of McKeesport Brownfield redevelopment site.

3.1.2. The Almono Site (Hazelwood)

The 178-acre ALMONO brownfield site is a long, narrow strip of derelict riverfront land, geographically bound by the Monongahela River to the west and a steep hillside to the east. It was once home to two of the largest steel manufacturers in the Southwesten Pennsylvania region: Jones and Laughlin Steel Company (J&L) from 1884 to 1974 and Ling Temco Vought (LTV) Coke Works 1974 to 1998 (Gtech. 2011).

This land is the last large brownfield left within the Pittsburgh city limits, making it attractive to the hospitals and universities that reside in Oakland. Therefore, various site plans which aim to capture the interesting urban landscape of the site in a way to integrate the needs and current conditions of the nearby community have prepared (WPBC, 2007i). Because of its being the only brownfield owned by local foundations there are many opportunities that allow unique development. It is the first urban brownfield in the city in which is developed without the contribution of local government agencies and departments.

As the other brownfield sites which locate in the inner parts of the cities, Hazelwood also has a wealth of physical infrastructure that will be an asset for future developments. There are two rail lines that cross on either site of the site, one of

which connects to downtown and the other travels up Panther Hollow to Oakland. It has a working and licensed dock system that would allow for barge traffic and it is bounded by Second Avenue which is the main commercial corridor of the neighborhood. The size and flat structure of the site are the other features which enable many alternatives and opportunities for the future developments.

Due to contamination, the area needed to be de-commissioned of asbestos, petroleum, PCB removal, and other environmental hazards (Gtech, 2011).The site has currently cleared Act II remediation The entire site has been cleaned for commercial use and much of the site would need little or no remediation for future housing (WPBC, 2007i) (Figure 3.3.)

The community in Hazelwood is aware of the development of the site with a successful planning strategy and design criteria will bring the wealth and better living environment. The community involvement in the planning process has been organized through a Hazelwood Initiative, Inc (HI). The mission of HI is to act as a catalyst for the revitalization of the Greater Hazelwood Community in collaboration with the city, county and state representatives and serve as a vehicle to address resident concerns relating to various city services and to all community stakeholders (WPBC, 2007i).

Before starting the master plans, six stakeholder groups were engaged. These groups included transportation agencies; economic development agencies; private developers; river life and recreation interest groups; river commerce agencies and neighborhood residents from Hazelwood and adjacent communities (Vavro, 2003). In 2000, all these stakeholders developed their own vision of how to turn the site into a neighborhood in a sustainable way and how to make the site attractive for the residents. Their ideas, many of them similar to those that guide the Almono development today, include remediation of the site for commercial use, housing, recreation and regaining their access to the river (Fraser, 2004) (Figure 3.4.)

In the redevelopment process infrastructure costs will be significant. It is estimated that the redeveloping former steel mill sites due to the large building foundations that are often left after building teardowns will be difficult. The removal of the foundation take a considerable amount of money. The water and sewer lines, and other abandoned infrastructures on the site need a large investments to dig out, to refill, to repair, to replace or bury. (WPBC, 2007i)

Because of the land has not be developed yet it is not possible to estimate the possible economic benefits of redevelopment.

Figure 3.3. Current use of Almono Site (Hazelwood)

Figure 3.4. Almono site (Hazelwood Avenue- Courtesy of Urban Design Associates)

3.2. URA's Brownfield projects

3.2.1. Washington's Landing

Herr's island is located approximately 2 miles north of downtown along the Allegheny Rivers at a very famous point, where he Allegheny and Monongahela Rivers join to form Ohio River. The site's industrial history is extending over a hundred years to a variety of industrial uses (Deitrick and Farber, 2005) (Figure 3.5.)

In 1978 URA bought 0.5 acres from the Western Packing Company and, in 1979, 20 acres of the Buncher Company's land (Chute, 1979). The redevelopments began with the CDC, a private developer, and the city prepared a mixed-use projects comprised of commercial, light manufacturing, recreational and housing facilities. (Deitrick and Farber, 2005)

According to the environmental assessment of the central and northern part of the island, waste materials from rendering operations were found on the site. Besides, because of the placement of ash, sand, slag, cinders, and other granular materials in the fill, the groundwater did not meet drinking water standards (WPBC, 2007c).

During the planning and implementation of the brownfield redevelopment project, the developers tried to give much attention to the aesthetic viewpoint of the island in order to enhance the beauty of the island. The plantation of the streets and other public spaces, the materials used, building facade and roof slopes clearly defined. Eventually, in addition to upsacle townhouses, marina and tenis complex , many public spaces including public parks, tennis courts, biking trails, and hiking trails were formed in order to improve the accessibilty on the site (CMU, 1998a; WPBC, 2007c) (Figure 3.6.).

Figure 3.5. Image from past use of Washington's Landing

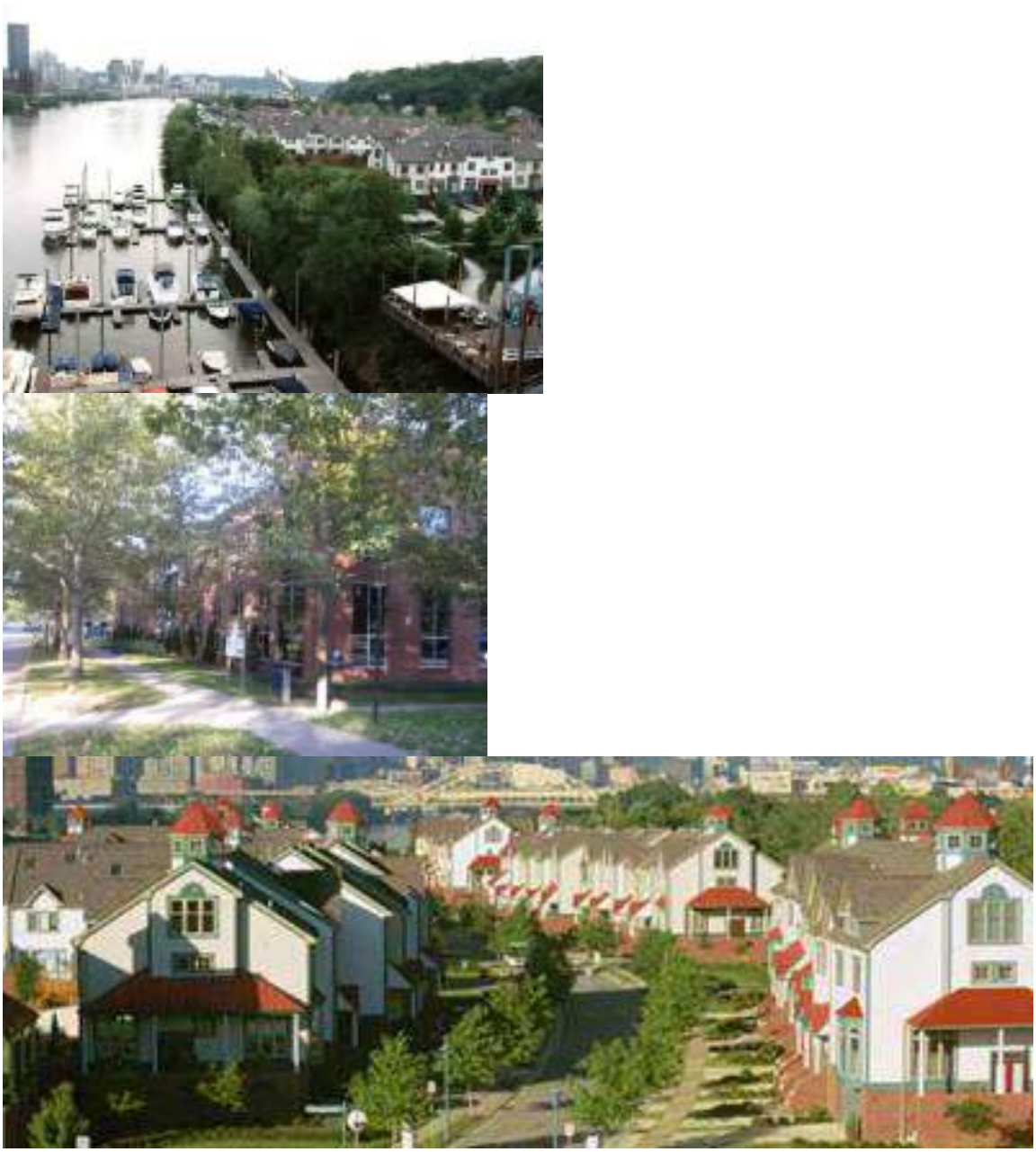

Figure 3.6. Images from current use of Washington's Landing

3.2.2. Pittsburgh Technology Center

Pittsburgh Technology Center sits on a portion of former Jones & Laughlin (LTV) integrated still mill located in Oakland across north side of the Monongahela Rivers

(Figure 3.7.). The site is less than two miles to Pittsburgh downtown and two major universities, the University of Pittsburgh and Carnegie Mellon. University.

There were numerous industrial uses during its history, including sawmills, iron and coke works, glass companies, manufactured gas, and steel production. URA purchased the land in 1983" (CMU, 1999a) Before construction on the site, all existing buildings except one, the former Soho Works galvanizing line and attached warehouse, were cleared off. Because of the wide variety and large number of industrial companies which occupies on the current PTC site, many environmental factors took into consideration (CMU, 1999a; WPBC, 2007d)

Although the URA wanted to increase access to the riverfront in this area, the active railway line on the bank of the river prohibits access. Existing infrastructure required renovations and some new infrastucture was required. None of the existing roads within the site were used. New sewer lines, electric lines, and a road system were constructed. The renovation of the Hot Metal Bridge was carried out in 2000. (WPBC, 2007d)

Today, there is an increasing demand for new office buidings in the area. The success and continious interest shown by private organizations induces URA to make more available land for office space and give more oppotunity to use more smart growth practices on the site (WPBC, 2007d) (Figure 3.8.).

This project is considered as an embodiment of Pittsburgh's evolution from town founded on heavy industry to a city on the cutting edge of innovative research and technology. (Lubove, 1996) Furthermore its sucess makes clear the contined prominence of the URA in shaping the Pittsburgh environment as well as the emergence of a broadened civic coaltion in the post-steel era (Lubove, 1996).

Figure 3.7. Images from past use of PTC

Figure 3.8. Images from current use of PTC

3.2.3. Southside Works

Southside Works is located on the south side of Monongahela River, directly across from what is now the Pittsburgh Technology Center. During the 19th century iron was produced and a big steel Company took place at the site for over a century (Santoro and Messenger, 1998) (Figure 3.9.)

After purchasing the land in 1993, URA made an effort for community consesus related to development of the site until 1996. Over the next few years URA tried to attract the developers while completing environmental, infrastructure, and traffic enhancement efforts and executing a Tax Increment Financing (TIF) package with the three taxing bodies The URA focused on improving the accecibility of the site and traffic. (WPBC, 2007e)

Today, the site contains approximately 330,000 square feet of specialty retail, restaurants, a hotel, residential urban living units, and up to 700,000 square feet of class A office space (WPBC, 2007e).

Southside Works considered as a first-class riverfront development utilizing a mix of office, medical, recreational, housng and retail uses. By this brownfield redevelopment Project, 5400 employmnet opportunities and approximately 1500 jobs were created (WPBC, 2007e) (Figure 3.10.)

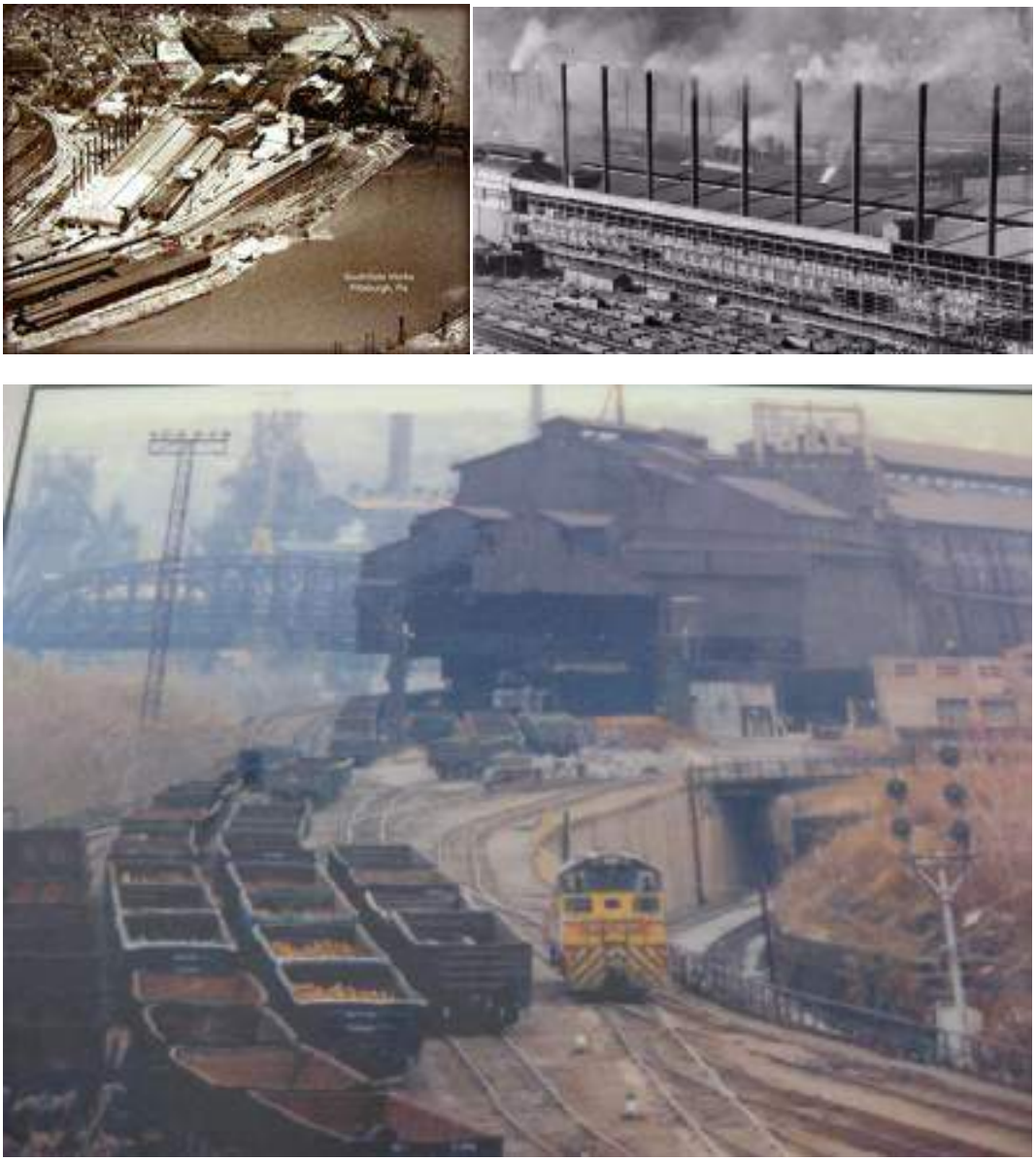

Figure 3.9. Images from the past use of SSW

Figure 3.10. Images from current use of SSW

3.2.4. Summerset at Frick Park/Nine Mile Run

In contrast to other Pittsburgh brownfields, any manufacturing facilities were constructed on Nine Mile Run and its valley during its history. It was served as a dumping ground over 17 million cubic yards of slag (Stikkers and Tarr, 2000) (Figure 3.11.). Nevertheless, its large size, close proximity to steel mills, river frontage and easy access to water and rail transportation made Nine Mile Run an ideal site for industrial development. (Stikkers and Tarr, 2000, CMU 1998b)

The URA purchased the property in 1995 and assembled a planning team to prepare plans for a housing development of up to 800 units (Deitrick and Farber, 2005:170)

Currently, Summerset at Frick Park projects is at its Phase II development. Phase I included 221 homes on 27 acres of land. Phases II will include 270 additional homes on 42 acres, and Phase III will include 213 homes on 40 acres. Phase I sales were a

success. (WPBC, 2007f) The developers constructed a main road throughout the housing areas. The projects is considered as a successful development in terms of economic concerns. There is a raise in the property taxes for the area and the project expected to generate over $2.9 million n annual revenue in the future (WPBC, 2007f) (Figure 3.12.)

Figure 3.11. Images from past use of Summerset at Frick Park and Nine Mile Run

Figure 3.12. Images from current use of Summerset at Frick Park

3.2.5. Hays Ammunition Plant (Galvtech)

The Hays site lies in the southeastern part of the city and is more properly culturally and geographically connected to the Monongahela Valley the location of many former steel mill properties (Deitrick and Farber, 2005) The site is not located along a riverside but at a very accessible point in the Monongahela River drainage basin. In 1942, the U.S. navy constructed the Hays ammunition plant to manufacture gun forgings near the southeastern border of Pittsburgh.

In 1993, the Army donated the site to the URA for $1 (Massey, 1995, Deitrick and Farber, 2005). In September of 1995, it was announced that the Hays site would be leased by GalvTech from the Pittsburgh Economic Industrial Development Corporation (PEIDC) which is part of the URA. (Belko, 1995)

Currently,there are plans for improvement in the rails to accommodate new rail traffic. Also, a new entrance constructed on SandCastle Recreational Park property may be created. The existing entrance will include the construction of new concrete pavement and the widening of the roadway intersections. Economically, GalvTech's activity has brought tens of new jobs into the area (WPBC, 2007g) (Figure 3.13.).

Figure 3.13. Images from current use of Galvtech

3.4. Allegheny County Economic Development's Projects

3.4.1. The Waterfront

The site is located on the Monongahela river directly across the city of Pittsburgh. It was occupied by a steel mill headed by the US Steel Industry (WPBC, 2007h) (Figure 3.14.). Despite some advantages of the topography of the land, there are some disadvantages in terms of accessibility. Even though the topography is flat and nearby other prime locations such as Squirrel Hill, the location of the site is not easily accessible to the communities within walking distance. Active railroad tracks separate the development from surrounding communities (WPBC, 2007h)

The developer had to undertake main streets because of the increasing traffic due to the new residential, commercial and retail uses. Many physical changes were made, however the historical character were destroyed during these efforts.

The lubricants used by the steel mill were stowed in underground storage tanks, which leaked and contaminated the soil. There was also asbestos contamination on the site. The asbestos cleanup and a storm runoff test was conducted before the development. (WPBC, 2007h)

What the people expected most from the redevelopment of the site was jobs for out off work steelworkers (Serrin, 1992). The former residents were conflicted over what the new Homestead should be, but many wanted industrial or retraining facilities so people could stay in place, prepare themselves for new jobs, and "have control over their lives (Serrin, 1992). The citizens formed a non-profit citizen's development corporation (CDC) and a Homestead Economic Corporation (HERC). The state formed the Enterprise Zone Program. HERC and Enterprise Zone were able to develop two master plans together, one for the mill site and one for the community. However, most of the residents disappointed with Waterfront development. Because retail jobs do not support families, neither do they provide the unemployed with the sense of control Homesteaders so urgently need (Pearce, 2006).

As a result of these projects a new landscape has emerged along the rivers (Figure 3.15.) Although paying more attention to the river, the private Waterfront development on the former Homestead Steel Works site on the Monongahela River is retail, entertainment, office, and light industrial complex seemingly designed without any consideration of the riverfront (Muller and Tarr, 2003:37) In other words, it can be said that he development of Waterfront based on the suburban model and the land would be better utilized if storied buildings as well as structured parking was also part of development plans.(WPBC, 2007h)

Figure 3.14. Image from past use of the Waterfront

Figure 3.15. Images from current uses of the Waterfront

3.4.2. City Center of Duquesne

The City Center of Duquesne is located on approximately 250 acre site along the Monongahela River, south east of Pittsburgh on the former Duquesne Steel Works (Figure 3.16.). The plant was in service until 1984. In 1984, RIDC started working with the McKeesport Area Recovery Plan on a revitalization strategy for the distressed urban communities in the Mon Valley. Allegheny County Economic Development took control of the site in 1987.(RIDC, 2010; WPBC, 2007b)

The site is at an accessible point via water and rail. RIDC welcomes the newly proposed funding for flyover ramps which would improve vehicular access over extremely active rail lines. The current access to the site creates significant traffic, pedestrian delays and safety risks. Therefore, transportation by ground, specially trucking access is considered as the key issue for the site (WPBC, 2007b)

RIDC did not pursue environmental insurance for the City Center of Duquesne. The primary contaminants on the site were heavy metals and PFCs. According to the environmental assessments, it is determined that the site would require at least 12 inches of fill spread over the entire site in order for approval as a light-industrial commercial property. On the other hand, demolished blast furnaces that are laden

with asbestos have presented a large obstacle to redevelopment of the sites southern end. (WPBC, 2007b)

The railroad tracks run between the community and the property causes the feeling of separation from the site. It is not possible to say that the communities' decisions have been taken into consideration during the redevelopment of the site. The West-to-West Coalition was formed in order to serve as an economic developer for this and many sites (WPBC, 2007b)

This site is large in an area with an economically disadvantaged population. The attack of Hurricane Ivan in 2004 decreased the market conditions on the site. Even though several public funds have been available for the site, the redevelopment process has not been completed yet. Some of these funds are:

To date, a total of $31 million has been committed to the Duquesne and McKeesport projects. The funding includes: $8.0 million in loans and grants from HUD; $4.5-million grant from the RACP; $1.0-million grant from the U.S. Environmental Protection Agency (EPA); and $17.5 million in earmarked federal transportation funding.(WPBC, 2007b)Until now, RIDC has renovated 5 existing buildings into multi-tenant facilities. In addition to them several facilities have been constructed filling up 60% of the site (Figure 3.17.)

Figure 3.16. Images from past and current uses of Duquesne City center Brownfield Redevelopmnet Site. Available at http://www.ridc.org/files/a_files/Case%20Study%20-%20Duquesne%20-%20red.pdf

Figure 3.17. Images from current use of Duquesne City Center

4. Conclusions

With the redevelopment of brownfields through city's new economic vision and land-use strategies, Pittsburgh has achieved to reverse its decline into a a new development strategy. All the brownfield redevelopment projects In Pittsburgh analyzed here met the objectives of the following strategies

-Revitalizing the waterfront

-Increasing public access to waterfront

-Attracting the residents to the city

-Establishing high technology industry.

-Accelerating the urban developments through City's new development strategy

-Increasing the quality of life

-Reversing the city's economic decline

-Creating new jobs

There are some lessons which can be learned from the brownfields redevelopment projects of URA in Pittsburgh which can be applicable elsewhere. Stikkers and Tarr (2000) in their paper, try to clarify the important points for the redevelopment strategy in these projects: According to them all these projects facilitated the City's overall redevelopment goals of creating high technology jobs, encouraging people to move back into the city, increasing access to waterfront, and preventing the decrease in tax revenues. Public funding is the most important factor in achieving the city's redevelopment goals. It is nearly impossible to attract the developers' interest to abandoned lands in the cities where there is population decline. In many cases it was seen that the attempts to attract private developers and to develop the sites cannot be achieved unless the local governments took the lead. Most of the actors who play important roles during the redevelopment of these brownfields and in determining the City's new development strategy argue that without URA it was impossible to achieve these projects. It may be possible to find developers, but at that time the developments would have been not realized through mixed use planning strategy or through City's new development strategies.

In this context it is necessary to emphasize that to facilitate these strategies, significant amounts of public funds from local, state, and federal sources has been required. The city's efforts, combined with state government policies that favor brownfields redevelopment, have been able to provide the momentum necessary to transform and revitalize these properties.

URA has been the dominant body, as the primary source of funds, in the Pittsburgh's brownfields redevelopment process. As a developing agency, the URA was unique. As Lubove (1996) indicates, no other institution as URA combined so many functions: initiator, catalyst, coordinator, planner, funding agent, provider of technical assistance and land assembly. URA plays the key facilitative role not only in funding but also in implementing the City's overall economic strategies through acquiring brownfields and removing the barrier of environmental liability. By acquiring the land URA has the opportunity to control all the aspects of redevelopment. Implementing City's overall economic strategy may have been more difficult and slower had Pittsburgh sought to attract private developers to acquire and develop the land. Moreover, the success of removing the barrier of environmental remediation have only achieved by the lawsuits concerning environmental liability issues associated with the brownfield projects.

Infrastructure is another critical factor in the redevelopment of these sites. In most of these projects (except Hays Ammunition Plant and RIDC's projects), existing infrastructure was almost completely removed and the sites developed as it were vacant. This approach has some advantages in establishing connections to existing facilitates such as water and sewer system. A particularly important issue in this respect is transportation and how impacts to the community's existing street network will be addressed. Such a problem appeared at the Southside works by rehabilitating a historic bridge to serve as a new transportation gateway. In other cases, such a development cannot be achieved and the increased traffic with new developments has proven to be tough problem associated with development. An important issue

beyond the re-use of existing infrastructure, however, is the degree to which new development will connect to the fabric of surrounding community. In Pittsburgh cases, an important goal of redevelopment has been to transform the industrial sites at the waterfronts, to remove barriers associated with previous use of the rivers and to establish corridors that can connect the surrounding communities to the recreational public spaces at the waterfront.

In terms of transforming an abandoned site into a magnet for new jobs, the Pittsburgh Technology Center can be considered as successful project. However, the interconnection between the surrounding community and the riverfront was not achieved and an opportunity of enhancing public access to its prime waterfront location was missed. A rail road line along the site's southern edge adjacent to the Monongahela River was one of the barriers in the failure of this strategy. Because this line effectively blocks public access to the river and occupies land that might otherwise be used as a riverfront park. Critics also fault the development because of its overall design and use of space. Instead of establishing a connection between the river and surrounding neighborhoods, the site was designed as a typical suburban office campus.

Contrary to PTC, Washington's Landing can be described as successfully reconnecting the surrounding community with the Allegheny River. To achieve these goals and to improve public access, a historic bridge was refurbished with pedestrian and biking trails and these trails linked the island to an existing riverfront on the city's north side. These design features enabled Washington's Landing to achieve the goal of restoring access to the waterfront at a site that was previously reserved completely for industrial uses.

In the Southside and Nine Mile projects, similar design criteria tried to be accomplishing because of the success of the Washington's' Landing development. At Nine Mile Run, numerous collaborative meetings were organized between city officials, artists, engineers, landscape architects, and local residents for the viability of the project.

The preservation of historical industrial heritage can be considered as another failure in these projects. Each of these sites has deep historical roots and helped shaping Pittsburgh as the center of American industry during the nineteenth and twentieth centuries. Each site is also a symbol of the region's decline. Revitalization of these sites reflects Pittsburgh's determination to rebound from a devastating period of de-industrialization (Stikkers and Tarr, 2000). The design criteria should be developed with the approach to reveal the symbol of the sites.

In addition to these major redevelopment projects, the river landscape is changing in many smaller but no less profound ways. The former industrial riverfronts are not the only sites of renewal. Most dramatic developments of a regional shopping mall and an upscale housing complex were occurred on the massive slug dump. (Muller and Tarr, 2003:37) However it is still not possible to say Pittsburgh utterly eliminate the environmental pollution problems. Despite improving river conditions, the region

still struggles to meet clean air standards and the water quality is under the acceptable levels. (Muller and Tarr, 2003:38) Waterfront reclamation, is also considered as a key aspect in improving the marketability of these sites to both potential residents and businesses (UP, 1998)

Linking of the environmental, economic and legal efforts to a comprehensive community development strategy is very essential in brownfields redevelopment in Pittsburgh Region. Such a strategy requires that contiguous communities with shared interests but distinct political boundaries must begin to work with one another to both redevelop brownfields and revitalize their communities. Moreover, an effective redevelopment strategy with vigorously working groups in order to reduce the impact of the obstacles and liabilities can also strengthen and market the assets of the sites. (UP, 1998:57) Comprehensive approach should be evident, proper planning requires that several factors, including environmental factors, transportation, land use, community interests and long - range and regional focuses, should be included." (UP, 1998:57,58)

The Pittsburgh case study provides direction for other cities in a number of areas. As Roger S. Ahlbrant Jr. (1986) mentioned in his paper about the "public private partnership in the neighborhood renewal", city programs must be flexible enough to be tailored to the needs of individual neighborhoods. The Pittsburgh brownfield redevelopment experience also demonstrate that partnerships not only provide additional resources, enabling the city to leverage its public dollars, but also help to build the capacity outside of city government to respond to the needs of community. In addition, programs, include both technical assistance and funds for operating and project purposes, to build organizational capacity may be required (Ahlbrant Jr., 1986)

At this point, after analyzing and evaluating some of Pittsburgh' brownfield redevelopment experiences, it may be necessary to ask the question "At what point will the City's strategy stimulate the private market sufficiently enough to persuade investors to take on local brownfield projects without significant infusion of public funds? Must the URA continue to serve as the developer of brownfield sites by investing substantial amounts of public funds to return them to productive use?" Because the main goal in brownfields redevelopments in many communities is to attract private developers to assume the redevelopment of abandoned or underutilized properties.

Most of the actors, had important roles in the redevelopment process, argue that there is not a certain answer for this question. Actually, it is clear that URA should continue to serve until the country' and state' economy become better, stronger and stay stable. For example according to Stikkers and Tarr (2000) the answer of the questions may be evident in another regional brownfield just beyond the city limits.

Political support and leadership is the main driving force for the achievement of the purposed objectives. However, the political climate is not the same as in 1980s.

Therefore brownfield redevelopment in Pittsburgh, PA is more difficult today than 30 years ago.

Table 1. SWOT Analysis for Pittsburgh Brownfields Redevelopment Projects

	Strengths	**Weaknesses**	**Opportunities**	**Threats**
Environmental issues		-Soil and water contamination levels are still below the legal standards	-Legal arrangements related with contamination and preservation -Increasing public awareness in environmental related issues	-Urban sprawl
Spatial issues	-Existence of infrastructure -Accessibility -Waterfront	-Insufficient awareness in historical heritage preservation -Existence of railways as separators	-Existence inside the border of metropolitan city	-Greenfields
Political and institutional issues	-Central role of governments -Existence of RIDC and URA		-Strong political support at federal, state and local level	
Legal issues		Clouds on the determination of brownfields	-CERCLA, BRERA, Pennsylvania Land Recycling Act (Act 2)	

Economic issues	TIF	-Insufficient public funds -Limited market demand	
Plan/design based issues	-Well-defined development strategy for the city	-Lack of comprehensive planning -Insufficient design criteria for sustainable development	
Social and Communal issues	-Effective community development corporations (active participation)		-Collaboration between the stakeholders

It may be necessary to analyze the existing situation after looking back the brownfields, in the year of 2012. There are still some weak points and some threats which cause delays in some brownfield projects and some strengths and opportunities which still keep the brownfields redevelopment issues on the City's agenda.

It can be said that the economic problems are considered as the main obstacle in the redevelopment attempts for brownfields. It depend not only the global economic crisis all around the world but also the economic problems at the state level.

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Urban Governance for Sustainable Development - The implementation strategy for a sustainable development plan at the administration of the City of Ludwigsburg

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Climate change is the big challenge for sustainable urban development in the next decades. Especially in Germany after the exit of nuclear power, there are big programmes for energy saving and for new supply concepts of renewable energy. There are huge funding's for raising the standards of building insulation and improving the heating system. But beneath new technical solutions and individual projects it is necessary to focus more on spatial concepts for a comprehensive energy strategy.

EU Leipzig Charter for sustainable development

The goals of a sustainable urban development policy have been laid down by the European Union in the "Leipzig Charter on Sustainable European Cities" in 2007. This charter is being implemented within the framework of the German programme "National Urban Development Policy". Here, strategic guiding visions for urban development such as "the compact city", the "climate conscious city", "the City as a location for business" or "the socially balanced city" are formulated. It is a declared goal to prevent the European city from on-going urban sprawl and segregation and meet the challenges of demographic and climate change. Thus, the climate conscious and energy efficient city is part of a comprehensive integrated strategy for sustainability that - besides ecological themes - also accounts for social and economic aspects. (Bundesministerium fuer Verkehr, Bau und Stadtentwicklung 2007)

City-Climate-Plans

The Federal Government of Germany is supporting City-Climate-Plans, where the energy demand and the energy supply for the whole city is analysed and where on the basis of demand scenarios new projects are prepared. These Climate-Plans are connected with the individual funding of energy modernisation of buildings. Also there are new regulations that are forcing the landowners to a high standard of building insulation and new heating systems. These measures have crucial impact on the urban design, the composition of the façade and the planning system, and more and more they are dominating the other sectoral needs of a city.

In the point of view of urban planning, there is the question how to combine the City-Climate-Plans with the existing planning system. At the moment they are almost not integrated, sometimes the energy measures are against the current planning objectives. Individual energy projects could counteract to comprehensive supply strategies or objectives of city design. (Herrmann-Lobreyer; Kurth 2010)

Climate Development Planning

Sustainable development requires a renaissance of comprehensive urban development concepts. Germany has already a formalized planning system with the land-use-plan for the whole city (Flaechennutzungsplan) and the zoning plan for a new building project (Bebauungsplan), in between there can be established citywide or district development plans. To achieve the objectives of energy turn it will be necessary to make an “climate development plan” for every city with analysis about energy demand and supply and which will be integrated as a sectoral plan in the city development plan. These city-wide plans should be concretized on the level of districts and/or quarters, where the energy demand can be analysed much more detailed, and integrated in district development plans or zonings plans. If the energy plans are integrated in the planning system, conflicts of objectives could be solved preventive, and there will be a framework for individual energy modernisations. (Mitschang 2012, Oberste Baubehörde Bayern 2011)

Sustainable development plan of Ludwigsburg

The city of Ludwigsburg (90.000 inhabitants) in the Region of Stuttgart in Southwest Germany has created a continuing urban development process with an intensive participation to strengthen sustainable development. The approach is to create a urban development plan which combines different strategies of prevention, empowerment, social renewal, urban renewal and energy measures. This plan is combined with indicators of sustainability to identify energy efficiently urban structures. With thematic masterplans and district development plans the measures had been detailed. One masterplan was the city-wide “Energy-Concept” about supply and demand of energy and traffic. For the Citywide Energy Strategy, a multitude of activities in the areas of climate policy, climate change adaption, energy, transport, industry and land use have been compiled. These activities show that a special

priority is given to energy policy in this community. Furthermore, outstanding energy efficiency standards have been realized in building and conversion projects in Ludwigsburg. (City of Ludwigsburg 2011)

Municipal energy supply company

An important stakeholder for the energy concept is the municipal energy supply company (Stadtwerke) Ludwigsburg-Kornwestheim GmbH (SWLB), founded in 1858, delivers gas and water and since 2006 electricity. The company supports concepts for energy efficiency measures in buildings together with the local energy agency LEA by offering infrared thermography of buildings. In November 2009 SWLB opened the largest wood chip fired ORC cogeneration plant in Baden Wuerttemberg. With an electric power of 2.1 MW it produces 10.000 MWh electricity and 48.000 MWh heat. This covers 70% of the district heating energy and supplies 3000 households. By using 42.000 tons of regionally produced wood chips annually, the plant saves 18.000 Tons of CO_2.

Climate Governance

A unique feature of the City of Ludwigsburg is the strategy of the mayor and his administration to use the comprehensive administrative reform for establishing sustainable structures that advance the subjects of urban development, energy and climate protection. Many other cities promote climate protection in campaigns with doubtful success. In Ludwigsburg, the administration makes well-directed use of the instruments it already has at hand while trying to achieve a balanced municipal household that contributes to fairness among generations. The mayor established a new head office at the city administration called “Sustainable Urban Development” with special departments for energy and urban regeneration. This office is located directly at the mayor and can check every sectoral project from other divisions concerning the indicators for sustainable development. (Herrmann-Lobreyer; Kurth 2011)

Integrated sustainability management

As part of the climate governance and to secure continuous advancement of the urban development process, a distinct management system was developed for the administration. It safeguards the implementation and allows for modification of strategic objectives. It is a recurrent cycle that should be undergone every four years. The cycle comprises of five steps:

1. Assessment of the local situation: In the sense of an inventory, the present urban situation is reviewed by the help of neighbourhood walks, talks with citizens and experts or thematic workshops.
2. Further development of strategic goals: The existing goals are examined and, if necessary, redefined. Every three years there are future conferences.
3. Adoption of the guiding principles and objectives for the main themes. The

guiding principles and objectives are stipulated in a council resolution, so that the municipal action is politically legitimated.

4. Implementation via master plans: For each area of action, a master plan is drawn up that specifies the guiding principles and strategic objectives by assigning measures, time schedules and responsibilities. By linking the master plan to municipal budget and financial planning, a new and transparent steering tool is generated.
5. Reporting and evaluation (indicators): For each thematic field in the Urban Development Strategy, several indicators have been defined. In this way, the process can be checked against pre-set goals (evaluation). With these indicators, time series are generated that allow for early recognition of trends and comparison with other cities. (City of Ludwigsburg 2011)

Conclusion

With the sustainable Urban Development Strategy, the Citywide Energy Strategy and the consequent restructuring of administration, the City of Ludwigsburg chose an exceptionally comprehensive and integrated approach, especially when compared to other German medium-sized cities. The concept builds on experiences from municipal energy efficiency projects and national and international exchange programmes and takes them further in a consistent way. Participation in European research projects such as “Managing Urban Europe 25” (MUE) asserted wide influence on further conceptional development.

Energy efficient urban development already gained momentum during the 1990s, for example in Local Agenda 21 groups, urban regeneration (Social City) and housing development. This process has continuously been cultivated. It has particularly been stimulated by the introduction of the Urban Development Strategy in 2004 and the resulting Citywide Energy Strategy. In Ludwigsburg, the “concept of an energy efficient city” is part of an overall sustainability strategy. Aspects of settlement structure, infrastructure and traffic strongly influence the energy consumption of a community – be it in a direct or indirect way. A new integrated structure of administration and a comprehensive implementation strategy were developed in parallel. The effectiveness of measures is evaluated by a set of indicators in a regular management cycle.

Finally, energy efficiency and climate protection as parts of an integrated urban development approach contribute to safeguarding competitiveness and promoting economic development. In the long run, citizens and enterprises benefit from security of energy supply and low energy prices. The City of Ludwigsburg has realized that only energy efficient cities remain attractive for their citizens and can maintain their cultural and social offers and public services. In 2012 the city of Ludwigsburg won the prize of “climate neutral city” of the state of Baden-Wuerttemberg.

The approach of energy efficient city and sustainable governance was already evaluated by the University of Applied Sciences Stuttgart as a case study for the International Energy Agency: (http://www.ludwigsburg.de/servlet/PB/menu/1290113_l1/index.html). A similar research projects is on process about energy development plans for the city of Munich: http://www.nationale-stadtentwicklungspolitik.de/cln_032/nn_251538/Content/Projekte/energiegerechte__stadtentwicklung__muenchen.html

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Overview of Romanian Planning Evolution

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Key words: planning history, planning instrument, critical approach.

The paper aims to present a brief overview of more than one century of urban planning development in Romania. Its historic evolution is split into four different stages, starting with the first roots that can be found at the end of the 18th century and in the first part of the 19th, when first urban plans and regulations were elaborated. The four stages refer to the predecessors (before 1900), the basics (the 1st half of the 20th century), the totalitarian age (the communist decades), and to the transition one (post 1990 decades). The analysis emphasises the main characteristics of each stage and the elements attesting continuities or discontinuities. The method of the author is chronological and comparative. The investigation is placing, whenever possible, the evolution of the Romanian planning within the European context. The planning knowledge and instruments have been inspired over the time by the Austrian-Hungarians or Russian Empire during the first stages, by the French or German schools later on, by the Soviet Union during the communism and most recently by the different trends that can be seen within the European Union, of which territorial cohesion becomes important. However, the paper mainly insists on the last 100 years, as being the most relevant interval, starting with the major theoretical gains of the inter-war period, going through the major transformations of settlements and territories during the authoritarian regime and ending with the decades of radical shift and reconstruction of a system under a liberal political and economic system. The significance and relevance of the paper stands in its comprehensiveness and synthetic perspective at the same time, providing information about a country with an important experience in the field, yet still looking for recognition and positioning at European and international level. The first comprehensive monographic studies of Ionescu de la Brad, in the 2nd half of the 19th century, the contribution of eng. Cincinat Sfintescu to development of spatial planning at macro-territorial levels in the early '30s, or the complex systematisation plans of the 6th and 7th decades leading to development of new towns, large touristic areas, or industrial zones (yet marked by functionalism and radicalism of the interventions), are some significant achievements. During the last decades, Romania has done several steps in order to catch up with the evolutions of planning education, instruments and methodologies, legal and institutional framework. A consistent and continuous process started after December 1989, leading to setting up a new planning system, a specific higher planning education and in defining the objectives and professional standards for the profession of urban planner in Romania. The approach is critical and based on various professional opinions as well as on own personal views. The paper is a follow-up of a recent issue on the same topic, of the planning magazine

"Urbanismul-new series", and can be used as a start for a planning course on recent urban planning history in Romania.

1. Introduction

Romania has a history which is specific for the Eastern part o f Europe. It is a rather hew state, which was born after the second world war in 1918. The setting up of the modern Romanian state, was the result of bringing together 4 different regions with 4 different administrative rules and models of organisation: the Romanian kingdom an independent state since the mid of 19th century, Transylvania an autonomous voivodship under the Hungarian and Austrian influence, Basarabia a region which was part of the Russian Empire and one small Northern region called Bucovina, part of the Austrian – Hungarian Empire at that time. It is obviously difficult to analyse the planning system evolution before 1918, as it was quite different in the 4 regions. In general all Romanian regions have suffered from different influences along previous centuries as they have been most of the time under the authority of the bigger powers, empires which were dominating the area: the Austrians to the West, the Ottomans to the South and the Russians to the East and North.

Figure 1. Romania in 1925. The 10 historic regions can be noticed. Muntenia, Oltenia and Moldova joined together in 1859 and formed the Romanian Kingdom. Dobrogea was added in 1878 (map by Ana Maria Petrescu, 2012)

Until the unification of the 20th century the history of planning is quite different in the West compared to the East and South and has specific features in the North or in the South-eastern parts between Danube and the Black Sea. Historic evolution left its traces if one looks at the structure, shape and development of human settlements, of towns and villages, traces that can still be noticed in spite of the last 100 years of attempts of a more homogenous development and also, mainly, in spite of the more than 4 decades of communism which tried to uniform and diminish the gaps and differences between regions, between rural and urban, or between towns.

However, it must be noticed that a solid tradition started to be created in the field beginning with the 2nd half of the 19th century. The modernisation of the so called Old Kingdom (Moldavia + Walachia) and the orientation towards the Western European models set up a path that will be further developed in the 20th century. Until the '50s, the new Romanian state set up new institutions and laws and developed a planning policy which was following very much the modern European and international trends of that time. The 2nd part of the century and specially the last decades meant a new fracture in relation to these trends and for a short period of time lead to isolation, stagnation and peculiar evolutions determined by an increasing authoritarian political regime.

The political shift occurred at the end of 1989, meant a new return to the Western European models and reconnection to the international trends and changes in general and in planning policies and approaches too. The last 2 decades are characterised by a continuous attempt to improve and adapt the legal and institutional framework, the planning instruments and procedures to the new political and social-economical context. A particular emphasis has to be mentioned in respect to the important steps done in the planning education system and in defining the profession of urban planner in accordance to the European principles promoted by organisations such as the Council of European Planners (CEU), but not only.

2. Analysis

The following lines will present the main characteristics of the 4 stages of evolution and development of the Romanian planning system. The first stage refers to the period before 1918, basically the 19th century, the 2nd one to the inter-war period ending with the change of political regime in 1947, when Romania became a republic, the 3rd interval represents the 4 decades of communism followed finally by the present period of transition which began in December 1989 with the fall of the totalitarian regime and the setting up of a new democratic society and a market economy.

2.1 The predecessors (before 1918)

The first territorial planning regulations can be found during the feudal period, since the XVI-th and XVII-th centuries. The use of lands owned by the landlords were subject to certain regulatory planning actions concerning the efficient use of the land resources such as forests, waters or agricultural land. The development of small rural settlements for the peasants who were living on the landlord property and worked the land were also sometime the result of a planned activity. As a public policy of a general interest first traces can be found in the Western part of the country, which was part of a process of modernisation of the territory initiated by the House of Habsburg, aiming to a better protection and administration (Gheorghiu, 2010, pp.17-23). The setting up of a more balanced settlements network, of a number of fortified

towns, were part of such a process, which was also accompanied by colonisation of people of various nations: Germans, Serbians, Bohemians, Slovakians, Hungarians.

The German and Austrian influence can be noticed in the specific design and volumetric developments of the "burgs" in the Western part of the country which become more urbanised and industrialised in the 19th century. The rest of the country remained mostly an agricultural one by the end of the century, when the Old Kingdom led by a German King (Carol the 1st), began a process of modernisation and capitalist development. The Ottoman influence remained however strong especially in the Southern part of the country along the Danube and in Dobrogea region. A certain indirect or direct French influence can be noticed after 1830 and the so called Organic Regulations. At that time, the Eastern and Southern part of the country were under Russian authority and were governed by these new rules of French influence. The Russian Governor or that time, general Pavel Dmitrievich Kiselyov (or Kiseleff) began a process of reconstruction of towns especially of strategic importance such as some Danubian harbours (Brăila, Giurgiu, Turnu Măgurele) (figures 2,3). The circular form, the radial street system and the peripheral boulevard were some common characteristics of such urban planning interventions. The general was also an initiator of some first works of urban modernisation of Bucharest by cutting some of the first large boulevards in its Northern part.

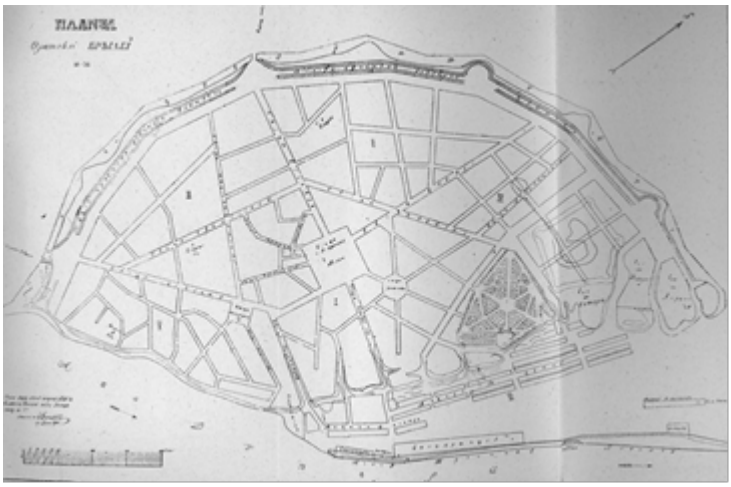

Figure 2. The Plan of Brăila in 1836

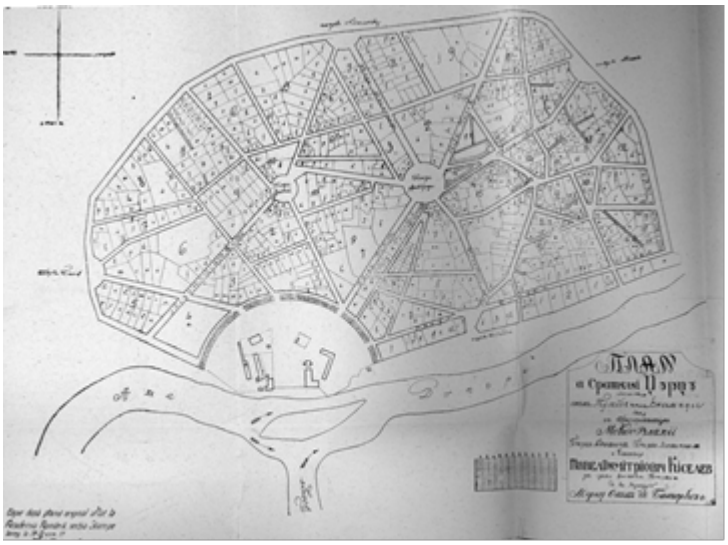

Figure 3. The Plan of Giurgiu around the mid of 19th century

The first traces of a modern planning system can be related to some legal initiatives of the beginning of the 19th century such as: the development of a cadastre, regulations for development of rural areas, first alignment plans and first accurate topographic maps for towns and cities. Bucharest gets its first complete topographic and cadastral map in 1847 (the Borroczyn plan). The 2nd part of the century is also characterised by a growing interest for urban infrastructure and embellishment works: public gardens and parks, larger and better urban streets and boulevards, social and cultural endowments are developed as well as water distribution and sewage systems. By the end of the 19th century, in 1894 the law for organising the urban communes was issued setting up rules for controlling the chaotic sprawl and creating conditions for a hygienic and secure development. The first development and regulatory plans for the capital city of Bucharest were elaborated around 1900.
At territorial scale there is a raising concern about the development of rural areas and of the large territorial infrastructure. During the 2nd part of the 19th century, the activity of Ion Ionescu de la Brad, specialised in agronomy, was significant. Besides the organization of the agricultural land use, he initiated some original research methods for better knowledge of rural life, which led to the elaboration of the first counties' monographic studies.

The unification of Moldavian and Walachian voivodships in 1859 was also the beginning of the construction of the modern state. The setting up of a ministry of public works was among the first measures taken by the new leadership. It was an important step for the development of the communication infrastructure at the level of the territory. The development of a railway network connecting the main cities and the Saligny's bridge over the Danube, followed by the development of the harbour cities on the Black Sea were important achievements of the time. One of the representative figures of the time is the engineer Elie Radu who had a major role in the development of engineering works from railways to aqueducts, bridges or water reservoirs.

It must be also mentioned the development during the last decades of the 19th century of education in the filed of architecture and civil engineering. This was another important step as by then the main public works and urban plans were done by foreign engineers, architects or landscape planners, or by few Romanians who graduated in Germany, France, England or elsewhere in Europe.

2.2. The inter-war period – 1919 - 1947

The 3 decades of the first half of the last century played an important part in the history of modern Romania. In spite of the troubled times of the last part of the interval, the social and economic progresses were remarkable. The role of spatial planning became important as modernisation of towns and cities and the further development of territorial infrastructure were major targets. The after war reconstruction, the land reform and the administrative reorganisation, the necessity to develop the capital city accordingly to is new status and in general the increasing role of the state were an impetus for a fast development of a spatial planning system.

Significant aspects can be mentioned such as: the setting up of the Town Planning Institute of the Union of Towns and Cities, the development of the education in the field and the development of an interdisciplinary approach to urban and regional planning, the issuing of a specialised publication – the magazine "Urbanismul" and of a collection "The Urban Planning Library", the master plan for Bucharest.

Figure 4-5. Covers of "Urbanismul" magazine from 1933 (5-6) and 1934 (3-4)

Relevant contributions to developing new approaches to study and research of the territory and human settlements were coming from fields like geography and sociology. The development of a Romanian "School of sociology", by Henri H. Stahl and Gustav Gusti and of the human geography one by Simion Mehedinţi and Vintilă

Mihăilescu led to an increased knowledge of the social and economic development of the country in general. The research of the rural areas continued the initiatives of the previous decades by elaborating detailed monographic descriptions. Architects, such as Florea Stănculescu, developed a kind of a rural planning and initiated at the Faculty of Architecture in Bucharest a course of "ruralism"

A critical overview of that period reveals significant evolutions such as: elaboration of general urban plans for a number of cities including the capital, urban plans for new resorts, and successful participations of Romanian architects in international urban competitions, cultural and editorial activities. Shortcomings are related mainly to precarious and incomplete legislation and weak quality of the administrative staff as well as a weak awareness of the general public for "systematization" (Marcu, 1930). The basis of higher education in urban planning is set up at the Faculty of Architecture and at the Polytechnique School (both in Bucharest) as well as in the Schools of Administrative Sciences (courses of urban legislation, civil engineering, urban hygiene or aesthetics).
The most important contributions to development of urban planning theory and practice belong to the engineer Cincinat Sfinţescu, who left a vast written work including volumes for "General Urbanism" and "Special Urbanism" (in original "urbanistica") or "The Superurbanism". His books and articles were based on the European knowledge of that time and touched most or the problems of spatial development from the details of urban design to the problems of organising the national territory. The concept of "superurbanism" was presented as an original contribution at the international urban planning congresses held in Rome (1929) and Berlin (1931) and speaks about the necessity to manage regional and national territories. Among the new concepts he speaks about urban agglomerations and their area of influence.

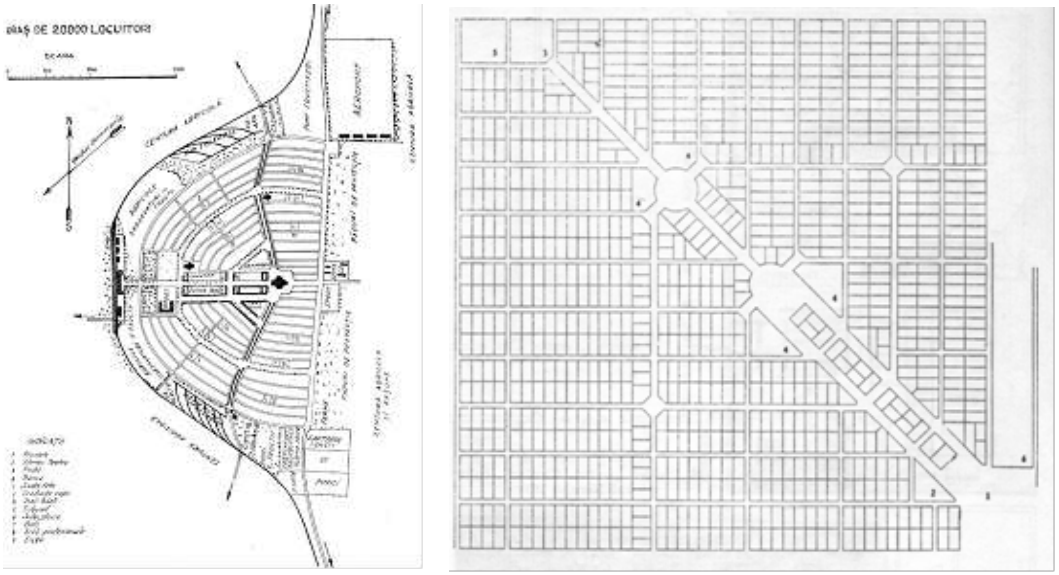

Figure 6-7. New town project by Sfinţescu (left) and project for a new village by Stănculescu (right)

One of the most important achievements of the period remains however the Directory Plan of Bucharest elaborated between 1934 – 1939, comprehensive master plan based on a long term strategy accompanied by a detailed urban regulatory framework. Due to the events that followed in the '40s it could not be put into practice effectively but remained a valuable source of inspiration for the next decades.

2.3 The communist period – 1948 – 1989

This interval is characterised by at least three different stages. A first one, which lasted until 1960, is related to a period of intensive reconstruction and major structural changes at all the levels of social, economic and cultural life. A second one lasted for another 15 years, by mid of the 8th decade and can be seen as period of consolidation of the new state and relationships. According to the official documents of that time it was a period of "achieving the economic basis for the socialist society". The third and last stage of the period is marked by an increased power of the Communist Party and its leader evolving to a totalitarian regime.

Spatial planning was much influenced by the political changes, but in general it was a good time for this domain as it became increasingly important for the regime, which used it as a political "tool" to module the society by transforming and reshaping the human settlements and the territory. During the first after-war decades, regional and large scale studies were developed and new master plans for towns and cities were elaborated. They were meant to prepare the ground and support the fast process of industrialisation and urbanisation which was a priority of the new political regime. Planning in general became important due to the fact that the whole society became centralised, coordinated and planned by a central authority. Most of the land became state property or was somehow managed by the state authorities.

The '60s were a time for complex studies of the settlements network, prognosis, developing the legislative and institutional framework. Spatial planning became an institutionalised activity, organised at national level within a network of public architectural design and territorial and urban planning institutes. These ones were quite large in size, counting tens and hundreds of professionals form various fields. They were pluri-disciplinary public companies were architects, engineers, geographers, economists, sociologists and others were working in inter-disciplinary teams. In the capital such institutes became really big, counting over 1000 employees. Spatial planning became a public policy of strategic importance, as it was a framework for most of the public investments. It cannot be denied the fact that during the first 2 decades there have been major achievements in developing public infrastructures, residential quarters, tourism and others (Lăzărescu, 1977). It may be mentioned:

- the regional plans done for areas reach in energetic resources (coal especially), followed by development of new towns and industrial areas,
- the studies and plans done for the touristic area of the Black Sea followed by the development of new resorts,

- the large scale regional and national studies for water management followed by the construction of numerous hydro-electric power plants and artificial accumulation lakes,
- the plans for large residential areas in big cities, characterised by high densities and collective housing,
- the development of new and large industrial zones especially in the Eastern and Southern parts of the country which were less developed before.

It has to be also mentioned the interest for some central areas of cities and some significant achievements regarding renovation and regeneration of some historic areas (Baia Mare, Brăila, Bistriţa etc.). However only in a few cases the interventions were paying consideration to the heritage. In general, renovation meant reconstruction and was aiming to develop new monumental and representative public spaces under the expression of "civic centres". In some cases (Giurgiu, Suceava, Piatra Neamţ etc.) the interventions were significantly changing the traditional pattern.

In 1974, in the second half of the interval a new planning law was issued "systematization law" which introduced a number of very restrictive provisions. The most important one was the so-called "built-up perimeter", which meant a very strict containment of the growth of rural and urban settlements. The new generation of urban plans were supposed to limit as much as possible the expansion of the localities and even reduce their size whenever possible. This approach was affecting mainly the rural areas were localities were traditionally quite spread along valleys and roads. The concept of "regrouping" of the inhabitants was used and in some cases localities were supposed to slowly vanishes and people relocated in a limited number of villages better placed geographically and better equipped.

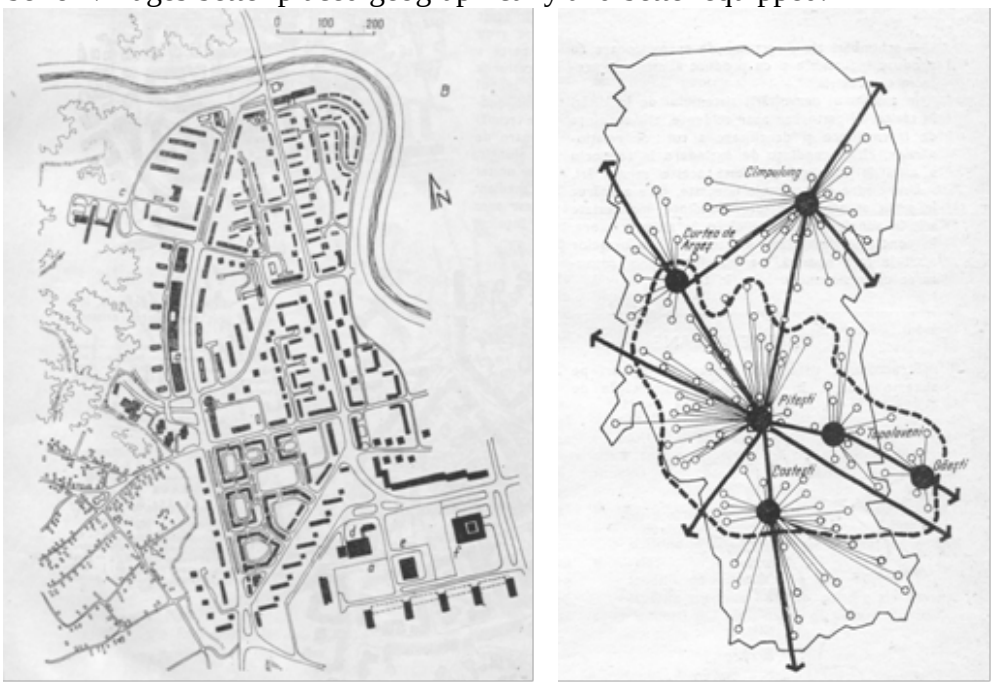

Figure 8-9. New town scheme (left) and development of a periurban area (right)

Another provision with significant consequences was related to the "liveable area". Minimal density indicators were set up by law, in relation to the average heights of a residential area. The law provided a minimum of 4,000 sqm for a 3 stories residential area up to 12, 000 sqm for areas going over 9 stories heights.

Figure 10. The new residential areas of collective housing

The last part of the period was characterised by studies at national scale aiming to a large restructuring of the human settlements network by rapid transformation of hundreds of rural settlements into urban ones (fig. 10). The terrible earth quake of 1977 opened the way to the radical restructuring of the central part of Bucharest and the construction of a new large boulevard of 3km long heading to the monumental House of People.

Figure 10. Large scale national planning concerning the development of the urban settlements network

2.4 The transition period – post 1989

2.4.1 A new legal framework

Systematization was perceived by the Romanian society but also by the Western ones as one of the most powerful symbols of the communist regime, responsible for the destruction of a large part of the built-up heritage of towns and villages and for the brutal reshaping of the urban environment. Important historians as Dinu Giurescu, describe systematization as being responsible for "the destruction of the traditional urban constructed area almost in its entirety and its replacement by tenement apartment buildings and the resettlement of the entire rural population" (Giurescu 1989:68). In December 1989 "Systematization Law" (58/1974) is abolished and systematization becomes overnight urbanism or territorial and town planning[i]. Its replacement and the reconstruction of the legal framework proved to be difficult and lasted longer than expected. Until 2001 the legal framework for spatial planning was rather fragile and regulations in the field were mostly coming from other areas: constructions, transports, environment and human health. The setting up of the legal system can be divided into three stages: the first decade of transition, the '90s, when some preliminary "bricks" were added, the first part of the 2nd decade, the 2000s', when a number of important laws were issued and the last few years, characterized by attempts to reforming and improving the system. During the first stage, after a short legal void, in 1991 the Law 50 for issuing of the building permit is approved. References to urban plans and to urban permit are made. Shortly after the law was issued, in November 1991, the 91st Ministerial Decree (MD) defines the new planning instruments at local and territorial levels and their content. Although during the first half of the decade a draft of a new Planning Act was prepared its discussion for approval by the Parliament was continuously postponed.

During this first interval, a General Urban Regulatory Framework is issued by Government Decree (GD), which defines some general rules for urban planning. Planning activity is also influenced by other laws concerning the land restitution (1991 Land Law), quality of constructions (1995), expropriation for public utility (1994), public property, cadastre and publicity (1996). It is characteristic for this period of time the associated status of spatial planning to the building sector. By the end of the decade the activities meant to set up a new and comprehensive framework for urban and territorial planning increase. Guiding documents for the elaboration of urban plans (general, zonal, detailed) are published and the concern for protected areas and heritage in general is also proved by legal documents: a Governmental Ordinance for the protection of historic monuments (GO 228 / 24.11.2000) setting up specific areas of protection and a law for approval of PATN Section III – Protected areas (law 5 /2000).

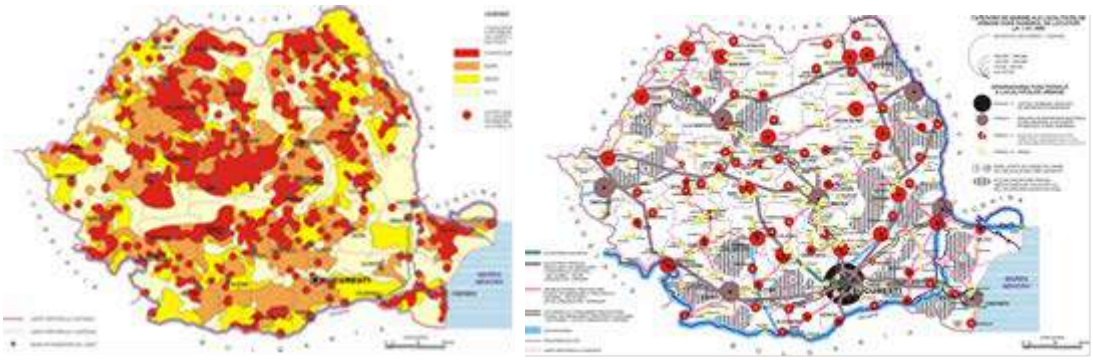

Figure 11. National Physical Development Plan. Sections III and IV concerning the built-up heritage and the human settlements network

The accumulations of the first decade of transition and the steps forward in view of European integration led to a better definition of the domain at the beginning of the new millennium. The new Territorial and Urban Planning Act issued in 2001 clarifies and enforces the planning instruments and public responsibilities. The new law provides an independent status for spatial planning which is no longer seen as subsequent to the construction sector. In the field of the heritage protection, also in 2001, the previous GO becomes a full law (Law 422 for the protection of the historic monuments), in 2002 the Parliament ratifies the European Landscape Convention (Law 451 / 2002) adopted in Florence in 2000 by the Council of Europe and in 2004 a complete list of historic monuments is published in the OJ (MD 2314 / 2004)[ii]. The legal framework is completed with a new and stricter environmental legislation, due to the European Union (EU) requirements, with a significant influence on spatial planning activities too. General urban plans, regional plans and sections of the national plan are elaborated and approved. In general the planning activity is very intensive and has a very dynamic rhythm.

Although the legal framework develops and becomes more complex it cannot keep up with the dynamism of the transformation of the Romanian society. Its shortcomings are becoming obvious during the second half of the decade and attempts are made for improving, correcting or reforming the system. Significant debates, relevant studies and even and audit of the legal system are done in view of elaborating a comprehensive Code of Urbanism. By 2008 revisions of the Planning Act are made, mainly aimed to raise its effectiveness and reduce the derogatory procedures. It also provides new planning instruments and specific responsibilities for the protected areas. The influence of the EU structural Funds for urban development becomes important too.

2.4.2 Institutional changes

The institutional framework for spatial planning can be followed at two levels: central and local as well as in two different social environments: public and private. It may be also discussed and analyzed in relation to decision-makers, professionals and communities. During the last two decades opposite processes can be observed: dissolution of the old structures and relations and construction and reconstruction of

new ones. Whereas the process of dissolution was much too faster due to the rapid and brutal changes of the social, economic and political environments, the construction and reconstruction proved to be more difficult and not necessarily continuous and ascendant.

At central and local level new institutional responsibilities were set up since 1991, based on the principles of local autonomy and decentralization. The importance of spatial planning as a public policy is recognized and clear attributions were set up by the laws for local administration[iii]. Urban and territorial development should be done according to plans that have to be approved by the local authorities and implemented accordingly. Within the Mayoralties at all territorial levels (county, town, and commune) special planning departments or offices were created, usually subordinated to a chief architect supported by advisory technical commissions. Full responsibilities for approval and implementation of planning schemes are given to local authorities (some particular areas of international, national or strategic importance being exempted). At central level, spatial planning remained an important sectorial policy and was part of specific in-line ministries.

As elaborators of the plans, professionals who were grouped until 1989 in big public institutes, as part of large multidisciplinary teams were forced to shift towards smaller private consultancy and design companies mainly mono-specialized, as the old structures were dismantled during privatization processes. The former multidisciplinary teams were slowly replaced by networks of small specialized firms. At central level one National Research Institute for spatial planning – Urbanproiect – was actively involved in the restructuring of the field especially during the first 10-15 years. Later on it was affected by a slow decay and become a part of one larger national research institute for constructions, architecture and planning[iv].

Although a great deal of effort was made to replace the old system and set up a new and functional one, the results were not satisfactory. The fragility of the institutional building is often seen as being one of the main problem of the whole planning system as "institutionalization is in fact the mean which ensure the control within the process of using and respecting the legislation" (Urbanismul 2010[v]). The weak involvement of state control in planning process, the low level of urban culture of the administrative staff, the lack of institutional cooperation, the overlapping of competencies are among the identified weaknesses of the responsible public institutions. At central level it can be noticed that along the two decades there has been a diminishing importance of the domain, which started in the '90s to be represented by a National Commission for Territorial and Urban Planning and then by a Ministry of Public Works and Territorial Planning. After being initially represented by a Commission of ministerial ranking, then by a Department within a ministry in the '2000s the domain was represented by an ever smaller Direction in Ministries whose major focus was Transport, Housing, Public Works, Constructions, Tourism or more recently Regional Development[vi]. As other fields developed and EU directives were also implemented, planning responsibilities were shared among

several central bodies such as Ministry of Transport, Ministry of Environment, Ministry of Agriculture and Rural Development.

The institutional system, which is seen as key element for the good functioning of spatial planning in general, is weaken by fragmentation of tasks, lack of cooperation, sub-financing and corruption: "Public bodies are eroded and infiltrated by <<ambassadors>> and <<mauls>> of the private sector and as a consequence is put to work for private interests. There is no culture of public interest…" (Urbanismul 2010[vii]). As most of the tasks concerning the elaboration of development plans at all levels are externalised, a big responsibility belongs to the professionals who are to be found within private firms but also in research units belonging mostly to universities. In this sector there is an uneven territorial distribution of professional competencies as well as among companies, which sometime deeply affects the quality of the planning documents. In order to provide a better control in this area, in 2005 the Register of Romanian Planners (RRP) was set up.

2.4.3 The Planning Instruments

The last but not the least important piece of the "puzzle" of the planning system is represented by the planning instruments. They are in fact the legal mean leading from conception to concrete development, via the planning and building permit issued on the basis of the plans. The new system was put into place in the early '90s and remained practically unchanged by now. It provides two main categories of plans strongly related to territorial levels. The so-called urban plans refer to local and sub-local levels whereas the territorial ones refer to upper administrative levels. Whereas territorial plans have a guiding / strategic character the urban plans are regulatory /operational and are accompanied by urban regulations, which once approved by the Local Councils can be enforced as a local planning law. Due to their operational character, the urban plans have a much stronger influence as the territorial ones in the reshaping of the built and unbuilt environment. However, territorial plans are also important as they set up and identify the main development objectives and the potential conflicts between development and protected areas. The basic principles of the system of planning instruments as it can be deducted from figure 12 is that provisions set up at upper levels are compulsory for the lower levels. Horizontal and sectorial correlations are also mandatory.

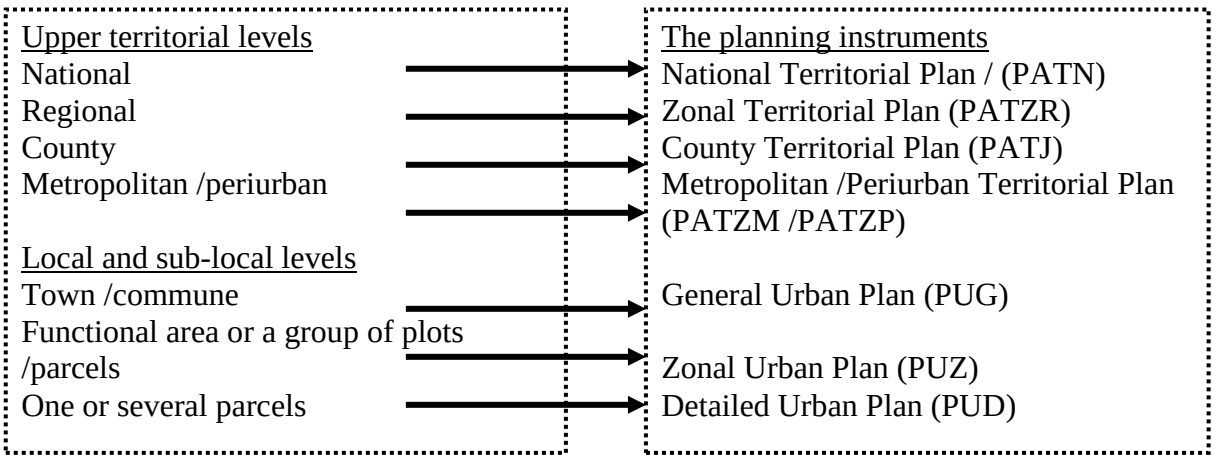

Figure 12. The planning instruments in relation to the different territorial levels

3. Conclusions

The short overview of the evolution of planning system in Romania shows a rather long tradition coming from the 19th century and before. Yet, the various changes of political regimes and at administrative level hampered a normal and sound continuity and effective use of the knowledge and experience accumulated in time. By the end of the first half of the last century, Romania was connected to the evolutions and trends at European level, but after the 2nd World War it has been disconnected and influenced by the new communist ideology and approach to spatial planning. The evaluation of the situation after more than 20 years of transition to democracy and market economy is not encouraging at all, indicating major weaknesses of the spatial development at local and regional levels. The reconstruction of the system, which began during the first years of the post-communist era, achieved to setting up a new legislative framework, specific instruments and procedures, yet was not able to generate an adequate institutional one and a sufficiently large and well qualified corpus of professionals in the field. The present state of general discontent against the aggressiveness of actions against the built-up and natural environment, in connection to the recent recommendations and actions of the EU to developing a sound and sustainable spatial policy, create the opportunity for a substantial reform in the field and a change of paradigm concerning the role of the spatial planner in the society (Pascariu, 2011). It can be concluded that Romanina planning system was much influenced over time by various other systems coming form abroad. Nowadays the most important influences come from the European Union and are based on general documents such as the 1983 European Chart of Spatial Planning up to most recent Green Paper on Territorial Cohesion.

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[i] Mostly inspired by the French model "aménagement du territoire et urbanisme" and also close to the Italian form "pianificazione urbanistica e territoriale".

[ii] Up to then a List of Historic Monuments have been issued by the National Commission of Historic Monuments, Piles and Sites in 1991-1992.

[iii] A first law is issued in 1991 (Law 69), which is later revised and replaced in 2001 (Law 215 /2001).

[iv] Since 2010 the institute was part of a unification process of several institutes and became URBAN-INCERC.

[v] Comment of prof. arch. Alexandru Sandu.

[vi] During the last decade there have been the following succession: 2001-2003 - Ministry of Public Works, Transports and Housing, 2003-2007 – Ministry of Transports, Constructions and Tourism, 2007-2009 – Ministry of Development, Public Works and Dwellings, 2009–2010 - Ministry of Regional Development and Housing and since 2010 the Ministry of Regional Development and Tourism.

[vii] Comments belong to prof. arch. Doina Cristea, prof. arch. Peter Derer, arch. Sorin Gabrea, arch. Andrei Luncan, arch. Simona Munteanu.

REGIONAL LRT AS A BACKBONE FOR THE PERI-URBAN LANDSCAPE:
Research by design on an intermodal public transport network

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Abstract

Public transport and the periphery have a troubled relation. In search for a more sustainable mobility, the idea of re-shaping the city is more appealing than the idea of re-shaping public transport. Public transport for the 'car-oriented' periphery is considered utopian, with a lack of density as the knockdown argument.

The Belgian region of Flanders certainly seems to prove this. An inefficient bus network covers almost the entire territory, but only 15% of its costs. Two types of public transport have remained somewhat successful: the train connections between cities and the bus lines within cities. The periphery, in which mobility is situated on an in-between scale remains dependant on the car. Is public transport for suburbia an impossible task? New concepts such as Light-Rail Transit (LRT) and Bus Rapid Transit (BRT) have emerged over the last decades. They blur the lines between classic PT concepts, and are able to adapt themselves to the structure of the contemporary city.

The region of Klein-Brabant is a typical peri-urban nebula, lacking a legible structure. The difficulty of defining this specific spatial condition, requires planners to propose a new spatial vocabulary for this type of territory. This research-by-design shows how the infrastructure of a regional public transport system (LRT) can become the backbone of Klein-Brabant after the sprawl.

From a theoretical point of view, intermodality has a great potential, as it increases the number of possible connections exponentially. In reality however, organizational issues prevent peripheral public transport networks from functioning as a real 'network'. The assumption of overcoming these issues allows to discover the spatial potential of intermodality. It stimulates the nodal function of a station in a network, expanding its role as a carrier of (sub)urban programs. In Flemish planning practices, many master plans for small-scale station areas are currently being developed by municipalities, trying to enlarge their capacity as an urban center by transforming their mobility nodes.

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The relevance of a light rail network for Klein-Brabant is to a great extent related to the dispersed urbanity of the region. This kind of network functions through a large number of nodes at a small scale. These nodes ground the concept of mobility, making it tangible on a specific location, and within a network their role is increasingly important. Public transport thus gives way to nodal development, as a sustainable alternative to the ribbon development along secondary roads. The paper elaborates on a specific scenario for LRT implementation, namely heavy to light rail transformation, as part of a bigger research by design. Spatial morphologies are tested and proposed through this scenario.

This design proposal is part of an ongoing research project, called ORDERin'F[3] (*Organizing Rhizomic DEvelopment along a Regional pilot network in Flanders*).

1. Introduction: heavy to light rail transformation

On the former Zoetermeer Stad-line and the Hofplein-line, two heavy railtracks between Rotterdam, The Hague and Zoetermeer, the Randstadrail[4] combines an extension of the Rotterdam Metro network and the tram network of the Hague. Although major infrastructural works redirected the terminus of the Hofplein-line to Rotterdam Central Station, the rest of the trajectory follows the former train connection between these cities. The trains were replaced with faster and more frequent light rail vehicles. The main advantages of this transformation are a densification of stops and a better level of service. Existing stations were remodeled, with urban renewal occurring in their surroundings, while large scale new developments were simultaneously planned and are being executed around new stops. These stops offer extensive possibilities in terms of intermodality, connecting with bus lines and bicycle routes.

Similarly, the Atlanta Beltline[5] aims at a transformation of an abandoned railway corridor into a tangential tramway around the city of Atlanta, integrating it in a linear park structure called 'The Beltline Emerald Necklace'. Along the Beltline strategic interventions are planned, focusing on affordable housing, economic activities and public infrastructure.

A more modest use of regional rail connections as a catalyst for urban renewal can be found in the Swiss Canton of Zug[6]. Nine new stops were created along the two Stadtbahn-lines, creating a string of new public spaces. However, these stops are more than nodes of modal change; the stations often restore pedestrian and cyclist connections, giving the station a central position in local networks. Additionally, the architecture of the stations is consistent along the entire line, thus strengthening the regional identity of the Stadtbahn network. Although the project in itself is not

[3] OSA, BUUR, IMOB, MOSI-T, Lab'Urba, ORDERin' F, Organizing Rhizomic Development along a Regional pilot network in Flanders, Research Proposal (2009).
[4] For more information on this project: http://www.randstadrail.nl/
[5] For more information on this project: http://beltline.org/
[6] For more information on this project: http://www.zvb.ch/

groundbreaking from an architectural point of view, the fact that this was realized in a Canton of only 113.000 inhabitants, with the main city as small as 26.000 inhabitants, is impressive. It shows that low densities can provide the critical mass required for regional railways to succeed.

In the Parisian public transport network as well, suburban tangential connections are made by tram. Both in the case of the T2 and the T4 tramways[7], former heavy railway infrastructure was transformed into light rail. On the former line between Puteaux and Issy-Plaine, which was in use for heavy rail between 1889 and 1993, operation of the T2 tramway started in 1997. For the T4 tramline as well, a heavy rail line was transformed into light rail, although in this case, a hybrid between tram and train was developed, making it the first Tram-Train in France (2006). The current trajectory runs on train tracks and at heavy rail voltage, while future expansions will be integrated in the regular tram network, taking over its technological characteristics. In 2010, the Tram-train concept was pushed even further in France, as the Tram-Train Mulhouse-Vallée de la Thur[8] opened. This line, which connects urbanizations in the Thur Valley with the city of Mulhouse, shares the railway track with regional heavy rail trains.

These projects show how the renaissance of the tram not only influences urban mobility, but also aims at establishing fast connections on a regional scale. In the examples mentioned above, this is realized through the transformation of abandoned or active heavy rail lines. Although this approach has only been put in practice systematically during the last decade, the major technological hurdles have been tackled since the 1960's, with the development of a regional public transport network around Karlsruhe (Cervero, 1998). The tram network of Karlsruhe makes use of four different systems, all of which integrate heavy rail infrastructure with light rail vehicles, through the technological adaptation of both.

When dealing with new infrastructures, a general ascertainment is the near impossibility to obtain public support, as their profound interference with the urban tissue automatically causes resistance. For public transport infrastructure this applies even more strongly, because trajectories deliberately seek out urban concentrations, as this provides the system with potential travelers. One possible way to avoid this issue, is by realizing a new system on existing infrastructures, without disturbing the tissue of the urbanized landscape. This possibility has been studied for the Flemish context in 2008, when an evaluation of 104 railway lines on their potential as candidates for light rail transformation, was published (Kauffmann, 2008). Based on this evaluation, three test cases were elaborated. The research focused on the condition of infrastructure and stations, travelers potential based on the existing spatial context, necessary adjustments to track configurations, traffic impact, travel time, exploitation costs and the commensal opportunities of planned developments. Although a wide array of characteristics was considered in the aforementioned study,

[7] For more information on this project: http://www.stif.info/
[8] For more information on this project: http://www.solea.info/

the potential impact such a transformation could have on spatial developments has not yet been explored. This paper intends to bridge this gap by approaching the topic of heavy-to-light rail transformation from a designerly point of view.

The next paragraph argues the relevance of this spatial potential through three arguments: one based on historical ascertainments, one by looking at current planning phenomena in Flanders, and one by learning from foreign reference projects. Subsequently, the topic of this paper and its methodology is framed within the research project from which it originates, after which the actual research is elaborated, first through an analysis of the region that serves as a test case, next by a design-based exploration of the transformed rail infrastructure and its context. Finally, some conclusions will be formulated.

2. Three perspectives on the issue: historical, current and foreign practice

To understand the distinct spatial patterns in the urbanization of Flanders, often referred to as the 'nebular city', one must look at the role that railway infrastructure played in the genesis of this landscape. Famous for its dense network of heavy and vicinal railways, the spatial impact of industrialization was quite different in Belgium in comparison to other countries. All across Europe, farmers were attracted by the job opportunities offered by city-bound industries, resulting in urban growth on the one hand and a rural exodus on the other hand. This was first documented in the late nineteenth century by Ravenstein (1885) and articulated into his 'Laws of Migration'. In Belgium however, the industrialization process had a different imprint on the landscape. As argued by De Block (2011), the dense network of railways allowed for agricultural laborers and farmers to transform into industrial workers without forcing them to leave their ancestral villages. Population growth occurred without considerable migrations, and urbanization was not a process of expanding cities, but of a balanced growth in communities of all sizes. Polasky (2004; 297) has framed this phenomenon within the objectives of Belgian politics. The fear for corruption of the working class when concentrated in the city, was tackled by an increase in mobility between the city and the territory.

Thus the Flemish territory – which today is among the most densely urbanized regions in the world, yet has only four cities larger than 100.000 inhabitants (including Brussels) – is a testimony of the structuring potential of railways. They have been a main instrument in steering nineteenth century urbanization, and has done so well into the twentieth century, until mobility and accessibility became even more ubiquitous thanks to the car and dense road network.

Although public transport in Flanders has reclined into a mostly intra- and interurban system, the spatial patterns still lead to diffuse mobility patterns, nowadays covered by car mobility. There is a little coherence between the spatial structure of Flanders and its public transport system, as regional trains and buses do not offer an adequate level of service to the suburbanized territory, resulting in a modal split that is not very favorable for public transport (Verthetsel, 2007). Furthermore, planning

documents do not predict a remediation in the near future. Against this background of a weak regional public transport system, it is remarkable how many municipalities are planning a redevelopment of their station surroundings (Blondia, 2012).

Since the end of the 1990's, many of the bigger cities in Flanders started struggling with capacity problems of their stations. Because of that, several expansions, renovations and infrastructural changes were planned. Sparked by a new focus within planning policy on the central cities, these projects became levers for the renewal of station quarters, resulting in master plans and development strategies, as is the case in Leuven, Antwerp, Ghent, Liege, … Urban design was introduced as a planning practice, and spatial planning gained a new dimension of a bottom-up project driven approach. Not only were these large scale station area operations influencing urban planning in Belgium, they also inspired smaller towns to invest in their stations.

The last years, a significant amount of master plans for small-scale stations was developed, and is currently under realization. They are very different from the bigger stations redevelopments, from concept to realization. The limited amount of program and resources and the lack of critical mass and density that encompass these projects, forces design proposals to tackle a maximal number of spatial complexities with a minimal number of interventions. They deal with the specificity of the nebular urban landscape in very different ways, but all of them highlight the role of public space in a peripheral context. With more and more of these projects emerging, spatial strategies are becoming recurrent. The knowledge and insights surfacing from these projects is currently being captured and shared by a number of towns in an Interreg-funded expertise network[9].

At the same time as these small towns are redeveloping their station quarters, the level of service of public transport is being diminished. In December of 2011, 170 train connections per day were dropped by the national railway company. By 2014, 23 other lines will be cancelled. Nearly all of these are regional connections[10], servicing many of the stations surroundings that are currently being planned. The bus network, which has nodes in all of these stations, is under pressure as well, as a 60 million euro budget cut (6% of the yearly budget) is being carried out in 2012 by the regional public transport authority. There is thus a strong discrepancy between the growing spatial ambitions for peripheral stations quarters and their shrinking importance as mobility nodes when the level of service is declining.

So, both from a historical point of view and looking at current spatial and mobility planning practice in Flanders, the development potential of regional public transport lines and the spatial structuring impact they have on their surroundings become apparent. A third confirmation of this potential can be found by looking outside of Flanders. Although the spatial and societal context is not always comparable to Belgium, the projects mentioned in the introduction – Randstadrail, the T2 and T4

[9] Structuurversterking Stationsomgeving Vlaanderen-Nederland. For more information: http://www.grensregio.eu/2011/02/15/structuurversterking-stationsomgeving-vlaanderen-nederland/
[10] A full list is available at: http://www.standaard.be/extra/treinen/?mobile=n

trams in Paris, the Tram-train in Mulhouse, the Atlanta Beltline – show promising results of a qualitative upgrade of regional train lines into light rail, and the spatial impact it can have on the surrounding territory.

The concept of heavy rail transformation fits within a philosophy of optimizing the existing infrastructure networks, strengthening its ties with existing urbanization patterns, rather than adding new lines to a landscape already saturated with infrastructure. In the Netherlands, the potential of an optimization of existing mobility network infrastructures was studied in the BESTNET project (Rutten, 2011). All infrastructure networks were considered, yet a strategic advantage of public transport is explained through the 'Wegener Circle Concept':

> Good accessibility can lead to the development of new homes and businesses. The use of land then results in activities at that location, which then leads to even more mobility. This in turn has an impact on accessibility and so on. If this increased mobility involves cars, it can cause congestion, as a result of which the location and accessibility deteriorates, causing urban sprawl. In the case of public transport the opposite can occur: increased use of public transport can lead to higher frequencies and increased quality, creating a self-reinforcing system. (Rutten, 2011)

The aim of a research by design on heavy rail transformation, is to detect spatial opportunities on which such a dynamic could graft itself.

3. ORDERin'F: a scenario-based research by design

Heavy-to-light rail transformation benefits from existing infrastructures, and as such offers a feasible implementation of light rail. However, other strategies are also possible. Within the ORDERin'F research project (OSA, 2009), the structuring potential of three different concepts for light rail connections are tested on a specific sub-region of Flanders; Klein-Brabant, situated in between the main cities of Brussels, Antwerp and Ghent. In comparison to the usual discourse on Transit Oriented Development (Curtis, 2009; Dittmar, 2009), the emphasis is on a qualitative and design-oriented approach, rather than a quantitative exercise in densification.

On a basic level, a regional public transport network aims at significant economic, social and environmental benefits for the society at large. However, the ORDERin'F research also projects such a network as a lever to restructure the suburbanized spatial structure of Flanders in the long term. This ambition brings about a complexity in – sometimes contradictory – objectives that is also present in realized projects throughout Western Europe and elsewhere. The most interesting of these ambitions are positioned on the intersection between spatial planning and public transport planning. The main domains that the research by design is dealing with, are infrastructure planning, mobility planning and spatial planning. Corresponding to each of these, a design concept is determined that functions as a scenario, focusing

on the specific issues of this domain (Figure 1). These scenarios sharpen the consequences of design choices, and clarify the way in which decisions on a larger scale influence the small scale level.[11] The scenario of heavy to light rail transformation corresponds to the infrastructural component of the research by design, and is elaborated in the next sections.

Figure 1. Three inputs for scenario building: existing infrastructure (left), existing mobility patterns translated into the bus network (middle), guiding landscape structures (right).

4. The region of Klein-Brabant as a laboratory for regional public transport experiments

The region within which this scenario is tested is the broader area around Klein-Brabant (Figure 2.). It is situated at the heart of the Flemish Diamond. Although it is the center of a highly urbanized region, the density is remarkably lower than the surrounding cities, its landscape qualities and natural values however are much less defined than the Green Heart of the Randstad conurbation in the Netherlands. Instead, Klein-Brabant is characterized by a direct and diverse juxtaposition of unbuilt landscapes, different types of housing tissue and areas of economical activities, strung together in a network of towns connected by ribbon development. As such it is exemplary for the Flemish landscape (Figure 2.).

A major driving force behind the dispersed urbanization in Flanders has been the sequence of consecutive infrastructure networks projected on the territory, on which diffused urban growth grafted itself (Van Acker, 2011). Although this process has

[11] The overall methodology is elaborated extensively in: Blondia, M., De Deyn, E. (2012). Understanding the development potential of regional public transport in a peri-urban context through research by design: the case-study of Klein-Brabant (Belgium). BUFTOD 2012 - Building the urban future and Transit Oriented Development. Paris, 16-17 April 2012.
The third scenario has been elaborated earlier in the research. For more information: Blondia, M., De Deyn, E. (2012). Landscape-based design strategies as a sustainable backbone for regional public transport in a dispersed territory. Landscape as a guiding principle in the transit-oriented transformation of Flemish urbanization patterns. ECLAS 2012 Conference, Warsaw, 19-22 September 2012.

been a work of centuries, planning and urbanism discourse have only recently, since the 1990's, challenged the dichotomy between urban and rural, through concepts such as sprawl, rurbanization, ville territoire, edge city (Delbaere, 2007). As such, the Flemish hybrid landscape is being recognized as a continuous nebula of urbanization, strongly interwoven with the open spaces in between. Hence the name 'nebular city'.

Figure 2. Klein-Brabant and the surrounding region, with the intersecting train connections highlighted.

A closer look at Klein-Brabant shows that the 'nebular city' offers specific challenges for public transport. As it is the far-out corner of three separate provinces (Antwerp, West Flanders, Flemish Brabant) and five public transport regions (Antwerp, Brussels, Mechelen, Sint-Niklaas, Aalst), the spatial and mobility challenges of Klein-Brabant are seldom considered on the scale of the entire region, in particular with regard to public transport. Because Klein-Brabant is enclosed by

these bigger cities whose transport networks intrude and influence the region, public transport in Klein Brabant lacks a logic of its own; it is merely an overlap of these different city-based systems.

The starting point for a research by design on the transformation of heavy rail lines is obviously the existing network passing through the region of Klein-Brabant. Mechelen was originally conceived as the central node in the Belgian train network. Although nowadays Brussels is the main hub, there are still many lines intersecting in Mechelen, most of them among the oldest lines in Europe[12]. In the east part of the area lies the connection between Antwerp and Brussels, built in 1836. The line on the south edge of Klein-Brabant was opened just a year later in 1937. These two lines were part of the initial cross-shaped network projected on the Belgian territory. The other lines soon followed: in 1844 the connection between Ghent and Antwerp was opened, in 1856 a trajectory between Lokeren and Dendermonde was built, just west from the region of Klein Brabant. In 1870 a new diagonal intersected Klein-Brabant, connecting Mechelen to St-Niklaas. The last line to be realized was the line between Antwerp and Dendermonde, in 1880.

5. The dual concept of Belgian railways: a network of hybrid lines

All the lines intersecting Klein-Brabant were built in a period of merely forty years. As argued by De Block (2011), the Belgian railway network was realized as a comprehensive system covering the entire territory, conceived from the start as a carrier for national and transnational transport mobility, and at the same time as a tool for nation-building and territorial organization. These ambitions made the railway network into a hybrid scheme of engineering, spatial planning, politics and economy. This hybrid nature is also reflected in the trajectories of the train network. On the one hand, lines were planned as fast connections between the main cities or even between the neighboring countries. These lines were superimposed on the existing territory, their trajectories as straight as possible. On the other hand, the economical advantage that rail infrastructure brings to the context it cuts through, made a more subtle positioning of the trajectory desirable. Connections between cities deflected from a straight line to bring service to smaller towns in between, thus making the train a carrier for regional as well as inter-city mobility. On an even smaller scale, short branches of rail were often realized connecting individual plots of industry to the railway.

The function of rail infrastructure as a connector is thus of a dual nature: it connects the cities on both ends of the line with each other, while often also connecting the intersected territory to the national train network. These two different modes of ‘connecting’ are not mutually exclusive, nor are they perfectly complementary. As such, individual railway lines are not belonging to one of these two categories, but are always positioned somewhere in-between.

[12] Throughout this paragraph the building year refers to the date on which the part intersecting Klein-Brabant was realized, not the line in its entirety.

Since the conception and realization of the railway lines intersecting Klein-Brabant, the landscape has drastically transformed itself. Developments occurred around and because of the train network and its stations, while consecutive layers of infrastructures became attractors for activities in their own right. The interplay of the train network with the urbanizations and other infrastructures has lead to complex spatial configurations. Taking the railway as a starting point however, three concepts of spatial development configuration can be derived (Figure 3.). In reality most lines show a combination of two or more of them, and hardly ever are they a clear and certified example of one concept. The next paragraph gives an overview of these configurations, after which they will be applied to the different lines intersecting the region, thus offering a base for design choices.

Figure 3.Three concepts of spatial coonfigurations along regional railway lines: (1; left) train stations at a certain distance from town centers creating a dual centrality between both; (2; middle) parallel infrastructures attracting road-oriented development along the railway trajectory; (3; right) direct branches connecting individual plots to the train network.

(1) Depending on how strong the interrelation between the railway and the intersected territory is, communities have stations at a certain distance from their centers. As the train was the fastest mode of transport at the time of its conception, a shift in centrality occurred in the local fabric of small towns. The station attracted all kinds of functions and activities, creating a tension between the historical center and the new center of mobility, being the station. In most cases this materialized into an axis connecting both, usually named ‘Stationsstraat’ (Station Street). Since the railway network and its stations have been built, the urbanization of the Flemish landscape has grafted itself on other infrastructure networks as well. Primary and secondary roads have, since the democratization of mobility by car, been strong catalysts for urban sprawl within the finely grained settlement structure of Flanders. Consequently, in the current situation, the structuring role that once belonged to the station is not always equally distinguishable. In many cases, the expansion of settlements exceeded the distance between town center and railway, filling up the void between them. In many towns, the railway acted as a barrier, with only limited urbanization on the other side of the station, with the expansion of towns taking place in other directions, thus further

away of the station. There are however exceptions: in Puurs, for example, the Keulenhoek quarter is located on the backside of the station.

(2) The previous paragraph points out urbanization grafting itself on different infrastructure as a general concept, not specifically targeting the influence of one road in particular, but rather of the network as a whole. However, there are certain cases were a single infrastructure transformed the morphology of the urbanization, as the railway has done before. In particular, main roads and regional roads have attracted many developments. On the level of land use and morphology, these developments are confronted with the developments attached to or oriented towards the station. A fundamental difference between both, is the fact that train stations give way to nodal development, while road infrastructure stimulates linear development all along the trajectory. When projected on top of each other on the landscape, the resulting figure is a strip of linear road-oriented development, interrupted by nodal development around station locations. This occurs when segments of railway run parallel from main roads. The distance between the two infrastructure determines how strong the interplay between both is.

(3) A particular case of railway-oriented development occurs when the line originally was not only intended as a connection between cities and towns, but also for the shipment of goods from the industrial developments it passes along. For this purpose, short branches of railway were built, establishing connections between the line and the industrial parcel. This gave individual companies or clusters of companies organized on one site, the opportunity of a fast access to the national and international rail network. As road transportation gained ground during the twentieth century, the strategic benefit of a rail-bound location became of lesser importance for companies. Most of these branches have been abolished or even demolished, and many of the industrial sites have become brownfields waiting for reconversion.

These three types of configurations overlap and influence each other in different ways along the railway lines intersecting Klein-Brabant (Figure 4, Figure 5.). A line-by-line analysis that focuses on these configurations offers a solid base for design choices and future development. This is explored in the next section.

6. Line-by-line: concepts for a light rail-oriented development

6.1 Railway 59 connects Ghent and Antwerp with an almost straight line. Two major curves are made to enter the two cities at its end, and in-between only two minor direction changes occur. Obviously, the trajectory was not chosen in favor of proximity to smaller towns within the Ghent-Antwerp corridor. Initially, only a few stations were built, in Klein-Brabant these are the stations of Sint-Niklaas and Beveren. Smaller towns started having their own stations along the line only later. As the line was not initially conceived as a connection for these towns, the line often passes at a considerable distance of the center. The one exception to this rule is

Zwijndrecht, whose center happens to be located near the straight line between Beveren and Antwerp.

As the railway serves mostly as a connector for the bigger cities along its trajectory, it doesn't have a strong link with the urbanized landscape it cuts through. It is a supra-regional infrastructure, and although it has had some impact on the local tissue around specific stops, the distance between towns and stations has often been too large to encourage densification. Rather it stimulated a low-density expansion of the town towards the station. As a conclusion from the past development of this corridor, the interrelationship between the trajectory and the intersected territory appears not strong enough for a regional light rail to be added to the rail corridor.

Figure 4: Map showing all the trajectories intersecting Klein-Brabant with the stations that were initially conceived in the concept of the line (big red dots) and those that were added later (small red dots)

6.2 A similar logic applies to the lines between Dendermonde-Mechelen and Antwerp-Mechelen. As part of the initial cross-shaped network projected on Belgium, they were as well conceived as (inter)national connections. The line Antwerp-Mechelen still has its supra-regional function today, but as the central node of the Belgian railway network shifted from Mechelen to Brussels, the line Dendermonde-Mechelen was downscaled to a regional connection. Although its course is as well an almost straight line between the two cities, it passes more closely near several town centers (Buggenhout, Londerzeel, Kapelle-op-den-Bos, Hombeek). As these towns expanded over the decades, their station and "Stationstraat" (the connecting road) attracted developments and became an integral part of the town. The towns that have their stations more remotely located (Malderen, Baasrode) still show a pattern similar to the towns along the Ghent-Antwerp line.

Figure 5: Map showing all the trajectories intersecting Klein-Brabant with all the branches that were built to connect individual plots with the train network. Additionally, alterations to the original line, such as taluses and separated intersections, were mapped (red.

Looking at the relation between these three heavy rail trajectories and other infrastructures, shows that while the lines Ghent-Antwerp and Antwerp-Brussels each have a highway running parallel at distance of approximately 4km, the line between Dendermonde and Mechelen only has crossing infrastructures. In the case of those first two lines, the parallel infrastructure is of a supra-regional character, similar to the train connection. Thus, the same cities are being serviced. In the case of Dendermonde-Mechelen, where such a parallel infrastructure does not exist, the string of stops along the railway line does not function as a corridor. Spatial relations and consequent mobility patterns have developed much more criss-cross, into a pattern that is equally diffuse as the road network. Whether a transformation of this regional train connection into a high quality lightrail connection can provide enough leverage for a transformation of the existing spatial patterns is uncertain. Spatial development potential around the existing stops is limited, as most of them have already been absorbed into the expanded town center, which implies a scarcity of unbuilt plots. On the other hand, entirely new stops for new developments are not desirable, as the areas where this would be possible are part of big, albeit fragmented, open space structures. Furthermore, this would require new road infrastructure as well.

The best opportunities for new developments along this railway line, exist around the more remote stations. These are well connected by both road and rail infrastructure, and there is still development potential around them. Many of these stations have closed because of low ridership, and reopening them requires the creation of a travelers potential that previously was not there. This has to be done by a mutually reinforcing strategy of providing good public transport service and stimulating mobility from and towards the stations by providing development opportunities. Thus, the strategy for this line is to encourage the existing principle of small station redevelopment, combined with a higher level of service by public transport.

The previous lines were initially conceived as supra-regional connections, and although the line between Dendermonde and Mechelen became a regional line over time, they have the according characteristics of being straight lines that are not intentionally connected to the intersected territory. The two lines that cross Klein-Brabant diagonally were originally planned as regional connections, and this shows clearly in the morphology of the line and its interaction with the surrounding landscape and urbanizations. They are the connections from Antwerp to Dendermonde and from St-Niklaas to Mechelen.

6.3 When the connection between St-Niklaas and Mechelen was opened all the towns within the corridor were provided with a station. Later, more were added as suburbanizations started to grow. The typical duality in development between station and town center, as elaborated in previous sections, made the railway an important connector along the corridor. Developments occurred in and around the towns and smaller settlements, with the railway stations as important node in the tissue. In-between these towns, there were some connecting ribbon developments, but these

were limited to their linear shape, and as such, developments were not homogeneously spread over the corridor between St-Niklaas and Mechelen. This changed however when the N16 was built parallel to the railway. This primary road was conceived with the intention of stimulating economical activity in the region. Since it was built, a lot of industrial companies and offices have located themselves along the N16. As the areas around existing towns and stations were already developed, available space for these economic activities was primarily found in-between these towns. The resulting morphology is a strongly developed corridor around the N16 and the parallel railway, in which concentric towns with station-bound developments alternate with road-oriented industrial sites. Not all of the landscape has been consumed by urbanization though, as the hydrological structure of the region imposes linear unbuilt spaces along the intersecting water streams. Also, along most of the trajectory, the railway has served as a barrier for economic developments, thus protecting the landscape behind it from expanding industries.

The spatial development potential along this line (Figure 6.) mainly exists in a restructuring of the industrial tissue. Currently, it makes inefficient use of the available land and its layout is completely oriented towards the N16. An optimization could enhance the importance of public transport in this area as an important area of employment, while at the same time a more efficient organization of the industrial sites could further stimulate development, realizing a layout that is more favorable in terms of public space.

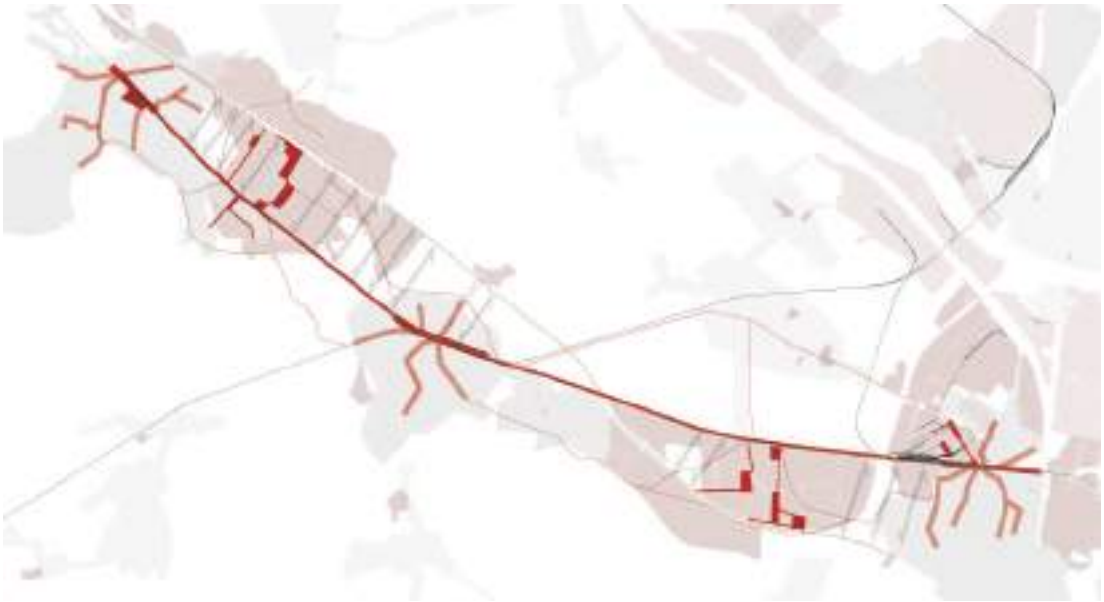

Figure 6. Development Scheme for the line between Sint-Niklaas and Mechelen (section: Bornem-Willebroek).

Within the town centers, main roads often connect in the vicinity of the station. Small-scale mixed-use redevelopment could occur on the long term along these axes. The railway bed in itself could also transform into such an axis, as a transformation of heavy into light rail softens the barrier of the infrastructure. Developments

currently have their backside oriented towards the railway, and the in-between space is strictly a residual strip that buffers the nuisances of trains. When light rail vehicles replace the traditional train cars, the rail trajectory can evolve into a public space, in which the infrastructure is integrated without imposing a strong barrier in the tissue. This new strip of public space could then become an attractor for redevelopment, changing the 'backside orientation' of flanking building blocks.

6.4 The line from Dendermonde to Antwerp has a regional character as well. There is a clear distinction between the sections Dendermonde-Boom and Boom-Antwerp. The first part of the line was built in a similar way as the line from Sint-Niklaas to Mechelen: with stations in or near existing towns with an intermediate distance up to a few kilometers. Between Dendermonde and Boom however, the railway trajectory never became an infrastructure bundle through the addition of a main road. This has resulted in very low spatial dynamics in this part of Klein-Brabant.

Figure 7. Development Scheme for the line between Dendermonde and Antwerp (section: Boom-Antwerp).

Most of the towns served by the railway have remained rather small and compact. In fact, as a consequence of its low dynamics, this section of the railway stopped its service in 1980. Currently it is exploited as a touristic steam train trail during the

summer months. Although a redevelopment of station areas could be possible along this section of the line, the desirability of a densification of this area is to be addressed with stakeholders, as this area has some distinct landscape qualities to preserve.

The section between Boom and Antwerp (Figure 7.) has more potential for a light rail transformation. It was also conceived as a regional railway with a strong connection to the intersected territory. Here there was already a particular water-based economic development at the moment the railway was conceived, thus creating a strong potential for this railway for the transport of goods. Big factory sites were connected directly to the railway by short private branches. These sites no longer have use of these branches, as most factories have either transformed into companies that don't produce goods, or have seized their activities resulting in brownfields waiting for redevelopment. In particular, near Boom, a number of clay excavation sites and old brick factories are a very specific type of brownfields. For most of these branches the railway infrastructure has disappeared, but the trajectory itself is still distinguishable in the landscape, as an unbuilt linear structure or as a boundary in the parcellation. All along the railway, redevelopment potential can be found in many of the plots at the end of old braches, either as redevelopment of existing businesses or as brownfield reconversions. The former branches can be reinstalled as pedestrian and bicycle paths, connecting a new development with a new station. This way, the development potential around the line not only exists in the immediate vicinity of existing and new stations, but also at the end of these connecting branches.

7. Conclusions

The research by design from which this paper originated has led to a number of conclusions. The main goal was to assess the spatial potential in the long term of a heavy to light rail transformation of existing railway infrastructures. First of all, not all railways are suitable for the installation of lightrail. The decisive factor behind this can often be traced back to the original nineteenth century conception of the railway. The extent in which it was conceived as either a supra-regional or a regional connector, largely defines its position in the current territory. The lines from Ghent to Antwerp and from Antwerp to Brussels show how straight connections were not meant to have a station in each town, which is exactly what a light rail would intend to do. The line Dendermonde-Mechelen was also conceived as a supra-regional connection. Coincidentally, many town centers happen to be in the vicinity of the straight line between the two connected cities. This is quite remarkable as there are not and never were any other parallel infrastructures stimulating a linear development between the two towns. The biggest potential for a light rail transformation however, can be identified for lines that were already conceived as regional connections in the nineteenth century. Their course was chosen as a balance between a fast – thus straight – connection and a line with proximity to existing settlements. These are the same characteristics that light rail seeks to exploit.

In terms of spatial elaboration of this development potential, the presence of parallel road infrastructures defines to a great extent the conditions with which the design has to deal. A primary or secondary road running parallel to the railway track is of great influence, as is the case between Sint-Niklaas and Mechelen, as well as between Boom and Antwerp. The corridor that is required for a well-developed light rail connection is already installed, but its morphology is not adapted to the nodal structure of transit-oriented development. Furthermore, the development potential along such a bundle is limited, as most terrains are already developed, due to the dynamics of the road infrastructure.

Where such a bundling with other infrastructures is not occurring, the desirability of new urbanizations filling up the landscape, as well as the feasibility of light rail in terms of mobility demands, are two main challenges. The mobility aspect will be calculated in the future steps of this research by design, through calculations with a newly developed traffic model[13]. The question of adding new developments in this landscape that are not well connected to the existing road system is a more complex matter, one that is much more subjective. As it is much more involved in the values and policy goals of various societal stakeholders, their opinions will be included in the elaboration of this topic. For this, the ORDERin'F project is developing socio-economic evaluation tools[14]. These are two important next steps in the research.

As the main goals of this paper was to emphasize the role of design in the ORDERin'F research, this track will also be further elaborated in the future. The options that were formulated at the meso-scale, will be explored and tested on a more detailed scale by the proposal of urban design schemes and development strategies on the local scale, highlighting the role of small scale stations as nodes of intermodality between regional and local mobility flows. As such, the role of design will be further explored in the matter of heavy to light rail transformation as a tool for urban development

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[14] The research of MOSI-T within the ORDERin'F project focuses on this aspect.

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'URBAN RESILIENCE' AS A NEW POLICY PARADIGM FOR ACHIEVING SUSTAINABILITY IN ISTANBUL[1]

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Abstract

Because of the complexity of components and dynamics in settlements, planning practices and processes focus on diverse urban problems such as global environmental challenges, land and water degradation, biodiversity, habitat loss and fragmentation, natural hazards, climate change, inequitable distribution of resources and services, urban sprawl and fragmentation, traffic congestion, unsustainable way of urban form, social injustice, spatial segregation based on socio-economic differences of population and unemployment (Abukhater, 2009; Miller et.al. 2010). Consequently, it will be inevitable to have vulnerable and unsecure community and spatial form in urban areas. A city without resilient community will be extremely vulnerable (Godschalk, 2003). Based on this realization, throughout the past half century, there has been a growing and continuing demand towards developing more integrated approaches to spatial planning in a way to combat the disreputably complex and chronic urban problems (Abukhater, 2009). Therefore, the necessity to provide resilience in order to achieve sustainability for community development becomes more crucial. Since planning for a community may seem like a significant challenge, spatial planning should involve rational choices to get prepared for the future (Kelly and Becker, 2000). In this context, Wilkinson (2011) mentions a fundamental issue in planning theory that is "think planning again" in ways of admitting the emergency, unpredictability and inescapability of ecological processes.

This paper aims to discuss the integration of urban resilience theory into sustainable spatial planning process and to assess how urban resilience concept can be related with urban sustainability. Istanbul is chosen as a case study since having the largest metropolitan population and being the economic, cultural and international focal area of Turkey.

In the second half of the 20th Century, during fast industrialization and urbanization, Istanbul has been the destination of rural migrants in large scales that influenced illegal developments on public lands with low quality housing pattern lacking basic

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infrastructure and technical guidance. Additionally, the majority of these illegal developments emerged on major water basins (Tezer, 2005; Tezer, et.al. 2011a; Tezer, et.al. 2011b). Consequently, the pattern of growth couldn't be sustained ecologically and socially. Due to the problems affected by social, economic and administrative characteristics, the community as well as the spatial form of the city became vulnerable. On this account, this paper will focus on the integration of social and ecological systems to develop better tools and policies for enhancing urban resilience in Istanbul. In this task, the key questions will be how spatial planning can be apprehended to provide urban resilience and how urban resilience can address vulnerabilities to achieve sustainable urban development in Istanbul.

Key Words: Sustainability, urban resilience, urban sustainability, spatial planning, Istanbul.

I. Introduction: Resilience Theory

The future can't be predicted, but it can be envisioned and brought lovingly into being… We can't surge forward with certainty into a world of no surprises, but we can expect surprises and learn from them and even profit from them. We can't impose our will upon a system. We can listen to what the system tells us and discover how its properties and our values can work together to bring forth something better than could be produced by our will alone. We can't control systems or figure them out. But we can dance with them! (Meadows, 2001)

The increasing complexity and rapid changes in world dynamics, brought to a growing interest in "resilience" as a concept for understanding, managing and governing complex social-ecological systems and managing the capacity to cope with, adapt to, and shape change (Figure 1) (Lang, 2011; Schultz, 2009). The attention this term receives is the response to a widespread sense of uncertainty and insecurity and a strain to find formulas for adaptation and survival (Müler, 2011). Resilience as a concept firstly appeared in the work of the ecologist C.S. Holling. According to Holling (1973), resilience is "a measure of the persistence of systems and of their ability to absorb change and disturbance and still maintain the same relationships between populations or state variables." In 1986, Holling (1986) refines this definition as "the ability of a system to maintain its structure and patterns of behavior in the face of disturbance." In the late 1980s, the ecological vision of resilience involved the interactions between people and the environment in order to measure the complexity of community-environment interactions, and the changes they bring (Maguire and Cartwright, 2008), then in the 1990s several scholars adopted this approach as an important tool to measure sustainability.

Now the general approach of resilience for urban development related sectors is quickly expanding and including the following: mitigation and adaptation to climate change (Satterthwaite et al. 2007; Dodman, Ayers and Huq, 2009; Deppisch and Hasibovic, 2011), disaster planning, management and recovery (Goldstein, 2009; Vale and Campanella, 2005; Godschalk, 2003; Berke and Smith, 2009; Normandin,

Therrien and Tanguay, 2009), energy and environmental security (Coaffee, 2008), urban design (Colding, 2007; Pickett et al. 2004), resilience as socio-ecological systems (Berkes, Folke and Colding, 1998; Adger, 2000; Folke, Colding and Berkes, 2003; Adger et al. 2005; Walker, Holling, Carpenter and Kinzing, 2004; Folke, 2006; Walker and Salt, 2006; Ernstson, 2008), urban resilience (Folke et. al. 2002; Alberti et al. 2003; Pickett, Cadenasso and Grove, 2004; Campanella, 2006; Gleeson, 2008; Maguire and Cartwright, 2008; Ernstson et al. 2009; Newman, Beatley, and Boyer, 2009; Deppisch and Schaerffer, 2010; Lin, 2006) and urban planning (Fleischhauer, 2008; Wilkinson, Porter and Colding, 2010; Scotti-Petrillo and Prosperi, 2011; Schrenk, Neuschmid and Patti, 2011; Wilkinson, 2011). The extended use of resilience allows the treatment of the issues raised by Holling (1986) about renewal, innovation and reorganization in system development and how they interact across scales (Gunderson and Holling, 2002; Folke et al. 2010).

Resilience means in the last two decades what sustainability meant in the 1980s and 1990s. Among the many authors discussing the relationship between resilience and sustainability (Table 1) the most remarkable are; Levin et al. (1998) claim that resilience is the preferred way to think about sustainability in social as well as natural systems, thus he suggests basically an equivalence of resilience and sustainable development. Holling and Walker (2003) showed how a resilient socio-ecological system is synonymous with a region that is ecologically, economically, and socially sustainable, while Gross (2008) quoted Holling promoting resilience as a better tool than sustainability.

Since sustainability policy has been adopted globally in the late 20th century, theorists are increasingly appreciating the interesting role that change, dynamics, and uncertainty play in sustainability, so that the Brundtland Report (1987) sets as the goal of sustainability, all the processes and abilities to deal with change in constructive ways. The Millennium Ecosystem Assessment (2003) also depicts sustainability as a process and suggests paying more attention to issues such as robustness, vulnerability, resilience, risk and uncertainty, which will determine the ability of a system to adapt to and take advantage from change. Put in these terms, resilience gives a new look to the perception of sustainability. Long-term sustainability will result in the ability of continuously adapting to changing conditions which growth and transformation are inevitable in urban systems. Paradoxically sustainability is grounded on the basic need for stability and security while facing and accepting the necessity of change (Novotny, Ahern and Brown, 2010; Schrenk, Neuschmid and Patti 2011).

However, the necessity of resilience in system's sustainability is still under criticism (Table 1), like Derissen, Quaas and Baumgärtner, (2009) explained these options such as: "*resilience of the system is both necessary and sufficient for sustainable development; resilience of the system is sufficient, but not necessary; resilience of the system is necessary, but not sufficient; and resilience of the system is neither necessary nor sufficient for sustainable development*".

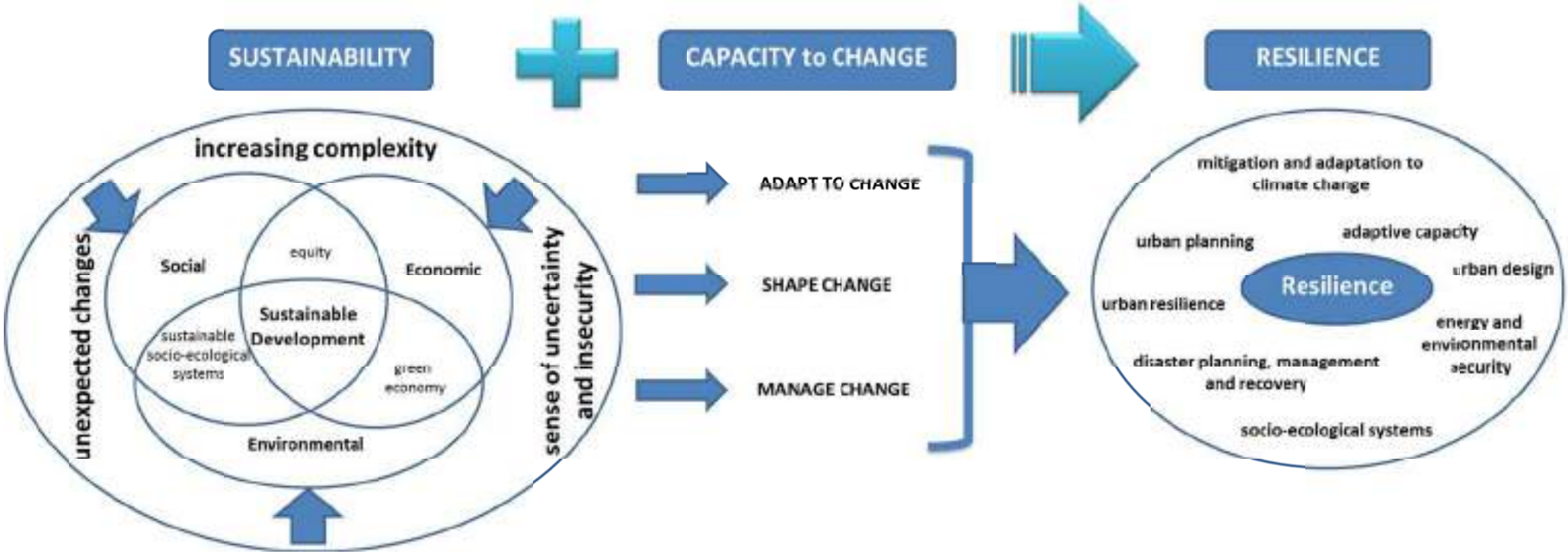

Figure 1. Resilience Theory

Clearly resilience proved to be effective, under its both social and ecological perspectives, as a crucial tool for the sustainability of urban development and resource utilization, not the least as a comprehensive strategy for urban sustainability, in sight of increasing working hypotheses about urban and regional systems, widening the interest to the whole aspects of human life.

II. Resiliency As A New Theory In Urban Scale and Sustainable Spatial Planning

Morphing in cities will always take place, carrying growth, change or the death of the city itself (Kowalik and Guaralda, 2011). Resilience in the urban systems risks to be lost (Folke et al. 2002), due to the growing complexity (Ernstson et al. 2010) and global integration of economic, social and physical processes putting in evidence the fragility of urban areas. Switching the perception of the city from economical to environmental, will guarantee better results allowing the city to prosper, grow and survive as long as these changes are not seen as negative but understood as yet another transformation being a natural part of the evolution of the metropolis. Recently there has been interest to apply the resilience concept to cities as complex adaptive systems (Newton and Bai, 2008; Alberti et al. 2003; Pickett et al. 2004; Newman, Beatley and Boyer 2009; Campanella, 2006; Gleeson, 2008; Maguire and Cartwright, 2008; Ernstson et al. 2009; Lin, 2006, Colding, 2007).

In order to be sustainable over significant periods of time, cities can't avoid being also resilient since, as it is natural, they will be affected by unexpected influences and disturbances (Novotny, Ahern and Brown, 2010). Newman, Beatley, and Boyer (2009) show cities' strain to endurance, to react to crises and adapt, and how they are compelled to re-shape and grow toward other directions; cities don't need only strong physical infrastructure and built environment, but also require their own inner strength and resolve. The novelty of this approach is a multi-level understanding of resilience of urban systems, recognizing the role of *metabolic flows* in sustaining urban functions, human well-being and quality of life; *governance networks* and the ability of society to learn, adapt and reorganize to meet urban challenges; and the *social dynamics* of people as citizens, members of communities, users of services, consumers of products, etc., and their relationship with the *built environment* which defines the physical patterns of urban form and their spatial relations and interconnections (Resilience Alliance, 2007). Urban resilience is created by the intersection of these areas.

Moreover, Gleeson (2008) suggests the ‘resilient urbanism’ via three principal branches: firstly, the acceptance of the inevitability of evolution and the necessity of adaptation. Urban planning's aim is to defeat disorder while navigating change flows, in search of urban resilience. The resilient city is the goal. Secondly, planning is an orchestration of activities (zoning, infrastructure, services, design, etc.), all of which converge in the best set of major improvements for urban well-being and efficiency. A good planning is a pre-condition for urban sustainability and resilience. The third branch of resilient urbanism is equity, meaning fairness not simple equality.

Table 1. Relationship between "Sustainability" and "Resilience"

Author	Relationship between "Sustainability" and "Resilience"	Which is more broader: "Sustainability" or "Resilience"
Hollings, 1973	A more laudable goal should be resilience rather than sustainability.	Resilience
Wildavsky, 1988	Resilience is the key to achieving long-term urban sustainability.	Resilience
Arrow et al. 1995	Economic activities are sustainable only if the life-support ecosystems upon which they depend are resilient.	Resilience
Lélé, 1998	Resilience is one of the contributing concepts of 'sustainability'.	Sustainability
Haris, 2000	For the ecologist, sustainability should be defined in terms of the maintenance of ecosystem resilience.	Resilience
Ahern, 2011	Resilience theory offers a new perspective, or possibly a solution to this paradox of sustainability.	Resilience
Carpenter et al. 2001	Resilience is often used to describe the characteristic features of a system that are related to sustainability.	Sustainability
Folke, et al. 2002	Management that builds resilience can sustain social-ecological systems in the face of surprise, unpredictability, and complexity therefore is closely related to concepts of sustainability and sustainability transition.	Resilience
López -Ridaura, Masera, and Astier, 2002	Resilience is one of the attributes of sustainable systems.	Sustainability
Bastianoni, Pulselli and Tiezzi, 2004	The role of resilience to achieve the goal of sustainable development is essential.	Resilience
Neuman, 2005	Sustainability draws from at least five intellectual traditions: capacity, fitness, resilience, diversity, and balance.	Sustainability
Fiksel, 2006	The sustainability of living systems-including humans-within the changing Earth system will depend on their resilience.	Resilience
Lebel et al. 2006	Strengthening the capacity of societies to manage resilience is critical to effectively pursuing sustainable development.	Resilience
Tainter, 2006	It is important to distinguish sustainability from resiliency. Sustainability is the capacity to continue a	Sustainability

	desired condition or process, social or ecological. Resiliency is the ability of a system to adjust its configuration and function under disturbance. The goal of human groups is more often sustainability or continuity than resilience. Most of us prefer the comfort of an accustomed life (sustainability) to the adventure of dramatic change (resiliency).	
Walker and Salt, 2006	Resilience is the key to the sustainability.	Resilience
Perrings, 2006	A development strategy is not sustainable if it is not resilient.	Resilience
Brand and Jax, 2007	Resilience is one of the most used concepts in sustainability.	Sustainability
Stirling, 2007	Stability, durability, resilience and robustness are each individually necessary and collectively sufficient for the quality of sustainability in social-ecological systems.	Sustainability
Callaghan and Colton, 2008	By shifting focus away from an ultimate end goal of sustainability, to an ongoing process of enhancing resilience it moves a community toward sustainability.	Resilience
Newman and Jennings, 2008	Sustainability cannot ensure survival, especially if disturbances are completely outside the realm of s system's experience.	Resilience
Stirling, 2008	Resilience as just one dynamic sub-property of sustainability	Sustainability
Derissen, Quaas, Baumgärtner, 2009	Resilience is the preferred way to think about sustainability.	Resilience
Du Plessis, 2009	Resilience, vulnerability and adaptability are seen as the conditions for sustainability of the city.	Sustainability
Hvid, 2010	A new systems approach is developing. It understands systems as incalculable complex entities in which change is discontinous, in which chaos and order exist at the same time. Sustainable systems are adaptive and have the capacity to change themselves in a world dominated by uncertainty.	Resilience
Novotny, Ahern and Brown, 2010	Understanding resilience is central to understanding sustainability. Resilience is a new way of thinking about sustainability, rather than a specific set of guidelines, instructions, or checklists.	Resilience
Thapa, Marshall and Stagl, 2010	Resilience is about adaptation, uncertainty and flexibility, which allow for continuous development for long-term sustainability.	Resilience
Pierce, Budd and Lovrich, 2011	Resilience is a major theoretical contribution to the understanding the likely sources of sustainability.	Resilience
Saporiti, 2011	The concept of resilience is not tied exclusively to the maintenance (for present and future) of natural resources, such as sustainability, but also to the transmission of these resources.	Resilience

Ernston et al (2009) defines ‘resilience in cities’, operating within the city and dealing with local-to-regional ecosystem services; while ‘resilience of cities’, operating at the scale of a ‘system of cities’ which is a concept borrowed from geography meaning a set of cities linked with each other through relations of exchange, trade, migration or other that sustain the flow of energy, matter and information between the cities. Resilient cities are constructed on solidity and flexibility criteria. According to sustainability, development is based on the creation and conservation of a prosperous social, economic, and ecological system, therefore the role of resilience becomes essential for a prosperous development of society (Folke et al. 2002). In order to become more resilient, cities and regions are supposed to adapt planning and design strategies versatile and able to foresee the economic, social, and physical stresses they will face (Müler, 2011). 'Adaptation' is surely the new keyword for planning: ‘ordering the use of land’ in a time of increasing urban disorder. Resilience wants to be the ordering logic and the potential of planning (Gleeson, 2011).

Planning theory conceptualizes change in many different ways, according to the philosophical starting point. Complexity theory and its conceptualization of the dynamics of change are concepts not new to planners. As Wilkinson (2011) expresses, the attempt to ‘defeat disorder’ inherent in traditional planning approaches is challenged and the ‘science of surprise’ is prioritized. Land-use disorders and the reduction of land-use conflicts (Fleischhauer, 2008) are becoming the core tasks of spatial planning, that contribute to all those principles of urban resilience dealing with the physical/environmental urban structure. Spatial planning is one of the fields which embed at its best the infrastructures that are necessary for resilient cities. Hence, one of the purposes of planning is to strengthen resilience of cities to be able to adapt to new trends, changes and impacts (Schrenk, Neuschmid and Patti 2011).

In recent literature, disaster management allowed resilience theory in urban planning to show up (e.g. see Godschalk, 2003) since recently natural disasters with distressing effects on human settlements have multiplied. Uncertainty of natural risks, gives resilience the possibility to provide a better guidance to produce effective hazard mitigation approaches in urban settlements. The disaster resilience concept, in terms of the adaptation capacity, provides not only built up infrastructures, but also non-built up environment such as community of life potentially exposed to natural hazards with a view to maintaining or restoring an acceptable level of functioning and structure (Alarslan, 2009).

According to Godschalk (2003; p.139) researchers who have studied the response of resilient systems to natural hazards find that they tend to be;

Redundant; with a number of functionally similar components so that the entire system does not fail when one component fails,
Diverse; with a number of functionally different components in order to protect the system against various threats,

Efficient; with a positive ratio of energy supplied to energy delivered by a dynamic system,
Autonomous; with the capability to operate independently of outside control,
Strong; with the power to resist attack or other outside force,
Interdependent; with system components connected so that they support each other,
Adaptable; with the capacity to learn from experience and the flexibility to change,
Collaborative; with multiple opportunities and incentives for broad stakeholder participation.

Both hazard mitigation and land use planning are noteworthy tools for reducing vulnerability and creating more disaster resilient communities that can front or absorb an impact, shape in order to overcome or recover from the backlash of a disastrous event and consequently adapt or learn from the experience. Disaster resilient communities are intrinsically more sustainable than those who do not undertake any action to reduce their exposure to natural hazards. A resilient community can actually return to prior conditions quickly, mainly because it has embodied hazard mitigation infrastructure and counter-measures into their community that reduce the spreading and the duration of the disorders due to disaster (Berke and Smith, 2009).

As Lebel et al. (2006) indicates a society's ability to manage resilience resides in actors, social networks, and institutions (Figure 2). The kinds of attributes such as participation, representation, deliberation, accountability, empowerment and social justice are considered to be part of good governance. Furthermore, to obtain urban resilience, governments should be self-organized and they should have the capacity to learn and adapt (Lebel et al. 2006) which means it is essential to provide hazard mitigation and urban planning indicators as well as the analysis of the risks (see Fleischhauer, 2008) and their possible impacts that cities may be exposed to.

Certainly, resilience theory can't be an approach only for disaster mitigation but also it has the tools in a larger scale in the sustainable urban planning. The goal is to pursue community resiliency striking an appropriate balance among economic, environmental, and equity values (Berke and Smith, 2009). As Wilkinson (2011) determines 'think planning again' in ways that acknowledge the emergency, unpredictability and inevitability of ecological processes, it is sure to define social-ecological resilience as of interest to the field of planning in several dimensions. In this sense, resilient urban planning approach should be accepted as a more comprehensive strategy for urban sustainability aiming to have low risk, low vulnerability, appropriate scale of planning, interdependent and independence of social networks (Tobin, 1999), a concrete, unified strategy for the overall urban development of a city which provides an overall vision for the future direction of urban maturity and which developments meet and enforce and the necessity to address current urban concerns – transportation, density requirements, urban facilities as well as having a clear direction in terms of sustainability goals and agenda (Kowalik and Guaralda, 2011). Therefore, resilient urban planning comprehends all the development plan elements and sustainability policies (Table 2).

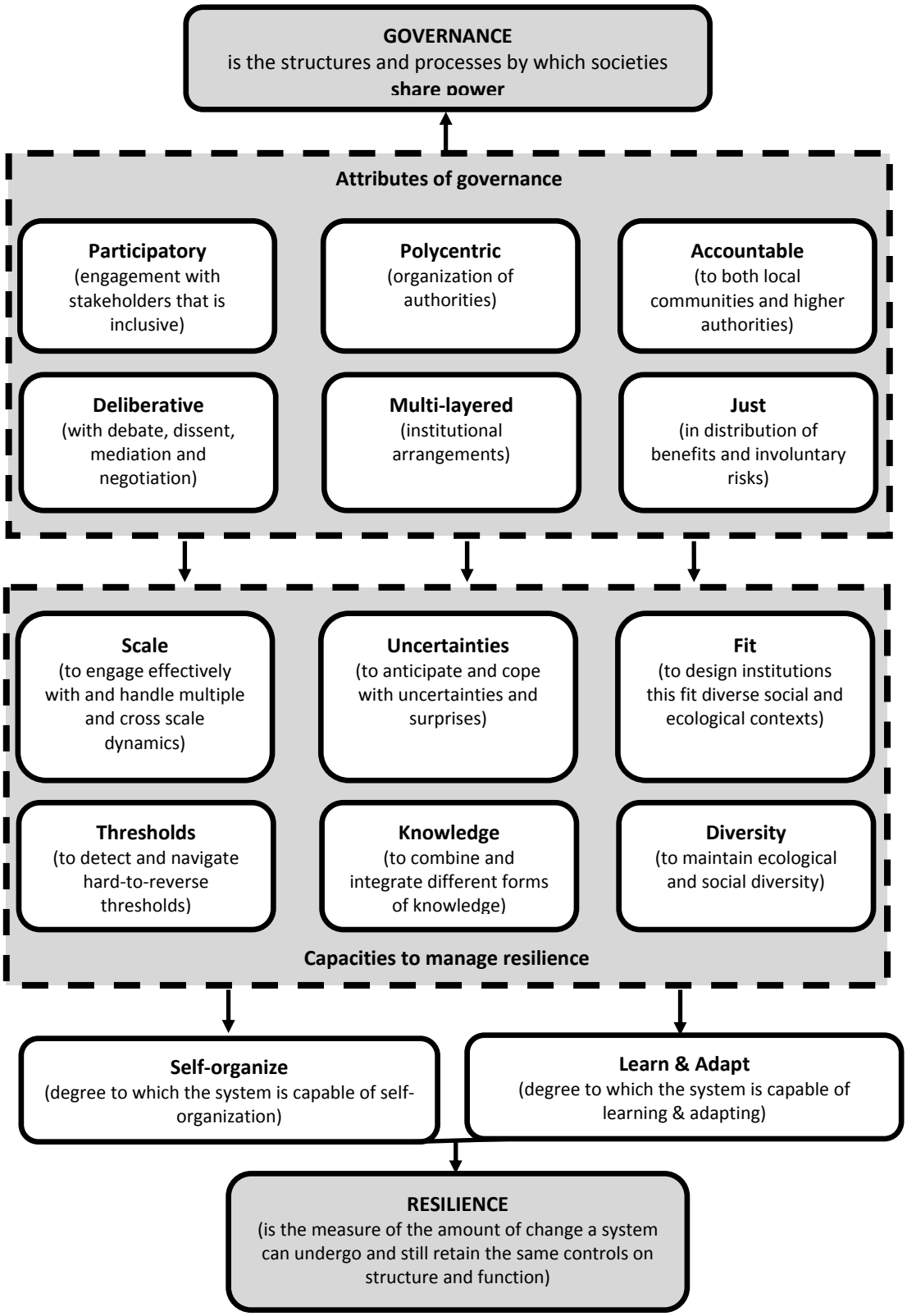

Figure 2. The Capacity to Manage Resilience (Lebel et al. 2006)

Table 2. Development/Master Plan Elements and Sustainability Policy (reproduced and adapted from Alshuwaikhat, 2006)

Urban Plan/Policy Development Components	Sustainability Policy
Physical Issues	**Land Use** Controlling urban area footprint Supporting mix land use and compact development Redevelopment of land and prevention of uncontrolled urban sprawl Balancing jobs and residential areas Managing sustainable housing policies Supporting smart growth **Transportation** Balancing travel density Balancing transit mode density Reducing car dependence Supporting pedestrianization and bicycle use **Infrastructure** Preventing ozone depletion Preventing excessive water consumption Providing available park space Managing wastes **Urban Design** Preservation of historic and archaeological sites and buildings Protecting open space
Environment and Energy Issues	**Environment** Protecting natural areas Protecting species and biodiversity Supporting agricultural land conversion Controlling Imperviousness Controlling water quantity Maintaining water quality Maintaining air quality Adapting climate change **Energy** Reducing excessive energy use
Economic Issues	Developing economic performance Increasing level of investment Increasing the ratio of employment
Social Issues	Enhancing human health Eradicating poverty Providing access to basic education Providing security Providing social inclusiveness

Resilience theory is at the frontier of contemporary urban planning and design, serving as a robust platform to shape and articulate the re-forming urban

development. Resilience is a new way of thinking about sustainability (Pickett et al. 2004), rather than a specific set of guidelines, instructions, or checklists. Resilience is strategic because, in order to be effective, resilience must be obviously based on, and informed by ecological, social, and economic drivers and dynamics of any particular place-called site specific, and it must be integrated across variety of linked scales.

III. Evaluation: Resilient and Sustainable Urban Planning in Istanbul

There is a commonsense that developing/less developed countries are exposed to more frequent and more severe natural hazard risks as a consequence of an increase in human settlements in vulnerable areas, rather than a rise in the number of geophysical events. The two main reasons for the exacerbation of the effects of natural hazards in developing/ less developed countries were rapid uncontrolled urbanization and unstable economic conditions (El-Masri and Tipple, 2002).

Cities are planned to last for long periods of time, therefore, continuation of functions ensures resilience in cities even in times of crises, unexpected changes or stressed spatial configurations (Surjan et al. 2011). The challenges for human dimensions research include those of measuring and addressing vulnerability, adaptation and resilience (Adger, 2006). Surely, resilience and vulnerability assessment is a necessary component of effective planning. Figure 3. shows vulnerable physical elements of urban settlements which are categorized in three scales in accordance with the scales in spatial planning.

Alarslan (2009) points out since urban settlements develop dynamics parallel with living organisms, the vulnerability of an urban settlement changes over time. Therefore, those elements in spatial plans at macro, meso, and micro scales should be updated to provide resilient urban policies. In this sense urban resilience theory is a relevant and noteworthy focus for contemporary urban development and enhancing urban resilience necessitates finding out how urban resilience can address vulnerabilities to achieve sustainable urban development. Table 4 is presenting a framework to explain how urban resilience relates with the key vulnerabilities and urban policy components. First of all, it is crucial to define the key vulnerabilities of different scales. Then, for realizing these vulnerabilities, it is necessary to emphasize what kind of urban development policies address them. Considering the role of resilience in providing and strengthening sustainability, third step is to define how to develop the resilience capacity. Enhancing resilience capacity is the overall concept of sustainable urban development with the scope of an increasing adaptability and manageability of the changing conditions.

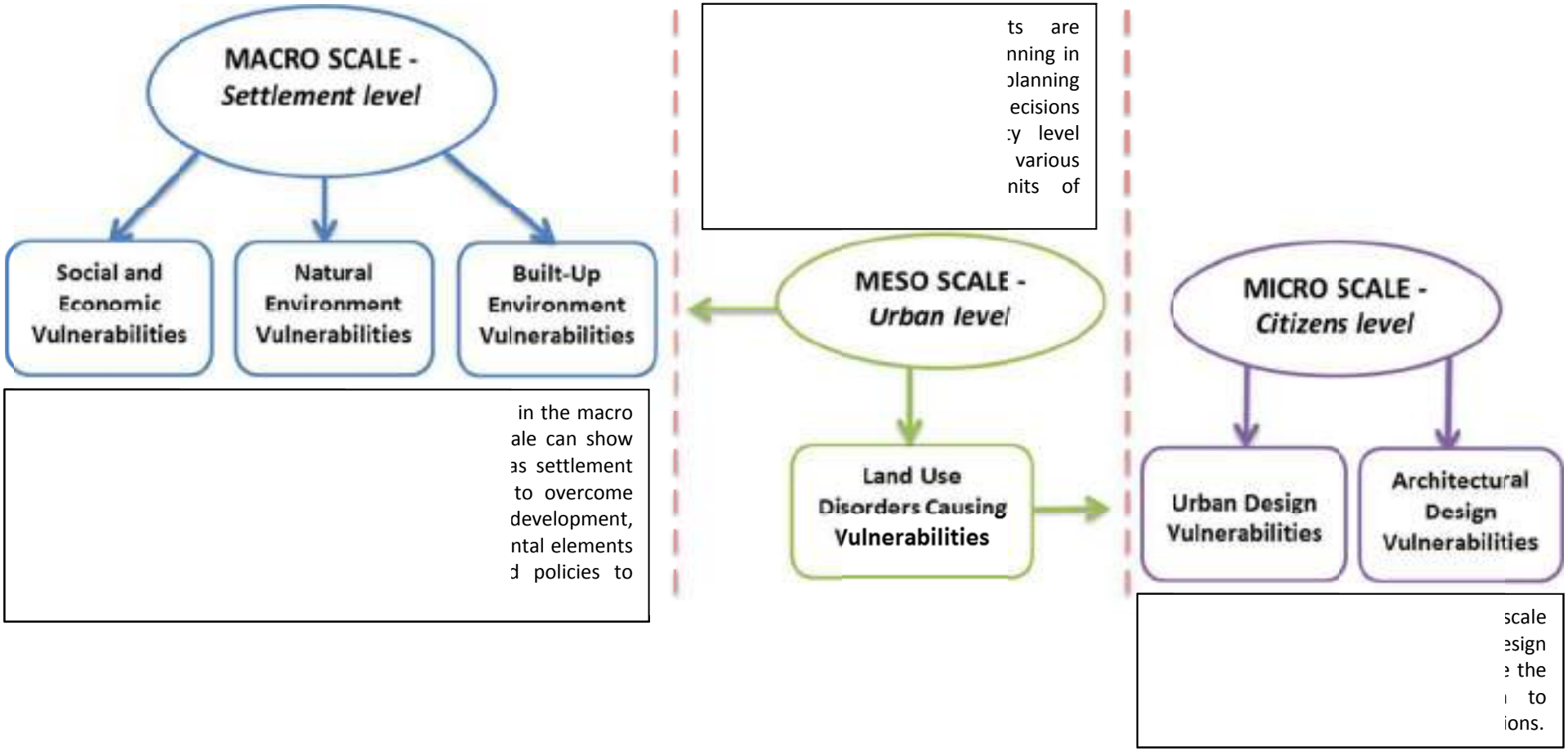

Figure 3. Vulnerable Elements of Urban Settlements (reproduced from Alarslan, 2009)

Turkey, like other developing countries, suffers from extensive pressures on natural resources due to rapid population increase and urbanization dynamics around metropolitan attraction nodes. The case of Istanbul sets a unique example with a population growth around 600% and a growth in built up areas 700% approximately since the 1950s. Today, Istanbul, with more than 12 million people, is still one of the most attractive internal migration nodes in Turkey. Diverse service facilities of governmental and private institutions, employment opportunities, cultural and historical background have been stimulating thousands of people from different rural parts of the country. As a result of the rapid growth in population and urban dispersion, there has been significant pressure on the ecological life support systems of the region (Tezer, 2005). The conditions, which are the origins of change processes creating vulnerability in megacities include high population density, high resource consumption, intensive land use (Deppisch and Schaerffer, 2010), a combination of economic and non-economic urban poverty, uncontrolled and unsustainable urbanization, unsustainable planning and development practices, and substandard urban management systems (Gencer, 2007), like in Istanbul. Istanbul shows high degree of complexity of dynamic ecological, social, economic, cultural and political interrelationships. Moreover, it is particularly vulnerable to changes and disorders.

In Istanbul, there has not been a plan covering the metropolitan area since 1995. There were many of local plans, which were not integrated to each other (Eyuboglu, 2004). While urban planning in Istanbul has been experiencing a rapid restructuring process intending to have an integrated and decentralized system, issues such as “environmental protection, risk management, transportation, urban renewal and regeneration” have increasingly been included into its urban planning discourse (Turan, 2011). In order to provide urban resilience through sustainable spatial planning process, first of all it is essential to address key vulnerabilities and define a framework to address those vulnerabilities with the resilient urban planning tools (Figure 4).

Although it is not the complete list of the assessments about the resilient urban planning in Istanbul, it may open up a discussion for further researches. Some of the indicators in the Figure 4 may be relevant for other crosschecks too. The aim of this evaluation is to represent the possible criteria of the resilient urban planning concept for policy development and spatial organization.

V. Conclusions

This paper examined the necessity to provide urban resilience in order to achieve sustainability for community development and emphasized the importance to consider planning in ways of admitting the emergency, unpredictability and inescapability of ecological processes. In order to face this new challenge, cities should cope with, adapt to and manage change and remains sustainable not only in terms of ecological perspective but also from the social and economic perspectives. It is important to note that, developing sustainable urban planning tools and creating

resilient and sustainable cities is fundamental for contemporary society. Planning is an ever-changing combination of activities such as zoning, infrastructure, services, design, etc., which meet the major improvements to urban welfare and competence. Effectiveness of the planning process is the first step for urban sustainability and urban resilience. Then, cities will be sustained over time depending on the ability to anticipate and adapt to new circumstances.

Surely, urban resilience will be the next objective of Istanbul to overcome the worsening social, economic and environmental problems. The evaluation in this paper shows that, there is still a long way to generate a concrete concept to clarify and explain urban resilience and resilient urban planning policies for Istanbul. Each scale (macro, meso, micro) in urban planning has its specific vulnerabilities and the resilience indicators addressing them. A macro perspective is instructive and might be the relevant starting one to evaluate both key vulnerabilities and urban resilience policies for urban sustainability.

Table 4. Evaluating Resilient Urban Planning[2]

	Key Urban Vulnerabilities	**Urban Plan/Policy Development Components**	**Attributes of Resilience Capacity**	**Attributes of Urban Resilience**
Macro Scale	Natural Environment	Protecting natural areas Protecting species and biodiversity Controlling imperviousness Controlling water quantity Adapting climate change Preventing ozone depletions	Scale Uncertainties Knowledge Thresholds	**Built Environment** Quality of Environment Quality of Housing Reduction of zones at risk Safety standards and codes Quality of transportation Urban planning **Metabolic Flows** Agriculture Business Economic development Education Energy Finance Health Insurance Sewers Telecommunication Water **Social Dynamics** Age
	Built-up Environment	Supporting agricultural land conversion Maintaining water quality Maintaining air quality Reducing excessive energy use Managing wastes Controlling urban area footprint		
	Social and Economic Vulnerabilities	Enhancing human health Eradicating poverty Providing access to basic education Providing security Providing social inclusiveness Developing economic performance Increasing level of investment Increasing the ratio of employment		

[2] Adapted from Normandin, Therrien and Tanguay, 2009; Alarslan, 2009; Resilience Alliance, 2007; Alshuwaikhat, 2006; Lebel et al. 2006

Meso Scale	**<u>Land Use Disorders</u>** Housing Areas Health Services Education Services Social Services Administrative and Security Areas Commercial Areas Industrial Areas Infrastructure and Technical Service Areas Transportation Routes and Terminals Open and Green Areas Protection Zones (cultural, historical, natural assets)	Supporting mix land use and compact development Redevelopment of land and prevention of uncontrolled urban sprawl Balancing jobs and residential areas Managing sustainable housing policies Supporting smart growth Balancing travel density Balancing transit mode density Reducing car dependence Supporting pedestrianization and bicycle use Preventing excessive water consumption Providing available park space Preservation of historic and archaeological sites and buildings Protecting open space	Thresholds Fit Diversity Knowledge	Population Education Gender Health conditions Housing conditions (TL/per) Awareness about probable hazards Labor force Ownership Poverty/income Social conflicts Community participation **Governance Networks** Budget/funds Community involvement about hazards Coordination Emergency services Law for prevention Emergency planning Mitigation plan Training for emergency Other types of preparation Public information/education about hazards and risk Risk assessment
Micro Scale	**Urban Design Vulnerabilities:** Indoors and Outdoors Psychological Issues	Providing social inclusiveness Providing accessibility Preservation of sense of place Protecting open spaces	Knowledge Self-organize Learn and Adapt	

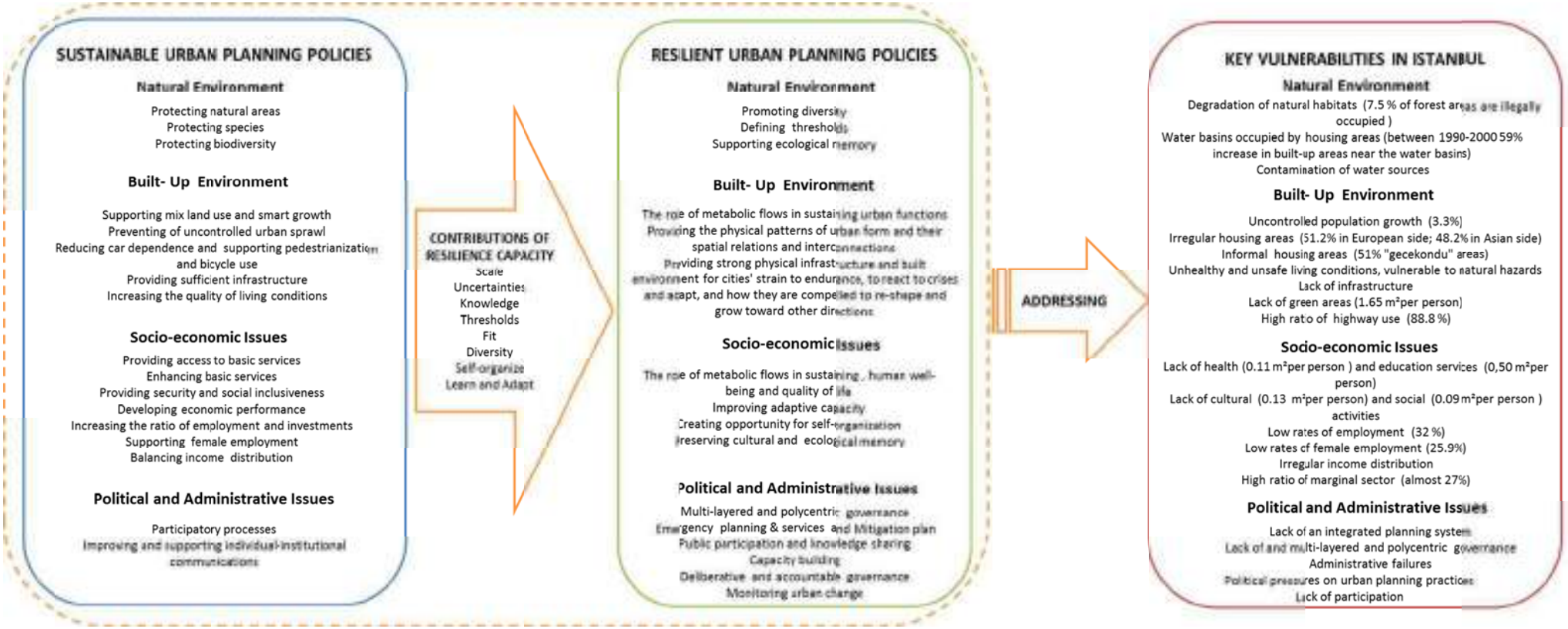

Figure 4. A Proposal for Evaluating Resilient Urban Planning in Istanbul[3]

[3] Key vulnerabilities of Istanbul, Istanbul Metropolitan Municipality (IMM), 2009 Environmental Master Plan of Istanbul, Available at: www.ibb.gov.tr [Accessed 27 April 2011]

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Regional strategy, local dilemmas, and values. A study of values underlying a complex regional process and their role in solving local dilemmas.

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1 Introduction

During the last 20 years, the nature of spatial development in the Netherlands has changed. Instead of being centrally governed, spatial development has become the responsibility of regional and local government. Furthermore, the influence of non-governmental organizations and civilians on spatial development decision-making has increased during this period: they no longer stand on the sidelines, but have become partners in drafting and implementing spatial development policy. An example of this type of collaborative planning in the Dutch province of Overijssel is a regional strategy for riverbed enlargement in the Vecht Valley region, called 'Ruimte voor de Vecht'[1].

Using the 'Ruimte voor de Vecht' regional strategy as a case study, this paper sets out to examine whether this new method of spatial planning is an improvement on current methods. Instead of using a more traditional interest-oriented approach, the case study is analysed from a value-oriented approach. The goal of this approach is to identify the values on which the various stakeholders base their basic choices. Basic choices are those choices in which different, sometimes conflicting, values are taken into consideration (Buunk, 2010a, pp11-13).

After describing the 'Ruimte voor de Vecht' case, this paper continues with a short description of the research method used to identify values involved in the complex process of collaborative planning. In addition to describing the method, an overview is given of the storylines, value sets, and values that form the process of the Vecht Valley regional strategy. Next, this paper identifies three possible dilemmas that are likely to occur. I will focus on one of these dilemmas, namely that of nature versus agriculture, by describing the basic choices that are involved in this dilemma and the values that may clash in making these choices. I will conclude by considering whether a complex process of collaborative planning, like that involved in the 'Ruimte voor de Vecht' regional strategy, should be adopted or avoided in the practice of spatial development.

1.1 The Vecht Valley region, The Vecht and 'Ruimte voor de Vecht'

The Vecht Valley region is located in the north east of the province of Overijssel and consists of four municipalities, including the province's capital Zwolle. Together the municipalities Zwolle, Dalfsen, Ommen, and Hardenberg are home to roughly 220,000 inhabitants, half of whom live in the city of Zwolle. The rest of the Vecht Valley region

[1] NB: Literally translated to 'Room for the river Vecht'

is mostly rural, with 1324 agricultural businesses, and consequently most of the region's GDP comes from agriculture. The riverbed is home to 20 agricultural businesses.

The economic importance of agriculture in this region is relatively new. Before the 20th century, the region's economy relied heavily on the river. In these earlier centuries, the river Vecht was a shipping route used to transport sandstone from Bentheim to the Zuyder Zee and beyond, to countries as the United States of America. However, in the 20th century, the river Vecht's main economic function and appearance changed, due to canalisation of the river. The river lost its characteristic meanders and gained multiple weirs to stop it from flowing too fast and, as a result, the river has become increasingly hidden in the landscape.

In addition to having become a hidden element within the landscape, the river Vecht also faces other challenges. For example, as recently as 1996 the Vecht Valley Region was confronted with high water levels and minor flooding. In 1997, responding to the flood, the regional water boards and Rijkswaterstaat[2] wrote a policy document on flood protection in the Vecht Valley region, which envisaged the river Vecht as a 'semi-natural' river. This semi-natural Vecht should freely meander through the landscape, with little riverbank protection, eroding the riverbed and creating its own path.

To achieve this goal, a number of projects were started in the Vecht Valley region, but ten years on little progress had been made. Therefore, the province of Overijssel took the lead and initiated a regional strategy called 'Ruimte voor de Vecht', in which developing a semi-natural river became the first goal. However, the province realised that the Vecht Valley region also faces other challenges that needed to be addressed and they therefore decided to combine these with the Vecht Valley regional strategy. These challenges include the ageing population and an economic decline in the region. Consequently, to tackle these issues, the second goal of the regional strategy is to give the region a socio-economic boost.

The third goal of the strategy is related to the natural environment of the Vecht Valley region. In 1992, European Union governments adopted legislation, called Natura 2000, designed to protect habitats and species across Europe. In line with the Natura 2000 legislation, the Dutch government drafted additional legislation, called the 'Ecologische Hoofdstructuur' (EHS)[3]. In accordance with the EHS legislation, the Vecht Valley region has to gain approximately 1100 hectares of new nature characteristic to the natural habitat of the region. Since the Vecht Valley region is mainly a wetland, new areas of nature should include vegetation such as marshes and grasslands.

As well as creating new nature, the EHS legislation also prescribes the creation of a so-called natural network in the Netherlands. Several natural areas and reserves in the

[2] The national institution responsible for water management
[3] NB Literally this term means 'Main ecological structure'

Netherlands are separated from each other, which causes problems for biodiversity. To increase the biodiversity in Dutch nature, it is necessary to create connections, known as *robuuste verbindingszones* (RVZs), between different natural areas and reserves. These connections are, for example, created by building ecological bridges over motorways so that animals can cross safely. Initially four RVZs came together in the Vecht Valley region, however, following recent political changes, these have been reduced to just one.

Although the regional strategy 'Ruimte voor de Vecht' has no formal responsibility concerning the implementation of EHS and Natura 2000 legislation, its stakeholders are committed to creating new nature in the Vecht Valley region. This commitment has partially caused the dilemma on which this paper focusses, namely that of nature versus agriculture in the Vecht Valley region, and will be discussed in more detail towards the end of this paper.

The three goals of 'Ruimte voor de Vecht' make it a very complex regional strategy. Furthermore, this strategy is based on the principles of good governance, which, among other things, promotes collaboration with non-governmental organizations and civilians. This collaboration has become a key element in drafting and implementing the 'Ruimte voor de Vecht' regional strategy. As a result, thirteen different governmental and non-governmental parties play a formal role in the process management, whom all consider the development of their region from different points of view, based on different values.

This method of planning, which combines different types of policy goals and is based on collaboration, is relatively new in the Netherlands. Although it is a new method, it seems to be successful and therefor interesting to evaluate.

2 A value-oriented research approach

This paper draws on research into the Vecht riverbed enlargement strategy and aims to evaluate this program by revealing the values on which stakeholders base their choices about the design, use and management of the area. This approach differs from a more traditional interest-oriented policy analysis that analyses the stakeholder's interest, assuming he/she behaves rationally and chooses a certain option because this option best fulfils his/her interests. While stakeholders tend to talk explicitly about their interests, they often keep values implicit in negotiations, although values do form a stakeholder's point of view. In this paper a value is defined as a wish, a goal or a motive that a person or organization aims to realize.

Although value-oriented policy analysis is new territory in spatial development research, it is a relevant approach to analysing regional strategies in which both governmental and non-governmental stakeholders cooperate. Since values, like interests, may determine the choice a person makes when facing different options (Haidt, 2007 , pp.103), it is likely that values will also play a role in a complex regional strategy in which

stakeholders have to choose between different options. However, the stakeholder's final choice may not necessarily be the one that is in his/her best interest, since choices based on values are not, by definition, rational. Therefore, if the underlying values are not made clear, choices based on values can be confusing. Such confusion can lead to a stalemate in a regional strategy, making it an unsuccessful planning instrument. As a result, it is important to take values into account when assessing a planning instrument.

Based on a value-oriented approach, this research uses discourse analysis to identify the values on which the stakeholders draw. Discourse analysis is a generic term for many different approaches. As described in (Buunk, 2010a, pp.46-47) and (Buunk, 2010b, pp.15), the approach used to analyse the regional strategy 'Ruimte voor de Vecht', focusses on storylines, value sets, and values. Based in part on Maarten Hajer's definition, a storyline can be defined as: "*(crisp) generative statements that bring together previously unrelated elements of reality. The main function of storylines is that these short narratives help people to fit their bit of knowledge, experience or expertise into the larger jigsaw of a policy debate.*" (104). In this study, the storylines were constructed using document analysis and interviews with stakeholders in the Vecht Valley region. From the storylines, values were extracted and categorized into a small number of value sets (Buunk, 2010b, pp.15-16).

3 The stories and values in the Vecht Valley region

In the process of the regional strategy 'Ruimte voor de Vecht' four storylines can be identified, namely:

- The semi-natural river
- Rediscovering the Vecht Valley identity
- The affluent river Vecht
- The connecting river Vecht

3.1 The semi-natural river

The semi-natural river is the most prominent and extensive storyline in the development of the Vecht Valley region. It focusses on the appearance of the river Vecht and its position within the Vecht Valley region. From the start of the development of the river Vecht in 1997 until now, the idea of a more natural-appearing river has been a guiding principle. All human interferences in the river's path have made it dull and hidden. By allowing the river to become more natural and by allowing the river more space in the landscape, it may be possible for the river Vecht to regain some of its former glory.

An important theme in this storyline concerns the technical problems due to climate change, and possible solutions. Climate change poses a problem for many rivers in the Netherlands, including the river Vecht, because it demands an increased runoff capacity

to prevent flooding. Furthermore, climate change increases the need for land for controlled flooding, which is particularly important for rainwater rivers like the river Vecht. Such rivers need more land for controlled flooding to be able drain off the distribution of water in the rainy season. To prevent flooding the Netherlands has directives on the runoff capacity a river has to meet and, in the case of the river Vecht, the runoff capacity must be increased. To many stakeholders, this is the key problem in the Vecht Valley regional strategy, and solving it, namely developing the most suitable river regime, is a vital task for them.

When stakeholders talk about the river Vecht as a semi-natural river, it becomes clear that this storyline is not only about the river's regime. The other themes in this storyline, namely flood safety and scenery, are concerned with the surrounding area of the river. To stakeholders, the scenery of the Vecht Valley region also plays a role in developing a semi-natural river, because this development not only requires adjustments to the river itself, but also to the natural environment of the riverbed. Throughout the process of developing the river Vecht, the province and its partners have consulted the University of Wageningen on the type of adjustments that can, and should, be made to the river and the surrounding riverbed. These studies have shown that, to create a successful semi-natural river, not only the

The theme of flood safety is closely related to the river's regime. Stakeholders believe flood protection of the surrounding riverbed can be improved by developing a semi-natural river with more meanders to increase the river's runoff capacity. On the other hand, a semi-natural river has more control over its own path, thereby decreasing human control over the river. Consequently, stakeholders, especially the water boards, believe that maintaining a controlled river regime is also important for flood protection. In short, when deciding on the development of the river Vecht, stakeholders have to consider different elements. They cannot simply decide on a number of technical adjustments that increase the river's meanders and runoff capacity, but they also have to consider the effect of these adjustments on the surroundings of the river. Furthermore, the stakeholders have different opinions about the extent to which the river's regime should be changed and which adjustments are most suitable to do so. Thus, while the first storyline may seem clear-cut on the surface, it is a storyline with many complexities and possible dilemmas.

3.1 Rediscovering the Vecht Valley identity

The second storyline 'rediscovering the Vecht Valley identity' also plays a vital role in the regional strategy. Stakeholders of the regional strategy consider the Vecht Valley to be a tightknit region, where inhabitants strongly identify with the region. However, the Vecht Valley region is a relatively new concept that came into existence at the end of the last century. In fact, just a small percentage of the inhabitants consider themselves as inhabitants of the region, rather than inhabitants of the town in which they live. However, the stakeholders of the regional strategy report that they wish to promote this

concept of the Vecht Valley region and that they aim to stimulate the inhabitants of the region to rediscover their collective regional identity.

The importance of the Vecht Valley identity is a new concept. Prior to the province becoming involved in 2007, rediscovering the region's identity was not an important issue. Before this time, the relevant water boards and Rijkswaterstaat were only concerned with the development of the river and the surrounding area, and had no interest in rediscovering or creating a collective identity for the region. In fact, stakeholders first discussed the need for a collective identity when the province took over in response to a suggestion by an independent research bureau. This agency advised the province that a collective Vecht Valley identity would contribute to accomplishing the multiple goals of the collaborative regional strategy. Furthermore, a collective identity might increase the connection inhabitants feel with their region, a feeling they can propagate, in turn increasing the popularity of the region in the rest of the Netherlands. The province and stakeholders acted on this advice and made it part of the regional strategy.

The collective Vecht Valley identity has become increasingly important in the regional strategy since drafting the master plan for the regional strategy 'Ruimte voor de Vecht'. It has become a regularly recurring subject in policy documents, minutes, and debates, but also in interviews conducted for this paper. When stakeholders talk about the Vecht Valley identity, it is clear they consider it to be an important issue in the Vecht Valley development, even though there is no exact definition of the Vecht Valley identity. For example, some stakeholders use words such as *peaceful* and *quiet* to describe the region's identity, while others think of the valley as a more *economic, agricultural region*. To discover the true Vecht Valley identity, the province initiated a cultural-historic study of the Vecht Valley region. This resulted in a book that describes and highlights the collective history of all the Vecht Valley inhabitants. Overall, the story of rediscovering the Vecht Valley identity seems to be a successful one, with recent studies showing that an increasing number of inhabitants of the Vecht Valley are aware of the concept and consider themselves to be inhabitants of the Vecht Valley.

3.2 The affluent river Vecht

The second storyline is called 'the affluent river Vecht' and is linked to the regional strategy's goal of boosting the Vecht Valley region's socio-economic situation. Although the river Vecht historically brought wealth to the Vecht Valley region, the main economic resources nowadays are tourism and agriculture, and both of these branches are currently declining. The tourism branch in the Vecht Valley region faces many challenges because of a lack of awareness of the region in the rest of the Netherlands and Germany. Another problem reported by stakeholders in the tourism branch is their inability to fully utilize the river´s business potential. Because of the many weirs in the river´s path, boating is not an attraction for visitors and tourists. However, for the most part the challenges in the tourism branch have been overcome

already. The tourism branch seems to be growing again in the Vecht Valley region, and apart from some issues on where boating should be allowed, the planning policy has succeeded.

The agricultural branch, on the other hand, faces tougher challenges and poses more difficulties for the regional development. Farmers in the region feel it is becoming increasingly difficult to compete in the national and global agricultural market and, consequently, many Vecht Valley farmers believe they have to expand their businesses to so-called factory farms to secure their future. These farms can, for example, house more than 120,000 laying hens and are highly debated in the Netherlands for ethical and environmental reasons. In contrast, the stakeholders involved in the 'Ruimte voor de Vecht' regional strategy believe that the future of agricultural businesses in the region does not lie in developing factory farms but in developing diversified farms. This type of farming is considered a wiser choice because animals are treated better, but also because it fits more closely with the third goal of the Vecht Valley regional strategy, namely to protect and develop nature in the Vecht Valley region.

The debate on farming defines the storyline. Most of the Vecht Valley farmers believe the government, especially the province of Overijssel, is interfering in their business management and making choices *for* them instead of *with* them. Therefore, the Vecht Valley farmers, represented by the Dutch farmer's organization LTO, had no interest in being part of the regional strategy for the first few years and did not join the regional strategy until 2009. After joining, the LTO drafted its own plan for the Vecht Valley development, together with the region's farmers. This plan was completed last year and will define/direct/guide their contribution to the regional strategy.

In the story of the affluent river Vecht, stakeholders and farmers do not always see eye to eye. The farmers believe the regional strategy may limit their choice on how they want to develop their agricultural business. The stakeholders in the regional strategy, on the other hand, believe there *is* no choice as diversified farming is the only stable future for farmers in the Vecht Valley region and is the only type of farming that fits with the vision of the regional strategy.

3.3 The connecting river Vecht

The final storyline is that of the connecting river Vecht, and revolves around collaboration. Collaboration is one of the distinguishing features of the regional strategy 'Ruimte voor de Vecht', and is not limited to collaboration with governmental organizations: non-governmental parties and even citizens are also stimulated to get involved. This need for extensive collaboration is what distinguishes 'Ruimte voor de Vecht' regional strategy from other regional strategies and spatial development plans, and makes 'Ruimte voor de Vecht' a complex collaborative planning process.

The number of collaborating stakeholders in the 'Ruimte voor de Vecht' regional strategy has increased since the start of the planning process. As with the 'rediscovering the Vecht Valley identity' storyline, the involvement of the province in the planning process changed the nature of the Vecht Valley development. In 1997, the development was aimed solely at the river and the riverbed, making it a plan in which relevant water boards were the only necessary partners. The involvement of the province not only broadened the goals of the development, but these policy goals also had a greater impact on the Vecht Valley region. For example, on the one hand, some of the goals implied a structural change in the appearance and the spatial function of the Vecht Valley region. On the other hand, developing a collective Vecht Valley identity meant that the inhabitants of the region also needed to change. Therefore, for the strategy to succeed, it was important to have a wide range of support, meaning the province and its initial partners needed to involve as many parties as possible. The number of collaborating stakeholders has now grown to thirteen, including a regional environmental group and the regional farmers interest group.

Initially the regional farmers interest group was reluctant to join the Vecht Valley regional strategy, because they were wary of the role they would play and the influence they would have on the decision-making. In the first meeting of the regional strategy they raised concerns about their lack of involvement in the early-stage fundamental decisions and thus decided to withdraw from the collaboration. Eventually the stakeholders already involved in the regional strategy successfully convinced the regional farmers interest group and the farmers joined the Vecht Valley regional strategy in 2010.

When interviewing the stakeholders of the regional strategy, it becomes clear that are not only bureaucratic reasons to invest time and effort into collaboration in the Vecht Valley development. What makes this storyline interesting is that stakeholders also find collaboration important on a non-bureaucratic level. They feel that the development of the Vecht Valley region should involve everyone in the region, so that the result is something everyone agrees on.

This feeling of collaboration is even symbolized in the use of a flower, namely a pink carnation, that can only be found in the Vecht Valley region. The story surrounding this carnation is that it cannot exist without collaboration between different elements in nature. As with the carnation, the Vecht Valley region can only flourish if everyone works together.

3.4 Values in the Vecht Valley region

After describing the storylines, the analysis of the collaborative regional planning strategy 'Ruimte voor de Vecht' continues with an account of the values identified in this process. Values are not normally the subject of research when evaluating the use of a planning method; instead, such research usually analyses interests. However, as argued

in this paper, values may play a vital role in the success of a planning method, especially one that relies heavily on collaboration, like the Vecht Valley regional strategy.

The values on which stakeholders draw in the Vecht Valley regional strategy can be divided into six different value sets, namely safety, nature, lively river, self-determination, landscape and cooperation. Within these value sets, sixteen distinct values have been identified. For example, a value in the landscape value set is 'self-consciousness', which means that stakeholders who draw on this value consider it important that inhabitants and communities in the Vecht Valley region become more conscious of their own regional identity. Another example is the value 'utilization' in the lively river value set, which has a more economic meaning. Stakeholders who draw on this value consider it important that the business potential of the river is utilized. The following table gives an overview of the value sets, the values and their meaning in the Vecht Valley regional strategy:

Table 1 Valuesets and values in the Vecht Valley regional strategy

Six sets of values	***Key values* and meaning in Vecht river management process**
Safety	*Prudence*. Adequate river regime is a necessity. *Guilt and penitence*. Climate change is man-made burden to which society needs to adapt.
	Fear of flooding limits possibilities of natural river regime *Sobriety* in the natural river regime is needed.
Nature	*Responsibility* for global biodiversity (in particular rare species and habitats).
	Love of local variety of nature and natural landscapes
Lively river	A lively river has high *aquatic diversity*
	The *beauty* of natural river dynamics needs to be visible in the landscape
	Harmony in natural beauty and recreational experience of the river
	Utilisation of business potential of the river
Self-determination	Economic *self-determination* for farmers who wish to seize investment opportunities with changes in allotment of their fields
	Justice in respecting property rights, not only decisive public interests in changing the river regime and surrounding grounds
Landscape	*Pride* in the singular scenery of Vecht valley region
	Self-consciousness of regional identity should grow with individual inhabitants and communities
	The agricultural, military, recreational and spiritual *history and traditions* of the Vecht valley region are worth rediscovering
Cooperation	Cooperation is *useful* for all

One conclusion that can be drawn from this overview is that there is a broad variety of values at stake in the Vecht Valley region. When making decisions about the

development of the region, stakeholders sometimes base their choices on different value sets, and thus different values. In other cases, stakeholders base their choices on different values from the same value set. This is especially the case when looking at the value set 'lively river', in which values like 'beauty of the natural river dynamics' and utilization of business potential' come together.

4 Dilemmas in the Vecht Valley region

The analysis of the storylines shows that, in a complex collaborative planning strategy like 'Ruimte voor de Vecht', stakeholders may draw on many different values when making choices. These values may complement each other, but they may also clash, leaving the planning process in an apparent stalemate. These clashes typically occur for dilemmas that are characteristic of the region and the regional strategy.

In terms of the 'Ruimte voor de Vecht' regional strategy, the storylines reveal a number of current dilemmas and possible future dilemmas. For example, one dilemma concerns the extent to which the river Vecht can, and should, become semi-natural. Although much has been written about the wish for a semi-natural river, it remains unclear what exactly a semi-natural river entails and how the river's path should be changed to achieve this semi-natural state. These questions form a dilemma because their answers require considering values concerning river safety, the natural environment and the economy. Another dilemma is that of boats on the river Vecht. One of the effects of a semi-natural river is that the depth of the river will decrease, leaving it less suitable for boating. Yet, in the Vecht Valley region, stakeholders from the recreational and tourism branch envisage the river Vecht as a river on which visitors and tourists can sail. In this dilemma, values concerning the natural environment and the economy have to be taken into consideration.

4.1 A dilemma of nature versus agriculture

This paper focusses on another dilemma in this strategy, which concerns a choice between the natural and agricultural function of the Vecht Valley region. Within the Vecht Valley region approximately 1100 hectares of new nature have to be developed to meet the criteria set by Dutch and European nature development legislation. Although the regional strategy 'Ruimte voor de Vecht' has no formal responsibility to meet these criteria, stakeholders have defined it as one of the three main goals, and thereby committed themselves to the Vecht Valley's natural environment. Furthermore, as was described in the storyline 'the semi-natural river', to create a semi-natural river it is also necessary to make certain adjustments to the riverbed. Among other things, these adjustments entail the cultivation of certain plants and vegetation that facilitate the river's runoff.

Due to the recent economic depression, the Dutch government was forced to implement a number of cutbacks in 2011, one of which concerned the EHS and Natura 2000

legislation. The Dutch central government decided to shift the implementation responsibility to the regional government level. In itself this was not a problem, because already the regional government was working on the implementation of both legislations, however the central government also decided that they no longer had the financial responsibility, meaning the regional governments also had to pay for all the adjustments required. Responding to these policy changes the province of Overijssel decided that they would no longer fully implement the EHS legislation, cutting back on the number of RVZ's and reconsidering the amount of grounds which would be used for the creation of new nature.

For the Vecht Valley regional strategy this contributed to an already existing tension between the natural and agricultural function of the Vecht Valley region. As described above, the Vecht Valley region is a mainly rural area, housing a high number of farms. Many of the farmers fear that the implementation of nature reservation legislation will limit their business possibilities in the region. One the one hand because grounds that could be used for agriculture are being used for nature reservation, and on the other hand the presence of nature reserves brings limitation to the magnitude of surrounding agricultural businesses. A larger farm will have more impact on its surrounding environment, so in order to protect the nature reserves, certain limits are set for surrounding agricultural businesses.

Furthermore, nature reservation is proving to be very expensive for regional governments, since they are not only responsible for creating new nature, but also for managing nature reserves. As a rule nature reserve management is outsourced to land managing organizations such as Staatsbosbeheer[4], who are considered to be experts on the field of nature reservation. However, land managing organizations rely on government funding, resulting in a costly management of nature reserves. In order to solve this budgetary problem, multiple provinces, including the province of Overijssel, have decided to explore the possibility of outsourcing nature reserve management to private parties such as farmers.

In the Vecht Valley regional strategy, creating nature and managing it is of importance for a number of reasons. First, in order to develop a semi-natural river, the surrounding riverbed needs to gain and maintain certain vegetation. Second, the extensive natural environment of the Vecht Valley region is a used as an attraction in the promotion of the region's tourist information offices and the region-wide tourism branch. When considering the value sets and values that are identified in this region, stakeholders that stress the importance of nature reserves and nature development draw from the value sets nature and lively river. In particular stakeholders seem to draw from the values *responsibility, love, beauty* and *harmony*.

[4] Staatsbosbeheer is a national organization commissioned a large part of the nature reserves in the Netherlands

The farmers, on the other hand, draw from another value set to substantiate their wishes for the region, namely the value set self-determination. The vision they have for the region has room for agricultural activities, and emphasizes the cultural landscape instead of the natural landscape. In this choice they draw from values like *self-determination* and *justice*, after all they consider the Vecht Valley region to be a rural area, *their* rural area.

5 Conclusion

This paper has given a short overview of an analysis into the Vecht Valley regional strategy, in order to consider if this new method of spatial planning should be avoided or adopted in the practice of spatial planning. The planning method has two interesting elements which are considered, namely the combining of different policy goals into a single spatial plan and the degree of collaboration with non-governmental parties and citizens. Furthermore, this paper presented a new method of analysing spatial planning projects, focussing on storylines and values, rather than on interests. Finally, to illustrate the importance of values in a planning process an example was given of how values play a role in causing and solving local planning dilemmas.

Combining different policy goals into a single spatial plan has occurred before in Dutch spatial planning practice, involving multiple non-governmental stakeholders and citizens in a planning process, however, is relatively new. The key advantage of combining multiple policy goals within the same region is that it increases the efficiency of the development in that region. Not only does this approach allow for cost reduction, it also slims down the bureaucratic process involved, since there is only one board of stakeholders involved. The downside of this approach to planning is that the project can become too large or even megalomaniac, which in turn destroys any efficiency.

An extensive collaborative process also has several advantages and disadvantages. First and foremost, the wish for collaboration is driven by a need for support from the society. Many spatial plans fail, because non-governmental organizations and citizens feel they have no influence on the choices governments make and consequently these organizations and citizens will try to prevent the a plan from being implemented. If non-governmental organizations and citizens are involved in a planning process, they have a better understanding of the decisions that are made. The second advantage is that involving non-governmental organizations and citizens gives them a feeling of responsibility in the planning process. Implementing the plan is no longer the government's job, it has become everyone's job.

The main advantage of this type of collaborative planning is also clear, namely that an increased number of stakeholders also means more opinions have to be taken into consideration. No longer can governments only take their own interests into consideration, they now have to negotiate with stakeholders that have different point of views on how a region should be developed.

The Vecht Valley regional strategy seems to be a good example of how a complex collaborative planning strategy can succeed. Since the initiating phase of the strategy, collaboration has increased, the strategy plan has almost fully been drafted and the implementation has already begun. Apart from that, the goal of boosting the region's economy has been met partly, now that the tourism branch in the Vecht Valley region is growing again. The combining of different policy goals in one strategy has not produced a megalomaniac plan.

In short, from the analysis of the Vecht Valley regional strategy can be concluded that a complex collaborative strategy, in which different policy goals are combined, is a planning method with many advantages. It is planning method which can increase the efficiency of spatial development, and thus should be adopted more often in the practice of spatial planning. However as this paper also showed, there are some dilemmas that the stakeholders of the Vecht Valley regional strategy need to solve, in order to fully succeed. These dilemmas revolve around basic choices, in which different values have to be taken into consideration. Spatial planning is not only a matter of considering different interests and technical data, it is also a matter of considering values. Policy makers need to take a full deliberation of values in consideration, in order to be able to continue the on-going collaborative planning process in the region.

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The “bankruptcy” of the Greek Cities.
Neoliberalisation and the urban landscapes in the age of the crisis.

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Introduction to the Sisyphean Myth

The Sisyphean myth is fittingly of Greek matter and essence. We will try to narrate the way that this mythological construction can be perfectly applied to our case study of Greek urban politics and agendas all the way from the early 90’s to the present time.

Issues such as corrupt local political and social behaviour, state inefficiency, low productivity but high wages and misuse of EU structural funds are among the causes that have been used repeatedly as explanations of the recent Greek debt crisis. Although there is good reasoning in these explanations, they tend to be either one-sided or very economistic in their assumptions (Hadjimichalis, 2011). Before focusing on the Greek case and in order to overcome shallow approaches we need to mention two parameters that are of major importance.

The first one is to underline the deep and systemic character of this crisis of over-accumulation and under-consumption. As Harvey assumes, it originated in the steps that were taken to resolve the crisis of stagflation and the political threat to capitalist class power in the 1970s in the core regions of capitalism - North America and Western Europe. These steps including among others the successful political assault upon organized labor and its political institutions, dismantling of capital controls over international movement, empowering money capital and bubbles in the asset market (Harvey, 2005; Harvey, 2010) formed neo-liberalism and dogmatic market fundamentalism that dominates until today in Eurozone and IMF policies. The second parameter is the relation between the particular way in which the international

crisis affected Greece and the socio-spatial structure of the European Union (Hadjimichalis, 2011). Considering the above as key factors, Greek deficiencies and particularities need to be taken under consideration in order to evaluate economic / urban policies and their incidence.

The debate around contemporary Greek cities has close links with the general process of economic integration with the European Community in the early 1990s and with the shift towards free market economies. The new urban trajectories were those of city competition, place marketing and urban boosterism. The support of an "entrepreneurial" vision and a way to compete in the European urban arena were monopolizing the discussion around urban problems (Swyngedouw et.al, 2002). More and more capital circulated – and still does - in the production of spectacular events with all sorts of consequences for consumerism as well as for urban life. But productions of this sort are invariably debt financed and, as the history of the Olympics clearly demonstrates, finding the money to pay off the debts afterward is often a problem. As we will explain furthermore it is no accident that Greece, which staged the Olympics in 2004, is now in a leading crisis role because of its sovereign debt (Harvey, 2011).

International Crisis and the Greek Epicentre

But let's start from the beginning. The primary epicentre of the national economic crisis was allocated in the United States. The crisis then quickly spread through the mortgage finance companies to the major financial institutions that still held an amount of what became "toxic" securitized mortgage debt. It then spread to other institutions that either held the debt, invested in the debt or insured the debt and other financial transactions. The parallel crash of Northern Rock in Britain indicated that there were problems in property markets elsewhere. The financial institutions located in New York and London then became the epicentre of the crisis. It largely fell to the U.S. and British governments, along with the U.S. Federal Reserve and the Bank of England, to stabilize the situation.

The crash of Lehman Brothers in September 2008 sent the contagion global. No matter where they were located, the holders of the toxic debt were in difficulty. But after the crash of Lehman Brothers, the whole global credit system froze, which formed the immediate primary blockage to the continuity of flows of capital. Perfectly good enterprises suddenly found themselves in difficulty because they could not roll over their debt. Many firms rescued themselves by laying off workers by the droves and intensifying wage repression. Debt-fueled consumerism and effective demand were halted, consumer confidence fell off a cliff, and unemployment surged although at radically different rates both within and between countries: compare, for example, Minnesota and Ohio in the United States or Spain (19 percent) and the Netherlands (4 percent) in Europe as of February 2010 (Saltmarsh, 2010).

The major export economies then took a hit as world trade contracted by one-third in early 2009 (Norris, 2009), sparking huge difficulties for businesses and emphatic surges in unemployment in East Asia as well as in Germany, Brazil, and elsewhere. What then followed depended crucially upon the imperatives, ability, and willingness of different governments to use their powers within the state-finance nexus to confront the crisis. Across the European Union Germany took the lead in turning the Eurozone to a monetary policy of deficit reduction through draconian reductions in public expenditures. The so-called PIGS (Portugal, Ireland, Greece, and Spain) found themselves in dire financial straights, in part through their own mismanagement but, even more significantly, because their economies were particularly vulnerable to the credit collapse and the sudden decline in property markets and tourism. Lacking the industrial base of countries like Germany, they could not respond adequately to the fiscal crisis that threatened them (Harvey, 2011).

Such issues are not new but they are structural in the way that the free market forces tried to reshape the Greek economy into a profit making machine. From the mid nineties, it had been made clear that the ultimate goal for the Greek capital forces would be to align the whole country to the new formation of the Eurozone. Obeying in the external and internal high pressure market commands led the primary sector of

production to be reshaped in order to fulfill not the need of the interior demand, but completely disconnect itself from the Greek market as a whole. In addition to that, since Greece never was an avid pole of secondary means of production, that left a one way street for the over growing of the tertiary sector. In reality if one traces down the extent of new antisocial rules that have been implemented in the past 11 years (after the admission of Greece in the EU), one would be surprised from the work achieved so far. The past two and a half years have only added speed to this process.

The introduction of the euro, along with other functions, was and is still being used as a mechanism through which global capitalist pressures are shifted to local labour markets in order to secure capital's profitability. European labour markets, however, owing to the weak geographical mobility of labour, remain a national / regional affair and are still regulated by national laws (Ioakimoglou, 2010).

When the unequally developed South East regions found themselves with the same hard currency in 2000, very few paid attention to their pre-existing highly unequal regional production systems and specializations, to their structurally different regional labour markets and to their unequal accessibility to markets (economically, institutionally and spatially) vis-à-vis the 'core' of the eurozone. And even fewer paid attention to differentiating the socio-spatial effects of putting an unevenly developed SE into a macroeconomic and fiscal framework designed purposely for north-central European economies.

The major problem in the very formation of the eurozone is the so-called 'national convergence criteria' (price stability, low interest rates, stable exchange rates and limits on the size of budget deficits and national debt) and the neglect of spatial or regional convergence. In the debate on the euro in the early 2000s and now on the debt crisis, very little attention was paid to geographical differences under the four important conditions for a successful monetary union. As Hadjimichalis (2011) underlines following Thirwall (2000), Magnifico (1973) and Martin (2000), (i) regional economic and social structures should have a degree of economic similarity – in the absence of such similarities, neoliberal restrictive monetary policies will

produce geographically uneven employment/unemployment; (ii) regional economic and social structures should have high rates of geographical mobility for capital and labour – if such mobility is weak, cyclical crisis may lead to persistent regional inequalities; (iii) regions should have similar propensities to inflation; and (iv) an automatic fiscal mechanism is required through a centrally organized tax/benefit system, that will compensate for different national and regional shock.

Nowadays the EU is being proved unable to handle the crisis owing to the above reasons and due to various dogmatic and inflexible neoliberal pacts that form its ideological and institutional mode of operation. The Lisbon Pact in particular prohibits any intervention to help national economies facing a crisis, such as that in Greece. When EU governments realized that the crisis was not restricted to Greece alone but could spread to the entire eurozone, a "solution" was found via a joint IMF/EU. The proposed package of cuts that would protect global investors placed a high burden on the working and middle classes. It included extensive privatization; percent increase in sales taxes; a 20–30 percent cut in salaries in the public sector; freezing and in some cases reducing pension payments; a 34 percent cut in public spending on education, health and public works; and, most importantly, major anti-labour institutional changes. These measures will complete a vicious economic circle of rising unemployment and inflation, shrinking tax revenues and profiteering market valuation of economic policies. They will sink the country from its current deep recession into an enduring depression with no obvious way out (Douzinas, 2010; Golemis, 2010; Krugman, 2010). In this context, the bail-outs for Greece in March 2010 can hardly be taken as a major solidarity step within the EU, or globally if the IMF is included.

The forced imposition by the EU/IMF - in collaboration with the Greek governments- of extreme neoliberal reforms in Greece was possible only because of the economic crisis. In Greece even until our days there are still strongholds of social control whoever small they might be. Demonstrations are still a major part of the civil life, unions and syndicates, however corrupt they might be, are still in existence. Since the majority of these orchestrations were established just after the military

junta, it has been proved really difficult for the provisional governments to take them away in a singular fashion.

Indeed, crises might be considered to be a primary engine of capitalist restructuring that internal and external elites and regional hegemonic blocs across Europe use, jockeying for better positions.

A very important factor in the success of the above politics was to maintain the constant practice of what we call “the carrot and the stick”. On the one hand to strengthen and reassure the Greek public that being part of the Union was not only necessary for their survival but also profitable for their life, using major projects directly connected to the media interpretation of civil life (like the Olympic Games, the new highways and other parts of infrastructure that was created just after joining the EU). On the other hand, when this policy was not deemed sustainable, the way of the “sword” had to be proven as the one with no alternates.
All these political dependencies drove us to what the free market forces want to call a crucial crossroad between the continuation of the policies that brought us here in the first place and what they let describe as the apocalyptic path that shouldn’t even be discussed (the exodus from the EU).

Neoliberal Policies and the Greek city

However, the question of how the recent austerity measures affect the urban development process needs to be answered. Despite the fact that the situation is ongoing and we may rush to conclusions, we support the view that there are major transformations towards ultra-neoliberal policies in every aspect regarding the urban landscape. There is a worsening of existing factors as well as the emergence of new phenomena that construct a “crisis setting” especially in the metropolitan areas.

Of course this phenomena was also a result of the particularities of the Greek urban development “heritage” of spontaneous urbanization, lack of planning and illegality

(Gospodini, 2002). The Structural deficiencies of strategic planning and significant transformations in development and function of the building sector are key factors in order to understand this genealogy (Mantouvalou, 2011).

The first Strategy Plan - for the city of Athens – that is still into force was written in 1985. In this plan's priorities *containment of Athens' expansion, re-orientation of the investments in order to be set outside Athens Metropolitan Area and population control* are included. In other words Athen's growth considered to be oversized. Thus, sweeping transformations during 1996-2006 were lead by Major Public Works -in the context of the Olympic Games and the inclusion of Greece in the EU- not placed among an integrated planning framework. Such choices, like repositioning of the city airport or defining the location of the Olympic developments, lead to urban sprawl, function diffusion and abandonment of whole areas. At the same time Inner City policy lead basic functions to be taken away. Relocating the Ministries outside the center was an emblematic example that dragged more movements. These factors made up favourable terms for crisis and its spatial imprints.

Supplementary, constructive sector changed during the 1990s. Construction is "traditionally" important sector for the Greek economy and the reproduction of social relations. Being grounded in small property and companies and having worked as a substitute of the welfare state for housing matters, its transformation brought the social relations at stake. Today the crisis in constructive sector is interwoven with employment and urban space crisis.

Despite these urban traditions we argue that the current crisis led to two changes:

Firstly it led to a radical reconciliation with the past of informal, illegal, spontaneous urbanization, which was now considered not a problem but a necessary characteristic of the future . The continuing expansion of illegal settlements in the fringes of Greek Cities was compared with the contemporary urban development of cities such as Boston or Atlanta (Aesopos, 2009). Notions like "overexposed city", "edge city", "generic city" were introduced to the vocabulary of architects and planners in order

to describe the new urban phenomenon. This was also combined with a promotion of the free market solutions in the design guidance and control system in Greece (Beriatos & Gospodini, 2009), both as a need for the economic elites but also as a side effect of the critique in the public funded projects. In short it was the promotion of New Urban Policies which would: (i) Revise the hierarchy of plans (regional, regulatory, city plan, architectural plan) in favor of more effective interventions (master-plans) which can be easily developed. (ii) Rethink and establish connections of network infrastructure and urban design in the cities. (iii) Promote the role of private initiative in the development process and the collaboration of public and private institutions (PPP-PFI). (iv) Form the new institutions that will implement these plans.

Secondly this theoretical debate was integrated in an "aggressive" neoliberal transformation of the planning system. In only two years the whole planning system was turned upside down, as we argue, in favor of private institutional forms and market speculation in particular:

- Changes in the Urban Governance system with the "Kallikrates" legislation (2010), which shifted many of the obligations of the State (planning, nurseries, schools etc.) to the Municipalities, but with no additional funding. The implementation of a 500millions austerity "package" to the local communities and peripheries. But most important the transition of a strategy of even peripheral development to a strategy of "competition" and economic antagonism.
- Changes in the Urban Development Policies with the establishment of the institution of "Fast-Track Projects". Projects that are basically private funded and can bypass state regulation (even environmental laws) in favor for economic sustainability. Also the formation of the Hellenic Republic Asset Development Fund (HRADF) in 2011 with the main goal the privatization of the Greek State's assets initiated a "sell-out" strategy of public spaces (like the former "Elliniko" airport, coastlines) but also major utilities services (energy, water, telecommunications, waste disposal).
- Changes in the Building Code (2012) in favor of "higher densities" and high rise buildings. In many areas especially in metropolitan districts the densities are

increased by 20-30% and also the legislation gives great power to the Minister enabling him to approve certain development projects, that are “in favor of economic development” but also cannot be approved by the existing system.

The “bankruptcy” of the Greek cities and communal resistance

These transformations in the planning system and strategies in combination with the austerity measures and the wider economic crisis have severe social impacts that are further noticeable in the central neighborhoods in the city of Athens, where one can clearly see the most tragic consequences of the Memoranda and the austerity policy: new poverty, high unemployment rates, rapid growth of homelessness as well as racial violence.

The city is the framework, where crisis appears in the most brutal and intense way: The rapidly increasing unemployment and poverty rates compose Athens’ new landscape, while the currently promoted urban policies intensify economic inequality, social exclusion and socio-spatial segregation. Quoting David Harvey ‘Violence is required to build the new urban world on the wreckage of the old and it is the poor, the underprivileged and those marginalized from political power that suffer first and foremost from the urban process of “creative destruction”’(Harvey, 2008). Social violence definitely marks the urban environment of a capital in bankruptcy, while on the same time forming new tendencies and political correlates within the social uprising and the emerging need for an overthrow.

However, as the urban process is based on the twin themes of accumulation and class struggle (Harvey, 1990), the city sharpens discriminations and contradictions, while on the other hand constitutes the arena where people's common needs, hopes and solutions can be perceived and organised. During the last four years, crucial political struggles and social movements developed in the city of Athens, starting with the revolt in December 2008, known as 'the first revolt of the crisis'. Less than two years after, the measures imposed by the IMF, EU and European Central Bank with the full

accord of the Greek government, have led to several general strikes, numerous regional strikes and other acts of resistance, which often paralyzed the country showing signs of rebellion against austerity. In the broader context according to the movement's timeline, the Arab spring, the indignados, the new social movements, the occupy movement underlined the possibility for a mass, global and local resistance against the current global economic catastrophe. Responding to the call for action within the <occupy movement>, the 'Syntagma Square movement' created new perspectives, especially when the labor movement got involved into the movement's progress. For more than two months the central square of Athens became a meeting point, where thousands of people gathered daily to discuss the next steps of the fight.

A year after the burst of the <occupy Syntagma Square> movement, one can observe what is left as a ‘legacy’: general assemblies and direct democratic procedures constitute a vital heritage for neighbourhood and grass-root movements were developed.

What is worth to bear in mind is that after December 2008 many urban movements arose, as people were more inspired to see and act beyond the closed horizons of the mainstream politics(Stavridis, 2009). Public places are being transformed, while many collective actions are invented. The collective reclaiming of urban space was connected with the demand for social justice reflecting in some cases an attempt to achieve a different social organisation, against the dominant ideology and the capital's laws. The new key-word is solidarity! As people in Greece keep on suffering from the brutal policies, the need for direct solutions and answers becomes more and more essential. The basic rights to housing, decent work, education and health are the emerging aspects of the “Right to the city”, while reclaiming urban space, public places and public buildings no longer in use remains an important precondition for solidarity social networks combined with anti-capitalist struggle.

Thus, the concept that enters the debate and affects both the spatial as well as the socio-political level is the 'demanding of urban life' transforming the city into a 'common place of demand'. The emerging action within the framework of urban

movements redefines urban space, while being a call for a radical restructuring of social, political, and economic relations, both in the city and beyond (Purcell, 2002) . Abandoning all former certainties regarding urban life, the rising 'right to the city' is like a cry and a demand (Lefebvre, 1996) that contests the dominance of state and capital in producing and reproducing, controlling and perceiving urban space.

According to the Lefebvrian thought, the 'right to the city' is interrelated with the right to participation and appropriation, while those aspects refer both to the radical transformation of urban space and social relations. The newborn social movements link the reclaiming of the city with the reclaiming of the socio-political scene. By occupying the central, crowded public square of Athens people not only demand their participation in decision-making processes regarding urban space but they also prioritise direct democracy and social justice fighting against the unbearable austerity measures and the corrupted undemocratic administration policies.

Urban space and its public places become contested places where dominance is a bet to win. Furthermore, urban space becomes a battlefield, where official public discourse, formal narratives together with police brutality and parastatal organisations construct 'moral panic' (Cohen, 1973) presenting urban movements as a threat for social order. On the other side, grass-root initiatives as well as platforms of the radical Left give voice to political subjectivities, who were in a large extend absent or silent during past periods of time and who elaborate on solutions to the on-going survival problems that the majority of the society faces. With the slogan “no one faces crisis alone” collective initiatives were set to motion focusing on: organising collective kitchen, ensuring that no house will be left without electricity due to the government's hikes, organising cultural events or offering free lessons to students in need.

Although the grass-roots movements and labor struggles are trying to reestablish the “right to the city” as Lefebvre reminds us “Capitalism has found itself able to attenuate (if not resolve) its internal contradictions for a century, and consequently in the hundred years since the writing of Capital, it has succeeded in achieving

‘growth’. We cannot calculate at what cost, but we do know the means: by occupying space, by producing a space.” (Lefebvre, 1976)

Who is going to prevail is something that the future will tell. However it is certain if we recall again our Sisyphean introduction that “the stone” is meant to come rolling down. Everyone is expecting it and certainly the neoliberal forces that implement those policies also depend on it.

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Revitalization of a mid-sized city in Japan through public transit and land use policies: Case of Toyama

Noriko Kono[1]

Abstract

Beginning with the latter half of the 20th century, the excessive motorisation of cities has been one of the most controversial issues in urban planning. The impact of the automobile was far more wide-reaching compared to that of the earlier streetcar, which was more linear in movement and confined to discrete areas. The invention of the automobile allowed cities to spread in all different directions, and to sprawl into greenfields and undeveloped countryside. While it is true to say that motorisation raised the level of freedom and mobility for all, a high price has been paid in terms of both environment and minorities' lifestyles.

The City of Toyama, a mid-sized city in Japan, has succeeded to shift from a car dependent city into a transit-oriented, environment-friendly city. Presently the city, one of the 6 the Eco-Model Cities by the government, plays a leading role of the environmental conscious city planning. Innovative policies such as renewal of public transit into new model of Light Rail Transit (LRT), subsidy for development along public transit stations, and revitalization of CBD with introduction of new public transit/community rental cycle/construction of new facilities.

This study analyses the city's success in terms of modern urban planning paradigms such as Transit Oriented Development (TOD) and multi-core development. This paper first explains the outline of the City. Then it introduces policies of Toyama related to GHG emissions from the transport sector. Finally it calibrates environmental impact of the city's attempt by GHG emissions reduction and NOx reduction. For mid-sized cities, this case is one of the most successful examples of land use planning and development of public transit, which could avoid the degradation of CBD and environmental condition. In addition, the case potentially has a high relevance for developing countries.

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1. Introduction

The capital of Toyama prefecture, Toyama city, has a population of about 420,000, making it a mid-sized city in Japan. The city is located on the coast of the Sea of Japan in the middle of Honshū island, about 200 km north of the city of Nagoya and 300 km northwest of Tokyo. The city was once prospered as the castle town by several feudal shoguns. The city's major industry is manufacturing using their ample water resources and medicine from the long tradition of medieval era.

For a few decades, the city has suffered from problematic aspects of the population structure that the cities remote from major megalopolis area of Japan could have. The population has been declining, and it is estimated that in 2045, 23% of population will be decreased compared to the 2010 level. Young population and labour population are to be decreased, while the old will increase up to 30 % of the total population in 2020.

Toyama prefecture also has its own problems which make the city to suffer from excessive sprawl. The prefecture is flatter than the other ones and has the 2nd most inhabitable areas among all prefectures. The prefecture's road preparation rate is the highest than the others. People in Toyama prefer to purchase their own houses (No.2 rate in housing owners in 2008) and one of the highest income per household in Japan (No.4 in net income in 2009). Also, the land prices in the suburb areas are much lower than in the city centre, so the prices of collective housing in the city centre are relatively expensive than single detached houses in the suburbs.

Presently the city has the lowest densities of all prefectural capitals (40.3 person/ha in 2011), second highest car ownership rate in Japan (1.72 cars/household in 2010). These has resulted in many administrative problems. First, citizens without cars were exposed to many inconveniences in mobility. Second, greenfield development in suburban areas and weakening of the Central Business District (CBD) reduced the attractiveness of the city as a whole. Third, sprawl due to motorisation increased the cost of infrastructure expansion and administrative services.

In the 2000s, the city tried to solve these issues through urban planning and transportation planning policies. The city’s attempts in these efforts are well-known among policymakers and researchers, but yet it does not have quantified their impact over global environmental challenges. This report reanalyses the city’s success in terms of modern urban planning paradigms such as Transit Oriented Development (TOD) and multi-core development and calibrates the actual effects in GHG emissions reduction.

2. Policies of Toyama

2.1 Tables and Figures

The city of Toyama has engaged in the following policies for urban renewal since the beginning of the 2000s:

1) Public transit promotion via introduction of LRT and subsidies for city buses;

2) Multi-core development with Transit-Oriented Development to accumulate residential and commercial businesses and cultural services in CBD area;

2.2 Public transit promotion by introducing LRT

This public transit planning was primarily intended for the short term. During mid-2000, when the city was involved with designing a new master plan, city officials realised that they needed to consider the declining population. One of the chief aims was to reconstruct the abandoned streetcar lines within the CBD and remodel poorly operated Japan Railway (JR) lines. These policies were soon realised in the late 2000s owing to the strong political will of the present City Mayor, Masashi Mori, who serves for the city since 2002.

The Toyama Lightrail, Portram is basically a renovation of the old JR Toyamako line originally opened in 1924. During and after WWII, this 8 km line ran from JR Toyama station to Toyama Port along the Tomiiwa Canal, a key transport route for cargo from the port. However, it had become ill-favoured due to its age, poorly-maintained cars, infrequent service, and lack of sufficient stops. In 2006, it was re-introduced as the nation's first modern Light Rail Transit System with fully air-conditioned, low-floor cars. It now serves 13 stations, four more stations than before, and cars run every 15 minutes from 5 am to 11 pm, an increase in the frequency and service hours of operation. These are the typical measures to increase ridership in fixed rail transit projects.

Table 1. Outline of the Toyama light rail (Portram)

Opening	2006.4.29
Length	7.6km
Stations	13 stations
Cars	7 cars
Duration	25 minutes

Figure 1 shows the stylish and futuristic cars of Toyama Portram. The system technique is imported from Germany Adtranz (ABB Daimler Benz Transportation, now merged to Bombardier Transportation) and it is the first fully

modern LRT system in Japan. The stations and cars are all equipped for handicapped people. Passengers need to purchase their own IC cards when boarding. The rail is earthquake proof and some tracks are planted with lawn. The LRT is full of new attempts that the present public transit systems can get.

Figure 1: Toyama Light Rail
Left - Modern, stylish design of the remodelled line, Middle - Lawn planted tracks, Right - Barrier-free floor, accessible for the aged and physically challenged. Note: Pictures taken by the author

Simultaneously, the city has tried the pilot study for transport on JR Takayama-Honsen. The study was held using a national subsidy for community planning (Machidukuri-kofukin) and attempted to work on transit oriented development in the areas of regional train, from 2006 to 2008, and, from 2008 to 2011, by increasing the frequency and making a new station to decrease the distance among stations. It also set "park and ride" policies and the city provided the free parking lots near these designated stations.

2.2 Multi-core development with TOD

Multi-core development with transit oriented development was to accumulate the residential commercial businesses and cultural services in CBD area. This policy is aimed to be achieved through theories on compact cities. Specifically, the theory employed was “dumplings-connected-by-skewers,” or connecting the cities (dumplings) with skewers (transport lines). Figure 2 shows a comparison of a conventional compact city and Toyama example to show the contrast in future development. Moreover, the compact city attempts also include the meaning of infill development in that it targeted to create a lively CBD area.

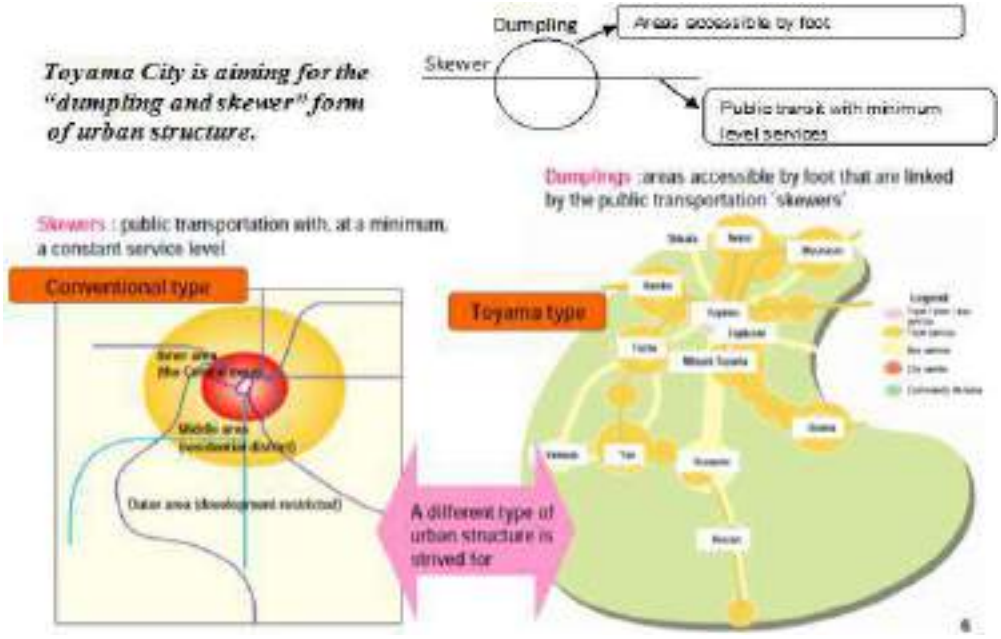

Figure 2: Toyama Multi-core Compact City Development Source: Made from Mori 2011.

3. Analysis

3.1 Changes made by the policies

The public transit renewal in Toyama has offered choice to its citizens in regard to mobility. The LRT conversion of the Toyamako-line has also shown an increase in ridership. It also tried the pilot study of the present JR lines, which represents a feasible option in terms of the total cost.

Table 1 illustrates the difference in number of users before and after the line remodelling. The city measured the ridership of LRT, both before and after the making of LRT line. Before the construction, the daily ridership of the LRT was about 2,200 in weekdays and 1,000 in holidays. After the LRT construction, each ridership became more than doubled and five times higher, around 5,000 for weekdays and 5,500 for holidays.

Table 2. LRT impact on ridership (Unit: persons)

	Before (2005 10)	After (2006 10)	Changes	Increase
Weekday daily average	2,226	4,988	224%	2,762
Holiday daily average	1,045	5,576	533%	4,531
Annual Weekdays (261 days)	580,986	1,301,868	--	720,882
Annual holidays (104 days)	108,680	579,904	--	471,224

Source: City of Toyama 2006

Figure 3 shows the LRT users previous modes measured from the questionnaire survey. Though half of the people are the former users of the same line before the renovation, the significant change can be seen that 11.5 % of people switch from driving their own cars.

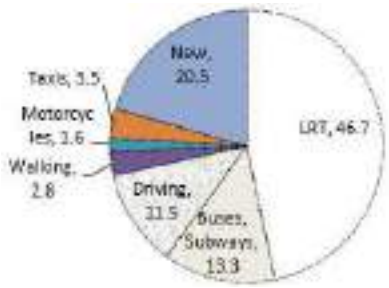

Figure 3. Modal shifts: Previous modes which transit users use (2006)

Note: Made from Mori 2011

Based on Figure 2, Table 3 calculates the estimated modal shifts of the riders in the year 2006. Though most of the users are former line users (556, 714 persons), 137,092 persons who drive, which are the most GHG emitting, switched to use LRT.

Table 3. Arrival of Toyama Portram and Mode Change of People (Unit: persons)

Switching from:	Percentage	Weekdays	Holidays	Total
Rail (former line)	46.7	336,652	220,062	556,714
Buses	13.3	95,877	62,673	158,550
Driving	11.5	82,901	54,191	137,092
Walking	2.8	20,185	13,194	33,379
Motorcycles	1.6	11,534	7,540	19,074
Taxis	3.5	25,231	16,493	41,724
New Users	20.6	148,502	97,072	245,574

	100.0	720,882	471,224	1,192,106

Source: City of Toyama 2006

Similarly, the city used a national subsidy for community planning (Machidukuri-kofukin) and attempted to work on transit oriented development in the areas of regional train in 2006 and 2008 by increasing the frequency by 42 % and making a new station to decrease the distance among stations. It also set "park and ride" policies in 5 stations, where the city provided the free parking lots near the designated stations.

Table 4. Outline of the Takayama Honsen (TH) line Pilot Project -City region

Opening	2008.3.15-2011.3.11
Length	36.6km (total 225.8 km)
Stations	10 stations
Cars	7 cars
Duration	51 minutes (Express: 36 minutes)

Source: City of Toyama 2006

Table 5 shows the change of the ridership in TH line before and after the pilot study. The increase of the ridership shows 113.5% increase, from 890,000 to 1,011,000. The increase is about 12 thousand.

Table 5. TH line impact on ridership (Unit: persons)

	Before LRT	After LRT	Changes	Increase
Daily average	2,440	2,770	113.5%	330
Annual average	890,475	1,011,000	113.5%	120,525

Source: City of Toyama 2006

Table 6. Innovation of TH line and Mode Change of People (Unit: persons)

Switching from:	Percentage	Holidays & Weekdays
Rail (former line)	46.7	472,160
Buses	13.3	134,470
Driving	11.5	116,271
Walking	2.8	28,309
Motorcycles	1.6	16,177
Taxis	3.5	35,387
New Users	20.6	208,276
	100.0	1,011,050

Source: City of Toyama 2006

The city also experienced the changes of new housing development in the TOD area. The area where the transit stations exist had much higher new housing development during 2004-2009. Several studies show that neighborhoods in TOD clearly emit less GHGs from the transport sector (Winkelman 2000, Belzer and Autle 2002, Sotone et al 2007). Though the calculation for GHG emissions reductions needs more data, this certainly shows one aspects of the success of the land use policies in Toyama.

Table 7. New Housing Development in Toyama City

	2004	2009	Changes
TOD area	90	119	132%
Old City Area	2238	1455	65%

3.2 GHG Emissions Reduction

3.2.1 Toyama Portram

Previously the estimate of the people switched from cars to LRT was shown. Here the Person Trip Survey for the Toyama -Takaoka Regional Urban Area conducted in 1999 is used as the newest available person trip survey of this region. According to the survey, car users use cars average 22.4 minutes a day and average speed of car trips in this area (Hokuriku region) is calibrated as 33.5 km/h (2009). Using the calculation of MOE and MLIT, the emissions from a car per km are calibrated as 0.175kg-CO2/person-km. Also, GHG emissions from person who uses a fixed rail is calculated through GHG emissions per one car (0.574kg-CO2/car) divided by average number of passengers in one car. As there are 7 cars and 128 runs run in weekdays and 124 runs in holidays (Toyama Portram homepage 2012), weighted average passengers per car is:

Weighted average passengers per

$= 2{,}770 / (128 \times 5 + 124 \times 2)/7$ -- (1)

$= 5.80$ (person/ car)

Therefore GHG emissions per person who takes LRT is:

GHG emissions from people who take LRT

$= 0.574/ 5.80 = 0.0988$-CO2/person-km -- (2)

In this calibration, we estimate people do not share the ride and only pursue drive-alone. The calculation used the most recent population from notional census in 2005.

Annual CO_2 reduction by transport planning in Toyama city

= (0.175 -0.099) (kg-CO2/ km)×22.4/60 (hr) × 33.5 (km/hr) ×137,092(People) -- (3)

= 0.76 kg × 0.373 (hr) × 33.5 ×137,092

= 130,190.5 (kg-CO2/year)

= 130.2 (t-CO2/year)

According to Ministry of Environment, NOx emissions for a vehicle per km is 0.22 g/vehicle km. The LRT emits about 1/3 of the emissions and if its divided by the average number of passengers, it could be ignored as it is out of the range of significant figures.

Annual NOx reduction by transport planning in Toyama city

=(0.0022kg – 0) (kg-NOx/km) × 22.4 (hr)/ 60 × 33.5 km/hr ×137,092 --- (4)

= 3768.67 (kg-NOx/year)
= 3.77 (t- NOx /year)

3.2.2 Takayama Honsen

Previously the estimate of the people switched from cars to LRT was shown. The LRT is confined to the CBD area of Toyama, which occupies 43ha, about 0.3 % of the city. The study expands its scope to regional train. Car users use cars average 26.4 minutes a day and average speed of car trips in this area (Hokuriku region) is calibrated as 33.5 km/h (2009). Using the calculation of MOE and MLIT, the emissions from a car per km are calibrated as 0.175kg-CO2/person-km. Also, GHG emissions from person who uses a fixed rail is calculated through GHG emissions per one car (and the approximate number of people in one car (0.574kg-CO2/car). As there are 4 cars and 106 runs in weekdays and 49 runs in holidays (Toyama Portram homepage 2012). Weighted average passengers per car is:

Weighted average passengers per car

= (4988 × 5 + 5576 × 2) / (106× 5 × 4 + 49 × 2 × 4) --- (5)

= 21.83 (person/ car)

Therefore, GHG emissions from the people who take TH line is:

GHG emissions from the people who take TH line

= 0.574/ 21.83

= 0.026-CO2/person-km

In this calibration, we estimate people do not share the ride and only pursue drive-alone. The calculation used the most recent population from notional census in 2005.

Annual CO_2 reduction by LTR modal shift in Toyama city

= (0.175 -0.026) kg-CO2/ km× 22.4/60 (hr) × 33.5 (km/hr) ×116,271(People) -- (5)

= 0.149 kg × 0.373 (hr) × 33.5 ×116,271 (People)

= 216,476.78 (kg-CO2/year)

= 216.48 (t-CO2/year)

According to Ministry of Environment, NOx emissions for a vehicle per km is 0.22 g/vehicle km. The LRT emits about 1/3 of the emissions. 3×10^{-6} and this could be ignored as it is out of the range of significant figures.

Annual NOx reduction by transport planning in Toyama city

= 0.0022kg (kg-NOx/km) × 22.4 (hr)/ 60 × 33.5 km/hr ×116,271 (People) ---(6)

=0.0022 kg × 0.373 (hr) × 33.5 ×116,271

= 3196.30 (kg- NOx /year)
= 3.20 (t- NOx /year)

3.2.3 Summary

Total emissions reduction by the policies is 346.67t-CO2/year in GHG and 6.97 t-NOx/year in NOx. The reduction undoubtedly benefits the global environmental challenges. In addition, considering the people who decide to choose to live in CBD instead of suburbs, GHG emissions reductions will be additional. The policies of Toyama certainly contribute to mitigate GHG and local air pollution.

4. Other Policies

Previous section has shown the core policies of the city, light rail and compact city, and Toyama also came up with supporting policies for variation in modal choices and CBD's attractions. Toyama's Cyclocity is a service by which one can rent a bicycle in the inner-city area and return it at any of the 15 stations scattered around the CBD. This service first became available in March 2010, and over the subsequent five months, the service was used around 24,000 times and registered 850 people as members (as of October 2010).

Cyclocity uses the same system as the Paris Velib system, in which those intending to rent a bike first register online and then use an IC card or enter a registration number at their desired station. Registered users pay 700 yen a month as a membership fee and rental is free for the first 30 minutes, 200 yen for the following 30 minutes, then 500 yen per 30 minutes thereafter. The pricing reflects that the organiser of the system expects people to use bikes for short rides over short periods of time.

The system is useful for supporting the compact city idea as it supplements the public transit system and gives the residents more choices for modes of transportation. City officials have commented that this system was being widely used in less than a year from its introduction, which is a very short period of time. The reasons why introduction of Cyclocity was a strong political will by the City Mayor Mori, 100 % covered initial cost subsidy by MOEJ, the relatively wide roads in the inner city area of Toyama, and the mutual understanding of the city's compact city initiative within city hall departments, such as the police department, which is in charge of roads' usage and safety.

Figure 2. The Cyclocity System in the Centre of Toyama
Note: Left - A Cyclocity station in front of Toyama castle. Middle - Users pass their registration card over the IC reactive port next to a bicycle when renting. This is exactly same system as Velib in Paris. Bicycles are also imported from France. Right - One of Cyclocity's stations at night; all stations operate 24 hours.

5. Challenges

There are three major challenges that the City of Toyama faced: the financial burden, the coordination between the prefectural and national government, and the cooperation between local businesses and citizens.

LRT (Light Rail Transit) system is the city's biggest investment. Generally, in Japan, except for the biggest cities like Tokyo, Osaka, and their adjacent cities, it is difficult to make a profit with fixed-rail systems. Governments mostly invest in construction and maintenance of fixed rail networks. The profitability of the lines in mid-sized or smaller cities depends heavily on the reduction of operation costs. For the case of Toyama, the initial cost of its light rail transit system was subsidised considerably, as was its maintenance. In terms of actual operations, it is realising a profit and the positive externalities to urban planning and mobility benefits for citizens are significant. Therefore in Toyama as well, the total cost and benefit is not profitable. However, considering the negative externalities of using single occupant vehicles causing to both local and global environment, the investment in this LRT is commendable.

Coordination between the prefectural and national government, the prefectural government and the city government is actively facilitated partly because these entities are situated next to each other in front of Toyama Castle. This geographic proximity that has led to the strong partnership in creating Toyama's compact city. Initial investment for the Toyamako line from the prefectural government amounted to 16% and that from the city government was 33%. The national government also subsidised the line significantly as it is considered a project of MLIT. The Ministry has had a policy of subsidising the introduction of LRT systems since early 2000s. The partnerships here and the resultant outcomes of their combined efforts demonstrate that it is essential to be on good terms with other governmental bodies in making drastic changes in urban planning.

With regards to cooperation between local businesses and citizens, the city has realised successful partnerships between the private sector and its citizens. Because all Toyama's private transport businesses operate under one big company, Toyama Regional Railway, which is in charge of both fixed rail and buses (except for those belonging to JR), obtaining a consensus for use of public transit system was easier than in other cities. Furthermore, many local business owners wanted to invest in public-private joint venture companies in the operation of the LRT. In addition, nearly 80% of citizens stated that they are highly satisfied

with the new LRT lines . Thus the compact city initiatives and LRT development have been favourably welcomed by both local businesses and citizens alike.

6. Conclusions

The city of Toyama provides a good example to fast growing cities in the Asia-Pacific region as the city is promoting multi-core development, which is a useful concept for cities undergoing rapid growth. As it could reduce both GHG and NOx, it is a good policy measure for co-benefit of GHG mitigation in urban areas. The overall messages for mid-sized cities are the following: 1) Importance of multi-stakeholder initiatives, 2) Importance of a top down political will, and 3) Leapfrog in the development of a multi-core compact city;

First, the importance of multi-stakeholder initiatives reinforces the importance of building partnerships among the different levels of government, private sector, and citizens in urban planning policies. Aomori compact city was a stereotypical representation of Japanese government-led regional development projects prominent in the past: excessive investment in building and infrastructure and little interest in conceptual framework and management to run the new investment (Kono 2011). Toyama has created an original plan by creating many partnerships among stakeholders, such as railway companies, small business owners, and through a constant dialogue with the citizens.

Second, a top-down political will is important to pursue the big projects like Toyama. Toyama has been headed by Mayor Masashi Mori since 2002, who has a strong aim to make the city attractive and sustainable. His sense of crisis was blossomed as changing the city into Transit Oriented Development and the city official and citizens well cooperated to his idea. In a way, he is like a former Curitiba mayor, Jaime Lerner or Bogota mayor Enrique Peñalosa, who were succeeded to make both cities transit oriented development in a short period.

Lastly, considering leapfrogging to a multi-core compact city, it is important to plan ahead to determine smaller city boundaries. City officials say that even cities that are currently experiencing rapid urban expansion like China, it is important to work on the compact city idea. After all, it is very hard to compress a city once it has broadened. Especially in this age of scarce energy sources and global warming, cities should not just expand—they should leapfrog toward a multi-core compact, transit-oriented style city depicted by Toyama.

Acknowledgement:
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An Evaluation of Planning and Organization Process of Sporting Event: The Case of Formula 1 in Istanbul

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1. Introduction

From rational planning to collaborative planning, it has been well known that planning involves complexity through the negotiatons among different actors. Harvey (1989) has defined the occurring paradigm shift in urban policies as the "transformation from managerialism to entrepreneurialism"; using the term "governance" instead of "government", emphasizing that the authority to organize space is in the hands of a fragmental power involving many actors.

On the other hand, cities have been changing with the winds of globalization, transforming economic structure from production to more consumption based economy. This economic structure which the private sector has raised inside, the open market dynamics and re-distribution mechanisms have been modified only for certain classes, has become more dominant. Therefore, real estate, construction sector, cultural industries and organizing events have become rising sectors within the cities.

Especially in the 1990s, international events have increasingly become a new tool for attracting visitors, bringing revenue for the cities and enhancing their competitiveness, while Amin (2007) and Urry (2002) called this process as "selling places for pleasure". There are variety of reasons why cities may wish to host these

events, the most compelling being the promise of a vast economic windfall forecast by economical impact studies (Burns and Mules, 1986; Hiller, 1998). Given these forecasts, an increasing number of developing economies have joined the bidding frenzy, insisting on their right to receive a share of the monetary spoils and hopefully kick-start their development. Discussions generally focus on three main points: the organization and financing, the effects, particularly the economic effects and the legacy and sustainability of the events. Not only the direct economic impacts through the visitors spendings, but the secondary economic impacts have also be the research interests (Gratton et.al, 2001; Roche, 2000). Generally the events have been used as urban regeneration tools, while the changing land use pattern and increasing land values have become a significant agenda for the urban studies.

Nowadays, many of the entrepreneurial cities desire to implement the urban development policy by establishing public-private partnerships and these partnerships have been seen as products of the new economic and political understanding (Evans, 2005; Smith, 2007). Mega events are always encouraged by the business elite or implemented by carefully mobilizing their support. Political actors have been a part of this elite coalition because public funds and subsidies of governments are inevitably needed for the implementation of mega events. In fact, the decision to host a mega event is the consensus of the bureaucratic elite, who have been chosen officially, and the government. This decision has become a part of the grassroots democratic decision-making process. The organizers, developers and sponsors assume that the events are absolutely successful; either there are none or very few, negligible negative effects (Hiller, 1998; Bodwin et.al.2002). The lack of transparency in the process continues to be dominant in the implementing organizations (Horne and Manzenreiter, 2006).

Mega events require the mobilization of public resources, which is a reflection of political decisions but not a public consensus, due to the large financial burden that they have caused. Generally, public spendings on these events have been legalized, emphasizing the long-term gains; urban infrastructure and renewal projects, the

increase of international recognition and tourist visits (Hall, 1992; Andranovich et al., 2001) (Figure 1). There is a high cost for maintenance and the truth is that it is now very difficult for a sports facility to be financially viable without some degree of public subsidy (Aman et.al, 2009; Horne and Manzenreiter, 2006).

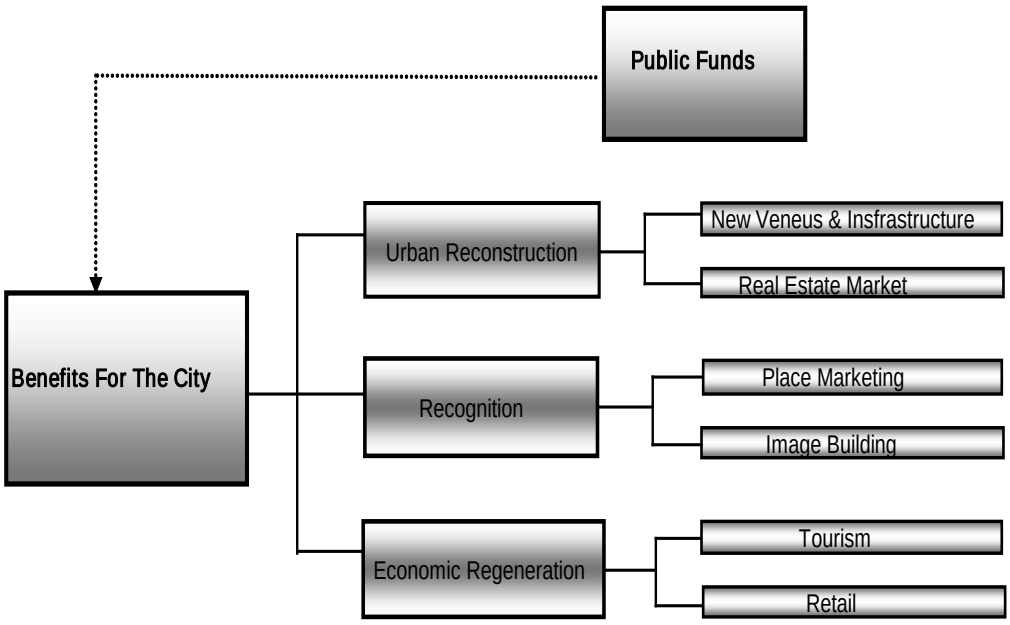

Figure 1: Public Funding and Expected Benefits of Mega Events

The aim of this paper is to examine the hosting process of Formula 1 as a sporting event in Istanbul. However, after the year 2011 Formula 1 events will no longer take place in Istanbul due to the lack of audience and very high costs, and it contains important lessons for Istanbul. Therefore, the paper tries to put forward the issues of Formula 1 event in Istanbul, considering the planning and organization process, rather than expected economic impacts. Planning process would include the selection of "Tuzla Akfırat region" as the location of the event and functional changes, while the organization process includes the actors that involved in the formation process of Istanbul Park, along with the funding structure.

2. Location Decision and Planning Process of Formula 1 Istanbul Park

Location choice for an international event within the city would be considered with the requirements of event and the priorities of the city itself. Furthermore, the location decision of the event mostly defines the benefits of the event. While the venue and public infrastructure should be constructed in a location within the city to provide maximum benefits for urban redevelopment, the location decision would guarantee that there would not be a problem neither at the neighborhood of the event, nor the other parts of the city. If the location of event would require transportation infrastructure such as a new airport, highway or subway, not only it creates high public spendings, but the land use pattern and the land values are influenced by the events as well (Darcy, 2006).

Before evaluating the location decision and planning process of Formula 1 Istanbul Park, we summarize the story of interest for Formula 1 in Turkey. The live broadcasts of the races on Cine-5 in 1995 and subsequently on NTV in the 2000s with the enterprise of some individuals have raised an interest for F1 in Turkey (Okumuş, 2008). At this point, sympathy of the society for the "red colored car", even if not for F1, played an important role (Özener, 2009).

Turkey's Formula 1 adventure started not with the rising expectation from society, but with the enterprise of some business elites in the 2000s. With the support of the government, the municipality and the professional organizations like the Istanbul Chamber of Commerce, the snowflake turned into an avalanche (snowball effect) and the residents of Istanbul suddenly found the race in their homes (Okumuş, 2008).

Matters escalated after Bernie Ecclestone, president and legal owner of the Formula One Administration (FOA) procured a boat in Tuzla, Istanbul met with the president of the Turkish Automobile Federation (TOSFED), a member of the World Motorsports Council. The beginning of the 2000 was the time when Ecclestone

started meeting with potential entrepreneurs from all over the world, making comments about organizing GPs in countries other than in Europe and the Far East. In the 2000, as Formula 1 prepared for new racetracks, Turkey, Beirut, Russia, Saudi Arabia, China and Dubai were mentioned in the GP options that the FOA had approved.

On Champions' Night, organized by the Turkish Automobile Federation and Motorsports Federation (TOMSFED) in January 2002, it was announced by the president that they had received a letter of approval from the F1 boss. This occasion pulled the trigger, now it was time to choose the city and with the support of the central administration, officially start the F1 adventure of Turkey.

It was announced to the public by the Formula Association members that a Formula 1 event is a prestigious tourism opportunity that should not be missed. Three big cities (Istanbul, Antalya and Izmir), that were willing to get a share from this promising pie of economical income and the tourism potential, were put into a nine month long race. The chosen city was Istanbul, as the site selection for the Formula 1 races in Istanbul took much less time - in one month compared to the city selection. The chair of National Olimpic Comittee suggested that the land surronding Olimpic Stadium within the European side of Istanbul would be the most suitable location since it would decrease the infrastructure cost with its existing one. However, it was reported that the location decision was made by Bernie Ecclestone and preparations started for the construction of the race track in Akfırat, Tepeören at the Asian ring of Istanbul. Therefore, the location of event is expected to stimulate new development within the periphery of metropolitan area by asking high cost infrastructure.

The Istanbul Chamber of Commerce (ITO) was the candidate to realize the Formula 1 project, the chosen land was the one that the ITO rented from the Prime Ministry Directorate General of Foundations in order to construct a university. This location was contradictory to the master plan of the city; it was also a foundation forest that was within the limit of a long-distance conservation area for water reservouir basin (Figure 2).

With the Formula 1 race track selected at the Akfırat, Tepeören locality, rumors of foul play took place in the media. Some said "*the good luck bird landed on the region*" (URL-1), some said "*The champion of the Formula 1 has already been decided*" (Saymaz, 2003). The landowners, the sizes and quantity of these lands belonging to certain capital groups were announced in the media (Mercan and Gün, 2006). However, the decision of Istanbul Park is not the only stimulating effect for the region. While Akfırat was one of the neighborhood of Kartal municipality in 1978, it became an independent "belde" municipality. Although one of the neighboring municipalities (Kurtköy) has faced with the new housing development projects in 1985, Akfırat was a small and quite village in the perihery of Istanbul until 1998. Sabiha Gökçen Airport awaked the real estate investors in 2001. Later, Formula 1 as a flagship project has attracted the investment to Akfırat since 2003 (Figure 3). Formula highways combine airport and city center to Akfırat. Professionals agree that construction of highways is the main impetus for the transformation of Akfırat and increasing land values.

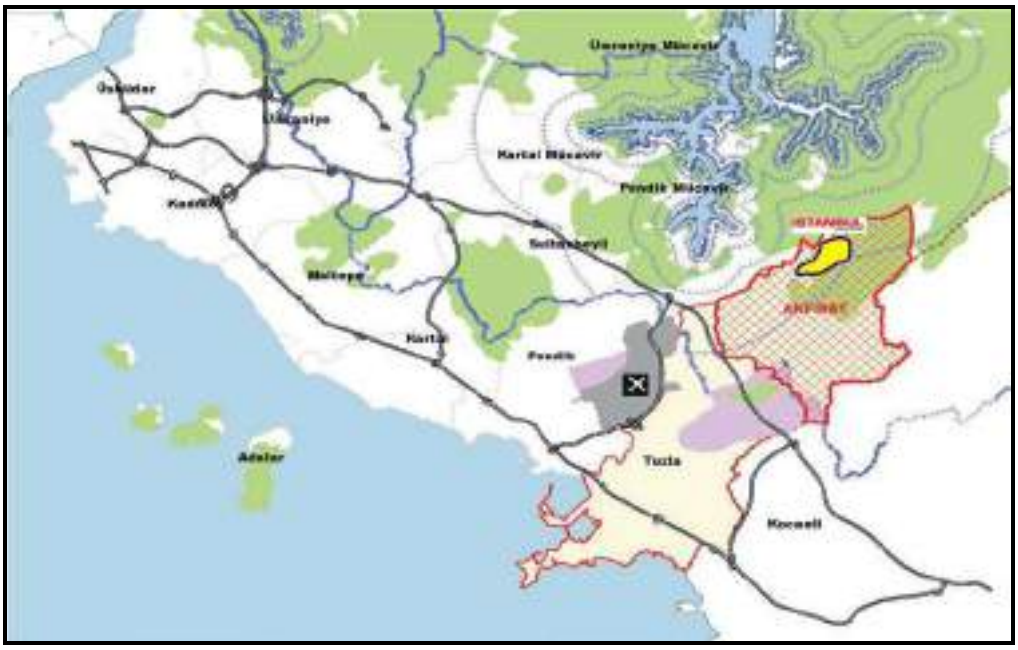

Figure 2: The location of Akfirat and Formula 1 Istanbul Park

During the location decision process, the toughest opposition was not the concern about the economical impact of the activity, but about the mistake made in location decision and the environmental risks it would bring. Eleven organizations such as the Chamber of City Planners objected to the land chosen for the construction of the race track. The president of ITO, however, considered this objection as a mass opposition and saw the Environmental Impact Assesment report as the largest obstacle to the Project.

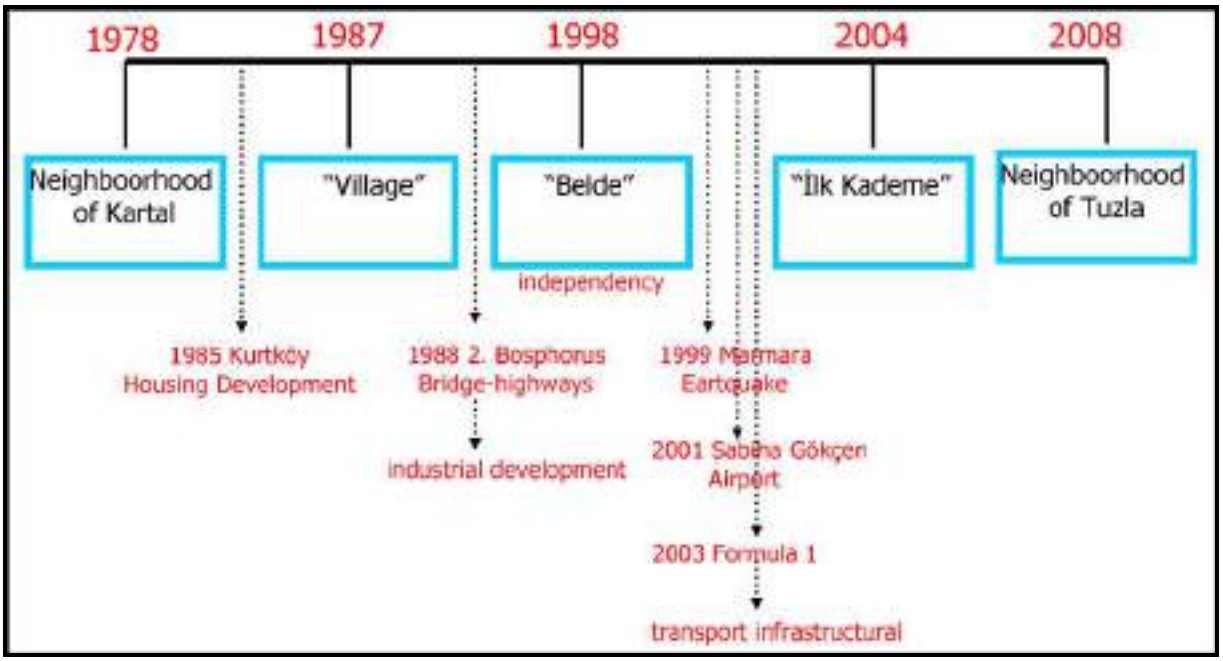

Figure 3: The stimulating factors for Akfırat during the 30 years (1978-2008)

Regardless of the objections to the site selection and the decisions of the upper scale plan, in the 09.09.2003 approval dated and 1/50,000 scaled plan change and with the 1/5000 and 1/1000 scaled master and development plans prepared according to this plan, Tuzla district, Akfırat area, the parcels considered for Formula 1 were removed from "Forest Area and Area for Forestation" legend and added to "Formula 1 Istanbul Automobile and Other Motor Vehicles Sport and Competition Area" (Figure 4).

Soon after, the construction of the Formula 1 race track commenced on September 10, 2003. According to the 2004/7214 ordinance, which was approved on April 28, 2004 by the Council of Ministers, "Formula 1 Istanbul Automobile and Other Motor Vehicles Sport and Competition Area" was announced as the "Tuzla Akfırat Tepeören Tourism Center". Thus, Istanbul Park was relieved from the on-going discussions about the site selection and the planning process, however the local and central government are both from the same political party. Therefore, the story of

Formula 1 indicates that it has been a top-down decision by ignoring the public interest.

Figure 4: Formula 1 race track within forest area

Source: Google Earth 6.2.1. 6012 (beta).2011.*İstanbul Park* 40°56'42.89"N, 29°23'42.89"W, elevation 125 M. Available through: <http://www.google.com/earth/index.html> [Accessed 18 February 2012]

3. The Organization and Financial Structure

FIYAŞ (Formula Istanbul Investment Inc.) was established in February 2003 to construct facilities, manage and organize sporting activities by the ITO (Istanbul Chamber of Commerce) and ITO Educational and Social Services Foundation with a capital of 10 trillion TL. Even though FIYAŞ had a wide mission regarding the sporting activities, the main purpose of its foundation was to become the investor of the Formula 1 race track of Turkey. The company guaranteed to pay 2, 000 dollars monthly for the first years for the 2250 acres of area that they had rented from the T.R. Prime Ministry Directorate General of Foundations. Starting from 2005, when

the first races were held, it would rise 2% per annum, 30, 000 dollars of monthly rent (Mercan, 2003).

According to the agreement, FIYAŞ could not undertake the management of the racetrack, therefore Motor Sports and Organizations (MSO) was established and took charge of the management. The company would make the promotion of Formula 1 and manage the income. (Url -2; Url - 3). On July 24, 2002, the government decided to pay 13.5 million dollars racing charge to the organization in order to support and undertook the guarantorship duty of the Formula 1 races and in August of 2003, a 7-year contract was signed with FOA.

As the cost of the Formula 1 circuit, Istanbul Park, rose drastically from 25 million dollars to 130 million dollars and there was a risk of completing the construction on time, with the intervention of the central administration, the Turkish Union of Chambers and Stock Market (TOBB), the Istanbul Metropolitan Municipality (IBB) and the Istanbul Provincial Administration were involved as partners to the Istanbul Chamber of Commerce (ITO), who started to undertake all of the costs. By 2009, 40.65% of the shares belonged to FIYAŞ, 39.92% to ITO, 0.73% to ITO Foundation, 3.66% to ISTON A.Ş. (IBB), 3.66% to ISFALT A.Ş. (IBB), 3.66% to KIPTAS (IBB), 7.69% to Istanbul Provincial Administration (İ.İ.Ö.İ)[1] (Figure 5).

Although staging different activities other than Formula 1, it did not create any profit from management in the first two years. Therefore, it was thought that Istanbul Park would be better managed by the private sector. The bidding for the management of Istanbul Park was held in June 2006. The only offer was made by the Turkish Travel Agencies Association (TÜRSAB). However, an agreement regarding the terms of management could not be reached with TÜRSAB. Soon after a proposal was made to Bernie Ecclestone, the president of Formula One Management (FOM) and the race track was rented in 2007. Istanbul Park Organization Inc. was established for the

[1] Interview with F. Gündoğan,14.07.2009.

management of Istanbul Park, with 100% participation of FOM. According to the agreement, Istanbul Park Organization Inc. would manage the Formula 1 circuit, Istanbul Park for fifteen years with an annual rent of 3 million dollars.

In January 2009, something unexpected happened; Bernie Ecclestone announced to the media that he wanted to resign from the management of the Istanbul Formula 1 race track. As a matter of fact, FOM president had never managed a race track before; his first management experience was Istanbul Park. After this statement, the ideas and concerns about the projects for rescuing Istanbul Park were begun to be intensely discussed in the media (Tek, 2009).

Since the Istanbul Park Race Track, was rented from TR Prime Ministry Directorate General of Foundations with a build-operate-transfer model for a period of 20 years; FIYAŞ has been paying 30,000 dollars as rent since 2005, on the other hand, receives 3 million dollars from Istanbul Park Organization Inc. as annual rent for management. FIYAŞ also receives 45,000 dollars annual rent from the GSM transmitters on the racetrack. With all of this rent income, it seems impossible for the Istanbul Park investment to interest FIYAŞ. When we asked about the expectations from the investment, FIYAŞ executive's response indicates how far the interest of the investment is: "*The return is impossible. We have made some calculations, indicated some foresights, but not much comes out of these. Considering that we have spent 200 million TL for the race track, it sums up to a 10% interest per year, we spend that money as rent. It means that we have to make 20 million TL annually in order to get an interest in 200 years*"[2].

Looking at the financial situation in context of the Istanbul Park Organization Inc., the chart does not seem promising. The only income that the Istanbul Park Organization Inc. gets from Formula 1 racing is provided through the revenue earned through ticket sales. All of the revenues from sponsorship and broadcasting rights are transferred to FOM. It seems impossible to level the income – expense ratio for the

[2] Interview with F. Gündoğan,14.07.2009.

events other than Formula 1 without the backing up of a strong sponsor to cover the expenses of the events[3].

The executive of the Formula 1 circuit, Istanbul Park indicates that the maintenance costs are also very high due to the size of the race track. It is also clear that there is no financial interest on the annual cost of the 13.5 million dollars that the Republic of Turkey Prime Ministry Promotion Fund pays to FOM. It was thought that the interest of this expense would be covered by the value-added tax expenditure of the 50,000 tourists who would come to Turkey for Formula 1. This calculation method is problematic considering the 2009 Istanbul Park Grand Prix tickets sold to the tourists were no more than 10.000. After all these, there has been an uncertainty about the future of the Formula 1 Grand Prix in Istanbul. After the year 2011, Formula 1 events will no longer take place in Istanbul due to the lack of audience and very high costs, while it contains important lessons for Istanbul.

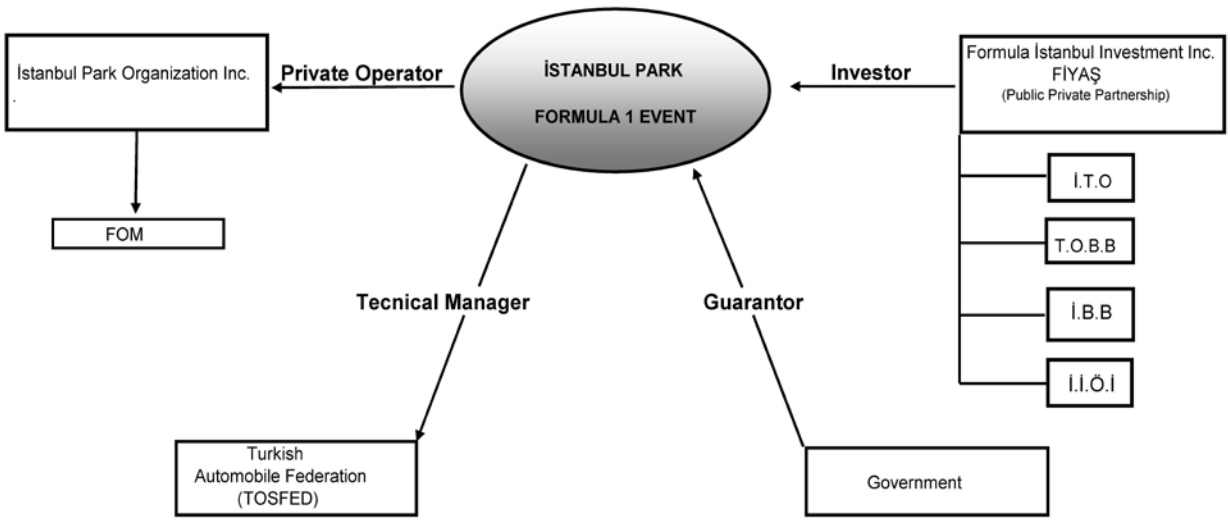

Figure 5: The organization scheme of Istanbul Park Formula 1 Event

[3] The interview with C. Güçlü, 13.07.2009.

The Bahrain Grand Prix is set to return to the Formula One calendar 2012, with the Turkish GP to be dropped. Simone Perillo, general secretary of the Formula One Teams Association, tells The Associated Press that Turkey did not make the cut while Bahrain will be held in November 2012.

4. Conclusion

Evaluating the main issues regarding the site selection and organization process of the event in Istanbul constitutes the aim of this paper. Istanbul Park Grand Prix was organized not by the public will, but a group of business elites who wanted to bring the Formula 1 event to Turkey, convincing the public will to be the stakeholder of the event.

A group of business elites' stimulating global scaled sports events, persuading central and local government to be the stakeholders, is a phenomenon seen not only in Turkey, it is a common feature of almost all global scaled events. The role of public in this case of Istanbul Park Grand Prix, could not go further than solving the problems that had been raised by the discourse of urgency; the plan had to be done urgently; the license had to be taken urgently; the facilities and infrastructures had to be constructed urgently. In fact, an adequate social consultation did not take place in all these discourses of urgency, the social opposition, which is related with the site selection of the event rather than event itself, has not been taken into consideration, besides, the opinion of "social opposition had been against development" was attempted to be imposed to public. Public opinion had not been informed that hosting such a high cost event actually carries "great risk". Public sector has failed to perform its most important role; proving the legitimacy of the event, defining and controlling the accountability tools, while it took the risk as well.

Furthermore, Istanbul Park as the stage of the event, was constructed in a "Forest Area" and a "Water Basin", without any environmental concern. It was built

physically larger than needed and this has caused the maintenance costs to skyrocket. Financially, the cost of Istanbul Park is huge, however the participation levels have not been achieved, turning out to be a lot lower than the capacity.

Contrary to widespread world examples, the Akfırat Region is not a rundown zone nor a region that had lost its reputation or needed the urgent development of infrastructural development. In the case of the Istanbul Park Grand Prix, the event and the infrastructure investments for the event have raised the pressure upon the region. Therefore, Formula 1 is one of the main stimulating factors of development within Akfırat by making the region "accessible", "well-known" and so-called "prestigious", while there is not any sustainability of the event anymore considering the high expectations.

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The Preliminary Study on the Design of Rural Public Space in Rapid Urbanization Sichuan, China: a Case in Zhaoyan Village

Abstract

Under the rapid urbanization process, the fluidity between urban and rural has increased; the traditional inward-looking lifestyle in rural China has collapsed gradually as well. Meanwhile, space structure has transformed dramatically, traditional public space has declined, and however, the modern public space hasn't turned up. Because of the misunderstanding of difference between urban and rural lifestyles, many rural planning copy the way that constructing urban public space, as a result, the space cannot coordinate with the need of rural daily life. How to create a public space that peasants really need is quite an important problem. In the rural planning project of Zhaoyan village, Dazhou, Sichuan Province, the design was focused on the two central public spaces at the second half of 2009. An overall investigation was done before and after the reform construction. In this paper, a design strategy of public space which is able to adapt the reality of contemporary rural China through the work that summarize and analyze the whole project data, combined with several related theories, such as sociology, architecture and urban planning. Exploring the strategy of rural public space design and suggest a further guidance related to the design practice: conclude the lifestyle of peasants; respect the exiting functional public space.

Keywords: Urbanization, rural lifestyle, public space, Zhaoyan village, design strategy

Under the arrangement of the tutor, the author was lucky enough to come into contact with the reconstruction project in Zhao Yan village in Da County, Si Chuan province in August, 2010. This extremely characteristic transformation project had been launched by the local government in Da County, whose purpose was to respond to the government's job evaluation on "the new rural construction" project through reconstructing key villages within the scope of the county. As the key demonstration village in Da County, Zhao Yan village situated on each sides of the Ting Fu road, which is the main path to Zhen Fushan, an important 4 A level scenic spot in the county. For various considerations, it has become the key area of this activity.

Zhao Yan village has formed a certain scale early in the Qing dynasty. It was

reported that a person in this village whose family name was Zhan had successfully made himself an assistant minister in the imperial court. Except him, there were many other prestigious families in this village as well. Even up to today, lots of old houses and tombstones in the Qing dynasty that are incompletely preserved can still be found. Nowadays, Zhao Yan village comes under the jurisdiction of the pavilion village and has been divided into nine communities. According to the official statistics, there is a total population of 1526 and there are 413 households in this village. This reconstruction project focuses on the fifth and the sixth community with 91 households and a total population of 406. Ranging to 7 meters and being built in 1997, Ting Fu road has been the main road in this village, which was first built to connect the pavilion town and Fu Shan village with its southern end pointing to the 4 A level scenic spot--- Zhen Fushun. The whole village covers 2340 mu of cultivated land, which is divided by residents in this village and situation differs in different communities: the first community (a mu of three points/per person), the second community (a mu of two points/per person), the third community (eight points/per person), the fourth community (a mu of four points/per person), the fifth community (seven points five/per person), the sixth community (seven points four /per person), the seventh community (six points five /per person), the eighth community (nine points /per person), the ninth community (nine points/per person). The industry structure of this village is based on agriculture and its main project is aquaculture and lotus planting, along with a small amount of single season rice and corns etc. In the time of midsummer, those large lotus ponds present the beautiful and breath-taking scenery, just like the famous Chinese poem goes “The green lotus leaves stretch to the sky”, which does leave a deep impression on the author. In addition, in the beginning of the design, the village has already had a sound infrastructure as well as a perfect system of water, electricity and gas, other facilities like public toilets and stores have existed in there, too. However, the village still lack of necessary garbage collection points and proper management to the street lights that have been damaged; meanwhile, villagers have no essential education and sports facilities as well as a public space for necessary gathering and festival celebrations. As to farming cartilages, most of the existing farming cartilages within the scope of the design were built along the street after 1997, among which, only 14 of them were built in the period between 1950 (land reform movement) and 1997, 11 of them were built before the land reform movement and 2 of them had a hundred year’s history. The architectural style of these cartilages is what is popular in the village now, that is, brick buildings covered with ceramic tiles outside, the only reason for that is because there is a modification in 2004 that houses with traditional structure are to be separated from others by the painting in the gables of the farming houses. Generally speaking, the living standard of the villagers in Zhao Yan village has been fully guaranteed, but the further social public life as well as the spiritual life are still deficient and need to be improved immediately.

This project only focuses on the major areas of the village due to the urgency of the design task. With the responsible attitude for government and humanistic care, the design team decides to choose the public space as the core of this design by taking the content of this project and problems caused by the phenomenon of rural hollowing into consideration. But here comes the problem: as a rural project, what kind of public space is more fit in with the requirements of the villagers? Should it be a square or a more casual public space? If it is a square, then is there any similarity between the design of the rural square and that of the cities'. At the same time, what should they do to reflect the rural characteristics? With all the concerns mentioned above, the design team puts their own understanding of the rural areas into the design of this project.

The idea of the design comes from two aspects: on the governmental level, in order to achieve the goal of the evaluation, the plan will focus on the design of several public spaces, hoping that they can form a visiting line along with other scenic spots so that the main achievement of the new rural construction project will be highlighted. While on the villagers' level, designers hope to explore the public spaces that belong to the rural areas as much as possible and to present the rural characteristics. From this perspective, in the overall planning, designers have selected two key sections: the square with the village committee sitting on it and the southern area of the village with the most intensive farming housing distribution. The reasons for site selection can be listed as follows: first, they all located on the side of the pavilion highway, on one hand, it is good for the construction and presentation of the landscape and caters to the demands of the superiors' visit and inspection; on the other hand, considering the factors of accessibility, sites that are convenient for villagers to come and go will be conductive to the use of the space and improve the significance of the space on the villagers. Besides, two pieces of main design area all own relatively open land, which can be transformed into appropriate public space and ensure that the idea of the designer, Party A's requirement and local people's needs will be satisfied at the same time. While in the design of these two pieces of land, the design team thinks that it would be better to treat the village square as the democratic rally square without huge modification for it has already existed in there, so only the walls around the square and its internal facilities will be transformed and more energy is going to be put on the other side of the village square. The selected land of the village square situated in the settlements on the roadside, which is about 45 meters wide, 65 meters deep and covers an area of 3000 square meters, shaping like the bow of a ship. This place used to be a farmland possessed by a farmer living nearby and it is chosen as the best place to put the square for its good location, its comprehensive landscape display as well as its accessibility and availability for public activities.

As to the specific design of the square, several questions must be taken into account: What will happen if squares, a public goods, appear in the villa where the

environment is quite different from that in the cities? What measures shall designers take to minimize the disadvantages brought about by this difference? What kind of squares are villagers' public squares? What shall be contained in these squares? How can designers make villagers feel a sense of belonging? These questions lead to the concept and the starting point of the design of the squares. In the designing process, designers take into account the particularity of the rural environment while purposefully lower the openness and liquidity of the public space. Meanwhile, they decrease the area of afforestation, the sole function of which is to add beauty to the squares. In choosing materials, simplicity and convenience are given top priority for the sake of construction difficulties and follow-up management. In designing their looks, traditional and modern elements are combined to satisfy the taste of rural residents.

Though rural areas experienced the impact of the globalization as well as the city, most of rural areas are still kept in a rather closed circumstance. The villagers under such a circumstance could hardly accept too much openness and mobility, so the designers design walls to separate the space. At the same time, the admiring attitude towards the city makes the villagers' judgment on city lingers on its features. In constructing the spatial distribution and shape, the designers adopt the modern construction technique to allocate the space. In the northeast of the square, there are footsteps leading to the farming houses. The architects design the opening shape into a visual focus of the background environment. Therefore, there appears landscape axis in the north of the square. At the end of the axis, there is a two story pavilion. In the northern part, the open land can be used for the main active region. In order to enlarge the active space, the virescence was designed behind the wall, in this way, it can beautify the environment and won't take too much space. A couple of chairs were paced at the edge of the active region for the villagers to relax. Deciduous trees whose color changes according to different seasons are planted for the villagers to escape heat in summer. To the designer himself, the understanding of rural areas comes from his childhood and elder generation's influence. The designer try to put this traditional and nature sense into his plan. The designer use the local material to design the modern building and retained the modern and traditional flavor of the building. In terms of the wall, the designer use the traditional garden method to simplify the structure, and the local way to modify the pictures on lattice windows. The peasant painting and publicity columns show the simple and unadorned features of the village. Finally, the villagers use the big stone water vat to separate the space and prevent the motor vehicles from going through, which also reveals the plain nature of the village.

However, there are several incidents happened during the implementation process of this plan. The farmer who lived directly opposite the square thought the wall of the square affects his house's geomantic omen, so he opposed the construction in front of his house. So the architect had to slightly modify the original

design. The walls designed to be the centre of the landscape were replaced by the heads of door and some tablets, in this way, the farmer's problem was solved and the local color of the building was retained. However when it comes to the pavilion, since the location of the pavilion was the farmer's pigpen, the pulling down of the pigpen would cause damage to the farmer's profit. Further more, how can a two story pavilion fit for a pigpen? Due to all kinds of reasons, the compensation for the farmer had not been made, so the farmer was against the plan. Moreover, another farmer's house has a long history, so the designer decided not to reconstruct it, which irritated the owner. She thought that the planners jut put on act, and didn't take the residents' need into consideration. Though the designer and the workers explained several times, she insisted on her own idea and result in the failure of the project.

These incidents made the team realize that the design of the rural public space is not easy. The popular city system may not fit well for the rural circumstance, due to the great discrepancy between the city and the rural area. However, numbers of city modal are being copied blindly, and it gradually becomes such a trend that the majority would follow.

The upsurge of new rural construction has begun since the Central Government put forward the slogan in 2005. It has been carried out for 6 to 7 years up to now. However there are few qualified projects we can see today. Here are several reasons for the phenomenon. From the perspective of local government, although the new rural construction was proposed by Central Government, it was the local government who carried it out. The investment of the projects in new rural construction does a less important promoting role in the development of local economy. So, local governments have not much interests in this kind of low return rate investment. In addition, local governments had some financial problems because of the tax system reform practiced in 1994. The implement of new rural construction made the problem worse. As a result, most of the local governments have no interest in it. While, since the Central Government had put forward it and determined to improve people's livelihood and the rural living standard. Therefore, the local governments can not ignore it. In order to make sure that the new rural construction runs well, the upper level governments have to take the job as one of the contents in the assessment of basic-level government work. Meanwhile, they sent government officers to check the projects in rural area untimely so that the policy can be made into practice. Spontaneously, many projects of new rural construction are finished in a short period just for the check from upper officers. So, it is unnecessary and impossible that designers play important roles during the whole process. Designers are just the instruments of governments to finish the projects. Inevitably, these kinds of projects are vulgar and bum.

From the side of designers, there are two kinds of attitudes, admixture and misunderstanding which led to the problems of new rural construction. Among the two attitudes, the former has a great majority people; fewer people make unfavorable

influence on new rural construction because of their misunderstanding. For the former attitude, as we have mentioned before, this kid of rural projects can not get the strong support from local government. So, a lot of problems happened in the process of design and construct. For instance, overload in blindfold, lack of money, and relaxed control in projects. The design companies that are well-organized and well-capitalized have no interest in the rural projects. On the one hand, it is hard for them to get a good economic and social reward from the rural projects. These large design companies have established their good fame and stable development model. They emphasize the output value and brand. Hence, the rural projects become their last choice. Even though sometimes they are forced to accept this kind of projects, they would not spend much energy in it. In older to survive, those new and small design companies accept the high risk and low reward rural projects without reluctance. They ignored the quality, brand, and tasty for collecting more money in the competitive market. Their main purpose is enlarging their company. Actually, the “fast food” model projects contribute a lot to the success of some of the new design companies. But these companies loose interest in rural projects as soon as they become strong. Not all the companies do as what I said, but the phenomenon has a great bat influence on new rural construction. After all, it is the rural villages that loose most in the end. For those companies that misunderstand the rural projects, it should be pointed out that it differs from the admixture in a great extent. We can see the differences from the real finished projects. Designers are not familiar with the rural situation and the distinction between cities and rural area. But they hurried to sole and improve the rural problems with their limited knowledge at the same time. As a result, the urbanized program produced in rural construction when the doctrinarism thought is taken into practice. This kind of situation always happened in the small design companies that are established not long and too weak to accept other lager projects. But different from those small design companies mentioned above, they are ambitious about architecture and society. They are also taking their credit and brand as important factors. Consequently, they are willing to spend more time in some small rural projects. However, they failed to finish their ideal designs because they are lack of knowledge and experience that can help them make a correct judgment about the rural situation. But, it is undeniable that their attitudes should be affirmed. Besides, these design companies mentioned above, some entities and individuals have participated in new rural construction. Because people who from cities have different interpretations and ideas on rural civilization and life. Many unsuitable designs appeared in rural program. These designs have no promoting effect on new rural construction. What’s worse sometimes, rural inside contradictions are intensified by the unsuitable designs.

Viewing the situation of current domestic new rural construction, most of the new rural construction can be classified into the category of being made crudely. Those that are outstanding and classical cases often trend to come from the

researchers who have a profound understanding and experience of social activities, from the relevant researchers in universities and some major research centers engaged in the study of all kinds of splendid architectures and city formulation. These researchers and institutions have good familiarity with rural areas, which can obtain sufficient funds through various channels and can be able to gain adequate time. Under the help of many comprehensive conditions, they have completed the project in their hands as expectedly. In addition, in this special area such as Wen chuan, thanks to the great attention central government paid, the excellent designs can achieve enough social returns, so all kinds of design companies just rushed to bid, and then they thought carefully, no wonder the excellent works were designed.

However, when we review the situation that the China's rural construction is facing, how can we expect to find out some carefully designed and suitable local public space? Let alone the protection and succession of rural culture. However these stereotyped and copied plans also can arise questions: why the urban formulation cannot be learned by rural areas.

The Chinese traditional society is a continental culture society featured as isolation. Rich resources, the vast plowland and the risk of invasion from abroad make Chinese traditional society form a economic model that is self-sufficient and inner self-recycled. In such a circulation system, on the one hand, the role of the countryside is a producer, which means that farmers meet the demands of farm produce and handicraft articles from the city through continuously hard-working yields; in return they obtain money and other high-class handicrafts that are necessary to daily life. On the other hand, the city mainly plays the role of consumers who accept the grain and handicrafts from rural areas, while consuming the citizens process these raw materials for a second time so as to make them become the high-class handicrafts and then put them into market for consuming. However, when the 19th century British people forced China to be open by the opium war since then the situation has changed, when the solitary self-circulated economy system was gradually broke down, industrialized business rapidly occupied the market in cities, the countryside started to be broke away from economic system.

Since then, the opposite relationship between China's cities and rural areas began to be formed gradually, also the economic gap between cities and rural areas began widening，rural areas were gradually being marginalized in economy and society, so it formed sharp contrast to the top developed cities under the influence of globalization. In such a background, more and younger rural labor forces left their home for a way into the city to change their conditions of life. Therewith rural hollow problem appears. At the same time, because the whole China's social was shocked fiercely by western culture, and excessive radical influence after the political movement of liberation, the traditional Chinese public society based on blood tie began to collapse, which was substituted by social relations based on the geopolitical relationship. Following is the constantly changes of ways of living and

producing and the disappearance of traditional Chinese rural culture. Many rural "family tree" disappear, the sharply reduce of the worship activities and neglect of traditional festival, all of these changes are the proof of this phenomenon.

The rural spatial settlement model began to change when the social changes are reflected on the space aspect. Traditional Chinese rural settlement model is organized on the basis of blood tie. The rural areas were distributed by surrounding the ancestral house beginning with the earliest settlers. In the process of construction, Fengshui would be taken into consideration and then formulate a certain space form (it is believed that Fengshui affects the family's destiny, fortune, prospect etc.), and at the same time, each family will have its own ancestral hall (ancestral hall may be located in ancestral house in a small family, in a big family the ancestral hall will be built separately), which is equivalent to a church and a court in the western town. And the public space in village is also distributed by setting the ancestral house or ancestral hall as center, which reflects the Chinese value and worship on family and blood relations. In some rich or large-scaled village, the public space was surrounded by independent drama stage, the performance would be showed on which when festivals, weddings and ancestor worship, which was considered as one of the events for family reunion. The events not only enrich the spiritual life of the residents but promote the relations among the families.

The changed rural settlement, its settlement organization form has drifted into geopolitical relations from blood relationship. Furthermore, rural economic stantard is quite low under the comparison between urban and rural, so the farm houses in village often gathered near the main traffic network, buildings always stand toward roads, which get rid of the traditional concept of fengshui (there are superstitions and dregs in the traditional concept of fengshui, but which makes great contribution as for the natural combination between the buildings and the environment), instead putting economy as the primary factor to consider. The village was no longer divided by the past family name, but was divided by the upper governmental administrative standard. At the same time, because of the weakening of blood relations, the originally existing ancestral temples that gradually disappeared turned to be the modern administrative office buildings and village committees. The current existing public space in villagers either regards village committees as center organization or can't provide the room for need of festival and villagers' daily life, under the conditions of which there is no point mentioning the cultural activities in rural areas.

Based on what we have discussed above, we can see the current situation of China's rural areas. Under the economic globalization, China's rural areas have been marginalized. And shocked by the western modern culture, these areas have lost their traditions, while the modern lifestyle has not been formed. What's more, villagers' spiritual life is humdrum., and their income is very low. With the above analysis, China's rural areas are always in a relatively closed circumstance and have not surpassed reginal limits markedly. Therefore, when designing public spaces in rural

areas, designers should take the following aspects into account.

1. The design should encourage and highlight the regionality and uniqueness of rural areas.

Designers should be encouraged to set stages, ancestral halls and other cultural or belief buildings so as to promote and regain villagers' cultural identity gradually. Meanwhile, designers should encourage villagers to construct public buildings in a traditional way. On the one hand, traditional crafts could be retained: on the other hand, we can save costs. In this process, architects and planners can participate in the design and promotion as technological guidance. Moreover, spatial patterns and building styles can make use of local features and some traditional elements, such as, dry pepper strings, corn strings, haystacks to add local colors and enhance villagers' identity to the traditional culture. At last, designers should excavate historical sites and make them become a visualized manifestation of rural characteristics.

2. The design should take rural economic and technological conditions into consideration.

In light of the disparity of the capital and constructive level between rural areas and cities, architects should suit measures to local conditions and use local materials as much as possible when they design and construct buildings. They should avoid using expensive materials and those that require much to constructive technology. Otherwise, the project will exceed the budget or some difficulties in construction will come out. Even if the project went well, economic burdens of rural areas would be increased and some big difficulties would happen in their later maintenance.

3. The current situation of rural areas, villagers' ideas and interests should be considered well in the design.

In the Chinese traditional society, land resources belonged to the private property. Because of the interpersonal relationship based on blood tie, however, as the old saying goes, "One should always keep all benefits for one's own people", villagers were willing to sacrifice some of their lands to construct public buildings in the past. But with the rapid development of the society, although public ownership of lands exists in rural areas, lands have been farmed out to villagers respectively. For the traditional interpersonal relationship has disappeared, villagers care more about their own interests. So, it will be difficult to build public spaces in rural areas. Though the government has planned compensation policies, villagers' lost lands and newly-built public spaces are practical problems designers need to solve. For this reason, designers should pay more attention to how to make rational use of land resources and meet villagers' needs.In addition, designers should not do any change to existing facilities in a village, unless they could be adjusted or reconstructed reasonably. When designing facilities in public spaces, designers also should try not to disturb villagers for fear of unnecessary contradiction.

As for the industry, the current "new rural construction" is overcorrect. No matter what a village is, big or small, near or far, poor or rich, it seems that a good

industrial planning is to hail the slogan of tourism. And those designs of public spaces carried out are always full of commercial and urbanized atmosphere. In fact, it is quite common for people in the city to see such designs, which can not show local features of rural areas at all. Furthermore, villagers' cultural identity and sense of belonging can not be satisfied through these designs. And building public spaces will consume lots of resources. So, these designs can not get villagers' approval. As a result, designers should focus on the relation between industries and spaces, and suit measures to local conditions, so that they can promote the rural culture and economy at the same time.

The current situation of China's rural areas is the result of China's national conditions. In general, rural circumstances are always in a relatively closed and static state. In light of the globalization, no fundamental changes would happen in China's rural areas as for its current state. Therefore, the design of public space in a village should focus on its status in the whole China or in the whole world. Besides, designers should analyze the space needed in the process of the construction rather than copy the design of the cities' or impose some notions for cities on rural areas. Only in this way can the designs of public spaces in China's rural areas reach a higher level and can we solve rural problems faster and better.

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Perspectives in Governance and Global South Urban Crises: The Case of Nairobi

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Abstract

Drastic changes in global urbanisation trends, coupled with political and socio-economic insufficiencies, have resulted in severe societal problems that necessitate new and innovative discourses, policies and practices, in spatial development and planning. Recent and past global, political-economic crises have significantly influenced Global North's spatial policies and practices, which in turn have also profoundly impacted the planning and policy agenda in the Global South. Using the case of Nairobi, Kenya as an example, this paper looks at the linkages between global crises, European policies and their impact on the Global South's urban policies and practices. Nairobi exemplifies many Global Southern cities that are currently experiencing rapid urbanisation coupled with increasing socio-spatial inequalities, urbanisation of poverty, environmental degradation and proliferation of slums. Attempts to deal with these urbanisation challenges has led to several policy and action initiatives, which however have failed to adequately deal with the challenges and in fact some of those initiatives have contributed significantly in worsening the situation.

Subsequently, since the 1950s, each decade has seen a paradigm shift in initiatives and approaches towards these urbanisation challenges. Currently there is the shift from government to governance which is taking root in urban planning institutions and practices. Indeed 'good urban governance' is increasingly being seen as a prerequisite for dealing with these complex urban challenges in the Global South. However, the urban arena in the Global South has become very complex and fragmented, involving heterogeneous actors at various scales, all with disparities in their powers, roles, interests and perspectives. Furthermore, these actors possibly have different paradigmatic positions which stand in the way of attaining common ground and effective cooperation. As a result, tackling these perpetual urban challenges of the Global South necessitates an appreciation of the actors' relations that could lead to an appropriate multi-level urban governance system, geared towards sustainable and inclusive urbanisation.

Consequently, this paper examines Nairobi's urban arena, focusing on the roles and perspectives of 'low income housing' actors, both formal and informal. Employing a multi-level-actor analysis and following an analytical framework from Giddens' structuration theory, its concepts of structure, modality, and interaction are explored.

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It examines the actors' different paradigmatic positions and interests that hinder attaining of mutual understanding and effective cooperation which is necessary for 'good urban governance'. Finally, with the aim of proposing alternatives for improvement, it points towards the search for appropriate innovative discourses, policies and practices; and effective ways of involving all the relevant stakeholders and actors, both weak and strong, towards dealing with the Global South's urban challenges.

Key Words: Urban housing crises, governance, actors, policies and practices

The need for new discourses and practices - the global urban arena

Globally, ongoing socio-economic, political and environmental changes are resulting in severe societal crises. These changes in addition to questioning existing models and discourses also raise new questions necessitating a better appreciation of contexts and development of appropriate discourses in spatial development and planning. Future and current urban planning must be more cognisant of past, present and future challenges such as globalization, climate change and environmental degradation, rapid urbanisation, immigration, global economic and financial crises, increasing poverty, marginalisation, and slum proliferation. Furthermore, there is need for planning to interact appropriately with challenges and opportunities afforded by increased awareness and the demand for democratized decision-making processes and socio-economic rights by ordinary people. Accordingly, with the ongoing shift from government to governance discourses, the urban planning arena is awash with many new planning approaches such as collaborative planning, strategic spatial planning, participatory urban appraisal and community action planning.

However, a closer look at the global urban arena reveals great disparities between theory and practice, normative and positive, as well as the desired and reality in terms of inclusiveness, effectiveness and responsiveness to societal needs. Besides, current policy and academic discourse continue to view Global South's urbanisation through a prism of "abnormality" or "exceptionalism", terming it "pathological" or "dysfunctional" due to rapid substantial structural population growth without commensurate poverty reduction which greatly contrasts the Global North's urbanisation experience (UN-Habitat, 2010). Moreover, economic growth in the Global South is not reducing informal settlements neither is it improving the lives of the majority of its residents; depicting a fundamental lack of political will to deal with the urban problems in a systematic way, which is compounded by failure in policies and initiatives. These policies and initiatives, usually driven by powerful interest groups, have often times failed to benefit the urban poor partly due to political structures that preserve the undesirable status quo. Additionally, rapid urbanisation has also been fuelled by non-traditional reasons for example populations escaping hunger and conflict. This could be due to failing agriculture due to not only natural environmental causes, but also due to global political-economic reasons. In addition, persistent regional and internal conflicts continue to generate refugees and internally displaced people. Thus spatially, despite many informal and formal links and networks, many urban areas in the Global South may be misconstrued as uncoordinated patchworks of informal settlements and gated communities, industrial zones and luxurious resorts, refugee camps and golf courses and many other fragments (Coy, 2006). In sum, all these complexities mentioned above, raise questions and demand answers that transcend conventional discourses, policies and practices. They point towards the need for deeper self-reflection and appreciation of the situation, in both global and local contexts.

This paper therefore attempts to discuss those complexities facing Global South's urban areas, which became more apparent since 1950s. Since that time, the world has

continued to experience very rapid urban growth, such that majority of the global population is now urban. What is more is that UN-Habitat (2010) projects that by 2050 over 70 percent of the global population will be urban, terming them *Homo sapiens urbanus.* However, this recent rapid growth is concentrated in the Global South, and is in fact happening through the growth of informal settlements, in that; many urban areas are growing at the same rate as informal settlements. For instance, in 2005, informal settlements in Sub-Saharan Africa were growing at 4.53 per cent compared to urban growth rate of 4.58 per cent per year. Moreover, in some countries such as Sudan, Central African Republic and Chad, the informal settlements accommodated around 90% of their urban population, and in total, one billion people, representing a third of the global urban population, currently reside in informal settlements (UN-Habitat, 2005 2010). Proliferation and persistence of informal settlements have been seen to represent societal failure or unwillingness to deal with problems besetting the poor members of society. Depending on the prism through which the problem is viewed, at different times in history and according to different actors, it has been described as a different form failure including: economic, policy, planning and market failure; failure to provide; failure to modernise; failure to benefit from or tame globalisation; and currently it is being viewed as failure in governance (Tosa, 2009; UN-Habitat, 2003, 2009b).

Indeed, since 1950s, each decade in the Global South has seen a different conception or a dominant paradigm on how to deal with informal settlements. It started with modernisation, progressing to the current governance paradigm with 'good urban governance' being seen as a panacea for dealing with these complex multifaceted Global South urban challenges. What is more, is the Global South informal settlements arena has experienced a proliferation of actors and stakeholders both international and local, formal and informal , state and non-state, all with different interests, resources, powers, perspectives and approaches. However, this scenario generates a number of questions for instance: why the various approaches have failed, why the paradigms shifted, who defines the dominant paradigm and whose paradigm it is. In briefly trying to look at these questions, this paper, also examines the possibility of different actors following different paradigms while at the same time purporting to be pursuing the current paradigm espoused by the prevailing powerful actor's interest at the particular time. This is explored Giddens' *Structuration Theory* following its concepts of structure, modality, and interaction; which demonstrate a "duality of structure" i.e. continual interaction and mutual constitution of 'structure and agency'. In this theory, modalities i.e. frames of reference, allocative and authoritative resources, and norms; provide linkages through which structures are generated and maintained in the flow of practices or interaction (Giddens, 1971, 1976, 1979, 1984). Therefore, could this be evident in the informal settlements' arena that is comprised of many actors with different frames of reference resulting in a multiplicity of social worlds, 'rationalities' and practices co-existing in the arena with complex power relations? Consequently, in an attempt to explore the above, the following section of this paper briefly presents the Global South's informal settlements' challenge against the backdrop of the situations in the Global North. This is followed by a glimpse into the policy, politics, polity and

governance context of Nairobi Kenya. Subsequently, the actors' paradigmatic positions and frames of reference are briefly reviewed, and finally the conclusions discussing the role of competing paradigms in Global South's informal settlements arena are presented.

Global South's Urban Crisis in a Global Context

Soon after the Second World War, the Global North's economy quickly recovered and grew well past pre-war levels, experiencing an economic boom with rising incomes and general improvement in social well-being that lasted till the 1970s. Fordism as a "regime of accumulation" was characterised by mass production and mass consumption in protected domestic markets with Keynesian economic policies as the prevailing mode of regulation (Aglietta, 1979). However, for most Global South countries which were still under colonial rule, the post War period saw the struggle for independence, which was often very bitter and violent, but also brutally suppressed. Growth of informal settlements was checked by laws that prohibited the natives' entry into urban areas, and also through brutal evictions and demolitions of native settlements in and around the urban areas. Informal settlements were seen as generators of disease, crime and political dissent (Myers, 2003).

In the 1960s, many African countries became independent and removal of restrictive laws led to massive rural-urban migration that overwhelmed the urban areas, leading to rapid growth of informal settlements. To deal with the many problems besetting these new emerging countries, 'modernisation' became the global development paradigm aiming to transform these countries from 'traditional' into 'modern' societies. Informal settlements were seen as a problem of 'backwardness' that would be solved by modernising. Therefore, informal settlements were demolished, and were to be replaced by 'modern public housing'. As public housing proved to be inadequate, a *laissez-faire* approach towards informal settlements ensued, as the urban crisis was seen as a temporary situation that would disappear with economic growth and modernisation (Obudho and Aduwo, 1989; Weru and Bodewes, 2001) Failure of modernisation practices brought the dependency discourse to prominence in the 1970s. In response, International Labour Organization and the World Bank advocated a basic needs development strategy, in which housing needs were addressed through site and services schemes as aided self-help. The 1960s and 1970s approaches were based on Keynesian principles, with the state playing a dominant role, in a top down manner. However, the public housing produced was highly inadequate and unaffordable to the urban poor and as a result, informal settlements grew exponentially.

The breakdown of Fordism and Keynesianism, and the coming into power of conservatives such as Margaret Thatcher and Ronald Reagan lead to Post Fordism; and Neoliberalism became the dominant paradigm in the 1980s (Harvey, 2005). Towards the end of the 1970s, as the Fordist model was breaking down, the Global North experienced stagflation and an economic crisis exacerbated by the 1970s oil shocks. The oil crises also generated enormous profits for petrochemical corporations

that recklessly lent them through commercial banks to Global South countries. These countries were mostly run by corrupt leaders who diverted the money from development to overseas accounts or purchased weapons to repress their subjects. However, declining commodity prices due to stagflation in the Global North, and the increase of interest rates, produced a possibility of Global South's debt-defaulting, triggering a debt crisis and possible collapse of banks (Hart, 2001). To prevent this from happening, the lending countries directed the IMF and World Bank to bail out those Global South countries. The bailout was given on condition of implementing Structural Adjustment Programs (SAPs). Thus neoliberal policies also referred to as the Washington Consensus, spread to the Global South, with devastating effects to the local economies as well as social wellbeing of these countries (Hart, 2001; Broad, 2004). Furthermore, to cut costs, Global North manufacturing shifted to the Global South, where to compete for foreign investment, bargaining processes between Global South governments and multinationals led to low wages, deplorable working conditions and extreme levels of labour and environmental exploitation. Thus Taylorism was introduced into Global South contexts which had very lenient regulations producing 'bloody Taylorism' (Lipietz, 1982; 2008). Moreover, neoliberal policies required the withdrawal of the state from service provision and a shift towards reliance on the private sector and civil society, henceforth, in dealing with informal settlements the government was required to be an *enabler*, to create an *enabling* environment for the private sector and other non-state actors, to deal with housing problems. As a result, many Global Southern states abdicated the role of housing provision, but the private sector and the market, despite many incentives did not take the role. With increasing poverty, inequalities and marginalisation, proliferation of informal settlements continued in the 1980s (UN-Habitat, 2006).

The realisation that unregulated market and globalisation forces, were causing serious social and natural environmental degradation globally, even threatening the very existence of the human race, led to Brundtland Report and the Rio Earth Summit; thus Sustainability and Sustainable development became the dominant paradigm in the 1990s (Fergus and Rowney, 2005). The government's role became that of regulating the market forces. To deal with Global South's urban problems, Sustainable urban development was prescribed, to produce liveable and inclusive cities with social harmony, economic and environmental sustainability. Participation of the target groups and bottom up practices were emphasized. Therefore participatory slum upgrading projects led by the civil society were proposed which aimed at improving the environment of informal settlements and regulation of security of tenure (Sietchiping, 2008). Deepening globalisation, and increasing role of non-state actors towards the end of the 1990s among other forces brought to prominence the 'good governance' paradigm in the 2000s that called for partnership between the governments, private sector, civil society and supra national entities among others. Furthermore, at the end of the Cold War, Global Northern countries, which had previously turned a blind eye to corruption, repression and violation of basic rights and civil liberties in the Global South, through multilateral and bilateral organisations, demanded institutional reform to create 'good governance'. Additionally, the Millennium Development Goals (MDGs), aimed at addressing

Global South's problems, specifically mentioned good governance and reducing slums as its targets. However, for different actors involved, good governance has different definitions, approaches and understandings, thus it motivates different practices among them (Kirby, 1997). In dealing with informal settlements the government's envisioned role was that of a partner-to partner with other stakeholders in the form of public-private partnerships and creation of city-wide and nation-wide city strategies and alliances such as espoused by the 'Cities Without Slums' initiatives. All in all, these initiatives have produced very little impact on the Global South's urban challenges and the problem of informal settlements persists, calling for more appropriate attention and actions.

Table 1: Paradigm shifts in prescribed responses to Global South's urban crises

Paradigm	Containment	Modernisation	Basic needs	Neoliberalism	Sustainability	Good Governance
Decade it was dominant	1950s	1960s	1970s	1980s	1990s	2000s
Geo-political and economic context	Post war era Late colonial	Independence Keynesianism	Oil shocks Stagflation Debt crisis Fordism crisis	Thatcher-Regan Post Fordism & bloody Taylorism	End of Cold war Globalisation deepens	New Millennium
Development orthodoxy	Containment (by law & force)	Modernisation (accelerated growth & trickle down)	Basic needs (dependency theory-redistribution)	Economic-liberalism Enabling approaches , state roll back	Sustainable development	Good governance and MDGs
Urban and housing strategies	Restriction repressions eviction and demolitions Maintain purity of the city	Slum demolitions replaced with modern public housing	sites-and-services, aided self-help	housing without houses, create an enabling environment	Slum upgrading urban management tenure regularisation	Public-private partnership, Cities alliances
Role of the state	Architect for idealist cities	Planner for development	Provider of basic needs	Enabler of the private sector	Regulator of market forces	Partner with stakeholders
Mode of governance	Authoritarian & Clientelist	representative democratic	Managerialist	Corporatist	Pluralist	Inclusive democratic

Based on these criteria, the study identifies five dominant paradigms that dominated the Global South's urban housing arena in various decades. They are; containment, modernisation, basic needs & redistribution, neo-liberalism, sustainable development, and finally good governance. Seemingly, periods in history and other geo-political and economic forces at one time or another, have favoured a particular paradigm over others, making them dominate discourse and policy. Nonetheless, these paradigms are ideal types, and do not exist in pure forms or revolutionarily replacing each other, but the new paradigms have evolved from the previous ones and in fact as shall be discussed later, they all continue to co-exist and are actually competing in the Global South's urban arena.

Additionally, several ideal types of modes have been identified, i.e. the informal arrangements that define the governing relationships among actors in the urban arena. They include, authoritarian, clientelist, representative democratic,

managerialist, corporatist, populist, pluralist democratic, inclusive democratic, oligarchical, criteria driven, entrepreneurial consensus, inclusionary argumentation, pro-growth, and welfare (Rakodi, 2003; DiGaetano and Strom, 2003; Healey, 2003; Healey, 1997; Pierre, 1999); with each paradigm having a peculiar preferred mode. However, whilst in theory each paradigm prescribed a different mode, in practice, any given time there prevailed hybrid forms such as authoritative/clientelist. In sum, the paradigm shifts presented, reflect dominant discourses and policies that dominated the Global South's informal settlements and urban housing arenas. Indeed, policy and programme documents reflect closely those paradigm shifts. However, there was and still is great variance between what was desired or intended as compared to what was actually practiced. Different actors or stakeholders have acted following different paradigms; depending on several issues including their vested interests, motives, and sources of funding and knowledge. Additionally, the socio-economic and political contexts in with the initiatives are conducted also play a significant role.

Structuration perspective in Global South's urban governance arena

The different perspectives in the Global South's urban crises, governance and paradigms shifts in the informal settlements, housing policy and practice arena, could be viewed through Structuration Theory. According to Structuration Theory (Giddens 1984), there is a 'duality of structures'; in that social structures make social action possible and at the same time social action creates those very structures, presenting a continual interaction between, and mutual constitution of, 'structure and agency'. By defining *structuration* as being "the structuring of social relations across time and space, in virtue of the duality of structure" (Giddens, 1984 pp. 376); and *structures* as being 'recursively organized rules and resources' that both constrain and facilitate or enable social actions, and structures existing as 'memory traces' (Giddens, 1984 pp. 377); This theory could provide a way of situating the actions and interactions of actors involved in housing, policy or governance within structuration processes.

Pursuant to Structuration Theory, three modalities i.e. interpretative schemes, facilities and norms, mediate the linkage between social structure and human interaction. Firstly, interpretative schemes are shared stocks of knowledge which actors draw upon to interpret actions and achieve communications while interacting, and thereby producing, reproducing or reinforcing structures of signification or meaning. Interpretative schemes include semantic codes and discursive practices and are "the core of mutual knowledge whereby an accountable universe is sustained" (Giddens, 1979 pp. 83). Secondly, Facilities are allocative and authoritative resources through which actors exercise power and realise their inattentions, thus creating structures of domination. Facilities are thus, "reproduced relations of autonomy and dependence in social interaction" (Giddens, 1979 pp. 93). In urban governance therefore, the existing or prescribed authoritative and allocative systems not only depend on different actors' vested interests, but also on routine social relations, practices and institutional designs all structured by deeper values and

conceptions such as paradigmatic positions (Healey, 1997). And finally, norms are rules that actors use to sanction behaviour and produce legitimacy i.e. the structures of legitimation, hence norms are "the actualization of rights and enactment of obligations" (Giddens, 1976 pp. 86), norms are standards and laws that define how actors should act within a particular context.

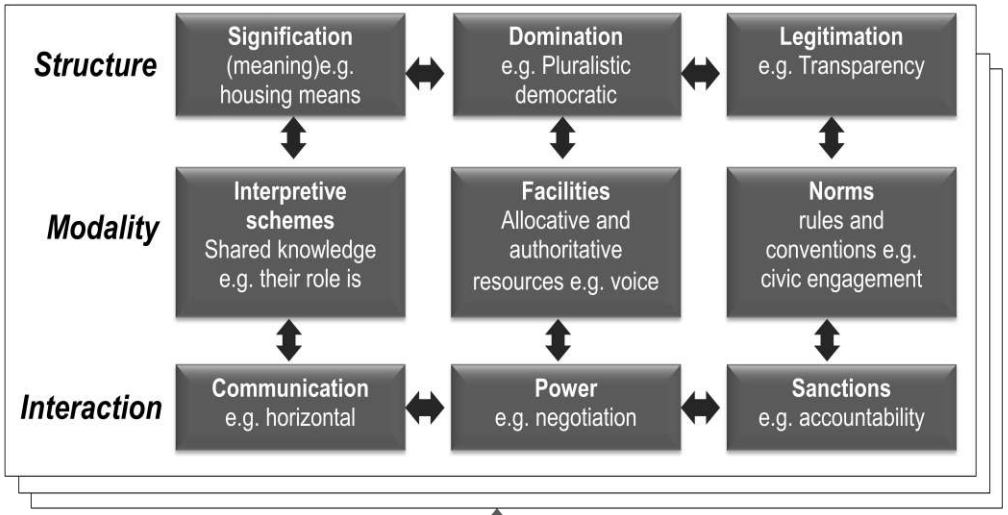
Hence, while interpretative schemes reveal what terms like urban problems, informal settlements, housing policy or good governance mean for a certain actor; facilities depict what resources are used or should be used (normatively) to meet the stated common objective. It is by means of facility that it is determined who is or should be included or excluded in governance process, in addition to determining who has or should have a controlling stake or voice in a governance setup. In this way, with more facility determine whose paradigm becomes dominant. Conversely, norms show the justification or reason for pursuing certain normative actions or taking a certain housing policy or good governance stance, by stating what and why it should be done because of what. In sum, these structuration concepts could aid in the appreciation of the complex and multifarious milieu that encompass the Global South's urban governance and housing issues, and as such, the Nairobi's informal housing and policy arena.

As discussed in the previous sections, attempts to deal with the Global South's urban problems including informal settlements have been inadequate; and each decade since the 1950s has seen a different dominant development orthodoxy and preferred approach towards these urban problems. This is shown mainly in paradigm shifts in discourse and policy and programme documents and the actions of powerful interest groups whose voice dominated the scene in each decade, beginning with restriction and modernisation, and the latest paradigm being 'good governance' as shown in Table 1. There are many and varied definitions of governance and its normative form good governance, however, a common denominator among them is that they concern certain actors making binding decisions that will enable or constrain their own, or others actions and interactions. Governance includes the regulation, co-ordination and interaction systems amongst these diverse actors, with varied interests and positions. However, governance means different things to different actors, leading to different actions and expectations and creating multiple structurations. Moreover, the situation is complicated further by differences in meaning of the normative 'good governance'. Consequently, through Structuration Theory, the various actors in Global South's urban governance arena, acting, interacting or preferring different paradigms can be seen as having different frames of reference and therefore different structuration, thus acting in a certain way and producing certain structures that define, shape and direct actions and interactions in the arena, for themselves and other actors.

Table 2: Structuration in Global South's housing and urban governance arena

Governance

Systems of regulation and co-ordination governing interactions, interconnections and relations amongst a plurality of actors at various spatial scales. A socio-economic and political steering logic with multi-centred and multi-level systems. However, the term (good) governance elicits different meanings to different actors leading to different expectations and actions.



Urban and Housing discourses

Housing means more than a roof over one's head, but what does it mean to different actors? For instance housing as: shelter, product, noun, verb, service, assistance , or human right. The Global South's urban housing arena has seen several paradigm shifts in dominant discourse, policies and programmes. Global paradigm shifts translate into both global and local actions, policies and programmes, such as 'self help, 'housing by the people' and 'housing without houses'. The process by which different actors take different paradigmatic stands could be inferred as structuration.

Paradigmatic positions in Nairobi's informal settlements arena

In theory all the actors and stakeholders involved in the informal urban housing arena in Nairobi, have closely followed the paradigm shifts and changes in policy and approaches as shown in table 1 (GoK, 2005; UN-Habitat, 2003; Huchzermeyer and Karam, 2006). All the policy and programme documents have at least in part referred to the dominant orthodoxy, for instance in the 1990s almost all programs and initiatives mentioned 'sustainability' or 'sustainable urban development' while currently they mention 'governance', or 'good governance'. However, in practice, there is great variance between the desired changes or action compared to the actual changes or actions that were taken (Pugh, 2001; UN-Habitat, 2009a), and in fact, the actors have often acted or interacted according to different paradigms, with different frames of reference. Indeed, this was observed in the ongoing field-study in Nairobi's arena, firstly, based on what the actors said about themselves, and their policy and programme documents, their modus operandi, why and how they acted and interacted with other actors; secondly, analysing what other actors said or thought about the particular actor under consideration, what the actor did or should have done; thirdly based on scholarly evidence, studies and discourses about the said actors; and finally all this was explored through a 'structuration, housing and governance' framework presented in table 2. A summary of the findings presented below show the co-existence of multiple paradigmatic stands and frames of references by different actors, all involved in the same policies and programmes, and in the same locations; all which could contribute to a fundamental lack of mutual understanding and could also prevent the attainment of common ground, necessary for 'good urban governance' or effective initiatives, policy, projects and programs.

From the international level, multilateral organisations are the major players in Nairobi's informal settlements arena, and indeed, over the different decades, they have introduced, influenced or decided most of the time what the dominant paradigm should be. These include the United Nations Human Settlements Programme (UN-Habitat), World Bank and International Monetary Fund (IMF), Cities Alliance, and United Nations Development Programme (UNDP) among others. While all these actors currently promoted good governance, there was divergence in their approaches; for instance the World Bank, providing financial and technical assistance, and in terms of governance highlighting public-private sector management and the rule of law, was seen to have a more neo-liberal stand, focusing on enabling the market and private sector to work towards solving housing and urban problems (Pugh, 2001; Omenya and Huchzermeyer, 2006; World Bank, 2008; Kedogo *et al.*, 2010). Then United Nations organisations such as the UNDP and UN-Habitat emphasised human development aspects such as horizontal coordination, collaborative action, and human rights. Currently, UN-Habitat aims at socially and environmentally sustainable urban areas and adequate shelter for all emphasising community participation themes, all this in line with the sustainability paradigm (UN-Habitat, 2010). The Nairobi informal settlements arena also has several bilateral agencies and development assistance programmes from various countries, either acting directly or supporting the government and the civil societies. These include

German Agency for International Cooperation (GIZ), Swedish International Development Cooperation Agency (SIDA), the United States Agency for International Development (USAID), and Italian Development Cooperation (IDC), just to mention a few. These bilateral agencies mainly reflected values and priorities of their mother countries, but mostly followed a basic needs paradigmatic approach. Moreover, beyond their divergent approaches, these alliances, multilateral and bilateral agencies have complex internal governance arrangements resulting in heterogonous paradigmatic views, even within those institutions.

Currently, at the national and local government level, all ministries, parastatals, and all state agencies have governance and good governance in their policies, mandates, service chatters, programmes, and short term and long term plans and visions. However in dealing with the informal settlements their approaches varied depending on the party affiliations, visions, vested interests, and motives - both positive and negative. For instance, on the one hand, some departments persisting in evictions and demolitions were seen leaning toward the restriction paradigm with authoritative governance approaches and seemingly apathetic to the plight of slum dwellers, but more interested urban renewal and beautification to attract tourism and international business and. On the other hand, other departments favour a more welfare, provision of subsidised public housing akin to the modernisation paradigm (GoK 2011). While some politicians were engaged in more clientistic modes of governance with patron client relations with residents, slumlords, private militias and local mafias; other politicians' engagement with informal settlement was more populist, setting out initiatives that seemed to address the needs of the majority, but in fact were only symbolic and without any resource allocation to match them, the only aim being to gain political power. All this is further complicated by varying personal and political interests of the ever changing key personalities in those institutions, rendering the position of those institutions even more inconsistent (Huchzermeyer and Karam, 2006; Mitullah, 2008).

The private sector, with varied actors ranging from giant multinational corporations to small informal enterprises, appears seemingly to have benefited immensely from the persistence of informal settlements, which enable payment of low wages and maintain a pool of casual labours, thereby sustaining 'bloody Taylorism' which in turn propagates more informal settlements in a vicious cycle. Private sector involvement in improving the situation in Nairobi's informal settlements has been minimal. The public-private sector initiatives espoused in Good urban governance paradigm have in practice merely been tokenism; the private sector involvement has been limited to a few corporate social responsibility projects and funding of some civil society activity. Thus private sector actors, seen to be gaining from the status quo have preferred a *laissez-faire* approach in a neo-liberal paradigmatic manner that maintains the current status quo, with its many layers that sustain the exploitation of the urban poor.

The informal settlements arena in Nairobi is teeming with Civil Society Organisations (CSOs) varying in scale from international to grassroots level, all with

diverse interests and approaches. They include Non-Governmental Organisations (NGOs), Community Based Organisations (CBOs), Religious or Faith Based Organizations (FBOs), and many other formal and informal community self-help groups and Non-State Actors (NSAs). The 1980s saw the proliferation of CSOs when multilateral and bilateral organisations began channelling development assistance directly to NGOs, following a Structural Adjustment Programmes (SAPs), a neo-liberal approach, also due to an aid ban to the Government towing to Kenya Governments reluctance to reform, reduce corruption and embrace the SAPs (Syagga *et al.*, 2001; Kedogo *et al.*, 2010; GoK 2005). Currently, there are some human rights oriented CSOs following a sustainable and rights based paradigmatic theme, but also many pragmatic project based CSOs, following a basic needs approach. While many CSOs purport to represent the views of the informal settlements dwellers, it has been observed and argued that many CSOs, being dependent on donor funding, aligned their agendas with that of donors' primary interests and paradigmatic approaches. Moreover, some CSOs have been seen to be gaining from the current situation and have apparently opposed several interventions in the informal settlements, preferring a *laissez-faire* in a neo-liberal paradigmatic way. All these have resulted in myriads of conflicting approaches, duplication of efforts, wasteful competition and sometimes outright violence experienced in many slum upgrading initiatives (Mittulah 2008)

One of the main goals of the good governance paradigm is to ensure the views and voices of the most weak and vulnerable in society are taken into account and heard in decision-making, which would result in more responsive actions towards the needs of the urban poor. However, the voice of the majority of the urban poor in Nairobi's informal settlements is rarely heard. Several Civil Society Organisations (CSOs) have set out to represent the voice of the urban poor, but only ended up representing the views of their funding organisations. Moreover, an attempt at increasing participation in government led projects has often been hijacked by powerful interest groups or other gate keepers. In Nairobi, the informal settlements residents also displayed a variety of preferred approaches, influenced by their relative income, and more so based with their contact with NGOs or government led initiatives. Some residents also expressed fear for any slum-upgrading activity as from their past experiences, slum-upgrading only lead to further displacement and worsening of their welfare (Syagga *et al.*, 2001; Huchzermeyer and Karam, 2006). However, many preferred public housing that would be leased to them at subsidised rates, with a more supportive government that protected and listened to them; an approach that seems contrary to the prevailing dominant paradigms. The poor, who with time have increasingly become more vocal and active in demanding for democracy, basic rights and justice, have often blamed the government for neglecting them, and failing to protect them from the vagaries of society. Moreover, many residents have become more and more suspicious of upgrading initiatives, both by state and non-state actors, as they saw these initiatives and their outcomes would not be in their best interests. Accordingly, all these findings point to the need to review the current approaches leading to the development of more effective and responsive approaches and strategies suited to the needs, locations, policy and political milieu and all the surrounding complex issues. As shown in Nairobi's informal settlements' policy and

practice arena, there is simultaneous co-existence and co-presence of sometimes competing paradigms ranging from containment to good governance, not only among different actors, but also within the different departments of given institutional actors, and even between individuals acting in them. There a strong indication that these competing paradigmatic stands could also be contributing to lack of political will, poor implementation of policies and programme initiatives, inappropriate policies and initiatives and many other such factors which prevent effective solutions to the urban problems but in fact perpetuate the deplorable living conditions for many residents in Nairobi.

Conclusions

This paper, while focusing on Nairobi, has discussed the Global South's urban arena in the context of prevailing urban crises, global geo-political and economic forces, and complex policy and political contexts, which is complicated further by presence of a myriad of actors with differing interests, resources and approaches. While there was convergence in theory, there was wide divergence in practice. Whereas, currently most of the actors said and wrote according to the prevailing good governance paradigm, the term produced different meanings for different actors. This could be explained by the fact that different actors could be having different paradigmatic references i.e. the ideological postulates, implicit theoretical foundations and representations of the world that frame their definitions, actions and interactions. Moreover, changes in dominant paradigms in the larger arena seem to have resulted only in changing of names and labels of initiatives, while the underlying paradigmatic approaches of many actors prevailed. For example when the term 'austerity' becomes politically incorrect, it is replaced with 'efficiency' without any policy change. This is also exemplified by the fact that to some actors in the Global South's arena the term good governance is just as other aid conditionality, and is therefore viewed the same way Structural Adjustment Programs were viewed (Doornbos, 2001; Mkandawire, 2007). In sum, could all these explain why many actions aimed at or purporting to improve the lives of the urban poor in fact end up worsening the situation further, deepening further the layers of exploitation of the poor? Therefore, with these actors possibly have different paradigmatic positions standing in the way of attaining common ground and effective cooperation, tackling these perpetual urban challenges in the Global South necessitates an appreciation of the actors' relations, actions and interactions, taking into account their different frames of reference and stands, as this could lead to an appropriate multi-level urban governance system, geared towards sustainable and inclusive urbanisation.

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Light Rails to Sustainable Mobility?

Mette Nielsen[1]

Abstract

Taking its point of departure in the mobilities paradigm, this paper applies a theoretical framework of narratives and storytelling to analyse and describe the rationales behind implementation of light rail in the case of Bergen light rail in Norway. Through the analysis it is demonstrated that there is not one overall rationale for implementing light rail, many arguments are evident in various contexts. Furthermore, findings in this paper show that planners, policy makers and other stakeholders shape stories for or against the implementation of light rail through the use of narratives that are linked to global discourses of light rail. By looking into the narratives and stories around light rail, generated in the policy and planning phase, the process of creating visionary concepts for light rails can be unfolded. The central claim of this paper is, that the formation of a clear concept for a light rail project is crucial when forming the basis for the decisions for the political process and the decisions made later in the implementation and operation stages of the light rail project. Furthermore, a clear concept is necessary to identify the criteria for a successful system and evaluate the outcome and more importantly to institutionalise this concept among all actors involved in the process to ensure that there is agreement around the concept. Through findings from the Bergen Light rail case, the concepts and arguments for implementing light rail in this local setting will be presented to exemplify how concepts for the light rail can be shaped in the policy and planning phase and show how the lack of a clear concept can extend and complicate decision making processes. The paper moreover provides a more general perspective on the effectiveness of creating clear concepts in order to steer new infrastructure projects and urban interventions through the political process and secure the outcome of these projects are recognisable in proportion to the visionary concept.

1. Introduction

1.1 Reintroducing the Tram

After Second World War old tram systems were abandoned in many European cities. After decades where the tram, in many cities, was the preferred mean of urban transportation and had structured urban development, the introduction of the car caused a radical innovation in the transportation sector and made other modes of travel inflexible and fragmented compared to the seamlessness that the car could offer. (Urry, 2007, pp. 119). The attributes of the car made it impossible for the tram system to compete as the preferred mode of transportation for the everyday journeys. As the system of auto mobility became well established it overtook the role as the central mode for urban transportation. (Beckmann, 2000). In 1932 General Motors bought up the US tramways in order to close them down (Urry, 2007) and in Bergen, Norway the last tram was dumped in the fjord in 1965 (Vollset, 2007) both symbolic acts to cement the beginning of a new area of auto mobility. In the recent years there has been a change in discourse around urban mobility. Coming from decades with

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policies that supported automobile oriented cities, many policymakers today seems to recognise that this propensity needs to change in order to deal with increasing travel demands, struggle for space and liveability in the cities and the growing CO_2 emissions from the transport sector while at the same time enhancing mobility (European Commission, 2007). One solution, caused by this new direction, is a reintroduction of the tram which has had a technological upgrade and a new name - light rail. In many European cities there has been increased political interest in the possibility to implement light rail. Europe is the densest light rail continent with 170 systems in operation and nearly 100 more in construction or planning (UITP, n.d.). Furthermore, light rail in many cities, has proven to be a successful tool to change the urban mobility system away from the car-oriented approach, which in many cities have resulted in modal shifts, passenger increase and decrease in car-use in the cities (The National Audit Office, 2004; Bottoms, 2003).

This new mode of urban transportation has some features that, in a technical sense, make it different from both metros and busses; lower construction cost than metro, in many cases the system runs in prioritised lanes, it is integrated in street level and intervenes with the urban environment. It has a higher comfort level and regularity than traditional bus systems. (Hanssen et al, 2005). There are several technical documents and evaluations of light rail as a technology, however there is need for a more holistic understanding for the genesis of light rail system; why are light rail suddenly relevant, and what has caused this change and which rationales are behind the decisions to implement such systems? The goal with this approach is to understand how light rail projects are framed in the policy and planning process in different local contexts and which influence this framing has for the political and public process that the project passes afterwards and for the later stages of the project. A narrative and spatial understanding (Jensen, 2007) of light rail will be provided through this paper to show how arguments for and against light rail are shaped and fitted to the local urban context with a reference to other local spatial dimensions (other urban development projects or historical attributes or symbols of the city), hereby creating a local 'concept' behind the implementation of light rail.

1.2 General discourses, Global and Local Concepts

As experience, culture and growth gain importance, cities worldwide are engaged in constructing images and representations according to these trends (Jensen, 2007). According to this trend it is evident that many European cities have a wish to integrate light rail as a part of their urban branding and urban development strategy, and as a tool to improve the city´s positions in the global competition for growth and liveability. A literature review of research around light rail supplemented with a review of relevant material for newly implemented light rail lines, shows that one strong discourse for implementing light rail is the wish to create an identity for the city - creating an image of a modern and visionary place that should facilitate future growth. (Hanssen, et al. 2005; Hedström, 2004). An indication that show that the rationale for implementing light rail is beyond the purpose of getting people from A to B, hence facilitating discussions involving more that transportation purposes. Likewise, at the international scene, the discussion around implementation of light rail proves to be based in a variety of discourses that both supports and opposes the need of implementing light rail. These discourses can be characterised as general that might be applicable in many local contexts, and hereby they are not connected to any particular local agenda or spatial referent. Tait and Jensen (2007) describes that global ideas, models and concepts for urban development (e.g. waterfront developments or business Improvement districts) are shaped by professions such as planning, urban design or urban management, and these global

ideas, models or concepts travel to around the globe and is translated into local contexts. In this transformation process the model or the 'concept', as I will term it in this paper, are given local meanings and are often attached to spatial localities. However, if the translation process is not linked to one overall discourse and hereby framing a local 'concept' that makes the project relevant in the local setting, then the light rail project could face difficulties in communicating the various actors in the process. Furthermore the project could face difficulties in addressing opposing views because of the lack of a clear vision and hereby clear concept. The Bergen case presented in this paper will exemplify this.

Light rail is obtaining an important role in the normative discussions around the future urban mobility system globally, and especially in many middle-sized European cities. A literature review of official European and international documents around light rail made it evident that there exist some general discourses around light rail on the global level. Furthermore the literature review identifies the discussion around light rail to be derived from the general discourse of the liveable city - with an emphasis on the historic dimension in the story of the liveable city; how do we move on from the past? What is the wish for the future? Some discourses are continuously repeated in the official reports and forms general discourses for and against light rail. Proponents and opponents derive narratives from these discourses in the local translation process of creating stories for and against the implementation of a light rail project and hereby shaping a local 'concept' for the project. The key challenge is to link the general discourse with a local challenge or situation at hand.

The general discourses are summarized in table 1.

Discourse	Narratives
The liveable city	- modernity - quality of life - identity and image - attraction - the creative class - health - Culture and experience (new culture for urban mobility) - the creative class (Florida) - behavioural change - regeneration of urban areas - urban transformation - city competition
Struggle for space in the cities	- Public transport can structure future urban development and reduce the need for mobilised individual transport in the cities. - restricting car-use in the cities
Backbone of the public transport network	- efficient transport system - multimodality - quality in public transport - attractiveness - show investment in public transport
Rail factor	- citizens preferences for rail born transport - the indirect effects of rail (economic development in corridor, symbolic value) - More than a transport system (consumption of transport forging personal identity)
Economical feasibility	- Cheaper than metro. - Attractive public transport for smaller cities - cities as engines for economic development
Growth	- Urban development potential - Economic vitality - settlement

-Culture

Discourse	Narratives
Economical feasibility	- not cost effective -Time consumption as the economical measure
Accessibility	- restricting car use, causing congestion - not solving congestion
Capacity	- Capacity problems should be the argument for upgrading the public transport network

Table 1. General discourses around light rail (based on literature review and case studies).

Table 1 outlines the dominant general discourses for and against light rail which has been identified through the literature review. Figure 1 is an illustration of how these general discourse forms global concepts and models that are translated by planners, politicians and other stakeholders from the global to the local level and framed to the local context, where the arguments/discourses passes a filter before the official concept for the project is established.

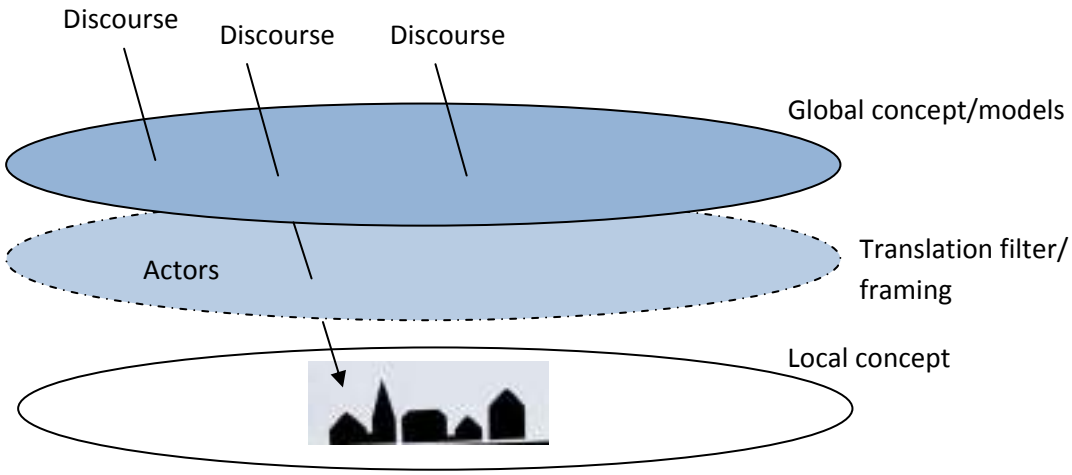

Figure 1 Translation from general discourse on global concept level to local concept with spatial reference (own figure inspired by work of (Tait & Jensen, 2007))

The means by which ideas, concepts and models travel requires an understanding of the context in which they are produced and in which they travel and are adopted. (Tait & Jensen, 2007, pp. 109). The translation process activates numerous actors that serve an important role in framing the local concept through their actions and their use of narratives to support this framing. The aim with this paper is thus to identify the importance of framing the local 'concept' for light rail projects, and to provide a case example of how this framing has happened. The framing will be unfolded through the use of a narrative - spatial framework (Jensen, 2007).

1.3 Stories and narratives of Light Rail

Understanding the role that stories and narratives play in planning has a great importance when unfolding the arguments shaped in the policy and planning phase for light rail systems (and the genesis that comes before this phase) (Flyvbjerg, 1991). The stories told can be deconstructed and provide a critical view of the normative arguments in use in the stories. There is a presence of plot and character in stories that is valuable to understand the stories being told in policy and planning - what is the story about, and what is the plot about and which chain of events structures the plot? Stories can also function as a catalyst for change and hereby shape new imaginations of alternatives (Sandercock, 2003). Often stories serves as inspiration when they are re-told, and good storytelling involves persuasive powers that can mobilise emotions and cause change, which is also called 'narrative rationality' (Throgmorton, 1996, pp. 48).

Using a theoretical framework of narratives to unfold the rationality behind light rail systems is valuable because the stories told in the different light rail cities seems to vary, and there are indications of differing rationality behind the decision to implement light rail systems in the different contexts. It is important to understand this difference in rationality because light rails, as a new urban mobility mode, has to find its place physically socially, economically and discursively within a landscape in which there are already physical structures, social practices and economic entities that overcome distance and structure mobility in sedimented or locked in forms. (Urry, 2007, pp. 52). There is a relation between the story and place in all light rail cities, and therefore emphasis in the analysis in this paper should be on understanding these place-based narratives to unfold the local concepts (Jensen, 2007). Any planning story has a spatial referent which is also the case for light rail systems. Hence the central claim of this paper is, that the rationality behind light rail and how the concept of this urban intervention is framed can be understood better when analysed through a spatially sensitive framework. Jensen (2007) provides an analytical frame to understand the representational logic of urban interventions. He argues that in order to understand the representational logics both a narrative dimension and a space dimension needs to be applied. The analytical frame is illustrated in table 1.

Narrative dimension	*Information* *Temporal order/structure* *Causality* *Plot* *Discourse institutionalization*
Sense of place dimension	*Relations to other places* *References to physical attributes*

Table 1. Analytical framework for the representational logic of urban interventions (Jensen, 2007).

The analytical frame is a checklist that is taken into account in the analysis.

2. Analysis

2.1 Case-study Methodology

A case-study methodology was applied to explore the use of narratives and story-telling to frame the local concept of the light rail project in Bergen, Norway. This qualitative approach provides a valuable basis for understanding and explaining light rail as a phenomenon and the rationalities behind implementation of light rail. Explorative interviews with key stakeholders from the policy and planning phase were conducted. Furthermore, document studies supplemented the unfolding of the use of narratives in the policy and planning phase. The case and stakeholder interviews are presented in table 2.

Case	Case study timing	Case Characteristics	Stakeholder interviews
Bergen, Norway (250.000 inhabitants)	May, 2011	- First light rail line finished in 2010 - strong political focus - public debates	Municipal planner Politician - left wing Public transport authority Local Researcher Technical engineer Head of the Local Business life

Table 2 Case description

The case presented in this article was selected to show a critical case (Flyvbjerg, 1991) where the actors in policy and planning process has struggled to form a clear concept for the light rail project, hence causing the process of Bergen light rail to be the heavily discussed subject in Bergen for 15 years and also delaying the decisions significantly. By applying the analytical frame I will now look into the narratives in use in the cases of Bergen light rail and identify the local concepts for this project and the narratives in use to frame this concept.

2.2 'The Silent Monster' - A case of political struggle for Bergen light rail

In June 2010 the Queen of Norway opened the first light rail line in Bergen. It was a symbolic day since opponents of the light rail had worked long and hard to reach to this point and the policy and planning process of Bybanen was the most heavily discussed case in the media for a period of fifteen years (Vollset, 2007). Since the last tram was abolished and dumped in the fjord in Bergen in 1965, the establishment of new urban rail born transportation has been discussed politically and publicly, and many different technical solutions have been presented (Nielsen, 2011). The pictures illustrated in figure 2 captures some of the stories that have been told about Bybanen in Bergen in this heavily discussed project.

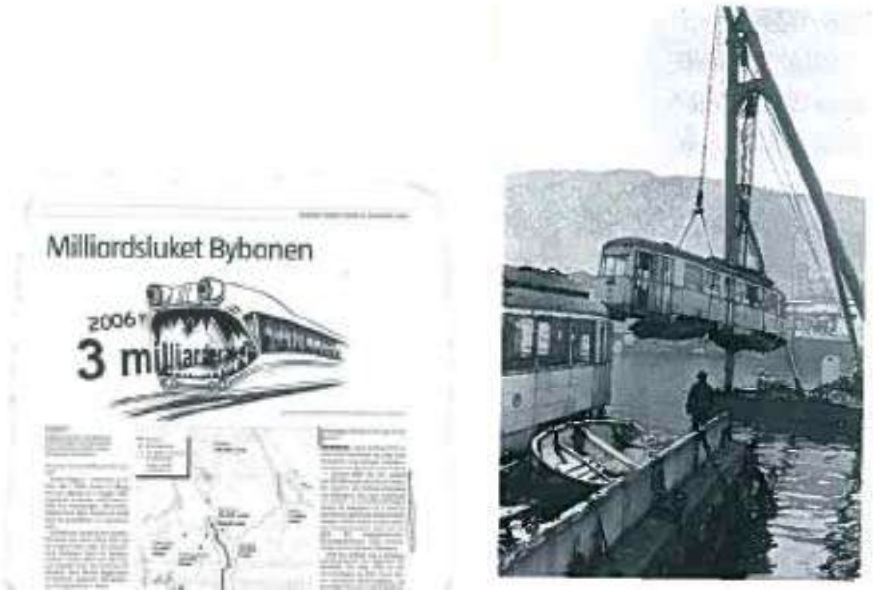

Figure 2: Left: Article presented in the local newspaper Bergens Tidende by opponents, the headline was that the light rail would literally swallow milliards of Norwegian kroner (Hartmann, et al., 2006). Right: picture from year 1965 when the last tram was symbolically dumped in Bergen Fjord to symbolise the beginning of a new era. (Rasmussen, 2011).

Like many other cities Bergen closed the tramlines in the 1960ies due to the introduction of the automobile. In 1946 each Norwegian on average travelled 4 kilometres pr. day. In 1960 this had increased to 18 km pr. day. Concurrent to this development the tram and the local rails were abolished. Furthermore, investments in road infrastructure made the car even more indispensable. The car changed its status of 'welfare-good' to a 'necessity' as Bergen city sprawled. Though, increasing auto mobility started to cause problems in the city; congested roads lack of accessibility and time delays (Vollset, 2007). The struggle for space in Bergen raised the discussion of 'the liveable city': how should the city develop in the future? (Potter, 2011; Eide, 2011). The normative discussions around this question drew clear front lines for stakeholders for or against a new agenda for urban development to start a value based discussion where all arguments were valuable if it supported the future development the different stakeholders supported. Therefore a reference to the political context is important when evaluating how the local concept for Bergen light rail was framed, or more correctly to say; the many ways in which the concept was framed by different actors through the policy and planning process, and the genesis of this.

2.2.1. Actors

The narratives used in the process around Bybanen in Bergen can roughly be divided into proponents and opponent of the light rail. However, the picture is not as clear as such. Three main categories could be identified consisting of narratives derived from the rationality of different professions/groupings; engineers, architects and environmentalists which illustrated how different professions are framing the project in various ways. The rationality of these different professions proved to be very different. The 'groupings' of professions are not divided by clear boarders; it is more right to say that the narratives in use in the process generally originate from different rationalities within these professions, and the span of actors using these specific narratives seem to

be more varying (Vollset, 2007; Rasmussen, 2011; Potter, 2011; Eide, 2011). The many varieties of arguments in use reflect a diffuse process where the 'translation' of the global model of light rails was not initiated by one global discourse of light rail. Almost all global discourses (table 1) were activated in the argumentation and this caused confusion around the concept for the local project. It was not one story being told but many opposing stories. In this process the 'narrative rationality' and the ability to mobilise emotions was essential (Sandercock, 2003; Throgmorton, 1996).

The dominant discourse among the stakeholders that held the engineering rationality was the economic discourse; creating a debate of how to value transportation, getting 'the most transportation for the available money', specially the road directorate, which is a national organisation, shared this belief and hence became a dominant actor that managed to mobilise public and political support for against the light rail project. The main reason for their opposition was that a stated proposal for financing of the light rail was made by the proponents of the light rail which involved financial means collected through road toll would be transferred to a public transport project (Eide, 2011; Potter, 2011). Based on traffic model calculations the road directorate argued that the light rail project couldn't cope with the increasing congestion; new roads had to be build to meet the future demands and likewise socioeconomic calculations showed that the light rail project was far to expensive. More busses could be inducted when new roads were build, this would by all means be the most cost effective solution based on their rationality (Vollset, 2007).

It is obvious that the road directorate had a very central role in the debate around Bergen Light rail. Their rationality was rooted in the understanding of traffic as cost benefit calculation based on traffic modelling with time savings as the important factor to evaluate on socioeconomic benefit of the infrastructure project; and in this perspective the light rail project didn't make much sense.

Another group of stakeholders can be framed as the environmentalists, and in the Bergen case the environmental arguments proved to be important. The awareness of the environment started growing in Bergen in the eighties 'Gatebruksplanen' from 1989 was the fist realisation of that planning for cars had happened at the expense of pedestrians, cyclists and public transport users (Eide, 2011; Vollset, 2007). The environmental movement in Bergen 'Naturvernforbundets' initiated the fist hearing of a plan to construct a light rail called 'Bybanehøringen' from 1989. However, the increasing environmental problems also became much more visible for the people living in Bergen in the beginning of the 2000s. Due to the location of Bergen between seven fells and close to the seaside, the smog from the increasing car traffic in some years lied as duvet and created a visible picture of the downside of the growing individual car traffic (Figure 3) (Rasmussen, 2011). This picture became an important argument for the need to shift planning towards more sustainable modes, including the possibility to construct a light rail.

Figure 3: Bergen city covered in smog from the traffic in the first years of 2000 (Rasmussen, 2011).

The main arguments in use within this environmentalist grouping in favour of the light rail project, was that the light rail should be provide an efficient public transport network that could serve as an attractive alternative to the car, hence indicating that this was solely a matter of getting people from A to B as fast as possible. Therefore it was important that the alignment of the tracks was made in direct lines to ensure a high speed for commuters of the line. This argumentation didn't fit with the rationality shared by many planners that the light rail should be an urban project. In their story the most important goal of the light rail was to ensure that the system was integrated in the urban environment and enabled frequent stops at the relevant urban destination. However, if the light rail was to have many stops along the route this would reduce the speed and the environmentalists saw this as a big disadvantage if the light rail should be a realistic alternative to the car (Vollset, 2007).

Various 'experts' was brought in from other countries to tell about the successful outcomes that the light rail had facilitated in these countries, and hereby provided spatial referents. Hereby the global discourses around light rail had an important role in the local arena in Bergen and initiated the translation of these to the local context (Vollset, 2007; Potter, 2011). The argument of perceiving the project as more than a transport project became an important argument in the process, especially since this argument was a valuable counter reasoning towards the road directorate which used the traffic models, and the engineering determinism that follows with using these models, to evaluate on the direct economic benefits of the project and hence overlooking the indirect benefits that the light rail project could have in order of structuring urban development and increasing market prices in the corridor (Rasmussen, 2011). It therefore became a principal question of how infrastructure benefits and disadvantage could be valued.

2.2.2 The Mothers of Bergen Light rail - and the making of Bergen Light Rail as a Urban Project.

The important actors who made the choices that finally resulted in the decision to build Bergen light rail were women, and in the stories told about Bergen light rail in the media these woman are called

'The mothers of Bergen light rail' (Hustvedt, 2010). Gunn-Vivian Eide (from the green left wing party SV) was the first politician to suggest that the financing for the light rail project, which had been subject for great discussions, could come from the toll-money in Bergen, where car-drivers paid tolls to finance new infrastructure projects, by this Gunn-Vivian seriously challenges the vision for the mobility future in Bergen since the toll money was originally indented for road infrastructure. This was not considered an unpopular move amongst the road directorate since their rationality around traffic planning and prioritisations was somewhat different (Eide, 2011). In 1996 the politician Elisabeth Tryti followed up on this initiative by preparing for a transport financing agreement called 'Bergensprogrammet' where the toll revenue, amongst other priorities, should finance the light rail project in Bergen. But because of strong political opposition towards the use of toll money paid by car-driver to finance public transport project, a compromise was made the 'Bergensprogrammet' should be a package that both covered money for public transport, cyclists and new road infrastructure. The party SV, which was considered proponents of the light rail and initiated the idea with toll money to finance the project, didn't support the transport program since they thought that they would the compromise the original intent with implementing of light rail; to reduce car traffic. Therefore they didn't vote for the proposal which indicated that they could no longer support the local concept of the light rail if it ended up being a compromise that didn't change the traffic prioritisations and mobility hierarchy towards greener modes. The Bergensprogram was implemented without the support of the SV party (Vollset, 2007).

The final concept for the light rail in Bergen was framed when responsibilities for public transport in Bergen city was handed over from 'Fylket' (the regional authorities) to the municipality in Bergen in year 2001 where the first light rail office was establish as a section under the Planning Department (Potter, 2011). The shift was caused by a political awareness amongst the municipal politicians that the public transport system in Bergen Centrum had been neglected for ages on behalf of providing a network in the less populated area that serviced every nook in the region due to the regional politicians focus on nursing for the districts where they were elected (Eide, 2011). This shift finally manifested the light rail project in Bergen as an 'urban project' where the final concept create the possibility for an urban lifestyle where you didn't have to own a car or at least could prevent the purchase of the second car in the household (Potter, 2011). However, by looking into the official planning documents this concept doesn't come across as very clear. However the project originally wasn't rooted in this department and the financing of the project ended up being a compromise between two visionary concepts; 'the efficient road scenario' and the 'life in the collective city' (Potter, 2011). When you visit Bergen today you will see this compromise; many places you see densification in the light rail corridor and construction of new quarters along some stops, but you will also experience a city where the car still has a high prioritisation. Table 3 summarizes the discursive and spatial aspects of the Bergen case.

Table 3. The case of Bergen Norway

		Proponents	**Opponents**
Narrative dimension	*Information*	Factual but not well structured argumentation. Proponent's views don't from a clear concept.	Clear and consistent argumentation based in the economic and capacity discourse - choose the most cost-effective solution.
	Temporal order/structure	Before the city was a congested and polluted place, with Bybanen it will be a liveable place.	Congestion can be solved with road infrastructure; busses can handle the need for capacity in the public transport sector.
	Causality	Urban competitiveness is dependent on a new urban transport system that will restructure the city	Facilitating traffic is a requisite for growth, we cannot reduce the flow of traffic - time losses are expensive for the society.
	Plot	Strong plot: the struggle between the car and the public transport - what do we want for the future. The result is the compromise made in 'Bergensprogrammet' half/half soulution.	Money earned from the motorists shouldn't pay for public transport. Value for money is to facilitate the flow and ensure capacity.
	Discourse institutionalization	Heavily embedded in many of the general discourses around light rail: 'liveable cities discourse', 'struggle for space in the cities'.	Heavily institutionalised discourse. The road directorate evaluates due to a model based method where timesaving's and accessibility is the important factor.
Sense of place dimension	*Relations to other places*	Strong relation to 'best practice example in other light rail cities' - the city competition of creating the liveable city. The most important argument	Not articulated - focus on the local challenges and how to solve these.
	References to physical attributes	Not many references to local physical attributes - the light rail project is not specifically linked to this more to sprawl and congestion issues in general.	No link to physical attributes.
The final concept	*Main argument*	Creating the collective city - with the choice to live in proximity to public transport (deselecting purchasing car no. two)	
	Discourse	*Weak institutionalization of concept (not all are clear on arguments):* 'Backbone of the public transport network' - trying to change the modal split by introducing an alternative lifestyle choice 'the collective city'	

3. Conclusions

The Bergen case exemplifies the importance of forming a clear local concept for any project that requires significant interventions in the urban and cultural landscape. The formation of a clear concept for a light rail project is crucial for the project to pass smoothly through the political process and even more importantly, to ensure that the aims and goals with the project are clear for all stakeholders from the beginning of the project. In Bergen the concept for the light rail ended up as a compromise that neither fully supported the proponents or opponents for the light rail project, and thus it can be difficult to identify the original intend and purpose with the light rail project as it is formulated today, not herby saying that the project haven't been successful in many aspects, especially in changing cultural perception public transport after the system has now been running for more than a year.

The lack of a clear concept and purpose for the project can furthermore have some implications for the later stages of the project. Choosing the final alignment of the system can be very different depending on the purpose of the system; was the intend to transport people as fast as possible from A to B, or was the light rail a tool to structure future urban development, or was it a part of an urban branding strategy? With the absence of a clear concept that defines the aim with the project it is challenging to define success criteria for the system and guide the project through the implementation and operation process. It is therefore argued that focus for future light rail project and other urban intervention projects should be placed on creating a clear stories and concepts for such a project, hereby making it relevant in a local context. This could be by applying the project to an overall strategy for the future urban development which politically gives the project an important role to play in future development strategies. This will ensure that the concept is institutionalised and passes the political process with fewer obstacles.

Moreover, the Bergen case exemplifies a trend of city competition and creating the story of 'the liveable city' which is evident in many middle sized European cities. In this intense city competition within a globalised world, global concepts such as light rail or harbour front developments is constantly 'travelling' and entering new geographical arenas where local actors tries to grasp and narrate these ideas and use them in a local context to keep the cites 'fit' for competition in order to facilitate economic growth. But in this strong competition of implementing new global ideas many cities often end op looking the same, especially those cities that have not managed to integrate the global concept in the local context and activate the potentials that such concepts might have. Light rail projects are translated very differently across European cities; In France light rail projects are often perceived as urban projects where a significant part of the budget for such systems are covering urban regeneration processes and urban design features along the route (Johansson, 2011).This generates new mobile spaces in the city and in many cases causes a reordering of the mobility hierarchy in the French cities because implementation of light rail is often followed by restrictions for car-traffic. In some German cities e.g. Freiburg the light rail system plays an important role in facilitating an efficient urban mobility system that is integrated in the urban environment and linked to the regional and national networks (Schade, 2011).

In this paper I have shown how the stories told light rail systems are considerably different in various national context etc. due to the differences in how the global concepts has been activated in a local context and how these new concepts find their place physically, discursively and culturally. Furthermore there is a very clear connection between the concept and the effects of the systems. The technology light rail doesn't cause change in itself, it is the framing of the concept in the local context that defines the role the system should play in the existing *mobility system* (Urry, 2007) and the potential effects that the system could cause. Discussions around public transport is a highly valued based discussion, even though many technical arguments are often activated, therefore planning professionals have to acknowledge the importance of the translation process from global to local concept in order to make the project relevant in a new context.

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SOUNDING BRIGHTON: DEVELOPING AN APPLIED SOUNDSCAPE STRATEGY

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Abstract

In order to help develop an applied soundscape strategy for the City of Brighton & Hove, in the United Kingdom, we conducted a social survey, as part of a project called Sounding Brighton, via a questionnaire study. The survey, in which members of the public were invited to participate anonymously, was supported by the EU COST Action TD0804 "Soundscapes of European Cities and Landscapes", in cooperation with Brighton & Hove City Council and Local Action Teams. In total, 354 individuals, 15 years or older, completed the questionnaire. It consisted of four parts: (1) noise annoyance, (2) favourite outdoor location in Brighton & Hove and the social and recreational activities it entails, (3) what sounds are appropriate to the favourite location, and (4) demographic data. Using hierarchical cluster analysis, 5 categories of favourite locations, as well as 5 categories of recreational soundscapes, were found. The categories of favourite locations in Brighton & Hove were named: 'Beach & Seaside', 'City Park', 'Peri-Urban Recreation Area', 'My Space', and 'Downtown City'. The recreational soundscapes were named: 'Urban Nature', 'Distant Nature', 'Urban', 'Seaside', and 'Urban Beach'. A Chi Square analysis showed that there is a statistically significant and meaningful relationship between the social and recreational activities that people find suitable in their favourite outdoor location and the degree to which they find that specific sound sources are appropriate there. The next step in the development of an applied soundscape strategy is to identify and map all areas of Brighton & Hove that fall under the five categories of favourite locations, and to decide on their acoustic objectives in line with the five categories of recreational soundscapes.

1. Introduction

As the European Noise Directive illustrates, management of the acoustic environment is currently predominantly focused on sound levels and noise mitigation (EC, 2002). Consequently, the single objective is to reduce sound levels below an acceptable guideline value (cf. WHO, 2000).

Noise researchers have started to realize that the current approach to the acoustic environment needs to be complemented with an approach that acknowledges the positive aspects of the acoustic environment (e.g., Brown & Muhar, 2004). A strict

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focus on acceptable guideline values may be counter-productive, because once they are reached there are no incentives for further improvements. As a result of these insights, some noise researchers adopted the concept of 'soundscape' in the late 1990s (Schulte-Fortkamp & Dubois, 2006). This marked a paradigm shift in the way noise researchers studied the acoustic environment.

The term 'soundscape' refers to the acoustic environment of a place, like a residential area or a city park, as perceived, experienced or understood by people, in context (cf. Axelsson, 2011a; ISO, 2012). It is the acoustic equivalent to 'landscape' (cf. Council of Europe, 2000), and includes all sound sources, wanted as well as unwanted. Managing the sounds of places can, therefore, be referred to as 'soundscape planning' (e.g., Axelsson, 2011b).

Unlike the current approach to managing the acoustic environment, soundscape planning is not primarily about reducing sound levels. Soundscape planning is not even necessarily a question of how loud sounds are, rather, what sounds are appropriate to, or belong to a place. There is no one ideal soundscape; and what is deemed an appropriate soundscape can change over time to reflect the evolving needs and/or uses of an area. To decide which soundscapes are good (i.e. appropriate), it is necessary to consider which activities the soundscape may enable at a place (Brown & Muhar, 2004).

The present paper reports the results from a pilot study conducted in the City of Brighton & Hove, in the United Kingdom, exploring the possibility of integrating a *soundscape* approach with a recent method for spatial planning and land use management called *sociotope* mapping. Sociotope mapping was developed in Stockholm, Sweden, to help avoid conflicts between residents and the city administration when increasing the density of the city space (Ståhle, 2002, 2003, 2006). A sociotope map is developed through user surveys, where urban planners are informed about how residents use and value urban open spaces from a social point of view. Together with expert assessments, this results in a GIS (Geographic Information System) map with areas marked in different colours representing their user values (e.g. enjoying the street life; nature appreciation; playing with one's children; or having a picnic). The sociotope maps then help the city planners to take the user values into consideration in the planning process. In Brighton & Hove this model is being adapted to encompass *soundscape*, by incorporating the sounds people find appropriate to the sociotope into the maps.

2. Method

2.1 Questionnaire

To explore the relationship between soundscapes and sociotopes, we conducted a social survey, using an electronic questionnaire that consisted of four sections. (1) To allow respondents the opportunity to register complaints about noise, as a service to the community (see Section 2.2, paragraph 2, below) the first section concerned

noise annoyance. It was based on the ISO/TS 15666 question with verbal rating scale (ISO, 2003), with the amendment that the response category 'Not at all' was divided into the two response categories 'Not at all (don't hear it)' and 'Not at all (hear it but not bothered by it)'. Sections (2) – (4) then concentrated on local soundscape quality as follows: (2) In the second section the respondents were asked to name their favourite outdoor location in Brighton or Hove, and to indicate to what degree a list of 27 social and recreational activities would be suitable in this location (6-point category scale: 'Don't know/not applicable', 'Not at all', 'Slightly', 'Moderately', 'Very', 'Perfectly'). (3) In the third section the respondents were asked to indicate to what degree a list of 29 sound sources would be appropriate in the favourite location (5-point category scale: 'Not audible', 'Slightly audible', 'Moderately audible', 'Clearly audible', 'Completely dominant'). (4) The fourth, and last, section concerned demographic data, such as in what area of Brighton or Hove the respondents live, gender, age, as well as occupation.

2.2 Participants

The participants were residents in Brighton or Hove, 15 years of age and older. They were recruited via advertisements in local newspapers, via Local Action Teams (residents groups organised by the City Council; http://www.safeinthecity.info/), and via the Noise Abatement Society's local network of contacts.

The recruitment materials invited residents of the city to 'have their say' about 'how they experienced local sound quality'. This wording was particularly important in order to differentiate the activity from traditional approaches to surveying for noise annoyance. In other words, the project was specifically designed to gather data about local soundscape quality as its primary purpose.

Nearly 700 persons visited the electronic questionnaire. Out of all visitors, 537 completed the first section on annoyance, 395 completed also the second section on favourite location, 382 completed the third section on appropriate sounds, and 354 completed the entire questionnaire, including the fourth section on demographics data.

Out of the 354 respondents who completed the entire questionnaire, 182 were females and 172 were males. A majority lived in the most highly noise exposed central parts of Brighton & Hove, and were 35–69 years old. With regards to occupation, 70 % were employed, 17 % retired, and 8 % self-employed. The remaining 5 % were unemployed or students.

3. Results

The present report concentrates on the relationship between sociotopes and soundscapes, and presents the results for the second and third sections of the questionnaire.

3.1 Sociotopes

To identify the number of different kinds of sociotopes among the named favourite locations in Brighton & Hove, the 395 complete responses to the 27 variables of the second section of the questionnaire were analysed. First, the verbal data was transformed to a numerical 6-point scale (0–5). Secondly, the 395 × 27 matrix was subjected to a hierarchical cluster analysis, and the 395 rows in the matrix were clustered (SPSS 19 for Windows; Squared Euclidean Distances; Furthest Neighbour/Complete Linkage). Inspection of the agglomeration schedule, as well as a range of potential solutions, revealed that 5 main categories of sociotopes could be identified in the data.

Separately, for each of the 5 categories, median values were calculated for each of the 27 variables. Then, for every category, the variables with the highest median values were used to interpret and name the 5 sociotopes. In addition, the names of the favourite locations that the respondents provided were used to guide the interpretation.

The first sociotope was most highly associated with the variables ‘Appreciating the sea’, ‘Appreciating landscape/scenery’, ‘Walking, jogging’, ‘Wind/wave/kite surfing’, and ‘Swimming/bathing’. The median values for these variables were all above 4.0, indicating that these social and recreational activities were found very suitable for the first sociotope. This sociotope was named ‘Beach & Seaside’ (N = 149).

The second sociotope was most highly associated with the variables ‘Appreciating landscape/scenery’, ‘Walking, jogging’, ‘Appreciating parks and gardens’, ‘Individual outdoor exercise’, and ‘Picnic/barbecue’. The median values of these variables were all above 3.0, indicating that these social and recreational activities were found moderately suitable for the second sociotope. This sociotope was named ‘City Park’ (N = 117).

The third sociotope was most highly associated with the variables ‘Appreciating landscape/scenery’, ‘Walking the dog’, ‘Walking, jogging’, ‘Appreciating wildlife’, and ‘Experiencing peace and quiet’. The median values of these variables were all above 4.0, indicating that these social and recreational activities were found very suitable for the third sociotope. This sociotope was named ‘Peri-Urban Recreation Area’ (N = 56).

The fourth sociotope was most highly associated with the variables ‘Appreciating landscape/scenery’, ‘Appreciating wildlife’, ‘Experiencing peace and quiet’, ‘Appreciating parks and gardens’, and ‘Watching people go by’. The median values of these variables were just above 2.0, indicating that the social and recreational activities were not strongly associated with the fourth sociotope. That this sociotope often was associated with “My own garden” indicates that this is a place where the

individuals could relax and ‘be themselves’. This sociotope was named ‘My Space’ (N = 44).

The fifth sociotope was most highly associated with the variables ‘Watching people go by’, ‘Experiencing active street life’, ‘Eating (Café, Cafeteria)’, ‘Outdoor events’, and ‘Walking, jogging’. The median values of these variables were all above 3.0, indicating that these social and recreational activities were found moderately suitable for the fifth sociotope. This sociotope was named ‘Downtown City’ (N = 28).

3.2 Soundscapes

To identify the number of different kinds of soundscapes among the named favourite locations in Brighton & Hove, the 382 complete responses to the 29 variables of the third section of the questionnaire were analysed, using the same method as for sociotopes above. Among the 382 cases, 5 main categories of soundscapes could be identified.

The first soundscape was most highly associated with the variables ‘Birdsong’, ‘Wind in trees, etc.’, ‘Other wildlife’, ‘People walking’, and ‘Seagulls’. The median values of these variables were all above 2.0, indicating that these sound sources were found appropriate when moderately audible in the favourite location. The first soundscape was named ‘Urban Nature’ (N = 132).

The second soundscape was most highly associated with the variables ‘Birdsong’, ‘Wind in trees, etc.’, ‘Seagulls’, ‘Children playing’, and ‘People talking’. The median values of these variables were just above 1.0, indicating that these sound sources were found appropriate when slightly audible in the favourite location. This means that sounds should only be heard in the background, and not be present in the foreground. The second soundscape was named ‘Distant Nature’ (N = 88).

The third soundscape was most highly associated with the variables ‘Seagulls’, ‘People shouting’, ‘Road traffic’, ‘People talking’, and ‘Amplified music’. The median values of these variables were close to 2.0, indicating that these sound sources were found appropriate when moderately audible in the favourite location. The third soundscape was named ‘Urban’ (N = 85).

The fourth soundscape was most highly associated with the variables ‘Flowing water’, ‘Seagulls’, ‘Children playing’, ‘People walking’, and ‘People talking’. The median values of these variables were near or above 2.0, indicating that these sound sources were found appropriate when moderately to clearly audible in the favourite location. The third soundscape was named ‘Seaside’ (N = 55).

The fifth soundscape was most highly associated with the variables ‘Seagulls’, ‘People walking’, ‘Children playing’, ‘People talking’, and ‘People shouting’. The median values of these variables were all above 2.0, indicating that these sound

sources were found appropriate when moderately to clearly audible in the favourite location. The third soundscape was named ‘Urban Beach’ (N = 22).

3.3 Sociotope-Soundscape concordance

To investigate the concordance between the 5 sociotopes and the 5 soundscapes, a 5×5 contingency table was created based on the 381 respondents who had completed both the second and the third sections of the questionnaire (Table 1). A Chi Square analysis shows that the distribution of the data in Table 1 is statistically significantly different from that expected by chance (see numbers in brackets) (χ^2 = 126.0, DF = 16, $p < 0.001$). This shows that there is a relationship between the social and recreational activities that people find suitable in their favourite outdoor location and the degree to which they find that specific sound sources are appropriate there.

Table 1 shows that ‘Beach & Seaside’ sociotope was strongly associated with ‘Seaside’ and ‘Urban Beach’ soundscapes, and weakly associated with ‘Distant Nature’ soundscape. ‘City Park’ sociotope was associated with ‘Urban Nature’ and ‘Distant Nature’ soundscapes, but very weakly with ‘Seaside’ soundscape. ‘Peri-Urban Recreation Area’ sociotope was strongly associated with ‘Urban Nature’ and ‘Distant Nature’ soundscapes. ‘My Space’ sociotope was most strongly associated with ‘Distant Nature’ soundscape. Finally, ‘Downtown City’ sociotope was strongly associated with ‘Urban’ and ‘Urban Beach’ soundscapes, but weakly with ‘Urban Nature’ and ‘Distant Nature’ soundscapes.

Table 1. Contingency table for 5 sociotopes and 5 soundscapes

	Soundscape					
Sociotope	Urban Nature	Distant Nature	Urban	Seaside	Urban Beach	Totals
Beach & Seaside	41 (49.5)	15 (32.7)	31 (31.9)	44 (20.6)	12 (8.3)	143
City Park	46 (40.2)	34 (26.5)	27 (25.9)	4 (16.7)	5 (6.7)	116
Peri-Urban Recreation Area	34 (19.1)	20 (12.6)	1 (12.3)	0 (7.9)	0 (3.2)	55
My Space	7 (13.5)	17 (8.9)	12 (8.7)	2 (5.6)	1 (2.3)	39
Downtown City	4 (9.7)	1 (6.4)	14 (6.2)	5 (4)	4 (1.6)	28
Totals	132	87	85	55	22	381

Note: Numbers in brackets are the values expected by chance.

4. Discussion

The current approach to the acoustic environment – based on sound levels and noise mitigation – needs to be complemented with an approach that acknowledges the positive aspects of the acoustic environment. To this end, the present paper explores

the possibility to integrate a soundscape approach with sociotope mapping. With this pilot study we have established that the present method is useful for identifying distinct sociotopes and soundscapes; and have shown that there is a meaningful and statistically significant relationship between them.

The relationship we have found between sociotopes and soundscapes means that people agree to a large extent on the degree to which a specified set of sound sources is appropriate in a place that is suitable for a specified set of social and recreational activities. This clear and meaningful relationship was not necessarily expected. Rather, people could be in disagreement in this respect, which would mean that sociotopes and soundscapes would be uncorrelated. The latter would have meant that all 5 soundscapes would have been appropriate in all 5 sociotopes, and there would have been $5 \times 5 = 25$ soundscape/sociotope categories. We have found that people typically expect an urban park to have a park soundscape, a beach a beach soundscape, and a city centre a city soundscape; although, of course, there is still room for significant variation and appreciation of local distinctiveness within these general soundscape categories.

Whereas it could be stated that current noise policy, for assessment, measurement and enforcement purposes, presupposes that acoustic environments are more or less uniform and should not exceed a specified guideline value with regards to sound levels (e.g. 55 dBA; EC, 2002; WHO, 2000), the Sounding Brighton survey results show that soundscape may – and probably should – vary, depending on what social and recreational activities are deemed suitable for a space by the users of the place. For example, in some places, such as the city centre during the daytime, moderately loud sounds may be acceptable, including road traffic and people noise. In other places, like the city's parks, many people would like to be able to relax at most times of the day; indicating that such a place should be dominated by the sounds of nature but that the sounds of other people may be acceptable when slightly audible. These results indicate that current government and local government policy related to the acoustic environment must be further developed and better adapted to suit human needs.

With regards to urban planning, the method used in the present paper could be used to identify and decide acoustic objectives for an area depending on what social and recreational activities it is intended for. A next step could be to develop soundscape mapping to complement sociotope maps.

With regards to the City of Brighton & Hove, the next steps in the development of an applied soundscape strategy would be to identify and map all areas of the city that fall under the five categories of favourite locations, and to decide on their acoustic objectives in line with the five categories of recreational soundscapes. It would then be important to further evidence the research by conducting in situ questionnaire studies with visitors to these areas to further evaluate how the soundscapes of these areas are perceived in reality.

5. Concluding remarks

We found a statistically significant and meaningful relationship between sociotopes and soundscapes. In essence, an urban park should have a park soundscape, a beach a beach soundscape, and a city centre a city soundscape. Where soundscape is not taken into account residents may experience loss of health and wellbeing as well as annoyance, particularly in places which would otherwise normally be restorative.

Our results show that it is possible to integrate soundscape with urban planning and design. Sociotope mapping may be expanded to incorporate soundscape, as a tool for soundscape planning. Such a tool would help urban planners to take soundscape into account at an early stage of the planning process. Surely, this would contribute to sustainable urban development, in promotion of health, well-being and quality of life of urban residents.

6. Acknowledgements

The preparation of this paper was sponsored by the Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning (Formas). Special thanks go to COST Action TD0804 “Soundscapes of European Cities and Landscapes”; the City of Brighton & Hove, which sponsored the social survey and its promotion; and the Local Action Teams of Brighton & Hove that helped to recruit participants to the survey.

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ECOLOGICAL PLANNING AND STRATEGY ANALYSIS FOR THE AREA IN ARID DESERT

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Abstract

Climate change has become the focus of the world. Today the ecological environmental protection and energy saving technologies are maturing. Planning and Construction need to fundamentally change the traditional concept and methods, and use advanced technology to achieve harmony between man and nature. Arid desert region, as the planet's most fragile ecological area, where people developed through building activities to improve the living environment and alleviate further deterioration, is the typical region with great research value.

In this paper, through the analysis of this kind of regional climatic conditions, three special characters were underlined to be aimed at urban planning. The most important element is water supply, which safeguard all the biology. Then is energy saving, because the main method to keep a comfortable temperature in the high-heat area is to supply large energy, and normally solar energy is affluent in arid desert. In addition, we also need to resist wind and fix sand to protect the living environment.

The traditional building wisdom, as the reference of modern planning for the area in arid desert, is worth of learning. For example, shadow space was used to promote the convection between the hot and cold in small scale to get breeze in micro-environment. And building material with heat insulation like soil and thick brick was used widely to refuse the heat wave outside. In addition, Karez is one of the most outstanding achievements in desert people have done, which even affecting on people’s drinking supply today.

According to the analysis on regional climate character and traditional building wisdom above, some strategies in urban planning were proposed. The first was

compact layout, including the function layout of land use, building layout of space combination and residential unit layout with special community mode. The second was to build an efficient transport system and road network to advance the comfortable degree and decrease the consumption of nonrenewable energy. The third was to use local plants to establish green system with different levels and irrigation technology. The fourth was to suggest characteristic image and guideline on buildings, which could cope with high-heat and dry environment at the beginning and through historical accumulation gradually becoming a regional artistic and cultural value.

Finally, by using the low carbon planning concept and appropriate environmental protection and energy saving technologies effectively, the living environment in arid desert would be improved. As one of the new domain people try to explore to apply to climate change, the area in arid desert is expected to become the new home of the human.

Keywords: Climate change; Urban planning; Arid desert

Introduction

Land desertification is a global environmental issue. Since the existence of historical records, in China, there are 12 million hectares of the land have been turned into deserts, while at present, the desertification area has accounted for over 18% of the national land area[1]. To trace the reasons, most (accounting for 95%) of the land desertification was caused by human factors[2]. Therefore, doing a good job of protecting the land, developing and utilizing the land in a scientific way and conducting ecological comprehensive development rectification in planning and human constructions shall play an important role of relieving the desertification problem and improving the human habitats.

This Paper is based on the research of ecological planning strategies of extreme dry desert areas, and it is aimed at improving human life and working conditions through the ecological development construction activities of independent areas under typical climate conditions and intervening the desertification process through ecological measures.

1 Energy conservation and emission reduction have become the hot topics of the research of current planning and construction

Since the 2009 Copenhagen Climate Conference, the issue of climate warming has caused the broad concerns of the whole world; although the parties of the Conference failed to reach a consensus at the end, they have put the slogan of “Saving our mutual earth” into their schedule.

Meanwhile, the research of worldwide environmental protection and energy conservation has been booming. For example, a Masdar City has been planned for construction in the deserts areas of United Arab Emirates, and it shall be constructed into the world’s first “environmental protection city” that is totally dependent on solar energy to realize self-sufficiency and self-containment, and the zero emissions of waste water and auto emission and CO_2. Its goals of zero emission, zero waste and sustainable environmental protection have provided important experiences for the planning and construction of deserts area.

Starting from the Eleventh Five-year Plan, the environmental protection concept of energy conservation and emission reduction in China has been transformed from the original research and appeals into practical numeral planned targets, and the performance assessments have been conducted on the local governments and mayors. Not only has the nation promulgated a series of laws and regulations, enhanced the relevant policy system of energy conservation emission reductions, but also invested in ten major energy conservation projects, totaling more than 500 energy conservation projects[3]. On such a basis, the practice research of ecological planning and construction has entered the substantial stage.

Dry desert areas belong to the extremely feeble areas of the ecological system, and the effective utilization of energy and resources shall play an outstanding role in the aspects of energy conservation and emission reduction, and the ecological transformation on human habitat is not only an active intervention of the adverse environmental condition, but it is also an important research practice for the present planning practice of our nation’s low-carbon cities. Hence, an in-depth transformation on the production mode, life style and the basic planning concepts has been formed.

2 The Climate Characteristics of Extreme Droughts and Key Planning Points

The dry desert areas are widely distributed worldwide, and in our nation they are mainly distributed in the northwestern areas, which feature dry climate and scarce rain, sparse vegetation, and relatively such fewer humanity scenes as the population and cities, and are the areas that manifested the feeblest ecological system[4]. In the localities, it is extremely tough to conduct general outdoor activities, and with regard to such aspects as the air’s temperature, humidity, wind speed and heat radiation,

they most manifest the environmental characteristics of discomfort, thus affecting the working efficiency and human health. However, the areas' annual sunshine hours are all over 3000 hours, and are featuring the excellent conditions of utilizing the solar energy. Therefore, regarding the climate characteristics of these kinds of areas, their planning and constructions are mainly manifested in the following aspects：

a) Water cycling and intensive utilization

b) Sufficient utilization of solar energy

c) Windbreak and sand fixation through planting measures

d) Construction of comfortable human habitat

3 Drawing Experience from the Traditional Architecture Wisdom

Although these areas feature adverse conditions of natural environment, they have inspired the boundless wisdom of human being, especially regarding the constructions of the traditional architecture, which reflect the great achievements made by the locals in their fights with the nature. Through such special construction modes, they have been fighting against the threatening climate condition, which worth to be learned in modern planning and construction. For example：

3.1Sufficient utilization of shadow and gray space to form local temperature difference counter-flows

In the architecture and planning of these areas, the retaining walls on the roofs, narrow lanes and deep window holes are utilized to form the shadow and gray space; due to the dry climate, there is a big difference between the temperature in the shade and in the sunlight, therefore local air counter-flows can be easily formed, thus increasing the degree of comfort in local areas. Therefore, in the planning, the complex space construction is usually adopted in the courtyard so as to provide the shadow space in different times and different locations (Halike, 2005) , and meanwhile, through the shadow and gray space to organize the public open space, to form the main outdoor activity sites of the residents.

3.2Thick walls are laid with local insulation materials to fight against the high temperature

Local clay or bricks are mostly adopted for the traditional architecture, which feature excellent thermal properties, are heat-insulated and sound-insulated, without

chemical reactions, and the material units are small and they have stronger plasticity and elasticity, and even in modern time, they can be used in combination with stone, wood and steel materials, and they also cost lower.

3.3Kariz water gathering system

Kariz is an artificial facility used for the farmland irrigation and residents drinking by intercepting the underground water in areas with specific landform conditions, and it is the life line for the local agricultural production and residents' livelihood. Through an underground water collection, an enclosed channel that is shaded and protected from the wind is formed, thus greatly reducing the water vaporization, so it is a typical example of scientific use of water through human constructions. (DENG, 2010)

4 Planning Counter-measures

4.1 Compact Layout and Concentrated Functions

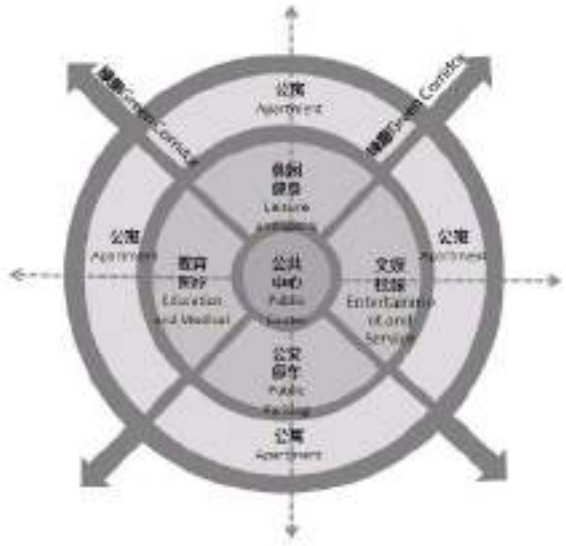

Figure 1. Diagram of functional configurations

In dry desert areas, due to the vast land and sparse population, the construction conditions are hard; generally it is necessary to have compact layout so as to reduce the invasion of the wind and sands. As for the public service facilities that are constructed in one period, it would be favorable to have concentrated layouts, have compound functions and comfortable environments so as to form intensive public cores and reduce energy dissipation and waste. Meanwhile, the service scope of the public service centers shall be moderately expanded, so as to reduce the construction volume.

The residential neighborhood shall be laid in a compact way so that, on one hand,

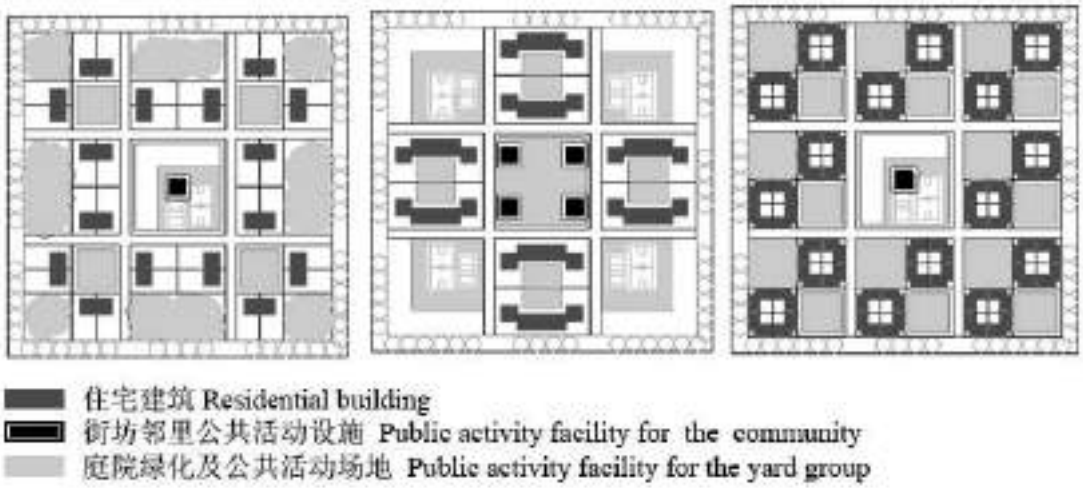

Figure 2. Diagram of functional layouts

shadings can be provided between the adjacent buildings, and, one the other hand, the visual concerns between the neighbors can play a soothing effect on the environmental psychology of the residents in the desert areas. It is possible to learn from the enclosure mode of residential layout, so that the shade space can become the activity centers of the neighborhood with mutual supervision and mutual cares.

4.2 Separate Setups of the Road System

The urban roads, due to the differences in the supporting transportation tools, shall be somewhat separated. As for the traffic of motor vehicles, according to the principle of convenient and flexible, the roadway should be settled down to every garage, but meanwhile, the driving time of the vehicles should be limited and public transportation should be encouraged by making endeavors to create more comfortable and efficient running conditions. As for the traffic of non-motorized vehicles and pedestrian traffic, efforts shall be made to provide special routes that are relatively shaded and moistened so as to reduce the discomfort of slow moving traffic. Therefore, roads for motorized vehicles and non-motorized vehicles or walking traffic shall be set up separately, and the road environment shall also be designed separately; while reducing the construction costs, these measures can create comfortable environments of walking traffic and biking traffic. It is also necessary to make efforts to adopt the design without the pedestrian lanes for the designs of the road cross sections and set them up with shadows.

Figure 3. Diagram of motorized lane and non-motorized lanes

Parking lots or garages shall be deployed with shading facilities so as to reduce the energy consumptions of the vehicles' pre-cooling. The outdoor concentrated parking lots can be provided with integral sunshade panels and meanwhile they can be combined with the solar energy heat-collecting panels so as to supplement the municipal power supply, or provide the charging services for the electric automobiles. What is worth mentioning is that since the technologies of electric automobiles have become increasingly mature, in the future urban planning, the deployments of charging stations shall also be taken into considerations.

4.3 Humanistic Outdoor Spaces for Public Communications

Regarding the outdoor spaces for public communications, in order to strengthen the comfortable feeling of the environment, sunshade system shall be provided, which can be divided into three levels：

a) Pedestrian lanes: By utilizing arbor for shading, meanwhile, combining with the shades of the bushes on sides of the pedestrian lanes, the counter-flows of cool air can be enhanced and the temperature can be reduced with the water scenes in local areas.

b) Shaded activity sites: Through constructing the solar gathering and adumbral system in the sites of public activities and combining with the water scenes, a small climate environment can be created. The special light and shadow effects, while enhancing the shaded areas, can also manifest landscape characters.

c) Shaded gray spaces: Shaded corridors should be provided to form a transition between the indoor space and outdoor space.

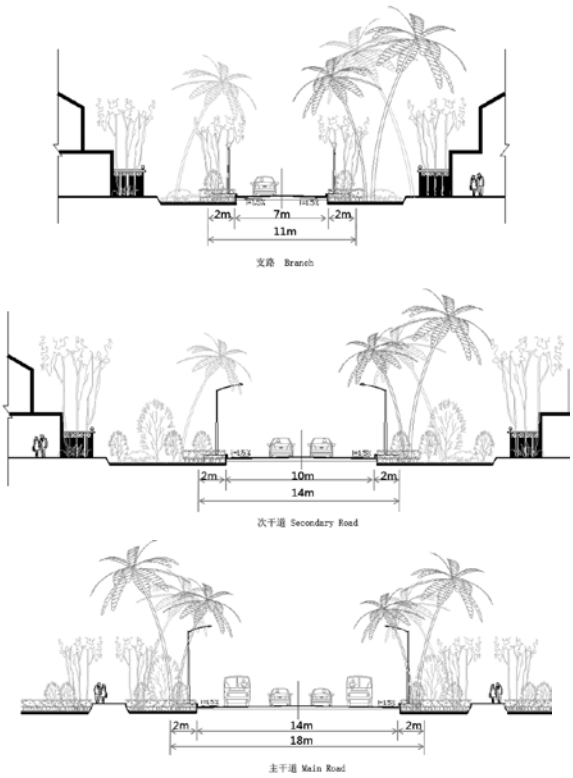

Figure 4. Road cross-section diagram with motorized lane and non-motorized lanes separated

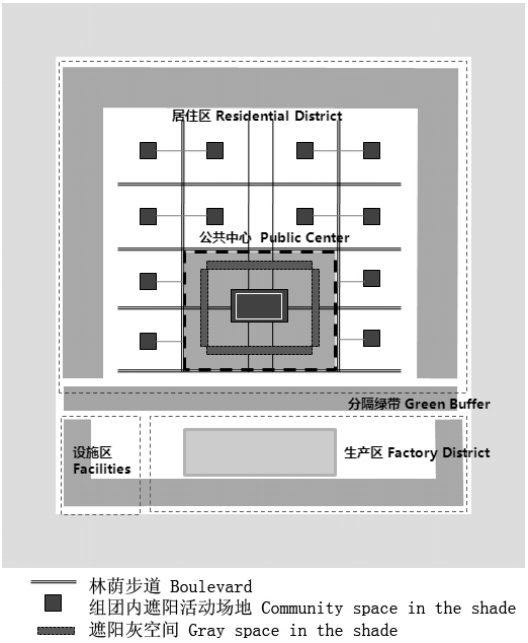

Figure 5. Diagram of outdoor spaces with public communications

4.4 Set up Green System in Different Layers

The planting costs in the dry desert areas are extremely high, and the planting effects of most local plants

that adapt to the local climate are not strong. Therefore, the landscape function of planting should be somewhat weakened, and the functions of windbreak and sand fixation and ecological nourishing should be elevated accordingly. Regarding different land sections and different planting needs, emphasis should be given to a green system with different position, different investments and diversified plant arrangements.

a) Outer sand protection green belt: In the vicinity of the planned areas and the directions from which the sandstorms are coming, the green belt for windbreak and sand fixation should be planted. The importance of providing such greening belts is similar to that of the setup of the flood wall and they shall be arranged and their seeds shall be selected in a scientific way, basically giving less consideration to the landscape effects. Meanwhile, nursery gardens shall be set up in their surrounding areas for cultivation and planting observations, which form a mutual enhancements and supplementations with the green lands of windbreak and sand fixation. By this way, the green belt can be maintained through timely supplementary planting. The planting vegetation in such green belts need to have concentrated irrigations with drip irrigation technology through the municipal water pipelines.

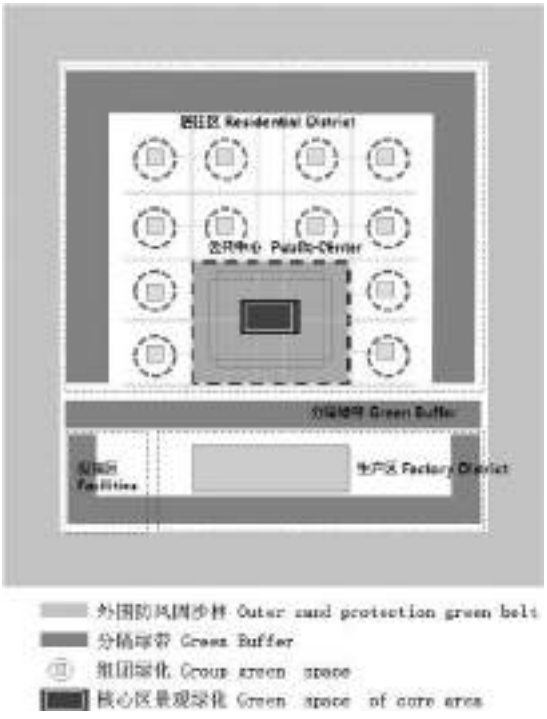

Figure 6. Diagram of outdoor green system layouts

b) Inner sand protection green belt: Green belts with certain heights shall be set up in the surroundings of the areas where there are intensive resident activities, which shall feature both the function of windbreak and sand fixation, and the function of landscape and shadowing. As a result, while the residents can be protected from the harms by sandstorms, they can also acquire a psychological cooling sensation through visual effects and elevate the degree of comfort. Such kinds of green belt have concentrated irrigations with drip irrigation technology through the municipal water pipelines also.

c) Group green space: Courtyard green space shall be set up in the residential building groups which are combined with the resident activities, which mainly feature the landscape and shadowing functions, and somewhere the arbors planted with flowers for appreciation. They shall be irrigated with reused water after anaerobic effluent treatment from living waste water.

d) Green space in core area: Intensive and high efficiency green space shall be provided in the public core areas, which mainly feature the landscape and shadowing functions; Meanwhile, the hardened ground surface and arbor planting shall be combined with each other ,and sometime the lawn patches and flowering plants for appreciation are also needed. They shall be irrigated in a concentrated way through the municipal water pipelines.

4.5 Elastic Reservations and Rapid Construction

Since during the initial construction phase of the dry desert areas, it mainly features the intensive construction, with the smooth operation of the energy and ecological system as the main goal; when the development of an area is relatively stabilized, it will, just like most of the cities and towns, attract more people to settle down here and practice their occupations, which expand the city functions. Therefore, in the planning, it is necessary to provide the possibility of future expansion so as to avoid the damages to the newly formed green belts and the ecological system caused by the expansions of the growth borders of cities.

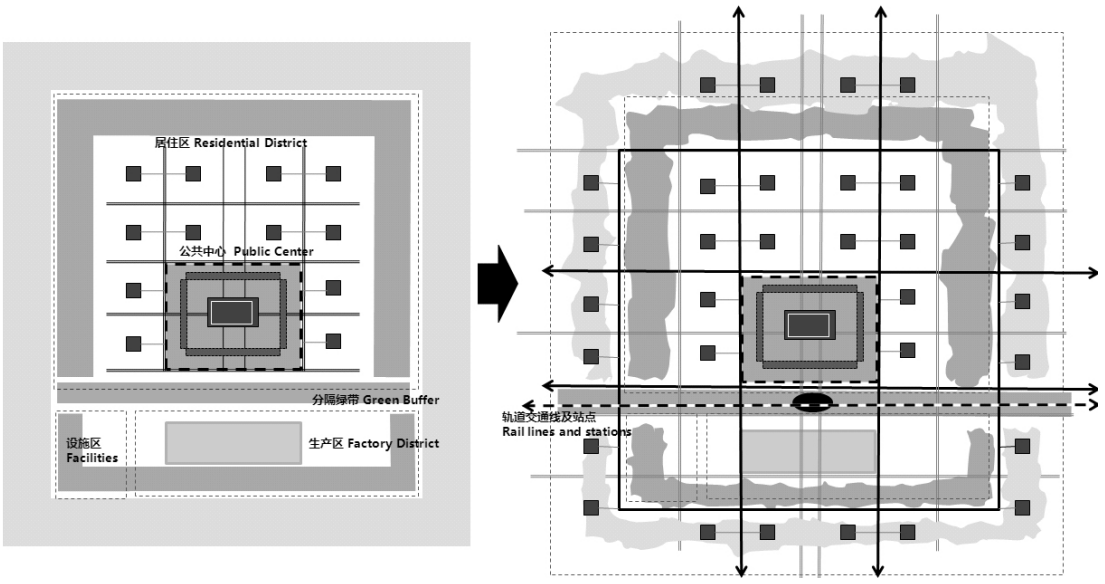

Figure 7．Diagram of cluster expansion and transformation

a) The planning of road networks shall mainly be based on square grids, with

reserved possibilities of outward expansions.

b) Protect most of the living vegetations, which is potential to be transformed into urban green belts with different functions in the process of urban expansion.

c) New area shall be developed with the form of blocks so as to avoid removing and reconstruction.

d) Since the civil engineering activities are mostly conducted outdoors, it is necessary to elevate the construction speed and efficiency and shorten construction periods. For the engineering facilities which need constant maintenance and some functional blocks with shorter utilization periods, they would be preferable to adopt the modular components, which feature elasticity of transformations, or the modes of out-site production and on-site installations can be adopted so as to elevate construction efficiency.

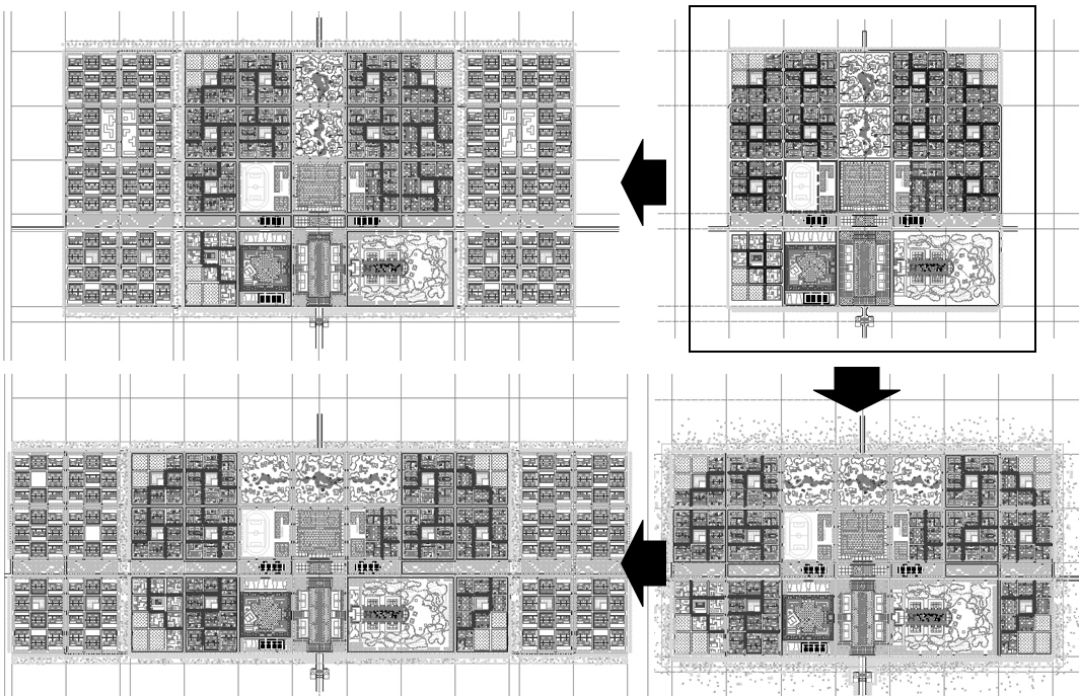

Figure 8. Diagram of urban growth

5 Relevant Ecological Technical Assurances

During the process of realizing the above planning measures, the applications of energy conservation and environmental protection techniques are indispensable, especially regarding such aspects as the reclaimed water utilization, electric generation with solar energy and windbreak and sand fixation. At present there have

been rapid progress in domestic and foreign energy conservation and environmental protection techniques; however, although some techniques are advanced, they do not feature the conditions for wide applications, either because the technical process is too complicated or the costs are high, or they are too particular about some preconditions. Nevertheless, dry desert areas are bound to be the important areas for human beings to fight against the nature through science and technology, and the steps of their research and exploration shall never cease.

In the following, some of the relatively mature ecological technologies that are suitable for uses in the dry desert area are selected so as to ensure the realization of the measures.

a) Greening plantations and plant irrigation techniques: Generally there are three kinds of irrigation techniques as border irrigation, furrow irrigation and drip irrigation, among which the drip irrigation technique features the most advantages. Based on a simple principle, the drip irrigation technique drip the water onto the precise locations of the plants. Compared with the open type irrigation which has 40% water used efficiently, the efficiency in the use of water with the drip irrigation technique can reach as high as 70～80%, so the limited amount of water can get maximum benefit. It not only can effectively save resources, control evaporation, but can also reduce the plants needs on fertilizers, prevent the soil's salinization and prevent weed growth.

b) Techniques of windbreak and sand fixation: There are generally such three categories as biological sand fixation, engineering sand fixation and chemical sand fixation.(LIU, *et al*, 2002)

Biological sand fixation technique: establish artificial vegetations or protect and restore natural vegetation, and generally it is necessary to provide mechanical or chemical sand fixation techniques as supplements. Local plant species shall be selected first for the biological sand fixation.

Engineering sand fixation——sand barriers which blockade the movements of sands through engineering measures, are divided into the two forms of flat layout and vertical layout.[5]

Chemical sand fixation——fix the flowing sands by utilizing the sand-fixing agents. Sand fixing agents can be directly sprayed on the ground or mixed with sand soil, and it can form a protective membrane with the sand soil, thus effective fix the sand and prevent the movements of the sand soil; meanwhile, absorb and reserve the rain water so as to ensure the vegetation viability and speed up the growth; for example,

the uses of water retention agents, ABT, and PG reagent.

c) The technique of geo-thermal heat pumps: Retrieve the heat from the shallow soil or underground water or release heat to them, and, through the geo-thermal heat pumps units distributed in the various rooms, directly change it into the heat wind or cold wind, or provide heating or chilling for the rooms.

d) The technique of reclaimed water recycling: Currently the membrane separation technique is adopted commonly but features high costs. The reclaimed water technique in combination with biological technique has gained certain market shares. And the technique utilizing the nuclear technique will be used to greatly reduce the costs, but which have not been widely promoted.

e) Solar power technology: Concentrated solar energy power station features low costs and high efficiency. The concentrated deployments of patches of solar energy heat collection devices can make the utilization of solar energy sufficient. In addition, the application of solar photovoltaic walls panels as hanging components on the building facades is also an effective means of reducing the energy consumption of single units.

Results

By using the low carbon planning concept and appropriate environmental protection and energy saving technologies effectively, the living environment in arid desert would be improved, especially from water supply, energy saving and wind resist and sand fixation. We can see from the historical immigration and the wisdom of people how to govern the diverse lands that even the environment is threatening but people will never give up to conquest new lands for living. As one of the new domain people try to explore to apply to climate change, the area in arid desert is expected to become the new home of the human.

Conclusions

The ecological planning and construction of dry desert areas manifest the human beings' splendid vision of improving the living environment through science and technology, mitigating climate change and creating a harmony relationship with nature. Amid the current era when the techniques of environmental protection and energy saving have been constantly maturing, the planning and constructions in many areas are still following the behindhand strategies and approaches, while such concepts of low-carbon, energy saving and environmental protection are still a mere formality. Therefore, how to concretely fuse the low-carbon concept in planning and

practically utilize appropriate techniques of environmental protection and energy saving is an important step that all the practitioners of planning shall be striving for.

Notes

1. Based on the statistics revealed by State Forestry Administration P.R. China, in 2011, the sandification land in China had reached 1731100km^2, accounting for over 18% of the national land area, affecting 30 national first class administrative regions (provinces, autonomous regions and municipalities). The desertification land in China had reached 2623700 km^2, accounting for over 27.33% of the national land area.

2. Excessive deforestation accounted for 32.4%, overgrazing 29.4%, overuse 23.3%, inappropriate utilization of water resource 6%, sand dune movements 5.5%, urban and factory and mine constructions 0.8%.

3. It is specified by the revised "Law of energy conservation", which was executed on April 1st, 2008 that the resource reservation is one basic national policy of our country.

4. This kind of areas usually features big temperature difference, enormous sand, and the soil layers have coarse quality and lack organic substances and are strongly salinized. The annual rainfall is less than 250mm, with some areas even having less than 20mm, while the annual evaporation capacity reaches 2400mm～3000mm. There is strong northwest wind, and there is a tremendous amount of sand blown by wind. The average temperature in summer is above 30 ℃, with the highest summer temperature

5. The flat-laid sand-buffer is made of such materials as the firewood, stalk, clay, tree branches, laths and pebbles, which can reduce the wind's speed and fix the sand surface. The vertical sand-buffer involves the setups of lines of blockages on the passing routes of the sand blown by wind so as to reduce the wind speed and deposit part of the sand, thus playing the functions of windbreak and sand fixation.

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COMPETING REGIONAL DEVELOPMENT DISCOURSES: CONCEPTUAL FOUNDATIONS, AND THE RECENT EVIDENCE

Hüseyin Çiçek[1], Ayda Eraydin[2]

Abstract

Over the last few decades, the regional development discourses and theories have changed substantially, parallel to changes in the economic regimes in world. The shift from the traditional regional development theories, which focused on industrialisation efforts via large-scale enterprises and transfer of central government funds to disadvantaged regions, to regional development based upon endogenous capabilities and potential of innovation and knowledge creation.

This paper provides an overview of the theoretical literature on regional economic growth and examines its conceptual foundations, major competing paradigms, and aims to discuss and evaluate the explanatory power of different theoretical frameworks to explain the growth of regions in Turkey in the recent period. In order to achieve this aim, after deciphering and concretising various classical and contemporary regional economic and territorial models, the paper introduces the studies on the evaluation of three main types of approaches to regional development namely external state support, development based upon local dynamics and knowledge based economy in the Turkish regional/provincial context.

Using the panel data on 81 provinces and annual figures from 2005 to 2008, the research evaluates the regional models with more explanatory power compared to the others. The findings are important to discuss effect of the contemporary theories that emphasize the endogenous factors.

1. Introduction

The regional development discourses and theories have changed substantially, parallel to changes in the economic regimes in world. The shift is mainly from the traditional regional development theories to regional development based upon endogenous capabilities and potential of innovation necessitating knowledge creation.

This paper aims to discuss and evaluate the explanatory power of different theoretical frameworks to explain the growth of regions in Turkey. In this context, paper firstly provides an overview of the theoretical literature on regional economic growth and examines major competing paradigms. Later, regional development policies of Turkey are encapsulated. After giving hypothesis of the paper in the fourth section, in the fifth section empirical model design is explicated. Main characteristics of variables used in the econometric analysis are

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briefly explained in the next section. Model results are explained in the seventh section. Finally main findings of the paper are summarized in the conclusion section.

2. Development Theories

Regional development theories were built up by perception and representation of current socio-economic environment; assumptions on society, individual and market; objectives and policy tools. Regional development paradigms have evolved parallel to the changes in these concepts. Three paradigms define the regional development history spanning from post-war years towards the contemporary world (Eraydın, 2004; Tekeli and Pınarcıoğlu, 2004).

The first paradigm that had been the basis of the theories and policies in regional development up to the 1970s crisis was parallel to national economic development discourses dominated by planned development idea in the Keynesian welfare state period. The 1970 crisis became the turn of the policies that emphasised market dynamics and competitiveness as the source of growth. In this era, local production dynamics and to achieve competitive advantages by the use of local capabilities were underlined. The increasing forces of globalization in 1990s caused to birth of the third paradigm, which has been developed around knowledge economy concept.

The context of regional development approaches that is also defined by mode of regulation, regime of accumulation and mode of production in three periods are summarized in Figure 1.

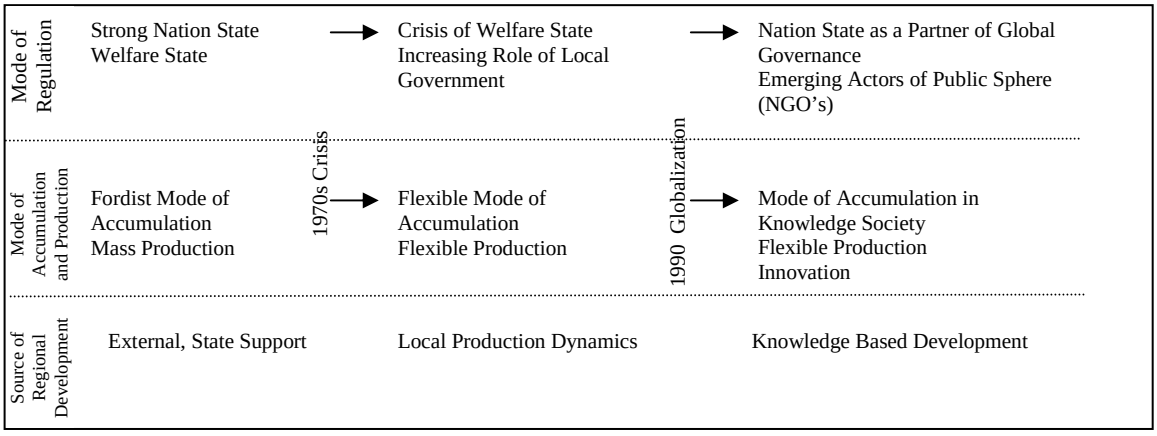

Figure 1 General Characteristics of Three Regional Development Periods

2.1 External State Support

The 1930 crisis and Second World War led to Keynesian welfare state policies, which aimed to bring regulations to the existing capitalist systems, especially the ones related to the redistribution of resources. It offered a planned developmentalist perspective and defined state as the main actor of development. In this period, it was believed that regional

development can be initiated by external support mechanisms, which facilitate the development process by creating infrastructure and leading productive units rather than regional internal dynamics. Therefore, it was argued that local resources can be activated and supported by transfer of resources by the state. Strong nation state and measures for public resource transfers for development were the main characteristics of the first period.

The regional development theories of this period have a high level of abstraction (Eraydin, 2002). They reflect the economic principles and aimed to define basic factors of development, such as external economies and multiplier effects. Regional growth, in this period, was defined as externally driven (external demand, redistributive decision of the state, external decisions of transnational companies). Factors of regional development were outlined as large scale investments, economies of scale, agglomeration economics, externalities and capital accumulation-investment dynamics, vertically integrated economy, and traded interdependencies (Eraydın, 2004).

The dynamics of regional economy were theorized in growth pole theory and economic base theory. Besides, some theoretical efforts were focused on defining regularities of spatial organization and emphasising locational choice problem of production units as well as service enterprises. Economic base theory defines basic sector as the source of development of regional economies that induce multiplier effect on the other sectors and the total economy. According to this theory, selling locally produced goods and services to consumers outside of the region create economic development (Stough and Maggio, 1994). Therefore, it accepts regional growth as a function of increase in export demand. Likewise, growth pole theory argues that economic development strategy should focus investment on a specific sector—that is the growth pole, or sectors, to initiate propulsive development (Stimson, et. al., 2006). In Perroux's (1950) original formulation, a growth pole is referred to as a core that is able to facilitate linkages between firms and industries. In essence, growth in this model is dependent on three sets of processes: large firms, knowledge creation and transfer, and new technology (Plummer and Taylor, 2001). Perroux (1950) also viewed management -by government, large enterprises, or entrepreneurs- as the main driver of regional growth. The growth pole concept has been intensively revised, extended and complemented with other modern economic geographical concepts. The literature was consequently enriched by concepts as industrial complexes, formations, industrial districts and clusters (Harrison, 1992).

2.2 Local Production Dynamics

1970 crisis which caused to eventful changes in economic regimes in the world brought new regional development approach based on local production dynamics. The economic crisis was considered as the end of Fordism and the emergence of the new form of industrial production organization. There have been several attempts to theorize the dynamics of territorial development. As some SMEs and SME clusters were less affected in the crisis, were able to recover in a very short period and began to grow, these efforts were focused on post rationalization of successful SME concentrated areas. Therefore, the theoretical attempts of this period focused on the endogenous nature of growth which became the new nodes of growth in the period of new production organisation system. Flexible production system was

the response to the problems of Fordist type of production and industrial districts and clusters were identified as the means of achieving and maintaining local economic success. Several theoretical debates are introduced that discussed the spatialisation of flexible production.

Flexible-production theory blends elements of regulation theory, institutionalist economics, evolutionary economics, and transaction costs according to Plummer and Taylor (2001). As a model of local economic development, flexibility model is technologically driven and hinges on the local integration of firms through the exchange of goods and information. This integration enables to achieve local external economies of scale and scope and minimizing transaction costs. Flexible production theory also emphasizes trust and reciprocity, the role of small and medium-sized firms on innovation, role of R&D for developing differentiated and localized products.

Industrial district and cluster theories, on the other hand, were formulated around geographical proximity, external economies, agglomeration economies and interaction concepts. Industrial district theory and cluster theory foreground collective pool of knowledge, local skilled labor potential, information exchange facilitated by various forms of social capital, especially the cultural norms of trust, local cooperation and reciprocity, production for the same end market, regional production organizations and locally embedded relations (Eraydin, 2004). Informal links through cooperative and competitive relationships, broad product range and high specialization, low transaction cost, creativity and social and economic reform, creative environments also defined as the assets of industrial districts (Belussi, 1999). Therefore, historical and socio-economic factors become so important to understand new industrial districts (Mouleart and Sekia, 2003).

In these theories regional development was perceived as dependent on internal potentials. Local potential was the core of the regional development literature in the 1970s and 1980s. Elements of development were defined as human capital, local integration of firms, exchange of knowledge and experiences, social capital, trust and reciprocity, geographical proximity, external economies, agglomeration.

2.3 Knowledge Based Economy

While in a highly competitive, borderless environment knowledge economy become more noticeable due to increasing globalisation and production, regional development is redefined in this context. Achieving the capabilities of knowledge based development became the core of theories of regional growth, while the importance of local production dynamics lost their dominance. Knowledge, learning and innovation raised its significance in this period and growth dynamics of regional economy were theorized in innovative milieu, learning regions and regional innovation systems.

Innovative milieu theory offers the space as source of innovation and development. The innovative milieu theory is based on relation between actors and their environment; it interprets spatial characteristics to development as the source of innovative processes and synergies. In innovative milieu theory, innovations and innovative actions are the result of a collective, dynamic process of numerous players in a milieu. The theory also defines the

importance of other factors such as, innovation oriented infrastructure, social homogeneity, governance, identity, network synergy, promoted linkages, knowledge transformation and learning. Therefore, innovative milieu theory underline directly the innovative capacity of the different members of the milieu, which depends on the capacity of learning and thus cultural factors, including social capital, trust and cooperative organization.

Similarly, learning regions are considered as an important debate on regional development in which the main actors (politicians, policy-makers, chambers of commerce, trade unions, higher education institutes, public research establishments and companies) are strongly, but flexibly connected to each other and are open both to intraregional and interregional learning processes. Learning regions build their advantage through creation, dissemination, use and improvement of knowledge which requires knowledge creation institutions and infrastructure (physical, communication and production), intraregional and interregional networks and social capital. They also necessitate skilled human capital to use knowledge, continuous education and training for achieving a high level of skilled human capital.

Moreover, elements of innovative milieu, learning regions and system of innovation were formulated in such a way to define a regional innovation system. Regional innovation system paradigm argues that collective learning and cooperative actions are important to enable regional development. Main factors highlighted by the regional innovation system are innovation and innovation policy; knowledge, learning and training system; interaction between actors (firms, R&D institutions, universities, etc.); employment; labor division; soft infrastructure; universities; small and large firms, entrepreneurs; trust and regional budget.

2.4 Determinants of Growth Defined by Different Regional Development Models

As the brief summary of the theoretical debates on regional development, the determinants of growth/development differentiate substantially in different development discourses. In the first period, regional development was accepted to stem out of external dynamics rather than internal dynamics of the region. External interventions can activate internal potentials and led to development. In this period, investments and incentives of state, large scale infrastructure and manufacturing projects sectoral agglomerations were defined as the major means of development.

Regions with local production dynamics have gained importance in the second period when redistributive role of state decreased due to crisis of the state and deregulatory measures adopted. Local skilled labor, entrepreneurship, local cooperation, R&D, small and medium sized firms, knowledge transformation through interaction of businesses, political decision-makers, institutions and the workforce were underlined in the theories of endogenous growth.

Knowledge economy is much more emphasized in the recent decade Different than the theories centered on intangible factors parallel to growing emphasis on endogenous potentials, contemporary theories see dissemination of knowledge, learning, innovation and innovative environment as the sources of regional development. Table 1 summarizes the components of development defined by the different regional development paradigms.

Table 1 Development Factors by Regional Development Paradigms

Explanatory factors	External State Support	Local Production Dynamics	Knowledge based development
Export	*		
Basic sector	*		
Agglomeration in a specific sector	*		
Linkages between firms and industries	*		
Large firms	*		
State support	*		
Local skilled labor		*	
Entrepreneurship		*	
Local cooperation		*	
R&D		*	
Small and medium sized firms		*	
Knowledge transformation and learning		*	*
Interaction of businesses, political decision-makers, institutions and the workforce		*	*
Social capital		*	*
Capacity of learning			*
Innovation			*
Innovative environment			*
Continuous education			*

* Denotes that the variable is an significant factor in a given theory

3. Regional Development Policies of Turkey

Turkey has prepared plans to stimulate social, economic and cultural development since the beginning of 1960s. National development plans of Turkey gave a special importance to regional inequalities and developed regional development policies compatible with concurrent regional development paradigms. The period between 1960 and 1980 was state-led policies period for regional policy. State was the main actor and policy tools were developed in this context.

The 1960s designated a new Constitution and “the planned period”. In fact, it was an attempt to rationalise the growth process and put it into discipline in order to avoid the ups and downs in the economy as it was experienced in the earlier period. The same idea was applied to regional questions. In order to improve the capacities of different regions, which is believed to contribute to the economic development, different regional plans were prepared beginning

from 1958. In the First Five Year Development Plan document "Regional planning" has been described as *"the plan that defines the natural resources and their efficient use, which helps the proper use of land and determines and schedules the public activities that are needed"*. The regional development Projects are prepared for East Marmara, Antalya, Çukurova, Zonguldak and Keban regions during the 1960s. As the distribution of regional development projects showed, most of the planned regions were either relatively prosperous ones or the regions with certain potential for development.

In this period new planning system and institutionalisation of national development planning endorsed several studies on regional differences and the settlement hierarchy. Moreover, as a reaction to the strong emphasis on economic development, the debates on the National Physical Planning attracted very wide attention. The discussions on the National Physical Plans indicated the need to blend national economic objectives with the ones related to the spatial organisation of productive activities and the urban settlement system (Tekeli, 1971; Erder, 1969). Although the discussions related to "spatialization of development plans" took place in the official documents, there happened little efforts to institutionalise this aspect of planning. Instead, a group of experts in the State Planning Organisation were assigned to evaluate the regional issues in planning. The context of the regional policies and regional plans prepared in that period were consistent with the import substitution policy that became the basis of industrialisation in the 1960s. The plans mainly tried to define the industries that can have comparative advantage in the domestic economy and put limited emphasis on export promotion.

Although there was no change in the economic policy, 1970s denoted important changes in regional policies. Firstly, the emphasis on public sector investments was faded in favour of private entrepreneurship. The regional development is seen as "*a cooperative effort of defining natural resources of regions and supporting the most advantageous fields of activity in these areas*". This new perspective and the lack of administrative capacity and institutionalisation to implement regional plans meant the end of regional planning. Instead, incentive schemes were defined as the major tool for reaching the regional objective of convergence. Even in the plan documents prepared by State Planning Organisation, it was refrained to use the word *"region"*, whereas several studies conducted in order to determine areas eligible for assistance. The huge rate of inflation, lack of foreign reserves and increasing unemployment during the 1977-80 periods enforced a radical change in the economic and industrialisation model. Import substitution model, which dominated the economic policies for more than twenty years, has been abandoned in favour of export oriented growth. In fact, 1980s became the turning point of economic policies in Turkey, from protectionist attitudes dominated Turkish economic policy prior to this period (Kazgan, 1985, Boratav, 1988) to increasing reliance on market forces.

Under the new economic relations, although encouragement incentives still accepted the main tool of regional policy, Southeast Anatolia Development Plan became the core of attention. In this period, it is also possible to observe increasing attention on "local", which reflected itself on local administrative system, municipalities and local conditions. Reforms, in the form of delegation of power the local bodies stayed unsatisfactory and limited change in the centralised character of the state was succeeded. While the newly emerging conditions created the new models of regional and local institutionalisation and decision systems in

many countries, these issues stayed untouched in Turkey. The state defined several fiscal rearrangements as parts of export oriented development program. During 1990-93 period new regulations related to floating exchange rate and mobility of capital were brought, which aimed to integrate Turkey to the global economy. However, as seen in many places in the world, this integration deteriorated the capacity of the earlier mechanisms and necessitated new fiscal management policies, which was not taken into account by the governments at that period. As a result, the distortion in the balance of public finance and the wrong policies to deal with increasing interest rates caused the crisis of 1994.

1994 financial crisis had important consequences beyond the economy. It caused the decline in income per capita and led to important degradation in less developed regions, especially in Black Sea Coast and Eastern Anatolia. As expected, the period after 1994 financial crisis has been again devoted stabilisation policies and reforms for recovery. The aim was to change the high rate of inflation conditions and to increase private sector investments especially in productive sectors. The change in the strategy adopted by business enterprises was vital, since during the1990s instead of investment private enterprise directed most of their savings to treasury bonds, which increased the domestic debt burden of the state. That is why the new economic policies have been mainly directed to create a new economic environment via controlling both the interest rates and the rate of inflation. This situation caused the dominance of short-term needs in the economic policies. Economic problems and decline in income per capita, however, brought the regional discrepancies back into the agenda. Beginning from 1998 the regional plans have been prepared for Eastern Black Sea and Eastern Anatolia Regions. These regions, which fell behind in the development process, have relatively few resources. That is why although there was strong concern to use local potential for development, still the plans followed the traditional approach and gave a strong emphasis on public investment programs. However, there has been increasing awareness that public resources were limited and all infrastructure and productive activities cannot be realised by the public sector. These contradictions stimulated the discussions on “how to define the regional policies to promote growth in regions with limited capacities in the contemporary economic system, where state has limited financial resources and has limited capacity to manoeuvre the global forces”.

The liberalisation of the economy and the deregulation of the financial markets during the 1980s increased the importance of external factors and brought volatility to the economy. Fewer restrictions on the flow of goods provided for a rise in exports, but also increased the amount of imports, which brought negative impacts on the balance of payments. During the 1990s the economy faced several financial crises, which had a negative effect on the financial and production sectors. Different to the earlier economic crises, the crises of 1999 and 2001 meant job losses in specific activities that employed highly skilled personnel, such as banking, as well as financial problems in some production sectors.

In this period it became clear that the pragmatic solutions introduced in the 1980s were not enough to meet the increasing needs of deregulation in the global market. The liberalisation of the economy and integration to the global markets necessitated new administrative reforms, which were mainly imposed by the International Monetary Fund (IMF) and the European Union. In fact, the rules imposed by the EU during the membership negotiations

were mostly related to social and political issues, including governance. During the 1990s, besides important changes in the economic system and deregulation related to trade and finance systems in the previous decade, several important changes were introduced in Turkey in order to comply with the rules of EU and other international institutions, which affected also the existing structure of urban governance (Altaban and Duyguluer, 2004).

In 1999, Turkey has gained candidate status for the European Union in the Helsinki Summit and internal political developments have led to step up efforts for integration with the European Union (Filiztekin, 2008). Besides, 2001 crisis that Turkey experienced pointed out the need of significant policy change. Therefore after 2001 significant changes occurred in regional policy which is developed in cohesion with EU regional policies. In the Eighth Development Plan (2001-2005) and Ninth Development Plan (2007–2013), substantial changes occurred in the regional policies. In the plans, the global economy is taken as a new social reality which involves both opportunities and threats for national development.

Moreover, the agenda imposed by the international institutions enforced the decentralisation of public administration, which has become a key government priority in Turkey since the early 2000s. New laws were adopted to create new mechanisms to transfer major spending powers to Special Provincial Administrations, Metropolitan Municipalities and other Municipalities. Secondly, the new regulations redefined the new roles for metropolitan governments in the provision of services. The new roles assigned to local governments covered education, health and protection of cultural and natural resources, which meant an increased role for the metropolitan municipalities against central government institutions. Third, the new legislation that was adopted in 2005 increased the resources of local governments. Lastly, the Regional Development Agencies are defined as a part of decentralisation of administrative mechanism, although still the dominance of central government is important in decision mechanisms of the agencies established at NUTS II level.

The Turkish experience is important, since it shows the difficulties in formulating regional policies not only in the past but also in the contemporary period, which is increasingly defined by global pressures. It indicates that it was quite hard to follow the consistent regional policies during the development based on import substitution type of industrialisation due to the fluctuations of the economy, although the state has felt an obligation to give assistance to relatively less developed regions. However, the shift from state led development to neo-liberal economic policies at the national level caused a change in classical regional policies to export promotion assistance to regions. The new policy helped the regions with certain capacities and competence and motivated them to use all their accumulated competence in order to gain competitive advantage in international markets, but did not contribute the ones with limited capacities. The policies in the recent decade, although aware of the new conditions defined by the knowledge economy, it is difficult to say that the efforts to develop the innovative basis of the regions are substantial. Most of the regions do not have the capacity to be integrated to the knowledge economy.

In sum, special importance was given to regional development and the elimination of interregional development disparities in national plans. In order to ensure regional development and eliminating interregional disparities, instruments such as regional

development plans investment incentives and Priority Regions for Development policies, organized industrial zone and small industrial estate and rural development projects have been used in Turkey.

4. Hypothesis of the Study

Recent theories highlight technology and innovation, knowledge and learning, cooperation and competition, network and linkages, cultures and trust, social capital and governance. On the other hand, state support which are recognized as tool of early period, are still employed to reduce regional inequalities.

Although substantial amount of development factors have been proposed by theories and models, neither success of theories nor success of these factors is comprehensively discussed yet.

Therefore, hypothesis of this study is defined as state support has still significant contribution to regional development.

5. Empirical Model Design

Various theoretical framework and empirical analyses have emerged in growth arena as discussed. Substantial amount of factors have been proposed by theories and models. Recent theories highlight technology and innovation, knowledge and learning, cooperation and competition, network and linkages, cultures and trust, social capital and governance. It seems recently that there is consensus on factors of regional development, neither success of theories nor success of these factors is not comprehensively discussed yet.

Therefore, an empirical study was designed to test regional development paradigms/ theories. This test also enables us to identify and explain the relationship between factors and development.

After defining factors for each theory, factors eliminated and factors make sense and specific to the theory are kept. Sets of measurable variables and proxies are developed for each model to try to encapsulate the processes they recognize as driving growth.

Defining and choosing proxies that (best) express intangible factors and limits of available or attainable data are two main constraint of the study. Within this condition, proxies are developed to measure the variables drawn from the review of theories. 18 proxies are developed in preliminary analysis of three regional growth paradigms.

In order to select proxies that reflects factor ideally, factors and indicators identified in empirical studies defined and annual data availability for relevant NUTS 3 regions and for the period of 1980-2010 was checked. Practical limitations on consistent data availability are the main decisive in selection of factors. As there is no time series data for selected factors, study is done for 2005-2008 period.

In order to control unobserved heterogeneity, data for proxies are collected to get panel data rather than cross-sectional data. The period of coverage is from 2005-2008. Collected data is standardized by using variables (i.e. population, employment and area) depending on the nature of proxy.

Figure 2 NUTS 3 Regions of Turkey

It was aimed to use general-to-specific modelling strategy to evaluate the models of local economic growth, but overlapping period of available data is very limited to form a general (over parameterized model). Therefore general-to-specific modelling method is not used. For each theory, static model is established for panel data and tested. Empirical model design and analysis has been conducted using Oxmetrix 6.01. The factors and proxies are listed in Table 2.

Table 2 Highlighted Factors by Theories and Proxies Used

Factors	Proxies
Growth	GDP per capita growth
Export	Export per capita
Basic sector	Share of employment in agriculture, industry and service sectors*
Agglomeration in a specific sector	Share of sectors in GDP*
Large firms	Share of firms in top 100 highest tax to population
Public investment	Public investments per capita
State support	Existence of regional development plan
State support	Development priority provinces
Incentives	Per capita incentives to private sector investments
Local skilled labor	Share of vocational graduate*
Entrepreneurs	Number of established trade companies per 10 000 persons
Local cooperation	Number of established companies and cooperatives per 10 000 persons
R&D	Academicians per person
Small and medium sized firms	Number of SMEs receiving investment and operation credits
Innovation	Number of registered patent
Knowledge transformation and learning	Number of thesis per person
Capacity of learning	Student teacher ratio
Innovative environment	Number of technology development zone
Social capital	Number of established foundations per person
Continuous education	
External economies arise from existence of shared infrastructure, services, information	Number of OIZ Plot

* Interpolated using available data.

GDP per capita growth is used as dependent variable. As GDP data at NUTS 3 level is available until 2001, for 2005-2008 the data is only available for NUTS 2 level GDP values are distributed to NUTS 3 level using electricity consumptions.

6. Main Characteristics of Variables Used in the Econometric Analysis

GDP and GDP per capita values are the basic indicators reflecting the economic development. Although GDP per capita at Turkey performed significant growth, GDP per

capita is very low comparing with EU and OECD countries. GDP per capita in purchasing power standards of Turkey is about 48 % of EU-27 (EU, 2011). Similarly GDP per capita in purchasing power parity of Turkey is approximately 41 % of OECD countries (OECD, 2011).

Analysing GDP per capita at NUTS 3 level for the period of 2005-2008 shows that, increase in GDP and so GDP per capita at Turkey scale is also valid at NUTS 3 scale. Geographical representation of GDP per capita pattern at NUTS 3 regions shows gradually decreasing pattern from west to east in Turkey. Figure 3 shows 2008 GDP per capita by NUTS 3 regions.

Figure 3 GDP Per Capita by NUTS 3 Regions, 2008

Average annual GDP per capita growth rate (2005-2008) by NUTS 3 regions is illustrated in Figure 4.

Figure 4 GDP per capita Growth by NUTS 3 Regions, 2005-2008

In Turkey, public investment, particularly public infrastructure and social investment, is recognized as the most important determinant of capital accumulation, therefore development.

A historical exploration in Turkey public investment, one of the turning points is observed in the early 1980s. During this period, with the start of the transition from inward-looking import substitution to export-oriented and outward-looking structure, structure of public investment policies and priority sectors in public investments have begun to change. In general, the rule is left to national or global private equity actors. Private sector aiming financial profitability directed to investments brings high levels of return. Public sector aimed social profitability and began to intensify areas that are seen unprofitable by private sector, particularly infrastructure investment.

Figure 5 Total Public Investment per Capita by NUTS 3 Regions, 2005-2008

Figure 5 illustrate total public investment per capita by NUTS 3 regions. Ongoing or completed large cost public projects are very important in the distribution of investment to NUTS 3 regions.

Patents, as indicators of innovation plays significant role in economic performance and thus development. Patents per person significantly have increased in 2005-2008 period. This development pattern can be explained by implementation of patent laws, policies and incentives aiming to encourage technological developments increase in the number of universities and share of university graduates.

Even though the increase in registered patent increased in the recent decade, Turkey's registered patent is still very low compared to EU and OECD averages. This situation can be explained by low innovation performance, low investment on science and technology and modest R&D expenditures.

Historical development pattern of patent numbers at national level is also valid at NUTS 3 level but still there are NUTS 3 regions which have no registered patent yet. Geographical

distribution (Figure 6) shows that patents are concentrated on industrialized areas, lowest patent per capita ratio belongs to East and South East Anatolian NUTS 3 regions.

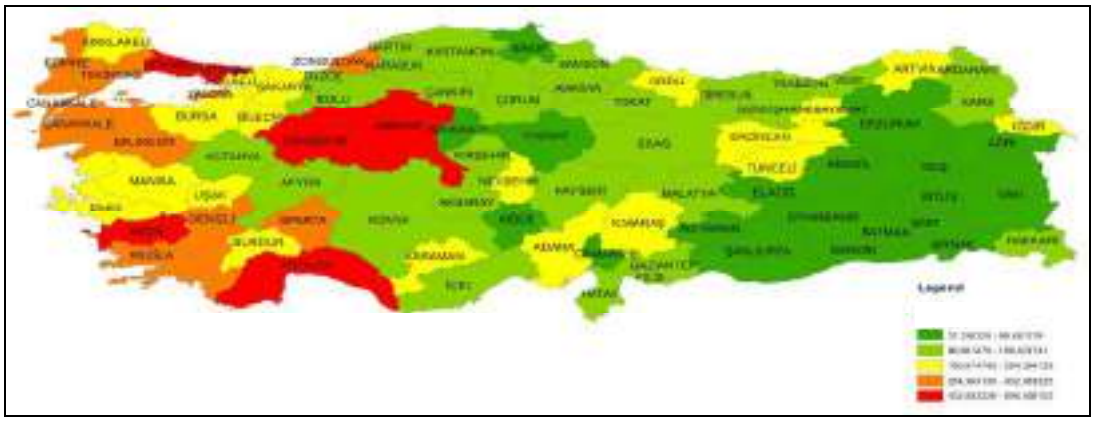

Figure 6 Total Registered Patent per Million Inhabitants by NUTS 3 Regions, 2005-2008

Number of established trade companies and cooperatives is the reflection of entrepreneurship capacity. Number of established trade companies at national scale is increased in the analyzed period, but after 2006, growth ratio started to decrease sharply.

Number of established trade companies per inhabitant shows more homogenous distribution on geography but south east Anatolia regions owns lowest values (Figure 7).

Figure 7 Established Trade Companies per 10 000 Inhabitant by NUTS 3 Regions, 2010

7. Model Results

From the GDP growth relativities for 2005-2008, the general model specification is as shown in Table 3. In the general model specification, the set of explanatory variables accounts for 32,6 % of the variability in GDP growth relativities between regions the period of analysis.

Table 3 General Model Specifications

	Coefficient	Std.Error	t-value	t-prob
Export	-2.99966e-005	0,0009	-0,0325	0,9740
Share of employment in agriculture sector	13,1705	5,7810	2,2800	0,0240
Share of employment in industry sector	12,8216	5,7670	2,2200	0,0270
Share of employment in service sector	13,2870	5,8330	2,2800	0,0240
Share of services in GDP	0,6556	0,1274	5,1400	0,0000
Share of industry in GDP	0,5488	0,0925	5,9300	0,0000
Share of agriculture in GDP	0,4098	0,1080	3,8000	0,0000
Number of large firms	0,1784	1,4900	0,1200	0,9050
Total public expenditure	-0,0004	0,0023	-0,1740	0,8620
Regional plan	-1,4062	2,3880	-0,5890	0,5560
Priority regions in development	-2,1452	2,3780	-0,9020	0,3680
Total incentives investment	0,0010	0,0012	0,9040	0,3670
Share of vocational school graduate	1,4597	1,1970	1,2200	0,2240
Number of established trade companies	0,0454	0,0271	1,6800	0,0950
Number of established companies and cooperatives	-0,1229	0,0677	-1,8200	0,0700
Academicians per person	-0,0251	0,0483	-0,5200	0,6030
Number of SMEs receiving investment and operation credits	0,7082	0,0936	7,5700	0,0000
Number of registered patent	0,1374	0,3037	0,4520	0,6510
Number of thesis	0,0105	0,0062	1,6800	0,0940
Total student teacher ratio	1,4045	0,3417	4,1100	0,0000
Number of technology development zones	-2,9678	2,2610	-1,3100	0,1900
Number of established foundation	0,0147	0,0621	0,2360	0,8140
Plot of OIZ	0,0003	0,0004	0,6000	0,5490
Constant	-1358,3200	580,2000	-2,3400	0,0200

R^2 0.3264279

no. of observations 292, no. of parameters 24

From the set of regionally specific structural variables eleven of them are statistically significant. Share of employment in three main sectors, share of three main sectors in GDP and number of trade companies, number of companies and cooperatives, number of SMEs, number of thesis and student teacher ratio are significant to explain GDP growth rates.

Those regions with higher capacity of learning as measured by student teacher ratio have higher estimated GDP growth relativities. Similarly, those regions with a better, knowledge transformation and learning as measured by number of thesis are predicted to have higher GDP growth rates. Besides, those regions with a better entrepreneurship tradition, as measured by number of established trade companies are predicted to have higher GDP growth rates. More controversially, those regions with higher local cooperation, as measured by the established companies and cooperatives, are predicted to have lower GDP growth rates.

Thus, while capacity of learning, knowledge transformation and learning, small and medium sized firms and entrepreneurship generate GDP growth in the Turkey context, levels of local cooperation is counterproductive.

The remaining variables are not individually significant. It is surprising that the variable intended to capture external state support; public expenditures and incentives to private sector investments and other regional development policy tools –priority regions in development, regional plan are not statistically significant and do not explain GDP growth in the general model. This is not consistent with our theoretical expectations. Similarly, number of large firms and export do not explain GDP growth in the general model.

Besides, local skilled labor as measured by share of vocational graduate, R&D as measured by number of academicians, innovation as measured by number of registered patent, innovative environment (as measured by number of technology development zone, social capital as measured by number of established foundations and external economies arise from existence of shared infrastructure, services, information measured by number of organized industrial zone plot are statistically significant.

Similar to the general model, in the external state support model only share of three main sectors in GDP which are representing agglomeration seems to be significant in terms of explaining the GDP growth. Other factors highlighted by the early paradigm and theories are not statistically significant (Table 4).

Although state support was emphasized in the first paradigm, state support and incentives have been seen as significant policy tool in many countries since first paradigm. European Union and Turkey employ this tool. State support represented by total public expenditure, regional plan, priority regions in development and total incentives investment have no effect on GDP growth according to model results, which is quite interesting.

From the set of variables representing local production dynamics only two of them are statistically significant. Number of SMEs as measured by number of SMEs receiving investment and operation credits and knowledge transformation and learning as measured by number of thesis explain GDP growth rates.

Table 4 External State Support Model Specifications

	Coefficient	Std.Error	t-value	t-prob
Export	0,0003	0,0008	0,3580	0,7200
Share of employment in agriculture sector	2,7918	5,7500	0,4860	0,6280
Share of employment in industry sector	2,5681	5,7630	0,4460	0,6560
Share of employment in service sector	2,8526	5,7850	0,4930	0,6220
Share of services in GDP	0,6288	0,1350	4,6600	0,0000
Share of industry in GDP	0,5582	0,1071	5,2100	0,0000
Share of agriculture in GDP	0,4897	0,1189	4,1200	0,0000
Number of large firms	-0,5014	1,1220	-0,4470	0,6550
Total public expenditure	-0,0017	0,0026	-0,6570	0,5120
Regional plan	1,0588	2,5700	0,4120	0,6810
Priority regions in development	-1,7909	2,6650	-0,6720	0,5020
Total incentives investment	0,0018	0,0015	1,1400	0,2550
Constant	-290,3100	577,0000	-0,5030	0,6150

R^2 0.08726124
no. of observations 292 no. of parameters 13

Those regions with higher number of SMEs have higher estimated GDP growth relativities. Similarly, those regions with a better knowledge transformation and learning are predicted to have higher GDP growth rates.

Table 5 Local Production Dynamics Model Specifications

	Coefficient	Std.Error	t-value	t-prob
Share of vocational school graduate	0,1447	0,9959	0,1450	0,8850
Number of established trade companies	-0,0108	0,0325	-0,3330	0,7400
Number of established companies and cooperatives	-0,0550	0,0504	-1,0900	0,2760
Academicians per person	-0,0827	0,0516	-1,6000	0,1100
Number of SMEs receiving investment and operation credits	0,7164	0,1005	7,1300	0,0000
Number of thesis	0,0143	0,0062	2,2900	0,0230
Number of established foundation	-0,0357	0,0462	-0,7740	0,4400
Constant	30,8007	4,6870	6,5700	0,0000

R^2 0.1666479
no. of observations 292 no. of parameters 8

It is quite interesting that local skilled labor, entrepreneurship, local cooperation and R&D that are highly stressed by second paradigm are statistically insignificant according to the model result.

Three of knowledge based development variables are statistically significant. Knowledge transformation and learning as measured by number of thesis, capacity of learning as measured by student teacher ratio and innovative environment measure by number of technology development zone explain GDP growth rates.

Those regions with higher capacity of knowledge transformation and learning, and innovative environment have higher GDP growth.

On the other hand social capital measured by number of established foundations per person and innovation measured by number of registered patent which are core of last regional development paradigm are not statistically significant.

Table 6 Knowledge Based Development Model Specifications

	Coefficient	Std.Error	t-value	t-prob
Number of thesis	0.0124520	0.005588	2,23	0,027
Number of established foundation	0,0578082	0,03926	1,47	0,142
Total student teacher ratio	1,04768	0,3009	3,48	0,001
Number of technology development zones	-3,70836	1,64	-2,26	0,024
Number of registered patent	0,503669	0,3453	1,46	0,146
Constant	11,7509	5,459	2,15	0,032

R^2 0.06756094
no. of observations 324 no. of parameters 6

8. Conclusion

We have attempted in this paper to test empirically different theoretical frameworks of regional growth for explanatory power of regional growth in Turkey. The transformation in the regional development paradigm can be observed in Turkey's regional development policies and practices. Therefore, it was intended to test for 1980-2010 period, but available data limited the study for the period 2005-2008.

Like many countries, available data to be used as proxies for the factors is insufficient in Turkey. Therefore much of the proxies are general. On the other hand, available time period of collected data is another barrier for such study. For example GDP data at NUTS 3 level is available until 2001. GDP data at NUTS 3 level is calculated by using GDP data at NUTS 2 level by using electricity consumptions. Although this issue is the weakness of the study, the

result of the study seems to be significant to discuss explanatory power of theoretical frameworks of regional growth.

Eighteen broad dimensions representing the hypothesized drivers of regional growth have been derived from the paradigms and theoretical models. A general model was developed within which the dimensions derived for the competing theoretical paradigms/ models were nested. The results of the empirical modeling process are conspicuous. While there are significant contributions of factors of local production dynamics and knowledge based economy in the general model, contributions of elements highlighted by state supported development is much more limited.

Agglomeration in a specific sector, number of small and medium sized firms, knowledge transformation and learning and capacity of learning are the factors that are statistically significant at least two models.

Table 7 Significant Variables by Models

Explanatory factors	**General Model**	**External State Support**	**Local Production Dynamics**	**Knowledge based development**
Export				
Basic sector				
Agglomeration in a specific sector	*	*		
Linkages between firms and industries				
Large firms				
State support				
Local skilled labor				
Entrepreneurship	*			
Local cooperation	*			
R&D				
Small and medium sized firms	*		*	
Knowledge transformation and learning	*		*	*
Interaction of businesses, political decision-makers, institutions and the workforce				
Social capital				
Capacity of learning	*			*
Innovation				
Innovative environment				*
Continuous education				

* Denotes that the variable is statistically significant in a given model

The study shows that while public expenditures and incentives to private sectors that are central to state supported development surprisingly do not have impact on regional growth in Turkey, local production dynamics and knowledge based economy models offer partial explanations of regional growth. Hence, there is no paradigm fully explaining regional growth.

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NEW INSIGHTS INTO OFFICE LOCATION AND RENTS

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Abstract

This communication presents a research on the reasons that shape offices locations and respective rent levels, within the scope of increasing globalization. It tests the hypothesis that the factors that shape the spatial structures and rents of the office markets are much strongly determined by urban planning and municipal investments than by variables more market-related, recognized in vast literature (Glascock et al., 1990; Bellini, 2000; Archer and Smith, 2003; Rabianski and Gibler, 2007; Ozuz, 2009). Thus an innovative methodology and model are proposed aimed at supporting the definition of urban strategies and policies concerning offices´ location and relocation, and corresponding influence on rent levels. They resort to a set of planning tools able to express the local characteristics of office markets. They are applied, as a case study, to the Porto's office market (Portugal). Implications for urban policies are inferred from this analysis. Some courses of planning intervention are further proposed that may consist, namely, in the regulation of property markets, in the indirect control on rent levels, and in a more local-based assessment of those markets.

This research is relevant for planning and public policies because it stresses the importance of urban planning interventions in office markets; it develops a urban management upgradeable information system; it overcomes some restrictions of previous location models; it settles a hedonic integrated and interactive non-deterministic model that fits the values that variables underlying rents may assume any time; it develops cartographic display and simulation functionalities (resorting to the use of geographic information systems); and it finally includes agents´ behaviours in the hedonic model of offices´ rents.

The assessment of the proposed model complements and enriches the operational application of hedonic models previously proposed in literature, and includes flexibility devices to support urban planning decisions on office markets. Besides, the results of this methodology and model will probably engender a reassessment and discussion on the role of public intervention versus market factors on urban office rents´ levels and trends.

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1. Introduction

Globalization processes, the structural organization of firms, information technologies and accessibility networks; the increasing importance of local markets and agents; the variables currently underlying location/relocation decisions and offices´ rents, and the concerns with the social function of land stress the importance of urban planning and municipal investments in the settlement of strategies and policies aimed at office markets.

But what is the relevance of planning options for the spatial structures and for the distribution of rents/m^2 in office markets? And what is the relative importance of public interventions when compared with the free initiative of promoters, builders and sellers? A better indirect control exerted by municipal authorities could launch the performance and characteristics of these markets! In order to respond to these queries, this research proposes an innovative methodology that renders operational the relation between planning and market variables, and offices´ rents/m^2, computing respective influences. It is articulated upstream with an urban management information system with upgrading ongoing functionalities, and downstream with a simulation and display interface (developed in geographic information systems). This operational assessment complements the application of hedonic models previously proposed in literature. The obtained results question the role of public intervention versus market performance on office rents**.**

2. Theoretical framework

2.1. Planning interventions in office markets

Should planning intervene on office markets? Within a global increasingly competitive scope, decisions on offices location/relocation depend more and more on macro-economic variables and, consequently, on public planning policies. And the future of cities, by its turn, depends on their ability to master strategic services, and to attract new office developments (Ihlanfeldt and Raper, 1990).

Municipal planning holds a series of social functions, namely to promote the public interest, to remove negative externalities, and to support the collection of decision data (Klosterman, 1996; Tang et al., 2000). In order to reach these goals, planning shall assure the availability of property for the different kinds of functional uses at acceptable prices, prevent excessive profits upstream and downstream the trade of development land, and guarantee the free the initiative of developers, builders and sellers (Rebelo, 2011), resorting to parameter setting, control over development licences, and distribution of surplus-values.

The municipality being the exclusive holder of development rights is out of question because of the risk that it involves for public finances (Rebelo, 2009). What are, then, the available ways for public intervention in office markets? It can control the development of specific uses and locations, even if it doesn't own property, or

through a temporary property ownership or even participation in public-private partnerships (Correia, 1993; Rebelo, 2009). It may also control specific general or particular developments resorting to planning or fiscal tools. Finally, it can shape property markets through the dissemination of data and guidelines on public participation. Planning intervenes in property markets through plans, regulations, administrative procedures or fiscal devices (Dunse and Jones, 2002). These interventions – through the regulation on development processes - shape the physical form of the built environment, and the territorial distribution of economic activities and values and is performed through (Ihlanfeldt and Raper, 1990; Rebelo, 2009; Rebelo 2011): straight provision of development land; zoning ordinances; legal incentives or restrictions; taxes on property; control of changes in land use or intensity of use; development costs; and investment decisions.

Municipal authorities can control rent levels through direct intervention in the competitive property market (Rebelo, 2011), providing their own alternative land parcels whenever private plots reach disproportionate prices (Tang et al., 2000; Rebelo, 2009).

Legal incentives and restrictions - namely fiscal incentives, zoning ordinances, building regulations, or subsidies -, control over changes in land use or intensity of use, development costs, or decisions on investments are able to shape the profitability of certain areas through their mediation role between the economic cycles, guiding private investments towards certain locations and neighbourhoods (Hanink and Cromley, 1998). Zoning policies also shape offices´ supply and demand (Ihlanfeldt and Raper, 1990), namely through the promotion of office clusters, or through upward pressures on development costs. Different taxation forms are applied on surplus-values in the United States of America, Canada and many Latino-American countries (Rebelo, 2009), that range from the traditional taxes to development rates, and include different kinds of urban regulations. Even the types of development licences – that span from rigid to flexible ones - issued by planning authorities shape the characteristics of the markets, investments, and so the urban built environment (Tang et al., 2000).

These different policies and planning procedures often involve inelasticies in certain locations that result, namely, from bounds to land uses or respective intensities, designation of protection areas, identification of patrimonial buildings (Dunse and Jones, 2002), or delays to respond to demand queries. These inelasticities inevitably reflect on offices rents.

2.2 Variables underlying offices location

The main reasons that traditionally explain offices´ locations and, consequently, respective rents are: centrality/proximity to the CBD (Archer and Smith , 2003; Nitsch, 2006; Greenhalgh, 2008; Jennen and Brounen, 2009; Ozus, 2009); nearness to other businesses, especially insurance companies and financial institutions (Kutay, 1986; Shilton and Webb, 1995; Jennen and Brounen, 2009); amenities, and local

services (Bollinger et al., 1998); accessibility and proximity to transports´ infrastructures and services (Nitsch, 2006; Nappi-Choulet et al., 2007); status, prestige and symbolic meaning of certain areas (Archer et. al., 1990; Krätke, 1992); positive externalities, such as agglomeration economies (Mun and Hutchinson, 1995; Jennen and Brounen, 2009); added value that accrues from the use of productive factors (Fogarty and Garofalo, 1988; Ihlanfeldt and Raper, 1990); nearness to workmanship, providers and consumers of services (Ihlanfeldt and Raper, 1990); and planning and fiscal tools, and public investments (Wasylenko, 1980; Long, 1984; Ihlanfeldt and Raper, 1990; Tang et al, 2000). However, globalization, the structural organization of firms; the progress of informatics and telecommunications technologies, the free circulation of people, and the increasing investments in communications and transports shape new patterns of land use by tertiary activities. Thus the relative importance of these variables on offices, and their impact on respective rents should be reassessed.

Currently, European cities exhibit polycentric layouts in the location of services (Archer and Smith, 2003; Greenhalgh, 2008; Jennen and Brounen, 2009; Ozus, 2009). These result from the internationalization of businesses, the development of information and communication technologies, and the increasing investments in transports and telecommunications, the characteristics of firms, suburbanization of services, and a polycentric distribution of employment poles (Ihlanfeldt and Raper, 1990; Rabianski and Gibler, 2007; Ozus, 2009). These reasons have surmounted the traditional offices´ requirement for centrality that has lost importance on behalf of a greater flexibility in the location/relocation of services. As a result, rent gradients have slowed down, so rents still keep high values throughout a larger territorial cover (Sivitanidou, 1995). Consequently many firms have total or partially moved to metropolitan suburban municipalities, where they benefit from additional spaces with qualified environments at affordable prices/rents (Suda, 1997; Nitsch, 2006). This implies changes in property uses and values (Ozus, 2009). Despite accessibility still keeps a central role, it ceased to mean an easy physical access to certain specific locations, infrastructures and transport services (Nitsch, 2006; Ozus, 2009). It has currently a wider meaning, as it covers a broader territorial extent. So the traditionally centre-targeted activities disseminate more and more, among different alternative poles of offices. But the location and relocation choices of services depend on variables that shape profits, expressed both through spatial (Ihlanfeldt and Raper, 1990) and temporal changes (Rebelo, 2009; Rebelo and Pinho, 2011). So offices that remain in the same location, and during longer terms, undergo physical, functional, and economic devaluation. Offices tend to remain in the same location till they perceive that the differential advantages between and a new potential location and the previous one are big enough to offset the relocation costs (Ihlanfeldt and Raper, 1990). The effects of zoning restrictions on supply and demand are doubtful (Ihlanfeldt and Raper, 1990), despite they have been tackled in several studies (Wasylenko, 1980; Long, 1984; Bourassa et al., 1999; Nitcsh, 2006). When tertiary activities benefit from external or agglomeration economies, they can easily access workmanship and services they can't provide internally (Jennen and Brounen, 2009). Wage levels are also determining in offices´ demand, and can be approached by

variables that measure the distance to employees´ homes (Erickson and Wasylenko, 1980; Wasylenko, 1980), or by the number of workers in the upper tertiary sector (Mills, 1995; Shilton and Webb, 1995; Wheaton et al., 1997; Bollinger et al., 1998; Jun, 1999).

In a nutshell, the variables that best explain office's locations and rents concern their absolute and relative location, their accessibility to the main centres and sub centres, their location inertia, municipal planning and public investments, the dimension of the upper tertiary sector and their average surface according to the provided kinds of services.

Despite its widespread application in the analysis of housing, hedonic models are less often applied to office markets (Dunse and Jones, 2002; Nitsch, 2006; Nappi-Choulet et al., 2007; Ozus, 2009). These models relate a certain variable (price or rent) to a set of underlying attributes, so they clear up rent values (as they identify and compute the effects exerted by explanatory variables), are flexible, and characterize different real estate goods through a limited number of attributes (Knight et al., 1995). If the relation between rents and their underlying explanatory variables is linear, then the regression coefficients of each attribute explain its implicit rent, as valued by the market (even if it is merged with a set of attributes traded together with in a single unit) (Rosen, 1974; Bourassa et al., 1999; Nappi-Choulet et al., 2007). But if the logarithm of the rent is a linear function of the different characteristics, then respective coefficients point out correspondent elasticities (Bourassa et al., 1999; Dunse and Jones, 2002; Nitsch, 2006; Nappi-Choulet et al., 2007; Jennen and Brounen, 2009). Additionally, as the hedonic analysis is framed by microeconomics, it especially suits offices targeted to use (Maleyre, 1995; Rebelo, 2003).

3 Case study

3.1 The Porto office market: evolution

Porto is the second biggest Portuguese city, where the headquarters of the Portuguese Northern firms, as well as most metropolitan services[2] locate. The municipal strategy that prevailed during the nineties stressed that planning should foster the sector of services. So urban planning and public investments during the last decades strongly shaped the patterns of land use by services, and therefore the performance and

[2] Porto metropolitan area is made of nine municipalities (Espinho, Gondomar, Maia, Matosinhos, Porto, Póvoa de Varzim, Valongo, Vila do Conde and Vila Nova de Gaia). 49.1% of the services of the metropolitan area locate in Porto city (23.7% of Portuguese services activities locate in the northern region and 60.1% of the latter locate in the Porto metropolitan area) (INE, 2001). However, the metropolitan services have developed more swiftly in surrounding municipalities than in the proper Porto municipality. The expansion of overall metropolitan accessibilities during the last years, together with Porto's relative reduced surface and geographical bounds has contributed to Porto's loss of leading role. Despite the number of employees in the services sector in Vila Nova de Gaia municipality has surpassed its homologous value in Porto municipality during the nineties (85 496 versus 63 210 employees, respectively), Porto municipality is responsible for the employment of most workers of services per km^2 in the metropolitan area, still keeping a central symbolic meaning.

evolution of the office market. Despite the already consolidated city downtown centre (territorially enclaved), the 1993rd Porto Master Plan - through a comprehensive zoning ordinance - assigned the location of services - both for public administration and for private firms – to the *directional centre*, strategically located in the central area (in Boavista district).

But municipal planning strategies were further supported by other reasons. In the early nineties the Boavista district had many vacant or provisionally-used land plots. Many public infrastructures, equipments and public spaces - namely a set of roads aimed at reinforcing the accessibility networks to central Porto - were also under construction. These public investments have completely changed the urban morphologies, building typologies, and accessibilities to the Boavista district, Porto's intra-accessibilities, and the inter-accessibilities between it and the surrounding municipalities.

Decisions of private agents were shaped by these planning incentives and public works. Thus many office buildings were built, together with the development of high-quality undertakings including housing and trade facilities. The adhesion to the European Union in the mid-eighties attracted the headquarters of many firms to these privileged office buildings, where they could further benefit from agglomeration and internal economies. By the late nineties about 1070 offices (36% of total offices) were already located in this district. As many of these represented regional/local branches of multinational companies – able to afford rents higher than local-based firms - they commanded premium rent-levels, what subsequently involved economic-territorial filtering processes. Within the scope of a strong competition where the available land was progressively shrinking, the demand was willing to pay high levels of rents, and the outstanding planning guidelines and public works increased the value of land, promoters, builders and sellers felt forced to lock up great amounts of capital and to provide better and better quality levels. Afterwards supply overtook demand, but promoters still kept high levels of construction, because they wondered if the economic cycle will invert soon, and they further needed to render profitable their investments.

But during the same decade, offices located in the Porto downtown were still devaluating because this area was tight, population and buildings were dense, buildings were decaying, and a set of planning guidelines and legal restrictions were enforced that hindered the initiatives of real estate promoters – that included a great division of land, and the application of the rent law that kept tenants in strategic locations. As a result land reached top prices, and the development of real estate for rental purposes was out of question because land plot gathering, joining and acquisition was expensive, costly and time-consuming. So offices supply in downtown summed up to second-hand refurbished detached spaces within a narrow territorial scope that involved accessibility and parking shortcomings, despite traditional trade and services mostly remained there. The city council, by its turn, sponsored public-private partnerships in order to implement rehabilitation policies, thus counterbalancing these trends. However, specific regulations towards the

protection of heritage buildings´ have worsened their rehabilitation costs, thus shaping respective characteristics and rent levels. So only the firms with a solid financial foundation – mainly financial institutions and insurance companies – could keep in these prestigious symbolic heritage buildings.

The Porto office market has lost its importance during the last two decades in favour of Lisbon and some Spanish cities, due to the development of accessibilities and telecommunications. Beyond Porto's geographic and legal bounds, suburbanization processes lead to the emergence of a polycentric pattern of offices location in the metropolitan area that mainly results from higher profit expectations in Porto's outskirts due to larger available land plots.

The current Porto's Municipal Master Plan, strategically relieves control on land uses, and is less focused on the upper tertiary sector. Offices are mainly demanded by technology, press and telecommunication firms, public services, financial services, and public administration. To keep abreast of tertiary suburbanization processes and growing competition from other metropolitan poles of offices, Porto office districts consolidated, and their rental levels stabilized.

3.2 The Porto office market: characterization

Porto's office market is structured into three main territorial areas: the downtown/traditional area (that conveys a sense of prestige); the recently developed planned CBD (at the Boavista disctrict); and the transition between both areas (at the Constituição/Marquês district) (Figure 1).

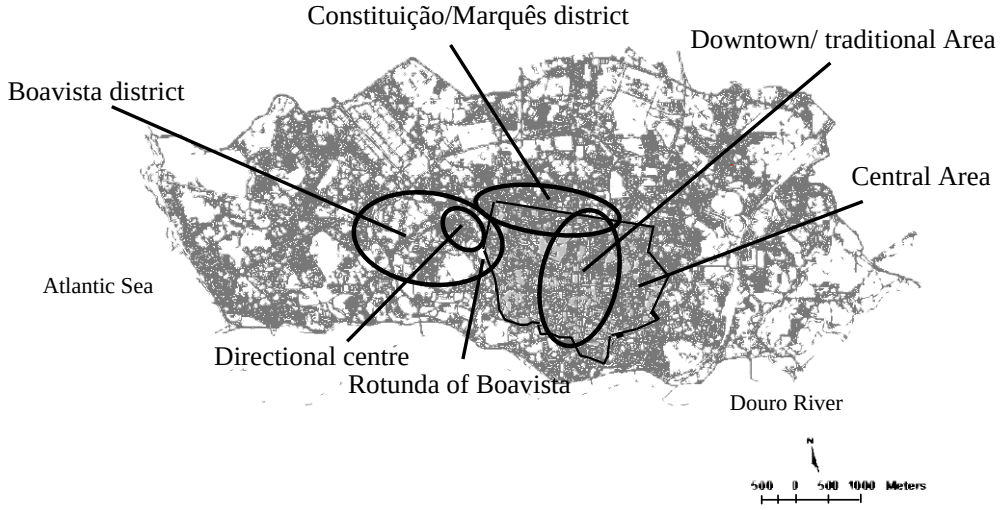

Figure 1. Main office areas in Porto city

The downtown and part of Constituição/Marquês district are mainly characterised by disconnected offices, most of them aimed at liberal professional people. In the former offices mainly belong to old heritage buildings, located in narrow low-lighted streets, almost without public spaces around. In the latter, however, offices mainly locate in middle-sized, middle-aged multifunctional buildings, likewise located along many important streets that provide trade and services. As far as Boavista district is concerned, it holds the most important office buildings of the city (most of them built during the late eighties and the nineties), located in premium bright spaces within high-quality spacious environments[3].

The percent increase of the most representative services in Porto during the nineties was the following[4]: law (17.1%), economics (52.5%), engineering and architecture (16.6%), banks and insurance firms (84.3%), real estate activities (121.6%), informatics (209.6%), and other services to firms (15.8%). So informatics, real estate activities, and banks and insurance firms underwent a swift expansion, whereas law, engineering and architecture and other services to firms registered much lower growth rates. It is also noticeable that the offices most closed to the Boavista district or to downtown most probably remained in the same locations for over longer periods than those settled in older buildings and in less central locations (Rebelo, 2003).

3.3. Methodology

The methodology reported in this article aims at explaining office rents/m^2 [5]. The rental market was chosen because it represented almost 60.4% of total offices in Porto (during the studied period). Besides, the rental regime is more flexible as it fits short-term location goals. Indeed the rental values tend to approach offices´ real worth because offices respond to use goals rather than to investment goals. The microeconomic models to study consumers´ behaviours (including hedonic models) further fit the features of Porto's office market.

First, data was collected and treated. An urban management information system was then settled, which fed an interactive integrated hedonic model. Display and simulation functionalities of this model were further developed. The attained outcomes were subsequently discussed. Finally, conclusions, recommendations, and policy implications for municipal planning on office markets are presented (Figure 2):

[3] In the Boavista district firms can take advantage either from external and agglomeration economies (due to office buildings´ clustering) or from internal economies (due to the set of services available within each proper building).

[4] These variations were computed through comparison between the number of autonomous registered activities existent in Porto in 1999 and the ones existing in 1990, within each kind of activity.

[5] In this research was used the software SPSS 14 for analysis in principal factors and hedonic modelling.

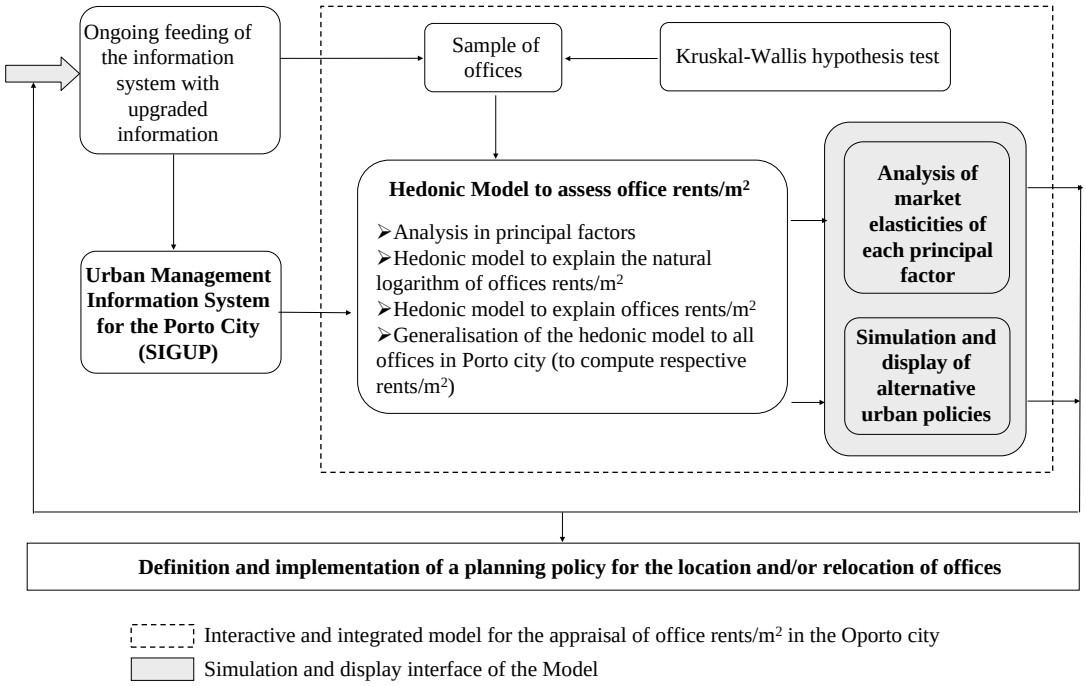

Figure 2**.** Methodological outline of the research pursued

3.4 Urban management information system

The dependent variable (offices rents/m^2) was chosen as a standardised measure of rents that can be easily generalised and compared (namely with other office rental markets studied in literature). The explanatory variables are the ones that are commonly assumed to exert significant influence on offices location and rents (Rebelo, 2009): absolute and relative location of offices; simple distance to the modern planned CBD (in Boavista district); accessibility; temporal inertia of office activities; municipal planning and public investments; dimension of the upper tertiary sector; and average office floor surface, according to the kind of services.

Thus, an urban management information system was specifically designed and implemented in the Porto office market (SIGUP). As data concerning this office market during the nineties is sparse (due to its small dimension and recent development), different diversified data sources were used, such as the Portuguese Statistics Institute (census data: INE, 2001), advertisements in journals, real estate magazines, and interviews with people working in this field. This information system is innovative because each variable are assigned a design and spatial meaning (Bourassa et al., 1999). Data refers to the location and some characteristics of all offices existent in the Porto city in 1990 and 1999 that belong to the most representative activities of the upper tertiary sector (law, economic activities, engineering and architecture, banks and insurance firms, real estate activities, informatics activities, and other services lent to firms).

But considering that many variables in the management information system are strongly correlated, an analysis in principal factors was then pursued in order to identify the orthogonal dimensions that best explain data variance (Bourassa et al., 1999, Dunse and Jones, 2002; Jennen and Brounen, 2009). So the analysis in principal components, and the equamax method with Kaiser normalization of factor rotation were successively applied. The obtained outcome shows that seven principal factors explain 83.6% of the variance (Table 1).

Table 1. Identification, characterization, designation and interpretation of the principal factors

Principal Factors	Most positively correlated variables	Most negatively correlated variables	Explained variance	Designation	Interpretation
Factor 1	Public investments in urban qualification, communications and transports, housing and education	Y coordinate Percentage of offices that changed location between 1990 and 1999	26.7%	Urban planning and municipal investments	This factor assembles the variables that planning controls directly
Factor 2	Weighted distance to Rotunda of Boavista Straight distance to Rotunda of Boavista	Location index of informatics activities Zoning ordinances	16.3%	Metropolitan accessibility	This factor expresses the general metropolitan accessibility (assessed in spatial/temporal terms). It is mostly due the network of streets and transport means that connect the main services poles in the whole metropolitan area (centrered in Rotunda of Boavista)
Factor 3	Location index of law activities	Y-coordinate	10.8%	Distance to Porto's downtown/traditional centre	Law activities (older steady ones) mainly concentrate around the municipal court of justice, deep inside the historical centre. So this factor represents the distance to Porto's downtown historic/traditional centre
Factor 4	Percentage of offices that remained in the same location between 1990 e 1999	Percentage of offices that left the market between 1990 and 1999	10%	Temporal inertia of offices	This factor expresses the tendency of offices to remain in the same location
Factor 5	Location index of real estate activities Public investments in the environment	Percentage of offices that changed location between 1990 and 1999	7.5%	Quality of the natural and built environment	This factor translates the environmental quality (green/public spaces), nearness to equipments, and characteristics of urban typologies and building morphologies
Factor 6	Land Use coefficients Zoning ordinances	Public investments in economic development and tourism	6.9%	Agglomeration and internal economies	This factor positions the location of services in relation to the territorial distribution and economic characteristics of other services, and to the internal characteristics of the proper offices and respective buildings
Factor 7	Total number of activities that belong to the upper tertiary economic sector	Zoning ordinances	5.4%	Dimension of the upper tertiary sector	This factor translates the availability and proximity to specialized workmanship for activities of services

3.5 Hedonic model of office rents/m^2 in the Porto city

A model was then settled, according to a succession of steps, in order to explain offices rents/m^2 in Porto city. Data on the variables of the urban management information system was available (or could be easily computed) for all offices in the

Porto city. However, in order to assess the values of rents/m^2, it was necessary to resort to a sample and – according to the application of the proposed model - generalize the results for the whole office market. All the offices that belonged to this sample were characterized in terms of respective location, characteristics, surfaces, and asked rents/m^2 (Rebelo, 2003; Jennen and Brounen, 2009; Ozus, 2009)[6]. A Kruskal-Wallis statistical test (McMillen, 1995) was used in order to test the significance of this sample (that confirmed it belonged to the whole offices population[7]).

Next, a hedonic regression model was adjusted in order to explain offices rental prices/m^2 in Porto city. Different functional alternative models were adjusted and graphically displayed using the principal factors as explanatory variables. The model that best fitted data is the one that expresses the natural logarithm of rents/m^2 as a linear function of the principal factors (Rebelo, 2011):

$$LN(Rent/m^2) = 0.557 + 0.226F1 - 0.064F2 + 0.021F3 - 0.319F4 + 0.177F5 - 0.294F6 - 0.021F7$$

In this model the principal factor i is represented by Fi, coefficients F4 and F6 and the constant term present a significance level of 5%, the remainder coefficients a significance level of 10%; and $r^2 = 0.904$.

As this is a logarithmic model, the coefficients of the factors represent respective elasticities, as well as their correlations with the dependent variable. Thus this model stresses the importance of each factor in the dynamic explanation of changes in rents/m^2. Office rents/m^2 are, consequently, explained by the derived model:

$$Rent/m^2 = \exp^{(0.557+0.226F1-0.064F2+0.021F3-0.319F4+0.177F5-0.294F6-0.021F7)}$$

As this sample is population-representative, this model can be generalised to all offices located in the Porto city, in order to appraise their implicit rents/m^2 [8] (Figure 3):

[6] This sample represented about 3.6% of the total offices in Porto, and reproduced quite well the percent distribution of offices among parishes.
[7] With a 5% significance level.
[8] Be they available or not in the rental market, in this latter situation the model points out potential rents/m^2.

Figure 3. Office rents/m^2 in Porto city anticipated by the hedonic model

The simulation and display interface further developed supports the definition of strategies and the implementation of measures by municipal authorities in order to guide the location or relocation of services, and the indirect control over their rental levels[9], taking alternative scenarios into consideration (that result from induced changes in the values of some variables). These values are included into the analysis in principal factors and, afterwards, into the hedonic redefined logarithmic model and into the correspondent model of rents/m^2 – in order to test their influence on offices´ territorial location and rents/m^2.

3.6 Discussion of results

The knowledge of the relevant factors in location or relocation decisions is crucial to define and implement planning policies and measures in office markets. Supply and demand inelasticities bind the quantity, location and characteristics of offices and office buildings. But as demand is shaped by the available concrete office stock, and firms seek short-term responses, planning can tackle uncertainty through a better approach to real market conditions prevailing at any moment.

The compared analysis between the characteristics and evolution of office markets among different researched European and American cities clearly show that the

[9] This model may as well be useful to real estate agents, architects and private planners, firms, and all the other remaining parts involved in office markets.

importance of the variables traditionally used in offices´ location or relocation decisions has been changing over time. These changes result from globalization processes and the proper organization of firms that highlights the need for integrated public policies. So a reassessment of the effect exerted by these variables on offices rents/m^2 is, thus, required.

This research points out that variables related to municipal planning and public investments are quite relevant in the explanation of the variance of urban data in Porto's office market (26.7%). Other factors indirectly modelled by planning decisions also contribute to the explanation of variance. These include agglomeration or external economies[10] (6.9%), and the quality of the natural and built environment[11] (7.5%). The increased metropolitan accessibility also expresses a strong intervention of the Porto municipality either through zoning ordinances or through the proper investment in accessibilities (16.3%).

The comparison of the current research with other studies pursued in many office markets show that the role of planning can be exerted under different ways, resorting to different planning tools, with varying intensities. In what concerns zoning ordinances, they don't exert a significant effect on offices development patterns in the Atlanta metropolitan area (Ihlanfeldt and Raper, 1990), but the same doesn't hold true in other metropolitan areas and in different periods. For instance in Hong Kong, despite planning authorities are not intended to intervene in the office market, they end up by shaping its performance, as they tend to deny development licenses in locations where the density of offices is already high. Urban planning - zoning ordinances - and municipal investments – especially in accessibility and urban qualification - (factor 1) are the variables that best explain the increases in rents/m^2 in the Porto office market. Indeed these variables strengthen the attractiveness of some urban areas, so they exert upward pressures on rents/m^2.

Globalization processes – including recent developments in telecommunications technologies (Heikkila et al., 1989; Ozus, 2009) – weaken the importance of the proximity to reference places. But this variable keeps particularly important in some office markets, as is the case of Istambul (Ozus, 2009) where the most recent office sub-centres locate along the main communication streets. This also holds true in Porto where, as expected, metropolitan accessibility (factor 2) decreases rents/m^2 when the distance to Rotunda of Boavista - deeply connected to other metropolitan trade and services poles – increases (Nitsch, 2006).

The distance to the Porto downtown (factor 3) stresses the relevance still kept by the traditional centre on offices location and rents/m^2 that mainly results from its prestige, status, and magnificent patrimonial buildings.

[10] Through promotion of a privileged area for offices location, Porto municipality indirectly induced agglomeration effects over offices prone to locate there.

[11] Despite the majority of the variance explained by this factor accrues from the activities of promoters and builders, the applicable plans, municipal licensing decisions, and public investments are important inputs that underlie this factor.

Porto's offices inertia, reflected on their tendency to remain in the same location (factor 4) – strengthened by the longstanding rental agreements in the historic/traditional centre - exerts a downward pressure on their rents/m^2, as a result of building's age, filtering processes in offices´ uses, and subsequent property devaluation. This comes in line with what happens in other European office markets, such as Amsterdam (Jennen and Brounen, 2009) and Glasgow (Dunse and Jones, 2002). This effect is less noticeable in Paris due to the recovery and re-qualification of office buildings (Nappi-Choulet et al., 2007). However, this variable is not quite relevant in the Istambul office market (Ozus, 2009), especially because of the recent development of simultaneous office sub-centres.

The characteristics of office buildings in the Boavista district – with a good finish, equipments, infrastructures, conveniences and common internal services (factor 5) - tend to push rents/m^2 up. The same effect has been exerted by the positive externalities and amenities attached to the high quality of the urban environment, opposite to what happened, for instance, in Istambul, where the sights over the sea don't add any value to office rents.

Agglomeration economies (factor 6) don't exert such a strong impact as suggested in literature in the Porto office market. Indeed they push rents/m^2 downwards due to tertiarization processes, competition among different office location poles, and also due to the excess supply in high-dense office areas (in order to secure the occupation of offices promoters rent for lower values/m^2 than they are willing to). On the office market of Amsterdam, on the contrary, rents are pushed upwards by location externalities, even if a direct relation between office clusters and urban concentration isn't clear (Jennen and Brounen, 2009). In the Istambul office market external and internal economies, as well as accessibilities, are not so determining as other variables (Ozus, 2009) (namely the number of building's floors, vacancy rates in the neighbourhoods, social equipments, building's aesthetics, and floor surface for rental purposes).

Despite in the office markets of Amsterdam and Istambul the number of offices is strongly correlated to the employment in finance, insurance and real estate activities (Jennen and Brounen, 2009; Ozus, 2009), in the Porto office market this kind of employees tend to decrease mainly due to the strengthening of the information-intensive component of work (what generally improves working conditions in tertiary spaces). Additionally, services employees tend to settle in suburban areas, so they have stabilised or even decrease in the proper Porto city. That's why the dimension of the upper tertiary economic sector (factor 7) exerts a slightly negative effect on office rents/m^2.

4. Conclusions and implications for urban planning

Within the scope of globalization and overall urban competition, municipal planning should stimulate private initiatives aimed at tertiary sector developments, on the one

hand, and regulate and control office rent levels, on the other, keeping them close to local economic conditions, and attractive for both supply and demand.

This article proposes an integrated, interactive and flexible set of tools that - together with different planning and fiscal policies - should support the implementation of municipal strategies and interventions in office markets. It is more flexible than other models referred to in literature, because it fits the conditions prevailing in each moment, and adapts to different urban settings, as it grounds on a strong management information system that can be regularly feed with new and upgraded information on office variables and respective rents. Through the proposed approach, the behaviours of the agents, and the performance of the market can, thus, be monitored. Indeed, the coefficients of the relevant factors underlying rents/m^2 in the model represent respective elasticities. Consequently, any intervention of municipal authorities on the explanatory factors shall strengthen their control over rents/m^2, thus promoting the accomplishment of planning's social function. The mathematical and computational simulation and display device further supports the analysis of alternative decision scenarios for urban intervention (considering that the variables that underlie rents/m^2 may assume different values). This methodology can, thus, be applied to feasible alternatives set up by municipal authorities, in order to select the policies that best fit planning and management-settled goals. It can additionally be replicated in the same city, at different moments, and in different office markets, provided that proper management information systems are implemented and upgraded. This methodology can further support the harmonization of planning policies on offices among different cities and countries, what is becoming increasingly important within the scope of global environments.

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APPLICATION OF THE INNOVATIVE INCA ROAD MAP INSTRUMENT TO INTEGRATE FOREST FIRE RISK MITIGATION, CIVIL PROTECTION AND SPATIAL PLANNING - EASTERN ATTICA REGION, GREECE

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Abstract

Separation and isolation of Spatial Planning from other co-responsible policies for risk mitigation, i.e. civil protection and sectoral risk prevention, leads to unwelcome results: Reservation of a minor role or no role of Spatial Planning for Risk Mitigation; breaks in the Response-Preparedness-Prevention-Remediation chain; duplicated or diverging measures and funding; minimal attention to Prevention and emphasis on Emergency Management; inefficient resource consumption for Risk Mitigation.

All above failures are evident in the Greek Forest Fire Risk Management system which is weak in terms of prevention and ineffective in crisis management being expensive at the same time. These failures are more evident in the forest-fire prone regions of Greece, as is the Region of Attica wherein Athens is located. Despite stringency of the Greek Forest Law its implementation is a big problem because its rationale is totally incompatible with the Housing, Development and Spatial Planning reality and policies. Therefore, the co-responsible agencies for forest fire risk mitigation in Eastern Attica blame one another for the failure of the system instead of attempting mutual understanding and coordination.

The administration of the Attica Region however, had the opportunity to become a partner of the INCA (EU funded) project and apply the respectively introduced concept of “Agreement on Objectives” and the adjoining Road Map instrument in the mixed forest-residential area under the competence of the Directorate of Forests of Eastern Attica”. The present work attempts to present this application and results; also to recommend this approach as a model of Risk Governance even for centralized administrative systems as is currently the Greek one.

The specific application of the Road Map model in the area of East Attica evolved through a series of procedural steps, starting from a partnership establishment and agreement on objectives and goals, accommodating continuous feedback and leading to the implementation of a package of consensual multi- and inter-sectoral measures.

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The application of the model in the test area of Eastern Attica proved to be successful despite pre-existing administrative and cultural adversities. The major decisive factor has been the involvement of Local Authorities in the partnership (or Working Group). The test application indicated that a knowledge intensive institution and constant facilitation of feedback are preconditions of success. It is hoped that the successful experiment of application of the novel Risk Governance process in East Attica will be followed by imitators.

1. INTRODUCTION: The typical shortcomings of natural risk management and the promising INCA road map instrument

It has been acknowledged by scholars and practitioners as well that risk management failures are, more often than not due to the difficulties encountered in coordination / cooperation among the co-competent agencies and between them and the civil society. Some of the reasons / conditions underlying these difficulties have been identified as follows:

- Risk assessment and management has been entrusted to a wide variety of institutions which differ in scale / level of jurisdiction and sectoral responsibility. Taking as an example the case of forest fire risk we can address as co-responsible institutions those of Civil Protection, Forest Policy, Fire Service, Regional and Urban Spatial Planning and Housing Development.
- The policies exerted by above distinct and separate institutions are usually fragmented, introvert, self-complacent and sometimes authoritarian.
- These policies are decided and implemented without the consent, even knowledge, of citizens who may resort to their own plans undermining those of the formal institutions.

Above adverse conditions implying lack of coordination and non-harmonized risk management policies are accountable for:

- Breaks in the Remediation-Prevention-Preparedness-Response (RPPR) chain which however has to be a continuous and cohesive process;
- Marginalization of the role of Spatial Planning in Risk Management despite its outstanding significance;
- Lack of synergies among risk targeting policies;
- Duplicated funding or mutual subversion of risk management measures;
- Inefficient and ineffective resource consumption in the field of risk management policies;
- Irresponsibility of citizens (who usually blame the authorities in case of risk conditions and disaster occurence) and sometimes excessive tolerance of spatial law breaches / illegality on the part of formal spatial planning institutions;
- Risk intensification instead of risk mitigation.

The INCA rmodel of risk management –after the EU INCA project ("Linking Civil Protection and Planning by Agreement on Objectives") that was launched in 2009- was built with the aim to bridge spatial, functional and operational gaps and divergence in approach, competence and perspective between Civil Protection, Spatial Planning and other administrations in charge of prevention (see INCA booklet 2011). For this purpose the INCA pattern of policy-making was formulated as a collaborative process with concrete results to make measures and actions of risk prevention and mitigation efficient, effective, strategically aligned and sustainable (INCA booklet 2011).

The INCA model is founded on two fundamental elements: (a) A consensus building procedure attempting convergence on risk mitigation objectives by all co-responsible authorities and agencies and (b) a "Road Map" instrument. The first is the so-called "Agreement on objectives" (of risk mitigation and management) among all accountable authorities as well as stakeholders, which / who are involved in or affected by the risk and the risk mitigation process. All these actors formulate the Working Group (WG) which agrees on common objectives and the optimum blend of measures in order to reduce or mitigate a given risk.

The "Road Map" instrument (see Diagram 1) is a plan of successive operational steps to lead not only to a memorandum of commonly agreed objectives and measures by the WG but also to their actual implementation, monitoring and control of the respective results, feedback and review of the process.

Among others the INCA model has been applied in the case study area of East Attica region facing forest fires. East Attica region occupies the eastern part of the Region of Attica where the agglomeration of Athens is located.

2. Current deficiencies of Forest Fire Risk management in the Greece

Forest Fire Risk management in Greece is realized in a social and institutional context that is featured by the typical adverse conditions presented in the introductory chapter: (a) a crowd of institutions involved in forest fire risk management which vary in terms of spatial scale and sectoral competence; (b) risk management and other involved policies which are fragmented, introvert and often mutually conflicting; (c) public risk mitigation policies which are counteracted by the private plans of individuals, firms and households.

At first, indeed a wide variety of public institutions and policies are involved directly or indirectly in the causes and the short-, medium- and long-term impacts of forest fires, hence in forest fire risk generation and management. Among these policies, predominant are spatial planning and housing development policies. This is true because:

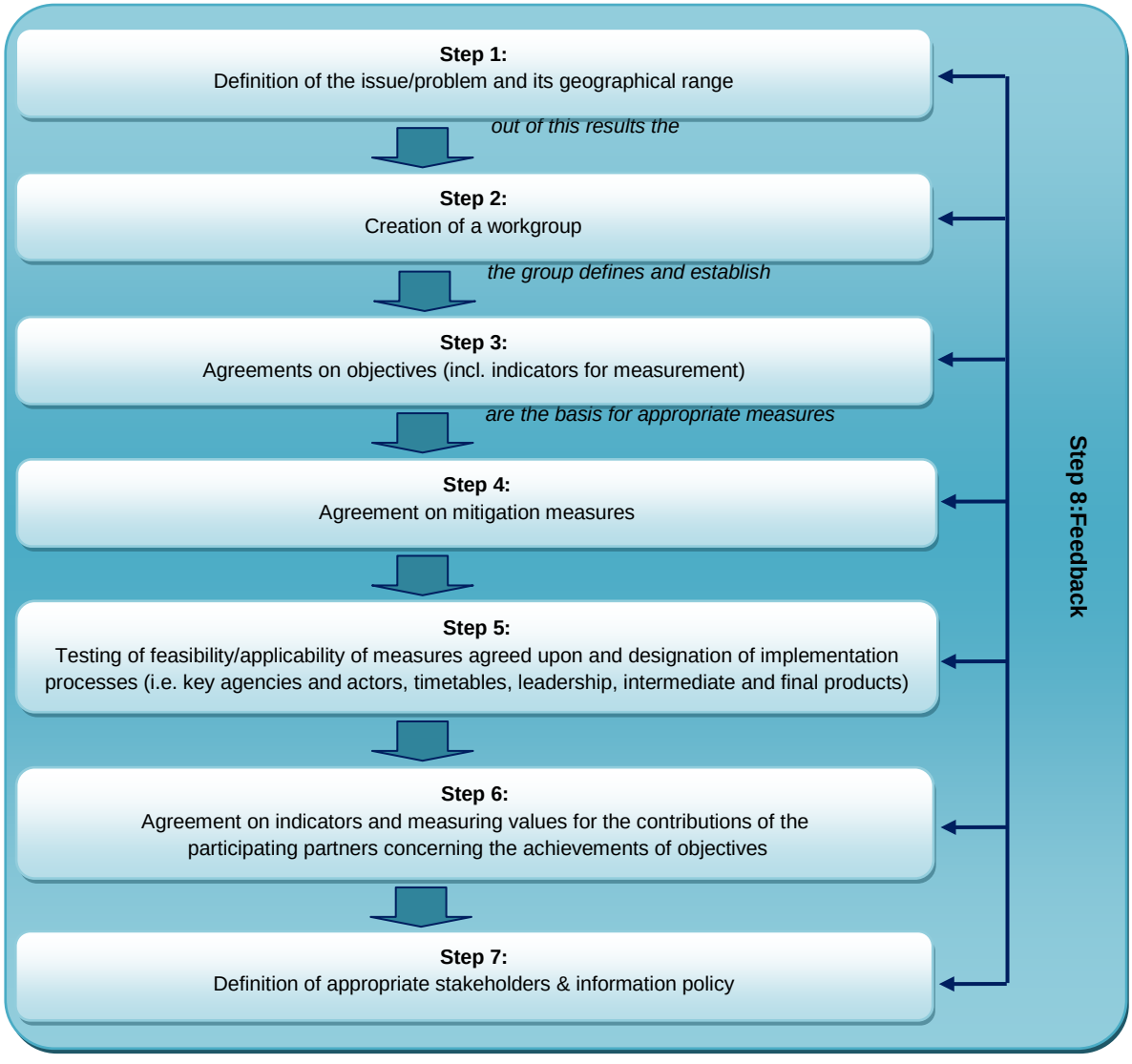
- All causal factors of forest fires (both intentional and those out of carelessness) are related to land use and land cover conflicts and

incompatibilities (mostly between forest land cover and various socio-economic land uses such as housing, tourism, recreation, grazing, agriculture, hunting etc).

- A large part of forest fires are related to the interests of the construction and real estate sectors (e.g. building development corporations); these can be controlled and regulated principally by appropriate spatial planning policies.
- The usual long-term and most catastrophic impacts after forest fires are city plan extensions and expansion of building development rights over burnt (and prior forest) land and in general moving on of mixed land use patterns where built land is entangled in wildland areas. These unwelcomed changes cannot be halted but only via appropriate spatial planning policies.

Despite the land use / cover dynamics generated by spatial, housing, tourism and other policies with land impact (or their absence), these are not taken into account by the policies for forest land protection. In Greece, forest policy is planned and implemented by the Forest Service and its regional extensions exclusively. In particular, the Forest Service exerts forest policy with administrative introversion meaning without coordination with the other policies bearing a land impact. This is the case, in spite of the fact that these other policies are accountable for incidents of forest land elimination (e.g. through arson).

Diagram 1: The Road Map instrument of the INCA Project (INCA project, Del E, 2011)



The variety of formal and informal institutions involved in forest fire risk generation and management refers not only to the sectoral but to the scalar dimension also. Responsible institutions can be found at all administrative levels, the central / national, the regional and the local level. The administrations directly involved in the matter of forest fire risk management are: the central Ministry of Rural Development enjoying competence on forest law and policy formulation at the national level; the Regional Directorates of Forests realizing the national level policy directions in the wildland areas of their jurisdiction; the Forest Service Offices (FSOs) and the Municipalities accountable for forest fuel clearance and other preventive and preparedness measures at the local level.

Secondly, the policies affecting one or the other way forest fire risk in Greece and the respective management actions are truly fragmented, uncoordinated, top-down and introvert. Decision-making in the field of forest policy is strictly hierarchical. Higher levels make decisions and the lower ones follow instructions and implement the generalized forest law and policy. As a consequence a uniform forest law and policy is implemented all over the country regardless of the diversity of factors and land use dynamics exerting pressure upon forest land, in coastal and inland regions, in mountainous and lowland regions, in peri-urban and rural regions and so on.

Lack of coordination is most evident between Spatial Planning and Forest Policy. For Spatial Planning forests and wildland areas are a “black hole” because these areas fall exclusively under the Forest Service responsibility. Under these circumstances, forests are not seen as an environmental amenity (a common good) but are elevated instead to a forbidden fruit, i.e. a factor obstructing realization of private visions and individual rights such as improvement of life quality by means of habitation of the countryside. This is because Forest Policy and the Forest Service have a biased and over-protective attitude toward forests. They view the forest ecosystem as independent from the social one and stand against whatever spatial development demand. Forest institutions protect forest as an absolute value regardless of the needs of the society.

Thirdly, the condition of absolute protection of forest land as dictated by the Forest Service comes in full contrast with the visions / interests of numerous social groups, private agencies and individuals. Examples are the urban citizens who have become alienated to the degraded urban environment of major cities and desire a second home in the forest, building development corporations with interrelated interests, building contractors, real estate agents, tourism entrepreneurs etc. In several cases

these groups realize their plans counter to the policy dictate of forest institutions and often after the tacit tolerance of spatial planning institutions. Indeed, as income levels continued to rise (up to 2009) more and more residents of Athens managed to obtain a legal, illegal or semi-illegal vacation home close to or within the peri-urban or coastal forests of East Attica. Speculators and building contractors turned the demand to profit and offered building plots and expensive villas (legal or illegal) at high profit. Consequently, a constantly changing and risky, mixed mosaic –with forest vegetation and buildings in close proximity- has been gradually created. This means that a common environmental good (the forest) and the associated public interest clashed with the perceived rights of individuals to improve their quality of life by inhabiting the wildland areas.

3. East Attica facing Forest Fire Risk: The INCA Road Map as a convincing response to Forest Fire Risk Management failures

3.1 Why East Attica?

The area of East Attica has been selected as an ideal case for the application of the INCA pioneer model because it represents an instructive example of mismanagement of forest fire risk in Greece (Kaoukis 2009; Sapountzaki et al. 2011):

- Out of the currently thirteen administrative regions of the country, the wider Attica Region is the most fire-prone on the basis of the indicator *percentage of burnt forest area to the total forest land of the Region in the period 1991-2004* (more than 26%);
- In the above period most of the fire events of the Region of Attica occurred in East Attica.
- In the same period most of the fire events in the Region of Attica have been registered as events of unknown causes (66,8% -see figures 1 and 2). Official ignorance of the actual root causes of the catastrophic phenomenon is a precursor of an ineffective risk management system.

The selected sub-region is an area of 193,000 ha which in 2001 amounted to 403,918 inhabitants (National Census of 2001). According to Sapountzaki et al. (2011, p. 1451):

> *"East Attica receives the urban sprawl of the Athens' agglomeration and is dotted with satellite settlements (especially along the eastern coastline) which are continuously growing. They are dominated by second homes or semi-permanent residential developments. Also, East Attica hosts the new international airport "Eleftherios Venizelos" which attracts speculative land uses and entrepreneurial activities yielding high land revenues and raising the land values in the vicinity."*(See map 1).

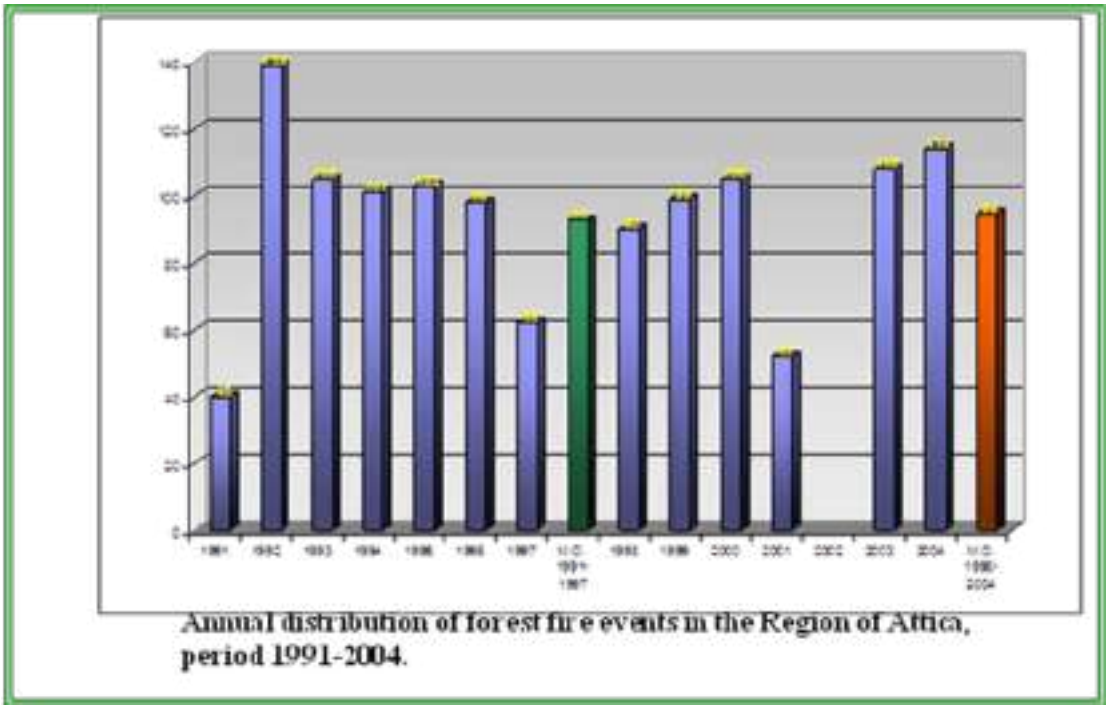


Figure 1. Distribution of the number of forest fire events of the Region of Attica to the years of the period 1991-2004. *Source: Kaoukis, 2009*

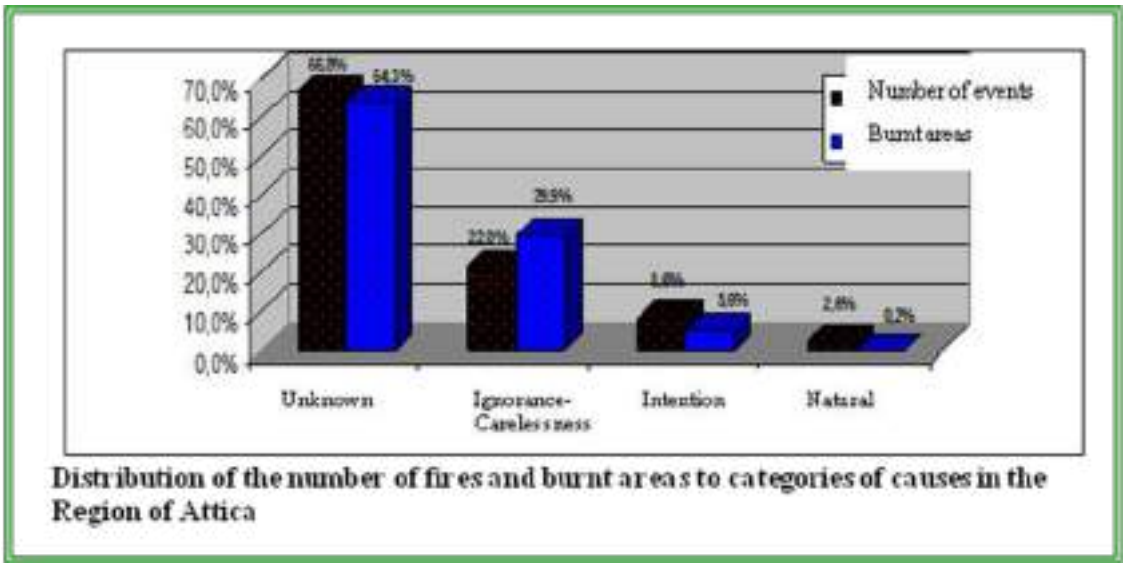
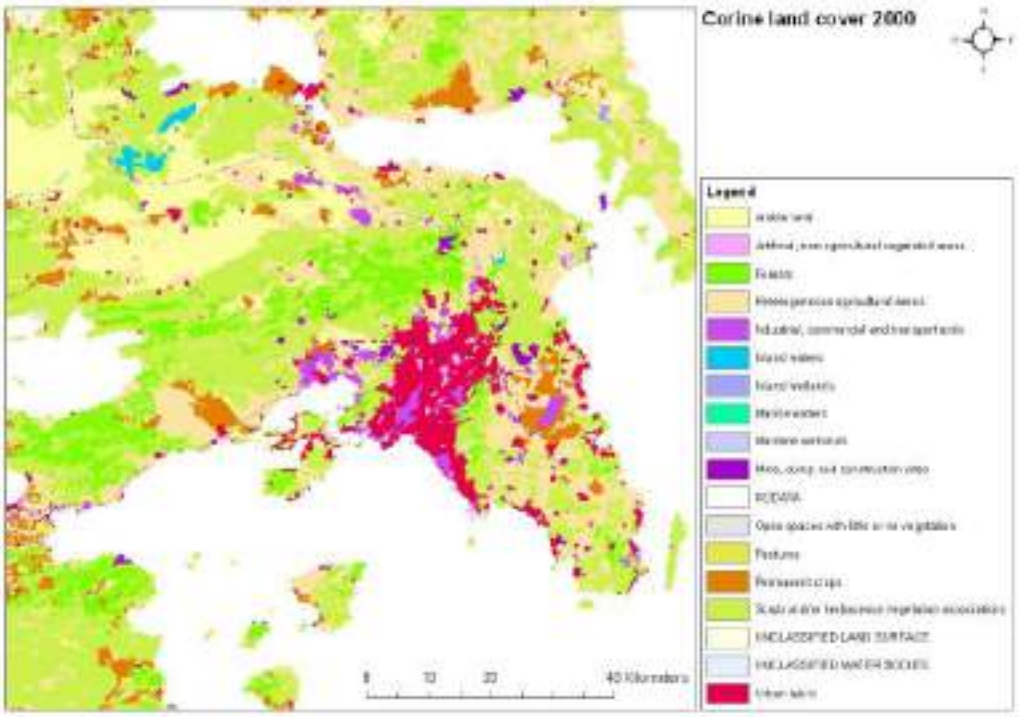


Figure 2. Distribution of the number of events and burnt areas of the Region of Attica to categories of causal origin, period 1991-2004. *Source: Kaoukis, 2009*



Map 1. The Athens urban complex and the satellite settlements in East Attica region. *Source: Corine Land Cover 2000*

3.2 Applying the Steps of the INCA Road Map model in East Attica Region toward the objective of Forest Fire Risk Mitigation

Selection of Eastern Attica region and its fire risk problem as the area and issue of concern and application constitutes the 1st Step of the INCA Road Map process (see diagram 1). In the next paragraphs the reader can follow the application of the subsequent Steps (2nd to 8th) and their results.

2nd Step: Creation and establishment of the Working Group (WG) for forest fire risk mitigation in Eastern Attica region.

After the initiative of academic and research institutions, namely the HUA and NAGREF teams-partners of the INCA European project a WG was established to deal with the overall objective of forest fire risk mitigation in Eastern Attica region. This consisted of:

- Representatives of the three involved Directorates of the Regional administration of Attica (Civil Protection, Spatial Planning and that of Forests of East Attica)
- Members of the research teams of HUA and NAGREF (INCA project partners)
- Representatives of the Municipalities of East Attica (local level)
- The heads of the four Forest Service Offices of East Attica (local level).

The WG was envisaged and planned to be as inclusive as possible in terms of the co-competent policy sectors and spatial scales / levels of administration.

3rd Step: Agreement on sub-objectives

During the four meetings of the WG and after intense discussion and some frictions between its members the latter arrived at an agreement on four sub-objectives (goals) to be consistently pursued by every member of the WG. These are:

- *Goal A*: Reduction of the number of forest fire events owing to negligence & ignorance causes.
- *Goal B*: Early detection of fire ignition points.
- *Goal C*: Intense search of the causal factors of the recorded as events of unknown origin.
- *Goal D*: Enhancement of prevention, preparedness and recovery by means of active participation of the Civil Society.

Agreement of the WG upon the above goals means commitment of each one of the partners to work for their accomplishment. It is worth noting that above goals are not independent from but interrelated with each other. Also worth-mentioning is the fact that the range of the greed goals extends over the whole RPPR chain (or risk management cycle) to ensure consistency and continuity among its successive phases.

4th Step: Agreement on mitigation measures

Out of the five measures that gained consensus among the participants of the WG three were actually implemented:

Measure I: Training of the school population (12-14 years old) on forest fire causal factors (including those related to human and physical geography) and self-protection and management issues. This was intended to serve simultaneously goals A and D.

Measure II: Assessing vulnerability and enhancing self-defense of residences versus fires (those in mixed forest residential areas) and creating a relevant geo-data basis. The measure was intended and planned to serve all four goals agreed upon in Step 3.

Measure III: Correction of contradictions, overlaps and/or ambiguities regarding competences of Spatial Planning, Civil Protection and Forest Service authorities as regards their impact on Forest Fire Risk. This measure has been envisaged so as to facilitate goals A, C and D.

Commitment of all participants to contribute to implementation of co-decided Measures is tightly connected to the multidisciplinary dimension of these Measures necessitating input from several fields and the respective WG members. An indicative example is the case of the measure of "Training seminars addressed to pupils". These seminars were implemented in two sessions where the first covered the spatial planning dimension of the catastrophic phenomenon[2] while the second focused on the foresters' and forest fire managers' point of view.

[2] Spatial planning dimension is relevant to the manmade causes owing to economic interests and human activity pressures on forest land, preventive measures related to the control of building development within and around forest land etc.

On the other hand “the spatial data basis for a mixed forest-residential territory” that was indeed realized in a hilly area within the jurisdiction of the Municipality of Kalyvia in Eastern Attica region is also a composite multi-dimensional Measure. The information that was collected includes data that are usable for both spatial planning preventive interventions (e.g. delineation of high risk and vulnerability zones where to impose building construction constraints and locate critical protective infrastructure) and pre-suppression and preparedness planning versus forest fires (e.g. localization of the weak points of the emergency road network etc). These of course are effective ways for rehabilitating synergies and cooperation between Civil Protection, Spatial Planning and Forest Policy to the end of Fire Risk Mitigation.

5th Step: Testing implementation processes and assessing final products
The Measure of the Training Seminars (I) and that of the Geo Data Basis referring to the vulnerability to fires of the building stock in the mixed forest-residential areas (Measure II) have been implemented at the local level (Municipality of Kalyvia in Eastern Attica region) while Mesure III focusing on the correction / demarcation of competences has been implemented at both regional and local levels.

The results after implementation of Measure I have been evaluated by means of questionnaires addressed to the pupils twice (an original version was submitted to the pupils before the Seminars and a copy of it after the Seminars) to allow evaluation of comprehension and assimilation by the pupils of the teaching material and respective messages. The statistical picture of the answers given to specific queries (of the questionnaire) before and after the Seminar on “Self-protection and Forest Fire Management” is offered in the following figures 3, 4, 5.

Map 2 below is indicative of the results after implementation of Measure II. It indicates the overall risk of destruction of houses possibly attributable to construction materials, location of the building, the slope, density and quality of vegetation that surrounds it, also the road leading to it.

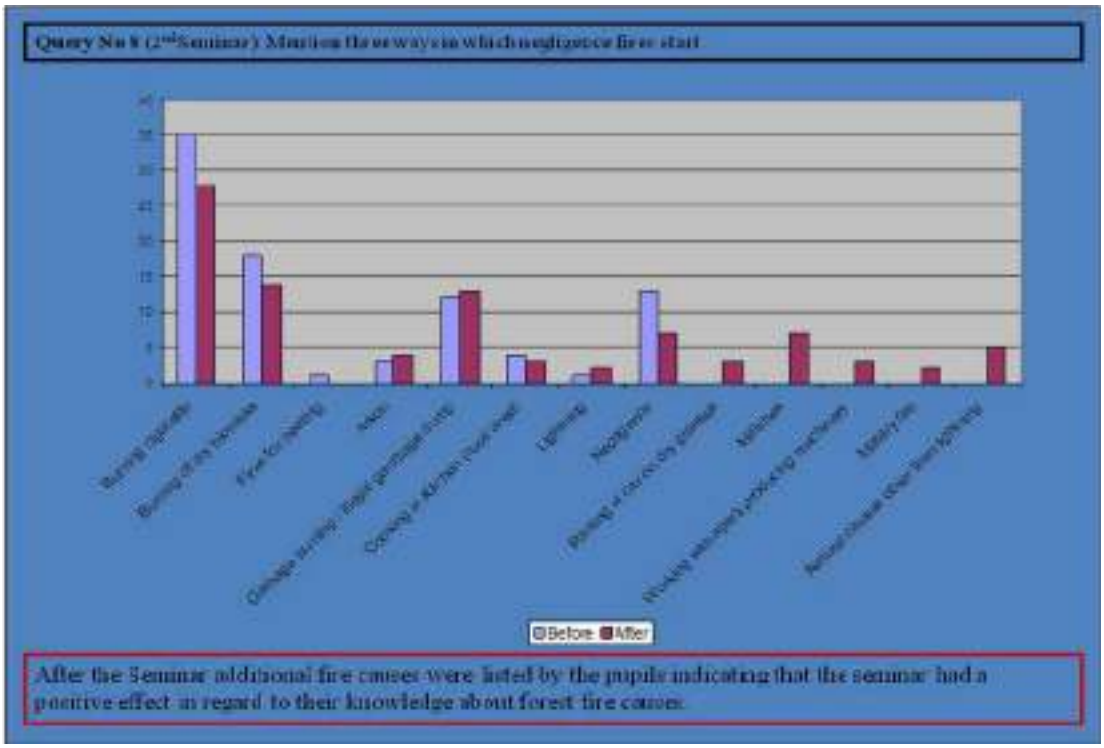


Figure 3. Comparison of pupils' answers to the query "Mention three ways in which negligence fires start" before and after the respective Seminar of the INCA project. *Source: INCA project 2011, Del. D2, Roussos A. and Xanthopoulos G.*

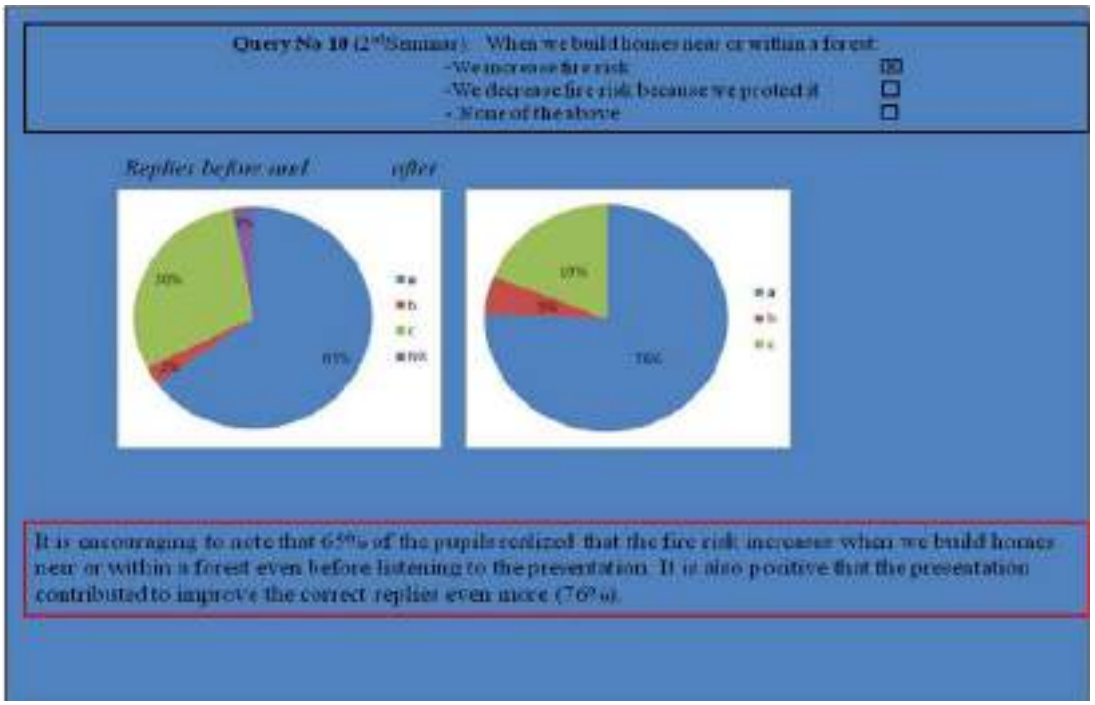


Figure 4. Comparison of pupils' answers to the query "What is the impact of buildings close to or within a forest?" before and after the respective Seminar. *Source: INCA project 2011, Del. D2, Roussos A. and Xanthopoulos G.*

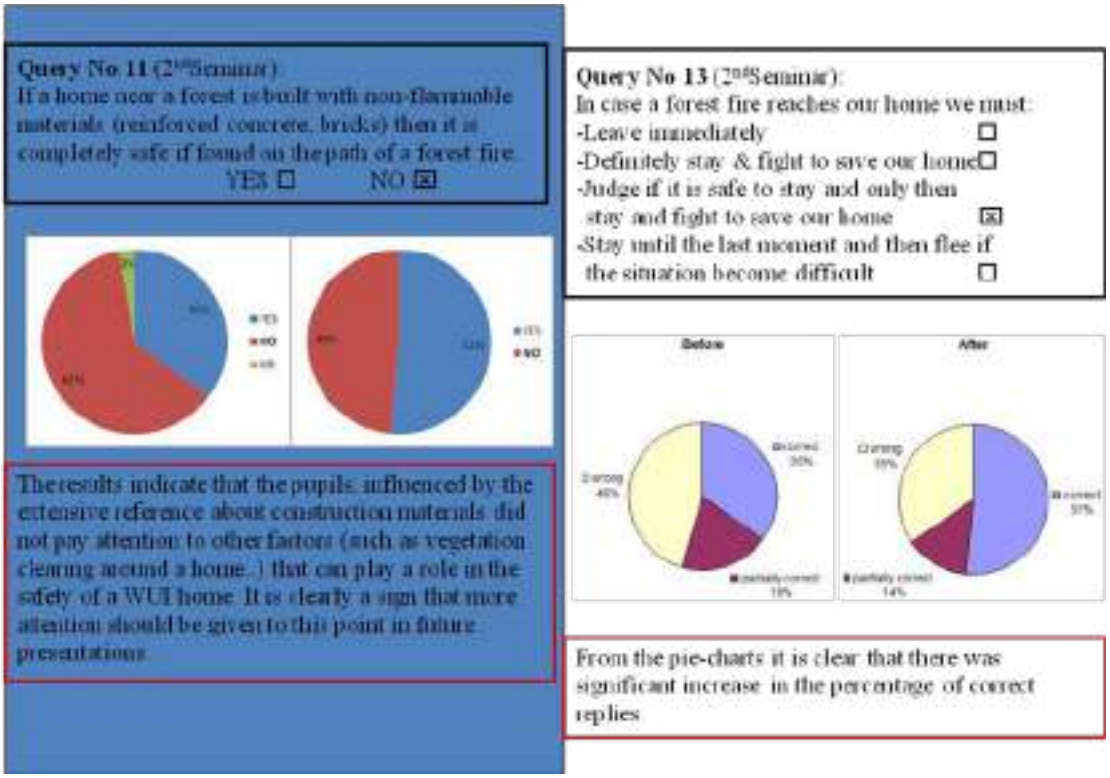


Figure 5. Comparing pupils' answers to queries regarding proper residence-defense and self-protection attitudes (before and after the respective Seminar). *Source: INCA project 2011, Del. D2, Roussos A. and Xanthopoulos G.*

Map 2. Houses and roads are coloured according to the total index (K) of risk of destruction of the building. *Source: INCA project 2011, Del. D2, Kalogirou S. Roussos A. and Xanthopoulos G.*

The statistical picture of the answers to the questionnaire submitted for completion to public officials (at the regional and municipal levels) asking them to address the effect of their own competences on forest fire risk (Measure III) is given in figures 6 and 7. The respondents have been selected to represent all primarily relevant policy fields: Spatial Planning, Civil Protection and Forest Policy. The aim of the questionnaire has been to increase consciousness of public officials regarding their possibility to influence forest fire risk (either in a positive or negative way) as well as clear delineation of competences and investigation of the prospects of cooperation. The questionnaire comprised a number of closed and open questions and the statistical sample amounted to 29 filled in questionnaires that were analyzed then by using methods of descriptive statistics and correlations.

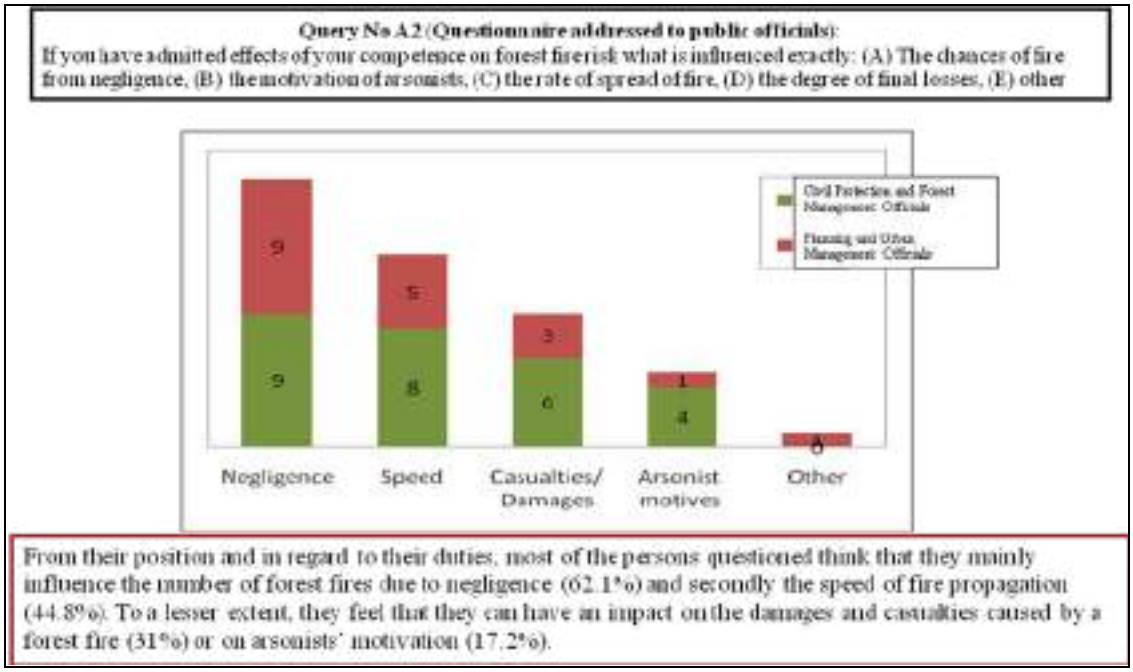


Figure 6. The public officials' answers to the query referring to the effects of their competence on forest fire risk. *Source: INCA project 2011, Del. D2, Sapountzaki K., Tragaki A. and Papachatzi A.*

6th and 7th Step: Indicators and measuring values reflecting the contributions of each partner and monitoring / controlling the achievements with respect to the envisaged goals.

The implemented measures serve the goals/sub- objectives that have been agreed upon by the WG as follows:

- Measure I (Training Seminars on Forest Fires directed to the school population of the Municipality of Kalyvia) contributes to the achievement of Goal A i.e. 'Reduction/Elimination of the number of fire events owing to negligence and ignorance causes' as well as Goal D (i.e. 'Enhancing participation of the Civil Society in forest fire prevention, preparedness and reforestation/rehabilitation processes')
- Measure II (Evaluation and Mapping of fire risk and vulnerability levels of buildings in the Out of Plan forest-residential areas of the Municipality of Kalyvia) establishes the prerequisite information basis for the successful pursuit of all four established Goals.
- Measure III (Submission of a questionnaire to public officials to address ignorance, uncertainties, contradictions and overlaps of public policy competences affecting forest fire risk) serves equally the Goals A, C and D (see 3rd Step).

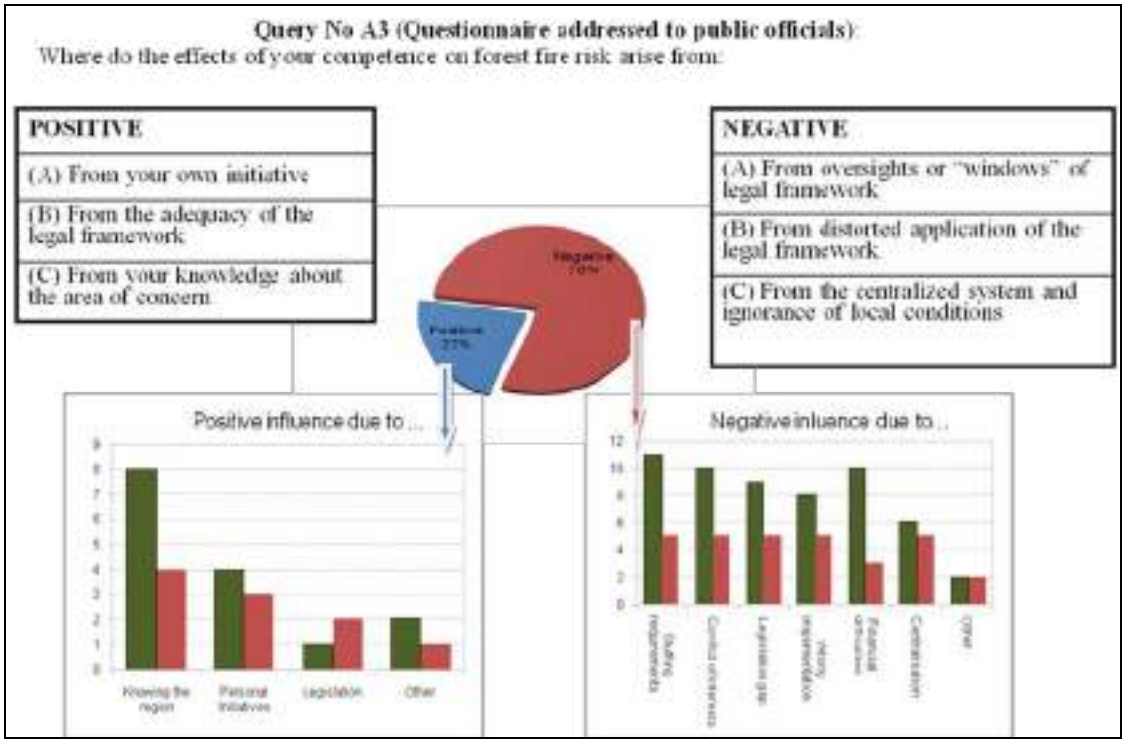


Figure 7. The public officials' answers to the query referring to the reasons behind the effects of their competence on forest fire risk. *Source: INCA project 2011, Del. D2, Sapountzaki K., Tragaki A. and Papachatzi A.*

Current steps of the road map process are preoccupied also with the degree to which the implemented measures fulfill the goals and whether all participants have contributed equally and cooperated with each other effectively. Appropriately planned and selected indicators and measuring values are the response to this challenge. More specifically the indicators that were constructed address:

- the contribution of each involved partner (input, i.e. own resources committed to the implementation of a measure)
- the effectiveness and efficiency of the implementation process with regard to the expected output and/or degree of achievement of the established goal/sub- objective
- the final outcome, i.e. the impact of the applied measure on the overall general objective of reduction of the forest fire risk in the area of concern.

Table 1 presents as an instructive example the monitoring indicators for Measure I (Training seminars on forest fire risk to be offered to school population). Figure 8 shows the estimation of measuring values and classification process for one specific indicator: "Sensitivity of pupils regarding forest fires and respective citizen responsibilities" both before and after the Seminars.

Table 1. Monitoring Indicators for Measure I (Training Seminars for School Population). *Source: INCA project 2011, Del. D2, Sapountzaki K.*

Steps / agents to be controlled	The element to be monitored	Monitoring Indicators
The Input of the involved partners (the Region of Attica, the respective Municipalities, the Research Institution)	Public Schools	Proportion of the Public Schools of the Region/Municipality joining the process of the training seminars (on annual basis)
	Public School- Teachers	Proportion of the school teachers (specialized in environmental education) adopting the measure on annual basis
	School Population	Proportion of the total school population of the Region/ Municipality attending the seminars on a yearly basis
	Academic- research manpower specialized in forest fire issues	Man- hours (on a yearly basis) of researchers (specialized in forest fires) devoted to the preparation of training material and analysis of questionnaires to address lessons learnt by the pupils
The effectiveness and efficiency of the training seminars (output)	Knowledge/ awareness of pupils and their families regarding forest fires	Mean knowledge/awareness indicators derived from answers to an appropriate group of queries (addressed to pupils by means of anonymous questionnaire)
	Sensitivity of pupils (and their families) regarding forest fires and citizen responsibilities	Mean **sensitivity indicators** derived from the answers of pupils to appropriate group of queries
The impact of training seminars on forest fire risk in the Region of Attica	Pupils' residences regarding exposure to forest fires as well as territorial exposure to forest fires of the wider area of East Attica	Proportion of pupils of which their families performed actions mitigating residential exposure
		Risk perception indicators of the pupils that attended the seminars
		Exposure levels of the Out- of-Plan mixed forest- residential areas of east Attica (on the basis of long- term horizons)

Sensitivity Scores are estimated by combining scores attributed to the answers of the following queries of the 1st Questionnaire:

5. What feelings are created to you by forest fires?
19. Do you prefer your residence to be located (A) inside the forest, (B) inside a city or settlement?
20. Would you change your answer above if you were sure that a building in the forest increases the danger of forest fire or of your house to be burnt?

	Before the Seminar	After the Seminar
-5 to 0	4 (10%)	5 (12%)
0 to 5	17 (41%)	12 (29%)
5 to 10	18 (44%)	22 (54%)
10 to 15	1 (2%)	2 (4%)
15 -20	1 (2%)	0 (0%)

Sensitivity scores:
Frequencies and relative frequencies

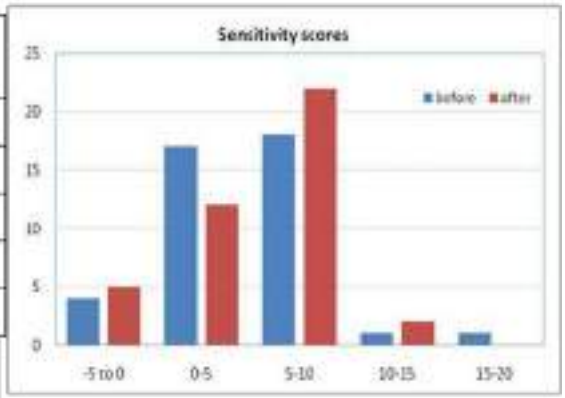


Figure 8. Estimation and classification of measuring values of the indicator "Sensitivity of Pupils versus forest fires" before and after attending an informative Seminar. *Source: INCA project 2011, Del. D2, Sapountzaki K., Tragaki A. and Papachatzi A.*

8th Step: Feedback

The feedback possibility has been employed several times during the INCA Road Map process. First, for the enlargement of the initially established WG (after the 3rd Step) so as to include additionally involved stakeholders (i.e. competent Municipalities, the heads of the Forest Service Offices –FSOs- in the Eastern Attica area etc).

Feedback has also been performed at the 6th Step when it was decided that implementation of measures should start as a pilot case at the local (Municipality) level and not the regional level; also that it should be undertaken firstly by an active Local Authority Organization (the Kalyvia Municipality) and should be performed as a trial case of limited scope (the seminars were conducted for a sample of the school population of Kalyvia and the Geo-data basis was created for only a small hilly forest-residential area falling in the jurisdiction of the Municipality of Kalyvia.

Feedback has been used in several other circumstances and should continue to be employed in the future if the refinement and standardization of the Road Map process is pursued.

4. Conclusions

The results of the pilot application of the INCA Road Map model in the Eastern Attica region and more specifically in the area of the Municipality of Kalyvia proved to be impressive. Without spending even one euro the Municipality by following the process managed to: (a) obtain a valuable Geo-data information basis on the variations of risk of destruction and building vulnerability in a section of its forest-residential areas and (b) organize Seminars for pupils and disseminate useful information to the wider Kalyvia community on forest fire prevention, protection and management.

The INCA Road Map model for risk mitigation represents a radical change and innovation in relation to the rigid political / administrative systems and a significant deviation from the established norms of administrative processes. This is true for even centralized, like the Greek, systems of policy-making.

The INCA Road Map model promotes actually risk management processes that are adjusted to the risk generating conditions; on the contrary conventional management solutions are reflections of administrations' structures, constraints and possibilities. Hence, viability of the model is at the hands of regional and local administrations which have to follow visions and be committed to the matter of risk abatement, environmental protection and public safety rather than retain their introversion and insularism.

The success of application of the model in the case of Eastern Attica region facing the standing and increasing risk of forest fires in its mixed forest-residential areas was due to the following appropriately reflexive and feedback decisions/ actions:

- Enlargement of the initially formulated WG so as to embrace crucial but non-formal actors and agents (members of NGOs, public officials carrying simultaneously the status of a researcher, representatives of voluntary citizen groups, officials with prior experience in organizing drills and in training volunteers, persons at key-posts which INCA members kept personal friendship contacts with etc.)
- Involvement in the working group of a Local Authority to undertake the mission of measures' implementation. The LA level is indeed the most flexible level of administration, the closer to the Civil Society and the easiest in adopting and assimilating novel, innovative processes which are usually ejected by the state's bureaucracy.
- The measures have been opted so that their application would not necessitate extra financial resources. This was possible due to the employment of voluntary citizen groups and utilization of a University's and Research Institution's infrastructure (software and hardware). Should implementation necessitate extra funding it would not ever be realized.

The process of application revealed that a knowledge intensive institution is a necessity and a precondition for success. Such an institution is out of the internal conflicts of the administration pyramid, it enjoys (to a certain degree) credibility and trust, it is acceptable as negotiator and it is the only agent that can refute the consolidated, backward and rigid mentalities strung along with bureaucracies.
In any case the successful application of the measures is only provisional and temporary. No question, the measures have not been embedded in the routine process of the Regional or Local Authorities. Indeed, there is a long distance to cover before achieving such an end but the pilot case application has opened the way.

5. References

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SPATIAL STRATEGIES FOR IMPROVING CONVIVIALITY IN PUBLIC PLACES: THE CASE OF THE HISTORICAL GOLDSMITH AND TEXTILE ARTISANAL MARKET AREA OF CITTÀ BASSA IN NAPLES

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Abstract

The effects of the privatization of public and quasi-public places in affluent and well-connected areas of the city and the correspondent decay and abandonment of public places in deprived areas need to be discussed. Under the umbrella concept of conviviality in public spaces, a research project on the rehabilitation of urban areas for commercial and retail uses – as engine of a complex process of production of places of social and cultural mixité – has been defined. In this context, a reflection on the role played by the rehabilitation of traditional and natural market areas inside city centres will be developed in order to favour liveability of public places.
The increasing in the expulsion of commercial activities from the city centre and the proliferation of gated suburban commercial areas have deprived wide areas, creating ruptures in the continuity of the urban grid. According to Gehl (2001), these ruptures are causes and effects of decay and abandonment of public areas. The research main hypothesis is that traditional retailers should be considered an essential element to ensure effective public use of urban public spaces. Thus, conservation and preservation strategies should take them in account as a priority matter, in order to guarantee a high level of conviviality in the urban centres.
The research methodology is based on a qualitative approach. Focussing on the process of impoverishment within local commercial districts – due to functional, logistic and market-oriented policies – the research aims at defining a holistic methodology for interpreting, designing, managing and assessing the refurbishment and redevelopment of those specific areas. In details, in order to apply a case study approach (Yin, 1994), the research group started working with local stakeholders in order to identify the most significant case study to be carried out in Naples, thus selecting the historical market place of Piazza Mercato and its neighbourhood in the Città Bassa of Naples (Italy) that are object of the Local action Plan implemented in the framework of the CTUR and HerO Projects of the URBACT II Programme. Naples presents interesting aspects of public spaces dedicated to identitarian artisanal

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and commercial activities inside a dense historical centre – one of the bigger UNESCO sites in the world. After the selection of the case study has been made, a possible strategy for addressing the revitalisation of the area was built and tested, by delivering a set of semi-structured interviews with key stakeholders and focus groups.
The aim of this research has been to produce useful tools for coping with the abandonment of public spaces in former commercial urban areas, and to avoid the risk of generating anonymous and globalized commercial districts. It aims at involving local stakeholders in pilot action plans, to demonstrate the possible effectiveness of the proposed approach. In so doing, it offers useful tools applicable in urban policies, particularly in European cities, characterised by the presence of significant historical centres challenged by both isolation and gentrification processes.

1. Introduction

The contemporary city is affected by a profound crisis due to the loss of cultural identities, of traditional social networks, and of welcoming urban spaces for improving interactions between diverse components of society. (Madanipour, 2010) Places of public life are the expression of this scenario: the agora is changing forms, functions, and symbols, following new trends superimposed by globalization phenomena. The impact on the transformation of public places due to recent dynamics, is revealed by the tendency to produce market-led transformations of public places in affluent areas and the abandonment and decay of the peripheral public realm. (Carmona et al., 2003)
In the following pages a research project will be presented which is aimed at identifying the main components of a process of rehabilitation of urban areas for commercial and retail uses in order to favour social and cultural *mixité* and economic regeneration. The project deals with the increasing globalization process, and consequently with the expulsion of traditional and identitarian commercial activities from the city centre, creating ruptures in the continuity of the urban grid in terms of creation of market-led and anonymous commercial areas on the one hand, and in terms of abandonment and decay of less affluent areas with a strong local cultural character on the other. (Augé, 1992)
The research starting point is the role played by traditional retailers and artisans as an essential element to preserve local cultural character, ensuring effective public use and liveability of urban public spaces. This qualitative approach aims at defining a holistic methodology for interpreting, designing, managing and assessing the refurbishment and redevelopment of those specific areas. This topic will be addressed by developing an urban design tool based on an effective participatory process in the rehabilitation and redevelopment of public places in abandoned commercial areas (Healey, 1997). This tool could be applied within community planning consolidated methods (Arnstein, 1969), in order to best address the physical and spatial component of the mapping and visioning process. Consolidated procedures for collecting and sharing the demand expressed by local communities in

terms of services delivery and public places organization have been developed in different fields of knowledge. Nevertheless, there is a lack of procedures for addressing demand for spatial transformations in order to favour the preservation and development of traditional and identitarian artisanal and retail areas as a driver for a wide urban regeneration process. This topic is included in the research programme of the EU-funded research Commercial Local Urban District Programme (CLUDs) "aimed at emphasizing the strategic role of small retailers – handcraft and typical food – in reinforcing the sense of community, reducing transportation costs and contributing to the creation of an attractive urban environment, thus producing an increase in private investment". (CLUDs Commercial Local Urban Districts, 2011)
In order to identify the way physical and functional transformations of commercial areas in city cores can favour results in terms of social cohesion, economic development, cultural preservation and local liveability, the study started by working with a case study approach (Yin, 1994).
The research focusses on the specific experience of Naples in Southern Italy, which offers a wide range of interesting fields of reflection on the research topics. The group of scholars and local technicians involved in the fieldwork started doing active observations of the Neapolitan urban area in order to identify possible significant case studies to be carried out. The conceptual map of significant areas was discussed with local stakeholders resulting in the selection of the historical market place of Piazza Mercato and its neighbourhood in the Città Bassa district as a case to be analysed. This area has been the core of the Local Action Plan implemented within the framework of the CTUR and HerO Projects of the URBACT II Programme and is now the object of a new project funded by the EU.
Through the experience gained during the execution of the Local Action Plan for this historical area in Southern Italy, this paper aims at introducing and discussing a work in process oriented to coping with the tendency to abandon wide core areas of the city centre by supporting virtuous processes of urban regeneration, and intervening through a participatory process in the rehabilitation of traditional and natural market areas.
This paper is divided into four sections. Having introduced the research in this section, the following sections will:

- Set the context to identify the theoretical and methodological context of urban design, community planning and economic procedures to be applied together to commercial urban districts regeneration;
- Define the framework for the empirical analysis and discuss the pilot area findings; and
- Draw general conclusions, defining the role of local commercial areas as divers of urban regeneration.

2. Setting the theoretical and methodological context

The research project here presented is based on two different kinds of EU-funded research. The first one – the 7FP Marie Curie IRSES project Commercial Local Urban District Programme (CLUDs) – set the theoretical perspective and the

methodological approach. The second one – the development of the case study approach – has been conducted under the umbrella of the Local Action Plan implemented within the framework of the CTUR and HerO projects of the URBACT II Programme.

The conceptual framework of the CLUDs project (CLUDs Commercial Local Urban Districts, 2011) consists of the possibility of merging urban design, community planning and economic procedures in order to build a new tool for renovating degraded public spaces and improving the attractiveness and accessibility of deprived urban areas by focussing on the high potential of local commercial activities. The research can assist policy-makers in coping with the needs of urban regeneration by setting up an analytical process to understand how a public-private partnership oriented to sustain local retail can be both market-led and social-led. These aims can be reached by highlighting integrated approaches related to credit access, local resources promotion, job creation, typical retail protection and community engagement – in order to understand how the territorial milieu can contribute to create the necessary critical mass for improving local urban regeneration initiatives. (Ball, 2003)

The history and culture of European cities reveal the importance of public spaces such as streets and squares, which are deeply influenced by the commercial functions they host. Over the centuries, local retailing models, often integrated with the production of typical services, handcraft traditions and locally produced food, have frequently conditioned forms and organization of the European city. More generally, a higher level of manufacturing, commercial and residential integration is still related to vibrant urban environments, which are rich in urban life and social relations. (Brinkerhoff et al., 2011)

From the social point of view, it is widely recognized that integrated urban environments often contribute to a higher level of safety because of the social control exercised on the public spaces due to their continuous use; for the same reason, they are less likely to became blighted areas, thanks to the involvement of local communities in preserving their values. From the environmental point of view, the residential and commercial balance in each area is a fundamental tool in securing a less car-oriented living model, as small retailers allow residents to meet their everyday needs by walking; thus, it represents a real and proper pillar in ensuring a sustainable urban lifestyle. Furthermore, the link between small retailers and niche local production helps to ensure a more consistent and efficient supply chain, avoiding useless freight transportation costs, as well as reinforcing the relationship between the urban and rural environments.

Although these are remarkable and valuable features in the traditional European urban model, nowadays the changes in the international retail organization system are deeply impacting on the commercial functions of some urban areas. In particular, shopping malls and other large shopping centres present potential forces for dramatically reshaping the urban and suburban landscapes.

The CLUDs rationale is oriented to provide critical mass to weak urban areas through the connection with a broader network of local producers, thus fostering the

concentration of services (urban competitiveness) by connecting them to the production of goods in a wider territorial milieu (urban-rural balance).
The described Joint Exchange Programme CLUDs, reflecting the rationale of Economic Opportunity Zones, focusses on local small retail associations concerned with typical local production and their capacity of bringing together public initiatives, private investments and community demands.
This research project as been developed along diverse routes for empirical applications. In particular, two projects guided by local administrations and oriented to make possible a wide public-private partnership have been chosen to cross the CLUDs theoretical premises with a case study approach. The projects "Cruise activity and the recovery of urban and harbour building heritage: Strong elements of the common interest of sea towns to develop and strengthen the urban tourism sector" (CTUR) and "Heritage as Opportunity" (HerO) of the URBACT II Programme (www.urbact.eu, 2011) have been both developed (2008-2011) by a network of European cities. The core idea of the first one has been to improve competitiveness and liveability of port cities through the waterfront revitalisation (including derelict industrial areas) in an overall approach of the port city development, creating a mix between maritime and urban activities within the framework of an integrated approach of sustainable development. The second project – dealing with the challenging management of historic towns in Europe – focuses on heritage cities throughout Europe, in order to enhance balance between the safeguarding of heritage and the development of the city, taking heritage as an economic driver. These projects are both completed and are now in the process of being implemented in the local policies and are the base of the new projects promoted by the Neapolitan City Council in order to deepening the concept of land consumption in the historic centre.

3. Case study analysis: the Local Action Plan of Naples Città Bassa

Briefly, Naples can be considered one of the prominent ancient settlements in Europe and part of the Mediterranean basin. Its historic centre is a unique example of architectural stratification through the centuries and is still a vibrant catalyst of mixed activities without any museumification phenomena. Along with these positive aspects there are many problems, such as: the high population density; the low education indexes; the severe status of the labour market linked to the lack of private activities and job creation initiatives; the presence of criminal organizations; and the strong rehabilitation needs of the built environment, including the cultural heritage.

Table 1. Naples at a glance

Location	Capital of the Region of Campania - Southern Italy
First settlement	VI century B.C. as a Greek settlement
Population	1,004,500 inhabitants (City Council of Naples, census 2001)
Pop. density	8,556 inh/sq km (City Council of Naples, census 2001)
Unemployment rate	31.39% (City Council of Naples, census 2001)
Income per capita	€ 25,565.81 (Finance Ministry, 2009)

Historic centre	UNESCO recognizes the Outstanding Universal Value (OUV) of the historic centre of Naples (1995).

The complexity of this local scenario of resources and challenges is the humus for nourishing the local initiatives we are going to describe. (Gaber et al., 2007)
The first step has been the definition of the case study domain in terms of location, size, functional organization and general characteristics. Through the dialogue with the Urban Planning Department of the City of Naples, the active observations in different daytimes, weekdays and seasons as well as the discussion with local stakeholders and scholars in charge, a specific area involved in these comprehensive projects has been chosen in order to address the topics of the research.

Table 2. Plans and Programmes which coexist in the study area

Plans and Programmes connected to the ERDF 2007 – 2013	DOS (Strategic Guidance Document); Integrated Urban Plan EUROPE for the historic centre of Naples (PIU EUROPA); Grande Programma UNESCO (UNESCO Great Programme); Strategic Plan of Naples; HerO "Naples Historic Centre World Heritage Site Management Plan (WHSMP)" "Project of renewal of Borgo Orefici" under 2000-2006 ERDF Funds

The coexistence in the same area of various urban planning and management tools, of several UE-funded initiatives as well as of grassroots movements and of traditional local economic activities can be considered the ideal scenario for developing a complex participatory process of urban regeneration to be tested and generalized. The research in progress here introduced has been developing in parallel and − on some topics − in cooperation with the planners in charge for the cited URBACT projects conducted by the City of Naples.
The area of Città Bassa, despite having previously had a strong commercial character, suffers since the end of the Second World War relative neglect and gradual decay. In this context some relevant key issues can be pointed out with regards to: the physical aspects such as location, accessibility, built environment conditions; cultural issues such as historical heritage, monuments, arts and crafts traditions; and social scenario in terms of social deprivation indices.
The work is premised on enhancing local revitalization and regeneration processes by focussing on the potential of an integrated approach to commercial activities, among the key issues related to the urban revitalization of the historical urbanscape. This is to be addressed in Naples by meeting the needs of different stakeholders – the linkage with the cited URBACT projects is "to secure traditional shops and retail trade structures as these ones are struggling to survive and to set up new governance structures for a better coordination of the revitalization activities" (HerO, 2011).

Table 3. Città Bassa: some relevant aspects

Location	Enclave between the port area and the historic centre UNESCO WHS
Accessibility	• 15 km from Capodichino International Airport; • near the Central Railway Station; • served by four metro stations (2 of those need to be completed); • near the local and regional maritime transportation nodes of Beverello Quay and Porta di Massa Quay.
Historical heritage	• Porta Nolana gate of the ancient city walls; • the renaissance church of SS. Cosma e Damiano; • the ruins of Castel del Carmine; • the baroque church of Santa Maria del Carmine; • Sant'Eligio Maggiore Church of the Angevin period dated 1270.
Art and crafts tradition	• Borgo degli Orefici (goldsmith quarter) since the fourteenth century; • Piazza Mercato Old Marketplace; • Antiche Botteghe tessili (textile market); • Typical handmade street food.
Social deprivation	• Unemployment rate (Mercato district 38.01%, Pendino district 40.37%); • Illegal immigration; • Hidden and informal economic activities.
Built environment	• Low level of housing maintenance and technological retrofitting; • Abandoned and decayed public places; • Lack of spaces for pedestrian uses due to cul-de-sacs, squares transformed in parking areas, inefficient street lighting, abandoned ground floors (38% unused sqm – source Si.Re.Na Company); • Buildings which provide physical and visual barriers between the area and the waterfront.

The focus area for HerO projects is Piazza Mercato, which is connected to an overall URBACT LAP named "Città Bassa" (www.urbact.eu/hero) included in a comprehensive intervention called "The waterfront of the historic centre and port area from piazza Municipio to piazza Mercato: a sustainable development through the

improvement of the cruise tourism impact", which also concerns the LAP of the URBACT Thematic Network CTUR (Cruise Traffic and Urban Regeneration) lead by the City of Naples.

Field of action	Principle							
Objective	#	Project title + description	Responsibility (stakeholders to involve)	Financial resources	Funding by	Financing secured	Time schedule	Links to other projects
Objective 1 Brief explanation	1.1	Title of "Action 1" Brief description stating requirements	Planning Department, Mr. A (Tourism Office)	50.000 €	Municipal budget	yes	2012	2.1
	1.2	Title of "Action 2" Brief description stating requirements	Tourism Office, Ms. B (Reservation authority)	10.000 €	Municipal budget + CFDP	yes	2012	–
Objective 2 Brief explanation	2.1	Title of "Action 1" Brief description stating requirements	Economic Department, Ms. C (City Marketing)	250.000 €	Urban Development programm	no	2013	1.1
	2.2	Title of "Action 2" Brief description stating requirements	City Marketing, Mr. D (Tourism Office)	5.000 €	Municipal budget	yes	2011	–

Example of a structure of a Local Action Plan. In this sense the LSG can be a good source to identify the key actions as well as to fill out the LAP table.

Figure 1. Example of Local Action Plan organization. Source: HerO Final Results: The Road to Success - Integrated Management of Historic Towns Guidebook; p. 47

The area of Città Bassa of Naples reflects all the issues, criticisms and potentiality related to the integration of typical handicrafts, dense residential uses, traditional commercial activities and the historical character of public places. This wide and articulated area lies between the port and the historical centre which has been listed as a World Heritage Site by UNESCO since 1995.
The study area is included in the range of influence of the Local Action Plan built by the City with the help of its Local Support Group (LSG), within the framework of the URBACT projects. The LSG as defined by HerO is to support the development and implementation of the Integrated Cultural Heritage Management Plan, which is "oriented towards the needs of the historic urban area and its users, offers the unique opportunity to bring the different stakeholders together". (HerO, 2011) The Neapolitan LSG has been formed as the first step of the URBACT projects and has become the main interlocutor of the different kinds of local initiatives such as research fieldworks, entrepreneurships, training and programmes for the control against informal and hidden economy.

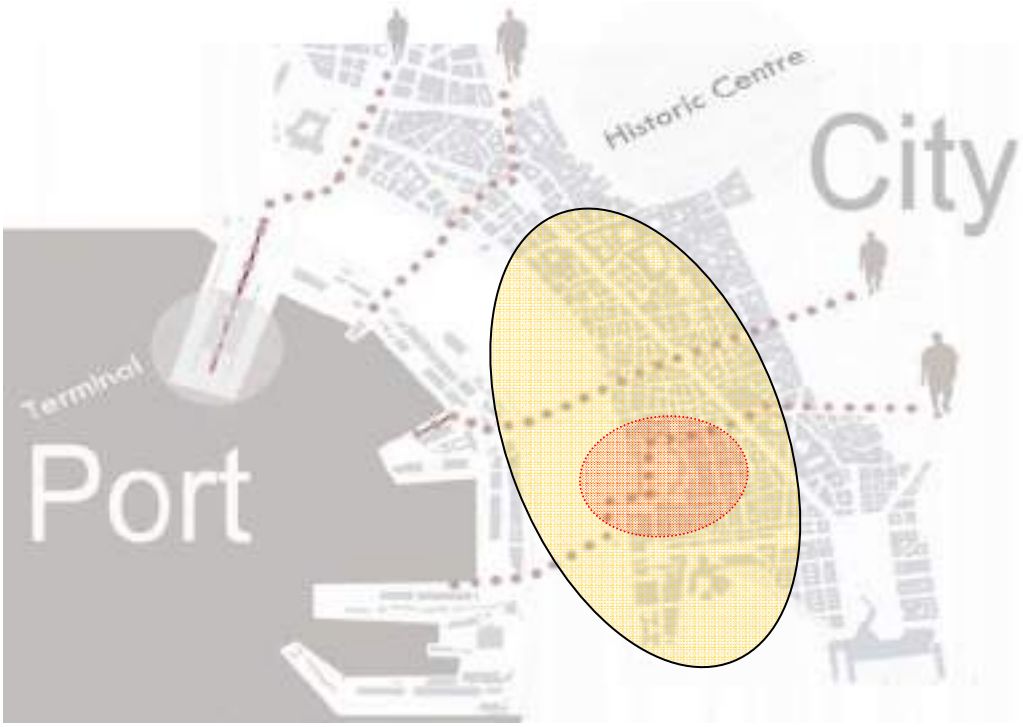

Figure 2. The study area of Città Bassa of Naples and Piazza Mercato. Source: Elaboration by the CTUR Final Report

The Local Action Plan (LAP) of Naples Città Bassa could become an experience of paramount importance – to be analysed, assessed and enhanced due to its mixed and complex character. Focussing not only on social indices and economic issues, the LAP is oriented to integrate both the approaches: built environment and historic heritage rehabilitation on the one hand and economic strategies on the other.
The Città bassa LAP includes the districts of Borgo Orefici/Waterfront (which form part of CTUR) and piazza Mercato (part of HerO) – all closely related to the port and the eastern part of the city – and is aimed specifically at reconnecting the ancient town centre and the harbour as well as regenerating the historic neighbourhoods.
The main topics are development of sustainable tourism, creation of business incubators, increasing commercial attractiveness, and job creation in specialized fields. One of the results obtained by the LAP has been to create an impact at the local level by transferring the knowledge acquired in the URBACT process to local policies, programmes and actors. This has been accomplished by scaling-up some of the action plans at the policy level and integrating them into mainstream services, as well as by securing funding through the Operational Programmes of the European Regional Development Fund (ERDF) for their implementation. In addition, the process has also contributed to creating new partnerships between different levels of government and the involvement and participation of private stakeholders in the development of the project. The LAP has been developed through the active participation of different categories of local stakeholders. (Sanoff, 2000)

Table 4. Città Bassa LAP: main aims and objectives

1	Requalification of the waterfront monumental area and nearby historic urban area;
2	Refunctionalization of the city and the port heritage;
3	Maximize the economic and social impacts of the projects;
4	support the social and economic development of the "Città Bassa" quarter based on historical activities.

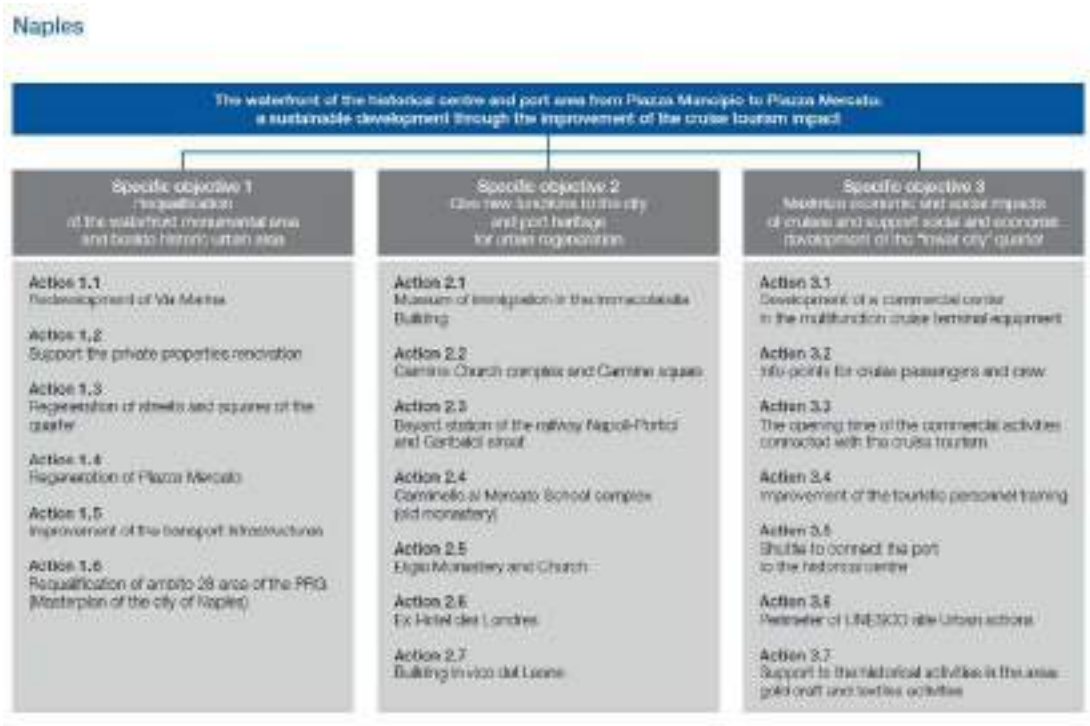

Figure 3. Scheme of priorities for the study area. Source: HerO Final Results: The Road to Success - Integrated Management of Historic Towns Guidebook; p. 71

Table 5. Città Bassa LAP: flagship projects investments (CTUR and HerO)

Projects	Responsible	Funds allocated	Source
Cultural heritage safeguarding – building restoration			
Old Monastery Carminiello (School)	City of Naples	3,000,000	ERDF 2007/2013
S,Eligio Monastery	"	2,500,000	"
Borgo Orefici requalification	SiReNa	17,670,000	Public/private
S.Maria Portosalvo Church	Private	1,200,000	Private
Public places requalification	City of Naples	5,140,000	ERDF 2007/2013

Requalification of complex ambit in the area	"	10,000,000	ERDF 2007/2013
Underground parking and requalification of related areas	"	13,500,000	ERDF 2007/2013
Business incubator for goldsmith and textile activities	City of Naples Private consortia	1,000,000	ERDF 2007/2013 Private funds
Tramlines and requalification of via Marina	City of Naples	4,203,491 13,997,299	ERDF 2000/2006 Public/private funds
Shuttle connection to the Maritime nodes	Port Authority of Naples	750,000	Port Authority of Naples

Sources: HerO Flagships Projects 2011 and CTUR Naples Local Action Plan

4. Conclusions: local commercial areas as drivers of urban regeneration

Starting from the virtuous process launched within the framework of the URBACT LAP here analysed and applying the methodological premises of the CLUDs project, an adaptive model of urban regeneration based on commercial activities is currently being defined - in cooperation with the local stakeholders involved in the transformations of the study area.

Applying the CLUDS methodology, the research aims at building a dynamic architecture of public private partnership PPP in order to enhance the regeneration process during this crisis period. The LAP has been an important instrument for encouraging dialogue between the stronger stakeholders of the LAP area, such as the Port Authority, arts and crafts private consortia and the City Council. By setting up the local support group, the URBACTS projects acting in the area have created a positive process: first, the initiatives developed by public bodies started the auditioning process and the collection of resources; subsequently, private bodies and civil society have become part of the process.

Referring to the logic of Business Improvement Districts (BIDs) – models dating back to the 1970s in the USA, are private institutions aimed at providing supplemental services in underserved urban areas – the wider experience resulting from the implementation of PPPs in North America will be combined with recent experiences developed in Europe that have involved actors from the broader territorial context in order to reach a necessary critical mass for urban regeneration.

The complex and articulated scenario of PPP tools offers the possibility of identify a possible dynamic system of relationships between subjects, actions, resources, roles and evaluation of the results. In particular, the case study approach is needed to design a sort of fuzzy-architecture of the partnership models aimed at facilitating local private and public initiatives within the framework of the common interest of

generating social and economic enhancement. A bottom up approach, oriented not only to collect demands and needs from the territory but also to encourage private initiatives, start-ups, non-profit organizations, and other forms of investments, will be elaborated and discussed with local stakeholders.
As we can see, in the LAP experiences analysed the initiative starts with the involvement of public bodies whose activites are primarily oriented to identify priority for public investments and to engage other public and private stakeholders. This process has been developed by the City of Naples and the LSG using a wide participatory process involving different categories of city-users, producing a huge data and information collection from the territory, providing a big effort in terms of sourcing and integration of financial resources and involving different categories of city-users.
The feedback needed – by applying the tools elaborated within the framework of the WP1 of the CLUDs research – is a model of governance that could enhance the non-profit private initiatives of urban regeneration driven by the development and rehabilitation of commercial areas in a wide profitable and marketable way.

5. Acknowledgements

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WORK IN PROGRESS ---DO NOT QUOTE

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Title: The Dilemma of Programming and Mobilising in the Urban Cultural Landscape of the New Dutch Waterline

Keywords: Governance, Institutions, New Dutch Waterline, Cultural Heritage, Landscape

Governance has become a key concept in planning. In this paper we focus on a specific dilemma associated with the emergence of governance as a means of solving collective action problems in the area of planning: the tension between mobilizing and programming. Using the work of Scharpf (1997) and Ostrom (2003) we analyse the problems actors face in dealing with this dilemma. The multi-actor context of many planning problems requires on the one hand the interactive (re)construction of the problems and solutions available and on the other hand the establishment of concrete results. This interactive (re)construction is a communicative process in which actors are mobilised around a certain definition of a collective action problem (Fischer and Forester 1993, Healey 2007). Visionary documents aimed at reframing the problem at hand are typically mobilising. However, to reach implementation, actors must agree on clear norms for programming. Reaching agreement about concrete decisions puts actors on the alert and makes them risk averse, while mobilising requires an open risk taking attitude among actors.

This paper asks how actors in practice deal with the dilemma described above. The paper takes the National Project the New Dutch Waterline as a case study. In this project more than 30 actors cooperate to revitalize a 85 km long former military defence structure in order to preserve defence works that are considered cultural heritage and to preserve and develop the quality of the landscape. The project is situated in an area described as an in between city, or Zwischenstadt (Sieverts, 2003), in which the difference between city and countryside has blurred. The involvement of a multitude of actors and the need to develop new problem definitions that suit a previously unknown challenge, in theory provides the ideal typical context for governance (Albrechts 2004).

The tension between mobilising and programming was dealt with by separating the two activities among two different groups of actors and by dealing with them sequentially. As a result mobilising and programming became disconnected.

New Problems in zones in between cities

The once clear distinction between cities and rural areas is becoming increasingly blurred since changing spatial, economic and cultural dynamics have led to new polymorphic urban landscapes and new perceptions of cities and their periphery (Salet 2009, Ascher 1995, Sieverts 2003). Cities and the countryside are increasingly interconnected resulting in highly diffuse urban forms (Salet & Dembski 2011). This new configuration has been conceptualised as Rurban spaces (Gallent et al 2006), Landscape Urbansim (Waldheim 2006), the Zwischenstadt (Sieverts 2003) or the Città Diffusa (Secchi 1997). In the areas in between cities spatial patterns are still changing, leading to new, unpredictable problems. These problems are difficult to deal with because planning authorities deal with various spatial claims in an uncoordinated and insufficient way. This has two consequences: a loss of spatial

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quality can be experienced and the identity of rural landscapes is changing. Especially in the Netherlands the concept of '*verrommeling'*, or 'scenic deterioration' is being used in the public debate expressing the loss of spatial quality in rural landscapes. The concept has a strong negative connotation regarding the unwanted, ugly, disjointed and incoherent spatial development in rural landscapes (Gies et al 2005). Another effect is the loss of identity in rural areas: "Traditional landscapes with their ecological and cultural values become highly fragmented and gradually lose their identity" (Antrop 2004). This is problematic because urban dwellers visit the countryside in their search for recreation, authenticity and identity (Albers & Boyer 1997, Mommaas et al 2000). The spatial transition is caused by the shift of urban functions to the rural periphery.

Economic, cultural and agricultural interests clash in the zones in between cities leading to a chaotic patchwork of different urban and rural functions (Van der Valk et al 2007). Policy makers and planners have difficulty to guide the various spatial claims in these areas with respect to three institutional factors. First, the new evolving configuration at the fringes of cities crosses territorial institutional boundaries (Horlings 2010: 9). The transitions in the zones in between cities exceed the traditional separation of rural and urban municipalities. Second, planning doctrines and the organisation of planning authorities are grounded on the establishment of the traditional urban-rural formation (Van den Brink et al. 2006). The sectoral organization within public bodies regularly divides urban and rural policies, leading to separate and poorly linked policy plans for the zones in between cities. Third, within a diffuse field of power relations, it is not always clear who is responsible for the problems (Kreukels 2004) and which actor has to initiate and coordinate planning processes and eventually. This leads to a lack of *capacity to act* (Horlings 2000: 17). These three institutional factors make the organisation of planning in these areas problematic. Eventually, due to unclear rules and norms, spatial intervention takes place next or across traditional planning orders. This gap can be defined as an *institutional void* (Hajer 2003); a state of a policy sector where clear rules, norms, routines or institutionalized practices are absent.

Besides organisational difficulties, actors are confronted with a dynamic spatial configuration that is still evolving which leads to new problems. Planning authorities are still using 'old' frames when they try to tackle these new problems (Van Ostaaijen et al. 2000: 157). The old frames are based on the traditional urban-rural divide, while in the meantime socio-spatial reality shows that the boundaries between rurality and urbanity are fading. Moreover, the reciprocal relationship between public and private actors requires storylines and a communicative practice to reach a shared perception of the problem situation (Van der Stoep & Aarts 2000: 154). The aim of this communicative activity is to *mobilise* actors to change their attitudes towards the other actors (De Vries 2008), and let them reframe their perceptions about the current spatial transition and the associated problems (Healey 1993, Rein & Schön 1996).

The process of activating actors and the development of broadly supported collective frames are considered as *mobilisation*. When mobilisation of actors is pursued, a spatial plan is used as a tool to involve actors in the planning process. Typically, these processes conclude with the determination of a visionary plan. These plans 'create an image of a dynamic future and give meaning to isolated issues, measures and projects' (Van den Broeck 2004: 181). The

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process towards the visionary document is most valuable because it reframes and aligns the perceptions of the actors (De Vries 2008). To prevent that actors drop out in the process because their interests are put under pressure, visionary documents are abstract, lack clear interventions and decisions about the distribution of resources. However, to execute spatial intervention, *programming* is required: this includes an agreement amongst actors about the final physical result and the contribution and distribution of resources and responsibilities. In programming processes, negotiations about goals, resources, responsibilities, and implementation take place, which means that the plan is not a tool as in mobilising processes, but the result of a negotiation process (Faludi & Alexander 1988: 132). Although there is a sharp contrast between the characteristics of mobilising and programming processes, both are needed to reach collective action (Van den Broeck 2004, Albrechts 2005).

Especially in the areas in between cities the contradiction between mobilising and programming is prevalent. Mobilisation is difficult because public and private actors are not aware of the dynamics and scale of the new evolving *Zwischenstadt* and its corresponding problems, which actors persistently try solve with traditional frames, strongly based on the separation of 'rurality' and 'urbanity' (Mommaas & Janssen 2008). In addition, innovative ideas in these regions 'come up against a glass ceiling of regulations and procedures, which makes it difficult to set new agendas for the region' (Horlings 2012: 17). Previous research in areas in between cities showed that mobilisation in these areas lead often to '…container plans [with] compromises in which too many things are interwoven,… integration become a goal in itself, obscuring the focus on resolving actual problems' (Mommaas & Janssen 2008: 27). The abstract characteristic of these mobilising plans makes the gap between mobilisation and programming problematic. Additionally, when actors have to negotiate about the final result and its program, they are aware of the risks of using their individual resources to solve a unclearly formulated collective problem. Above all, reaching collective action is difficult because both mobilisation and programming is required but has opposing characteristics. This leads to the following research question: how do actors deal with the dilemma of mobilising and programming in areas in between cities?

To answer this question, first theory about the dilemma will be reviewed, leading to the formulation of the hypothesis. The roots of the dilemma of mobilising and programming will be examined with the comparison of different planning methodologies with contrasting views regarding the function of a spatial plan in decision-making processes. Second, the research design and methodology will be explained. Third, the case of the New Dutch Waterline will be explicated as an example of a landscape in between cities where actors have to deal with the dilemma. Fourth, the research findings will be confronted with the existing theory in the discussion and conclusion.

Theory: The Dilemma between Mobilising and Programming

The question whether a spatial plan should be considered as an agreement about the final result and its implementation or as a tool to reframe and reshape a problem definition is based on presumptions about the function of a spatial plan in plan making processes. The core of this difference is found in the way planning methodologies consider the relationship between planner, spatial plan and the involved actors differently. To reach collective action, actors should on the one hand reframe and align their perceptions of the problem, and on the

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other hand reach an agreement about concrete measures (Van de Broeck 2004, Friend 2000). Mobilising and programming activities lead to different type of spatial plans with distinctive characteristics. In this paper the four main differences between mobilising and programming planning activities are elaborated: goal setting, type of agreement, production of options and the mode of interaction between the actors.

The main goal of mobilising planning activities is twofold. On the one hand the actors are reframe their perceptions about the problems at hand and on the other hand they change their opinions towards the other actors (De Vries 2008). When many actors have diverging interests, a shared definition of the problem and a broadly supported direction for solutions increases the capacity to act (Healey et al 2003). This '…sense of direction reflects the tension and interdependence between different values and interests' …which enables new combinations of different objectives (Giezen et al. 2012: 43). Within the communicative practice in planning, mobilising activities can be considered as 'making sense' of the situation together using diverse types of knowledge for joining and defining problems (Forester 1993, Healey 1993). While mobilising activities generate mostly invisible products (Friend & Hickling 1997), the result of programming processes is a clear agreement about a specific solution and the implementation of the project. Agreement about the final result is also important for legitimacy of planning activities and engaging in contracts with construction companies (Rein 1969).

Mobilising and programming activities lead to distinctive types of agreements.

Reframing the perceptions of actors during mobilising activities often results in plan which can be characterised as a 'grey compromise between various interests' (Van den Broeck 2004: 174). Also, Mommaas & Janssen (2008) criticise these plans because even in the case of consensus. These plans do not stimulate institutional innovation that is required to tackle the rather new problems in areas in between cities sufficiently. However, Giezen et al. (2012) state that ambiguity could be strategic, leading to more flexibility to cope with uncertainty. Programming plans consist agreements about the contribution and distribution of resources. Moreover, the links between goals, resources the results and the sharing of costs and benefits are more clearly determined in programming plans. For reaching implementation, the gap between strategic ambiguity and operationalisation should somehow be bridged.

When plans are used for mobilising purposes, divergence of options is desirable. There are three reasons why variety of alternatives is important. First, the redundancy and variety of options makes project more resilient towards unanticipated changes (Giezen et al 2012: 40). Second, the alternative that is eventually chosen is perceived stronger when it is challenged with other alternatives (De Bruijn & Ten Heuvelhof, 2004). Third, a majority of the actors supports the plan making process and feel committed when multiple options remain on the table. The process of producing the alternatives is important because it uncovers the preferences, values, opportunities and interests of the actors. This is important for exploring win-win situations and framing the project in such a way that the plan is broadly supported. Ideally, every actor can propose alternatives, which contribute to the cooperatively defined problem definition. Van den Broeck (2004) states that it is of great importance to connect abstract ideas and concepts to local problems because it strengthens trusts and local support when then plan needs to be implemented. However, in practice it turns out to be difficult to create sufficient space in the process for retention of alternatives (Swyngedouw et al. 2002).

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At a certain moment in time, a selection of alternatives has to be made, but what are relevant criteria and when should an alternative be retained?

According to De Bruijn & Ten Heuvelhof (2004), the production of alternatives should be stopped when learning processes come to a standstill. On the one hand, learning processes can come to a standstill cognitively, actors are unable to address new problem definitions, articulate new alternatives and change their patterns of thinking. On the other hand learning processes could end socially, when actors do not engage new relationships or attempt to understand the viewpoints of others anymore. When both learning processes have stopped, convergence of alternatives is of importance to get a step closer to implementation. However, divergence and convergence of alternatives is mainly executed in a messy process switching from the one to the other (De Bruijn & Ten Heuvelhof 2004). In programming plans, convergence of alternatives is important to determine a plan that can be and implemented. Now, the alternatives are compared by the actors, who possibly all have different preferences. Often, actors use different criteria ranging from political, practical to financial norms but have to agree about one specific option. The result is a negotiation where alternatives drop out and finally one 'best' alternative remains (De Bruijn & Ten Heuvelhof 2004). The divergence and convergence within programming and mobilising activities are conducted in arenas where specific *modes of interaction* determine the plan making processes.

Table 1.1: Characteristics of Mobilising and Programming use of Spatial Plans

	Mobilising	*Programming*
Interaction of actors	Discussion	Negotiation
Input and options	Diverging	Converging
Agreement	Direction	Distribution resources and responsibilities / contracts
Goal	Reframe perceptions	Clear agreement for implementation

The above distinction between mobilising and programming plans is strongly connected with the modes of interaction in plan making process. Although the structure wherein mobilising and programming activities are practiced is diverse, the main difference can be found in the interaction between the actors. A profound analysis of the interaction between the actors is important because, although mobilising and programming practises have opposing characteristics, actors have to reach consensus about the execution of both practices to eventually accomplish collective action. From a rational actor point of view, a crucial condition for interaction, collaboration or partnership is that the outcome of the process should lead to potential welfare gains which can be shared amongst the involved actors (Scharpf 1997, Pressman & Wildavsky 1974). The surplus created by the collaboration and the benefits that the individual actor eventually receives, should be larger in comparison with separate and singular behaviour of actors. It is a challenge to find ways to define problems and connect them with solutions which create additional value and can be divided equitably. According to Scharpf (1997), two activities can help in optimising the additional value and reaching agreement about the implementation: joint production and distribution. This

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distinction is also known as the process of 'creation and sharing of value' (Lax & Sebernius 1986). Both activities can be linked to mobilisation and programming activities.

Joint production is the activity where actors are jointly interested in pushing the welfare frontier to its limit to pursue a solution that lead to maximisation of the total value (Scharpf 1997). In this process, actors try to find ways to combine their interests in order to establish a plan that create extra value that could be shared amongst the involved actors. Therefore, actors have to discover the interests, preferences, opportunities and threats of others and should be transparent about their own. This process is very explorative because actors have to localise the zones of 'mutual attractions' and the 'zones of conflict' (Scharpf 1997). Innovative processes that reframe the problem situations and create synergetic combinations of resources, can lead to additional value which cannot be reached by the actors on their own. One specific mode of interaction is connected to the process of joint production: problem solving. The central purpose of these activities is the creation of better projects, because the power of problem solving is joint action (Scharpf 1997: 130). Discussions amongst actors are focused on the possible solutions and the best way of achieving it (Elster 1986, Majone 1989). Joint production requires a, communicative practice, where actors are transparent about their goals and interests, and discuss what they like and dislike. The main goal is the harmonisation of the perceptions that contribute to a consensus (De Vries 2008: 857). Therefore, activities of joint production are expected in mobilising plan making processes.

Distribution requires a different mode of interaction because the basic question here is how the created or existing value should be distributed. The distribution question leads to different behaviour of the involved actors. Cooperation to maximise win-win situations is achieved through negotiations about the distribution of costs and benefits. Actors are not focused on the soft side of planning where definition and reframing play, but try to reach hard agreements about the final situation and application of legal and financial instruments (De Vries 2008: 857). In order to reach an agreement, actors can decide that compensation measures are equitable or multiple decisions can be brought together in package deals to level of advantaged to disadvantaged actors. Scharpf (1997) defines distributive bargaining as the mode of interaction where negotiation about the distribution of costs and benefits can lead to an agreement. This leads to behaviour that can be described as strategic, where actors keeping the cards close to the chest, and mark their positions. This distributive behaviour of actors is typical for programming activities in plan making processes.

The activities of production and negotiation are strongly interconnected but the opposing characteristics make it difficult to combine both activities. In academia, there are different views how to treat the dilemma of mobilising and programming. Scharpf (1997) states that "procedural separation of both types of interaction seems to be useful on theoretical grounds" (Scharpf 1997: 135), but notes that this is hard to reach given the interconnectedness and tension between both activities. It is difficult for actors to see both activities separately, because it… 'may facilitate the coexistence of 'arguing' and 'bargaining', which are … incompatible modes of communication and interaction' (Scharpf 1997: 135). The creation of value and the search for win-win situations is only interesting for actors when satisfactory distribution is in some way guaranteed.

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Although Scharpf (1997) advocates the separation of mobilising and programming activities, Van den Broeck (2004) and Albrechts (2004) plead for simultaneously executing multiple tracks where the formulation of a long term vision, the arrangement of long and short term actions, and the mobilisation of different actors are at the same time performed. To bridge the gap between long-term visions and implementation, it is suggested that short-term actions are carried out in order to create trust by solving problems on a very short term (Albrechts 2004: 752). In contrast to Scharpf (1997). Albrechts (2004: 753) points out that during the process of developing a long term vision, "credible commitments to action engagement (commitment package) are needed where [different actors]… enter moral, administrative, and financial agreements to realize these actions."

The dilemma between mobilising and programming activities leads to three hypothesis. First, it is expected that mobilisation and programming activities lead to very distinctive types of plans with opposing characteristics. Second, distinctive modes of interaction characterise mobilisation and programming activities, regarding the theoretical differences between the creation and sharing of value. Third, although mobilising and programming activities are either simultaneously or sequentially carried out, the incompatibleness of the modes of interaction will presumably lead to conflicts between the actors.

Research Design, Case Selection and Methodology

A case study is good way to investigate how actors deal with the dilemma of mobilising and programming in an area in between cities. Regarding to Yin (2003: 13) a case study is a proper way to investigate a phenomenon when the boundaries between the phenomenon and the context are not clear-cut. In this paper, the phenomenon is the dilemma between mobilising and programming and in order to investigate this relationship between this dilemma and its context, an in depth case study is appropriate. To examine the dilemma, the case of the New Dutch Waterline is selected because it is a typical example of a project in the highly dynamic zone in between cities. The revitalisation of the cultural heritage in this project, can contribute to the recuperation and maintenance of the identity and quality in the zones in between cities. It is expected that actors will have difficulty to reach collective action because many actors with different backgrounds are involved and the project comprises various sectors within public bodies.

The New Dutch Waterline is a former military defence line located at the eastern fringe of the Dutch Randstad, containing a combination of different interconnected fortresses, bunkers, flooding fields, dams and dikes[2]. The line was built approximately between 1815 and 1963. The defense line was an ingenious concept; the main idea was to defend the rich urban area on the western side of the dike by flooding fields on the eastern side. When there was the threat of attack, military forces were entrenched in their fortresses and bunkers, positioned on strategic places in the flooded landscape in order to defend Holland.

Today, the New Dutch Waterline has lost the military function it once had. In 1995 the landscape was added to the potential shortlist of heritage for the Unesco list of cultural world heritage. In 2002, the management office New Dutch Waterline was founded with as main target the revitalisation of the landscapes and the hidden military structures. The main idea

[2] Map is located at final page of this paper.

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was to make the cultural and historical value more visible and exploitable for the public with one coherent plan. Above all, this project should be a collaboration of different sectors within the public sector. The main challenge was to bridge the political complex situation: more than 35 public bodies were involved starting from five ministries, five provinces, more than 25 municipalities and different semi-public agencies.

To investigate this case in depth, three research methods are used. First, archive study is carried out for the period 1985-2011 at the archives of the national project office of the New Dutch Waterline. Especially reports concerning crucial decisions are investigated. Second, 25 in-depth interviews with involved actors are executed. And third, for the period of one year, one researcher was present as an observer at the national project office of the New Dutch Waterline and observed the practices of the employees from an appropriate distance.

The chronicles of the New Dutch Waterline Project

At the beginning of the nineties many study groups were founded within national public bodies. The goal of these study groups was to attune the plans of different policy sectors and to establish coherent and well consistent policy plans. The national project New Dutch Waterline (NDW) starts when three of these study groups' conjunct in 1992-1993. At the national spatial planning agency, the *Rijk Planologische Dienst* (RPD), the interdisciplinary study group *ArMoLA* was founded in order to bridge the policy gap between architecture, landscape and monuments. Employees from the RPD and three ministries (the ministry of housing, spatial planning and the environment, the ministry of culture, education and science and the ministry of landscape, agriculture and fisheries) were attached to this study group and searched for projects that combined architecture, landscape and monuments: they found the NDW. The second study group was "*Project 33*", initiated by the ministry of landscape, agriculture and fisheries. This was an interdisciplinary study group with civil servants of the ministry, scholars and members of interests groups who had the task to find landscapes of great international importance that ought to be protected from "spatial disturbance". Again: this study group found the NDW. The third study group which looked at this project was the study group *Waterline.* This study was appointed by the RPD and did an explorative analysis of potential new functions in the area, carried out by the Research Institute for Forest and Nature and the University of Wageningen,

Eventually, the study of *Waterline* appears to have ended up in the archives. However, the project was brought back to life again when the new national policy plan for cultural heritage was shaped. The new *Belvedere* policy was a breakthrough for cultural heritage because the existing sectoral and conservative policy was grounded on the principles of conservation and was replaced by a new perspective that was based on the famous statement of 'conservation through development'. The main idea was to make the cultural heritage more accessible and pay for the maintenance of the heritage through spatial development and exploitation (Bloemers 2010, Schoorl 2005). This new policy opened doors for the NDW project: it was introduced by ex-members of the study groups and rather rapidly, the project became an example project in the *Belvedere* heritage policy and rapidly a separate (interdisciplinary) team was founded to set up an organisation and to elaborate plans.

The management office of the NDW was founded in 1999. In the beginning, the management office was part of the broader *Belvedere*-program. At the start of the project, the

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goal of the project was not clear, neither was there a definition of the exact problem, and neither a strategy existed that should lead to success. Nevertheless, some 'soft' directions were given by the Belvedere program, which was coordinated by the ministry of culture, education and science. The three main important directions were (1) the project should highlight the unity of the defence line, which included that the current developments in the area must be aligned with one coherent plan and (2) inter-sectoral plans (spatial planning, cultural heritage, housing development, infrastructure, water management and nature) should lead to well-attuned plans of high "spatial quality" and (3) the recognisability and acquaintance of the NDW should be stimulated because the military structure was hidden in the Dutch landscape and was rather unknown to the public.

The start of the project could be characterised as chaotic because many activities were carried out without a supportive and clear strategy. This changed after two years when organisation structure was installed with a political advisory board (Steering Committee) and at the operational level a civil project group (Project Group). The Steering Group, composing representatives of the ministries, the provinces, the municipalities and the water management boards, gave the management office the assignment to develop one coherent visionary document for the NDW. The management office followed two tracks to develop this visionary document: two tours through the area were conducted and a competition was organised between landscape architects.

Eventually two tours through the area of the NDW were organised to discuss the project with local politicians, farmers, cultural heritage organizations and citizens. The first tour comprised an open discussion about the *Belvedere* credo "conservation through development" in the NDW area. The main goal of this campaign was to introduce people to the NDW project and create political and local support for the project. The presentations given revived the historical value and contained a storyline which was grounded on historical images, tales about the rich history and discussions about the opportunities of the cultural heritage. For many people, it was the first time that they heard of the NDW and some experienced this as an exciting collective 'exploratory expedition'. Making people aware of the project using a coherent storyline which was based on the rich historical value can clearly be seen as a mobilizing activity because the involved actors cooperatively frame and reframe the direction of the project. However, people reacted differently; although they broadly recognized the rich history and great opportunities of the project, there was scepticism about the development and exploitability of the NDW. Some local and regional politicians said that the project was unrealistic because there was a lack of financial and political guarantees for implementation.

During the first tour through the area, the management office initiated multiple design sessions to create visionary plans for the NDW which were based on four different themes. Four landscape architects translated the themes in four –diverging- visionary proposals. Finally, the Steering Committee choose for the concept of '*Line in the Landscape'*, however, this decision was never discussed with local politicians, citizens or other actors at the local level. However, three feedback moments were important for elaboration of the plan and shaping and reshaping the vision. The first feedback was provided by the directors in the Steering Group, the second feedback was delivered by local residents and politicians in the second tour which was organized by the management office. And finally at the third moment

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of feedback, the landscape architects showed how they applied the collected feedback in the final plan. Finally, the concept of *Line in the Landscape'* turned into the visionary document of *Panorama Krayenhoff* which was eventually determined by the Council of Ministers in 2003. This rather open process where many actors had the opportunity to deliver input for the of the visionary document could be seen as characteristic for mobilization processes.

The visionary plan of *'Panorama Krayenhoff'* was based on a four basic design principles. First, the defence line should become the central marker in the plan: the landscape at the eastern side of the line should be kept free from development, regarding the historical open firing and inundation zone. At the western side of the defence line there was opportunity for development in order to generate financial resources to maintain the fortresses and landscapes. Second, the bunkers and fortresses would be recuperated with the financial support of public resources, and the long term maintenance of the building would be paid by the function(s) in or around the buildings. Third, the plans should lead to a recognizable and coherent ensemble, with a proper distribution of recreational, ecological, residential and water management activities. Fourth, concrete programming should be articulated at the regional level and must be compatible with the overarching visionary document.

Obviously, the visionary document lacked clear measures but did set a direction for development. The visionary, abstract characteristic of the plan was a mindful decision of the Steering Committee. The following anecdote emphasizes this: the author of *Panorama Krayenhoff* made some concrete examples of implications but was obliged to keep them out of the final version because it could lead to resistance by local and regional actors. Strikingly the planners were conscious about the mobilising effects of the process and wanted to capture this with the determination of the visionary document. However, although joint problem finding is a characteristic of mobilising plan processes, in the case of the NWD, an exact definition of the problem was never clearly expressed by the initiators. Nevertheless, many actors acknowledged the importance of the project because the project management was convincingly bringing inspiring opportunities to the table. Furthermore, the level of abstraction made it possible for local, regional and national politicians to attach their problems to the project. Nevertheless, collectively defining and redefining the problem of the project is an important characteristic of mobilisation, it was never an issue in the case of the NDW. The starting point of the project management was convincing people of the importance of the project and give people the opportunity to use their imagination add ideas for the existing path that was already chosen. Striking in this process is the central position of the management office, which organized support for the determined direction without discussing the crucial necessity of the project or linking the project to concrete problems of actors at the local level.

When the *Panorama Krayenhoff* was determined in 2003, actors were sceptical about the implementation of the plan because there were no financial or political assurances given by the involved actors. Therefore, the project management decided to tackle this problem with two measures. First, they made a *Bestuursovereenkomst* in 2005, a formal declaration about the management made by the directors of the provinces and ministries. In this declaration actors agreed on the organisation, the distribution of responsibilities, and they articulated the intention to reserve funds for implementation of the project. Although actors determined officially their commitment in this document, there was yet no long term program been

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formulated. And second, to deal with the scepticism about the implementation of the plan, "*Quick Wins*" were executed: small projects which were carried out quickly to show the politicians that the process would not persist in phases of bureaucratic consideration. The *Quick Wins* showed the politicians that the project was effective which indirectly contributed the support for the *Bestuursovereenkomst*.

Because the process of mobilisation was finished with the determination of Panorama Krayenhoff it was decided to change de organisation of the project. The NDW was split up in five different "envelopes" and regional civil servants became responsible for the management. With this measure, the regional level obtained a steering position. It was their task to activate the municipalities and develop projects for the NDW in the envelopes. A crucial qualification was that the projects should square with the overarching visionary document. The establishment of the envelopes was a technique of the project management to bridge the gap between the abstract level of the visionary document and the problems at the local level. Eventually, the plans delivered by the municipalities were brought together in one document: the *Uitvoeringsprogramma,* the implementation plan in 2007. The total costs of the project were estimated at 550 million euros.

Hence, the process of programming conducted at the level of the envelopes, where one crucial question dominated the debate between the actors: which actors would pay for the projects and how are the costs and benefits distributed. Essential that the ministries or provinces did not initiate a new financial program for the NDW project, and that funding for the project was generated form already existing programs. In the financial agreement in 2008, provinces and ministries agreed to dispose both 69 million euros which they reserved from already existing spatial, recreational, cultural and infrastructural programs. This meant that for every local project, municipalities and provinces had to apply for steams of money which were controlled by the provinces and ministries.

The phase of programming led interestingly in some envelopes to conflicts between the regional and local level. Some municipalities did not concede the relevance of the NDW project and disliked the guidelines and regulations executed by the national and regional actors. A number of municipalities had opposing preferences and priorities, for instance, one municipality had elaborated plans for a transport district in areas considered open space regarding the visionary document. Or, in the eyes of the Steering Committee, another municipality disrupted the historical value of the NDW with plans for a new residential area. Eventually, implementation of the plan was in some municipalities difficult, because some civil servants operating at the regional level had difficulty activating municipalities and designing plans that met the requirements of the management office and the visionary document.

Discussion

In the case of the NDW mobilising and programming activities are separated and sequentially executed. The management office recognized the importance of aligning the perceptions of actors and started with mobilising activities, creating an overarching visionary plan which was supported by the public and national, regional, and local authorities. A convincing story based on the historical legacy of the project combined with inspiring opportunities was used to mobilise the public. Eventually this process led to the determination

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of a visionary plan that could be characterised as abstract, indefinite, and most importantly, lacked an agreement about the distribution of resources. The mobilising effect of this process was of great importance because national and provincial politicians could link the vision directly to their political agendas. Finally this resulted in an agreement amongst the national and provincial politicians to promise a financial effort. Although mobilisation appeared to be successfully carried out because the goal (reframing perceptions) was accomplished, the process of mobilisation was not sufficiently conducted regarding two shortcomings.

First, mobilisation was only partly been realized. The starting point of the mobilisation process was activation of actors and exchanging perceptions about the project and the opportunities. Nevertheless, an important step was neglected; the project started with an already clear track for solutions while the necessity of the project was never questioned. Moreover, the attendants of the discussions did not had the ability to challenge the direction of the project or to connect local problems to the already determined direction.

Second, mobilising activities were strongly attached to the determination of the visionary document resulting in a temporal mobilisation of local and regional actors. The interests and preferences of local actors were absorbed in this visionary document but were of significantly less important for the planners in the subsequent process. Although the visionary plan *Panorama Krayenhoff* was a product of mobilising process, the implementation of the plan was eventually hindered by local resistance. After determination of *Panorama,* the main question was how much the project would cost and how the cost would be distributed (programming). Therefore, the project management was strongly focussed on reaching an agreement amongst politicians which controlled the resources. This led to significant less attention for local actors in the period 2003-2008. The local actors were only mobilised one single time, during the design of *Panorama,* but when after all implementation of the plan was at stake, new local actors and politicians were in charge which were not mobilised at all.

Thus, the local actors were only mobilised one single time instead of constantly. The created support was translated in *Panorama Krayenhoff,* which turned into a static document, a fossil that slowly lost its support. During the programming activities, local actors experienced *Panorama Krayenhoff* as top-down planning tool, forced by actors of the provincial and national level. *Panorama* was based on the political agendas of 2003-2004, but because the visionary document was determined and was never discussed again, subsequent local politicians were not able to modify the visionary plan according to current political agendas. Although the planners thought that mobilising activities were successfully finished with the determination of *Panorama Krayenhoff,* they created their own resistance by isolating the local partners for a reasonable period of time and closing the discussion for the principles which were captured in the visionary document.

Although *Panorama Krayenhoff* mobilised many actor, the step towards programming remained large. With sequential addressing mobilisation and programming for this long term project, both activities became disconnected leading to resistance concerning the implementation of the project. As a result of mobilising activities, difficult decisions regarding financial and political commitment were moved forward leading to scepticism about the implementation and feasibility of the project. To bridge the gap between mobilising and programming activities, the actors conducted two measures. First, short term projects or *Quick Wins* were implemented, to convince the politicians that the project was effective.

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Second, at the regional level *envelopes* were installed, which formed the nexus between the abstract national level and the concrete local reality.

Conclusion

In the NDW project a range of different actors were able to reach collective action in the dynamic area in between cities. The long term project started in 1999 and in 20011, 22 % of the programmed projects were implemented and 32 % was under construction. At the beginning of the twenties, the NDW project matched perfectly in the agenda of politicians to improve the quality and identity of space. However, for reaching collective action two important activities had to be applied: mobilisation and programming. Mobilisation was important for activating the many actors involved in this project and aligning their perspectives. Remarkable was that during the mobilisation in 2000-2003, the discussion was never focused on the direction or necessity of the project. The planners did not open the discussion and take a vulnerable position to reflect on the necessity of the project, or organized the debate concerning the direction of the path that was already chosen. In this perspective, "Joint Production" as Scharpf (1997) defines it, was never accomplished. In the NDW case, programming was of main importance to reach an agreement concerning the final implementation and the distribution of costs and benefits. The examination of the NDW case answers three theoretically grounded hypotheses.

First, theoretical background suggests that mobilising and programming activities leads to distinctive types of plans. The empirical study confirms this assumption: *Panorama Krayenhoff* was the result of a mobilising process and can, in line with the theory, be characterized as abstract, visionary, and lacks clear measures and implications (Albrechts 2004, Van den Broeck 2004). The *Uitvoeringsprogramma*, or implementation plan was the result of a programming activity and is way more clear about the final result and includes agreements about the distribution of resources and responsibilities (De Vries 2008). In practice it remains difficult to connect both plans in a proper way and when programming is conducted; the abstract norms in visionary documents can be interpreted differently, which leads to conflicts between actors forming a serious threat for implementation.

Second, mobilising and programming activities are separated and sequentially addressed in the plan making process. This practice is underpinned by Scharpf (1997) who advocates a procedural separation of both types on theoretical grounds (Scharpf 1997: 135). The *Quick Wins*, projects which were implemented quickly in the process to show the effectiveness of the program, would be supported by the theory of Albrechts (2004), who supports a constant leapfrog between mobilising and programming activities. However, although mobilising and programming was quite resolutely separated, the *Quick Wins* turned out to be not sufficient for bridging the gap: eventually the separation caused resistance of local actors. There was significantly less attention for local actors during the period 2003-2007, when there was a gap between mobilising and programming activities. In this way, some local partners saw the NDW as a top down forced project which eventually resulted in resistance and conflicts.

Third, programming and mobilising activities were carried out in a different institutional setting which exposed different modes of interaction amongst the actors. Scharpf (1997) distinguishes the process of 'arguing' and 'bargaining', which can be linked to both

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mobilising and programming activities. To mobilise actors, the planners used a strong story, based on the rich history of the project and powerful imaginations of opportunities. Eventually this led to commitment of regional and national politicians who promised financial support. The most conflicts in the NDW case occurred when actors had to talk about the distribution of costs and benefits. Here, as in line with the theory, the actors acted strategically, marked their positions and kept their cards close to their chest.

The case study of the NDW showed that in the area in between cities projects are initiated which aim to improve the quality and identity of space. A multi sectoral project like the NDW is an opportunity to intertwine different interests and translate them in coherent plans for this dynamic region. However, to reach collective action, mobilising and programming activities are required but are difficult to execute because they entail opposing modes of interaction.

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Map 1: The New Dutch Waterline

(Source: Management Office New Dutch Waterline)

THE REGION, THE TOWN AND THE HERITAGE: FUNCTIONAL LINKAGES ON THE PERSPECTIVE OF INDIVIDUALS' SOCIAL PRACTICES[1]

Luciane Aguiar Borges and Marcus Adolphson[2]

Abstract

Improvements in regional transport infrastructure have stretched individual's alternatives in regards to places for living, working, recreating and participating in civic activities. Beyond enlarging labor markets, these improvements have also changed the social character and the spatial configuration of urban milieus affecting as well the urban heritage. This paper investigates the functional linkages between the region, the town and the heritage on the perspective of individuals' social practices. The theoretical approach hinges on two understandings (i) social and physical structures constrain and enable individual and social activities and (ii) individual and social activities are an outcome of various processes based on needs and desires, which are dependent on individual, social and physical prerequisites. Based on this reasoning the paper proposes a model that comprises the region, the town and the heritage. In depth-interviews are the sources to design three personas that belong and represent each one of these social systems. The interviews also describe personas' social practices which are the parameters to assess the functional linkages among the region, the town and the heritage. The model is tested in the empirical context of Mälardalen Region, in Sweden in which Mariefred is the town and Gripsholm castle is the heritage. The results suggest that the model is appropriate to depict the functional linkages between the region, the city and the heritage.

Key-words: regional integration, urban heritage, functional linkages

1. Introduction

Improvements in regional accessibility have changed commuting patterns and cities' demographic and social structures (Champion, 2001). According to urban economic theories one of the consequences is that there will be fewer and larger big cities and they will be further dispersed in space (Krugman, 1996). Thus while some cities will expand other cities will shrink.

The consequences of increasing regional accessibility on the internal dynamic of cities are uneven and at large extend unknown. The enlargement of job markets accessible to the population by means of better transport infrastructure might have negative effects in some cities, whereas others in the same region will benefit from the development. One result of better transport facilities is that competition between

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different localities most likely will increase, as a greater number of local places will come up for consideration when people and companies choose between possible locations. Improving regional accessibility also magnify individual's alternatives to perform their activities in different places within the region, altering thus, their character and consequently contributing to reproduce and transform the region as a whole and thus the cities which are part of it.

The intra-urban structure of cities is also influenced by improvements in regional accessibility. Taken heritage as one of the components of the intra-urban structure one can argue that the existence of heritage in a town associated with improvements in regional accessibility might influences individuals in regards to place for live. Thus, heritage might lead to urban development since it may attract newcomers. Furthermore, newcomers may imply urban expansion affecting negatively the conservation of heritage. For example, undeveloped urban areas which stand for heritage preservation might be target for development. The dual and conflicting role of heritage as an attractor and restrictor of urban development makes heritage an interesting example to discuss the effects of improvements in regional accessibility on cities' intra-urban structure.

In this sense this study deals with three different scales: regional, urban and intra-urban and focus on the functional linkages among them. Previous studies (e.g. Taylor, 2004) have dealt with urban networks in terms of volume of contacts between cities based on number of work places within firms. Others based on system theory have created linkages between urban sub systems based on flows of people, goods etc. Nevertheless, none of them have approached functional linkages based on social and system theories and on individuals' social practices anchored in structuration theory. We argue that the functional linkages between the region, the town and the heritage are product of how individuals stretch their territorial boundaries through their practices.

Therefore, this paper aims at increase understanding about the functional linkages between the region, the town and the heritage. Knowledge about these interdependences will enable estimate effects of planning initiatives in regional, local and heritage management and identify spillovers that procedures adopted in one level may have on the others. Thus, relying on social theories we design a model that assists to map the functional linkages between these social systems. Individual action is the parameter to measure these linkages. Thereby, this research contributes in improving the effectiveness in planning and heritage management.

Mälardalen region in Sweden, Mariefred town and Gripsholm castle are the empirical cases to test our assumptions. Mariefred and the nearby Gripsholm castle are of medieval origin and are today – due to transport investments in 1997 – spatially incorporated within the Stockholm labor market. Still, due to lack of knowledge regarding these interdependencies effects on the Gripsholm castle and in Mariefred from these investments are rather unknown.

In order to depict these interdependencies in-depth interviews with three individuals (the regional citizen, the local citizen and the heritage representative) are the sources to measure the functional linkages among the region, the city and the heritage. The actions performed by these individuals are what establish the functional linkages among the systems.

Following this introduction the paper is arranged in five sections. Next section presents the Mälardalen Region, Mariefred and Gripsholm Castle. Section three describes, the main theoretical standpoints used to build up the model which is explained and discussed in section four. Afterwards we present and discuss empirical evidences about the functional linkages between these social systems. Finally, section six outlines some implications for planning and also pinpoints some limitations and further developments of the study.

2. Background

2.1. Mälardalen Region

The Mälardalen Region is constituted by five counties: Stockholm, Uppsala, Örebro, Södermanland and Västmanland (see Figures 1 and 2). The biggest county is Stockholm with 26 municipalities and population of almost 2 million inhabitants. In functional terms the region is considered as the largest one in Sweden with regard to population and economic competitiveness. There are tendencies that the Stockholm County polarizes the development.

The region is surrounded by railway and motorway networks that link several municipalities within the five counties (see Figure 2). In 1997 the implementation of high speed trains (Svealands line) made possible a journey of 115 km in just one hour. One effect of these investments was the enlargement of local labour markets and population growth in the neighbouring areas. This was a consequence of increased accessibility and supporting daily commuting which has balanced the housing and labor markets. Figure 3 shows the number of local labor markets from 1970 to 2008.

Figure 1: Swedish counties

Figure 2: The railway system in the Mälardalen Region

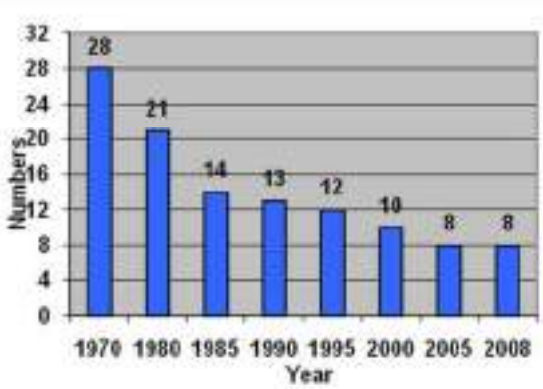


Figure 3: Local labour markets in the Mälardalen Region.

As can be seen from Figure 3 there were a quite significant number of labor markets in the region during the first 15 years from 1970. From 1985 and the following years the process of integration of labor markets decrease in general. However, the labor markets have become larger in size as a consequence of the increased commuting.

Previous studies (Copus et al, 2006; Johansson, 2009) show that even if 'regional enlargement' has increased as a function of the increased commuting, peripheral municipalities have lost in population size. On the other hand, municipalities around Lake Mälaren have experienced a favorable development during this period comparing with 1970s. The Figure 4 shows a schematic typology of the population development in Mälardalen Region 1973-1977 and 2003-2007 (Johansson, 2009). The color scale ranges from red that means a positive population development (positive net migration and positive natural population) to dark blue which depicts a negative population development.

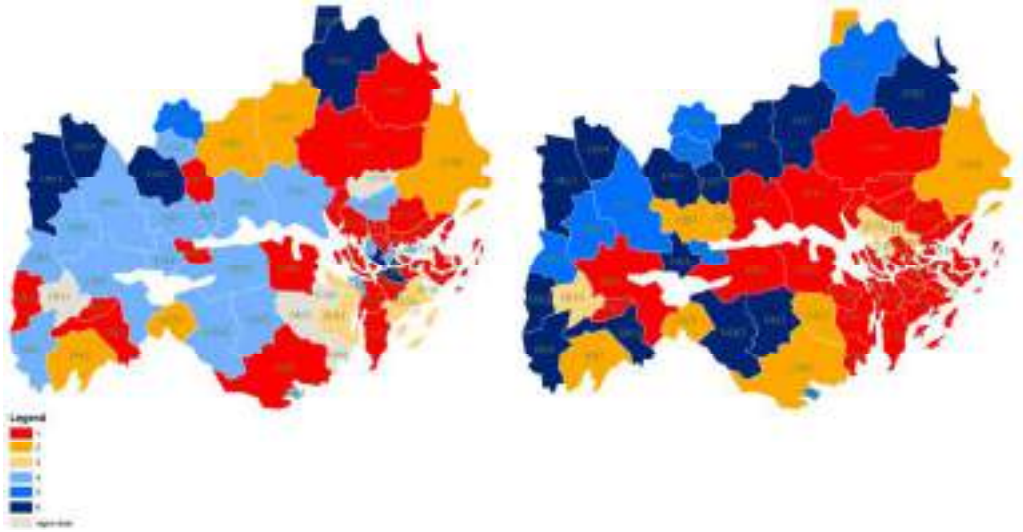


Figure 4: Typology of the population development in Mälardalen Region
Source: Copus et al, 2006; Johansson, 2009.

2.2.The context: Mariefred, Strängnäs

Strängnäs is one of the municipalities in Södermanland County and Mariefred is one of the eight towns that belong to Strängnäs. The municipality has experienced the effects of being connected through an efficient transport infrastructure. Approximately 14% of Strängnäs' population commutes in daily basis, most of them travelling to another county (SCB, 2010).

Between 1990 and 2009 Mariefred population has increased 33%. Mariefred is located 68.5 kilometers from Stockholm. Since 1997 with the implementation of high speed trains (Svealands line) the town has been seen as an attractive place for living. The Svealands line enables a trip between Läggesta (Mariefred' train station) to Central Stockholm in only 33 minutes. This fact reflects in Mariefred's commuting patterns; more than 20% of the population commutes in a daily basis: 38.9% of them to Södertälje, 25.3% to Stockholm and 13.4% to Strängnäs (SCB, 2006).

Changes in the social and demographic structure of Mariefred's population have urged urban development. There is an increasing demand on urban services such as schools, daycares, etc. as well as new residential areas. Figure 5 show Mariefred'

urban structure and the existing built environments (grey) and those which are under investigation for future developments (dash grey colour).

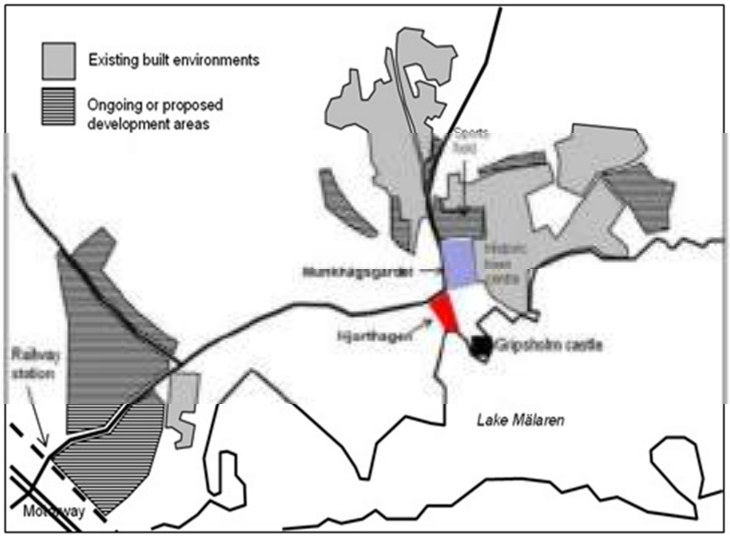


Figure 5: Mariefred and the region

Figure 5 shows that the area close to the railway station (Läggesta) is expected to expand considerably in the future. Nevertheless, the most sensitive areas for development are those close to Mariefred historic town centre where there has been a great pressure for relocation of communal activities to develop residential areas.

2.3.The object: Gripsholm castle

Gripsholm castle is one of Sweden's royal palaces. It was built as a fortress by Bo Jonsson Grip in 1380. In 1526 the King Gustav Vasa confiscated the fortress, tore it down and built a fortified castle as it stands today. Since then Gripsholm has belonged to the Swedish Royal Family and was used as their residence until 1713. The castle is now a museum and home to the Swedish national portrait collection.

The relations of production and consumption in the castle have changed along the history. The castle has functioned as fortress, residence, prison, and as museum. It means that different demands had to be fulfilled to enable these activities to take place. For example, when the castle was residence of the Swedish Royal family possibly few resources were enough to supply royal family's needs but when it became a prison there were also soldiers and prisoners who had another demands and so on. These changes in activities associated with technological changes (e.g. introduction of motorized vehicles, modernization of Svealands line) have changed the functional linkages between Gripsholmen, Mariefred and Mälardalen Region.

The castle underwent to rebuilding and redevelopment in several stages that has changed its built form and its surroundings. Nevertheless, some of them still remain the same. Figure 6 shows Gripsholm castle and its surroundings.

Figure 6: Gripsholm Castle

3. Theoretical framework

The understanding of the functional linkages between the region, the town and the heritage is theory/discourse dependent. In this paper we use basic components from system planning theory (McLoughlin, 1969) and Giddens structuration theory (1984) as the theoretical basis to design the model.

System theory contributes with a framework that explains how the region, the town and the heritage are functionally interlinked. Mariefred and Gripsholm castle are here regarded as social system that are affected by the surrounding – the region. The affect from these social systems on the region is not of concern here. Due to the need and desire for consumption and production there is a flow of goods, people, money, etc. between the surrounding and the social systems. A change in one component will imply a change in all other parts

The structuration theory contributes with a conceptual framework that integrate the individual in 'social systems' how individuals reproduce these 'social systems' (the Mariefred and the Gripsholm castle), the linkages among them and how knowledge about the society is connected to actions. A simple example of a social system could be a supermarket. Individuals go to the supermarket and buy goods, and by doing that they reproduce the supermarket every day. Therefore the supermarket is also a resource for other people, ultimately the supermarket exists because people go there and buy goods. Nevertheless, to go to the supermarket and reproduce it the individual needs to have knowledge that the supermarket exists. Thus knowledge and motivation are essential for individuals' actions, which is what reproduce and transform the social systems and the linkages among them. Hence, the structuration theory provides a framework for incorporating the individual in a social and physical context. This concept can be extended to a region, a town or a heritage.

3.1.Functional linkages

In this study a functional linkage is related to individuals' actions to supply their demands in the surrounding (region) and in the social systems (the city and the heritage).

System theory acknowledges that the town comprises a number of constituents or parts: residential areas, industrial areas, etc. Each part could also be regarded as a system. They are interconnected and interdependent since change in one part influences the other parts, affecting the entire urban system (McLoughlin, 1969). The system perspective thus provides a dynamic functional approach on the heritage, the town and the region. This approach also makes possible to integrate the heritage in the town and in the region as one of the urban component among others.

Structuration theory (Giddens, 1984) is used to understand each part – each system – and their interdependence. The theory brings in the knowledgeable reflexive individual who – by his/her activities – contributes in reproducing the society. This theory acknowledges the ongoing reproduction of the town. By performing activities individuals' reproduce their homes, work place, the food store – and the town. Thus the individual by his/her actions also reproduces resources for other people. These resources is by Giddens divided into three external 'constraints': material, regulations and institutions (patterns of activities). For instance, the possibility for an individual to perform an activity depends on the material shape of her/his home, her/his town, if roads are available, etc. Further on, also laws and rules regulates the opportunities for activities, and last the individual is also dependent on others peoples activities in maintaining for instance a shop. The individual uses memories of these external constraints as a resource in his/her internal action generating process. Other influencing factors are the individual motivations and consciousness. Examples of these kinds of resources are work places, shops, supermarket (see example below) etc. For a more detailed description see Giddens (1984) and Ritzer (2008)

In this paper the town (Mariefred) and the heritage (Gripsholm castle) are regarded as interlinked social systems that are continuously reproduced by individuals. The region (Mälardalen) is – according to the system planning terminology – regarded as the surroundings. These social systems are understood to be constituted by material, regulations and activity patterns. When people perform activities they use their knowledge – stored as internal memories – about these social systems in the action generating process.

4. Methodology

4.1.The model

The model enables to analyze the relations among the surroundings (region) and two social systems (town and heritage).The main objective of the model is to describe,

from a social perspective, the functional linkages among them in order to provide some insights about how planning at different levels affects and is affected by the other levels.

The region provides a framework that contributes to shape the town and their objects components (e.g. the heritage), physically and socially, and, at the same time, the physical and social character of the towns build-up and constitute the region. The region is understood in morphological and relational sense. In a morphological sense a region is constituted of towns which are linked by efficient transport infrastructure, that enhance regional integration. The relational aspect stands for the (functional linkages) that the physical morphology enables. An example is the circulation of flows of people, money, information, goods, etc. which is enabled by regions' physical structure and also by cooperation between individuals and/or organisations.

The towns, besides being part of the region they are the environment that contains the objects (any built form). Thus, the town is the urban settlements which contains a form and enable/constrain individuals' action. The town is a system in itself that provides the necessary resources for the reproduction of each urban object. According to system theory changes in the town also imply changes in the urban objects and vice versa. What determine the level of dependence between the town and the object (urban heritage) are their linkages, which are depicted through individuals' social practices.

The town is understood as association of two basic components: (i) the morphological, which refers to the material part (buildings, streets, open spaces, etc) and (ii) the relational, that refers to the activities, not only those embraced by buildings (residential, commercial, leisure, industrial) but also those that take place in public spaces (meetings, leisure, etc.). While the morphological part is more permanent in time, i. e., it might take a long period to change the relational component is more ephemeral and fluid because changes depending on immediate individuals' action.

In this study the heritage stands as an urban object. Nevertheless, urban objects could also be a sport field, a food store, a house, etc. They are reproduced in time and space by individual activities, and consequently they are also resources for other people (Giddens, 1984). According to system theory the urban objects are perceived to interact with each other through individuals' action which reproduce and transform them in time and space. The town is seen as the interaction among different objects. It is not our intention disregard the on-going discussion about what heritage is, but this issue is not the focus of our paper. Nevertheless, the heritage is assumed as a build-up form recognized by authorities as such. It is urban because it is an interactive part of an urban structure; it changes functionally and is dependent on appropriation by individuals. It is heritage because it is associated with knowledge, culture and identity.

The model acknowledges the individual as a key actor as she/he by her/his daily activities, of different spatial stretches and duration reproduce the social system. So the individual is the agent who, through her/his action is able to assess the functional linkages between the social systems. The individual is reflexive (has a free will) although she/he is constrained by external resources.

The functional linkages are assessed by three individuals that belong and represent each social system: the region, the town and the heritage. Their actions and the resources that they need to perform their daily activities (professional and private) describe the functional linkages between the social systems. These individuals are designed as personas. This technique is further explored in the following item. Figure 7 illustrates the model.

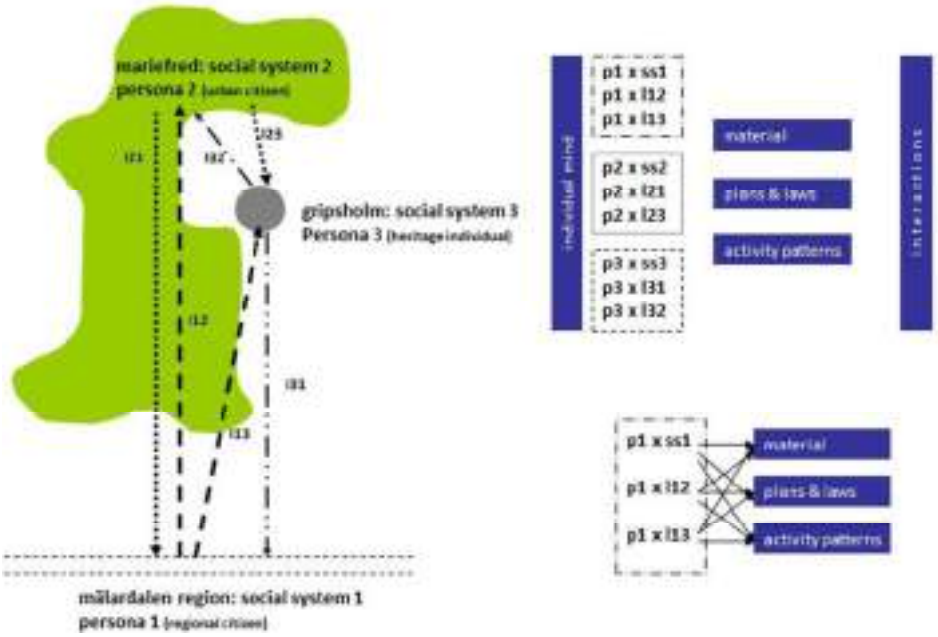


Figure 7: Model of interactions between social systems

Figure 7 shows the social systems (ss) and the lines represent the different linkages between them (l12, l13, etc.). In each social system there is a persona (p1, p2 and p3) who belongs, represents and assesses the linkages between this social system and the others through her/his professional and private social practices. For example, persona 1 (p1) is located and represents the region (ss1) since she/he perceives the region as a resource for her/his own actions. Therefore, this persona, by describing her/his actions, needs and knowledge indicates the interactions between the region and the other social systems: the town (l12) and the heritage (l13). This procedure enables to draw a functional map of interdependences between the region, the town and the heritage on the perspective of individuals.

4.2.Techniques

In depth interviews was the main resource to design the personas and to describe the functional linkages between the social systems.

Persona is a technique that was initially used for software design (e.g. Haikara, 2007). Nevertheless, its use has extended to other fields, such as travel behavior (Henriksson & Räsänen, 2010), consumers preferences (Palmgren & Zapico, 2008). These studies used personas as a means to describe patterns of behaviors and individuals' needs. The technique consists of a precise description of a user´s characteristics and what she/he wants and needs to accomplish a given task (Cooper & Reimann, 2003). A persona can be designed based on a single interview or can be a 'collage' of perspectives of many interviews, depending on the objectives of the designer in the process.

Since we focus on the region, the town and the heritage as a resource for individual's action we believe that personas technique provides a reasonable way to depict the functional linkages among them. Personas' concept is very much associated with products and services so it is our perspective about the region, the town and the heritage.

Therefore, based on in depth interviews with three individuals we designed three personas that belong and represent the surrounding and the social systems: the region, the town and the heritage. It is assumed that she/he belongs to the social system because she/he take from this social system most of resources that she/he needs for act. She/he represents the social system because she/he by acting establishes functional linkages with the other social systems. For example, an individual who works in another place in the region but lives in Mariefred is an individual who belongs to the region. Ultimately it is in the region that this individual takes her/his main resources to perform her/his activities. This individual represent the region by establishing, through her/his actions, connections with other social systems to supply her/his demands, which are not satisfied in the region. Therefore, she/he through his/her social practices is able to map the functional linkages between the different social systems.

The selection of the individuals followed some criteria: (i) their belonging to the surrounding and social systems should be explicit; and (ii) they should have a position in respective system where they have a comprehensive overview of the activities that take place in the system and the flows in both direction that link the systems with the other system.

Giddens' theory (1984) was the starting point to design the interviews, which covered questions about the individuals' mind and also about the material resources (built environment), sanctions (plans and & laws) and structural (patterns of activity). While information about the individual mind aided to design the personas, the other data helped to define the functional linkages between the social systems. In the

individual mind knowledge about normative rules, authorative and allocative resources are stored as memories. Allocative resources are the internal 'picture' of the external resources. The knowledge is also connected to degrees of consciousness. Thus is where action generating process – connected to motivations, and reflexion monitoring about actions – take place (see Giddens, 1984)

4.3.The personas

Based on Giddens (1984) and in three interviews we designed three personas: (i) Persona 1: the regional citizen. He lives and works in different cities within the region. (ii) Persona 2: the local citizen. He is manager of a hotel/restaurant in Mariefred and (iii) Persona 3: the heritage representative. He is Gripsholm's castle manager.

The regional citizen: Matts is 54 years old. He is married and has two teen ager daughters. He is from Uppsala (town close to Stockholm) but moved to Mariefred in 1989. He commutes every week day to Stockholm where he works as chemical engineering. He works irregular hours so when it is possible he takes the train to work otherwise he drives. Mariefred's' historical landscape, aesthetic characteristics and the cosy and nice atmosphere were the main motivations for him and his wife to move to Mariefred. Matts is engaged in local political processes. He is interested in the future development of Mariefred.

The urban citizen: Daniel is in his late 20's and is single. After spending some years abroad he came back to live in Stallarholmen (a small town close to Mariefred) where he was born. He was working as manager in a hotel in Strängnäs but since June 2010 he has been working as a manager in hotel and restaurant in Mariefred. He travels everyday by car to his work. He barely travels by train. He enjoys living in Stallarholmen because his family and friends live there and because it is close to the nature. He recognizes the importance to preserve Mariefred as a historical site and its importance for the success of his business.

The heritage representative: Lars is 66 years old. He comes from Vaxholm (small town close to Stockholm) but he moved to Mariefred five years ago to work as governor of Gripsholm Castle. He and his wife live in a building close to the castle. He travels by car to Stockholm for professional purposes twice a month. He is a member of Folklore society and participates in other social activities such as discussions about Mariefred development. Lars enjoys living in Mariefred because it is similar to Vaxholm and the community is very friendly. He acknowledges that the origin of Mariefred is connected to the development of the castle.

5. Analysis

Following the theoretical reasoning the analysis was divided into two themes: knowledge about what the personas know about the functional linkages and the functional linkages.

5.1.Knowledge

The theoretical framework already highlighted the importance of knowledge in order to reproduce the social systems and the surrounding. Based on the interviews we present personas' knowledge in regards to the functional linkages between the social systems and the surrounding.

The regional citizen, Mats, is aware about the dependencies between the museum in the castle and Mariefred. His main motivation to move to Mariefred was the landscape's aesthetic values. However, he has limited knowledge about the historical relation between the castle and Mariefred. He is concerned with the development of Mariefred but has mixed feelings about development/preservation. At the same time that he believes that Mariefred should grow to offer opportunities to newcomers he is also concerned with the effects of the development on the urban heritage. Mats argues that Mariefred's' historical core must be preserved but the town should expand in the periphery. In his opinion Mariefred could host activities such as advertisement, computers, and distribution hub due to its location close to highway. Nevertheless, big industries are not welcome in the town because they would compromise the town's characteristics.

Daniel, the restaurant manager is also responsive to the dependences between the museum in the castle and Mariefred. He recognizes that the restaurant and hotel would not be economically viable if the castle would not exist. Therefore, he stands for urban heritage's preservation and acknowledges the role of the landscape's historical and aesthetic characteristics as influential for the success of his business. Daniel believes that Mariefred should maintain its character of small and cosy place. In his opinion there is no place for activities such as night clubs or big shops in the town.

Lars, the castle manager, is aware about the dependencies between the museum in the castle and Mariefred. He acknowledges that Mariefred is highly dependent on the castle and vice versa but not in the same extend. He stresses that the historical process of urban formation of Mariefred was a consequence of the functional demands of Gripsholm Castle (employees, services, resources). In his opinion the improvement in regional accessibility has not influenced the number of visitors in the museum and in the castle.

5.2.Functional linkages

As stated before interviews were the source to map the functional linkages between the three subsystems. Information about which kind of resources the personas needed to perform their daily activities were classified into two categories: professional and private. Professional activities hold specialized and non-specialized services and employees, goods and customers. Private activities were classified in civic activities (participation in social organizations such as religious, political, etc.), leisure, shop of groceries (daily stuff) and more specialized goods (clothes, shoes, books, furniture,

etc.). The graph below (Figure 10) was used to plot the personas spatial footprints. It distinguishes between four different spatial levels (local, regional, national and international) enabling a visualization and comparison of the results. Even though the paper deals with the functional linkages among the region, the town and the heritage, the interviews showed that some individuals also need resources from the national and international level. Table 1 summarizes personas' spatial footprints.

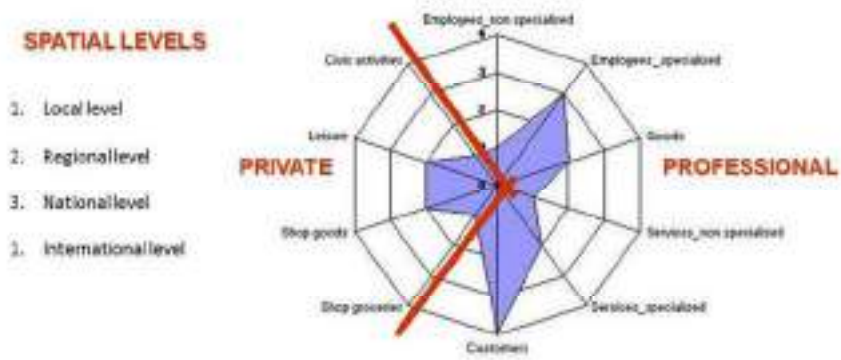
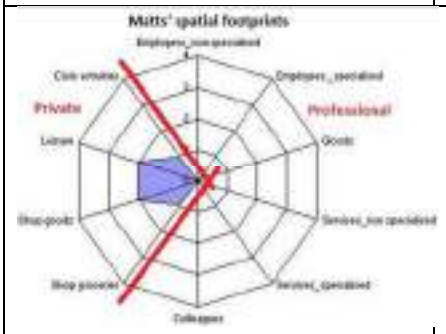
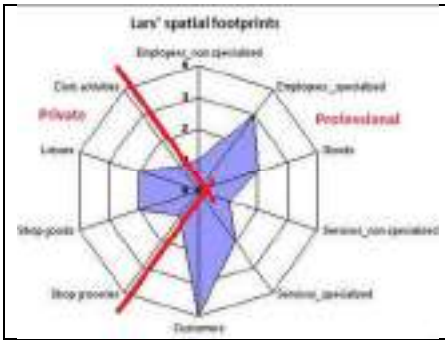


Figure 10: Personas' footprint

Table 1: Personas' spatial footprints

CHART	PRIVATE	PROFESSIONAL
	• ranges between local level (civic activities & basic goods) and regional level (leisure & specialized goods)	• Not applicable. Matts' job locates in the region thus the spatial reference of resources' provision changes in relation to Lars and Daniels' professional activities.
	• shopping (specialized and non-specialized) at local level • not engaged in any civic activity • leisure at regional level	• National customers but also few international • specialized goods and non-specialized employees at local level • non- specialized goods at regional level • specialized employees at national level

	• ranges between local level (civic activities & basic goods) and regional level (leisure & specialized goods)	• visitors from international level • specialized employees at national level • specialized services and goods at regional level • non-specialized services & employees at local level

In regards to private footprints, Lars and Matts present a similar pattern. Both of them participate in civic activities and shop groceries in Mariefred but their boundaries stretch to the regional level concerning to leisure activities and shop of goods. On the other hand Daniel is not engaged in civic activities, he shops groceries locally and specialized goods on the Internet, and therefore the spatial level was disregarded. Like Lars and Mats Daniel also performs leisure activities at the regional level.

Lars and Daniel professional footprints are almost the same, excepting for their customers that in the case of Gripsholm castle are significantly from the international level while for restaurant in Mariefred are from the regional/national level. The results also show that specialized employees such as guides for the castle and chefs for the restaurant usually come from the national level. Daniel also mentioned that the restaurant uses local products such as homemade beers and vodka but the regional level supplies the restaurant with most of the resources for food.

5.3.Results & discussion

This section summarizes the information about knowledge and functional linkages on the perspective of the personas. Table 2 provides an overview about the type of resources the personas need to perform their activities and from where they come from (region, city and heritage).

Table 2: Personas and resources for action

Persona	***Region***	***City***	***Heritage***
Matts	- work - specialised goods - leisure	- non-specialized goods - non-specialized services - civic activities - leisure	- nothing
Daniel	- leisure - non specialised goods - specialised employees	- work - leisure	- nothing
Lars	- wages - specialized services - financial resources for management	- non-specialized services - non-specialized employees - non specialised goods	- work

	- specialized employees - guidance for his work	- civic activities	

Based on the interviews Table 3 compiles the information about the functional linkages described by the model (see Figure 7). When analyzing the linkages between the region (R), the town (T) and the heritage (H) the activities/resources selected were those which fit to answer the question: what does this system provides to another? The grey color indicates that there is a linkage.

Table 3: Functional linkages

Types	***Services***		***Goods***		***Employees***		***Costumers***	***Leisure***	***Money***		***Regulations***	***No links***
Links	***s***	***n-s***	***s***	***n-s***	***s***	***n-s***			***w***	***p***		
R-T												7
T-R												4
R-H												5
H-R												2
T-H												3
H-T												4

(s) specialized; (n-s) non-specialized; (w) wages; (p) payments.

The Table 3 shows that the region is quite influential for both the town and the heritage. The strongest linkage (R-T) shows that Mälardalen complement Mariefred in regards to services, goods, employees, etc. The region also plays an important role for the heritage. It affords services, employees, customers, regulations and financial resources for management. On the other hand the weakest linkage is between the heritage and the region. The heritage provides leisure opportunities to the region and some financial resources from the museum entrance fee.

6. Discussion

The model provides a systematic way to depict the linkages between the region, the town and the heritage and shows in which way they are interconnected. In regards to planning at different scales some estimation can be pinpointed.

The interviews showed that the modernisation of Svealands line in Mälardalen region did not strengthen Gripsholm castle as social system. Even though most of visitors come from the regional/international level their visit do not depend on the capacity in the railway system. Nevertheless, Svealands line strengthens Mariefred as social system, because it attracts newcomers. Attracting newcomers implies a need for urban development, which might threat heritage as spaces close to the castle may

come up as alternative areas for urban expansion. The understanding of these implications it is beneficial for planning.

From the heritage management perspective it is worth to mention that the introduction of entrance fees to visit the museum in Gripsholm castle in 2007 caused a drop of 30 000 visitors/year. Certainly it influenced Mariefred's' local economy. This fact reveals the strong interdependence between Mariefred and Gripsholm castle and also suggests that both local planning and heritage management should coordinate their actions through cooperation. Evidences from the interviews also indicated that the castle is one of the main aspects that influence newcomers to move to Mariefred. It reinforces the dependences between Mariefred and the castle.

7. Final considerations

The paper presents a new approach to disclose the interdependences between the region, the city and the heritage. This approach considers system and social theories as the basis to envisage the interrelations between different planning scales; therefore it enables to estimate consequences of changes contributing for planning practice.

However, the study presents some limitations. A larger number of interviews would enrich the personas profile, aiding to deepen the analysis. Still, the model needs further development. The consideration of volume and intensity of flows certainly would provide a more accurately measure of the functional linkages between the surrounding and the social systems.

From heritage management and planning perspectives, the use of heritage as one of the social systems disclosed how social and system theoretical approaches could deepen the knowledge of how heritage is integrated in urban and regional contexts..

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Using heritage: let's begin by using the same language.

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Abstract

Any attempt to use heritage in the pursuit of place planning and development objectives is bedevilled by terminological and conceptual confusion. This stems largely from the way thinking about the past in the present evolved and the resulting contribution of many different academic disciplines to the creation and application of heritage, resulting in a plurality of paradigms and quite different, even contradictory attitudes to the past and its contemporary uses. This creates a lack of understanding or dialogue between those involved and drastically reduces the instrumental effectiveness of heritage in place development and planning. This paper will explore the confusion in terminology and the concepts behind it and argue for a common, less ambiguous and logically underpinned language. The heritage phenomenon itself should not be viewed as object, artefact or site but as process, outcome and experience. As a contemporary creation in the service of current needs, the spurious dichotomies of natural /cultural and tangible / intangible are a meaningless distraction. As heritage is produced by the user of it, its values are extrinsically ascribed rather than intrinsically authenticated and thus authenticity can relate only to the contemporary consumer experience not the contributory historical resources. However this also implies that heritage is multi-used and multi-consumed, which renders its management a necessity. The role of the preservation, conservation and heritage paradigms in development will be explored and the contradictions inherent in the first two will be resolved in the third. Heritage plays many potential but quite different roles in development, including as a commodifiable resource for products and services, an enhancer of environmental amenity, a catalyst in local area regeneration and revitalisation and contributor to place image or brand. The characteristics of heritage, so defined, as a ubiquitous, flexible, and inexhaustible development instrument thus render it ideal for place management but until we resolve these terminological and conceptual issues its potential will remain largely unrealised.

keywords: heritage, paradigm, terminology

'Words are like leaves; and where they most abound,
Much fruit of sense beneath is rarely found'
(Alexander Pope, *Essay on Criticism* 309)

Pasts, presents and futures

Heritage is a process and an outcome. It is a process whereby objects, events, sites, performances and personalities, derived from the past through relict structures, memories and histories, are transformed into experiences in and for the present, with an intention of bequeathing these to a future. It is an outcome in which the present evokes imagined pasts and imagined futures in fulfillment of contemporary political, social, economic and psychological needs. The problem is that those engaged in this process and involved in managing these outcomes have varied, different and even contradictory intellectual backgrounds, approaches, motives, working methods, ethos and responsibilities. These differences are manifest in the paradigms, concepts and terminology used. The result is not just cacophony; it is a counter-productive, often fractious, misunderstanding and loss of opportunity. If the enormous, flexible, multifaceted contribution of heritage, not least to the planning and management of environments, is to be realized then at its most basic level we must begin by using the same language.

Historical paradigms

Three main paradigms have been, and are still being, applied to aspects of the relict past in the present. Each evolved its own focus, obsessions, justifications, and modes of expression not least in language (Ashworth, 1997; 2011).

The language of preservation: the absolutist paradigm.
Assigning value to the past, and even the wish to sustain elements or qualities derived from it into the present and bequeath these to a future, has a very long history and may arguably (such as by Tuan 1977) be an inherent human trait. However the idea of preserving obsolete forms for their own sake, when the functional requirements that produced them no longer exist, is much more recent. Almost every Gothic cathedral in Europe was built on the demolished ruins of its predecessor. The European cultural renaissance of the fifteenth and sixteenth centuries may have rediscovered and revalued the ideas of the classical world but was simultaneously using the surviving classical monuments as just a quarry of building materials (Larkham 1996). What Lowenthal (1996) has called the heritage "crusade" begun in the middle of the nineteenth century and has often been linked to three long-term, inter-related trends in the cultural, economic, and political spheres of Western European and North American societies. It would need a lengthy historic study (such as attempted by Lowenthal 1985 and Denslagen 1994; 2009) to trace why this radical change in thinking occurred and why it became so deeply entrenched as to become for many today effectively an unchallenged self-evident truth. However suffice it to note that the rapid economic and concomitant social changes, which are

encapsulated in the term the 'industrial revolution', accelerated the replacement of many centuries of urban evolution by new forms, spatial patterns and ways of life that in reaction fuelled a romanticism, powered by nostalgia, etymologically pain for what has been lost. This became intertwined with the rise of nationalism, an ideology necessitating the creation and propagation of the entity 'nation'. This imagined entity is bound together and separated from others, by the bonds of a collectively memorialized past, within which built environments played a major role through their very visibility and thus the raucousness of their message.

This radical change in the way historic built environments were viewed, was pioneered by crusading prophets with a near messianic fervor, focused determination and impatient dogmatism such as among others John Ruskin, Augustus Pugin, William Morris, George Gilbert Scott in England, Victor Hugo and Eugene Viollet-le-Duc, in France and Victor de Stuers and Pierre Cuypers in the Netherlands. All shared a fundamentalism based upon an unshakeable belief in their righteousness, a feeling of being alone against an indifferent or hostile majority and impatience with counter argument. All combined in the single simple message to save what can be saved before it is too late. The paradigm is a clear, obvious and unchallenged imperative expressed in the word 'save'. The main unquestioned assumption is that the past is real, it actually existed, and it can be preserved through its sites, monuments, memories and historical narratives for the present and bequeathed intact to the future. The sharp and continuing schism among preservationists revolves around the application of the action 'save'. Some, notably Ruskin (1849) would save 'as found' after time and circumstance had impacted upon the relic, others, notably Viollet-le-Duc (1858 /1872) would not only save but also 're-establish a building in its finished state, which may in fact never have existed'. The word renovation was the dividing shibboleth.

Preservation appears to be a straightforward and uncomplicated idea associated with an equally simple action, saving. It is a protective intervention to maintain the current condition of an artefact, building or ensemble. It is notable that the word 'use' has not entered into the discussion except as a potential enemy of preservation. The objective is just to continue to exist with the idea of bequest so that such existence should continue also for future generations.

The language of conservation: the planning paradigm

The seeming success of the preservationists, expressed by their obtaining effective, comprehensive, official protective legislation and a consensus of popular support at least in Western countries by the 1960s, led to an extension and modification of the preservation ideas, which became manifest in official policy documents and ultimately very similar legislation in, for example, The Netherlands (1961), France (1962) Britain (1967) and Italy (1970) (Burtenshaw et al. 1991; Ashworth & Tunbridge 1990). The focus shifted to include not only individual buildings (the 'monument') but also ensembles (the 'historic or 'heritage' district). This in turn compelled a wider approach, if only because a single building could perhaps be treated as an art object in itself regardless of its contemporary use but a whole urban historic district could not. Function had to be added to form which inevitably

involved the planners and managers of place functions and thus what had been largely the preserve of architects and art historians now became linked to policy objectives, wider than the building or site itself, which became an element in more extensive schemes of local area renovation, revitalization, renewal and regeneration. Larkham's book (1996), entitled *Conservation and the City*, which is structured by local area policy objectives rather than the historic characteristics of the buildings and areas in which they are applied, chronicled these changes in the United Kingdom. The phrase "adaptive reuse" became a mantra in planning departments of local authorities throughout Western Europe and North America (Tiesdell, et al. 1996). The critical difference between preservation and conservation however was not so much in the actions themselves as in the methods, attitudes and goals of those who were performing them.

The term conservation, used in this way rather than as used in museums as a synonym for preservation, was evolved and applied largely by place planners and managers in the context of the built environment and to them was best expressed in the phrase "preserving purposefully" (Burke 1976) where the decision to save is linked with the intention to use. The increasing involvement of politicians and government officials in a field previously the almost exclusive preserve of experts, usually architects, is related for the United Kingdom by Delafons (1997).

The language of heritage: the phenomenological paradigm

In many respects, heritage has evolved as a process of managing the consequences of the very success of previous paradigms and the heritage paradigm could be seen as a continuation of the shift in focus from object to process and outcome. Structures, sites and places are seen as vehicles for the transmission of historicity, contributing to many contemporary social, political and economic needs. It is the fashioning of some representation, a key word, of a past in the present from selected relics, memories and histories. The purpose is thus not to save anything from the past but to use the past in the present: the use determines and, in that sense, creates the resource rather than use being a subsequent action for something already preserved. As Lowenthal (1985) put it 'heritage is about creating something not about preserving anything'. A heritage approach has a significantly different way of viewing the basic time dimensions of past, present and future than does a preservation approach. A preservationist sees the responsibilities of the present as being to select and preserve aspects from an inherited past and to bequeath these to a future. The salient questions here are how is such a selection made, who makes it, on what criteria and on the basis of what authority. Preservationists seek to retain an objectivity in relation to the selection of the subject being preserved and see the process as devoid of ideological meaning. The questions about ownership or relevance are not posed or, if so, only answered by an appeal to the universal - all humanity. A heritage approach asks only what are the needs of the present that a past transformed into heritage can help satisfy. The future, when it becomes the present, will have not only its own needs but also will create its own heritage to meet those needs. If the past is treated as a resource to be activated by contemporary choice then the choice is likely to be quite different in content, criteria, agency and purpose.

This way of viewing the relics, memories and narratives of the past has a number of implications. If the process is demand driven then, at least in theory, resources will be activated as contemporary needs require and thus are mutable, ubiquitous and infinite. A major objection to the view that heritage resources are inexhaustible is that this view is plainly contradicted by countless cases around the world where demand is outstripping supply, not least the supply of space itself that is self-evidently bounded. A particular heritage site, district or city has a limited capacity to accommodate contemporary uses and users and that capacity may be exceeded causing damage to the resource itself, conflicts between users and a diminution of the quality of the user experience. However the supply of heritage in total is limited only by the limits of the human imagination to create it. Thus a local excess of demand over supply can be seen as just a result of specific time or place bound management failure to increase supply to meet the demand by shaping new heritage products and spaces (Ashworth, 2011).

The view that heritage resources are ubiquitous would also be countered by a glance around the world and the conclusion that there is just more heritage in some places than in others. This would be a misunderstanding of what has occurred. Deliberate choices were made to activate potential historic assets according to the prevalent idea of what constitutes heritage and to pursue heritage as a characteristic

element in preference to other options (Ashworth & Tunbridge, 2000). All places have that possibility: only some choose it. No place therefore is inescapably locked into, or out of, the heritage option by a fixed resource endowment.

An incomplete paradigm shift

In most sciences paradigm shift (see Kuhn 1962) is a successive challenge, conflict and replacement of one commonly accepted way of viewing and processing knowledge by another. However what has happened in the short few centuries of concern for the past in the present is that quite different paradigms have been successively introduced for use in particular areas of study or practice and instead of replacing those already in use have tended to be added to them so as to coexist simultaneously with them (see figure). There has been only a partial and incomplete paradigm shift. It is this uneasy coexistence of parallel paradigms and their languages that gives rise to confusion and many misunderstandings between those responsible for different aspects of the heritage process. A consequence of the incompleteness of the paradigm shift has been to emphasise and widen the gap between different phases and aspects of the process whereby past built and natural environments are transformed into contemporary heritage products. In particular the gap between the theorists and the practitioners may be tolerable if they operate in mutually isolated spheres. However when they come into enforced contact then this gap may have several serious consequences. Heritage place management and planning with the objective of contributing to local public policy objectives has many such contact zones (see Graham, et al, 2000).

Confusions and delusions

Values and value

Those engaged in the selection, care and safeguarding of historic resources apply a dominantly preservation paradigm in which value is assumed to be intrinsic, universal and immutable. The object itself possesses value, which although discovered and legitimated by experts is self-evidently present to all who wish to experience it and always will be. In the heritage paradigm all values are extrinsic and ascribed to the object by those who experience it. They are thus neither universal nor immutable, as different people at different times will ascribe different values. The value, and thus the heritage itself, is in this sense created by the current users in fulfilment of their contemporary needs. Heritage is a cultural creation of the present and as with all culture, is fashion driven: new presents will constantly imagine new pasts to satisfy changing needs.

What seems to have happened over time is that form, which was a direct creation of function, possessing only utility value, now becomes itself a creator of new functions and has other non-utility values ascribed to it. Thus the reversal is total. There is a direct parallel in approaches to the natural environment, which was treated for many millennia as usable space, most obviously for food production, This

was supplemented and at least partially replaced by the aesthetic concept of nature to which many non-utility attributes were ascribed (Denslagen, 2009).

The intrinsic / extrinsic distinction over value should not be confused with two other debates that involve the idea of value. The first is common in cultural studies in general and is between the 'economists' and the 'culturalists' (Klamer, 2003). The former attempt to value culture in the sense of ascertaining its worth, ideally through some comparative measure, ultimately market price, thus allowing selection, prioritisation and comparison to be made. The latter see culture as possessing non-commodifiable values that render both comparison and selection of the basis of objectively determined value all but impossible.

The second distinction is between the instrumental and non-instrumental uses of the past and its artefacts. In the former heritage is used as a means towards some other political, social or economic objective. Heritage becomes a resource for political legitimation, socialisation or an economic enterprise. However heritage may also confer non-instrumental values, in itself such as aesthetic satisfaction or just pleasure. In both of these conditions the values remain extrinsic as art appreciation is a learned, culturally specific and time bound response and the values experienced are not intrinsic to the paint, stone or musical notes.

Objects and resources

Heritage can be constructed from an enormously varied range of physical objects, sites, events, personalities, memories and cultural expressions. If the focus is upon the object then heritage could be classified according to the characteristics of that object. The temptation to do that in practice is strong if only because the expertise required in the creation, maintenance and presentation of different categories of object is itself quite different. The task of a museum curator, an administrator of a cultural performance or manager of a natural landscape or physical phenomenon requires different skill-sets. It is understandable therefore that these difference have led agencies to add the adjectives 'cultural', 'natural' and even 'mixed', to the noun heritage. Such usage has become embedded and legitimated by UNESCO in its application of the World Heritage Convention to specific sites and is echoed in numerous national ministries and non-governmental agencies around the world. From the perspective of heritage as experience such usage is in part tautological and more seriously a misleading misdirection of attention. The resources from which heritage is shaped may be categorised in this way but the heritage itself cannot, as all heritage, whether a building or a landscape, is a cultural construction. The stones and bricks, or trees and hills, are not heritage until recognised and designated as monument or park.

A similar misdirection to the resource rather than the experience is the distinction between tangible and intangible heritages, introduced by UNESCO in the interests of political balance between countries, continents and cultures in its bestowing of World Heritage accolades. Apart from its comic aspects such as French cuisine or carnival costumes at Binche, being designated 'intangible', more

fundamentally it misdirects attention from heritage, which is all inherently intangible, to the resources from which it is constructed, which may or may not be.

There is a further related source of misunderstanding concerning probably the most toxic and divisive word in heritage debate, namely authenticity. An object based preservation paradigm is dependent upon the authenticity of the object, whether this means the authenticity of the date of creation, hand of the artistic creator, or historical accuracy. Such authenticity in turn is dependent upon authentication and ultimately upon the authoritative authenticator resulting in an expert-driven, top-down validation. An experienced-based heritage paradigm however has no such dependence. This is not because heritage, as its preservational critics charge, is inauthentic and essentially false. It is because heritage relies upon the authenticity of the experience, not the object. Thus a reconstruction or a facsimile may convey more the sense of how it was, or how we now wish to imagine how it was, than some partial degraded relic however authenticated as validly of the period. Ultimately heritage relies upon a user-driven, bottom-up validation.

Objectives and outcomes

The objective of preservation is to save: the objective of heritage is to use.

The ostensibly simple idea of preservation can be logically challenged by posing the question of whether preservation, in this negative sense of protection from change, is actually possible. The preservation of physical objects created in past time can of course be attempted, as can their reconstruction. However the past is by definition not here now and a preserved or recreated historical townscape is of the present not the past, however perfectly preserved or reproduced are the physical forms of which it is composed. We cannot experience it as it was, if only because we are different.

In a preservation paradigm the subsequent uses of what is saved, apart from any aesthetic satisfaction or pleasure derived from experiencing it or just from the knowledge of its continued existence, are irrelevant to the action. First save, then maintain and only then, if grudgingly possible, reuse. This was expressed in the UNESCO so-called "Venice Charter" of 1964, whose article 5 states clearly that uses of preserved buildings would only be permitted in so far as they do not cause change to the structure or site. This idea, echoing the much earlier (1931) 'Athens Charter', became a central dogma of ICOMOS, established in 1964, and has been reiterated in all 12 subsequent such 'Charters'. The sole purpose is preservation and bequest not use (ICOMOS 1974).

The relationship of preservation as saving, to development as change, is ostensibly simple: they are opposites between which no logical compromise is possible as an increase in one inevitably causes a corresponding decrease in the other. The slogan "save by developing" is a terminological contradiction. Heritage however contains no such contradiction; indeed heritage is a development option.

As far as planning or development is concerned the saved and preserved relict historical artifacts and sites are at best irrelevant and at worst an obstacle. There are

three possible planning reactions, discounting illegal demolition. First, the spaces and buildings designated as saved are removed from 'normal' planning consideration and development occurs elsewhere. A spatial fossilization occurs as evolution and change is brought to a halt at such designated places. One practical difficulty of this is that the monumental designations contain no time limit with the preservation extending into an infinite future. Thus our built environments are increasingly cluttered with the museumified artefacts, monumentalised buildings and sacralised sites that previous societies believed were worthy of preservation for us and for future generations stretching into infinity. This may appear an exaggeration in countries yet to develop effective building preservation official structures and corresponding popular ethos. However in the countries of Western Europe a position has been reached where large swathes of most cities have been effectively fossilised and a millennium of urban development has come to an abrupt end. This raises some uncomfortable planning and management issues and there are very few precedents for de-listing or un-inscribing historic buildings or districts so as to preserve the future's capacity to make its own choices rather than to be imprisoned in the choices of the past.

Secondly, if the legislative protection permits, the preserved structures can be somehow incorporated undamaged into the development, which occurs around and even above and below them. Thirdly, the protected structure can be moved, which saves the object but divorces it from the location upon which it was built. This solution is quite common in North America, where individual buildings or clusters are relocated from the path of development. Europe, however, can be credited with devising whole concentrations of such relocated structures known as 'skansens' (a now generic term for open-air museums of displaced and rearranged buildings, originating from the location in Sweden of the first such collection by Artur Hazelius in 1891). The structural authenticity of the object is preserved at the cost of the authenticity of the ensemble, the site and the function.

A linguistic cacophony of fragmented meanings

Given the long list of the potentially beneficent characteristics of heritage it could be simply concluded that heritage is an ideal policy instrument whose benefits, of whatever sort, will accrue more or less inevitably and the only determining variable is management. However, it is not so simple and there is an inherent condition of heritage that at the very least complicates its use as an instrument of public policy, namely its fragmentation. This in turn is both a consequence of a mutual unintelligibility and also its cause.

Fragmented consumption

Heritage is multifaceted and because it can serve many purposes, it generally does. It is therefore unlikely that the utilisation of heritage for any public purpose is the only, or even the major, use of any given set of heritage resources. The almost inevitable consequence is the multi-use of the same resources, even at the same location; the multi-consumption of diverse heritages by different consumers for different purposes; and the polyvocality of the messages being conveyed and

received. The reason why this matters is that the public policy claim upon heritage is likely to have to compete with other claims.

Heritage producers, notably but not exclusively in the public sector, tend to be product driven. They focus their attention on the selection, maintenance and management of the product itself rather than upon the manner of its consumption. They see their task as being completed once the product has been made available often to a market that they only vaguely and cursorily envisage. However, heritage consumption is not only highly selective it is driven by changing trends and fickle fashions. The idea that heritage is the expression of timeless, universal, immutable value is a comforting delusion. All culture tends to be fashion driven and heritage is no exception. Thus what is today selected may be ignored tomorrow and vice-versa. The more rapid are the changes in an increasingly fluid society, then the more rapid and less predictable will be such changes in fashion.

It also needs to be remembered that all heritage is essentially individual. Each individual creates their own heritage from their own resources of personal relics, histories and memories for their own self-identification and self-positioning within society. Collective memory is not a physiological reality it is a metaphor for attempts outside the individual to add to or modify the individual's identification with ideas, places or other people. The collective in heritage is not an aggregate of the individual. It is, like the 'public interest' it is frequently called upon to serve, an abstraction useful in the formulation of public policy.

Fragmented production

To accept that public heritage is what someone has decided we collectively should remember is not to reduce it to any simplistic 'Bourdieuian' or 'Habermassian' conspiracy theory of dominant ideologies legitimating themselves through the capture of cultural capital and imposing this on the passive subordinate consumers. Merriman succinctly disposed of that simplistic idea in 1991. It is actually much more straightforward. Heritage is an undoubtedly potent instrument in the expression and exercise of ideology, power, and social control. It is not however intrinsically an instrument of any specific version of any of these. Therefore the significant questions will turn out to be, who is doing this and for what reasons. The answers are likely to be as multiple as the agencies competing in this struggle for attention and power.

Heritage is also used as an instrument of public social policy, becoming burdened by governments with many social goals and expectations. It is expected to further social inclusion by promoting social cohesion and combat social exclusion by mitigating social division (Ashworth, 2012). Assumptions are made about the unifying nature of heritage when the reality is that it is as often divisive. All heritage by definition disinherits and all heritage is dissonant to someone, which allows it to evoke feelings ranging from vague disquiet through distress to a complete cognitive alienation and rejection (Tunbridge & Ashworth, 1996). The producers of the heritage product may react by denial and claim they do no more than relate 'the facts of history' or display the cultural, architectural or technical ingenuity of previous ages. They may even claim to be fulfilling an educational role, using an imperfect

past to teach various commendable lessons for a perfect future through 'edutainment'. Both reactions are usually spurious. The point is just that heritage is not a universal common public good that automatically bestows benefit to everyone and anyone. Any use of heritage opens up a potential Pandora's box of particular and often unanticipated reactions, all of which require recognition and sensitive management.

It is often assumed that heritage is a zero-priced freely accessible public good. To many it is. However, heritage from the position of the producer, or indeed the place, is not free. To the costs of selection, maintenance, accommodating collections, promotion, interpretation, marketing and consumer site-management, must be added the opportunity costs of development options foregone. Heritage may be an instrument for some types of development but it also inevitably imposes restrictions, reflected in costs, upon many other types of development. Such costs will be paid at least in part by local communities, whether or not they are the beneficiaries of the heritage development.

Finally in this list of fragmentations and resulting cacophony of messages, there is the issue of spatial scale. Although the national scale has tended to dominate the political legitimation uses of heritage, other scales have become powerful competitors. The continental and even global scales have been recognised in policy at the European scale and at the world scale by UNESCO and its agencies. Similarly at the sub-national scale, regional and local heritage has been explicitly used in the furtherance of place identities at these scales. It may well be that these various jurisdictional scales harmoniously complement each other in a 'Russian doll heritage model' but equally they may not and may project different, distracting and even competing messages.

Does it matter?

The fragmentation in the experience of heritage evident among consumers and producers in all of the various dimensions of heritage sketched above is manifest in the deepening chasms of misunderstanding between the collective and the individual, public agencies and commercial enterprises, theorists and practitioners, the local and the global and many more dichotomies. All are expressed in mutually unintelligible terminologies derived from assumptions that are neither stated nor argued. The question must now be posed, does it matter and if so can such chasms be bridged.

A failure to respond or even to be aware of the issues of fragmentation raised here could, at the least serious, render most public heritage simply irrelevant. There is at least an arguable case that this drift into an irrelevant obscurity is already occurring. At a time when popular interest in personal heritage has never been greater, as witness the increasing interest in genealogy, and family and local history, public museums are becoming concerned about their function and a future in which they serve only an elite minority. While marvelling at the large numbers of local history activists, heritage guide purchasers, heritage trail followers or viewers of television heritage programming, we should not be blind to the even larger number

who eschew all of these activities. The overwhelming majority of national monumental buildings in most countries serve no obvious social or cultural function and a high percentage of even the occupiers of state protected monuments and areas in a recent Dutch study (Kuipers, 2005) were just unaware of the status conferred and, of those that were aware, many were indifferent to it. This popular irrelevance can descend into ridicule as the ever-lengthening heritage lists, designations and appellations are extended to the curious, ingenious and bizarre. (A reading of UNESCO's tentative list of 'intangible' heritage provokes but incredulous hilarity rather than indifference.)

The influence of public heritage policy is reduced by the multiplicity of official agencies and commercial enterprises operating in this field and the resulting unavoidable absence of coherence or consistency in the messages they attempt to project (Ashworth & Graham, 2012). In addition most public heritage producers and promoters underestimate or just fail to consider, let alone understand, the reactions of their targeted consumers. Most public heritage is not noticed and, if noticed, is ignored. Even if noticed and experienced, it is highly unlikely that public heritage will be understood in the way the producers of it intended. Such evidence as does exist suggests that consumers have conscious or unconscious strategies of resistance to the messages intentionally conveyed by public heritage. They change and adapt public heritage to conform to their much more significant private heritages, even to the extent of creating a counter-culture supported by a counter-heritage that, being unexpressed publicly, is unknown to the public authorities.

However, irrelevance is not the worst future scenario. The loss of the opportunities presented by an effective engagement with a pluralizing society is enormous. Heritage can divide as well as unite, be a source of conflict as well as harmony, can lead to social exclusion and disintegration as well as inclusion and cohesion. Many public agencies seem to be unaware of the fragmentation of the societies in which they operate, let alone set out to manage such inherent pluralism through their heritage policies (Ashworth et al. 2007). Finally heritage can be a powerful instrument for the furtherance of many laudable and increasingly necessary social goals as well as the source of much individual satisfaction and plain enjoyment. The loss of this potential, as heritage theorists and practitioners imprison themselves in their mutual linguistic solitudes, would be close to tragic. A necessary precursor of liberation would be the use of the same language. Common concepts, paradigms, theories, goals and instruments of practice could follow.

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TERRITORIAL DIMENSION OF INTEGRATED DEVELOPMENT POLICY – EXPECTATIONS AND CHALLENGES TOWARDS PLANNING AND INSTITUTIONAL SYSTEMS

Tadeusz Markowski[1]

Abstract

Contemporary development faces a fundamental problem: a mismatch between the institutional system and the planning practice in the context of increasing contradictions between the dynamics of functions and petrification of spatial development. Therefore the new public intervention policy, covering development policy requires a serious reform, as well as structural and institutional adjustment to the new conditions.

At times of the global need to maintain the competitive capacity of territorial units, and the need to protect the environment, it is necessary to create new forms of multi-level decision-making system (for policy and management purposes). Such organisational system should aim at optimisation of development opportunities and reduction of social costs related to development management by highly politicised administrative structure of territorial government. This policy should use such an instrument as integrated planning and functional approach to the territories.

The ongoing debate on the cohesion policy and the nature of territorial cohesion in particular, provides such an opportunity of creating a new policy and planning model. However, the European debate mixes up the concepts of spatial cohesion and territorial cohesion and treats them as synonyms. This results in many misunderstandings.

A broad definition of cohesion put forward by the European Council of Spatial Planners (Conseil Européen des Urbanistes) states that „territorial coherent Europe can be achieved by „**The connectivity of and among Economic, Social and Physical Systems, which enhances their overall Effectiveness for Innovative Sustainable Development".** Author discuss definition territorial cohesion and put the question to what extend **„Territorial cohesion" be perceived as universal objective or even paradigm of contemporary development policy?**

Adopting such a concept of territorial cohesion means that it becomes a synthetic (macro) objective for the development policy; an objective which is reached through ensuring **social cohesion, economic cohesion and spatial cohesion which are coupled with integrated, horizontal cohesion policies; social, economic and spatial ones.**

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The author consider also concept of integrated planning, delimitation dilemmas of functional areas in territorial cohesion policy and functional areas (territories) as subjects of regional policies. It needs to be noted that **the approach concerned with functional areas brings about a greater probability of more effective usage of support funds with regards to achieving the objectives of pro-development policy**. What is more, this approach is also in line with the new theories on development, such as: a networking economy, an economy of flows and highly flexible, increasing role of territorial factors in competition of companies-(terriorialization of the economy), etc.

The paper is concluded with the set of recommendations and directions of activities addressed to public institutions involved and responsible for planning system.

Key words: territorial cohesion, integrative planning, functional areas.

Introduction

Contemporary development faces a fundamental problem: a mismatch between the institutional system and the planning practice in the context of increasing contradictions between the dynamics of functions and petrification of spatial development. This is a structural barrier of the contemporary increasingly more globalised economy, which is expressed in the growing market failure and governmental failure. And in consequence it leads to increasing negative effects of development, including in the form of interregional polarisation, social exclusion, growing public debt, etc. Therefore the new public intervention policy, covering development policy requires a serious reform, as well as structural and institutional adjustment to the new conditions.

The international development policy must adopt – as its overriding strategy – a constant drive towards price internalisation of externalities or, in other words, reducing market failure, since otherwise international capital flows will enhance and grounds for political corruption will consolidate (forcing regulation that enable to avoid the social costs by failure to respect the social internalisation of effects). This is encouraged by too slow changes in the local (territorial) systems of social values, loosening of the system of values by the business cycles and other disruptions of social, environmental, etc. character.

At times of the global need to maintain the competitive capacity of territorial units, and the need to protect the environment, it is necessary to create new forms of multi-level decision-making system (for policy and management purposes). Such organisational system should aim at optimisation of development opportunities and reduction of social costs related to development management by highly politicised administrative structure of territorial government. This policy should use such an instrument as integrated planning.

Integrated planning should be understood as planning covering social, economic and spatial issues, under which spatial planning acts as the verifier and coordinator of many elements in the area of effects referred to space (it is *de facto* the instrument of territorial dimension coordination and the impact of functions (activities)). Development plans have to be jointly elaborated under the multilevel and multisectoral governance system. Legal regulations are necessary as they make it possible to establish real competences to solve conflicts between territorial administration jurisdictions and governmental administration sectors.

The ongoing debate on the cohesion policy and the nature of territorial cohesion in particular, provides such an opportunity of creating a new policy and planning model. Various broadly-conceived attempts at interpreting and defining territorial cohesion bring to a conclusion that it should be, actually, treated as an important effort to find the new vision for Europe's development: "A territorially coherent Europe". We adopt a broad definition of cohesion put forward by the European Council of Spatial Planners - Conseil Européen des Urbanistes (ECTP–CEU), which states that territorially coherent Europe can be achieved by "The connectivity of and among Economic, Social and Physical Systems, which enhances their overall Effectiveness for Innovative Sustainable Development" (Vogelij, 2010, p. 1) **Hence "territorial cohesion" understood in that manner becomes an universal objective (means), or even a specific paradigm of contemporary development policy.** Territories under such policy are treated as categories that change over time and whose size is determined as a result of an agreed planning and political decision.

However, the ongoing European debate mixes up the concepts of spatial cohesion and territorial cohesion and treats them as synonyms. This results in many misunderstandings. It is our proposal to understand spatial cohesion - in reference to the definition of ECTP - as the state of spatial development (spatial, network and point structures), which enables the establishment of highly efficient connections of economic, social and spatial systems beyond administrative divisions. **Hence spatial cohesion is a means to the achievement of territorial cohesion in Europe. Thus it is not identical with the territorial cohesion and the territorial dimensions of the development policies.**

When adopting such a concept of territorial cohesion we treat it as a synthetic (macro) objective for the development policy; an objective which is reached through ensuring **social, economic and spatial cohesion which are coupled with three integrated, horizontal (cohesion) policies: social, economic and spatial.**

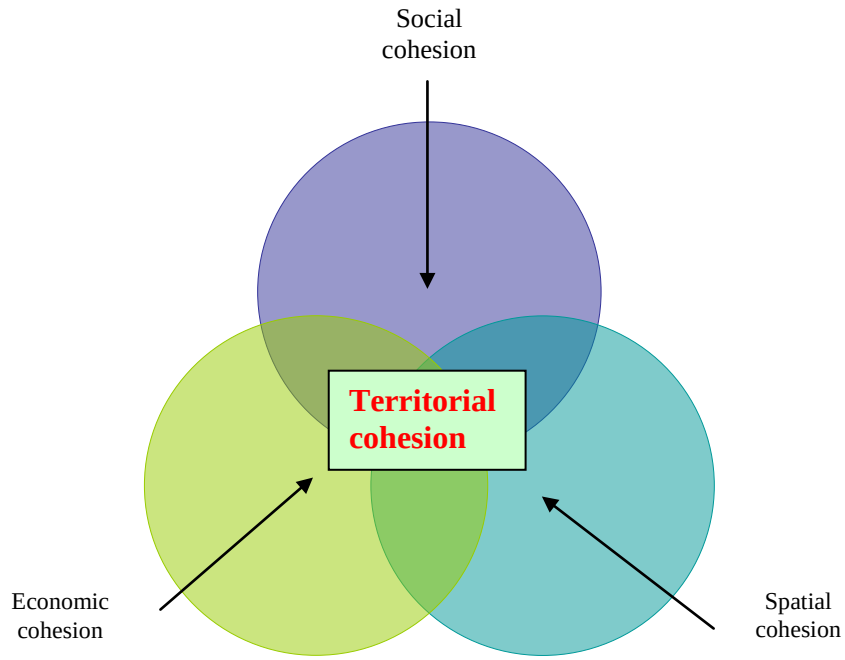

Figure 1. Territorial cohesion concept

The cohesion policy (understood as the new integrated development policy) should be conducted on and within the framework of the specified functional areas. This makes it possible to better ensure efficiency of functioning and development of social, economic and physical systems (built and natural environment). Emphasising the role of connectivity factors as well as the quality of spatial systems in the new cohesion policy means that the role of spatial planning methods will increase in importance. After all, spatial planning in its very essence was (and is) oriented towards integrating relationships between the system of functions and the forms of spatial development.

2. Integrated planning

The traditional spatial planning (physical planning in particular) was concerned with locating the functions and buildings in space. The more advanced planning methods put more emphasis on externalities caused by construction activities as well as by

technological spillover effects caused by the users of properties. Today spatial planning is oriented more towards the shaping of the natural environment as well as the anthropogenic environment in the context of sustainable development. This means an entirely different approach to planning in the entire system of development policy.

In the British concept of development planning, spatial planning is a synonym of integrated planning. This follows from the fact that in the traditions of the British local-level planning there was no such a concept until Great Britain accessed the European Union. Planning pertained to land use - Land use planning, or buildings - Physical planning. Under the influence of the continental Europe - using the English language to describe the planning system - the term "Spatial planning" in Great Britain was recognised as well corresponding to the new approach of planning for development[2].

Regardless of the final popularisation of the term applied in Europe - we refer to the integrated development planning combining in the planning process the phenomenon and socio-economic relations with the forms of spatial land development and showing the mutual relationships and dependencies determining the drafts of planning decisions and political forms of intervention. The territorial dimension of development policy means that we consider the functioning of the systems under their spatial ranges (both the factors determining their development and negative externalities) and we coordinate the sectoral policies by referring them to the functional and spatial layout, in other words, to places where it is possible to better coordinate them in spatial and thematic aspects, i.e. under a system of functional (planning) areas defined for the period of the intervention.

3. Delimitation dilemmas of functional areas in territorial cohesion policy

The functional and territorial approach can result in the greatest doubts and concerns. The more if the issues of functional connections under the territorial system are not adequately stressed. The discussions on the so-called territorial based policy highlight – and correctly so, at least in theory – that the territorial development policy must put an emphasis on endogenic factors that exist within the territorial system and that the territorial capital is the essence of contemporary development. However, the dynamic and changeable character of functional areas is not sufficiently emphasised. What is more, the delimitation of territorial units for the support policy is concerned most with solving specific problems (thematic issues). Thus two approaches can be identified in these debates:

1. An approach concerned with problems on given territories (delimited in accordance with administrative units and statistical nomenclatures), and

[2] Given the significance of the English language for the European Union it seems to be worthwhile to agree this term between Member States. To what extent the term development policy should be used and to what extent the term spatial development policy, and whether this do not give raise to interpretative misunderstanding. Whether this should be the new spatial planning or integrated spatial planning or integrated development planning?

2. An approach concerned with functional areas

It needs to be emphasized that these two approaches are not mutually exclusive. However, it needs to be noted that the approach concerned with **functional areas brings about a greater probability of more effective usage of support funds with regard to achieving the objectives of pro-development policy.** It is also in line with the new theories on development, such as: a networking economy, an economy of flows and highly flexible and increasingly important role of territorial factors in competing, etc.

Hence in fact territorialisation in the concepts of the new EU policy was simplified and presented in a rather trite manner, which may be scientifically attractive, but it remains very traditional in practice; it assumes that the administrative units which apply for support will identify and define their development potentials themselves, while public support will anyhow be concentrated on *a priori* defined problems (thematic concentration). If it turns out that under other sectoral policies, other types of intervention will take place regarding other issues, than the essence of territorial approach would cover coordination of sectoral support on the level of a territorial (de facto administrative) unit. However, the practice shows that this has not been possible so far, and that the traditional reluctance to cooperation or even mock cooperation aimed at gaining funds will not change a lot in the way that the regional policy is implemented, and conditionality principle does not help much, either.

"Place based policy" requires that many classification and delimitation criteria are applied which rather leads to another artificial division (masked with the air of scientific requirements) into groups of similar units (often dispersed in space). The politicians then assign these groups of units with the right to apply for funds in line with the so-called principle of thematic concentration, using objective (or rather mechanical) criteria. The other approach can be based on spatial and functional relationships of the socio-economic activities of man and, therefore it relies on networking criteria, where a functional area delimited according to a set(s) of leading functions (or even according to one highly specialised function) acts as an object of intervention.

The territorial system in this respect is treated as a set of interrelated functional and spatial characteristics, in which the so-called built environment preconditions the development of the functions (their efficient and competitive functioning against other entities). For example, this can be a group of gminas having a leading touristic function. This can be an area, in which there are metropolitan functions or an area, in which spatial effect of a metropolis are visible, etc.

Identification of the delimitation criterion(a) of the functional area, at the same time, implies identification of the strategic direction of intervention. This does not, however, mean that in such a functional area it is not possible to set an intervention in other spatial functions and features in line with other thematic and sectoral policies. Nonetheless, this territorial and functional approach simultaneously points

to the fact that in such an area we have to make interventions and plan development **in an integrated manner.**

Functional areas are dynamic in both time and space. Their range depends on the changeability of functions, lifecycle of products, fluctuations of the outlet and supply markets, variations as regards the number of companies, spillover externalities caused by economic activities, etc. The range of functional areas depends also on the physical features of the geographical environment, the need to sustain life, biodiversity, air purification and meeting the need of people to have contact with the natural environment, etc.

The planning practice uses planning areas which are, de facto, political areas. Their boundaries are based on conventions valid only as long as the plans are valid. Delimitation of an area requires delimitation of the intervention area. The typology of functional areas may adopt various objectives and criteria, such as: cognitive, legal, spatial externalities, multiplier (territorial) effects of development, social and political objectives, etc.

The functional and territorial approach enables greater effectiveness and efficiency of development management and is integrated into the territorial dimension of the EU cohesion policy. At the same time, it is in line with the integrated development planning, under which - in the current conditions and according to the generally accepted rule of sustainable development - the role of organising and coordinating the development factors in territorial systems gains special importance. Adopting the functional approach means that it is necessary to seek for new methods of management (and regulation), allowing true discounting of theoretical opportunities for reaching development objectives in the territorial dimension. The country's territorial organisation, local ambitions, political interests, the existing system of competences and forms of financing of the local activity are often contradictory to the functional areas (territorial) approach to cohesion.

Delimitation and policy of functional areas belongs to one of the most important forms of implementation and conduct of development policy and spatial policy accompanying it. The functional approach covers economic, social and natural areas, etc. threat going beyond the administrative borders - from the local to the national level considering the border areas.

4. Regions vs. functional areas (territories) as subjects of policies

Problems with a functional approach appear whenever questions concerning the subjects responsible for policy implementation in functional areas which go beyond the administrative borders of the country's territorial division are raised. Are we protecting anything? If so, which functions? Are we developing anything? Are we repairing anything? What are the levels of competences (of organisations) required for solving the problems of a given planning area? Will some of the contemporarily identified areas require creation of special organisational and institutional structures

in order to attain the objectives which were set for them? It needs to be remembered that in the history of several countries, including the former socialist countries, there was a time of too many special administrative divisions, which often disturbed the operation of the local administration. The memory of the negative effects of operations of the government special administration system can constitute an ideological barrier to introduction of the management structures, despite the fact that economic and system conditions have changed significantly. This concerns, for instance, the management of metropolitan areas. Yet another issue, is the matter of natural systems, separated as the planning areas. How can we interfere in such areas? In case of natural systems, people decide on their delimitation and carrying out such type of activity that will be compliant with or stopped given the expected functions of the natural system. Thus it is necessary to create an organisational and institutional system, which will ensure protection of functions assigned by the planner to the natural system. Therefore by introducing such an area, not only the law must be established but also mechanisms of its control and enforcement. If areas of risk are delimitated, it is also necessary to undertake a number of actions in such an area, e.g. prohibitive and prescriptive actions, regulations within the scope of risk insurance, forms of awarded support, etc.,

Efficient implementation of planning arrangements following from the functional approach requires seeking for objective and technically feasible criteria of geographic delimitation and consideration of dynamic changes of social and economic relationships over space and time. Therefore an important feature of the managerial approach to functional planning covers: identification of the sources of conflict and methods of achieving compromises; legal, institutional (including political), economic and financial barriers existing both in delimitation of functional areas, as well as determining later implementation of the provided arrangements and objectives of social policy (and general development policy) in the entire planning system.

We should strive for attaining the greatest possible consistency between borders of the functional regions, the borders of administrative territorial divisions and the territorial units defined for statistical purposes. Delimiting a functional area, the borders of which exceed administrative borders, has to be preceded by an analysis of existing administrative structures in terms of their co-governance capacity in the functional area. Furthermore, the necessary instruments which motivate to adopt multi-governance methods (such as economic, legal and organisational impulses) need to be highlighted. Otherwise the idea of functional planning will remain dead.

Providing support for creation of co-governance systems (idea of public governance with professional agencies acting as operators and trustees, etc.) should become the essence of implementation of policies based on functional areas rather than creating special administrative structures, which would be outside of the control of local democratic and civic local government structures.

5. Functional areas in integrated planning

Delimitation of functional areas in plans is a sign of public authorities' policy, whether we want it or not. This assumption consequently means that, the delimitation thereof, must be followed by different forms of direct and indirect impact oriented at functions under the area delimitated in the plan. The plan points to strategic areas (zones), whose borders and specificity are made more precise in further programmes and decisions on the national, inter-regional (inter-voivodeship) and inter-gmina levels.

National plans cover only such areas which, due to important national interests, are of significance for state policies. By analogy, the same is applicable to the EU level. The European development strategy should highlight the areas which are directly in the field of interest of the European Parliament and the European Commission. Identification of these areas in practice has to imply that they are (or will be) related to a specific system of regulations and financial instruments. For example, should floodlands be identified, then the minister responsible for construction should, by way of his action, introduce appropriate building standards for these areas, i.e. a requirement to construct higher foundations, provision prohibiting the construction of basements, the need of using appropriate foundation technologies, etc. Identifying mountainous areas or, for example, areas threatened with landslide, will mean that voivodeship and gmina plans will need to specify their borders more precisely and the minister will introduce regulations which will, for example, put limits on the weight on constructed buildings. It is thus imperative for the planning practice to clearly differentiate delimitation of areas (and various methods applied for this task) for cognitive and analytical reasons (studies to plan) from the final delimitation which serves political objectives (approval of the drafts of plans).

It needs to be noted that in practice, the functional dimension of spatial policy is ensured by zoning and delimiting areas also in modes other than the planning mode, i.e. by legislation approved by the parliament or regulations issued by ministers or voivodes. In case of the EU, such modes may include strategy provisions or directives. In such circumstances planning processes need to recognise these areas and treat them like any other legal or regulatory condition. However, it needs to be highlighted that planning which integrates complex aspects of planned future should also critically assess areas delimited in non-planning modes and indicate, in the plan's provisions, required changes in that respect[3].

When adopting that spatial planning serves e.g. strengthening the protection of natural systems and/or development of different functions under complex socio-economic systems operating in space, it is necessary to consider that the planning areas - regardless of the adopted delimitation criteria (these are changeable and

[3] Given the fact that zoning through statutory mode is often not implemented in Poland, the situation leads to collisions in the system of planning provisions and later results in social and political conflicts and degeneration of the planning system.

historic), are always oriented at functions[4]. Functional planning areas are therefore arbitrary areas and acts of political choice. The accuracy of choice depends on the state of knowledge, cognitive methods of the manner of their delimitation. Hence it needs to be assumed that the functional planning areas should be connected with the function of the system objective or sub-system objective and not only the morphological features. The morphology of the area is an important but only auxiliary criterion. This can raise doubts of spatial planners that aim, primarily, at shaping the manner of development and physical features of a space, and not at caring for the system organisation and efficiency of its function.

An integrated planning system includes two types of planning decisions: identification of a functional area as an object of concentrated intervention, as well as obligations to prepare indicative and regulatory plans for identified functional areas. In the former case planning instruments and other methods for delimitation of an area for intervention are applied in order to achieve the best possible concentration of means of intervention devoted to certain areas or themes (problems). In the latter case, intervention means implementation of the plan's provisions which are binding for political entities and different users of space in a functional area covering several administrative units.

In the former case, delimitation of functional areas as an object of intervention comes close in its concept assumptions to the mechanism of intervention in special economic zones. Not all functional areas will require special strategic spatial plans. Since, in many cases it is to be expected that specialised instruments of development policy will enforce integration of local spatial development plans (urban-planning). In such cases a principle of conditionality of financial support may be used in order to stimulate joint preparation of plans. This may, above all, apply to border areas and, where regulatory systems (procedural and implementation) in terms of spatial planning differ. In this case the documents supporting the management process will be prepared according to a different formal and legal mode.

It remains to be considered whether the new type of integrated development planning introduced into the EU development policy will require individual Member States to harmonise their systems of creating local spatial development planning, including the procedures for issuing building permits in the EU, ordering the implementation system of the area related to spatial development, real estate marketing, etc., in order to exclude the possibility of competition between territories by means of creating political benefits.

[4] It is necessary to ask oneself a quite straightforward question: how do we actually understand functions under planning? Starting with the systematics of the word to function, i.e. act, it needs to be stressed that it pertains to action for a given purpose. Each function (activity) is assigned objectives of action, e.g. production, logistic servicing, education, etc. The Functions (activities) create defined relationships between each other. Thus they create functional systems and sub-systems. A natural system also has a function of an objective, which can consist, for instance, in sustaining life or capacity to recreate life processes. Under the natural systems it is also possible to separate planning area: chain systems, hub systems, etc.

Integrated planning combines, at east, several overlapping dimensions (Vigar, 2009, p.1572):

- Interpenetration of and relation between strategies and polices (integration of strategic documents and actions- policy framing),
- Connecting policy and actions, as well as cooperation between actors and actions.

Integrated planning requires the strategy development processes to be coordinated in order to avoid conflicts. It also requires that the scope of issues and context of the problems covered during document preparation (formulating objectives and actions) is broadened. The process of integration includes also an equally important process of learning and developing new knowledge which is beneficial to all users. This often allows to overcome institutional failures, i.e. avoiding the fragmentation of institutional systems and established a partnership for achieving joint objectives. Of course, how the integration takes place depends on local cultural conditions, legal systems, tasks and formal competences, the planning system and all other elements which form e.g. the spatial economy system. Thus integrated planning requires a change of many legal, institutional and cultural conditions, and overcoming stereotypes of both decision-makers as well as stakeholders.

The typology and delimitation of functional planning areas for the purpose of methodological practice, and later on the implementation practice, two basic types of areas should be identified: 1) areas based on natural and physiographic features and relationships, and 2) areas based on the socio-economic features and relationships. The attempts at integrating spatial and socio-economic planning give raise to additional complications in the establishment of a functional planning model. The integrated plan covers also areas of different level of precision and changeability (blurring) of borders, which is not tolerated by the traditional spatial planning, Therefore integrated planning will include both areas with clearly defined borders - having administrative and legal effects, and also areas with blurred (approximate and arbitrary) borders. In the former case, these will be areas, where each activity within the boundaries of the zone (area) has to be subordinated to the legal regulations binding therein. In the latter case, the intervention is connected to a function, and location in a area is of secondary importance. This does not, however, mean that restrictive borders for policy purposes cannot be delimitated for them.

A new challenge for the integrated development planning, including in particular for the purposes of spatial planning, includes delimitation of a hub and networking region, in which there is discontinuity, insufficient determination and blurred nature of the borders. Such an approach is contrary to the traditional understanding of spatial development. This, however, does not release us from the search for new methodological approaches.
The delimitation of a planning area should serve for:
- concentration of actions of thematic (sectoral) policies,
- or, introduction of new rules (regulations) of used areas,

- or, confirmation of the existing regulations on the area by way of statutory acts.

Cognitive delimitation of areas of different functions in the planning process through the so-called system of overlies should be used to delimitate areas of critical and integrated intervention. When it will be necessary to establish special organisational structures to solve the overlapping and complex problems it seems justified to draw attention to two forms of intervention in space:

- **Regulation and intervention in an area** and indirectly in functions and
- **Regulation and intervention in functions in given area** and indirectly in area and its physical development.

For the purpose of the implementation and analytical practice of integrated planning: at the European, national or regional level, it is possible to use a division into strongly functional areas (in which de facto one function predominated over others) and multi-functional areas (areas of broad contradiction of functions and likely occurrence of conflict situations). This division makes it possible to show the scale of the problem related to legal tools of the planning instrument. Multi-functional areas require very complex approach and integrated inter-sectoral cooperation. For example, metropolitan areas require integrated approach to planning, system, financial, environmental, infrastructural and other issues.

6. Postulates and recommendations

- Introducing integrated development policy and integrated planning methods in individual territorial units will, undoubtedly, encounter numerous barriers. The most significant of these barriers include: barriers of political, mental, historical, bureaucratic, informational, legal, institutional and other nature.
- High dynamics – in terms of both space and time – of functional areas need to be recognised. This means that regardless of statistics carried out according to the conventional nomenclature of statistical units, there exists a need to set up minimal statistical units which are necessary for implementing effective cohesion policy on every level of intervention decision making (EU, state, administrative region, gmina). Furthermore, the scope of collected information needs to allow observing and verifying functional areas delimited according to varying criteria. These actions will create rational foundations for optimising intervention performed by the authorities. Therefore it is necessary to reorganise public statistics in the EU Member States and introduce an obligation to record externalities, including territorial distribution of externalities which are public and quasi-public in character.
- In a society of high differentiation of social systems of value (human and social capital) development policy targeted at mobilisation of social groups according to standardised methods may turn out to be of little efficiency. Hence it is not possible to apply the same instruments in the entire EU. It is necessary to identify differentiated systems of value in territorial systems. These systems should also be the subject of integrated cohesion policy. Hence there can be territories having territorial systems where externalities commercialisation strategies will prevail, and others - where the level of their

internalisation has to be lower, and yet others, where the policy can be liberal or ever restrictive, etc. As a consequence, it means economic differentiation of competitive conditions of functional areas and makes the cohesion policy pursued in the regions a more complex (sophisticated) issue. This implies that the policy will require a high level of institutional development.

- Ensuring effectiveness of the integrated policy requires creation of mechanisms guaranteeing that politicians become interested in avoiding negative externalities related to development and incorporate such criteria in their decision-making systems and political decisions. Identifying and incorporating negative externalities into the social (electoral) system of values is a prerequisite for such political behaviours (it provides an opportunity for the so-called socio-political internalisation of negative externalities)[5]. Positive externalities, on the other hand, may be regarded as means of strengthening objective foundations of a functional system's competitiveness (in other words – they allow for creating the so-called external sources of competitive advantage).
- It is also necessary to create adequate instruments, including universal instruments common for the EU and taking into account the need of creating specialised and territorially oriented instruments which, at the same time, would not violate the EU's principles of fair competition.
- Undoubtedly, the integrated planning methods need to become more widely spread, and as for planning processes it is necessary to popularise the application of similar methods for assessment of policy and planned activities impact in a territorial dimension (impact assessment methods and analysis of external, non-market effects) divided into positive and negative externalities. It is also required to disseminate the use of multiplier analyses of economic growth effects on account of the intervention in markets and resources - i.e. analyses based on the effects estimated by the markets.

7. Directions of reform of the public planning system

- It is necessary to start with a concept of integrated development planning and based on it build a rational model of intervention meeting the requirements of the economic competitiveness, sustainability and social inclusion. The above terms to some extent are combined with the traditional understanding of the regional policy objectives. It is necessary to answer the key question: should we keep the conventional regional policy model, but with emphasis on the territorial effects of sectoral policies and mobilisation of resources in territorial administration units, or should we establish a new model - an evolutionary one, which in a way covers the conventional approach, but puts more emphasis on functional areas (administrative divisions are of secondary

[5] A social system of internalising externalities is a long-drawn process and can be implemented through education of the society and sending new demand signals, for example for environmentally friendly manufacturing processes so that companies respect the principle of minimising their environmental footprints (a strategy of enforcing corporate social responsibility with regards to the natural environment).

significance) and produces stronger connections and relationships between organisations rather than highlighting the physical resources that can be used by economic activity on the markets of goods exchange. The new approach should put more emphasis on the coordination of resources, factors and products of the non-market area co-deciding on the quality of life, development sustainability and long-term competitiveness.

- Under the latter solution, the role of the international achievements and experience in the field of spatial planning will, certainly, gain in importance. Development policy objectives (the object of the intervention) cover, above all, externalities in functional areas (as a place of intervention in market failure, and creating conditions for a more efficient and better internalisation of resources and creating sustainable competitive advantages for commercial business operating in the functional areas). The role of multi-level governance becomes more important and the principle of subsidiarity on providing support has to have dynamic nature.
- It is necessary to take into account in the spatial decision-making the externalities at all levels of political decision, i.e. considering them in spatial development and adjusting development to dynamically changing functional and spatial relationships (and these are formed and disappear independently of the formal jurisdiction of the political entities).
- The new approach implies greater role of professional planning. It requires reorganisation of studies and statistics, introduction of a dynamic approach as regards application of the principle of subsidiarity in the territorial authorities organisational systems, strengthening and professionalisation of administration, new instruments for organising cooperation, adequate ways of accounting for development benefits, i.e. eliminating conflicts, prisoner dilemma and other social traps, greater trust to the co-participants of the policy and concentration of control on the results.
- The governmental institutions play an essential and important role in outlining and "enforcing" the integrated approach to planning on the regional and local level. We hope that the European Commission and the European Parliament will recognise and adopt to the practice the integrated approach and apply adequate instruments to its introduction, i.e. they will form the legal grounds for integrated development planning.

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Annex

Minimum requirements for implementation of integrated development planning and management methods

- Knowledge and methodological skills;
- Adequate methods for planning development processes, including concept of observing critical provisions of a plan which allow for integrating development (the so-called critical points of political control and joint decisions);
- Introducing adequate economic stimulators targeted at stakeholders and decision makers into the functioning of the socio-economic system: the objective is to provide transparency and create awareness of economic, political, social and environmental costs and benefits of all decisions;
- Availability of analytical instruments for decision making in public and political institutions together with appropriate skills required for using them;
- Legislative support for integrated (multi-subject) planning;
- Adequate databases and monitoring systems;
- Instruments for implementation (real competences);
- Preparing and disseminating as well as observing the principles of integrated planning *(some examples of such principles include:*
    - *Using long-term, comprehensive analyses in the operating and decision-making system;*
    - *Adjusting spatial development to functional requirements (eliminating speculation);*
    - *Principle of conditionality, related not only to effects but also outlining conditions for cooperation and coordination of actions of administrative bodies as well as other structures operating in the functional area;*
    - *Principle of specificity – requiring that organisational structures are adjusted to the local context).*

AN ASSESSMENT OF THE PLANNING AND OPERATIONAL PERFORMANCE OF THE BUS RAPID TRANSIT SYSTEM IN ISTANBUL

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1. Abstract

Bus systems are the backbones of transportation systems in cities; all cities provide their mobility with bus systems either as their main public transportation system or a feeder service for rail transit. However, conventional bus operations have been suffering from a poor public image due to their slower and lower quality service provision. Thus there is a tendency to improve the quality of bus operations in recent years, and Bus Rapid Transit (BRT) systems are getting more popular throughout the world since they combine quality of rail transit service and flexibility of buses. Today there are more than 120 cities operating BRT and bus corridors in North America, South America, Asia, Europe and Australia. BRT operations in medium-sized cities and in certain corridors in large cities can carry the same amount and even more passengers than many of the LRT lines. Since BRT provides faster transit services, reduced travel times and high quality of service with good identity and image it is believed to increase transit ridership. Furthermore, recent experiences with certain systems, such as one of the best-practice cases of BRT in Curitiba, Brazil, show that when the planning of these systems are carried out in integration with metropolitan development plans as well as local neighbourhood plans, expected benefits can be significantly increased due to high land-use impact that can in turn increase ridership.

This paper provides an assessment of the Istanbul Metrobus, the only BRT system in Turkey, which opened in September 2007. Using the lessons learnt from a number of best-practice cases in the world (TransMilenio in Bogota, RIT in Curitiba and Metrobus in Mexico City), the paper will first attempt to answer what makes a BRT system successful, and then review the following aspects regarding the Istanbul case:

- Planning background: integration into urban planning; integration with other transport modes
- Physical characteristics of the system: location, design and other aspects that may have effects on ridership
- Operating characteristics: level of service, fare schemes, etc. that may have effects on ridership
- Marketing, advertising, identity and image-building policies: operator's and/or local authorities' efforts in promoting the system, which may have an effect on ridership

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It is intended to elaborate how the first four aspects, ie. planning, design, operation and marketing, may have affected the ridership performance of the BRT in Istanbul. Findings are to be generalized in comparison with the aforementioned best-practice cases, and a list of possible factors will be presented for a successful BRT implementation.

Key words: BRT, planning, implementation, operation

2. Introduction

Today, the boundaries of cities enlarged due to high economic activities and in metropolitan areas population increases, thus the mobility between residential areas and job, education and public services become fundamental. Cities throughout the world suffer from traffic congestion caused by high rate of private car usage and air and noise pollution due to gas emissions led by transportation activities. In order to deal with traffic congestion, air and noise pollution problems national and local authorities started to focus on integrated public transportation activities. With no doubt bus systems are the backbones of the public transportation systems, because of being cheaper and more flexible. Rail based transportation systems are applied in most of the cities in the world, but they are expensive to implement and require long construction time. Despite being the most common type of transportation mode, conventional bus operations suffer from poor public image, lower speed, reliability and safety issues. Bus Rapid Transit systems are getting more popular all over the world both in developed and developing countries, because of having flexibility, being easy and cheap to build, which are characteristics of bus operations, and having high service quality high capacity, being reliable and safe, the well-known characteristics of rail transit.

BRT includes many components; according to budget of the national and local governments it can be implemented either partially or as a whole. The benefit gained from operation increases when all the components are implemented. There are more than 120 cities that applied BRT in their public transportation network either as the primary mode or as a feeder service to the rail transport system.

BRT system is not a recently rising public transportation trend; especially in Latin American cities it has been implemented for decades. In Turkey too, there was a separated bus-lane operation in Ankara in the 1980s; however it was abandoned in favour of an underground light rail system. Currently, the only example of BRT in Turkey is in Istanbul which is the largest metropolitan area in the country. City officials are trying to deal with traffic congestion and problems caused by this situation.

Population of Istanbul is rapidly increasing due to economic development, thus urban area is expanding. Registered private car number has increased 6 times and reached

over 1,7 million since 1958 in Istanbul. Also passenger mobility is very high. According to household survey conducted by Metropolitan Municipality of Istanbul, number of daily trips is 20,9 million, 10,3 million trips are pedestrian the rest is with motor vehicles. (İstanbul Ulaşım Ana Planı, 2010)

As it is discussed previously, rail transit investments require high investment and maintenance cost and also long investment time. Istanbul has a number of rail lines newly developed; but the city also needed a cheaper and quicker solution for transportation problem in the main arterial of the city. The corridor that BRT is implemented is one of the most important highways and surrounding areas are densely populated. One of the main objectives of the BRT project on this corridor was to provide fast, reliable and comfortable service to the users and attract especially private car owners.

Istanbul also suffers from high air pollution rates caused by transportation activities. While planning and implementing BRT in Istanbul, reducing greenhouse gas emissions was the other objective, by decreasing the number of private cars in the corridor and also reducing the number of other (low-capacity) public transportation vehicles which pollute the environment most such as low technology conventional buses and minibuses.

The first BRT corridor in Istanbul started operation in September 2007 between Avcılar-Topkapı corridor. The first phase became successful and fulfilled the objectives; reducing travel times, reducing private cars by attracting people with high quality service, via high technology buses and eliminating low technology conventional transportation modes from traffic BRT reduced CO_2 emissions.

The high ridership of the 18,2 km BRT route led new routes to be planned. Today three phases have been completed and in operation. After completion of Phase III two continents, i.e. the two sides of Istanbul, were connected through the Bosphorus with BRT line. Phase IV is under construction in the western part of the city from Avcılar to Beylikdüzü.

Figure 1: BRT System in İstanbul

3. Implementation

3.1. Phase I: Avcılar-Topkapı Corridor

The construction of the first BRT corridor started in 2007 between Avcılar and Topkapı corridor and started operation in September 2007. Total construction time of the corridor was 8 months. Total route length of the corridor is 18,2 km and total number of stations on the corridor is 16, 14 bus-stops and 2 turning point stations.

Açıklama [EBS1]: Bu aşamada olumlu değerlendirmelere girilmemeli. Daha tarafsız bir anlatım baş tarafta daha doğru olur.

Figure 2: Avcılar-Topkapı BRT Line

3.2. Phase II: Topkapı-Zincirlikuyu Corridor

One year after Phase I, Phase II started operation in September 2008. Phase II starts from Topkapı and ends in Zincirlikuyu station which is the last station in European side. Construction of Phase II was completed in 77 days. Total route length of the Topkapı-Zincirlikuyu corridor is 11,8 km and total number of stations are 12; 11 bus stops and 1 turning terminal.

Figure 3: Topkapı-Zincirlikuyu BRT Line

3.3.Phase III: Zincirlikuyu-Söğütlüçeşme Corridor

Zincirlikuyu-Söğütlüçeşme line is the 3rd Phase of the Istanbul BRT. This phase of the system connects two continents over Bosphorus. This feature makes Istanbul Metrobüs first and only intercontinental BRT line in the world.

Figure 4: Zincirlikuyu-Söğütlüçeşme BRT Line

Total route length is 11,5 km, consisting of 7 bus stops and 1 turning terminal. This phase is constructed in 5 months and started operation in September 2009. The line starts from Zincilikuyu station from Europe and ends in Söğütlüçeşme station in Kadıköy District in Asian side.

The BRT line in Istanbul has a fully segregated route along the corridor. The only place where BRT buses flow in the mixed traffic (for 3 km) is on the Bosphorus Bridge. However, in order not to compromise the speed of the system buses enter and exit the bridge on dedicated lanes, and it is the approach to the bridges that feature the worst traffic congestion; therefore the system provides a significant advantage in journey time when crossing the Bosphorus.

4. Physical Characteristics

4.1. Running Ways

İstanbul Metrobüs is running on D-100 and O-1 Highways with fully segregated median busways with 40 km route length. There is one lane in both directions and it is segregated from general traffic with physical barriers and from other BRT lane with road markings. Since the doors of the vehicles located on the right side, buses run on the left side of the traffic and counter to the general traffic flow.

Photo 1: Fully Segregated Median Busways

4.2.Stations

There are 33 stations in Avcılar-Söğütlüçeşme BRT corridor. Since running ways are limited with total two lanes, there is no passing lane at stations. Platform length is 60 m which allows two 26 m long bus or three 18 m bus to serve at the same time in the stations. Since BRT corridor is located in the middle of the highway, passengers' access to the stations is provided via under or over passes. Platforms and vehicles have the same level of height.

Photo 2: Median Station

4.3.Fare Collection

Fare collection is off-board. In Istanbul fares are fixed both in rail and bus transportation independent from the travel length. In order to decrease waiting times of buses in stations and accelerate the boarding, BRT uses same fixed tariff with other public transportation systems.

Photo 5: Off-Board Fare Collection

4.4.Service Plan

There are three lines as described before, which are operated 24 hours stopping at every station. Since the line has one lane in the both directions, there is no overtake capability of buses in the stations, thus different service types, such as express service is not applicable.

4.5.Information Technologies

Visual and audio information is provided in every bus for passengers. Real time information is gathered in command and control center. Every bus is tracked with GPS technologies and any emergency situation can be detected quickly.

Photo: GPS tracking of buses

5. Analysis

BRT system in Istanbul has all the components of classical BRT systems in the world. In this part of the study BRT system in Istanbul will be compared with three other BRT systems in the world. First best practice case is Curitiba RIT system in Brazil. Reason for choosing this case is RIT is the pioneer BRT implementation attempt starting from the 1970s and has a great success in terms of ridership and system performance. The other system is TransMilenio in Bogota in Colombia. This system is implemented at the end of the 1990s but the system coverage, ridership and performance is admirable because of its planning background. Third case is the Metrobus system in Mexico City in Mexico. This system started operation two years before Istanbul Metrobüs and more or less has same ridership with Istanbul. The population of the city, its density and increasing car usage are also similar to Istanbul,

Comparison of the systems is made in 5 categories: planning background; physical characteristics; operating characteristics; marketing, advertising, identity and image-building policies; and finally the ridership on the systems.

5.1.Planning Background

Daily trip rate is very high in Istanbul due to high population and development pattern of the city. Since there is limited area for development, the city has a linear urban form but very strong Central Business District (CBD). Although about half of daily trips are made by walking, the remaining half represents long trips between homes and working places. Passenger mobility is provided in Istanbul with road, marine and rail transport, but most of the trips are done via roads. Private car ownership is low compared to Western European cities but car usage rate is high and combined with ever-increasing rates of mobility, this causes traffic congestion in many arterials. Rail investments are present in the city, with a number of metro, LRT and tram lines, but their coverage is still limited and the completion of the full network takes long time to construct. Therefore, city officials decided to implement BRT as a cheaper and quicker solution to traffic problem.

Since the decision to implement the BRT was linked to traffic congestion and the existing mobility needs, the local government focused only on traffic issues and aimed at starting the operation in the shortest time possible. This meant that urban development plans and future development patterns were not considered; and as a result the system does not have any integration with the urban master plan, which was actually being prepared and about to be finalized at the same time with the BRT decision. Meanwhile a comprehensive transport plan is also being prepared for the city, studies for which have been carried out since the mid-2000s, again during the same time with the BRT decision. The BRT is not integrated into the transport plan either.

After the high ridership of the first phase, other corridors were implemented again without any coordination with urban master plan and urban transportation plan.

The system operates in the middle of D-100 Highway, which has already turned to an urban arterial, and thus land use pattern is mostly integrated with the road. Some of the stations in the European side are partially integrated with important nodes, such as universities, shopping malls, dense residential areas and commercial uses. These uses existed before BRT implementation; they are not a planning decision because of the Metrobüs construction. In the Asian part, the highway preserves its highway features, thus integration with land uses seems more complicated here. Since important land uses do not exist close to BRT stations (because they are at a reasonable distance to the highway), integration becomes weaker.

BRT system is also only partially integrated with rail system in the European side of the corridor. The integration is related to proximity of Metro and BRT stations only. Many of the bus and minibus operations are removed from the corridor, since Metrobüs has a higher carrying capacity. But there is opportunity to transfer to bus and minibus systems; İETT tried to integrate conventional bus stops to BRT stations. Metrobüs system is operating in the middle of highway, thus bike lanes are not applied. Bike integration does not exist; and there are no bike parking areas on the corridor. There are Park and Ride facilities in some stations. Since pedestrian infrastructure is very weak in the whole of Istanbul in spite of high pedestrian trip rates, integration with pedestrian areas and streets is also limited.

Information about the best-practice case studies of Curitiba, Bogota and Mexico are given in less detail and summarized in Table 1. Important findings of the comparison to note are as follows: all systems initiated the BRT projects due to congestion problems and high car usage rates, and therefore to improve public transport. In Curitiba, an additional aim was to control development, which is important since this leads to one of the best-known examples of integration between land-use planning and BRT implementation. In other cities too, integration with urban plans existed; and this seems to be one important shortcoming in Istanbul. Integration with other transport systems also appears to be limited in the Istanbul case. Interestingly, all systems have somewhat neglected integration with cycling, perhaps due to the low rate of cycling in these cities.

Table 1: Planning Background Checklist

	Curitiba	**Bogota**	**Mexico City**	**İstanbul**
Reasons to implement	uncontrolled development high car usage	high traffic congestion high private car ownership	poor public transport high car usage	high travel times high congestion poor public transport
Aim	integrated public transport reduced private car usage	reduce private car usage	increasing mobility reduced gas emissions	fast & economic transport solution to corridor
Integration with urban plans	yes	yes	yes	no
Integration with land use	trinary system zoning & land development policies	support long-term urban renewal prioritize walking & cycling	yes	no

Integration with rail systems	Not applicable	yes	no	limited
Integration with bus systems	yes	yes	no	Yes
Integration with Bicycle	no	partially	no	no
Existance of bike parks	no	yes	no	no
Existance of Park&Ride			no	some
Integration with pedestrians	yes	yes	yes	partially

5.2.Physical Characteristics

An important aspect that affects ridership is the physical characteristics of the systems, including location and design of the system. In this part, analysis is done in three categories. First physical components, then busways and finally stations and vehicles will be compared.

Table 2: Physical Components Checklist

	Curitiba	**Bogota**	**Mexico City**	**İstanbul**
BRT System Covarage	405 km	310 km	67 km	42 km
BRT Busways	65 km	84 km	67 km	42 km
Number of Stations	127	114	112	33
Average Distance Between Stations	600 m	790 m	600 m	1210 m
Off-Board Fare Collection	yes	yes	yes	yes
Control Center	yes	yes	yes	yes
Located Top 10 Corridors	yes	yes	yes	yes

As Curitiba is the first city that applied total BRT system, its network coverage is the highest. This is also due the feeder service network. In Istanbul there is not an official BRT feeder, thus BRT busway can be observed as the coverage of the system. But in Istanbul BRT corridor is fed by İETT and private buses, thus total system coverage is more than 42 km. In terms of station numbers and average distance between stations; Istanbul represents a faster system with much higher distances between its stations.

While determining stations' location, being a trip attraction point is an important factor, and especially in Asian side distances between stations increase.

Another important feature of BRT systems is off-board fare collection. Since it is time consuming to pay to the driver, the most effective way to decrease time needed to validate the ticket is off-board fare collection. Smart cards are also very effective to decrease time losses while boarding to the vehicle, off-board fare collection allows passengers to board vehicle not only from first door but also from all doors, which in turn decreases time needed for buses to wait in the stations. All four systems have off-board fare collection to increase the performance of the systems. Existence of control center tracking buses with GPS technologies lead to interfere to buses quickly if an emergency situation occurs. Thus, whole system is not affected negatively from the interruption.

If the system is constructed along one of the top 10 corridors, it also increases the number of the passengers using it in daily trips. Same as all three best practice cases, BRT system in Istanbul is implemented on one of the most important arterials.

Table 3: Busways Checklist

	Curitiba	**Bogota**	**Mexico City**	**İstanbul**
Busways				
Segregated Right-of Way	fully segregated	fully segregated	fully segregated	fully segregated
Alignment	median	median	median	median
Intersection Treatment	yes	yes	yes	not applicable
Passing Lanes at Stations	%20 of total	%100 of total	no	no
Station Set Back from Intersection	yes	yes	no	not applicable
Center stations	yes	yes	yes	Yes

Segregated lanes are the distinctive characteristics of BRT systems when compared to conventional bus operations. It leads buses to move quicker and not to be affected by traffic congestions. All systems analysed here have fully segregated busways. BRT system in Istanbul crosses the Bosphorus Bridge, the only place where BRT buses flow in the mixed traffic is on the bridge: that is because the property of the bridge belongs to General Directorate of Highways, and this authority did not permit reserving one lane exclusively to BRT. But buses enter and exit the bridge in

dedicated lanes, and since it is the approach to the bridge that suffers from worst traffic congestion, the BRT is not affected much by congestion.

All systems are located in the medium lane which prevents interruptions from other traffic. But Istanbul has the advantage since it runs on the highway that already has most junctions in grade-separation; and therefore the BRT does not have any at-grade intersections. There is no intersection where BRT buses have to stop for traffic lights.

Passing lanes at intersections is another feature of the system that increases the ridership. Passing lanes located at the stations prevent buses to wait for the other bus to move. Also it gives opportunity to operate express services which do not stop at all stations, just at those with higher passenger demand. Passing lanes may be one of the reasons that Curitiba and Bogota BRT systems have higher ridership than Mexico City and Istanbul BRT because this gives them an opportunity to provide higher service levels. Since the highway that the Metrobüs was implemented has a limited area, it was hard to implement passing lanes, thus system has only two lanes both in the corridor and at the stations that decreases the passenger numbers carried.

Access to the station has to be safe for passengers using the system, thus stations should be located at a distance to intersections not to conflict pedestrian movement with vehicle traffic. Since stations in Curitiba, Bogota and Mexico City are at grade intersection set back becomes crucial. Stations are located in Curitiba and Bogota at a distance from intersection to protect pedestrians from flowing traffic. But this type of treatment was not applied in Mexico City. This kind of precaution is not applicable for İstanbul BRT, because passengers can only access to stations via pedestrian overpasses.

While using median running-ways center station which serves both directions of BRT system makes transfers easier and it is also more cost-effective. All four systems have center stations.

In Istanbul buses and stations have same level, but drivers are afraid of crashing to the platform, thus they do not dock to the station. This sometimes leads passengers either to jump a long distance or step down and step up to access the vehicle. This also decreases the performance of the system. Safe and comfortable station design is the distinctive characteristics of BRT systems when compared to other bus operations. In RIT, TransMilenio and Metrobus systems, stations have safe and comfortable design. In RIT tube stations are used, in Bogota and Mexico City there are similar station design with Curitiba. This type of design provides total weather protection. Also they are safer, because they have sliding doors protecting people from stepping into the road. Despite having diverse severe weather conditions in Istanbul, weather protection is very limited, since stations have only roofs. Also neither sliding doors nor guard rails exist to protect passengers from flowing bus traffic. Especially in peak hours people wait for the bus standing on the road. Since BRT operations are very frequent in Istanbul, seating are not provided at the stations. Since off-board fare collection is a feature of BRT operation, the number of doors on buses becomes important. Passengers can use all doors, time losses decrease while boarding. In RIT system buses have 5 doors, the other three systems are using buses

with 4 doors. Frequency of BRT operation is very high especially in peak hours, thus platform length should be long enough to accommodate more than one bus at the same time to decrease waiting times of buses in each stations. There are sub-stops and docking bays in three best practice cases. In Istanbul platform length is enough for 3 buses to stop. Sliding doors have another important mission, that is to define the exact place where buses will stop and this informs passengers to wait close to the doors. Also it helps handicapped users to know where to wait to board easily with wheelchair or with special pavements blind people can be directed to the doors. Mexico City and Istanbul BRT systems do not have sliding doors.

Table 4: Stations and Vehicles Checklist

	Curitiba	**Bogota**	**Mexico City**	**İstanbul**
Platform Level Boarding	yes	yes	yes	yes
Safe and Comfortable Stations	yes	yes	yes	yes
Number of Doors on Bus	5	4	4	4
Docking Bays and Sub-Stops	yes	yes	yes	yes
Sliding Doors in BRT Stations	yes	yes	no	No

5.3.Operation Characteristics

Having good feeder services is a very important determinant that increases ridership of systems. Curitiba and Bogota systems have feeder operations to support BRT system. Mexico City and Istanbul has only BRT corridor not including an official feeder system. But these two systems have conventional bus operations to support the system which is only based on proximity of stations. Istanbul has a good conventional bus feeder operation but vehicles cannot enter the corridor. Buses discharge people to a bus stop close to BRT stations.

BRT systems have higher commercial speeds then conventional bus operations, because like rail operations they have their own right-of-way. But especially intersections slow down vehicles when they meet mixed traffic and decrease commercial speeds. All three best practice cases have at grade crossings and intersections. Thus commercial speeds are 17,5 km/h for Curitiba, 18-28 km/h for Bogota and it is less than 20 km/h for Mexico City. Since Metrobüs in İstanbul is located in the middle of highway and intersections are eliminated from flowing traffic, commercial speeds are as high as 35-40 km/h, which results in faster and more reliable operations.

İstanbul Mertobüs has the highest frequency especially in peak hours among other cases. Also off-peak intervals between buses are very short which increases total

ridership of the system. In peak hours every 15 seconds a bus leaves the station. 3 buses dispatch from terminal stations and in order to meet high demand on crowded stations some buses leave terminal stations empty. In day time, off-peak intervals are 1 minute. The system is operated 24 hours both in weekdays and weekends while this is not the case in any of the other comparison systems. It can be concluded that operating characteristics are quite superior in IstanbulMetrobüs, providing a high quality service level. On the other hand, as mentioned before, there is only one corridor in Istanbul and since there are no passing lanes it is not possible to operate express or limited services. Despite having only one corridor there are 3 different lines in the same corridor, defined by different lengths. Same electronic card is used in Istanbul for all transportation modes except for minibuses, which operate with cash payment. Same travelcards are used for Metrobüs also; this provides easy transfers between other transport modes.

Table 5: Operation Characteristics Checklist

	Curitiba	**Bogota**	**Mexico City**	**İstanbul**
Operational Mode	trunk-feeder	trunk-feeder	trunk-only	trunk-only
Commercial Speed	17,5 km/h	18-28 kım/h	<20 km/h	35-40 km/h
Peak Frequency		2 minutes	48 seconds	15 seconds
Off-Peak Frequency		6 minutes		1 minute
Hours of Operation	weekday 20 hours	weekday 5am-11pm	weekday 4:30am-0:30am	weekday 24 hours
	weekend 19 hours	weekend 6am-11pm	weekend 4:30am-0:30am	weekend 24 hours
Multiple Routes	yes	yes	yes	No
Express, Limited and Local Services	yes	yes	no	No
Multi Corridor Network	yes	yes	yes	yes
Express, Limited and Local Services	yes	yes	no	No

Fare Integration	yes	yes	yes	Yes
Automated Fare Collection & Fare Verification	yes	yes	yes	Yes

5.4.Marketing, Advertising, Identity and Image Building Policies

Stations and vehicles should be distinctive for BRT systems, because they show the customer that they provide different and higher-quality services than conventional bus operations. Since the idea behind implementation of BRT is "think rail, use buses", it should provide comfortable, reliable and frequent services like rail systems, thus it should have different vehicle and station designs like tube stations in Curitiba or Bogota. In Istanbul, buses and stations are different than conventional bus operations, but unlike other cases, stations do not provide full protection for users like tube stations do. Also for increasing ridership branding of the systems by local private or public authorities is very important. Before starting the operation in Curitiba, Bogota and Mexico City a large campaign was made to introduce BRT systems to the users. Since planning and implementation was very quick in Istanbul branding was very limited initially. But now there are some commercials for the system.

Table 6: Marketing, Advertising, Identity and Image Building Policies Checklist

	Curitiba	**Bogota**	**Mexico City**	**İstanbul**
Stations	distinctive	distinctive	distinctive	distinctive
Vehicles	distinctive	distinctive	distinctive	distinctive
Branding	yes	yes	yes	Initially limited; improved today

5.5.Ridership on the System

After presenting the features that are likely to affect the ridership and performance of the systems, in the last part ridership on systems will be discussed. As it is stated before Curitiba is the pioneer BRT system and because of its integrated planning background and high coverage, total ridership is very high with 2.26 million passengers per day. Since there are 6 different corridors and multi centered urban pattern peak hour passenger/hour/direction are only 13.000. When the only BRT

corridor of 65 km without the feeder services are taken into consideration, passengers carried per km is 34.770 in Curitiba. (Table 7)

TransMilenio in Bogota also appears to be a highly used system: 1.65 million passengers are carried daily on the corridor. In peak hours passenger/hour/direction is 34.000 on the 84 km BRT corridor. 19.047 passengers are carried per km of the BRT corridor.

Metrobus in Mexico City has ridership numbers close to Istanbul: total number of passengers is 620.000 daily on 62 km route. Approximately 9.250 passengers are carried per km. In peak hours, it carries 9.000 passenger/hour/direction.

Total number of passengers carried daily in İstanbul Metrobüs is 600.000. With 42 km route length, this amounts to 14.280 passengers carried per km. It carries 21.400 in peak hour passenger/hour/direction.

When the total ridership is compared Curitiba and Bogota has very high numbers but they have very extensive feeder services too. Despite using only existing conventional bus operations and having a rather limited integration based on proximity of stations, İstanbul BRT has a rather high ridership, higher than the BRT in Mexico City. Also Istanbul has shortest route length when compared to other systems. The reason to have high ridership for Istanbul is probably a combination of two factors: the corridor's location and high service level. It is located on one of the most demanded axis and it provides a rather fast journey with very frequent services and for 24 hours all days of the week. In addition, the system provides a relatively fast crossing across the Bosphorus, a major physical barrier for the two sides of the city. Also many of the conventional and minibus operations are removed from this corridor, thus people have to use the system. Despite having high frequency especially in peak hours, it is often reported that operation is inadequate to meet the demand.

Table 7: Ridership Checklist

	Curitiba	**Bogota**	**Mexico City**	**İstanbul**
Passenger Numbers	2,26 million/day	1,6 milion/day	620.000/day	600.000/day
Peak Hour Passenger/hour/direction	13,000	43,000	9,000	30,000
Passenger Per Km	34,770	19,047	9,000	14,280

6. Results and Conclusion

When compared to the three well-known best-practice cases of BRT, the Istanbul Metrobüs is found to have a mixed performance. Its major weakness is in its planning background: the system was developed without any integration into the urban development plan and the transportation plan of the city. This has two consequences:

- The Istanbul Metrobüs is developed with only existing passenger demand considerations; and therefore the corridor serves currently existing development areas that already have very high mobility needs. This maybe one of the reason for its high ridership. Such a strategy of serving the existing high-demand corridor may be beneficial indeed to establish the system as a success in its early years of operation. And Istanbul Metrobüs is a young system that proved to be successful in ridership figures. However, this lack of coordination between the system's planning and urban planning need to be overcome in the future in later stages since the urban plans will inevitably change demand patterns, that the Metrobüs will have to follow.
- Lack of integration into the transportation plan meant that the system was not integrated with existing metro and tram stations at all initially. No transfer stations were designed although some rail stations were in close proximity to the BRT. The same goes for conventional bus systems and stops. They were also poorly integrated although this improved in later years. The transfer stations with rail systems also improved although problems still exist. This is obviously a negative aspect in terms of planning; but it may have two very conflicting repercussions: had the system been better integrated with rail, the passenger numbers might be even higher; however, the opposite appears to be the case: the BRT system competes with the (Light) Metro system and it is stated by the Istanbul Rail Operating Agency that it attracted many passengers from the rail systems.

In spite of these apparent problems of integration, the system carries a reasonably high number of passengers. Its number of passengers per km of route is lower than the systems in Curitiba and Bogota, but higher than that in Mexico City. Furthermore, its number of passengers per km of route is higher than that of the two Metro systems of the city combined, which is about 13,500 passengers/km according to figures given by Özgür (2009). This high level of ridership shows that the level of service provided is a very important factor since this is the clear strength of this system when compared to the best-practice cases. The strong points of the Istanbul BRT can be listed as follows:

- Due to its design with higher distances between stations and full-segregation, it provides the highest speed of service when compared with the best-practice cases, and this is extremely important in a large city like Istanbul where commuting from outer suburbs to the CBD is the dominant mobility pattern.
- Furthermore, the system operates with very high frequency and 24 hour service – in both aspects, the system out-performs the best-practice cases as well as the Istanbul Metro systems.

- Moreover, the Bosphorus crossing, a condition specific to Istanbul, is a major advantage since there is no rail crossing yet and therefore this is the first rapid transit connection between the two sides of the city.
- Although it was noted that integration with other transport modes was limited, conventional buses and minibuses operating at the BRT corridor were reorganized and mostly removed, which made the BRT system the favoured choice in most cases.

Finally, the comparison with best-practice cases also provides some lessons to improve the Istanbul Metrobüs:

- Station design needs to be improved for both safety and weather protection.
- In future phases, passing lanes should be incorporated in order to allow for faster operation as well as express services.
- Integration of non-motorised modes, such as cycling and walking, should be improved.
- As already mentioned above, integration with rail systems need to be improved; and future phases must be planned in integration with the urban development plan of the city.

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Historic preservation in Fast-Changing Cities - Case Study of the Hankow Historic Concession District

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Abstract

During the past three decades, since China's reform and opening up in 1979, there has been rapid urbanization and urban change in most Chinese cities as a consequence of economic growth. Facing the need for urban development, many local officials regard new construction as the representation of advanced and modern development as well as political achievement. Therefore there are many forces to change the appearance of the old city with consequences for historic buildings and districts which are of great cultural value but in poor condition. Although recently the concepts of historic preservation have been more widely accepted, there is still a challenge to meet the need of economic growth.

Taking the Hankow historic concession district as the case study, this paper aims to analyze historic preservation and renewal in fast-changing cities. The Hankow historic concession district was formed by Western countries' aggression in China during 1861-1898, its formation was greatly influenced by western cultures, and meanwhile it embodied the traditional and regional cultures of China. Presently this district has become an important part of the modern Wuhan's multiculturalism. The fast growth of Wuhan' urbanization has brought pressures on this district from both internal and external aspects, including local residents' urgent demand to improve their living environment and authority's expectation to maximize economic value of the land in the city center. Therefore historic buildings were once regarded as the obstacle of urban development, but in the last decade the value of the Hankow historic concession district has attracted more attention from the local authority, developers and the public.

The local authority has offered legal protection to this district at building, block and urban levels: First, regulations protect listed historic buildings; second, overall historic preservation of three blocks with a high density of well-preserved historic heritage and buildings has been undertaken; third, Hankow historic concession district has been ranked one of four urban historic preservation districts. Developers have also realized that historic buildings

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embody great economic value as well as cultural value, an example given in the paper shows that the integration of the old and new can create the urban place of historic and livable features as well as commercial success. Public and small enterprises were also encouraged to participate in the restoration and renewal of historic buildings by renewing internal conditions with the external appearance unchanged.
This study concludes that historic preservation and development seem now to be better balanced in Hankow based upon its urban characters and condition in the "fast changing" era of Wuhan. It also shows that the revitalizing of historic district needs both efforts and cooperation from the public and private sectors.

1. Introduction

Since the reform and opening-up in 1979, China has witnessed high economy growth, rapid urbanization as well as ever-expanding city sizes. Facing the urban growth imperative, many China officials regard development as the symbol of urban modernization and political achievements. Nearly all China cities have massive urban construction undertaken under a variety of rhetoric over the past two decades, therefore urban growth turned out to be the explosive shift only instead of conventional evolution. Many historic cities have suffered, under those drastic urban transformations, various damages, even erasement of extinction and were replaced by the universal urban style. Such development homogenization puts all cities in one appearance, and thus the urban character crisis incurred raised concerns about historic preservation in public who increasingly recognizes that historic places not only demonstrate culture heritage but also work as the basis to build up urban character.

There are few well-preserved historic towns in urban China due to weathering through the ages and continued destruction or devastation, in which case the historic areas and districts with relatively concentrated historic buildings and still with residents have emerged into the primary carrier of urban culture heritage. China started to incorporate historic districts into its historic preservation initiatives in 1986, and then a number of historic districts were registered and conserved all over the country with Wuhan among the second-round list of National Historic Cultural City. For the purpose of preservation and usage of urban historic heritage and urban cultural character, Wuhan designated 4 historic townscape area, of which the Hankow historic concession district best survived owing to its historic buildings which is the greatest in number, with the most integral and best in conditions. At the same time, 4 of the 10 historic districts of the whole city lie in the areas according to Wuhan urban preservation planning.

The Hankow historic concession district is the legacy of former western colonial powers invading China, and served as the major intermediary to usher in western civilization in Wuhan. Its urban pattern was greatly affected by western

cultures while taking shape however still beared the imprints of Chinese traditional and Wuhan local cultures, and presently has become a major part of the culture diversity of Wuhan. During recent rapid urbanization of Wuhan, the Hankow historic concession district confronted pressures from both inside and outside. On one hand, local residents are in urgent need for living improvement due to heavily deteriorated infrastructure. On the other hand, because of the scarcity of land resource, the authority and developers attempt to maximize land value of the downtown. The Hankow historic concession district has therefore long been in the dilemma of historic preservation vs. urban redevelopment. With the transition from preservation of historic building to that of entire region, the government-led historic preservation initiatives were shifted from sheer regulatory conservation to the revitalization of historic neighborhoods.

2. The Making of Hankow historic concession district

Hankow was specified as a trading port along the Yangtze River according to unequal treaties with western powers after the Second Anglo-Chinese War between 1856-1860. The concessions of the U.K, Russia, French, Germany and Japan were established one another after 1861, covering largely from present Jianghan Road down to Mayang Street and in between the Yanjiang Road to the east and the Zhongshan Road to the west, totaling about 195 ha., bringing into being a riverside development strip. Infill development took place lengthwise afterwards as the territory expanded, forming a pattern of street block fronting the Yangtze River against the Jinghan Railway line.

The internal development in each concession was totally independent including urban planning, road system, drainage system, water supply and power system planning etc. However due to the adjacence to one another, the external transport links needed to be considered. Urban district pattern appeared in the early-opened British concession. Thus the later concession developments referred to this mode which followed uniform planning rules such as wharf, warehouse and yard along the riverside area for water carriage and distribution, layout of large scale public building along the riverside main road to improve the riverside landscape. The external side of the concession was functioned as commercial area. Residential and office area were planned between Shengli Street and Zhongshan Road with other functions of embassy, bank, hospital, school, church, trading, restaurants and other public buildings and residence, villa, residential and other residence etc. Thus quiet and noisy area was distinct between internal and external of the concession area. Such layout reflected the modern urban zoning characteristics, while the urban form still followed the traditional European classical style with tall buildings at the end of the main streets, and the continuity of the street interface were paid certain attention to.

After the establishment of the concessions of the five nations, consultants of another seven nations were setup. Since then, a great number of western –style buildings appeared in Wuhan and the unprecedented construction peak occured in the Wuhan urban development history. With the rise of Westernization Movement, many modern factories, schools were then built in the concession area, including both pure Western-style and mixed-Chinese and western style, together with the modern factories, residential alleys and private villa by the public, these buildings became the symbol of the transformation from the traditional style to the modern.

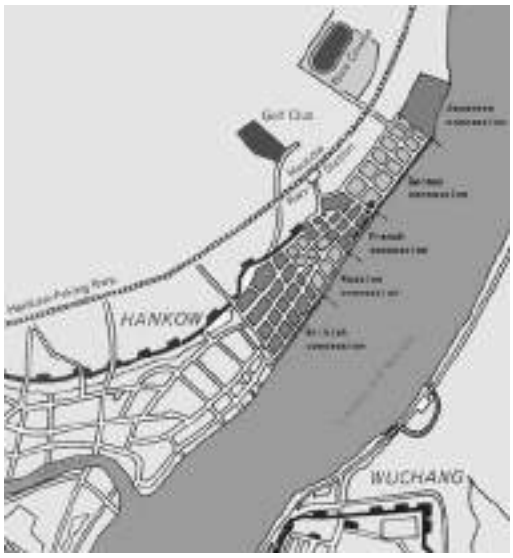

Figure 1. The Map of Hankow historic concession

3. The Present Situation in Hankow historic concession district

Urban Wuhan has changed radically since the reform and opening-up policy and in only 30 years new building made up 90% of the total in its 8,000 Km2 of region, which accelerated the disappearance of historic building in its downtown, in particular of the traditional wooden building that was left few due to its poor fire-and-erosion resistance, as compared to stone building that remains many thanks to its safety and durability, especially in the Hankow historic concession district. Nevertheless, the area is confronted with demolishment from outside and plagued with redevelopment of itself as well. In general, there are five issues in present Hankow historic concession district as follows.

(1)Damage to Historical Townscape

Due to urbanization shock, the Hankow historic concession district has also undertaken sweeping demolishment and development, especially in the north

part where few historic buildings were left and they are surrounded by new constructions. Even for the well-conserved old neighborhood in the south part, there are still some less harmonious developments resulting in serious inconsistency with the historical townscape in the aspects of the massing, color, style of new buildings. Moreover, the original spatial pattern and townscape have been damaged badly due to lots of environment variation or unauthorized constructions within their sites.

(2)Decline of Urban Vitality

The Hankow historic concession district was at one time the high-end quarter with many outstanding colonial buildings compete with public facilities and so was the place of dwelling, leisure and entertainment of the upper-middle class then. Its infrastructure got dilapidated over the time, and in addition, hollowing-out can be found downtown as its surroundings kept growing and new high-standard estates gave incentive to resettlements by downtown population. What are worse, more commercial shopping centers are settled during the period of urbanism and have a negative impact on commercial activities in the Jianghanlu Commercial Street, the symbol of Wuhan commercial hub.

(3)Deterioration of Building Quality

Many changes have been made in the use of historic buildings in the area, such as housing turning into office, restaurant, recreation and etc. Some former single family houses were shared now by multiple families, leading to overload operation. What is more, historic buildings of the area have serviced generally longer than their physical life, their safety is declining year by year and even some have become dilapidated.

(4)Underdeveloped Infrastructure

It is evident that the standards of existing infrastructure are lower than those of modern urban living. Quite a lot of old neighborhoods even lack of sanitary fittings, most existing facilities of waters supply, drainage, electricity and etc. grew physically dilapidated, and new facilities like gas and CCTV remain substandard. Many of the roads have worn down without repair for many years. The Infrastructure that cannot meet the requirements of modern cities therefore has yet to be either improved or increased.

(5)Inadequate public space

Years of unauthorized developments keep reducing the otherwise already less public spaces. The surge of private cars ownership in recent years brings about parking problems that in turn add to the decrease of public space. New developments have increased greatly, which leads to more inadequate public spaces.

4. The Preservation of Hankow historic concession district

Urban character and culture heritage gain increasing attention with people's living standard's rising over the decade, and the public come to accept the historic preservation. In the recent decade, as the increase of living standard, more attention has been paid to the urban characteristic and cultural heritage. The concepts for heritage conservation ideas were gradually accepted by the public. The preservation for cultural heritage is reinforced by the local authority, and relatively complete classification, grades, hierarchical protection system was formed the main responsibility of different protection units has been clarified.

The preservation units are classified as two types: heritage conservation units and outstanding historical building. The former is the name for the unmovable cultural relics according to the National Heritage Preservation Codes and is of the highest level of protection; the latter refers to all the listed historic buildings by Wuhan urban Cultural heritage protection regulations and managed by the local Housing Managing Bureau.

The local urban planning bureau is responsible for the preservation of urban level and related planning strategies. The preservation unit is classified as historic district and historic scene district. The former refers to the districts which reflect traditional historic scene and local characters with relatively more numbers of historic relics, sites and buildings; The latter is greater in scale and refers to districts with historic buildings, urban patterns, building type and streetscape. With the increasing awareness of cultural heritage preservation, the range of preservation work expanded and has experienced the process from the level of building preservation to the level of historic environment.

（1） The Preservation of Historic Buildings

The Hankow historic concession district preservation began with the protection of primary historic buildings in it by filing and reviewing of Heritage Conservation Unit and implementation of corresponding measures in accordance with the National Heritage Act. Heritage Conservation Unit is classified by its significance into the 3 levels of State, province and city (county) and published by governments. 34 in all in Hankow historic concession district have succeeded in the register of Heritage Conservation Units since 1982, including 4 at State level, 5 at province level and 25 at city level. The local government designates boundaries of conservation and development control, sets up protection sign, files registry, in conformity with relevant rules of the "Measures of Hubei Province for enforcement of the National Heritage Act" and "Conservation measures of Wuhan Local government for Heritage Conservation Unit". Protection limit is confined to 10 meters outside Heritage Conservation Unit whereas its counterpart of development control largely to 20 meters outside it, and within it no development or act is allowed to harm the Heritage Conservation Unit or its surroundings. The style, height, mass, color must go harmonious with those of Heritage Conservation Unit and its surroundings upon new development, major repair or reconstruction within the development

control area. The proposals of project, maintenance, or reconstruction should get permitted by corresponding culture heritage authorities and approved by urban planning authorizes before its construction.

Criteria are quite strict in the selection of Heritage Conservation Unit, focusing only on those of historical, art, scientific significance and often closely related to history events or figures, as a result of which a lot of significant historic buildings have no access to legal protection, leading to a simplistic approach to preservation initiative. The local government therefore enacted the “Measures for Conservation and Management of Wuhan Townscape area and Outstanding Historic Building ”in 2003, broadening the scope of historic buildings, which specifies those over 30 years old and of historical or cultural value as Outstanding Historic Building, and set explicitly conservation guidelines, duties of competent agencies, owners and users. On the basis of a survey by municipal housing administration department, reviewed by culture heritage and urban planning authorizes, and permitted by the local government, 54 in Hankow historic concession district are identified as Outstanding Historic Building with 8 at the first and 46 at the second class.

To advance further its regulation and rule for cultural heritage conservation, make the preservation endeavor more specific, for the ease of application, thus for better conservation, Wuhan enacted the “Wuhan Regulations for Historic Preservation "in 2007, taking it as an important agenda. Meanwhile, the authority made more commitment to it and have repaired some historic buildings, for instance, the 4 in Hankow historic concession district have been well maintained and greatly improved their conditions, guided by the principles of cultural heritage repair and technical requirements.

（2） The Preservation of Townscape Area and Historic District

Because of the prominence of Hankow historic concession district in the evolution of urban Wuhan, Wuhan Master Plan 2006 specified its south as one of the 4 townscape areas that hold the greatest amount of historic buildings and highest historical values, noting that priority should be put in maintaining the integrity of downtown characters and their continuity, appropriate designation of character-compatible area, restructure of land use, and control of population. Townscape area should protect styles of historic building, regulate those of new buildings to make them in harmony with their contexts, in principle no change should be made to existing road patterns and current names of streets and places be retained. Also, the master plan had mapped 4 historic districts within the historic concession quarter, that is, the neighborhoods between Jianghan Road and Zhongshan Road, along Qingdao Road, around venue of the “CCP August 7th Conference”, and around Yiyuan Road, each with conservation priorities.

The Wuhan Historic and Townscape Region System Planning by Urban Planning Bureau in 2009 extended historic conservation sites, adding 12 historic districts, and for the first time covering the quarter to the south of Jinghan Avenue in the north of Hankow historic concession district. To carry out historic preservation in the Master Plan 2011 and in the system planning above, explore the methods of creating Regulatory Detailed Planning concerning historic districts, and better serve urban regulation, Urban Planning Bureau is coordinating the formulation of Regulatory Detailed Planning for the 4 historic districts in Hankow historic concession district, the work of which is under review now.

Table1. Authorities for Cultural Heritage Preservation and Their Duties in Wuhan

Authority		Units(immovable heritage)	Work
Municipal Government	Urban Planning Bureau	Townscape region Historic district Cultural heritage units Outstanding historic building	Planning and administration of historic heritage, including plan creation and review.
	Housing Administration Bureau	Outstanding historic building Ordinary historic building	Administrative control of the safety, use, maintenance of outstanding and ordinary historic buildings.
	Cultural Heritage Bureau	Cultural heritage units	Administrative control of townscape region, historic heritage unit, and outstanding historic building in accordance with relevant laws and rules.

5. The Revitalization of Hankow historic concession district

How to achieve sustainable growth in historic heritage arises, as the preservation agenda in the Hankow historic concession district shifts from unit to outstanding Historic Building, and single Monumental architecture to historic district and even the morphology of entire downtown. The experiences by Shanghai, Tianjin, among others, that link historic preservation with urban growth arouse extensive attentions, and the initiative to combine conservation with re-use came to prevail in addressing historic districts. That process

developed rapidly, during the transition the government, developer and the public all vigorously provide support. As such, the Hankow historic concession district area began its recovery only several years later.

(1)Government Developing Revitalization Scheme of Historic District

Economy-oriented land use Restructure became of the priority of the revitalization undertaking in historic districts. The Hankow historic concession district used to be the upscale business center, the first agglomeration of finance and trade services in Wuhan's history second only to that in Shanghai. Based on the local government's strategy, the Urban Planning Bureau worked out the "Development Planning of Wuhan Riverside CBD "in 2008, to make full use of cultural heritage advantages of the historic concession area, and promote it as the finance and business center , creative industry base, and culture-tourism destination, 5 major strategies of modern service industry are developed to build on business headquarter economy, scale up boutique business, move forward with culture-creative industry, integrate IT industry, enhance tourism and entertainment industry. Meanwhile, various conservation models, such as priority protection, coordinated protection, and development protection, are adopted to featured locations within the historic concession area and on specific basis of different sites.

During building the Riverside CBD, the Qingdao Road region initiated the protective development agenda of Wuhan's historic concession district that has to be demolished in part because the Yangtze River Tunnel runs through beneath it. The negative effect taken as a catalyst, the area above the tunnel is being redeveloped as public space, around which a pedestrian space is under construction complete with culture-creative industry, commerce, finance, tourism and entertainment, adapting to modern needs, adopting new features, boosting vitality, and improving environment through the conservation, rehabilitation and redevelopment.

(2)Developers Shaping Mix of Old New Dynamic Neighborhood

The success of Shanghai's Xintiandi project demonstrated a new approach to Wuhan's urban renewal, i.e. linking preservation to development by converting history resource into commercial resource, which was applied once more by the developer to Wuhan Tiandi project located in the former Japan's Hankow concession in 2005. Outside the downtown conservation area, the site is allowed for massive development. Instead of scrap and build redevelopment, it kept all of the 9 historic buildings within its site that are neither Heritage Conservation Unit nor Outstanding Historic Building registered by the local government, undertook renovation and alteration work, and added new use, making the historic building radiating new unique charm, well blending in with surrounding modern buildings, creating an original Hankow-like atmosphere with retail, restaurant, entertainment, business, hotel and etc. The premise gets widely popular since its completion in 2009 and now becomes of a city branding. Its success rests not only in set of modern urban design elements like

mix-use, compact configuration, pedestrian circulation, diversified public space and etc., but more in deliberate conservation and subtle remaking of historic elements integrated into modern life, in which small fashion buildings meets old-fashioned mansion, street pool, old trees, gallery, shop, restaurant, café, and bars all come together, whereas people are exposed to the history and culture of Wuhan in their leisure-time. The project brings people about the recognition that historic preservation and urban development can get along.

(3)Partnership and Re-use of Historic Buildings

The Hankow historic concession district's preservation endeavor is increasingly focusing on the sustainable growth of historic heritage. The Municipal Housing Administration Bureau established the re-use principle of outstanding historic building, asking to make full use of value of Outstanding Historic Building and well integrate its social and economic benefits, by function replacement, interior alteration, environment making, and commercial operation, in light of the characteristics and modern function, based on retaining original style and inheriting history and culture.

Some strong enterprises began investing heavily in the renovation of Outstanding Historic Buildings to host them. The former French Calyon is repaired and rented by Agricultural Bank of China Hubei Branch. Another, Tukunshan mansion, after a massive renovation by China Oil and Foodstuffs Corporation, has become a place for dining and gathering. Those along the river within the former British concession also did it, turning into nostalgic café or bar street. Many artists also came into the quarter refitting old houses into studio, salon, gallery, and freelance artists flock around the Lanling Road, known as "artist village" within the former Russian concession.

Conclusions

The historic concession district is the shift of Wuhan urban spatial form from the traditional to the modern development. In the recent 100 years, the communication and integration of Chinese and foreign cultures have left deep imprint on the urban form etc., which are considered as the valuable for the future urban development. In the rapid growth of urbanization in Wuhan, the concession district has been in the conflicts between conservation and development and experienced the process from the sharp opposition in the beginning to the pursuit of win-win situation and this process also represents the social and economic change of Wuhan. The acceptance of the value and importance of historic preservation by the public, the authority and the real estate could promote the historic district from decline to revival. In the background of "chasing the new change" era in China, Wuhan is exploring an unique way to balance the preservation and development in the historic district. However, according to the case study of historic concession of Hankow, a number of aspects in preservation and development are in need of improvement. For example, in the aspect of historic preservation, the public resources are almost entirely focused on cultural relics protection units and

outstanding historic buildings, while neglecting of the preservation of general historic buildings, which results in the further deterioration of the overall environment of the historic districts.

On the other hand, in recent years, the re-use of the historic district which aims at revival is in the ascendant development, however with a too strong economic driving force underlying. This kind of development led to the contrary results to the basic principles of historic preservation, such as forcing relocation of local residents for the purpose of commercial development, manufacture of fake antiques to maintain the historic style of the old city etc, and it is clearly shown that historic preservation still needs research and thinking, as well as further legislative protection and public participation. Only when historic preservation is regarded as an universally shared value, could the government, developers and the public form a joint force, and promote the historic districts from decline to revival, and truly realize the sustainable development of the historical heritage.

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Policy Implications for the ESPON Climate Project Vulnerability Assessment

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Abstract
The ESPON Climate project is an Applied Research Project conducted within the ESPON 2013 Programme. The project can be considered as a response to the EU 2007 Territorial Agenda, Priority 5, which stipulates a need for developing Cohesion Policy with respect to territorially differentiated effects of climate change and for further development of transregrional approaches to overcome natural hazards. More explicitly, ESPON Climate also addresses direction given in EU legislation from the EU White Paper "Adapting to climate change: Towards a European framework for action" which states that strategic approaches to spatial planning are needed for territorial development.

In consideration of this policy background, the ESPON Climate project produced a Pan-European vulnerability assessment which identifies regional typologies through analysis of exposure, sensitivity impact and adaptive capacity as components of overall vulnerability. It creates a basis for tailored-made strategies for adaptation due to the regional specificity emphasised within the project. These regional responses to climate change are further addressed within the seven case studies evaluated and communicate the diversity of responses to climatic stimuli. The project provides a territorial focus which is commonly lacking in most related studies. The focus is one which addresses regions within and across European territories rather than maintaining the more commonly used sectoral focus. The project also addresses the need to consider Europe as a whole, to assess what consequences European regions will face in regard to climate change, and how this affects the competitiveness of Europe as a whole and the cohesion of European territories. Through this assessment, ESPON Climate creates an evidence base for policy through possible scenario outcomes. Though the project does not provide a clear cut forecast, it offers a basis for recommendations for policy development toward climate change adaptation.

Concluding findings of the project provide policy recommendations for the development of European regions. The analysis identifies hot spots, or areas most affected by climate change, emphasising the need for developing tailor-made adaptation strategies for example in Southern Europe and for areas such as the Alps and the Mediterranean where tourism will be greatly affected. Also identified are the challenges to spatial planning and which types of regions should be targeted in terms of increasing emission reduction measures. The analysis additionally establishes that countries which are most highly affected have lower adaptive capacity and that this is contradictory to current and future aims of territorial cohesion. These and other findings of the project assist in the understanding and implementation of context appropriate strategies. These strategies will be crucial in overcoming present and future challenges to territorial cohesion and in achieving a harmonization of territorial development.

Acknowledgement

This brief paper is derived from the more extensive literature found within the ESPON Climate Final Scientific Report (2011) and the forthcoming chapter 'Implications for territorial development and challenges for the territorial cohesion of the EC' in *European climate vulnerabilities and adaptation: A spatial planning perspective* (Greiving and Schmidt-Thomé, forthcoming). The reader is encouraged to consult these documents for further information.

1. Introduction to Brief Policy Background

The European Union is currently pressed by many challenges including unemployment, financial crisis, demographic change, movement toward a low-carbon economy and the development of strategies for climate change adaptation. Development and implementation of responses to these challenges necessitates action and initiatives within both vertical (EU, national, and regional levels) and horizontal (across sector) dimensions of governance. This is particularly the case when considering efforts within EU competitiveness and Cohesion Policy which must take into account the spatially differentiated impacts of climate change. Anticipated changes will produce significant economic, social and environmental impact which will vary largely by region, sector, and social groups. Challenges posed by these changes require a place-based approach to actions taken toward implementation of adaptation strategies. This is particularly due to the spatial variation of climatic impacts. With regard to mitigation, the Europe 2020 Strategy adopted by the European Council in 2010 provides specific energy goals toward reducing greenhouse gas emissions and increasing energy security. The Strategy additionally specifies the following priorities (COM, 2010, p. 3):

– Smart growth: developing an economy based on knowledge and innovation.
– Sustainable growth: promoting a more resource efficient, greener and more competitive economy
– Inclusive growth: fostering a high-employment economy delivering social and territorial cohesion

The Strategy also includes a 'Resource efficient Europe' as one of its seven flagship initiatives which, in combination with the above-stated priorities, contributes to both climate change mitigation as well as EU competitiveness. This is achieved through the Strategy's "smart, sustainable and inclusive growth" agenda which aims to reduce emissions and to encourage positive economic growth (COM, 2010, p. 13). The importance of this in relation to EU competitiveness is apparent in the need for reducing energy insecurity and in reflection of pledges already made for emission reductions within the 2009 Copenhagen Accord. However, even if these pledges are met, consequences for competitiveness will still be far-reaching due to the changes already underway. With respect to this fact, actions must be taken now to avoid substantially higher costs of inaction in the future (OECD, 2009). Direction for these actions has been provided within the adoption of the EU White Paper on Adaptation to Climate Change in 2009 which acknowledges the regional vulnerability of climatic impacts and the crucial role of these impacts on the future of European competitiveness. Disparities in regional vulnerability and capacities toward adaptation and mitigation are addressed in both the White Paper and the outputs of the ESPON Climate Project. The disparities highlight how economic development is often correlated with mitigative capacities. This is exemplified by regional differences such as the difference between the lower mitigative capacity and weaker performance in competitiveness indicators of South and East Europe verses that of North Europe. A further example is found within the gradient revealed between East and South Europe which additionally identifies a particular weakness of the peripheral regions compared to that of the core.

The results of the ESPON Climate project reveal that the economic sectors most directly affected include primary as well as the tourism and energy sectors, again with the periphery regions most adversely affected due to their higher vulnerability. These regional imbalances are exceptionally important when considering the impact to European territorial cohesion and are particularly important to future solidarity. Most crucial in this respect is the potential for a widening and deepening of disparities and a compounding of inequalities as a result of climatic impacts.

What these inequalities necessitate is the regular inclusion of climate change policy within rural territorial development as is required under the holistic approach of the Renewed Social Agenda in 2008 (COM, 2008). Inequalities within and beyond rural development will more specifically be affected by the potential change in frequency and intensity of natural hazards including flooding, landslide, forest fire, drought and heat waves which will significantly impact both physical and human capital. The potential loss of physical capital, such as infrastructure, and human capital, such as loss of working days and lives, can produce adverse consequences for EU competitiveness. The ESPON Climate research, however, emphasizes that some climate change impacts produce potential opportunity for capitalization toward reducing these disparities. This is an important part of territorial cohesion and is stressed within the EU's Fifth Cohesion Report (5CR).

The 5CR explicitly addresses the 'third dimension' of Cohesion Policy, territorial cohesion, introduced originally within the Lisbon Treaty (EC, 2010). In contrast to the other economic and social dimensions, territorial cohesion emphasizes the importance of "access to services, sustainable development, functional geographies and territorial analysis" and further states that climate change and energy goals require coordination at all governance levels (EC, 2010, p. 24). This is in order to prevent counteractive policies and additionally places stress on the regional, more local levels. The 5CR addresses these issues and acknowledges differences in intensity of impacts, but does not elaborate on how the variation of impacts will affect future Cohesion Policy. The ESPON Climate project attempts to remedy this gap by identifying regions which are most adversely impacted and should be targeted for financial assistance. Though this project clearly states that it does not provide a clear-cut forecast, it assists in current efforts to improve Cohesion Policy and future growth strategies toward harmonious territorial development.

2. Main Findings of the ESPON Climate Project

The ESPON Climate project conducted a Pan-European vulnerability assessment and evaluated seven case study areas. The assessment focused on five impact dimensions: social, cultural, economic, environmental and physical impact and three elements which determine the regional capacity to adapt: awareness, ability and action. These dimensions serve as an important part of the ESPON Climate methodological framework. Suggestions for policy options are based from the Massey and Bergsma (2008) classification of adaptation objectives: adaptive capacity enhancement, reduction of risk and sensitivity, coping capacity and capitalisation.

The social dimension considers the adversely affected populations exposed to heat waves, flooding, and sea level rise and tends to target adaptation policies to reduce risk such as loss of life. The cultural dimension focuses on susceptible historical sites and landscapes which are exposed to flooding and concentrates on policies toward flood risk reduction especially for the tourism sector. The economic dimension varies by sector with policy recommendations including a need for flexibility, for granting autonomy for business adaptation, and for evaluating opportunities for capitalisation especially in the tourism and agricultural sectors. The environmental impact dimension targets primarily ecosystem indicators with adaptation policies to enhance coping capacity through maintenance of ecosystem services. Adaptation policy for the physical dimension focuses on risk reduction through planning regulations and codes and capacity building of emergency services. Though it is acknowledged that the ability to address adaptation objectives is highly spatially dependent, trends can be observed within these dimensions and are summarised as follows:

- All dimensions need both short and long term adaptation planning
- Adaptive capacity enhancement: is oft a result of early warning systems, education and information sharing

- Risk and sensitivity reduction: requires revision of current and specific policies and regulations
- Coping capacity: is found within focus on response of emergency services
- Capitalisation: is very tourism centred, while few in-practice examples exist

The information provided in the assessment also highlights what can be divided into several categories of the main findings: regional consequences, challenges and typologies in the spatial context, and recommendations for development of climate change strategies[1]. This is followed by a brief section on affects to European competitiveness and cohesion.

2.1 Regional Consequences

This section is broken into three main sub-sections. The first provides the ESPON Climate project's identification of consequences using the INTERREG IV B & C programmes' 10 trans-national regions, while the second sub-section provides consequences as analysed through regional typologies. The third sub-section provides a brief explanation of mitigative typologies.

2.1.1 Consequences on Trans-National Regions Assessment

The ESPON Climate project has generated a regional analysis through identification of climate change issues utilising the 10 European trans-national regions of the INTERREG IV B & C programmes. The analysis identifies a reiteration of the following events throughout the regions: sea level increase, flooding, forest fire, drought, extreme weather conditions and events, and a potential for increased frequency for natural damages. The summary for this analysis is provided in Table 1[2]. The information in Table 1 provides each trans-national region specified by the INTERREG IV B & C programmes and includes the climate change issues identified in each region by the ESPON Climate project as well as recommended options for future programme development.

Table 1. Climate change issues identified by ESPON Climate European for each trans-national region

Region Identified	Climate Change Issues Identified by the ESPON Climate project	Options for further programme development
Northern Periphery	flood sea level rise	-Risk management for settlements potentially affected by river floods related to climate change

[1] The ESPON Climate project employs the definition for adaptation provided by the IPCC Fourth Assessment Report stating adaptation is an "adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities" (Klein et al, 2007, p.750).

[2] Tables within this paper are taken from the forthcoming chapter 'Implications for territorial development and challenges for the territorial cohesion of the EC' in *European climate vulnerabilities and adaptation: A spatial planning perspective* (Greiving and Schmit-Thomé, forthcoming).

Baltic Sea	storm surges sea level rise floods & flash floods changing frost changing precipitation	-Further development of Regional Adaptation Strategies related for climate change impacts on forestry -Climate change impact assessments on coastal and island areas, including tourism and water quality (algae blooming)
North West Europe	flood (river & flash) sea level rise storm surges	-Combination of flood and storm surge prevention and spatial planning as cross border and transnational initiatives.
North Sea	flood (river & flash) sea level rise storms (& surges)	-Combination of flood and storm surge prevention and spatial planning as cross border and transnational initiatives.
Atlantic Coast	flood (river & flash) sea level rise storms (& surges)	-Development of regional strategies to anticipate the impact of river floods -Development of regional strategies to anticipate the impact of storms and storm surges
Alpine Space	floods & flash floods changing precipitation	-Diversification of tourism, also interlinked with water scarcity -Integration of sustainable crossborder adaptation and mitigation concepts -Options of enhancing synergies to avoid conflicts (especially on adaptation measures) -Over regional and transnational water management approaches, especially focusing on the Alps as a "water tower".
Central Europe	floods & flash floods changing frost changing precipitation + summer days + summer temp. sea level rise	-Development of regional climate change adaptation strategies on floods, heat waves, forest fires -Development of regional climate change adaptation strategies on water scarcity -Development of regional climate change adaptation strategies on tourism -Development of regional climate change adaptation strategies for agriculture and forestry
South West Europe	agriculture forestry flood sea level rise	-Development of regional transnational climate change adaptation strategies on heat waves, water shortage and forest fires.
Mediterranean	storm surges droughts floods forest fires changing precipitation + summer days Sea level rise	-Management of public (including tourism) water demand. -Identification of possibilities to save water instead of relying on current -Water management schemes and further development of desalinisation plants. -Avoidance of mal-adaptation, e.g. transferring costs and risks from water sector to energy sector -Management of land take (urban sprawl)
South East Europe	flood sea level rise changing precipitation changing evaporation + summer days Sea level rise	-Emphasize analysis and management concepts on impacts of climate change on forestry and agriculture -Development of common (crossborder) methodology for land use restructuring, including integrated water management planning

Of the INTERREG IV B & C programmes considered, adaptation to combat adverse climatic impacts was not found to be a priority but appeared to be indirectly addressed in the majority of the programmes through efforts toward sustainable development, environmental protection and natural risk avoidance. Actions within these efforts take the form primarily of water management development and risk prevention. Aside from this observation, the ESPON Climate project identifies that when climatic stimuli are applied the most prominent impacts across all regions are found in the following order: flooding, storms, precipitation change and sea level rise.

The results of the vulnerability assessment enable a further classification of these 10 trans-national regions into three major groups which are identified in Table 2.

Table 2. Three major groups identified by the ESPON Climate project vulnerability assessment utilising the INTERREG 10 trans-national regions.

1. Regions where vulnerability is expected, as a rule, to increase at a high or medium rate
Regions: Mediterranean Region, South-Western and South-Eastern Europe **Description:** impacts accrue primarily in the environmental and economic dimension, overall growth of vulnerability related to poor adaptation capacity **Proposed solutions:** program measures addressing e.g. water management, preservation of water, forest fire forecasts, preparation for heat waves and regulation of land use would potentially have the greatest importance
2. Regions where vulnerability is expected, as a rule, to grow at a low rate
Regions: Northern Sea region, the North-Western European and the Atlantic coastal regions (includes also some Alpine regions) **Description:** increase of climate change impacts is projected primarily for the physical and social dimensions **Proposed solutions:** measures addressing natural disasters such as floods and coastal storms would have the greatest positive effects
3. Regions, where vulnerability is expected, as a rule, not to change significantly
Regions: Baltic Sea region, the Northern periphery and Central Europe (the lattermost can also be in part of the second group) **Description:** climate impacts are diverse but not extreme **Proposed solutions:** adaptation measures should stress the importance of the role of water management and prevention of natural disasters

The table (Table 2) identifies the regions in terms of the severity of change in vulnerability as estimated by the ESPON Climate project. The table further provides a description of the climatic impacts and a few recommendations as to potential solutions. What can be concluded from the table is that certain hot spots, or areas most affected by climate change, are found within the Mediterranean region, South-Western and South-Eastern Europe. This is in large part due to the poor capacity for adaptation of the region coupled with significant impacts felt within environmental and economic sectors, especially for the potential impact to the tourism industry. Forecasting, preparation and land use measures are suggested as having the greatest potential benefit in remedying adverse consequences. Climatic change is found to be significant but to a lesser degree within the some Alpine regions, the North Sea, and the North-Western and Atlantic coastal regions. Impacts within these regions tend to

affect primarily physical and social dimensions and are recommended to be addressed through measures that specifically target natural disasters including coastal storms and flooding. The last category consisting of the Baltic Sea region, the Northern periphery and Central Europe faces diverse impacts that are estimated as having no significant changes. In keeping the severity of change to an insignificant level, it is encouraged here to consider adaptation measures stressing natural disaster prevention and the importance of effective water management practices.

2.1.2 Mitigative typologies

With respect to climate change mitigation, the ESPON Climate project has identified what can be described as mitigative typologies[3].Within this identification process, the project makes use of the mitigative capacity definition as provided by the IPCC, "a country's [or region's] ability to reduce anthropogenic greenhouse gas emissions or enhance natural sinks" (IPCC, 2007, p. 818). The analysis of typologies considered social factors including educational commitment and attitude towards climate change as well as the availability and extent of the following: technology for reducing emissions, availability for non-carbon energy sources, land use type, mitigation policies, and government effectiveness and economic resources through income per capita. Four types of regions were produced as a result of the analysis:

1. regions with high capacity and low emissions
2. regions with high capacity and high emissions
3. regions with low capacity and low emissions
4. regions with low capacity and high emissions

The analysis further emphasized the importance of particularly types 2 and 4 as both indicate the most obvious areas in which action toward reduction measures should be taken.

2.2 Challenges and Typologies in the Spatial Context

Aside from the analysis provided above, the project also produces a spatial planning focused analysis generated in terms of identification of spatial typologies and the immediate challenges faced. The project acknowledges and builds off previous work by Massey and Bergsma (2008) as well as Greiving and Fleischhauer (2012) who review European spatial planning perspectives. Through the reviews, it is asserted that spatial planning is related to land use within adaptation policy development and that though its role is growing in importance this role is not well recognized (Greiving and Fleischhauer, 2012). This role is further differentiated based on the planning policies of various countries where, for example, a role is assigned in Germany, France, Hungary, a central role is played in the UK and the Netherlands, and a role is not assigned in Finland and Spain (Greiving and Fleischhauer, 2012). It

[3] The use of the word mitigation follows the definitions provided in IPCC (2007) and Füssel and Klein (2002) where mitigation is an effort to reduce climatic changes by reducing greenhouse gas emissions and through enhancing carbon sinks.

is recognised that consideration of particularly a spatial focus is especially important for adaptation at the regional level not only for political reasons, such as policy with respect to the role played, but also territorially with respect to type of spatial designation. This topic is elaborated within the next sub-section.

2.2.1 Spatial Typologies

The Pan-European vulnerability assessment recognizes and identifies variability of impact not only for specific types of regions, such as those previously mentioned from the INTERREG programmes, but also between and within these regions. This variation is spatially determined and is represented within the ESPON Climate project through regions based on spatial typologies. These are listed as follows: metropolitan/urban, rural, mountain, coastal, sparsely populated, islands, and border regions. The analysis considers the climatic impact, adaptive capacity and vulnerability and provides some policy recommendations within each typology.

The metropolitan/urban regions were found to have high impact particularly for the highly populated coastal areas, Alpine areas and especially Southern Europe. Impact is largely dependent on the characteristics of these regions such as the concentration of both people and infrastructure. The ESPON Climate analysis states that, for these particular regions, there is a need to establish a common 'spatial vision' through collaboration of both spatial planners and civil society because of the management constraints of limited space and resources. The vision must include diversity of structural sensitivities as well as system redundancy (where main elements of the system can be interchangeable) and robustness (where e.g. infrastructure and vegetation strengthen resistance to adverse impacts).

Analysis of rural regions highlights a range of low to high potential impact with particular adversities for Southeast Europe. These regions are economically not as robust as other regions and have consequentially lower adaptive capacity. To remedy this, attention must be paid especially to economic development, particularly for areas facing water scarcity.

Impact is considered medium to high for mountain regions; Southeast Europe, Spain, Greece and the Southern Alps being especially affected. Impacts are exacerbated through the inaccessibility of transport, demographic changes, and triggering of natural hazards by climate change which requires hazard assessment and risk mapping.

Coastal regions have medium to high impact due to potential sea level rise which necessitates a need for Integrated Coastal Zone Management for improving coastal defences in combination with settlement restrictions. Potential capitalisation opportunity exists with potential for increased tourist comfort in Northern Europe.

Sparsely populated regions must be considered in terms of relative and not absolute impact because there are relatively few assets within these regions which include part

of the interior of Spain, Scandinavia and Scotland. Improving accessibility is suggested particularly for the periphery regions.

Islands in the Mediterranean and Atlantic face severe impact due to their reliance on tourism and agricultural sectors combined with low adaptive capacity. Solutions proposed include diversification of economic activities especially those which conserve freshwater resources and are generally less climate sensitive.

A wide range of impacts exist for border regions due to differential sensitivities (e.g. population density, settlement patterns, economic development, and general adaptive capacity). Solutions suggested for these regions include particularly strategies balancing economic development, environmental issues, and demographic change.

Overall, the analysis of spatial typologies reveals that the Mediterranean and Southeast Europe have the highest vulnerability because of high impact and low adaptive capacity, especially those areas in the Mediterranean and the Alps which depend largely on the tourism sector. The typologies identify the vulnerability of these among the other spatially differentiated regions and suggest that each area has a different starting point for the investment and effort needed. Taking the typology analysis into consideration, it must also be acknowledged that challenges exist for the spatial approach to implementing climate change strategies.

2.2.2 Challenges for Spatial Planning

The ESPON Climate project identifies that in taking a spatial approach to adaptation and mitigation one must consider important challenges faced by spatial planning. Already existing structures are a particular challenge especially for adaptation strategies and must be considered within implementation of an RAS, or regional adaptation plan. Spatial planning is considered more relevant for still developing areas because conflicts arise between adaptation enforcement and pre-existing private property rights. To remedy these conflicts, it is recommended to avoid regulatory (or conforming) planning and to provide compensation schemes for affected private property owners.

The role of spatial planning should also be considered as it is and can be applied across sectors and governance levels, though challenges arise in that this role is not well understood, well-developed nor emphasised within strategies toward mitigation and adaptation (Davoudi et al., 2009; Mickwitz et al., 2009; Greiving and Fleischhauer, 2012). There is a need for a multi-level (vertical) and cross-sectoral (horizontal) governance approach because sectors are differently affected by climate change impacts. If the role of spatial planning follows a comprehensive planning approach to climate change strategies, this can consider both institutions within and across different levels and the involvement of multiple actors in order to establish legitimacy of recommended actions and to account for normative values (Mickwitz et al., 2009). The inclusivity of this approach is an important feature of climate change governance and has been cited within both European legislation and recent

literature as essential for effective adaptation strategy development (Ribeiro et al., 2009; Swart et al., 2009; Meister et al., 2009).

2.3 Recommendations for Climate Change Strategies

In addition to the typologies presented and the identification of particular challenges within the spatial context, the ESPON Climate project identifies specific recommendations for adaptation and mitigation strategies. The project recognises and discusses briefly the interconnectivity between the two kinds of strategies. The linkages between these strategies are acknowledged especially by the IPCC Fourth Assessment Report and described within three types of relationships (Klein et al., 2007):

- Direct relationship: involves use of the same resources (e.g. land and stakeholders)
- Indirect relationship: involves connection through budgetary allocations
- Remote relationship: involves distant connection (e.g. currency exchanges)

The project reiterates and recommends the notion that establishing an understanding of the type of relationship is crucial for developing effective mitigation and adaptation, especially in avoidance of potentially counteractive strategies. What must be further understood are the four types of interrelationships also identified by the IPCC, two of which are discussed within the ESPON Climate project: 1) strategies for mitigation which impact adaptation and the inverse 2) strategies for adaptation which impact mitigation. This occurs when, as an example of #1, mitigative reforestation efforts impact adaptation by influencing the water budget and biodiversity of a given region or when, as an example of #2, adaptation efforts require additional energy resources.

2.3.1 Recommendations for Adaptation Strategies

Specific to adaptation strategies, the project recommends more research and development for that which requires international cooperation such as forecasting systems, planning methods and knowledge transfer as well and coping strategies especially for those concerning natural risks (e.g. flooding). Within cooperation for all adaptation strategies is a need to consider multiple levels of governance because implementation at one policy level is not independent of implementation at levels both above and below. It is further recommended to take into account more social measurements including demographic changes and to encourage more concentration on integrated water management particularly when dealing with transnational prevention of flood risks. Specific to tourism and agricultural sectors, special attention should be paid to changes in availability of water as peak water demand and seasonal reduction in supply occur at the same time (Amelung and Moreno, 2009). This is especially important because of the economic role played by tourism in regions such as Mediterranean and the Alps which are even acknowledged in the EU White Paper on Adaptation as susceptible to climate change impacts (COM, 2009). It

is, however, also important to consider what the ESPON Climate project highlights as opportunities, or capitalisation, for these sectors where diversification of both industries can lead to beneficial adaptation strategies. Opportunity for capitalisation is found also within recommendations for mitigation.

2.3.2 Recommendations for Mitigation Strategies

Though substantial difficulties exist in estimating how the energy sector can develop particularly due to uncertainty of estimated impacts, the project recommends encouragement of capitalisation in current and future policy development with respect to mitigation strategies. This is a relatively new concept and takes form in mitigation strategies through opportunities in reduction of energy consumption and increase in energy production. This can additionally mean provision of market opportunities by development of carbon neutral technologies. One more specific example exists in taking advantage of favourable wind power conditions in Northern regions and connecting these to areas of high consumption. Opportunities also exist within the tourism sector, especially within the Alpine region, where development and implementation of climate neutral facilities can be encouraged through mitigation measures.

2.4 Affects to European Competitiveness and Cohesion

The analyses provided by the ESPON Climate project identified the above recommendations and regional typologies based on place-based characteristics of climate change impacts and assists in determining priorities for future territorial development. Identification and variation particularly for regions which are most vulnerable is acknowledged within the 5CR. However, the project provides some solution to the 5CR's lack of further explanation for future policy development. There is a need for a transnationally coordinated approach which must include consideration at the EU level due to nature of climate impacts where boundaries of impact are not confined to politically or administratively drawn lines. Attention at this level is important to ensure efforts are made to build capacities of the most disadvantaged regions. The role of the region is crucial in consequence of the regionally specific physical, social and economic factors which influence the severity of impacts as well as responsibilities of the region in providing utilities, emergency services and general disaster risk management.

Climatic impact to territorial development is likely to deepen already existing regional inequalities and produce a significant challenge to progress for competitiveness and general Cohesion Policy, especially with respect to the solidarity principle with respect to most disadvantaged regions. This demands that more attention be paid to how Cohesion Policy will address this challenge and how this combines with effects of existing demographic changes. The project estimates that this could expand the wealth gap in areas where greater change is expected. Attention is additionally needed for the peripheral regions that face additional challenges due to rising energy costs and substantial commuting. Policy should also

consider what is termed ‘carbon leakage’ where high emitter industries avoid costs imposed by one region by relocating to another. It is suggested that, in order to balance territorial development, climate change issues must be integrated within rural development policy. Another important consideration is the potential development opportunity for regions which rely heavily on seasonally dependent sectors including forestry, agriculture, and especially tourism. These regions face challenges especially at the local level in terms of EU policy implementation.

Through observations from discussion within the 2011 EPSON Internal Seminar, it is revealed that there are some additional challenges to implementing the Europe 2020 Strategy which must be addressed. Discussion greatly emphasized that there exists a need for flexibility in translation of objectives and targets especially at local levels because targets in their current form are unrealistic or undesirable for some regions (e.g. property rights for pre-existing settlement). Further, priorities need to be set at the regional level in order to ensure successful climate change strategy implementation especially with respect to territorial development. According to representatives of the Polish Presidency, this particular Presidency has stressed the importance of the role of spatial planning and the need for spatially specific strategies as well as the need for more local input in strategy development. This sentiment is echoed in the emphasis placed on analysis of the spatial, or place-based, context within the ESPON Climate project and is seen as an important component toward achieving the 2020 Strategy goals and implementation of current Cohesion Policy.

3. Conclusions

A number of observations, estimations and recommendations have been produced as a result of the ESPON Climate project analysis. These products stress that implementation of strategies must encourage regional and more local level involvement and multi-level governance for effective implementation. They further emphasise that the current trends indicated demonstrate a path for European regions which is contradictory to the goals of territorial cohesion and that taking preventative and precautionary actions now save substantial future costs. The analyses and understanding produced from the ESPON Climate and like projects assists in creation of tailor-made strategies which will be crucial in overcoming present and future challenges to territorial cohesion and contributes in the efforts toward harmonious development of the European regions.

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THE EVOLUTION OF FAIRS, HOW FAIRGROUND DEVELOPMENT REFLECTS HISTORICAL PLANNING DISCOURSES

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Abstract

Fairs have a very long tradition within the cities of Western Europe. Medieval markets, World expo sites, early industrial facilities, venues constructed after World War Two and modern state of the art convention centers all take up a specific role in the city. By opposing a traditional and a modern discourse in urban planning, this paper argues that through the course of fair development, these venues have shifted more and more towards the modernist discourse. This has resulted in large efficient venues but has decreased direct relationships with their surroundings. The paper ends with the discussion of a recent and partial reversal of this trend and relates this development to broader shifts in the orientation of urban planning.

1. Introduction

Over the past two decades, many cities have invested in their exhibition centers. Some cities renovated their old centers that were constructed in a previous exhibition center boom in the years after the Second World War, others have built new centers at regional subcenters. The amount of newly constructed and extended exhibition centers is extraordinary and unprecedented (Fenich, 1992; Kay, 2005). Between 2000 and 2005 the number of square meter exhibition surface worldwide had grown with 40% (Wallace, 2007). This sparks an interest in the historical development of these sites and in what this tells us about current development. When we look at the longer lines of fair development in Western Europe, we see that there have been previous waves of exhibition center development in the second half of the 19th century, the 1920s and directly following World War Two (Vermeulen, 2011). This paper describes these periods of development and also places them in the light of an ever strengthening dominance of modernist values, striving for efficiency through enlargement of scale and isolation from other functions. It is argued that this is emblematic for the overall development of cities. The paper ends, however, by discussing what can be argued to be a revival of traditional urban values of diversity and small scale in urban planning. It is suggested that recent divergence in exhibition center development strategies shows on the one hand a continuing of the modernist logic and on the other hand this revival of traditional urban values.

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To support these arguments, illustrations are given from the development history of different fairs around Europe, most notably Amsterdam, Frankfurt, Munich and Vienna. The word fair is used, even though it is in some contexts a little outdated, to indicate what has at several moments in time and place been also called expo, exposition center, exhibition center or convention center. A fairground is the broader ensemble, also encompassing adjacent outdoor exhibition terrains and complementary infrastructure like parking lots and free standing restaurants and theatres. First, two ideal typical urbanist models will be introduced, thereafter the development of fairs in different time periods will be described. The article will end with a discussion of current developments.

2. The traditional and the modern city

Before planners took over the control of the development of the city, cities developed organically. This rendered functionally very mixed neighborhoods where working, living, trade and cultural activities were spatially very close. The central squares of medieval towns where trade, religion and government were represented are emblematic for this diversity. All these combined activities ensured close relations between different activities but also produced inefficiencies, mutual nuisance and congestion. With planning and modernization came the separation of functions. As the footprint of different activities became larger and markets demanded efficiency, each function was moved to its own particular location, often to the borders between city and countryside. This functionalist logic was especially dominant in the post World War II period when specific areas for working and living were designed and developed. This period produced a massive amount of monofunctional districts and buildings. Markets were replaced by food centers, town halls by government centers, urban shopping streets by peripheral shopping malls and university campuses by university complexes and, later, technology parks. Relations with other functions vanished as these autarkic complexes housed everything that was needed for an efficient fulfillment of their tasks.

Modernist development went at the expense of the diversity and livability of urban centers. With many functions moving out, they were deprived of their diversity and functional separation, resulting in the absence of functional relations. Especially US cities were hollowed out by these processes and found themselves during the 1960s, ‘70s and ‘80s in a downward spiral (Frieden and Sagalyn, 1991). As fewer people had business in the center, this center became less attractive for business to settle. For functions traditionally enmeshed in urban centers, people now went to dedicated locations where their sectoral needs were efficiently answered.

There has always been a counter current to these developments, most famously represented by Jane Jacobs in her – scholarly (1961) and activist- work. This view on city development adheres to many of the traditional traits of urban development. They propose gradual development and transformation and, most importantly, a diversity and mix of functions. Illustrative for the influence of this strand of thought is the attention for (new) urbanity, the return of many cultural functions and small businesses to city centers and the preference of a growing part of residents for urban environments, reflected in increasing rents and property values.

Francoise Choay (1965) has termed these two different ways of urban development as cultural (culturaliste) and progressive (progressiste), we will here use the terms traditional and modern. They can be opposed and seen as ideal types for the analysis of urban development. Where modern development advocates separation, disintegration, efficiency and scale; traditional development advocates functional mix, small scale and relations.
This paper will use these two ideal types in order to typify the historical development of fairs in Western Europe. They have always largely followed the dominant discourse as they moved from very traditional to structures that can be termed very modern. At this moment, they can be argued to be at a crossroad where we see diverging development with some exhibition centers opting for a continuation of the modernistic pattern and others for more traditional values.

3. The medieval city

The first fairs originated at strong centers of production or at crossroads of international trade routes. Cities like Leipzig, Lyons and Frankfurt benefitted greatly from their central location within Europe. As centers of production shifted, so shifted the dominance of fairs within Europe. Whereas in the twelfth till fifteenth century the Flanders and Champagne fairs were dominant, this shifted in the 16th century to Frankfurt and later to Leipzig (Allix, 1922).
The first of these fairs were extensions of local markets that were held at the central squares of medieval towns. As markets became larger and more prestigious, soon arcades and covered passageways were constructed to prevent for rain and snow. Such a central location also favored local businesses, especially guest houses and inns. Not seldom, local commerce was supported by decree. In medieval Munich, a center of the salt trade, merchants had to stay at least 24 hours in the city (Schafer, 2005). In Munich, the location of the fair was the central Marienplatz, which was also the site for festivities, government and jurisdiction. The markets were held at religious holidays, thereby integrating them with religious life of the city. This integration also serves as the etymological origin for the words fair (English), Messe (German), Fiera (Italian) Feria (Spanish), which all mean religious festival.
Only at the beginning of the 19th century, the Munich fair had grown to such an extent that it could not be housed at the central square anymore. Different sites were allocated for different goods to be marketed and often some kinds of halls or stands were erected (Schäfer, 2005). The first signs of functional separation became visible, even though integration of the different sectoral fairs with their surroundings and city life was still largely in place.

4. World fairs and exhibitions

By the mid 19th century the phenomenon of the international exhibition rose in importance. The immense World Expo's that followed the 1851 World Fair in London are of course the most pressing examples but also many thematic and regional exhibitions were held (Mattie, 1998). These events marked a shift in the sense that they were no longer focused on economic exchange but rather on display and showing what mankind was capable of. This was also reflected in the venues where these events were held. Contrary to the market-like settings of earlier

exhibitions, architecturally impressive facilities were erected at international exhibitions, exemplified by the appealing and prestigious Crystal Palace of the 1851 London World Fair. Many cities followed with similar facilities like the Paleis voor Volksvlijt (Amsterdam, 1864), the Glaspalast (Munich, 1854) and the Rotunde (Vienna, 1873). The construction of new facilities and the mere size of the events often required a location outside of the city. Although the terrains were often found adjacent to the city, this provided a first stage of disintegration between the city and the fair. Nevertheless, this connection was still very apparent. Local residents visited the fairs and also side events like carnivals that were accompanying them (Bennett, 1994).

This combination was more permanently realized in cities like Munich and Vienna. In Vienna, the legacy of the 1873 World Fair had resulted in an amusement park and exhibition facilities at the Prater, which were after the fair conserved and extended (O'Brien, 1981). In Munich a 'Vergnugungs- und Ausstellungspark' was realized by the city in 1904, facilitating large exhibitions as well as a leisure environment for residents (Lauterbach, 1984). In these days, the combination between cultural consumption and exhibitions was still very common (Bennett, 1994). In Frankfurt, the Festhalle was constructed in 1909, providing a space for concerts, exhibitions and other events. Till today, this building serves as a central venue in Frankfurt and an important place for its residents (Bauer, 2009).

With early industrialization in the first half of the 20th century, the exhibition space at these fairgrounds was extended. Gradually, the architecture of these facilities became more sober and functional. As these additions served predominately to facilitate the enlargement of exhibitions, they also had a more monofunctional use.

In the 1920s, cities like Amsterdam (1922) and Milan (1923) continued this development in their new exhibition facilities (Heijdra, 1995). Those were much more functional and efficient than the earlier generation that was developed two decades earlier in Vienna, Frankfurt and Munich. They merely served the display of goods, produced by the emerging industrial sectors of the city. There was also no surrounding amusement park as the focus shifted towards mere exhibiting. This more sober layout was also inspired by the economic crisis that was hitting the world during the 1920s. Moreover, these exhibition centers were no longer developed by the municipalities themselves but by industrial sectors. The RAI exhibition center in Amsterdam was developed by the bicycle industry of the Netherlands, in its aim to concentrate dispersed exhibitions in a single time and place. As they had developed their own venue for this purpose, they soon started to sublet it to other organizations (De Jong, 1986; 1982).

Again, these new facilities were realized at the border of the then-existing city. With a physical separation from the city and a separation between cultural consumption and display and exchange, these facilities were again more functional than their predecessors.

5. The functional city

World War Two marks the further modernization of exhibition facilities in Europe. During the war, many facilities had been ceased for military purposes and many facilities, especially in central Europe had been damaged by air raids and other acts

of warfare. The exhibition centers of Frankfurt, Milan, Munich and Vienna were all to a considerable extent destroyed. Although exhibition centers were certainly not the only aspects of the city that needed attention after the war, all cities decided that their exhibition centers needed to be rebuilt. Especially in German cities, the reconstruction of the fair was seen as an important impetus for economic recovery. Although Hannover is the most apparent example of this strategy, it hosted already in 1947 an export fair for over 730.000 people in a 30.000 m2 facility, also other cities like Frankfurt, Munich and Cologne followed pretty soon (Möller, 1989).

They used the remnants and old sites of the pre-war facilities, initially by constructing temporary facilities, but later also for more permanent structures. Economic recovery led to an increasing interest in trade fairs through the 1950s and 1960s, which required again larger halls. These new facilities consumed most of the park-like environments that had characterized pre-war fairgrounds. Moreover, as industrial products like cars, building equipment and agricultural machinery required larger halls than the smaller pre-war manufactures, individual halls also increased in size (Kölbl, 1984). Functionality and efficiency replaced aesthetics and diversity. In Frankfurt, the terrains around the restored Festhalle were fenced-off to prevent people from sneaking in.

Although the extension of the city around the exhibition centers of Frankfurt and Munich made them, at least geographically, more embedded within the city, they were functionally segregated. In Amsterdam, this segregation was also geographical as the fair was again moved to the border of the city in 1961. The halls constructed here were also considerably larger than the ones at the central city location (De Jong, 1968; 1982).

The processes of enlargement and segregation can be seen as mutually reinforcing. First the growth of exhibitions required larger halls which in some situations led to the need for a new location, often out of town. Second, these larger events also produced larger crowds which produced more noise and traffic. Especially the busses, cars and taxis needed to transport visitors were in many cities seen as nuisance by surrounding residents. This, again, led to all sorts of measures to alleviate or prevent these side effects, which often led to increased separation. New parking lots were developed to prevent visitors from parking in residential areas. Often, residential streets were closed off for visitors during event days. Loading docks were covered to mitigate noise from constructing and deconstructing exhibitions. Highway exits and connections routing to public transport stops were made more efficient to separate visor flows from residents. Moreover, first the nationalization and then internationalization of fairs made that visitors came to an increasing extent out of town and, consequently, that local residents frequented their home-fairs less often. Fairs turned their back to the surrounding neighborhoods.

The continued enlargement of fairs and fairgrounds has led to a situation in the early 1980s where most fairs are now conceived as segregated and underused parts of the city where normal residents hardly ever go. The extensive use of the fairgrounds, often taking up large surfaces at relatively central locations, has led to questions of the legitimacy of this use in some cities. Neighboring residents conceive negative effects related to parking, traffic and noise over positive effects on the urban

economy. In both Amsterdam and Munich this has posed serious limitations to the extension of fairgrounds.

6. The polycentric city

It is therefore not surprising that many cities have considered the relocation of their fairs towards the urban periphery. During the 1980s and 1990s, the periphery of European metropolises has developed rapidly into an attractive environment for economic activity (Phelps and Parsons, 2003; Keil and Ronnenberger, 1994). The relocation of exhibition centers in, amongst others, Munich, Milan, Madrid and Stuttgart, has been facilitated and has strengthened this development (Jesse, 1998). New fairs are used to instigate regional sub-centers. Also the newest generation of World Exhibitions is used for this purpose as cities do not have inner city locations available of the size needed for the most current events. In Munich, a new fairground was constructed for the National Garden Exhibition of 2005. The old fairground had faced problems with extension and neighborhood nuisance since the 1970s. In Milan a new fairground opened in 2005 at a former oil refinery between the city and the airport.

This move away from the city center signifies the definitive cut between the exhibition center and other urban functions. Where modernization had already cut functional ties, relocation also separated city and fair geographically. Thereby, most fairs have become truly international places, only connected to their host city by their name, history and some spill-over effects to the urban economy. These large facilities have several in house restaurants, conference facilities and in many cases also hotels. Dedicated high speed rail stations, highway exits and convenient connections with the airport ensure accessibility and prevent the mixing of visitor flows with conventioneers. The monofunctionality of the complexes ensures that nothing different from exhibitions and conventions takes place there. This has left them far from the situation of the medieval market or the international exhibition when fairs were hallmarks on the urban calendar.

7. Back to the city.

Just when modernization seemed to have reached its final stage, consumerism and cultural economy have sparked new interest in the city (see for example Florida, 2002; Zukin, 2010). In recent years, urban centers have gained a new attractiveness and reinvigorated themselves from the derelict places they were during the 1970s and 1980s (Law, 1992). To this testify new waterfront developments (Judd, 1999) and entertainment districts (Sagalyn, 2003). These developments do not thrive on efficiency, large scale and separation but rather on the opposite: functional diversity and small-scale. Part of the revival of urban centers are, especially in Anglo-Saxon countries so-called convention centers, smaller and compact versions of exhibition centers and fairs. Hong Kong, Vancouver, Liverpool and Boston are amongst the cities that have constructed such convention centers in an attempt to add a different function and use to their waterfronts. Cities that have not removed their centers from their urban locations also cease on this opportunity. Frankfurt and Amsterdam are investing on their inner city locations. Primary reason not to move to the periphery is the synergy with urban amenities and other functions. Traditionalist urban views are

taken in consideration again and now form a serious alternative to modernist strategies.

8. Conclusion and discussion

Fairs in Western Europe started out as very traditional, diverse functions, enmeshed in urban life that developed more and more into modernist, functional facilities. Throughout the years they have increased in scale and decreased in integration with the surrounding city. Since World War Two, the fair in Amsterdam has increased almost three times in size, Munich more than four and Frankfurt almost five and a half times. In this regard, they can be argued to represent a broader shift in urban planning towards modernist principles and organization. In recent years, however, both fairs and urban planning in general is attributing renewed value to traditional urban values. This has resulted in divergent patterns of fair development with on the one hand, large scale, efficient peripheral venues and on the other hand centrally located facilities, striving for added value through a relationship with the city.

Hence, current exhibition center development reflects current ambivalence in planning where the modern and traditional discourse exist side by side. Many cities are trying to get the best of both worlds as they concomitantly strengthen and diversify their historic cores as well as develop peripheral nodes of activity. In the case of a single entity like a fair, such a balance is less easily found. Nevertheless, some cities attempt to offer both efficiency and urbanity in multiple facilities. In Paris, several central and peripheral facilities have united in a single organization offering different levels of urbanity and efficiency. In Milan, a small part of the central exhibition center was conserved as a new integrated convention and exhibition center was build outside the city.

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FLOODINGS AND SOCIAL VULNERABILITY: THEIR SPACIAL EQUIVALENCE IN THE CITY OF CURITIBA, BRAZIL

Beatriz Hummell Clovis Ultramari

ABSTRACT
This is a theoretical discussion on social vulnerability and on the construction of vulnerability indexes. Empirical exercise takes place in the city of Curitiba, Southern Brazil. Article is based on both conceptual approaches revealing complexity of such topic as well as on empirical demands to establish priorities in terms of risk reduction action facing natural adverse events and distribution of resources in post-disaster recovery. Urban context is that of Brazilian cities, revealing spatial inequalities in the way inhabitants build, use, and transform urban compartments. Research presented here can be contextualized in a scenario where adverse phenomena increasingly influence the elaboration of urban public policies; its main target is to contribute to the identification of parameters to channel public resources in preparedness actions facing adverse situations.

KEY WORDS
Social Vulnerability; Natural Hazards; Vulnerability Index; City of Curitiba.

1. FOREWORD

Natural hazards represent an increasing threat to populations in all parts of the world. Historical statistics show that, since the 1950s, the number of these hazards has increased significantly (EMDAT, 2011; SWISS RE, 2011). Natural hazards may occur regardless of social stratification, and their impacts affect differently among these very same specificities, enabling to increase or diminish damages and their temporalities. Empirical and scientific observations confirm that lower income levels of the population often are repeatedly affected by the recurrent hazards, which leads to the necessary addition of social and economic parameters on the vulnerability concept. It means that similar exposures to natural hazards may generate different consequences according to social parameters. Again, we juxtapose Hewitt´s (1997) more restricted view of social vulnerability to that of sustainability restricted view of Blaikie et al (1994). By adding the complex social layers to an already wide concept such as Beck's (1992, 2006) risk society, vulnerability acts as a result of contemporary social development and discrepancies in the distribution of the outputs of this very same development. This article is based on such conceptual bias, stressing a close relation between impacts caused by natural accidents and social characteristics of those who are submitted to

them. Because of the fact that social vulnerability may be understood as a “dormant phenomenon in suspended animation till a calamity occurs,” it is more easily related to risk management situations and hardly taken as a pre-existing condition that shapes suffering and recovery ability. Case study presented here is carried out by the authors in the city of Curitiba, located in the southern region of Brazil, with 2 million people and known because of its urban management experiences and a better quality of urban life if compared with country´s average but still with deep social discrepancies. Methodology adopted in this case study overlays the most affected areas by natural hazards to the spatialization of social-economic indicators of the entire population. This methodology is pragmatically and necessarily simple to be developed based on the data available and to pedagogically and clearly distinguish a city´s district regarding their vulnerability index. It also stresses the importance of spatializing public policies, an approach rarely seen even in cities marked by social and environmental compartmental discrepancies. Longer periods of analysis would certainly provide more solid results; however, the intended time frame of 10 years had to be shortened because of data unavailability and different methodologies used to collect them. Thus, the time frame considered was limited to 2003-2008. Otherwise, this period provides rich information on the topic discussed here because it may be particularized by the occurrence of intense adverse natural phenomena in the city. Geographical scope of the research refers to the entire territory of the city (430, 9 sq. km) according to its 75 districts that represent not only administrative units but also specific territories with social and economic specificities.

2. THE CONTEXT OF ADVERSITIES

In the last 100 years, an increase in the number of natural hazard events has been noticed throughout the world. According to The International Emergency Disasters Database, the number of natural hazards in the last decades increased faster if compared with the first decades of the 1900s (EM-DAT, 2009). Other studies, developed according to different methodologies, also have stressed similar concerns. Data showing and highlighting the increase of disasters is, in fact, recurrent in the scientific production that discusses contemporary social and urban problems. The United Nations Development Programme (UNDP) states that, in the last 25 years, not only the number of reported natural disasters but also their impacts on human and economic development worldwide have increased, reducing gains obtained during a period of relatively economic success. “It is troubling that disaster risk and impacts have been increasing during a period of global economic growth” (UNDP, 2004, p.11). Similarly, Munich Re Group (2003) data show that the economic losses related to disasters also have increased since the 1950s.

Rampant impacts of natural disasters on human and economic indicators call for a combined and complex action in terms of prevention, risk reduction, emergency procedures, and reconstruction practices. They also call for a solid proposal of financial and economic sustainability for the communities involved. Globalization and regional intricacy have certainly multiplied solidarity action but, reversely, also have caused impact on communities and countries that were not primarily submitted to the natural phenomenon.

According to Nunes and Kobiyama (2006), the increase of reported disasters is caused by a number of factors, such as the population growth, social and territorial segregation, accumulated resources in danger areas, progress in communication media, and global changes. This phenomenon also can be related to the global warming process and climatic changes (IPCC, 2007). If causes are to be detected in a myriad of typologies, current scientific production seems to focus its main concern on the social factor, which is considered decisive to understand natural hazard impacts.

Yet considering the complexity involving the increasing number of accidents and the increasing impacts they impose, this paper concerns the ability of local power or cities to adopt reduction risk procedures. Indeed, some authors quote the cities' occupation dynamics and urban growth as important facts to understand the social systems and the social and environmental vulnerability related to natural hazards (Santos, 1996; Rolnik, 1997; Giddens, 2000; Hogan et al 2000; Kasperson & Dow, 2001; Mattedi & Butzke, 2001; Carvalho, 2006; Maricato, 2006; and Marandola Jr. & Hogan, 2006).

In poor countries, the intense and fast occupation of the urban territory, especially in the 1970s – 1990s, was caused by many facts such as a) mechanization of rural production procedures resulting in migration of countryside populations to cities and b) generalized crisis in the production and consumption systems with impressive layoffs and no generation of new compensatory job posts.

In fact, the expansion of Brazilian cities is basically characterized by both an impressive official division of rural areas into urban lots, reserved to those who can afford this product, an even more impressive production of irregular or illegal division of land properties or a complex process of squatting environmentally fragile urban compartments. All this forms what Milton Santos (1993) calls spread urbanization: an intricate way of building and transforming cities with fragmentation, peripherization, and dispersion.

The large number of unqualified workers available in urban centers made salaries even cheaper, working conditions precarious, and informal jobs recurrent. Generalized impoverishment pushed low-income families to distant and never ending suburbs. Despite low urban quality of these areas—in most cases, with no basic infrastructure, new comers were not able to afford the cost of the formality desired by the urban technique and imposed by municipal and federal legislations. Resulting settlements mostly characterize the entire city with an inappropriate way of occupying the territory such as riverside strips, with the reduction of essential riparian woods, environmentally protected or fragile areas, and highly descending slope areas with no proper soil engineering correction, among others. At the same time, territory in impoverished cities is improperly occupied; an almost generalized lack of basic services and infrastructures also aggravates urban dwellers´ vulnerability: if occupation occurs in improper ways, municipalities hardly consider the possibility to correct resulting risk situations. In fact, lack of basic services and infrastructure imposes an additional burden to a population already overexposed to natural and social contingencies: nonpaved road system or the lack of rain water drainage network causes or aggravates floods, lack of garbage collection services obliterates existing water and sewage pipes and natural hydrological

flows, and poor sanitary habits in high urban densities lead to alarming public health problems.

Despite recent positive changes in the Brazilian and other countries in Latin America, cities of this continent are still featured by a fast and impoverished urbanization process: "while 136 million poor people lived in LA/C countries in 1980, this number rose to 204 million in 1997. One third of all people in LA/C live in poverty, and 15 percent (90 million people) live in extreme poverty" (Duncan, 2005, p 5). The same author stresses the fact that, according to the International Labour Organization, the unemployment rate in this continent in 1999 was at 9.5 percent, higher than it was even during the worst period of the 1980´s generalized debt crisis.

Two concurrent and connected impacts in the consolidation of the contemporary Brazilian cities can still be identified: those resulting from economic crises and those resulting from a fast urbanization that certainly shaped urban settlements with hard-to-solve problems. Current urban policies in the country recognize social and financial limitations to transform entire cities and have channeled efforts to more pragmatic solutions comprehending acupunctural interventions, legalization of squatted areas, and maintenance of original people in their occupied lots (Ultramari, 2006). If this approach may be considered appropriate mostly because of the grant of legal property rights, it does not fully eliminate the submission of large groups of Brazilian urban population to the immediate impacts of natural accidents.

This occupation dynamics is largely known in large poor compartments of impoverished Brazilian cities. However, if that generalization is still valid, new economic scenarios in regional emerging markets announce new phenomena still left to be understood. Brazil, in the last five years, has embarked in a non-precedent economic recovery with immediate transformation in the way its cities are occupied. Legal land market has, in fact, boomed in Brazilian cities, following the decision of federal and local governments to launch massive low-income housing programs: lower income levels of Brazilian population, who were marginalized, are now part of the consumption market. It certainly increases pressure on the limited stock of land made available by planning guidelines. At the same time, this lack of proper urban land for occupation is now a real problem if we consider the fact that in the case of governmental programs considering the necessary removal of families from risky areas, new houses must be located not far from original areas, services, and job posts: a demand not easily to be accomplished. For the first time in recent Brazilian urban history, limitations for implementing social housing programs concern not only financial restrictions and speculative behaviors but also physical unavailability of proper land. This new situation indicates a problem that has unexpectedly forced national urban planning and management to be more "flexible" in their parameters of proper and safe land. Irony now takes place in the construction and transformation of our cities: if, in the past, they experienced risks being concretized by illegal or informal occupation, at present, this phenomenon may take place because of official determination and technical orientation.

3. NATURAL HAZARDS AND VULNERABILITY

Situation previously described confirms the idea of a wider concept of vulnerability resulting from natural accidents. Certainly, social, community, political, cultural, and economic aspects play decisive roles in its definition side by side to natural phenomena. This is, in fact, a conceptual approach already largely adopted by the scientific milieu and that has been clearly defined by the distinction between the Theory of Disasters and the Theory of Hazards. These theories attest two traditional analytical formats. The first one is mostly aware of geographic aspects, such as dimension, causes, and typologies of natural phenomena. The second one conducts its investigations mostly referring to more socially elaborated analysis to understand adverse natural phenomena. From a limited mono-disciplinary approach, the concept of vulnerability has been driven to a wider understanding, with several sciences playing a distinctive and collaborative role (Thouret & D'Ercole, 1996).

The research presented in this article is related to the Hazards Theory, considering it as its main reference and understanding urban occupation dynamics (presented above) as a fundamental factor to consider lower income levels of the population as the most vulnerable to natural disasters' effects. These populations, usually living in environmentally risk areas and relying on their low incomes, present a limited "response capacity," forcing them to depend on external agents to cope with adversities. Deschamps´ empirical research reinforces the idea that "there's a strict relation between the placement of the lower levels of the population and the areas that have adverse risk factors. The socially vulnerable populations are placed in socially vulnerable areas" (2004, p.104). This is an example of a series of studies that this present research takes part in, all insisting on the assumption that disasters are no longer acts to be understood through the lens of the natural sciences alone or even nature's will.

At this point, we should go back to the dialectics announced by Hewitt´s (1997) and Blaikie et al (1994) and the construction of the concept of social vulnerability. The origins of the concept of vulnerability may, in fact, blur the idea we have of it today. Introduced as a scientific field of research connected to the hazards and disasters phenomena, it still shifts from a more natural to a more social approach. Back in the 1970s, O´Keefe, Westgate et al. (1976) radically proposed to *take the naturalness out of natural disasters, advocating that* socioeconomic factors were the causes for natural disasters; a conclusion taken from an empirical study proving that the larger amount of human losses because of natural accidents is confirmed in the poor countries. Chambers (1989), despite agreeing with the fact that people present specific abilities to cope with exposure to natural adverse phenomena, argues that vulnerability results from both natural and social risk, opening the opportunity to accept that social vulnerability has, in fact, multiple origins in terms of scientific fields, either in social or natural sciences, and so is expected to be presented according to different approaches.

Social factors have a partial implication in the construction of the social vulnerability concept and also depend on an institutional - civil and governmental - framework and its ability to respond to emergency situations. The case study presented here describes a

city with different urban compartments according to their social indicators, with specificities in terms of community ability to react when facing adverse phenomena but with a homogeneous paid attention in terms of governmental public policy in preventive actions. If this combination of factors confirms the complexity of the social vulnerability concept, it allows a more simplified analysis of concentration of low social indicators and the number of natural accidents per district. Case study confirms too that social indicators certainly have a close relation with the compulsory choice lower income classes (have to) take for their settlements. The city of Curitiba, and other capitals in the country, suffered from huge rural-urban migration in the 1970s and 1980s; to the newcomers, improper parcels of urban land were left, both those cheaply and legally traded and those simply squatted. This situation is recognized recurrently among authors who discuss vulnerability in the context of Brazilian cities. Rolnik (2011) perhaps synthesizes these ideas by recalling that

There are ways of intervening in order to improve terrain stability, drain water, slope reinforcements, that are ways of intervening in order to improve safety and management of a certain urban so that even at risk situation deaths are avoided. But the main question is that nobody chooses to live in a risk area because he is dump. People live in a risk area because there is no other option to their income. We are talking about workers whose salary does not allow to buy neither to rent a place to live in a proper area. … There is no point in palliative measures here and there if we do not take decisive action: what are the proper areas, or what are the areas that will be designated to the poorest people? (Translated from the Portuguese).

At this point, we can refer to the pressure and release model as announced by Blaikie et al (1994) as a reformulation of that previously proposed by Turner et al (2003). The model proposed by Turner et al (risk hazard model) understands impact of hazards as a result of the exposure to a hazardous phenomenon and of the sensitivity of a community exposed; however, authors do not make clear what or how impacts of the hazard are amplified or attenuated. The model by Blaikie et al stresses the progression of vulnerability according to the relation between the four main component - three socially constructed and one naturally built: root causes, dynamic pressures, unsafe conditions, and the natural hazard itself. In the case of the city of Curitiba, these four components can be understood as follows. Root causes can be translated into the economic and demographic features of the boroughs in the city, each of them presenting specificities in their average income, unemployment rate, and demographic performance implied in the number of people per family and house density. Dynamic pressures may indicate the migration process observed in the city confirming at least three main inhabitant groups: those who arrived in the turn of the 19^{th} - 20^{th} centuries; those who arrived in the rural urban migration flux of the 1970s and 1980s and still able to afford safe but distant areas of the city or of its metropolitan region; and finally, those who still arrive, with low income, and occupying off-adequate limits of an already large agglomeration. As a rule, these two social components—root causes and dynamic pressures—present a close

relation with the distance we take from central areas: the further we go, the worst social conditions are. This is, in fact, a pattern to be taken as a rule for Brazilian cities, where central areas differ in terms of historical occupation, provision of infrastructure, urbanistic quality, and income from that occupied in the most recent decades, more precisely after the 1970s, when urbanization process boomed. Third, Blaikie et al´s component—unsafe situations—is to be observed mostly in summer time during the rainy season and the resulting floods: illegal settlements along rivers or in areas already considered improper by planning guidelines but still an affordable choice for lower income classes are among the most submitted areas to such adversity. Finally, in terms of the natural hazard itself—the four component, it is important to recall that impermeabilization of urban land in the city resulting from a demographic rate of 1.3% per year and a never seem civil construction sector boom have imposed the elimination of so far large areas of natural permeability.

It seems that models to establish components of a comprehensive concept of vulnerability and indicators to geographically measure impacts of adverse phenomena are under constant criticism and, paradoxically, an object of recurrent practice, both at public policy agencies and scientific production levels. Undoubtedly, despite conceptual limitations of these methodological tools, they remain, or should remain, a reference for public managements concerning the most sensitive groups in emergency situations. In the case study presented here, pragmatism imposed submission to data available: number of occurrences (floods) per district per year and social indicators gathered to summarize a hierarchy of income levels' emergency response ability per district. By adopting such approach, we avoid common criticism to the construction of the concept of vulnerability by adding probably more adequate indicators but with difficulty in their measurements. Besides, the approach adopted here considers the fact that statistics concerning geographical and social concentration of floods in the city of Curitiba are taken as a result of 1. Social structures and processes (either by the lack of necessary infrastructure or by the occupation of environmentally fragile areas), 2. Different responses to recovery according to different socioeconomic profiles (poorest people rely more on immediate public action than those who can afford individualized solutions), and 3. Physical features of the municipal terrain (some areas are more subject to floods than others). As a matter of fact, the case of the city of Curitiba, which could be taken as a parameter for other Brazilian cities, overlaps these three levels of comprehension: unsafe lands are primarily occupied by lower income people, both for historical reasons but mostly because of impositions of segregating practices concerning real estate values. The effort to establish a relation between these levels of comprehension is aligned to what Villágran de León (2006) considers one of the main current topics in the formulation of social vulnerability: use of models to explain it and the creation of indicators to express it over time and across spaces.

Another conceptual reference adopted in the case study presented below concerns the limited number of indicators used to determine the most and the least affected districts by adverse natural phenomena and the most and the least prepared districts to respond positively to their impacts. It contradicts other analyses such as that developed by

Yeletaysi, Sarp et al (2009), among many other authors, who works with a broader set of indicators to identify poverty. In our case, there is an assumption, based on empirical experience, where it is possible to work with combined indicators such as that used by the municipality of Curitiba to express a social condition or, what interests the most here, a hierarchy among districts of social fragility facing disasters. By proceeding this way, we avoid criticism as that recalled by Villégran de Léon (2006) who attests an intrinsic difficulty in quantifying vulnerability.

What is important for the construction of a socially sensitive public policy is the recognition that certain areas of a city are more likely to suffer from the very same adverse event than others. This results not only from different physical features but also from differences concerning its population groups. By doing so, this discussion enlarges the comprehension of Beck´s (1992) idea of risk society or even his own concept of risk: society is not only part of the "world's uncontrollability" but also capable of disaster preparedness, mitigation, reconstruction and, most important, understanding who deserves priority in actions depending on limited financial resources.

The case of the city of Curitiba reinforces these ideas and confirms the hypothesis that the higher impacts of disasters and the lowest social and economic features are expectedly and almost precisely overlaid. This article focuses on the determination of compartments that are socially and spatially vulnerable. The first compartment stresses the identification of human settlements with lower social and economic indicators. The second one focuses on where natural disasters are more likely to take place, according to physical and natural aspects. The combination of social and physical aspects reveals a conceptual concern that disasters are hard to be named either natural or human but certainly carries a combination of both (Baker, 1976; Tobin and Montz, 1997).

The understanding that natural hazards cannot be described as consequences of independent natural or human factors but, most likely, as a result of their complex and constant interaction is on the basis of what is described below.

4. ANALYSIS AND RESULTS

The method used in the case study is primarily based on the analysis of official data produced by public agencies. According to Brazilian legislation and local institutional practices, incidence of accidents must be reported, properly classified, and publicized. Despite this organizational process of collecting and making information available, as well as an increase in the number of accidents and in the number of impacted areas and people, they are not yet easily spatially understood. It means that civil defense agencies or urban management processes still resent planning tools to establish priorities in terms of city compartments and their vulnerability specificities. This absence of spatial comprehension is implied not only in a blurred and generalized view of possible adverse phenomena and their real impacts but also in difficulties to later determine the kind of action needed to each one of the urban compartments of the city. In fact, most of the Brazilian municipalities still lack spatialization of accidents data in their territories; the city of Curitiba made progress in presenting these data according to its districts; however, microspatialization is still in demand.

In terms of the variables used in the research, two are more representative: a) natural disasters (number of registered disasters between 2004 and 2008), collected by the City´s Civil Defence Agency, classified by year and type of occurrence and gathered by the city´s districts; and b) population's quality of life index (PQLI) given in percentage and synthesizing a series of education, health, housing, safety, and transport indicators. This variable was collected at the Institute of Research and Urban Planning of Curitiba (IPPUC) and refers to the year 2003.

In both cases, data used were the most updated at the moment of the research. Complementary and updated analysis made for selected compartments of the city confirm positive changes in terms of the quality of life index. However, it also confirms the persistence of spatial patterns differentiating districts and confirming a discrepancy between those with high PQLI from those with generalized critical socioeconomic indicators.

Data concerning accidents are normally classified in natural, anthropic, and combined. Despite the fact that such distinction is very subtle in urban areas and more and more difficult to be established, official data are still organized according to these three typologies. In the case of the present research, the combination of anthropic factors such as the location of urban settlements, techniques of civil construction, density categories, provision of infrastructures, and impermeabilization patterns intensely shape and graduate impacts imposed by the most recurrent natural adverse phenomenon observed in the city: intermittent floods in selected areas during the three months' summer time. Discussion presented here is limited to this kind of accident (floods) and confirms the inaccuracy in classifying accidents according to independent causes.

To make a joint analysis of the variables (recurrence of natural accidents and PQLI), they were both classified in four categories and were given numerical values. In both cases, the category with the lowest value (1) represents the worst situation; the category with the highest value (4) represents the best situation.

Table 1: Classification and Numerical Value of the Variables

Numerical Value given to the Registered number of Disasters and to the PQLI	PQLI Classification	No. of accidents Classification
1	Very Bad	Highly above average
2	Bad	Above average
3	Good	Below average
4	Very Good	Highly below average

Additionally, the analysis of the areas were floods are more recurrently observed reveals that relation between these phenomena and the density of water bodies is not equivalent; in fact, their spatial differences stress the idea that natural events may constitute a risk but not necessarily an accident: a paradoxical discrepancy that confirms conceptual differences between risks, accidents, and vulnerability.

Considering the fact that Curitiba's territory is fully occupied, although with different densities, spatial differences between indicators used in the present research reinforce the well-known idea that not all adverse natural events necessarily turn into accidents: the two North-South corridors (along the two main rivers crossing the city of Curitiba), for example, that concentrate the largest areas under historical risk of floods, do not correspond to the main areas of accidents: districts in the north, around downtown area, and those in the very south.

By analyzing the information of the two variables simultaneously according to the same scale of 1 to 4, it was possible to create another scale, now with a combined meaning but again from 1 to 4. As a result, the highest number (8) represents the best situation in both (lowest number of accidents and the best socioeconomic situation), and the lowest number (2) represents the worst situation in both variables (similarly, the highest number of accidents and the lowest PQLI). This combination made possible the creation of the so-called Vulnerability Index to be used in analytical spacialization.

After this classification, it was possible to visualize a spacialization that gathers both variables simultaneously (registered number of disasters and quality of life index) and then to establish the vulnerability index per boroughs. Such spacialization confirms that a) neighboring boroughs perform similar results, and b) distinction between central and peripheral boroughs is clearly observed.

Districts presenting a score of 8 are concentrated in the central regions (downtown areas); districts with a score of 7 are not as spatially concentrated as those with score 8 but are generally located in the surroundings of downtown area. These factors can be explained by the history of this part of the city territory, which has been occupied mainly by higher socioeconomic level populations. Safer areas were first occupied, leaving those considered under risk to migrants arriving in the 1970´s demographic boom or simply to those who could not afford overpriced urban land. It is important to stress that areas in the core territory of the city were not "made" safe by infrastructure interventions; quite the contrary, they present almost no limitations in terms of unstable terrains, slopes, or high concentration of river channels. Mostly recent occupied areas either depend on such infrastructure implemented by local government or are simply left to be occupied under risk.

Districts with scores of 3, 4, 5, and 6 or classified as "Vulnerable" and "Most Vulnerable" do not have an occupation pattern in the municipal territory.

Despite the already mentioned facts, by drawing an east-west line along the center of the municipal territory, it would be possible to observe a concentration of the higher scored districts ("least vulnerable" ones) in the upper part of the map, whereas the lower numbered ones ("vulnerable" and "most vulnerable") are concentrated in the southern areas of the city. Again, this fact may be related to the history of the territory's occupation: selection of safer and infrastructured areas by those who first settled (a long and slow process of urbanization till late 1960s) among an occupation that would sprawl to distant, improper, and metropolitan terrains (an appalling process starting in the early 1970s).

Final analysis reveals that 29 districts or 40% of the total (least vulnerable ones or adding the ones with results 7 and 8) have the best situation in both variables. Eleven districts, or 15% of the total (most vulnerable ones or adding the ones with results 3 and 4), have the worst situation in both variables.

All this facts allow the conclusion that in a great number of cases, the districts classified as having higher PQLI levels (good and very good) are related to lower registered numbers of disasters (below average and highly below average). On the other hand, the districts classified as having lower PQLI levels (very bad and bad) are related to higher registered number of disasters (highly above average and above average).

Considering these observations, it is possible to understand that the populations performing lower PQLI are more vulnerable to natural hazards than those performing higher PQLI. This information allows the return to the working hypothesis announced earlier in this article. This being confirmed was so reiterated in the final results of the research that authors now believe it would be only named assumption And, at the same time, scientific approach recurrently observed in terms of validating the priority given to social concerns in the discussion of adverse phenomena.

5. FINAL REMARKS

A conceptual review on social vulnerability and efforts to measure it are discussed in this paper; the case study presented here submits itself to explicit methodological limitations for apprehending social realities in abstract representations such as numerical indicators and maps. Despite the confirmed possibility to rely on the vulnerability index as a parameter for the development of public policies in the city of Curitiba, it leaves room for controversies concerning variables to be considered and the way they are overlaid and finally analyzed. Despite its significance for a specific urban planning, it reinforces unavoidable generalizations of specific situations (in this case, made at the district level), recalls the multitude of variables influencing final results, demonstrates recurrent ideological approaches in the selection of parameters to be taken into consideration, and confirms a submission of the researcher or policy maker to data availability. If this complex situation leads to reconsider the search of precise hierarchical definitions of spatial compartments in terms of risks, the extreme situations, those that interest us most (both very good and most critical) are believed to be detected in a more accurate way. Such contribution, made possible by the definition of a vulnerability index, also may serve as an instrument of public policies concerning different needed governmental or community actions facing risk reduction plans or emergency procedures. Despite generalizations because of the geographic scale adopted (boroughs), it may constitute a primary planning tool. Otherwise, much room is left to the investigation of particularities at a more intra-urban scale, considering existing differences inside the same district.

Results presented in this research were not expected to point out other important facts related to the concept of vulnerability, such as different capacities of the population´s territories to reduce risks and to respond to disasters according to their institutional and local organizations. Therefore, there is an assumption that it is implicit in socioeconomic

profiles described in the synthesis brought by the population´s quality of life indicator (PQLI). Constraints and distinguished abilities to establish either formal or informal civil organizations to present demands are to be differently detected in territories classified either as the most or as the least vulnerable ones. Social scenario worked in this research certainly indicates the existence of an overlay of unequal access to urban services and infrastructure (education, health, housing, safety, and transport), unequal conditions to respond to emergency situations, and unequal conditions to postulate for structural changes. If this triple overlay is somewhat a synthesis of different vulnerabilities, it still recognizes the existence of a city far from the dual visualization proposed by Castells (1989) or Mollenkopf & Castells (1991) but closer to a more encompassing one, such as that formulated by Marcuse´s quarters (1993). From a dual city of rich and poor, overlays worked in this research indicate an urban occupation characterized much more by a profusion of situations, agents, and abilities to cope with adverse natural phenomena.

If the assumption that different socioeconomic levels are affected differently by natural hazards is largely taken into consideration at conceptual discussion, urban management practices are hardly familiarized with this particularities in their own territories. It draws the attention to the fact that preventive actions are not only needed but also must adopt a profound fractal vision of the city.

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Codes of research ethics : what are they useful for; and what are their limitations?

Francesco Lo Piccolo and Huw Thomas

Introduction

This paper will discuss the nature, usefulness and limitations of codes of research ethics. An awareness of the need for ethical sensitivity has been an accepted part of research practice in the humanities and social science for at least the last sixty years (Small, 2001). In recent decades the concern has taken a distinctive form, namely an increasingly prominent role being ascribed to procedural safeguards for ethical behaviour. Formal ethical approval for research proposals is now a standard requirement in virtually all disciplines in universities of the Global 'North'. Major funders of research in humanities and social sciences – for example, the Research Councils in the case of the UK – ask specifically that research they fund have appropriate ethical approval. The concern has gradually cascaded down the academic hierarchy, so that by now it appears to be commonplace in planning schools in the UK and elsewhere to require ethical approval of any significant piece of formal research even by undergraduate students[1].

Ethical approvals for research proposals are also required in some of the Southern European university systems, such as those of Portugal and Spain. This can extend to the training of the next generation of researchers. Despite the substantial lack of awareness in PhD programmes which was described by Mello (2009) in reference to many European university systems, in 2011 the Portuguese National Ministry for Education and Science issued a Guideline of Ethical Issues which has to be considered by all applicants; consequently, PhD researchers are asked to complete a questionnaire concerning ethical issues. In Spain, the National Law 14/2011 established (Title I, art. 10) the National Ethical Committee on Research; among its duties and commitments, there is also that of producing a code of ethics. At the local level, as a consequence of the National Law 14/2011, many universities have established ethical committees, issuing ethical protocols and guidelines. Although most of the concerns regard bio-medical and natural sciences research, in both countries some attention is paid to ethical issues arising in social research, in reference to those activities which involve the treatment of personal data or the engagement of children or adults unable to give informed consent.

Italy provides a rather different, but instructive case. In Italy codes of ethics represent a very recent initiative undertaken by universities, and the concern of Italian universities' codes of ethics is on the independence of research on the one hand and on integrity in the staff recruitment procedures on the other (thereby recruiting the right kind of ethical individuals). These concerns reflect the particular political and socio-cultural circumstances of Italy,

[1] This statement is based on personal experiences and anecdotal evidence.

reminding us that in relation to ethical judgement, especially, cultural inflection is inevitable. The focus on the independent responsibility of the researcher, on the other hand, is common to most discussions of ethics, and ethical codes: the implication is that in essence ethical behaviour is an individual accomplishment in an imperfect and impure world.

We previously discussed how most of the debate on research ethics and the principal concern of codes of ethics focus on individual behaviour, tending therefore towards a view of ethics as heroic endeavour (Lo Piccolo and Thomas, 2009). Small (2001, p. 390) highlights that the radical assumption that ethics is "an immediate relation between the individual person and moral values, without the mediation of a social group as a source of either understanding or motivation (…) leave the public dimension of ethics in darkness". We suggested (Lo Piccolo and Thomas, 2008) that ethical sensitivity is developed by researchers as part of a social practice, through communal activity; in order to demonstrate this assumption, we used the notion of social practice, as developed by MacIntyre (1985), which places the individual's acquisition and development of moral perception and judgements within a social context.

Nevertheless, individual responsibility is sill the basis of approach to most ethical issues in planning research (and practice). In fact, in most of the examples discussed in the literature, which regards planning research as well as planning practice, the autobiographical approach is (still) the most common: personal experience, and the ethical dilemmas which were faced, are the base for a more or less (self)reflective interpretation of more general issues. Codes of ethics *for individuals* reinforces this individualistic framing of the ethical landscape of research, including planning research.

Some commentators have drawn a distinction between a procedural approach to research ethics and reliance upon a code of research ethics (Guillemin and Gillam, 2004). The prime example of the former is a requirement to seek formal ethical approval of a research proposal. This approach, it is suggested, attempts to address all potential ethical issues involved in research ahead of time, and checks that the researcher's espoused belief about how s/he will react to such issues is acceptable. The latter, on the other hand, involves drawing up a code which gives advice on good conduct in research, and allowing individuals to interpret the code within the context of their particular research as it progresses. It should be noted that though the code has to be interpreted, its contents – what count as ethical considerations – are laid down within it for the researcher. There is undoubtedly a difference of approach being identified here, but its significance is over-stated. In practice, applications for research ethics approval will often contain a reference to an appropriate code of research ethics, usually one from an academic discipline within which the research proposal is framed. Second, and more importantly, a procedural approach and the reliance on a code share a significant similarity which marks them as very different from the approach to research ethics that once prevailed in planning research. Use of either a code or formal research ethics approval suggests that it is not safe to allow researchers to simply get on with their research project and exercise individual judgement in the field (even after suitable training, which could include a period of supervised research for example). In addition, and related to this focus on anticipating what researchers will encounter, both approaches assume that their framing of the ethical landscape within which the proposed research will take place by codes or approval

procedures is accurate, and will be uncontested by the researcher, even when s/he encounters the day to day realities of the research project. A discussion of the usefulness and limitations of codes of research ethics will therefore identify some considerations which also apply to a procedural approach to regulating researchers' behaviour.

This chapter will begin by discussing why concerns might arise about the ethical conduct of research, and in particular how such concerns are shaped by how research is conceptualised. It then examines the nature of codes of ethics, especially what they might typically contain and hope to achieve. Finally, it considers whether the content of codes of ethics are intelligible outside specific ethical traditions. In each section, the implications of the discussion for the kinds of use researchers can make of codes of ethics are drawn out.

Why regulate research?

Research is a social practice which finds its definition and rationale within a particular way of conducting, and ordering, social relations and institutions more generally –ie a way of organising social life. While curiosity, learning and teaching, and social differences which are at least in part based on some conception of possession of greater or lesser knowledge or understanding may be widespread in human societies, research as the kind of activity conducted in contemporary universities is distinctive of a certain kind of post-Enlightenment society. As Weber knew, science as a vocation becomes possible only when certain political-economic and institutional structures are in place. It is because research has become a particular kind of social practice that it comes to be argued that it requires formal regulation – in which a code, or codes, of research ethics may play apart.

Regulation of a practice can become attractive for many reasons; in the case of academic research a number of these have coincided. From outside a practice, demands for regulation arise when the practice has the capacity to cause widespread and possibly serious harm, and when there is a possibility that those involved in the practice may be so wrapped up in it that they lose their sensitivity to broader value concerns. This is particularly likely when a practice becomes institutionalised and a significant divide – in terms of social identity and outlook – arises between practitioners and others beings and objects which are caught up in the practice. From within the institutionalised practice, on the other hand, the key question will be who undertakes the regulation. It is a mark of the power, and status, of those engaged in a particular practice that they be allowed to regulate themselves, as in the case of some professionalised occupations (Johnson, 1972). Even for practices/occupations which are not entirely self-regulating, having aspects of regulation such as a code of ethics can provide an additional (albeit small) marker of distinctiveness for the practice, as it does with professionalised occupations (Bickenbach and Hendler,1994). Even in professional codes we can find an attitude towards the accountability and legitimation of the social status of a profession (and its members), which is prevailing compared to the aim of regulating the ethical conduct of the members in their professional activities (Moccia, 2011).

We would suggest that it is significant that the rise to prominence of regulation in general, and codes of ethics as part of this, in social science research has coincided in many countries with a number of related phenomena. Prominent among these is the increased emphasis on the importance of research as an activity which defines a university and is also a major source of revenue (Collini, 2012). Secondly, there has been an acceleration of research, with minimal teaching, as a career path – both for established faculty, who may simply relinquish other duties – and for newer faculty, who are recruited as researchers and intend following, if possible, a research career. The research-based PhD has become almost universally required as a qualification/apprenticeship for academic life. Running alongside these developments, social research institutions have continued, perhaps intensified, their roles as authoritative producers of knowledge, particularly for policy development that professes to be based on evidence (Allen and Imrie, 2010; Thomas, 2010). So, universities and research institutes are doing more research, are claiming it is important, and more and more academics are thinking of themselves primarily, or at least in large measure, as researchers. It is in these circumstances that it can seem attractive and appropriate to devise and subscribe to a code of research ethics as part of a tacit professionalising of the researcher's role and practice. It is arguable that Planning still has an insecure place in the Academy, and for such a discipline a clear commitment to ethical self-regulation, including adherence to a code of ethics, can be an important part of the continuous assertion of academic legitimacy. Some arguments are discussed by Stengers (1987) on the process of 'soft' sciences in order to become 'harder' in order to acquire broader recognition. The process of 'hardening' a discipline comes from the need of gaining broader social legitimation and reaching an upper status for its members. Even the establishment of professional codes of ethics is a step towards this direction.

In large measure, the practice and understanding of research in contemporary universities is modelled on the experimental sciences (for example, if the underlying rationales for research assessment exercises are ever persuasive then it is in relation to these disciplines (Collini, 2012)). Yet, the metaphysical underpinning of experimental science, its ontology and epistemology, is only one way of seeking an understanding of the world. Within social science, positivism, which is an approach framed by the same metaphysics as experimental science, is fiercely contested (eg Flyvbjerg, 2001). Values are central to various (different) critiques of positivism within social science. Thus, it is criticised by some for ignoring, and having no resources to address, the value-context within which social scientific problems/issues are framed and pursued (Flyvbjerg, 2001). Others suggest that to make sense of individual and social activity, social science must understand the systems of meaning (and values) within which individuals and groups make sense of the world and generate reasons for acting (Winch, 1958). Conceived in this way, social science and the Humanities might be characterised as activities which seek understanding rather than seek knowledge (Collini, 2012). And undertaking them might sometimes involve feeling one's way into sets of values and ways of life which have ethically questionable dimensions. At the same time, knowledge produced by planning research is influenced by the local power-relations and the hegemonic policy discourse (Thomas, 2010). In many cases (and more often in recent times, due to the position of the contemporary entrepreneurial universities), planning researchers are looking for institutional requests and commitments, with significant ethical implications. Thomas

(2010) has discussed how planning research can be helpful to those who would promote and sustain hegemonic policy discourses and that legitimacy is acquired through claims to a particular kind of rationality and objectivity. In other words, planning research as it is developed in universities – as a product of institutional requests – may have as a result the university's standing as the guardian and constructor of (a supposedly neutral and objective) knowledge, justifying and sustaining any given set of governance arrangements.

One might expect a code of ethics to have something to say about these matters. But as Christians (2000) points out, codes of research ethics developed in the context of positivist, 'value-free', science. This has shaped their form and content. One consequence is that the nature and purpose of research as a practice is usually not alluded to in the codes – it is assumed to be socially beneficial and value-free (as natural science is widely considered to be). The codes focus on the day to day practice of research itself, and within that, the researcher is viewed as detachable (including ethically detachable), at least in principle (and ethically) from that which is being researched.

This is particularly inappropriate for research such as planning research which involves, of necessity, an engagement with the value-saturated world of public policy. For example, if planning is about a dialectical relationship between knowledge and action (Friedmann, 1973, 1987) then those who claim to produce planning knowledge will inevitably be implicated in the moral landscape of practice. As we know, most of the practice requires to face ethical judgements and dilemma; as Kaufman (1993, p. 113) highlights, "much of the behaviour of planners reflects both ethical choices and carries with it ethical consequences. Ethical judgements are involved, sometimes explicitly but more often implicitly, in many planning activities including collecting and analyzing data, forecasting, cost-benefit analysis…". So, if we consider and recognize the pervasive ethical dimensions involved in planning work (Kaufman, 1993), ethics is a relevant, even if not particularly discussed, component of planning research, which mainly derives from the continuous involvement of planning researchers into practice. Although the utilitarian approach implies that the choice of good or ends come from a political process beyond the scope of the planner-as-scientist, which is responsible just of the choice of means (Harper and Stein, 1992), we all know that this division does not occur in reality. Planning practice is inherently political, denying the rhetoric or stereotype as a value-free means-technician who deals with "factual data but avoids the value questions of defining these objectives" (Klosterman, 1978). In those circumstances, good researching is partly defined by sensitivity to politico-ethical implications of the research (Flyvbjerg, 2001).

What do (and could) codes of research ethics contain?

In discussing professional codes of ethics for planning, Taylor (1992) rehearses a distinction which also appears regularly in discussions of research ethics (eg Small, 2001): is a code a set of ethical guidelines which could apply to any occupation, or at least any professional occupation, or does it identify challenges and issues which are particularly pertinent to

particular kinds of activities? The appearance of virtues such as honesty, objectivity and respecting confidentiality (eg Resnik, nd) in research ethics codes illustrates that to a large extent what is being asked of researchers is that they simply be of good character as they go about their work (Thomas, 2009). Yet, it is certainly the case that different kinds of research tend to bring distinctive challenges and dilemmas. The case-studies in Lo Piccolo and Thomas (2009) illustrated ethical challenges which had resonance for researchers into planning, but were likely to have little or no resonance for researchers in experimental science. For example, at the core of Porter's (2009) concerns is exploring the feasibility that a non-indigenous researcher researching the lives and views of indigenous peoples can free herself from the objectifying imperial gaze that has structured (and defined) indigenous/non-indigenous relations over centuries. She is rejecting the research position of the experimental researcher on ethical grounds.

It follows that codes of ethics which is sensitive to the circumstances under which particular occupations or activities are undertaken are likely to be more useful. In the case of research, appropriately different codes will be needed by researchers engaged in activities involving people, other sentient beings, other organisms, or objects, for example. Different codes may also apply to people engaged in activities which can potentially cause widespread harm; and these are just some examples of differences which many would regard as warranting special mention in a code of research ethics. Researchers who wish to avail themselves of guidance from a code need to unearth one that is appropriate for their kind of research, therefore. It should be noted that what counts as a significant difference between types of research is itself an ethical judgement ; so, for a group of people to agree about even the need for, and broad lineaments of, a code, they must already share significant ethical perspectives.

This consideration has a bearing on another of Taylor's points. He argues that central to a code of ethics must be a vision of what the activity (eg planning research) should be, a vision of what MacIntyre might refer to as the characterisation of excellence in that activity[2] .

Such visions are contestable. This is not always obvious because often discussions of research ethics focus on the minutiae of day to day research activity, at its worst reducing the ethical implications of research to a kind of soap-opera of inter-personal relations which happen to take place in the research field. It is certainly the case that inter-personal relations are as important an issue in research ethics as they are in ethics in general, and researchers must be sensitive to factors such as the power-relations bound up in social relation. The research activity itself can create distinctive kinds of social relations which will have their own power-dynamic, and at times one that is questionable (eg Porter, 2009).In addition, those engaging in research, in any capacity, are inevitably embodied and socially located (in terms of gender, or class, for example) as they engage in the research process. As Sayer (2005) has argued persuasively in relation to social class, these characteristics, and their associated hierarchies, can have a moral dimension because they have judgements of personal worth bound up with them.

[2] Hendler (1990), too, notes the significance of ideals of excellence in relation to codes of ethics.

Important as they are, these kinds of issues associated with the conduct of research do not comprehensively define the ethical landscape for the researcher. Flyvbjerg (2001) points out that social research practice is itself enmeshed in webs of power-laden social relations which constitute a particular kind of world with a particular kind of trajectory. The practice of social research will either consolidate or change the world. He argues that the kind of practical knowledge which is required for researching human social life is itself a capacity which will allow the researcher to judge the ethical import of the research being undertaken and to act so as to make the world better. There is no choice in this matter, in that research which is not self-consciously set on improving matters will either be self-consciously avoiding doing so, or be poor research because ignorance of the import of research betrays a lack of the phronesis needed to undertake insightful research into human social life.

Harper and Stein's (1992) argument for a reunion of ethical and planning theory makes a similar point in relation to planning research, on the grounds that planning can not be considered a technical, value-free activity. Moving beyond this consideration, we could add that is not possible to justify the goals of (public) planning research without appeals (possibly explicit) to normative ethical theory. In most planning research we will not find references to ethics and ethical theory, but implicit interpretations of and references to public ethics, as inherent in planning as a public (political) activity: issues as cultural heritage, environment and public health, social justice and equal opportunities are common examples. Most planning research (especially when intended to directly inform practice) does not make any reference to any sort of ethics or ethical theory. This does not imply that there is not any (normative) ethical theory at the base of the research, but just that it is implicit (and sometimes at a non-cognitive/conscious level). It would be a significant advancement in our research to make these implicit normative ethical foundations explicit. However, an ethical code alone will not impel researchers in this direction.

Research is intended to make us understand the world better, and hence differently. In planning, this cannot but have normative implications, because understanding the world a certain way suggests ways in which it can, and should, be changed. Seeing people a certain way is part and parcel of behaving towards them in given ways; the two are inseparable. This implication of research is so, whether one is taking oneself to be de-mystifying power-relations in a major planning project in Denmark (Flyvbjerg, 1998) or exposing the failure of planners to grasp the concrete realities of the communities they were affecting with their policies as Jacobs (1961) and Dennis (1970,1972) did in their different ways. In these cases, Geertz (1988) argument that a process of persuasive interpretation of circumstances is central to ethnographic research rings true. But even self-consciously dispassionate studies such as Forsyth's (1999) account of struggles over urban expansion in Sydney, or Le Goix andWebster's (2008) theorising of gated communities still invite us to understand the social world in a certain way, and that way will be shot-through with values. This is impossible to capture in any code of ethics, for the latter's bullet-points can get little beyond 'don't lie; don't fabricate' and the like; and that is not what is going on when research is being written up. All writing up of research intends to persuade the reader of that of which the researcher is

already persuaded. But in writing up planning research, like any social research, the commentary (like the study itself) has within it a picture of humanity, a picture that is inevitably normative.

Codes and ethical traditions

As noted earlier, codes of research ethics tend to contain a core set of concepts. Central to most are integrity and respect for persons. The current UK Economic and Social Research Council framework for research ethics identifies what it calls 'six key principles' (ESRC,2010, p3). These highlight the significance of:

- Integrity, quality and transparency
- Informed consent
- Confidentiality
- Voluntary participation
- Avoidance of harm to participants
- Independence/freedom from partiality and/or clear declaration of interest/partiality

Small (2001) points out that the kinds of concepts listed above gain their meaning within an ethical tradition or theory which will itself have metaphysical underpinnings. Underlying the significance of informed consent and voluntariness, for example, is a liberal notion of respect for persons, which views the person as ontologically and morally more basic than, and prior to, any social entity. But liberal conceptions of what is meant by 'respect for a person' simply cannot be transplanted unchanged into, say, the kind of feminist perspective on life which emphasises the significance of our social being in constructing our individuality. As he says, applying the notion of respect to social groups is not simply an extension of the Kantian notion of respect for individuals, but a different idea entirely. This kind of conceptual revision, and argument around it, is central to ethical life. It is an unavoidable part of the way in which we construct our social existence, and moral concepts have to be understood within these forms of life (MacIntyre, 1998, 1– 4).

Small (2001) suggests that as a consequence, ethical codes are simply compromises between groups with fundamentally different ethical perspectives, a kind of lowest common denominator that all can live by. Not surprisingly, he goes on to argue that developing ethical behaviour among researchers should not focus on codes of ethics but on how to discuss ethical issues and reach agreement on ways forward. If one follows MacIntyre's approach, even a lowest common denominator will be illusory – for the terms used will have been ripped from the context which gives them their full meaning. As a consequence, they will either be applied in ways which will seem arbitrary, even when agreeable to all; or, at other times, their application will be embroiled in irreconcilable conflict (eg in relation to research involving human embryos; or research which involves contact with largely undisturbed peoples) as concepts are interpreted within different ethical traditions. Codes of ethics are

mainly related to procedures and (individual) conducts; nevertheless, there is a substantial difference between substantive ethical theory and procedural ethical theory, the latter making "recommendations about the process which should be followed in deriving and justifying ethical principles, and arriving at ethical conclusions" (Harper and Stein, 1992, p. 106). For their nature, codes of ethics are mainly related to procedural, and not substantive, ethics.

These considerations suggest that central to ethical research will be the development of a community of researchers which shares an outlook on what matters, and what the place of human life (including practices like research) is in relation to what matters. Within this community there will be shared terms of reference and vocabulary which allows principled, but constructive, discussion and disagreement about research ethics. In particular, it allows constructive discussion about why, when and how research may be appropriate. Within research communities, codes of ethics may have a role as rules of thumbs, or reminders of key dangers to researchers' integrity. But not as answers to day to day issues that arise in research.

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ONLINE INTERACTIVE LEARNING TUTORIALS: ADDRESSING ACADEMIC INTEGRITY AND REFERENCING

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Abstract

Academic integrity and good practice are central to student learning, and student success requires flexible delivery of critical concepts in interesting and interactive formats. Two online tutorials were developed and successfully implemented in the planning program at The University of Queensland, Australia. The Academic Integrity tutorial clarifies aspects of good academic practice, including why it is necessary to cite sources and how to acknowledge them, explains the difference between collaboration and collusion, examines the seriousness of misconduct and demonstrates good habits for avoiding plagiarism. The Academic Referencing tutorial addresses the concepts of referencing and why it is important and clarifies the key elements of citations using the Harvard and Chicago styles. Planning students require basic information on institutional and workplace expectations in relation to plagiarism and referencing to enable them to effectively assess information, work within teams, and communicate in an age of expanding technologies and information.

The seamless design of the tutorials incorporates linear navigation, meaningful contexts, learning by doing and a thorough testing of concepts. Students interact with a series of real world scenarios and respond to case studies and questions which test their understanding. Learning is promoted by extensive feedback and multiple attempts, and users' progress and outcomes are recorded in a database. The needs of diverse learners were considered, by incorporating a range of cultural backgrounds in the examples, ensuring all visual information represented in text was suitable for visually impaired users, incorporating the use of screen readers, and designing the flash demonstrations to reduce cognitive overload. Extensive evaluation has indicated a significant improvement in student knowledge of what constitutes plagiarism and an enhanced understanding of the seriousness of plagiarism and its consequences. Students and staff focus groups indicated that the key strengths of the tutorials are their clear and relevant information on referencing styles, collusion, collaboration and plagiarism, their good design, relevant language, ease of operation and the sense of relief that students now understood how and when to reference and what is and is not good academic practice. The Academic Integrity tutorial has won international acclaim for its high quality design and effectiveness.

Keywords: plagiarism, online learning, academic integrity, referencing

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1. Introduction

There is no doubt that some students plagiarise (James et al., 2002; Park, 2003; Sutherland-Smith, 2008; AUQA, 2009; Curtis and Popal, 2011) and that some professionals in the workplace plagiarise (Roberts, 2008; Shrimsher et al., 2011). These findings have relevance for both planning educators and employers. Our research team in the School of Geography, Planning and Environmental Management (GPEM) at The University of Queensland (UQ), Australia began a proactive approach to move from a regime of punishing students who were found guilty of academic misconduct to one of providing relevant information in an engaging and interactive manner. In response we developed a range of tutorials. In this paper we examine the key features and effectiveness of the *Academic Integrity* and the *Academic Referencing* online tutorials. The former has been in place within GPEM since 2006 and was later redeveloped and deployed university wide in 2010, while the latter was completed in 2012.

We begin with a review of the recent research addressing academic integrity, then an overview of the two online tutorials, followed by a brief explanation of the technical and pedagogical principles that underpin them, how they are delivered, and finally brief evaluation results. Our research indicated a significant improvement in students' level of understanding of academic integrity and referencing and very positive student and staff responses to the design and delivery of the tutorials.

2. The nature of the educational problem

Plagiarism is the act of misrepresenting as one's own original work, the ideas, interpretation, words, images, designs, or creative works of another (UQ, 2008). Examples of plagiarism include: direct copying of paragraphs, sentences, a single sentence or significant parts of a sentence without appropriate acknowledgement; a 'cut and paste' of statements from multiple sources; and simply rearranging another person's words or ideas without changing the basic structure and/or meaning of the text and without appropriate acknowledgement (Warren et al., 2012).

The literature cites many reasons for academic misconduct among students, including: time pressures; inexperience; immaturity; personality; cultural practices; the pursuit of good marks and the associated belief that this will assist in gaining employment in harsh economic times (Harding et al., 2004); increasing class sizes, with reduced access to staff; staff setting similar assessment tasks and student's increased reliance on past student work (James et al., 2008). Students also are learning from their peers through group work, online discussions, and interactive activities (McLoughlin and Lee, 2011), and some may not fully understand the complexities of collusive activities. For professional planners this can be potentially problematic as many will work in interdisciplinary teams. In addition, students may view information on the internet as public knowledge and thus free from intellectual property rights (Schrimsher et al., 2011) and some will download academic papers for free or for a small price (Evans, 2000; Thompson et al., 2002). Faced with an

explosion of information, issues of plagiarism and collusion are problematic in many educational institutions and professional workplaces.

Academic misconduct is a problem that seems to be on the rise in most countries (Larkham et al., 2002; Carroll, 2004; Park, 2004; Roberts, 2008). The Australian Universities Teaching Committee (AUTC) (2008) indicated that while it is impossible to determine trends in the incidence of plagiarism in higher education institutions, it appears to be widespread, and occurs across a range of disciplines (Peterson et al., 2009a,b). The incidence of plagiarism and the perception among students that poor academic practice and plagiarism are tolerated in universities has been an issue raised by the Australian Universities Quality Agency (AUQA) in a number of its audits of Australian universities. In the 2009 audit of UQ the agency observed that the university needed "to address a concern held by students in some schools that plagiarism or copying is tolerated" (AUQA, 2009). Other research (AUTC, 2008) indicated that many cases of alleged misconduct could be attributed to misunderstanding and ignorance among students about why they should avoid plagiarism and how they can do so. Hence it is evident that students, particularly beginning students, may not have the necessary academic skills (O'Donnell et al., 2009) to perform well and avoid academic misconduct. In fact they may have to unlearn certain practices (Johnson and Watson, 2004). However, to complicate this situation, staff may overestimate students' abilities in key areas (Tobell et al., 2008) and thus fail to provide the necessary information and guidance.

Instances of students, including planning students, in GPEM demonstrating poor academic practice were long recognised by our research team. The reporting of suspected plagiarism cases increased following the introduction of plagiarism detection software and in response the School introduced procedures to identify and categorise the seriousness of the alleged plagiarism, and to process allegations of misconduct. This was efficient, but not totally effective. A frequent student defence was, "… I didn't know this was plagiarism". In 2006 we changed direction and decided it was necessary to increase out students' awareness of the meaning of academic integrity and how to avoid it.

In GPEM, 472 students, including students in a large first year planning course, were invited to participate in an online survey addressing student understanding and attitudes to academic integrity. Thirty-three percent (157) responded. Most students agreed that plagiarism included paraphrasing or summarising someone else's work and not citing them as the source. However, 21% believed that it was acceptable to use someone else's ideas, to express them differently, and not acknowledge the source (4% didn't know). When asked about using elements of a design from a third party and incorporating these into their work, 85% did not consider this to be plagiarism. Almost 50% believed that it was acceptable to submit, without acknowledgement, an assignment for assessment that was previously submitted in another course. Almost 30% were neutral on the issue of copying information because of time demands and 10% disagreed or did not know that this was plagiarism. Over 30% believed that it was acceptable to be a member of a group

undertaking a group project, to work less than other members in the group and to claim equal contribution to the project. About 10% of students could not correctly identify examples of collusion. In terms of seriousness: plagiarism was viewed as moderately serious by 19% of students (81% very serious or serious); collusion as moderately serious by 27%, (44% very serious or serious); and 20% believed that cheating on an exam was not very serious. In an age of easy availability of information from the internet, students were asked if the use of text that was cut and pasted from websites was a serious plagiarism issue and 27% did not consider this to be serious, with a further 13% not knowing.

When examining the causes of plagiarism, almost 20% of students believed that they could 'get away' with plagiarism in their courses and that their peers thought it was 'OK' to plagiarise. Almost 40% believed it was easier to plagiarise than spend time undertaking the work properly; and over 10% believed it was appropriate to 'make up' information in a bibliography. In relation to referencing skills, most students were unable to correctly reference information using a recognised referencing style, and. Students also showed little understanding of the consequences of plagiarism. However, nearly 80% believed that plagiarism detection software encouraged them to correctly cite information.

Our results provided clear evidence that universities and their component programs (including planning programs) must ensure that their students are adequately skilled in the concepts of academic integrity and referencing to ensure that collusion and plagiarism are avoided. Pecorari (2003, p.317) agrees stating that "the focus on preventing plagiarism [should] be shifted from post facto punishment to proactive teaching" and a Stanford University student survey also indicated that students "wished faculty would clarify their expectations for academic integrity" (Schrimsher et al., 2011, p.10). Curtis and Popal's (2011, p.30) longitudinal research about the perceived seriousness of plagiarism and its causes indicated that "plagiarism may be reduced by means of educational programs that promote the perception of plagiarism as a serious academic integrity issue".

In order to narrow the gap between student expectations and course, program or institutional expectations, we developed and implemented an online tutorial about academic integrity (including referencing). Our need for a new approach took us on journey to evaluate what was currently being used in other universities and workplaces, both in Australia and internationally. Nothing suited our needs as most instruments focused on repeating institutional policy and instituting punishment regimes. In 2006 we developed our first tutorial about academic integrity and referencing. The final product was piloted and implemented with first year undergraduate and postgraduate students in GPEM. Our three year evaluation of the tool highlighted its effectiveness (refer section 4). At this time, the findings of the AUQA (2009) audit in relation to UQ were released, highlighting the misconceptions of students as to the nature of what constitutes plagiarism, and this resulted in new institutional policies and procedures in relation to academic misconduct, based on increasing staff and student awareness of the key issues. One of the decisions of the

university was to invite our research team in 2010 to re-develop our existing tutorial for university wide deployment. This resulted in the *Academic Integrity*: *referencing and avoiding plagiarism* online tutorial and the excision of information about specific styles of referencing into a new tutorial called the *Academic Referencing* tutorial.

3. Design elements

The Academic Integrity tutorial aims to ensure that students develop a sound understanding of key issues so that they can apply and demonstrate academic integrity and good practice. It encompasses four sections: S1 "Academic Integrity" clarifies aspects of good academic practice; S2 "Working Together" explains the difference between collaboration and collusion; S3 "Misconduct and Consequences" examines the seriousness of misconduct; and S4 "Good Writing Habits" demonstrates good study habits for avoiding plagiarism, including time management and note-taking. From 2011, the tutorial must be completed successfully by all commencing UQ students. A university-wide evaluation of the effectiveness of the tutorial began in 2012 and will be completed by the end of 2013.

While issues related to referencing were included in the original tutorial, its redesign for institution-wide deployment resulted in the removal of information specifically addressing referencing styles. In response, we developed a separate tutorial to complement the Academic Integrity tutorial and its focus is when and how to reference. It has four sections: S1 "Introduction to Referencing" addresses core concepts of referencing and why it is important; S2 "Elements of Referencing" clarifies the key elements of citations and provides detailed instruction for a range of sources (e.g. books, book chapters, journals, web sites, government reports, personal communication etc.); S3 "Harvard" referencing; and S4 "Chicago" referencing provide information on how to format elements of referencing for bibliographic and in-text referencing for an author-date and footnote systems of citation. It was piloted in 2012 and will be implemented fully within our School in the latter half of 2012.

The technical and pedagogical design issues are explained in this section, including information on the administration of the tutorial. The target audience for both tutorials is undergraduate and postgraduate students at UQ. The Academic Integrity tutorial is compulsory for all students at the university (about 45,000 students), while the Academic Referencing tutorial is implemented in GPEM (about 2,000 students). The tutorials are completed by both domestic and international students.

3.1 Technical design

The tutorials interface seamlessly, although ideally the Academic Integrity tutorial would be completed first. They have a similar clear and refreshing design, with appeal primarily to university students, due to the images and contexts that are used (Figure 1). For example, the tutorials are personalised with images of young adult students, who have been selected to reflect the age range and cultural diversity of the

students within our institution. The layout is uncluttered with interesting text to engage the reader and yet maintain a serious tone reflective of the issues being presented.

Figure 1. Example of the Academic Integrity tutorial design encompassing interesting layout, colour and style

Information is presented mainly by means of a two-part screen, with stimulus material (e.g. information and demonstrations) on the left, and instructions and interactive activities on the right (Figure 2). Thus different sections of the screen are assigned to specific purposes (Alessi and Trollip, 2001) and this remains consistent in both of the tutorials to facilitate student interaction and ease of use. The screen separation also assists sight-impaired users.

Figure 2. Screen layout, incorporating resource information (left) and instructional and interactive exercises (right)

The content of the tutorials is identified on the log in page and they each have four self-contained sections. These sections also are clearly identified at the top of the

screen, with a 'mouse over' facility to identify the key content areas in each section (Figure 3). The Academic Referencing tutorial incorporated a progress line at the bottom of the screen for ease of navigation, allowing students to slide the bar to highlight relevant parts of the particular section (Figure 4).

Figure 3. Incorporation of a 'mouse over' facility enables the detailed content of each section to be identified.

Figure 4. The slide bar at the bottom of the screen enables students to quickly manoeuvre between various components of each section of the tutorial.

The tutorials' content incorporates visually stimulating images, and the examples used for instructional purposes reflect the cultural diversity within the university. There is sufficient, but not excessive, instructional text and clearly indicated transitions between sections and screens. For example, navigation within the tutorial is by consistently placed icons, indicating the 'next' and 'previous' screens (Figure 4). The language is geared to appeal to university students from a variety of discipline areas.

The tutorials' linear navigation allows students to complete each exercise, receive immediate feedback with a learning focus, and have multiple attempts at the exercises until the correct response is achieved. Students must successfully answer

each question in order to proceed and hence a 100% success rate is required to complete the tutorials.

The tutorials are self-paced, allowing students to enter and exit at any time. An underlying database records and saves users' progress, meaning that students can continue the tutorial from the location they left. Once questions have been answered correctly a 'skip' button appears (upon return to the particular question). This enables students to review questions and move quickly between questions that have been correctly answered on a previous occasion. The pedagogical purpose of this linear navigation is to build on the concept taught, apply concepts, and test concepts.

The web advantages of the online tutorials allow users secure access, any time and any place. A lightweight html based design minimises download size, improving the speed and experience of all users particularly students accessing the tutorial on low-bandwidth connections. Tutorial content is stored in database tables separating the content from the presentation level. This separation enables additions and modifications to the tutorial without the requirement of technical expertise and upgrades and modifications to the presentation level without the requirement to re-enter or change the content.

Each response provided by students is logged with a timestamp. Analysis of these logs enables reviewers to consider which questions take students longer to answer, are more likely to have students leave the tutorial, or are more likely to have students choose incorrect options. The total time and number of logins is stored per student providing an overview of how students use this system. A report of student competitions is generated on request for administrative systems to track compliance with university requirements. Student data is stored for 12 months and to manage data storage and student privacy, official completion details are transferred and stored in administrative systems.

3.2 Pedagogical design

The tutorials employ two key categories of affordances of e-learning, namely static/instructive learning opportunities (e.g. definitions and explanations), and productive learning (e.g. "learning by doing") (Bower, 2008). Several key principles of effective instructional design (Carrol, 2002; Anderson and Elloumi, 2004), which facilitate learning, are reflected in the design of the tutorials including the following (Peterson, Jordan and Neil, 2010; Peterson et al., 2010, 2011):

a) Relevant contexts to help learners construct new knowledge from existing knowledge
   The authentic/real world contexts (e.g. exemplars from student work and their practices) employed in the tutorials, link the current student experience with future real-world work experiences and activate learners' schema – the "structures that permit us to recognise objects and other entities" (Sweller, 1999, p.10), thus reducing cognitive, working load stress. Due to the diversity of students at our institution, broad themes are used in the examples (e.g. environment,

sustainability, climate change), along with common student contexts (e.g. related to assessment and group work).

b) New knowledge is demonstrated to the learner
In general all key concepts are defined and illustrated through examples and/or animations to minimise confusion (Klausman, 1999). For instance, learners are provided with information about the conventions of referencing, they read the specific requirements (e.g. use of author names, or how to reference a quote), and then view it in a stimulus text, where it is highlighted, often using flash technology.

c) Learning is enhanced by doing
The principle of 'learning by doing' is based on the notion that active learners learn best and thus reinforce their learning (Dewald et al., 2000). Students are compelled to think and in practical terms, the learners must demonstrate knowledge or understanding by choosing the correct response to questions. They then receive feedback for both correct and incorrect responses.

d) Self-paced learning
The students are able to work through the on-line tutorials at their own pace and in their own time, thus more appropriately matching the learning style of the student. The tutorial can be used as an on-going resource for students to refer to as the need arises. Hence, its flexible delivery enhances student engagement, as does its good design, layout and ease of use.

e) Students are required to apply the new knowledge
Learners are required to demonstrate their new understandings in their assessment tasks and other activities. For example, GPEM course profiles, which outline student obligations and assessment tasks, include reference to the need for students to undertake and pass the tutorials. All staff (including tutors and markers) are trained in the tutorials and reinforce the standards and expectations established in the tutorials. The tutorials' on-going availability to students also assists in embedding the key concepts.

4. Evaluation

To date, only the Academic Integrity tutorial has been comprehensively evaluated and this has centred on assessing the effectiveness of the tutorial in raising awareness of academic integrity, its key components and the serious of academic misconduct.

There were several components to the evaluation of the tutorial:

a) A three year evaluation within GPEM (2007-2010) involving 157 students. This included a pre- and post-survey (i.e. about 6-8 months after completion of the tutorial) and in-depth focus groups.

b) Observations of how 25 students manipulated and navigated through the tutorial within a controlled computer laboratory prior to the university-wide roll out of this tutorial (2010). The evaluators observed student progression through the tutorial, noting whether students were reading the text or merely clicking buttons, and how long the tutorial took to complete. Students also were

interviewed to assess the relevance, interest, effectiveness and user interface of the tutorial.

c) All UQ academic staff were informed of the tutorial and invited to provide comments and feedback to the project team.
d) Pre- and post-surveying of all UQ students who undertake the tutorial. To date approximately 600 students have completed the pre-survey (data has not yet been analysed).

The online survey canvassed student responses to several issues including:

a) why it is important to engage in good academic practices;
b) what constitutes plagiarism;
c) the seriousness of several practices (e.g. copying information from the internet/books/journals/designs, failure to correctly reference, unintentional copying, cheating on exams, collusion, and auto-plagiarism);
d) factors influencing plagiarism (e.g. time commitments, lecturer inaction, real-world pressures, peer pressure, difficulty in detection);
e) sourcing information, which addressed author-date in-text referencing and constructing a bibliography, and when to reference (e.g. use of common knowledge, quotes);
f) differences between collusion and cooperation; and
g) penalties in relation to the seriousness of plagiarism.

Qualitative responses were analysed using Leximancer to identify key themes, and relational responses were analysed using Nvivo software.

5. Results and discussion

The results indicated improved student knowledge of what constitutes plagiarism, when and how to cite sources (Peterson et al., 2009a), the seriousness of plagiarism and its consequences. They also had an enhanced understanding of collusion.

a) Importance of citing sources
Students were asked to indicate three reasons why it is important to correctly cite information. About 25% of students said that it was necessary to acknowledge the work of the author or demonstrate respect for the author (6%) (Figure 5). Enhancing the credibility of the student/writer's work was also important (16%), as were a range of value-based responses, particularly that of fairness (11%). Other criteria included abiding by rules (either to ensure compliance or through fear of censure) as well as this being a sign of good practice, enabling the tracing of cited information.
b) Meaning of plagiarism
Following completion of the tutorial, students displayed improved understanding of plagiarism and considered that it included the following: failing to correctly cite information; 'copying and pasting' information from the internet without acknowledgment; and auto-plagiarism. They also had raised awareness of the

need to acknowledge the work of designers (e.g. planners). Students generally understood, both before and after completing the tutorial, that the failure to correctly reference images, maps or diagrams, and paraphrasing without acknowledging the authorship constituted plagiarism.

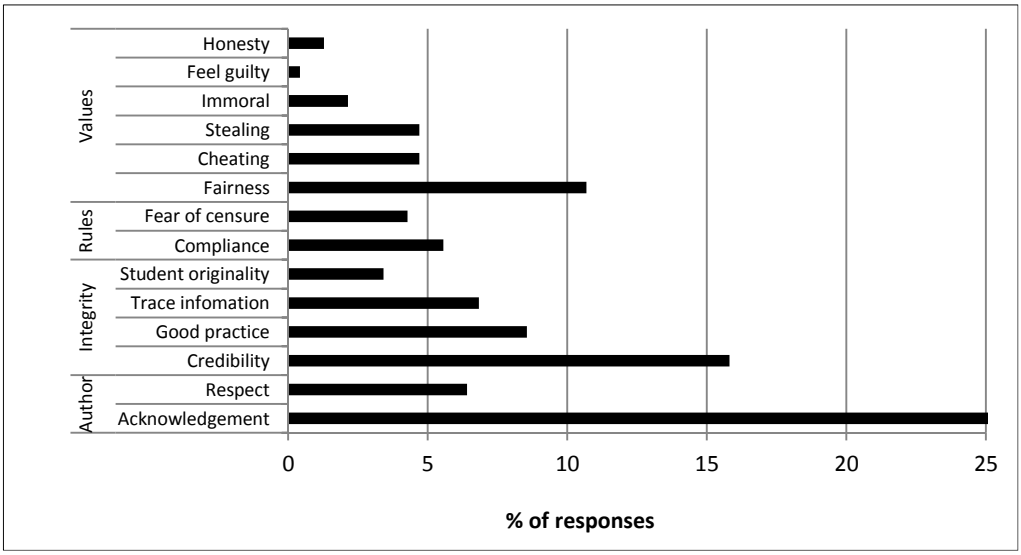

Figure 5. Student responses to why it is important to correctly cite information

c) Referencing skills

The ability of students to correctly in-text reference and create a bibliography significantly improved following completion of the tutorial (Figure 6). The greatest change was in relation to a basic in-text Harvard referencing style where students were asked to consider the author/date order, and in this instance, success improved from 46% to 81%. Students were generally much better able to cite quotes and to detect inaccuracies in-text referencing of information obtained from the internet and in understanding bibliographic referencing.

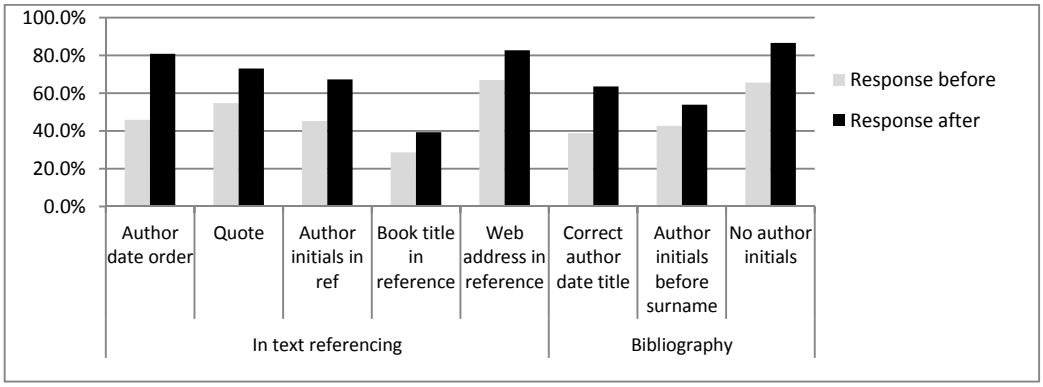

Figure 6. Percentage of correct student responses to in-text and bibliographic referencing questions, before and after completion of the Academic Integrity tutorial

d) Seriousness of plagiarism

Almost all students (97%) viewed cheating on exams and plagiarism as either serious or very serious, both before and after the tutorial (Figure 7). The greatest percentage change in awareness (14%) was in relation to copying images from the internet (from 71% - 85% of students perceiving this to be serious or very serious). There was a 14% improvement in relation to auto-plagiarism (78%-92%), 11% for copying text from the internet (85%-96%), 10% for collusion (69%-79%), and 8% for copying a design (86%-94%). There was a 3% change in relation to copying from a journal (78%-81%).

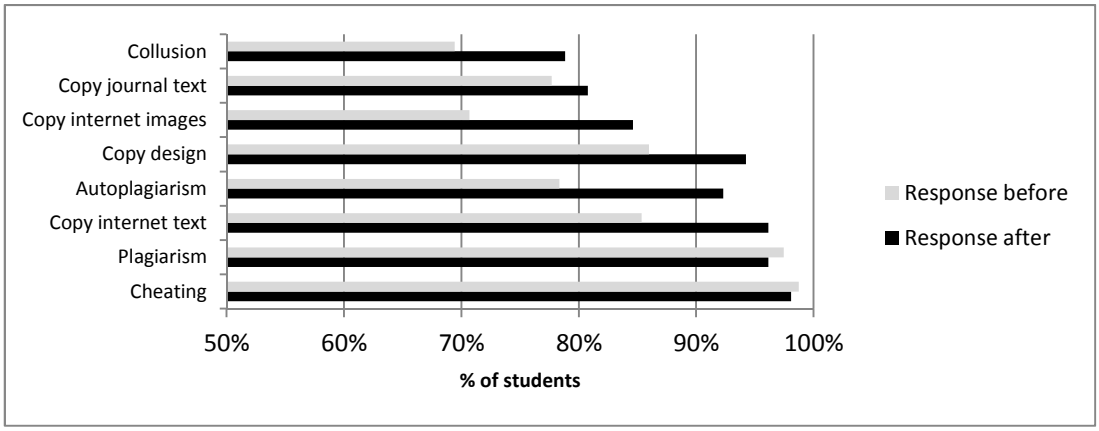

Figure 7. Percentage change in student perceptions of the seriousness (both very serious and serious) of various aspects of plagiarism before and after completion of the Academic Integrity tutorial

e) Causes of plagiarism

Several researchers have identified a range of factors that contribute to poor academic practices (refer section 1). Our results indicated that the highest positive changes in student perceptions of plagiarism, following completion of the tutorial, were in relation to: the opinions of peers, with students believing that their peers did not think it was acceptable to plagiarise; that plagiarised information is not better than the work the student can produce; plagiarism detection software is a disincentive to plagiarise; plagiarised information does not provide a competitive advantage; information is not freely available on the internet without acknowledgement; the pressures of course demands, and time limitations should not be used as an excuse to plagiarise; and that it is not easy to 'get away' with plagiarism (Figure 8). Hence the tutorial was effective in positively changing students' perceptions particularly in relation to the social norms affecting behaviour.

Both before and after the tutorial, students generally did not believe that: plagiarism was acceptable, merely because you could get away with it (89%-92% overall disagreement); cheating was acceptable and that plagiarism was not looked on unkindly in the 'real world' (92%-94% overall disagreement); others' expectations placed pressure on students to plagiarise (91%-89% overall

disagreement); it was acceptable to contract and pay someone else to research and write their assessment (94%-100% overall disagreement); they would purchase an assignment from the internet and change it slightly (94%-94% overall disagreement); and the benefits of cheating outweighed the consequences of not cheating (92%-92% overall disagreement).

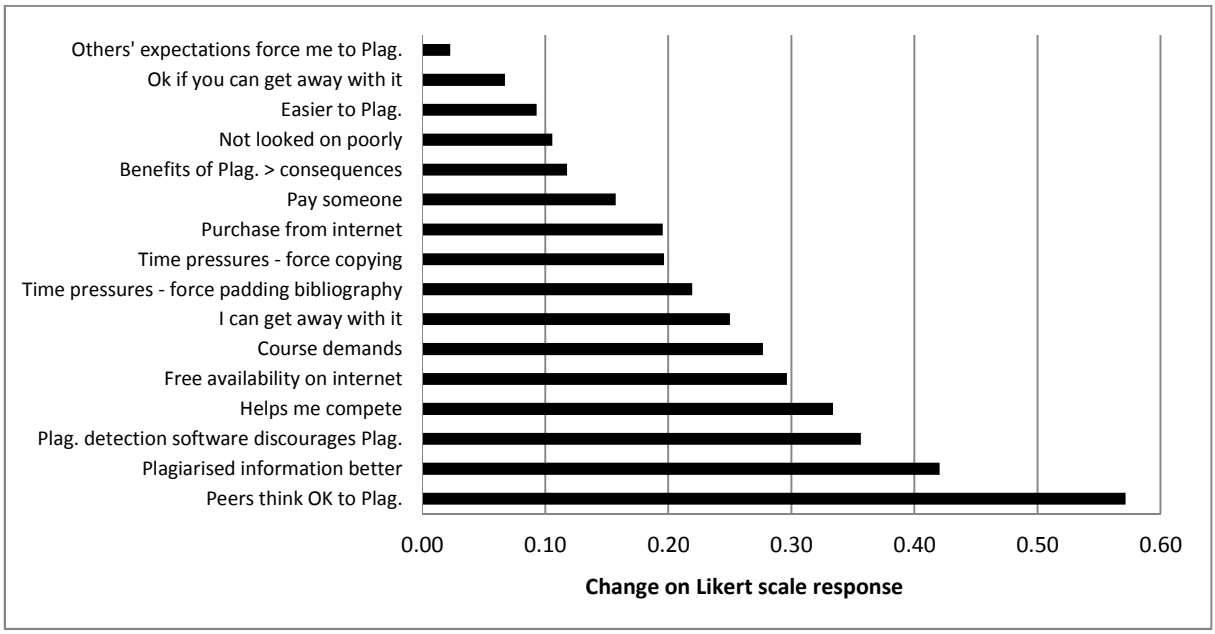

Figure 8. Changes in students' perceptions of what constitutes plagiarism following completion of the on-line tutorial (based on a 1-5 Likert scale response)

Following completion of the tutorial, more than 60% of students indicated that cheating, plagiarism, auto-plagiarism and copying text from the internet were very serious. Issues perceived as being less than very serious were copying designs and images, copying text from a journal and collusion. There were also marked improvements in their understanding of the implications of poor academic practices, although the relatively poor results in relation to collusion indicate an area to be addressed in subsequent versions of the tutorial.

Student Focus Groups identified the key strengths of the tutorial as its clear and relevant information on referencing styles, collusion, collaboration and plagiarism, its good design, relevant language, ease of operation and their sense of relief in now understanding how and when to reference and what constitutes good academic practice.

Academic staff from UQ also were invited to test and comment on the tutorial. Comments from staff included:

> ".. I think it's great, especially the section dealing with collusion over group work – an issue that is not well understood by many students. Also

> fantastic that it points students at the resources that will help them if they are under assessment pressure and tempted to plagiarise. It will help me a great deal that there is such a tutorial in place and that it is compulsory for students to complete ...".
>
> "I have just worked through the new academic integrity tutorial and it is great … it will really help to emphasise ethical practice… I … understand how confusion about plagiarism is both widespread and currently difficult to overcome without use of significant class time - which of course cuts into tuition of other issues. The tutorial's design allows students to really think through and engage with authentic problems, which we all know is the most effective means of teaching, so it will make an impact. I sense among many students a real desire to understand these issues more deeply and also a strong commitment to ethical practice. So, this is fantastic…".

6. Conclusion

The widespread and rising incidence of plagiarism were the stimulus for our team to develop the Academic Integrity and Academic Referencing online, interactive tutorials. These are central to student learning and provide a sound foundation for professional practice, particularly regional and town planning. The tutorials are designed to support student learning in several contexts: new information is presented in meaningful ways through the use of real scenarios and real academic texts, which help to construct and build learners' understanding; interactive exercises are provided, which require active user engagement with the learning material; an assessment process is applied whereby learners are able to re-try exercises, after responding to extensive feedback until they submit a correct response; and once the tutorials have been completed, users can access them as an information resource.

The tutorials have successfully raised awareness of the meaning of plagiarism (including collusion) and its seriousness, and enhanced students' skills in referencing, including the citation of written material, images, and maps, and how to correctly reference in-text material and to develop bibliographies. These skills provide life-long advantages for our students, many of whom will move into professional practices as planners, and the tutorials set a consistent standard for all students and hence greater equity in relation to assessment procedures. Additional efforts are needed at the institutional level to embed good practice, ensure equitable processes in the detection and processing of students alleged to have plagiarised and thus to demonstrate to students that plagiarism is not something that they can easily 'get away with'.

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CONFLICTS IN PLANNING PROCESS OF LOCALLY UNWANTED LAND USES (LULUs): A CASE STUDY IN İZMİR

İlgi Atay Kaya [1], Nursen Kaya Erol [2]

Abstract

Land use planning is a both technical and political process in which many different groups with multiple interests are affected by planning decisions. While every land use planning problem has a potential of creating conflicts Locally Unwanted Land Uses (LULUs) are the most conflict facing subjects in urban land use planning.

Locally Unwanted Land Uses are land uses which may be regionally or nationally needed or wanted but are considered objectionable by many people who live near them because of their negative externalities. Land allocation for LULUs is usually problematic and usually a threat for the whole planning process. A site selection decision for a LULU becomes more difficult when there is a NIMBY (not in my backyard) movement against the LULU. It is opposed by interest groups with various reasons such as health effects, economic costs, harms to environment. The possible relation between the conflicts about land uses and its decision making process should be discussed.

This paper focuses on the need for understanding and evaluating the planning processes of LULUs. The paper is based on a research examining the planning processes of a LULU in İzmir, Turkey. The case study is examined to demonstrate;

- the whole process followed for the land allocation of the LULU,
- the conflicts and the reasons of conflicts,
- interest groups involved and conflicting interests,
- solutions searched or proposed by planning authorities or related institution and,
- what might be done for a more smooth process and formation of a consensus base

To understand the reasons of conflict and to highlight the potentials that planners should seek would be a step for solutions.

Keywords: Locally Unwanted Land Uses (LULUs), Land use planning, Conflicts in planning process

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1. Introduction

Land use planning, as a process affecting various interests groups, faces with conflicts especially while dealing with locally unwanted land uses (LULUs). The aim of this paper is to emphasize the importance and difficulty of site selection processes of LULUs.

The research involves two main parts. The first part includes a short review of literature related with LULUs, their decision making process, conflicts and conflict resolution techniques.

The second part includes a case study about site selection process of solid waste disposal area in İzmir. The case study aims to demonstrate the conflicts, the conflicting interests, the movements against site selection decision in an ongoing process and the actions taken and proposed by the responsible institution to solve the problem. Finally the paper discusses reasons of conflicts, and possible solutions to conflicts.

The data for the case study is gathered from the archives of local institutions and newspapers. The plans analysed are obtained from İzmir Metropolitan Municipality. The web-based archives of two national (Milliyet and Hürriyet) and a local newspaper (Yeni Asır) including news since 2004 are searched. 417 news from three newspapers are searched and 93 related news are found in the period between 09.03.2009 and 19.02.2012. Additionally a city planner from the Planning Department and an environmental engineer from the Department of Solid Waste Facilities of İzmir Metropolitan Municipality are interviewed.

2. Planning for Locally Unwanted Land Uses (LULUs)

2.1 What are LULUs?

LULUs are described as development projects that are predictably objectionable to many of their neighbours (Popper, 1983), a set of technologies with the potential of creating major environmental or social perturbations (Nordenstam, 1994), potential threats to the environmental safety and the economic value of property to adjacent communities (Peyton, 2007), and land uses which may be regionally or nationally needed or wanted but are considered objectionable by many people who live near them because of their negative externalities such as being noisy, dangerous, ugly, smelly; polluting; increasing traffic; and lowering property values (Popper, 1985; Nordenstam, 1994).

There are various examples of LULUs given in the literature. These are energy, waste, industry, transportation, housing, health, and crime related LULUs. Energy related LULUs are nuclear facilities, power plants, refineries, mines and electricity generating facilities, and so on. Waste related LULUs are solid waste facilities, hazardous waste facilities, landfills, incinerators, and so on. Factories are industrial

LULUs examples. Airports, highways and other transportation infrastructures are LULUs related with transportation. Housing related LULU examples are low income housing, slums, shelters for the homeless, housing for the mentally ill and so on. In addition, there are health related LULUs such as rehabilitation clinics, drug treatment centres and mental health facilities. Prisons and detention centres are also noted as LULUs related with crime. There are also other LULUs such as red-light districts and military installations.

2.2 Decision Making for LULUs

Local level has more importance in decision making of LULUs than other various levels (such as territorial, national or global) of environmental problems (Peeples, 2000). There are post-siting effects of the LULU decision making process (Been, 1994). Classical location criteria are not suitable for decision making of LULUs, rather multi-criteria undesirable facility location model is needed (Colebrook and Sicilia, 2007). Also, there should be an integrated framework guided by a multi-disciplinary approach in LULU decision making (Nordenstam, 1994).

Various interest groups are affected by decisions of land use planning. These groups include different levels and departments of government, representatives of special interests such as neighbourhood preservation, environmental conservation and minority groups, and market oriented groups including private sector land owners, developers and builders, local residents and other members of the public, and finally land planners (Kaiser et al., 1995).

2.3 Conflicts in Planning LULUs

Urban land use planning process faces with conflicts about various topics because urban environment itself includes various people with multiple interests. Therefore, every land use planning problem has a potential of creating conflicts. LULUs are one of the most conflict facing subjects in urban land use planning. Land use planning process deciding a site selection of LULUs becomes more difficult when there is a NIMBY (not in my backyard) movement against LULUs. NIMBY is described as mobilizations to oppose the siting of LULUs. It is opposed by interest groups with several reasons such as health effects, economic costs, harms to environment, and so on.

One point of view demonstrates that LULUs are located in economically deprived or racially and ethnically minorities' neighbourhoods and the lack of equity in these kinds of site selection decisions are seen as reasons of LULU conflicts (Minchart and Neeman, 2002; Rootes and Leonard, 2009). On the contrary to the view describing siting LULUs as racist and classist, Been (1994) discussed the possibility that neighbourhoods surrounding LULUs may become poorer and become home to a greater percentage of people of colour over the years following the sitings.

2.4 Conflict Resolution for Land Uses

Several strategies to solve land use conflicts are proposed in literature. Participatory planning (Magigi and Drescher, 2010), mediated negotiation strategies describing various roles for planners such as mediator, resource, regulator, negotiator and process manager (Forester, 1987), dispute resolution techniques (Dorius, 1993), decision making processes considering local community perspectives (Nash et al., 2010), and to sum up the need for alternative planning processes with more public participation than planner-centred planning is underlined by various studies.

Collaborative planning which seeks to bring together major stakeholders to build consensus rather than use majority rule, and also generates commitment to commonly accepted objectives and fosters commitment to implementation is one of these alternative planning approaches (Healey, 1997; Margerum, 2002). It engages stakeholders in interest-based negotiation to reach consensus agreement on plans. There are both advantages such as avoiding win-loss outcomes and improving stakeholder relations; and limitations of collaborative planning such as powerful stakeholders' possible reluctance to participate (Cullen et al., 2010). Also, there are several recommendations for collaborative planning such as including full range of stakeholders and participation on an equal basis and full information (Margerum, 2002).

3. Case study: Land Allocation Process of Waste Disposal Sites in İzmir

3.1 Waste Disposal Sites

İzmir is the third biggest city in Turkey with a total population of 3 948 848. Total amount of waste collected in İzmir in 2010 is 1 685 659 tons/year. It is almost 7 percent of total waste of Turkey in the same year. Almost 77 percent of the collected wastes are disposed in controlled landfill site while others are disposed in dumping sites of municipalities in İzmir in 2010. Composting plants have been used for waste disposal until 2008 (TurkStat, 2010), but these facilities located in Uzundere and Menemen in İzmir are not active today (Özen, 2011) because of revision studies (CEE, 2009).

There are 41 municipal waste landfill sites in Turkey in 2009 (MEF, 2009). Two of these landfill sites are located in İzmir: Harmandalı and Foça. Foça Solid Waste Landfill Area is constructed in 1999 for Foça, Bağarası, Gerenköy and Yenifoça Municipalities (MEF, 2008). Harmandalı Solid Waste Landfill Area is constructed in 1992 by İzmir Metropolitan Municipality (MEF, 2008). It is the first regular waste disposal site in Turkey. It has 90 hectares of area. It is 25 km. far from city centre. It has run out of its temporal capacity of 15 years (İDA, 2008).

Almost 3000 tons/day of waste is collected in this area everyday. There are three types of waste collected in this area: domestic waste, industrial waste with domestic characteristics and medical waste (Figure 1). Oozing water from the collected waste

is transferred to sewage system and refined in Çiğli Waste Water Refinery. Harmandalı Solid Waste Landfill Area serves all settlements within the boundaries of İzmir Metropolitan Municipality. The capacity of this facility is increased in 2007 (Özen, 2011).

Figure 1. Disposal areas for domestic waste (left), for industrial waste with domestic characteristics (middle) and for medical waste (right) in Harmandalı Solid Waste Landfill Area (İWSMGD, 2010)

The boundaries of İzmir Metropolitan Municipality is enlarged in 2004 due to the Law of Metropolitan Municipalities (No. 5216). 24 of the 26 irregular waste disposal sites in new added settlements are closed and 2 of them are going to be closed after construction of new waste transfer stations. The wastes from these settlements are being transferred to Harmandalı Solid Waste Landfill Area. There are transfer stations in Halkapınar, Gediz, Kısık, Gümüldür, Karşıyaka, Selçuk, Torbalı, Foça and Urla (Figure 2). In addition, the site selection and project preparation processes are continuing for Türkelli and Kemalpaşa Transfer Stations (Özen, 2011).

Figure 2. Waste Transfer Stations in İzmir (Özen, 2011)

3.2 Site Selection Process of Waste Disposal Sites

The legislation related to the waste disposal sites in Turkey includes fundamental right of living in healthy environments in Turkish Constitution, 6 laws about environment, municipalities, metropolitan municipalities and penal code, almost 15 regulations about waste processes including incineration, disposal, control and so on,

almost 21 circulars about waste disposal facilities, implementation projects, management plans, permissions and so on, and other related notifications. While the related laws regulate the general rights and rules, the regulations specify the type of waste such as oil, vehicles, batteries, construction wastes and so on.

The Department of Solid Waste Facilities in İzmir Metropolitan Municipality is the responsible institution for preparation of plans, projects, adjudication documents and Environmental Impact Assessment (EIA) reports, and control of these processes. Location decisions are taken by this institution. An environmental engineer from the department explained the process they followed for site selection: First they use several criteria to select a location, produce alternatives according to these criteria, choose the most suitable alternative and start the land allocation procedure. Then they call for a bid for EIA report preparation. Afterwards, they report the selected location to the Department of Planning so as to make the decision added to the plans. Sometimes Planning Department report negative opinions to the selected locations depending on planning principles but they do not take part at the beginning of the process. The Department of Solid Waste Facilities considers plans while studying the criteria before proposing alternative locations. That means plans are included in the process, but planners are not.

The criteria in the site selection process of waste disposal sites considered by the Planning Department are as follows:

- Space requirements
- Distance to settlements
- Distance to agricultural lands
- Distance to olive groves
- Land use capability classes
- Distance to industrial zones
- Distance to conservation sites
- Distance to military zones
- Distance to natural lakes
- Distance to dams
- Distance to rivers
- Distance to drinking water wells
- Distance to 1st degree highways
- Distance to 2nd and 3rd degree highways
- Distance to railways
- Slope
- Elevation

Minimum or maximum values are determined depending on existing regulations and legislation for each of these criteria.

The processes about transfer stations are not so different; however, there are fewer criterions for site selection. Accessibility and the availability of roads for trucks are the most important criteria. Also, minimum space requirement is specified as 6000-

$8000m^2$. First, the department proposes a site for a transfer station considering these criteria. Then, EIA Report is prepared. Documents that state "EIA Report is not needed" is also valid. After the EIA process, geologic situation of the area is analysed for development and construction; and finally the implementation projects are prepared. The project is sent to the Planning Department. If there are objections to the selected site of the project, alternative locations are searched. For those alternative locations the opinions of several institutions are taken (İMM, 2008).

3.3 Planning Decisions on Waste Disposal Sites

Plans with upper scales in İzmir include decisions about waste disposal sites. 10 waste disposal sites are shown in the Manisa Kütahya İzmir Environment Plan (Figure 3). This plan proposes strategies to minimize the pollution depending on solid wastes. The main suggestion of the plan is that there should be infrastructure unions in which the solid waste problem is solved for a region including several settlements instead of solving the problem for each settlement. The location criteria should include geographic structures of the land. It should serve the whole city. Regional solutions are needed.

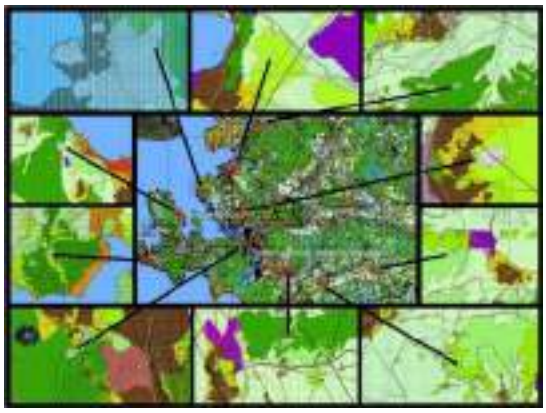

Figure 3. Solid Waste Landfill Areas in the boundaries of the city of İzmir shown in Manisa Kütahya İzmir Environment Plan with 1/100 000 scale (webpage: gisapl1.cevreorman.gov.tr/cdp/)

İzmir Development Plan approved by İzmir Metropolitan Municipality shows several waste disposal site decisions (Figure 4). The plan proposes a total area of 237,2 hectares of solid waste collection and disposal areas. The plan includes Solid Waste Disposal Areas in Harmandalı (existing 107,1 ha, proposed development 147 ha, conservation zone in a buffer of 1km), Konak Uzundere (8,2 ha and conservation zone in a buffer of 1km), Foça (4,8 ha), Torbalı (43 ha), Mordoğan (5,9 ha), Urla (12,5 ha), Yelki (1,5 ha) and Gümüldür (0,4 ha), Solid Waste Transfer Areas in Buca (6,1 ha), Karşıyaka (5 ha) and Menemen (6,1 ha), Kemalpaşa (4,1 ha), a rubble disposal area in unused area of stone mines in boundaries of forests in Bornova (50 ha), renewal of the irregular waste landfill in Aliağa and transform of it to a regular solid waste landfill area (4,3 ha). The plan includes requirements about solid waste

landfill areas. First obligation is EIA. Second, waste collection is not allowed in 1st and 2nd Zone Resource Conservation Areas. Finally, the Environment Law (no. 2872) and related regulations including Solid Waste Control Regulation should be considered in all solid waste facilities.

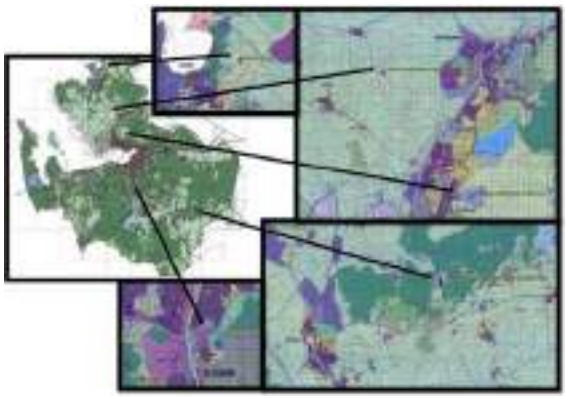

Figure 4. Some of the Solid Waste Landfill Areas in İzmir Development Plan with 1/25000 scale (3D City Map of İzmir Metropolitan Municipality)

3.4 Search for a New Site for Waste Disposal

The site selection process of solid waste landfill areas in İzmir is a difficult decision making process facing with conflicts depending on negative opinions of some institutions and objections of nongovernmental organizations and local people.

As Harmandalı Solid Waste Landfill Area has completed its capacity and, as the city grows, this facility becomes so near to the residential areas (The proximity can be seen in Figure 5). İzmir Metropolitan Municipality tries to find a new site for waste disposal. The Department of Solid Waste Facilities plans to construct a Solid Waste Assessment Facility for effective and efficient assessment of solid waste, separating recyclable waste from others, producing electrical energy from organic waste and composting wastes (Özen, 2011).

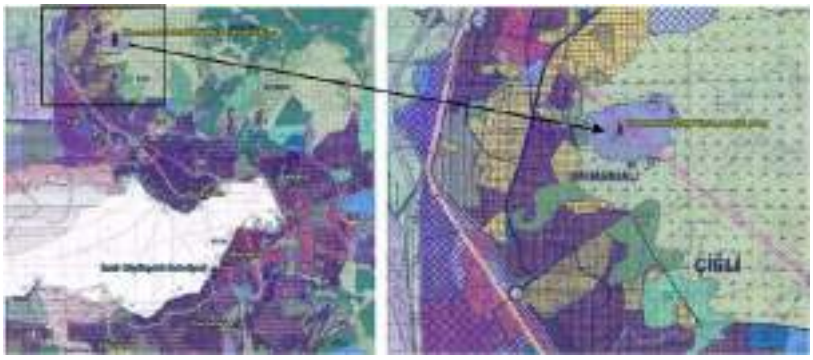

Figure 5. Harmandalı Solid Waste Landfill Area in İzmir Development Plan with 1/25000 scale (3D City Map of İzmir Metropolitan Municipality)

According to the Action Report of the Department of Solid Waste Facilities (2008), a new regular landfill area is planned in the southern part of the city. First, several alternative areas in Torbalı are proposed. After a series of cancellations for most of the sites because of objections of several institutions, an area of 168 hectares is selected. The prior authorizations are taken from Forestry General Directorate. The area is approved by Local Environment Committee. Map preparation and then, EIA report preparation and planning processes started. The new solid waste facility is added to the İzmir Development Plan, and then the institution opinions are collected for plans with lower scales (İMM, 2009). The project was planned to be finished until 2010 (İMM, 2008). However the actual process was not same as predicted in the Action Reports.

In 2009 the mayor of the Metropolitan Municipality announced the plans to close the existing disposal area in Harmandalı in the following 2 years and to select a site for a new facility. There were two possible lands for an Integrated Solid Waste Facility including collecting wastes, composting or incinerating them and producing energy. First one was in Torbalı and the second one was in between Bornova Gökdere village and Buca Kaynaklar village (M, 09.03.2009; YA, 07.10.2009). This announcement started the discussions with several conflicting opinions.

The first responses were from the majors of the municipalities of Buca and Bornova. They did not want the facility in the boundaries of their municipalities. Also, the Minister of Environment and Forestry were opposed to the type of facility. He explained that incineration facility which was planned to be constructed was not appropriate to the existing conditions and budget of the country. Depending on these objections, Metropolitan Municipality gave up the project in that location (YA, 31.03.2010) and discussions continued on the alternative proposals for Torbalı, Menemen and existing Harmandalı sites (Figure 6).

Figure 6. Locations of existing Harmandalı Solid Waste Landfill Area and proposed Solid Waste Landfill Areas in Torbalı and Menemen (image from 3D City Map of İzmir Metropolitan Municipality)

For the Torbalı proposal an objection came from the Provincial Directorate of Agriculture as 47 hectares of the total 168 hectares of proposed area contained olive

graves (Figure 7). This problem was overcome by decreasing the site to 121 hectares (YA, 31.03.2010).

Figure 7. The Proposed Site for Solid Waste Disposal Area in Torbalı Taşkesik (YA, 06.05.2010)

Then many objections came from different individuals but more from local or central authorities, NGOs, representatives of political parties and groups of local people who were usually activated by professional chambers. They showed their protests in municipality councils, through press releases, going to court or collecting signatures by door-to-door visits. The majors of the Chambers in Torbalı including Chamber of Commerce, Chamber of Agriculture, Chamber of Tradesmen, and Chamber of Drivers worked in a union to prepare a report about the problems of Torbalı including the location of solid waste disposal area. They visited the Minister of the State, Vice-Prime Minister and deputies from the three major political parties, and presented that report to them (YA, 04.04.2010).

Beside objections there were few supporters of the proposal. The director of the Provincial Directorate of Environment and Forestry supported the mayor and criticized the people saying "not in my town" that they did not learn the type of facility, its technology or its quality (YA, 05.06.2010; M, 06.06.2010). Also, some newspaper writers reminded that there were several institutions giving positive opinion to this site such as Regional Directorate of Forests, Institute of Mineral Research and Exploration, Ministry of Environment and Forestry, General Directorate of State Hydraulic Works, Provincial Directorate of Agriculture, Gediz Electricity Distribution Company and other related institutions (M, 06.06.2010; YA, 09.06.2010).

The mayor of the Metropolitan Municipality visited the proposed site in Torbalı and faced with protests (Figure 8). Almost 70 villagers from 3 villages met in the area, stopped the bus of the Metropolitan Municipality, booed, showed banners writing “We do not want İzmir’s waste in our region”. Some of them showed their land titles to the mayor and said that the area was theirs. Some of them loudly asked the mayor why he did not ask them while making this decision. The mayor tried to explain the process, told that their opinions would be taken in two or three meetings after the EIA report and suggested them to come to the meetings and to tell the reasons of not wanting. The headman of the village told that they gave petitions against the decision but did not get answers. The mayor told that telling opinions was their right, however

the decision would be taken depending on science and if there were no legal constraints then they would locate the facility in this area. The villagers shouted him down and then he got angry and left the area (YA, 04.06.2010; M, 05.06.2010).

Figure 8. The Protests against the Decision of a Solid Waste Disposal Area in Torbalı (photo on top left from YA, 04.06.2010; other photos from M, 05.06.2010)

Following these protests Metropolitan Municipality organized a trip to Germany to show good examples to interested people or groups. Some of the interest groups decided not to attend the trip as a response, while some others decided to participate to learn so as to oppose better and consciously. 32 people including some villagers, people from central and local government, representatives of universities, chambers and other nongovernmental organizations attended to the trip and gained positive opinions about constructing the similar in İzmir (YA, 20-23-25.09.2010; M, 23.09.2010). The trip included technical observation in Münster Mechanic-Biologic Processing and Regular Disposal Facility and Vereinigte Ville Regular Disposal Facility in Cologne (Figure 9).

Figure 9. The Participants of the Technical Trip to Germany (left photo from YA, 25.09.2010; right photo from M, 23.09.2010)

The people objected the solid waste facility in Torbalı established a Nongovernmental Initiative Group against Waste in the coordination of Torbalı

Chamber of Commerce. The group included participants from political parties, nongovernmental organizations, unions, headmen of villages, and representatives from 25 institutions (Figure 10). They organized meetings and discussed possible movements against waste. They decided to sign a declaration, distribute hand-outs including this declaration, announce by newspaper advertisement, tell the possible harms and bad effects of the facility to the villagers, make a press release in Harmandalı waste disposal area, start legal fight, visit the institutions in the EIA process, organize an exhibition in Torbalı centre including the photos of Harmandalı waste disposal area, stop waste trucks and stay in tents in the proposed waste area (YA, 28-31.10.2010; M, 30.10.2010).

Figure 10. The Participants of the Nongovernmental Initiative Group against Waste in Torbalı (left photo from YA, 28.10.2010; right photo from YA, 31.10.2010)

While discussions were continuing for Torbalı, in a press release, the mayor of the Metropolitan Municipality announced a proposal for a secondary waste disposal site in the northern part of the city too (YA, 3.11.2010; M, 04.11.2010; H, 04.11.2010).

On the other hand, people living near the existing solid waste landfill area in Harmandalı also started to take actions and organize meetings to force the responsible institutions to find solutions as soon as possible (Figure 11). The headman of the Cumhuriyet Quarter in Harmandalı applied to the Human Rights Committee of İzmir Governorship, Environment Commission of İzmir Bar Association and Provincial Directorate of Health. His applications were based on the 56th sentence of the Constitution which guarantees the right of living in healthy environments for everybody. He complained about the environmental problems and health risks caused by waste disposal, but the authorities from Metropolitan Municipality Water and Sewerage Management General Directorate rejected the claims and told that there was no risk of explosion, no stored gas, no leakage of polluted water (YA, 05.12.2010). The people from Harmandalı explained their decision to go to the European Human Rights Court. The mayor of the Metropolitan Municipality supported this decision and told that they were right (YA, 05.10.2011).

Figure 11. The meetings of the people living near the existing solid waste landfill area in Harmandalı (left photo from M, 09.09.2011; right photo from M, 13.09.2011)

The news about the movements against the existing condition of the solid waste landfill area in Harmandalı increased the movements in Torbalı (Figure 12) (YA, 06.12.2010). The first legal action of the Nongovernmental Initiative Group against Waste in Torbalı was going to the court with an aim of cancellation of the Manisa-Kütahya-İzmir Environment Plan claiming that the proposal for a waste disposal area in Torbalı was on contrary with the 20th Sentence of the Law about Rehabilitation of Olive Production and Vaccination of Wild Olives with No. 3573 (YA, 28.12.2010; M, 29.12.2010).

Figure 12. The Meeting of the Participants of the Nongovernmental Initiative Group against Waste in Torbalı Taşkesik (YA, 06.12.2010)

The group organized a meeting, invited first the Minister of Environment and Forestry, then organized another meeting, invited the Minister of Culture and Tourism and presented reports including their opinions against waste facility in Torbalı. Both of the ministers said that Torbalı is not appropriate for this facility. The mayor of the Metropolitan Municipality told that if any other more appropriate area was possible the Metropolitan Municipality would change the decision (YA, 01-02-03-04.04.2011; YA, 03.08.2011).

In the following days the EIA report for the area in Torbalı was completed. It was found that the ground was permeable and also there were underground water resources. Therefore, Metropolitan Municipality announced that the area was not suitable for any waste facility, rejected the possible proposed methods using impermeable membrane in the ground of the facility, and the process of searching a

new area for the facility was continuing (Figure 13) (YA, 27.08.2011; M, 29.08.2011).

Figure 13. Villagers of Taşkesik and members of the Nongovernmental Initiative Group against Waste in Torbalı Taşkesik celebrating the decision of Metropolitan Municipality not to locate waste disposal area in Taşkesik (YA, 27.08.2011)

With a majority of votes the Council of the Metropolitan Municipality decided to transform the existing compost waste facility to a new more technological one on an area of 203 acres in Menemen. The facility would not be for storing waste but for separating it and producing energy and raw materials for industries (M, 16.10.2011). The mayor of Metropolitan Municipality organized a press release, explained the details of the project and the reasons of the selection of the area. He added that there would be another solid waste disposal area in an unused area of stone mines in the southern part of the city (YA, 05.10.2011; M, 28.10.2011).

The people against the solid waste disposal area in Menemen came together to show their response. The mayor of Menemen Municipality organized a press release and told that the decision was not appropriate to the Development Plan and the Environment Plan. He emphasized that the economic structure of Menemen depending on agriculture would be affected badly with this land use decision (M, 26.10.2011; YA, 28.10.2011). The mayor of the Metropolitan Municipality responded to the oppositions by explaining the reasons of site selection as the area was far from settlements, it was near to highway, using the existing facility and renewing it would be more feasible, and there would be no odour and no stored waste after the process which had a high technological design (YA, 06.11.2011; M, 07.11.2011). However the movements of people from Menemen continued with a meeting of representatives of several chambers, City Council and Profession Organizations Platform of Right and Left Coasts Irrigation Associations (M, 13.11.2011). They protested the decision by showing agricultural products (Figure 14). The head of Left Coast Irrigation Associations told that they went to court to cancel the project (YA, 15.11.2011) to protect the neighbouring agricultural lands and water resources (M, 16.11.2011). The protests were supported by the representatives of the political parties, nongovernmental organizations and lots of farmers (M, 17.11.2011). The nongovernmental organizations in Menemen also went to court to cancel the project (M, 08.12.2011).

Figure 14. The Meetings of the People in Menemen to Protest the Decision of Solid Waste Disposal Area (left photo from YA, 15.11.2011; right photo from M, 17.11.2011)

İzmir Metropolitan Municipality sent the proposal for Menemen solid waste disposal area to the Provincial Committee of Soil Conservation. The committee investigated the site and reported that the area was agricultural land with quality (Figure 15) depended on the Law about Soil Conservation (no. 5403) (YA, 30.12.2011).

Figure 15. The Existing Waste Facility in Menemen between Agricultural Lands with Quality (YA, 30.12.2011)

In the following process the Metropolitan Municipality is going to approve for 'public interest' decision in the area to the General Directorate of Local Administrations in the Ministry of Internal Affairs (YA, 30.12.2011). If it is not possible to get this decision for the additional area, the existing area of 65 acres will be used (YA, 12.01.2012; M, 13.01.2012). According to the mayor there is no need to take EIA report again, because it was taken before for the existing facility. On the other hand, according to the head of Left Coast Irrigation Associations, EIA for the existing facility was given in 1995 and it is not valid in 2012; therefore a new EIA process is needed (YA, 16.01.2012). That shows signs that the following process will go on with conflicts.

4. Discussion: Conflicts in the Process and Possible Solutions for a Consensus Base

The problem of site selection of a new solid waste disposal area in İzmir remains unsolved. Analysis of the process may be of help to understand the reasons of the problem and learn lessons for a smoother process.

There are several actors involved in this site selection process. These actors may be grouped as; (I) public institutions including İzmir Metropolitan Municipality and host municipalities, ministries and their local directorates, (II) local people and their representatives, (III)non-governmental organizations such as chambers of various professions, environmentalist groups, political parties and so on, (IV) universities, and (V) private companies including possible investors of the facilities.

Most interested and involved actor groups are public institutions and local people groups. The first group is the responsible institution that makes the decision. Second group involves the people who are living close to the proposed area and think that they would be directly affected by the decision. This group is usually supported by various actors from the third group. These groups are the main stakeholders of the site selection process. They are conflicting with each other and among themselves. While the people living near the existing disposal area in Harmandalı take actions to call the attention of metropolitan municipality to the completed capacity of the area, on the other hand, the people living near the proposed disposal areas in Torbalı and Menemen move against the land use decisions and organize meetings to make the metropolitan municipality to change the location of proposed solid waste disposal area.

The other groups are less interested. These are the institutions that give/or not give permission to the project, the groups with political interests, and so on. The examples in İzmir showed that the groups with political interests oppose to the project to make the municipality unsuccessful and that their approaches are not for solving the problems but for inciting the conflicts.

The types of responses of the second group to the decision are several. The most popular response is verbal notification of the opposition. There are group based responses such as organizing meetings, going to the site, stopping the bus of the municipality, booing, showing banners writing negative opinions to the decision, preparing reports including the reasons of ‘not wanting’ the facility, collecting signatures against the facility by door-to-door visits, signing a declaration, distributing hand-outs including this declaration, announcing by newspaper advertisement, telling the possible harms and bad effects of the facility to the villagers, making press releases, visiting the institutions in the EIA process, organizing an exhibition of the photographs showing the situation of the existing solid waste landfill area, stopping waste trucks, showing agricultural products to protest the decision of solid waste area located in agricultural lands, camping in the proposed area, calling all people living in host settlement for action against the

decision. The Nongovernmental Initiative Group against Waste in Torbalı also invites the Minister of Environment and Forestry and the Minister of Culture and Tourism. Some members of the council of metropolitan municipality show responses by leaving the council chamber. Legal movements are also seen such as giving petitions against the decision, working with an environmentalist lawyer and going to court. There is an application of the headman of the Cumhuriyet Quarter in Harmandalı to the Human Rights Committee of İzmir Governorship, Environment Commission of İzmir Bar Association and Provincial Directorate of Health. Also, the people from Harmandalı explain their decision to go to the European Human Rights Court. One of the extreme responses is from the preceding mayor of the Torbalı Municipality. He explained his will that his name would not be given to any place in the settlement after his death if this waste disposal area decision is implemented in Torbalı.

The objections to the proposals stems mainly from environmental concerns, traffic problems, image of the town and political reasons. People emphasize the health effects, natural, economic and social harms and traffic congestion. The olive groves next to the proposed area in Torbalı and the absolute agricultural lands next to the proposed area in Menemen are listed in the reasons to oppose the waste facilities. One of the reasons of the cancellation of the area in Torbalı is written as the existence of underground water resources in EIA report. Is it a sign that the metropolitan municipality skipped the site selection criterion about distance to the underground water resources? Are there variations in the thresholds of the criteria? Isn't it interesting that the metropolitan municipality learned the underground resources from the EIA report? Well designed processes in which analyses are fulfilled and site selections are depended on these analyses would not face with this kind of results.

The decisions of existing plans of the settlements are also considered as a reason of opposing the waste facilities. Both the opposing and the supporting groups use this subject in their speeches in Menemen case. The opposing groups say that the facility is not appropriate to the İzmir Development Plan, while the metropolitan municipality says that it is appropriate. In fact, the proposed area for waste facility is shown in the plan between absolute agricultural areas and also the plan notes give permissions to the new solid waste disposal areas without a need to review the plan if there is a public interest and need for public investment.

The manager of the Department of Solid Waste Facilities explained two major reasons of the conflicts about site selection processes of waste disposal sites of İzmir. First, "the problems of the existing waste facility cause a negative public opinion and people need to see good examples". Second, there is a lack of trust to public institutions responsible for organization, management and control because these institutions failed to fulfil their previous promises about the environmental investments such as waste disposal facilities. Then what might be done for a more smooth process and formation of a consensus base? What are the ways to minimize or overcome the conflicts?

The metropolitan municipality tried to change the perspectives of the opposing groups by showing good examples in a trip to Germany. The technology and quality of the visited facilities without odour and harm to environs was useful to make people think that similar would be good for İzmir. However, what about the people denying to attend to the trip? A trip to show good examples abroad would be a solution to conflicts just with a limited success. The attempt with much possibility of success is to show the local good examples. In Menemen case, the mayor gave the example of purification facility 2,5km far from the proposed waste disposal area in Menemen and told that the new facility would be as unproblematic as that. This is much meaningful because the management of this good example is in their responsibility.

One solution proposed by the metropolitan municipality was an additional tax. It would be useful to make host municipalities to support the site selection process, but what about the local people? They would be forced to pay extra for the facility that they do not want. The support of the host municipality is not enough to solve the conflicts as seen in Torbalı example. On the contrary, the opposing people blamed the mayor of the Torbalı Municipality not to be against the waste facility.

An important requirement for a process with minimum conflicts is that the locations of LULUs such as solid waste disposal areas should be decided with a comprehensive approach while deciding all other land uses and planning the whole city or region. These decisions are sometimes skipped or postponed in the planning process and they are handled when there is an urgent need. This is resulted with inconsistency between planning decisions. The environmental engineer from the Department of Solid Waste Facilities told that there would be better site selection processes if there was cooperation between their department and the planning department. Joint works of experts from various professions would be better. Experience is also important in this process. They solve problems easier than the process of their first waste disposal site proposal. She told the possible strategies that could be used. She gave the example of making investments to villages with no water purification facilities. If these kinds of villages are chosen for waste disposal sites, the villagers will gain a water purification facility. She also gave example from Japan. She told that there is a mutual gain system in waste disposal site selection processes in Japan because they construct public swimming pools in the settlements in which they plan to locate a waste disposal site. She thinks that trying this kind of solutions would be a chance to solve problems about waste disposal sites in İzmir.

For a more smooth process, first the responsible institution should select a process which is technically and scientifically proved. The previous solid waste landfill site selection cases should be considered and their proposals should be modified to the conditions of İzmir. For example, several multicriteria analysis methods, combination of the multicriteria analysis and geographic information systems (GIS), combination of the analytical hierarchy process and GIS, adding remote sensing methods to these two techniques, the Analytic Network Process, combination of

stakeholder analysis and spatial multicriteria evaluation are used in various cases (Vasiloglou 2004; Banar et al., 2007; Chang et al., 2008; Schumati et al., 2008; Ersoy and Bulut, 2009; Wang et al., 2009; Aragones-Beltran et al., 2010; Ekmekçioğlu et al., 2010; Şener et al., 2011; Geneletti, 2010). If the responsible institution uses such a method to select a location for solid waste disposal areas, it would be easier to persuade the opposing people. To consider various interests including local interests would increase the possibility of better solutions and focusing on reasons rather than insisting on positions would also be useful for opposing groups.

5. Conclusion

The results of this research indicate that the process has conflicts in which opposing groups could not propose an alternative solution and the metropolitan municipality could not ensure trust because of doing technical mistakes and unkept promises. This lack of trust causes people not to believe although there are scientific data and evidence.

Planning LULUs requires a carefully designed decision making process. The responsible institution should ensure trust by finding solutions to minimize negative externalities of LULUs, choosing scientific and applicable methods to select a location. However choosing a location with technically appropriate process is not enough. There is also a need to maintain a fair process, considering all interest groups. To solve or minimize conflicts depending on local interests the reasons of conflicts should be carefully analysed. The conflicts can be solved by changing the site selection method. Site selection process of LULUs should not be handled incrementally but should be solved comprehensively. In addition, planning practices for LULUs should give more attention to local level than the other land use decisions.

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BEE or not to be.
LINKING BUILT ENVIRONMENT EDUCATION AND PARTICIPATION IN PLANNING PROCESSES

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Abstract

The paper reflects in practice and theory on the link between built environment education and youth participation in urban planning processes. The discussion is based firstly on an evaluation of the EU-project "Fantasy Design – Children in Community (2009-2011)". The project explored innovative ways of design education in four countries focussing on participatory design processes involving young people in design projects. Secondly, the paper is based on an analysis of results of the youth workshop "Young Cities Now! Youth.City.Laboratory". The workshop invited adolescent who participated in different urban development projects all over Germany to reflect upon their experiences. As a result the young participants formulated a manifesto.

Taking into account further empirical knowledge on linkages between built environment education and youth participation the case studies show, that built environment education is an important way to qualify current practice of participation. Strong linkages between education and participation seem to be evident but further investigation is necessary. The authors will argue that a deliberate integration of the two fields can be very productive.

1. Introduction

Children and adolescents have a vital understanding of spaces, buildings and neighbourhoods. They are experts for their needs. They will be "framers" and decision makers in cities of tomorrow. Hence, the participation of children and young people in planning processes receives more and more attention in urban planning. Planning cities for children and young people today still means planning for a largely unheard section of society. There is a rising acceptance and willingness to seriously let young people and children participate and collaborate with adults to discuss, plan and implement improvements in their cities and neighbourhoods. At the same time the participation processes place enormous demands on young people.

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Educational processes that focus on design and planning skills help children and young people to form a stronger and more reflective voice when it comes to formulate their spatial needs. Built environment education is such a multifaceted and interdisciplinary way for young people to learn about their own environment and gain necessary skills in designing it.

The obvious overlapping of built environment education and community participation could qualify both. In order to initiate a debate on linkages between youth participation in community and built environment education this paper introduces both concepts and afterwards discusses practical experience from two projects which worked on the interface between the two fields, meaning: the both presented participation processes were also aimed to be educational processes. The examples will be reflected in the light of the existing theoretical debate.

2. Youth Participation in Planning Processes

Communities face today manifold challenges of organisational, economic and social nature. The creation of youth- and child-friendly cities and neighbourhoods involves a complex and difficult process of negotiation. An important basis for this is a broad and inclusive decision-making pattern, which engages stakeholders with different backgrounds, motivations, opinions and resources and makes also the voices of young people and children heard. Through the participation of the civil society, planning processes and their outcomes can acquire higher quality and efficiency as well as broad acceptance. One important way to broaden participation and to move to a more generationally inclusive city is the involvement of youths (cf. Bertelsmann Stiftung, 2007, pp. 7 and 78-80; Meinhold-Henschel, 2007b, p. 221; Mullahey et al., 1999, p. 5). "From the perspective of community planning, influential youth participation occurs when:

- actions aim to intervene in existing conditions
- involvement is part of the public dialog and decision making
- engagement is influential and changes are significant" (Mullahey et al., 1999, pp. 3-4).

Characteristic of community participation is that young people act as stakeholder in the political arena and not in a pedagogical environment (cf. Knauer, Sturzenhecker, 2005, pp. 19-20). But looking at current participation processes young people identify problems, they analyse causes and resources in order to solve these problems, mobilise other stakeholders, they formulate goals and design action plans, they implement actions and evaluate their outcomes (cf. Mullahey et al., 1999, p. 5).

A typology of different kinds and levels of participation is provided by Hart's ladder of young people's participation (first published in 1992; see figure 1) which is based on Arnstein's seminal ladder of participation (1969). The ladder distinguishes non-participation and divers degrees of participation. The different degrees describe grades of "agency or participatory engagement by young people" (Hart, 2008, p. 23). In 2008 Hart wrote a paper reflecting on the ladder of youth participation and its

manifold interpretations since its publication. He concludes that the ladder metaphor is unfortunate because it suggests the assumption that the higher rugs of the ladder are necessarily superior to the ones beneath. He stresses that this is not the case. Rather do the rugs describe the different roles adults have in youth participation and the degree of agency by young people (cf. Hart, 2008, pp. 20-24).

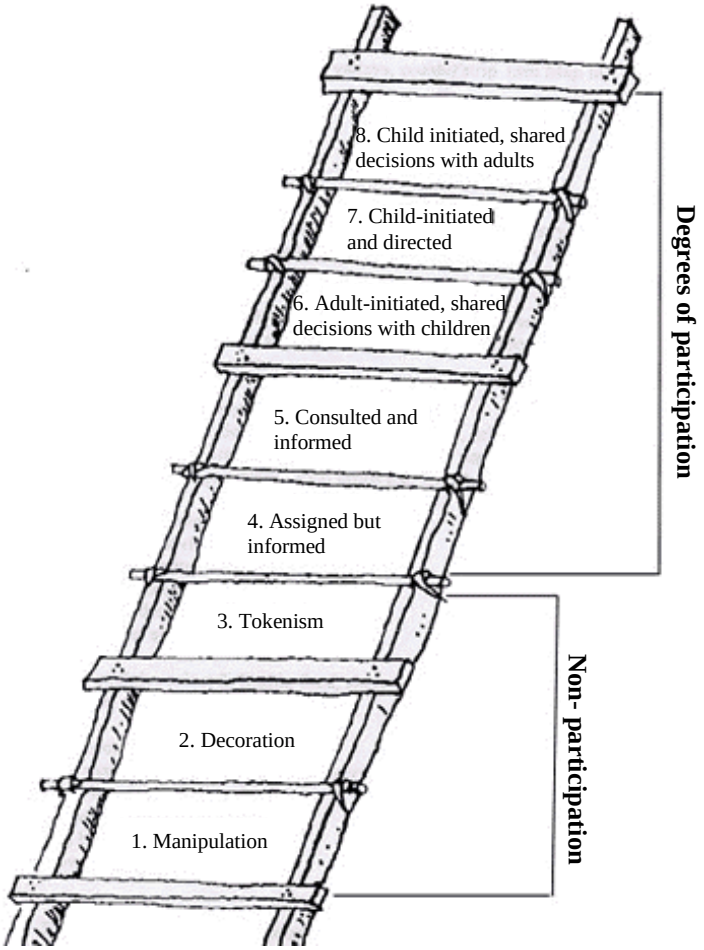

Figure 1. Hart's Ladder of young People's Participation
(source: modified figure based on Mullahey et al., 1999, p. 10)

Within the five degrees of participation different forms of participation can be distinguished. While there is a high diversity of methods Stange (2008) gives an overview summarising different categories of participation methods:

- advocacy representation of youth's interests,
- youth participation in institutions of the adult world,
- selective participation,
- everyday participation,
- representative participation (e. g. children and youth parliaments),
- Open forms and forums, and
- project approaches to participation.

Within this categorisation the first aspect describes “policies for young people”, the second to fourth point define “policies with young people” and the last three categories outline “policies by young people” (cf. Moser, 2010, p. 212).

The justifications for youth participation are divers and refer e. g. to civil law, democratic and political theory, educational, ethical and moral theory and service orientation (cf. Betz et al., 2011, p. 3). The most important legal point of reference is The United Nations Convention on the Rights of the Child (1989). It discusses children’s and adolescent’s right to participation as one of its main topics. Thereby it contributed to an appreciation of youth participation in many countries (cf. Meinhold-Henschel, 2007a, p. 9). Furthermore, the United Nations action plan for sustainable development, namely Agenda 21, and its Local Agenda 21 processes strengthen the of role major groups in development processes including the role of young people (cf. Hart, 1997, p. 23). In Germany, an important motivation which drives youth participation in communities is the common goal to be family-friendly and thus to attract families and enterprises (cf. Meinhold-Henschel, 2007a, p. 12).

Despite these legal foundations of and motivations for youth participation, adolescents are generally not integrated in traditional planning processes of urban development in Germany (cf. BMVBS, 2010, p. 10). Participation is often part of project work at most. So far, youth participation is neither a cross-cutting issue in urban development nor is it part of planning culture (cf. Moser, 2010, p. 19). Additionally, the quality of participation processes is often poor (cf. Meinhold-Henschel, 2007a, pp. 12-13).

3. Built Environment Education (BEE)

Educational activities related to the built environment incorporate a broad field of activity focuses and approaches to education such as architectural education, design education, (visual) arts education and environmental education. “The common ground of all these various types of learning activities for children and young people is the use of buildings, places and spaces as a context for learning” (cf. Uttke, forthcoming). Built environment education (BEE) is conceptualised as a cross-cutting subject which utilises the built environment as a learning resource taking into consideration cities, towns, villages, buildings, landmarks and public spaces. Common BEE activities are e. g. school visits to certain places, school-projects supervised by design professionals such as architects or urban planners and participatory school design processes. Furthermore, BEE can thematise the relation between people and the built environment or the design of spaces in order to trigger learning processes (cf. Engaging Places network, 2012a).

Built environment education is multifaceted and interdisciplinary. It incorporates aspects of architecture, urban design, city and regional planning and landscape design. Consequently, educators from these different fields cooperate in projects and programmes of BEE. Furthermore, schools and teachers, parents, education

authorities and governments can be partner (cf. Uttke, forthcoming; Engaging Places network, 2012a).

The different approaches to BEE are all forms of cultural education and share common aims (cf. Uttke, forthcoming). Objectives and learning targets of BEE are amongst others:

- to develop awareness and understanding of the local environment and appreciation for architecture and design
- to learn about stakeholders, rights and responsibilities in the design of the environment and possible careers in the built environment
- to support the development of responsibility in view of contributions to society and sustainable development
- to broadens personal, learning and thinking skills such as creativity, confidence, self-management, team-work, critical reflection and judgement, participatory and communicative skills
- to experience analytical and conceptual working methods (cf. Engaging Places network, 2012b; UIA, 2008, p. 5).

The development of concepts and ideas for BEE has increased in the past 20 years and receives growing attention nowadays. International networks, have been installed in the last years to discuss, promote and support BEE. Examples for this are amongst others PLAYCE (www.playce.org), the Engaging Places network (http://www.engagingplaces.org.uk/home) and the International Union of Architects (UIA) Built Environment Education Network (http://uiabee.riai.ie/index-en.html).

4. Linking Built Environment Education and Youth Participation in Planning Processes

"It is noticed that – at least in Germany – there is a growing importance of linking education and participation" (Uttke, forthcoming). The linkages between built environment education and youth participation in planning processes seem to be particularly evident. On the one hand one of the central motives of community participation is the assumption that participation entails a great variety of educational and socialisation processes (cf. BKJ, 2009, p. 31; Knauer, Sturzenhecker, 2005, p. 3; Mullahey et al., 1999, p. 3). Key qualifications such as self-reliance, communication skills and the development of own viewpoints shall be strengthened (cf. Winklhofer, 2008, p. 72; Knauer, Sturzenhecker, 2005, p. 3). On the other hand, BEE shall "inculcate […] a desire to participate in the complex and magical process that constructs the house, the town and the region" (UIA, 2008, p. 4). BEE promotes abilities which are relevant for decision making and participation and besides arouses interest in urban development and the built environment. Accordingly, BEE can be a starting point for further participation in the community (cf. Uttke, forthcoming; Räsänen, 2006, p. 14).

In practice the linkages between built environment education and youth participation are evident in concepts for both alike. For one thing participation places high

demands on young participants and thus qualification and education are regarded as a necessary component of participation processes (cf. Adams, 2006, p. 9; Bertelsmann Stiftung, 2009, pp. 60-61; Knauer, Sturzenhecker, 2005, p. 20). For another thing BEE is supposed to be participatory in order to engage young people in local development processes (cf. Kapanen, Svinhufvud, 2011, p. 9). Despite these linkages practical concepts of BEE and participation rarely focus on mutual references and strategic links between one another.

The described first glimpses on the linkages between built environment education and youth participation in planning processes ask for proof and furthermore raise many questions. What are in detail the interfaces between BEE and community participation? What exactly do young people learn in participation processes? Does experience from BEE indeed influence future commitment? How do BEE and participation complement each other and were do the two approaches aim for contrary goals?

In the following, practical experiences from the authors will be presented in order to shed light on the linkages between participation and education and to give first answers to the posed questions.

4.1 Practical Experience in Linking BEE and Youth Participation

As an approach to a deepened understanding of the linkages between participation and built environment education, the authors practical experiences from projects at the interface of the two fields will be described and analysed in the following.

First, findings from the EU project "Fantasy Design in Community" will be summarised. The project was designed to promote built environment education and focused on participatory design with young people. Therefore, it allows many assumptions on the linkage between participation and built environment education. Basing on a professional evaluation the results can be classified as practical experience from a scientific viewpoint.

The second example of practical experience presents an attempt to incorporate the viewpoint of adolescents. The findings are derived from the youth workshop "Young Cities Now!" which was conducted with young people who participated in divers planning processes all over Germany in 2009. One result of the workshop was a manifesto drawn up by the participants.

4.1.1 Fantasy Design – Children in Community

In the EU-project "Fantasy Design – Children in Community" innovative ways of design education were explored between 2009 and 2011. "Fantasy Design is a design education initiative […]. Its core idea is to give children and young people an opportunity to work with designers and to display their own design thinking in an international exhibition" (Kapanen, Svinhufvud, 2011, p. 9). The project focused on participatory design processes involving young people in design projects, solving

problems of their own environment and everyday life and discussing these issues in an international community (cf. Uttke, Heinrich, 2012, p. 18). Uttke/Heinrich conducted in 2011 the evaluation of this EU-project.

"Fantasy Design – Children in Community" was realised by partners from four different countries: Design Museum Helsinki (Finland), University College Sealand (Denmark), Design museum Gent (Belgium) and National Museum of Decorative Art Madrid (Spain). The Fantasy Design (FD) project consisted of central activities and components on national and international level. Local design projects of different tasks and scales working with designers and other professionals were conducted in all four countries (cf. Uttke, Heinrich, 2012, pp. 17 and 21). In total Fantasy Design consisted of 18 local projects in Finland, Denmark and Belgium and 12 workshops in Spain (cf. Kapanen, Svinhufvud, 2011, pp. 113-116). An international web site (http://www.fantasydesign.org/fd/) was used for the documentation of the projects, for compilation of information on design education in general (e. g. learning material for teachers) and communication within projects and amongst different projects. Throughout the process two international conferences were held. An international touring exhibition presenting design processes and products was both highlight and closing event of the project (cf. Uttke, Heinrich, 2012, p. 21).

Figure 2: "Fantasy Design in Community" local youth project in Gent (Photograph: A. Uttke)

The project was based on earlier international design educational programs: the first „Fantasi Design" (engl. Fantasy Design) project (1998–2000) and the second „Fantasy Design – Children and Young People as Designers" project (2003-2006)

(cf. Uttke, Heinrich, 2012, p. 14). Those first two Fantasy Design (FD) projects mainly focused on product design (cf. Uttke, forthcoming, p. 3). "Fantasy Design – Children in Community" (FD 3) retained key ideas and factors of success of the first two FD projects. Furthermore, deficits of the former projects were compensated and new components were added to the concept (cf. Uttke, Heinrich, 2012, pp. 57-58). One of the most important innovations of FD 3 was the explicit focus on community aspects and the built environment, such as

- „looking at design as a tool in building a sustainable and socially inclusive environment,
- working in collaboration with local authorities of planning and environment,
- including trans-sectoral aspects in local work; e.g. collaborating with social and health sectors, culture
- and administration,
- creating an European design community within the project" (Application Form to the EU Culture Programme / Education and Culture DG application FD 3, p. 8).

Figure 3: Testing and prototyping in the Fantasy Design project "Outdoor Artwork" (Photograph: E. Vasu, available at http://www.fantasydesign.org/fd/content/building-recycled-artwork, accessed 7 May 2012)

The spectrum of realised projects under the umbrella theme "Fantasy Design in Community" was very broad. Projects included re-designing of central spaces in communities, such as school yards, parks, youth houses and spaces for the youth,

community centres and neighbourhood spaces. Other projects focused on a communicative and collaborative process in product design discussing the needs of participants and clients in a community. Within the local design processes designers and educators with different professional background as well as local actors were partners. They assisted the children and adolescents acting as designers (cf. Uttke, Heinrich, 2012, p. 8).

Within the various projects different methods and principals were applied: young people worked as designers in teams, collaborations with local partners were built up and open design processes were created. As a design education project, supporting learning with design and promoting design methods in education was one of the main principles. All projects should trigger learning processes through personal experience and should allow exploring creativity and innovation through "real" design projects (cf. Application Form to the EU Culture Programme / Education and Culture DG application FD 3, p. 8).

An evaluation of the EU-project "Fantasy Design – Children in Community" was conducted by the two authors of this paper. Aim of the evaluation was to reflect on outcomes of the project. The methodology of the evaluation included a workshop with the four national coordinators of the project, face-to-face and e-mail interviews with several participants such as educators and designers, desktop studies of the Fantasy Design web site and documents as well as self-evaluations of the national coordinators and finally a visit to the international Fantasy Design touring exhibition in Gent (cf. Uttke, Heinrich, 2012, p. 12).

Figure 4: "Fantasy Design in Community" touring exhibition in Gent
(Photographs: A. Uttke)

Benchmarks for the evaluation were the project's objectives as described in the project application:

a) "to deepen and to extend the collaboration with central organizations in design education,
b) to promote contents and activities of innovative design education in Europe,
c) to create for children and young people a framework for informal learning and networking in local communities through real design tasks,

d) to use the possibilities of digital media (interactive web site) for collaboration and cross-cultural dialogue between children, young people, designers, educators and other stakeholders" (Uttke, Heinrich, 2012, p. 11).

As a participatory design project Fantasy Design and its local projects operated at the interface of (built environment) education and youth participation. Particularly important for the examination of linkages between the two issues is the third goal which addresses the framework for informal learning and networking in local communities. The evaluation stresses how closely related the aspects of BEE and participation are. Often education and participation are hardly separable within a project for both are fundamental for a successful process and high quality products.

Each local project of FD 3 proceeded from a "real" design task such as the (re-)development or (re-)design of a certain place within the community or existing needs from local stakeholders. This relation to young people's own environment and daily problems and needs gave the projects high authenticity. FD was originally conceptualised as an educational project. The task to engage in community design was used to give the young people the opportunity to directly participate in urban design processes involving local politicians, architects and urban planners. Instead of "just" learning something about design in community in theory or exercising design projects completely detached from the current local development, the young participants were able to actually implement own ideas and thus to influence and change their local environment. This practical and participatory component gave the young people a high motivation to learn about design because they were eager to realise own high quality projects. Accordingly, project components such as visits of local design museums were appreciated by the young participants. The young people obviously interpreted educational components as necessary prerequisite for their own design processes (cf. Uttke, Heinrich, 2012, p. 40-45).

Furthermore, being empowered to actually change the own environment gave the young people a strong feeling of appreciation and acknowledgement. They experienced how they can influence their surrounding and implement own ideas. The approach of learning-by-doing triggered their creativity and allowed them learning about design by playful means. This created not only feelings of success but was for many participants overall a formative experience (cf. Uttke, Heinrich, 2012, p. 44). This could be important for future participation and commitment in community development because the participants were very positive and motivated at the end of the project and inhibitions for participation processes were overcome through the projects. Statements from youth workers from Finland support this assumption. They report that since the involvement in Fantasy Design young people as well as youth workers are for example no longer "interested in just buying new furniture for the yard when they can make it in a more special way by building and recycling" (Kapanen quoted from Uttke, Heinrich, 2012, p. 44).

4.1.2 Young Cities Now!

An important aspect of the discussion on youth participation is the viewpoint of young people themselves. They are experts for their needs and should thus be allowed and encouraged to discuss and formulate their claims in view of youth participation. This is not least the case because young people's perspective on participation is highly relevant for a realisation of successful youth participation (cf. Bertelsmann Stiftung, 2009, p. 19). Therefore, young people's ideas and criticism in view of community participation will be considered in the following. As will be seen, young people do strongly link the issues of participation and education.

The workshop "Young Cities Now! Jugend.Stadt.Labor" (Young Cities Now! Youth.City.Laboratory; www.youngcitiesnow.de) was conducted in Berlin, Germany by the non-profit organisation JAS Jugend Architektur Stadt e.V. (Youth Architecture City) in November 2009 (Heinrich, 2010, p. 15). One of the authors was herself one of the project managers who conceptualised and conducted the workshop. The other author accomplished a scientific analysis of all material concerning youth participation which was produced during the workshop (Heinrich, 2010).

"Young Cities Now!" was a project within the research field "Adolescents in Urban Neighbourhoods" of the German Federal Institute for Research on Building, Urban Affairs and Spatial Development. This is one of the research fields within the research programme "Experimental Housing and Urban Development" of the German Federal Ministry of Transport, Building and Urban Development. Aim of the research field is to develop methods and strategies for youth participation on different levels of urban and neighbourhood development. In the long term the projects within this research field shall support the establishment of a youth participation culture and thus contribute to the creation of youth-friendly cities (cf. Heinrich, 2010, pp. 15-16; BBSR, 2009b, pp. 21-22; BBSR, 2010a).

In May 2009 a call for projects for the research field "Adolescents in Urban Neighbourhoods" was launched. 25 projects all over Germany were chosen from 220 applications. The range of applied methods and conducted projects was very broad – the adolescents used new media, made films and composed songs, they created art initiatives and festivals. Additionally, "Young Cities Now!" was selected as an add-on project inviting two representatives of each of the 25 pilot projects to a common workshop. Aim of this workshop was to give the youth ambassadors the opportunity to reflect, discuss and communicate their different experiences. As a result a manifesto should be written in order to set an impulse for the qualification of youth participation in planning processes (cf. BBSR, 2012; BBSR, 2010b; Heinrich, 2010, p. 16; BBSR, 2009a, p. 29).

In total 42 adolescents age 12 to 22 joined the three-day workshop in Berlin. The major topics they discussed were

- participation,
- communal life and neighbourhood,

- sport and action,
- chill out,
- art,
- music, and
- mobility (cf. BBSR, 2010b).

First a world café allowed all youngsters to share experiences, ideas and criticism on all of the seven main issues. In the further course of the workshop small groups focused on one topic each. After deepened discussions they formulated paragraphs and catchy slogans for the manifesto and created illustrations to underline their statements (cf. BBSR, 2010b; Heinrich, 2010, pp. 16-18; JAS, 2009).

Figure 5: Group discussion at the "Young Cities Now!" workshop
(Photograph: A. Meichsner)

In total the manifesto consists of eleven statements under the title "Live your city – bringing forward something new together. A manifesto for youth-friendly and liveable cities" (http://youngcitiesnow.de/manifest/). The first statement is entitled „Future is Youth – Trust us!" and addresses youth participation. The adolescents criticise the lack of confidence in the abilities of young people which reduces their opportunities for action and participation. As one solution to this lack of confidence and the consequential lack of participation the adolescents consider empowerment and education. The young people suggest projects, seminars and workshops as possible formats of education. The value they see in an aimed empowerment is

- a strengthening of interest in and motivation for youth participation and voluntary commitment amongst adolescents,
- a growth of confidence of adults in adolescents,
- an improvement of the quality of living in cities, and
- an acquisition of soft skills and key competences (cf. JAS, 2009).

The working material of the small group which explicitly concentrated on the issue of youth participation stresses this again and goes further into detail. The analysis of the working material was focused on four main issues:

- conditions of youth participation,
- formats of youth participation,
- motivations for youth participation, and
- topics and choice of topic for youth participation (cf. Heinrich, 2010, pp. 27-28).

All written documents (posters, index cards, text blocks) from the small group working on participation throughout the workshop were analysed via content analysis. Additionally, an expert interview was conducted with the supervisor of the working group (cf. Heinrich, 2010, pp. 21-22 and 24-25). The mass and diversity of points of discussion which could be identified from the working material shows how complex and intensive the adolescents discussed the issue of participation (cf. Heinrich, 2010, pp. 32-35). Furthermore, the analysis stresses that the young participants linked the subjects of education and participation in all four dimensions of the analysis although education was not a topic brought up by the supervisors.

Figure 6: Visualising their demands for the "Young Cities Now!" manifesto (Photograph: A. Meichsner)

The young participants interpret education as a necessary prerequisite and condition of participation. Within processes of participation the adolescents expect support from adults, especially from politicians and the administration. They summarise the expected with three key words: guidance, competence and learning. They describe

that they want to be supported developing certain skills. On the one hand they want to adopt those skills through participation and on the other hand they feel they need to be trained for participation. They link this qualification closely to the matter of trust. „Trust us" is the most prominent claim of the youth's manifesto. Obviously the adolescents gain self-confidence from the empowerment and they hope to be able to enrich planning processes in a way which builds up a certain trust in youth in general (cf. Heinrich, 2010, pp. 36-39; JAS, 2009).

In view of the forms of participation and education the adolescents discussed two major issues: Firstly, they claim the application of participatory methods which guarantee an individual support of all youngsters. Secondly, they address youngsters and ask them to support each other within participation processes. They do not necessarily link the issue of education to adults and supervisors. They see a high potential in learning from one another (cf. Heinrich, 2010, p. 39; JAS, 2009).

Figure 7: Final presentation of the "Young Cities Now!" manifesto to representatives from the Ministry of Transport, Building and Urban Development (Photograph: A. Meichsner)

The third dimension of the analysis was the motivation for youth participation from different viewpoints. As an overall societal reason for participation the adolescents see a possible strengthening of society through participation because of the many educational effects participation incorporates. From their own perspective they also value participation because of its educational effects but again stress that participation necessarily needs educational elements as precondition for a high quality (cf. Heinrich, 2010, pp. 40-41; JAS, 2009).

In view of topics and choice of topic for youth participation the youngsters state that generally they want to be allowed to participate in all contexts and discussions, not only those directly relevant for themselves. Issues they name specifically are amongst others competencies they would like to strengthen such as media usage and to learn to do interviews (cf. Heinrich, 2010, pp. 41-42; JAS, 2009).

In line with these findings the German Federal Institute for Research on Building, Urban Affairs and Spatial Development draws the following conclusion from the pilot projects of the research field "Adolescents in Urban Neighbourhoods": "Teenagers must be empowered in order to tap their potentials. Therefore, foundations must be laid to enable them to formulate their interests. For this purpose, knowledge must be conveyed and technical languages translated or learned. Based on this, teenagers are given the possibility of becoming independent players in the quarters themselves" (BBSR, 2012).

4.2 Lessons Learnt from the Practical Experience

The EU-project "Fantasy Design in Community" started as built environment and design education project. "Young Cities Now!" however was conceptualized as a participation project. Both projects nevertheless emphasise a close connection between BEE and participation.

The evaluation of "Fantasy Design – Children in Community" shows that projects on the interface between built environment education and participation attain very high quality. The young participants had a strong motivation to learn about their environment and design because they realised that the gained knowledge and skills could help them to realise projects of high quality. The youths considered it appropriate and purposeful to integrate learning processes in their projects and accordingly had a high level of motivation and willingness to learn. The young people enjoyed learning because it was meaningful and the educational components of the projects made the youths knowledgeable participants with increased self-confidence. The participatory component in turn increased the authenticity of the project, as projects were involved in real community development processes. The opportunity to implement own ideas in their local environment made the projects beneficial for the young people and at the same time expressed appreciation of the young people's commitment. The expression of appreciation is again a crucial factor within participation processes as the example of "Young Cities Now!" shows. Altogether, the evaluation clearly shows that one factor of success of Fantasy Design was indeed the linkage between built environment education and participation.

The analysis of the workshop „Young Cities Now!" and the resulting manifesto reveals adolescent's viewpoint on participation and education. All participants were representatives of youth participation projects that focused on urban development. Based on their experience with community participation the adolescents clearly expressed that participation and built environment education are inseparable. Youth participation should be designed as an educational process which allows the

participants to learn from adults and from each other alike. For one thing the youths interpret BEE as necessary prerequisite and condition of participation because of the high demands placed on participants. For another thing they see BEE as a means to support individuals throughout participation processes and thus to strengthen the society as a whole.

4.3 Theoretical Discussion on Linkages between BEE and Participation

The theoretical discussions on built environment education on the one side and youth participation in community on the other are poorly linked. So far, there seems to be general agreement that participation automatically implies educational processes (cf. Düx, Sass, 2005, p. 397; Winklhofer, Zinser, 2005, p. 72). "Through first-hand experience [in participation processes], young people are building self-reliance, connecting with others, and learning about their inner resources and their own creative potential to forge a new sense of what is possible. They are transforming ideas into pragmatic proposals for action and advocating solutions to the urgent problems confronting their communities, their country, and their world" (Mullahey et al., 1999, p. 1). Nonetheless, the assumption on this connection between participation and education lacks empirical evidence (cf. Prein et al., 2009, pp. 530-531; Düx, 2005, p. 397).

A strong focus in research regarding these educational processes so far is on participation as an experience and training ground for democracy and civic education (cf. Hafeneger, 2005, p. 27; Knauer, Sturzenhecker, 2005, p. 11). In this sense, empirical studies proof a strong connection between education and participation in the way that an increasing level of education increases the general political interest, trust in social institutions and participation in organisations (cf. Winklhofer, 2008, pp. 77-78). "Young people need the experience of genuine participation and knowledge of the responsibilities of real citizenship to become effective decision makers. [...] A community planning process can serve as a springboard to actualize democratic citizenship" (Mullahey et al., 1999, p. 6).

First findings on educational effects of participation in general are presented in the investigation by Düx and Sass (2005). They analyse informal learning in the youth age in settings of voluntary commitment. Their results base on 72 face-to-face interviews with adolescents and young adults who are or have been voluntarily active. Furthermore, the data basis includes standardised telephone interviews with 1,500 persons who were engaged in voluntary activities as adolescents and 500 persons who did not engage in community commitment in their youth. The interpretation of the empirical material suggests that young people's commitment in the community leads to a development of skills which meet the conflicting demands of modern society. Skills such as personal, social and technical skills, responsibility, democratic participation and moral values are promoted (Düx, Sass, 2005, p. 398 and 408). On top of this, a recent review of international research on issues of acquisition of competencies and learning through commitment and participation can be found in Lerner et al. (2007) (cf. Prein et al., 2009, p. 532).

Starting from the discussion on education in general and built environment education in specific there seems to be general agreement on the insistence that meaningful education needs to be participative (cf. Kapanen, Svinhufvud, 2011, p. 9; Winklhofer, Zinser, 2005, p. 73). Despite the debate on educational effects of participation and participatory approaches to education there is little discussion on a purposeful integration of education and participation. Scientific research so far lacks investigations and discussions on the high demands on youths within participation processes and the questions what kind of education participation thus requires.

5. Conclusion

The theoretical discussion on linkages between built environment education and youth participation in community shows that it is generally assumed and partially proved that meaningful education needs to be participative and that participation automatically implies educational processes especially in view of civic education. The two practical examples introduced in this paper – "Fantasy Design in Community" and "Young Cities Now!" – added a further aspect to the current scientific debate on participation and education. While youth participation and built environment education are mostly considered apart in theoretical and empirical studies so far, the practical experience emphasises that an integrated consideration is productive.

Based on the findings from "Fantasy Design" and "Young Cities Now!" the authors strongly recommend expanding the occasional educational processes within participation processes through a deliberate integration of built environment education. BEE should be an integral part of participation processes. Gained skills could improve process and product quality of youth participation. This would make participation a positive and formative experience and young people more knowledgeable participants. Furthermore, having participated in a successful project once, the young people would more likely participate in future projects.

Hart's ladder of youth participation introduced different degrees of participation. Hart stresses that a higher rug of the ladder of participation is not necessarily the better one but that the degree of participation simply needs to suit the respective project. Nevertheless, it seems obvious that the higher the rug and thus the higher the degree of agency by young people, the more demanding and challenging youth participation becomes for young people. The authors conclude that a debate on the inclusion of BEE in participation processes is necessary to enable young people to participate on the higher rugs of the ladder of participation. The discussion on linkages between the two fields of education and participation should definitely take into consideration the different degrees of participation and the arising need for support and education in projects of a higher degree of participation. This enriches the on-going discussion on whether children and youths are able and capable to truly participate in community planning (cf. Christensen, O'Brien, 2003, p. 10).

Despite the presented recommendation to link built environment education and youth participation in planning processes the authors are aware of the risks and problems this might incorporate. “Young people's work that focuses on individual learning and development, rather than on changing their surroundings, is not real participation” (Mullahey et al., 1999, p. 4). In this sense, Knauer and Sturzenhecker (2005) come to the conclusion that by definition youth participation is not pedagogical because here youths act as political actors and policy-maker. But because this seems hardly manageable without certain knowledge and skills, coaching and training should be integrated in participation processes (cf. Knauer, Sturzenhecker, 2005, pp. 19-20). Participation processes must not be instrumentalised as pure educational processes but it seems necessary and productive to integrate educators and built environment education in youth participation.

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THE CONUNDRUM OF A STATE SPATIAL PLAN IMPLEMENTATION: THE SPATIAL PLAN OF THE REPUBLIC OF SERBIA (2010)

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Abstract

Political changes in Central and Eastern Europe, initiated with the fall of the Berlin Wall (1989), had immediate and strong impact in Serbia. However, economic and political reforms of post-socialist transition in Serbia, followed with the dissolution of Yugoslavia at the beginning of 1990s, have been going through a number of "ups and downs". One of the causes lies in the fact that majority of those reforms have been imposed on the society at large by the political and economic elites, almost without any broader public dialogue undertaken about the main directions, content and implementation means of such reforms. The current socio-economic situation of Serbia is poor, mainly taking the form of a "growth without development". While facing a number of difficulties, Serbia also fails in institutional and organizational adjustments, to cope with the predictable bleak future development prospects.

The former *Spatial Plan of the Republic of Serbia* from 1996 defined a very complex set of implementation measures and support, which was stipulated for further elaboration, via a particular implementation programme. However, this programme has never been worked out. For the newly adopted *Spatial Plan* (2010), the *Programme for implementation in the period 2011-2015* has already been adopted, but there are still many obstacles in the current system and practice of spatial and environmental planning, which represent a mixture of old habits and substandard approaches, with only some adjustments to current EU legislation and good practice introduced. Therefore, the main worries remain – will it be possible, and how, to reverse the existing institutional and organizational solutions and practices, in order to implement at least the majority of strategic aims from this leading strategic document, on the one hand, and thereby to support the renewal of strategic research, thinking and governance in Serbia, on the other.

Key words: national spatial plan of Serbia, implementation, post-socialist transition, collapse of strategic thinking, research and governance

1. Introductory notes on post-socialist transition in Serbia

The collapse of communist/socialistic system in Central and Eastern European countries has induced different reactions from their political and economic elites. Success of the ways those governments and experts tried to solve these new challenges are still much reflected in today's economic and geo-political position of their countries and wellbeing of their nations.

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For its specific socialistic/communist (self-governing socialism) and political heritage (a part of both the East and the West), Serbia holds the distinct position regarding the process of socio-political and economic transition. Since the 1950s, the Yugoslav version of a Bolshevik ideological paradigm, i.e. "self-managed socialism" has been developed as quasi-market and quasi-liberal, but at the same time it was also quite opened to the economic, political and cultural influences from the "West", the so called "Third world nations" and the "Socialist block" (Vujošević et.al., 2010). This period was characterised by an enormous economic and overall development, but already experienced a crisis in the middle of 1970s and finally collapsed in the early 1990s after the fall of the Berlin wall.

The unstable political situation (civil wars for Yugoslav secession started in 1991) and deep economic crisis directed Serbia towards rather bleak development prospects. Therefore, the initial phase of transition period (1991-2000) or the so called "blocked transformation" (Lazić and Vuletić, 2009) has been devastating for Serbia. For the period of more than ten years the country was isolated from the mainstream trends of European integration and convergence.

Serbia's comparative advantages and competitiveness have worsened in two key aspects: firstly, in terms of its structural qualities, and secondly, in terms of its territorial capital, whereby Serbia's "endogenous capital" and competitiveness lost a large part of their previous value and potential. Especially has worsened the so-called "soft territorial capital", together with the weakening capacity for strategic research, thinking and governance. (Vujošević et. al., 2012, and Vujošević et. al., 2010).

After the political changes in October 2000, substantial economic, material institutional and organizational progress has been accomplished in the subsequent period. Though, that wasn't enough to satisfy the expectations of the overwhelming majority of the population. The economic recovery from 2000 onwards, while fairly dynamic (by the average annual GDP growth of almost 5%) has still been insufficient and more or less assumed the form of a "growth without development", as well as a long unsustainable development. Although transition reforms in Serbia have progressed, their political legitimacy is rather poor, since veritable societal dialogue has not been established so far, nor has societal consensus been reached on the most important issues. The country is still among the least developed ones in Europe (a part of the "inner peripheries of Europe", Göler, 2005) and faces a vast number of very complex developmental problems and also many challenges. Its development prospects, at least over a mid-term period, are not bright. The global and national economic crisis, as from 2008 onwards, has only worsened the existing conditions and future prospects.

In the sequel of this paper a short account of the different institutional, economic, social and environmental changes and adjustments is given. This is followed by a brief overview of planning and governance system and practice. The comparison of the latest (2010) and previous (1996) Spatial plan of the Republic of Serbia and their implementation measures and support will also be presented. Finally, some conclusions regarding possible development prospects of Serbia, and renewal of strategic research, thinking and governance in Serbia are given.

2. Collapse of planning system and practice

Although more than two decades have passed since the process of transition from socialism to capitalism started in CEE countries, Serbia is still in a phase of post-socialist "proto-democracy", where institutions of market economy, civil society and representative

democracy are only basically developed. While the "good" parts of the Yugoslav self-management system have been abandoned and almost forgotten, its bad parts, e.g., paternalism, manipulation, clientilism, etc. are still being kept.

Serbia has now found itself in a deep crisis, which is even more emphasized by the ongoing world economic crisis. The current economic development of Serbia is poor, mainly taking the form of a "growth without development". The new dilemma that emerged in front of Serbian elites reads: "What would be a successful development path for the Serbian society today?" As only recently (in March 2012) it finally received a status of candidate member of European Union, Serbia has been trying for so long to "Europeanise outside the EU", which has put forth additional challenges to its development. Today, after many years of reforms, with some ups and downs, a lot of people in Serbia are the objective losers due to an application of contemporary models. The main economic consequence of this period is a stunning redistribution of a social wealth, followed by a total destruction of the former economic system and formation of new interest-groups in this isolated semi-martial economy. Since 2000 there have been attempts to improve that new and unjust economic distribution by measures like a tax on extra profit, but they mainly remained unsuccessful due to absence of other measures of political transition, like reform of the security sector, reform of the tribunal and prosecution, restitution and denationalisation, etc.

From the beginning of the post-socialist transition, one of the most radical changes in Serbia was attempt to create a new balance in the state (power) – market – planning – privatization quadrangle. This "search for a new balance" has a great influence on development planning and governance system and practice. However, there has been a retrogression of strategic thinking, research and governance in last two decades or so. Planning system, and particularly planning practice have not been developed in accord with the "asymptotic ideal" of a democratic, participative and emancipatory-modernising model, but rather manipulation, clientelism and paternalism dominated in practice. After many years when an eminently anti-planning and anti-developing attitude dominated among the elites, a large number of development documents (strategies, plans, etc.) have been adopted in recent years at various governance levels (state/national, regional, and local), totalling many hundreds of the kind.

In terms of institutional and organizational arrangements in planning, in parallel two tendencies took the place: on the one hand, a number of old "institutional zombies" have been kept; on the other, "management agencies" and similar organizations have been introduced at large. The latter proved of almost no use to cope with the key development problems and challenges Serbia has been facing for a longer period now. In sum, the legitimacy of planning is relatively low, while planning practice represents a mixture of elements from different "models": planning as crisis management; planning as a mechanism for support of "uncontrolled privatisation and wild marketisation" (with domination of big projects instead of strategic development programmes); and, the least practised but mostly needed, planning where institutional framework is accommodated to the needed social, economic, cultural and environmental transformation of Serbian society (see Vujošević et. al., 2010).

3. Old and new Spatial Plan of the Republic of Serbia

In the last 20 years there have been two attempts to redirect the existing, undesirable direction of development from the spatial and environmental perspective, and provide a common strategic framework for the coordination and integration of different and multi-levelled

development policies, viz., *Spatial Plan of the Republic of Serbia* from 1996, and *Spatial Plan of the Republic of Serbia 2010-2020* adopted in 2010.

When *Spatial Plan of the Republic of Serbia* was adopted in 1996, Serbia (at that time part of the Federal Republic of Yugoslavia) was first among the post-socialist countries that have had a newly prepared and adopted national spatial plan. The *Plan* consisted of a large number of basic reference points, strategic commitments and general goals (English version, 1997:9-12), viz.:

- A higher degree of functional integration of Serbia's territory;
- Better communication and economic links between Serbia and its neighbouring and other European countries;
- More balanced regional development (decreasing regional disproportions);
- Improvement of life quality in macro and regional centres;
- Effective introduction of the principle of polycentric development;
- Developing rural areas as multifunctional production, social and cultural entities;
- Priority development of insufficiently developed border and mountain areas;
- Introduction of rigorous location, technical, techno-economic and environmental criteria in investment and decision-making procedures;
- Careful management, rational use and protection of natural resources, and protection of natural and cultural heritage;
- Priority protection for best-preserved and most valuable ecological areas, and those with best prospects for sustainable development;
- Providing the timely reservation of space in the corridors of technical infrastructure;
- Combating illegal construction and un-planned space utilisation; etc.

The intention was to produce a strategic document to be "more than a plan", i.e., to instigate a number of legislative, normative, institutional, organisational and other changes in the planning system and practice. The *Plan* encompassed a very elaborate system of implementation measures and support. Those measures were stipulated to be elaborated in detail in the particular implementation programme, which, however, had never been made. It has turned out that one of the main problems lied in its implementation and coordination, or, as Anker (1998) had noticed: "there is a need for further coordination of the proposed concepts over the medium term with other policies and development measures".

No systematic monitoring or *ex post* evaluation of the implementation of the *Spatial Plan of the Republic of Serbia* (1996) has ever been carried out, but it could safely be concluded that the majority of its provisions have never been carried out. Apart from a number of some mostly exogenous factors (viz., international sanctions and isolation of the country, slow pace of transition reforms, NATO bombardment in 1999, etc.), a lack of effective political will played key role for its poor implementation. Only the preparation of spatial plans at lower planning levels was more successful, as well as an indirect implementation of some of its propositions via spatial and urban plans at sub-national planning levels. In sum, the realisation of a few elements of the *Plan* turned out to be erratic and accidental, more as an outcome of non-coordinated activities of some individual actors, than resulting from the organised and systematic efforts of key institutional actors (Vujošević, 2010).

Similarly, the new *Plan* (2010) has replicated the ambitions, approach and structure of the former *Plan* (1996). As its precursor, it has also demonstrated an ambition to be "more than a mere spatial plan" at the national level, apropos, it has introduced a number of measures and

instruments targeted at broader reform of systems, approaches and practices in the sphere of sustainable spatial planning and governance. Alike to the previous *Plan*, this new *Plan* also defined many different propositions (as a part of different categories), which will probably prove unmanageable due to the poorly developed planning culture and capacity, as it has happened with the strategic document from 1996. Even more than the former *Plan*, the new *Plan* insists on adequate implementation of key sustainable spatial development propositions, also by realising the Programme of implementation (2011) which has been elaborated and adopted one year after the *Plan* itself. Some other differences between these two strategic documents include:

- The new *Plan* devoted more space to novel categories from the European planning discourse (e.g. "territorial cohesion", "social inclusion", "territorial capital", "urban-rural cooperation", etc.);

- Not having been daunted by the existing poor development conditions, the authors of the new *Plan* envisaged the "long term vision of spatial development of Serbia" imbued with further "boosterism" like: "In the future Serbia should be territorially defined and regionally well balanced, competitive, socially coherent and stable with sustainable economic growth, proper infrastructure and good transport accessibility, preservation and protection of natural and cultural heritage, enhanced environment and functionally integrated with neighbouring countries and regions''. (*Spatial plan of the Republic of Serbia 2010-2014-2020*, Abridged version, 2010: 9);

- The new document has paid, at least nominally, more attention to spatial development scenarios. Two basic scenarios have been defined – "scenario of recessive growth with the elements of crisis management" ("predictably not to last more than 3-4 years"), and "scenario of sustainable spatial development", to emulate the above defined vision and subsumed key strategic goals in the sectors comprised by the *Plan* (*Zakon o Prostornom planu Republike Srbije od 2010. do 2020. godine*, 2010:31-35);[3]

- For the monitoring and *ex post* evaluation of the key strategic propositions of the *Plan* an elaborate list of indicators has been defined and further elaborated in detail in the *Programme of Implementation of the Spatial Plan of the Republic of Serbia from 2010 till 2020* (2011);

- The broader contextual factors that influence the implementation of the new *Plan* (2010) are in many respects different as compared to those pertaining to the implementation of the former *Plan* (1996). Regarding the effective manoeuvring space of the planning authorities at various governance levels, this has even narrowed in three key aspects: misbalances are worse, the macroeconomic situation is worse, and the foreign debt has reached a multi-ten billion of €, altogether crippling the effective capacity to introduce more redistributive policies, which are however an imperative vis-à-vis ever enlarging territorial misbalances and social differentiation and polarization; and

[3] Within the latter, a number of reform steps have been stipulated with regard to the following "frameworks": legal and institutional; market, economic and development; macroeconomic; demographic; social; ecological; and spatial-urban. This scenario contemplates four specific sub-scenarios ("variants"), viz.: "negative economic growth and disintegrated spatial system" (1); "negative economic growth and integrated and partially regulated spatial system" (2); "positive economic growth and disintegrated and partially regulated spatial system" (3); and "positive economic growth and integrated spatial system" (4), all under different assumptions regarding the pace of intensity of the integration of Serbia into the European Union.

- The utmost limit to the *Plan's* implementation is stemming from a predominant compartmentalization of development policies in Serbia. The work of ministries is extremely competing and uncoordinated, as being mostly managed under the auspices of political parties as their "feuds", under the circumstances of prevailing "partitocracy", as the current state of political governance of Serbia is depicted by the majority of most authoritative commentators. Under such circumstances, it can be hardly expected that new *Plan* will act as strategic framework for integrating specific (sector) approaches and concepts, i.e., combining both spatio-ecological (environmental) proper, and broader economic and development concerns; etc.

4. Concluding remarks

Paralleling the collapse of strategic thinking, research and governance, lasting now for more than 20 years, there has been a lack of effective and implementable strategies in Serbia for resolution of its key developmental problems, and some necessary strategies are still missing as well. Despite the fact that in recent seven or eight years several hundred strategic development documents have been adopted (at various governance levels), an overall "exit strategy" is missing to cope with the prolonged crisis, for which reason some commentators have been pointing to a "developmental schizophrenia" (Vujošević, 2010). This also applies to the *Spatial Plan of the Republic of Serbia 2010-2014-2020*, which was adopted in 2010. Within the overall strategic framework, this document contains a number of various sector conceptions. The enclosed implementation means, however, have not been formulated so that they could effectively support the implementation of the respective sector concepts, vis-à-vis disposable financial and other resources. Similarly, existing institutional and organizational arrangements, which have recently been introduced, do not properly reflect the differences between various regional areas, especially vis-à-vis the concentration of activities and population in the metropolitan area of Belgrade and Novi Sad ("Serbian spatial banana"), and concomitant lagging behind of majority of other regions of Serbia. This could be improved via the *Plan's* implementation programme, which ought to be coordinated with other strategic frameworks, both overall and sector-wise. They should altogether focus on the key developmental problems of Serbia, always keeping in mind that the disposable resources are scarce vis-à-vis the predictably prolonged economic crisis (1) and, also predictable, "long and difficult Europeanization of Serbia outside the European Union and with its limited financial and other support" (2). Within the overall strategic framework, this document contains a number of various sector conceptions, also comprising those of balanced regional demographic development. However, for the effective implementation of overall and sector development concept, now a clear political will to define implementation means and mechanisms will have to be demonstrated. Particularly, new institutional and organisational arrangements are needed for the strategic governance in the Belgrade and Novi Sad metropolitan area. In addition to this, a new approach is also needed with regard to the utilization of territorial capital of Serbia, this being a relatively new thematic issue in European spatial planning, also addressed in Serbia only as from very recently. The *Spatial Plan of the Republic of Serbia 2010-2014-2020* represented a first attempt of the kind, i.e., to address this theme in a strategic document at the state (national) level, paralleling few regional plans also comprising this issue in a more significant way. Apart from dealing with the geographical and traffic position of Serbia, some other aspects of overall territorial capital of Serbia have also been taken into account. However, the approach and defined concept have been applied rather rudimentary and insufficiently, especially vis-à-vis implementation of the

Plan and concomitant institutional and organisational support, either at the state (national) or at the regional governance levels.

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INTELLIGENT PLANS FOR INTELLIGENT CITIES

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Abstract

The concept of digital city has been evolving since the 1990s towards the formation of a knowledge society enabling the exercise of citizenship through different types of participatory processes and levels of involvement in city planning. This is made possible by the amazing volume of information that is now available to all, supported by Information and Communication Technologies and the growing field of Intelligent Systems. The concept of intelligent cities (IC) is related to the notion of collective urban intelligence that can be enhanced through different factors: learning, innovation, organizational capacity and leadership or creativity and competitiveness. The four challenging topics of evaluation, governance, intelligence and complexity are used to introduce the concept of intelligent plan (IP) as a cornerstone to IC. Using a three level approach (planning process, plan and territory) crossed with the planning evaluation timeline (*ex post*, ongoing and *ex ante*), the authors argue that the Intelligent Plan should take advantage of ongoing evaluation and monitoring, should preserve memory, have ability to display visions into the future and allow for strong interaction between local authority (the plan owner) and urban actors. Applying the attribute "intelligence" to cities and urban plans and its quasi personification as autonomous and living entities, which do not necessarily presuppose automation, is seen by the authors, above all, as a way of instilling reflection.

The article seeks to explore the attributes of IC, bringing new digital "faces" for IP and its future contribution concerning planning challenges derived from IC. Such a plan is highly dependent on Information and Communication Technologies (ICT) and Web-based-GIS which are seen as important drivers for enhancing interactions between citizens, planning process and city governance, improving a participated policy making and urban design and the effectiveness of plans and planning according to the intents of an increasing intelligent city that continues evolving and adapting.

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1. Introduction

'Intelligent Cities' and 'Smart Cities' are the present concepts that succeed to 'virtual cities', 'digital city', 'informational city', 'wired city', 'telecity', 'knowledge-based city', 'electronic communities', 'flexicity', 'teletopia', 'cyberville', among others, covering a wide range of electronic and digital applications related to digital spaces of communities and cities.

The label 'smart city' is used by the World Foundation for Smart Communities (http://www.smartcommunities.org/) to address the 'smart growth' issue. Here development is based on ICT and 'Smart Communities' are communities that have made a conscious effort to use information technology to transform life and work within its region in significant and fundamental ways. The concept of 'smart city' turned out to be popular and has been generally adopted by many cities, business industry and urban marketing, having had echo in the scientific literature of urban and regional studies and policy development, even in the EC and OECD initiatives. There have been some relevant efforts to address the concept (VUT, 2007) - structured on smart economy, smart mobility, smart environment, smart people, smart living and, finally, smart governance - anchored to traditional regional and neoclassical theories of urban growth and development, competitiveness, transport and ICT economics, natural resources, human and social capital, quality of life, and the participation of society members in cities.

Intelligent cities (IC), (communities, clusters, regions) were defined as multi-layer territorial systems of innovation (Komninos, 2009) that bring together: a) knowledge-intensive activities (the intelligence, inventiveness and creativity of the individuals who live and work in the city, widely explored by Richard Florida (2002)); b) institutions for cooperation in learning and innovation (the collective intelligence of a city's population allowing capacity of human communities to evolve towards higher order complexity and harmony, through differentiation and integration, competition and collaboration. (Atlee and Pór, 2006); c) and digital spaces for communication and interaction (the artificial intelligence embedded into the physical environment of the city and available to the city's population) in order to maximize the problem-solving capability of the city. Komninos (2002, 2009, 2011) states that the distinctive characteristic of an intelligent city is the high performance in the field of innovation, because innovation and solving of new problems are representative features of intelligence.

Smart city literature and research seem to put more emphasis on embedded systems (Steventon and Wright, 2006), sensors and interactive media, while intelligent cities rely more on collective intelligence / collaborative intelligence, innovation systems, and web-based collaborative spaces. In literature the concepts of smart and intelligent tend to overlap and try to integrate the three dimensions of urban space (physical, social, and digital), thus having strong similarities. Some authors sustain that 'smart city' is still quite a fuzzy concept (Caragliu et al, 2011). In addition, the

issues associated with Urbanism, Planning and the physical organization of the city and territory have not been properly considered. Likewise, the future shape of planning tools that currently do not address the increasingly digital dimension of urban space has been out of the scope of the literature. There is an apparent lack in smart city literature concerning the physical side addressing urbanism and planning functions. Hollands (2008) report some problems: the splintering urbanism (fragmentation and polarization, economically and socially); growing contrast between creative classes and IT illiterate sections of the population; social inequality and urban gentrification; conflict between environment sustainability and economic growth. Hollands argues for a more progressive smart city that might use ICT to enhance democratic debates about the kind of city it wants to be and what kind of city people want to live in – a type of virtual 'public culture'.

In general, this debate has gone alongside planning practice and plans ignoring its influence in urban development. In all countries urbanism and urban planning have their own idiosyncrasies and go side by side with the legal system of planning in force. In Portugal it is well rooted in both public opinion and the media that urban planning (and in general spatial planning) is a problem that remains unsolved. In many countries, the plan is still an important instrument in the practice of planning, guiding private and public initiatives and more recently supporting public participation and strategy building, in spite of many criticisms that have forced a progressive shift from planning to process and to the improvement of city governance. And the question remains: What is the role for urbanism, urban planning and plans regarding the future IC?

Rephrasing Hollands' statement concerning the need for a 'virtual public culture', we would appeal for a 'virtual planning culture' enabling a more progressive intelligent city that links urban planning and society. This would mean also a less pro-business city, with smart (quick) and traditional reactive attitude from policy makers but a city that has a medium- and long-term policy agenda. For our purpose this is a good reason to differentiate smart city from intelligent city.

This requires different planning practices but also a different planning product (a different Plan) better adapted to an increasingly digital urban infrastructure that here and there is already including some smart devices embedded in the urban environment (e.g. the Intelligent Transport Systems), but also an increasing amount of urban information made available online and instantly – the ubiquitous city (U-city) - where virtually everything is linked to highly connected information systems (see Choi, 2010).

Within this paper we intend to explore and discuss a new type of plan for cities - we have called it an 'Intelligent Plan' (IP) - as the cornerstone for the future Intelligent City.

2. Four challenging topics for the planning process - evaluation, governance, intelligence, complexity

This notion of a new plan format better adapted for intelligent cities is our provocative starting point that triggers, at least, two questions. The first is "Does the Intelligent City need a plan?" and the second is "If the Intelligent City needs a Plan, what type of plan is it?".

In fact, we believe that an intelligent city still needs a plan. Or better than this, it still needs planning. And planning process should give form to urban development strategies. It is important to state these strategies and, sometimes, to give them an urban form, usually with some rules and to promote public participation and public agreements with stakeholders and community. So, we need to express all this in a plan that acts as a public contract. We also need a plan to promote public participation and to assure transparency to planning process. However, in the context of intelligent cities, this plan should be more interactive, informative and self-explanatory. We have considered four topics that should be the basis for the discussion about the intelligent plan: evaluation, governance, intelligence and complexity.

2.1 Evaluation

There is an extensive literature concerning evaluation in planning (Oliveira & Pinho, 2010) that has been giving useful insights to improve plan making. The traditional timeline of evaluation - "*ex post* evaluation" (what has been done, how, why, by whom), "*ex ante* evaluation" (what should be done considering what is going or is expected to happen), the "ongoing evaluation" (a type of evaluation that takes advantage of plan monitoring and that allows for changing the course of things in time) – can be a first framework to consider. Lessons learnt from *ex post* evaluation practices (Lichfield & Prat, 1998) put the accent on the preservation, as complete as possible, of planning process memory, including previous plans, strategies, options, their implementation and results. *Ex ante* evaluation, the most and more widely explored type of plan's evaluation, puts the accent on the ability to anticipate change allowing for the *a priori* evaluation of the plan and its components. Finally, ongoing evaluation (or "*in continuum* evaluation") and monitoring (Silva, 2006) place the emphasis on the planning process that produces and takes advantage of information (that is being produced and stored, namely through monitoring indicators) and has the ability to process that information in order to give inputs to plan improvements and adjustments in the course of plan implementation.

Conformance and performance principles (Mastop & Faludi, 1997) should also be considered. The first uses a framework of explicit intentions and plan objectives that should be structured in order to be compared with results that are being obtained. The performance principle is better oriented to plans with a strategic dimension and uses different criteria to assess the plan success, such as the utilization of the plan by the community and as a frame of reference to decision making. Planning rights, explored

by Alexander (2002, 2007), are dependent on a specific institutional context but should also be considered as important key-points to ensure a lower threshold of quality to plans, namely as far as public participation, non-discrimination, human dignity and social and distributional justice are concerned.

In a few words we would say that the intelligent plan has to consider the rationale for what, and for whom, it will be evaluated on its own course of implementation favoring an ongoing evaluation process, by planners, politicians and the community.

2.2 Governance

Governance has been an issue of strong debate and has an extensive theoretical literature on which to draw. According to Santinha & Anselmo de Castro (2010) this has led to several reforms in public administration and in the delivery of public services. The growing awareness that governments need to interact with society at different levels in order to tackle the emerging challenges has enabled city governance to involve all informal and formal actors in policy design, decision-making and delivery, with high levels of interaction with citizens, socioeconomic agents, and other public institutions. The emphasis has moved from the power to decide to the power to transform through an active multilevel cooperation. Within this process ICT may have an important role to develop innovative solutions and improve governance mechanisms to reduce deadlocks, conflicts of interest or differences in attitude arising among stakeholders, which are very common in territorial arena. Van der Meer & Van Winden (2003:412) describes 'e-governance' as "the capacity of local administrations, in a dialectic exchange with social organizations, citizens and firms, to deploy ICT to achieve urban policy goals" and discern that access, infrastructure and content form a 'local digital flywheel' for the local information society.
Santinha & Anselmo de Castro (2010) present four levels in ICT use by local/ regional governments in their governance mechanisms: a) passive and unidirectional provision of web information – the technology is used as means to facilitate information delivery, namely cartography or land use plans, and other services of general interest located within its geographical area, namely in the field of health, education and tourism; b) ICT use for interaction and transaction purposes with citizens and other institutions, namely the submission of forms, payments, or the issuing of licenses and permits; c) the use of ICT in promoting interaction with citizens and other institutions so that full participation in policy design and decision making is granted; d) ICT used to bring many participants into the public policy domain not only in providing all technological and organizational means available for the full participation of citizens and other institutions, but mostly in developing complementary initiatives to provide people with, on the one hand, the necessary know-how to understand the utility of and have the willingness to participate in public policy design and decision making and, on the other hand, the needed mechanisms to organize collectively and therefore increase their capacity for participation and mobilization towards collective aims and interests. The same

authors have analyzed three Portuguese case-studies that can be located at the third level, being the fourth level the most difficult one to achieve.

2.3 Intelligence

Considering the urban planning context, 'intelligence' is derived from 'information' and "planning intelligence is strategic decision-support information that enables the planner and the community to identify, understand, and deal with new and trying situations" (Kaiser et al, 1995). Its foundation is an information system, which rapidly evolved with computers to what is known as Planning Support Systems (PSS) (Geertman and Stillwell, 2003; Batty, 2007). The massive use of GIS and Web-oriented ICT had also an outstanding development. Google Earth and systems alike boosted the 'virtual city' concept. Visualization and web based contexts are viewed as the future driving forces for PSS (Batty, 2007). Systems of Monitoring Indicators had a huge improvement in last years to monitor urban change and assess policies, planning and plans (Innes and Booher, 2000; Hoernig and Seasons, 2004; Wong, 2006) improving access to data, to its meaning and to better urban knowledge. As mentioned by Santinha & Anselmo Castro (2010:82), "if knowledge is the engine and information the fuel of economic development, ICT can be seen as driving the innovation process".

The intelligence of cities is intrinsically linked to data and information which are increasing in quantity and quality. Intelligent cities tend to require more collaborative and collective intelligence and new discussions concerning spatial intelligence are being presented in literature (Komninos, 2011). In any case, cognitive psychology could give good insights to discern about the intelligent city.

The future format of plans for cities will be digital and web based. And the main interrogations concerning plan making will be centred on tools made available to increase and develop that collective intelligence and on their different attributes and dimensions, to improve a more participative attitude, on information to trigger urban creativity and on governance tools to explore artificial intelligence and modelling.

2.4 Complexity

Cities and society are complex by nature. Recent developments concerning complexity theory try to uncover its mechanisms: urban long term evolution, path dependence, emergence, feedback, self-organization, resilience-adaptation among others. The main efforts in different scientific areas concerning the complexity of cities are centred on understanding fundamental principles governing global behaviour of these urban systems, expressed in terms of many dimensions (namely physical, ecological, economic and human) related to interactions and resulting patterns and structures that collectively define system responses. There have been many studies interested in local interaction between parts giving rise to an emergent global order, "the order out of chaos". This recognizes, somehow, the virtues of bottom up dynamics that have led to enhance participation in planning and the use of

collaborative planning practices as a means to reinforce the self-organization and self-adaptation power of cities. But in our point of view this is illusive if we think that those practices can lead to waive the plan, as a planning tool to organize cities. Alexander, Mazza and Moroni (2012) explained recently very well why we still need rules, and consequently, why we still need plans. Portugali (2011) also stated that the notions of complexity and self-organization are not in opposition, as apparently they seem to be, with the notions of planning and urban design, highlighting the importance of spatial cognition where planning can be at once a cognitive capability of humans as individuals and collectivities.

We are certainly far from the time when the Intelligent City would resemble a self-planned city, expression used by Portugalli (2011) which would require a new and different structure of planning and perhaps new planning authorities. But we cannot continue to ignore the role of models, simulation, technology, information and multiple types of communication in the organization of the city, which do not fit in the traditional and common format of plans. The "Intelligent plan" can be a first step to recognize and start to deal with the complex nature of cities in spatial planning.

3. What can be an Intelligent Plan?

Our problem to be investigated is centered on the fact that the present format of plans to cities does not match with the future intelligent city and it does not take advantage of ICT and digital space in urban societies. Despite having evolved into more dematerialized versions, made available on the Internet, these formal plans remain stuck to the traditional paper format. They remain static, generally blind without visual representations of the planned reality, rigid in time, with low interaction with people after plan adoption and difficult to interpret concerning the proposed changes to the antecedent plans. Therefore, the challenges are to design a new plan framework that can be adopted and web based, taking advantage of three types of Intelligence – Human, Collective and Artificial - in order to prepare better adherence/adaptation to the future Intelligent City.

This new plan format – the Intelligent Plan (IP) – is a challenge to scientific research because it seeks to overcome different problems. In the scope of intelligence we can devise the problem of information systems (openness of data access to different users and applications, uniqueness of digital applications and fragmentation of planning activities, tools to automate urban analysis and management). In the field of evaluation in planning there is the problem of structuring and preserving old plans, past planning options and policies, results, practice and urban change (spatial memory). Looking to the planned city there are problems such as those of visualizing intermediated stages of city being changed and simulating the planned city that is being built to evaluate its performance (self-explanatory power). Complexity leads us to understand the long-term evolution (memory) of the city and implies paying attention and favor bottom-up emerging behaviours from citizens and organizations which, in turn, recommend us to create mechanisms for communication and public participation. From the governance side different problems emerge: the interaction models between urban actors/ population and decision makers and planning

authorities to be embedded in IP; the automation of approvals and authorizations of land use changes and its public disclosure through the IP; the creation of automated tools to monitor policies, namely through monitoring indicators, dashboards and management tools.

The almost personification of the IP as an autonomous and living entity will be used in the context of this paper to help us think about its meaning, functions and main attributes.

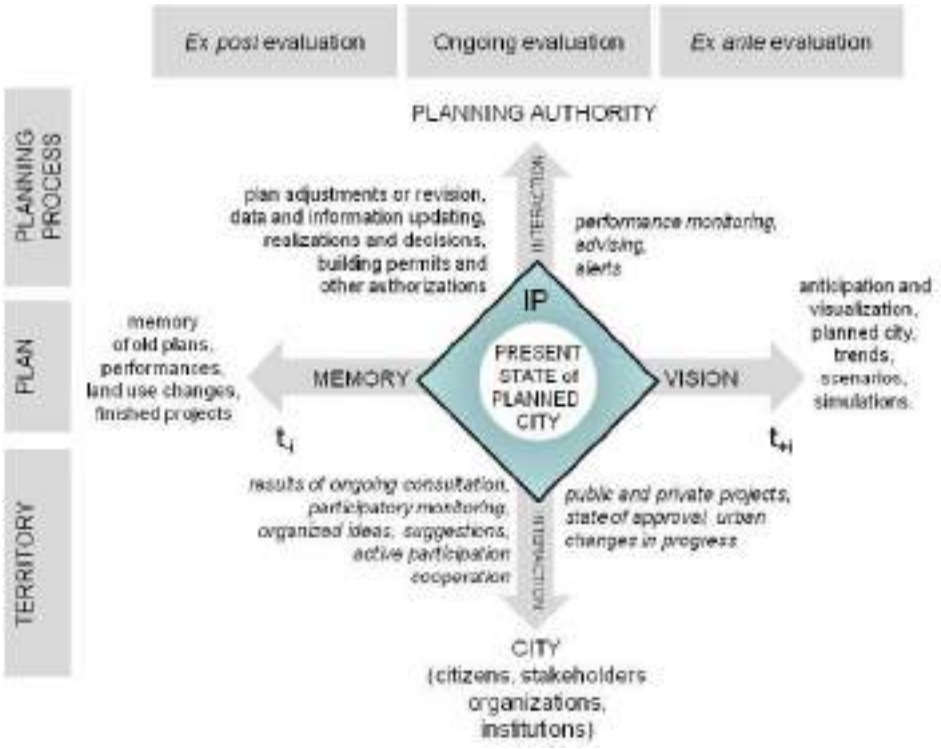

Figure 1 – the Intelligent Plan (IP) as a communication tool for planning authority and for urban actors concerning the past, present and future state of the intelligent city.

The attributes of the IP represented in Figure 1 cross the traditional timeline of evaluation types (*ex post*, ongoing and *ex ante*) with three evaluation levels – the Planning Process with strong interaction with the planning system - styles of planning, legislation, planning authorities and planners – with the formal Plan itself and the Territory (the city) that receives the influence of the Plan but has its own behavior and transformation mechanisms.

A second line of thought (Table 1) will try to link the IP with the idea of an IC which is expressed in Table 1. The attributes identified on the first column are based on extensive literature produced about IC and cognitive psychology, taking into account that the intelligent city is a collective and evolving body with similarities with human

intelligence attributes. In the second column we try to expand potential contributions that IP can give to IC. The type of IP considered here is based on the common functions envisaged for urban planning to structure, organize and prepare cities for future times.

Table 1 – Contributions from the Intelligent Plan to the Intelligent City

Attributes of the Intelligent City	Intelligent Plan
Intelligence (collective) / Education	
• Urban Knowledge and Learning • Problem solving and the construction and use of urban tools • Collective thinking (reasoning) • Mental representation (abilities of abstraction, generalization, interpretation concerning city)	• Repository of old plans, preservation of memory related to past planning process and past performance and evolution of city • Self-explanatory power (language) concerning policies, planning options and measures adopted • Takes advantage of Internet and augmented (mediated) reality through ICT devices to show urban changes (land use change, new public projects or private buildings) in progress or planned for the city. • IP has enhanced capabilities of representing virtual city being changed and planned, relating urban models, structures and abstractions to land use maps and proposals.
Communication	
• Takes advantage of digital infrastructure (ICT), physical space (public space, sustainable mobility) and public services (sustainable transportation) to fuel quality of life for all and develop human and social capital; • Urban open systems (available formats and open data to the creation of apps) and sensor networks • Ensures access for all social groups and organizations and enabling wide interactions • Stimulus to simplification, transparency and new public e-services; • Enables the relational capital of cities (among citizens/organizations and between cities).	• Offered as an ICT technological platform that relates local administration to citizens/organizations/ companies • Promotes and organizes public participation to different planning purposes (auscultation, hearing, partnership, collective deliberation, etc.) • Requires integration with urban planning and local urban management services (e-governance). • Gives and collects data that can be used and interpreted by urban actors • Displays benchmarking data, performance indicators and comparative analysis between cities on the course of plan implementation
Relational capability	
• Promoting human and social capital enabling social relationships among citizens and the expression of their emotions concerning city and urban life • Ability to relate to other cities	• Integration on (or integrating) local social networks
Creativity / Innovation	
• Entrepreneurial capabilities; • Inventiveness of individuals, organizations, institutions and companies • Openness to experimentation	• Providing office spaces, support services, financial backup and urban environments to nurturing creativity and innovation • Launching challenges and interpellations trough the plan to the community to solve problems or uncover solutions • Acceptance of temporary (non definitive) or

Biçimlendirilmiş: Girinti: Sol: 0 cm, Asılı: 0,25 cm

	experimental solutions by planning and planners and its formal inclusion in the plan
Healthy growth	
• Promotes a balanced metabolism and sustainable growth (production and consumption of resources and energy, green and social economy) • Ability to care for itself (social inclusion, territorial cohesion, preservation of social/ common services and supporting deprivation) • Balancing competitiveness/collaboration • Balancing differentiation/ integration • Seeking diversity (in all dimensions) • Capacity of adaptation (adaptability/ resilience) • Ability to reproduce itself.	• IP includes knowledge about the urban metabolism and measures of its evolution • Promotes diversity of urban typologies and urban ambiances • Promotes diversity of housing solutions for different social groups, taking into account the lifecycle of families in neighborhoods • Anticipates the risks and develops contingency programs and solutions • Enhances adaptability (resilience) of city and avoids a complete allocation of uses and a total definition of land use, accepting uncertainty and bottom-up initiatives. • Promotes city growth by multiplication, not by increasing its size, developing cities within the city and polycentrism within the system of cities.
Self-organization and wise management	
• Rules and self-control • Self-evaluation, monitoring and warning systems • Leadership and democratic governance • Stimulation for public participation • Enables an organized participation	• IP includes more flexible regulation, more agile in changing (improving) planning rules and developing stochastic norms that are triggered when a certain condition is met • IP offers information and interactive tools to more knowledgeable governance about population needs and desires. • Feeds leadership allowing for a participative monitoring • IP can open decision spaces to public discussion and deliberations • IP can offer some automation concerning mature methodologies of urban management (e.g. Urban Development Charges, land taxation, etc.).
Intentionality	
• Ability to develop common understandings and a collective consciousness (social, cultural, environmental and urban) • Structure future intentions, policies and take action • Ability to progress for long term planning (sustainability)	• Shows clearly the intent structure and how the objectives and strategies evolve in time with the successive revisions/ alterations of the plan (conformance) • Can automate (performance) levels of participation/interaction and how the IP is acting as a reference system to decision making • Can include monitoring dashboards, and offers simulation tools to anticipate configurations/ visions for future states of the city and its *ex-ante* evaluation.
Finality / Purpose	
• Creating citizens and develop citizenship, which allows collective thinking about the future of their city, what and how can be achieved and developing common strategies to get there.	• The IP should feed citizenship

It is our conviction that such IP should have, at least, the main following attributes (Figure 1):

Memory - preserving old/previous versions of plans, their objectives, options, realizations and performance and also previous images of city and its past transformation.
Vision – powering to anticipate urban change and visualize the future planned city, its trends and visual simulations concerning strategic projects.
Interaction capability – interaction with the city actors promoting consultation, enabling active participation individually or collectively organized, allowing to post individual initiatives or even private projects in order to an automated preliminary approval; interaction with the planning authority and the planning process in order to make possible plan adjustments or revisions, updating data concerning administrative and management decisions or including performance results using dashboards and monitoring indicators.
Self-explanatory power – presentation of an updated view of current state of city and all data/ information related to approved land use changes and building permits; showing an updated image of the virtual city that is being built which should be available to all the community; including clear explanations and justification of planning options using ICT concerning urban design, urban structure and regulations.
Reasoning – allowing collective thinking which may include graphical representations and mathematical formulations, capabilities of urban modelling (and some sort of artificial intelligence) in order to anticipate impacts from private actions or from public decision making and warning systems, namely those alerts concerning performance of plans and their objectives/ targets.

Vision and *Interaction* are in line with the two main performance strategies to increase the success of plans, following the main functions that plans should fulfill (Needham et al, 1997): the "vision model" where the attractiveness of the design is crucial but have to be perceived visually in all its multiple dimensions; the "consultation model" – a two-way participated process of plan-making. Visioning the virtual city being built or the planned city and scenarios are crucial to formulate and validate urban policies (Ramos, 2010). *Interaction* is a means to allow public participation in plan making and plan implementation. *Memory*, like in humans, is considered essential to build a sense of collective intelligence. The *self-explanatory power* is here assimilated to human language and can be explored in different ways by an IP. The *reasoning* ability pushes the IP to include models and artificial intelligence tools allowing some automation capabilities to support governance and interaction.

4. Conclusions

In Portugal every 308 municipalities have a master plan (Plano Director Municipal-PDM) for their territory and some cities have a land use plan (Plano de Urbanização). A high percentage of them (Santos et al, 2012) use GIS and the presence of the

municipality on the Web is widely observed. E-government had an increased development in Portugal at central and local levels which is internationally recognized - Portugal ranks first in the European tables for the sophistication and availability of its online public services (EC, 2010).
In general, local plans are still produced in paper format but many municipalities offer dematerialized versions in common digital formats (pdf, jpg). The General Directorate of Planning, responsible for the registration of all formal plans in Portugal, has moved to dematerialization and made available all plans in digital versions through SNIT (National System of Territorial Information, www.dgotdu.pt), which was a strong enhancement to the planning system.

Possible evolutionary steps could be, as proposed, to move from simple dematerialization to a plan format implemented as a technological platform, a true e-planning service with tools in front-office available to community and tools in back-office available to local authorities and planning departments. Therefore, the plan would become: interactive; acquiring and storing data from many sources, integrated with municipal planning systems; with memory concerning the succession of plans; embedded with monitoring indicators that would enable its multi-level ongoing evaluation; serving as a platform of collective communication tool for discussion of "collective hopes" and creation of visions for alternative scenarios and future development; displaying visualizations of the virtual city being planned and built and of the trends of the evolving city and its future configuration; enabling cooperative mechanisms regarding the process of finding and developing solutions; having tools to promote an organized participation process among citizens, public and private organizations; a plan that would promote high levels of transparency, advising and alerting.

An improved digital ICT has strong challenges to urban planning and plans: information asymmetry between citizens and administrations, access of the population to the web, different digital skills and economic and educational levels among the population. The more dynamic nature of such IP may present difficulties to its juridical side where the stability of plan regulations is considered important for the confidence of economic agents. Even the issue of transparency has its limits concerning some aspects of negotiation involved in the planning process. But other challenges related to this transfer from the traditional paper format to the web will have clear positive impacts on collective intelligence and on the planning culture of the city, as many other aspects of the information and knowledge society had in the last two decades.

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THE MEANING OF BIOMASS IN LANDSCAPE MANAGEMENT AND ENERGY PLANNING: UNDERUTILISED OR OVERESTIMATED?

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Abstract

A team with representatives of private and public sectors deals with the spatial organisation of Dutch river region WaalWeelde. They care about landscape management of the river flood plains, which takes in maintenance of nature areas and water safety measures. The team calls for improvement of landscape management, due to financial cuts and inefficient practice. The concept of ecosystem services is considered as a promising concept for changing landscape practice. Biomass resulting from landscape management can be considered as one of these prospective benefits. Whereas nowadays practitioners handle organic material mainly as a cost, in future it can be handled as, for example, a renewable energy resource. Notwithstanding this promising outline, some people are cynical about the feasibility of using biomass. What is the meaning of biomass, as ecosystem service, to improve landscape management in the WaalWeelde case? In this paper, we consider biomass as a 'matter of concern' (after Latour). Biomass is a physical 'matter' that can be valued from diverse perspectives, for example, in energy potential. Moreover, the meaning of biomass in practice depends on the 'concerns' of organisations involved in landscape management: their drives, instruments, rules and boundaries define to what extent biomass can really matter. A literature review shows that the value of biomass 'matters' in the WaalWeelde case is relatively limited but can increase. For example, harvest can expand by more active management, which also increase other spatial qualities. Moreover, cooperation is useful to bundle both biomass and ambitions. Spatial planners can play a key role in organising this cooperation. Then, an impression of actual 'concerns' of key landscape managers in WaalWeelde shows a vital challenge for spatial planners. Namely, hegemonic practice, rigid legislation and prevailing habits hinder change in the field, notwithstanding sustainable initiatives around biomass and willingness to cooperate.

1. Introduction

"Because the Waal belongs to us all!"[2]

Various private and public organisations are involved in the spatial organisation of river Waal surrounding in the Netherlands. River Waal is an important transport river of the Netherlands, part of the extensive Rhine Delta in Western Europe. In addition

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[2] Vision WaalWeelde (Project WaalWeelde 2010, p.2)

to their individual spatial practices, organisations cooperate under a program called WaalWeelde, directed by the province of Gelderland (www.waalweelde.nl). 'Waal' refers to an 80 kilometres long Waal section, from the German border to the castle of Loevestein in the middle of the country, part of the province of Gelderland. 'Weelde' means richness, referring to shipping, nature, rural functions and an attractive environment for housing and business. These various spatial functions need to be preserved, utilised and managed (Project WaalWeelde, 2010) but have diverse physical and social dynamics and are organised by different owners or institutions, each having specific practices and standards.

Landscape management: financial cuts and fragmentation

Whereas many teams under the WaalWeelde program are concerned with spatial visions and implementation of projects in view of *realising* spatial quality, one team is concerned with management in view of *continuing* spatial quality. This team is 'taskforce river flood plain management', concerned with maintenance and exploitation of WaalWeelde's flood plains. Management in WaalWeelde is based on water safety, transport standards (e.g. line-of sights), ecological norms (e.g. Natura 2000), as well as agricultural practice and recreational needs. In this paper we focus on land-based management (i.e landscape management), with special focus on vegetation management.

In general, landscape management in rural landscapes is crucial for sustaining natural and cultural values (Naveh, 1994). Surprisingly, landscape management is mostly neglected in Dutch comprehensive and communicative spatial planning approaches ('hidden responsibilities', Beunen & Hagens, 2010), though most space is subjected to management rather than to new development. Moreover, Dutch national government (i.e. 'Rutte cabinet' 2010) made large financial cuts in nature policy, including landscape management; meanwhile, decentralisation of nature and spatial policy from ministries to provincial authorities started, which still causes an unsure situation about tasks and possibilities. Furthermore, landscape management of Dutch river areas needs to be improved due to inefficient practice (Bureau Stroming, 2011). Landscape management in river flood plains is hindered by fragmentation of property and responsibility[3]. This 'practical' fragmentation comes together with discursive and institutional fragmentation. Namely, stakeholders have various viewpoints on the function or functions of Dutch river floodplains (Jacobs & Buijs, 2011; Fliervoet, 2012). Likewise, river flood plain management in the Netherlands has been dominated by a battle between technocratic (i.e. safety and agriculture) and ecological (i.e. 'dynamic' nature) approaches (Van der Brugge et al., 2005), notwithstanding spatial concepts intended to integrate various functions and implemented in practices ('Plan Stork' by Van Nieuwenhuijze et al., 1986; 'Cyclic

[3] For example, Rijkswaterstaat (i.e. the executive arm of the Dutch Ministry of Infrastructure and the Environment) is a key organisation in river floodplains. Its task concerning landscape management is manifold: DG water management is, overall, owner of the river shores (i.e. summer bed to river groins); contracting authority for water and vegetation management of the river shores; sometimes owner of other parts of the river floodplains, which are mostly put out to lease; temporarily owner of project areas, which are transferred to managers after completion; always responsible for permits concerning vegetation management, based on water safety and shipping rules, in the flood plains (interview RWS, 2012).

Floodplain Rejuvenation', Baptist et al., 2004). The challenges of finances and fragmentation also apply to landscape management in WaalWeelde's floodplains. Stakeholders and experts tackled these challenges during a two-day conference in June 2011. The conference was the start of 'taskforce river flood plain management' and resulted in three innovative scenario's for future landscape management for WaalWeelde's floodplains.

The potential of ecosystem service biomass
An important direction in each WaalWeelde scenario for future management, developed during the June 2011 conference, is to make better use of the socio-physical values of the river region. In other words, people concerned with management of WaalWeelde are encouraged 'to cash' material and cultural ecosystem services (cf. Melman et al., 2010), like sand for infrastructural works or an attractive environment for recreation. In addition, regions are forced to become less dependent on standard 'central' resources and find place-related 'decentral' resources (Pinto Correia et al., 2009). During the conference, scenario-makers mention residual biomass resulting from landscape management, wood and grass, as a promising 'new' ecosystem service. Namely, nowadays, Dutch practice mostly handles organic material from landscape management as a cost, whereas it can be handled as a source for renewable energy or other high-quality products. Moreover, using residual biomass from landscape management on local-regional scale can contribute to a very small but ecologically sustainable biomass supply for a national-international bio-based economy (Ros et al., 2012). However, knowledge about energy-flows in ecosystems and energy-conscious spatial planning, especially on the regional scale, is limited (Stremke & Koh, 2010).

'The tragedy' of ecosystem service biomass?
The idea of 'cashing biomass' from landscape management, instead of considering it as a cost, will overcome a 'tragedy of ecosystem services' (Lant et al., 2008). In line with the familiar 'tragedy of the commons' about over-exploitation of an environment by misplaced investments, a 'tragedy of ecosystem services' concerns under-exploitation by 'misplaced' (i.e. *non*placed) investments (ibid). Notwithstanding a promising plea to make better use of biomass in WaalWeelde by dedicated conference participants, other participants were more cynical about the feasibility of using biomass. To better understand this struggle between 'optimism and pessimism' as well as the actual situation, we study the potential of biomass for improving landscape management in the socio-political context of WaalWeelde. The main research question is: what is the meaning of biomass, as ecosystem service, to improve landscape management in the WaalWeelde case? In other words, is the potential of biomass underutilised or overestimated?

2. A realistic approach to the meaning of ecosystem service biomass

Ecosystem service contextualised: a theoretical reflection
Starting point of improving landscape management in Dutch river region WaalWeelde is, in this paper, the use of ecosystem service biomass. Starting from a

physical issue (i.e. an ecosystem service) is a sensible step in spatial planning since the future of our landscapes is a central task of planners (Perry, 2003); nevertheless, 'landscape' itself has been narrowed down in planning theory (Graham & Healey, 1999) and is overruled by theories about procedures. The key, then, is to *contextualise* ecosystem services and to understand *why* spatial planners deal, or do not deal, with specific ecosystem services (cf. Allmendinger 2002). An ecosystem service refers to "the benefits people obtain either directly or indirectly from ecosystems" (Millennium Ecosystem Assessment in Lant, et al. 2008, p.969). People only benefit if a service is made operational: recognition of its value, incorporation in policy practice and paid for (Daily et al., 2009). The possibility of 'cashing' an ecosystem service depends on individual, market and state engagement; this engagement implies clarifying and organising 'new rules' between 'buyers' and 'providers' of a service (Vatn, 2010). Such engagement and 'new rules', however, are difficult to realise.

Change, as engagement with a 'new' ecosystem service biomass in WaalWeelde to improve landscape management, is sensible in nowadays political-economic situation (section 1, this paper; cf. a 'trigger event': Kingdon, 2003). It may not only deliver financial support for landscape management but may even 'mobilise power' and create new coalitions of individual, market and state (Healey, 2006), which break through rigid spatial planning (Hajer & Zonneveld, 2000) and fragmented landscape management practice (section 1, this paper). The use of ecosystem service biomass on regional Waalweelde scale fits in a prospective energy perspective on planning (Stremke & Koh, 2010) yet needs to battle against existing hegemonic nature and safety perspectives (cf. Disco, 2002). Likewise, change depends on the flexibility of existing structures and procedures, as well as the will of existing authorities to release power if necessary (Moulaert et al., 2007; cf. 'fallacy of centrality', a lack of curiosity and ignorance of new ideas: Westrum, 1982; cf. 'self-referential' systems, in reference to Luhmann: Van Assche, 2007). In order to get a realistic picture of the meaning of ecosystem service biomass in WaalWeelde we accordingly need to investigate 'new' power and ambitions in local-regional spatial practice in relation to hegemonic planning practice.

Biomass as a 'matter of concern': an analytical framework

In this paper, in line with our theoretical reflection, we study an ecosystem service as a 'matter of concern' (after Latour, 2004). An ecosystem service is a physical 'matter' that can be valued from diverse perspectives, for example, in financial terms, energy potential or cultural significance. Moreover, the meaning of an ecosystem service in practice depends on the 'concerns' of owners, landscape managers, users and organisations involved (i.e. its system); their drives, instruments, rules and boundaries define to what extent a service can really matter. For example, organic material from landscape management was often categorised as 'waste' by legislation and needed to be dealt with accordingly (Senternovem, 2005; see www.agentschap.nl for new European Waste Legislation). And, for example, logging techniques in relation to accessibility of a site define the actual availability of biomass (Kuiper & De Lint, 2008).

For a realistic picture of the meaning of biomass in river region WaalWeelde, we study the *combination* of matters and concerns. For simplification, though, we sketch four -theoretical- possibilities, based on a combination of scores for 'matters' and 'concerns' (see table 1). Ecosystem service *matters* hover between little and high potential, taking in socio-physical values of the service. Ecosystem service *concerns* refer to the effort and input of people and related institutions to 'cash' a service (cf. Vatn, 2010), which hover between passive (i.e. ignorant, prioritising other issues) and committed (i.e. eager, capable, organising) systems.

Figure 1 The meaning of an ecosystem service in practice

The meaning of an ecosystem service in practice Hagens 2012		**'matters'** potential, including values	
		little	**high**
'concerns' efforts & input	**passive system**	A. unfeasible	B. underutilised
	committed system	C. overestimation	D. feasible

Four -theoretical- scenarios emerge:

A. *Scenario unfeasible*: the amount and value of biomass is limited and the system is reluctant to use biomass for, for example, energy-production (i.e. a dark scenario);
B. *Scenario underutilised*: the, hidden, potential of biomass is considerable but has little meaning since individual, market and government are not willing or capable of utilising its potential;
C. *Scenario overestimation:* the expectations and willingness to participate in the exploitation of biomass are high but the actual amount of biomass is of little value;
D. *Scenario feasible*: both the potential biomass and the possibility and willingness to invest in using biomass are sufficient (i.e. an ideal scenario).

With these framework, we can specify two mediocre scenario's of an ecosystem service, which are essentially different in problem and solutions, being either an 'underutilised' or an 'overestimation' scenario.

The case of biomass in WaalWeelde: research material
We investigate biomass 'matters' in the context of landscape management in WaalWeelde by literature review (Spijker et al., 2007, Kuiper & De Lint, 2008, national explorations; Stroomlijn, 2011, a study about cost-effective management in Dutch river regions). Detailed research into the availability of biomass in WaalWeelde's floodplains, in an ideal scenario, is ongoing (Caspers, 2012). We

investigate biomass 'concerns' in the context of landscape management in WaalWeelde by interviews with representatives of key organisations in landscape management, as well as additional literature.

3. The results of a 'matter of concern' analysis of the meaning of biomass in Waalweelde

Basic material: biomass 'matters'
Biomass in flood plains comes, of course, from the vegetation present. According to succession models, vegetation development on exposed bars in temperate European river areas is initiated by pioneer species, followed by willows and poplars, and potentially converting to oaks (Francis et al. 2008). In a landscape mainly dominated by river dynamics, diverse development stages can be found at the same time (Geerling et al. 2006). The vegetation nowadays present in the flood plains of the Waal river is defined by Dutch history of civil engineering, manifested in dike building and cut off of river bends, in relation to creating a safe environment and economic development. Moreover, vegetation is defined by nowadays policy decisions and approaches in landscape management (see section 1, this paper). Overall, five main categories of habitats are related to floodplains of the Waal river (Bureau Stroming, based on Schipper & Siebel (eds.), 2009). These categories take in both vegetation and management characteristics (see table 1).

Table 1 Habitat and management characteristics in WaalWeelde's floodplains (based on Schipper & Siebel (eds.), 2009 & Bureau Stroming, 2011)

Habitat category	Typical vegetation	Spatial and management characteristics
River- and wetland	grassland, wetland vegetation, alluvial wood	- Influenced by flooding - Dynamic landscape - Grazing
Wetland	grass, reed, reed grass	- Transition stage, from water to land - Dynamic water level is essential - High water quality is essential
Herbaceous and fauna-rich grassland	grass with herbs and mosses, brushwood, shrubs	- Extensive land use - Often a temporarily situation
Oat grassland	oat grasses, flowers, a diversity of herbs	- Landscape with gradients (elevations) - Rare habitat; habitat of European importance - Mowing regime; clippings is removed
Grasslands of overwintering birds	grassland	- Productive landscape - Foraging area - Nutrient rich grass land

Various issues define the amount of organic material available in WaalWeelde's floodplains for products instead of 'waste'. Firstly, the total production depends on physical issues: the area and rate of growth of vegetation present (Spijker et al., 2007; Kuiper & De Lint 2008). Consequently, harvest out of the total production is defined by some practical and strategic issues (ibid). Namely, in case of Dutch river floodplains, management is mostly defined by water safety and ecological targets

(see section 1, this paper). In general, water safety promotes harvesting, whereas ecological targets can either promote or restrict harvesting (e.g. Stroming, 2011). Moreover, in the Netherlands, harvest by sometimes remains on spot, especially in forests, due to nature conservation legislation and is, therefore, unavailable as biomass (Kuiper & De Lint 2008). Another issues that influences harvest of organic material is grazing; by grazing, vegetation is transformed into another ecosystem service as meat. That is, in the case of WaalWeelde, 'wild' horses and cows (Stroomlijn, 2011). Furthermore, accessibility of sites and harvest techniques define the amount of organic material (Kuiper & De Lint, 2008). The current harvest is not equal to the potential harvest: there is organic material that can be 'activated'. For example, in case of Dutch wood from forest and landscape elements about a quarter of potential harvest that is not yet harvest in current practice (Kuiper & De Lint, 2008). Spijker et al. (2007, p.12) estimate that in the Netherlands in total "an annual amount of 1.9 million tons dry matter biomass can be harvested in nature by 2020, based on the current management practices". In the case of WaalWeelde's floodplains, a preliminary estimation is that 'natural floodplains' can produce, in an ideal scenario, 31937 tons dry matter per year (Caspers, 2012). That will, then, be a small 2% of the national amount of biomass from nature in the Netherlands (as presented by Spijker et al. 2007).

Only part of the vegetation harvest is, in the end, suitable as biomass that can be transformed into useful products. There is a difference between the biomass-chain of wood on the one hand and grass and reed on the other hand. Stroming (2011) presents an optimal scenario for landscape management of alluvial wood (taking in 400 present hectares plus 200 future hectares of alluvial wood, of almost 9000 hectares river Waal floodplain's). In this scenario, landscape management is cost-effective, provides sustainable energy, advances biodiversity, within water safety targets (ibid). Of course, the feasibility of this scenario depends on the willingness and necessity to change of current organisations (see 'concerns' in this section, this paper), as well as market prices, market development and governmental subsidies (Spijker et al. 2007). In many Dutch studies, wood from landscape management is related to energy; these studies follow a national 'energy agenda' with reduction of greenhouse gas and promotion of sustainable energy (e.g. Spijker et al. 2007). However, part of wood can be used in a more effective way; that is, with smaller amounts, one can produce more high-quality products in, for example, the forestry industry (in line with the 'cascading principle', e.g. Kuiper & De Lint 2008).

Organic material harvested from natural reed and grassland is mostly used as cattle feed, dried, or composted (Kuiper & De Lint 2008). Experts estimate that about a third of reed and grass harvest is treated as waste. The use of grass and reed for bio-energy is very limited in the Netherlands (Spijker et al., 2007). Logistics are complex since there are only two cutting-moment per year, which requires pre-processing and storage (Kuiper & De Lint 2008). Moreover, due to the chemical composition of grass it is, until now, still difficult and expensive to convert it into bio-energy (Spijker et al., 2007).

An impression of biomass 'concerns'
The potential value of biomass 'matters' in WaalWeelde is also defined by existing 'concerns' around landscape management and biomass (section 2 & figure 1, this paper). Therefore, we explore the practices of key organisations in landscape management in WaalWeelde's region, floodplains and surrounding, taking in their habits, ambitions and structures concerning removal and use of biomass. The impression of 'concerns' is based on interviews with representatives of four key organisations: Rijkswaterstaat (i.e. the executive arm of the Dutch Ministry of Infrastructure and the Environment), Staatsbosbeheer (i.e. Dutch National Forest Service), Agricultural Nature Management Organisations of the WaalWeelde river region (organised in 'SpAN') and Waterboard Rivierenland of the WaalWeelde river region. Interviews were held in February and March 2012. The description of 'concerns' of key organisation is based on these interviews, as well as other references (mentioned in the text).

The role and position of Rijkswaterstaat in floodplain management is major but diverse (see footnote 3, this paper). For Rijkswaterstaat, water safety and shipping conditions are leading objectives in management (e.g. reducing hydraulic resistance and clearing line-of-sights, by the removal of vegetation). The actual management is, in the case of river Waal, mostly carried out by a large contractor, based on multi-annual management. On 'top level', sustainable processing of biomass is promoted though not primary. A focus on biomass is absent 'in the field'; above all, management needs to be feasible and affordable. Likewise, management decisions and activities are mostly focused on a 'short term' efficiency philosophy, rather than on a sustainable but unsure 'long term' philosophy. A shift towards sustainable management requires a huge and difficult cultural shift within Rijkswaterstaat (cf. Van den Brink 2009). Similarly, a 'financial' argument for sustainable management will make more sense than a 'green' argument. Interestingly, a small team of Rijkswaterstaat developed a 'self supporting river system' scenario for the Dutch IJssel river. Self supporting implies a low-cost form of management, by new coalitions, using ecosystem services as 'blue energy', recreation values and biomass (Hamilton-Huisman et al., 2011). The concept of 'self supporting river system' is an ambitious but unusual plan within the technical practice of Rijkswaterstaat. In the 'self supporting river system' scenario, biomass is considered a substitute for petroleum-based materials, instead of a cost (ibid). This idea, however, cannot catch up with the actual planning and implementation of urgent 'Streamline' program of Rijkswaterstaat, which is designed to realise removal of vegetation that hinders straightforward river runoff. The actual owners and managers are responsible for implementation of 'Streamline', like Staatsbosbeheer, being another key organisation in landscape management of WaalWeelde's floodplains.

Staatsbosbeheer is the Dutch National Forest Service; it is an independent administrative body, privatised but commissioned by the government (http://forestportal.efi.int). Staatsbosbeheer is manager of about 60% of the area in Dutch floodplains designated as Ecological Network (i.e. nature policy; that is about 25% of floodplains covered with vegetation, i.e. about 17% of total floodplain area in

the Netherlands). Thereby, it is considered as a major landscape manager in floodplains, together with major player Rijkswaterstaat. Staatsbosbeheer has a pragmatic or adaptive approach to its management task: notwithstanding its main focus on nature, it connects with other land use functions that are 'on the agenda' and accordingly cooperates with other players in spatial policy. In the case of WaalWeelde, recreation, nature and water safety targets are combined. With regard to processing of biomass, Staatsbosbeheer can be considered as an experienced player. Staatsbosbeheer has considered biomass as a product of its main task instead of as a waste for years. Biomass, wood and grass, has accordingly 'a positive value'. For example, wood is used in wood products as paper, as well as sold for the production of bio-energy (www.staatsbosbeheer.nl). Staatsbosbeheer has a subsidiary company, Biomassa BV and is also involved in BioEnerco BV (www.staatsbosbeheer.nl). These companies facilitate agreements between wood supplier and processors, taking in mostly Staatsbosbeheer's wood but also wood from 'third parties' to fulfil agreements. In line with legislation, Energiehout BV has restricted its transactions of wood from 'third parties' (ibid). This restriction will be supported by entrepreneurs in the Dutch wood sector (www.avih.nl); however, this restriction may complexify the possibilities of cooperation with other, smaller, biomass suppliers. An example of a small biomass supplier are farmers.

Dutch farmers involved in landscape management often cooperate in Agricultural Nature Management Organisations; in river Waal region, these organisations are in turn organised in a support centre (i.e. 'SpAN'). Farmers can deliver biomass from maintenance of landscape elements in WaalWeelde floodplains, as well as from horticulture and arable crops in WaalWeelde surrounding. The total amount of biomass, however, will be restricted in comparison to other suppliers. In WaalWeelde's farming practice, organic material is collected by contractors, against payment. In part of the river region, willow material is collected by people from the regional zoo, for free. The willingness of farmers to change this practice into a more sustainable and efficient way is limited. A practical restriction is the actual small amount of biomass. Moreover, it is difficult to compete or connect with larger biomass suppliers as they have binding agreements with other companies. A possible scenario for farmers in WaalWeelde is to focus on high-quality products, as aspirin from willows, rather than on energy production; this scenario requires innovative techniques but small amounts of biomass. Finally, the Agricultural Nature management Organisations will be inspired or assisted by innovative initiatives concerning sustainable processing of biomass by other landscape managers. An example of an innovative initiative is the 'Energy Factory' concept of Waterboards.

Dutch Waterboards are owner and/or responsible for management of a network of waterways and embankments, roadsides and dikes. In the specific case of WaalWeelde's river floodplains, Waterboard Rivierenland is responsible for management of river dikes. Normally, management is outsourced to contractors; contractors, thereby, become holder of organic material. These contractors are not yet bounded to rules about the processing of organic material; however, setting green conditions is a sensible possibility. Contractors mostly compost green material; wood

is processed as either waste or in the wood industry. Waterboard Rivierenland is not directly intended to build digesters herself; the private sector needs to take the lead, in line with Waterboard's public -therefore restricted- function. This caution to extend its function is led by risks in legislation and investments. Companies are willing to produce energy and contact Waterboard Rivierenland but most initiatives do not succeed. Nevertheless, Waterboard Rivierenland joins some regional digesting initiatives, as cooperation with farmers (e.g. providing manure as essential adding to organic material in digestion). Transport is considered as a possible breaking point of regional initiatives, trust as a requirement. Moreover, Waterboard Rivierenland investigates sustainable methods for processing its 'green flows' as an alternative to conventional methods; this exploration is rooted in a climate and energy agenda but mostly led by financial drives. Finally, in contrast to its reserved attitude towards new functions, various Waterboards have the ambition to realise sludge digesters in combination with sewage water treatment (i.e. an 'Energy Factory', an idea rooted in a challenge of the Dutch Association of Regional Water Authorities, Kiestra et al., n.d.). Accordingly, Waterboards will become energy producers (ibid). Biomass other than sludge, however, does not play a key role in the Energy Factory concept.

4. Conclusions & discussion

Limited 'matters'

WaalWeelde's biomass 'matters' take in wood, grass and reed. Preliminary results show relatively small amounts of potential biomass in WaalWeelde (Caspers, 2012). However, studies show that current harvest of biomass from nature and landscape in the Netherlands can be increased by different, more active, management (Spijker et al., 2007, Kuiper & De Lint, 2008). This is an interesting assertion in the light of WaalWeelde's spatial qualities: different management can increase biomass harvest, as well as improve landscape quality and water safety (cf. Stroming, 2011). Moreover, part of biomass harvest in the Netherlands is still treated as a waste (Spijker et al., 2007, Kuiper & De Lint, 2008). In theory, biomass is processed in an optimal way if one follows the cascading principle, striving for 'high-quality' products. In practice, 'low-quality' product bio-energy is on the Dutch policy agenda, whereas the actual market, logistics and techniques are still negative. In the end, in the light of making landscape management in WaalWeelde more efficient, it is crucial that profit is invested in landscape management and not lost 'outside'. Overall, we indicate the total value of biomass 'matters' in the case of WaalWeelde, at the moment, as *little* (figure 2). 'High potential' can be reached by improvement in logistic and energy-processing techniques. In addition, cooperation between various landscape managers within WaalWeelde's floodplains (as 'taskforce river flood plain management'), as well as on regional WaalWeelde scale (cf. Stremke & Koh, 2010) can bundle biomass value and push WaalWeelde's position in comparison to other Dutch regions. The willingness and necessity of landscape managers to cooperate depends on the 'concerns' of organisations involved.

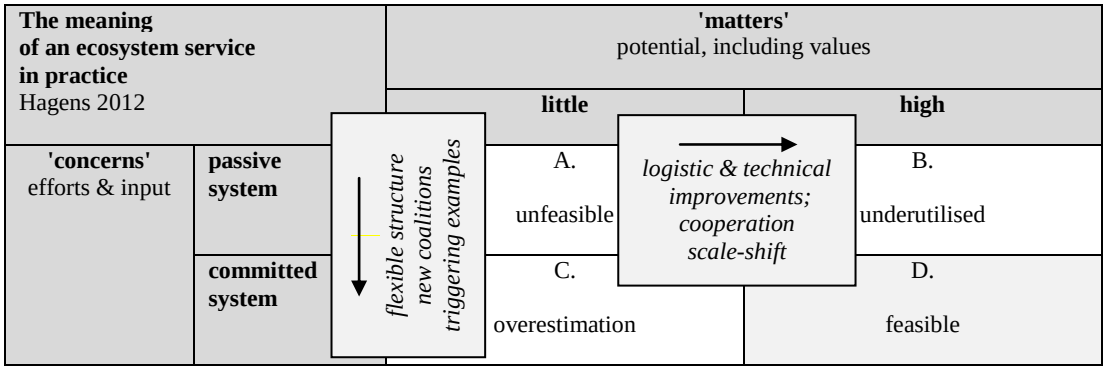
A hesitant system

Participants of WaalWeelde's river flood plain management conference were enthusiastic and had ideas about the use of biomass to improve landscape management (see section 1, this paper): they had high expectations, though some were cynical. Then, a more detailed analysis of the 'concerns' of key organisations involved in WaalWeelde's landscape management shows a more complex reality. Each organisations is willing to use biomass in a more sustainable or cost-effective way. These ambitions, however, are not easy to realise. For example, initiatives risk stranding on 'top level' (case of Rijkswaterstaat). Other ideas are often too 'small' to compete with other initiatives (case of Agricultural Nature Management Organisations & Waterboard). The willingness or necessity to cooperate is sometimes hindered by legislation or binding agreements. Likewise, change is difficult if practices have strong but inflexible structures and discourses (cf. Moulaert et al., 2007). In the case of landscape management in WaalWeelde, a 'biomass and energy' discourse is inactive and overruled by the hegemonic battle between 'nature' and 'water safety' discourses. Overall, based on the impression of 'concerns' of key landscape managers, we define a small part of the system as *committed* due to some biomass initiatives but most part of the system as *passive* due to rigid structures in practice.

Spatial planners and ecosystem service biomass

The current meaning of ecosystem service biomass is, without change, *unfeasible*. Directions towards a feasible scenario are summarised in figure 2.

Figure 2 The meaning of an ecosystem service in practice: towards a feasible scenario



In short, a feasible scenario requires cooperation between both old and new planning participants. Spatial planners can play a key role in organising this cooperation. Likewise, they are essential in realising a feasible ecosystem service. Starting point is to relate the potential of ecosystem services with nowadays planning problems. Moreover, planners need to show how existing structures can be 'opened up', without losing functional power.

Discussion
Is it right to explore, market-based, alternatives for governmental financial cuts in landscape management? Likewise, does a 'utilitarian calculus' neglect esthetical and ecological perspectives (cf. Spash, 1997), which are vital to beautiful and sustainable landscapes? Is it right to promote 'green energy' from biomass, which may not be the most sustainable solution? As spatial planners, in research and practice, it is our job to present and discuss 'unthinkable' alternatives. The meaning of ecosystem service biomass in the case of WaalWeelde's management seems limited but the exploration in fact shows vital conditions for making other ecosystem services operational in dealing with planning challenges.

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Making scenarios for nature policy in the Netherlands

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Abstract

The *Nature Outlook 2010 - 2040* was produced by applying the scenario approach. The outlook explores some alternative directions in which nature policy may evolve in the long term and the implications of this for nature policy in the short term. The subsequent building blocks of the scenario study enable policymakers to gradually gain insight into alternative desirable future states of nature and alternative policy-strategies to realize them. This is further stimulated by the character of the scenarios, which contain not only qualitative storylines, but also concrete images and quantitative information. In order to build such scenarios various methods were applied, like model calculations, scenario workshops, and design activities. By participating in the scenario study, policymakers not only provided valuable insights but also became more receptive for the results.

1. Nature Outlook as a source of inspiration

Recently, the PBL Netherlands Environmental Assessment Agency published the *Nature Outlook 2010-2040* (2012). The main objective of this scenario study is to inspire the present political and societal discussion about nature policy in our country. After some decades of ongoing efforts for developing a national ecological network, consensus has recently eroded. Nature policy is criticized now as being too much technocratic and legalistic and too little responsive to other societal interests, like outdoor recreation and building of industrial estates or roads. There is a lot of political and societal discussion now about a new direction of nature policy. This discussion is not only fed by the budgets which are cut in response to the economic crisis. Policy objectives are also under discussion. Furthermore, the government started a deregulation and decentralization program of nature policy (Wieringa and Van Oostenbrugge 2010).

The nature outlook intends to inspire policymakers and stakeholders involved in nature policy to think not only about policy-changes in the short term, but also about policy development for the long term (PBL, 2011). This happens among other things by presenting several alternative futures of nature and alternative policies to realize them. This is relevant for nature policy for various reasons. First, it's important to

avoid policy-decisions, which may later only be corrected at high costs. An example of this is building in natural areas that are important for biodiversity. Second, some decisions must be made now in order to realize desired results in the long term. For instance, it can take a few decades before a newly developed natural area is fully grown. Natural processes can indeed be slow and policy-making and implementation may also take some decades, particularly if land must be bought for nature development. But in the long term nature policy can be questioned again and the policy impacts may be uncertain (Van Asselt et al., 2007). Desires regarding the natural environment dominating society and politics today may change again. The same is true for the context of nature policy. This is clearly illustrated by the economic crisis and the radical budget cuts for nature policy in reply to this event. It's uncertain now how the economy will evolve in the next decades and which impacts this may have on nature policy.

This paper describes how the *Nature Outlook 2010 – 2040* was produced. First, it explains why scenarios were built (section 2). After that it describes the scenario parts that were made (section 3) and the methods that were applied (section 4). The paper will also explain which choices were made and which impacts they had on the results of the outlook. Finally, some lessons are drawn from the nature outlook that might be relevant for other scenario studies (section 5).

2. Nature Outlook as a scenario study

Various methods are available to help policymakers and stakeholders to better deal with the uncertainty regarding the future, such as trend extrapolations, computer simulations and creative brainstorming (Wright and Goodwin, 1998; IKR, 2005). Figure 1 gives an overview of the main *types* of methods. The degree of uncertainty of the future course of political or societal trends about which statements are made is decisive in this respect.

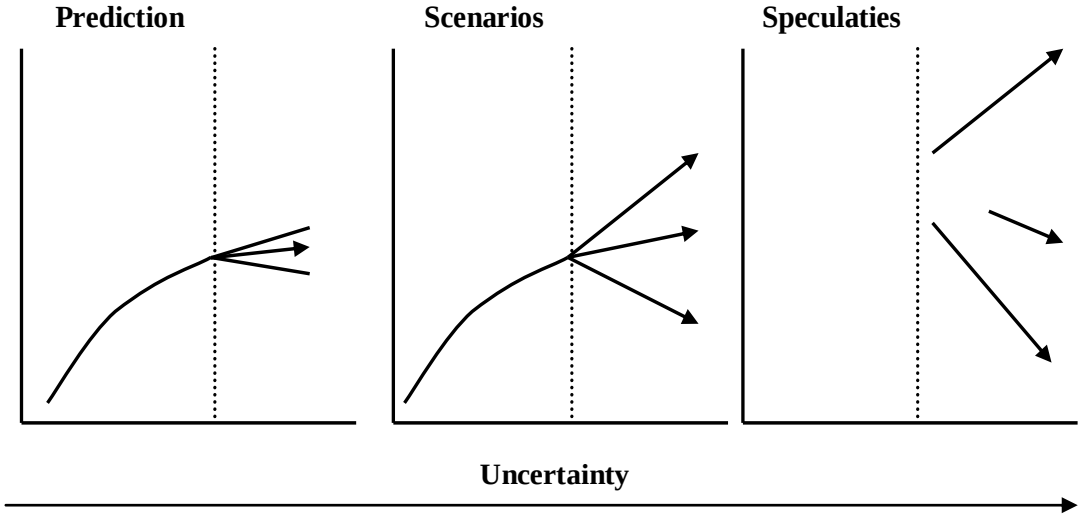

Figure 1. Prediction, scenarios, and speculations

A prediction provides a statement about a future trend, which is based on knowledge about that trend in the past and which is meant to be as accurate as possible. Since the future is always uncertain to some extent the statement is accompanied by a confidence interval, indicating an upper and a lower limit within which the trend may evolve with a specified probability. A prediction is made if the uncertainty regarding the future trend is limited. This may be the case if the trend is expected to be relatively stable or if the period which is taken into consideration is relatively short (Dammers, 2000). A statement about the expected climate change within ten years is an example of this.

Scenarios are narrative descriptions of possible or desirable futures that focus attention on causal processes and decisions (Kahn, 1965). They consist of statements about several alternative courses of future trends or other developments, based on knowledge about them in the past and the present. Scenarios are built when the future is uncertain, but not as uncertain as in cases in which speculations are made (see below). This is for instance the case if a development is known to be dynamic but not chaotic or if the period which is taken into consideration is long but not extremely long. The *Nature Outlook 2010 – 2040*, exploring alternative futures of nature and alternative policies to realize them, is an example (PBL, 2011).

Speculations provide statements about several alternative futures based on creative ideas or images about how these futures might look like. Usually, there is no link with a past or present trend or other development. Speculations are made if the uncertainty regarding future developments is large. This may be the case if the course of the development is expected to be chaotic or if the period which is taken into consideration is very long. An example of this is the possible development of the knowledge-based economy in the next 100 years.

Scenarios have an advantage over predictions because they can provide more inspiration. The reason for this is that they explore different directions in which nature policy may develop in the future, for instance in the direction of realizing several large scale natural areas or in the alternative direction of a great amount of parks and other green areas in urbanized regions. In addition, scenario's do more justice to the uncertainty regarding the long term future since they explore alternate directions in which political, societal and physical developments with an impact on nature may evolve. Scenarios have an advantage over speculations because the statements about the future they provide are more substantiated. Moreover, they offer more insight into the ways in which desired future states could be realize. As a result, scenarios provide policy recommendations that are more practical and concrete.

3. Building blocks of the Nature Outlook

Scenario-building is an eclectic activity, applying various methods like scenario workshops, essays, designing or computer models, and using various knowledge sources like expert judgments, literature review, imagination, and quantitative data. It's rather a global approach than a well-defined method (Dammers, 2010). Therefore, it is not self-evident that all building blocks of a scenario project that can be distinguished in theory are always made in practice. In the *Nature Outlook 2010-2040*, we have done this though. This scenario study consists of a scenario base, policy scenarios, context scenarios and policy messages.

The *scenario base* gives a description of the present situation of nature and nature policy in our country and how this situation has arisen from the past. The scenario base was made, because it provides a starting point to define the policy scenarios. The various images about nature that for many years now play a role in the political and societal discussion about nature policy provide a basis for the policy scenarios. In addition, the scenario base provides the possibility to compare desirable or possible futures of nature and nature policy with the present situation and thereby to indicate the required policy changes more clearly. Furthermore, the scenario base makes it easier to derive policy messages from the scenario study. For this requires not only that imaginable futures of nature and policy are taken into consideration but also the present situation.

Describing the past and present situations of nature included the identification of various policy problems. Important problems that were identified are decline in biodiversity, shortage of 'green' amenities, unsustainable use of natural resources, and hindrance of building activities by nature policy. Part of the analysis of the past and present nature policy was to make the various motives of people for being involved in nature conservation or development explicit. Important motives are the intrinsic value of nature, the esthetic quality of nature, the sustainable use of natural resources, and the utility of nature. By doing this the scenario team intended to inspire the present discussion about the direction of nature policy. A comparison of the problems and the motives provided four challenges for nature policy. These were in turn used to define four policy scenarios.

Policy scenarios describe alternative desirable futures of nature and alternative policies to realize them (figure 2 provides an overview). The challenges for nature policy, derived from the comparison of the bottlenecks and motives, were taken as a starting point. "Vital Nature" meets the challenge of improving internationally relevant biodiversity, "Recreational Nature" the challenge of improving the accessibility of natural areas and the esthetic quality of the living environment, "Functional Nature" the challenge of using natural resources, like CO_2 storage or biomass production, in a sustainable way, and "Flexible Nature" to reduce the costs related to nature development and the hindrance of other land-uses by nature. Policy scenarios are

normative since what nature an organization or group desires depends on its values (WRR, 2010). Each policy scenario describes how the challenge can be met and is also assessed on the degree to which it meets the challenges of the other policy scenarios. This makes the scenarios comparable and helps to derive policy recommendations from them.

Figure 2. Overview of policy scenarios

Context scenarios were developed in order to explore to what extent the policy scenarios can be achieved under different circumstances. These scenarios are descriptive (Becker et al., 1982). They explore in an integrated and coherent way some alternative future directions of economic, societal, physical and other trends with an impact on nature and nature policy (compare Wack, 1985). In addition, they explore how big the challenges mentioned before may become in the future, for instance, improving biodiversity in circumstances of high or low dynamics in land-use and environmental pollution. Furthermore, they explore the opportunities and threats for nature policy, for instance, in terms of the availability of public and private money.

Policy recommendations provide strategic points of interest to policymakers and stakeholders involved in nature policy. Recommendations are focused on the short term, formulated from views on the long term. Some recommendations were derived by comparing the policy scenarios with one another. On this basis, suggestions were made to combine parts of the scenarios, such as large natural areas which are made accessible for extensive recreation. Other suggestions were derived by comparing the policy scenarios with the scenario base. This makes the consequences for the current

policy clear, for instance, that there is always an important role for public organizations in nature development even if the market is highly involved.

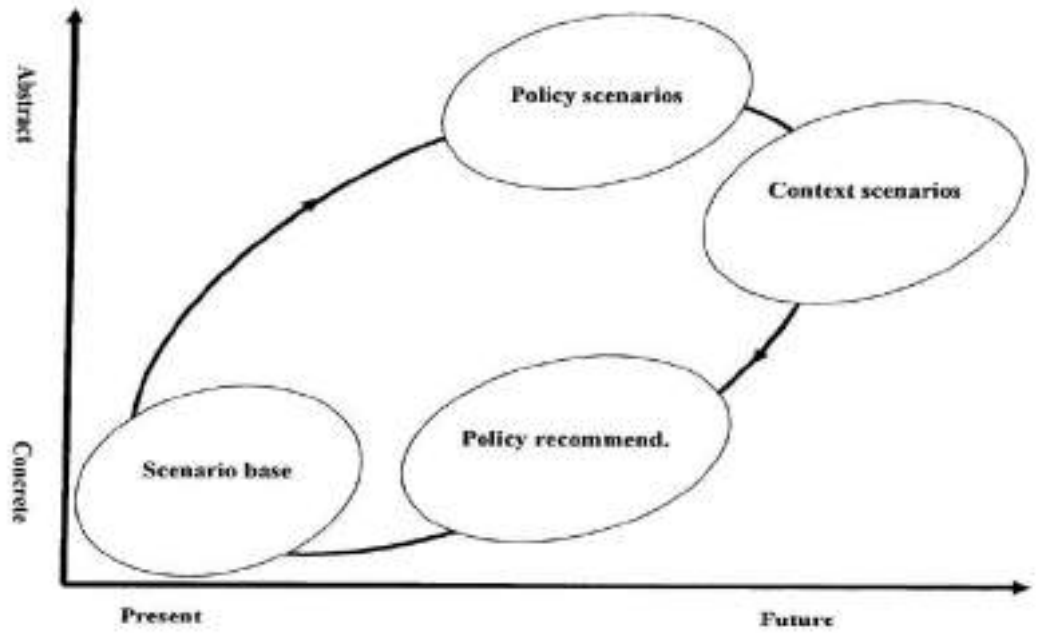

Figure 3. Building blocks are connected in a cyclical way

The building blocks just described are connected in a cyclical way (see figure 3). First, there is a cyclical movement in time. The scenario base focuses by definition on the past and the present. The policy scenarios and context scenarios explore desirable or possible developments in the long-term. And policy recommendations focus on the short term since they are formulated for current policymaking. Second, there is a cyclical movement in the measure of elaboration. The scenario base is relatively concrete since usually a lot of knowledge about the past and the present is available. The scenarios are necessarily more abstract since we know much less about the future, particularly about the long term. And policy recommendations are formulated in a more concrete way in order to provide policymakers and stakeholders strategic points of interest that are useful for them.

4. Applied methods

The building blocks can be developed in different ways using various methods. Each method has its strengths, but also its weaknesses (Dammers, 2010). Scenarios which are developed by model calculations often provide specific insights, because many variables and relations are made explicit and quantified. But the scope of these scenarios is usually limited, since variables and relations that cannot be quantified are excluded. Scenarios developed by designing are often very inspiring, because they present visionary images about the future. But the insights these scenarios provide

are often not very specific since they remain rather sketchy. Scenarios developed by workshops offer the possibility to let policymakers and stakeholders participate and thereby to mobilize a lot of practical knowledge. But the insights that workshops provide are usually less specific than those generated by model calculations since hardly any variables or relations are quantified.

Producing the nature outlook, the scenario team found it a challenge to apply the methods just mentioned in a combined way. By doing this, the team tried to exploit the strengths of the methods and to compensate their weakness as much as possible. Figure 4 provides an overview of the methods that were applied for each building block; the sections below provide an explanation.

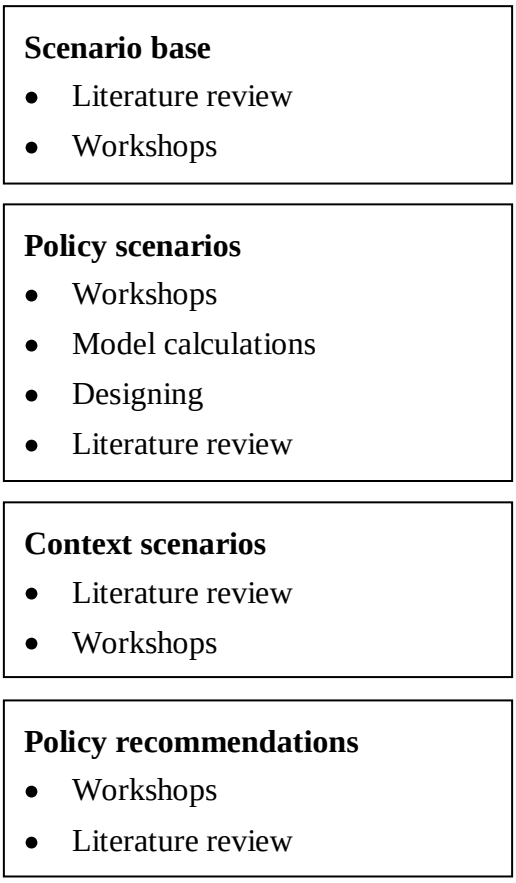

Figure 4. Methods applied for each building block

Scenario base

The scenario base was made by doing a literature review on the past and present situations of nature and nature policy. The developments, including the policy problems they generated, were mainly derived from the *Assessment of nature*, an evaluation study published every two years by PBL, and the *Assessment of the environment* (PBL, 2010), in which the assessment of nature is now integrated. In order to find the motives of organizations and groups a study was carried out into the history of their

involvement in nature conservation and development and into the changes that occurred in nature policy (Klijn, 2011).

The results of the literature review were checked by and discussed with experts on nature policy during workshops and interviews. These experts were employees of departments, provinces, municipalities, nature organizations, knowledge institutions and private companies. During the workshop the experts pointed to some aspects of nature and policy that should be taken into consideration, for instance, that natural dynamics at the local level (which is important for biodiversity) decreases and that the relationships between public organizations and citizens are important for the effectiveness of nature policy. These aspects, were included in the scenario base.

From these outcomes the scenario team derived the four challenges for nature policy. The team especially took policy problems into consideration that already exist for a long time and motives that organizations and groups already have for years. The policy challenges differ clearly from one another and therefore appeal to various organizations and groups: preserving and restoring internationally important biodiversity, making nature more accessible and perceivable, using natural resources in a sustainable way, and utilizing nature in a profitable way while reducing the hindrance for other land-uses. These challenges were presented to the participants of the above-mentioned workshops. This gave, however, no reason for adapting them.

Policy scenarios

The challenges were then used to define the policy scenarios. They became the most important building block of the nature outlook. The reason for this is that the political and societal discussion, as mentioned before, is focused on a new direction of nature policy and that the nature outlook is produced to inspire this discussion. For this building block also most methods were applied.

Four workshops were organized for making the policy scenarios: two workshops on terrestrial nature and two on maritime nature. The aforementioned experts participated in the workshops. The main criteria for their participation were: having much expertise about nature, being able to reflect on the long-term future, being able to think beyond the limits of one's own professional domain, and together represent a great variety of viewpoints on nature and policy (Dammers, 2010). The application of these criteria contributed to a rich harvest of ideas. Additional workshops were organized with experts from the Government Service for Land and Water Management (DLG), the recreation sector and building companies.

During the first workshop for terrestrial nature and for maritime nature the contours of the policy scenarios were drawn. This happened first by asking the participants to generate a large number of so-called guiding ideas about the future of nature in our country. Examples of generated ideas were "nature near home", "natural recycling",

and “interwoven nature”. Subsequently, the guiding ideas were clustered on the basis of their substantive consistency and the participants were asked to work out the ideas both in keywords and in sketches. In this way, the first rough versions of the policy scenarios were constructed.

The additional workshops with employees of DLG helped to work out the policy scenarios for various regions in the country and to make them more concrete. More than in the other workshops the focus was now oriented on policy strategies. For each policy scenario it was explored in which regions it could be realized and what measures would be required to do this. The workshops with the recreation sector and the building companies yielded additional information, e.g. about opportunities for extensive recreation in large natural areas and on the possibilities to achieve more nature in the living environments.

Interviews were conducted with experts who were underrepresented during the workshops, including experts from water boards and from the agricultural sector. These interviews also yielded new information, for instance about the fragmentation of land-use, generating high costs of water management and about the larger role that farmers could play in nature management if they were addressed as entrepreneurs instead of subsidy recipients.

The scenario team analyzed the results of the workshops and the interviews, clustered them into the four policy scenarios and elaborated them into storylines. The story lines represent the essence of the policy scenarios and integrate the many insights they contain in a meaningful way. This is important for the usability of the scenarios, since storylines are often easier understood and remembered than equations and graphs (Schwartz, 1991). Each storyline responds to a challenge that was defined in the scenario base.

During the elaboration of the story lines two criteria were applied: maximum consistency within the policy scenarios and maximum contrast between them (Van der Heijden, 1996). This contributed to the plausibility of the storylines and their imaginativeness. During the workshops also the names of the policy scenarios were defined: “Vital Nature”, “Recreational Nature”, “Functional Nature”, and “Flexible Nature”.

In the second workshops for terrestrial and maritime nature the results of the analyses and the elaborations were presented to the participants and discussed with them. The experts did various suggestions, for instance, to pay more attention to cultural history and to gradients from salt to fresh water. These suggestions were integrated in the further development of the policy scenarios.

Initially, the policy scenarios only had a qualitative character. Model calculations were done in order to quantify them. For each challenge it was calculated which solutions were possible. In addition, models and data were used to make the first sketches of the scenarios more concrete and realistic. For "Vital Nature" the Meta Nature Planner was used to calculate which environmental conditions had to be improved for creating favourable conservation status of species and habitats (Reijnen et al., 2007). Habitat suitability maps, based on soil conditions and current land-use, were used to determine where the relevant types of nature should be realized to improve biodiversity. For "Recreational Nature" the Hotspots Monitor (Sijtsma et al., in press) was used to calculate what existing nature should be preserved to maintain the experience quality and accessibility of nature. Experience GIS was also used to identify the locations where landscape should be improved. And AVANAR (De Vries and Goossen 2002) was used to calculate where deficits of hiking and cycling trails occur and extra recreational area is needed. Hiking and cycling are the most popular activities of outdoor recreation in the Netherlands. For "Functional Nature" various ecosystem models were used to determine, for instance, in which locations what type of nature is optimal for capturing CO_2 or for countering water floods. And for "Flexible Nature" the RuimteScanner (Hilferink and Rietveld 1999) was used to calculate where nature will disappear if other land-uses become more dominant.

Model calculations were not only done to make maps of the policy scenarios, but also to assess them. The Meta Nature Planner was used to assess the effects of all policy scenarios on biodiversity. AVANAR was applied to indicate which part of the future population in 2040 would be confronted with deficits of walking and cycling trails in their living environment. Information from the Hotspots Monitor was used to explore the experience quality of the policy scenarios. The LEI Cost-Effectiveness Instruments (De Koeijer e.a. 2006) were used to calculate the economic costs and benefits of nature development and management.

For maritime nature no model calculations were done, because suitable models were missing. There were, for instance, no allocation models to calculate the most optimal locations for functions, such as aquaculture, wind energy, and sand extraction. And the use of models for the assessment of the policy scenarios on biodiversity was limited by the large spatial variation and temporal dynamics of ecosystems in the sea and the lack of understanding of the sensitivities of the ecosystems and the dose-effect relations. Therefore, the elaboration of maritime nature in the scenarios relied on expert judgement and simple techniques, such as a comparing a map indicating future uses of the sea with a map indicating the locations of ecosystems.

Design activities played a role in making maps for the policy scenarios. These activities were closely interwoven with the model calculations. On the one hand, the sketches made during the workshops were the basis for the maps that were calculated. On the other hand, the results of the model calculations were modified into simplified maps. For terrestrial nature the detailed model calculations were simplified

via GIS analyses. In this way the scenario team tried to prevent users from interpreting the policy scenarios as blueprints (Van Hinsberg et al., 2011). The simplified maps express the essence of the scenarios by indicating in a rough way what types of nature can occur on which locations. The simplification also made it possible to integrate the maps of terrestrial nature with those of maritime nature. These maps were immediately displayed in global way since no model calculations were done for them. Drawings, sketches, and photographs were used make the scenarios more imaginative.

The policy scenarios were further elaborated by literature review. This was especially true for those parts of the scenarios that could not be calculated since data on the national level were missing, such as the locations of parks and green working environments. With this information the storylines were further improved. The policy strategies for terrestrial and maritime nature were also further elaborated by literature review (Bolman and Goldsborough, 2011; Verburg et al., 2011). Research publications, scenario studies, policy documents and other literature was used to gain knowledge of important aspects of policy strategies, such as coalition formation, strategy development, policy measures, financing, et cetera.

On the basis of literature and through logical reasoning, the scenario team constructed a specific strategy for each policy scenario. Each strategy can be considered an example of how a desired future regarding nature could be realized. “Recreational Nature”, for instance, could be realized by provinces taking the lead in regional policy networks, by putting co-designing into practice, by combining public and private financing in regional funds, et cetera. And “Functional Nature” could be implemented by public and private organizations and research institutes cooperating in innovation networks, by providing freedom to experiment with new ecosystem services, by establishing regional business enterprises et cetera. During the construction of the strategies principles of the welfare theory were applied, e.g. principles regarding public goods, external effects, market forces, and coordination issues (Stiglitz, 1988; Kuiper and Evers, 2011). The results of these activities were also discussed with experts during the workshops. Suggestions made by the experts, for instance, to pay more attention to new coalitions for nature development and to new arrangements to finance nature development were helpful to further elaborate the strategies.

Context scenarios

The context scenarios were developed by doing literature review and organizing workshops. The scenarios were based on the existing scenario study *Prosperity, welfare, and quality of the living environment* (CPB et al., 2006). This study contains four context scenarios: “Global Economy”, “Transatlantic Market”, “Strong Europe” and “Regional Communities”. Only the first and the last mentioned scenario are include in the nature outlook, because they explore more or less the highest and the lowest dynamics in demography, economy, and other trends in the coming decades. As a result they roughly represent the largest and the smallest pressure on nature in terms of environmental pollution and land-use. Because of that, they suffice to ex-

plore the possibilities and limitations for realizing the policy scenarios under different circumstances. Moreover, to inspire the political and societal discussion about nature policy it's important not to make the scenario study more complicated than necessary. Furthermore, the policy scenarios and not the context scenarios are the most important building block of the nature outlook.

From both scenarios only trends with an impact on nature and nature policy were selected to be included in the nature outlook, such as economic growth, food production, and energy supply. For some trends the scenarios had to be updated, since they were no longer plausible in the light of present knowledge. Because of the expected food crisis in the world, for instance, agriculture can no longer be expected to be subordinate to other forms of land-use in each scenario (Stegeman et al., 2011). In addition, sustainable energy policy is more ambitious now than expected in the scenarios. The reason for this is that only measures that the Government had officially decided on at the time of publication were included in *Prosperity, welfare, and quality of the living environment*. Two trends were added in the nature outlook which have an impact on nature and nature policy but receive little attention in the former scenario study: the changing attitudes of people towards nature and the changing institutional setting, i.e. the relations among public organizations and between public and private organizations, including the EU. These trends were explored by literature review and by expert judgement. Because of these amendments the scenarios were renamed into High and Low scenario.

The scenario team summarized the results and presented and discussed them with the experts. This happened during the second workshops for terrestrial and maritime nature. The experts stressed, for instance, that a distinction should be made between people's attitude towards nature and their attitude towards nature policy. They also informed the team there that several studies on future oil and gas exploration at sea were available. These reactions were particularly important for exploring trends with an impact on maritime nature since these trends are not included in *Prosperity, welfare, and quality of the living environment*.

The context scenarios were used to explore to what extend the policy scenarios could be realized and what resources and efforts would be required for that. The available budgets of the national government for nature policy in the context scenarios, for instance, were compared with the costs related to the realization of the policy scenarios. This provided information about the recourses that should be generated by other public organizations, nature organizations, business, et cetera. In one case, the context scenarios provided input for the model calculations that were done to elaborate a policy scenario. In "Flexible Nature" the land-use demanded for building houses and offices in green environments was derived from the context scenarios (Van Hinsberg et al., 2011).

Policy recommendations

The policy messages were based on the workshops and literature review. Three workshops were organized in which participants could derive ideas for policy messages from the scenarios or come up with their own ideas. In two workshops ideas about parts of the policy scenarios that can or can't be combined were generated. The combination of "Vitale Nature", "Functional Nature", and "Recreational Nature" in the coastal zone may improve biodiversity, recreation and water safety. But agriculture in a peat meadow area can't be combined with CO_2 capture since the latter requires a much higher water level. In the third workshop the participants could generate ideas about themes for the policy recommendations. Examples were "nature in the heart of the economy" and "diversity of nature types caused by diversity in urbanization".

The scenario team selected and checked the ideas that were generated during the workshops. A criterion for selection was that the ideas should focus on themes that were also explored in the policy scenarios. But this didn't withhold the team from adding themes to the scenarios that were mentioned in the workshops. An example of this were ideas about the added value of financial arrangements, like regional funds, over separate financial flows. The ideas were checked for their relevance for nature policy by comparing them with the results of the literature review and by expert judgement.

5. Lessons for other scenario studies

This paper described the way in which the *Nature Outlook 2010 – 2040* was produced, the choices that were made during the production, and the impacts of the choices on the results of the outlook. In this final section we draw some lessons from the scenario study that might be relevant for other scenario studies. The policy scenarios were defined by taking nature images that already play a role for years in the political and societal discussions as a starting point. The advantage if this was that truly different policy directions could be explored and that various organizations and groups involved in nature policy can easily identify with them, as was apparent from the workshops.

The nature outlook includes all building blocks that can be distinguished in a scenario study. Therefore, it provides policymakers and stakeholders using the scenario study the opportunity to explore the alternative policy directions as well as their implications for current nature policy step by step and thereby to learn from them.

Various methods were applied to produce the building blocks: workshops, literature review, designing, and model calculations. Because of that, the scenarios contain not only qualitative storylines, but also visualized images of the future and, where possible, quantifications. Besides, more knowledge resources were mobilized than had been possible if only an individual method was applied.

Policymakers and stakeholders were actively involved in the production of the building blocks. This enhanced their receptivity for the scenarios, as contacts with them indicate. The reason for this is that they consider the scenarios not as being produced by other people but as produced (among other people) by themselves.

There are also lessons that can be drawn from some suggestions to improve the nature outlook. In the context scenarios trends in food production and energy supply were updated by expert judgement. Updating these trends by model calculations would make it possible to quantify them and would thereby be helpful to better test the policy scenarios in different circumstances, defined by the context scenarios.

Besides, more attention could have been paid to the design activities. It would be easier for policymakers and stakeholders to imagine the policy scenarios if they were more visualized by showing more concrete situations of how nature might look like (e.g. by making sketches or manipulated photographs), by providing more symbolic representations of land-use by nature, and by showing the differences with the present situation more explicitly.

Furthermore, the methodology for deriving policy recommendations from the policy scenarios could be further elaborated. This was more or less done in an ad hoc way. Doing this in a more systematic way could be helpful not only for the scenario team but also for the policymakers and stakeholders who want to derive more recommendations from the scenarios by themselves.

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RIVER AGREEMENTS: A STRATEGY FOR DE-GROWTH? COLLABORATIVE WATERSHED MANAGEMENT TOWARD RENEWED ECOLOGICAL RELATIONSHIPS.

Giusy Pappalardo[1]

Abstract

Contemporary strategies and practices for environmental management are not always able to improve healthy ecosystems. Pollution, landscape degradation and resources' crisis are crucial issues not only for scientific community; they are also common topics among laymen and activists involved in various associations. After the Rio Declaration on Environment and Development in 1992, for almost 15 years Sustainable Development paradigm seemed to be a suitable path to regeneration of local contexts taking into account global challenges. Then, some questions arose about the concept of Sustainable Development itself, about its outcomes and real effects on ecological matters, thinking ecology as a complex system of exchanges among humans organizations and their environment of life (Bateson, 1972).
Sustainable De-Growth is coming up as a possible alternative, with a variety of theories, hypothesis and discourses about it, inspired by groundbreaking thinkers like Georgescu-Roegen, Gorz, Illich, and Latouche (Martínez-Alier et alii, 2010). Beyond scholar debates, some people are starting to change their vision, expectations, and behavior, participating in "De-Growth inspired" movements in different parts around the world. The First International Conference on Economic De-Growth, held in Paris on April 2008, was a milestone about the topic: in its Final Declaration, it is underlined the needs for transition toward renewed ecological relationships, whose core can be synthesized through what Latouche calls "the eight R program": re-evaluate; re-contextualize; remodel; relocate; redistribute; reduce; reuse; recycle (Latouche 2007). Innovative strategies are required to accomplish this transition, starting from spontaneous movements already existent, but also interesting and involving people who are not inside De-Growth discourses, and above all, affecting institutional structures and decision-making processes.
Assuming that watershed management is a central issue for humans organizations and their environment of life, watershed policies and programs can be an opportunity to verify how De-Growth can be translated in practical experiences. A shift of paradigm is required: from a technocratic approach, to the active involvement of laymen, with their peculiar knowledge and their proposals about everyday life (Gorz,

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1975). In Italy, there is a school of avant-garde scholars that is experiencing watershed management through participatory processes and collaboration among associations and institutions: these processes are called River Agreements (Pizziolo&Micarelli, 2011).
This paper discusses if a River Agreement can be a De-Growth strategy, and how; it presents a body of literature to identify which families of practices can be considered "De-Growth River Agreements", and why. The paper is also a working tool to reflect about an ongoing Participatory Action Research project in the widest watershed in Sicily, the Simeto River process, led by a partnership between the University of Catania, Department of Architecture, and a network of grassroots associations (Saija, 2011).

1. Introduction

"[…] The creature that wins against its environment destroys itself. […]"
Gregory Bateson (1972), Steps towards an Ecology of Mind.

The last part of Bateson's milestone is named after *Crisis in the Ecology of Mind* (Bateson, 1972). According to the author, ecology is a matter of complex relationships among human beings, communities, and their places of life. The crisis regards these relationships, and it is related to the concept of hubris, i.e. the extreme feeling of powerful that lets humans act as dominant beings, when they have a strong faith in their technological capacity in order to control other humans, other living beings and nature. In the section called *The Roots of Ecological Crisis*, a bill is reported. The bill was presented in 1970 to face Hawaii's environmental problems related to DDT's use; it describes how unaware human actions are able to affect ecosystems hardly, leading to the annihilation of the species if human arrogance is not stopped. To escape the crisis, the bill asked for institutional commitment in changing, involving all the community's members in a deep debate about their common future. This is just an example of a lot of documents, essays, research, that came out during the 1970s; they all were worried about the destiny of Earth and its ecosystems, trying to deal with possible solutions. That decade was the starting point of a debate that lasts nowadays: even if some conditions have changed (like the DDT's issues), the ongoing global crisis is still related to environmental degradation, persisting inequity between northern and southern countries, plus the recent trouble of economic recession and financial bubbles.
Bateson pointed out that a crisis can be an opportunity to re-think relationships inside communities, and to re-adapt them in a co-evolutionary and regenerative sense. Even Rifkin (1980) underlines the necessity of new organizational structures for societies that have to face their lack of resources; he describes the history of mankind as a sequence of entropic watershed, critical moments when communities have to re-think their institutional structures if they want to survive.
The 1970s were also the decade when Sustainable Development came out: the Club of Rome's *Limits to Growth* (1972), highlighted the need of a regulatory framework in consuming resources that were about to be exhausted in the short-medium run, according to its previsions. It opened the way for different policies and strategies in

order to allow development inside some limits defined by carry-on capacity indicators. In the meanwhile, ten years before Rifkin, Georgescu-Roegen had already introduced the concept of entropy inside debates on resources' management. *The Entropy Law and the Economic Process* (Georgescu-Roegen, 1971) underlined the necessity to change direction in the mainstream economic schemes of maximizing production-consumption, as this mechanism cannot last forever in a finite world that is regulated by the second principle of thermodynamics. Georgescu-Roegen's positions were more radical than the Club of Rome's ones, asking for a deep change of direction that was identified with the label of De-Growth. Even if Georgescu-Roegen and the Club of Rome had some contacts points (Levallois, 2010), Sustainable Development and De-Growth followed two different paths: the first one was recognized as the feasible one in the dominant culture, through a system of technological solutions and incentives, while the second one remained just a marginal hypothesis of changing economics organization.

Beyond the controversy about these two approaches (Kallis, 2011), and the disputes about GDP/GNP as proper indicators for well-being (van den Bergh, 2010), Sustainable De-Growth discourses are coming up again, at a scholar level, as well as at a grassroots level, with international conferences (Paris 2008; Barcelona 2010; Montreal 2012; Venice forthcoming), and international networks among people who are trying to explore and experience practices to overcome the crisis line. It is too general talking without entering a specific context, with its preconditions and characteristics, but it sounds reasonable to say that societies are still stuck on the line of an entropic watershed, at the global and at the local scale; so De-Growth movements are questioning how to reorganize life-styles around the idea that human beings cannot deplete resources more and more.

In this framework, urban and regional planners have the responsibility of rethinking the use of territories as an opportunity to regenerate communities. Following this perspective, rivers' ecosystems may be a test-bed to understand how to move practically toward renewed ecological relationships inside communities, and between communities and the environment. The choice of focusing on watersheds is related to the importance that water resources have for human life, culture, rural economies, and to regenerate healthy landscapes; the Bioregional Movement (Aberlay, 1993) had already identified rivers as the vital circulatory system of Earth; furthermore, in the last years, international governmental and non-governmental organizations are increasing the attention on water, asking for an equitable and sustainable use of it.

2. Planning to Sustainable De-Growth? Some lessons from the current debate.

A recent article (Limburg et alii., 2011) on *Fisheries*, the Journal of American Fisheries Society, reports the necessity in stopping the depletion of water's ecosystems in order to protect the growing number of threatened or endangered aquatic species. Authors well explain the relationship between economic growth and the progressive decline for fishes and fisheries in the world, entering the debate about limiting the levels of growth. Authors ask for a "framework to assist society at large in re-directing lifestyles and satisfaction away from a consumptive perspective

toward a sustainable perspective". In this hypothesis, it is central the role of laymen and NGOs, as well as institutions, in order to work on the cultural improving of behaviors, paying attention to social justice, corporate responsibility and ethics. Coming back at the 1970s, even Gorz (1975) had already underlined the necessity to approach ecology through practices deeply connected with people's living and behaviors, rather than a technocratic way to eco-compatibility.
Furthermore, Kallis (2011) well focuses the importance of changing the collective vision toward less-consuming lifestyles; Jackson (2011) highlights the necessity of a cooperative approach, instead than a competitive one; Daly (1995; 2005), in his ecological economics perspective, underlines how stopping growth does not mean stopping development, rather it is necessary a qualitative improvement of the economic process toward efficiency, justice and sustainability. In general, there are different ways to embrace Sustainable De-Growth discourse, and Martinez-Alier et alii (2010) well trace the current articulation of the debate.
Besides different positions and labels, it is possible to point out some elements as raw indications to trace a planning approach, in order to overcome the limits that have characterized a failure in facing ecological crisis since the 1970s.
According to Gorz, the first step moves from the local knowledge, i.e. the system of values, memories, skills, hopes that people have about environment: if sustainability has to be an effective path, it is important to involve laymen (with their direct experience of their life places) in debates, working actively to improve everyday life-style and common imaginaries.
This fact leads to the necessity of collaborative practices among different members of a community, like laymen (and their different kinds of associations), researchers, experts, practitioners, administrators, and so on. Institutions like schools, universities, municipalities, public agencies, and environmental boards, play an important role to trigger and to speed up a democratic and constructive dialogue to reframe environmental management day by day, at a local scale, as well at a broader one.
The current debate also reminds that equity and quality of life are indefeasible characteristics toward the path of sustainability: it does not matter if GDP/GNP increase or not, or if other indicators for well-being are more precise, but it does matter if all the members of a community, and among different communities, develop their life-conditions, using resources in a responsible way; of course, differences between rich and poor contexts (in terms of personal income thresholds) have to be taken into account in a global justice perspective.
Lastly, Latouche (2007), with the "eight R program" (re-evaluate, re-contextualize, remodel, relocate, redistribute, reduce, reuse, recycle), inspires another important R: re-thinking urban and regional planning paradigms, policies, strategies, and tools, in order to renew ecological relationships.

3. How to re-think planning? Rivers Agreements as an opportunity for Sustainable De-Growth.

The paper's research question deals with the possibility of applying Sustainable De-Growth discourses (as they have been traced in the last paragraph) in practical

experiences related to an aware use of rivers' ecosystems in a specific context. In Italy, these experiences are defined as River Agreements, i.e. collaborative strategies among laymen, NGOs, experts, researchers, institutions, in order to start a community approach for watershed management. They come out after some European Conventions and Directives, like the *European Landscape Convention* (Florence 2000), the *EC Water Framework Directive* (2000/60/EC), and the *Strategic Environmental Assessment* (2001/42/EC), whose core is the active involvement of citizens in public processes, in order to define which plans and projects are really able to revitalize landscape, according to inhabitants' visions and needs.

An example of a River Agreement is the Panaro River Landscape Contract, Modena-Italy: it is an open and evolutionary path that is built day by day thanks to the input of different actors (inhabitants, associations, researchers, administrators, and so on), leading to complex and articulated systems of proactive actions, organized in a structure labeled as a 'beehive'; this name underlines the relational character of all the actions (it is well known that everything is related to each other in ecosystems), and also the fact that every participant is asked to be active and to collaborate with others. The river is the central core of the Contract: it means not only working on projects for water quality, but also realizing a system of sustainable projects to enjoy the landscapes, to promote wholesome rural productions, to host visitors interested in the local cultures through a fair touristic network, and so on. It is a way to sustain a slow use of territories, to improve the quality of relationships among its users, and to enhance the 'genius loci', i.e. the soul and peculiarities of the context (Norberg-Schulz, 1979; Pizziolo & Micarelli, 2011). This example suggests some key elements: the participatory process, as a way to define what inhabitants really want to do with their places of life, takes advantage from supportive institutions, in order to realize concretely inhabitants' willingness; the active role of each participant means not to delegate, but to work concretely for a specific action; every small action, as a part of the complex 'beehive', takes actually benefits thanks to the fact of being part of the system.

Focusing on the participatory approach, research shows the importance of stakeholders' involvement in watershed management issues: through a variety of case-studies, the work of the Nobel Prize in Economics Elinor Ostrom, *Governing the Commons* (1990), proves that a collective action may be able to change institutional structures in order to reorganize common goods' management, like rivers or forests. When there are some litigations related to a lack of resources or problems into the management system, partnerships can be an effective way to reframe and to improve the organization, but they have to be established under some important conditions, like inclusiveness and a deliberative character of the democratic process (Fisher, 2000; Leach, 2006). Other scholars (Mirghani & Savenije, 1995; Dube & Swatuk, 2002; Lennox et alii., 2011) have demonstrated the overall importance of stakeholders' involvement through widespread participatory practices in order to better distribute water benefits. It is not just a matter of water: all the connected activities take benefit from a genuine community-based watershed management. For example, agriculture moves toward a better quality production if it is located in a healthy watershed; of course it is necessary to pay attention to the

nutrient load that goes into the water courses: Amate & de Molina (2000) show how an organic and local farming system can avoid this problem, and become a key element for sustainability.

In synthesis, it is possible to define a 'River Agreement' as a system of collaborative practices among different stakeholders, inhabitants and institutions, established through participatory processes with the aim of improving local watershed and ecosystems. River Agreements can be a way to experience Sustainable De-Growth discourses practically, if they come out from the same perspective of enhancing local resources in an equitable way. It is the concept of applying the R-program to territories and lands, using derelict areas as an opportunity to test Sustainable De-Growth hypothesis.

In order to lead planning and environmental management toward this directions, institutions (like Universities and Public Agencies) are compelled in reframing policies, strategies and tools toward more inclusive and democratic practices, working actively with local inhabitants, with their local knowledge, and visions for the future. Someone can argue that it is obvious underlying the importance of collaboration among stakeholders, and inhabitants' participation into the decision-making process, since the aforementioned European Directives were passed, or the elder *UNECE Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters* (1998) was ratified, as institutions are forced to involve laymen in their planning processes. Even the *Rio Declaration on Environment and Development* (1992), that contains the principles of Sustainable Development itself, underlines the vital role of local communities in environmental management "[…]because of their knowledge and traditional practices. States should recognize and duly support their identity, culture and interests and enable their effective participation in the achievement of sustainable development[...]" (Principle 22). Evidence suggests that this is still not completely acknowledged in some contexts.

An innovative aspects of emerging Sustainable De-Growth discourses is related to a deeper attention for everyday lifestyles thanks to the input received from grassroots movements (Martínez-Alier et alii, 2010); the forthcoming Third International Conference on De-Growth, Ecological Sustainability and Social Equity, is indeed paying attention to listening at territories' stories through activists' voices (www.venezia2012.it).

Besides these innovative discourses, and some avant-garde institutional processes, it has been shown (Gravagno et alii., 2010) that the direct involvement of local communities is not going to happen in contexts like Sicily, where the planning process is still anchored to a technocratic approach, and participation processes need to be explored much more. The proposal for a River Agreement in Sicily comes out from this necessity: it is a practical experiment to understand if it is possible, and how, to modify the ordinary planning procedures toward an effective collaboration among inhabitants and institutions. This paper tries to verify if the River Agreement can happen in a Sustainable De-Growth perspective, as a an opportunity to experience if a community is really able to take care of its place of life, to regenerate its ecological relationships and its economies, through a deep change in everyday life.

4. The long and passionate road toward the Simeto River Agreement.

To enter deep inside the practical experience in a specific context with its peculiarities, it is now presented a Participatory Action Research project, i.e. a research conducted through a mixed and open group that includes scholars and other different participants, in order to empower the local community (Whyte, 1997), revitalizing the spoiled context of the Simeto River Valley, Sicily-Italy.
In 2008, the partnership was established between the University of Catania – Department of Architecture, and a network of grassroots associations called ViviSimeto; since 2011, the partnership is enlarging through the involvement of municipalities and other institutional agencies in charge of regional planning, and it is leading a process toward a strategy for sustainability, called the Simeto River Agreement.

4.1 Methodology.

The partnership is led by a mixed research group, with researchers and activists as catalysts of the process, and open to different inputs from local people. Some scholars (Lewin, 1946; Whyte, 1989) have shown the validity of these groups that contribute to build collective innovative processes, linking research deeply with the context, and producing changes into the context. This is suitable for researchers to enter inside practical problems and evaluate their hypothesis during the action; and for participants to get capabilities in raising problems and building strategies. This research strategy is recognized as Participatory Action Research with a Service Learning perspective (Reardon, 2003; Gravagno et alii, 2010).
Service Learning is an opportunity for University in order to apply its theoretical skills and to contribute directly to local development; for Associations, in order to learn and to improve their action; for Institutions, in order to innovate themselves.
As research is connected to a practical experience, researchers themselves are active participants, not just observers: according to the complexity theory (Morin, 1994), they influence data during the action, and they are also influenced from the action.
All participants are invited to reflect and to reframe their issues and visions (Schon, 1994; Schon & Rein,1995). Results are evaluated during the action, too; they are deeply connected to what is currently happening during the process, and they are subjects of discussions, focus groups, and public debate.
This paper, after contextualizing the research, presents some steps of the participatory process, with two milestones toward the Simeto River Agreement: the Community Mapping Project, and the Institutional Turning Point. The process is analyzed to answer the research question about preconditions and characteristics of a River Agreement as a Sustainable De-Growth strategy in a specific context. In order to evaluate some preliminary results, interviews in-depth have been conducted. Interviews in-depth are conceived as a tool for a self-reflective moment in order learn from the past and to understand how to go on, highlighting crucial issues.

Key-actors are identified as the 'passionate participants': they have been selected for their important inputs to the process, with their lives, stories, emotions, perseverance; the interaction among researchers and activists has been based on intense empathy, sharing the common feeling of working to improve the native context. According to Fisher (2009), this emotional dimension has to be highlighted to explain well the deep motivation of participating in an unusual end experimental processes in a challenging context like Sicily.

4.2 Snapshots from the context.

The local context is a rural area where the most important river of Sicily flows, the Simeto River (113 km/70 mi long; 4182 Km^2/1614 mi^2 watershed). This place is very rich of biodiversity, traditions and agricultural productions, but it is losing its original characters due to a lot of factors. The local community calls the middle course of the River as the Simeto River Valley.
With five municipalities in two different Provinces along its path, plus eight more close to it, it is a significant area due to some features: rare elements of wildlife still existing; historical and cultural heritage places; peculiar farming systems (with some high-quality products into a fascinating rural landscape with ancient buildings and infrastructures, from different époques starting from Neolithic, continuing with Greeks, Romans, Arabic, Normans, Bourbons); a lot of springs from Mount Etna (rich groundwater system).
But there are also a lot of disturbing factors: water and ground pollution (cities' depuration plants do not work; inefficient waste management system, illegal water pumping and chemical pollutants by some farmers and industries); derelict lands (young generations move from rural places into the cities and no one is taking care of fields anymore); inefficient and useless hydraulic infrastructures (artificial banks and dykes); so the context is badly changing and biodiversity is decreasing. For these reasons, it could be defined as an ecological challenging context.
Furthermore, there is a long-lasting crisis for the local agricultural market and rural economies, with few institutional plans and no well-defined visions to empower local communities. Different local agencies do not share land management information and, in general, laymen, associations, and institutions are not used to work in a collaborative way, as it is even difficult to say who is the local community. Moreover, political patronage is quite common and young generations suffer unemployment problems (they do not believe in better changing so they often go away from Sicily).
In the meanwhile, there is an active network of grassroots associations that wants to promote strategies and projects to revitalize derelict areas though responsible fruition and practices. They want to encourage public debate about these issues, with institutions playing their part in a responsible way.

4.3 Steps toward the River Agreements.

In 2008, partnership started from a specific need: defending a Special Area of Conservation (SAC Pietralunga) from the building of a big incinerator, that laymen

perceived as very dangerous for them, for ecosystems and for the economy of their life place. This incinerator was part of the Regional Waste Plan of Governor Salvatore Cuffaro in 2002 (some years later he was convicted of mafia affair), so that regional institution was perceived as an enemy to fight.

Laymen started organizing in grassroots associations that were able to affect decision-making process thanks to mass protests, for example mobilizing more than 5000 participants for a march, and also legal actions supported by some experts (Gravagno&Saija, 2008). Even if the fight against incinerator was successfully, it was not enough: partnership knew that NIMBY approach was not a proper way to face the question (Fisher, 2000), so researchers and activists started reflecting on a complex and more holistic level. It was immediately clear that the entire river system needs to be revitalized from deep changes, long-terms strategies, new and respectfully relationship human-environment.

The partnership highlighted some goals: promoting an inclusive debate about the environment, starting from local knowledge and common experience, involving also laymen that are outside grassroots associations; affecting decision-making process, building a community strategic plan as a tool for a meaningful dialogue with institutions; trying to overcome advocacy toward a shared responsibility, i.e. a process in which different actors play their part with their skills. The partnership was therefore starting to trace a collaborative strategy for watershed management improving renewed ecological relationship. It is reasonable to say that these goals are inspired by discourses about sustainability. The partnership never faced the debate 'Sustainable Development' vs 'Sustainable De-Growth', but the common issue was clear: how to make the Simeto Valley a beautiful place to live, for present and next generations, learning from the past ones? More than theories, the debate focused on practices: which could be suitable paths toward sustainability?

The first step was defined as the 'Community Mapping Project', built in a specific way suited to the local context, interests and needs. It explored the awareness to be part of an ecosystem where inhabitants share a 'common home' and its resources with other living being. Inspired from Bioregional practices, it focused the importance of mapping to create a community sense related also to natural environment, giving up a 'city-centered' vision to move toward a wider one, with the central role of rivers as symbols for respectful ways to live together (Aberlay, 1993); furthermore, it was a way to explore allocation and management of resources through an easy way of understanding land's features, as experienced in Participatory Rural Appraisal (Chambers, 1992). But the 'Community Mapping Project' was also something more. It was a simple and direct action able to put different people together in front of a huge map (1:10000 scale with the all river path, in a 3 m height, 10 m weight wall) and reflect together about future of their land. A 'serious play' was invented, without rigid rules, but just some guidelines, to sharpen 'mapper's' interest and action. In four months of work (carried on in four different cities), the partnership was able to involve 500 active participants (farmers, tourism operators, students, inhabitants, workers, users of the valley, and so on), plus some institutional representatives. This number is quite minor comparing with 5000 people involved into the protest against incinerator mentioned above, because it was more difficult moving 'from NO! to YES!', i.e. from the protest level to the proposal level. By the

way, the Map collected a lot of interesting contributes about the past, the present and the future of the river valley in its complexity, with a particular attention on water resources. After a 'Three Days Community Design Workshop', called 'ViviSimeto 2010' and focused on some topics arisen from the 'Community Mapping', a document was realized, with a system of values, wish and, above all, with a system of actions: something like a participatory strategic plan. Participants evaluated this phase as successful through public appreciations and the willingness to continue working together.

When the partnership focused which pilot actions and projects could be the starting point of practical landscape transformation and regeneration, it was immediately clear the necessity to start from derelict areas, places that are not currently used, apart from being illegal dumps. Two of them were chosen, where the partnership experienced a community design approach to build collective knowledge (Raciti, 2012): one near the river, to revitalize through planting trees and natural open furniture, promoting a responsible use and care of a fragile ecosystem characterized by peculiar birds; the other one inside a city in a poor neighborhood, to revitalize through a creative school-community garden, promoting intergenerational exchange between old people and young students, with experiential forms of education. These two experiments showed two critical points: voluntary action was too weak; institutional support was not effective. Reflecting during the action, the partnership focused the importance of an Institutional Turning Point, i.e. a more organized structure made of a deep collaboration among associations and institutions.

Synthesizing, in order to build the River Agreement, the Community Mapping Project was the first milestone as a voluntary experiment carried on by the partnership among associations and institutions, with its good results and some failures related to the pilot actions. In the meanwhile, the partnership decided to enlarge itself, enclosing different institutional representatives, with the aim of building a frame defined as a Community River Statement, the baseline for the River Agreement. This is still a work in progress, but it is possible to trace its characteristics. It is about to be realized by mixed work groups, with the institutional representatives as newcomers, and the purpose of clarifying the Simeto Community's system of values, common rules, and landscape managing. The process of realizing the Statement is a way to let institutions and citizens collaborate around the common issue of revitalizing their place of life. It is going to be structured like a 'puzzle', where different actors do what they can (and want) to do, in order to contribute and to exchange with others. For examples, old people want to explore the topic of memories and transmission to young generation; some institutional representatives want to exchange data and expertise related to the river system; farmers and touristic operators want to realize networks and promotional strategies for a sustainable rural economy; some activists and researchers want to continue a 'listening process', like the one started with Community Mapping Project, going deeper inside stories of people who live the river. All different contributes are going to compose the puzzle, if every participant does not delegate, but takes own responsibility of a small action for the large collective project. After this phase, expected results are related to obtain a mature process to build the River Agreement, with the crucial challenge of defining the 'stickiness factor' (Gladwell, 2000).

In which sense this process is going toward a sustainable de-growth perspective? To answer the question, interviews in-depth have been conducted, as exposed in next paragraph.

4.4 Evaluations from passionate participants: some preliminary results.

Four people have been listened to discuss paradigms, results, and next steps of the River Agreement process. They all are activist of ViviSimeto, and they represent four different points of view, that can also be assumed by other participants, but cannot exhaust the variety of points of views. According to the classification matrix of Deming&Swaffield (2011), this research strategy is subjectivist, i.e. knowledge itself is the product of a particular way to look at society where researchers are merged, and samples are not representative of general laws, but they are related to specific situations and contexts. The interviews are a tool to verify if the Simeto River Agreement can be an opportunity to experience De-Growth discourse, reflecting with people who are directly involved working actively into the process. Their lives are deeply related to their answers, so four stories are synthesized, together with their reflections.

More than 10 years ago, the President of ViviSimeto has been also the mayor of Paternò, one of the municipalities along the River; after that experience, she worked actively for the River, from the very first moment when ViviSimeto arose against the incinerator, till the ongoing process. Her point of view is very close the an institutional perspective, and her sustainability idea is related to promote a plain life-style and a responsible use of resources, consuming less and improving local economies. To her, the River Agreement has the potential to become a strategy for sustainability, but two preconditions have to happen: the first one is the ability of its promoters to affect the political sphere, transforming the Agreement in an effective tool for environmental management; the second one is the capacity to start the cooperation among different rural producers, in order to revitalize the socio-economic context via best practices for the environment. She is concerned not only for the natural ecosystem, but also for unemployment plague that is affecting the local context.

With her, another activist has already been involved in governing the Paternò's Municipality some years ago, and he also followed her into the ViviSimeto adventure. He declares not to be inside the De-Growth/Sustainable Development debate, but he has a clear idea: it is necessary to reduce consumption of resources and to improve the relationships between communities and their local context. For him, first of all there is a problem of democracy and values: it is central to start public debates in order to go deep inside the concept of community, to create the sense of community, and to highlight which values a community wants to share, with the awareness that the current direction will lead to destroy peculiarities and the real wellbeing of the context; he also underlines the central role of agriculture, reframing it toward a multifunctional conception. So, the River Agreement has to be an opportunity to enter this path.

They both sustained the Community Mapping Project (even with some preliminary doubts), and now they are very passionately involved into the Institutional Turning Point.

An organic farmer is an activist of ViviSimeto, too. He experiences De-Growth discourses in his everyday life, thinking De-Growth as a change of direction, from the obsession for quantitative development, toward the relaxed search for equitable quality. He was one of the passionate promoters for the Community Mapping project, hosting some public meetings into his rural farm (and house, that he calls 'La Casa delle Acque' – tr: 'The Water House', paying extreme attention to this important resource), while he is doubtful regarding in the Institutional Turning Point. He was enthusiastic for the working method used during the Community Mapping Project: it was led by an open group that met frequently in order to design and to organize the process, exchanging ideas in a very friendly way, and according to him, this exchange made the Community Mapping an original practice, rich of a variety of inputs. He believes in the strength of networks, at a local and at a global scale, so he is part of a lot of 'De-Growth' inspired networks, like the 'RESSud - Fair Economic Southern Network', based on the mutual support and trust among different producers and consumers. He supports De-Growth practices and tools, like the Participatory Guarantees System, to certify good organic productions through a community process of control, and he is aware of the importance of a rural network for the Simeto Valley. He sees in the River Agreement an opportunity to sustain these networks, if they are spontaneous, not addicted to fundraising, and composed of innovative farmers, who link agriculture with hospitality and, above all, with the aim of taking care of the land, transforming derelict areas in regenerated ones.

A Bioregional activist was one of the main promoters of the Community Mapping Project. He is very familiar with De-Growth discourses, that he started deepening during the Earth Summit in Brazil, 1992. He experienced fair and ethic economics systems, like the Time Banking and, at a certain point of his life, he decided to live very close to the Simeto River, as a sort of 'River Caretaker', with a very essential lifestyle, believing that rivers are the most vital part of earth. He was part of ViviSimeto while he was living his deep connection with the river ecosystems, being genuine concerned about its future. He knows that saving the earth is a matter of deep awareness inside every inhabitant, and of willingness in living like a community: it is a matter of ecological relationships. He thinks that the institutional support can be important, but before it is necessary to build a community sense, to build healthy relationships among people. Otherwise, according to him, it is like 'having beautiful cut flowers without a vase to contain them'. His dream would be to continue being a 'River Caretaker', with other young people as facilitators to renew ecological relationships. Institutional support can be useful in organizing the 'River Caretakers', so the Agreement can be an opportunity toward this direction.

These two last participants are inside De-Growth discourses more than the first ones: they were passionate promoters of the Community Mapping Process, and they are

not deep inside the Institutional Turning Point like the first ones, but they both hope it can happen as a useful frame for De-Growth practices.

5. Conclusions and discussion.

Beyond labels, Sustainable De-Growth is perceived like a feasible perspective in the Simeto Valley. Discourses about GDP/GNP, or decreasing production, are never been faced by the partnership, but it is shared the idea that local community has to rethink its economic system toward an aware and responsible use of resources. It is widely accepted that the sense of community has to be improved, and that ecology is not just a matter on healthy natural relationships but, above all, of healthy social relationships.
The Simeto River Agreement is coming up as a strategy to organize spontaneous De-Growth practices already existing, to speed up innovative practices, and to allow young generations revitalizing spoiled contexts, with a multifunctional approach to agriculture. Collaboration among laymen, association, experts, and institutions is necessary to improve a holistic sense of community; furthermore, institutional support is important in order to introduce effective changing in environmental management.
As this is still a work in progress, a question is open: how is the Institutional Turning Point going to end? Future development of this research will be related to explore the practical experience of building a Participatory River Statement, and to define concretely the River Agreement at a more advanced status.

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FEEDING THE CITY: HISTORICAL EVOLUTION OF THE FOOD SUPPLY AND ITS TERRITORIAL PLANNING IMPACTS END 18TH CENTURY - END 20TH CENTURY

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Abstract

Cities do not produce their own food and that is why they are an interesting starting point to study food policies evolution, regarding territorial and urban planning and concerning food supply.
Feeding a city depends on procedures settled since its founding. But food supply results from a sequence of complex and rather unknown mechanisms. Unfortunately, knowledge is fragmented whether (or both) by disciplinary shackles or (and) historical periods boundaries.
The theoretical and analytical framework of territorial ecology provides a way to think historically the co-evolution of the urban food hinterland and its governance. It helps tracing past social and territorial conjectures in order to provide new inputs for a prospective debate on the current changes in urban food supply arrangements and its consequences in terms of urban and territorial planning.

A historical scan will embrace the connected evolution of the Parisian hinterland and the governance of its food supply. Since the end of the 18th century, food supply experienced progressive liberalization. Technical changes in farming and transport released most of the natural constraints that featured the pre-industrial food system; whilst feeding Paris remained and important issue for both the city and the French state, justifying the existence of a public supply policy, at least up to the World War II. Simultaneously, the agricultural policy (at regional, national or after WWII European scale) had large consequences on food production that had as well many consequences on hinterlands and especially on rural areas that surrounded Paris (where they added to urban pressure, especially from the inter-two-wars on). The metabolic links between Paris and its surroundings became very thin. This ongoing configuration led to agrifood business, large retailing and mass consumption development although almost hegemonic, the resulting food system has been challenged from the 1970s on.

Based on a multidisciplinary bibliographic approach, this paper aims at better characterizing this long-term history. We are indeed convinced that it is a necessary step to a comprehensive analysis of urban-rural trajectories and the intertwined

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questions of space (rural and urban) and flows (of food) underlying some great planning issues.

The findings expected in this article are twofold.

First, the center of Paris metropolitan area's is an illustration of the co-evolution of the hinterland and the multiscalar governance of food stream, from the late 18th century to the early 1980s. The case helps to understand the processes and agents' networks that govern upstream of urban metabolism, in terms of food supply.

And second, as expected, agent's governance and the management of a food hinterland involve consequences in terms of territorial and urban planning. The case offers a way to analyze those consequences retrospectively and maybe foresee new perspectives regarding recent movements of food system "relocalization".

1. Introduction

Resource scarcity and global change confirm the relevance of considering the city as endowed with a systemic metabolism. It has a stock, it is supplied by material and energy streams, it produces excretas, and it is sometimes even able to recycle some of these resources. The city thrives on exterior territories since it is not intended to produce its food. As renewed policies think on money saving and flow management efficency, food supply is being challenged by movements aiming the relocation of food strems provenance.

The analysis of the food system and its recent changes may lead to its spatialization. The metabolism territorialization takes place through the concept of hinterland. Literally "backcountry", the hinterland is defined by the American geographer Van Cleef as "the area adjacent to a trade center (extending to and including its satellites) within which economic and some cultural activities are focused largely on the primary center" (Van Cleef, 1941, p.308). The hinterland, from the perspective of urban metabolism and in our globalized societies, involves non-contiguous territories, and it is the result of food upstream management. The "natural" hinterland, as reffered (in other words) by those who claim for a territorial bond between production and consumption, can be defined as "the valley of the river on which [the city] is located or even of the drainage basin of the river. [Or as] the region readily accessible from the [city] or as the terrain tributary to the [city]" (Van Cleef, 1941, p.308).

At a metropolitan scale, the food system is now global, but it has not always been so. History is used to understand how the Parisian hinterland has become global and what the socio-spatial path that led to pleading for the relocation of the food supply areas is[2].

Feeding the city is a public policy concern since the urban population, concentrated and plentiful, is capable of a certain political power. However in Paris (and in some other global cities), the governing who cared greatly for the livelihood of citizens under the *Ancien Régime*, now seem to be almost entirely excluded from food supply management decisions. A retrospective review of the stakeholders and their involvement in the food supply system is needed to understand their path, their political chronicle. It leads to the causes and consequences of a public withdrawal, to the study of agents today in power, and to the implications of relocating the hinterland in terms of food flow governance.

This study is mainly bibliographic. It seeks to gather in a synthetic way, much scientific work concerning the subject. So the material basis is deliberately eclectic and multidisciplinary.

One goal of this paper is the decompartmentalization of disciplinary approaches: planning is a field that, although denying it, remains dominated by sectoral thinking. We aim to bring together a broad and transverse thematic corpus, and by that to embrace the diversity of approaches tackling spatial planning and food.

[2] Relocation involves a come-back to a nearby supply, reached one day and now lost.

The bibliographic material is essentially made of secondary sources: reports, monographs, articles, theses… but we also wanted to compare some of these documents to their sources, in order to reveal their richness.

Here, time slicing is driven by the evolutions more than by the historical accuracy or an academic relevance. The study investigates the periods of time in order to understand the transitions between each of them. Thus, we focus on the end of the *Ancien Régime* (second half of the 18th century) because it carries the unprecedented changes and announces the upheavals of the Industrial Revolution. The following period covers the 19th century and the first half of the 20th century. This combination is used to treat the process of long-term Industrial Revolution: the successive innovations as taken one by one are not the point here. This long period allows us to read the political-economical and socio-technical trajectories of the food system. Finally, since World War II (WWII), the period stands in one block because it seems that we are still evolving within it.

As a first step, we analyze each period independently. We study the co-evolotion of of the food flow governance, the scale of the Parisian food hinterland, and land management and urban planning. The results of this bibliographic investigation are presented as answers to two main working hypotheses.
a. Public authorities are sidelined in terms of food supply. How did it come to such marginalization? What were the keys of a public food policy and in which directions were they replaced?
b. The inner metropolis of Paris allows us to observe the combined evolution of the hinterland and a multiscalar governance of food flow. How city and regional planning are keys to understand this co-evolution? What are the spatial implications of political and economical choices for food supply?
At last, the interest of that work is that its timeline is deliberately long. Our hindsight highlights different stable periods and their transitions. It sheds light on actual claims for the relocation of the hinterland.

2. Analysis

2.1 Ending the *Ancien Régime*[3] (last 18th century): the State governance of Paris food-stream landscapes a "natural" hinterland.

Social stability and the basis of power are only guaranteed by the insurance of a consistent, affordable and regular food supply : administrators keep in mind the political disorders caused by food scarcity and famines. Paris is even more strategic as it is the capital of France: the population is high[4] and represents a risk of urban uprising (that finally turned out to be at the end of the period!).

[3] *Ancien Régime* is the French term that refers to the polital system established before the French Revolution, including monarchy and aristocratic society.
[4] Lepetit (1995, p.93) notes that there are approximately 510 000 people at the edge of the eighteenth century and 620 000 by the Revolution (1789).

Royal power is directly involved through the supply police (*police de l'approvisionnement*). It ensures consistency, quantity, quality and prices' relative stability (Kaplan, 1988). The monarchy controls many different places, but the police is mainly operational on markets. All transactions must take place there, where the supply police overcomes and moralizes trade. The market provides a bridge between the interests of the "sovereign [State] responsible of the exchange" (Clement, 1999, p.8) and those of the society, against the principle of market economy[5] (*principe de marché*).

Following this principle, the market economy is completely freed, on property and self-interest bases. Facing this thinking trend, the state fears the monopoly and the power or merchants that may now speculate on famines to increase their profit. Preventing that kind of speculation is also a way to guarantee State incomes: "tax interest came in large part in the measures taken, arguing to ensure supply and to fight speculation" (Bureau de l'Approvisionnement, 1889, p.11). The principle of market economy leads private interests, as the market is the material place of sales that supply police can look after and rule.

In the middle of the 18th century, French economists stand up for liberalization. They recommend freed exchanges, guided only by the rules of offer and demand, out of all socio-political considerations (Clément, 1999). On the eve of the Revolution, supply police is quite contested since it sets against the liberal claims of the merchants.

Ending the 18th century, all believe in a social justice that allows everyone to get food according to one's needs, without yet accepting the State as a market ruler. Whilst the debates among economists are reflected on the merchants' claims (Clément, 1999), in fact, according to Kaplan's expression, supply police and food supply are "an inseparable pair". French society, and particularly Parisians, is gifted with a strong political culture: the State along with the police keeps legitimacy to rule the market until the end of the *Ancien Régime*.

Whereas Abad (2002) and Kaplan (1988) respectively spot successive "circles" or "rings" centred on Paris, we rather stand with a slightly flat characterization of spaces[6].

Abad (2002) shows the contribution of all the French territory to provide varied foodstuffs. Other authors (Billen et. al., 2011) balance these contributions by their nitrogen value, but agglomerate at the same time the types of food. The following maps (figure 1) combine those works : they do not exclude some provinces even if they are lightly contributing to Paris hinterland in caloric terms.

[5] "System of relations in which, whereever the transaction takes place, the impersonal forces of offer and demand determines the prices that preside the allocation of resources, incomes and productions" (Kaplan, 1988, p.16)

[6] The contributions of these authors are relevant in their argument (typology and sectorial features of each areas). But here, this representation is superfluous and may even suggest an application of the Von Thünen model – although Abad (2002, p.802) defends itself in the way that territorial specialization does not match the type given by the German economist.

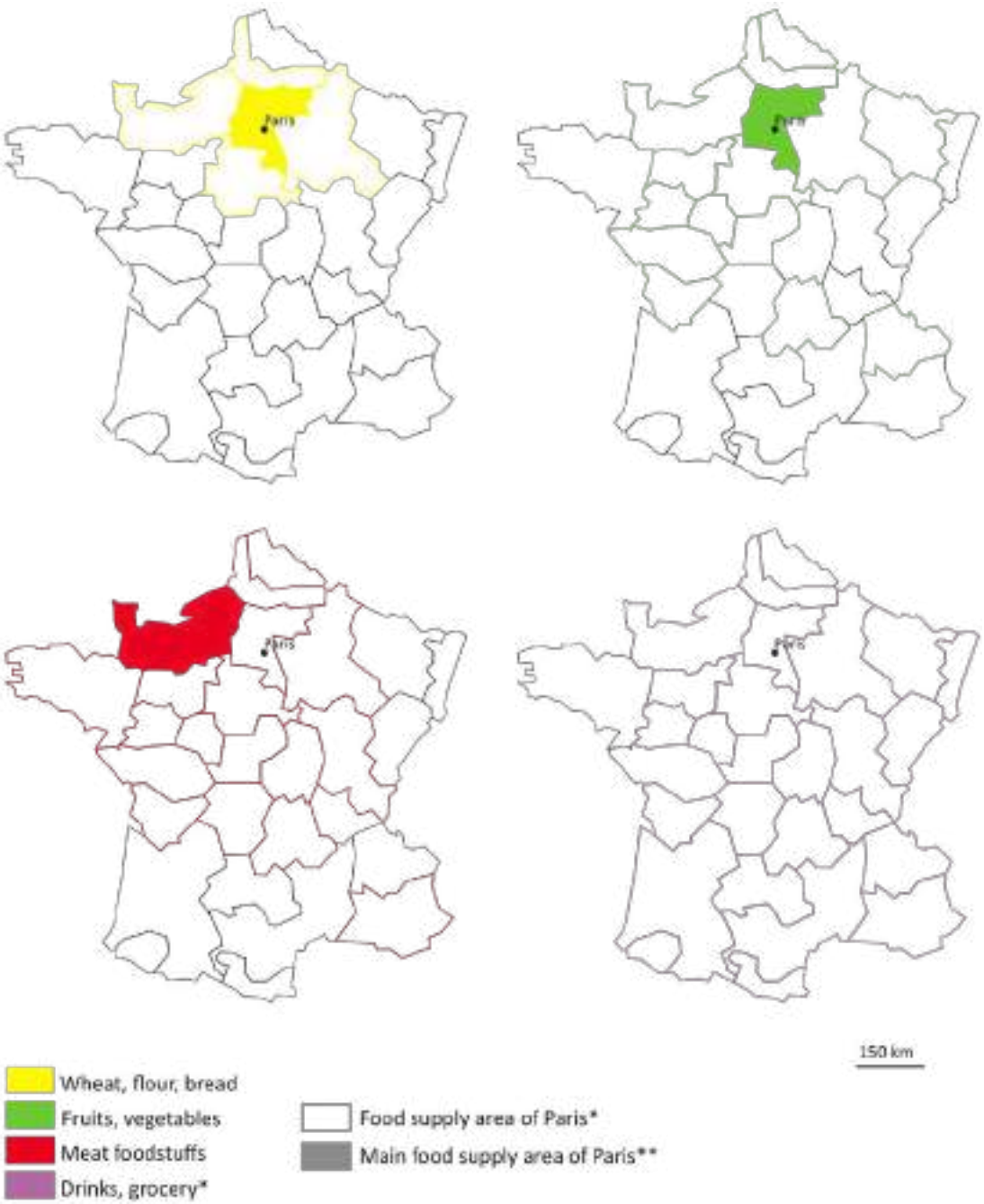

Figure 1. Paris food hinterland, ending the Ancien Régime

From Abad, 2002 ; Billen et. al.,2011

** data exclusive Abad[7] - ** data exclusive Billen et. al.[8]*

[7] Although way more fragmented, we have regrouped some datas to ease their overlaying.

[8] We have only selected the upper class of statistical quantitative typology because this assessment does not necessarily represent at best the reality of the Parisian hinterland of the *Ancien Régime*. The unit that bases these thresholds is the amount of nitrogen in each food family. Our study does not attempt to assess the contribution of nitrogen flow in the territories, which may also skew the results for the products that contain little (fruits and vegetables). The representation of the upper end of this territorial classification allows here to prove the quantitative weight of some territories.

Ending the *Ancien Régime*, the food hinterland of Paris is national: all the provinces contribute. International trade is negligible, as it concerns very few volumes, and exotic foodstuffs that are reserved to the wealthier[9]. The quantitative results (Billen et. al., 2011) show an origin area centred on Île-de-France (Paris province) and Normandy. Even if the whole French territory feeds its capital city, it seems that the watershed of the Seine-river downstream from Paris, is the "natural" hinterland, as defined by Van Cleef (1941; see introduction of this article).

Both cause and consequence of what we achieved to demonstrate, Paris is conceived as the core knot of the national transport system. Numerous streams pass through the city that concentrates financial capitals. Concentrating the national infrastructure is a typical concern of the monarchy.
Created ending the 15th century[10], postal roads (*routes de poste*) founded the national road network. Built on a radial scheme around Paris (figure 2), they guarantee a decentralised royal power throughout the country. The merchants nevertheless neglect road supply, because road network is not very attractive. On the one hand, foodstuffs are not necessarily produced nearby the main roads, and on the other hand, transport conditions are much poorer than by waterway. Waterborne shipments are favoured (Abad, 2002): it is more profitable (opportunity to move more important volumes, with less workforce), and the network is already well extended. Rouen and Le Havre ports are the sea doors to Paris. The Seine-river watershed's mesh is important and bonded to the Loire-river watershed since the beginning of the 18th century. Let us note that the Canal du Midi, which construction started ending the 1660s, can bring to Paris southern and Mediterranean foodstuffs, via Bordeaux and Nantes, without passing through the Strait of Gibraltar (figure 2).

Important infrastructure work, ending the *Ancien Régime*, gives Paris privileged access and fluidity: "a very large part of the communication network has been conceived to allow Paris to soak up the whole kingdom production" (Abad, 2002, p.15).

[9] Abad (2002) quotes citrus and dried fruits from the Mediterranean basin, almonds, capers and olives from Spain, Japanese pistachios, spices from colonial trusts, coffee from Arabia, tea from China…
[10] Their purpose is the availability of mounts for the messengers of the kingdom.

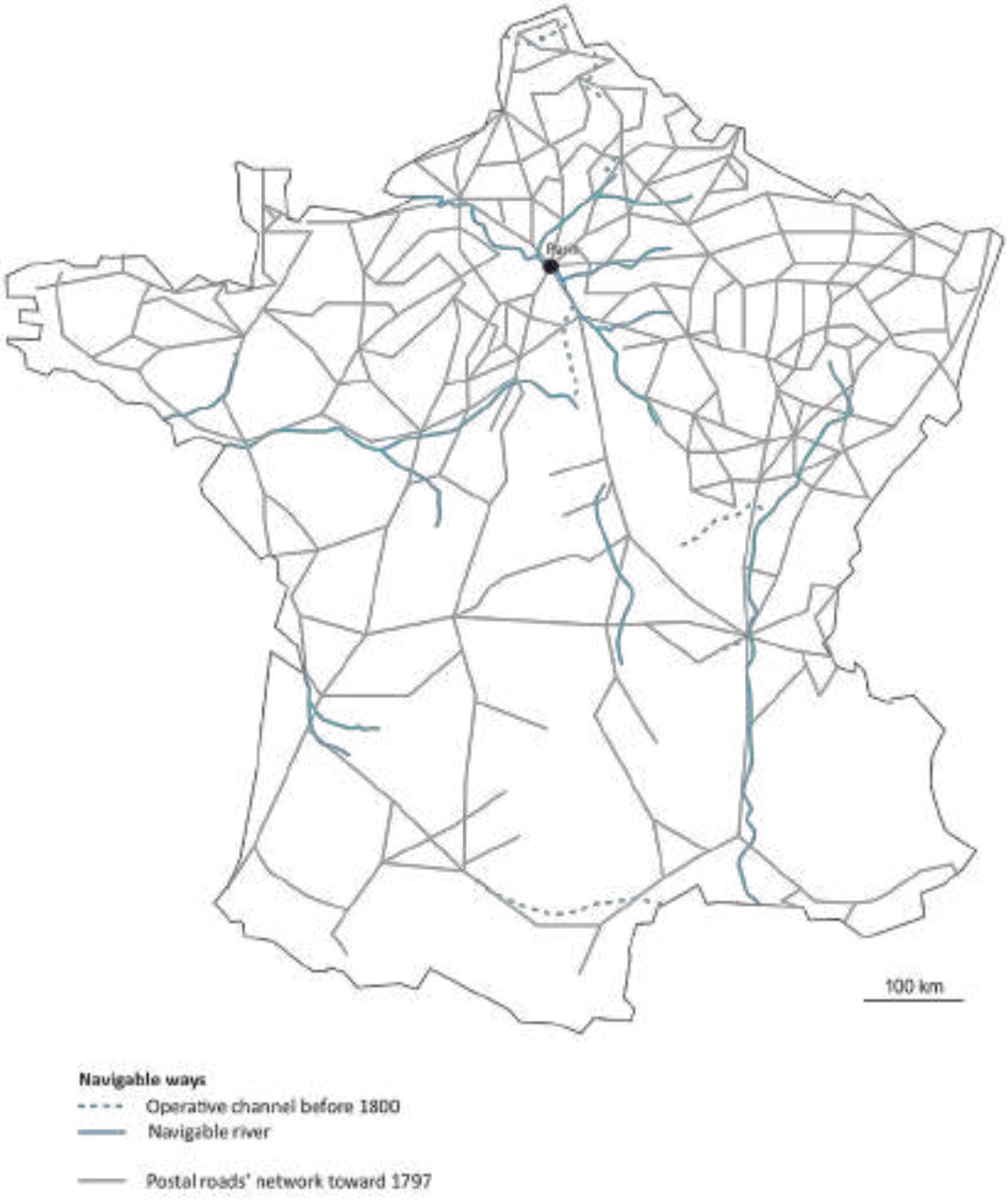

Figure 2. Paris as a transportation node for roadways (*) and waterways (**).
From (*) Saint-Julien, 2000, p.77 ; (**) Saint-Julien, 2000, p.23

2.2 The Industrial Revolution and its consequences (19th century – inter-world-wars period): innovations improve the transportation infrastructure network and provide a wider hinterland

One revolution after another, the French Revolution gives place to the Industrial Revolution. Technical improvements cause great changes into the food-system. The documentation concerning this period increases: primary sources become reachable due to thriving national statistics. And those sources are often the basement of the secondary sources of our demonstration.

Paris keeps its capital city status: its population is far superior to that of other French cities and is growing fast, particularly in the second half of the 19th century (Dupâquier, 1995). At a national scale, the urban population increases by 155% between 1831 and 1911. The main causes are industrialization (which attracts rurals) and the intensification of international commercial relations (which attracts immigrants).

Still central to the concerns of public authorities, social order[11], tax collection and thus food supply are among the causes and consequences of enhancing the polarization of transport networks around Paris.

The road network is growing. The whole territory is now covered even if the north of France, and especially around the capital, is more densely equipped. A nodal network of cities is born, creating as many regional relays for the delivery of provincial goods between these secondary cities and to Paris.

Figure 3 shows the road network in 1820: differences in meshes are still significant. Even if the gaps tend to disappear throughout the period, the road network remains differentiated in favor of the capital city area.

Waterways, always playing a part in food supply capital are also improved and increased throughout the 19th century and the first half of the 20th[12] (figure 3). The watershed of the Rhine and the Rhône are connected to that of the Seine to facilitate international trade with Central and Southern Europe and with the Mediterranean ports.

[11] Attracted by the cities, the working masses increase the vulnerability of the State against potential episodes of food insecurity.

[12] Ther modernisation (1879-1914) is mainly due to Freycinet, French ingeneer and public Works minister, than *Président du Conseil* (Saint-Julien, 2000, p.77)

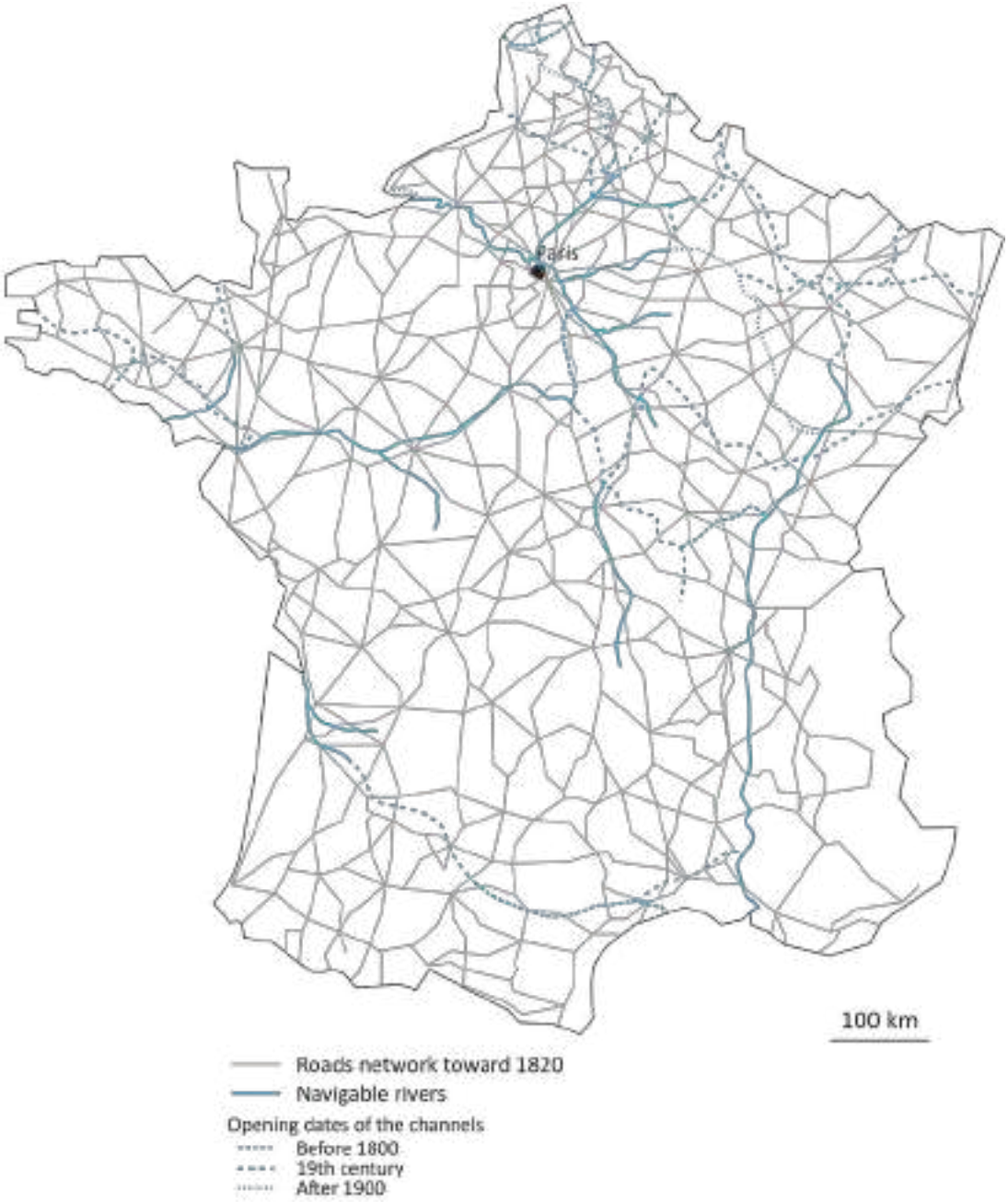

Figure 3. Main roads network toward 1820 (*) and navigable waterways (**)

From (*) Saint-Julien, 2000, p.23 ; (**)Saint-Julien, 2000, p. 77

The advent and growth of the railway contribute to strengthening the central location of Paris since the network is heavily polarized by the capital (figure 4). In the first half of the 19th century, it seems that the rail has a mandate for international transport. The trend is reinforced in the second part of the period with new links created to the Mediterranean (present Italy and Spain) and the multiplication of tracks towards Prussia and the Netherlands.

Figure 4. Railroad network emprovement.
From Saint-Julien, 2000, p.45.

The origins of the products are known by the accounts held by the authorities. For this period, we have two specific dates (1896 and 1910) to which the Prefecture of the Seine (Bureau de l'Approvisionnement, 1897 ; Bureau de l'Approvisionnement, 1911) gives the origin of the products sold in Paris.
More than the previous period, the *Départements* (designation of the provinces since the Revolution) are requested. Their ability to meet this demand is made easier by the constant improvement of transport and technical progress in the primary sector. The widespread agricultural intensification contributes to higher yields[13] and at the end of the period, and the mechanization of farming increases productivity. These volume gains are reflected in the participation of all *Départements* to supply Paris.

[13] The fallow fields are reduced to leave room for legumes plantations (nitrogen-rich fertilizer) and the stocking density increases (producing quantities of manure suitable for fertilization). (Billen, et. al. 2007)

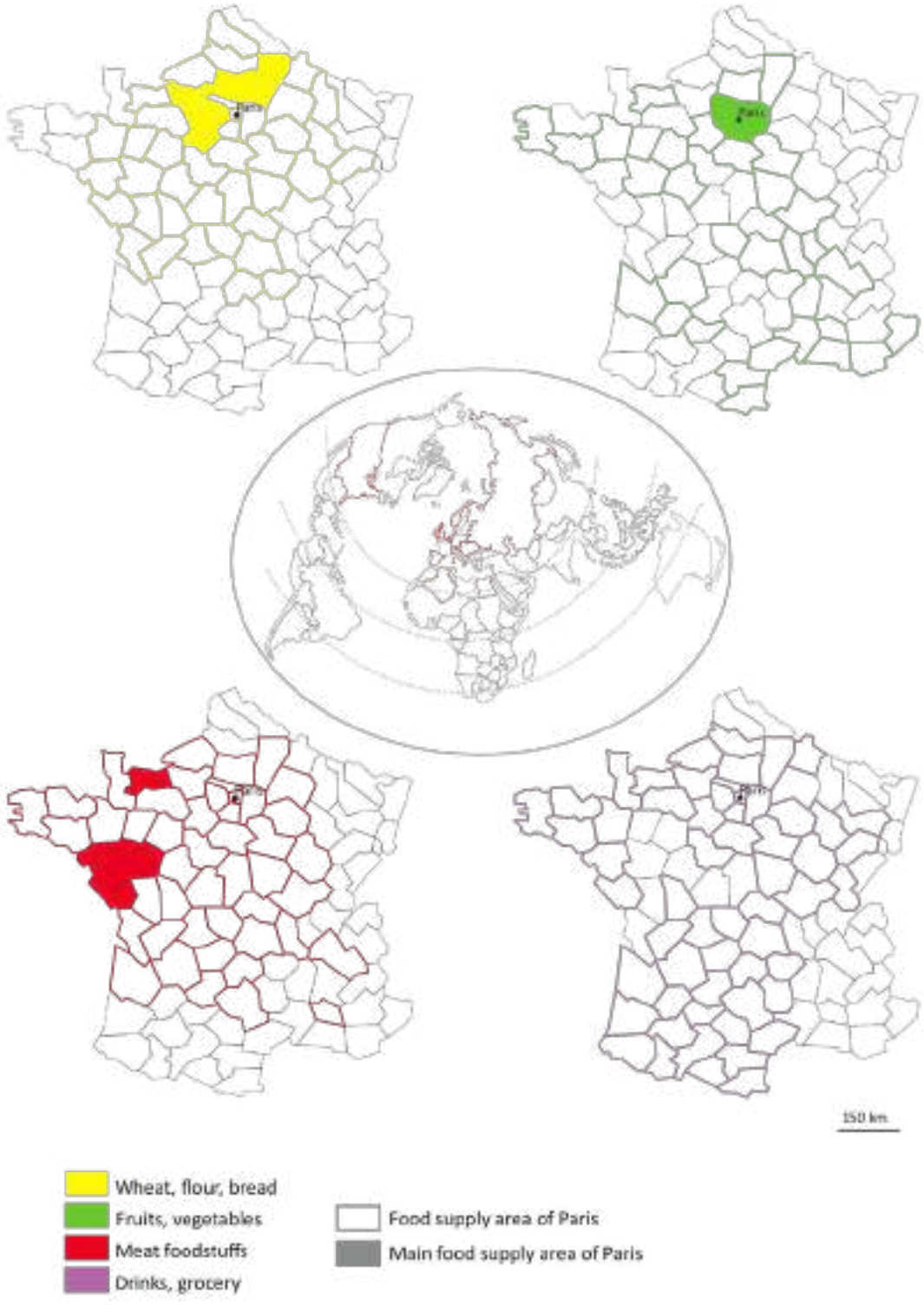

Figure 5. Paris food hinterland in 1896

From Bureau de l'Approvisionnement, 1897 ; Billen et. al., 2011[14]

[14] We have not found data detailed enough to compare them with those presented by Billen. As in Figure 1, we have retained only the higher level of its quantitative classification to account for the majority of grain origins.

On figure 5 the year 1896 is represented because it is one for which we have the largest number of corroborating reports. The natural hinterland from the late 18th century now seems challenged. All *Départements* are still involved in supplying the capital, but some regional specialization of production is at work. The privileged area of origin of animal products (meat and fish) moves to the west of the country and Algeria takes a relatively large share in the supply. Only 5% of animal products are imported from abroad, but most of Europe contributes. Marginally more in 1896 than in 1910, the import of meat from North America (and later Southern America) is gaining importance, especially because of the technical progress in shipping refrigeration means (Pedrocco, 2005).
Fruits and vegetables come mostly from the crops in the surrounding suburbs of Paris, while many other *Départements* contribute. The increasing importance of Mediterranean products (citrus and other fruits) and the significant contributions of Algeria as well as Spain and Italy, should be noted. The improvement of transport conditions is the cause (shortening time, preservation techniques): products previously reserved for wealthy people (exotic or extra seasonal consumption) become more and more affordable (Péhaut, 2005).

Les Halles Market case study

The dichotomy centralization / co-operation between public and private sectors can be explained with the case of Les Halles Market. Governed, according to the period, by the State or the City, but daily managed by merchants, this central market is only dedicated to the supply of fresh food in Paris.
Under the *Ancien Régime*, Kaplan (1988) describes it as a state-market (*Etat-marché*) in which each corporation rules its law, while subordinated to the public authorities. The transition from the revolutionary period occurs only in the last years of the First Empire (1810's). A dual public authority governs Les Halles Market. The *Prefecture de Police* (police headquarter) makes it accessible, ensures internal and surroundings security, healthiness of the products and the places of sale. The *Prefecture de la Seine* (city authority) monitors all economic transactions (fees and sales taxes collecting, price control by following prices trends, anticipation of speculation by prohibiting storage). Driven by economic interests above all, merchants are responsible for daily management of the market: they ensure the cleanliness of their storefront and update the register of financial trends of the products (enabling control by the *Prefecture de la Seine* and justifying prices' increases and decreases).
Les Halles Market, sometimes nicknamed the Belly of Paris (*Ventre de Paris*[15]), supply the capital city since Louis VI (12th century) who had launched an initiative to the site (Chemla, 1994). The upgrading will, expressed at the end of the *Ancien Régime*, was taken over by Napoleon. Haussmann, prefect of the Seine *Département* commands the main arrangements. He mandates the architect Victor Baltard to conduct works from 1853 to 1868, building ten pavilions on two blocks, connected by a glass roof.
The works increase tenfold the space occupied by Les Halles under the *Ancien Régime* and the neighborhood is greatly changed, especially to facilitate its access by

[15] For a romantic and realistic portrayal of Les Halles market, see Zola (1873)

various transportation modes, since the barriers and railway stations. "[...] the whole neighborhood was redesigned, upset. The breakthrough streets [...] [made] away much of the old market district [...] the result of those new streets was a profound and radical change in the neighborhood, making a clean sweep of the past [...]."(Chemla, 1994, p.39). The State's goal is to provide a centralized food supply for the capital region, "the new pavilions were not only an architectural work [resulting of technical progress of the Industrial Revolution, particularly in regard to light metallic structures and large glazed areas], they had to fulfill their daily essential function, that of providing the regular supply to the inhabitants of Paris and the Seine *Département*, but also to cities and outlying regions" (Chemla, 1994, p.40). The ten pavilions house the goods according to their nature. Outside, the fairground hosts the storage of all goods that do not fit in or do not find their way to their proper pavilions (figure 6).

In the early 20th century, access to the pavilions is more and more difficult[16]. The commercial intermediaries create their market niche by taking advantage of these obstacles and the multiplication of retailers scattered in Paris. They are remunerated by commission (thereby increasing significantly the price of food previously traded in direct circuit), a service provided to the seller and the buyer who now meet less directly. This new link in the chain of food distribution reveals the economic liberalization of the markets.

[16] The fairground's gradual spatial conquest causes a congestion that will bring the government to reconsider the location of the market after WWII.

Figure 6. Pavilions and fairground of Les Halles Market towards 1986-1875 (*) and in 1903 (**)

From (*) Chemla, 1994, p.58 (pavilions in 1869) and p.75 (faiground in 1875) ; (**) Chemla, 1994, p.88.

2.3 Contemporary period (post WWII – end 20th century): privatizing the food governance leads to a globalized and rather unknown hinterland, while State planning of the food supply becomes obsolete

The food industry dominates the production of foodstuffs and gradually becomes the origin of most of the products consumed. Indeed, the industry is involved in agricultural activities (production rationalization, use of chemical inputs, mechanization...) and productivity increases despite the decreasing number of farmers (rural exodus) and land availability (urban growth) (Malassis, 1994). The transition from a society of "mass poverty" to a society of mass consumption, and the globalization of the food economy is effective. Thus, it causes the expansion of an agribusiness food system. Supply is changing since the destination of the agro-industrial production is mainly supermarkets. In the 1950s, the original aim is to bring closer the consumer and the producer by combining interrelationships into the hands of intermediaries (distributors), in order to reduce the prices (figure 7).

B : potential buyer – P : producers – I : business intermediaries
No intermediary: **BxP**
5 producers and 10 potential buyers: 5x10= **50 interrelationships**
Availability of intermediaries between producers and consumers: **PxI+IxA**
2 producers gather the previous offer in one place: 2x5+2x10 = **30 interrelationships**
In this example, one loses almost a third of interrelationships. Here, the efficiency appears as particularly reliable for both the producer and buyer.

Figure 7. The efficiency goal of the mass distribution
From Dioux, Dupuis, 2009

But this demonstration does not take into account the margins released by the intermediaries, nor the pressure they may have on suppliers to ensure an affordable price to the consumer.
That distributor is buyer then seller of goods: its economical reason to be is therefore limited to (co-)pilot the households supply. From an economic perspective, food supply of Paris merges with the supply of consumption units that compose it (households, communities, businesses...). If the distribution circuits have always existed[17], modernity invents logistics. In the 1960s, it is about the logistics of means (freight management). Then in the 1980s, the concept of supply chain provides retailers the opportunity to drive the supply from beginning to end. Therefore, the distributor ensures a continuous flow of goods and makes reliable the corresponding information flows (creating databases that allow the exchange of computerized data throughout the distribution process[18]), dealing with making the service efficient and responsive to consumer expectations. It is in fact a tool of flexibility and constant adaptation of supply to demand. Finally, in the late 1990s, supply chain management becomes a unit of profit, an activity in its own, that distributors include (or not) in their supply activity.

[17] i.e. since concentrated populations need to by supplied by tradable goods.
[18] "By 1988 [Wall Mart] had the largest privately owned satellite communication network in the US and its central database is second size only to that of the Pentagon". (Morgan, et. al., 2006, p.180)

The backbone logistic tool of the mass distribution is the central purchasing body (CPB). To strengthen their relationship with suppliers and external purchasing companies, major retailers have formed oligopolistic and in-house CPBs, for their own use. They are intermediaries between farmers and agri-food suppliers; and although there are only few companies, they gather the large majority of turnover. This is the proof of the unequaled success of the large retailing companies.
The links between public authorities and the people become distended on food. The convenience prevails over the quality and quantity, considered as the primary givens of the food industry. From the perspective of consumers, the state is less involved, and it should, because food is a matter of individual choices (Chabrol, D., 2008). Public power is gradually but completely delegating the food supply governance to the business world. After WWII, supply control is provided by private companies, dominating a booming consumer society that chooses to accept and undertake the direction it is orientated.

The hinterland is reset by the plans of the agribusiness. The decrease of transport costs enables the outsourcing of production to countries with cheaper workforce. The hinterland is becoming global in consistency with new consumer habits: seasonality is no longer a price criteria and exotic products are made affordable for all. Consequently, the supply of Paris (as the supply of other cities in rich countries) is from more and more remote provenances. The hinterland is therefore largely and intensely internationalized. On the one hand, the potential provenances of products have increased. And on the other hand, territorial logics of supply have excluded State planning. Specialization of productive areas is guided by the agribusiness, and transport infrastructures created by the State in order to manage the supply nationally are being exploited by private companies.
It is difficult here to produce a map of the hinterland. First, although the food system is relatively stable since the 1960s, fluctuations in the hinterland are such that it is impossible to give a fixed vision. Moreover, the origins are skewed by the blurring of sources: food companies, CPBs, and large retailers communicate very little about the exact origin of the products they sell. And finally, the circuits of production and distribution have become so fragmented[19] that the origins obtained by the databases of the Customs can only account for the last (or penultimate) stage stop of the products.

In the 1950s, three reasons push the State to transfer the activity of the Halles Market on the outskirts of the capital city (Chemla, 1994). First, location is no longer appropriate, because of the city center traffic congestion, bad working conditions for the merchants, and the impossibility to extend despite the high population growth. Second, the occupational structure of the market is changing due to progressive emptying of the wholesalers that go to outskirts warehouses, and the emergence of polyvalent buyers for whom access to various buildings is complicated by the morphology of the market. Finally, the urban supply is changing with the progressive domination of the supermarkets.

[19] About this fragmentation, see the travel of a strawberry yogurt before one can eat it (Böge, 1993).

The State therefore wishes to create a new logistic platform that would be accessible, flexible and extendable. In 1962, Rungis is chosen because it is located close to functional transport infrastructures (main roads around Paris and Orly international airport). The market opening is in 1969. Forty pavilions, sectored according the traded goods, form a regular alignment and are separated by parking areas and arterial roads for internal circulation. A goods station completes the 230 ha of the National Market (Marché d'Intérêt National, MIN). Management is entrusted to SEMMARIS, a semi-public company that is technically and economically responsible of the MIN.
Rungis is one of 16 MINs in France. It is the one that has started the State dynamic of formalization of wholesale markets supplying large urban centers. Gradually becoming outdated (competition with agribusiness), the MINs were reformed in 2004, giving local communities greater autonomy for their management.
However, the evolution of consumption has profoundly affected the success of Rungis. The domestic market has not been responsive to the development of new products (frozen, freeze dried, processed...) that pass through major retailors and their central purchasing bodies. The sizing of the MIN becomes too important for the use made of it. An international dimension emerges. First, the goods passing through the marketplace are intended to supply cities abroad (London, especially for products of southern Europe). And a consulting firm offers the expertise of the SEMMARIS agents on management and development. Moreover, an office of the *Rungis* brand was exported to London (Covent Garden Market) and a close collaboration is born, including the sharing of experience.
Away from the outgoing logic (state control of local trade and national), Rungis is now in decline. The diminishing importance of national production (subsistence agriculture) led the wholesale markets to restructure. The international opening and the creation of parallel professional branches (marketing, consulting ...) illustrate the attempt of the MINs to be maintained, in urban contexts, however, more favorable to the extension of the commercial network of the supermarkets.

3. Results

3.1 The path of the governance: from centralized State to relegated State

From the end of the *Ancien Régime* to the present day, governance of the food supply has been reset continuously. From a centralized state that managed all matters concerning the supply of the Parisians, the food system has now passed into the hands of the private world of business.

At the French Revolution, the depletion of populations' amount differences between Paris and other French cities is partly due to the diversification of the supply means: it is the "revenge of the merchants' profits onto the tax levy, [the revenge of the] openness onto the world of earthly society, [the revenge of the] the market economy onto the state administration" (Lepetit, 1995, p.94). But according to Kaplan (1988), modernization of the supply means does not fundamentally change consumer attitudes against the State. The progressive globalization of the economy

(internationalization of economic relations, including the intensification of inter and intra colonial trade) puts forward the principle of market economy to which population and public authorities oppose the superiority of social demands. The trend is probably twofold. Market and principle of market economy are therefore political positions borrowed alternatively by governments and merchants.

However, the Industrial Revolution has led to technical progresses that have impacted all key areas of the food system. First, producing and routing facilities are systematized and streamlined. The responsibility now rests on private and public trusts. These companies first concern transportation (rail, initially) and then gradually handles the other components of the food system. The industry comes into production (improved farming techniques, farm businesses in the "new world") and distribution (rationalization of distribution and concentration at Les Halles Market).

This privatization trend has been continuing to this day. After WWII, the State is still relatively strong and highly centralized. Nevertheless, the priorities of government deviate from Paris food supply. Indeed, the material reconstruction of the country, the management of urban growth (shift to a service economy, rural exodus and international migrations) as well as considerations for international politics (decolonization and repatriations management, construction and development of a European Common Agricultural Policy) lead the public authorities to a withdrawal from food governance. Still in charge of quality control of foodstuffs (public health) and the balance of goods in transit on the domestic territory (customs), the role of the State is gradually becoming marginal to the omnipotence of agribusiness companies.

3.2 Spatial and urban planning at the heart of food supply concerns

During history, food supply has been a crucial issue for the authorities. They made of the capital city an essential node which polarizes the whole territory. This is obvious in terms of transportation: infrastructures were designed radially and concentrically around Paris; natural routes were arranged so that all can converge toward Paris. The urban site is fully optimized since the foodstuffs can reach from around the world.
It is the same inside the city: the facilities are designed to rationalize the supply. Initially, the concentration on a market was for the State to control transactions, but this structure has persisted because it allows an orderly supply. Haussmann's urban restructuration has optimized the supply, at least for a moment. As well, Les Halles Market's transfer to Rungis, closer to the national and international transportation infrastructures is the same movement: on the orders of public authorities, Paris relocates one of its functions outside its own territory, and further accentuates its functional influence on the national territory.
The privatization of supply did not reverse the trend. Instead, the companies responsible to route the food to Paris use the access roads provided by the State. As Rungis Market, CPBs of large retailers are excluded from inner Paris area, and their location depends more on the reported profitability and on land freight rates than on the consistency of proximity to the city.

The extension of the supply area of Paris is obvious. The international opening has been a milestone since the end of the *Ancien Régime*. International trade and technical-industrial revolution of the 19th century are the basis of this configuration of the hinterland. This is not a matter of planning, the specialization of agricultural areas is part of a global mechanism due to various factors (economical, financial, commercial, historical, climatic, diplomatic…).

4. Conclusion

History enlights a view over the periods that preceded us and the transitions that accompanied them. Nowadays, the relocation of the hinterland is a burning issue: it mobilizes a growing number of stakeholders and challenges the foundations of the global and privatized food system that governs us since the 1950s. On behalf of sustainable development, some say we should at all costs overcome this system. Indeed, it abolishes all values of equity (unfair trade), viability (mismatch between economic development and ecological enhancement of territories) and bearability (inadequacy of chemical-technical industry with public health priorities). This historical synthesis offers a reading key for the evolution of our food system: nothing was done without transition. No rupture is possible with the food system that rules us. But it seems likely that we live in a period of transition. Paris is an example of one of these rich cities that include some of the citizens and politicians to question the hegemony of the private and global agribusiness system. Emerging initiatives suggest that the invective of sustainable development has entered the common awareness. The shortening of some delivery circuits (direct sales) and the enthusiasm to go "back to the land" (community gardens, intra-urban or suburban productive areas…) can be plotters, leading signals suggesting that the food system is changing.
In France, and in Paris, this relocation will appeal (without using those terms specifically) to the proximity of a natural hinterland once optimally located on the outskirts of the city and that no longer exists. Supporters of this relocation are probably tagged by over a century of suburban legend, colored by the theories of the German economist Von Thünen and the utopia of the British urban planner Howard. Following the findings of this paper, the natural hinterland is to be relativized. First, no backtracking is possible in the the current system. Changes, if they are perennial, will be due to the innovations and to adaptation of some already known but renewed processes. Furthermore, we demonstrated that the natural hinterland, as defined in the introduction, has never matched the ring road of Paris. In his most spatially concentrated, the Parisian hinterland corresponded to the downstream of the Seine-river's watershed. But our demonstration helped to see that for over three centuries, Paris food needs polarize ad minima the whole country.
The importance of considering spatial and urban planning to gather consumption and production areas, is to be found in the principles of territorial ecology. This scientific field, under construction, considers a territory, together with the flows that supply it (and the ones it generates) and the actors who govern it. This set should be taken into account in any sustainable attempt to relocate the hinterland. Indeed, localism and proximity are two concepts, not to be confused. The first attempts to impose by whatever means the notion of local, which can lead to ideological dangerous shifts

(national or local fallback, borders glorification, excessive protectionism, "food fascism"…). Instead, the idea of proximity enables a step by step reflection, without giving limits for the relocation, and considers values of *rescale, respace* and *reconnect* (Kneafsey, 2010).

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DEVELOPMENTAL STATE, NEOLIBERAL PRINCIPLES, TRANSFORMATION OF PUBLIC HOUSING POLICY IN SINGAPORE

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Abstract

Among studies on variegated neoliberalization, a great deal of attention has been directed towards the Asian Tigers, where the neoliberal logic lands in a territory previously dominated by Developmentalism. Empirical studies unveil such an unstructured pattern of variegations that fuel the debates on the frictions between neoliberalism and state-led developmentalism. Situated in this concern, this study attempts to examine the frictional process through a longitudinal study on public housing policy transformation in Singapore, with the focus on the pathway revealed by successive rounds of neoliberal regulatory experiments.

Singapore might offer an interesting laboratory for studies on this topic for the following two reasons: a) TNCs dominate the economic life of the city-state, and the city has always ranked high on the Index of Economic Freedom by the Heritage Foundation; b) the Singapore party state not only plans and intervenes in the country's economic development, but also appropriates the state apparatus such that a number of scholars classify its model as State Capitalism. Open economy and state dominance seem to co-exist shoulder-to-shoulder for decades in the city-size country, and thus, the intensified conflicts between developmentalism and neoliberalism might inspire studies with either empirical or theoretical endeavors. The study examines the transformation of public housing policy and schemes from 1979 to 2011, identifying two stages. During the first stage, a series of market-oriented regulation relaxation and financial liberalization have been carried out, with the main drivers more than often domestic in origin. The second stage is featured by active involvement of international capital, which pursues a ticket to penetrate the domestic market that was dominated by the Government-Linked Corporations and to participate in the decision-making process that was confined to the state and its arms. This is a non-linear path, while the latest scheme of DBSS splits the two sides of

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public housing sector, with one side opened wider to the private sector for capital accumulation whist the other side as a governable space reclaimed by the state.

1 Introduction

Among studies on variegated neoliberalization (Peck and Theodore, 2007, Brenner et al., 2010), a great deal of attention has been directed towards the Asian Tigers, where the neoliberal logic lands in a territory previously dominated by Developmentalism (Weiss, 2004, Ong, 2007, Park et al., 2012). In concept, the two utopian projects of Neoliberalism and Developmentalism clash at their ideological cores which, guided by different norms, serve to justify interests of different social forces and power relations (Chang, 1999, Ong, 2006, Park et al., 2012). In empirical, studies on developmental states have unveiled either varied, hybrid modalities or mobile, and dynamic processes that tend to portray an "unstructured" pattern of variegation (Brenner et al., 2010). The conflict in ideology and deviations reported in empirical studies fuel continuous debates on the friction between Neoliberalism and Developmentalism (see Weiss, 2004, Park et al., 2012).

In a very concise sense, neoliberals put "egoism" as the basic law of society (von Hayek, 2005). Advocates of neoliberalism act wisely when they frame the discourse based on "individual liberty and freedom as sacrosanct" (Harvey, 2006a), which makes the removal of any constraint used to embed the Keynesian capitalist system necessary. Neoliberalism, therefore, is in fact a political project that restores the power of economic elites and reestablishes the condition for capital accumulation by naturalizing and legitimizing the idea of a free market. The neoliberal political regime embarks on institutional reforms featured by privatization, marketization, and commodification. Moreover, the requisite for the construction of a competitive market and a free economy is extended to social society, which must be economically and socially attended by the state (Peck and Tickell, 2002).

On the other hand, Developmentalism advocates Confucian values and collectivism. One must trace back to the original historical setting of Japan at the time of the Meiji Restoration to understand the rationale of Developmentalism (Chang, 1999, Hill et al., 2012). Facing the intrusion of the liberal model brought about by Western military conquests and the economic domination by foreign companies, the Japanese government was in urgent need of instant economic growth. The Japanese government resorted to Confucian values, in which the collective interest supersedes individual ones. A strong state, which represents the general will of the entire nation as one person, is thus claimed to be the leader of economic change through a full-fledge exercise of government instrumentality. Correspondingly, public ownership and strategic planning are institutional means to best achieve national economic development. The State-led Developmentalist model soon thereafter spread in Asia, being adopted by South Korea, Hong Kong, and Singapore, and recently by other countries, such as Malaysia and China.

Given the conflicts at their normative orientations, the current occurrences in developmental states in the global tidal wave of neoliberalism become interesting. Studies have reported diverse opinions. Market-oriented regulatory reforms are generally acknowledged, but scholars disagree with one another in terms of whether market-oriented regulatory changes are defined as transformation or cooperation, are driven by international forces or proactively taken by the state in response to changing circumstances, or by liaised inside and outside forces (Weiss, 2004, Ahmed, 2009, Stubbs, 2009, Park et al., 2012).

Aihwa Ong calls for a wider order of theoretical structure, in which Asian countries are perhaps "an extreme case," or "variants of the (global north), based on historical and geographical contingencies" (Ong and Zhang, 2008). Following Foucault's (1991) theory of governmentality, Ong (2006) goes to the abstract level to introduce her concept of "neoliberalism with a small n" for Asian developmental states, which triggered heated contestations in theorizing neoliberalization (Brenner et al., 2010, Peck, 2010). Scholars in the governmentality approach conceive neoliberalism as a technology of rule (Rose, 1999, Ong, 2006). The state imposes the idea to the ruled that " 'we' – the universal and undifferentiated subjects of the present – have entered the sunny uplands of liberty and human right" by shaping the discourse on freedom (Rose, 1999). Therefore, it is the call from the new era, in which self-enterprising and self-managing subjects live, that "places the ground upon which government must enact its practices" to remove impediments to free market (Rose, 1999).

The severest critique to the governmentality approach might come from Brenner, Peck, and Theodore (2010). They argue that the over-emphasis on instability, hybridity, and contextually specific presence fails to explain the "inter-jurisdictional family resemblances, interdependencies and interconnections" (206-207). Brenner et al. reiterate their theory of variegated neoliberalization, namely, the systemic production of geoinstitutional differentiation, by which they stress that "neoliberalization processes are simultaneously patterned, interconnected, locally specific, contested, and unstable" (185). The methodological flaw in the governmentality approach, as explained, is the lack of a broader view on the "context of context - specifically, the evolving macrospatial frameworks and interspatial circulatory systems in which local regulatory projects unfold." Local areas are not isolated from wider transnational political processes espoused by transnational corporations (TNCs), liberal intellectual elites in educational institutions and think tanks, and international financial institutions, such as the International Monetary Fund and the World Bank (Harvey, 2006b, Peet, 2007). Neoliberalization relies on the dialectic among different spatial scales of economic and political organizations and the mutual constitution of structure and agency across different levels (Cox, 1998).

The interactions between inherited institutional landscape and neoliberal experiments are agreed to matter in the transformation of an institutional framework (as constellations of normative orientations and organizational arrangements) (Weiss,

2004), but the question contested is how much is the room for the state to maneuver as a component of the regime.

Singapore offers an interesting laboratory for studies on this topic for the following two reasons: a) TNCs dominate the economic life of the city-state, and the city has always ranked high on the Index of Economic Freedom by the Heritage Foundation; b) the Singapore party state not only plans and intervenes in the country's economic development, but also appropriates the state apparatus such that a number of scholars classify its model as State Capitalism (Rodan and Jayasuriya, 2009). Open economy and state dominance seem to co-exist shoulder-to-shoulder for decades in the city-size country, and thus, the intensified conflicts between developmentalism and neoliberalism might inspire studies with either empirical or theoretical endeavors. The sector of housing development belongs to the latter category, which has been gradually pried open by international forces after 1997. Parallel with the state-led urban landscape beautification process for a post-modern cosmopolitan image, the long suppressed desire of (transnational) private developers for a bigger role has started to bear fruit.

Enveloped within this concern, this paper attempts to examine the frictional process between Neoliberalism and State-led Developmentalism through a longitudinal study on the public housing policy changes in Singapore, with a focus on the transformation of institutional framework as constellations of normative orientations and organizational arrangements. Particularly, the period under examination of this study is from 1979 to 2011. Through the experimental and frictional processes between the two forces of neoliberal globalization and the authoritarian state, this study attempts to shed light on studies regarding neoliberalization in developmental states.

2 Singapore in the context: Strategic pragmatism

Unlike the other developmental states of Japan and South Korea, Singapore's economic life is unique in the degree to which national economic growth has been so heavily reliant on international capital (Schein, 1996). Given the absence of a strong domestic bourgeoisie class and a colonial legacy that has contributed to the openness of trade (Rodan, 2004a), the resolution of an export-oriented manufacturing base run by foreign investment seemed natural. Articulated in support of national objectives, numerous policies are promulgated in favor of the interests of Multinational Enterprises, such as removing impediments to free trade and open economy. Nevertheless, efforts to attract foreign investment are not indiscriminate. What distinguishes Singapore is what Schein (1996) termed as the "strategic pragmatism", characterizing the working style of the Singapore Economic Development Board (EDB), which was a statutory board set up in 1961 to attract foreign investment. By strategic pragmatism, Schein highlights that the state picks "targeting industrial sectors" by plan and indulges them in globalization-oriented free market (Pereira, 2008). In other words, sectors not on the list of targeted industries are living on the flip side of an open economy, that is, state dominance. This condition is particularly

true for several key sectors with close linkages to the domestic market, such as media (Ibrahim, 2007) and land development (Lee, 2010).

Starting from Singapore's self-rule, policies on land-based development aimed at centralization of control. Through a series of measures, such as compulsory land acquisition assisted by the Land Acquisition Act, land reclamation, and land-lease legislation, the state became the primary landowner in Singapore, directly or indirectly owning approximately 80% of the land. The land, after acquisition and amalgamation, is either allocated to its arms, such as the Housing and Development Board (HDB) for public housing, or leased to the private sector. Through this mechanism, the state plans and tracks land released into the public and private sectors on the basis of projected demand (Lee, 2010). The control of land allows the state to influence the proportional share of private and public housing sectors. Sitting on the allocated state land parcels that are cautiously planned in the master plan, public housing easily gained popularity for its lower price, better locations in infrastructure terms, among others. Within a relatively short time, public housing has become the "common bond for all," accommodating approximately 85% of the whole population.

3 Stage One: liberalizing the resale market of public housing

Singapore's public housing is in ownership terms, with the Home Ownership Scheme (HOS) introduced in 1964. At that time, worries that public housing might become a vehicle for speculation restricted the liquidity of these assets. Hence, ownership rights were initially limited by numerous regulations concerning eligibility conditions for purchase, resale, subletting, and housing loans. Since the 1980s, a series of events related to regulation relaxation and financial liberalization reshaped public housing into a liquid asset, the value of which lies in the resale market.

Over decades of explorations and experiments, the state and its arms, including the HDB, Government of Singapore Investment Corporation (GIC), and Central Provident Fund (CPF) Board, have formed an almost closed loop of capital flow in public housing production and consumption (Figure 1). In the circuit, the scheme of CPF is a crucial financial tool through which individual savings are channeled to the largest single pool of investable funds. The mobilization of CPF money not only makes construction of public housing at a massive scale possible at the macro level, but also boosts housing ownership consumption at the micro level.

Established as a pension plan in 1955 by the colonial government, the initial objective of CPF was to provide social security for the working population in Singapore. For individuals, CPF accounts are compulsory savings accounts to which both employers and employees make monthly contributions at specified rates. Two years after the implementation of the HOS scheme, public housing consumers are allowed to withdraw money from their CPF accounts for down payment. By selling Singapore Government Securities (SGS) to the CPF Board, GIC - a subsidiary of the

Ministry of Finance - absorbs this increasingly large amount of forced savings and redirects part of them to HDB through schemes of Annual Grant and Development Loans. Sitting on this financial support and cheap state-owned land, HDB is able to invest on public housing development and sell the dwellings at a price lower than that in the private market. Individual consumers, the actor at the other end of the circuit, may apply to the CPF Board for a deduction of down payment from their personal CPF accounts. Moreover, after receiving another financial support called the Mortgage Finance Loan from the government, HDB also plays the role of a commercial bank, offering HDB mortgage loans to consumers for 80% of the total property value. In this way, national saving accounts are productively employed to finance housing development at the macro level, as well as housing consumption at the micro level.

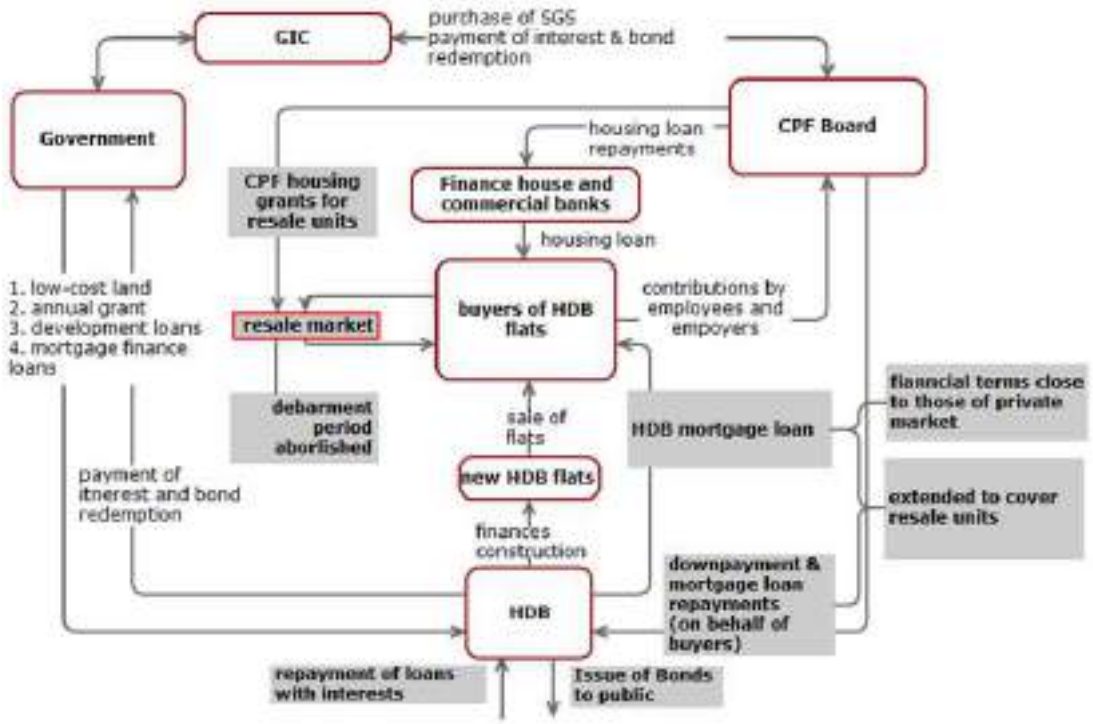

Figure 1: Financing public housing (developed upon the diagrams by Ng, 2000; and Phang, 2001)

Also within this framework, carefully timed measures are introduced to liquidize the asset of public housing on the resale market by replacing coercive rules with new financial technologies. The resale market, although in place as early as 1971, was constrained by many conditions. Among these regulations, the debarment period is a great deterrent for households considering the sale of their flats. Under this condition, the seller was debarred from applying for another public housing unit for one year. This largely limited volume of housing stocks that were placed in the resale market. Hence, 1979, the year in which the debarment period was demolished, is referred to as a turning point for a conceptual shift from public housing as a means to attach

people to the land, as claimed by Lee, to public housing as a liquid asset tradable on the market. In 1979, the regulation on the debarment period was replaced by a new scheme in relation to a resale transaction levy, which was further replaced by a graded levy system in 1985. In 1993, the HDB moved its mortgage financing terms for resale units closer to market practice by granting loan financing of up to 80% of the current valuation or the declared resale price of a housing flat, whichever is lower. In 1993, the CPF Board also began to allow withdrawals of CPF savings to be used to meet interest payments on mortgage loans for resale units. One year later, another scheme for resale units called "CPF Housing Grants" was announced, extending subsidies tied to new flats to resale flats. The subsidy is deposited into the CPF account of the eligible household upon application. Under the scheme, the government provides the eligible applicant household a grant of SG$30,000, with the figure increasing in 1995.

The threshold line for people to become eligible resale unit consumers has been lowered to accommodate permanent residents and the local economic elite in 1989. On one hand, access to subsidized public housing is offered as carrot to lure foreign professionals in exchange for their applications for permanent resident status. On the other hand, the relaxation indeed enlarges the pool of potential consumers, which is more critical when we consider the socioeconomic characteristics of these two population segments, which were private housing market residents with apparently higher purchasing power.

As a result, the resale market of public housing blossomed in a relatively short time span, the operation of which showed close correlation with the private housing market (Tu and Wong, 2002). Not only did the volume of transactions go up, but the fluctuation of transaction prices also resembled that of the private market closely (see Phang, 2001). The market-oriented institutional reforms resemble several features of neoliberalization, but all regulatory restructuring were driven by governmental forces and were constrained in the state-centered organization structure. What makes the case of Singapore different is the almost closed circular loop of capital flow, along which interests of the networked government and its associates are channeled with the assistance and intervention of financial tools.

4 Stage two: prying open the big cake of the public housing market

4.1 The context of context

The Asian financial crisis of 1997 significantly affected the island-state's economy and brought about fear of insecurity to its party state, which appropriates economic growth as one most important source of legitimation (Castells, 1992, Low, 1998). Afterwards, the anxiety rose to a new level because of Singapore's worst economic recession in 2001 and the economic stagnation in Southeast Asian region. Criticism of state capitalism from the international business community became powerful, something that was conspicuously absent in previous decades under the authoritative

state. Instead of requesting for a mechanism of a liberal market for it has been operating in Singapore, what international capital pursued was a ticket to penetrate the domestic market that was dominated by the GLCs and to participate in the decision-making process that was confined to the state and its arms. International capital aimed to eventually find a way by which to tear open the closely knitted network of the state, the GLCs, and the state capitalist class (Rodan, 2004b).

4.2 Participation of the private sector in decision making

The authoritative state of Singapore puts on a humble face, introducing the gardener analogy to illustrate the new role that government would play, a "catalyst that allows all kinds of organisms to thrive in a cooperate setting" (Ong, 2005). The government, unprecedentedly, also acknowledges that the process needs help from the private sector, who knows better how to cater to the market needs and the rising aspirations of the affluent.

The channel for communication between the state and the private sector is a new committee called the Economic Review Committee, which, as suggested by the CSC, should incorporate representatives from the three major sectors, namely, government, unions, and private entities. Under the sub-committee on Taxation, Wages, CPF and Land, the Land Focus Group is convened to review all policies, schemes that are related to land development. Influence from the private sector, especially transnational corporations is obvious. Of the 11 members of the Land Focus Group, three are senior managers of TNCs[2], three are from Singapore-headquartered Multi-national Corporations (MNCs), and two are from GLCs, whereas the remaining members are government officials. The private sector's long-suppressed desire for more participation has gathered momentum. Planning laws, such as the Land Title (Strata) Act and the Planning Act, along with many other regulations, such as the Controller of Housing regulations, were identified by the committee as "rules, regulations, and practices that needed immediate review" (Land Working Group, 2002). The government was urged to minimize its participation in the market, but encouraged to initiate infrastructure construction for land value creation and institutional reform to reduce the cost to investors.

4.3 Introducing private developers to public housing

Under this circumstance, public housing development in Singapore turns to a new chapter, especially in terms of the relationship between the state and the private capital. New schemes were announced, such as the Selective En Bloc Redevelopment Scheme (SERS), Executive Condominium (EC), as well as the Design, Build, Sell Scheme (DBSS). Although the first scheme allows private capital to participate sporadically through outsourcing, the latter two schemes offer private

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[2] TNCs include: Hewlett Packard Asia Pacific Ltd, Knight Frank Pte Ltd, and Exxonmobil Chemical Asia Pacific; MNCs include: Fraser & Neave Ltd, Wing Tai Holding Ltd and YCH Group Pte Ltd; GLCs inlcude: Capital Land and Singapore Airline Ltd.

developers more significant autonomy. These two schemes have many commonalities. First, under both schemes, the government auctions state land on a 99-year leasehold basis to developers, who are granted freedom to design, build, and sell housing stocks at a price comparable with those in the private market. Second, target customers of the two schemes significantly overlap, that is, the new rich who desire something more than the standardized ordinary public housing but find private market housing out of reach for the time being.

Since the inception of the EC scheme in 1996, a total of 21 projects have been completed. The field has clearly been dominated by GLCs, the mergers of which in later years merely resulted in the concentration of EC properties in giant government-linked conglomerates. According to the data, 15 out of all 21 projects were developed by GLCs and their subsidiaries. For instance, nine estates, such as the pioneer project of Chestervale, were developed by subsidiaries of either Pidemco Land Ltd or its shareholder, Singapore Technologies Properties Pte Ltd (STP), a subsidiary of Singapore Technology Group (ST) that encompasses critical sectors of national significance, namely, aerospace, electronics, land systems, and marine systems. After acquiring 24.6% of Development Bank of Singapore (DBS) Land, STP, which was then the shareholder of both Pidemco Land and DBS Land, urged a merger of the two. This merger resulted in the birth of the giant developer Capital Land in 2000.

In comparison, the GLCs' influence on the DBSS scheme evidently declined, the form through which the state and the international capital participate became indirect. . Since 2005, 13 land parcels have been put on sale for DBSS development, of which 12 have been awarded, nine to private developers and three to a joint venture. For instance, one big winner under this scheme is the consortium comprising Hoi Hup Realty Pte Ltd and Sunway Developments Pte Ltd. Hoi Hup is a well-established local developer that owns many properties on freehold land, and Sunway is the Malaysian conglomerate that forged strategic partnerships with global investors, such as GIC, Malaysian Provident Fund, Kuwait Finance House, and Goldman Sachs. Meanwhile, several private developers also managed to expand their business from humble beginnings as builders or building material traders to property developers. Such is the case for six out of the total eight developers. Sim Lian Land (SLL) is an example that continues its exploration in the public housing sector, developing one EC project and three DBSS projects. Thus far, the claimed business-friendly environment for all organisms to thrive seems emergent. This environment might be more evident from a closer examination of the geographical distribution of these projects, given that location is always at the core of real estate development.

4.4 Preserving the authoritarian state

The fundamental difference between the EC and DBSS schemes may lie in the official categories where they belong. In a concise sense, the EC is taken as private development at its final stage, whereas DBSS is envisaged as public housing. Public housing in Singapore might be an excellent case to demonstrate Foucault's (1991) concept of Governmentalization of the state. As illustrated by Rose (1999),

"invention and assembly of a whole array of technologies that connect calculations and strategies developed in political centers to those spatially scattered points where the constitutional, fiscal, organizational and judicial powers of the state connect with endeavors to manage economic life…and habits of the population." This change in the property manage sector reclaims the power of the state over the DBSS community, which is a governable space where a series of institutions have been set up over the years to shape, guide, and direct the conduct of community members. Nevertheless, DBSS residents are not exactly the same as the remaining members of the public housing community; on average, they paid significantly more for their flats. Complaints on the sky-high prices of DBSS projects are gaining momentum, triggering heated debates on the DBSS profit margin. In response, the ethos of neoliberalism as a technology of governance was employed.

On 24 June 2011, an article entitled "Time to slay the DBSS 'monster'" on "The Straits Times" triggered a stir in media (24 June 2011). The reporter reminded the public that, "Today, the 'monster' is rearing its ugly head – in the form of a record-setting SG$880,000[3] three-bedroom flat" in the Central 8 project developed by Sim Lian Group. Under this program, the reporter wrote, "developers profiting from high premiums slapped on homes and buyers seduced by unrealistic expectations of capital gains." Several days later, an article entitled "Profit margins for DBSS developers 'look high'", was published on "The Business Times" (30 June 2011), estimating that developers may make a gross profit margin of 20% to 33%, with that of the Central 8 project by the Sim Lian Group rising to an eye-catching 76% compared with an average 30% to 40% profit margin in private developments. The extreme case was immediately corrected by government officials, that is, the Director of Housing at the Ministry of National Development (MND), who published an article that highlights the errors in calculation on "The Business Times," as well as the Minister of MND on his blog, new entry of which has always been reported by the mass media like the several main TV channels. The government clarified that the margin of the Central 8 project had been exaggerated, and the press had to apologize. In another blog entry by the minister, Khaw, in fact, acknowledges that the price has caused discontent of the public, who requested the MND to step in and regulate. However, Khaw reminds the public that the power is at their hands, their power as consumer and their consumption behavior in the market will affect pricing. In contrast, any intervention by the state, that is, by MND, will only "damage Singapore's reputation as a business hub, with severe repercussions". In other words, self-enterprising behavior requires non-intervention of the government because only in the mechanism of a non-interrupted market can consumer preference become a determinant of price.

[3] Prices of ordinary new three-bedroom public housing are pegged from SG$116,000 to SG$188,000 in the year 2010 (HDB, 2011).

5 Conclusion

Analyses on public housing institutional restructuring in Singapore, while shedding light on neoliberal regulatory experiments in the developmental states, might generally have broader aspirations on theorizing neoliberalization.

This study uncovers an experimental process with trial and error. Basically, two stages with distinctive features are identified. The first stage, from 1979 to 1996, witnessed a series of market-oriented deregulation and liberalization initiatives that boosted the resale market of public housing. Since 1996, the regulatory restructuring of Singapore's public housing entered a new stage, in which state dominance was pried open to allow (international) private capital to join as a new player in the public housing sector. At the core of the developmental state of Singapore might be the organizational structure, which explicitly defines who are members and who are not. Meanwhile, the normative orientation of Developmentalism, that is, Collectivism, does not seem to resist the neoliberal principle of the free market. Hence, (international) private capital, at the time of the economic crisis and stagnation, aims at prying open the tightly woven net of the state, its statutory boards, and GLCs that used to dominate the domestic market of non-targeted industries, land-development in this case, as well as the decision-making process at the policy level.

The EC and DBSS, implemented in 1996 and 2005 respectively, are instructive in illustrating the dynamic and frictional negotiations between the authoritarian state and private capital. Although the policy of EC implies a more complete withdrawal of the state and its arms, possibly a hasty attempt to pull the public housing market out of the doldrums, the DBSS is a modified version that takes better care of both state and private capital interests. DBSS splits the two sides of public housing sector, with one side opened wider to private sector for capital accumulation whist the other side as a governable space reclaimed by the state. The case of Singapore's pubic housing might put us to another reflection on the neoliberal statement of "individual liberty and freedom as sacrosanct", which places neoliberals on the moral highland (Harvey, 2005). Importantly, transnational forces which urge for neoliberal regulatory reforms may be only partially or periodically attracted to individual liberty so that to differing degrees, these reform pressures can be accommodated by authoritarian regimes.

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Urban strategies and post-event legacy: the cases of summer Olympic cities

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Abstract

Mega-event strategies and their impact on host cities have drawn increasing interest, as organising large-scale urban events has become part of a deliberate urban policy strategy to promote local economic growth, improve the city image and put the host city on the world agenda. Most cities stressed exploring city marketing and reimaging effect of these mega events, like the construction of iconic flagship projects or large scale facilities and infrastructures; however, limited attention has been paid towards what legacies these strategies have created on host cities' long-term development, like the post-use of event venues, facilities and related infrastructure. Even less attention was paid toward the long-term effect of these mega-events on host cities' economic growth, social development and environmental upgrading.

This research critically examines the use of mega event strategy in urban development process in the Summer Olympic host cities since 1992 and the legacy left after the Games was over. Data has been collected through fieldwork and literature review. The research identifies urban strategies different host cities have adopted on program definition, organisation structure and development process and evaluate their effect on post-event legacy. This paper suggests that, although host cities may emphasize one particular perspective, it is important for host cities to take a more integral approach to guide the whole process from pre-event preparation and event hosting to post-event development. Such approach may take more care of the balance development of the host cities in economic, social and environmental perspectives and have better chances in sustaining mega-event impact. In particular, urban strategies should pay attention to the establishment of economic functions, social integration and sustainable re-use of post physical legacy in the long-term.

Keywords- Summer Olympic Games, urban strategy, post-event legacy, Barcelona, Beijing

Introduction

The Olympics is one of the world's great 'mega-events'. The Games' five-ring symbol alone can be recognised by approximately 90% of the world's population. Given the event's significance, studies have paid increasing attention to the Olympics in recent years. A large-scale undertaking such as the Olympics can act as a catalyst for local – and even regional – economic development, attracting mass investment, tourists and the global media to the host city. Indeed, host cities generally attach great importance to factors such as the Games' economic implications, event-related income, and the development of tourism. A number of studies have looked at the economic implications of staging the Olympics for host cities. Most studies attempt to identify the economic benefits, either measuring the extent to which such benefits offset the costs, or the extent to which such benefits can be sustained in the long term (Preuss 2004; Austrian and Rosentraub 2002; Kasimati 2003; Gratton et al. 2006; Whitson and Horne 2006). Others, meanwhile, focus on the development of Olympic tourism (Pyo et al. 1988; Higham 2004; Gotham 2005; Weed 2008; Van den Berg et al. 2002). In addition to the economic implications, a number of studies have drawn attention to the Games' likely social-cultural and environmental impact. With respect to social factors, there has been particular interest in the Games' social impact on local communities. It has been found, for instance, that while such an event may engender a local community's sense of self-worth or stimulate participation in sport at the community level, hosting the Olympics can also have negative social effects, particularly on housing and tenants' rights and processes of social gentrification (Jones 2001; Olds 1998; Waitt 2003). From an environmental perspective, the relevant studies have not only focused on the technical details of the International Olympic Committee's (IOC's) environmental requirements, but also increasingly link these to the issue of sustainable development.

Although the Olympic Games usually have a great impact on a host city's spatial structure, due to the IOC's requirements regarding the construction of gigantic sports venues and facilities, studies of the Games have been largely concerned with cities' economic or social motivations for hosting the event. In recent years, the Olympic Games have increasingly been viewed as a means of stimulating urban development processes, on the grounds that the erection of landmarks, the development of infrastructure, and urban renewal processes frequently transform an urban space (Chalkley and Essex 1999; Roche 2000; Gold and Gold 2006). The Olympics' role as a catalyst for urban development and regeneration was first identified in a bidding document in 1992, when Barcelona was preparing for its Olympics. Owing to its use of the Olympic legacy, increased capital flows and its improved attractiveness as a city, Barcelona was able to boost its economic growth, enhance its image, and transform itself into a

globally competitive city. Barcelona's success is one indication of the significance that the Olympic Games can have for urban development practices and urban policy in host cities, and equally, the importance of understanding the Olympic Games from an urban development perspective.
With a view to this, the objective of this paper is to review the existing literature on cities that have hosted the Summer Olympic Games, from the perspective of urban development. In doing so, this paper attempt to draw links between the Olympic Games and urban regeneration practices, in terms of motivations, development strategies, and post-event legacy. This paper does not, however, attempt to draw any conclusions as to how cities should capitalise on hosting the Olympic Games, nor does it propose the best strategies for interlinking the Olympic Games with legacy. Instead, the objective of this paper is to provide an overview of the different approaches adopted by the host cities, their underlying motives, and the expected or actual legacy.

The article is structured as follows. It begins by explaining the context of the Summer Olympic Games, and what motivated the cities to make such enthusiastic bids to host the Games in the context of globalisation. It then examines the various urban development strategies that were used to translate the host cities' visions and goals into reality. In the next section, post-Games legacy were examined, followed by the synthesis on the interrelationship between strategies and legacy in the years following the Games. We finally conclude by presenting the results of the literature review. We highlight the contrasts and contradictions provoked by the strategy of using the Summer Olympic Games as a catalyst for stimulating both urban development in host cities and, ultimately, sustainable development.

Hosting the Olympic Games in the context of globalisation

The interrelationship between the Olympic Games and urban regeneration in host cities is often addressed from two distinct angles: those of the Games as a global phenomenon, and their local aspects. The reason for this is that the Games are a global event that unfolds in one particular place (Short 2008). Mega-events such as the Olympic Games have often been described as one of the primary expressions of the globalisation of culture; or, as Roche puts it, as "large-scale cultural (including commercial and sporting) events, which have a dramatic character, mass popular appeal and international significance" (Roche 2000). Roche argues that that such an event's ability to support and adapt to the time structure helps "to coordinate intergenerational cultural, political and economic flows and networks" at the global level (2003, 119). Moreover, the unique feelings of being in a 'global village' and 'one world awareness' that are provoked by the Games have been further strengthened by the emergence of

globally-mediated television broadcasting and advances in communications technology. Horne and Manzenreiter (2006), for example, suggest that exposure to vast global audiences allows a sport-media-business alliance to benefit from the promotion and association of business with sport. In this way, argues Roche (2006: 30), the Olympic Games have become “an element in the development of global culture” on local soil.

A number of factors can shape a city’s motivation for hosting the Games, including its circumstances prior to the Olympics, the key challenges that it faces, and its vision on how the Games can contribute to urban regeneration. With a view to this, studies have often positioned host cities, especially western industrial cities, in the context of deindustrialisation (Gratton and Henry 2001; Surborg et al. 2008). Prior to hosting the Olympics, many of the cities in question had ceded their roles in traditional industries to newly industrialised countries, and were facing significant challenges in the form of local economic depressions, unemployment and urban decay. Recognising the growing importance of the service sector and the creation of new leisure and consumption spaces in the post-Fordist urban economy, these cities chose to host the Olympic Games as a strategy for facilitating urban restructuring and transformation processes (Surborg et al. 2008; Hannigan 1998). Among the host cities since Summer Olympic Games 1992, as Table 1 has summarized, Barcelona, Athens and Beijing the initial motives for the Summer Olympics host cities. For cities, hosting the Games provides an incentive and opportunity for city elites to restructure their cities in an increasingly competitive environment.

Table 1 Olympic host cities: initiatives

City	Initiative stakeholders	Goal	Objectives	Integration with urban vision
Barcelona 1992	Local municipality Leadership under the mayor	New Barcelona	Adopt global opportunities; solve economic crisis; incorporate long-term development projects	Very strong
Atlanta 1996	Private party: Billy Payne and “Crazy Atlanta Nine’	International recognition	Establish a higher international profile; invest in deprived areas, revitalize inner city	weak
Sydney	Central government	Global	International tourism; Attract business and	Moderate

2000	and state government of New South Wales	positioning	investment; Green Games	
Athens 2004	Central government and municipal government	Put Athens back on the world map; restore Olympic value	Reurbanise the city; link ancient and modern culture; boost business and tourist market	Strong
Beijing 2008	Central government and municipal government	International recognition; national promotion	Modernization; economic restructuring; Greening the city	Very strong
London 2012	Non-profit organization BOA, supported by municipality government and supported by the Mayor	Create city spectacles	Regeneration of East London;	Strong

In the early days, hosting the Olympics meant little more than assuming responsibility for providing the necessary venues and accommodations for competitions. These activities inevitably led to a stimulus of the local construction industry, employment boost and a tourist boom. Over the time, the Olympic Games grew bigger and larger. The host cities hope to use the adoption of larger, more spectacular and inherently more expensive stadia to make statement about the technological progress and modernity of the host nation (Gold & Gold 2007). Given the Games' multiple dimensions and the broad range of actors involved, the Games' potential legacy can give a city a wide range of motivations, from the economic and the social, to the spatial and the environmental. Baim (2008), for example, distinguishes four primary reasons for host cities to place a bid for the Olympic Games: enhancing tourism; promoting more rapid infrastructure investment than would occur without the Games; promoting entrepreneurial goals; and gain recognition as a global city or nation. Baim also points out that, although no former host cities have exclusively

aimed for only one objective, all cities since 1972 games in Munich emphasized one of these goals more than other.

The Olympics and its catalyst effect of on urban regeneration

When Barcelona seems successfully transforming itself in a short time “from a ‘gray’ industrial city in the midst of a deep economic crisis to an international successful story a decade later” (Calavita & Ferrer 2000: 793), their mega-event–driven urban regeneration strategy became particularly popular. Host cities have routinely integrated the Olympic development with host cities’ long-term strategic planning and hope to result in a package of benefits. These benefits include boosting the urban economy, permanently repositioning the city in the global tourist market, promoting regeneration, allowing the revamping of transport and service infrastructures, create vibrant cultural quarters, and establishing a network of high-grade facilities that could serve as the basis for future bids (Gold and Gold 2008).

While the Olympic Games promise each host city “fast track urban regeneration, a stimulus to economic growth, improved transportation and cultural facilities, and enhanced global recognition and prestige” (Chalkley and Essex 1999), different host cities have taken different approaches to implementing urban regeneration programmes. Some of the main urban development strategies of the six host cities (1992-2012) that are relevant to post-event legacy can be summarized as following in table 2. In comparison with the abundant literature on the legacy of the Olympics, our knowledge of urban development strategies that are able to bridge the gap between vision and reality is rather fragmented. While many studies examine individual cases in particular host cities, only a few offer more general insights into urban regeneration or urban renewal strategies. Chalkley and Essex (1999) identify a general transition in urban development strategy, from an early emphasis on constructing gigantic sports facilities and urban infrastructure, to a much broader notion of urban regeneration and urban restructuring programmes that sees the Olympic Games as a catalyst. In the case of Berlin (1936), Rome (1960) and Tokyo (1964), for example, the host cities reconstructed and expanded existing facilities, constructed landmark buildings, and generally improved existing infrastructure in order to achieve urban upgrading. In the case of Montreal (1976) and Seoul (1988), meanwhile, Chalkley and Essex explore the role of the Olympics as a vehicle for urban change via the development of the Olympic venue. In these two cases, the sports facilities and Olympic Villages were developed in combination with urban renewal, and schemes for “improved traffic management, the enhancement of cultural facilities, an environmental beautification program and actions to ensure

health and hygiene standards throughout the city" (Chalkley and Essex 1999). Furthermore, the development of Olympic sites has been increasingly integrated into host cities' larger-scale urban development plans, enabling such sites to become sport and recreation complexes, harbour developments, housing, and tourist accommodation, once the Olympics have taken place.

Table 2 Main urban development strategies in Olympic host cities

City	Integration with urban program	Infrastructure upgrading	Post-use legacy strategy	Economic development	Social development
Barcelona 1992	Integrating Olympic plan with long-term spatial planning; Transforming 4 key location, including the redevelopment of the coastline and upgrading of deprived districts; New identity by creating new landmark, improved public space and facilities; Mixing function in land-use	Constructing major ring road and other transportation infrastructure;	The Olympic stadium has been used by a local football club; the stadium is used for hosting mega events; the game training venues were used for public use.	Enhancing tourism throughout the region through rebranding and tourism planning;	Providing housing for different income group

Atlanta 1996	Developing the Olympic Park at a central gathering point; redesigning the street corridors	Expansion of the airport; the MARTA rail system, road network and renovating bridges, telecommunications and sewage systems	The central positioning of the Olympic park aims to create post-use of Olympic venues and facilities; The Olympic stadium would transfer to the new baseball stadium for the Atlanta Braves; Olympic villages would be transferred to become a dormitory for a local university.	Private financial initiatives that focuses on financial liability; Attract new business and US corporations through the beautification of the CBD and installation of an extensive optical fiber cable network; marketing activities and tour to introduce world's leading investors and business with business strategy	
Sydney 2000	Integrating Olympic development into Sydney's urban	A public transportation system that integrated heavy rail, bus, coach and ferry facility, an	The Olympic Park was designed for sport events, such as	Long-term tourism plan; Promotion programs to attract companies	

	structure; Brownfield redevelopment to transform an area of contaminated wasteland into new multi-use center in Homebush Bay for Western Sydney; Beautification of Sydney's central Businesses District; Green guidelines to govern the design, layout and construction of Olympic facilities.	extensive pedestrian and cycle network, allows easy access to Olympic Park Station from both west and east Sydney; Upgrading of Sydney airport.	the Rugby world Cup in 2003; A shift was towards a greater use of cultural and business events.	to invest in Australia;	
Athens 2004	A scattered model that involves development in 20 different locations throughout Athens, predomina	Massive investment; Upgrading airport; 210 kilometers of new roads and highways; 25 km of light rail and two	75% venues were existing buildings; yet 95% of Olympic development was in permanent	Tourism planning and promotion	

	ntly Greenfields; Renovating historical and cultural sites in inner city to improve the public space in inner city; Rehabilitation of coastline	new metro lines.	form		
Beijing 2008	Integrating Olympic plan with long term master plan; Environmental upgrading by moving about 2000 polluted factories out of city; drastic environmental measures to improve the air quality, including shutting down factories	Massive investment; the construction of the fifth and sixth ring roads, expansion of expressways and railways connecting Beijing to surrounding cities; construction and reconstruction of 318 kilometres of roads and 154.5 kilometres of urban light railway, the construction of eight new	Combination of using existing venue with building of new venues; Locating new venues within university campuses to ensure post usage; downsizing the venue capacities, making venues multifunctional and creating new	Economic restructuring by reducing dominant manufacturing sector and increase service sector; Place promotion; Involving private sector through bidding, BOT and Public-private Partnership model	Sports facilities were created in Beijing's residential communities, along major roads and in residential neighbourhoods

	and construction sites in Beijing and in neighbouring provinces and restricting the use of cars.	urban subway lines and the renovation of the two existing lines, the expansion of Beijing's bus system and the extension of the Third Terminal of Beijing Capital International Airport.	economic functions for the Olympic sites (the Olympic Greens and Olympic villages), and establishing commercial plans for Olympic facilities.		
London 2012	Regeneration of deprived districts		Olympic legacy company to prepare and guide the development of legacy; Downsizing the capacity of Venues.	Tourism strategy to ensure tourism expenditure; Improve skill level of local workforce;	Olympic trust to offer young people and diverse community the opportunity to fully participate;

Barcelona (1992) perhaps offers the most developed example of how the Olympics can function as a catalyst for urban development. Not only was Barcelona's urban structure modified through the development of four Olympic sites in different types of location (such as a low-income neighborhoods, a declining industrial site, and a waterfront area), but many programs that had already been proposed, such as the creation of public open spaces, the general improvement of public transportation, the opening of the city to the sea, the renovation of the city's cultural infrastructure, the landscaping of squares, and the commissioning of new sculptures, could finally be realised; programmes that

might otherwise have suffered long delays, or might have been cancelled altogether (Chalkley and Essex 1999; Marshall 2000, 2004; Monclú 2007; Coaffee 2007). Building on the so-called 'Barcelona model', Sydney (2000) continued the trend of integrating Olympic facilities with the city's Brownfield redevelopment (Chalkley and Essex 1999; Lochhead 2005; Lenskyj 2000). Sydney applied a detailed set of 'green guidelines' to the design, layout and construction of the Olympic facilities in the regeneration of a notorious polluted industrial site for redevelopment into the Olympic park (Chalkley and Essex 1999; 389). Sydney also attempted to achieve long-term vibrancy and variety in the area by mixing functions in its Olympic site development, providing sporting, entertainment, exhibition, commercial and residential facilities in the Homebush Bay. London (2012) uses the Olympics as a force for regeneration of the poorest and most deprived East London. The Olympic site was built on a 600-ha brownfield that has problem of contamination and toxicity,

An important but less well-examined issue is that of Olympic host cities' social regeneration strategies. While some identify the importance of community spirit, and suggest that participation is an essential means of improving community self-esteem and creating social coherence, other see social regeneration in terms of community empowerment, arguing that equipping people with skills through training and education (especially those in marginalised groups) will strengthen community development (Long and Sanderson 2001; Owen 2002; Waitt 2003; Regan 1999). In addition, a number of studies highlight the strategies that local communities can use to harness critical resources. The Games can function as an opportunity for job creation, the development and operation of leisure and recreation service opportunities, the upgrading of open spaces, and improved levels of public health and participation in sport. The existing literature is deeply inadequate when it comes to relating social development to spatial planning or urban renewal, however. The numerous studies on the Barcelona model are an exception in this respect, in that they look specifically at the social aspects of preparations for the Games, in term of housing for low-income groups and community participation (Marshall 2004). This particular strategy focused on how to benefit local communities and increase the welfare rights of low-income- and other vulnerable groups within local communities (such as housing and tenants' rights, job opportunities, and so forth). It is possible that this particular approach was the result of a number of factors, including: the leadership of the Community Party in local government, which stressed social welfare; the relative strength of neighborhood associations in the wake of the Franco regime; and the latter's direct involvement in decision-making processes, representing their own interests.

While most ambitious Olympic hosts use the Games as an opportunity to bring forward long-term plans, to accelerate the pace of change, or to introduce new planning concepts, using major events to achieve long-term urban goals has proven to be a difficult task to manage and implement. Since the end of 1980s, the transition towards a form of governance that gives greater weight to private sector leadership has greatly influenced the organisational structure of mega-events and the ways in which the various stakeholders collaborate. The involvement of the private sector in organising the Olympic Games in Los Angeles (1984) and Atlanta (1996) not only demonstrated the economic benefits and professional knowledge that the private sector could bring to the Games, but also necessitated a more collaborative way of working (Burbank et al. 2002). A number of studies identify particular configurations of public, private, and non-profit sector actors and coalitions that set a city's medium- to long-term urban governance agenda (Surborg et al. 2008). In Barcelona, for instance, a more business-like and less controlled urban intervention approach was introduced to deal with the city's exceptional circumstances, using public capital and a joint venture between local and central government to lure private investment (and especially foreign investment) (Brunet 2002). Acknowledging this trend, Smith (2001,180) notes the irony that in such cases the government, which is meant to be serving the public interest, negates broad social goals in order to focus on entrepreneurial and corporate interests.

The Olympic Games can function as powerful tools for developing cities as brands (Smith 2001; Van den Berg et al. 2002; Surborg et al. 2008). The development of sports facilities, for instance, may provide a city with important visual symbols, provoking memorable and positive images in tourists' minds (Smith, 2001, 136). The media and Games-related publicity may highlight improvements in a city's urban environment, transportation system and general level of organisation, attracting both sports tourists and a more general audience, such as companies, investors and conference delegates. In addition to the new physical icons and transitory spectacles that were intended to rebrand their cities, for instance, both Barcelona and Sydney used broad promotional campaigns that combined place marketing and tourism promotion with business networking (Ward 2007; Waitt 1999; Hall 2001; Yu 2004).

Post-Games legacy

The Summer Olympic Games "allows a rare opportunity for a major restructuring of the built form, a major economic boost, an increased global connectivity, and a profound change in the global image of city" (Short 2008, 339). Host cities

generally experience a number of direct or indirect benefits, but may also suffer from various potential downside.

Potential benefits

Regarding the tangible results generated from hosting the Olympic Games, Sakai (2006) suggests that hosting mega-events stimulates governments to invest heavily in the construction of event venues, tourism facilities and other forms of infrastructure over short time periods. In recent years, the construction of Olympic venues and facilities has been seen as a process of forming urban spectacles, through the creation of new, iconic stadiums and the construction of landmarks (Gotham 2005; Coaffee and Johnson 2007). A number of Olympic stadiums, like Munich's Olympiastation, Sydney's Stadium Australia or Beijing's Bird's Nest Olympic stadium, have since the Games become new landmarks for their host cities. The development of sports facilities may provide a city with important visual symbols that create memorable and positive images in tourists' minds (Smith 2001, 136). Furthermore, at the urban level, the Olympic project is increasingly used to facilitate the creation of new urban centers with mixed-use service, leisure, business and residential functions. This has resulted in a form of comprehensive strategic planning that combines Olympic site development with the provision and improvement of infrastructure, tourism facilities, the creation of high-quality public spaces, tourism planning and general urban regeneration programs, so as to maximise urban impact. Although a majority of past transportation infrastructure construction has been on roads, host cities and regions have also spent considerable sums on airport construction as well as on the renovation and construction of public transportation systems (Essex and Chalkley 2004). Investment has also been made to building modern telecommunication capacity in Atlanta or renovate the existing telecommunication system, as is the case in Los Angeles.

However awe-inspring during the Games, many of the heavily cost venues created or modified for the Olympic Games later falls into disuse or are used sporadically without generating a profit and many Olympic Parks remains largely empty and unused. This common problem occurring after the Olympic Games is the creation of the so-called "white elephants" –facilities that are built at great cost and after its initial use for a particular event become less and less used and therefore the cost of it out-scales what it give back to society (When host cities deliver venues or urban areas that are not or under- used after the Game, host cities.

Host cities can expect tangible economic results that are directly related to the Games. The host city can profit from television rights, sponsorship, ticketing and merchandising that is directly related to hosting the Games (Horne & Manzenreiter 2006; Gold 2008). It is suggested that an average of 5.1 million tickets had been sold for the past six Summer Olympic Gamesto local residents and visitors, generating substantial spending in the lodging, food and beverage sector (Zimbalist 2010: 8). Furthermore, host cities also receive a substantial income from the selling of Olympic television rights, special marketing measures such as sponsoring, licensing and merchandising (Preuss 2004). Preuss (2004) and Gratton et al. (2006), for example, also suggest several important economic aspects of holding the Games, such as those relating to employment, revenue, investment, real estate, tourism and the Organising Committee's expenditure. Increasingly, host cities are gearing themselves towards more long-term, more intangible economic approaches that are intended to sustain such cities after the Olympics have taken place. A substantial number of studies, meanwhile, focus on the development of Olympic tourism and the creation of new business opportunities (Kasimati 2003; Weed 2008).

Although the Olympic Games are often viewed primarily in economic terms, in almost every case, the Games have a significant social impact. Much of the concern expressed in the literature is related to the Games' effects on local communities. This is due to the fact that not only is community support an essential aspect of a successful mega-event, but also that community groups tend to be more vulnerable to, and more affected by, Olympic-led development. Jones (2001) suggests that hosting the Olympics leads to wider participation in sport and greater community access to improved sports facilities. Long and Sanderson (2001, 189) list a number of community benefits that may motivate host cities, including: enhanced confidence and self-esteem; empowerment of disadvantaged groups; improving a community's capacity to take the initiative; increased social integration and co-operation; the promotion of a collective identity; and increased cohesion. The Games not only offers an opportunity to physically renew but also a rare opportunity to re-brand a city, while providing valuable promotional opportunities for both cities and regions (Short 2008). The global media and the general publicity surrounding the Games can be used to highlight improvements in a city's urban environment, transportation system, and organisation, attracting both sports tourists and a more general audience, such as companies, investors and conference delegates.

Potential downside

Despite the important economic impact that sport events can have on their host cities, evaluating this impact remains a complex undertaking (Baade and Matheson 2002; Owen 2005). In general, direct economic cost-benefit

calculations take into account the host city's investment in the building of sport venues, media centres, accommodation, relevant infrastructure, and other tourism-related facilities. This may place an enormous financial burden on the host city and its taxpayers. Poynter (2006) suggests that it is perhaps useful to distinguish the financial costs and benefits derived from staging the event (the 'one-time', primary Games-related impact) from an evaluation of the longer-term structural economic changes that are derived from investing in transport infrastructure, telecommunications, environment, social and sports facilities, and housing (the secondary impact). Ingerson (2001) also suggests that economic impact studies of sporting events should take two key elements into account: the costs and revenues for the event's organisers, and the event's impact on the area in question. As far as the latter is concerned, attention has mainly been paid to the event's effectiveness with respect to job creation, tourism revenue, local real-estate market growth, and local income flows (Gratton et al. 2006; Jones 2001; McKay and Plumb 2001). Furthermore, there is the question of how to justify using taxpayers' revenues to subsidise private enterprises on economic grounds. On this point, Chanayil (2002) considers the evidence to be inconclusive, at best. Gratton and Henry (2001, 311) suggest that many studies had political motives for justifying expenditure on new facilities, and that "the validity of many of the results is questionable". Indeed, in some cases, "such studies have often been methodologically flawed, and the real economic benefit is often below that specified in such studies" (Crompton 2001).

A number of studies have assessed the social impact of hosting the Olympic Games in recent years. While the Games can have a positive social legacy, there is no compelling evidence to suggest that individuals and groups in host cities' local communities receive a just share of the rewards. Despite the fact that community support is vital for staging successful Games, community involvement in the early planning stages seems to be largely lacking. As Horne and Manzenreiter (2006, 13) argue, "sports mega-events have been largely developed by undemocratic organisations, often with anarchic decision-making and a lack of transparency, and more often in the interests of global flows rather than local communities". Furthermore, some analyses suggest that city elites tend to steer the Games towards corporate rather than social goals, thus undermining the social impact on local communities. Olds (1998), meanwhile, draws attention to the importance of guaranteeing housing and tenant rights, particularly for low-income groups, through specific, target-oriented housing programmes. Like all such mega-events, the Olympic Games are an almost exclusively urban phenomenon, requiring high levels of public and private investment, and offering opportunities to both governments and corporations to forge mutually beneficial alliances. As a result of investing scarce resources in Olympic projects, the government may make drastic cuts in health, education or

social housing budgets in order to reduce the level of public debt. The private sector, in turn, may benefit both from a growing market and from public subsidies linked to the Games. This trend, along with "the pursuit of enhanced, or even 'world class', status by politician and businesses, raised questions for some analysts about the social distribution of the supposed benefit of urban development initiatives" (Horne and Manzenreiter 2006, 8). Moreover, "which social groups actually benefit, which are excluded, what scope is there for contestation of these developments, and how can social equality be measured are three important questions that are often ignored" (Horne and Manzenreiter 2006, 8) For example, evidence suggests that Olympic developments in Atlanta led to the displacement of homeless people (Whitelegg 2000); and that in Sydney, low-income households, suffering from rent increases in the historically cheap housing area neighbouring the Homebush Bay Olympic site, were forced to move away (Hall 2001). More research is needed into the social value of such events, in order to understand exactly how communities benefit, and how they can use the Games to their advantage.

In terms of the governance of mega-event development, a key challenge is the increasing contradiction between the ideal of an open, collaborative and democratic process, and the reality of a process that is dominated by elite alliances. On the basis of case studies of five European cities, Van den Berg et al. (2002) conclude that mega sports events can be powerful tools for developing a city's 'brand', as is demonstrated by Barcelona's experience, but that such success requires strong, creative leadership. Burbanks et al. (2001) stress the crucial role that can be played by external actors operating at an international level, whose interests might conflict with those of the city. Roche (2000, 126), meanwhile, argues that mega-events are typically conceived and produced by powerful elites, with little opportunity for locals to contribute democratically to policy-making processes. Such conditions can lead to deeply ironic situations. For example, despite the fact that Sydney had embraced the notion of a 'Green Olympics' and adopted sustainable development as a governing principle, in order to provide certainty for developers and meet planning deadlines, the local government went so far as to issue new legislation to relax planning processes. This meant, for example, that environmental impact statements for Olympics-related developments and local community participation in decision-making processes were not required – simply to ensure that most of the facilities would be ready almost twelve months in advance of the opening ceremony (Owen 2002, 332).

Discussion

Sport is increasingly seen as a central strategy for cities to promote their image and global position, undertake regeneration and tackle problems of social exclusion" (Herring 2004). The Olympic Games are particularly attractive to cities, due to the unique impact that the intense media interest associated with the Games can have on a global audience. Existing research acknowledges the complex challenges associated with bidding for and staging the Olympic Games (Emery 2001). The issues examined in this review of the relevant literature can help us to better understand the relationship between the Olympic Games and host cities' urban development practices. Since the Games are tightly interwoven with urban economies and urban (re)development schemes, how cities indeed harness the Games and create their own Olympic legacies can best be understood by looking at their motivations, the kind of Olympic legacy that they anticipate, and the implementation processes that connect the vision with the expected results. By posing questions such as what motivates cities to stage the Olympic Games, how urban development strategies are formulated and organised in different cities, and the Games' true impact on a city, we have been able to identify the various approaches taken by different cities to staging the Games. The literature indicates a clear relationship between a city's motivations, urban development strategies, and expected results (impact). Whilst much is known about the event's impact, however, there are considerable gaps in our knowledge about the event's legacy and its social-economic effects. Along with disputes regarding methodology, this means that we lack persuasive evidence to support the claim that the Olympic Games bring social benefits to host cities.

It is also evident that different cities have adjusted their approaches to fit particular circumstances, particularly with a view to temporal demand, purpose, political agendas, and the locality in question. Thus the 1996 Atlanta Olympics, the 1992 Barcelona Olympics, and the 2000 Sydney Olympics had fundamentally different aims and objectives, and took different approaches. Atlanta set out to deliver a commercially successful event at no cost to the tax payer. Barcelona, in turn, aimed to regenerate the city and assert its Catalan identity. Unlike Barcelona, meanwhile, Sydney was not facing an economic crisis, but it did need to find a niche in order to defeat its fierce competitor in the bidding process, Beijing. Sydney thus appealed to the IOC's concerns about sustainable development, and aimed to achieve an environmental legacy.

Whereas every host city expects to experience some form of short- and long-term impact, or the so-called legacy, it is however difficult for most host city organisers to think beyond the Games in any systematic fashion due to the pressing nature and planning complexity. Therefore, although the post-Games period is by far the longest period that stretches for decades after the Games to

affect a host city, it is “clearly the least-planned period” (Cashman 1998). City leaders may well view the Olympic Games in strategic terms, as an opportunity to gain regional, national and international exposure at a relatively low cost. City leaders also face a gigantic and complex task in addressing financial, spatial and temporal challenges prior to and during the Games, however, not to mention the enormous investment of resources needed, and the large number of actors involved in the development process. Subject to time pressure and without careful consideration of the long-term impact, Olympic venues may become ‘white elephants’ after the Games have taken place, isolated in their city landscapes (Furrer 2002; Cashman 2002). In such situations, rather than economic benefits, the host city may be left with huge debts that take many years to repay. Moreover, the promises of social benefits made to local communities may well prove to be empty, with the circumstances of vulnerable groups potentially worsening, rather than improving. The contradictions and controversies surrounding the Summer Olympic Games may thus have significant implications for the lives of people living in host cities, and are therefore worthy of increased attention on the part of policymakers and planners.

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Planning to Achieve/Planning to Avoid

Helge Fiskaa:

The high ambitions of Norwegian Planning

Abstract

Traditionally the Nordic countries have many similarities in their administrative and planning systems, more or less different from other European countries due to common historical and cultural heritage and long lasting cooperation. They have all revised or replaced their planning (and building) acts during the last few years (Finland in 2000, Denmark in 2007, Norway in 2009, and Sweden and Iceland in 2011). This paper questions if the Norwegian planning system has become more unlike the other Nordic countries' systems, and if the ambitions have escalated beyond the limits for what planning can or should overcome.

Over years, Norway has extended the ambitions for planning, last by the implementation of the new Planning and Building Act. This relates to the act's requirements to the comprehensiveness and content of plans, and the plans coordinating and controlling function. Based on studies of some countries' planning and administrative systems the paper examines some features of the prevailing planning system in Norway compared with to the Danish, Finnish and Swedish systems (Iceland is not included due to practical reasons), and demonstrates that Norwegian ambitions for planning is far beyond the other countries'. The concluding discussion questions if the ambitions are realistic and what way Norwegian planning may take in the years coming.

Firstly, the Norwegian act's requirements to objectives, tasks, and considerations imply a nearby all-embracing social planning, including physical, environmental, economic, social and cultural development in regions and municipalities, which is far beyond the physical planning stated in the other countries' acts. For example, the municipal master plan shall include a social part dealing with all municipal activities and development in total. The ambitions bring Wildawsky's (1973) question "if planning is everything, maybe it's nothing" in mind.

Secondly, dealing with such comprehensive planning the act requires thorough coordination and collaboration among public sector authorities at different administrative/political levels, which is a complicated task. As municipalities perform most planning and Norway has strong traditions for local self-government, the challenge is how to coordinate sector bodies at state and regional level with municipal interests. On one side, municipalities can not instruct state or county agencies, and on the other side, use of the act's rather strong means for central control of local planning will often meets political resistance.

Thirdly, a question is about the ambitions of public control when private actors exert strong influence in community development. As in most western countries, public-private cooperation has emerged as the ordinary means for plan preparation and implementation in Norway. The Planning and Building Act underlines public bodies' responsibility for securing common interest. However, a special Norwegian right for private actors to promote plans may squeeze the public control. As in addition, negotiations on development agreements can take place parallel to the plan preparation the content of plans may be more or less determined in forehand of public participation and political treatment, and thus short-circuit the democratic planning process. The other Nordic countries have kept their hands on the steering wheel by maintaining the public planning monopoly.

Key words
Planning systems, Planning ambitions, Nordic countries.

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Introduction

A country's planning system is rooted in its particular historical, legal, physical conditions (Cullingworth and Nadin, 2006, p. 10), geography and settlement structure (Böhme, 2002, pp. 43ff), and cultural traditions (Knieling and Othengrafen, 2009, p. 39). Countries with long-lasting close political, economical and cultural relationship have influenced each other and thus probably having similarities in their systems, though specific national features may cause more or less differences.

Supported by among others Zweigert and Kötz' (1987) investigation and classification of five legal/administrative "families" i Europa, and based on EU's surveys of planning systems (EC, 1994; EC, 1997), Newman and Thornley (1996) have pointed out five "planning families" in Europe. That means groups of countries having more or less similar planning systems and styles in the perspective of legal and administrative principles. They define a British, a Napoleonic, a Germanic, a Scandinavian or Nordic, and an Eastern-European "family".

Figure 1. The five planning families in Europe (After Newman and Thornley, 1996, p. 29).

Previous surveys of planning in the Nordic countries indicate traditionally many similarities in their planning systems and praxis (Lemberg, 1981; Hall, 1991; Jerkø, 2004) which is highly understandable due to historical and present close political, cultural and economic interaction. They have a common cultural heritage, and there is a strong Nordic identity and cooperation, which traces its roots back to earlier centuries (Böhme, 2002). The languages of Denmark, Norway, and Sweden retain a close resemblance. An indication of this is that most Icelanders can understand these three languages while many Finns are able to grasp at least Swedish. There are well-established forums for cooperation between the Nordic countries, such as e.g. the Nordic Council and Nordic Councils of Ministers.
Although several differences exist, the investigations confirm the interpretation of Scandinavia as a planning family. The differences to other European countries are most evident with respect to the British system which, for example do not include legally binding plans, but are less distinct from the rest of Western Europe (Newman and Thornley, 1996, p. 34).

Over the last few years, all Nordic countries have revised or renewed their planning and building acts; Finland's planning and building act date back to 2000, Denmark revised their act in 2007, Norway decided upon their new act in 2008 (the building part in 2009), and so did Sweden and Iceland in 2010. A question is whether these revisions have lead to evolved differences between the systems or not and what important differences may be. Based on recent studies of planning and administrative systems in several European countries (Fiskaa, 2011) this paper concentrate on what ambitions for planning are embedded in the planning acts in four of the Nordic countries and discusses in what degree the Norwegian ambitions are realistic or not.

This paper gives at first an overview over the development of Norwegian planning act and system focusing on the widening of the planning ambitions over time, with some comparisons to the other Nordic countries investigated. Then a discussion set a critical eye on the present act's ambitions, illustrated with some examples of planning cases and planning processes studied. The conclusion is that the ambitions seem very difficult to fulfil.

From town planning to comprehensive planning

Building acts in the first half of the nineteenth century embedded the early regulations for Norwegian planning in for the cities in the form of pure physical planning, first of all regulating streets and buildings. The motives for planning were first of all the need for communication lines, fire protection, and establishing of healthy living conditions. Only one type of plan, town plan (byplan), which was a rather detailed plan for the whole town's area, existed according to the act. Later on, the act gave legal basis for voluntary planning also in villages and built up areas in rural municipalities, stated in The Building Act of 1924.

The renewed Building Act of 1965 introduced a more ambitious planning (Fiskaa, 2009), but still concentrating on physical planning. First of all mandatory planning also in rural areas was implemented. All municipalities had to prepare and decide upon plans. For the second a hierarchical system of plan types should contribute to coherence in the development at regional, municipal and very local level, in line with the state's policy. Thus the act introduced *regional planning* in the form of plans for two or more municipalities. The region plan should be a plan for *"coordination of land use and for joint solutions of questions concerning projects and arrangements for meeting common requirements"* in the region. (Translated by the author). The region plan should give guidance to the municipalities' planning, but not in the form of binding regulations. After some years one experienced poor results of this planning which, in 1973 led to replacement of region plans with *county plans* (fylkesplan) for *"coordination of the state's, the county's and the municipalities' planning when it comes to utilization of natural resources in a county and for other issues of common interest for promoting economic growth and well-being…"* (Translated by the author). The plan should include main features in utilization of natural resources, goals for population development and settlement pattern, assessment of labour situation and economic life, public projects and other arrangements, and economic assessment and priority of public projects.

In the municipalities, a system of *general plan* (master plan) embracing the whole municipality's area and *detailed plans* (zoning plan/reguleringsplan) for designated areas should make public control over land use and building possible, both in coarse features and more detailed. The master plan should be a plan for *"land use in a municipality and for solving questions concerning projects and arrangements for meeting common requirements in the municipality."* (Translated by the author). Emphasis should be on building areas, agriculture and forestry, natural areas, roads and other communication projects, and water and sewage installations. Also the need for different kinds of public service etc. was natural elements of common requirements. Based on recommendations from the ministry many municipalities implemented in their general planning a system of defining *common plan premises*, based on among other things prognosis for population and business life, for giving a dimensioning basis for the physical plans. Several general plans included some kind of economic plan for investments and public operations. By this the requirements to and ambitions for planning was increased but still within the frame of physical planning. The main purpose of plans was still preparation for future development on one hand and control over land use and building on the other hand. However, especial social scientists criticized planning for not solving the urgent problems, and argued for the introduction of other kinds of planning. Thus they challenged the physical planning approach (Skjeggedal, 2005, p. 739).

Planning practice and discussions about the purpose of planning, the content of plans, and planning process led to adoption of the Planning and Building Act in 1985. By this the ambitions for planning increased further. Firstly, the act introduced an objects clause stressing coordination of national, county and municipal activities, balancing considerations to use and protection of resources. Planning should contribute to land

use and building benefiting individuals and the society. By this, the act strengthened the requirements to coordination and collaboration between public administrative levels and sectors and private actors. Secondly, the act introduced rules for the state's possibilities to give instructions to county and municipal planning, and even to prepare and decide upon land use plans. Thirdly, the requirements to content of county and municipal plans expanded, and should include *physical, economic, social, and cultural issues*, and later on also *aesthetic regards*. Particularly planning should safeguard good growing up conditions for children. Fourthly, *municipal master plan* replaced the former term general plan, which indicated requirements for a more comprehensive planning than the previous physical planning.

The municipal master plan should include a *long-term part*, dealing with goals for development and guidelines for the sector authorities' planning, and a land use plan. The *short-term part* should contain an integrated action program for the sector's activities in the nearest years coming. This system was in line with Etzioni's (1967) model for a mixed-scanning approach. By this the municipal master plan should idealistic include most local development and municipal activities. The act introduced further a new type of detailed plan, *building development plan* (bebyggelsesplan) in addition to the former zoning plan (reguleringsplan). This comprehensive escalation of the planning ambitions occurred at a time when neo-liberalism and demand for deregulation influenced politics strongly, which seems paradoxical.

All-embracing planning?

After several revisions of and amendments to the act through the 1990s and many years of preparation work the planning part of the recent Planning and Building Act came into effect in 2009. The act has mainly kept the belief in strong public planning and synoptic ideals (Jensen, 2011), and extended the planning ambitions further (Kleven, 2011). In the following, the ambitions are discussed in comparison with the other Nordic countries' acts and illustrated by the results of some surveys. The discussion concentrates on the comprehensive ambitions expressed in the act, the plan system and relationship between plan types, the ambitions of coordination and collaboration between public sector interests, and the dilemmas concerning governing public-private cooperation and need for public control.

The fundamental purposes of planning are land use control, land use plans and central control (Newman and Thornley, 1996, p. 42). Planning systems consists of three elements: the plan-making function, the developmental function involving such issues as land assembly and servicing, and the regulatory or control function (Healey & Williams, 1993, p. 702). In line with this, planning traditionally is about physical planning, for the most performed by municipalities within more or less fixed frames given by the state and/or regional authorities. As described, gradually the requirements to content of planning and planning process in Norway have extended beyond the traditional.

The prevailing Norwegian Planning and Building Act's requirements to objectives, tasks, and considerations in planning imply a nearby all-embracing planning. Promot-

ing "*sustainable development in the best interests of individuals, society, and future generations"*, is the paramount objective. There shall be emphasis on *long-term solutions, and environmental and social impacts*. The principle of *universal design* shall be taken into account. Planning shall facilitate the *coordination of central government, regional and municipal functions* and provide a basis for administrative decisions regarding both *use and conservation of resources*. Planning shall ensure *transparency, predictability and public participation* for all affected interests and authorities.

This leads to numerous tasks and considerations planning shall take into account according to the act. In addition to *physical, economic, social, and cultural development*, the planning shall deal with *environment protection, public health and safety, natural resources, cultural and landscape values,* and *Sami interests.* Planning shall take the *climate* into consideration*, counteract social and health-related inequalities, promote societal safety* and *prevent crime, facilitate good surroundings, good housing and childhood environments and good living standards in all parts of the country*. At the same time planning shall *facilitate value creation and industrial and commercial development,* and *promote coherence between sectors, functions and interests.* By these requirements, planning has moved beyond the origin of regulating land use and building and undertakes the complex and contradictory task to influence people's life stile and socioeconomic behaviour in sustainable direction (Kleven, 2012, p. 49), which may be goes beyond what planning can do very much about.

However, according to the act planning shall be based on financial and other resource-related prerequisites for implementation and shall not be more exhaustive than necessary. This statement may indicate that the legislative authority is doubtful to the realism in thus comprehensive approach to planning. As planning is about future control and consequences of actions the question is how to obtain sufficient causal knowledge to control all implications and effects of contemporary proposals and decisions (Wildavsky, 1973). The comprehensive requirements will in many cases lead to disagreements and call for thorough balancing and coordination of divergent views and interests and conflict solving, which is discussed in a subsequent section of the paper.

Nor has Denmark, Finland, or Sweden near to corresponding statements in their acts. The *Danish* act's objects clause is concentrated on *physical planning* with respect to *sustainability* and *coordination of social interests in land use* with respect for *peoples living conditions* and keeping *fauna and flora*, production and protection of *valuable settlements and landscapes* and prevention from *pollution*. Similar the main purpose of *Finish* planning is to regulate *land use and building* for creating conditions for *good living environments* and promote *ecological, economic, social, and cultural sustainable development*. The act's name, *Markanvändnings- och bygglag* (Land Use and Building Act) indicates clearly that the ambitions for planning beyond physical planning are limited to taking societal considerations into account. According to the *Swedish* act's introductory clause planning is about *land, water and building*. Under consideration of *individuals freedom* planning shall promote societal development with

equal and good social living conditions and *sustainable living environment* to day and in the future.

Sustainable development is the superior objective for planning in all countries, leading to long term considerations. However, the Danish, Finnish, or Swedish acts don't require a comprehensive social planning like in Norway. However the planning must of course be accordant to superior goals and prognosis for several needs and coordinated with plans for various tasks, but not in the Norwegian way of ambitions of an all-embracing planning. This seems to be in line with the former Norwegian set of common planning premises.

A wide-ranging system of plan types

A wide-ranging and complicated system of plan types defined in the Norwegian act also indicates expanding planning ambitions. Figure 2 gives an overview over the plan types at state, regional (county) and municipal level stated in the four discussed countries' acts. It shows up that Norway has the most comprehensive and ambitious system, especially at the municipal level.

Level	**Denmark**	**Finland**	**Norway**	**Sweden**
State	- Report on national planning - Overview of the state interests in municipal planning - Rules for governing and the content of planning	- National land use objectives	- National expectations regarding regional and municipal planning - Planning guidelines - Planning provisions - Central government land-use plan	- National environmental objectives (+ Provisions in the environmental code)
Region/ county	- Regional spatial development plan	- Regional scheme - Regional plan - Regional development programme	- Regional planning strategies - Regional master plan - Regional plan provisions	- Regional plan - (Regional development program)
Municipality	- Strategy for municipal planning - Municipal plan - Plan for special topics or areas - Local plan	- Planning review - Local master plan - Partial local maser plan - Local detailed plan - Separate plot division	- Municipal planning strategy - Municipal master plan - social element - long term - implementation - land use plan - Municipal sub-plan - Area zoning plan - Detailed zoning plan	- Master plan - Detailed development plan - Area regulations

Figure 2. The plan types at state, regional (county) and municipal level.

In all countries, the State shall give some kind of superior guidelines *for local planning*. In Norway, the ministry in addition can intervene in local planning and even prepare and decide upon land use plans in order to secure national or regional interests, and give rather concrete instructions for planning. State's sector bodies, as for example the road authorities, have a right to prepare and promote zoning plans and having them treated in the municipal council. State and regional bodies have a right to object on local plans and thus bring the final decision over to the ministry. At regional level, the counties shall have a *regional planning strategy* and a *regional master plan*, and can give *regional plan provisions* concerning land use.

The most complicated and may be confusing system of plan types is to be found at the municipal level. First of all, there shall be a *planning strategy* as a superior document, comprising *"the strategic choices related to social development, including long-term land use, environmental challenges, sector activities and, an assessment of the planning needs."* This is more or less in line with the other countries requirements except for Sweden where a strategy plan is not mandatory.

Further, the *municipal master plan* is more wide-ranging than the other countries' equivalent plans comprising a long-term *social element,* an *implementation element*, and a *land use plan*. The plan shall *"cover all important goals and functions in the municipality"* and *"determine long-term challenges, goals, and strategies for the municipal community as a whole and the municipality as an organization. It should comprise a description and an assessment of alternative strategies for development in the municipality."*

The social element of the municipal master plan shall *"serve as a basis for sector plans and activities in the municipality. It shall provide guidelines for how to implement the municipality's own goals and strategies in municipal activities with participation from other public bodies and private bodies."* A municipal sub-plan may be prepared for specific areas, topics or areas of activity. The implementation part *"shall form the basis for the municipality's prioritization of resources and planning and cooperation functions, and clarify measures within the municipality's financial framework."* The *economy plan*, which has its legal basis in the Local Government Act, may be included in the implementation part, but not necessarily.

The land use plan shall cover the municipality's entire area and point out the main objectives and areas requiring special consideration in relation to the use and conservation of land. The municipality may also prepare land use plans for designated parts of the area in order to specify land use in more detail.

The act descries two types of detailed plans, *area zoning plan* and *detailed zoning* plan. The area zoning plan is meant for large areas while the detailed plan is intended for small areas, often single properties and tied to concrete projects. The requirements to content and planning process are the same for this plan types. The act definite a system of specific land use objectives, commonly for all plan types.

Several questions concerning municipal plan system can be asked. One is about the difference between the master plan's requirement for *alternative strategies for development in the municipality* and the planning strategy's *strategic choices*. Another is about the relationship between the master plan's land use part and the strategy's *long-term land use*.

Secondly, questions are about the social part of the municipal master plan, which is a quite different requirement than the other Nordic countries' master plans' concentration on land use and physical issues. The Norwegian act's description of what the social part should embrace is limited to the general statements mentioned above, and so far no precise guidance for this type of planning exists. Contrary, the act gives exhaustive instructions about the land use plan, and so do the ministry's guidance. The municipalities are doubtful how to handle the requirement to a social element of the plan, but are familiar with the land use planning. The importance of different municipal planning efforts according to the act of 1985 has been examined by asking mayors and chief executives in several municipalities (Falleth and Stokke, 2001). Shortly summarized the survey demonstrates that the economy plan and the land use plan are regarded as far more important documents for the municipal's future development than the municipal master plan's objective part, which is much the same as the present act's social element.

Thirdly, the wide-ranging system of land use plans may be confusing to operate. In worst case, one has to work out four plans for an area – the municipal master plan, a sub-municipal plan, an area zoning plan, which may be fairly similar to a sub-municipal plan, and a detailed zoning plan. In the city of Trondheim only two out of total 84 zoning plans decided upon according to the new act are area zoning plans. 77 are detailed zoning plans, and five are not specified. This indicates that the specific area zoning plan type is not very relevant. The act's intension is to establish a flexible system useful for different planning situations. However, the other Nordic countries' systems are not less flexible as the different plan types can be more or less detailed and cover larger or smaller areas, equivalent to the Norwegian system before 1985.

The ambitions of coordination

For dealing with thus comprehensive requirements to planning thorough coordination and collaboration among several state, regional and municipal bodies, private organizations and institutions, developers and the public at large is requisite. One must ask if and how the act's ambitions for coordination are possible to achieve. Questions to rise are about the system, planning process and political will for coordination between public bodies, collaboration with private sector, and public participation.

Practice demonstrates that planning often implies dealing with conflicts between sector interests and/or administrative levels, which can be challenging to overcome. One can differentiate between, relationship conflicts, conflicts about facts, interest conflicts, and value conflicts. Relationship and value conflicts may be difficult to solve as they are about personal feelings, perceptions and attitudes. Data and interest con-

flicts may be easier to overcome by bringing supplementary information and reasons for differing interests on the table for discussion and negotiation, which is the customary way to handle disagreements and conflict in Norwegian planning.

Coordinating public sector interests

First of all, decentralization is a superior objective in Norwegian as in most European countries' planning (Newman and Thornley, 1996, p. 40 ff.). This implies that the municipalities perform most planning and public bodies at state and regional (county) level are participants in the planning process by presenting their views and interests. Long traditions for local feeling and self government in Norway, make it political difficult for the state or county to instruct municipalities and overrule local decisions. Decentralisation implies fragmentation of responsibilities (op. cit. p. 67), which may counteract planning's intentions of and requires instruments for coordination.

One aspect of coordination is the effect of approved plans. As the social element of the municipality master plan is not binding correspondently to the land use plan and the zoning plans, it can only function as a guideline for further planning and decisions, usually legally based on other acts than the Planning and Building Act. When sector acts and state provisions regulate most public actions and activity, the degree of importance of the social element of the plan depends on the involved actors willingness and ability to coordination.

According to Mintzberg (1979) one can distinguish mechanisms for coordination in five categories: 1) mutual adjustment, 2) direct supervision, 3) standardization of the working process, 4) standardization of outputs, and 5) standardization of skills. Mutual adjustment means that autonomous sector bodies and actors discuss and adjust their stands. Even if actors may have more or less corresponding rationality they cannot achieve consensus in all cases, and instruments for conflict solving are needed, for example mediations or state's approval of plans. Instruments for supervision might be right for public agencies to object on plans or instruct local planning. Standardization of working process may exist in the form of planning procedures, and standardized requirements for outcome may be in the form of norms or recommendations for content of plans. Standardization of skills means participants in the planning process having equal competence.

The main legal means in Norwegian planning is traditionally a combination of mutual adjustment and direct supervision (Holsen et al., 1998), more or less like arrangements in the other Nordic countries. The Planning and Building Act expresses a strong belief in consultation, participation, coherence, and consensus building in planning processes (Kleven 2012, p. 49). Public agencies at state and regional level have both a right and a duty to participate in local planning work and thus contribute to mutual adjustment. However, the formal means for governmental supervision in the form of instructions, preparing land use plans themselves, setting aside local plan decisions etc. seem

stronger in Norway than in the other Nordic countries. The state has the last word if conflicts arise in plan matters (MD, 2001, p. 33), but traditionally instructions from a higher level are most often politically acceptable only in questions of major national or regional importance. Some standardization of working process exists in the form of general planning procedure rules, and to some degree standardization of outputs like standards and recommendations, partly settled in other acts, and professional traditions etc. exists. As several public agencies are involved in planning, probably having different experience and competence in planning, one can hardly assume high degree of standardized skills.

Although the duty to contribute in local planning, lack of coordination between different state agencies seems to be the most problematic which, is underlined in the preparation work for the new act (MD, 2001, p. 24), and have motivated the strengthened requirements for coordination and collaboration. Even if the new act has delimited the legal right for public bodies to object on plan proposals, conflicting interests and opinions, and different professional skills among participants in the planning process often causes problematic and time consuming planning processes. Even more problematic may the situations be if central sector agencies give instructions which, do not fit with other sector authorities interests and/or the local policy and plans. Over the last years, the number of public sectors' objections to plan proposal has raised (Falleth and Hansen, 2011, p. 8), which cause more plans to be scrutinized and finally decided upon by the ministry.

Municipal bodies seem to have better routines and ability for internal coordination (Holsen et al., 1998), but have of course no means for coordinating or instruct state or county agencies. An essential question then is how to force state agencies to cooperate with each other and with the municipalities and counties. The means for coordinating and forcing state sector bodies are rather weak. A solution to the coordination problem might be clearer statutory basis for departmental instructions to state sector agencies, which is controversial according to traditions of strong public sectors, often supported by politicians.

Public private cooperation and public participation

The second question concerning coordination and collaboration is about the relationship between public bodies, private interests and people in general. The shift from governing to governance during the neo-liberal period implies emerging of public-private cooperation, which is going on in most parts of the advanced capitalist world (Geddes, 2006, p. 76). This implies a number of dilemmas about the purpose of planning and the public's and the inhabitants' role in community development. As a fundamental purpose of planning is about safeguarding those matters and public interests that market forces do not take care of, the motives are to provide for what is desirable and to hinder unfortunate side effects of individual and private actions (Vigar et al., 2000 p. 7 ff; Røsnes, 2005, p. 34). Those two aspects of planning are often contradictory, and cause conflicts.

On one hand, planning must be sensitive to changes and flexible (Thornley and Rydin, 2002, p. 10). On the other hand, there are reasons for a removal beyond a project-based approach and restoration of the formal importance of plans (Newman and Thornley, 1996, p. 248). Developers request flexibility, in order to respond rapidly to changing circumstances (EC, 1997, p. 45), but at the same time a strategic framework in order to reduce uncertainty (Newman and Thornley, 1996, p. 249). Neighbours and other affected people look to protect their own interests and demand certainty (Alfasi, 2006, p. 558). And of course, developers' paramount motive is a most profitable development.

In Norway, private actors have a general legal right to provide detailed zoning plan proposals and having them political treated, in contrast to the other Nordic countries which have retained the public planning monopoly. The municipality may transfer the responsibility for preparing also area zoning plans to private actors. Most of the detailed plans are provides by property developers, and also many area zoning plans. Private developers first of all influence detailed plans, but have by their planning initiatives a considerable influence on master planning as well (Røsnes, 2008). Although public bodies decide finally upon plans, the public-private cooperation raises questions if close ties between developers and planning authorities hand power over to private developers in a way and a degree that may threaten public interests and the civil society's influence (Fiskaa, 2005).

When private developers prepare plans, the planning authorities' role is limited to negotiations over plans and control according to formal rules. Planning authorities have the primary contact with developers who only to some degree communicate with, and become influenced by affected persons and organisations. A start-up meeting between the developer and the planning authority for clarifying frames for a possible plan is the only statutory arena for direct communication in a planning process stated in the act. Inhabitants have a right to advance their views as response to announcement of start of a planning work and during the public inspection of a plan proposal, most often to late in the process to have decisive influence.

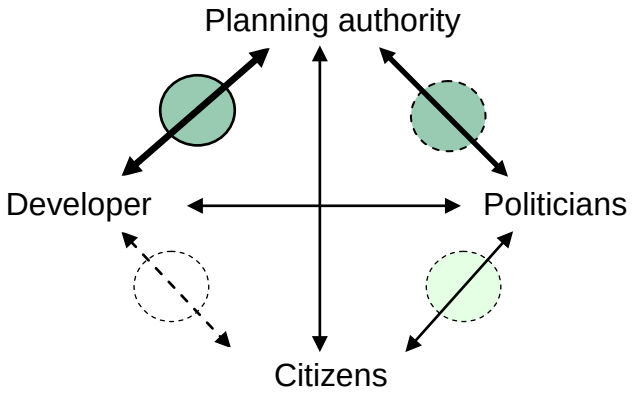

Figure 3. Actors in the planning process for a private promoted zoning plan. Full circle indicates formal statutory meeting and dotted circles eventual meetings. The thickness of arrows indicates the strength of contacts between actors.

Similarly, negotiations on development agreements between municipality and developers, which have substituted the traditional public responsibility for preparing project implementation, may threaten public interests. Crucial questions are about the transparency in the process and if negotiations can take place parallel to the planning work. Parallel and closed negotiations, and may be lobbying as well, may lead to early informal decisions on plans and thus short-circuit the planning process (Garnåsjordet, 2000, p. 31). Thus, negotiations upon plans and agreements for plan implementation may lead to pre-binding and exclusion of lay citizens and third parties from information and influence in an early and decisive stage of a planning process until the final hearing of the proposal (Røsnes, 2005; Falleth and Hansen, 2011). It seems clear that the performance of governance has given private developers a stronger position in planning and development than in the other Nordic countries at the sacrifice of public control and third parties influence. Falleth and Hansen's (2011) investigation concerning planning processes for detailed plans in several Norwegian municipalities supports such a suspicion showing generally a shortage in third party's influence.

As zoning plans are legally binding for land use and projects, and prepared through a comprehensive planning process, on should expect the plans to be followed. That is not necessarily the case. A study from 1987, when public planning monopoly still was in force, documented that only three out of 61 detailed plans in Trondheim was implemented completely according to the plan. In many cases, the responsible part was not able to fulfil all elements of the plan, and in other cases, revised solutions were worked out (Fiskaa and Røsnes, 1987).

Figure 4. The approved zoning plan to the left and actual implemented project to the right. Positioning of a buildings, the design of outdoor areas etc. are altered. Example from the survey 1987.

Especially one should assume privately prepared plans to be more in line with the developer's wishes and capability. A recent study demonstrates that it is not necessarily

so (Kristiansdottir, 2009). In all six cases investigated, the implementation was more or less different from approved plan. Both surveys demonstrates that in many cases "soft elements" like play grounds, foot-paths etc. were not constructed, which may be a sign of lack of attention to common interests and needs.

Figure 5. Overview of deviations in the planning area Hårstadmarka. Example from the survey 2009.

Conclusions

One must conclude that Norway over the years, not least by the Planning and Building Act of 2008, expanded the ambitions for planning beyond what is the case in the other Nordic countries. The ambitions drown planning in well-meant wishes and contradictory requirements (Sunde, 2000).

First of all the increased requirements for what planning in Norway shall embrace is in contrast to the other ones, which have on the whole held on the traditions of physical planning. The comprehensive and complicated system of plan types, especially the social part of the municipal master plan, is a part of this picture. In practice, most planning concentrates on land use and physical issues, and will probably do so also in the future.

Secondly, the ambitions for coordination and collaboration among public agencies at different levels seem out of range practically and politically. Especially a sectorial state is a problem as municipalities cannot force state bodies.

Thirdly, the special Norwegian right for private actors to prepare zoning plans, and thus having their hands on the steering wheel, may have weakened public authority and affected inhabitants' influence in planning, which is opposite to the ambitions of broad coordination, cooperation and participation in order to secure common interests.

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Integration of International Building Exhibition into planning strategies as a format of urban and regional development

(Track 6: Urban Change: Plans, Visions and Policies. Full paper presentation)

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Bibliography

Abstract
The paper presents the results as well as the considerations of a research project [2009-2010] concerning the future of international building exhibitions [IBA] as a tool of urban and regional revitalization. As a largeformat of urban and regional development – not directly comparable with other European formats due to different regional and national parameters – especially the IBA Emscher Park is highly reputed worldwide and viewed as an example to be followed in tackling restructuring processes (Reicher et al. 2011, p. 16). The positive reputation domestically as well as

abroad leads to believe that there are IBA-typical features which could be implemented in other formats concerning urban projects on the one hand. On the other hand, the research project gained experiences from the view on IBA similar formats in different European countries. It is necessary to discuss the experiences' value concerning IBA's future in Germany (Niemann et al. 2011, p. 314) and its implications in the European context.

1. International Building Exhibition [IBA]

International building exhibitions [IBA] are a largeformat of urban and regional development. They have become a trademark of German planning culture by being a field for experimentation marked by their openness towards innovation and goals. IBA-exhibitions take place within a time space of a century without a fixed annual schedule, set of rules or standardized quality criteria. Starting as an architecture exhibition in 1910 nowadays IBA is a highly reputed unique label dealing with social, economic and ecological aspects and the quality of processes and participation. IBA-exhibitions have to redefine themselves constantly by dealing with the real challenges of urban and regional society and urgent current problems. Due to these functions IBA are more than architecture exhibitions according to their title. (Durth et al. 2010, p. 66-70)
Especially by comparing the IBA-format with several European formats of urban and regional development, IBA-typical features and recommendations for both upcoming IBA-exhibitions and different European formats can be identified.

1.1 Retrospective:

In Germany, International Building Exhibitions have a long tradition. The first IBA took place in the city of Darmstadt in 1901. This IBA generated the exemplary artist colony of *Mathildenhöhe*, which was created in Art Nouveau Style (Durth 2010, pp. 19-20). The following IBA provided contemporary answers to urgent urban development questions (Durth 2010, p. 18). >New Objectivity< has been the central theme of the IBA Stuttgart in 1924. Architects from all over Europe developed new styles and forms of housing and presented upcoming considerations concerning constructional engineering and economy (Durth 2010, pp. 19-23).
The first IBA after World War II was located separately in both West [1957] and East Berlin [1951]. This IBA can be seen as a competition of the two rivaling political systems. West Berlin put the focus on the international tendencies of modern architecture by following the guiding principle of urban landscape, trying to propitiate both city and nature. Instead of building block of flats various types of construction should have been integrated into a park landscape. In the eastern part of the city IBA has been focused on the *Stalinallee* with its monumental architecture. (Durth 2010, pp. 23-26)
The following IBA was located in Berlin again. This IBA can be seen as a contemporary and sceptical answer to the developments of the IBA Interbau 1957. A shift of paradigm provoked contradiction. The tendencies of housing sprawl led to

the demand condensed housing again and implemented a discussion concerning city center revitalization. (Durth 2010, pp. 26-27)
While the range of tasks became broader the intervals between particular IBA-exhibitions became shorter after IBA 1984/87 Berlin. The following IBA started only two years later in 1989. The well reputed IBA Emscher Park took place in a timeframe of an entire decade between 1989 and 1999. The IBA Emscher Park has been the first IBA putting the focus not only on one city but rather on an entire region in transforming processes. It initiated regional projects and can be identified as a source of inspiration for ideas and development processes in different ways (Reicher et al. 2011, p. 16-22). Within the decade, 19 towns and cities as well as a large number of initiatives and business enterprises realized over a hundred projects (ib.). Those projects are seen as a model approach to deal with the physical realities of the region and its economic framework conditions (ib.). IBA has changed the image of the entire Ruhr Area and the way of identification by its inhabitants. Especially the conservation of former industrial buildings and their transformation into accessible cultural monuments is a considerable reason for IBA Emscher Park's high reputation worldwide. Nowadays IBA Emscher Park is viewed as an example to be followed in tackling restructuring processes (Reicher et al. 2011, p. 16) due to its characterization as an inspiration space, a demonstration space, a reflection space, a projection space and a space for encouragement (Kunzmann 2011, p. 168).
IBA Emscher Park can be seen as a model for the IBA Fürst-Pückler-Land, located in the federal state of Brandenburg surrounding Berlin. This IBA took place between 2000 and 2010 and put the focus on restructuring processes as well as the IBA Emscher Park. The IBA Fürst-Pückler-Land is located in a former lignite-mining area close to the polish border. Its projects re-developed the scenery by creating a wide lake landscape. This IBA also saved former industrial monuments by integrating them into both a new cultural and scenic context. IBA Fürst-Pückler-Land had its final year of presentation in 2010 as well as IBA Stadtumbau, located in the federal state of Saxony-Anhalt. Demographically changing and a huge rate of shrinking lead to the IBA Stadtumbau. 19 towns of the state proposed to find solutions concerning their structural renovation under shrinking conditions (Prigge 2008, p. 18).
During the last century the intervals between IBA-exhibitions still became shorter. Between 2000 and 2010 two individual IBAs were running simultaneously. Nowadays five IBAs are taking place at the same time located both in Germany and its neighboring countries Switzerland and the Netherlands.

1.2 Current and upcoming IBA-exhibitions:

Nowadays IBA-exhibitions are taking place in cities, city regions, federal states and tri-national regions. The IBA Hamburg [2007-2013] aims to realize a large city development project dealing with the cities' multi-cultural *backyard* district of Wilhelmsburg (Hajduk 2010, p. 12). The IBA Basel 2020 is the first IBA located in a border triangle containing parts of Switzerland, France and Germany. The IBA Heidelberg aims to position the city as a model city of science (City of Heidelberg ed. 2012, p. 7). And finally the IBA Thuringia – taking place in the entire federal

state – puts the focus on demographic and environmental aspects related to its financial situation (IBA Thuringia ed. 2011, p. 5-7). The first IBA abroad is located in the city region Parkstad Limburg in the most south-eastern part of the Netherlands, flanking Germany directly.
The enormous number of current IBA-exhibitions, the considerations about further IBA [Berlin 2020] and finally the positive reputation of former IBA domestically as well as abroad, lead to believe that there are IBA-typical features which could be implemented in other formats concerning urban and regional projects. IBA-typical recommendations can be useful for Europe-wide forthcoming formats of urban and regional development. Putting the focus on IBA's future in Germany, there are also experiences selected from IBA-similar formats abroad which are defined as possibly learning effects for IBA itself.

2. The research project >The future of International Building Exhibitions<:

Conducted in the context of a constantly increasing number of IBA-exhibitions in short time intervals the project >The future of International Building Exhibitions< [2009-2010] discussed the development of the IBA-format focused on two research elements.
The first element – the international project research – was aimed at enriching the discussion concerning the format's future with an international view (BMVBS ed. 2011, p. 7). Considering 80 formats and finally ten case studies [including Manchester's Urban Renaissance Program; Expo Milan 2015; Floriade Venlo 2012; …] of urban and regional development within the scope of the research project, several IBA-typical features have been defined and evaluated.
The second research element was focused on developing a monitoring system for an internal self-evaluation of future international building exhibitions as an instrument of quality assurance. That element of the research work consisted of two steps and included an analysis of the functional logic of an IBA and the development of recommendations of action for future exhibitions (BMVBS ed. 2011, p. 8).

2.1 Essential results of the international project research:

- Although IBA similarity of the international case studies has been a guiding principle for the research project, there are no formats directly comparable with IBA. For similar requirements different projects and formats are being applied (BMVBS ed. 2011, p. 7).
- Many strategies and projects combine the pure process of building with soft strategies of distinguishing sites either trough the arts, communication or events (BMVBS ed. 2011, p. 7).
- Unique characteristics of an IBA like the linkage of a top-down and bottom-up approach, the admission of experiments and of openness towards innovation and goals have been identified by only a few examined projects. (BMVBS ed. 2011, p. 7).

- Only a few projects work under lab conditions and a bottom-up approach at the same time (BMVBS ed. 2011, p. 7).
- Comparing IBA with different European formats a tendency towards regionalization can be detected and the areas of reference become broader (BMVBS ed. 2011, p. 7; p. 17).
- Instruments of analysis and quality control have only been developed in few examples abroad despite an obviously increasing complexity and need for reflection resulting from this fact. In some countries guidelines and *Baukultur* institutions (i.e. institutions for a better built environment) exist, already established in the area of quality control of strategies and projects with IBA-like aspects (BMVBS ed. 2011, p. 7)

2.2 IBA's functional logic

Considering the second research element the project was focused on developing a monitoring system for an IBA internal self-evaluation as an instrument of quality assurance. Neither has there been a monitoring process that can be generalized for the IBA, nor has there been a systematic research for a functional logic which is an essential prerequisite. Based on a case study dealing with the functional logic of the IBA Fürst-Pückler-Land in the federal state of Brandenburg, the research project defined mechanisms of functioning. Therefore partially structured interviews with the protagonists of this IBA-exhibition were a central instrument for the empirical survey. The structure of the interviews was worked out on the basis of the already existing knowledge on international building exhibitions and similar formats (BMVBS ed. 2011, p. 8). Finally four phases including several recommendations have been identified:

<u>Phase 1: pre-IBA-phase</u>

- Defining the urgency of implementing an IBA instead of using conventional planning instruments for structural problems by local actors and stakeholders. Therefore the protagonists need to discuss IBA's admission of experiences and its openness towards innovation at two levels; on the one hand innovation aspects concerning the local and regional development, on the other hand innovation aspects dealing with building and planning culture itself. (BMVBS ed. 2011, p. 7; p. 46)
- Furthermore the pre-IBA-phase requires political support, the debate of a stable IBA-idea, the definition of the area of scale and reference and the exchange of experience. (BMVBS ed. 2011, p. 47-48)

<u>Phase 2: starting phase</u>

- Developing a sophisticated structure of communication in order to assure IBA-project's approval by the local population. (BMVBS ed. 2011, p. 48)
- Institutionalizing the capacity to act concerning both financial and organizing resources. (BMVBS ed. 2011, p. 49)
- Stabilizing the network of experts and extending the structures of participation concerning IBA's projects. (BMVBS ed. 2011, p. 49)

<u>Phase 3: project phase</u>

- Emphasizing the extraordinariness and the "relative alienation" of IBA's projects. (BMVBS ed. 2011, p. 50)
- Strengthening the network of projects and sponsors. (BMVBS ed. 2011, p. 52)
- Integration into an international networking process (BMVBS ed. 2011, p. 52)

Phase 4: final phase

- Assuring institutional sustainability by defining forthcoming approaches and revoking the IBA-trademark while establishing self-supporting structures simultaneously. (BMVBS ed. 2011, p. 52)

The listed phases represent the ideal type of phases that were identified out of an abstraction of the information obtained from the IBA Fürst-Pückler-Land. The process of current and upcoming IBA-exhibitions does not follow rigidly this scheme of phases but show overlaps, parallel developments and also regressions to previous phases. (BVMBS ed. 2011, p. 8)

2.3 IBA-typical features / recommendations:

Approving IBA's functional logic – structured by phases – the research project extracted general IBA-typical features that are meant to be recommendations for both forthcoming IBA-exhibitions and different projects of urban and regional development. Based on the unique IBA-characteristics there are features considered as being typical for IBA. Initiated by an IBA validation workshop in 2010, the following IBA-typical features were filtered and emphasized (BMVBS ed. 2011, p.8). Therefore, IBA-typical features are:

- the specific innovative character of the idea of the IBA that cannot be realized with conventional instruments and formats,
- the degree of "relative alienation", meaning external influences and expertise when organizing and realizing an IBA-exhibition,
- a finely divided communication strategy,
- visionary project ideas that are initially created apart from hard calculations,
- the temporary lack of triviality and daily routines,
- the creation of degrees of freedom to allow experimental action and
- the definition of a mission for the future that can serve as a basis for planning at the end of an IBA exhibition (BMVBS ed. 2011, p. 8)

3. The future of international building exhibitions – experiences from abroad

Based on the analysis of IBA's functional logic and its typical features the research project defined – as previously listed – unique characteristics of the IBA like the linkage of a top-down and bottom-up approach, the admission of experiments and of openness towards innovation and goals. These characteristics are IBA's main potentials (Niemann et al. 2011, p. 322). Comparing IBA with different European formats of urban and regional development there are a few aspects that should be considered regarded to the future of international building

exhibitions. The key-topics in the context of possible learning effects for the IBA can be highlighted in the sense of a cross-sectional view: reason for urban development chains, scale and area of reference, identification of aims and topics, conditions for innovation/funding of innovation, quality of process, communication and image, quality assurance, functional chains and improvement of continuity (BMVBS ed. 2011, p. 7). Regarding the experience out of the international building exhibitions, the following recommendations and conclusions can be drawn for forthcoming IBA:

- IBA should provide clearly defined requirements for sophisticated analysis of the processes. Every IBA is related to specific spatial conditions and unique stakeholder, therefore the processes of following the different aims is important.

- IBA should have the view from outside. Being strongly involved in different internal problems make it necessary to have an ingenuous and sovereign view from an external perspective.

- IBA should encourage participation. The success of every IBA depends on participating the stakeholders and the concerned population.

- IBA should strengthen communication both internally and externally. Discussions in public about the projects, the aims and the successes of the whole process are import to get support from institutions and attention in public.

- IBA should implement (self-) reflective moments. As the process of nearly every IBA is flexible and determined by different decisions the moment of overturning the guidelines is a condition for being successful.

- IBA should examine mechanisms of continuation. As every IBA is running during a limited space of time, it is important to establish structures and conditions to continue the improvements.

- IBA should establish an international exchange of experiences. The format of the International Building Exhibition is getting more and more international related to the sites of the exhibition and is regarded more and more as an instrument to head urban development, therefore it is necessary to learn from each other and to profit form the different experiences.

At this moment, when the IBA format is getting known and discussed as an interesting format for initiating urban development, the research about the results should be intensified. If the Ruhr Region considers “Cooperations and networks have evolved that are now being continued on the basis of inter-municipal cooperations between the towns and cities involved… Other regional activities or the application as European Capital of Culture, would, as they stand, not have been possible without

the IBA, either on the cooperation level or in terms of the vision of seeking to create something jointly together for the region." (Reicher et al. 2011, p. 17) the question is obvious: How can this link in a chain of effects be used for restructuring the process of urban renewal?

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CITY: GROWTH, IDEOLOGIES, POWER AND VIOLENCE - SEMINAR

Markéta Březovská [1], Jan Kristek [2]

Abstract

Our paper presents a theoretical framework, content and methodological format of a newly established seminar on modern history and theory of urbanism at the Faculty of Architecture, Brno University of Technology in the Czech Republic. The paper deals with our concrete experience as educators and creators of the conception and teaching methods of the seminar. First objective of the seminar titled *City: Growth, Ideologies, Power and Violence* was to acquaint students with the theory of our field. This implies relations between cities and technology, economy, politics and culture, various approaches to urban planning, ideologies, urban growth and problems of cities since the first Industrial Revolution until today. Reflecting the interdisciplinary discourse, we have welcomed lectures and discussions with professionals from external urban studies fields. Students themselves were asked to read, understand, graphically represent to others and in the end rewrite theoretical texts by experts of different backgrounds, all dealing with cities: sociology, economics, geography, philosophy, urban anthropology or cultural ethnography. The course content was divided into three blocks. The first one, called *Growth*, addressed analyzing the development of the city in terms of current theories. The second one, *Ideologies*, summarized important approaches to urban planning, understood as a response to stimuli coming from the period discussed in the first block. The third block, *Power and Violence*, outlined the city as a medium and space for exercise of power. Apart from our effort to deliver this specially tailored content to our students, we have also devised specific ways of teaching in order to improve students´ ability to use critical theory as an essential part of their future work – our second main objective. In that respect, we have introduced a participative method involving students actively in the course of each lesson, in order to help them find their own beliefs and ways of thinking, rather than offering them ready-made interpretations and instant arguments. In a broader sense, we have tackled a question what role should we play as educators in such a complex field with so many elusive factors that architecture and urban planning stands for.

Keywords: seminar, teaching theory, critical thinking, ideology, city

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1. Introduction

Academic and professional sphere of architecture and urbanism are experiencing a pressure as never before, there are new factors acting on them. These forces include globalization, accelerating development of new technologies, extremely fast urbanization in developing countries of emerging economies, and new energy (de) regulatory policies. Our paper addresses an important question of today's architectural education: How can architecture schools train accountable professionals to successfully contribute to present situation? Within architectural education, we decided to focus on one topic only, which, we hope, will engage in meaningful debate. The issue covered is: How to teach urban planning theory under-ever changing conditions?

Although we[3] are examining a broader question here, this paper is very much based on one concrete example: In autumn 2011, coming back from studying and working abroad, we were asked to conceive and teach a new seminar on a modern history and theory of urbanism at our alma mater – the Faculty of Architecture of Brno University of Technology in the Czech Republic. Since the very beginning we had quite a strong idea what to teach our students and how. Rather than putting the emphasis on purely ´architectural´ analysis, we stressed out the importance of understanding links between the physical substance of cities and the technology, economics, politics and culture. The title of the course was *City: Growth, Ideologies, Power and Violence.* The course covered development of modern cities since the industrial revolution until today, based on precisely selected theoretical texts. Conceptually, we have been drawing from experience gained during our studies at the Institute of Art and Architecture at the Academy of Fine Arts in Vienna and at the Bauhaus Academy in Dessau. Therefore we would like to thank here our teachers, namely Gabu Heindl, Francoise Fromonot, Regina Bittner, Peter Trummer, Chantal Mouffe, Markus Schaefer and Wouter Vanstiphout, who have been a great source of inspiration and knowledge for us.

The given task was specific in several ways. The realm of modern history and theory of urbanism is broad enough to accommodate wide range of topics on one hand, delimitated by demand for innovation at the Brno Faculty of Architecture on the other. At the first place we have tried to understand who our audience will be. A) Although most of the students have a substantial knowledge on various topics concerning theory of urbanism, it is often fragmented gained via vicarious sources and potentially inaccurate, misinterpreted or covered with prejudices. B) The students had gained most of the knowledge passively and often have problems with interpreting it and applying it in practice. Therefore we introduced an underlying concept of thinking and talking about history and theory, rather than updating curriculum with the "latest stuff". We had decided to teach the

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course in a form of a participatory seminar instead of giving lectures in order to actively involve students into its structure. As for the content, we aimed to create a bundle of "must knows" - relatively wide in range but condensed in composition. The name of our seminar, *City: Growth, Ideologies, Power and Violence*, was also the basic structure of it, which was accordingly divided into three thematic blocks. Both, the specific format of the seminar and its content will be examined in this paper.

Our departing assumptions for the overall conception were based more on personal estimates than anything else – later on, they proved to be right, measured by high attendance and interest of students. The seminar was created as a compulsory optional subject for 5th-year students, but opened to everyone. Finally, it was attended by around 40 students of both, Bachelor and Master program, from 1st to 6th year. The accent on theory as fundamental basis for practical work – theory perceived as an inseparable part of the dialectics of theoretical and practical work of an architect, rather than to be there just for corroborating a "good culture of architectural profession" – is not groundbreaking, especially thinking of other disciplines falling into category of urban studies. It was particularly our personal involvement and experience confronted with the environment of the technical university that were crucial in delivering the selected content and developing specific teaching methodology of the seminar.

Our paper presents the very concrete case of our personal experience with teaching concrete students in a particular time at the concrete location. It is not meant to be an overall manual on "how to teach". However we believe that our experience can serve as a good reference to anyone who is concerned with urbanism and teaching in general.

2. Analysis

2.1 Content of the Seminar: the Bundle

The name of our seminar, *City: Growth, Ideologies, Power and Violence,* stands for the content itself, giving it a framework of three thematic blocks. In the first block, *Growth,* we have dealt with the historical facts and their interpretation of development of modern cities since the industrial revolution until today, based on precisely selected texts. As a backbone of this block we adopted a point of view represented by Czech sociologist Jiří Musil, in which the beginning of urbanization coincides with industrialization (2002). Not being purely technocrats or culturalists ourselves, still, we found the news in technology and changing demography relevant for defining different historical eras in order to frame the topics of the first block. We talked about industrial revolution, fordism, postfordims, globalization or shrinking cities.

The second block named *Ideologies* was closely interrelated with the first block, in terms of both, the time span and the context. Here we have summarized the

most important approaches to urban planning, understood and interpreted as particular modes of thinking with their own history and context. The word "ideology" itself does not represent pejorative connotations such as closeness, unilateralism, propaganda and other irrational features in a form of political theory or utopian architecture. For us, it stands for a coherent system of ideas, attitudes, values and evidence as an intellectual framework enabling modus operandi of practical work. Our goal was to introduce to students to historical and contemporary approaches to urban planning as openly as possible, still, based on categorization by two French historians and theoreticians of architecture in different times - Françoise Choay (born 1925) and Françoise Fromonot (born 1958). Furthermore, we focused on contemporary consumerist tendencies in society and their consequences for the city.

The third block, *Power and Violence*, outlined the city as a medium and space for exercising a power. We understood power as an ability to enforce own will against abilities and will of others, making it often a source of conflicts. Conflicts have always been an obvious aspect of forming and shaping cities and modern societies, where the coercion is monopolized by the national state, multinational corporations, politics, economics, but also by culture. We addressed violence in/against the cities, not only in the form of war or terrorism - urbicide, but also violence and conflicts of power, related to the various crises and further with concepts of an unobtrusive control in the city.

2.1.1 *Growth*: The Industrial Revolution

Our lessons have begun with the so-called industrial urbanization of the late 19th century. Jiří Musil, the Czech sociologist, dealing mainly with housing and urban sociology, considered the beginnings of urbanization being this period of time, especially due to the growth of urban population and spread of the urban way of life (2002). We addressed the rapid expansion of cities in the period of coal and steel and examined the concentration effects of steam as drivers of these elementary processes. Our foreign guest Michael Reuss, a German environmentalist and urban historian, spoke on changes in living conditions and infrastructure in the time of industrial revolution.

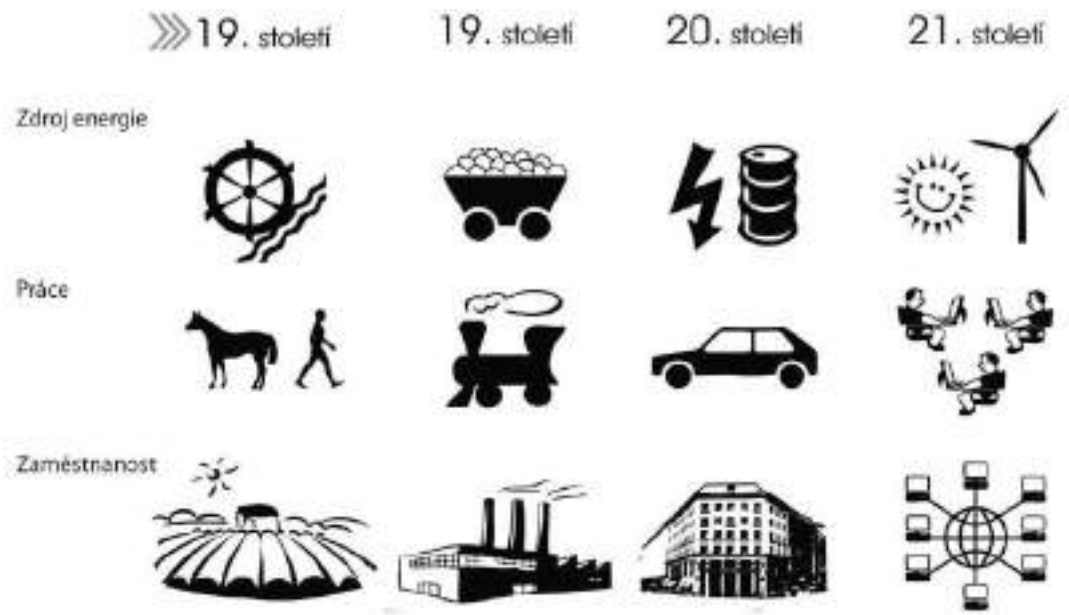

Figure 1. Classification of urbanization periods according to a participating student Zdenka Sedláková, based on the text by sociologist Musil (2002: 7 - 53). Source: Archive of the authors.

2.1.2 *Growth*: Fordism

Rationalization of production in the form of a moving assembly line introduced by Henry Ford caused the establishment of a new economic order of mass production (Garreau 1991). One of its consequences was for instance a general motorization (Jacobs 1962), acting as one of the main factors in the development of suburbia. In addition to Charlie Chaplin's film Modern Times (1936), we also watched the original documentary about the famous social project of that time – the Frankfurt kitchen by Margarete Schütte-Lihotzky (1928).

2.1.3 *Growth*: Postfordism

The rise of the middle class coincided with the advent of economy of flexible accumulation (Harvey 1994) and culture of mass consumption of goods, cities, and lifestyle. Western countries entered the post-industrial period, which we discussed with a landscape architect Daniel Matejka. Revitalization of post-industrial landscape recorded also a Josef Pleskot's documentary film *Lower Area of Vítkovice* (2011) about a Czech industrial and postindustrial city of Ostrava and its contemporary issues on redevelopment and revitalization.

2.1.4 *Growth*: Globalization and Megacities

Aspects of today's globalized world and its problems with growth (Burdett, Sudjic 2007), continued de-industrialization, migration, economic (dis) equilibrium

(Sassen 2002), the ubiquitous anonymous individuality of mass consumption (Figure 2) and attempts to escape this consumer culture (Palahniuk 1996).

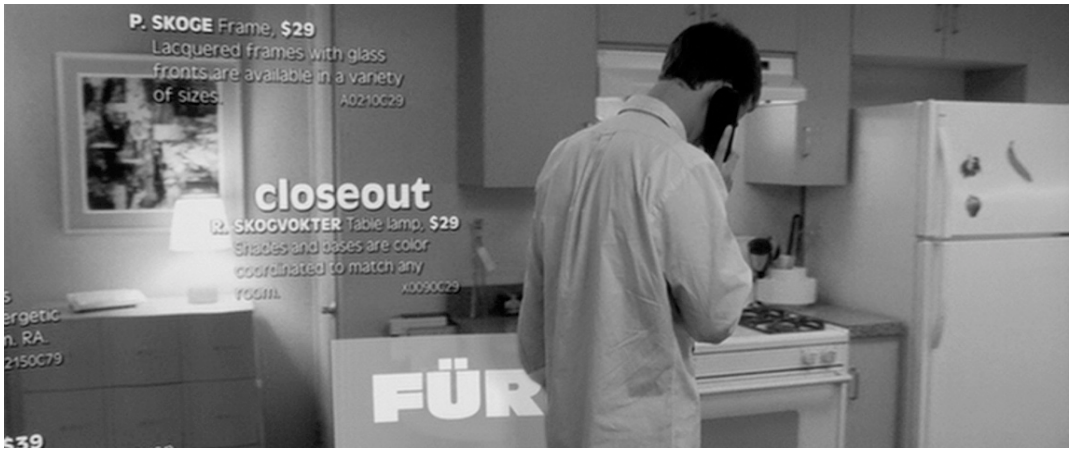

Figure 2. “Like everyone else, I had become a slave to the IKEA nesting instinct. If I saw something like clever coffee table sin the shape of a yin and yang, I had to have it. I would flip through catalogs and wonder, what kind of dining set defines me as a person? …I had it all. Even the glass dishes with tiny bubbles and imperfections, proof they were crafted by the honest, simple, hard-working indigenous peoples of wherever.” A clip from David Fincher’s film Fight Club (1999), based on the novel of the same name by an American postmodern writer Chuck Palahniuk (1996).

2.1.5 *Growth*: Shrinking Cities

Shrinking Cities - a term coined by the German architect Philipp Oswalt (2005) at the beginning of the new millennium - has been a problem for many cities around the world, and society reacts to it differently. For example, by the German video game Demolition Company (2010) as the opposite for the US video game SimCity (1989).

2.1.6 *Ideologies*: Categorization by Françoise Choay

Choy, born 1925, divides the ideological approaches to architecture and urbanism to 1) the naturalistic one - represented by F. L. Wright (and his plan for a city for a new community, 2000) for instance, 2) the progressive one - such as modernism represented by LeCorbusier and 3) the culturalist one, with suggestions of ideal garden cities (Howard 2011). We discussed the background of creation of individual ideas, their possible realizations and welcomed the lecture by the philosopher, director, scriptwriter and educator Jan Motal on dissolving the myth of modernity in the city.

2.1.7 *Ideologies*: Categorization by Françoise Fromonot

One generation younger Fromonot, born 1958, applies a slightly different classification to existing ideas, though again with the division into three groups: supermodernism (Koolhaas 1995), metamodernism (Spirn 2000) and postmodernism, represented by Jencks and Krier.

2.1.8 *Ideologies*: The City as a Product

Our guest in this session was a sociologist Slavomíra Ferenčuhová, who questioned „in what sense are the cities for sale“, when, how and why has developed the city branding and place marketing, how to create an attractive identity and image of the place/city, and whom are the cities as products primarily intended to serve. According to Jayne (2006), the cities are not only places of consumption, but also objects of consumption, and so we got to Disneyland (see Fig. 3) and Disneyworld (Zukin 1993) and urban activities of the Nike company (von Borries 2004).

Figure 3. Disneyland symbolizes the domination of space through the tools of architecture under the auspices of multinational corporate patronage. The world of joy and happiness became the visual landscape of consumerism representing a shift to a society of consumption. Source: STEROW © Stephen Rowley 2011.

2.1.9 *Power and Violence*: Crisis, War, strategy, terrorism and control in the city

Cultural anthropologist Petr Gibas, gave us a lecture on the Prague metro, the fear of (Cold) war and how it was reflected in the socialist city, both on the material plane as well as ideological and imaginary one. We also discussed issues of geopolitics, security and control in public space (Norman 2009) and the extent, to

which a war strategy (Weizman 2007) can influence the perception and the use of urban environment and architecture.

2.2 Format of the Seminar: the Method

"Imagine it, you're sitting in your living room, which you know so well; this is the room where the family watches television together after the evening meal. …And, suddenly, that wall disappears with a deafening roar, the room fills with dust and debris, and through the wall pours one soldier after the other…" (Weizman 2007).

Eyal Weizman's text was one of many read by students of the seminar. The text deals with strategy developed by Israeli military in a course of Operational Theory Research Institute (OTRI), where several thousands of soldiers were moving not through corridors of streets but through tunnels broken through walls and ceilings of houses of dense urban fabric when attacking the city Nabulus in 2002. "We interpreted the alley as a place forbidden to walk through, and the door as a place forbidden to pass through, and the window as a place forbidden to look through […]. This is because the enemy interprets space in a traditional, classical manner, and I do not want to obey this interpretation and fall into his traps," sayid Kochavi in one of the interviews (Weizman 2007). Co-director of OTRI Shimon Naveh claimed their theoretical background as being based on the texts of architects such as Christopher Alexander, John Foerster or Gregory Bateson or anti-imperialist texts of Situationsts or philosophers Deleuze and Guattari.

Although the aim of Israel military are in contrasts to often humanistic attitudes of architects, the pragmatic way of implementing critical theory illustrates its mastering as an intellectual tool. In the similar way, besides imparting the necessary knowledge of the theory, our main goal was to teach students how to use the theory for their own advantage. However we didn't aim to train students in a bare logical argumentation with the acquired theoretical ammo – a kind of academic sophism. Our goal was to relativize and in certain way undermine their way of understanding and to train them in a *strong-sense* critical thinking (Paul 1995). Similarly Shimon Naveh said: "We employ critical theory primarily in order to critique the military institution itself – its fixed and heavy conceptual foundations" (Weizman 2007).

This aim was particularly reflected in the format of seminar and the way we have worked with students. A typical lesson consisted of two up to three students´ presentations, one guest lecture, and several short screenings, always accompanied by discussion. The core of each lesson was built up on students' presentations. Each presentation was based on assigned theoretical text and it was understood as a little personal research project. In that sense, before students presented it to others, they had to have discussed it with us - in terms of accuracy of facts, relevancy of chosen material, language, correct sourcing and also means of graphic representation. Therefore, the considerable part of our teaching took place outside the seminar room – in the form of personal consultations, during

which we have intensively discussed with each student how to approach the topic, how to argue correctly about his/her findings and how to present it in appropriate way. At the classroom then, after each presentation we have critically analysed every student's work and eventually pointed out shortcomings or inaccuracies in his/her argumentation. We have also addressed various complementary or opposing points of view on the presented topic inducing students to actively participate in discourse. So at the end, it was students too, who have helped to create the content of the seminar, accompanied by our selection of screened clips from popular and/or documentary movies, series, videogames or computer games, comic books, characterizing the period, opinion or idea being discussed. The whole framework was complemented by guest lectures.

In such a scheme, a tutor operates as a discussion moderator rather than guru broadcaster. By already mentioned intensive tutoring and consultations of students' presentations/texts, we aimed to help students to deliver meaningful results in order to maintain the coherence of the whole seminar. This was possible with a great enthusiasm and engagement of students. Even if there were always some improvements possible, the problems and the following analysis carried the same importance within the lesson as the presentations themselves. To enable this participatory and informal scheme to work, we had to adjust the set up of the physical environment of the seminar room as well. At the first place we have rejected representative but proscenium-like aula and insisted on a rather smaller space. Getting one of such, we have organized its tables and chairs into a neutral O-shape, which made an informal face-to-face discussion possible.

Time restricted slide presentation of a text is already itself its reinterpretation requiring a deep understanding of the context and research on the topic. Furthermore it mobilizes conceptual and syntactical skills of a student. Based on this experience, in the second stage, students elaborated on their studied topics further by writing their own texts. We asked them to apply the newly gained knowledge on a personal experience, project or observed phenomenon of their choice. The output of the seminar is a book of students´ critical texts.

An important part of the scheme was a reflection of the interdisciplinary discourse in the form of lectures and interviews with external experts dealing with the city - from the fields of sociology, economics, geography, philosophy, cultural anthropology and urban ethnography. Besides complementary information on the topic, they have brought to discussion their own characteristic language - typical for methods and patterns of thoughts in their specific field. We have perceived this fragmentation - a consequence of the collage of the chosen texts, guest lectures and movies, which built up the content of the seminar, as an advantage – as a inseparable part of the concept, allowing students to relativize their own thinking. But, it was not enough for us to introduce students to the current expertise and to provide them this interdisciplinary context involving external professionals. Our main goal was to teach students to use the knowledge they have gained, to think critically, argue passionately, and independently express

their opinion, and by that we tried to reinforce their capacity of asserting themselves in order to be able to influence the field itself.

Figure 4. Spatial layout of the seminar room during a discussion with urban historian and environmentalist Michael Reuss. Photo: Jan Kristek.

2.3 Results

The seminar was attended in average by forty students (which was four times more than the number of students originally officially inscribed) from 2nd to the 6th grade, both Bachelor and Master programs. The general interest of students was immense; some show broader interest in seriously deepening their knowledge in theory in the future. The methodology itself proved to be working well in terms of format and content as well. In the weekly two-hour lessons we managed to discuss the fundamental topics as the basis for our eventual future work with students to build upon. The format, dense and demanding, still appreciated by students has had a considerable outcome: valuable presentations and 3 to 12 pages long texts written by students, which we perceive as a challenging success and motivation for further work for them as well as for us. All submitted texts are now being published in a seminar proceedings book carrying the same title, *City: Growth, Ideologies, Power and Violence.* Within lessons, we contrived to encourage everyone, external guests, internal teachers and our students to interact within each other.

The conception of our seminar became a part of the Operational program "Education for Competitiveness" for the period 2007-2013, directed by The Czech Ministry of Education, Youth and Sports and founded by the European Social Fund (ESF). We have also presented the content and methodology of the seminar at the PhD conference at the Technical University in Brno in January 2012, receiving a very warm reception and feedback by both, students' body and the faculty, inspiring us for further work. We also obtained an invitation to attend and present our teaching experience at the International scientific conference "Veda vo výstavbe / Science under Construction" in Bratislava, Slovakia in September 2012.

Since we were offered to continue teaching this kind of seminar in the future, looking back, we would like to implement some improvements. This time, we have let students working on their own writings first in the second half of the semester. Today we think that a continuous work on the texts since the very beginning could bring even better results. Considering the individual consultations before presentation or final submitting with each student, the shift to collective discussion comes here into question, allowing other students to listen or interact already during a concept polishing process.

3. Conclusions

The only thing constant is change itself, (Heraclitus in Mansley Robinson 1968: 91), and as well as rapid the world changes, changes the approach to teaching.

The pilot of the seminar on modern development and theories of urbanism titled City: Growth, Ideologies, Power and Violence took place in the winter term of academic year 2011/2012. The seminar was created as a compulsory optional subject for 5th-year students, but opened to everyone. This option chose students of both, Bachelor and Master program, from 1st to 6th year. We have dealt with the development of modern cities since the industrial revolution until today, based on precisely selected theoretical texts. The whole course was divided into three blocks. The first one, called GROWTH, addressed analyzing the development of the city in terms of current theories. The second, proceeding block called IDEOLOGIES, summarized important approaches to urban planning, understood as a response to growing complaints from the period discussed in the first block. The third block, POWER AND VIOLENCE, outlined the city as a medium and space for exercise of power.

After having the clear content structure, we have focused on our main goal and how to reach it. The main goal was to acquaint students with the basic historical and theoretical concepts, and, especially, to teach them to apply the knowledge they have gained in practice, to discuss ideas properly and master the principles of presenting complex topics. To some extent, it seems like the lack of discussion in the urban planning seminars at the FA BUT came from its format. If we really wanted to

introduce turbulence into education, we needed to structure it differently, to explore new formats. We have come up with a participatory method, when moderated and tutored students presentations built up the lessons of the seminar. Students have carried a part of responsibility in imparting ideas contained in theoretical text assigned to them. Each student has had to read, understand, assess and then process it in a clear graphic presentation to introduce the main idea to others. Then we have discussed the given issue sitting in a non-hierarchical face-to-face setup circle. The final output of each student's semestral work was an own critical text, which applied the acquired theoretical knowledge on a personal experience, phenomenon or project of his or her choice. We have insisted that students always explore relations to other issues, historical, geographical situation and relate it all in time and place. They had to rethink their way of presenting things and asked themselves: which theory are we talking about, at which time, on which place, mobilized in which direction?

As from students' side, it was demanding in terms of deep studying, understanding, and presenting the assigned topics. From the teachers side, the scheme was time demanding and challenging in terms of intensive individual consultations and personal involvement in students work, in order to uncover their potentialities, rather than letting them cover done deals. Together, we have prepared the lessons in close relation to the last and the coming one. Further on, the role of us as teachers in the classroom was rather a role of discussion moderators and when necessary correctors than the role of speakers. We have found this scheme, not commonly used for teaching theory, successful in accomplishing our goals mentioned above.

In number of lessons we have welcomed external lecturers dealing with the city - from the fields of sociology, economics, geography, philosophy, cultural anthropology and urban ethnography. The texts from our reading list were accompanied by screening of clips from popular and/or documentary movies, series, videogames or computer games, comic books, characterizing the period, opinion or idea being discussed. One could easily admit that this is not architecture education; this is not urban planning education. We have shown students that to think "what if yes?" is possible, to relativize stereotypical opinions is healthy, and to look around to perceive everything is necessary.

Within this dynamic process of going beyond the definition of "urban planning seminar", we hope we have reached new attitudes to teaching.

"Our unique mission is to move beyond the highest level of professional training to open a creative space within which the discipline can rethink itself, a space of speculation, experimentation, and analysis that allows the field to detour away from its default settings in order to find new settings, new forms of professional, scholarly, technical, and ethical practice."[4]

[4] Mark Wigley in his GSAPP Dean's Statement

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LIVEABLE LANDSCAPES: A key value for sustainable territorial development

Gemma García-Blanco [1], Efrén Feliú [2]

Abstract

The development of territorial cohesion policies in EU has become a very powerful tool for the implementation of European political guidelines. Besides, with regional policies in EU increasingly focused on harmonious territorial development towards sustainability, highly inspired by the European Landscape Convention (ELC, 2003), the elaboration of landscape plans and calling for its integration within spatial planning has become a potential asset in regional development towards sustainability.

Within this context the landscape has become a key territorial value where analyses and assessments could become important elements which could enrich and improve integrated spatial planning and urbanism in different ways, and be seen and used as an asset for economic and territorial development. But with the European Union characterised by varying, historically developed governing and planning systems in relation to both landscape and spatial planning, the process of reaching such a goal is not a simple task. The differences in land use decision processes due to different patterns of legal, constitutional and administrative frameworks have obvious impacts on the concept of landscape and practices in relation to landscape management and planning. It seems clear that the linkage between territorial development strategies and landscape planning is a political priority.

The paper presents the LIVELAND project, an ESPON 2013 targeted analysis running from March 2012 until April 2013, which focuses on policy making for liveable landscapes. In particular it aims to explore practices of landscape planning and regional territorial strategies. By means of policy analysis and exchanging experience, among landscape planners and policy advisers, comparisons are drawn on the content, methodologies, processes and procedures of policy making for landscape. The identification of successful approaches in combining landscape management and socio-economic development will constitute a basis of this comparison, and based on evidence, advices will be made on 'planning for liveable landscapes' in the form of guidelines and policy recommendations. In the proposed LIVELAND project these objectives and aims are addressed by including six case examples studies across Europe, each representing a different planning culture and different levels of competences and territorial scales of landscape policy making.

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These 6 cases serve as examples to: get an insight of the current practice of landscape policy making, and of implementing European landscape policy in particular (without pretending a complete overview of European practice, because this targeted analysis is a bottom-up initiative); it is expected that common denominators will be identified such as terms, concepts and practice that are shared among the landscape policy makers who are included in this project. The participant regions and cities are: The Basque Country (Spain), The City of Ljubljana (Slovenia), Midden-Delfland (The Netherlands), Navarra (Spain), Thy National Park (Denmark) and the city of Offenburg (Germany).

Key words: Landscape, Spatial Planning, benchmarking, policy making, territorial cohesion.

1. Introduction

Competitiveness and attractiveness of regions have become important aims of regional, territorial and environmental policies of the European Union, particularly as contributing to harmonious territorial development.

The European Landscape Convention states that landscape "*constitutes a resource favorable to economic activity*" and responds "*to the public's wish to enjoy high quality landscapes and to play an active part in their development*" (Council of Europe, 2003).

1.1 Concepts and approaches

It is embedded in European concepts of landscape that, as people, we do not simply live in a physical reality of 'areas' or 'territory' but mainly in our perception of such areas: in landscapes (Moore & Whelan 2007). 'Landscape' includes the physical and the mental, the natural and the cultural (COST, 2010). Landscape is a common good that visibly and invisibly frames everyday lives.

In recognition of a multifaceted aspects of landscapes, the European Landscape Convention (Council of Europe, 2003) recognizes landscape as having "…an important public interest role in the cultural, ecological, environmental and social fields". Consequently, improving the understanding of the outcomes of landscape planning decisions is of high political priority (European Union, 1998), a conclusion which is followed up in the European Landscape Convention (ELC) stressing the importance of stimulating the elaboration of landscape plans for the considering of landscape as a key territorial value (Council of Europe, 2000). The Convention recognizes landscape as having "…an important public interest role in the cultural, ecological, environmental and social fields, and constitutes a resource favourable to economic activity and whose protection, management and planning can contribute to job creation".

This need of developing a definition of landscape as an asset in regional development towards sustainability is fully recognized by ESPON, emphasizing among other things the need for a: “Balance between landscape protection and social welfare and economic development” through an “Improvement of governance and participation of key actors and stakeholders in the planning process”, and furthermore “Assess, evidence based, how to consider landscape planning in the framework of territorial cohesion policies”.

Within the LIVELAND project:

- Landscape is recognized as “whatever part of the **territory as conceived by the population**, which character results from the action and interaction of natural and human factors”.

- Landscape is also recognized as an essential element in the quality of life, expressing a common natural and cultural heritage, and contributing to the configuration of the territorial identity.

- It is also a dynamic element which reflects the relationship between the population and its territory along time, and therefore, its conservation should focus on maintaining and improving its quality and diversity, integrating new elements and uses.

- Land use strategies increasingly emphasise multifunctionality. The landscapes of the future will have to serve, simultaneously and in integrated ways, a number of different functions (Haber, 1977). These functions are employed for analysis and policy proposals in this project:
    - ecological (as an area for living organisms and natural environments), (Daily, 1997)
    - economic (as an area for production and reproduction),
    - socio-cultural (as an area for cultural actions and identification),
    - historical (as an area for settlement, memory and identity),
    - and aesthetic (as an area for shaping and experiencing).

- “Multifunctional landscapes” refers to areas serving different functions and combining a variety of qualities, i.e. that different material, mental, and social processes in nature and society take place simultaneously in any given landscape and interact accordingly. Multifunctionality in landscape, therefore, means the co-existence of ecological, economic, cultural, historical, and aesthetic function. (Zebisch et al, 2004).

- Balance between landscape protection and social welfare & economic development is possible and wanted.

- Landscape approach (evaluation and planning) could enrich and improve integrated spatial planning and urbanism

- The evaluation of the landscape requires a global vision of the land throughout a multi- scale approach, going beyond the local interest and point of view.
- The identification of landscape objectives can be the support to motivate the improvement and development of poorer or abandoned areas.
- The assessment of the landscape can contribute to the process of making decisions about the most sustainable way to use the land.
- Improvement of governance and participation of key actors and stakeholders in the planning process

2. Project objectives and aims

The LIVELAND aims at exploring practices of landscape planning and of regional territorial strategies. By means of policy analysis and exchanging experience, among landscape planners and policy advisers, comparisons are drawn on the content and landscape analysis and evaluation methodologies, processes (public participation / institutional coordination), procedures of policy making for landscape (protection figures, planning instruments) and performance monitoring. The identification of successful approaches in combining landscape management and socio-economic development will constitute a basis of this comparison, and recommendations are made on 'planning for liveable landscapes' in the form of guidelines and policy recommendations.

Specific project aims are as follows:

- Developing a **definition of landscape as an asset in regional development towards sustainability.**

- With this project ESPON will have made a first systematic analysis about landscape protection and development in European 'planning systems'

- **Identifying good and best practices** in the stakeholder regions, with regard to **landscape and spatial planning**, and of their impact on regional development.

- Identifying specific **actions or measures** in the stakeholder regions which have proven to be successful in implementing combined landscape protection and socio-economic development.

- **Benchmarking** of the methodologies for analysis, content and procedures to improve the processes and performances of planning in the involved regions.

- Scientifically assess how landscape approach (analysis and assessment) and landscape planning could enrich and **improve integrated spatial planning and urbanism**

- Defining **criteria for the integrating** of landscape and regional strategies. Assess, evidence based, the consideration of landscape planning within territorial cohesion policies.

- Analyse available **ESPON data and results** from previous and also current projects that could be used to reinforce the consideration of landscape as an asset for territorial development.

3. Case studies

In the LIVELAND project these objectives and aims are addressed by including 6 case examples studies across Europe, each representing a different planning culture and different levels of competences and territorial scales of landscape policy making.

Table 1. Case studies in LIVELAND project

Case study	Overview
The Basque Country	Is revising its Spatial Planning Guidelines and a proposal for a Landscape Law is under development inspired by the ELC with the aims to integrate landscape planning in other planning instruments
The city of Offenburg	Has recently made a landscape plan and seeks to develop and protect landscapes under urban pressure. Offenburg belongs to "Eurodistrict Strasbourg/Ortenau", so there is already exchange on European scale. A new "Landschaftsplan" is nearly done. Concerning landscape planning, the municipality is interested in improving and learning from the experience of other European regions and municipalities, particularly with reference to successful execution of recommended measures.
Midden-Delfland	Landscape development plan already exists and actions in partnership with the surrounding urbanised municipalities are currently being implemented. From regional perspective, the interest is how to stimulate project development and landscape monitoring. Local and regional governments work close together.
Government of Navarra	Wants to prepare a new landscape plan for the region, based on European experiences. To date, many formal regulations and informal actions exist which now should be articulated and improved by the new plan. The Government of Navarra is especially interested in the specification of the envisaged results concerning the "the guidelines for the elaboration of landscape plans and their implementation". These guidelines will be used for the design of the landscape plan of Navarra.
Thy National Park	Is challenged by the question of enabling a planning process involving all relevant stakeholders in order to obtain a coherent landscape development.
The City of Ljubljana	Is interested in methodologies for the identification of landscape potentials and the development of guidelines, aimed at bringing new arguments in the stakeholders´ dialogue for the development of the Ljubljana and its surroundings. European exchange of experiences is an important motivation.

4. Scientific approach and methodology to be applied

A common framework has been established aiming at exploring good practices of landscape planning and regional territorial strategies in the stakeholder regions and to benchmark the content and procedures between regions.

The following sections describe the main issues, from abstract concepts to planning practices, which will be applied as cross-cutting and transversal issues all along the project tasks.

4.1 Parameters of analysis

- **Methodologies for the evaluation of landscape**

The project should assess the different methodologies that are being used for the evaluation of landscape: data used, landscape elements and methods of valorization, establishment of objectives and also methodologies for the application of landscape concept into practice: protection, conservation, management.

The analysis of the plans will focus on:

1. ***Landscape or spatial structures and appearances***: This includes areas defined through major environmental features (as natural patterns like rivers), and man-made objects and patterns (such as settlements, power-grid lines etc.) These patterns, in their appearance in maps and plans, are not only defined through their "locus standii", but also on their coverage and their density within the appropriate area unit.
2. ***Functional features***: This defined through environmental features such as Biodiversity and Productivity; socially such as Place to live, work, visit temporarily or more frequent through second homes; economically through Production and Reproduction. Identification of functions is important when dealing with general area characteristics, and especially important when dealing with multiple functions/multifunctionality across sectors as a key concept in relation to for instance urban sprawl, homogeneity and heterogeneity of land use.
3. ***Values or qualities:*** the 'quality' or 'value' of space / landscape is an important issue of planning. Beside the function often the natural, economic, cultural and recreational value is mentioned on maps and plans.
4. ***Future developments and scenarios:*** the future spatial developments (trends and scenarios) are often analysed to develop goals and strategies for also to develop 'desirable / advisable' measures for protection, development and management of space and landscape.
5. ***Drivers of change in functions and values***: For instance socio-economic driving forces such as: Land ownership; Land management practices; Land use patterns; Landscape/Land cover; Aesthetics; Biodiversity; Productivity of

ecosystems; Forestry; Agriculture, or institutional driving forces such as regional, national, or EU regulations.

- **Planning processes & participation**

Process understood as governance and sequence of planning, including formal and informal methods and practices

  - Planning and planning processes at different administrative levels (here local and regional authorities with political power to guide developments as well as protection of certain values);
  - Planning and planning processes in different sector settings (as nature, recreation, agriculture, urban dwellings, etc.) that can generate developments and investigations;
  - Planning and decision taking procedures ('good governance' and participation) in relation to landscape and territories.

- **Planning procedures & decisions**

The procedures, including the administrative requirements to be fulfilled following specific legal frameworks will be other very relevant parameter to be considered in our research.

The local and regional plans for landscape and place are often made with participation of stakeholders. It is important to analyse which procedures of decision taking have been followed: such as hierarchical / bottom up / top down / stakeholder driven / administratively organized etc.

- **Actions and measures of local / regional government**

The analysis should also addressed which actions and measures have been incorporated, whether it could be formal as part of a regulated procedure, or informal, for landscape management and planning at different levels of competence.

- **Impact measurement: monitoring indicators and systems**

It is important finally to identify which monitoring systems are in place, for measuring the territorial impact of the actions incorporated in the planning instrument with regard to landscape management and planning.

4.2 Multilevel/Multisector/Multifunctional approaches

The project will apply a multiscale and multisector approach in a transversal way all along the project development.

Although the participant stakeholders represent different administrative levels and competences, both local (represented by the cities of Offenbourg, Ludjlbiana and Midden-Defland and Thy National Park cases) and regional (Basque Country, Navarre), the project will look at the coordination of different levels of planning and also the implications of cross-sector planning. With this regard is remarkably important to address the implications that regional landscape planning will have at local level.

As planning and policy making is often done by a variety of different authorities including experts with different backgrounds the impact of local, regional and national differences should be clarified before examples of planning practice are compared. These include state planning agencies, environmental and nature protection agencies, cultural agencies and authorities for monument protection, regional planning offices, nature park administrations, local administrations; private planning consultants may be called in for support. By comparing approaches taken, by different organisations representing different levels in the planning and managing landscapes, a set of common quality standards might emerge.

Another issue appears when looking into the above described approaches, namely that sectoral differences are another important quality that should be reflected and enables consistence when used across different sectors.

The expression multifunctionality, and more specific “multifunctional landscapes” refers to probably the most important contemporary challenge when dealing with the concept of landscape, namely that areas increasingly serves different functions and combines a variety of qualities, i.e. that different material, mental, and social processes in nature and society take place simultaneously in the landscape and interact accordingly. Multifunctionality in landscapes, therefore, means the co-existence of ecological, economic, cultural, historical, and aesthetic functions. Although there are different ways to classify landscape functions, all lead to the same conclusion that landscapes are multifunctional.

As a cornerstone of the project is the comparing of examples from different regions, and therefore with concepts and conceptual frameworks with historical differences in both definitions and practices, the project needs to get an overview of as well the current approaches to practice of landscape policy making, and of the implementation of landscape policy in particular, whereby common denominators such as the identification of terms, concepts and practice shared among the landscape policy makers who are included as stakeholders in this project enables comparability, and at the same time contribute to how landscape approach (analysis and assessment) could enrich and improve integrated spatial planning in different ways and be seen and used as an asset ensuring that assessment of the landscape can contribute to the process of making decisions about the most sustainable way to use the land, improve the governance and participation of key actors and stakeholders in the planning process, and finally contribute to the assessment of how landscape planning can be considered in the framework of territorial cohesion policies.

4.3 Stakeholder involvement

As a project within the framework of ESPON Targeted Analysis Based on User Demand, the question of stakeholder involvement is crucial. Practitioners are both contributing to defining the demands that has led to the call, but are also to be integrated throughout the project as supplies of more detailed information and practical know-how. In that connection they are expected to be critical in the process of outlining new understanding and perspectives in relation to future development opportunities and challenges, but at the same time also active in relation to the outlining of actions and potential new projects. Two groups of contributors are identified: First of all the professionals on space and landscape from the stakeholders, but in addition a group of experts who have been – and are – practitioners in relation to dealing with the problems outlined throughout the project, who, due to communality to the case study practitioners, constitutes a "legitimate peripheral participation" (Wenger et al., 2002) are able to supplement the stakeholder's involvement with additional input.

With a goal of bringing up the specific approach of landscape and territorial planning of each region through the exchange of experiences and giving feedback to the involved regions, the involvement of the stakeholders include five components:

1. The stakeholder's involvement is essential throughout the project and starts off with the definition and development of the specific theme for the targeted analysis.
2. The stakeholders will provide input and play an active role by delivering strategies, plans, spatial data, cases and measures and other relevant information about their regions;
3. A comparison between the practices of different administrative territorial entities (planning agencies of the involved local and regional authorities) in order to identify examples of good/best practices will be tested and responded to from both individual stakeholders as through a more general responses from the whole group of stakeholders.
4. A series of workshops will serve as a tool for discussions among the stakeholders and the research group to compare the region's performance at three levels:
    a. Internally, aiming at providing a comparison between different practices (methods, operations and procedures) of landscape and territorial planning within one's own organisation;
    b. Intermediate by evaluating own practices against the other cases and thereby acquire an important contribution to internal knowledge generation;
    c. Externally through evaluating the potential usability of the best practices for generalizations beyond their own situations.
5. Finally their comments to the generalizing of experiences and best practices of landscape and territorial planning and their impact on

sustainable development in relation to future planning approaches will be important.

The precise involvement of experts has not been decided on at this point of time, but it is expected that the option of involving one or a few experts with both practical as well as more overarching experiences within the integration of landscape and territorial planning would be included in the workshop activities.

4.4 Benchmarking

The benchmarking is based on the baseline analysis of the regional planning practices and case studies of plans, where the policy contexts (European and national), spatial planning systems, methodologies of analysis and studies, processes, procedures, challenges as well as needs are outlined for each of the regions. Out of this an analytical framework for the benchmarking procedure is generalized. In addition to the case studies "learning cases" will be taken into account which may provide longer traditions of including landscape plans in territorial planning may be included as well. Similarly input from the first stakeholder's workshop will provide important input to this activity.

A second step in the procedure include the identification of similarities and differences between the planning practices– territorial as well as landscape wise - and thereby enabling a categorization of the case studies according to similarities in planning systems, practices and planning tools. Emphasis will be on local and regional plans, which may provide guidance to future spatial measures of protection, development and management of space and landscape. The comparison will be structured through a set of indicators which enables a comparative presentation of practices and plans. We intent to use the same scheme as in the baseline analysis of cases in stakeholder regions:

- Analysis of space / landscape and future developments
- Problems and challenges
- Objectives and targets
- Actions and measures of government
- System of monitoring
- Impacts.

The results of this comparison will be presented through a draft version of"Guidance in benchmarking best practices".

A third step will be the second stakeholder's workshop which is intended to serve as a key meeting place between practitioners, selected experts and the research team. The workshop will be a learning experience between practitioners and experts from the case regions by being a meeting between three different knowledge components: the practical experiences of stakeholders, the input from the group of experts as well as input from the research team.

To guide the learning process and the targeted output from the workshop an agenda will be made aiming at prioritising the discussion items in order to keep a feasible 'work load' of a workshop of maximum two days. An important item for the 'agenda' will be the question of which practices (kind of spatial problems and type of plans) are comparable, and which kind of learning processes could be promoted. Generally spoken professionals ('plan makers') could learn from each if, at one hand:

- Their problem statements and challenges are comparable (like high urban pressure versus 'shrinking' depopulating regions; rich versus poor economic performance);
- Their scale of working is comparable (regional, abstract strategies versus local, implementation programmes).

And at the other hand:

- Their methods and cultures of planning are different (e.g. ways to analyse the spatial development, kind of goals and steering strategies; methods of participation).

Popular formulated: it is interesting to talk with each other, when we consider having the same problem, but working on different solutions and also in a different way.

Based on the above, two outcomes are target: on one hand a refining of the "Guidance of benchmarking best practices" will take place, which will be presented for the stakeholders at the third stakeholder's workshop. And on the other hand the overall results of the stakeholder involvement and the benchmarking exercise will provide messages and recommendations on how to integrate 'landscape' in European territorial cohesion policies and national spatial strategies. It will further deliver recommendations for future benchmark procedures.

4.5 Policy recommendations

The diversity of her landscapes is widely appreciated as on of Europe's major assets. Consequently, the wise management of landscapes and their special character leads to adopting generally accepted ways of landscape policy making. Pertinent recommendations are provided through this LIVELAND project. The first set of recommendations lists strategies that are designed to overcome current policy making challenges. The second set includes ideas for a contingency planning. The overall strategy would be to build up better levels of understanding of regional cultural differences referring to landscape and to concepts of landscape, and to build strength on the basis of the potentials that cultural and landscape diversity offer.

Since a number of different policy sectors (organisations, government, and non-government) are engaged with or directly/indirectly affect landscape, strategies are developed for these sectors to **engage in communication over landscape and landscape policy**. Suggestions are provided for 'good communication' across different sectors, levels of decision making, authorities and NGO, and private consultants. A suitable terminology is needed. Included are common understandings of the 'concept of landscape', of shared ideas about 'liveability of landscapes',

agreements on definitions of landscape as an asset in regional development, and as an asset that is important to lead the way towards sustainability. Encouragement is also given to allow for a common understanding of landscape that relates to the variety of concepts that exists and yet would connect different disciplines. The overall aim of this strategy is to try and reduce risks of misunderstanding each other (different disciplines, different points of view of different organisations, etc.).

On the foundation of 'good communication' strategies are recommended for different policy makers to assume **trans-sectoral perspectives on landscape**; for example, between those in environmentally / ecologically based administrations / professions and those arising from social sciences and the humanities. The overall aim of this strategy is to try and reach a common understanding not only of what landscape is, but also of the services that are expected of landscapes to provide (referring to so called 'ecosystem services', 'cultural services', and other 'services' that are essential for people's health and wellbeing, including the need for identity, for restorativeness, and many others). The overall aim is for policy makers to start and bridge the gaps that exist due to landscape issues being scattered across different segments of government and administration, and to de-fragmentise landscape policy making activities (including landscape and territorial planning).

Strategies are also needed for **developing pan-European perspectives on landscape**, instead of separating regional / local from European views / scales. Policy makers are advised to try and build on European networks of regions, professionals, etc. The overall aim is for policy makers to take advantage of opportunities that focus on landscape as it is cherished as essential to liveability of every region, and to link liveability to competitiveness and attractiveness of regions. From here, links are to be made to aims of regional / territorial / environmental policies of the European Union, particularly as contributing to harmonious territorial development and towards sustainability. Cultural landscapes, 'liveability', 'regional identity', human health and well being all refer to important aims of regional / territorial policies at the European level. Policy makers are advised to implement these general policy goals at regional and local levels.

As 'landscape' is considered an integrated concept it is also very much suited, in policy making, for achieving sustainable development. Recommendations are given that calls for policy makers to **stimulate knowledge based planning and the elaboration of landscape plans** in particular. Landscape planning, management and protection should be done in integrated ways, referring to indicators and to good and best practice examples (as provided by this project). The elaboration of landscape plans also calls for the integration of their policy output into spatial planning, for policy makers to be considering landscape as a key territorial value.

Recommendations are given for policy makers to agree on management structures for **planning processes that are inclusive and assume an outcome oriented approach** (instead of 'plans only'), referring to the liveability needs of all who live, work and recreate in a given area, their landscape. Forms of decision making are

advisable that are open to all segments of society and respectful of principles of good governance. By involving all interested parties, and their perceptions and interpretations of landscape, the development of landscape quality objectives is much enriched. The use of public participation in the identification and evaluation of future landscapes is seen as being crucial to informing decision makers. In this context it is important to accurately represent and describe the range of landscapes and landscape types experienced by members of the civil society; these might include cities, peri-urban areas, coastal zones and sites of mobility (some of which might otherwise be neglected if policy advising is done by experts only). It is important to choose approaches that help make policy makers understand what it is in people's surroundings that they cherish, now and in the future.

Furthermore, policy making is advised to consider to what extent landscape-relevant and politically important issues will need to be thought of with reference to the generation-gap (different views and values with every new generation), to demographic change and migration, climate change, lifestyle changes (relating to landscape use and preferences), etc. These are considerations that are referring to the future and thus directly relate to sustainable development. In this context it is also important to make decisions on the involvement of stakeholders, especially on how to include not only persons who have specific rights such as land owners, but also to involve representatives of temporary users such as tourists and second home owners etc., and even future 'claim holders' such as young people and children.

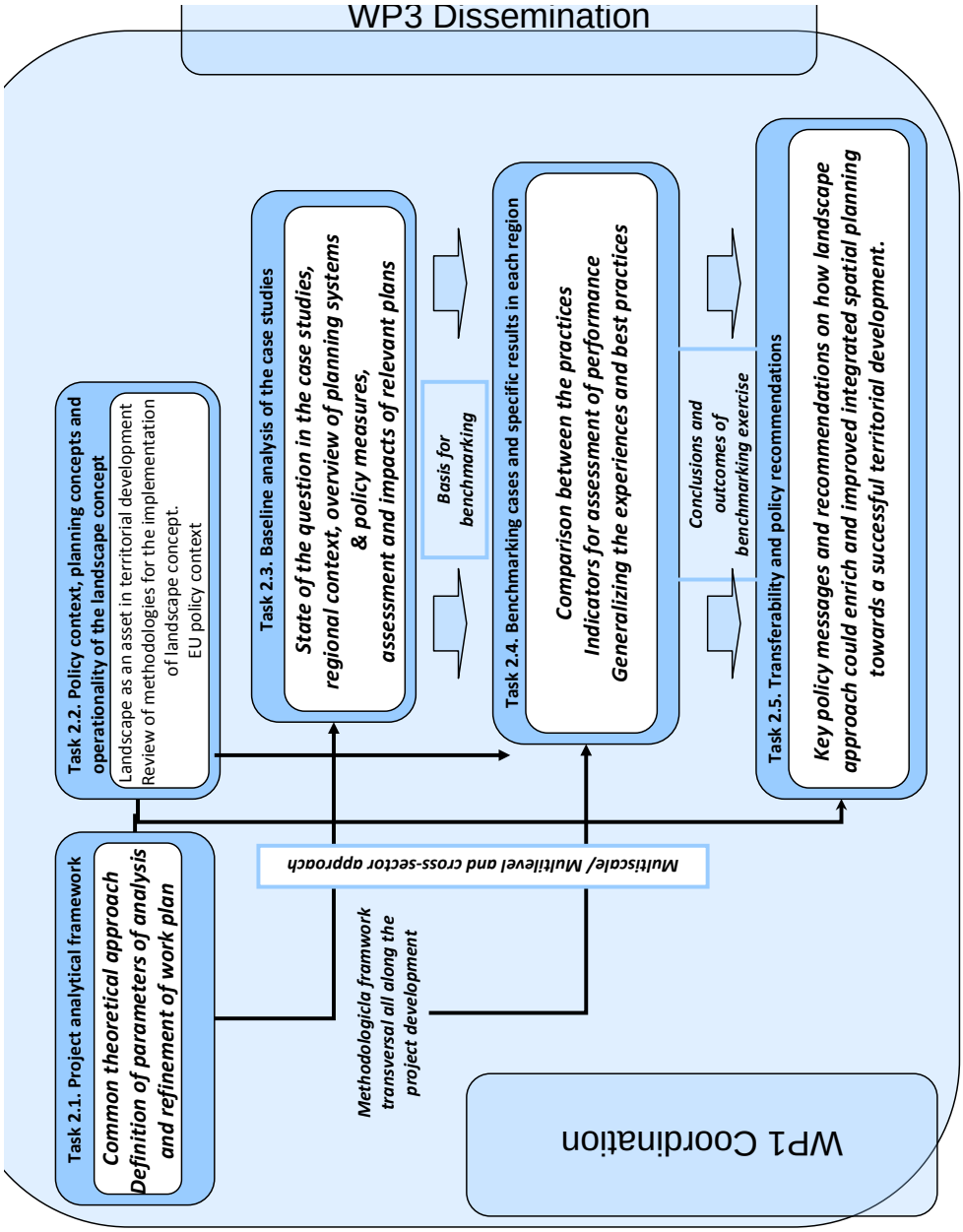

Figure 1. The LIVELAND project work flow.

5. Conclusions and expected results

Addressing the objectives and questions described above, the proposed LIVELAND project will strive to answer the following key policy questions

- Developing a definition of landscape as an asset in regional development towards sustainability. With this project ESPON will have made a first systematic analysis about landscape protection and development in European 'planning systems'.

- Balance between landscape protection and social welfare and economic development.

- How landscape approach (analysis and assessment) and landscape planning could enrich and improve integrated spatial planning and urbanism in different ways:

    - The evaluation of the landscape requires a global vision of the land throughout an multi- scale approach, going beyond the local interest and point of view.
    - The identification of landscape objectives can be the support to motivate the improvement and development of poorer or abandoned areas.
    - The assessment of the landscape can contribute to the process of making decisions about the most sustainable way to use the land.

- Improvement of governance and participation of key actors and stakeholders in the planning process.

- Assess, evidence based, the consideration of landscape planning within territorial cohesion policies.

The project is envisaged to deliver the following results:

- An overview of the EU policy context and the context of relevant national planning systems and traditions for an integration of landscape planning and territorial development

- Insight on the way landscape planning relates to economic development and land use pressure (urbanisation and agricultural intensification) including possible causal relations

- Methodology of analysing 'good practice examples' and benchmarking of the content and procedure (governance aspects) of landscape plans and their impact on the sustainable development of the case regions, and

choosing best practice in discussion with professionals and experts of planning from the stakeholder regions

- Examples of 'good & best practices' of landscape planning and the way they relate to regional territorial planning in the stakeholder regions
- Recommendations to professionals in the stakeholder regions to improve their processes and performance of landscape and territorial planning
- Policy messages for the relevant European (EC and CoE) and national authorities, to encourage the incorporation of landscape in the territorial cohesion and territorial planning policies
- Assessment on the use of ESPON data, objectives and results from relevant projects and studies. Identification of knowledge gaps to be covered by future ESPON projects

6. Acknowledgements

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INDICATOR ANALYSIS ON THE ISSUE OF TRANSPORT ENERGY CONSUMPTION

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Abstract

The issue of transport sustainability is drawing more and more attention from related researchers all over the world. In this domain, as one respect, the restriction of energy consumption in transport sector is crucially important to a certain extent. There are many ways for analyzing the factors of the superfluous energy consumption in transport to give reasonable interpretation for the incentives of it. In recent years, factor analysis related method such as decomposition analysis and data envelopment analysis are used in literatures in order to catch the principal factor that leads to the consumption. But it remains a problem that why the very factors are selected for the analysis instead of others, and there is no convincing evidence given by the analyzers. This paper introduces the method of indicator analysis rather than generally used factor analysis to make the analysis afterwards more reasonable. Indicator analysis considers the possible factor to be candidate indicator and evaluate them in advance based on the criteria of indicator selection. The criteria are developed for the application in the transport domain and classified into three categories which named representation, operation and policy application. The scoring standard for evaluation is also given in detail in order to get impartial result. Fuzzy functions are also introduced for joint consideration of indicators.

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1. Introduction

Sustainable development is considered to be a permanent topic around the world in recent years. The basic sprit of sustainability is to meet human being's needs as well as preserving the resources and environment of the world, so that the needs of human can be met not only at the time being, but also in the future for next generations. Sustainable is the systematically combination of environment, economic and social. Based on this spirit, we have to take more consideration on sustainability as well as economic development. Transport activity effects the environment, economic and social very much, therefore it is very important to trace the activity of transport for the research of activity. In this paper, we focus on the domain of the energy consumption in transport factor. It shares about 20% by the transport sector in the total all over the world, and the absolute amount is increasing generally, which is rather a crucial part.

Japan confronted a boom of economic development after the World War II, and is becoming one of the most advanced countries all over the world. At the same time, the consumption of energy in Japan is growing up steadily, which most of the energy consumed is non-renewable resources such as coals and oil. It is not considered sustainable for the ratio to consume so much non-renewable resources especially after the experiences of the oil crisis. And now, the accident of the Fukushima Daiichi Nuclear Plant makes the public uneasy for the safety of nuclear power particularly for the places where suffers from natural disasters easily. Other means of clean energy is restricted by the nature conditions crucially and the cost remains high. Overall, there is a long way for the development of the renewable resources. Therefore, it is more important to reduce the amount of energy consumption particularly in Japan which is not a country abundant in energy (Agency for Natural Resources and Energy, Ministry of Economy, trade and industry. 2008).

There are many ways to analyse the change of the consumption of the energy consumption for further policy suggestion. The most usual one is to analyse the factors which lead to the change of the total amount of consumption. Due to the method of factor analysis, we can find out the importance of each factor and can give corresponding suggestions on improvement. For instance, we can calculate the

proportion of each factor introduces by the method of decomposition analysis (Ang,B.W.,Zhang,F.Q.,2000.). However, the problem is that the selection on the choosing of factors does not have certain criteria at all. It will lead to totally different result of analysing based on different selections of factors. Corresponding references are listed for the issue in detail. Please refer to references C.Bockstaller and P. Girardin, 2003; Peter Hardi and Juanita Ama DeSouza-Huletey, 2000; Todd Litman, 2011 and United States Environmental Protection Agency, 1996.

In this paper, we introduce indicator for the analysis of the energy consumption in transport sector rather than common factor analysis.

2. Indicator analysis for the issue of energy consumption

Indicator is defined as a substance used to show visually the condition of solution with respect to the presence of a particular material by the Webster's dictionary. In the field of abstraction, it would give out invisible implications with the function as a maker or sentinel, indicating the presence or absence, a measurement tool, indicating variations along important dimensions of phenomenon, a decision support tool allowing taking certain action, or the combination of the above.

As indicators have the function to indicate the phenomenon of transport production, on the issue of energy consumption, we should analysis it in order to grasp the nature of the change of energy consumption for policy suggestions. The rest of the issue relies on the selection from factors into indicators.

According to the reference the criteria of indicator selecting can be defined as follows as most researchers agreed. We also believe that the three categories with ten criteria are the most reasonable ones as follows at the moment.

Table 1. Selected list of criteria (Jourmard and Gudmundsson 2010)

Category	Criteria	Definition
Representation	Validity	Actually measure the issue or factor it is supposed to measure
	Reliability	Give the same value if its measurement were repeated in the same way at almost the

		same time
	Sensitivity	Be able to reveal important changes in the factor of interest
Operation	Measurability	Be straight forward and relatively inexpensive to measure
	Data availability	Based on input data that should be readily available or made available at reasonable cost and time
	Ethical concerns	Comply with fundamental human rights and require only data that are consistent with morals, beliefs or values of the population
Application	Transparency	Feasible to understand and possible to reproduce for intended users
	Interpretability	Allow an intuitive and unambiguous reading
	Target relevance	Measure performance with regard to articulated goals objectives, targets or thresholds
	Action ability	Measure factors that can be changed or influenced directly by management or policy action

In the literature, based on the ten criteria above, the factors which want to be indicator have to be evaluated one by one. The evaluation method used right now is to score the ten criteria from level 1~4, which shows that the indicator candidate satisfies the criterion poorly, limitedly, well and excellently. After that, the score is added together to show which ones are apparently better than others and choose the better ones as indicator.

However, the literature assumes that all the ten criteria are of the same importance as they share the same value, at the same time, the evaluation of each criteria are almost decided subjectively, and the variance of the scores cannot be controlled, too. In fact, these ten criteria may be not of the same importance; therefore, the result of the scoring would not be so precise for us to select. In order to solve this problem, we

introduce the fuzzy functions for the comprehensive evaluation of the candidate indicators.

First, we lay out the candidate indicators that may be the one affects the energy consumption of transport crucially according to Peter W.G Newman, Jeffery R. Kenworthy, 1989. Notice that some factors are applied on the macro analysis all over a region while some factors are only applied on cities. It is important to tell them apart on the choice of factors into candidate indicator.

- Passenger trips per person
- Energy use per passenger km
- Length of road per capita
- Vehicles per km of road
- Urban density
- Vehicle ownership
- Model split
- Road parking
- Income
- Employment density
- Average speed of transport system
- Gasoline price
- Vehicle fuel efficiency
- Population
- Gross domestic product
- Passenger trip per vehicle km of service
- Lifestyle and tradition/culture

From the example factors introduced above, we notice that the factors are not all in the same field as every analysis concerns; therefore, we would like to analyze the fitness of factors into indicators by criteria according to the problem we are facing rather than putting all the probable factors into consideration.

Now we introduce the fuzzy functions for the ranking of candidate indicators, generally speaking, fuzzy functions are meant to build a mathematics function to describe the membership of each candidate indicator for the criteria, yet there are several characteristics for each criterion .For instance, some criteria cannot be described into figures so we cannot calculate its membership for that criteria .In this

case, we use relative and are classified as follows (Here we assume I_{qc}^{t} is the evaluation of this candidate and x_{qc}^{t} is the value of the candidate):

1) Ranking the candidates:

$$I_{qc}^{t} = \mathrm{Rank}\left(x_{qc}^{t}\right)$$

2) Standardize the candidates:

$$I_{qc}^{t} = \frac{\left(x_{qc}^{t} - \overline{x_{qc}^{t}}\right)}{x_{qc}^{t}}$$

3) Categorical scales:

$$I_{qc}^{t} = \begin{cases} 0.25 \text{ if } I_{qc}^{t} < p_{0.25} \\ 0.5 \text{ if } p_{0.25} < I_{qc}^{t} < p_{0.5} \\ 0.75 \text{ if } p_{0.5} < I_{qc}^{t} < p_{0.75} \\ 1 \text{ if } I_{qc}^{t} > p_{0.75} \end{cases}$$

4) Distance to a reference:

$$I_{qc}^{t} = \frac{x_{qc}^{t}}{\overline{x_{qc}^{t}}} \text{ or } 1 - \frac{x_{qc}^{t}}{\overline{x_{qc}^{t}}}$$

5) Percentage of annual differences over consecutive years:

$$I_{qc}^{t} = \frac{x_{qc}^{t} - x_{qc}^{t-1}}{x_{qc}^{t}}$$

6) Some other shape of function f(x) links from 0 to 1:

$$I_{qc}^{t} = f\left(x_{qc}^{t}\right) = \begin{cases} \frac{x_{qc}^{t} - b}{a - b}, x_{qc}^{t} \le a \\ \frac{x_{qc}^{t} - c}{a - c}, x_{qc}^{t} > a \end{cases}$$

Based on these calculations, we can deduce the evaluation of each candidate easily and lead to further results. For example, in order to judge how an indicator candidate satisfies the criterion “data ability”, we can use the ratio that available data accounts for in the number all data required as the one for calculating and use criterion number

1 above to evaluate. The characteristic of the indicator candidate should be taken into consideration on which criterion is used yet the score should be standardized for equality on all candidates.

3. Applications and Conclusions

Based on the fuzzy functions introduced to the evaluation of the candidate indicator, more convincing evidences are shown for the insurance of the indicator selecting. As stated at the beginning, the method of decomposition analysis and the DEA method can be used convincingly to describe the phenomenon. As a result, reasonable result would be got for the policy implication. Here we show the application of indicator analysis on the method of DEA.

Data Envelopment Analysis (DEA for short) is considered to be a useful operational research tool and becoming more and more popular on the field of evaluation analysis. It comes out to be a linear programming methodology to measure the efficiency of multiple decision-making units when the production process presents a structure of multiple inputs and outputs. DEA method is first proposed by Charnes, Cooper & Rhodes at first and developed into some other models with the years went by and is basically used to empirically measure productive efficiency of decision making units. Now it is spread and used widely in many fields for efficiency evaluation. Therefore, it can be also adopted for the evaluation of the efficiency by environmentally sustainable transportation policies.

DEA method focuses on the evaluation given some input variables and output variables. There is no need to set weight on each variable initially which may be difficult to grasp, and only consider the mathematical relationships of the variables. It can be used for both production and cost data. Utilizing the selected variables such as unit cost and output, DEA method searches for the points with the lowest unit cost for any given output, connecting those points to form the efficiency frontier. It is also useful because it takes into consideration returns to scale in calculating efficiency, allowing for the concept of increasing or decreasing efficiency based on size and output levels. A drawback of this technique is that model specification and inclusion/exclusion of variables can affect the results.

In the literature by Yoshino D., Fujiwara in 2010, DEA method was used for the analysis on the environmental efficiency. Population density, road length per capita, private car ownership per capita and public transport serve length per capita are selected as input variables for analysis without further explanation for the reason. And the result will be totally different if other variables are selected. Although the choice in the paper sound reasonable in certain degree and the result is very useful and robust, had the method of indicator analysis been introduced in, the analysis result would be more convincing. We do not know those candidate indicators they initially intended to introduce so we cannot give the table for calculation, yet the method in this paper may be a good approval on the decision.

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An Advanced Systems Approach for Planning Practice in Complex Cities – Anticipating emergence through citizens' participation Explained on the example of Central European cities in transition

With increasing global interdependencies our cities become more and more complex, challenging planning methods and practice over and over again. Foreseen and unforeseen hazards of, e.g., climate change or global economic crises require to safe-proof our cities against uncertainties. Dynamic processes in cities worldwide, be it emerging cities in Asia or cities of Central Europe in transition, call for new, less rigid planning approaches.

Let's consider the example of the Central European second tier (i.e. non-capital) city in transition with its specific material and social structures developed through time. Growing from a medieval core the Central European second tier city went through a phase of rapid urban growth in the 19th and early 20th century. It has then been further influenced by national independence following World War I and substantial population shifts during and in the immediate aftermath of World War II. Finally, the communist regimes left their mark on the Central European second tier city which now has redeveloped it's urban functions during the past two post-communist decades.

These "inherited urban structures" (Turnok 1989, p. 151) from the medieval core to the communist blocks of flats influence today's social and, in turn, material form of the Central European second tier city through complex interdependencies. Having already gone through several steps of development, much more seems to lie ahead still – and uncertainty about what will emerge next is great. Since it is in transition still, the Central European second tier city is best characterized by processes instead of conditions. Some of these transition processes are framed by the inherited urban material and social structures. Others are triggered by national and supra-national processes or conditions. The intertwined transition processes are not easy to overlook.

Is the complex situation of the Central European second tier city reflected in current urban research and development approaches? In fact, it is not, since mainly isolated facets of urban development are considered today, often tackled by "best-practice" which is simply imported from elsewhere. What would be needed, instead, is a consideration of the interdependencies of intertwined processes and structures, both the inherited ones and the newly emerged ones. An approach to urban research and development must consider interlinked aspects, cross-disciplinary or cross-domain issues and it must make use of a framework to cover the actual urban processes and structures comprehensively.

A potential answer to this kind of challenges of urban systems under dynamic and uncertain conditions lies in the application of systems approaches. Such system approaches are of great help in planning practice, since they provide several methods for the understanding of urban complexity. Well known urban systems approaches have been introduced by Forrester (1969) and Vester (1988), where Vester's biocybernetic approach relates to and extends the system dynamics approach by Forrester.

The biocybernetic approach makes use of system diagrams in which (directed, weighted) relations between elements of the system under consideration are depicted. It reaches beyond pure system dynamics in so far, as it introduces eight biocybernetic principles and seven domains of natural and man-made viable systems to assure wholeness in systems models. Also, insights about system properties are gained by analyzing the sensitivity of system elements and by simulating scenarios in which the impact strengths of selected elements is altered.

The approach of Vester has been applied regularly in urban and regional planning. However, at least two reasons call for a revision of this seemingly established approach. First, when looking at recent-years' applications of the biocybernetic approach (see, e.g., Cole 2007), it becomes clear that Vester's original approach which intends to assure wholeness in the system analysis is not being followed any more. The eight biocybernetic principles and the seven domains of natural and man-made viable systems are regularly disregarded. Instead, recent applications only make use of the system diagram and tools for its analysis.

Second, Vester's (and Forrester's) urban systems approach is rooted in the research of the 1960s and 1970s, mainly highlighting feedback and relational characteristics, omitting more recent findings about urban systems, such as resilience and emergence (see, e.g., Deppisch and Schaerffer, 2010) as well as self-organization (see, e.g., Portugali 1997).

While resilience might be a secondary system effect, a result of feedback interaction within the urban system, and self-organization a result of random changes governed by the existing urban structures and processes, I suggest to consider emergence as a first system principle. Other first principles are the just mentioned random changes (also called mutations or fluctuations), the ability of a system to recreate itself, usually termed autopoiesis, and of course interaction of any kind. As outlined above, of these four system principles, the focus of systems approaches applied today is on the last one.

Subsequently, I will focus on the system principle of emergence.

1 Starting points of urban development matter

It is interesting to observe in literature about the Central European city how urban researchers and practitioners try to apply the same categories known from western cities to the Central European city. It appears to me that an almost marxist idea of a determined, inevitable transformation towards a capitalist urban society is guiding such thinking. That is why there is an almost desperate search for evidence of what are considered the downsides of a market economy, e.g., urban poor, spatial segregation, and bottom up driven urban revitalization ("gentrification"). For example, Kunzmann (2006) notes:

"In gentrified inner cities, attractive suburban communities and in leisure regions the nouveau-riche upper class is showing its wealth. In contrast, those who did not succeed in benefiting from the new market economy are forced to remain at the urban fringe of agglomerations, in the run-down pre-fabricated social housing schemes where Western supermarkets and fast food chains absorb their small incomes" (p. 21).

However, such a transformation of the Central European city towards a (anyway rather stereotype) western neo-liberal place is now highly disputed, because the unique starting points of market-development matter. Pichler-Milanovic (2005) observes:

"In the 1990s it was rather assumed that transition […] would project cities in Central and Eastern Europe rather uniformly along a linear trajectory, which would result in their convergence […] with those [cities] in Western Europe. Such thinking, however, was not only naïve in the light of subsequent reality, but was often based on a lack of understanding […]. [C]ities in Central and Eastern Europe are »path dependent« on their pre-socialist as well as their socialist-period legacies."

For example, let's have a look at the "run-down pre-fabricated social housing schemes" from the 1960s and 1970s. Such large scale housing was built both in former communist cities and Western cities. The learning from the Western societies is clear: The 1960's high rises of Chicago's Robert Taylor Homes and Cabrini-Green settlements had become social hot spots and were eventually torn down. The high rise neighborhood of Köln Chorweiler, finished in 1972, is notorious for its social problems, high unemployment rate and large share of migrants. And the *banlieues* (suburbs) of French cities are similarly infamous for their social problems. In the West, the large scale housing estates are associated with crime and people living from social transfers.

Quite in contrast, more than twenty years after the fall of communism, the *paneláky* (blocks of flats in colloquial Czech) "are, for the most part, still stable social areas" (Grossmann and Steinführer 2011, p. 24). The apartments in the communist blocks of flats are still "sold and bought at good prices on the free market. Their social mixtures determines these estates not to be regarded as derogatory in terms of social prestige, as they more typically are in Western Europe" (Vais 2009).[1] Instead, rather unexpected from gentrification experience in Western cities, it is the old towns, especially the apartment houses from the late 19th century, that in some cities have become the place to live for the uneducated, unemployed.[2]

Hence, the starting points matter. Do we known which other distinct structures – material and societal – will emerge from the Central European second tier city?

2.A Urban self-organization is, in principle, predictable

Much of the change that occurs now in the Central European second tier city has been or could have been foreseen. Common tools to derive development scenarios are system models based on Forester's or Vester's work (see above) and agent based models simulating the (spatial) interaction of agents given a set of human-like behavioral rules.

By modeling interaction based on a given set of entities and rules, agent based approaches are, e.g., suitable to model spatial arrangements of people, revitalization of the old towns, or the appearance of shopping malls. The outcome of those tools – as of any (mind) model – however, is limited to such states which are within the *a priori* known space of states. The "unknown unknowns" cannot be modeled, as explained in the subsequent quote (Black Swan Theory):

"More generally, decision theory, based on a fixed universe or a model of possible outcomes, ignores and minimizes the effect of events that are 'outside model'. For instance, a simple model of daily stock market returns may include extreme moves such as Black Monday (1987), but might not model the breakdown of markets following the September 11 attacks of 2001. A fixed model considers the 'known unknowns', but ignores the 'unknown unknowns'."

[1] The quoted author refers to the situation in Cluj and cites Murie et al. (2005).
[2] See, e.g., Kabisch and Sagan (2011, pp. 95-96), referring to Polish cities.

In other words, the results of our models are within the limits of what we can expect as effects of the parts that make up the model. If we have people who move between neighborhoods, who give birth and die, who start commercial activities and buy, then we can imagine (and simulate) various distributions of residential and commercial areas, and the evolution of these over time. This evolution can be based on initial and learned behavior of the people (agents in simulation jargon), and on random changes (fluctuations, mutations) of behavior. If we start with a spatial distribution of agents with some behavior, then the output will be a spatial distribution of agents with some behavior. The simulation tells us something within the known coordinates, in this case the spatial distribution after a certain time. From such simulations we can learn a lot about self-organization, but less so about emergence.

2.B Emergence of urban phenomena is unpredictable

Some of the recent developments in Central European second tier cities could not have been predicted. An example of such an emergent development is that of the Hungarian city of Pécs, which became a "City of Lovers" by the symbolism of its "Love Locks", as described by Hammond (2010):

"Thousands of metal padlocks have transformed this East-Central European city. […] Often inscribed with initials and dedications, the locks are rumored to represent young paramours' hopes far the longevity of their passions" (p. 181).

The city has integrated the Love Locks into its cultural and marketing image, and "travel websites […] describe Pecs as a 'City of Lovers'" (p. 181). Now that it has emerged, this phenomenon impacts on the image of the city, urban life, the touristic development and, through the latter, the wealth of the city and its citizens.

But who could have predicted this development which, before it happened, belonged into the realm of the "unknown unknowns, […] things we do not know we don't know" (Rumsfeld 2002), but which had a tremendous impact on the city? Who could have predicted that from somebody adding a first padlock onto a gate, a bottom up process would lead to the emergence of new cultural and image aspects of the city, of new possibilities of urban marketing, tourist attraction, history telling? "[T]he newly emergent entities […] introduce new possibilities" which were formerly unpredictable (Popper and Eccles 1977, p. 30). Or, in the words of Hammond (2010):

"What the locks do offer is a radical aesthetics of interruption, which, even in their recuperation, are an indelible trace of how cities emerge through oppositionality. …

they are the telling detail which has the potential to unravel the image as a whole" (p. 192).

As a more general example, the emergence of urbanity seems to me a good example to distinguish predictable self-organizing phenomena from unpredictable emergent ones. Who could have described urbanity before it appeared? Still today, we only try to understand that what makes a place urban. If the interaction of people and streets, places and public infrastructure etc. make a city, what else is it that makes the city urban? How did the Central European cities manage to become urban again after communism, when urban centers had become «void», deprived of urbanites (Schlögel 1996, p. 229)?[3]

Real emergence, not just self-organization, is that which transcends the *a priori* known space of states of its elements. Emergence leads to "real novelty … much that was not foreseeable, at least not for human knowledge." As Jaques Monod put it for the emergence of life: " … we were unpredictable before we appeared" (Popper and Eccles 1977, p. 16). Emergence happens, when we require new words to describe the new phenomenon.

Likewise, urbanity is something more than the sum of its parts, i.e. more than a number of people in a built up environment. It is not simply an unknown state of known phenomena (e.g., people, behavior, spatial arrangements). It is a new phenomenon which emerges from the elements we deal with. It's not only unknown to us in what way the elements are going to arrange in dimensions we know, it is the occurrence of something which we wouldn't naturally expect from looking at the elements alone. No computer simulation can tell us when urbanity emerges from the interaction of people in space. Neither can we determine which quality in which quantity leads to an emerging phenomenon. We are also unable to rebuild the emergent phenomenon elsewhere.

3 Planning emergence in the urban context?

Now that we have had a look at emergence in the urban context it should have become clear that emergence of urban phenomena cannot be predicted, nor can the factors which are eventually leading to the emergence of a phenomenon be determined. Or, if they could be separated in one case, the insight would be of no great use since any other case would be much different anyway (different place, different time).

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[3] Original reads: "Die »Leere« der städtischen Zentren … spricht vom Verschwinden der städtischen Urbevölkerung … des Stadtbürgers."

However, urban planners would sometimes like to trigger desired emergent phenomena in cities. For example, town planners often hope that by physically structuring a neighborhood, a certain type of society will emerge. But while we can copy the physical elements of a successful urban area somewhere (and, to a certain extend, also try to get the "right" people in, e.g., the now fashionable "creative class"), we can only hope that the implementation of these structures (the elements) will lead to the emergence of a vivid, urban, thriving, etc. neighborhood (the whole) elsewhere.

Planning is an essentially top down process – it sets the frame for development (this is true even if during the planning process people were engaged bottom up). In contrast, emergence is both a top down *and* bottom up phenomenon: While natural and man made systems may frame developments of the entities within, those entities (in cities usually the people) may trigger their own new phenomena, e.g., the Pecs' Love Locks. Or, while planners might plan new towns (like the above mentioned Köln Chorweiler) according to their best practice, they cannot plan social and cultural behavior (emergent or self-organized) which might thwart the original good intentions. Planning is often carried out involving or avoiding factors of which we don't know the emergent effects. Does urbanity really die from increasing social segregation? Will urbanity survive much more greenery in the center?

4 Planning under uncertainty

The planning situation is, however, not entirely hopeless. But we need to learn much more about the peculiarities of the cities we are developing. And we need to enlarge our tool base.

Which fate would our experience and our models have predicted for the Eastern European kiosks twenty years ago? It doesn't seem unreasonable to assume that from our predictions they would have vanished by now, or at least been marginalized by large supermarkets. This fate has not come true. Instead, the kiosks can still be found in many cities across Eastern Europe today.

Although the kiosk example is one of self-organization and not of emergence (the survival of the kiosk was a predictable scenario within the known space of states), it shows how much we need to understand about the cities and how limited the transferability of knowledge, let alone "best practice", from elsewhere is.

Looking at emergent phenomena, the uncertainty of planning gets even worse. As described above, we are stuck with the coordinates we know, our models cannot transcend the dimensions for which they are set up. Yet the key question for urban development under uncertainty remains: what's going to emerge next? What is going to have tremendous impact, although from where we are now, with the knowledge that we currently hold, we cannot simulate, foresee, predict it?

Which new structures – material and societal – may emerge in the Central European second tier city under its specific conditions of deregulation, limited public financial resources, and fast growing economies? The Central European city has shown its ability to adapt rather well to changing conditions although municipal governance was usually weak. Schlögel (1996, p. 232) even argues that the Central European city "doesn't need top down organization any longer, it organizes itself."[4]

Who could have told about a re-emerging coffee shop culture in Central Europe? This hasn't happened because it was planned, and it wasn't anticipated either. In addition, the new coffee shop culture is not uniform across all Central European cities. While Budapest and L'viv – to pick just two examples – have experienced a revival of their historic coffee shops (it might, hence, be arguable whether one could talk about an emergent phenomenon), in other cities a clearly distinct coffee shop scene has emerged. For example, in Poznan, small and uniquely furnished coffee shops of a style unknown before mushroom around old town square, and also in Košice some alike coffee shops can be found.

Hence: How can we handle emergent behavior in the city?

I would like to suggest one possibility to widen the scope: involve citizens. How do people see the future developing around them? We might get ideas about what may be the next big thing. People are early "seismic" indicators for emerging phenomena – they won't predict, but they can provide a feeling for what has most recently emerged and might subsequently grow. To a certain extend, they might even anticipate what may come, i.e. they generate emergent thoughts. In a sense, this approach is a simulation of emergence in an interactive setting.

It is important to note that the suggested approach is different from participatory approaches applied today. In the participatory approaches common today, people are basically asked for their wishes. In the approach suggested above, asking people is to get knowledge about how the city works, about latest developments, and even about things that emerge (in people's minds).

5 Conclusion

What should have become clear by now is that every city has grown unique, producing its own emergent phenomena. Some cities, like those cities in transition in

[4] Original reads: "[Die Stadt] bedarf der Organisation von Oben nichtmehr, sondern organisiert sich selbst."

Central Europe, are especially prone to surprise, since their very situation of being in transition means that their structures – physical and societal – are not stable, but changing. They might more likely produce new phenomena than other, more stable cities. From emergent phenomena, opportunities may arise, like the "City of Lovers" image of Pécs. For such opportunities we need to embrace emergence, although we can hardly get a grip on it. Also, improved understanding of the cities is a precondition to informed decision making.

With cities being unique, and self-organization and emergent phenomena being produced by unique cities, it becomes clear that a simple "copy and paste" of "best practice" from elsewhere will hardly produce best results.

Have you ever heard about the Košice IT valley? Or other clones of the Silicon Valley, the thriving region south of San Francisco? People around the world are trying hard, for decades, to figure out the success factors of the Silicon Valley. They try to copy this success and bring it into their own countries and regions, around their own cities. How many copies of the silicon valley can you count around the world? And which of these, often funded with a lot of public money, is coming close to the original one? Who can tell the success factors? Today, dozens of Silicon Valley copies around the world simply won't thrive as the original place does.

Where local, bottom up forces of self-organization and emergence are at work, the conditions change fast and are never the same for any two cities. The setting in time and space is always different. A "best practice" from somewhere, yesterday, is unlikely to be adapted in the very same way elsewhere, today.

Instead of copying what worked somewhere else (for often unclear reasons), we should allow ourselves to be surprised by emergent, bottom-up phenomena. We may try out different things in the city, set impulses and test their effect, and we might not want to suffocate bottom-up organization and emergence through too strict top-down conditions (regulations, subsidies, levies etc.). The concept of emergence in urban systems is important, because it opens our eyes for the yet unknown and lets us refrain from simply copying best practice. It also leads us to embrace uniqueness. In emergent phenomena lies the source of cities' *unique* potentials – much more than in copying what has been done elsewhere before.

We need to observe: What will emerge from the many subsystems in transition in Central European cities? And in order to anticipate emerging phenomena, we need to involve citizens as outlined above.

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PLANNING AND DESIGN CRITERIA TO MAKE URBAN TRANSPORT MORE SUSTAINABLE: THE CASE OF BAKU

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ABSTRACT

Since the industrial revolution, technological developments and increased population have caused environmental damages. To protect the nature and architectural environment, firstly, green architecture, ecological architecture and then sustainability occurred. This term has been proposed not to be a new term but a response to environmental disturbances caused by human activities and it is re-conceptualization of architecture. Sustainable architecture or sustainability is lot more extensive than ecological and green architecture. It contains the imbalance between environmental problems which is natural environment and consumption that occurred all around the world.

An important part of sustainability debate focused on urban planning and design for more sustainable forms and patterns. In particular it is discussed that planning and design of urban areas have a major effect on transport and therefore can help reduce car usage, emissions, global warming and climate change. There are many planning and design approaches and movement that introduce certain criteria and strategies to prevent car dependency and encourage people to use public transportation and walking. However, when review the literature, it is seen that planning movements, such as New Urbanism and Transit Oriented Development originated and were implemented mostly in West European and North American Cities. The purpose of this study is to find out whether all those criteria, principles and strategies are also relevant planning approaches for more non-western cities like Baku which has a very different planning background and therefore possibly different urban form and transport issues. In order to answer the abovementioned question, planning and design approaches in the literature and in these recent planning movements were studied and a check list was formed which indicate planning and design approaches that can help attain a more sustainable transport outcome. The checklist was then applied to the case of Baku.

1. INTRODUCTION

There is a vast literature about sustainability, sustainable development and sustainable transportation. All those issues have an impact on urban form and design. There are several planning and neighborhood design movements today that have their own strategies and principles which have common ideas to create more sustainable urban areas, particularly to create sustainable urban transport system that is not car-dependent. The other common feature of those movements is that they all studied and were developed based on the West European and North American cities. This situation brings the question of whether all those principles are universal or not. In other words it should be clarified whether these approaches and principles can also

be valid planning tools for cities in "non-western" countries, such as those in developing country cities in Asia. In order to attain the main aim and to answer the main research questions some objectives and further research questions were identified. For this purpose, Baku was selected as a case study because it has a different planning background because of its Soviet history, which is much different than Europe and North America. Baku urban planning has never been analyzed after the independency of the Azerbaijan although it has a very consuming planning history at the beginning of the 19th century. In fact Baku did not produce a Master Plan after the 1987 plan. This brings the question of whether they continue to apply the principles of the old urban plan strategies, whether this old planning strategy include the sustainable urban design principles or not. The research question specific to Baku is whether planning and design principles for creating more sustainable transport outcomes can be a valid and useful guideline for planning in Baku or whether the specific planning background and resulting urban and transport structure in Baku make these design guidelines inapplicable or unnecessary in this city's context. These two basic questions make Baku an appropriate case study for this thesis in the concept of sustainable urban development principles.

2. LITERATURE REVIEW

2.1. URBAN DESIGN AND SUSTAINABILITY

Sustainability simply means in the global context the development that should improve economically and socially without harming environment. It is related with many disciplines and professions which has therefore developed many complexities (Newman & Kenworthy, 1999, p. 1).

'***Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs***' (Brundtland Report, 1987)

When we ask under the heading 'what is to be sustained' there are three major categories identified; nature, life support systems and community which has the intermediate categories of each such as earth, environment and cultures. The question of 'what should be developed' has again three ideas which are; people, economy and society (Robert, Parris, & Leiserowitz, 2005, pp. 8-21). All those instructions conclude of the same three pillars of the Sustainable Development which are economically, socially and environmentally sustainable developments, Figure 1.

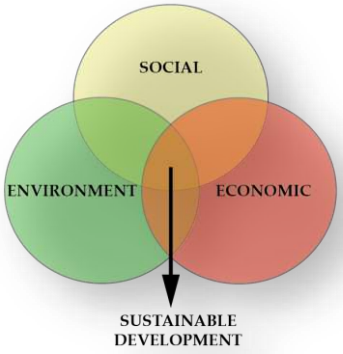


Figure 1: Three Pillars of Sustainability

Automobile usage increased over the 20th century parallel to the growth of income per capita. Both the increase in automobile usage and the division of land use functions caused the low density and fragmented land use development. As a result, a problem occurred as a planning issue known as urban sprawl. Today urban sprawl is a major source of environmental degradation. To solve the problem, many planning concepts have been introduced such as smart growth, transit oriented development and the most popular new urbanism.

When all these concepts are analyzed basic sustainable urban area planning and design principles can be summarized under four main areas which are, Land Use Management, Transportation, Social Interaction and Environment, Figure 2.

Figure 2:Sustainable Urban Area Principles Relation with Four Pillars

Sustainability is a concept that was discussed after the world war to create livable urban areas. All those discussed urban principles and trends designed to reduce the distances within and between communities. Walking and cycling can be viable options only in reduced distances, while urban sprawl with increased distances results in car-dependent lifestyles. Therefore the purpose is to reduce the travel distances between the daily facilities while saving time, design more green and walkable spaces and present quality of life by reducing traffic and accordingly reduce stress. Besides, to complete the sustainable urban idea, designing sustainable building is also thought. All written and discussed literature about the sustainable urban or city has a common approach which is Land Use Management. Land Use Management became important to succeed social, economical and environmental actions such as closer activities, more accessible centers, time saving from travelling, mixed-use neighborhoods, walkable communities. However; to achieve successful

Land Use Management there should be successful transportation system. If an efficient transportation system is not designed, land use management will not properly work. As a result, to achieve a sustainable urban area we should make the transportation infrastructure more sustainable too.

2.2. SUSTAINABLE TRANSPORTATION

Sustainable transportation is the expression of the Sustainable Development concept within the transport sector and it refers to any kind of low impact transport which includes walking, cycling, transit oriented development, green transportation and fuel-efficient transport systems. Sustainable transportation has positive effects on the environmental, social and economical sustainability of the communities they serve. (Schafer, 1998).

Transport is one of the major global consumers of energy, currently representing between 20% and 25% of aggregate energy consumption and CO2 emissions (World Energy Council, 2007). According to the IPCC Fourth Assessment Report (Transport and Its Infrastructure), in 2004, transport was responsible for 23% of world energy-related Greenhouse Gas (GHG) emissions with three quarters coming from road vehicles. Over the past decade, transport's GHG emissions have increased at a faster rate than any other energy using sector.

The social and environmental costs of transport include road accidents, air pollution, physical inactivity, lack of livability of areas. Traffic congestion also causes economic costs by wasting people's time and delivery options of goods and services. The real purpose of transport planning should be accessibility, access to work, education, goods and services etc., instead of improving mobility for vehicles. Communities which are successful in improving the sustainability of their transport network can achieve sustainable urban development (Litman, 2011).

There is a vast literature on the use of urban planning and design tools to make transport systems more sustainable. How we plan the macro form of cities, how we plan different lad-uses and densities, how we design neighborhoods have an effect on travel behavior. A set of planning and design criteria can change people's decisions on whether to make a journey by car, public transport, bicycle or walking.

For the strategies of New Urbanism, Smart Growth and Transit Oriented Development to be successfully implemented, the transport infrastructure must support sustainable transportation. When we focus on the question of "how can a sustainable transportation network be created?" it is seen that strategies fall under four categories:

- Improving and investing in public transport
- Improving and encouraging walking and cycling
- Restraining private automobile
- Supporting clean energy in public and private vehicles

All those principles related to the strategies and policies of sustainable transport, but to encourage more usage of public transport, walking and cycling needs more than that. None of these policies can be effective if an urban area has developed extremely car-oriented with low density and sprawl because public transport usage, walking

and cycling cannot be effective alternatives in long distances. This brings us back to the policies and strategies of sustainable urban design which help to create public transport friendly and walkable cities that are not automobile-dependent.

To summarize, policies for sustainable transport can be categorized under four headings as mentioned above. One of the most important aspects is to implement urban planning and design approaches to encourage more usage of public transport, walking and cycling. Hence; transport policies can make the transport infrastructure more effective, but transport policies alone cannot change travel behavior and create more sustainable travel patterns. For sustainable transport, land-use and urban design have to support public transport and walking and cycling. Transportation policies can work effectively only after such a management of the land use. Considering the review of the literature described throughout this chapter, it can be concluded that for achieving sustainable transportation, creating a sustainable urban form and therefore planning and neighborhood design are extremely important. This means that for sustainable urban areas, the operations must be performed in three scales of planning and urban design that can be classified as Macro, Mezzo and Micro scales (Table 1)

Table 1:Design Approaches for Sustainable Urban Form

SUSTAINABLE URBAN DESIGN INDICATOR		
MACRO SCALE	**MEZZO SCALE**	**MICRO SCALE**
▪ Compactness; Mixed-land-use, high density and Non-sprawl ▪ Existence of sub-centers ▪ Public transport infrastructure	▪ Mixed-land-use ▪ Grid system plan ▪ Well served public transportation ▪ Pedestrian friendly –walkable development	▪ Intensity of street network ▪ Mixed-use ▪ Well served with public transport ▪ Grid system plan ▪ Pedestrian friendly and walkable street sections ▪ A hierarchy of narrow streets, boulevards and alleys ▪ Interface with Parking ▪ Neighborhoods accessible on foot ▪ Car-free public areas

These principles are derived and originate from studies and planning experiences from the West European and North American cities, and this situation brings the question of whether all these principles are universal or not. A primary concern of this study is therefore to explore whether the abovementioned planning and design principles for creating more sustainable transport outcomes can be a valid and useful guideline for planning in developing country cities too. Such cities often have already high development densities but also they face with sprawl problems and increasing car-dependency. However with their much different planning backgrounds and different urban structures can these cities in developing countries also benefit from these design principles?

3. METHODOLOGY

3.1. AIM AND OBJECTIVES

With respect to the main focus are of the thesis, which is the sustainable development, there occurred three main questions which are tried to be answered:

- What are the key elements to make an urban area sustainable?
- What are the planning and design principles to make urban transportation more sustainable?
- Can those principles be a framework for all the countries in the world (or can those principles be considered as universal)?

One particular point of discussion was raised: all these sustainable urban design and sustainable transportation principles originated from experiences in the American and European countries.

The underlying objective is to examine whether the above framework of criteria is applicable to a city like Baku, which has a different planning history and background compared to North America and west European cities.

An expected outcome of this analysis is whether this framework of criteria can be a mainstream checklist or guideline or whether there are certain cities, due to their own context, history and background, where these guidelines become inapplicable.

Depending on these arguments main tasks of the study are listed below;

- Application/assessment of the above criteria for the case of Baku to examine whether such plan and design approaches are relevant to this City
- Through interviews with experts from Baku planning agencies, assessment of planning and transport problems and potentials in Baku
- Assessment of issues specific to the Baku context with a view to explore whether they can be addressed by the above mainstream criteria or approaches

3.2. CASE STUDY SELECTION

Baku was selected as the main case study. It is important to examine whether the planning and design strategies and guidelines for making urban transport more sustainable are relevant and applicable for cities with an entirely different context and planning background. Baku is a city that has a different planning and development background because of its history.

Azerbaijan, strategically located between Europe and Asia, has significant natural resources particularly oil and gas. The oil and gas sector has been consistently leading all other economic sectors. The non-oil sector -led by construction, services and agriculture - has also been growing but at lower pace. Today, the expanding range of economic activity and increasing cultural strength is increasing the region's popularity. Baku Metropolitan Region (BMR) is confronted with a number of challenges in order to maintain its livability.

There is a high employment rate. BMR is an internationally connected region, integrated with global markets and equipped with a world-class infrastructure in all

sectors. BMR is a leading centre of education and training in transport, a centre of excellence, within the region. Environmental awareness, health and safety, are high among residents, public authorities and the private sector (Strategic Transportation Plan, 2010);

Baku was the ancient city of the Soviet Union and has a variable history. Azerbaijan that lived under four states;

- 1918 Tsarist Russia
- 1918-1920 Republic of Azerbaijan (Mehmet Emin Resulzade)
- 1920-1991 The Union of Soviet Socialist Republics
- 1991 Republic of Azerbaijan (Heyder Aliyev)

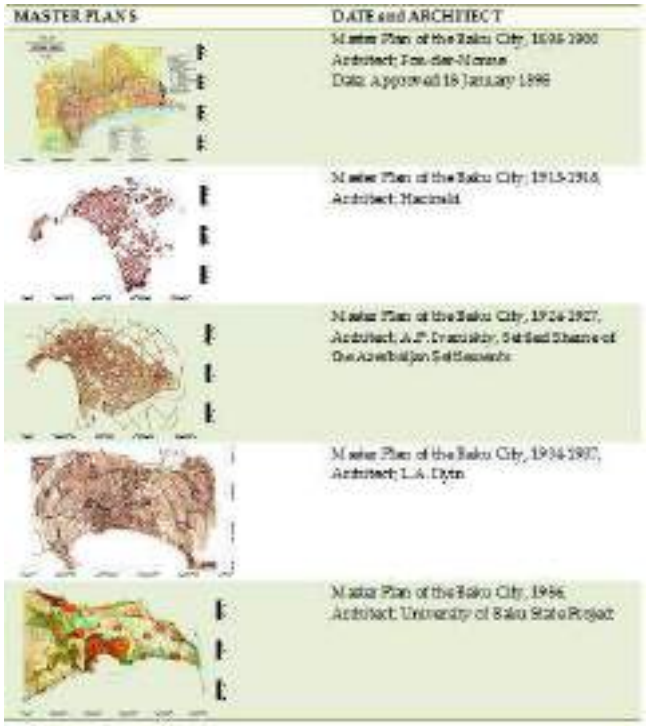
As a result it has a different urban planning history. The main Master Plan of the Baku is taking a shape according to the plan that was approved in 1987. Up to 1987 plan Baku had 5 different Master Plans,Table 2;

- A. İvaniski 1927
- V. Semyenov 1932
- L. İlyin 1937
- Bakqipogor 1954
- Bakqipogor 1986

3.3. METHOD FOR DATA COLLECTION

In this study, the data for Baku Urban Planning was considered a primary source. To access these data and documents, interviews were conducted with the Professors in Baku Architecture and Construction University, Department of City and Regional Planning and Department of Architecture and also Architects and Urban Planners in The State Committee on Urban Planning and Architecture and also the experts in The State Statistical Committee. Aim of these interviews was to get the correct information about the Baku Urban Planning Strategies with the experts and the academicians. Besides, individual analyses were also made by field trips around the selected there main study areas in the city, and sketches and photographs were taken.

Table 2:Master Plan Development of Baku



4. HISTORY OF BAKU URBAN PLANNING

4.1. BAKU URBAN PLANNING BETWEEN 19TH AND THE BEGINNING OF 20TH CENTURIES

Baku was the ancient city of the Soviet Union. Baku the capital city of the Azerbaijan settled on the west coast of the Caspian Sea. The specialty of the Baku was its thin and long streets within the wall of the Castle. Baku was the biggest industry and economy center of the Caucasian with its architecture and city planning. After discovery of the oil deposits in Absheron, Baku became the most important center for the Russian Empire during the second period of the 19th century. Lots of foreigners came for that oil deposits. Area of the Baku started to grow with the developments of industry and economy. With respect to those improvements; monuments, boulevards, and squares began to be built (Fatullayev, 1986).

When Baku entered under the protection of the Tsarist Russia, the city came out of the Castle walls/borders in 1806. It was geographically important because of the sea port that it had the trade route passing through Baku between Russia and Iran. After 1840, the highway developed and connected with all roads of Absheron Peninsula. Intersection of those roads created a square and around that square there were caravanserais and one-two storey houses which created a trade street under them. With those developments, traders and artisans began to arrive to the city and population grew. Growth process of Baku started therefore in 1806 when the city entered under the protection of Russian Empire and continued till 1914 and it was actualized in 4 phases. The first phase was in 1843, the second was between the years of 1843-1878, the third growth phase was from 1878 to 1900 and the last one was in

between 1900 and 1914 (Fatullayev, 1986). The sea side in front of the castle was used as a warehouse for the port. Sea shore/port became used as a trade center. It was growing through the east and pedestrians were not allowed to enter the sea shore. Although the plan drawn in 1854 was designed in rectangular/grid form, with the beginning of the use of sea shore, plan was designed according to the coast line (Fatullayev, 1986).

Population was increasing while the city was growing and port was getting more important because it allowed the transition between Iran and Russia. After that government took the control of the unbounded ports and in 1858, harbor/port city was designed in Bayıl District. According to the plan, there were shops, stores and lodgings. The area was 4 km2 and the plan was designed in a grid form and all the streets were open to the sea side. (Fatullayev, 1986). The biggest development of Baku was the openings of the oil factories. At the beginning oil factories and deposits were built unplanned. After 1870, because of the air pollution, government decided to collect them in one place. As a result, Qara Şehir/Black City was constructed. In 1876, no one could build an oil factory anywhere else except Qara Şehir/Black City. Like Bayıl, stores, shops and residential buildings were again designed in a grid plan (Fatullayev, 1986). In 1878 a new plan started to be developed. The new plan consisted of 3 parts which were Bayıl the port/harbor town, city itself meaning the castle and the area around it, and the Black City, the oil town. Although the area of Bayıl and the area of the Black City were located in a contrary side of each other, there were highways planned for the connection/transition. The 300 m swamp area in the sea side was designed as a promenade. In 1880 the first railway station was designed and constructed. It was located on the intersection point of the all roads of Absheron and also it connected with the three main areas of the Baku which were Bayıl, City Center and Black City (Figure 3) (Fatullayev, 1986) .

Figure 3:General Plan of Bayıl, City Center and Black City, 1878 (Fatullayev, 1986)

New towns were designed wider because the city was getting crowded and again the grid plan was used for their design (Figure 4). The main consideration was the wind of the Baku while planning those areas. As a result, all the buildings were located

facing the south. During the time period, when those towns started to connect with cities, street design and relationship between residential areas and railway system became an important issue. The main important issue considered was the topographic contours while planning. City center became the center of shops, stores, hotels, clubs, education and palaces of both foreign and local people (Fatullayev, 1986).

Figure 4:Expansion Plan of Baku (Fatullayev, 1986)

In 1908 Hacinski with his new plan development opened a water channel 190km far from Baku and this effected the industrial and economical developments of the city. Moreover drainage and green area developments of the city also changed. With this plan, a tram project began to be constructed and 270 ha new development areas were planned. Grid plan form was used from north to south and he developed narrow and uneven streets and inadequate green areas.

Figure 5:Baku Plan, 1918 (Fatullayev, 1986)

City assimilated its developments from 1806 to 1918. All political and economical situations affected those developments in each time. As a result there were ups and downs during the improvements. After all those developments and expansions Baku became one of the most important cities of the Russian and Caucasians while it was a

significant city for only Caucasians during the first half of the 19th century (Fatullayev, 1986).

4.2. BAKU URBAN PLANNING THROUGH THE SOVIET AZERBAIJAN

In the Soviet Period planners enhanced the grid system of current master plan and achieve the 1924 Master Plan by infill development of the non-designed plots as showed Figure 6.

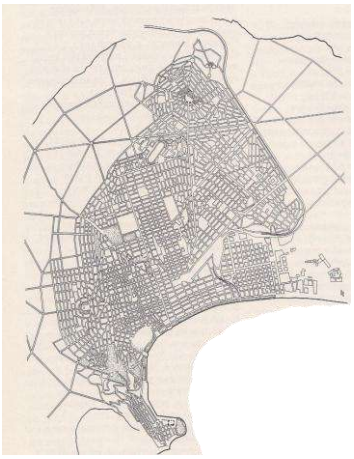


Figure 6:Baku Planning Design, 1924 (Efendizade, 1986)

According to that plan, architects developed the city borders to the natural borders of the amphitheater, in other words main Baku borders. This plan was 13 300 hectares and consisted of the sea in the south, 'Yasamal' hill in the west, great 'Shor Lake' and 'Oil' area in the east. It mainly had two areas, center and the industrial area which had its own residential districts/quarters. This land use plan was protected in the other Master Plans. Besides those land use planning, there also designed highways that appropriate to the lands infrastructure to make a connection between the other regions and industrial area. Planner also gave importance to grow green areas, by designing parks and leisure spaces. As a result boulevard which is 3 km length and 68 m wide was designed as a leisure and commercial area in 1967 (Efendizade, 1986). In the current situation, 2011 Boulevard is still 3 km length but it is approximately 170 m wide and it is the most important leisure place of Baku.

Figure 7:Plan in 1909 and View of the Promenade/Sea Side in 1910 (Fatullayev, 1986)

Planners started to use the current plan and developed the areas which are not designed of that plan schema. There were designed neighborhoods, streets and architectural buildings. The main idea of the planning system, as seen in the Figure 8, is to create streets and clusters which have courtyard in between.

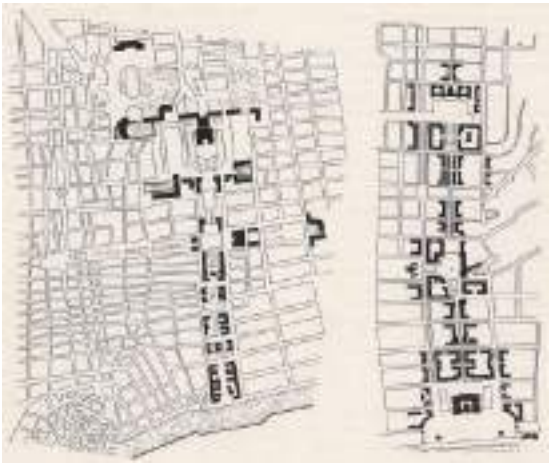


Figure 8:Baku Downtown Layout, 1932 and Baku System of City Centers, 1937 (Efendizade, 1986)

In 1950s architect M. Huseyinov made the revision plan as shown in the Figure 9. He planned the different functional building like as, administrative buildings, social buildings, cultural buildings as theaters and residential buildings along the main streets. This attitude made the Baku center multi-functional use.

Figure 9:Baku Layout of Main Ensembles (Efendizade, 1986)

Planning system of Baku will continue to with those aspects which gave the importance to the multi-functional use of the land, highways and main street layouts to make a connection between regions within and outside of the city.

5. ANALYISIS OF BAKU IN TERMS OF SUSTAINABLE DESIGN AND TRANSPORT

In this chapter of the study, the selected case area, Baku, is analyzed with regards to the approaches of sustainable planning, design, and transport that were discussed in the literature above. In particular, the relevance of approaches, such as new urbanism, smart growth, etc., is to be questioned in the context of Baku. The case area is studied in three scales of urban design which are macro, mezzo and micro scales. For the macro and mezzo scale analysis interviews were conducted with the urban planners, urban professors and architects to understand the design idea of the Baku urban planning. Experts from City Statistical Committee helped for the some statistical data's and also map analysis are done. For micro scale analysis three selected routes were analyzed by walking trips with drawing sketches and taking photographs. The main idea is to understand how Baku performs in terms of the criteria of creating a sustainable urban form and pattern; whether Baku has a problem in terms of unsustainable forms, design and transport; whether it can benefit from the approaches such as new urbanism, or whether such approaches are irrelevant in the case of Baku. In order to make a conclusion, all three scales were studied according to the principles which had been studied in the literature.

Baku, being 2130km2, has started from the intersection of the three main highway of Azerbaijan; Sumgait Highway, Shamakhi Highway and the Silk Road.

Figure 10:General Map of Baku Relation with the Main Road System of the Azerbaijan

Baku has 11 administrative regions. The population of Baku is said to be 2 246 000 with refugees but the experts said that the actual population is approximately 4 million. Baku consists of three main zones. The first one is Absheron district which called Great Baku, the second one is Baku administrative which occurred with industrial, residential and administrative areas and the last zone is the Private Baku which was designed as a residential area but currently has a huge mixed-use development. In this thesis these three zones were used as a reference for the three main scales of analysis.

Figure 11:Three Zone of the Baku Region

5.1. MACRO SCALE ANALYSIS

In this part of the analysis Great Baku was examined to find out the compactness of the city. The analysis of macro-scale criteria regarding sustainable form and transport reveals a mixed performance for Baku. According to Macro Scale Planning Policies planning for sustainable city and sustainable transport outcomes requires three main approaches (criteria): Compactness and prevention of urban sprawl; existence of sub-centers that can provide a mix of different land-uses and hence reduce the need to travel or reduce the distances to be travelled; and an extensive public transportation system.

- In terms of compactness, there is a mixed performance: the city used to be compact with a high density; however, it is experiencing sprawl now and compactness cannot be preserved as well as before.
- Sub-centers can help creating a mix of different land-uses and this issue is recognized as an important strategy in the plan document as cited above. On

the other hand, these are not implemented yet; and the existing city center of Baku is still extremely strong where most residents travel to work.

- The city performs well in terms of public transport infrastructure. It has a good metro system and extensive bus services and they are studying to develop the transportation infrastructure to make it more sustainable.

It can be said that all these macro scale policies are important and relevant issues that should be considered in the planning of Baku. Apart from the transport infrastructure, the city does not perform that well in terms of the two issues regarding compactness and sub-centers.

5.2. MEZZO SCALE ANALYSIS

Figure 12:Amphitheater Plan Scheme of the Baku, 1927

Baku is evaluated against the mezzo scale criteria and policies as shown in Table 1. Accessibility is high due to the extensive metro and bus network. The grid plan system also increases pedestrian accessibility. Mixed use development is encouraged and grid system is a positive feature of the Baku development pattern since it supports walkability. In terms well served public transportation, as there are at least two modes of transport stations around the neighborhoods or activity areas, there is an effective public transportation system. All those modes are close enough to walking, for example there are bus stations in each 350 m, and all designed pavements provide the needs of pedestrians by being at least 5 meter wide and divided with the green borders from the roads (as described below in the Micro Scale Analysis). Therefore it performs well enough in the aspect of the pedestrian friendly and walkable development.

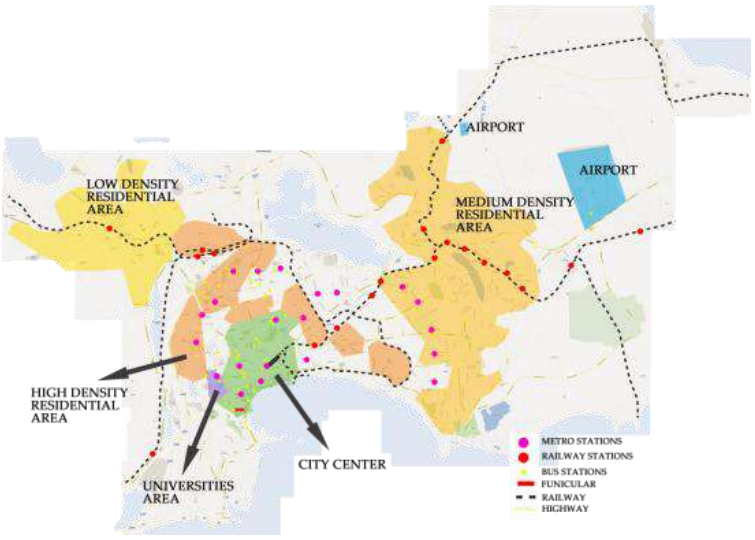


Figure 13:Accessibility of Transportation Modes of Baku

5.3. MICRO SCALE ANALYSIS

In this part of the analysis Baku Center is examined. Private Baku or Baku Center is the oldest development area of Baku.

For a more comprehensive study, three routes were selected for an in-depth analysis as shown in Figure 14. The first route is a trip going through the old residential area, Yeni Yasamal. The second route starts from a new residential area towards the city center and the last route starts from the main railway station and ends in the city center. Areas were analyzed according to the sustainable urban design indicators that were studied before. The study tries to answer the following questions: how is the intensity of the street network; is there an approach on mixed-use area development; is the area well served by public transportation; is there any awareness regarding pedestrian friendly design; how is the interface with car parking handled; is there a grid system plan to enhance connectivity for pedestrians; are there any car-free pedestrian areas and is the majority of the city walkable?

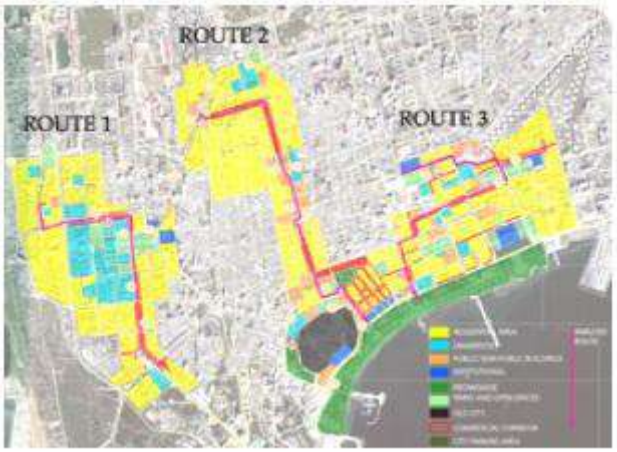


Figure 14:Three Route for Analysis

5.4. MAIN FINDINGS FOR THE CASE STUDY OF BAKU

The findings of sustainability analysis of Baku showed that Baku has retained its original development pattern which was based on grid and provided walkability as well as good public transport accessibility to a certain extent. The main findings are as follows:

- Baku has a **mixed-use development**. In earlier plans the city had a distinct zoning of residential areas and industry. However; there have always been local services and amenities within the residential developments. In addition, there has always been residential areas within the city center and administrative core area. Even within the castle there are both commercial and residential uses. After city began to grow it continued to consist of industrial areas, educational areas, business areas and institutional areas, recreation areas in close proximity to each other and in a mixed-use pattern.
- Baku traditionally had very **high density development** and this can be seen in both the city center (82,6 person/ha) and the housing areas (Yasamal District 115,7 person/ha). On the other hand, both experts interviewed and the Strategic Transportation Plan indicates that the currents trend is for low density housing and that low density development at the outskirts of the city is a major problem. Therefore; in terms of the density analysis, it can be said while Baku has a fairly high density built-up area in its inner city sections, the new developments at the fringes suffer significantly from low density growth. Nevertheless; the overall average density of 82,6 person/ha for the whole metropolitan regions is still higher than the 35 to 40 person/ha threshold suggested by Newman and Kenworthy (2006) and Banister (2008) as described earlier in the literature review section.
- Baku has an **effective public transportation system**:
    - It has had an electrified railway system since the 1960s (it is used as railway today) and it has been operating an underground subway (metro) since 1967. The metro system, which has 23 stations and 34.6 km length, efficiently serves the Baku administrative. Today, the government developed a new strategy for Great Baku by planning another 45 stations.
    - It has also an effective and extensive bus system as there are stops in every 350m approximately.
- In planning of the Baku street layout there is a concern for the **pedestrian friendly design:**
    - All pavements are wide enough for walking and separated with green border from the vehicle road.
    - There are commercial and leisure activities along the streets which encourages the walking.
    - Even though there are huge boulevards formed by the intersections of the main axes of the transport infrastructure, huge public spaces as cultural activities and parks and underground passages reduce the negative effect of those boulevards.

- Baku has had the **grid plan** system which is often described as one of the most important approaches for the sustainable urban design form. The city has had this approach since the 1898 Master Plan and protected its grid plan approach while enhancing the plan.
- All neighborhoods and special development areas like educational areas have at least two kinds of **transportation modes** like bus stops and underground subway station **close enough to walk**.
- City center layout is designed well enough to walk. Indeed three routes for the case study which are 2km long were analyzed by easily walking.
- There are huge pedestrian areas like boulevards and Tarqovı Street as leisure and commercial areas. These areas are completely **car-free areas**.

After an in-depth analysis of Baku, the following results can be shown:

Table 3:Analysis Result of the Baku Case

MACRO SCALE ANALYSIS	
Compactness of the urban form in metropolitan scale (restraining urban sprawl, setting growth boundaries, growth management, etc) and prevention of sprawl	+/-
Existence of sub-centers (a polycentric form that enables a mix of land-uses at macro scale and eliminates the need to travel to the city centre for daily needs or even for work purposes)	+
An extensive public transport infrastructure: efficient public transportation system	+
MEZZO SCALE ANALYSIS	
Mixed-land use	+
Pedestrian friendly, walkable development	+
Well served public transportation: efficient public transportation system and urban development focused on public transport stations	+
Grid system plan (to ensure high connectivity and walkability in the micro scale)	+
MICRO SCALE ANALYSIS	
Intensity of street network (to ensure high connectivity)	+/-
Existence of local services and amenities (mixed use)	+
Areas being well served with Public Transport	+
Grid Plan for high connectivity	+
Pedestrian friendly and walkable street sections	+
A hierarchy of narrow streets, boulevards and alleys	+/-
Interface with parking: parking areas should not be barriers for pedestrians	-
Having majority of the neighborhood accessible on foot	+
Car-free public areas	+

6. CONCLUDING REMARKS

According to this analysis, it can be said for certain planning principles and approaches, that Baku always had adopted those and preserved them, and therefore has a relatively more sustainable urban form and transport system. For example, mixed use development has always been an important strategy, and throughout its planning history, new developments in Baku have always been planned with their local services and amenities. In addition, boulevards with large sidewalks and protection of pedestrian pavements from the traffic with landscaping and green belts have been a long-lasting approach in planning in Baku. The adoption of grid-street patterns in most neighborhoods was another advantage that increased the

interconnectivity and walkability, although some residential areas such as Yasamal which were designed in the period of Soviet Azerbaijan had less connectivity with large mass-housing style parcels and plots.

From all these perspectives, it could be said that the new urbanism, transit oriented design and similar approaches are not as relevant to Baku as they are to the cities of North America because Baku planners have always been aware of the advantages of these approaches and implemented them throughout the planning history of the city. On the other hand, there are certain criteria or approaches that the analysis showed to be important for Baku:

Although development until recently has been in high-density, this is changing with the low density development in new residential areas. Hence there is the problem of sprawl; and therefore growth management should be an important strategy for Baku. The Transportation Strategic Plan also emphasizes this. In addition to that the interface of parking with sidewalks and pedestrians is a huge problem in Baku.

There are many large boulevards in the city and the city centre remaining from the Soviet period which are being further invested in today with fly-overs and junctions to create better accessibility for cars. Hence there is the danger of creating a car-dominated system in spite of the advantages of the current urban form and design.

Car ownership and usage are high as described. Car owner ship ratio is growing day by day because of the cheap sales of car industry. The city centre is not designed in a car oriented way and this is a positive thing. However, there are not enough traffic management approaches to prevent cars entering the city centre. Therefore in spite of the good design of the urban core, congestion and traffic problems are increasing. As a result, approaches, such as growth management and the design of car parking areas may be important and relevant strategies for the Baku case.

What the Baku case shows, however, is that with the strong planning background of this city, planning and designing the city to make it more public transport friendly or walkable is not the priority. The city is already like this. It is the lack of any control on car traffic that is the problem. This problem can be solved with further design and pedestrianisation actions, but also with good traffic management including traffic calming measures.

However; sustainability is a much extensive issue as it is related to economy, environment and social life. As a result to achieve sustainable urban area, there need be sustainable in all three pillars of sustainability. But, as cities are the core areas of the development, in the first step, they need to be designed according to the sustainable urban design approaches. There is a vast literature, again, about that issue and the transportation is the key element to design a city. Although there are many policies to achieve more appropriate and sustainable transportation they are not well served if there is not an appropriate urban planning and design approach that encourages the use of sustainable modes of transport, such as walking, cycling and public transport.

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NEW STRATEGIES FOR RISK COMMUNICATION AND KNOWLEDGE: THE EXPERIENCE OF THE E-LEARNING TOOL OF THE EUROPEAN RESEARCH PROJECT ENSURE

Giulia Pesaro[1]

Abstract

The essay offers a synthesis of the activities developed into the ENSURE European project in order to build the planned e-learning tool.
The basic assumption of ENSURE is that our ability to better understand and evaluate different types of vulnerabilities and resilience to hazards constitutes a crucial tool to strengthen communities in the face of disasters due to extreme events and climate change. Improving the understanding of the factors that make a community more vulnerable from the one hand and more resilient from the other is therefore extremely important.
Into such a framework, the e-learning tool has been regarded as a new communication and knowledge strategy for achieving two main goals. The first one is the better dissemination of the project results, which enclose the proposal for a specific model to assess the vulnerability and resilience of a territorial area. The second one is more general and regards the improvement of knowledge and communication for what concerns the complex matters of vulnerability and resilience to natural and na-tech hazards and their assessment.
The tool has been organized as a course without external assistance, available in a website free on internet, and has been designed to reach and involve a variety of students, practitioners and other technicians as target users.
The e-learning path offers a sequence of themes, theories, methodologies, tools, and case studies the users can browse and experience. All learning materials come from the ENSURE project activities, which made it necessary to revise and "rework" the documents produced by the ENSURE partners during the research activities to adapt contents to the e-learning uses.
The essay offers a description of the activities and choices made by the working group to obtain the learning path and materials and to design the architecture of the website. This having in mind the need to develop a communication strategy able to introduce users to the importance of vulnerability and resilience matters and to capture them with interesting and appealing contents.
The following points will be discussed: main goals, main problems, the concept of the e-learning tool and the design of the website architecture.

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1. Introduction

In Ensure Project the research activity has been focused on the analysis of the vulnerability of territorial systems to the consequences of natural and na-tech disasters. Consequences like economic and social damages, loss of natural environments and cultural heritage, up to large death tolls. Losses which should be regarded as losses of territorial resources and of values for present and future development. It becomes therefore very important to better identify and measure in which way and to what extent a territory is exposed to certain types of hazards. Which means to better understand which elements, systems, subjects and areas are most likely to suffer from catastrophic events like earthquakes, floods, droughts, landslides. Improving the understanding of the factors that make a community vulnerable or resilient is therefore crucial.

Addressing the enhancement of knowledge and practice of vulnerability and resilience assessment as the main overall objective, the ENSURE Project set three working goals. The first one was the operational character of the tool to be developed. This is the reason why the project attempted to build on previous knowledge, taking advantage of what has already been accomplished in the field, trying to embed available results of risk and vulnerability assessment experiences as much as possible. The second general objective, responding to the need for operationalization, was to provide an interpretation of the relationship between vulnerability and related concepts (resilience, adaptation, coping capacity, etc.) within a framework strongly targeted towards prevention. The framework had to provide a sort of guideline to assess vulnerability before an event strikes, helping decision makers and even lay citizens take appropriate mitigation and anticipatory measures. The third, more specific, goal was to provide an updated picture of what is already available in literature, in previous studies, and in applications worldwide. We may count already a growing number of proposals concerning indicators, parameters, measures, related to physical, systemic and social aspects of vulnerability. These have been analyzed and a selection of the most advanced or appropriate ones were proposed as part of the tool for vulnerability assessment.

Into such a framework, the e-learning tool has been regarded as a communication and knowledge strategy to enhance the set of goals introduced above and to better exploit the project outcomes.

The website would like to invite users to make a journey into the vulnerability and resilience matters, offering a tool to directly experience the research results obtained during the Ensure Project work. Here it is therefore possible to find some theoretical and operational tools related to vulnerability and resilience assessment which could help in better understanding and evaluating different interpretations of the concepts and ways to operationalize them.

The rationale behind the architecture of contents and their organisation into the website meets two main purposes. The first one is the better dissemination of the project results. These enclose:

- the proposal for a specific integrated and multi-scale model to assess the vulnerability and resilience of a territorial area;
- a review of the investigations and reflections on vulnerability and resilience that led to the development of the evaluation framework;
- the consequent application of the assessment path into different case studies.

The second one is more general and addresses the improvement of knowledge and communication for what concerns the complex matters of vulnerability and resilience to natural and na-tech hazards and their assessment.

The e-learning tool, organized as a course without external assistance, aims at introducing users to the vulnerability assessment model proposed in the ENSURE project, specifying procedures, criteria and parameters to make it operable within a given territorial or cultural milieu. Case studies at local scales and within regional contexts complete the picture, proposing an approach for better understanding the articulated nature of the concept of vulnerability (i.e. physical, economic, cultural, social and systemic) at different spatial scales (regional and local), useful for exploring the integration and connections of different types of vulnerability and resilience and for developing assessment processes and future scenarios.

The learning path has been obtained from the project contents and results and offers a sequence of themes, theories, methodologies, tools, and case studies the users can browse and experience. The choice for the contents and the design of the learning sequence required a careful review of all the project documents produced and specific work to adapt them for use on a website. This adaptation was necessary because of the complexity itself of the subject matter – vulnerability and resilience to hazards – and because of the need to simplify such complexity into a clear and useful learning path.

The website has been developed to reach and involve a variety of students, practitioners and other technicians as target users. Generally speaking, each target group has different learning and knowledge needs or goals and the different categories of users are treated differently. However, in this case the e-learning tool has to be mostly regarded as an additional method for disseminating the project's results to a wide group of users, therefore documents and activities offered on the e-learning platform are generally aimed at all users. With this in mind, the website has been designed to be as attractive as possible, where the contents are interesting and appealing to many users, offering a variety of examples and case studies developed by a multimedia approach (texts, hypertexts, images, videos, links to other websites) and embracing interdisciplinary approaches, theories, methodologies and tools.

Conceived for both communication and knowledge enhancement, after the learning modules, users can find a module of activities, designed to self-test the achieved learning outcomes. Also these activities have been designed to be suitable for different target groups and mainly aim at making users aware of their capability to deal with the project issues and the use of the assessment methodology.

2. The concept of the tool

Great attention has been paid to the continuous connection between the e-learning site and the ENSURE project itself. Aiming to enhance the dissemination of the project results and products from the one side and to make users aware of the opening of the e-learning site from the other side, the e-learning tool has been linked into the ENSURE project website as one of the pieces of the starting puzzle in the home page (www.ensureproject.eu). Moving the opposite direction, in the opening page of the e-learning site (http://ensure.metid.polimi.it) a clear link to the main project site is available. The *continuum* between the two sites is also obtained by the use of graphic elements. The opening page of the e-learning tool maintains the same colours and some visual effects of the ENSURE Project website, while the graphic elements and the organization of the pages are of course different.

The contents of this e-learning tool, in a general perspective, is not so different from more traditional learning tools, the main requirements being:

- the identification of the “key learning goals”;
- the selection of the main learning contents, which will be offered on the e-learning platform in terms of “learning packages”;
- the project design of the learning path, which means the sequence of the themes, theories and methodologies, statements, tools, examples, best practices and case studies;
- the selection and/or building of reference documents;
- bibliography and literature references;
- selection and design of activities or exercises for the enhancement of the learning process and as a mean for a self-evaluation phase;

The choice for the contents and the design of the e-learning tool of the ENSURE Project required a careful review of all project documents and a specific work to adapt them for use on a website. This adaptation was necessary because of the complexity itself of the subject matter – vulnerability and resilience to hazards – and because of the need to simplify such complexity into a clear and useful learning path. Moreover it was not possible to just upload the deliverables as they have been developed. Deliverables had mainly been conceived to communicate with the European Commission and to disseminate both research results and the new methodology to the European experts, scholars and academics, even if with a great attention to the needs of practitioners. The learning goals require a different approach and a reworking, in order to obtain new materials for learning purposes.

In the light of such elements, the concept of the ENSURE Project e-learning tool is the result of the reasoning around the following points:

- the learning path itself, that is the selection of learning contents and the sequence in which they are organized;
- the building of a friendly approach to main topics as well as to the learning path, in order to attract potential users and push them to enjoy the whole of the learning offer and site contents;
- the building of specific learning materials, different from the ENSURE Project final deliverables, needed to better support the users inside the learning environment;
- the offer of some activities to self-test the learning progress.

About the learning path, the following elements have proved to be particularly important in order to obtain the final scheme (see the next paragraph about the architecture of the site):

- to offer a clear and simplified framework of the concepts and main theories and methodologies concerning the assessment of vulnerability and resilience to hazards;
- to outline in a clear way the goals of a "vulnerability assessment" and of a "resilience assessment" (or of other typologies of assessments around hazard evaluation and management) in a certain territorial system;
- to draw attention to the passage from theory to practice, in particular in terms of information collection and processing for building assessment parameters. This also refers to the need for working on territorial complexity and "solve complexity" to both obtain clear and useful vulnerability and resilience assessments and better face hazard management and mitigation;
- to draw attention to the "scale approach" or spatial dimension in the analysis, that is the observation/analysis of territorial areas at the different territorial scales at which vulnerability and resilience assessments can be developed (from urban-local to regional). This also means to build working skills in order to better take into consideration the specificities of territories at different levels, with their institutional frameworks and organizational resources and bodies;
- to draw attention to "time", defining phases or sequences of events, analysis, interventions which can be reflected in the "history" of an event and of all what follows (impact, emergency management, recovery, prevention and mitigation policies and interventions..);
- to make links between vulnerability assessment and other dynamic elements like impact, emergency and recovery management. This also with reference to resilience and mitigation of risk/damage matters;
- to identify what learning elements can be considered central for enhancing the capacity of territories to face the sequences of: hazards knowledge, potential damage impacts, emergency planning, events, post events, damage assessment and accountability, reconstruction;

- to draw attention to the importance of “learning from case studies”, which also means to outline questions that “should be asked to the case study” to extract the main elements and information from the experience.

Concerning the need for obtaining a friendly approach to the learning environment, the learning activities have been organized in a sequence of thematic chapters in which the user can find contents at three different deepening levels. This allows users to choose their main interests and/or work only on some issues but, at the same time, makes it easy to browse other, enlarged, contents. Strictly linked to this comes the point of the building of specific learning materials.

First the users can find a brief description of some main elements and concepts, just to be introduced by a first glance to the “great world” of the activities around the vulnerability and resilience matters and assessments.

Then they can deepen their knowledge selecting from a list of more specific contents and documents expressly produced for the e-learning tool. A part of these documents has been obtained from the deliverables, selecting contents and rebuilding the texts of the final products. Others are summaries of activities and documents produced from the ENSURE Project partners during the working period: slide presentations from the project’s meetings, schemes, maps, images, case studies and shorter versions of official documents, modified to be more suitable for the e-learning platform goals. The written texts in the opening pages of each module have been conceived as constituting the thread of the work.

All these will address to the ENSURE official final documents and publications by the project partners: the third learning level. As an example, if the user is reading about the central importance of time and territorial scale in vulnerability assessment, it is every time possible to trace the deliverable and the chapters in which the specific item can be found. Moreover references remain in the final deliverables, so that user will have at least to open them if they are interested in the literature, giving deliverables themselves a better visibility.

Of course basic elements like definitions, approaches, possible assessment methodologies and other elements alike have been specifically elaborated further in an e-learning perspective. For instance the users can find a list of basic keywords with a brief definition.

3. The architecture of the e-learning site

The learning menu is composed of four main modules. Two learning modules are devoted to theoretical and methodological issues related to *Vulnerability and Resilience Concepts* and *Vulnerability and Resilience Assessment*. The third module is devoted to the *Analysis of Case Studies* and the last one contains final self-evaluation activities referring to the whole proposed learning contents.

A fifth and last module contains the ENSURE Project final deliverables, the final booklet, the references of articles written by the research partners as an outcome of the project and some useful links to other websites.

In each module the user can find a brief introduction text and files containing the specific learning contents. Activities and examples useful to check the learning level obtained are all included in module four.

3.1 The home page of the e-learning tool

In the home page a presentation text introduces the ENSURE E-learning platform, explaining the main purposes of the tool and the main dissemination and learning goals (fig.1).

Figure 1 – The opening page of the ENSURE Project e-learning tool

This text is important as it must attract people to enter into the “operational part” of an e-learning tool concerning a particularly complex matter as vulnerability and resilience assessment can be. A video with a presentation completes the opening page, explaining the key contents and the meaning of the learning offer. These elements are very important as the e-learning content is offered to a huge public variously interested in the matter. Moreover some elements make the difference from other e-learning experiences and courses related to natural and na-tech hazards research, management and prevention:

1. the e-learning website has been conceived to be a tool to better diffuse the ENSURE Project integrated multi-scale vulnerability approach, together with all the documents and products available as the result of the overall project, which

makes this tool really different from all other experiences. For these reasons, just after the introductory text there is a link to the ENSURE project website;
2. The e-learning tool entails knowledge enhancement goals but in absence of direct interaction with a teaching team. This calls for solutions able to make users understand the meaning and the goals of the on-line course, what they can obtain from this particular sequence of learning contents and the meaning of the activities to self-evaluate knowledge enhancement results;
3. The access to all contents is free(similar to the tool NAHRIS, but here enriched by self-test activities), differently from other university or institutional e-learning courses (for instance the tools e-Scenario or GEOG105 Lab Programme). In the home page an "autologin" routine is available to users to simply and immediately register to the website. The registration will be used to identify users (number and some simple characteristics).

A second page contains a tutorial for the use of the e-learning tool. Here users find information on the learning object and goals, together with some instructions on how to use the platform and the contents. A menu allows to enter into the learning modules and in the module containing the ENSURE project deliverables and other products.

3.2 The organization of the learning modules

The three learning modules are introduced by a brief text summarizing the main learning elements and introducing to the use of the materials available. From the operational point of view, the contents are organized in folders and subfolders, in order to obtain both a clear learning sequence and a system of homogeneous learning units. In each folder users find the "learning files", materials especially developed for the e-learning tool starting from the final deliverables of the ENSURE project and from other documents prepared by the partners during the research working period. These files are numbered to simplify their identification and use.

3.2.1 Learning module 1 – The Vulnerability and Resilience concept: "a journey into definitions, approaches, and tools"

In this module users find definitions, concepts and evaluation methodologies useful in vulnerability assessment and management. The module is meant to summarize the main theoretical and methodological elements in vulnerability assessment and management as elaborated and proposed by the ENSURE project working teams.

Here the ENSURE partners would also like to introduce both the importance of definitions themselves and the importance of the selection made during the working period. The huge variety of approaches, methodologies and assessment tools available in literature and practice requires a preliminary analysis to make it clear all the implications of such definitions in addressing assessment issues and activities: from the identification of hazards, the selection of indicators, the data collection and the elaboration of knowledge to the interpretation and evaluation process itself.

The following table 1 shows the organization of folders and subfolders.

Table 1 - Folders organization and files in module 1

🗁 *Lm1.1 Vulnerability: concepts and definitions* – what "do you need to know" to develop a vulnerability assessment?
🗐 *F02_An introduction to vulnerability definitions*
Lm1.1.1 Vulnerability in time and space
🗐 *F03_Vulnerability in time and space*
🗐 *F04_Vulnerability in time*
🗐 *F05_Vulnerability in space*
🗐 *F06_Scale factors in vulnerability analysis: multi-scale and cross-scale analyses*
🗁 *Lm1.2 Vulnerability and resilience* – what is a resilience assessment and what do you need to know to develop one?
🗐 F07_Vulnerability and resilience
🗐 F08_Resilience and vulnerability
🗐 F09_The resilience concept
🗁 *Lm1.3 The objects of a vulnerability and resilience assessment: structural, territorial, social and economic systems* – what territorial elements should we take into consideration and in which way? Which indicators should we identify and measure to obtain a valid image of such territorial elements and their dynamics?
🗐 F10_Vulnerability of socioeconomic systems
🗐 F11_Social and economic vulnerability_2 case studies
🗐 F12_Social vulnerability and resilience_the actors
🗐 F13_Territorial vulnerability and territorial capital
🗐 F14_Vulnerability of socio-economic systems. Concepts and definitions from a theoretical and research perspective
🗐 F15_Structuring social and economic vulnerabilities
🗁 *Lm1.4 Vulnerability, resilience and natural hazards* – which fundamental relations are there between a vulnerability and resilience assessment and the type of hazard? What are the roles of time and territorial scale when working on different types of natural hazards?
🗐 *F16_Concept of risk in volcanology*
🗐 *F17_State-of-the-art on territorial vulnerability and natural hazards. Lessons learned*

Definitions are crucial for building the general framework of each issue and for answering questions like "how can we find the vulnerability profile of a certain territorial area?", "which kind of vulnerability are we exploring?", "which kind of territorial subjects and objects are exposed?", "which are the main consequences in

terms of expected damages?", "how can we find the resilience profile of a certain territorial area?".

3.2.2 Learning module 2 – The Vulnerability and Resilience Assessment

The main purpose of this part is to make users experience the assessment process developed by the ENSURE research group. This is a particularly important and delicate issue as here the specific methodology developed by the ENSURE Project partners is introduced and explained from both a theoretical and operational point of view.

Users experience the sequence of elements and activities which drives from the territorial analysis to the vulnerability and resilience assessment. They can therefore find brief introductions to models, tools and techniques for the recognition of territorial elements and dynamics which explain different levels of vulnerability together with the operational definitions and applications of vulnerability and resilience assessment processes. Here it is moreover suggested to pay attention to some particular elements like: scale, time, indicators and data organization, knowledge building, territorial subjects and objects exposed to hazards.

After these, users find elements to identify the goals of a "vulnerability assessment" (or of other typologies of assessments around hazard evaluation and management) in a certain territorial system. The sequence of the learning contents will therefore drive the attention to the passage from theory to practice (in particular in terms of information collection and elaboration for parameters building): for instance the importance of "time", defining phases/sequences of events/analysis/interventions which can be reflected in building a certain sequence of activities (analyzed through examples of applications and case studies in this and in the following module). Users will have to pay attention to differences concerning different tools coming from different approaches and follow the discussion which led to the specific ENSURE Project integrated multi-scale approach to vulnerability and resilience assessment.

The final section explores the use of vulnerability and resilience assessment results as an important basis for the design and implementation of possible policy tools for hazard management. Users therefore find elements to connect vulnerability and resilience assessments with impact, emergency and recovery management. This working at different institutional levels for a better governance and management of "the cycle of disaster" and for enhancing prevention and mitigation matters.

The following table 2 shows the organization of folders and subfolders.

Table 2 - Folders organization and files in module 2

🗁 Lm2.1 Vulnerability and Resilience Assessment Tools – from theory to practice: the steps and the tools of a vulnerability or resilience assessment.

- 🗐 *F18_An overview of vulnerability assessment concept*
- 🗐 *F19_Examples of methodologies assessing territorial vulnerability*
- 🗐 *F20_Some key elements for vulnerabilities assessment with respect to complex hazardous events*
- 🗐 *F21_Relationships among vulnerabilities and resilience: an assessment perspective*
- 🗐 *F22_Tools for vulnerability analysis and representation*

🗁 Lm2.2 Territorial elements and dynamics – the importance of the local territorial scale and of the knowledge of specific characteristics and dynamics territorial elements

- 🗐 *F23_Structuring the relations between physical, social and economic vulnerabilities: an introduction*

🗁 Lm2.3 Vulnerability and resilience assessment – How to build a vulnerability or resilience assessment procedure and which elements have to be taken into account to develop the assessment process

- 🗐 *F24_Vulnerability operational concept and measurement*
- 🗐 *F25_Transfer of vulnerability across time and space_a case study*
- 🗐 *F26_Models and methodologies for socio-economic vulnerability assessment. A theoretic and research perspective*
  - 🗁 Lm2.3.1 Indicators
    - 🗐 *F27_Indicators for a vulnerability and resilience assessment: an introduction*
    - 🗐 *F28_Indicators/parameters of socio-economic vulnerability. A theoretic and research perspective*
    - 🗐 *F29_Data availability and indicators in vulnerability assessment*
  - 🗁 Lm2.3.2 Organizing knowledge
    - 🗐 *F30_Organizing knowledge for vulnerability and resilience assessment: the set of matrices developed within the Ensure project*
  - 🗁 Lm2.3.3 Interpretation: the vulnerability and resilience assessment
    - 🗐 *F31_Methodological framework for an Integrated multi-scale vulnerability and resilience assessment*
    - 🗐 *F32_A synthesis of the whole ENSURE method for assessing vulnerability and resilience*
    - 🗐 *F33_Vulnerability analysis and assessment of cultural heritage*

🗁 Lm2.4 Facing and managing vulnerability – Which connection between vulnerability and resilience assessment and impact, recovery, prevention and reconstruction management? Once knowledge is available, which actions or tools could a territorial system explore and implement to better manage hazards?

- 🗐 *F34_Does reducing vulnerability always lead to enhance resilience?*
- 🗐 *F35_Strategies, approaches and practices to decrease socio-economic vulnerability and to increase resilience*
- 🗐 *F36_Emergency planning in Vulcano*

3.2.3 Learning module 3 – Case studies

This section would like to introduce users to the reading, comprehension and building of case studies in vulnerability and resilience matters. Learning from case studies means also to outline questions that should be asked by the case study analysis. This, among others, means to apply “a certain level of abstraction” for a more effective description of reality and to extract the main elements and information from the experience.

A review of case studies is here proposed, in order to make users understand which are the most important knowledge elements which should appear in an assessment activity and how to build the sequence of working steps leading to an effective result. This can also be considered as a reading scheme to extract and learn from existing case studies as much as possible both of the experiences themselves (type of risk, country, vulnerable elements of the specific territorial system, selected tools to face and manage vulnerability..) and of the particular application of the tools for the building of the case study. “History” of an event and of all what follows (impact, emergency management, recovery, prevention and mitigation policies and interventions..).

The following table 3 shows the organization of files.

Table 3 – File organization in module 3

🗁 Lm3 Vulnerability and Resilience Assessment Tools – from theory to practice: the steps and the tools of a vulnerability or resilience assessment.
🗐 *F37_Hazard-specific case studies of inter-relationships between social vulnerability and economic vulnerability*
🗐 *F38_Structuring the relations between physical, social and economic vulnerabilities: applications to different natural hazards*
🗐 *F39_Applying the concept of vulnerability: the case of Negev*
🗐 *F40_Vulnerability in time: case studies*
🗐 *F41_Vulnerability in space: case studies*
🗐 *F42_Applying the ENSURE methodology for vulnerability assessment: the case of Ilia forest fires*
🗐 *ENSURE Del5.3.1 - Development of the Integrated Approach on the Ilia case study*
🗐 *ENSURE Del5.3.2 - Development of the Integrated Approach on the Negev case study*
🗐 *ENSURE Del5.3.3 - Development of the Integrated Approach on the Vulcano case study*
🗐 *ENSURE Del5.3.4 - Development of the Integrated Approach on the Ethiopian, Istanbul and Corvara case studies*

The selection of case studies tries to call attention to differences of approach, media, territorial analysis process and knowledge building tools like, for instance: type of document – written, images, video –, type of assessment tool, indicators selection and processing methodologies, knowledge building according to real needs, territorial features, scale and time, type of target communities of the document, subject asking for the assessment. Moreover, some elements already discussed in the previews modules are underlined, to make it clearer the transition from theory to practice: territorial scale of the analysis, time, sequences of events/analysis/interventions and time related matters, selection and processing of different kinds of indicators, building procedure for the vulnerability and resilience assessment (emphasis on the sequence of the activities).

To make users better understand the process, in this section both elaborated files and the four ENSURE Project final deliverables on case studies are available.

3.3 The activities to self-test the knowledge achieved

This section is meant to be a place where to test the acquired knowledge and as a mean for a self-evaluation of knowledge level about the specific subject of vulnerability to hazards.

The external intervention not being previewed, the exercises are organized with answers and the indication of theoretical and methodological knowledge references into the e-learning site.

The activities have been developed according to the main knowledge goals of the ENSURE Project and try to retrace the contents from an operational perspective. The user is then asked to try to develop actions like:

- “to identify and find essential elements in order to obtain a first knowledge picture of the specific territorial system”
- “to recognize usable information/knowledge from images, maps and other visual documents describing natural and na-tech hazards”
- “to select key territorial subjects in order to organize the vulnerability assessment activity”
- “to assess the quality of data”
- “to organize indicators and build up assessment tables”
- “to develop a vulnerability and/or resilience assessment”
- “to put in evidence the main results of the assessment process”
- “to suggest some possible vulnerability management suggestions to local subjects”

The architecture of these activities also aims at introducing users to the knowledge building needs and to the sequence of actions required to autonomously develop an assessment process.

Table 4 – Example of an activity in module 4

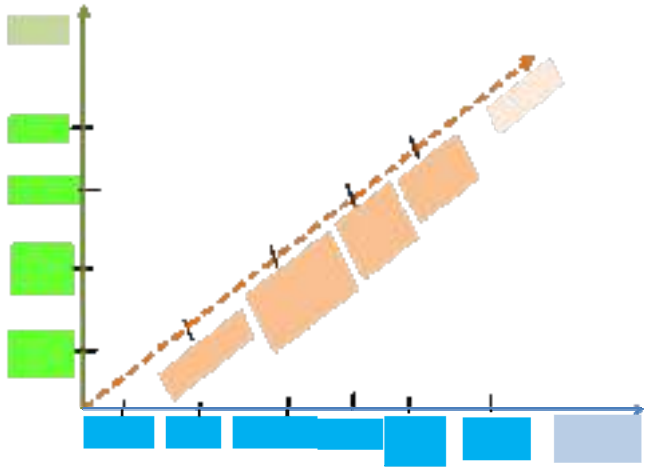
Working with indicators

This activity aims to help you achieve a better understanding of this important matter.

The use of indicators is one of the core activities in any assessment process, regardless of the specific field of application. As well introduced by file F28 in module 2, “Indicators are qualitative or quantitative parameters that describe features of a certain, often complex and ill-defined, phenomenon and communicate an assessment of the phenomenon involved (Dopheide and Martinez, 2000). The latter implies that, although indicators can be either descriptive or normative, they always have implicitly or explicitly a reference to a norm. This makes indicators clearly different from simple measurements”.

This means that the selection and quality of indicators define the quality itself of information. Quality which means completeness, usability and clarity of information describing a certain matter or phenomena or territorial area: information needed to develop any vulnerability and resilience assessment.

1. The following figure can be found in module 2 and shows “Criteria to identify and select vulnerability indicators”. Are you able to fill the coloured areas with the right contents?



To help you remember that criteria are grouped along three main axes:

- On the x axe, the inherent characteristics of indicators are addressed;
- On the y axe, the characteristics of the data to be used to assess the indicators value in a given place are shown;
- On the z axe, the usefulness of indicators is appraised.

2. To develop a vulnerability assessment you need some categories of data/indicators: which ones?

To understand which sources are needed we have to make reference to the definition of vulnerability. You can find useful elements in files F02, chapter 3, and, mainly, in file F29.

3. Once data have been processed into a vulnerability assessment, it is important to organise them into tools for vulnerability analysis and representation. Tools must be able to transmit information and communicate about the vulnerability profile of a territorial area, becoming supports for decision making processes. Which instruments for the data visualisation can be found in the ENSURE documents?

Exercises are of course based on the materials available on the website and try to use a variety of elements and media to make activities more attractive and diversified. Finally, as the e-learning site should function as a tool for the dissemination of the results and documents produced by the ENSURE Project, activities have been designed to invite users to browse all the knowledge contents and to make reference to the complete work developed into the ENSURE Project. Table 4 shows an example of activity.

3.4 Module 5 – The final ENSURE Projects products

The final module in the e-learning site offers a collection of documents and publications produced by the project partners.

Here it is possible to find the whole set of deliverables of the ENSURE Project from which the specific learning files have been obtained. There are constant cross-references between files and deliverables, in order to invite users to deepen their knowledge beyond the educational contents which have been expressly composed for learning purposes. For the same reasons this module offer is enriched by the final booklet *Enhancing Resilience of Communities and Territories Facing Natural and Na-tech Hazards,* a list of the references of the publications prepared by the project partners and a list of links to interesting websites.

4. Conclusions

The e-learning tool of the ENSURE Project may be seen as an attempt to widely diffuse both a research project results and a methodological/operational practice contributing to the offer of instruments to be used in the field of natural and na-tech hazards vulnerability and resilience assessment.

The concept and the architecture try to respond to a double challenge. From the one hand there is the need to offer contents directly coming from a recent and innovative research work. The selection and elaboration of the e-learning contents should therefore be able to adequately explain and diffuse the products of a very rich analysis and discussion regarding the existing approaches and practices in vulnerability and resilience assessment and the new operational integrated multi-scale ENSURE methodology. From the other hand this can be regarded as a new offer of an easy-to-use course on a very complex matter like vulnerability and resilience assessment to a wide audience of students, professionals and practitioners.

To draw concrete conclusions on the performance itself of the tool we will of course have to wait some more time, as a real evaluation of the results will be possible only after at least a year from the finalization of the website and the diffusion of information about its availability. The work of conceptualization and the production and organization of the learning contents has anyway highlighted some important elements for future developments.

A first issue is the use of English as the working language (see Lienert at al. 2009). This of course opens the tool to a really wide audience but, on the other hand, could represent a constraint to the diffusion towards practitioners and technicians in public and private local bodies. In future it will therefore be important to understand whether and in which cases it could be useful an effort of translation, taking into account the emerging of costs which may be high.

A second point is the capability to offer approaches and methodologies from both a theoretical and operational point of view. Operational tools are of course very important but in time they can change. A course like this one have to make users aware of the importance of theory and methodology beside practice. What changes only a little is the capability to build the knowledge needed to develop a certain sequence of actions to obtain an effective and useful vulnerability and resilience assessment, apart from the use of one specific model.

The final point is the need for contents able to offer a wide variety of operational experiences in many different regions and in presence of different hazard typologies. This is way the ENSURE Project tool put so much emphasis on case studies, a result achieved by involving many scientists from different countries working with different disciplinary approaches. An great effort during the research period but a great richness in terms of knowledge production.

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THE COMMERCIAL REAL ESTATE PRODUCTION IN ISTANBUL

IN THE GLOBALIZATION PROCESS

GÖKÇEN GÖKYER[1]

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ABSTRACT
Istanbul undertakes half of the imports and exports of the country which has been increasing importance as it is the most developed city in Turkey with a population reaching up to 13.255.685 people (2010) consisting of %17.98 of the national population. Conspicuously, the service demand and the commercial real estate production are expected to be high together with the Istanbul's rising position in the globalization process, which can be observed from construction statistics that are published by the Turkish Statistical Institute under the published categories of 'Hotel and etc constructions', 'Office, Wholesale and Retail Commerce', 'Traffic and Communication Buildings', 'Industry and Storage', and 'Public, Entertainment, Education and Hospital'. Considering main theories about the world city/global city concept that have played a major role in understanding the emergence of global command centers and strongly influenced on the world city literature belonging to John Friedmann, Saskia Sassen and Castells, Istanbul is relatively of the earlier stage of globalization process and with respect to these major theories; developments in respect of globalization process of the city can be expected in the direction of the formation of world city as defined in line with the Friedmann's theory regarding the city's buildings for service sector activities and industrial real estate production at the investigated period. It is expected that global city functions will develop as world city functions consolidate in Istanbul. Therefore, the commercial real estate production is expected to be more rapid and more in line with the growth of world city functions in Istanbul, compared to two other most developed cities of Turkey which are Ankara and Izmir.

Keywords: World City/Global City, Istanbul, Commercial Real Estate, Globalization Process

1. INTRODUCTION

1.1 AIM OF THE STUDY AND RESEARCH QUESTIONS

Indeed, the substantial result of the globalization process is the exceeding of the global capital among the boundaries and their movement between countries. Therefore, the country cities have differentiations in attracting the global capital, and the global cities are expected to have the capacity of attracting the global capital. Turkey's international impression in respect of investment dispersion is determined according to the diverse market opportunities in both domestic and export-oriented way which Turkey offers. As regards, Istanbul is expected to attract global capital at most in the country.

1.2 METHOD OF THE STDUY

In order to figure out the developed sectors of Istanbul, the construction statistics according to the construction permits data of Turkish Statistical Institute (TUIK) are compared with the construction statistics of each sector of Ankara and Izmir that are the second and the third most developed cities in Turkey. Thus, the comparisons of total floor areas show how afore is Istanbul in Turkey among the global sectors both industrial manufacturing and service activities.

1.3 CONTENTS

The world-city literature has been developed in parallel with the economical downturn in the 70s and the emergence of a globalized economical system, when the traditional pattern of separated national urban systems was made obsolete for a relevant analysis of inter-city relationships. In understanding the emergence of global command centers, John Friedmann, Saskia Sassen and Castells's hypothesis and theories played a major role and strongly influenced the world city literature.

Moreover, in the framework of the 1980's reforms towards economic liberalization, Istanbul, designated by the Government to become a 'global city' attracting foreign capital. The city is the primary gateway of Turkey to the global economy. Thus, international firms prefer to locate and more than half of the exports are made from there. Since the beginning of the 21st century the city has been well ranked in academic rosters of world cities (Beaverstock, Taylor et al., 2008) however; its position in famous business city rankings is not yet clearly established.

The data for the research of globalization process of Istanbul is the new and additional constructions with provincial and municipal boundaries, including the buildings for Hotels , Offices, Wholesale and Retail Commerce, Traffic and Communication, Industry and Storage, and Public Services, Entertainment, Education and Hospital that shapes the demand in the globalization process are investigated.

2. THEORETICAL FRAMEWORK

During the globalization process after the 1970s, there have been many theories regarding the world-city literature and there are several major ideas that directed the concept of the world city/global city. According to these major hypotheses,

Istanbul's position will be analyzed and the main findings of the thesis will be presented.

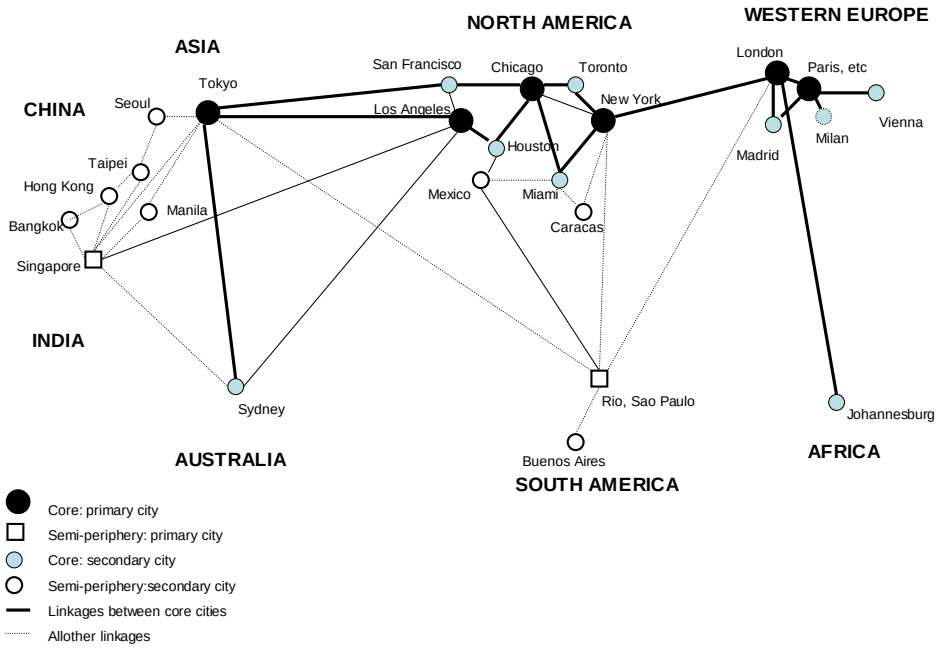
2.1 THE CONCEPT OF THE WORLD CITY

The major hypotheses about the emergence of global command centers that influenced world city literature belongs to John Friedmann, Saskia Sassen, and Manuel Castells.

2.1.1 John FRIEDMANN's "Word city Hypothesis"

Friedmann (1986) explained 'world city' concept with regards to the global economic forces as the global accumulation centers that direct the global economic system. That is to say, they are the origins of the global capital that orientates the investments and the market cities as being the command centers of capital in the new international division of labor. According to Friedmann, there is a hierarchy determined by the investment flows and the support services including advertising, accounting, insurance and legal services. Furthermore, the control center cities articulate larger regional, national and international economies in respect to flow of money, workers, information, commodities, etc beside articulating to the global economy or space of global accumulation of surrounding fields or regions and the space of accumulation represents both the national and regional capital accumulation.

Friedmann defined the process of connection to global economic forces by 'seven theses' depending on functional, hierarchical and global-local thesis. These functions are the headquarters functions, financial centers and 'articulator' cities linked a national or regional economy to the global economy. The hierarchical thesis comprises the 'basing points' of capital in the inter-city relations that resulted in a 'complex spatial hierarchy', and the hierarchy is organized by the city as a finance center, corporate headquarters, international institutions, business services, manufacturing, transportation and population size.



The world city hierarchy (from Friedmann 1986)

2 Figure 2.1 The World City Hierarchy (Source: FRIEDMANN John (1986), 'The World **City Hypothesis')**

2.1.2 Saskia SASSEN's "Global City" Concept

Sassen develops Friedmann's hypothesis instead emphasizing on the production of finance and services. Sassen defined the Global Cities as global service centers more than simply command centers including dispersed economic activities, specialized service firms, information database for the current industry sector, cross-border city-to-city transactions and the social discrimination between specialized professionals. Sassen has six hypotheses in the Global City approach including economic activities location choices, increasingly headquarters of large global firms, the specialized firms, headquarters' outsourcing increase, the need of the specialized service firms, and the spatial and socioeconomic imbalance in the Global Cities increases.

2.1.3 Manuel CASTELLS's "Space of Flow" Concept

In Castells theory, a 'new social morphology' of the society is cited as a social study regarding 'informational age' (Castells 1989). He developed the 70s and 80s elementary human framework of reference in the new information and communication technologies as 'space and time'. Castells explained spatial logic, places as the flows, which represent the informational exchanges orientated by social actors, and their frequency in receiving or production of information.

Furthermore, his aspect diverges with Sassen's idea that a network cannot be assumed as a traditional hierarchical pattern. According to his idea, in respect to interacting in one global network, the spatial domination cannot be considered in any traditional urban system pattern. Hence, the 'space of flows' becomes material thing

by its flow's own spatial arrangements in addition to its diffusion all over the world. The 'space of flows' can be interpreted by the material architecture and it is consisted of three 'layers' which are the circuit of electronic impulses, the hubs and the dominant and managerial elites' the spatial organization.

2.1.4 Evaluation

First, a city should comprehend the characteristics of world city in order to be a global city. Istanbul is relatively at the earlier stage of globalization regarding to have the world city qualifications in respect of finance, production, firms, administration, proficiency services, etc. According to Sassen, proficiency services are the fundamental aspect that should service internationally. In respect of the industry-storage, hotels, production wholesale and retail commerce production sectors, Istanbul seems to have the view of Friedmann's theory. So, it is expected to find developments in the direction of creation in the formation of world city as defined in line with the Friedmann's theory. The global city functions will develop as world functions consolidate Istanbul and in this stage, it is expected to find the final developments more in accordance with the growth of the world city functions compare to global cities.

On the basis of the short review of the three fundamental theories about global cities, the measurement and rankings of global cities can be aligned as follows.

2.2 GLOBALIZATION AND WORLD CITIES STUDY GROUP'S METHODS

In respect of studies about globalization and world city concept, The Globalization and World Cities Study Group and Network (GaWC) is a group of scholars who study the concept of world city and generated two different methods of ranking in respect of two different theoretical frameworks. The first method is proposing world cities as the concentrations of expertise and knowledge supporting and completing the job of transnational corporates and the second method depends on the 'space of flows' concept of Manuel Castells that comprehends the measure of interrelations in a network of global cities which are also accepted as process rather than places.

2.2.1 Measuring the 'world-cityness'

With respect to Saskia Sassen (1991), led by Beaverstock, Smith and Taylor, the global capacity of cities regarding services they provide were searched out, and an inventory of world-cities according to their advanced producer service level was taken. According to the data of the office distributions, information concerning 74 companies of advanced producer services in 125 cities have been collected and 55 cities have been defined as world-cities on the basis of the number, size and the importance of their offices. With regards to the research, there are three main stages which are first, the global competence of service firms in terms of the geographic location in cities, second, centers of the global services for a given sector to locate in the aggregated cities, and third, service centers' agglomeration creates the city and world cities of different degrees of overall corporate service provision are clarified.

In the research, three levels of world cities are identified in the 'roster of world-city' depending on the ranking of 10 Alpha world cities, 10 Beta world cities and 35 Gamma world cities.

More comprehensive inventory than 2000 and 2004's data collection about World Cities was taken by the Globalization and World Cities Study & Network at Loughborough University in UK within the same methodology and analysis in 2008 (http://www.lboro.ac.uk). With this respect, a roster of hundreds of world cities at 5 levels with 40 Alpha cities appeared besides the only two rankings with A++ New York and London.

2.3 ISTANBUL: A CITY HIGHLY CONNECTED TO THE NETWORK OF GLOBAL CITIES

Istanbul shelters a built environment and an imperial history that influence its position in the world system. According to the city's geography and centrality in two of the world's most important empires, and including two continents, Istanbul has the potential of being a 'global city' on the condition that the potential is actualized.
Istanbul is included in the ranking of GaWC study group as an 'Alpha Global City' in the 28th position (2008). Besides, Istanbul is the only city in the group in respect of global city in the region West-Asia, North-Africa.
Istanbul has 'global cityness' mainly in banking and financial sector. Istanbul is a highly connected city as being 35th position in the 'high-connectivity gateway' global ranking and the city can be accepted as a well connected city between the local and the global economy that the city is preferable for the firms in order to profit from the surrounding regional markets. Moreover, in the 'Global Cities Index 2008' and its global ranking, Istanbul is determined as the 8th position regarding its political engagement, whereas the 13th position in respect of good human capital.
Moreover, Taylor contradicted that Istanbul is articulated to the East European Countries better than to Middle-East and Western Asian countries which means, the city has the potential of being also a regional center besides being a gateway.
Lastly, according to Loughborough Study's research, among a network analysis of European world cities, Istanbul is an outer part of cities comprising a strong 'world city' characteristics regards to primitive service sectors. However, this will constrain its linkage to core European cities, so regarding to the city's various connections, Istanbul has better maintain and strengthen position in terms of articulating to the Middle East Black Sea and Central Asia Region as well (Foreign Economic Realtion Board, 2009).
Also, Istanbul is attraction and cultural center for many tourists. In addition to many awards, the city is declared as 'European Capital of Culture' in 2010 by the European Commission. Besides, Istanbul undertook house ownership of Olympics bids, conferences such as Habitat II in 1996 and the World Water Forum in 2009.

2.3.1 The Rise of Foreign Capital Investment in Istanbul

After the liberalization policies in 1980s, the foreign direct investments (FDI) began to increase and in 2008 Turkey became the 13th in the world and fifth among emerging markets in the ranking. Also, Turkey had the 17th largest economy and the

6th largest in the EU in 2006 within 7.4% of GDP growth which is one of the highest levels among the continent (Foreign Economic Relation Board, 2009). Moreover, Turkey ranked 23rd in the world and 9th with respect to the emerging markets according to the United Nations Conference on Trade and Development (UNCTAD). Moreover, in Ease of Doing Business Rank of the World Bank Turkey ranked 59th out of 181 economies, in Forbes Doing Business Index 41st out of 121 economies and in UNCTAD's World Investment Prospects Survey 2008-2010 15th regarding to the attracted economy for the location.

2.3.2 Foreign Companies in Istanbul and their International Network

The research of Service Sector of METU MATPUM Study Group, Istanbul's structure of economics, industry and services have analyzed among other official data without informing the employment and office numbers and their change during the years.

According to the 2000's year employment data of Istanbul obtained from the population census of TUIK, the number of employed people consists of the 34.6% range of the total population. There is a permanent decrease after 1970 and in 1980 and 1990, 51% of the total employment and 53% in 2000 consist of service sector which is pretty low regarding to other major metropolitan cities.

Regarding the employment structure of European metropolitan cities, Istanbul indicates a different structure where the industry share stays between 12% and 16%, whereas service sector has more than 80%. In South Europe cities like Barcelona, Madrid, Milan and the third world metropolitan cities, industrial activities keeps its significance and a big pie in the employment. However, due to the restricted land problem, manufacturing industry cannot be developed in the city center in Istanbul that leads same decrease in the share of this sector.

Moreover, as to the compared data with North Europe metropolitan cities, Istanbul again pretends differentiation in respect of existing structures of economic and employment and keeps its importance in manufacturing (Source: IMP Studies, *Office Cantonal de la Statistique (OCSTAT), 2004; The Swedish National Labour Market Adm. (AM), 2001;Oslo's Improvement and Dev. Agency and the Information Section of the Chief Commissioner's Department, 2002; Frankfurt Economic Development; City of Helsinki, Treasury, 2000; Statistisches Landesamt, 2005*)

Besides, service sector will develop but not rapidly. Total number of the employments of service sectors in 1985-1992 and 2002, there is dramatic increase, especially in financial institution's offices (Source: TUIK).

The global activities' developments are in respect of Friedmann's theory in line with financial institutions, insurance, real estate and commerce sector considering these years.

This case indicates the similarity with the other metropolitan cities over the world and shows the tendency of Istanbul to be a finance center. Furthermore, these data

can be commented on the Friedmann's world city concept regards to the sectors and their development. However, 50% decrease in the share of the public services, social and personal services between the years 1985 and 2002 is a negative aspect as a metropolitan area with lacking of public services. Regarding the data between the years 1985-1992, the ratio of the employment increase to population increase is 8.8%, whereas it increases to 39.6% in 1992-2002. (Source: TUIK)

ITO data also confirm the analyses as though the registered firm numbers to Istanbul Chamber of Commerce (ITO) and number of companies have rapidly increased since 1992. Despite of this, firm numbers depend on individuals stayed almost the same between the years 1989 and 2003.

Foreign capital companies in Turkey were 10,769 in 2005 and 65.3% of them located in Istanbul. Foreign-owned manufacturing companies in Istanbul are 969 and 118 of them are 'direct foreign investment' while 851 of them are multi-national capital investment companies.

According to data of ITO, in 2007, 3071 foreign investors founded company valued 410,315,784 TL capital. In 2010, 2044 foreign investors founded company valued 823,352,513 TL capital, whereas in 2011, 4639 foreign investors founded 1,735,399,674 TL capital with a 52.40% increase of investor number.

The number of International capital investment companies in Istanbul in 2011 is 15,692 and 5,634 of them are in wholesale and retail commerce sector, 2,700 are in manufacturing industry and 2,366 are in real estate renting and work activities sector.[2]

Subsectors' growth rates of sectors that are influenced directly by the population change in the structure of the population increase in the income and consumption patterns; such as commerce, hotel and restaurant are higher than the population growth. Therefore, there is no direct relation within public services and population growth due to the differentiation in the supply of public services and the least influence of the service subsectors belongs to construction and public works due to the effects of the dynamics in economics and disposal-expense equilibrium (ITO).

2.4 THE IMPACT OF GLOBALIZATION ON SOCIAL STRUCTURE AND OBSTACLES IN ISTANBUL

Many sociologists including Çağlar Keyder cite that neoliberal capitalism effects and articulation of Turkish economy to the global markets improve the social structure of Istanbul and globalization plays active role in spatial organization, within obstacles.

[2] (ITO, 2010-2011 *Registered Foreign Investors' Census and Foreign Capital's data*).

2.4.1 Social Polarization: a consequence of the entrance in the globalization process

Internal migration influences the population growth of Istanbul that increased from 1.16 million in 1950 to above 10 million people in 2000. Population growth is faster in Istanbul compare to Turkey after 1965. Regarding OECD countries, Istanbul is in the first in the ranking of OECD metro-regions between the years 1995-2002.

2.4.1 2.4.2 The Obstacles for a Broader Integration in the Global City Network

Istanbul has big potential to become a highly globalized city in case of reflecting this potential. However, the city does not perform satisfied due to its existing critical structural problems. The problems of Istanbul evaluated by Foreign Companies located in and out of Istanbul in line with the survey for checking out the problems that is conducted by the academicians in METU (ERAYDIN, A., GEDİKLİ, B., SUTCLIFFE, E., TÜREL, A. (2005), Yabancı Sermaye ve Istanbul; Istanbul'daki Yabancı Sermayeli Firmalar ve Bu Firmaların Kentle İlgili Değerlendirmeleri). Besides, there is the survey of 500 major European firms' chief executive officers about the main the European Business Centers by private consultancy agency Cushman & Wakefield since 1990 that indicates most of the firms think traffic conditions, transportation facilities are problematic, housing and living conditions are below the standards compare to global cities, prices for office and production units are high and not affordable for foreign investors, beside the environmental conditions and cleanliness and the number of NGOs and their activities pointed below 50%. This study will interpret the vision of European CEO in Istanbul that is generally in a low position comparing to the other 33 cities. Major advantage of the city regarding the other European cities is the cost competitions such as low prices for office rents/property and labor.

3. ANALYZING THE DATA

In order to become a world city, the city should first pretend as a world city in respect of finance, production, proficiency, etc before to be globalized. When the situation of Istanbul is considered, the city is relatively of the earlier stage of globalization process which is to have the characteristics of being world city. According to these aspects, the attribution of Istanbul has similarity with Friedmann's (1986) 'world city' vision. Thus, it can be expected to find developments in the direction of creation in the formation of world city as defined in line with the Friedmann's theory. The global city functions will develop as world city functions consolidate in Istanbul.

With respect to this aim, total floor areas of buildings related to each sector are compared among Izmir, Ankara and Istanbul between the years 2002 to 2010 by the TUIK's construction permits data in order to identify major differentiations of the commercial real estate production for each sector and year among each province (Figure 3.1-3.7). Second, those statistics are compared in respect of their increased populations between the years 2002 and 2010 (Figure 3.8) aiming to see the

increased shares for each city. Third, total floor areas are standardized to 1000 population for each sector and year in order to identify the supply amounts for the same population size (Figure 3.9-3.15).

In the real estate development, construction permits are regarded as representing the supply, whereas occupancy permits the demand for real estate.

3.1 SPECIFYING THE COMPARED CITIES

Istanbul is the most crowded metropolis in Turkey with more than two times greater population than the 2nd and 3rd developed cities in the country that are Ankara and Izmir. (Table 3.1). Moreover, these three cities' populations accelerate also with the contribution of migrations that shows the attraction of the city. Hence, entrepreneurs also become willing to invest to the city that improves the global capital accumulation and the connection to global economic forces of the city (Friedmann, 1986). These are such control nodes of the global economic system in the new international division of labor as the necessity of 'world cityness'.

3 Table 3.1 Total Populations of Izmir, Ankara and Istanbul Provinces

Total Population	**Izmir**	**Ankara**	**Istanbul**
2000	3.370.866	4.007.860	10.018.735
2001	3.422.817	4.074.666	10.305.451
2002	3.475.568	4.142.586	10.600.371
2003	3.529.133	4.211.637	10.903.732
2004	3.583.523	4.281.840	11.215.774
2005	3.638.751	4.353.213	11.536.747
2006	3.694.831	4.425.776	11.866.904
2007	3.751.774	4.499.548	12.206.511
2008	3.809.596	4.574.550	12.555.836
2009	3.868.308	4.650.802	12.915.158
2010	3.948.848	4.771.716	13.255.685

Source: Turkish Statistical Institute

3.1.1 Total floor areas of Construction Permits for Commercial Real Estate in Izmir, Ankara, Istanbul

According to the TUIK's construction permits data, the development level and competitive potential of Istanbul for the 'global cityness' is examined. With regards to the comparison, Istanbul can be seen as the leading province in the Table 3.2.1 and the total areas of each sector are cited in Table 1 that show the highest demand of the sectors in Istanbul and its capacity of the global specialty.

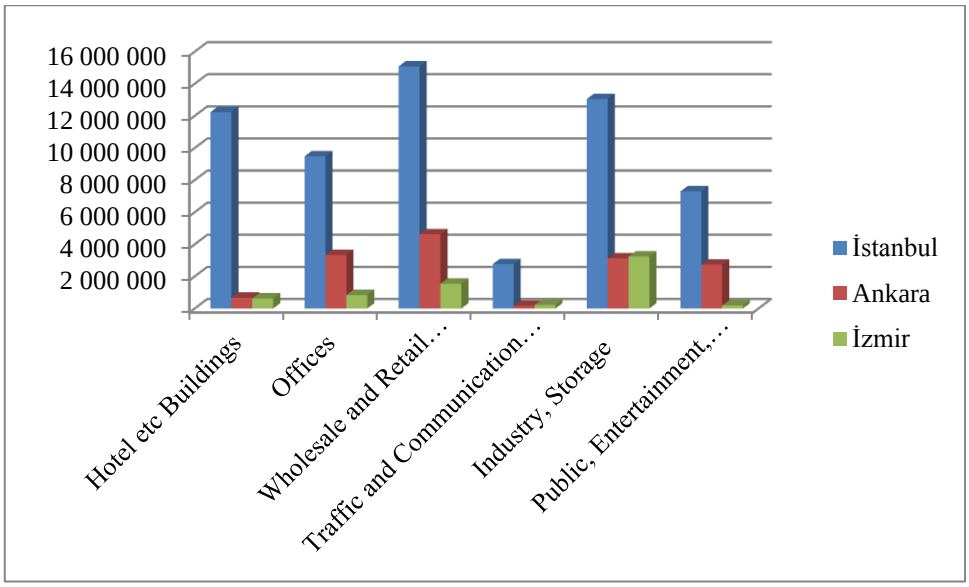
4 Table 3.2 Total Floor Areas of Construction Permits between 2002-2010 in the three developed cities of Turkey (m2)

2002-2010	Hotel etc Buildings	Offices	Wholesale and Retail Commerce	Traffic and Communication Buildings	Industry, Storage	Public, Entertainment, Education, Hospital
İstanbul	**12.230.346**	**9.476.929**	**15.077.604**	**2.762.362**	**13.048.945**	**7.293.354**
Ankara	674330	3325127	4620445	160160	3122401	2734476
İzmir	629530	834079	1537740	210140	3233147	181768

Source: TUIK: Annual Construction Statistics; 2002-2010

According to Sassen, proficiency services in respect of serving international level are the major indicators in the global network. With regards to the activities in Istanbul, the dominant sectors appear as wholesale and retail commerce, industry and storage, hotels and that indicate there is not only service sector development, but also command and manufacturing sectors as Friedmann's theory. In Istanbul, there is also a high increase in public, entertainment, education, health sector to develop the city in social aspect.

Istanbul is in the furthest among the other two cities in respect of the sectors in the globalization process.

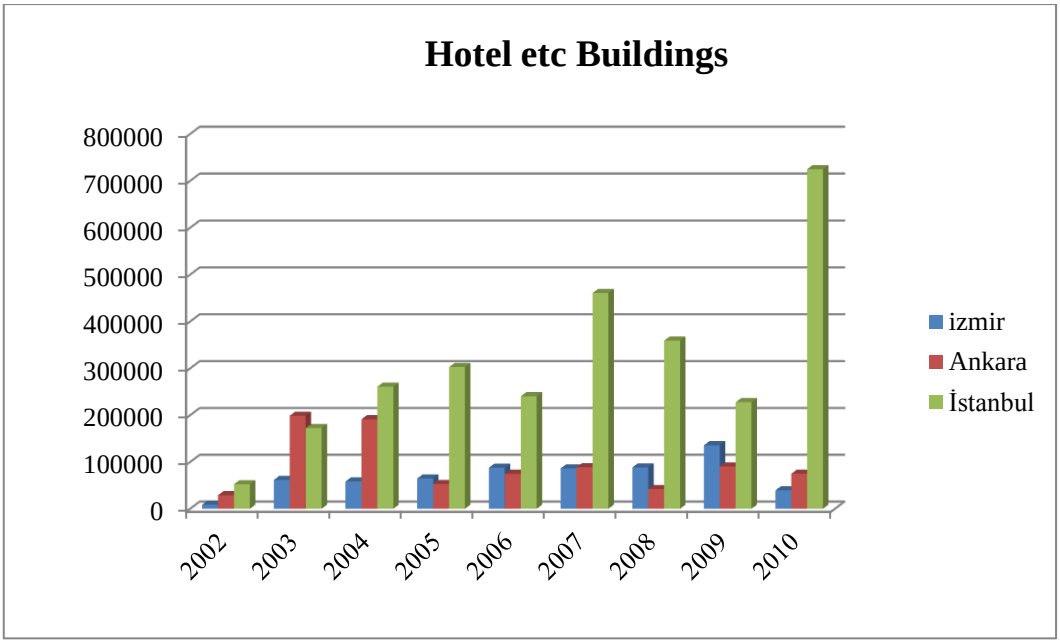


5 Figure 3.1 Total Floor Area of Construction Permits by Sectors in Istanbul, Ankara and Izmir between the years 2002-2010 (Source: TUIK)

3.1.2 Analysis of the Comparison of Izmir, Ankara and Istanbul by each sector for each year (2002-2010)

When the trends of each sector are analyzed by each year from 2002 to 2010 according to the construction permits data of TUIK, it can be observed that there is a general increase up to 2008, due to 2008-2009 global financial crises there is decrease among the sectors especially in Istanbul since its articulation to the global economy and in 2010 there is high increase again.

In Hotel etc Buildings sector, Istanbul's historic architecture and geographical location attract touristic attention which improves tourism sector and hence increases the demand and supply for hotels etc buildings. Building starts in those sectors have significant developments and total floor area value increased from 52.403 in 2002 to 724.870 in 2010 in Istanbul whereas Ankara stayed in 74687 and Izmir in 3930 in the latter year. Istanbul's international articulations beside its national and local interactions provide the city new incomers due to foreign companies, conferences, tourism, etc and this requires more hotels and related buildings that increase the demand and the investment for the sector in the city.

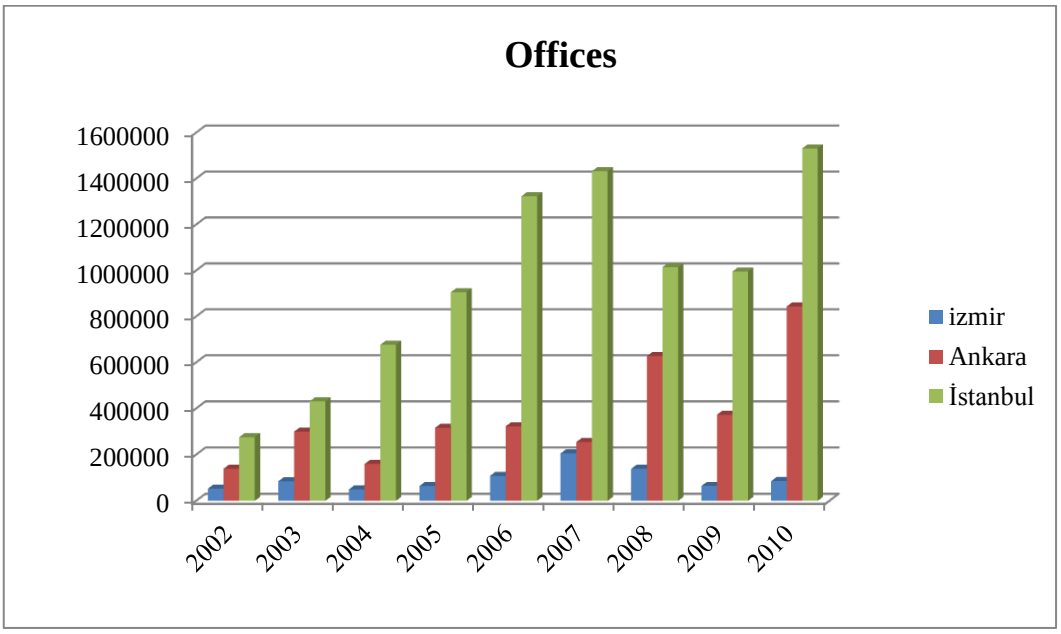


6 Figure 3.2 Total Floor Area of Construction Permits by Hotels etc Building Sectors in Istanbul, Ankara and Izmir between the years 2002-2010 (Source: TUIK)

In Office Sector, during the years from 2002 to 2010, each city shows fluctuation. As a growing finance center and increasing the number of foreign capital firms lead to the rise in demand for headquarter and other office buildings these are the primary reasons for the high level of supply for offices.

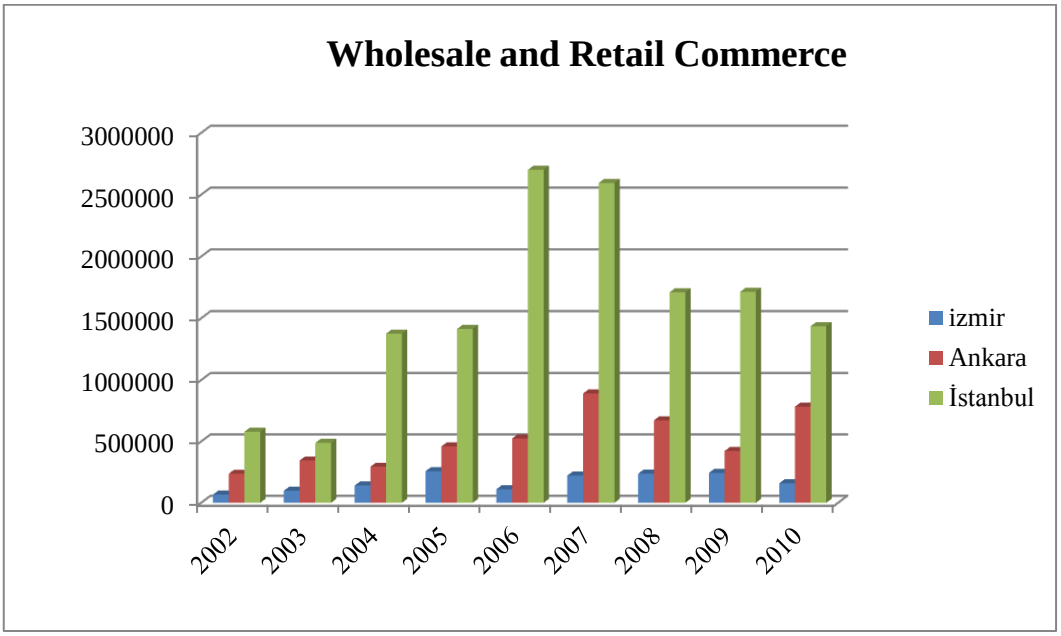
With the exception of the crisis year of 2008 and 2009, there has been increasing trend of office building supply in Istanbul.

In 2010, Istanbul has the highest level in the sector which equals to 1.531.152 m2 whereas Ankara has 843.439 m2 and Izmir has 85.457 m2. Istanbul and Ankara have relatively increased in the sector due to their effective roles in finance sector and demand for new foreign investments that contributes to their globalization process.



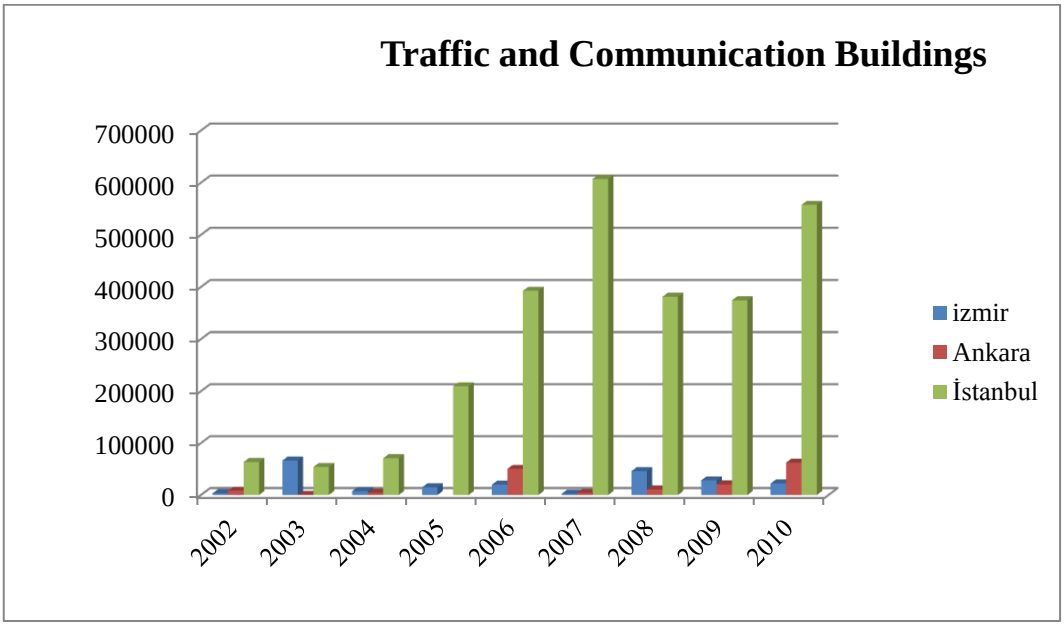
7 Figure 3.3 Total Floor Area of Construction Permits by Office Sectors in Istanbul, Ankara and Izmir between the years 2002-2010 (Source: TUIK)

In Wholesale and Retail Commerce Sector. In comparison with the all three cities, Istanbul has always the highest area in the sector and investments for shopping centers are the domains of global capital. Nonetheless, after the peak in years 2006 and 2007 in Istanbul, there is recession tendency in the sector, probably due to the land shortage problem and the saturation of the market.



8 Figure 3.4 Total Floor Area of Construction Permits by Wholesale and Retail Sectors in Istanbul, Ankara and Izmir between the years 2002-2010 (Source: TUIK)

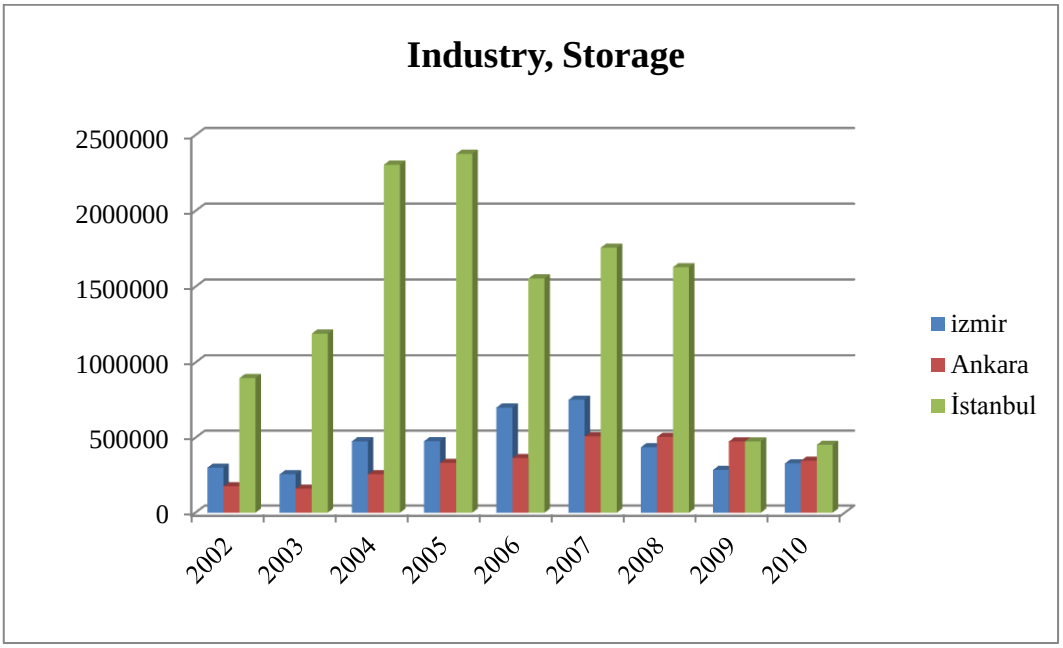
In Traffic and Communication Buildings' Sector, after 2005, emphasis on the infrastructure investments increases, particularly on communication sector. In total, the highest level in 2007 with 607122 m^2 and it decreased to 557374 m^2 in 2010. Developments in these sector, particularly in communication infrastructure is one of the major indicators of the consolidation of relationships with the world.



9 Figure 3.5 Total Floor Area of Construction Permits by Traffic and Communication Building Sectors in Istanbul, Ankara and Izmir between the years 2002-2010 (Source: TUIK)

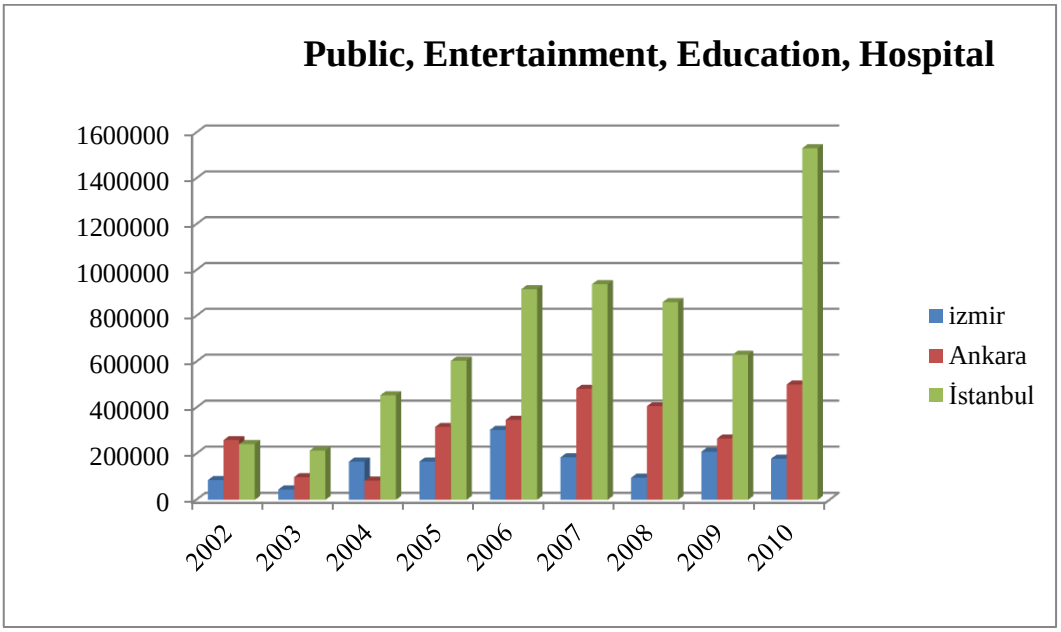
In the Industry and Storage Sector, the supply in Istanbul was high until 2008, then the amount of the increase is reduced. Besides the 2008-2009 crises, the decentralization policy for the industrial zones has impacts on the decrease. In the new plans, industry development, new as not included in the boundaries of Istanbul Metropolitan Municipality in line with the decentralization of the industry sector and increase in service sectors. Moreover, shortage of land in Istanbul is a factor that affects the fall in the development of industry. Hence, industry moves to the fringe as well as beyond the boundaries of Istanbul due to the decentralization policy and the availability of low cost land there is an increase in industrial building starts by 2004, and a sharp fall in 2009 that continued in 2010.

The trend in the development of the sectors in Istanbul between 2002 and 2010 indicates the process in lines with the world city concept of John Friedmann. There is not only proficiency services as Saskia Sassen mentions, but also there are developments Istanbul in industrial production, administration, finance and commerce in Istanbul.



10 Figure 3.6 Total Floor Area of Construction Permits by Industry, Storage Sectors in Istanbul, Ankara and Izmir between the years 2002-2010 (Source: TUIK)

Lastly, in Public, Entertainment, Education, Hospital facilities, although Istanbul mainly is the most developed city in the country, nevertheless, in respect of the per capita areas of education, hospital etc Istanbul is backward compared to the country average. However, deficiency of the public services appears to be overcomed as investments increase in entertainment and health services that started to serve to foreign citizens as well. Health services gained importance in recent years, hospital becomes health proficiency service attribute, yet not only related to Sassen. With respect to accessibility, service qualification and the price, Istanbul is a very convenient city in Europe consolidate Friedmann's thesis. The sector has a massive increase in 2010 and reaches to 1.531.720 m^2 floor area in construction permits.



11 Figure 3.7 Total Floor Area of Construction Permits by Public, Entertainment, Education, Hospital Sectors in Istanbul, Ankara and Izmir between the years 2002-2010 (Source: TUIK)

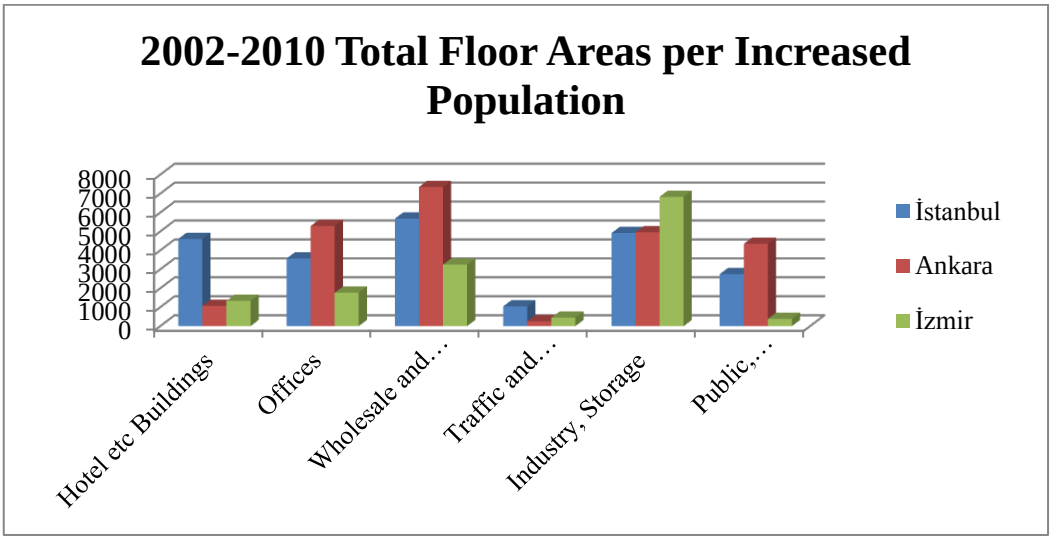
Regarding Friedmann's seven theses in terms of the process of the connection to global economic force, Istanbul's potential can be cited among the tables in addition to the ranking results among the previous studies. Istanbul has functional and hierarchical articulation to the world economy as well as global-local interaction when considered its pioneer up position in Turkey.

According to Friedmann's hierarchical thesis, it can be said that Istanbul's finance center, corporate headquarters, international institutions, business services, manufacturing, transportation and population size are the dominant aspects that has the basis in order to have global linkages in the 'complex spatial hierarchy'.

3.1.3 Total floor areas are compared in respect of their increased populations between Izmir, Ankara, Istanbul

According to the increased populations, total construction statistics of each sector of Izmir, Ankara and Istanbul are compared between 2002 and 2010. Then, within the every sector's construction statistics, the differences with the total development in the sectors for each three cities are analyzed. With respect to the total, Istanbul is ahead as an attraction center compared to two other cities in Turkey. Industry and storage sector have importance in the dispersion, in spite of the discourage policies promoting the idea of Istanbul's relative position of the globalization process.

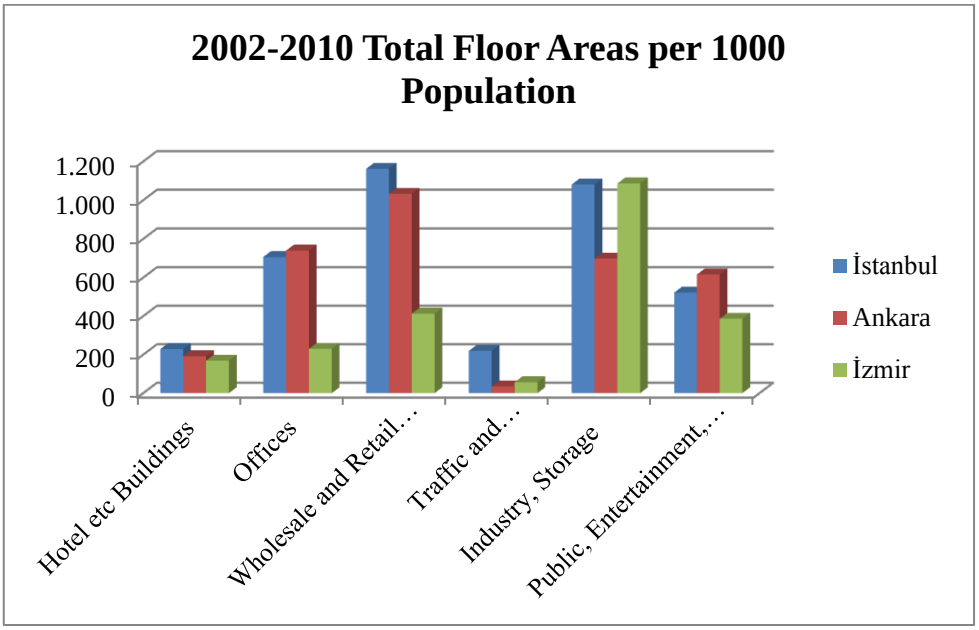
In respect to the Graphic 2, demands are higher mostly in Ankara and Istanbul. Ankara shows more rapid development in own scale. However, in compliance with the total populations and the total areas (m^2), Istanbul keeps its leading position.



12 Figure 3.8 Total Floor Area of Construction Permits per Increased Population in Istanbul, Ankara and Izmir between the years 2002-2010 (Source: TUIK)

3.4 Areas Compared in respect of Standardized 1000 Populations between Izmir, Ankara, Istanbul

In the investments of global capital, differentiation between the standardized investment amounts (it is standardized to 1000 population) shows the row of inland regional functions and the attraction of global capital in comparison with the other cities again in order to observe the change in the qualifications of regional hinterlands.



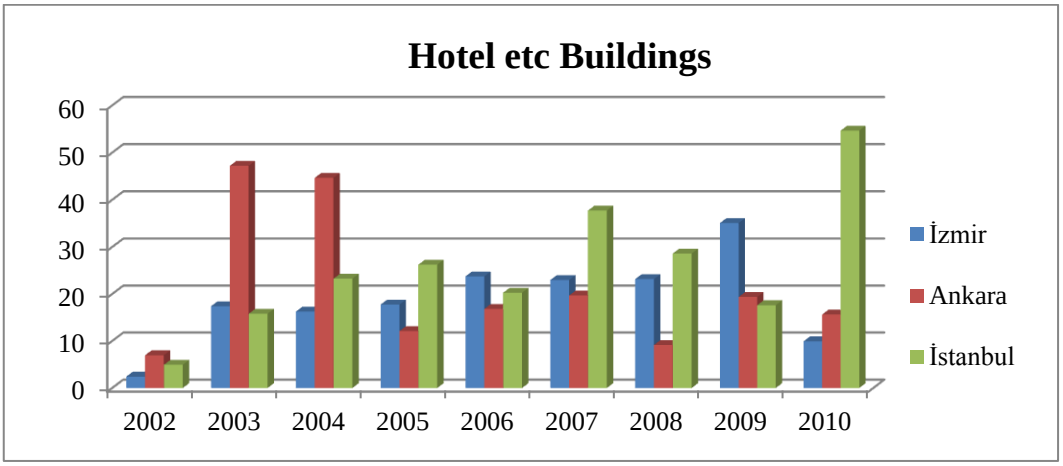
13 Figure 3.9 Total Floor Area of Construction Permits by Standardized to 1000 Population in Istanbul, Ankara and Izmir between the years 2002-2010 (Source: TUIK)

This standardization declares the basic service needs for each 1000 population in those cities. In this respect, by means of the population census of TUIK's Address based Population Registration System 2000 and 2010, each year's population has been calculated between 200-2006 by the formula;

$P_{(n)} = P_0 (1 + r)^n$

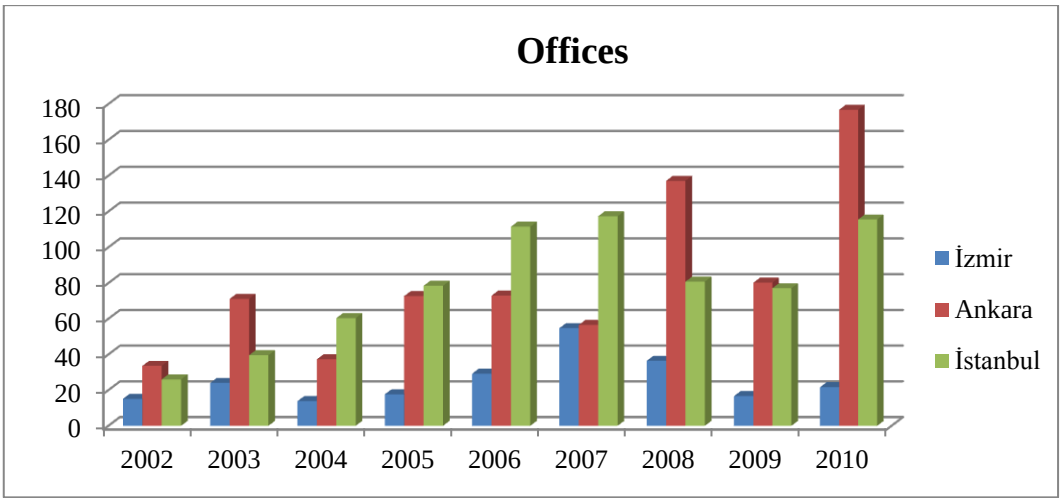
(P_n is the future population after n years, P_0 is the initial population and r is the growth rate)

After the calculations of each year between 2002 and 2010, the areas (m^2) per 1000 population are estimated.



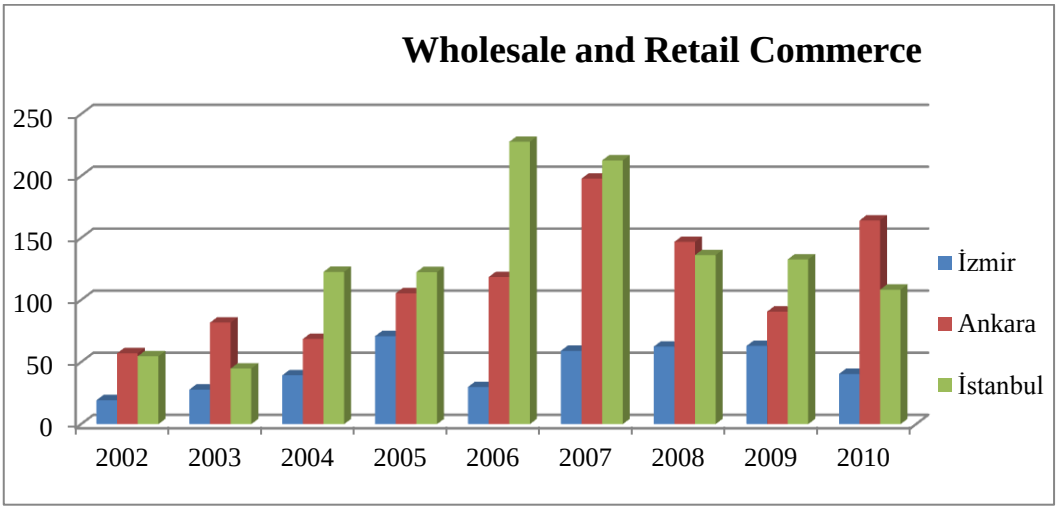
14 Figure 3.10 Total Floor Area of Construction Permits by Standardized to 1000 Population for Hotel etc Building Sector in Istanbul, Ankara and Izmir between the years 2002-2010 (Source: TUIK)

Istanbul has attraction in Hotel etc Buildings Sector generally, and it increases in 2010 again which creates a big gap with Izmir and Ankara.



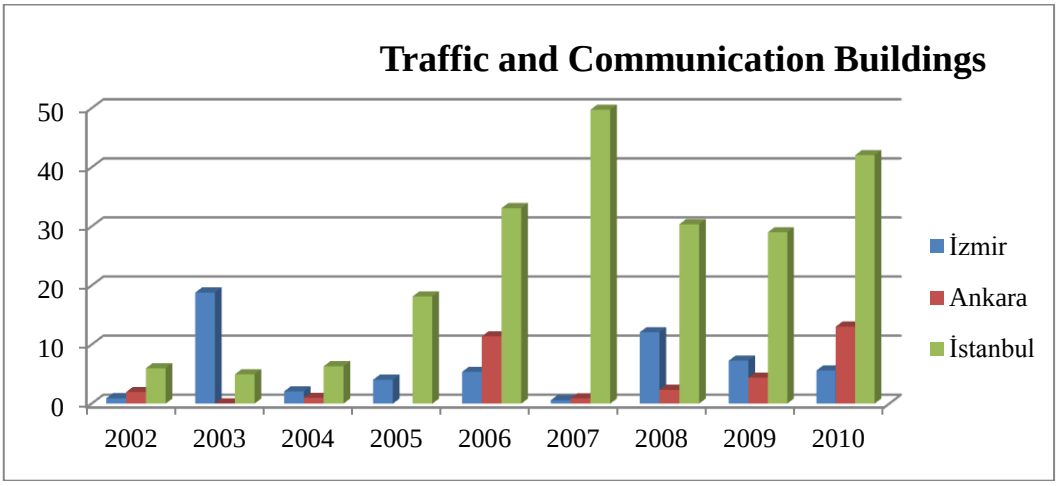
15 Figure 3.11 Total Floor Area of Construction Permits by Standardized to 1000 Population for Office Sector in Istanbul, Ankara and Izmir between the years 2002-2010 (Source: TUIK)

In the office sector, Istanbul and Ankara are the dominant cities in the sector with respect to 1000 population.



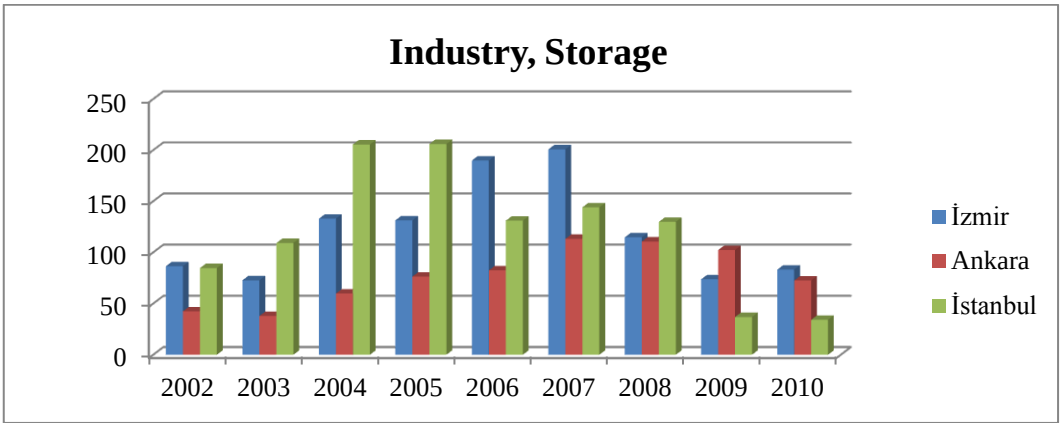
16 Figure 3.12 Total Floor Area of Construction Permits by Standardized to 1000 Population for Wholesale and Retail Commerce Sector in Istanbul, Ankara and Izmir between the years 2002-2010 (Source: TUIK)

In the Wholesale and Retail Commerce sector, again Istanbul and Ankara are the dominant cities as regards the standardized population.



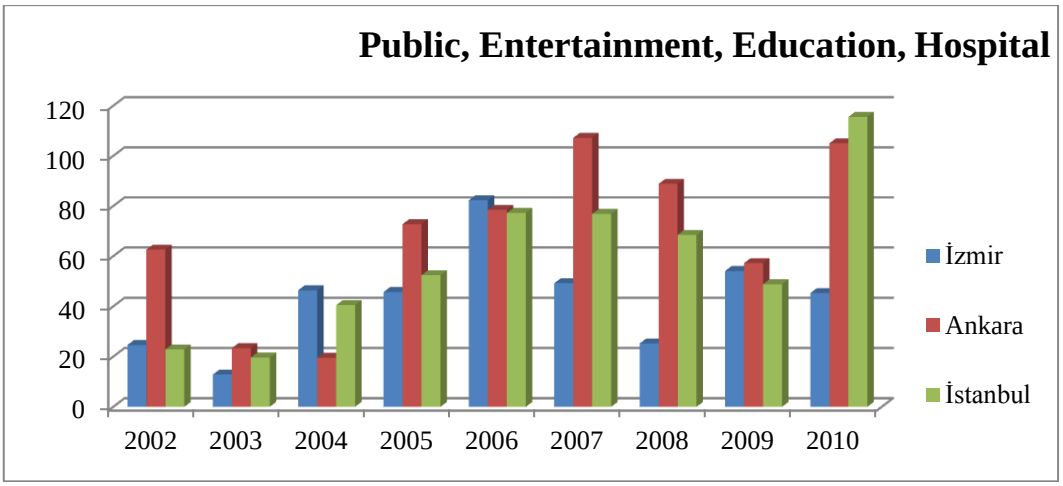
17 Figure 3.13 Total Floor Area of Construction Permits by Standardized to 1000 Population for Traffic and Communication Sector in Istanbul, Ankara and Izmir between the years 2002-2010 (Source: TUIK)

In Traffic and Communication Buildings' Sector, Istanbul has the only high demand between the years 2002 and 2010.



18 Figure 3.14 Total Floor Area of Construction Permits by Standardized to 1000 Population for Industry, Storage Sector in Istanbul, Ankara and Izmir between the years 2002-2010 (Source: TUIK)

Considering the total population, it can be seen that Istanbul has been far ahead from the other cities. However, when the amount is standardized to 1000 population, organized industrial zones appear and the competition increases. Therefore, industry sector does not relatively depend on the population. There are organized industry zones in Ankara and Izmir which have big pie in the sector. There are 13 Organized Industrial Zones in Izmir, whereas industry is discouraged in Istanbul. The share of industry in total employment in Istanbul is tried industrial establishments are decreased from %30 to %20, and to be transferred to the outside of the municipal boundaries, which are Gebze, Çorlu, Çerkezköy.



19 Figure 3.15 Total Floor Area of Construction Permits by Standardized to 1000 Population for Public, Entertainment, Education, Hospital Building Sector in Istanbul, Ankara and Izmir between the years 2002-2010 (Source: TUIK)

In accordane with 1000 population standardization of Public, Entertainment, Education, Hospital sector, they compete each other. Furthermore, Istanbul and

Ankara have significant increase in 2010, and Izmir has a lower share. There are not high differentiation between the cities in respect of the standardized sectors' areas. Furthermore, Istanbul is the city where the investments are mostly done in such as in wholesale and retail commerce sector.
It can be clarified that, Istanbul has importance in offices, hotels and the wholesale and retail commerce sector, however, it can also have global specialty in the industry and storage sector in consolidation with Friedmann's hypothesis.
Moreover, Istanbul is the most preferred city for the firms to invest due to labor intensive industry, cheap labor force, and global characteristics. Istanbul's global function in the industry sector beside the service sectors also supports its relation to Friedmann's thesis.

3.2 EVALUATION

Floor area is not related to population in Istanbul, since those supplies do not only serve to its population. This reflects in two dimensions. First, investments made already comprehend the needed services. Second, there are investments exceeding the population's need in Istanbul that shows the high demand not related to the overall population. For instance, office production does not reflect the need of the population only. Whereas, in Ankara there is a new development corridor for offices and the city is government center that also supports office production.

Due to the lacking of land, Istanbul cannot supply as large office floor area as Ankara and Izmir in service sector per employee that causes city constructed more intensive which deviates the analyze of the data for standardized to 1000 population.

Thus, the best results that give the globalization process of Istanbul can be identified by the total numbers.

As per employee floor areas are likely different between those three cities and floor areas cannot possibly be translated to employed population.

4. CONCLUSION

These analyzes indicate Istanbul's position in the globalization process that there is a rapid increase of industry sector until 2007-2008 as the manufacturing and command sectors continue to grow in lines with Friedmann's hypothesis. Even though the decentralization policy for industry in Istanbul is in effect, it still develops in the city and as well as within its region. Since, Istanbul is a big market that feeds these industrial regions; it keeps Istanbul's importance as an attraction center that consolidates the city's global articulation.

In 2008, as to the globalization process of Istanbul continues, serve of the new investors are coming to the city to exploit local, product marketing. A portion of the international capital is attracted by the shopping centers that develop trade centers in Istanbul. After decreases in the 2008-2009 crises, demand for each sector keeps on decreasing in 2010. However, foreign capital and the local investments still have

attraction on this sector that shows Istanbul's competitiveness and attraction potential in the globalization process.

In the service sector, there is a general increase in Istanbul especially in 2006-2007. After the 2008-2009 crises finished, market again bounces back itself and develops in 2010, yet cannot reach to the highest level. In the globalization process of Istanbul, service sector has been more important than manufacturing industry. Among the studies and world-city rankings before financial services in, Istanbul has already taken place in the rankings. After the crises, demand for new commercial real estates in service sector started to increase again. This can be interpreted Istanbul as a world city in relatively early stage of the globalization process, and with respect to Friedmann's theory; the city shows the world-city concept's features comprising importance of manufacturing industry and service sectors together.

Regarding Friedmann, Istanbul articulates to its regional, national and international economies by means of flows of money, workers, information, commodities, etc that integrates the city to the complex spatial hierarchy by articulating to the global economy and the space of accumulation of national and regional capital. Istanbul's presence as finance center, including corporate headquarters, international institutions, business services, manufacturing, industry, transportation and it high population size also embody its hierarchical integration.

In order to be a global city, Istanbul has the characteristics of world city in terms of finance, manufacturing, firms, administration, and proficiency services. Moreover, developed industry-storage, hotels, offices, wholesale and retail commerce sectors in Istanbul indicate its global activities in support of the world city concept of Friedmann.

To sum up, the commercial real estate production in Istanbul is relatively in the earlier stage of globalization as a world city as defined in line with the Friedmann's theory. Therefore, the global city functions develop as world city functions in Istanbul and with respect to the analyzes, studies and literature review have done, the developments in Istanbul are more in line with the growth of the world city functions compare to global cities.

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The Expansion of Renewable Energies - powered by Regional Energy Concepts?

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Key words: renewable energies, regional energy concept, regional planning, regional development strategies

Abstract

The climate change has raised the political debates on climate protection all over the world. In Germany the "Integrated Energy and Climate Concept of the Federal Government" (2007) stated the goal to significantly increase the use of renewable energy sources by 2020 and is in general pursuing the goal of decentralising the provision of energy in order to reduce import dependency. In a number of German regions planning institutions have already drafted initiatives towards a strategic energy portfolio and energy management as a contribution to the provision and security of technical infrastructure.

Renewable energy systems have strong spatial impacts and often depend on specific local and consumer related conditions which differ greatly throughout regions. Furthermore they require regional and supra-regional grids and coordination mainly because of the limitations of storing electricity. Thus the integration of renewable energies in concepts for energy-policy requires coordination with spatial planning. The principle objective of spatial planning is to cater for a balanced spatial development and to avoid undesirable spatial impacts, but in Germany it has no constitutional responsibilities for energy-policy.

The focus of the presentation is on the so-called Regional Energy Concepts and the identified regional actors who could support the increasing utilisation of renewable energies. Regional Energy Concepts may provide guiding principles to determine and agree upon the reduction of energy consumption and the use of local sources for energy generation. A scientific study "Strategic integration of Renewable Energies into Regional Energy Concepts – Implications and Recommendations from the Perspective of Spatial Planning" in order of the Federal Ministry of Transport, Building and Urban Development has been conducted during the period between October 2008 – September 2011 by the Faculty of Spatial Planning namely Prof. Dr. Hans-Peter Tietz, Dr. Jörg Fromme and the author. Based on selected case study regions there have been assessed measures and instruments of region-

al planning as well as examples of administrative structures and processes needed for the development and implementation of Regional Energy Concepts. Recommendations have identified promising strategic elements of Regional Energy Concepts with regard to the expansion of renewable energy systems and demonstrate starting points for the further development of regional planning instruments.

The target groups of strategies to integrate renewable energies in Regional Energy Concepts are regional planning bodies in collaboration with municipalities, the private business sector and civil society. Strategic approaches for the advancement of renewable energies at regional level try to mobilize stakeholders through networks or financial incentives. Other measures are e.g. systematic compilations of information such as wind and solar cadasters, regional planning directives identifying preference areas for renewable energy production and non-statutory development concepts. Although the strategic importance of regional planning and its statutory and non-statutory instruments has been acknowledged effective strategies at regional level are lacking to expand the implementation of goals set in the energy policy.

Safeguarding of Energy Supply as Part of the State's Responsibility and the Role of the Region – the Framework

In Germany the safeguarding of energy supply is in the responsibility of the state, however with regard to the usage of renewable energy resources and grid expansion private industry has taken over the demand planning for infrastructure. On the basis of the constitutional allocation of powers the government assures the safeguarding by highly efficient interventions that at the same time control the energy market. This assignment is conform to the competitive market and make economy and consumer responsible for specific objectives oriented towards the public welfare like social and environment compatibility, value for money and security of supply. For this purpose the government has put in place a vast number of legal provisions that are intended to help with the expansion of renewable energies.

As a result of legally compulsory norms the EU is obliged to increase the proportion of renewable energy resources in gross domestic energy consumption to 18% by 2020. To this end a National Renewable Energy Action Plan (NAP EE) has been in existence since the middle of 2010. Its energy policy agenda was complemented and extended by the ratifying of the energy concept of the government in September 2010. By 2050 renewable energy resources should cover 60% of the gross end energy consumption and 80% of the gross electricity consumption. The expansion concept of the

government provides for a considerable increase of plans and measures relevant to regional planning for wind energy use, energy plant cultivation and photo-voltaic.

The role of the regions consists above all of in fulfilling multiplier functions and taking over a pioneering role in the expansion of the usage of renewable energy resources by overachieving governmental minimum targets within their sphere of influence by, inter alia, raising the acceptance for expanding the use of renewable energy resources locally.

Although in specific cases these projects face considerable conflicts with competing demands to use and protect, there are clear opportunities for seeing what the usage of renewable energy resources offer for regional development. In carrying out their spatial planning functions the regions can as a result influence the expansion of the usage of renewable energy resources both in a supportive or restrictive way. The coordination between the energy-specific objectives and regional planning management requirements should be improved accordingly.

Definitions: The Regional Energy Concept

Regional energy concepts express a strategy oriented towards the public welfare to influence the energy future of the region. Currently, goals and models of the so-called energy turnaround are in the foreground that refers on the one hand to the reduction of energy consumption and on the other hand to the expansion of the use of renewable energy resources.

Thus the energy concept has become a planning task that focuses on the system of the energy supply addressed by the comprehensive spatial planning. By contrast, the comprehensive spatial planning with its interdisciplinary orientation refers to conflict minimization in a specified demand of space into consideration all the competing claims. By its spatial impacts the expansion of the use of renewable energy resources moves more and more into the central focus of spatial planning.

Possibilities and Limits of Regional Planning Control of the Expansion of Renewable Energy Resources

On principle, regional planning can solely control regionally significant projects. Additionally, requirement and admissibility of spatial planning and regulation must be given. Thus a considerable part of projects on the use of renewable energies that are normally considered in the drawing up of (regional) energy concepts are not included by regional planning. They include solar energy usage on building surfaces as well as in most cases also the privileged energetic bioenergy usage, the near-

surface geothermics and in general every activity to increase (building and plant-specific) energy efficiency. Independently of the regionally significance regional planning control only restrictively includes repowering of old systems of wind energy, locations of which are outside planning regulated areas.

Furthermore, the energy plant cultivation defies regulation by an efficient regional planning control. At the core the spatial planning regulations and control still concentrate on the use of wind energy with its implementation depending particularly on regional planning.

As the up to now available formal regional planning instruments for controlling the renewable energy resources have come up against their limits, many regional planning authorities draw increasingly on **informal concepts** of location control which, also, if not integrated into a formal spatial development plan do not have any legally binding regulatory effect.

Status of Regional Energy Political Initiatives and Concepts

In total 110 regions are known at present that pursue their own energy political goals and strategies. This concerns either territorial corporations with or without regional planning competence, planning regions as statutory associations or inter-municipal cooperation. It must be stated that the approaches, targets, motivation and intensity of dealing with this topic are rather different in these regions. Up to now the regional territorial structures of the “energy regions” have scarcely corresponded to the formal regional planning; the participation of the regional planning authorities in the development and realization of strategies and concepts is rather an exception. However, the federal states increasingly support and demand the performing of these functions by regional planning.

Explorative Case Studies in the Planning Regions

The case studies refer to the planning regions Hannover, Nordschwarzwald and Trier. Besides the region Hannover is a territorial corporation and in the meantime looks back on decades of experience in regional strategy development and process control in terms of energy policy.

Also Trier can boast of a more than ten-year old experience in this field. Both regions have in common that they have set up a wide network of actors and have energy and climate protection agencies at their side that work as multipliers for information and consulting campaigns that also (can) take over strategic functions.

The region Nordschwarzwald has dealt systematically with the expansion of renewable energy resources only since the association decided to draw up a formal partial regional plan of renewable energy resources. At first the regional expansion of renewable energy resources was intended to be comprehensively as possible controlled with this instrument, a regional energy concept has not been produced yet. Due to objections to the laws relating to regional planning from the supreme land planning authority the formal regional plan should only control the expansion of wind energy use and contain reserve areas where special importance is attached to certain regionally significant functions or uses when balanced with competing regionally significant uses for the location of open space solar power systems. In addition, the regional association intends to draw up an informal regional development concept with the focus on renewable energy resources for the expansion of its use.

Guideline for Regional Energy Concepts

The guideline comprises recommendations for action with regard to the development, realization and monitoring of regional energy concepts. This overall process can be divided into the preparatory phase, concept phase, realization and monitoring phase although the phases do not have to follow this order strictly.

Preparatory Phase

In the preparation of the concept development **network building** is of fundamental importance. Territorial corporations, chambers, associations and the regional energy industry, forestry, agricultural and waste management should be included. For larger regions the establishing of accompanying working groups can be recommended to be made up of the actors of the regional energy network. As the conception and realization of a regional energy strategy is an ongoing task it stands to reason that a suitable office within the regional administration takes over the lead for the development and realization of the concept.

Additionally the costs for the overall process must be calculated and the funding possibilities must be checked. The availability of human resources in the region must be checked as well as the subsidies from the state and the investment opportunities from the private sector.

The decision to draw up is a further important milestone in a regional energy concept and should be made in writing to document the necessary binding character and should be considered accordingly in the communication concept.

Concept Phase

A central element in the preparatory phase is the **analysis and goal definition**. Here the formal regional planning should be included.

For all the usage options of renewable energy resources the expansion potentials or rather the expectation values for the state of expansion in the target year (or years) will be assessed by technical experts. Therefore scenarios are set up that also include usage options of renewable energy resources that do not belong to spatial significant projects in order to generate a consistent and complete picture of “desirable” and “feasible” energy futures for the region and to compare them with the other goals and models for regional development.

The varied scenarios should show a clear spatial relation in the form of maps with descriptions of spaces that are kept clear for the extensive large scale projects of renewable energy resources. They form an illustrative basis for the definition of goals both in the area of the energy concept and regional planning. Each different scenario is based on a framework of data that contains quantitative data of energy supply and capacity for transformation plants. These are contrasted with the projections for energy consumption in the target year in order to ascertain the probably resulting regional cover percentage of the renewable energy resources of the scenario in question.

If need be, the results are fed in the current procedure of redrawing up or rather establishing the regional plan to bring about a coordination between the goals of spatial planning and those of the energy concept. If necessary, statements of aims can be taken over as text definitions in the regional plan. After the definition of goals has been politically coordinated the planning of the concept realization of the individual activities and their organizations follows.

Beside the safeguarding resp. provision of location and land requirements through formal regional planning there are further measures for instrumenting a targeted support of the expansion of a regional usage of renewable energy resources, such as:

- Project support programmes for investive measures incl. flagship projects
- Use of renewable energy resources on regional and local properties serving as a model
- Organising information campaigns (eg in form of a solar roofage catastre)
- Providing consulting for the local government and small and medium sized enterprises for promoting the use of renewable energy resources, and
- Founding a regional energy agency for the operative planning and realization.

These measures show the financial requirements for the development of the concept and its realization. Funding by citizens and energy cooperatives offer transferable funding models for projects.

Crucial milestones such as the decision to draw up, the founding of an energy agency, the call for tender of a concept expertise, assigning the expert and the official agreement on the goals should be supported by media along within a communication concept. For this purpose a professional PR agency should be assigned.

Monitoring Phase

Monitoring is of a high strategic importance since only the implementing of a regular success control guarantees that the planning of goals and measures can be followed up consistently and subsequently adapted to the actual development. Thus it is provided that either the right point of time for an updating of the concept can be found or that the planning of goals and measures can be specified continuously and can be further developed.

Recommendations for the Further Development of Regional Planning Instruments

Recommendations for the further development of regional planning instruments especially refer to the specification of new principles of regional planning to produce the spatial requirements for an expansion of renewable energy resources.

Overall Model of Regional Planning in the Context of Expanding the Use of Renewable Energy Resources

It must be determined whether the three-phrased concepts of spatial development should be complemented by a further concept “Spatial Requirements for Climate Protection and Energy Supply” and which specific concept should spatially be communicated. Instead concept 2 “Maintaining Essential Services” could be added with regard to aspects of renewable energy resources.

Spatial Planning on Federal State Level

It is suggested to elaborate a plan of spatial planning on federal state level regarding renewable energy resources acc. to § 17 Federal Spatial Planning Act (ROG) that contains spatially differentiated regional expansion goals of renewable energy resources in the form of quantity goals that in sum

correspond to the overall goal on national level. These goals could serve for regional planning as an orientation regarding the areas reserved for the expansion of the renewable energy resources in the region. This would require a discussion on the principles as defined by the spatial planning on federal state level at the different planning levels.

Strategic Environmental Impact Assessment

In connection with the quantitative goals for the regional level questions come up especially on the background of the strategic environment impact assessment about the conflict of land use from landscaping. In consequence, tangible criteria come up against a background of a restrictive control on the one hand. On the other hand the visualization for sensitive landscape areas to be considered as an element resulting from landscaping is requested. Additionally, a systematic review of the expansion of renewable energy resources along the federal highways/roads should be done that could have bundling and synergy effects also for a grid extension.

Space-oriented Reporting and Spatial Monitoring

Space-oriented reporting must be systematic and application-oriented. The explorative study and the findings in the case studies have shown that uniform standards are required for data collection on the different types of renewable energies such as:

- structure of land use, availability of land and quantitative land requirements for energy facilities
- structure of areas used for renewable energy facilities and cultivation of energy plants and their storage
- potential land use conflicts, including conflicts regarding the economic valuation of land
- spatial impacts (on ecology, natural resources, visual landscape, heritage, protection against flooding)
- emissions (especially of wind turbines and bio-mass facilities)
- infrastructure (generation of traffic, grid integration, transport chains and distances)

Information and Communication Methods

Region-related overall models and goals developed in dialogue potentially form a contribution to the specification of the “spatial requirements” as demanded by the ROG. This dialogue is possible with the available regional planning instruments. (s.§ 10 ROG, participation in drawing up spatial structure

plans). A variety of experience in facilitated discussions and mediation (eg airport expansion, settlement procedures of large-scale retail) can be used as well as the dialogue-oriented elaboration of regional development concepts in rural areas. For the role and shaping of communication processes on regional level procedures for the drawing up of regional plans should be accompanied by pilot studies. These should refer to both the use and coupling of available instruments such as goal definitions and monitoring (product level), and design of procedure with innovative communication elements (process level) and shape them systematically involving an accompanying evaluation.

Strengthening the Region as an Action Level in the Context of National Strategies for the Expansion of Renewable Energy Resources

The role of the region as an action level depends on the multi-level vertical coordination of the expansion of renewable energy resources and the inter-departmental horizontal coordination between the spatial-overall planning control of the expansion of renewable energy resources and the energy environmentally motivated quantity control of the expansion of renewable energy resources. The following models are possible:

- The federal states (territorial states) prepare their own energy concepts, coordinated with the EU requirements for the expansion of renewable energy resources and coordinate these with the regional energy concepts in the institutions of regional planning. This requires an additional horizontal coordination at federal states level between the energy and planning departments.

- The federal states (territorial states) prepare their own energy concepts in close coordination with regional planning via affiliated energy agencies which are in charge of the regional energy concepts. For a further strengthening of the regional energy competence energy councils are established at the planning offices involving important energy actors. The regional energy agencies take over the task of the vertical coordination of the energy political goals and strategies with the land energy policy. However the horizontal coordination between energy policy and spatial planning takes place at regional level.

- The horizontal coordination between energy policy and spatial planning is made to a large extent at federal state level in line with the “Focused Regional Plans for the Development of the Federal Territory”. The vertical coordination is largely taken over by spatial planning considering the feedback principle and the countervailing influence. They contain spatially differentiated expansion targets for renewable energy resources that, in sum, are consistent with the national overall goals. The national funding strategies and supports are adjusted to the regionalized expansion targets.

Finally it is to state that a regional database for the energy sector is crucial for the regionalization of the energy policies with their cross sectional character. With the establishment of Regional Energy Concepts an appropriate instrument is provided. Science based energy data for analysis, prognoses and monitoring as well as the development of the Regional Energy Concepts prepare the standards for methods, goals and strategies with the participation of the regional planning bodies. This matches with the "National Renewable Energy Action Plan" on national level of Germany as well as with the European context (Art. 4, EU Directive 2009/28/EG). Thus the framework of the regions can be strengthened when delivering and realizing custom expansion strategies of renewable energy resources within the multilevel system of energy policy: government, federal state and local communities.

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SHARED INFORMATION SPACE BETWEEN CROSS-BODER CAPITAL REGIONS

Kristi Grišakov [1]

Abstract

This paper is concentrating on the role of digital tools and open data in the planning processes of border-crossing regions in Europe. The research is concentrating on the case study of two capital cities Tallinn and Helsinki in the Baltic Sea Region. Although not an official border-crossing region, these two cities share a multitude a common projects and initiatives, among them an infrastructure project of a connecting tunnel.

This paper is concerned with both sides – the role of ICT in urban planning in general and the formation of a digitally enhanced cross-border space in particular – and is concentrating on the methodological challenges of such research.

This paper argues that for the emergence of a functional cross-border region, the discussion should steer from hard infrastructure and international logistics towards addressing urban values and citizenship ((Paasi and Newman, 1998), with an emphasis on creating common services and projects for a shared urban space. Secondly, the use of digital tools for the planning of border-crossing regions is a matter of understanding the intricate relationship between physical and virtual spaces as well as the dynamics of the relating communities (Augiri, 2008). It is not a matter of choosing applicable tools to use, but rather to outline the needs and goals of a border-crossing space towards a more ubiquitous, augmented version of itself. Such kind of augmentation would take into account the specific characteristics of a border-crossing space in moving towards an interactive use of urban space and more efficient communication. Thirdly, the actors included should encompass knowledge from the fields of cross-border cooperation, urban planning issues and urban informatics. It is relevant that viewpoints from different spatial scales and sectors (Hall, 2008) ranging from private to public are exchanged.

However, the key methodological question in tackling such a topic is how to encompass this complexity of cross-border actors and scales and not to disregard the activities taking place both in the virtual and physical realm. Especially regarding the case study mapping and analysis of an existing digital layer of such a cross-border space in a constant change of flux, also due to the quick change of technology and relation to digital tools, platforms and applications.

To create opportunities for the border-crossing region to develop further through shared knowledge and active use of ICT, would be a benchmark example in planning

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border-crossing regions on an international scale. The use of digital tools in urban planning is a rapidly developing research topic, this research would enrich the discussion with introducing the specifics of a cross-border urban area in creating place-based interaction and communicating shared urban values.

1. Introduction

The influence of information and communication technologies (ICTs) has transformed the ways we communicate and interact with one another. Technological networks have become more accessible, more ubiquitous and more mobile, changing our concept of place by transforming our sense of proximity and distance. Consequently, urban and regional planning and the methods for mapping, data visualization and citizen participation are changing as well. The physical and virtual are no longer perceived as separate dimensions but have come to influence and define each other. Concepts such as augmented spaces, locative media and mediated localities all suggest an increased attention given again to the physical place and the local. However, extensive understanding of the digital tools and methodology in urban planning has not yet emerged. Different disciplines (geography, computing sciences, social sciences and architecture) researching the topic are developing software programs and applications of their own, targeted knowledge and tools are produced only in a certain field of interest. Furthermore, there is a need to move beyond deterministic discourses about the impacts of technological networks on society to understand in rich empirical detail at the complex ways in which ICT technologies are being used in real ways in real places (Graham, 2005). There is a need to develop more integrated urban and ICT strategies that concentrate on digital agendas instead of specific tools and look at larger urban planning processes instead of a single neighbourhood or urban setting. Thus this research is looking at the field of ICTs in urban planning through the framework of regional planning processes, namely the border-crossing city.

Planning border-crossing regions/cities should be about creating transnational social spaces and crossing cognitive barriers not merely transnational exchange and regional politics. A more flexible approach towards planning and visioning border crossing regions/cities has to be developed that would include not only the planning elites (city officials, local cooperation and governance networks), but also the knowledge of the citizens. Cross-border territory needs to be conceptualized as cohesive in the sense of being well-appointed all the way round, so that people will want to attach themselves to them, work in them and develop them (Faludi, 2007). Paasi (2002) has suggested a checklist of forces to evaluate to what degree a border-crossing region does exist and how it might develop in the future. He emphasizes that territories emerge, develop and exist through an “institutionalization” process resulting from the simultaneous and interconnected working of four different forces (“shapes”) that all have to be included in the process of planning a border-crossing region/city.

Thus the case of the border-crossing city forms a rich framework for the research of integrated urban and ICT strategies because of the variety of actors and interests involved as well as the representation of different spatial contexts, ranging from the

international to local. The research in concentrating on the case study of two capital cities Tallinn and Helsinki in the Baltic Sea Region. Although not an official border-crossing region, these two cities share a multitude a common projects and initiatives, among them an infrastructure project of a connecting tunnel. Helsinki-Tallinn case is characterized by the physical distance (80km) between the two cities, slow progress of official cross-border initiatives but a range of informal activities and flows linking the two metropolitan regions. Additionally, both cities take pride in the active development of public ICT services, good access to the Internet throughout the city as well as a high number of Internet users. However, the visioning and planning processes of the border-crossing region are not concentrated on active ICT strategies such as common mobile applications, open data initiatives or even Internet platforms.

Therefore, the aim of this research is to concentrate on the role of ICT in urban planning in general and the formation of a digitally enhanced cross-border space in particular. This digitally enhanced or augmented cross-border space would be a 'shared information space' between two capital regions, thus emphasising not only the shared data and information in cloud format but concentrating also on the importance of creating shared and mediated spaces. This paper is looking into the preliminary findings from he Helsinki-Tallinn case study paving the way towards the development of a cross-border digital strategy supporting the planning process of the border-crossing region. A framework for further research is proposed that would address both the complexity as well as future development opportunities of the case study through the use of the scenario planning method.

The main contribution of this research lies in enriching the discussion of digital tools in urban planning with introducing the specifics of a cross-border urban area in creating place-based interaction and communicating shared urban values. To create opportunities for the border-crossing region to develop further through shared knowledge and active use of ICT would be a benchmark example in planning border-crossing regions on an international scale.

This research proposal is structured as follows. First, Chapter 2 will provide the theoretical framework discussion the relationship between the city and ICT as well as the latest turn towards the locative media and open city concepts. Chapter 3 is concentrating on the thematic of the border-crossing cities of Europe and relating planning processes. The primary case study of Helsinki-Tallinn with its characteristics and problems is presented in Chapter 4 along with the preliminary findings. Chapter 5 will describe the framework for future research operationalizing the scenario planning method. Chapter 6 will provide the conclusions of the paper.

2. ICT City

The "network city" has been presented as a "new" old way of thinking about cities in the ICT (Information and Communication Technologies) age (Drewe, 2005). Cities have always been recombined through new technological networks (Thrift, 1996). Such new technologies (such as the telegraph, telephone or nowadays Internet and mobile devices) are subtly recombined with the spatial and social practices of the workers and managers, operating within the complex material and social spaces of

the City (Thrift, 1996). Thus there is no big picture of the modern City to be had but a set of constantly evolving sketches (Thrift, 1996). Graham (1998) has critically explored the different conceptualizations of the relationship between information technologies and space and place. He identifies three dominant discourses as 'substitution and transcendence', 'co-evolution perspective' and recombination perspective'. The first one is the idea that human territoriality can somehow be replaced by using new technologies. The second perspective argues that both electronic 'spaces' and territorial spaces are necessarily produced together. Most importantly, the final 'recombination perspective' draws on recent work in actor-network theory, emphasizing the fully relational view of the links between technology, time, space and social life. Indeed, cyberspace is not anymore discussed as possibility to replace physical space (Mitchell, 1995; McLuhan, 1964), nor are they considered to be two separate entities, where electronic space helps to deliver us from the current frustrations with the world (Castells,1996; Boyer, 1996). Opposite to the Internet replacing space or causing erosion of a "sense of place" (Massey, 1993) the ICTs are increasingly more discussed as re-enacting the importance of place and home as both geo-imaginary and socio-cultural precept (Thielman, 2010).

2.1 Augmented City

As most lifestyles are digitally enhanced in many different as well as subtle ways, the 'virtual' and 'physical' spaces are no longer argued to be two separate dimensions (Mitchell, 2005). The physical and the digital environments are defining each other and concepts such as public space and "third place", identity and knowledge, citizenship and public participation are all inevitably affected by this reconfigured urban space, the augmented city and augmented urban spaces (Aurigi, 2008; Manovich, 2006). Furthermore, the sense of continuity and belonging derives from being electronically networked to widely scattered people and places we care about (Mitchell, 2003). While geography tries to characterize the mixing of code, data and physical place as "DigiPlace" (Zook and Graham, 2007), cultural and media studies refer to location based media" or "locative media" (Tuters and Varnelis, 2006). Regardless of the terminology it refers to the spatial turn in media studies and the media turn in geographical studies, also known as "geomedia"(Manovich and Thielman, 2009).

The two emerging technologies – the geospatial web and ubiquitous computing – suggest an intertwining of the network and the local (Varnelis, 2008). The two conceptual formations diverging from this development are locative media and mediated localities. Locative media turn implies that digital media is applied more and more to real places, thus triggering real social interactions (Varnelis and Friedberg 2008). Mediated localities attempt to re-animate the place of thought – mapping as means of expressing self through tagged objects and thus creating places that form a network of relations and connections.

Through the options of tagging and tracking with GPS, Wi-Fi and RFID tags we have seen a mass spread of mapping and geocoding in all areas. We are dealing with places in the form of a network of relations and connections between control space and ludic space (McQuire, 2010). In a nutshell, we can leave our mark on the world

or read the marks others left behind, re-creating place in a Borgesian digital map (Varnelis and Friedberg, 2008). Furthermore, November, Camacho-Hübner and Latour (2010) point out that digital technologies have reconfigured the whole experience of mapping into something else we wish to call navigational platform. The contemporary flâneurs could well be the young digital natives exploring the city through their mobile devices and being copresent with others at a distance through the aid of networking technology (Varnelis and Friedberg, 2008).
It may very well be, that 'augmented spaces' and 'geomedia' are only new concepts for old discussions about the relationship with consciousness to place and other people? We can also question the necessity of such extensive data production through posting, tagging and visualizing our surrounding space. There are also concerns over privacy matters and most importantly the ownership of the data produced. Finally, there is the question about the further use of the all the continuously produced and reproduced data – how can it support urban planning processes?

2.2 Open City

The merging of digital media technologies and urban life is leading to the creation of new resources in the form of huge volumes of data on all manner of urban processes. The evolution of networked technologies has always come in waves – databases, e-mail, the world wide, web, the social web – all offering new ways for doing things differently and each have posed financial and organizational opportunities and risks to those having to decide on whether to adopt or ignore them, or how adoption should take place (Powell, Davies and Taylor, 2012). The term Web 3.0 is now increasingly more used to describe the increasing emphasis on data and its description. Web 3.0 technologies facilitate new forms of linkage between data (as opposed to links between web pages) and support new forms of manipulation and presentation of data (Powell, Davies and Taylor, 2012). In relation to the Web 3.0 new buzzwords have emerged such as 'data commons', 'open city' and 'open data'. 'Open data' advocates call on owners to make it available so that it can be easily accessed and discovered, easily manipulated and licensed for re-use. 'Data commons' refers to combined data collections accumulated by the citizens either consciously or unconsciously on the use of all manner of products and services (De Lange and De Waal, 2012). 'Open city' is used more as a buzzword than a coined term and could be partly linked also to the 'Smart Cities' concept. However, in this context the open city rather refers to the city as a platform for data commons. 'City as a platform' can thus be viewed as a playground for emergent models of social organization that do not acknowledge any distinction between bottom-up and top-down approaches (De Lange and De Waal, 2012). Like the early Internet, which relied on public funding and open standards to foster innovation (Zittrain, 2008), the open city movement hopes to demonstrate that the sum of individual actions can give rise to more or less coherent forms of knowledge, understanding and behavior.
Examples include Open Data Eindhoven[2], that attempts to open up government data

[2] http://www.openeindhoven.nl/

for meaningful reuse in collaboration with citizens to foster new content and application development. Open Cities Project[3] is co-funded with European Union and aims to validate how to approach Open&User Driven Innovation methodologies to develop future Internet services for Smart Cities. The focus here is also on exploring crowdsourcing tools, enabling the use of public data for innovative mobile services and most importantly, the validation of pan-European Platforms for Crowdsourcing and Open Data.

While the process of applying open data is still in its infancy, the underlying principles of collaboration between multiple stakeholder parties and raising citizens awareness as well as the ownership of this data, propose a new way of creating transparency, simplification and exchange. It is not so much about choosing the specific tools to use, but rather about the goals behind utilizing these data resources – for urban planning, for citizen services, for commercial use or all of the above? More specifically, is the emergence of an open border-crossing city possible?

3. Border-Crossing Cities of Europe

While the last chapter discussed the relationship between the networked technologies and the city, concentrating on the latest development of concepts such as 'geomedia' and 'open city', this chapter will explore further the cross-border city thematic. The aim is to provide a better understanding of the background for the emergence of border-crossing cities as well as the core problems of the planning process.

Over the last decades, regional cross-border cooperation in Europe has led to the emergence of various forms of interregional and intermunicipal institutional frameworks and operational bodies (e.g. Euregios, Eurodistricts), as the European Union has simultaneously been actively cultivating and encouraging the disappearance of state borders as well as the emergence of border-crossing regions/cites. Cross-border studies have focused on the liberalization of borders and the increasing interaction due to globalization; the changing character of borders has been intensively described (Metroborder, 2010). Political geography as well as political science analyses have almost exclusively focused on organizational and governance issues including barriers to cooperation by mostly actor-centered perspectives (Newman, 2006, Paasi, 2005). As the institutional borders of Europe are not finalized and open to political struggles (Eder, 2006)□, the emerging border-crossing cites of Europe could be considered both the 'guinea pigs' and the catalysts in this process.

Although border-crossing cities by definition should foster border-crossing contacts, irrespective of mutual differences, but inspired by common interests and attractive opportunities (Buurisink, 2001), the everyday reality of this cooperation faces a number of difficulties. The territorial dimension of cross-border co-operations often has an almost arbitrary background and unclear political mandates (Metroborder, 2010). Forming border-crossing regions/cities is not only complicated because its rather seen as a pooled territory of the respective domestic institutions, but this lack of territoriality reveals itself also when imagining a common public for the future

[3] http://opencities.net/

cross-border regions/cities. Furthermore, current research about border-crossing cities (Ehlers, Buursink, and Boekema, 2001) indicates, that linking up and integrating paired border cities is not merely to be deduced from spatial adjacency, it is far more a matter of social relations and mental proximity. The (ir)relevance of spatial adjacency is put to test by a new type of paired border cities, namely '*connected cities*' (Buursink, 2001), that have been paired by new infrastructure, as in the *Sund* between Denmark and Sweden and in the *Channel* between France and Great Britain. It could be argued at least from the spatial adjacency perspective that in the case of Helsinki-Tallinn we are also dealing with connected cities, the relating tunnel project for the future supporting this argument.

Future cross-border planning efforts have also been ensured by the 1999 European Spatial Development Perspective (ESDP) but also with the Territorial Agenda (2007) and Europe 2020 strategy. There are significant differences in the administrative bodies that have been set up to initiate, plan and implement cross-border cooperation among the varied *euregios* of the European Union (Kramsch, 2001; Pikner, 2008; Metroborder 2010). The critics of "EU-phoric" cross-border cooperation argue that hardly any transfer exists between functional cross-border cooperation and processes of social integration (Strüver, 2005). For the emergence of a functional cross-border region, the discussion should steer from hard infrastructure and international logistics towards addressing urban values and citizenship (Paasi and Newman, 1998).

This can be seen as a critical response to the largely uncritical belief, held particularly in the European Union, that border cities and border regions should be seen as micro- scale laboratories for the larger European Union that dominated the debate on cross-border governance. '*People may associate themselves globally with images, brands, destinations but still live their daily lives in political communities. The human imagination is unlimited, but willingly restricted, as it is focused on voluntary associations of comfort, pleasure and adventure that fits its specific identity*' (van Houtum and Ernste, 2001). As a result the border-crossing cities have boost themselves even more inside, to their respective communities. The established of a cross-border region should directly improve inhabitants' opportunities to live, work and leisure. In practice citizens start to cross the border when it is also economically beneficial (work/housing opportunities) and convenient (combined services).

4. Towards Connected Cities

This research started as an exploration of digital tools contributing to the urban planning and governance of border-crossing regions. After working with the theoretical background of planning practices of border-crossing regions as well as the use of ICT in urban planning and public participation, it was determined that the underlying issue is in the quality and availability of data and information to utilize into digital tools ranging from service platforms to social media based applications. While the concepts of 'data commons' and 'open data' address the problem from the stakeholders' perspective – opening up public databases, inclusion of citizens and their participation as well as the cooperation with the private sector and NGO's – geomedia addresses the importance of inclusion of different spatial scales as well as

the mapping and visualization of various layers. As mentioned, the cross-border territory is not flat and should be regarded as an interactive environment. The latter can be described as an open environment that connects a number of closed systems to one another. The concept of interactivity is thus always in relation to an environment. In addition, interactivity is not a neutral or value-free entity but rather an entrance point to different spatiality, sphere or neighborhood (Jong and Schuilenburg, 2006).
In the case of Helsinki-Tallinn the contextual conditions are of high relevance and case study is a comprehensive research strategy covering the logic of design, data collection techniques, and specific approaches to data analysis. The suitability of the case study method was supported by the fact that multiple sources of data had to used to collect the evidence needed to solve the research problem. A preliminary data gathering was conducted regarding the case of Helsinki-Tallinn to identify first of all the core planning issues regarding future border-crossing region of Helsinki-Tallinn, the actors involved and the current use of digital tools for planning processes in both core cities. Preliminary research consisted of extensive desk research as well as focus group meetings held as part of cross-border events, both official and unofficial. The desk research consisted of official policy documents about the cross-border project and relating studies. Equally important were newspaper articles, conference presentations and statistical data regarding both metropolitan areas. Additionally to searching materials related to the border-crossing project, the digital initiatives from both cities also had to be mapped. In this aspect, the web presence of any form of cross-border activities or discussion was of relevance, as well as local open data and geomedia initiatives.
In this chapter the Helsinki-Tallinn case study with its key characteristics as well as the preliminary findings will be further discussed.

4.1 Helsinki and Tallinn

The Tallinn-Helsinki case is not what you would consider traditional border-crossing cities. Tallinn and Helsinki are both capital cities and as the primate cities of their countries, they are embedded in the national economies but also in national culture of their respective countries. The friendly relationship between Finns and Estonians has developed on the basis of spoken language and culture, by which Finns and Estonian belong to the same group, but this alone would not cause identity shifts and cultural homogenization (Zetterberg, 2004; Alenius, 1998).
Since Estonia escaped from Soviet-imposed isolation, the connections between the two countries and capital cities have intensified. The physical distance between Tallinn and Helsinki has almost disappeared due to the intensive traffic and communication flows. As Tallinn has become a Nordic gateway and transit destination for Eastern riches and Helsinki locates close to a technology hub, in the land of Nokia, then one could easily envision these national capital cities forming a single functional entity (Berg, 2002; Kurik and Terk, 2000).
The future of Helsinki-Tallinn, city pairs reaching towards each other, has been a topic of lively yet somewhat episodic discussion since the early 1990s, with persistent talks about a twin-city as well of viewpoints emphasizing strong

interaction without twinning (Ruoppila et al.,2007; Raagmaa, 2000). One persistent topic that has evolved in connection with the plans of cross-border cooperation has been the undersea tunnel meant to be uniting and further integrating the two cities.
The current overlaying discussion of Tallinn-Helsinki border-crossing region is primarily about infrastructure connecting the cities and the future common region with the rest of Europe. In a situation with two separate capitals with their respective city regions, the physical infrastructure in a form of a tunnel seems to be the common reference point and a shared project to imagine common futures. However, infrastructure is not only about concrete and logistics, it is also about accessibility to information.

4.2 Preliminary Results

The cross-border territory of Tallinn-Helsinki and their respective regions is already a rather abstract space, relating communities can be transient and dispersed. Information turbulence between the two regions and well as the discussion about a common border-crossing region is very much enclosed in national and municipal information systems. The information space of Tallinn and Helsinki seem to be as separated as the cities by the Finnish Gulf.
International sites bring together information from both cities and citizens, but it is often segregated on a national and language basis. The accessibility to information for the layperson but also for an urban planner or a developer of digital tools is made difficult by the scattered information between various institutions and the small amount of cohesive open data. At the same time Tallinn and Helsinki have the geographical closeness necessary to operationalize information to be used in everyday activities. The access to the neighboring city is fairly good due to geographical proximity (2h by ferry); however, the information about further activities in that urban space is limited. There is a change of a mindset needed in regarding frequent visitors from both sides of the gulf as something more than regular tourists and rather as temporary urban citizens. Secondly, the accessibility of information about various events and activities has to be closely connected to common services and the continuous development of new cross-border applications, thus utilizing data from both cities and using collected data for the further planning of the cross-border region.
Although there is a lot of effort towards developing and popularizing ICT and the use of digital tools in both capital regions, key differences need to be communicated regarding a common information space targeting the cross-border space. These differences include public-private collaboration activities, mentalities towards public participation and privacy as well as the actual use of digital tools in tackling urban issues. Although the creation of a common information space has been referred to as a relevant topic in the projects of networking organization Euregio, it has not been clarified, what is meant by information space, what kind of information is targeted, what would be the goals of a shared information space for the development of a border-crossing region ect.? From the official documents of Euregio, the Euregio 2010 Forum and Demos publication, it appears that information space is broadly understood as media space. While it covers different types of media, it is rather old

media centered, focusing on television and print media. The goals for the development of a common information space are unclear; the focus is rather on media as such and not about its relevance for the border-crossing region.
The publication by Demos, Helsinki situated think tank, is more innovative in proposing possible digital tools for the further development of this „urban union". They make a division between activities of the administration of a border-crossing region and possible grassroots initiatives. The emphasis is put on a cooperation portal providing service for citizens from both sides. The goal of the portal is to share both everyday information (such as tourism information) or find partners for cooperation projects. Thus, the portal is combining two functions without acknowledging different interest groups. A question emerges if something meant for everyone, from tourists to entrepreneurs, will be actively used by anyone?
The most recent initiative is the Talsinki.net knowledge platform, developed as part of the ongoing Helsinki-Tallinn transport and planning scenarios project[4]. The platforms' target is to "*collect and make accessible material that is relevant for the urban and traffic planning professionals, politicians and other project partners, concerned with the development of Helsinki Region, Tallinn Region and the common issues between the two*", listing actors, media coverage, policies, infrastructure projects, planning documents and other research. So far it's the only public cross-border collection of such materials.

4.3 Towards Common Information Space

In a situation, where technology is rapidly developing and popular applications change on a yearly basis, the challenge for urban planning is not so much about developing its own digital tools to compete with this constant change, but to collect existing information catered by different actors and applications as well as supporting local private and grassroots initiatives in developing their tools in a more systematic ways. Often these initiatives are scattered, lack funding or clear focus. Having an overview of the existing field of digital tools in an urban region supports in finding uncovered areas for development and strategic ways of operationalize existing ones. When discussing a common information space between two capital regions, the focus has to shift from the cross-border networking organizations and entrepreneurs focusing on urban informatics to NGOs and other urban communities focusing on urban issues and working in different spatial scales with the supporting aid of digital tools.
It appears that also the role of the expert planners has started to remind rather the task of an interaction designer concentrated on knowledge management. This means that information and ideas produced by various parties have to be analyzed and the interests of various stakeholders have to be communicated. Information is data that has been given meaning by a way of relational connection. This "meaning" can be useful, but not necessarily. Knowledge is then the appropriate collection of information, such that it's intent is to be useful - it is a deterministic process (Ackoff, 1989). Knowledge management refers to processes that are employed to manage the creation, dissemination and utilization of knowledge and that the organization's

[4] http://www.euregio-heltal.org/httransplan/

structures are developed to support knowledge processes (Gupta et al, 2003). However, this means that various data systems and tools supporting it have to be in place. In addition to data collected by the public registries and databases, many other parties produce knowledge in addition to the municipal organizations. Only after having an understanding of knowledge produced by the active urban agents in the region, can further goals be set about the knowledge that is lacking and the digital means to produce it. The competence and willingness of various actors to work interactively is one of the key issues here. Furthermore, the point of view of the inhabitants also has to be stressed as data is often given out on a very functional basis and public participation requires that data is also given back to the citizens and put to further development of common good.

4.4 Future research

For the future development of a shared information space a digital strategy is needed outlining the specific needs and goals for the development of the border-crossing region with an adequate timeframe.
Next stage of this research will concentrate on the variety of cross-border actors from the public and private sector as well as urban NGO's and activist groups to collect opinions of experts working on different spatial scales and sectors, while maintaining a focus on urban planning and 'open city' concept. The expert opinions along with other data gathered will be operationalized through scenario planning method.
The scenario planning method is not about predicting the future, rather about perceiving possible futures in the present (Schwartz, 1996). Any strategy involves a selective focus to identify one of more concepts, images and/or principles that are 'meaningful' and orienting (Healey, 2007). Scenario planning method is about finding new opportunities, storytelling, questioning assumptions and pinning down the critical uncertainties (Verwijnen). The construction of future scenarios helps to determine alternative futures and play out different decisions (Healey, 2007). A set of scenarios can be viewed at least from 3 inseparable viewpoints: the set of relationships, alliances and conflicts; the spatial aspects of these same relationships; the concrete nature of all the materials these relationships utilize and construct (Secchi, 2002). Thus, the scenario planning method is used in the last stage of the research to determine a flexible strategy for shared information space development between Helsinki and Tallinn. While the scenarios themselves are created to depict the range of development paths, the end strategy for a shared information space is the optimal route that is built on the core knowledge gathered from scenario planning method.

5. Conclusions

This paper discussed the preliminary results of the research about the cross-border region of Helsinki-Tallinn for the development of a shared information space between the two metropolitan regions. That shared information space has to stretch further than the occasional turbulence of information between old and new media channels crisscrossing the capital regions, but has to strive to create further

knowledge – intent for the border-crossing region. Furthermore, although there is willingness and initial project ideas from the networking organizations and other stakeholders, they lack a cohesive vision about the impact or the outcome that a cross-border digital agenda should have in the framework of the future border-crossing region. From a more practical side, the confusion stems from the overall definition of digital terminology, knowledge about the use of various digital tools in relation to physical space and experiences with public participation.

For the emergence of a functional cross-border region, the discussion should steer from hard infrastructure and international logistics towards addressing urban values and citizenship), with an emphasis on creating common services and projects for a shared urban space. The concept of 'open city' was discussed as a potential strategy component for the future development of the border-crossing region. Establishment of cross-border data commons would support the emergence of wider variety of common services and applications. Re-use of the data could be actively encouraged. The role of geomedia in the data production calls for a renewed consciousness towards place and other people – visualization of previously invisible flows and nodes as well as creating entrance points to different partialities.

The development of the shared information space for a border-crossing region is a matter of understanding the intricate relationship between physical and virtual spaces as well as the dynamics of the relating communities. It is not a matter of choosing applicable tools to use, but rather to outline the needs and goals of a border-crossing space towards a more ubiquitous, augmented version of itself. Such kind of augmentation would take into account the specific characteristics of a border-crossing space in moving towards an interactive use of urban space and more efficient communication. The actors included should encompass knowledge from the fields of cross-border cooperation, urban planning issues and/or urban informatics. It is relevant that viewpoints from different spatial scales and sectors (Hall, 2008) ranging from private to public are exchanged. The scenario planning method is used in the last stage of the research to determine a flexible strategy for shared information space development between Helsinki and Tallinn to prepare a wide range of possible decisions based on an entire range of possible futures.

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TERRITORIAL RISK AND VULNERABILITY: PLANNING TOOLS AT MUNICIPAL SCALE

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Abstract

The paper focuses on the link between territorial planning and risk management. Starting from the results of an interdisciplinary and international research called Quater-Interreg IIIB, we will underline the importance of territorial knowledge and the role that planning can play to mitigate risks such as floods, landslide and other natural and anthropical hazards. The aim of the research was a kind of certification than can help the municipality to learn and operate on their territory. We worked to elaborate a method that can measure the short term and long term decision that public administration should take to switch a risky land in a secure territory. We worked to understand how the territorial planning can mitigate the effect of hazard especially on the vulnerability components. Toscolano Maderno (Bs) and Seriate (Bg) are the two case studies that we will present here. Furthermore, we will introduce the Emergency Plans that we provided for this municipality and the link that we made with the ordinary tools of planning. In fact we don't think that it is necessary to introduce a new kind of tool, but we believe that the importance of the knowledge of a territory can be integrated in ordinary planning tools, in accordance with the 12/2005 Act of the Lombardy Region, and be helpful in the phases of mitigation, prevention and response. An important role that planner can have is in the recovery phase, especially if we introduce the concept of building a resilience city.

1. Introduction

Every year national and local communities face increasing costs due to the environmental and technological catastrophic events. The impact of these events on the environmental and territorial system is really complex. Due to the increase and the overlapping of the environmental costs, all institutions (public and private) feel the need to change the government system from emergency to prevention and mitigation actions.

Either in ordinary planning or in sectoral planning like the one of emergency, the role that occupies the knowledge of the territory is fundamental. In fact, this analytic phase can become the common base for a planning that takes into

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consideration the intrinsic characteristics of the territory (represented also from the presence of risks), towards a development and a sustainable and harmonious management of the territory.

The goal of the research QUATER – INTERREG IIIB, that will synthetically be illustrated in the first paragraphs of this paper, is the development of a "procedure handbook for the territorial risk management". The different workgroups involved in the research have analysed: territorial vulnerability, flood, landslide, chemical and seismic risk, vulnerability of public buildings. The final goal of the research was to integrate the territorial risk prevention into the ordinary planning system of the public institutions.

The research was applied on a local scale. In the Italian context, the municipal authorities are competent in urban planning and they have a deeper knowledge of the context. The research has been tested on three municipalities with different risks: Seriate (BG), Toscolano Maderno (BS) and Lainate (MI).

On the Municipality of Toscolano Maderno and Seriate the research has not been concluded with the application of the QUATER method, but it has been continued with the predisposition of the Municipality Emergency Plan (PEC). The General objective of the restricted instrument of planning like the PEC, is the predisposition of adequate models of intervention and procedures of emergency to place in action in case of a calamitous event, in order to support the population affected. A description of the innovative elements that characterize these PEC is reported in the 6th paragraphs and followings. The application of the methodologies used for the integration of the prevention of the territorial, anthropic and technological risks, in the ordinary planning and in the daily operating of the Local Agencies is slowly starting to pay off, but there is still lot of work to do because these applications do not result as isolate cases, but enter instead in the daily practise of the planner.

2. The research methodological framework

The methodology framework (analysis and assessment) is based on the evaluation of the potential damages due to the territorial risks that characterise the municipal context. Two aspects can be identified in the general methodology: the risk analysis/assessment and the response system. The risk analysis depends on four interrelated factors:

1. Sensitivity – intrinsic characteristics and resources of the municipal territory/context (natural or human);

2. Exposure – number of goods, people and activities potentially involved during the event;

3. Vulnerability – the tendency of goods, people and activities to get damaged;

4. Hazard – the characteristics (intensity, frequency, areas involved) of the hazardous events.

Risk is the result of all these aspects. The analysis of the hazard and vulnerability can be extended beyond the municipality boundary (local level and territorial level). The aim is to verify the presence of a potential hazard near the municipality boundary that can have some indirect effects on it.

The response system, based on the risk analysis, is characterised by two intervention levels on the territory: the first consider the emergency management measures and risk mitigation interventions (these actions must be implemented in a short period); and the second level regards the territorial risks prevention measures, that must be implemented in a long period (and that must be integrated in the planning and land uses plan instruments). (fig. 1)

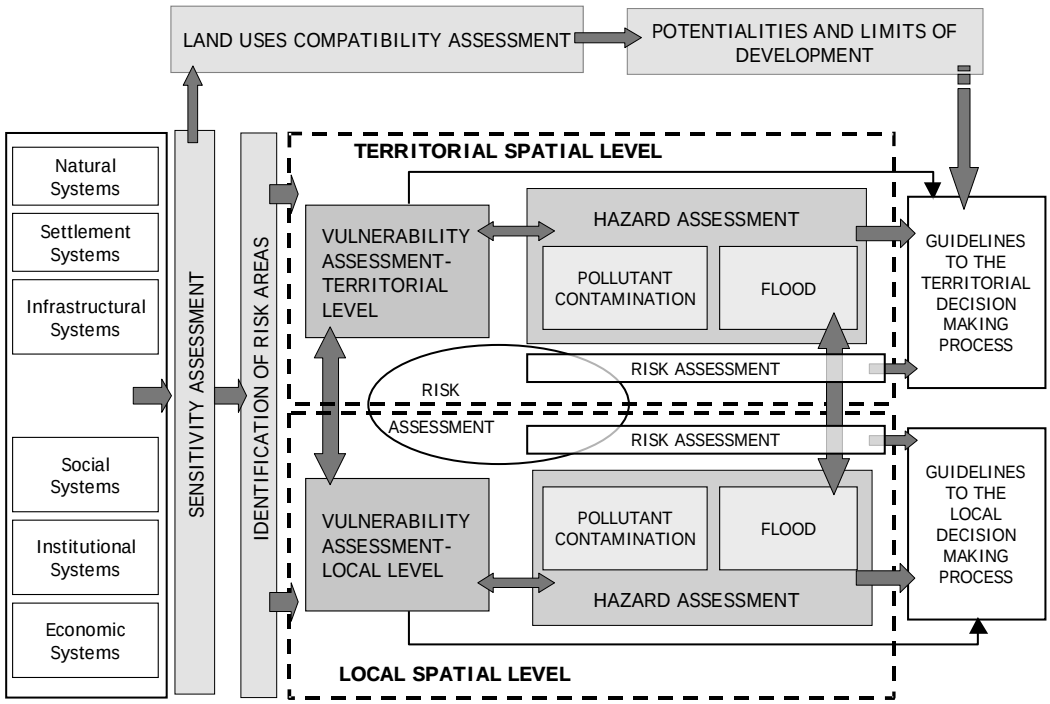

Fig. 1: The research methodological framework

3. The territorial vulnerability analysis and assessment: methodological framework

The method for the territorial vulnerability analysis consists of three steps: a preliminary analysis step (level 1), a detailed analysis step (level 2), and a further detailed analysis step (level 3).

The outcome of the preliminary analysis step (level 1) is the determination of the Basic Knowledge (territorial information/data) concerning the municipality. In particular, this level pinpoints the distribution of the population and the localisation of strategic buildings.

The second step (level 2) outcome is an investigation into the sensitivity by means of specific indicators, varying according to the characteristics of each municipality, and a preliminary exposure and vulnerability assessment of the territorial system for each risk.

The detailed analysis step (level 3) enhances the results of the previous step by means of a specific analysis (of the different hazards and the area of the territory involved).

The outcomes of these three analysis steps help municipal authorities to select an action and intervention system aimed to decrease/reduce territorial vulnerability. Every step uses parameters and indicators that can be used to assess vulnerability and carry out a periodic audit of the certification procedure. (fig. 2)

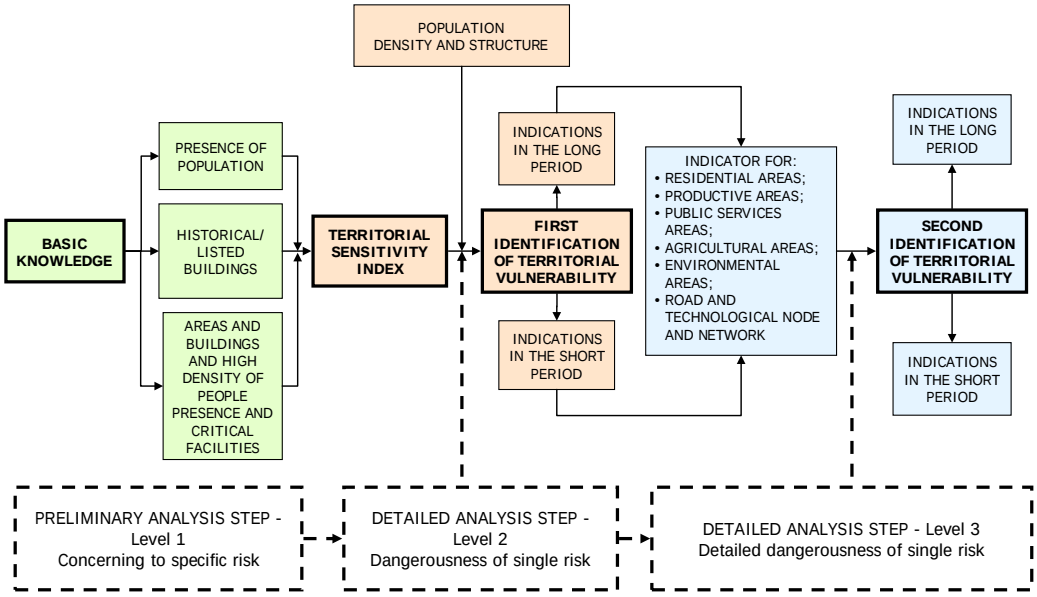

Fig. 2: Steps of territorial vulnerability analysis and assessment method

4. Indications

Like we have already mentioned, after the detailed analysis, the method allows the recognition of some indications in the short period and in the long period. The short period indications are related to emergency management measures and risk mitigation interventions (Municipality Emergency Plan, information campaign for the inhabitants, risk mitigation interventions on strategic buildings). The long period indications are related to territorial risk prevention measures, which have

to be integrated in the planning and land use plans instruments (for example a program for new location of strategic buildings and a land use code).

Table I shows an example of short term and long term indications in the case studies of Toscolano Maderno; the indications are divided in mitigation interventions, Civil Protection actions and planning measures (the red line divides short term indications from long term indications). All the indications are related to the analysis that we have made on the Municipal territory.

In the case studies analyzed, the town/city plan was in use from various years and little or nothing it has been done in order to introduce measures of mitigation which not only refer to the dangerousness, but also to the vulnerability of the territory. The long term indications, in the future phases of updating the plan, would have to be integrated or to be held in consideration in order to create the connection between ordinary and sectoral planning which was foretold, with the support of the procedures of maintenance of the certification.

Table I: Example of short term and long term indications

Indications framework						
	A	Mitigation interventions	B	Civil Protection actions	C	Planning
SHORT TERM	A1	Programming and design of hazard mitigation interventions.	B1	Updating of Municipal Emergency Plan with all risks present on the territory.	C1	Development of internal Municipal office collaboration: development of Territorial Information System.
LONG TERM	A2	Municipal programs finalised to hazard analysis.	B2	Design and development of information campaign for inhabitants.	C2	Verification and comparison with future land use plan and territorial risk.
	A3	Realization of hazard mitigation interventions.	B3	Development of a program to stimulate the intervention to keep the safety of the buildings.	C3	Development of municipality program for new location of strategic buildings.
	A4	Reduction of exposure level for inhabitants and strategic building.	B4	Realization of inhabitants information.	C4	Identification of alternative roads in dangerous areas.
		... ...	B5	Development of municipal Emergency Plan.	C5	Development of new location for public services buildings.
			B6	Arrangement of information about territorial and network vulnerability.	C6	Development of programs and systems for territorial and network monitoring; improvement of Territorial Information System.
				... ...		... ...

An important aspect of the proposed method is the verification of goals and actions. The actions efficacy and the targets gained can be checked in two ways: a continuous enrichment of the Basic Knowledge (which improves the efficacy of the indications) and the monitoring of actions over time.

5. The methodology realized for the redaction of the Municipality Emergency Plans

Like it was suggested in the indication of short term from QUATER methodology, for the Municipality of Toscolano Maderno and of Seriate, we have elaborated the Municipality Emergency Plans (PEC). If we go back to the three parts that compose a PEC, we can then disclose the methodology set in action in the specific cases present in the introduction and highlight some innovative elements and the relations with the planning and the management of the territory.

Firstly, in both cases we have elaborated a multi-risks plans that also takes into consideration those hazards not explicitly cited in the reference norms. The choice that we carried out is the result of the consideration that the hazards are intrinsically part of the territory and all hazards, in the first analysis, must be considered and analyzed with the exact same relevance. Only after a careful assessment it is possible to decide which ones are negligible in the plan.

Regarding the general structure of a PEC, it is composed of three fundamental parts: the Basic Knowledge, the Operative Part and the Part of Verification and Updating.

The Basic Knowledge contains:

- a territorial organization that must be elaborated independently of the presence of risks;

- the analysis of the direct or induced dangerousness, also from a close Municipality;

- the individuation of the vulnerable elements exposed to the risks (es. hospitals, schools, zones at elevated population density, technological infrastructures, etc);

- the individuation of the available resources (es. rapid-reaction force at local and regional levels, areas of reception and/or shelter, vehicles and materials);

- the drawing up of the risk scenes.

The Operative Part identifies the systems of monitoring and premonitoring an event for the expectable risks (es. the alluvial risk) and the drawing up of the aid models (individuation of members of the Local Unit of Crisis, that comprises the rapid-reaction force of the Municipal territory; the localization of over-local useful forces of intervention in the case of particularly serious events or for a particular typology of risks; for every force involved the "who - does - what" of the tasks).

The Part of Verification and Updating comprises:

- the verification of the PEC by drill and, in the case of incidental events, through the former post-analysis of the procedures of emergency action;

- the updating of the PEC through the individuation of protocols of updating of short and long period.

For the realization of the PEC we have used GIS, which allows to share and to update the information arranged systematically in a fast and effective way.

6. The Basic Knowledge of the Municipality Emergency Plans

In the Basic Knowledge, after a general organization of the territory object of planning which comprises of thematics like: climate, geomorphology, hydrography, we have analyzed the urban settlement and the infrastructural system, the distribution and the characteristics of the population, the economic activities, agriculture and public services, the emergency infrastructures and the resources available.

The first phase comprises of the analysis of the population census and the mapping of the strategic and vulnerable buildings; of the emergency areas available (subdivided in waiting areas, reception areas and recovery areas); of the public infrastructures service and of the available resources of Municipal property that we have at disposition in the case of a necessity. Every information obtained in this first part of the Basic Knowledge of a PEC becomes mapped by GIS and in such a way we provide a cartography which is always updated and available for the PEC, but also for the ordinary planning.

The ideal successive step, today still not completed in these two cases, sees this basic information of the territory, at the moment independent from the typology of present risk, contained into a Municipal SIT (Territorial Information System) where all the councillorships can reach and contribute in the given terms of updating. The structuring of the PEC for this purpose has concurred to supply a common working base in which, once the financial resources have been obtained, a Municipality will be able to construct the SIT.

Another important and innovative element in this type of sectoral plan, regards the drawing up and the continuous updating of the file dedicated to the emergency areas; they contain important information on the accessibility, the extension, the equipment of independent infrastructure service, etc. Often neglected inside the norm of writing of the PEC, usually the planner localizes the areas without entering in their specific characteristics.

The second phase of the Basic Knowledge of a Municipality Emergency Plan, regards the analysis of the dangerousness and the risks present in the territory. For the Municipality object of the research, the analyses have already been carried out from the work groups of the project QUATER.

The heart of this phase of surveying the PEC are the risk scenarios, meant from the Regional Directive like verbal and synthetic descriptions, accompanied with an explicative cartography of the possible effects on the population and on the infrastructures, by adverse meteorological events (flooding, also gave away dams), of geologic or natural phenomena (earthquakes, landslides and avalanches), by forest fires, or industrial accidents or of dangerous substances in freight accidents. From the point of view of the risk analysis, it is important to emphasize the presence and the involvement of various disciplines and expertise in this phase. These experts have not only supplied a risk assessment on the present territory, but also a reflection on the relation between these risks and the development of the actual urban area, on the effect of the future forecast urban growth.

The abilities of the planner to represent the territory through a reasoned and synthetic cartography are fundamental in order to give back a general picture of the risks and the complex systems that compose the territory, that a specific scientific sector does not succeed in condensing. In fact, in the phase of knowledge and planning of the territory, we would have to already be notified of the presence of a risk in our area of surveying.

Once again the relation between sector planning, the one of emergency and the ordinary planning emerge. In fact, the new Regional Law of Lombardy 12/2005, considers it obligatory that there is a risk analysis for the plans at different territorial levels, the problem is that all the risks are not taken into consideration and there isn't a directed connection between the ordinary territorial plans with the emergency plans that instead consider, as we have previously said, all the types of risk. Localization of a public structure, for example a school, would have to take into consideration not only the economic reasons, but the planner would have to also take into consideration the degree of dangerousness in the different territorial risks that characterize the area to settle. This information is contained in a PEC.

It is obvious that not always, in our territory, we can refer to new constructions, but we always have to take into consideration public buildings already constructed: in this case, given the impossibility to eliminate the risk, the intervention of mitigation would be opportune and useful in order to diminish the possibility of damage caused on the buildings. In both cases, a deeper knowledge of the territory is necessary, whether in punctual terms (es. localization of the building), or in the analysis of various systems that compose it.

The localization inside the Plan of Government of the Territory of particular services involved in the emergency phase and in accessible areas, is not subordinate to eventual risks (e.g. municipal civil protection, Red Cross, fire brigade, etc.), it allows to supply a ready answer to the emergency and therefore a more effective and efficient management of the event. If we placed side by side these two instruments and a Plan of the Urban Traffic, we could then be sure that

the time of reacting to the event and the dispersion of the forces involved will be limited.

Also regarding the second phase of the Basic Knowledge of a PEC, we have written up a series of explicative cartographies of the dangerousness, the present risks and of the risk scenarios that we have decided to adopts for the drawing up of the intervention models.

Another innovative aspect that deserves further discussion, regards the cartography of the risk scenarios. This cartography has been planned in such a way as to have in an only picture all the reference for the portion of territory interested in the calamitous event, with the indication of the strategic and vulnerable buildings, service infrastructures, that have been involved in the event. Where possible, we specified the civic number of the building involved and consequently we gave a brief description of the characteristic of the single inhabitants. In fact, in the PEC, we have also attempted to distinguish the sensitive population, that is the young people, old people or disabled ones who need particular assistance in the cases of evacuation of the areas at risk.

7. The Operative Part of the Municipality Emergency Plans

As anticipated, the Operative Part of a PEC also characterizes the systems of monitoring an event in the premonitory phase and it drawing up the intervention models. The first aids to the populations are directed and coordinated by the Mayor of the Municipality involved in the event. The Major, in accord to the Italian legislation, is local authority in matter of Civil Protection. In the case of events which cannot cope with local resources, the Mayor could ask for assistance at the Prefect who activates and manages the over-local forces of intervention. Therefore, the first step in the drawing up of the intervention model is the localization of the local forces of intervention, they will then be involved in the Local Crisis Unit (UCL) and the over-local forces will support it.

For every risk scenario contemplated in the Plans, we have identified specific procedures of intervention that, in this methodology are made up of:

- one matrix time/components of UCL; where we identified, subdivided for temporarily and succeeded passages, the activities to place in action part of every member of the UCL (for clarity, the main forces of over-local participation are also comprised in the matrix);

- one matrix activity/responsibility; where, for every identified activity we specify the responsibilities of every member of the UCL (if he is responsible for an action, if he is simply informed or just supporting);

- a job description for every member of the UCL; where the activities placed in the head of every Agency are explained. The job description contains all useful and indispensable elements to know in an emergency

phase (es. telephone numbers of the managers of technological networks, etc.);

- a cartography that summarises all the main information of the intervention procedures.

Where possible, as an example for the alluvial risk, all these procedures of intervention are multiplied for the pre-alarm phase, alarm or emergency phase. For the not expectable risks the procedures are formulated only for the emergency phase.

Particularly innovative and interesting in the contents is the job description and the cartography of the intervention models. Like we had observed for the cartography of the risk scenarios, also in this case we can find in a single cartography the necessary information for the activation of the intervention procedures: one clear map of the area interested in the event with the indication of the interested vulnerable elements, the indication of the ways to escape and the usable emergency areas. This cartography, beyond the graphical part, is physically structured with a series of "pockets" where the main intervention procedures have been collected (matrix time/components UCL, matrix activity/responsibility UCL, job description for every member of the UCL and a list of the population have been involved for typology)

8. The part of Verification and Updating of the Municipality Emergency Plans

All the "architecture of emergency" adjusted with this methodology, introduces to the third fundamental part of a PEC, that Verification and Updating of the data and information are contained in it.

The verification of a PEC generally occurs by drill, in the case of incidental events, through former-post analysis of the procedures of emergency. Closely correlated at the verification of the plan there is the periodic updating, necessary in order to be able to manage the emergency better, because the PEC must be used as a dynamic and modifiable instrument in consequence of the changes of the territorial system to which it belongs. For the review of the PEC we have identified a protocol of updating a short and a long period. The updating of the short period regards the population exposed (with particular regard to the sensitive population) the members of the UCL, the over-local forces of intervention and all the information that changes or could change in a minimal temporal arc. The updating of a long period regards the territory (which changes independently from the presence of risks) and the present dangerousness (that could modify in the light of new studies).

Also in this phase there is a strong relation between the emergency planning and the ordinary planning that can, with its decisions, aggravate or mitigate a present risk.

From the operational point of view the updating of a PEC is therefore also conceived inside a Municipality which adopts a system of certification like that one proposed from the QUATER method , it is useful to emphasize the necessity of a strong collaboration between several operative sectors of the Municipality, from the office of Civil Protection to the Technical Office up to the Registry Office.

9. Conclusion

The QUATER method develops a procedure handbook of the territorial risk management not only with short period actions, but also with some indications for risk mitigation and prevention in a long term vision. The method aims at integrating the risk mitigation aspects in ordinary planning.

The procedure allows the arrangement of information about the territory (Territorial Information System) and develops a public and private collaboration.

The system is managed by the Municipality, in a flexible and incremental way, through a constant process of goals update and verification. Moreover, the support of planning instruments such as a sectorial Emergency Plan, directly connected to the ordinary planning and to the certification process, allows to achieve those goals which were initially set for the mitigation of the risk through the planning instruments.

Table II: The innovative elements inserted Municipality Emergency Plans

	Innovative elements	Relation between ordinary planning
Basic Knowledge	Analysis of dangerousness also outside the municipal boundaries Organization of the information by GIS Interactive cartography	Use of the same information about the territory inside the Municipality SIT Use of the same information about the dangerousness and risk inside the Municipality SIT
Operative	Design of the intervention procedure with matrix, job description and interactive cartography	Coordination of the choice take in the ordinary planning and sectorial planning, in order to avoid a worsening of the situation at risk and to mitigate the effects.
Verification and Updating	Protocol of updating of the information organized by GIS	Continuous updating of the information regarding the territory and the Municipality goods

The task of making the connection between these two typology of plans more effective is still a lot. We do not think that the introduction of new instruments of planning is necessary, but that the correct and sustainable use of the existing instruments is enough. As planners, we think that we can’t stop to think of the single destination of land use, the instruments of mitigation in our "hands" are various (eg. the adoption of particular building regulations, the maintenance and the promotion of the use of particular natural buffer areas, etc.) and it is necessary to enter in the perspective that in order to plan a secure territory, we must think of

different levels of action in space and time and that a synergy between various sectorial expert is necessary.

When we think about "resilience", we often think only for the recovery of a city in the phase post-event, almost as if this stage was a sort of "closure" quantifiable. Instead, for resilience we mean the ability to get out of a stalemate, so do not necessarily equal to the initial pre-event. The ability of a territory to be resilient consists largely from the organization and from the relationships existing prior to the event, more the system will be flexible and more rapid will be the recovery to normal activities with a view to improvement and awareness.

Often, the concept of sustainability is partnered by resilience. Sustainability, in fact, does not necessarily mean that all risks are eliminated, but that a degree of balance between the issues related to risk, the social and economic ones are reached. Certain levels of risk may be necessary and acceptable. Where a community chooses to continue living in a territory, despite the risk, the development should go towards the creation of cities resilient, able to react to the effects of a disaster. This type of approach, namely to know and to work on the nature and not against it, can simultaneously achieve the goals of conservation and enhancement of natural resources without diminishing the chances of developing [Burby, 1998].

The integrated use of appropriate tools for management and planning, as we've tried using in the territories of Seriate and Toscolano, it is necessary for try to plan a resilient city, reducing the intensity of development in hazardous areas, reducing the need to alter and hinder the natural processes, we could reduce the economical and social costs, of vulnerable city.

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National Security Threat and Its Measurement: Protecting Society's Vital Infrastructures in Finland

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Abstract

Recently, the protection of societal 'critical' infrastructures has become a topical security issue in most Western governments and the EU. The manners in which experts generate responses to infrastructure risk and cope with risky infrastructures has been studied in the US. The paper tests this theory on another region by asking: how has risk been manifested in the management of energy supply in Finland, and how did the techniques of risk management emerge? The material of the study is organizational histories and expert interviews. The methodology centers in the different kinds of risk governance and their shifts in these materials. I pay particular attention to the manners in which the risk management of Finnish national energy provisions has been problematized at different times, often motivated by the experiences of pivotal national disasters such as wars, shortages and energy crises. A key tension in Finnish debates on national security stems from the energy crises and worries over technological dependency in the 1970s. This is between the storing of national raw resources and the securing of continuous and uninterrupted provision of energy, food, communication and other systems. The same tension I claim is still prominent in the more recent Finnish debates about infrastructures and security, emergency preparedness, and civil and military contingencies. Furthermore, the paper proposes that the tension also poses a useful analogue for thinking about the risks of other organizational fields, such as information technology, finance and logistics.

Keywords: infrastructures, risk, risk management, technological disasters

1 Introduction

In their historical study of the security of US infrastructures, anthropologists Stephen Collier and Andrew Lakoff (2006, 2008) identify three elements in the worries over

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societal vital infrastructures: i) "a concern with critical systems upon which modern society, economy and polity depend"; ii) "the identification of vulnerabilities of these systems and of threats that might exploit these vulnerabilities as matters of national security"; and iii) "the effort to develop techniques to mitigate system vulnerabilities" (Collier & Lakoff 2008, p. 24). Importantly, none of these three aspirations requires a late 20th century or early 21st century societal, economic or technological situation to be justified. Indeed, national security experts have often raised similar worries before: for example, in the strategic bombing theories of the early 20th century (Collier & Lakoff 2008); and in concerns over the impacts of a Soviet nuclear strike on the US's critical systems (Collier 2008). The protection of such critical systems – or *critical infrastructures* – is a marked concern for most Western governments today (Brunner & Suter 2009). Yet, Collier and Lakoff (2008) argue that the current thinking about critical infrastructures is a relatively minor redeployment of much older ideas about national security, emergency preparedness and civil and military contingencies.

This previous research pertains to the case of the US. This paper on the other hand tests the model by Collier and Lakoff on the history of electricity infrastructure protection in Finland. The key objective is to acknowledge the intellectual origins of ideas, techniques and concepts regarding Finnish infrastructure protection. Thereby the aim is to underscore parallels between recent debates and more historic discussions on emergency preparedness. The research question is: *What kind of security problem is the functioning of electricity supply in Finland and how did this security problem emerge? What have the main concerns, concepts and techniques regarding infrastructure security been during the last 100 years?*

The structure of this paper is as follows. I first present the emegence of infrastructure security practice by looking at three pivotal periods: the origins of Finnish crisis management in the 1920s; the late 1960s, 1970s and early 1980s when one particular rational approach to Finnish national security, namely the storing of raw resources, became a target of criticism; and the diffusion of these security concerns over the last few decades. The last section concludes and discusses possibilities for further research.

2 Infrastructural crisis preparedness in Finland

2.1 From defence economic planning to total national defence and storage security

Historical studies of Finnish emergency supplies (Seppinen 1996; Voimatalouspooli 50 vuotta, 2006) concur on the origin of infrastructure protection in Finland. This origin is not the 1973 energy crisis and not the 1910s paraffin crisis (Myllyntaus 1991, p. 78;

pp. 132-134), but the food shortage of 1917. Often attributed as an acute cause for the Finnish Civil War in 1918 (Myllyntaus 1991, p. 78), experience from the 1917 food shortage and depression from 1917 to 1919 raised discussions about the need for planning for national emergencies in Finland. In 1929, the Finnish government proposed the founding of an Economic Defence Board. Although having 'defence' in its name, the concerns of the board were actually more extensive. According to the government proposal for founding the board, the board's underlying aim was ambitious: to "mitigate and reduce the effects that an emergency period has on the society's machinery". The aim comprised broad responsibilities for the state as well as for industry. In particular, the anticipation of emergencies was a matter of

> the defence preparedness of the whole industry, the maintaining of agricultural activities and food production, the rationing of the consumption of food, fuel, clothes etc, the organization of many kinds of relief efforts etc. social actions and the arrangement of monetary and credit conditions. (Government proposal, 1 February 1929; quoted in Seppinen 1996, p. 21.)

The board was founded in 1929, but its tasks were soon narrowed down and the board was later terminated. The reason for this was political defence: with the Second World War looming, the Finnish government was much more concerned with war preparations than with crisis preparedness in the civil life (Seppinen 1996, p. 22). The situation changed after the war, as Finland had lost the war to the Soviet Union and the private sector could not mobilize any war efforts for about a decade. After the global détente of 1955 and once Finland joined the United Nations and the Nordic Council, however, the concerns for preparedness found new support especially within the security environment of the Cold War. Economic Defence Planning Authority, established 1955-56 in place of the Economic Defence Board, was concerned with "total national defence". This meant defence which involved both political and economic aspects (hence the term 'total') (ibid, p. 37). However, experts still tended to always equate crisis with war, as we shall see later.

The security concerns that figured in this period stemmed from experiences of foreign trade crises, shortages, rationing, poverty, and depression (Voimatalouspooli 50 vuotta, 2006, p. 11). There was therefore an overaching concern about the exhaustion of raw resources. And as national security experts widely believed then, the dangers of future shortages could be mitigated by stockpiling nationally important resources. Figure 1 is a rather rudimentary example of a Finnish stockpile. Dating back to the Second World War, it shows wood for burning being stored in a market place. Here a stockpile is a concrete *storage* where materials are kept and managed.

A couple of decades later, the approach to national risks in storage security had become markedly more analytical. Figure 2, from 1972, displays the consumption (thousand

Figure 1: Woods are stockpiled in a market place during the war in Helsinki, 1943 (from Seppinen 1996, p. 28).

Code	Type of crisis
A1	State of war
A2	Threat of war
B1	Worldwide disorder
B2	Nationwide disorder
C	Regulator conditions

Table 1: A Finnish crisis typology in economic defence planning, proposed in 1956 but never implemented. Each crisis has a code (Seppinen 1996, p. 32).

tonne) and stockpile (duration in months) of various Finnish goods. The goods include crops, sugar, coffee, cigarettes, cattle feed, vegetable oil, butter, fertilizers, chemicals, different kinds of coal, oil and gasoline, textiles, rubber and tires, and various types of metal and steel. You can see that the storage of coal, for example, lasts for a little over seven months, while coffee runs out in three months. There are two kinds of bars in the figure, one for "commercial centre storages" (diagonal filling) and other for "state security storages" (cross filling). While most goods are stored by private entrepreneurs for the most part, particularly lead and tin are actually stockpiled by the state.

The visuals of the image are basic especially by today's standards. Yet, this storing conveys already a rather sophisticaced *technique of risk governance*. This is: once you knew the duration of raw resources by calculating it, you could then assign responsibilites of stockpiling both to the state, and private companies. But in spite of its systemicity, and continued relevance in societies that depend on goods, this style of reasoning also has some limitations. Most particularly, as already briefly mentioned, storage security only dealt with the threat of war. In 1956, the Chair of Economic Defence Board, General K. A. Tapola, had proposed a "crisis typology", which consisted of five kinds of crises (see Table 1) ranging from regular conditions to various kinds of disturbances. Such considerations of crises were not altogether unusual in the 1950s: early American studies of disasters had also proposed that *disasters* are not merely military attacks but all those incidents that prevent the maintenance of essential societal functions, and disrupt social order (Perry 2007, p. 6). In Finland, it would nonetheless actually take several decades before Tapola's typology was implemented. For almost 20 years, the concerns for natural security remained preoccupied with military threats, and with a notion of crisis that is rather straightforward: a crisis was equated with military pressure, and most particularly with the rapid onset of the actual state of war.

2.2 New security problems and 'security of provision'

By the late 1960s and early 1970s, a number of events had challenged Finnish national security. Perhaps the most dramatic was the 1973 energy crisis, which happened to

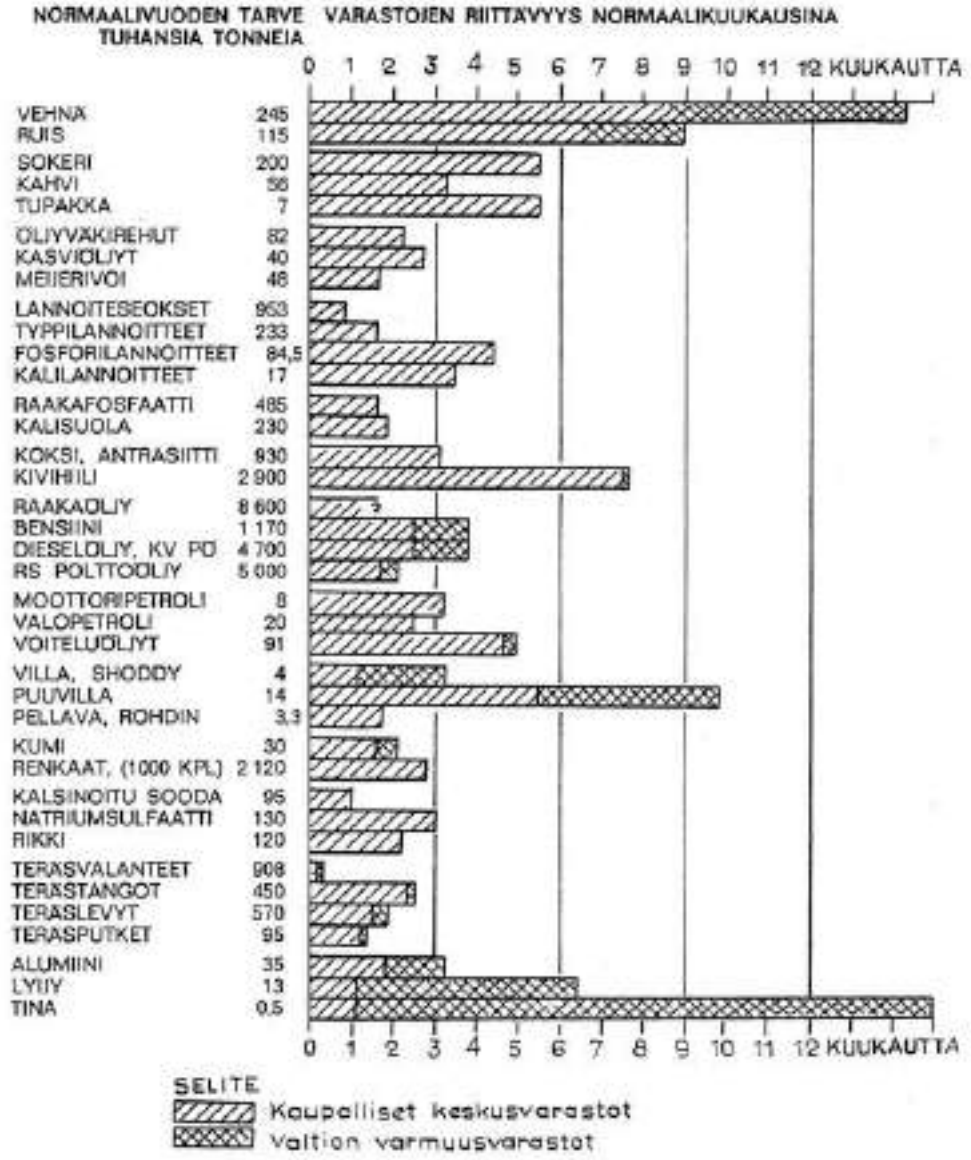

Figure 2: The duration (in months) of various Finnish goods in 1972, including wheat, coffee, cigarettes, crude oil, rubber, and other goods. Both commercial central storages (diagonal filling) and State security storages (cross filling) are displayed. The figure concerns the need of a "normal year" and in "normal months" (from Seppinen 1996, p. 75).

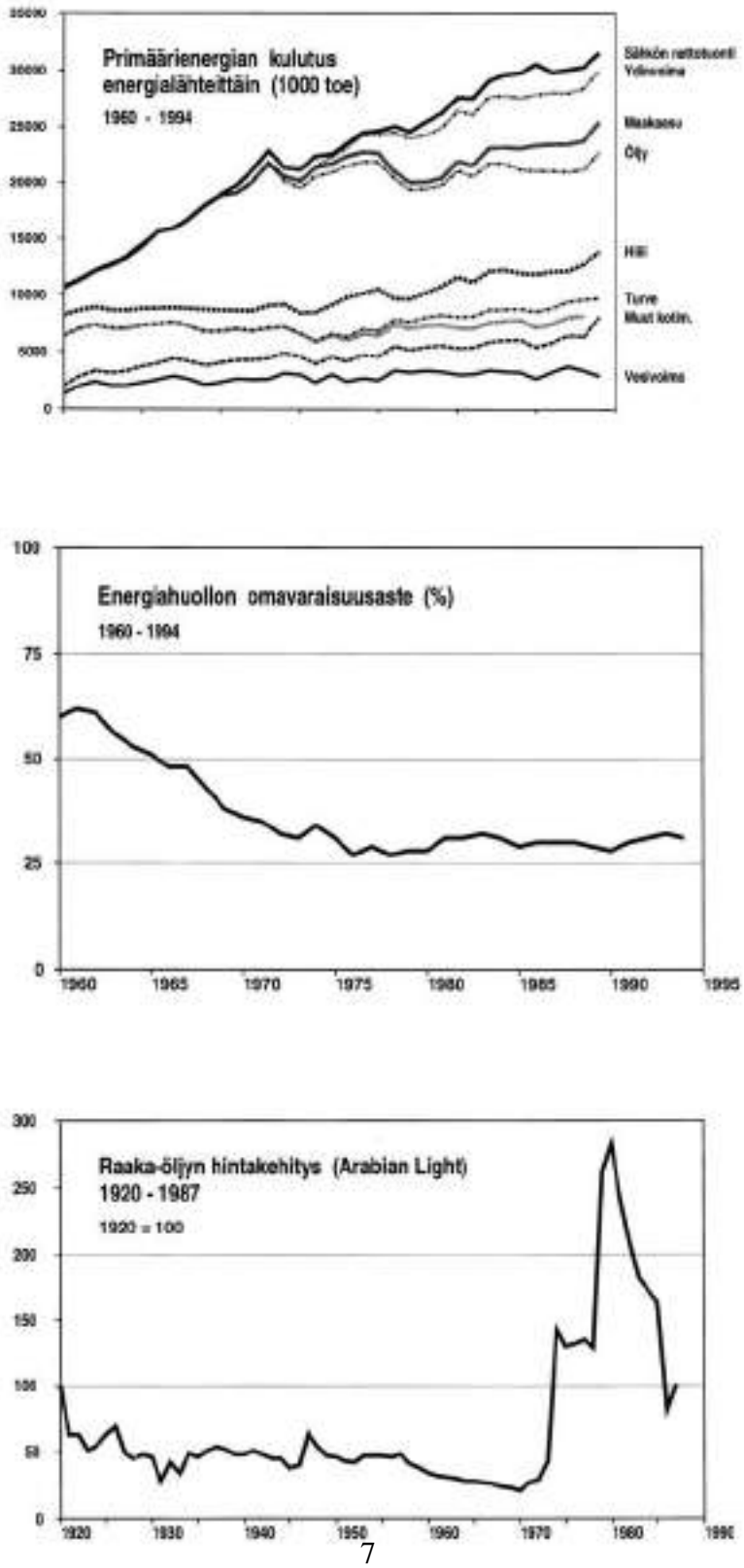

Figure 3: Finnish energy consumption levels, energy self-sufficiency, and the price of crude oil. As the consumption of exported energy grows, the society becomes vulnerable to energy price shocks (from Seppinen 1996, p. 81).

concur with a marked decrease in Finland's energy self-reliance. An illustration of the crisis is in Figure 3, which shows three graphs. The lowest is the price of crude oil, displaying in 1973 a sudden shock. Less dramatic, however, are the two upper graphs. They show that Finnish society has slowly become a larger consumer of energy, and is less self-sufficient energy-wise. These two trends can be see as a gradual development that caused vulnerability to the oil price shock.

Secondly, it was also becoming more apparent that perhaps not all 'indispensable' economic activities had been identified within the mainstream national security practice, and thinking. As discussed in the previous section, it was a tradition to prepare for crises by stockpiling goods such as oil, fuel, and food (Seppinen 1996, p. 88-89). By the late 1960s, technologies had arrived however which required more than just a storage place to function reliably. Indeed, these technologies needed to work all the time. This was true for the computer systems that were already used extensively in the 1970s finance, and industrial processes, while it was also apparent that 1970s convenience stores with their lighting and cooling systems were entirely dependent on electric energy supplies (ibid, p. 89).

The Economic Defence Planning Authority, and its Economic Power Pool were in what is reported to have been strong internal arguments. The central disagreement was about whether these organizations had comprehended up-to-date hazards, and threats like the above (Voimatalouspooli 50 vuotta, 2006, p. 25). While disparate events, the oil crisis, computerization, and dependence on electricity all showed that a crisis develops over many weeks, not through rapid onset like a military attack. A catastrophe may arise or almost lurk in the midst of 'normal' civil conditions; not merely in the context of a state of war. (Seppinen 1996, pp. 81-83.)

With this in mind, security thinking, and practice was problematized by critical national security experts. In 1977, K. H. Pentti, the then vice CEO of the state petrol company Neste, and the soon to become planning director of the Economic Defence Planning Authority, intervened in security debates by coining the term *security of provision* (huoltovarmuus). It was meant to replace the established term *storage security* (varastovarmuus).

These terms cannot carry all of their connotations to an English translation. The official translation of *huoltovarmuus* has either been *security of supply* or *emergency supply*. In English, *supply* means a provision or a resource, which might actually also be a storage. The word *huolto* has these meanings as well, nonetheless its most literal translation might be *maintenance*: the process of keeping something in good condition. While nowadays having quite a specialized technical, and military meaning in the Finnish language, *huolto* is an old word that stems from the late 18th century, and is derived from the word *huoli*. *Huoli* literally means a *concern* and acquired the form *huolehtia*, meaning *to take care of*, in the mid 19th century. All of this indicates not just a supply

of resources, but that *huoltovarmuus* is a broader process of taking care of people's living conditions.

For Pentti, the new term was characteristic of the security situation in many ways:

> The old question had been: "How long do raw resources last with normal consumption?" Now the question has become: "Which level of provision is satisfactory with regards to the need of raw material and fuel in different kinds of crises?" (Quoted in Seppinen 1996, p. 91.)

The security thinking did not change altogether. The above definition by Pentti is still calculative similarly to the older security practice. The problem is about calculating, and hence mitigating national security threats. But the objective of the calculation has changed: from determining the duration of raw resources to finding a level of provision. And even more significant changes are visible when we look at the definition in detail. It ends by noting that there are "different kinds of crises". Hence, in other words, there is more than just *military* crises to national security.

New kinds of social crises and emergencies were indeed soon raised on the agenda: disasters that had effect in everyday life, and took on a life of their own rather than being merely short-lived military events. Such crises also required a new typology, which was deployed in 1978 (Table 2). This was actually very close to to K. A. Tapola's proposal from 1956 (Table 1 on page 5). The classifications are similar to Tapola's – from a major accident to economic crisis, threat of war, and military attack. In addition, the crises were also given durations. Excluding major accidents, each crisis had three phases: first, a preliminary stage, second, the actual crisis and finally, recovery. Military attack also included a six-month blockage of foreign trade. Crises were hence diversified on many parameters: not only by their type, but also by the time they typically took to escalate, develop and eventually finish. Summing up, crises act like processes: there is a period of stability, followed by disruption and adjustment, and subsequently, new disruptions, which follow a similar cycle. This Finnish multi-scale typology of disasters was sophisticated for its time: similar considerations figured in the American academic literature on disaster studies in the 1960s (Perry 2007, p. 8).

But the change was not only academic according to the experts themselves. According to the official history of the organization that is responsible for security supply, national security had now opened up to the needs of civil society (Seppinen 1996, p. 94). Preparedness practice used to be highly secretive: according to one expert, it was encouraged that preparedness plans by electricity utilities be kept in a safe because crisis was an event that might always escalate to a war. The new security practice proposed in this section, however, concerned more than such a military preparedness. As another expert explained, it might be best characterized as continuity planning: "this simply means that different situations have been thought about, regarding how we act if this

Type of crisis	Preliminary stage	Crisis	Recovery
Major accident	-	-	-
Economic crisis	0.5 - 1 months	12 months	3 months
Threat of war	0.5 - 1 months	12 months	3 months
Military attack (including 6 months of total blockage of foreign trade)	0.5 - 1 months	3 months	3 months

Table 2: A Finnish crisis typology in security of supply, first implemented in 1978 (Seppinen 1996, pp. 90-92).

or that happens, if influenza sickens the majority of your personnel, then how will you act, and how do you keep the wheel turning."

Continuity is a grave concern of businesses in all conditions. Influenzas, and other incidents can happen all the time, not merely when a military power strikes. These are civil and not military *problems*. But it is important to add that the crisis management *techniques* themselves were not 'demilitarized'. Rather, the critical security experts took risk techniques from military security, and redeployed them in the civil crisis management context. Closely parallel events may also be seen in the US: techniques like evacuation planning, and training emergency responders stem from the military, although they may be applied to natural disasters, energy shortages, infrastructure failures, and humanitarian emergencies (Collier & Lakoff 2008). We will see how such redeployments have diffused in Finland in the following section.

2.3 Towards critical infrastructure protection and vital functions security

As a practical matter, the systems, and provisions which are part of society's security of provision cannot be safeguarded before they are defined. In 1984, Finland's first outline of basic provision systems was produced (Table 3 on page 11). The Finnish National Emergency Supply Agency was established in 1992 and became responsible for securing 'indispensable' economic activities like the above. Storage security also became one part of emergency supply: the first Security of Supply Act (1992) incorporated the previous Legislation on State Security Storages (1958). Today, both terms *security of supply*, and *storage security* are rather eclectic and rarely used in everyday language. But I would claim that their underlying ideas and tensions have stayed markedly influential when we start to consider more recent developments in infrastructure security.

Provision, *huolto*, figured in the ways that energy experts of my study talked about what they supply. Electricity appeared more than a technology or even a technical

	Basic provision systems (1984)	Critical infrastructure sectors (2002)	Vital societal functions (2003, 2006, 2010)
Clothing	X		
Dwelling and municipal utilities	X	X	X
Electricity and energy	X	X	X
Finance and payment	X	X	X
Food supply	X	X	X
Media and communication	X	X	X
National defence	X	X	X
Public health	X	X	X
Transportation	X	X	X
International trade and co-operation	X		X
Public administration	X		X
Information systems		X	X
Telecommunications		X	X
Water supply		X	X
Social services		X	X
Education and research			X
Insurance			X
Internal security			X
Labour force			X
Psychological crisis tolerance			X

Table 3: Three different Finnish classifications of basic societal provisions.

infrastructure. One expert said:

> I have taken electricity as a natural trait of a modern society. Electricity is very much a factor in that the society even stays together. It's a little like the education system or health care, energy belongs structurally to the society.

The likening of energy to education, and health care may sound somewhat dubious. But in one sense it is understandable: in the style of reasoning of society's basic provisions, outlined above. Indeed a number of experts implied to me that energy is a provision, and not merely any market commodity.

Today it is more common to talk about the security and protection of infrastructures than about a provision, supply or a storage (e.g. Dunn Cavelty 2008; European Council

2008; Brunner & Suter 2009; US Department of Homeland Security 2009). In 2002, also the Finnish government produced its first list of 'critical infrastructure sectors'. Viewed alongside the list of basic supply systems (Table 3), it is clear that the lists have similarities. More than half of the sectors in the 2002 list have counterparts in the 1984 list. The only notable change is that the newer list is that it was more technical. It drew on the words *networks* and *systems*: for example, the list included energy networks (rather than just energy supply); telecommunication networks (rather than just communications); and payment systems (rather than just finance). The critical infrastructures in this were less a 'supply', more a networked technological system. It may even be that the notion of a technological infrastructure is finding more support and expanding. This would correspond with the analyses of the US infrastructure protection policy (Dunn Cavelty 2008). Yet, it is also clear that the expansion has a different character in Finland. It is not a matter of first being concerned with information and communication technologies and then extending the worry to other infrastructures. Rather, the list of provisions is extensive to begin with and is only subsequently added to with networked technical systems.

There is also a second style of reasoning that figures in the Finnish efforts to protect systems such as electricity: the protection of society's vital systems. It is more recent than security of supply, and the first official document that concerned it was released in 2003. As the name implies, vital functions security thinking is about various functions that are deemed *vital,* and according to institutional security documents, its origins are in the Finnish security and defence policy concerns for internationalization and 'new security risks' in the early 2000s.

The first official document that considered the provisions that are needed for the 'functioning of society' was released in Finland in 2003. The document was called The Strategy for Securing Functions Vital to Society (henceforth YETTS from the established Finnish acronym) and these functions were defined as those measures "whose protection is necessary for helping to maintain national sovereignty and the citizen's livelihood and security" (YETTS 2003, p. 22). Curiously, although in line with the idea that security practice is redeployed rather than reinvented, the definition is not very far from the definition of security of provision in legislation: "the economic functions and related technical systems which are indispensable for securing the livelihood of the population, the country's economy and national defence in case of serious emergencies" (Security of Supply Act 2005, 1 §). The YETTS (2003, p. 22) definition does not mention emergencies, but otherwise both texts contain almost the same elements. A look at these 'vital functions' shows again marked similarities to the 1984 list of basic provision systems: only one of the 1984 'systems', clothing, was dropped from the 2003 list of 'vital functions'.

- Management of government affairs

- International activity
- National military defence
- Internal security
- The functioning of the economy and society
- The population's income security and capability to function
- Psychological crisis tolerance

This strategy was first revised in 2006 and then in 2010. Most of the vital functions remained unaltered in 2006, however one of the 2003 vital functions "functioning of the economy and society" was changed to "functioning of the economy and infrastructure". Furthermore, infrastructures received a formal definition which they lacked in the 2003 strategy; this was "the technical structures and organizations which are necessary to provide a livelihood for the population and for the functioning of society" (YETTS 2006, p. 16). In 2010, the name of the strategy was changed to the *Security Strategy for Society*, but the list of the vital functions remained the same as in 2006, although some terms were changed, in particular "national military defence" became "Finland's defence capability" while "psychological crisis tolerance" is now "psychological resilience to crisis".

Summing up, the list of society's vital functions has expanded, yet the idea that there are basic provisions in society that can be identified is not new as such. The same also seems to apply to many of the points made by the new Finnish strategies on vital functions and societal security. For example, new Finnish national security strategies problematize complex infrastructural interdependencies, especially starting from the 2006 strategy. Particular attention is paid to the reliance on electricity, as in this passage from 2006: "A new focus area, exemplifying the growing dependency on technology, is the security of energy supply. It is a fundamental prerequisite for the systems to function in the information society." (YETTS 2006, p. 45) Yet, it is rather easy to see parallels to the 1970s considerations for computerization and electricity dependence here. 1970s banking, industrial processes and daily commerce already depended on automation, electric lighting and cooling to function reliably and as Table 3 showed, many of these more general systems were themselves considered society's basic 'supply'.

Each Finnish strategy on vital systems outlines different threat scenarios regarding society's vital functions – there are ten scenarios in 2003, nine in 2006, and thirteen scenarios in 2010 – ranging from disturbances in the electricity grid to natural disasters, terrorism, illegal immigration, and the use of military force. The strategy from 2006 also highlights the diversity with an image in Figure 4. The image displays the interrelationship between a risk, and threat analysis and the resources of the actors that

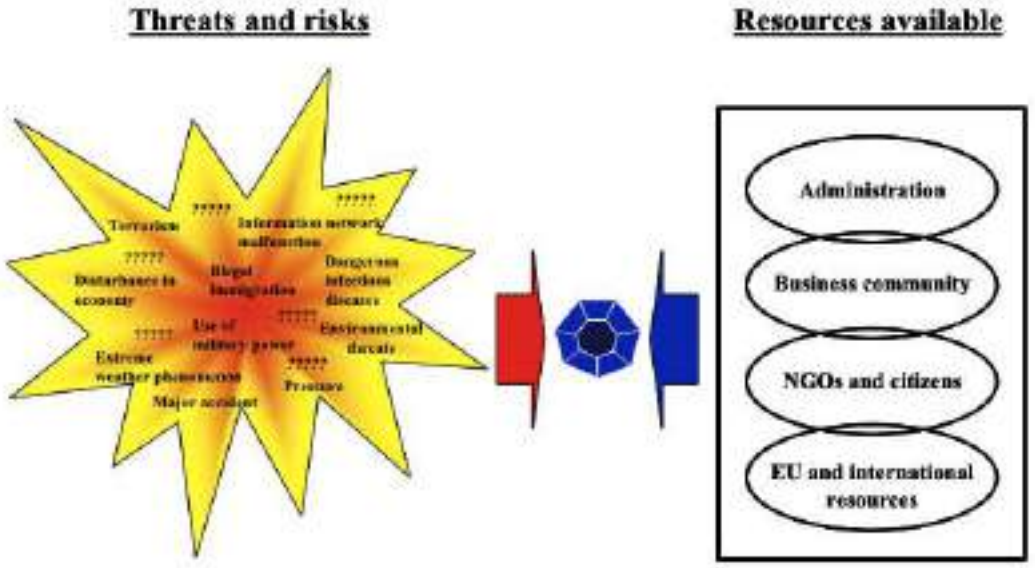

Figure 4: A Finnish analysis of threats and risks from a national security strategy (YETTS 2006, p. 22). Question marks represent still unknown threats and risks.

are concerned with the risks, and threats. Strategy is represented by the symbol in the middle, mediating between the resources, and what seems like a very diverse notion of threats and risks indeed. Inside the explosion on the left, there are various threats, such as illegal immigration, information network malfunction and pressure. Even more visible, however, are the multiple question marks. It is apparent here that the national security threats have become so diverse that even experts do not know what kind of events might pose a future harm.

Yet, these are not an entirely novel or original security concern. The notion of diverse Finnish crises can be traced back as far the 1950s, starting from K. A. Tapola's unconventional crisis typology and its deployment in 1978 in the context of security of provision. Even then, the idea was that national risks are different and comprise not merely states of war, but also civil contigencies such as economic crises and major accidents. The Finnish strategies from the 2000s add even more to the diversity especially by admitting that the national security threat might well be unknown (Furedi 2007), but they are still drawing on ideas and techniques which are old and already established.

On the other hand, similar charting of national risks is more widespread than just Finnish security strategies. For example, the UK government has published two *National Risk Registers* since 2008 and outlined those high-consequence risks that face the UK ranging from coastal flooding to animal disease, cyber attacks, and attacks on transport infrastructures (Figure 5). There are just two main differences between the UK picture and the Finnish picture; namely, the UK figure talks about likelihoods and

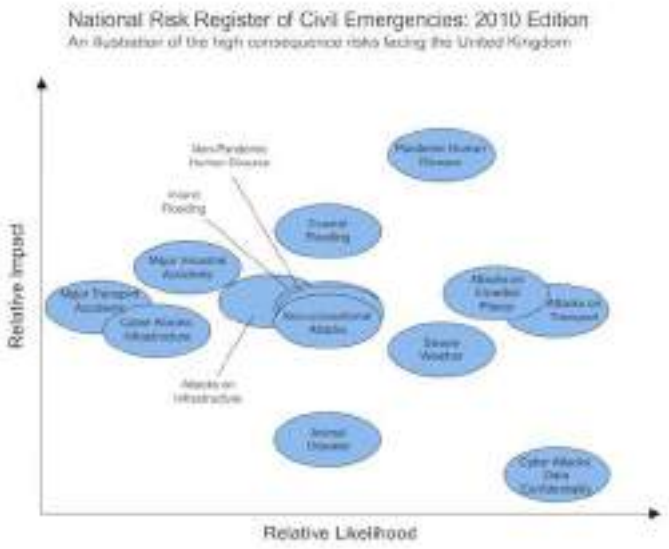

Figure 5: The UK National Risk Register (2010) from the web, or a "Risk Matrix". Estimates the relative impact and relative likelihoods of various national risks.

impacts, while the Finnish figure has no magnitudes at all, not even schematic ones, and the Finnish strategy also has question marks which are missing from the UK figure.

The energy company managers I interviewed were clearly influenced by such ways of thinking about uncertain security problems – and probably they had also influenced this thinking back. Many emphasized that disturbances to electricity supply come as surprises to them, that electricity blackouts are inevitable, and that there are threats whose impacts are even unknown: "if many large energy plants disconnect from the network due to an error, no-one knows if we can manage it or not". When prompted about a major electricity transmission failure in Finland, the same manager told me "everything is possible. I'd rather use the term it is not very probable." Another's interest was not with financial effects of risks, but with something much more serious: "Major blackouts are rare, but still possible, and if they occur, lacking preparedness and anticipation could mean that we shall really see deaths." These risks are not altogether calculative but they still have grave consequences.

2.4 Results

A tentative summary of the history of infrastructure problematizations is presented in Figure 6. It displays how concerns for basic provisions were first made official in the government initiatives for economic defence planning in 1929. During the Second

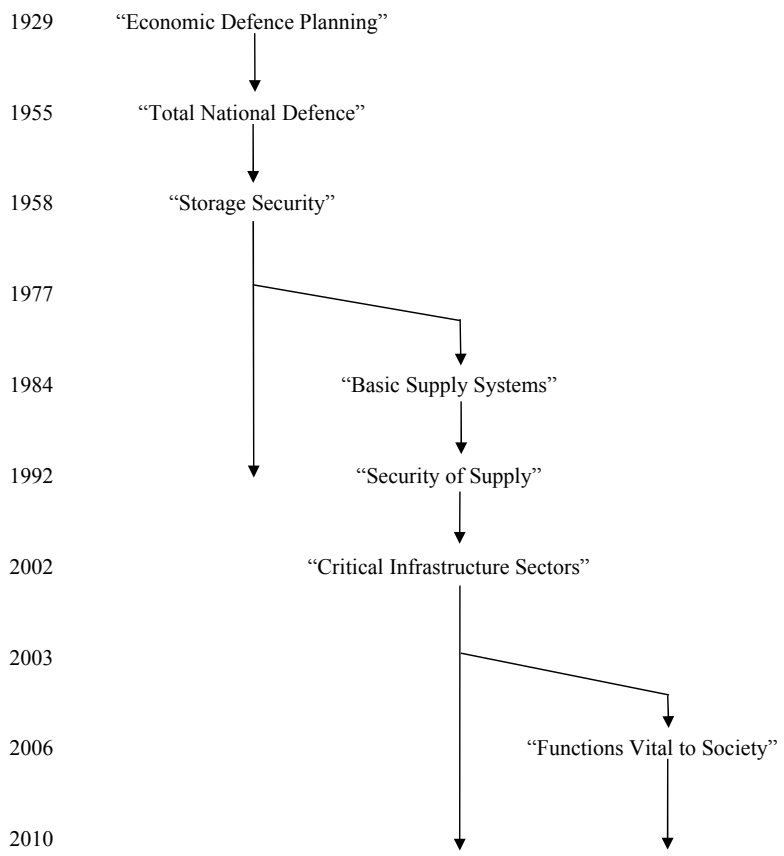

Figure 6: The emergence of infrastructural crisis preparedness in Finland.

World War, the concerns for security were narrowed down, and after the war, preparedness of the civil sector was impossible for political reasons. In 1955, a less tense security environment meant that infrastructure problems could be put back on the political agenda. Such problems included concerns with the total national defence, later exemplified by concrete efforts to secure a storage and self-reliance should foreign exports be blocked. In the 1970s, critical arguments were raised, however, on the types of threats that had been and could be imagined in the context of total national defence. Critical security experts wanted to address security of supply, which was not merely a matter of storage, but also of securing various 'provisions' (such as energy, transport, food, finance, government) continuously. In 1992, security of supply received its own legislation and organization, namely the National Emergency Supply Agency. This new legislation also incorporated the previous practices of storage security. The Finnish government produced its first list of critical infrastructures in 2002, and it published three strategies on the securing of the functions vital to society in 2003, 2006 and

2010. These new strategies show clear continuation to the older concerns for national emergencies, but especially the 2006 strategy started to develop the response to risk in a novel direction with respects to the role of calculations in risk management.

3 Conclusions

Three key conclusions emerge from the results. Firstly, although national security discourse often raises highly novel security problems of the last ten years – such as technological development and globalization (Puolustusministeriö 2008) – the styles of reasoning about security risks also clearly draw on old styles of reasoning. Security expertise gains shape from the already existing expertise, and has been reinvented little by little rather than facing a complete transition. Such connections and continuities are indeed highly contrary to the considerations of national security debates, and also to the popular social scientific discussions where risk is often an 'epochal' concept that signifies dramatic global shifts in all societies everywhere (Beck 1992; Furedi 2007; cf. Collier 2008).

Secondly, the tension between *storage* and *supply* might also be rather convenient in making sense of the security of provisions other than electricity. In the banking sector, for example, vulnerabilities are highly topical due to the financial crisis that started in 2007 (Langley 2011). In the 19th and early 20th centuries, the value of money was relative to the gold standard, and the amount of money that circulated was hence directly relative to the national storage of gold. Such a situation makes national storage security a highly topical concern. More recently, especially after the US dollar was detached from the gold standard in 1971, the problem has changed. The banking sector should be able to provide loans and credits continuously, somewhat regardless of the storage of gold or money by different countries. Maybe banking might now be increasingly considered an *infrastructural system*, and its security of provision is a central concern. The recent bank stress tests deployed after the financial crisis do not just calculate the magnitude of stored money, but try to identify vulnerabilities in the banking system and attempt to generate trust and hope into the continuous functioning of the markets (Langley 2011). Future research might pay even more attention to the figurations of these kinds of 'infrastructural' modes of security thinking on various domains like information technology, logistics and food supply.

As a third conclusion, such investigations might pay particular attention to the calculations that mitigate risk. Storage security was altogether a calculative logic: the national security threat was already known (it was always a military attack) and the vulnerability of society's basic provisions could be mitigated by calculating how long raw resources would last in case of an attack and blockage of foreign trade. Security of supply shifted towards greater uncertainty about the nature of potential crises, yet, it also emphasized

that the level of security of supply and the duration of infrastructural crises in Finland should be calculated. The newest security practice – *vital functions thinking* – is in fact the direct opposite. It draws on almost no calculations at all and tries instead to imagine worst-case scenarios and teach responsibilities to the actors that might face these scenarios.

Yet, at the same time, the vital functions strategies do also measure risk if one understands risk not as a numerical method per se, but as a technique that determines the impacts of future unwanted events. As new research on the precautionary principle (Ewald 2002) and governing of uncertainty (O'Malley 2004) has pointed out, future harms cannot always be calculated. They can also be imagined and governed through innovative techniques such as precaution, prudence, foresight and rules of thumb (O'Malley 2004). Rather than dismissing the Finnish security experts and claiming that they are exaggerating threats and 'inviting' catastrophes (Furedi 2007), it is in fact plausible that these experts are charting these "unknowns" and developing new ways of dealing with them.

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A SUSTAINABLE RURAL URBANIZATION IN CHINA THROUGH THE ANALYSIS OF ITS ENVIRONMENTAL ISSUES AND ENERGY RESOURCES

Valentina Rocca [1]

Abstract

After a research experience in China, this paper offers a perspective on the potential of Chinese rural areas, exploring the main resources and their current management. Investigating the contemporary landscape transformations, the paper intends to introduce the concept of natural countryside as multifunctional system, as preferred way out from a tendency of degradations and abandonment of the rural lands.
What is happening in rural China and what perspectives and challenges will we face in the incoming years? What is the role of agriculture in the environmental dynamics for a better rural development? What does urbanization mean in these lands?
Starting from effectively facing out today's China problems, the analysis aims at catching what we can learn from qualitative changes through the exploration of the complex relationships among rural/peripheral territories and its main resources.
In this perspective, the goal to reach is twofold: on the one hand, to carry out an analysis of environmental issues, such as sustainable agriculture, focusing on new ecological agriculture systems; on the other hand, to deepen matters such are energy-valorisation of biomass production, as well as the effective development of renewable technologies.
The development of China's rural areas is severely linked with the new development perspectives that are focussed on the capacity of local territorial issues to be re-oriented towards the organisation of social and economic life and needs. Is it possible to realize new rural eco-villages and self-sufficient farms in China, able to survive only using renewable energies as primary sources?
Good practises and case studies have been proposed with the intention of communicate the real possibility to design from an ecological point of view, to help China to make the correct policy choices, preserving the identity of rural areas.
To this purpose, current status and future outlooks have been considered: the output of this research wants to establish a starting point for developing methodologies on rational management of local resources in China's rural areas through a sustainable planning process.

1. Introduction

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Currently, rural areas seem to be in trouble in every part of the world, especially in those countries where natural surroundings are not favourable for agricultural production and policy proceedings have not shaped protected economic settings. In Asia, the differences between the rural and urban world are creating a lot of social, ecological and economic difficulties, due to out-migration of young people, climate change, and increasing cultural and social isolation. China is the country with the highest percentage of worldwide urbanization, a process that is sharpening social and energy problems in rural areas.
What are the sustainable solutions for the rural population?
A strong action plan might be the only way to achieve a sustainable model and develop rational projects for rural areas.
China is striving hard to develop a sustainable urbanization, improve a modern and efficient agriculture and promote energy saving. As a matter of fact, a sustainable use of local resources should permit to protect the natural environment: ecological agriculture represents one of the potential alternatives to conventional agriculture and the biomass sector is identified as the main source of economic and social improvement.

2. What does *urbanization* mean in rural China?

Usually, the term urbanization indicates the expansion of urban areas as a result of the migration of the agricultural population. "Urbanizing" means to apply a method to reduce rural-urban disparities and permit the transition to a market economy by balancing productivity in both urban/rural agro-economical sectors.
The process of urbanisation in China is strictly linked to the typology of the territory, often transformed without any rule, especially in rural areas. It seems to be a very complicated phenomenon: new neighbourhoods and cities are emerging in every part of the country.

Fig. 1: An anonymous rural village in Pinghu, Zhejiang (Source: Ming Shang)

A very large number of farmers have lost their sustenance and the expansion of big cities has deprived peasants of their lands, leaving them without any jobs and with no compensation to cover their losses. According to the statistics of World Bank, from 2010 the number of rural residents in China is about 670 million: 50.32% of China's population lives in rural areas and most of them in the central and western parts. Today, the current structure of millions of small farms is not competitive; it is clear that there is the need of a consolidation into larger farms for a more efficient use of inputs.

Which direction will China's rural development follow?

The Chinese government has set a series of strategies regarding ecological development, with sustainable agricultural choices, to promote the economy and environment, but also to conceive new sustainable urbanizations in rural reality. Primarily, it has been currently implementing three types of different measures: promoting large-scale infrastructure projects, such as east-west railways, water reservoirs and electrification projects; introducing regulamentations that protect rural areas, favouring a handling of rural-urban migration of household registration; developing new sustainable projects to preserve nature and human life.

Fig. 2: The Chinese *kang* is a traditional combined brick platforms, used in rural areas: it consists of a stove, a *kang* body (similar to a bed) and a chimney. It allows at least four different home functions of cooking, bed, domestic heating and ventilation, integrated into one system. (Source: Ming Shang)

Regarding the latter, at the moment, there are more than 500 eco-agricultural counties in China, with eco-agriculture demonstration zones. From 2005, the Chinese government has dispensed over 700 million Yuan to build dry farming and to plan water-saving agriculture demonstrations in arid territories, with the aid of agronomic and biological measures.

Looking for new sustainable solutions for rural development, China intends to turn to all the abundant renewable energy sources and territories of unproductive lands; the attention would also emphasize the research of new promising technologies. First of all, it might be significant to distribute advanced energy-saving stoves, improve the *kang* system (Fig. 2) and heating systems for cooking/heating and then, will be crucial to improve energy efficiency.
The rural urbanization in China might be divided into different subsystems: the first one should regard all the rural production aspects and the quality of life; the second one should be addressed to an improvement of the biomass sector and the bio-energy factory. In other words, to build a social and ecological environment with the aim of promoting the development of renewable energy.

3. Current energy situation in China's rural areas

As the biggest agricultural countries, China's arable land is a precious resource for its development. All suitable to agriculture, mountains and dry grasslands give shape the country, but often they are covered by new cities and constructions.
Also, natural disasters, soil erosion and pollution problems are changing the identity of these lands. Many factors influence the rural structure, such as economy, society, climate, culture and local energy sources: they are different for each region, due to the complexity of its geography and social economy.
In particular, an evident dissimilarity subsists between northern and southern China: the northern regions have the longer cold season, a fragile environment and the poorest economic status, but the soils are fertile and the biomass resources are copious. Heating energy consumption depends mainly on straw, firewood and coal.

3.1 Agricultural system and its residues

Since 1978, rural development in China has been an unprecedented success. In two decades, the agricultural productivity has exploded and the number of rural poor decreased by millions. But China continues to have some serious problems due to urban expansion: most of the fertile lands are located around the population centers, used for expanding settlements, roads and railways, as well as industrial and business compounds.
Between 1988 and 1995, the croplands have been converted into fishponds, forest plantations and horticulture land. Looking for new skills and best practices to preserve agriculture seems necessary to pursue an efficient policy for the national food security. In thousands of years of traditional agricultural cultivation, Chinese farmers have developed various agricultural techniques, contributing to the maintenance of soil fertility.
The Taoism philosophy has indicated the importance to follow earth's basic needs to achieve the food supply and besides that keeping agro-ecosystem process intact. According with principles of balance between humans and nature, traditional agricultural practices were ecologically sustainable and adapted to high population densities in every part of the country. From 1949 to 1979, the Chinese government carried out a series of agricultural reforms, replacing traditional practices with new

technologies measures; influenced by the Soviet model, the Western practices of industrialised agriculture demonstrated their limitations.
In the last decades, China has increased crop production for food directed to 1.338 billion of people, with only 6.5% of the world's arable land. In this scenario, new goals have to be reached, such are: protecting natural resources and the environment, coordinating needs of the agro and socio-economic systems, minimizing the environmental impact, facilitating the recycling of agricultural resources into biomass, and promoting the exploration of alternative practices. This vision has been promoted by a new agricultural production system, the Chinese ecological agriculture. The system is described as a unique body and a result of different factors such as natural environment, agricultural practises and technologies, ecological integrity, and biodiversity. In this perspective, making a good use of agricultural residues may be important in relieving energy pressure.

Fig. 3: Agricultural by-products, such as the corncob, are easy to collect and they are good raw materials to use as a new energy. (Source: Ming Shang)

The Chinese ecological movement in agriculture started with the review of the environmental impacts of conventional agricultural practices and the limitations of traditional agriculture in providing enough food to a growing population.
It offers a good opportunity to help alleviate poverty and solve the needs of many people, to establish ecological balance.
Since a universal plan for sustainability does not exist, the development of ecological agriculture requires a farmer participation strategy and a high sensitivity to local socio-cultural values. In this sense, the economic feasibility, social effects and institutional capacity of ecological agriculture in relation to the environment and rural development need to be further explored.

In most parts of China, agricultural technologies and management practices are still far from the concept of "precision" agriculture, so popular in Europe also as an indispensible strategy to control the territory.

3.2 Biomass vs. coal

Closely related to the urban sprawl, the unsustainable consumption of energy is causing the increase of environmental pollution. Indeed, fossil resources, especially coal but also natural gas and oil, guarantee most of the energy produced in China. For these not-contained uses, this big country has today a distinctive responsibility towards the entire world, mainly considering the global climate change and huge CO_2 emissions.

Fig. 4: Store of agricultural residues for cooking and heating (Source: Ming Shang)

In this very moment, China has the richest biomass sources, including primary biomass from agriculture, forestry and aquatic resources. The proportion of traditional biomass energy consumption to total energy consumption decreased from 56% in 1996 to 47% in 2005.
In the last years, renewable energy has rapidly developed in China: energy-saving measures, such as energy-saving stoves and *kang* have achieved great advancements too. Both played an important role in ameliorating the rural household energy supply and improving energy efficiency in rural areas.
What to do in rural/urban China to reduce the environmental pollution?
Coal, dung, firewood or charcoal are the main sources of energy for rural areas' inhabitants. Sufficient attention must be paid on the biomass sector because of its carbon neutral character: in fact, the bio-energy represents a renewable energy produced from all kinds of biomass with energy value as raw materials. Biomass energy is considered to be a clean energy resource because of the amount of contaminant materials. As soon as rural life improves, the demand for clean and

convenient energy increases.
The utilization of bio-energy can substitute the current fossil energy with the agricultural residues as an important component, successful for energy-saving and emission reduction in China. Biomass energy should become the major component in the future energy system; reminding us of the importance and respect for Mother Earth, the urbanism practices have to result from real sustainable principles.
As the largest country in coal production (and utilisation), the Chinese government has thought about ecological projects that should consist in the utilization of renewable energy sources: hydropower, solar, wind power, biomass and geothermal energy. From last decades, many nationwide programs have been carried out on renewable energy sources, but the use of biomass seems to be the best solution for rural problems.

Fig. 5: Circle coal bricks for domestic uses (source: Ming Shang)

Currently, 900 million of rural residents are still reliant on biomass, due to the limited supply of commercial energy: in fact, a large amount of crop straw and firewood are used as residential fuel. Some important researches on "Energy conservation and environment in Chinese rural housing" by the Department of Building Science of Tsinghua University (Beijing, R.P.C.) show that the energy consumption of the Northern China represents 56% of the total energy used in rural houses, and the 80% of energy is used for heating in winter time.
High energy consumptions are due to poor thermal performances of rural housing envelops. To improve such thermal performances, a sustainable action can be to substitute coal by carbon neutral biomass pellets, as well as to apply passive energy methods on building constructions.
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4. Demonstration projects for a sustainable urbanization

From 2000, a collaboration between the Italian Ministry for the Environment, Land and Sea and the Ministry of the Environmental Protection of the People's Republic of China have launched a series of ambitious projects on international cooperation for the environmental protection.
About 80 projects were implemented within this framework in the field of sustainable urban planning, environmental protection in China's poorest areas, sustainable agriculture, water resources management, waste-to-energy, energy efficiency and renewable energies development. To give a reference, in Inner Mongolia a total of 100 KWp of photovoltaic energy was installed to supply power to 191 households in three different villages.

Fig. 6: "Huai Rou New Town", a project for a new eco-city in a rural area near Beijing, designed by Moa Architetture (Source: www.occhiuto.it)

This "Solar Village" was a pilot project for rural electrification through renewable sources instead of coal, concluded in 2005.
As regard bio-energy, a project in Ningxia Province was conducted with the aim of exploiting herbaceous materials, shrubs and woody plants.
Moreover, some projects of "green agriculture" were implemented in some rural

areas near Shanghai, together with other two different projects in Xinjang and Inner Mongolia (China's most depressed rural areas for desertification problem), with the final goal to test and spread the best techniques and practices for the development of sustainable agriculture.
Also, a set of environmental guidelines for a sustainable planning of suburban district was developed. "Huai Rou New Town" (Fig. 6) is one of the best examples of a master plan, addressed to 70 thousand inhabitants and located in a huge rural area closed to Beijing. This project took in consideration the importance of rural areas, as the driver for the economy of the future city. This new urbanization will maintain the identity of the historical town, following bioclimatic principles and sustainable technologies.

Fig. 7: " Wanzhuang eco-city ", a project that promotes the Chinase rural landscape, designed by Arup (source: www.arup.com)

With a focus on agriculture as a starting point, the " Wanzhuang eco-city" is a project of conservation of productive land and agricultural heritage by Arup, located halfway between Beijing and Tianjin. The rural landscape encourages the contact with nature, as a source of well-being.
The main goal of this proposal is a cluster of villages around a shared town centre, linked to the Beijing-Tianjin corridor.
The compact, mixed-use development proposed around the existing villages allows for the conservation of important productive land and agricultural heritage, the existing urban fabrics of the villages and other elements of the existing natural landscape.
The successful development of ecological and sustainable demonstration projects could help to explore new and different ways of solving China’s urban-rural gap and

to achieve harmonious urbanisation.

5. Conclusions

It could be naïve to believe that the transformation of China's rural areas, from an agricultural society into an industrial empire, would have been possible without any environmental damage. Instead of condemning China's reckless development and its consequences, we should also remember that the European natural environment was tampered by modernization, creating highly artificial landscape forms, a trend that has fortunately stopped.

In rural China, urbanization is still in progress and this action is not yet fully sustainable. We hope that China will be able to use its financial resources to remedy the ecological destructions and to conceive new eco-towns, inspiring bioclimatic principles and respecting the natural environment and human health.

It should be said that China can not use the large amount of bio-energy storage, because of limited techniques for selection and cultivation of energy plants, low bio-energy use efficiency, difficulties in collection of bio-energy materials and so on.

At the moment, China has been planning its bio-energy development strategy (2006–2015), emphasizing the desire to activate an advanced bio-energy facilities for a better use of local resources.

According to the Chinese strategy adopted for the biomass sector, a first solution could be the collection of all the wastes from agriculture, forestry and people’s life.

The requirements for a better rural development could be characterized by the following actions: improving energy efficiency using fossil energy, strengthening international cooperation and expanding energy supply sources, protecting the environment using ecological best practices.

In addition, a good setting of polices, regulations and finances should be created to grant the development of alternative energy usage in China's rural areas.

Finally, a real sustainable urbanization in China should be in line with the definition of sustainable development expressed by the UN Food and Agricultural Organization, which states that "a sustainable development is to be referred to the management and conservation of the natural resources; all the technological and institutional choices have to ensure the satisfaction of human needs, for present and future generations."

Such sustainable development has to be applied in agriculture, forestry and fisheries sectors, to preserve lands, water, plant and animal resources.

Following this significance, China is seeking to move towards a sustainable urban future, in harmony with the natural environment.

Maybe marked by futuristic buildings, these new eco-villages will be able to preserve and maintain the function of the agricultural soils and the value of surrounding areas. In this way, a sustainable urbanization in rural areas will not forget human and nature needs.

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URBAN FORM AND TRAVEL BEHAVIOUR: A MULTIPLE-FACETED ANALYSIS

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Abstract

This paper proposes a methodology to analyse urban form characteristics in the context of research on the relationship between urban form and activity-travel behaviour. In particular, this methodology will be used to categorize neighbourhoods in the Netherlands in the context of a long-term project about the dynamic changes on activity-travel behaviour. The methodology proposes the use of four main features of the urban form: density, mixed-land use, street network, and accessibility. As a case study, we use data from different sources to apply the methodology in the Rotterdam area, in the Netherlands. Data about 15 cities is analysed in the neighbourhood level using cluster analysis. The results suggest that ten types of neighbourhoods can be used to illustrate the differences among the neighbourhoods in the study area, and that the methodology leads to sound results on such characterization.

1. Introduction

Designing cities for a more sustainable mobility relies on our understanding about if and how we can really shape the city to develop a more sustainable travel behaviour in its inhabitants. There is a common belief that the urban form affects people's travel behaviour. Because of that, the amount of research done on the relationship between the built environment and travel behaviour is vast. Notably, however, there is no common outcome about if and how the built environment is affecting the way people travel in a city.

Nevertheless, most of the research didn't consider in its analysis the complexity of cities: a great amount of the papers published on this subject limited their analysis to a single aspect of the urban form, usually density or mixed land-use, or a combination of both. Fewer studies took into account more characteristics of the city, such as the 3D's concept (density, diversity and design), and whether the street network was a grid or a cul-de-sac.

We argue that these approaches are too narrow for the subject at hand. They leave out fundamental aspects that can influence people's travel behaviour, such as features that affect the accessibility (for example, distance to public

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transportation) and characteristics of buildings and neighbourhoods that influence how people decide where to live, which in turn influences their travel behaviour.

In this paper we propose a methodology to analyse the urban form in a broader way. Four main features of the built environment are considered: density, land use, street network, accessibility, and housing/building characteristics. This methodology is based on a detailed definition of all these features, considering, among other facets of the urban form, two types of density, a variety of land use characteristics and different measurements of the accessibility. The definition of these features at different scales of measurement (neighbourhood, postcode, and city levels) is also addressed.

For the analysis we used data from the Rotterdam region, which includes 15 cities and 565 neighbourhoods. GIS data at the neighbourhood level from the 15 different cities were combined from different sources. The data contains information about the different aspects of urban form used in the analysis. Using cluster analysis we categorized the neighbourhoods in 10 types.

This methodology will be used in the context of our research project, where we have retrospective data about 350 respondents that are living now in the Rotterdam area. This data consists of details about different residential places and activity-travel behaviour for the last 20 years of people's lives.

2. The study on urban forms

During the last decades, a large amount of research was done in the relationship between urban form and travel behaviour. In the literature there is no common definition about types of urban forms. Each study defines its own urban forms, what can complicate the job of policies makers trying to leverage their results collectively. We don't aim here to make new definitions of urban forms and or to prescribe how it should be considered in future work, we rather intend to provide a discussion about how the different aspects of urban forms have been studied and how they could be considered in future studies.

Among the existent studies in the literature, often there is no detailed information on how the urban form characteristics were analysed or acquired. Some studies consider the most commonly used definition while others create new specific definitions for their studies. Usually the studies concentrate on the following characteristics: density, mixed land-use (being these two the most common), street network and accessibility.

2.1 Density

Alongside with land use, density is one of the features of urban form most studied in the literature about the relationship between urban form and travel behaviour (Cervero, 1995; Naess, 1995; Naess and Sandberg, 1996; Krizek, 2003; Cervero and Kockelman, 1997; Boarnet and Crane, 2001; Miranda-Morena et al., 2011).

This is perhaps because density is one attribute that implicitly relates to many other characteristics of a city or region. Higher density means not only more people living in a certain area but it usually also means more diversity of urban functions, more transport infrastructure and more complex urban systems. However, there are different types of density that can be explored in an urban area, and often the literature refers only to the most common type of density: the residential gross density, which is defined by the population living in an area divided by the surface of the that area.

Besides the most used type of density, different categories of density can be calculated, notably the employment density. A main distinction that can also be made is between gross and net densities, being the first one the population divided by the whole area concerned, while the second one being the population divided by the area concerned with its use, for example residential use or employment places. Moreover, there are other measurements that can be calculated and are related to density, such as the floor area ratio and the site coverage. The floor area ratio refers to the ratio of a total floor area of development to its area, while the site coverage is a measure of the proportion of the site area covered by buildings. (see more about types of density in Jenks and Dempsey, 2005; Churchman, 1999; Alexander, 1993; Berghauser and Haupt, 2004; and Vicky Cheng, 2010).

The reflection about the different types of density is important in terms of analysis. The residential gross density, for example, gives an idea about the amount of people living in an area. However, as it considers the whole surface of the area, a low residential gross density can mean that there are few people living in the area or that there is only a small part of the area that is used as residential area. A park or shops in the area concerned might decrease the density even if the residential portion of the area is dense. In this sense, the gross density also gives a clue of the use in the area. On the other side, the net residential area can give the exact number of people living in the area concerned for its use. The floor ratio and site coverage can provide an idea of the proportion between space occupied by land and by streets.

Despite the extensive literature on the definition and types of density, the literature about the relationship between urban form and travel behaviour is mainly concentrated on the residential gross population (Maat and Timmermans, 2009; Cervero and Kockelman, 1997). Some studies combined the residential density with employment density (Maat and Timmermans, 2009; Cervero and Kockelman, 1997; and Frank and Pivo, 1994). Others calculated the household density, which means the amount of household divided by the area concerned (Krizek, 2003; Cervero and Kockelman, 1997).

2.2 Mixed Land Use

Another important feature that can indicate differences between urban areas is the mix of uses. Especially when it concerns its relationship with travel behaviour. The availability of different services and shops close to home, for example, can

influence directly how a person reaches the places needed. As a result, mixed land use is probably the most studied feature in the literature (Handy, 1996a; Handy et al., 2005; Kitamura et al., 1997; Cao et al., 2009; Cervero and Radish, 1996; Frank and Pivo, 1994; Maat et al., 2005; Mogridge, 1985; and Krizek, 2003).

The types of land use that were considered to calculate mixed land use vary widely in the literature. While some research focuses only on the difference between residential and non-residential, others take into account a variety of land uses. The common feature that is used in the literature is commercial and retail uses, with some studies detailing which types of shops are in the area. Handy (1996b), for example, took into consideration only commercial areas, examining the amount of commercial establishments per 10000 inhabitants, including laundromat, beauty salon, day-care, and others. Krizek (2003) also focused on retail use at the neighbourhood level to calculate the land use mix. Another way of calculating land use mix is the relation between residential and shopping areas (see for example Maat and Timmermans, 2009; and Cervero, 1995).

Other studies used a higher diversity of land uses to calculate mixed land use indices. Frank and Pivo (1994) calculated the level of land use mixe using an entropy value. The land uses they considered were: single family house, multifamily house, retail and services, office, entertainment, institutional, and industrial/manufacturing. Different aspects of mixed land use were examined by Cervero and Kockelman (1997): dissimilarity index, entropy, vertical mixture, intensities of land use, activity centre mixture, commercial intensities, and proximities to commercial-retail uses. These last studies are particularly interesting because they considered the proportions of different land uses in an area.

2.3 Accessibility

Measures of accessibility in the literature differ among grid cell, neighbourhood and respondent levels. The most common way of calculating accessibility in the existent literature is through the distance from different origins to different destinations, which can be residence, work, city centre and public transportation facilities.

The distance to the city centre, to the station and to the sub-centre was, for example, a measure in the study by Snellen, Borgers and Timmermans (2002). Krizek (2003) took into consideration the urban characteristics of the residential places and of the work place. To measure accessibility, he used a standard gravity model taking into consideration the total number of retail employment on a grid cell of 150m to 150m. The workplace was also the level of analysis of Naess (1995). He calculated the average commuting distance, average percentage of commuting by different transport modes, the distance between the workplace and downtown Oslo, parking facilities, and the distance from public transport stops to workplace.

Maat and Timmermans (2009) calculated accessibility according to the average distance to work, nearest train station and work railway station, using a grid cell level. Accessibility was defined by Handy (1996b) using the types of activities and where they were located in the neighbourhood. She calculated the average number of activities that could be reached in 5, 10, and 15 minutes, considering different types of stores.

et al (2005) used the access to shopping places, freeway and public transit service. The same group of researchers (Cao et al, 2010) used a higher diversity of land use types to measure the accessibility for each respondent. They calculated the distance along the street network from home to a variety of destinations. Snellen el al. (2001; 2002) analysed 19 neighbourhoods from nine different cities in the Netherlands. The following characteristics of accessibility were considered: location in relation to the city centre, location vis-à-vis the main train station, and location with respect to a services sub-centre at the district level (when present).

As much as accessibility is concerned, distance is always present in the literature. However there are some other aspects that should be a matter of concern. Distance to public transportation might be an important aspect, but also frequency of the public transportation can be decisive in choosing for the public transport. Also, the size of a shopping area can have a higher importance than its distance from home.

2.4 Street Network

Most of the studies that analysed the street network did it according to the difference between neighbourhoods based on visual inspection. Usually this difference was related to the question whether the neighbourhood had either a grid-like or a cul-de-sac street network. In a few cases, the research included networks that were a mix of these two characteristics (e.g. Crane and Crepeau, 1998; Schwanen and Mokhtarian, 2005; Boarnet and Crane, 2005; and Handy, 1996b; Krizek, 2003).

Snellen et al. (2001; 2002) analysed the street network at the city and at the neighbourhood level. Nine cities in the Netherlands were chosen according to two components of urban form: the shape of the cities, and the street network for motorized transportation. They considered the transportation network as radial, ring, (shifted) grid, or linear networks. Three dimensions of the street network were analysed by Cervero and Kockelman (1997): the street, the pedestrian and cycling provisions, and the site design. One interesting aspect of this methodology is that it considered the proportion between the blocks and different types of street. Moreover it took account of the facilities existent in the streets, such as trees, lights, and signalization.

The street network is a basic characteristic of a city that is totally related to travel behaviour. Its analyses related to the study about the relationship between urban form and travel behaviour is central. At the same time, it allows different levels of

study: varying from the shape to capacity, or from size to the urban mobility. It is once more important to bring the reflection about which characteristic of the street network influences most people's travel behaviour.

2. Proposed urban forms

The decision about the urban forms that should be considered in our project was also related to its context. We consider that during people's lives needs and constraints make people choose to live in a certain place. Not only the characteristics of their environment is taken into consideration but also the needs related to their lives, such as work or family. In this way the urban form in our project, besides having a direct effect on people's activity-travel behaviour, has the role of intermediating people's personal needs to their activity-travel behaviour.

The data collected for our project consists on retrospective data from people living in the Netherlands for the last 20 years. Although the respondents are living in the Rotterdam area during the data collection, they could have lived anywhere in the Netherlands before. Because of that we need to be able to categorize any neighbourhood in the country. Due to the big amount of neighbourhoods, we have to find a way of objectively qualifying any neighbourhood in the Netherlands.

The combination of different aspects of the urban form is especially important when the context is the Netherlands due to the similarity among the different areas within the country. Considering that, four main directions of the urban forms where identified in the literature review and combined in our project: density, land use, neighbourhood characteristics, street network and accessibility. The data needed for this analysis, as can be seen in Table 1, was collected from different sources and combined in a geographical information system.

Table 1 | Urban form characteristics

urban forms	definition	description	source
Density	Gross density	#inhabitants / surface of the neighbourhood (in km2)	Population and #dwellings: CBS Areas: CBS and BAG
	Net density	#inhabitants / residential area in the neighbourhood	
Land Use	Residential		BAG
	Shopping		
	Other functions		
	Office		
	Industry		
	Sport Center		
	Health Care		
	Gathering		
	Accommodation		
	Education		
	Mixed gathering	mixed use where its majority is gathering places	Cluster analysis
	Mixed industry	mixed use where its majority is industry buildings	
	Mixed offices	mixed use where its majority is office buildings	
	Mixed other functions	mixed use where its majority is other functions	
	Mixed residential	mixed land use where its majority is residential places	
	Mixed retail and lodging	mixed land use that is a mixe of retail and lodging	
Street network	distance to highway	distance to closest access of the highway considering the existent street network	Kadaster
Accessibility	train station	distance from centroid of the neighbourhood to closest train station	Open source
	bus stop	distance from centroid of the neighbourhood to closest bus stop	
		amount of bus stops in the neighbourhood (standardized values)	
	tram stops	distance from centroid of the neighbourhood to closest tram stop	
		amount of tram stops in the neighbourhood (standardized values)	
	subway entrance	distance from centroid of the neighbourhood to closest subway entrance	
		amount of subway entrances in the neighbourhood (standardized values)	
	distance to city center	centroid of the neighbourhood to closest area of non-daily shops	DANS
	distance to green areas	centroid of the neighbourhood to centroid closest green area	

After deciding which indices of urban form will be analysed, a region in the Netherlands was selected as a case study for our analysis. The region decided to study is the Rotterdam region, which is the second-largest urbanised area in the country. The Rotterdam area consists of 15 cities: Albrandswaard, Barendrecht, Bernisse, Brielle, Capelle aan den Ijssel, Hellevoetsluis, Krimpen aan den Ijssel, Lansingerland, Maasluis, Ridderkerk, Rotterdam, Schiedam, Spijkenisse, Vlaardingen, and Westvoorne (Figure 1). Together, these cities have 1199710 inhabitants (CBS, 2010) and it is one of the areas with the most diverse types of urban form in the Netherlands.

Figure 1 | Rotterdam area

2.1 Density

From the different types of density that were exposed in Section 1.1, we decided that the most useful ones for our project were residential gross and net densities, which would measure aspects of the distribution of the population as well as the dwellings in the studied area. The definition for these two types of density was based on Pont and Haupt (2002), and consists, for the gross density, the population of the area divided by the whole area concerned. For the net density, the population of the area is divided by the residential area.

Maps for the two densities were created. Each density was discretised in 5 levels and plotted in the maps shown in Figure 2 and Figure 3. The maps also include the agricultural, water, and green areas illustrate well the difference between urbanized and natural areas. It is also evident the concentration of higher dense areas around the city centre of Rotterdam, and other concentrations in the city center of the other cities.

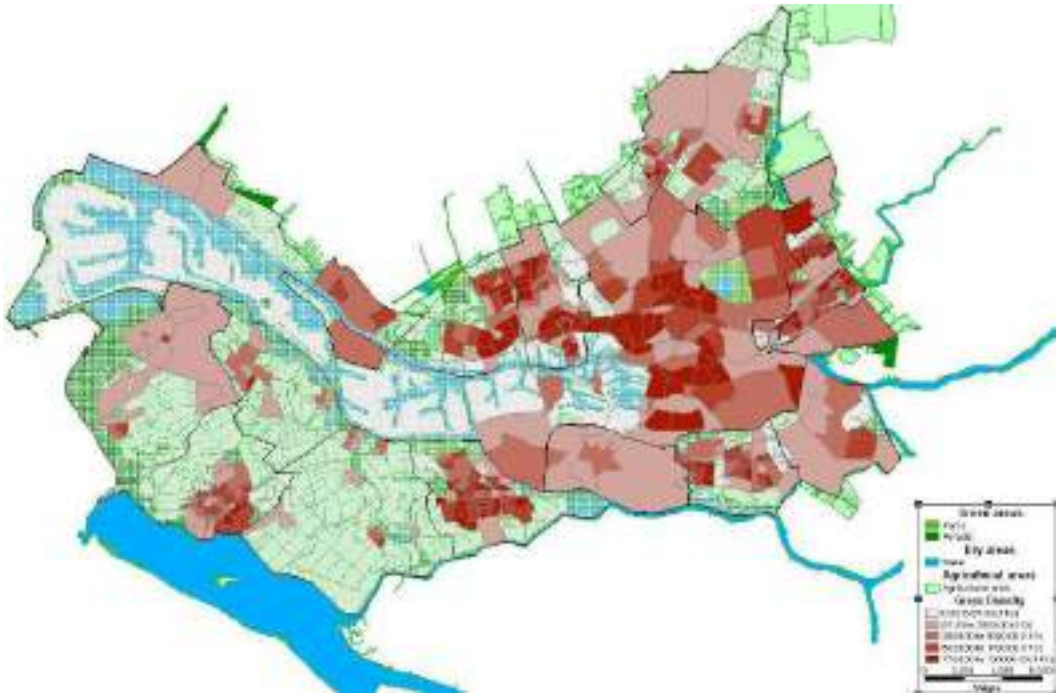

Figure 2 | Gross density in the Rotterdam area

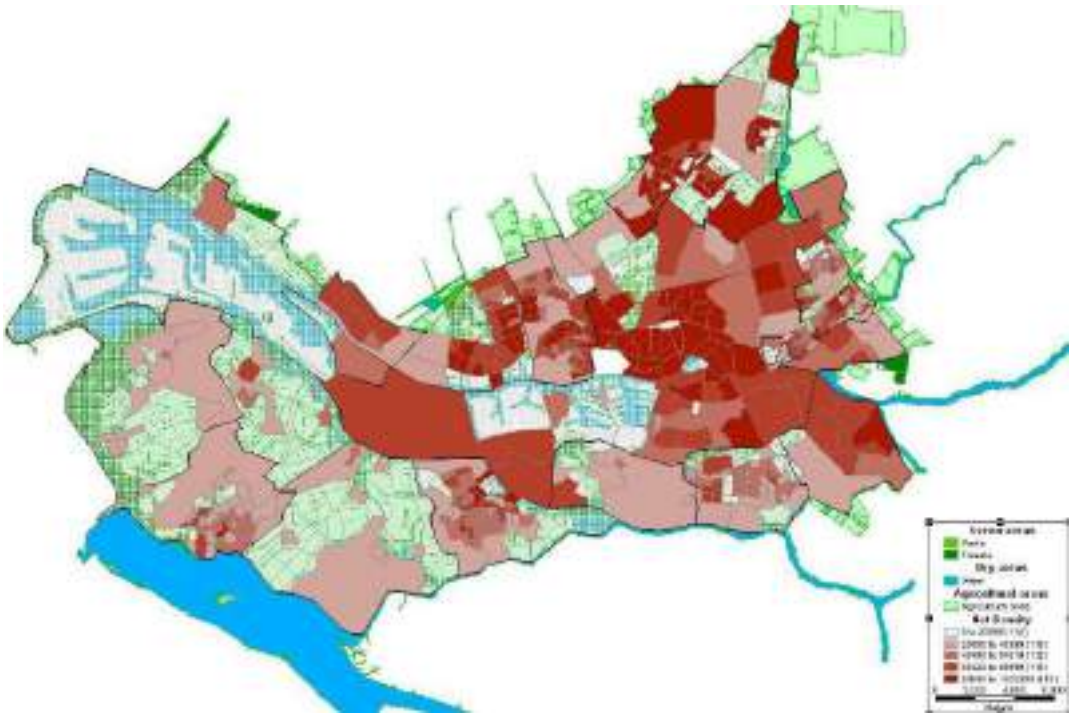

Figure 3 | Net density in the Rotterdam area

Comparing the two maps, it is apparent the influence of the size of the neighbourhood in the density: when only the residential area is considered, the

density values increase and the areas that are specific for residential purpose differ less among them when comparing to the gross density. Some neighbourhoods that appear as low density in the gross density might have more green spaces and other uses in their area, but they might still have a high density in its residential portion.

Considering the outcome distinction of the two densities. It was decided to consider in our project only the residential net density, which better demonstrates the distribution of the population in the residential areas. Green areas and other land uses are considered in the analysis of mixed land use and accessibility.

2.2 Mixed Land Use

Types of land use were taken from the BAG-database at the building level. The proportion of the different functions in the building (residential, offices, retailing, etc.) is known. However there is missing information for 39% of the buildings. Most of the buildings are solely residential (50,8%). Approximately 5% of the buildings have a mixed land use, which is the second most common land use type (see Table 3 for all functions).

The exact type of land use mixture for a building is not known from the data. This mixture must be categorized for each building so that we can later determine the mixture of land uses for the neighbourhoods, which is the level of analysis of our project. To define the categories of mixed land use that exist in our data, we used a cluster analysis to group the buildings there were identified as 'mixed land use' according to the proportion of each land use type in the buildings.

From the cluster analysis, six types of mixed land use buildings were identified: (1) mostly residential use, (2) mostly 'other functions', (3) mostly industries, mostly offices, mostly gathering, and mixture of retail and lodging. Table 2 displays the average proportion of each function in the clusters.

Table 2 | Cluster analysis at the building level

	Cluster					
	1	2	3	4	5	6
Residential	,99	,02	,04	,04	,06	,09
Retail	,00	,00	,02	,01	,01	,34
Other functions	,00	,97	,01	,02	,01	,01
Office	,00	,00	,02	,89	,01	,01
Industry	,00	,00	,91	,02	,01	,01
Sport	,00	,00	,00	,00	,01	,04
Health	,00	,00	,00	,00	,00	,05
Gathering	,00	,00	,00	,01	,89	,01
Lodging	,00	,00	,00	,00	,00	,33
Education	,00	,00	,00	,00	,01	,11

Considering the single land uses we have in total 16 types of land use. Table 3

displays the land use types at the building level in our data.

Table 3 | Land uses at the building level

Uses		Frequency	Percent
Missing		190972	39,0%
Gathering		1885	,4%
Health		358	,1%
Industry		5104	1,0%
Office		1789	,4%
Lodging		2459	,5%
Education		789	,2%
Other functions		14180	2,9%
Sport		313	,1%
Retail		1618	,3%
Residential		249198	50,8%
Mixed uses	Mostly gathering	1162	,2%
	Mostly industry	1776	,4%
	Mostly office	794	,2%
	Mostly other functions	1404	,3%
	Mostly residential	14391	2,9%
	Mixed retail and lodging	2064	,4%
Total		490256	100,0%

The different mixed uses at the building level were used as input to perform a cluster analysis at the neighbourhood level, so that we can visualize differences in neighbourhood land uses for the case study area. Neighbourhoods were clustered according to the proportion of each land use type, considering the 16 types of land use presented in Table 3. Figure 4 shows the results of this cluster analysis.

The cluster analysis at the neighbourhood level identified three main neighbourhood types: mostly residential, mostly industrial, and mixed with a large amount of residential areas. This looks a rather broad classification but it supports the idea that only one characteristic of the urban form is not ample enough to display subtle differences in urban forms. This is a rather interesting outcome for the analysis of the urban forms in the Netherlands. It demonstrates that the land use mixture doesn't gather enough difference between neighbourhoods.

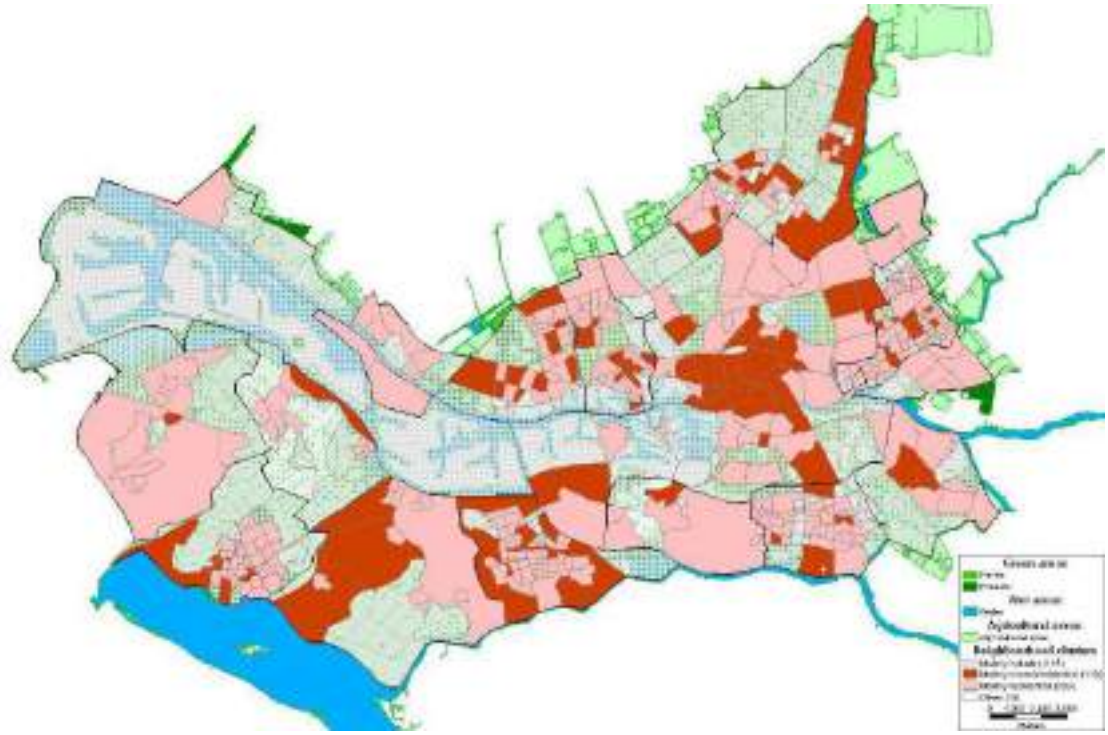

Figure 4 | Clusters at the neighbourhood level

One other interesting outcome of the neighbourhood clustering is that, comparing it with the density maps, we can see that mix of uses it not strictly related to higher density areas. This information reinforces the need of combining different features in the urban form analysis.

2.3 Street Network

Street Network is a very complex system to analyse, which might be the reason that it is analysed in diverse ways in the literature. Often the analyses are strict to visual verification, which is would not be a solution for our project because of the amount of neighbourhoods in our dataset.

For this study we decided to take into consideration the street network to calculate the distance from the neighbourhoods to the highway. We had access to the kadaster database of the motorized street network in the Netherlands. To determine the centre of the neighbourhoods we used the street node the most central. The nodes that represent the access to the highway were identified and used to calculate the distance.

2.4 Accessibility

Accessibility was calculated in terms of distance to public transportation, number of public transportation stops/stations, distance to city centre, and distance to green areas. All distances were calculating using the centroid of the neighbourhoods. For public transportation types were considered: train station, metro entrance, bus stops,

and tram stops. The distances to the different public transportations were calculated from the centroid of the neighbourhood to the closest station or stop.

To complement the calculations of the public transportation, the amount of tram stops, bus stops, train station, and metro entrances were calculated per neighbourhood. Standardized z-score values of each of these amounts were used in the analysis.

To identify the city centres we used the non-daily shopping areas that are bigger than 10000 squared meters. The distance was calculated using the centroids of both neighbourhoods and retail areas.

Different types and scales of green areas exist in our land use database, varying from parks to forests. The decision about which urban form to examine was taken in relation to the context of our project, where the distance to green areas influence the decision to move to a new place. In this sense, we decided to consider the distance to closest green areas, independently of it classification. Here also the centroids were considered.

3. Neighbourhood cluster analysis

We performed a cluster analysis using the 28 parameters that represent density, accessibility, street network, and mixed land use. Solutions with 6 to 10 clusters were analysed in detail. Among these, particularly two solutions had attractive results, those with 6 and 10 clusters.

In the 6 clusters solution it is simpler to distinguish between different neighbourhood types: there are striking differences among them. However, the lower density area of the study area was represented in one single neighbourhood type.

As for the 10 clusters solution, it is possible to identify different neighbourhood types in the lower density area. This is particularly important to be able to distinguish between the urban and rural areas of the smaller cities around the city of Rotterdam. Based on this distinction we decided that the solution with 10 clusters better describes the data. Moreover, the variance of neighbourhood types can provide a richer variation of urban forms to the analysis that will be performed with this neighbourhood classification.

We now describe the solution with 10 clusters. There are 17 neighbourhoods that could not be clustered because of missing data in one of the parameters. This issue will be taken into consideration in future analysis. Some clusters are formed by a single neighbourhood, suggesting that these neighbourhoods may be outliers in the data. The 10 clusters are described below and in Table 4, and they are represented in the map at Figure 5.

1. Mixed industrial. Neighbourhoods with a majority of 'mixed industrial' land use, and a high density. They are distant to city centre, close to green spaces, and have an average distance to highways. They have an average distance to public transportation facilities and few public transport stations/stops. This is an unusual neighbourhood type with its cluster formed by a single neighbourhood.

2. Mixed-industry suburbs. Neighbourhoods with mostly 'mixed residential' combined with other land uses, especially 'mixed-industry'. The distances to highway and the city centre are high, but the distance to public transportation facilities is average. This type of neighbourhood has a high number of public transportation stops/stations and average net density.

3. Industrial suburbs with low PT accessibility. Neighbourhoods with predominately industrial or residential land uses and distant from the city centre. They have a high accessibility to the highway. They have low public transportation accessibility and low density.

4. Residential with high PT accessibility. Neighbourhoods with low-density mainly residential land use with some mixed land uses. The distance to highway is high, to the city centre is average, and to green areas is average. They have a good accessibility to public transportation.

5. Mixed-residential highly accessible. Neighbourhoods with mostly mixed-residential land use with some offices. They are close to the highway and to public transportation facilities, but with few public transportation stations/stops. This is another single-case neighbourhood cluster.

6. Residential and central with low accessibility. Neighbourhoods with mostly ‘single residential’ and ‘mixed residential’ uses. They are distant to public transportation facilities and to highways, but close to the city centre. They have few public transportation stations/stops, and average net density.

7. Residential-office area with low accessibility. Neighbourhoods with a majority residential area with some other uses, especially office. They have high distance to public transport, to the highway, and to the city centre. They also have few public transportation stations/stops and average net density.

8. Industrial area. Neighbourhoods with a majority of ‘single industrial’ and 'mixed-industrial' land uses. They have low accessibility and a high net density.

9. Typical suburb. This cluster has characteristics of the suburbs in the first outskirts out of city: it is partially residential areas with a large amount of other mixed-land uses, in a low net density area. It is close to city centre, to green areas, and to public transportation. It has a large amount of public transportation stations/stops.

10. Residential low density. Neighbourhoods with mostly residential uses with some other mixed-land uses in a low net density area. They have average distances to city centre, green areas, and to public transportation facilities, but are close to highways.

Table 4 | Neighbourhood cluster analysis

			1	2	3	4	5	6	7	8	9	10
Density	Net density		3005854	262728	13433	395311	943449	770623	580794	1195372	124334	53633
Accessibility	Distance to tram		2078	4484	7015	4120	2526	4037	3677	3431	1989	5230
	Distance to bus		667	720	903	714	1140	681	438	971	561	685
	Distance to train station		2507	1602	3550	2308	851	1382	2031	3566	1058	2353
	Distance to metro entrance		5792	6376	8071	6396	840	8192	7577	6953	2470	5580
	Distance to city centre		1405	1081	1489	943	655	489	1031	1636	641	878
	Distance to green areas		145	601	439	392	134	353	337	683	332	318
	Number of Tram stops	z-scores	-0.27	0.15	-0.23	0.25	-0.27	-0.27	-0.27	-0.27	0.65	-0.05
	Number of bus stops		-0.43	-0.19	0.02	-0.2	-0.43	-0.43	-0.28	-0.43	-0.15	0.06
	Number of train stations		-0.27	0.05	-0.13	0.56	-0.27	-0.27	-0.27	-0.27	0.27	-0.03
	Number of metro entrance		-0.14	0.43	-0.08	0.59	-0.14	-0.14	-0.14	-0.14	0.25	-0.07
Street network	Distance to highways		4022.13	6325.65	3636.45	5422.16	3894.6	7337.56	6729.21	7471.46	2405.09	3062.49
Proportion of land use functions	Gathering		0	0	0.03	0.02	0.11	0	0	0	0.02	0.02
	Health		0	0	0.01	0	0	0	0	0	0	0.01
	Industry		0	0.06	0.21	0.07	0.02	0	0	0.49	0.03	0.06
	Office		0	0.01	0.05	0.02	0.08	0	0.09	0	0.03	0.01
	Lodging		0	0	0.01	0	0	0	0	0	0	0
	Mixed-gathering		0	0.03	0.02	0.01	0	0	0	0	0.02	0.01
	Mixed-industry		0.96	0.13	0.05	0.07	0	0	0.06	0	0.02	0.02
	Mixed-office		0	0.02	0.03	0.02	0	0	0	0	0.02	0.01
	Mixed-other functions		0	0.01	0.01	0.03	0	0	0	0	0.02	0.01
	Mixed-residential		0.04	0.29	0.1	0.33	0.65	0.08	0.08	0.42	0.3	0.08
	Mixed-shops		0	0.01	0.01	0.03	0	0	0	0	0.03	0.01
	Education		0	0.04	0.01	0	0	0	0	0	0.03	0.02
	Other functions		0	0.02	0.06	0.04	0.01	0	0.01	0	0.03	0.02
	Sport		0	0.01	0.03	0	0	0	0	0	0.01	0.01
	Shops		0	0.01	0.03	0.02	0	0	0	0	0.01	0.01
	Residential		0.01	0.41	0.35	0.52	0.14	0.92	1.00	0.09	0.44	0.70

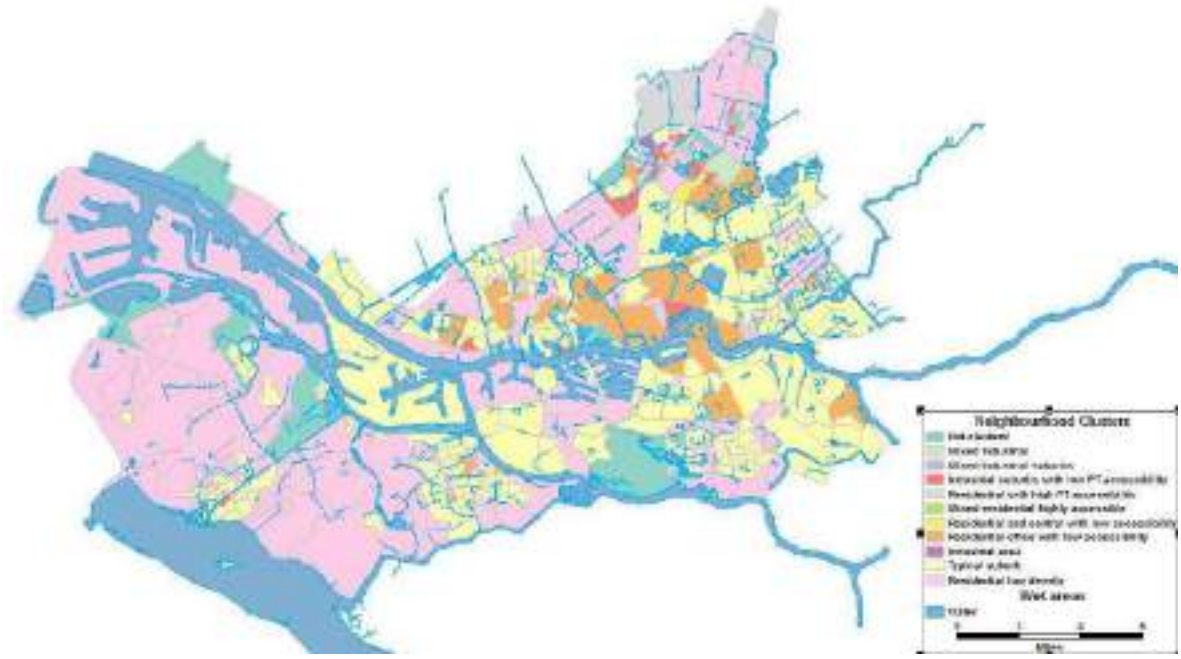

Figure 5 | Neighbourhood cluster analysis

Two regularities can be observed in the clusters. First, neighbourhoods with high density usually correspond to neighbourhoods that have a high diversity. This implies that residential areas in mixed-land use neighbourhoods are more compact and neighbourhoods with predominant residential land use are usually low net density areas. Second, we observed that there is a low variance of the distance to green areas among the neighbourhoods. This is perhaps a consequence of the attributes of green areas considered in the analysis, which does not differentiate between the type and sizes of the green areas. Such observation suggests that a more detailed distinction of green areas should be taken into consideration in the future.

4. Conclusions

This paper proposes a methodology to cluster different neighbourhoods according to their urban form characteristics. Combining data from different sources in the Netherlands, it used the Rotterdam area as a case study in the application of the methodology. Four themes of urban form were proposed together with methods to calculate them from generally available data: density, mixed-land use, street network, and accessibility.

Each feature of urban form revealed some importance in defining the final clusters. The analysis of the density displayed that, depending on the purpose of analysis, it is important to consider which density type has an impact on the results. In the context of our project, we could observe that residential net density is preferable than the residential gross density.

The mixed-land use study indicated that, in the case study of this research, there are little differences in neighbourhood types if only this characteristic is considered. Distance to highway was considered as street network parameters, and our analysis revealed it to be an important factor to capture the contrast among similar neighbourhoods. In addition, accessibility, not surprisingly, was an essential component in differentiating neighbourhoods.

The results from the cluster analysis suggest that neighbourhoods can be categorized in ten different types. This classification appears to reflect the nuances from the study area, considering at the same time density, mixed land use, street network and accessibility.

The methodology appeared to be satisfactory to categorize the neighbourhoods, particularly in the context of our project, where the neighbourhood types will be included into the analysis to each respondent. Most likely there are some refinement that must be done when incorporating it into the analysis. Nevertheless, the methodology presented here adds a new perspective on how to combine and analyse different aspect of the urban form.

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THE URBAN PLANNING OF FRENCH CITIES AND THE CHALLENGE OF SUSTAINABLE TOWN PLANNING: IMPROVEMENTS AND LIMITS

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Abstract

This article challenges the efficiency of the French urban planning system in front of national and European legislative objectives regarding sustainable urban development. It is based on a historical analysis of the effectiveness of urban management tools. Thus, in a first part, one will show that the major problems of cities such as they exist today, namely urban sprawl and zoning by unique urban function (Williams *et al.*, 2000; Mangin, 2004) and the creation of districts in the 60 ‘s fostering social problems today, appeared in spite of the development of the urban planning system at the same time.

The awareness of these problems and the rise of the notion of sustainable development have made the practices in town planning evolve (Raffaud, 2003). "By making” the legislation “green", they have also strongly developed the rules which change the contents and forms of urban planning (Mathieu *et al.*, 2005).

Then, one needs to ask the question of the current efficiency of the documents dealing with the planning of French cities confronted to the challenges of sustainable development. After a quick presentation of the French planning system and the local plan, which is its tool at the scale of the city, the article will present, in the second part, the advantages and the difficulties encountered. It will hence to light the difficulties we have to translate in a statutory way the planning orientations. One will also highlight other problems, such as the necessity to make the local planning orientation consistent with other public policies of planning and the variety of temporalities, and the limitation of the effects of local plans … (Blanc *et al.*, 2008).

This article will also attempt to demonstrate that town planning documents, if accurately written, can be invaluable tools to improve the quality of town planning and that the limitation of its "impacts", made compulsory by the European legislation

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in 2001, seems to be an extra security for the quality of the cities (Lerond *et al.*, 2003; Miller *et al.*, 2005; Alexander, 2006).
To conclude, after having presented the recent sustainable objectives of planning, by showing the improvements along with the numerous difficulties with which the planners are confronted, the article will focus on the fact that urban planning is not the only tool to be mobilized to make the sustainable city, but a necessary control lever, to be coordinated with other positive public actions, urban studies and responsible political choices.

1. Introduction

This article fits into an international context of urban development (Rogers, 2000) and studies on the quality of urban environments and resource conservation. In France, "sustainable planning" issues are increasingly present, owing to the Grenelle 1 and 2 laws (which aim to improve the awareness of the environment) and the legislative reinforcement in the assessment of plans and programmes (2001 EU directive, translated into French law in 2004).
In this context, the article questions the actual efficiency of urban planning with regard to sustainable development and the environment. To do so, it provides an analysis of the means and tools made available for the urban planning of French cities today, highlighting the improvements and limits encountered throughout the course of history.

The first section of the article shows that urban planning in France has existed for over a century, although this has not kept problems linked to social, demographic, economic and cultural factors, as well as to political decisions, from arising. Thus, history shows that planning and its developments aimed at improving urban quality have mainly been the translation of political choices, the latter being influenced by societal change.
In the meantime, global environmental issues, linked to the difficulties encountered by cities, have contributed to the emergence of global awareness, leading to the generalization of the "sustainable development" concept. Through legislation, sustainable development has also brought about changes in urban planning philosophy, as can be seen through the effects of the 2000 law on Urban Solidarity and Renewal, as well as the significant developments in urban planning practices.

The second section is focused on urban planning at the city level. Urban planning gathers all the institutional means that are implemented to try and control urban changes and city expansion. In France, such control is carried out through zoning and land use regulations at the city level. The second section shows precisely where these plans stand in the French urban planning system, the way they are linked to other planning documents and their actual impact. It also highlights the regulatory levers that the *Plan Local d'Urbanisme* (PLU) is provided with to act in favour of the environment, even though sectoral PLU efforts must be completed with other policies.

Finally, the last section deals with the assessment of these plans. This assessment, which was reinforced through EU laws in 2001, aims to curb their impact on the environment. Considering the State's level of environmental requirements, there are reasons to be optimistic about the impact of such procedures.

2. A century of urban planning hindered by uneven control of urban development

2.1 Evolution of urban planning in France

Originally, the urban planning of French cities boasted few legal instruments. It dealt with issues separately: traffic lanes and public area planning, public health, protection of heritage, management of hazardous institutions, etc.

The first significant law pertaining to town planning was the *Loi Cornudet* of 1919, in a post-war reconstruction context. This law, which stipulated "extension and improvement plans" in cities of over 10,000 inhabitants, was grounded in the values and goals of the time: health awareness and aesthetics. However, these first tools of urban planning did not produce the desired effect. After very long delays[5], only a quarter of the Cornudet plans were implemented, while a single regional project came into existence (that of the Paris region).[6]

Then, in 1958, "urban master plans" and "detailed plans"[7] were introduced. The master plan included land use zoning, dedicated spots for public facilities and protected woodland areas.
The detailed plan was a kind of "floor plan" that dealt with sectors defined in the master plan. In particular, this "floor plan" pattern was then blamed for being too rigid (the prescribed "floor plan" leaving no room during the building permit process).
Another major criticism was the lack of a global project, causing land speculation and excessive clustering. And yet, the aim of city planning, which was invented in the late 19th century according to Françoise Choay's analysis (Choay, 1965), is the management of urbanisation to help meet human needs. It was therefore essential to place regulatory town planning within a project context (Raffaud, 2003).

This was first attempted in the 1960s, when the notion of "territorial management" emerged, with the *Loi d'Orientation Foncière* (LOF) of 1967. This law (which remained in force until 2000), allowed for the creation of the *Schéma Directeur d'Aménagement et d'Urbanisme* (SDAU) and the *Plan d'Occupation des Sols* (POS), two town planning documents.

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[5] The first plans only received final approval on the eve of World War II. See P. Merlin, L'urbanisme, Que sais-je, PUF p.65.
[6] Le coin du droit de l'urbanisme website: http://www.coin-urbanisme.org/urbanisme. J.-H. DRIARD
[7] Since urban master plans were not compulsory for all towns, additional plans also existed (for large towns or towns confronted with specific problems) and basic plans.

The SDAU is a supra local planning document that sets out development guidelines while the POS is the local document that must be compatible with SDAU guidelines. The POS includes a territorial diagnosis and statutory documents that are binding on third parties and aimed at conditioning future constructions. Two elements stand out from these documents: the desire to define a coherent territorial urban project, and the willingness to respond to previous criticism by separating the project from the regulation to improve building rights management.
These documents aim to instil a strategic vision into territorial management, both in the SDAU at the supra local level through development guidelines, and in the POS at the local level through compatibility with the SDAU. However, with the POS, the town does not have a true guidance tool. That flaw and the criticism it incurred led to a redrafting of town planning documents in 2000 with the *Schémas de Cohérence Territoriaux* (SCOT) and today's *Plans Locaux d'Urbanisme* (PLU). Thus, the *Solidarité et Renouvellement Urbains*[8] (SRU) law of 2000 deeply changed the approach to territorial planning and remains a milestone in the history of French law. If it brings a new dimension in town planning, it does so also in terms of sustainable development and environment[9].

Thus, the evolution of urban planning in France has seen the emergence of a global town project, as well as the willingness to base decisions on a more accurate and scientific analysis of the territory. Yet, the urbanisation of French cities was far from flawless in the early years of town planning, probably because changing lifestyles and economic context as well as current political decisions precede issues and planning tools, thus conditioning planning to a great extent. These changes, which recent laws have tried to mend, often caught the fledgling town planning process unprepared. Indeed, such laws as the SRU laws or the more recent Grenelle[10] laws, which have made urban planning more sustainable, seem to have been created as a response to the issues we are now going to discuss.

[8] Or "Urban Solidarity and Renewal Act »

[9] The goals of the PLU as defined by the laws pertain to urban renewal, protection of natural areas and heritage, urban quality and urban functions such as housing and environmental awareness. (According to article L121-1 of the French Town Planning Code)

[10] Since the last decree of the Grenelle 2 law was published in February 2012, we lack the required perspective to assess the actual effects of the law. Therefore, this article will mostly address the PLU in its "SRU law" version, by introducing a few major tools brought by the Grenelle 2 law.
Furthermore, it seems that this law has helped raise environmental awareness and introduced some new tools and concepts, though it has not changed significantly the form or substance of PLUs.

2.2 Urban forms facing influences

This section aims to present urban evolution in France throughout the years, in order to compare the problems that occurred with public policy decisions and the evolutions of urban planning.

As early as the 1950s, the "house" was highly acclaimed. Yet, in the beginning, the state was more inclined to favour the construction of large collective apartment blocks to try and solve the housing crisis, while structuring a building industry that was too fragmented. After an initial satisfactory reception, apartment blocks were soon blamed for their monotony, formal rigidity and defects, and lost their appeal within a very short time. This lack of intrinsic quality, combined with the fast-increasing purchasing power of working and middle classes during the post war *trente glorieuses* (thirty glorious years) led these populations to fulfil their dream by leaving these dwellings in favour of individual houses. The attractiveness of the latter has not decreased ever since (Djefal et al., 2004).

The complete transformation of French urban designs was favoured by policies (the State's in particular) that radically shifted in terms of housing strategies. After fifteen years or so of restrictive policies regarding individual houses, their attractiveness was then strengthened by the implemented policies. Thus, in 1969, Albin Chalandon, then Minister for Infrastructure and Housing, claimed he wanted to "be able to give people what they wanted" (M.Carmona quoting A.Chalendon in Paquot, 2010). To do so, he organized a contest on individual houses, with the aim of finding an inexpensive "product" for villages of 3,000 to 4,000 houses. However, the so-called "*Chalandonnettes*" brought about a number of problems. While low-value individual houses became more accessible, sub-urbanisation increased with the inherent problems of energy, commuting and space consumption. Furthermore, with urban sprawl came an additional problem that is particularly acute in France, which Éric Charmes (Füzesséry et al., 2010) calls "crumbling". The town or the village is sucked up by the city centre, which tends to sprawl, in particular through the building of housing estates. This "crumbling" is problematic in terms of coexistence between natural, agricultural and urban areas, since it increases contact between populated areas, natural areas and farms.

In industrialized countries, increased access to individual housing accelerated urban sprawl. Indeed, this phenomenon, correlated to increased access to cars from 1960 to 1985 and the appearance of numerous shopping centres and *zones d'activité* (activity areas), began in the 1960s (Mangin, 2004, Figure 1.).

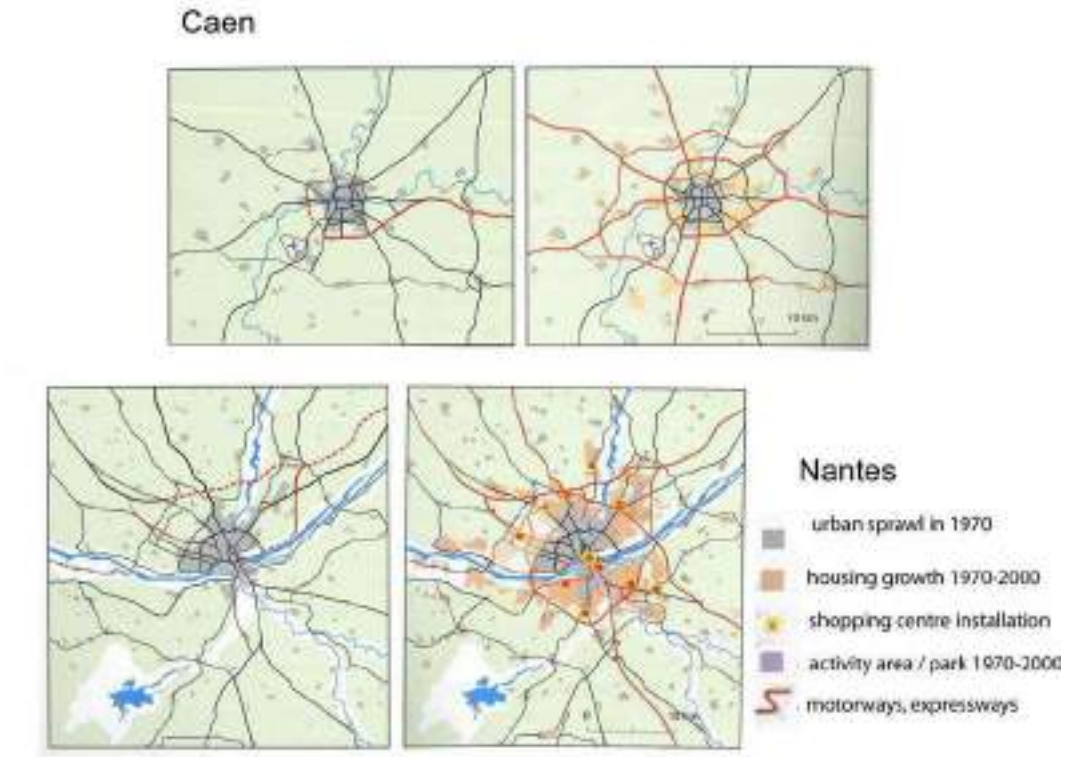

Figure 1. Concentric growth of Caen and Nantes from 1970 to 2000
Source: According to Mangin 2004 p.86, 87.

Increased access to cars, changing road networks and consumption modes are linked to evolving city structures and therefore to urban sprawl processes. Thus, we perceive that the reasons for the rapid growth of "houses" and "detached houses" in suburban areas are numerous. Such sprawl is linked to the home-owning dream, land prices, and mobility and consumption modes made easier by cars. In addition to - and as a response to - these societal levers, public policies have backed all these changes. Through this historic study of the urbanisation of French cities, we can see that public authorities and politicians have endorsed planning choices that perpetuated difficulties over 40 years, with the massive increase of detached houses and a political willingness to develop road and trade networks in favour of automobiles.

Finally, the *Loi de décentralisation* of March 2nd, 1982, was a turning point in urban planning since it entrusts competence to local authorities in planning matters – until then, it was the State's prerogative. To sum up, decentralization clearly proved beneficial for towns as it ensured localized action and strong involvement. However, it sometimes created pitfalls due to the complex planning system. Profits - whether financial or electoral - for the various actors, the quest for the collective interest and the definition of the common good that may vary from one individual to another do not always guarantee optimal planning choices.

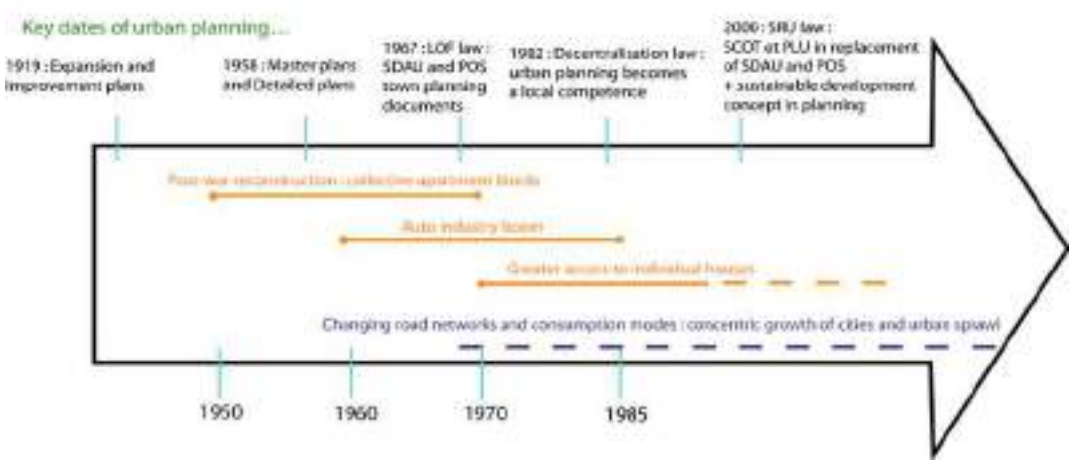

Figure 2. Evolution of urban planning and urban dynamics

Today, owing to these changes, the role of sustainable development in urban planning has become significant, as shown by the changes presented in 2.1. The next section deals more precisely with the functioning of the French planning system and the means of integrating the environmental component into city planning.

3. Local urban plans can be levers of sustainable development, provided they are coordinated with additional public policies

3.1 The role of local urban plans and their impact on the French urban planning system

From the late 1990s and the publication of the Labetoulle[11] report - a critical assessment of urban planning in the previous decade - the government has been trying to mend the errors pertaining to decentralization and the weaknesses of documents originating from the LOF law. To do so, it passed the SRU law in 2000, which changed the philosophy and structure of French urban planning.

As in the past, the current French planning system is built on two levels: the supra local and the local (of a town or of its agglomeration) levels.
The first tool at the supra local level is the *Schéma de cohérence territorial* (SCOT). This inter-municipality document allows towns or their groups of municipalities "to

[11] « L'urbanisme pour un droit plus efficace », French Council of State report, Labetoulle Commission. Documentation Francaise, May 1992.

provide coherence and coordinate policies in terms of urban planning, housing, economic development, commuting and commercial installations in a sustainable development perspective." (Goze, 2007)[12]
The broad guidelines for urban development at the supra local level contained in the SCOT were then enforced in the *Plans de Déplacements Urbains* (PDU) for cities with over 100,000 inhabitants and the *Programme Local de l'Habitat* (PLH).
PDUs aim to define the organizing principles of human and merchandise transportation, traffic and parking within urban transport perimeters in an attempt to achieve a balanced use of the different modes of transport and promote the cleanest and most energy-efficient modes.
PLHs aim to meet housing and accommodation needs while favouring urban renewal and social diversity.

At the local level, cities are provided with the *Plan Local d'Urbanisme* (PLU), which must be compatible with the SCOT and other PDUs and PLHs[13].
As for the actual content of the PLU, the SRU law of 2000 brought a new dimension to the former Plans d'Occupation des Sols (POS) by endowing them with a *Projet d'Aménagement et de Développement Durables* (PADD), which sets out territorial management priorities with a crosscutting approach (town planning, functions, commuting, environment, equipment, etc.). In order to be consistent with identified dynamics, strengths and weaknesses, the PADD is based on a territorial diagnosis. The development guidelines set out in the PADD are then translated into the PLU regulations, which condition future construction in terms of land occupation, volume and layout. Local territory zoning makes it possible to adapt the rules dictated by the general urban structure and space characteristics. Thus, the PLU regulations condition building rights (setting up, volume, outdoor areas) and space organisation (function, land reserves for equipment, etc.), while making sure that the PADD local objectives and PLU general objectives defined by the laws are respected. These general objectives apply to urban renewal, the preservation of natural areas and heritage, urban quality and urban functions such as housing and environmental awareness.

In their current form, these regulations are very often blamed for one aspect: they are regarded as extremely complex, either in expression (legal regulations that may be difficult for citizens to grasp), or in rule interaction that sometimes makes their consequences in terms of buildings and urban landscape difficult to anticipate. For each plan area, there are 16 articles available to restrict destination, aspect, installation, volume, surroundings and connection to future buildings, but only 2 are mandatory: those which condition installation in relation to the road and to

[12] GOZE, M. 2007. "Schéma de cohérence territoriale" Les outils de l'aménagement, http://www.outil2amenagement.certu.developpementdurable.gouv.fr/rubrique.php3?id_rubrique=41 website
[13] There are also "*cartes communales*", very simplified document adapted to municipalities with no land pressure or need for requalification of public spaces for instance. As soon as town planning becomes a true local issue, the low building impact of these "maps" (the National Master plan Regulation is applied) may encourage the drafting of a PLU.

boundaries. However, all PLUs use at least ten of them in order to control development as much as possible. That difficulty in reading regulations and grasping their impact is increased by the ever-changing city itself. The French government claimed it wished to simplify urban documents. If this reform becomes reality, one may wonder about the "right" form to give to these documents, the right balance between constraint and freedom, and the complexity of their future use.

The function of regulations is to translate the highly crosscutting guidelines of the PADD on a regulatory basis, the PADD being merely the political project for the city, while taking supra local prescriptions and legislative objectives into account. However, it is clear that the scope of regulations - building rights, urban functions, zoning and spatial organisation – does not systematically allow an extensive translation of all political challenges that may be set out in the PADD. The PADD either goes beyond the scope of the PLU (willingness to stand for political actions that exceed the scope of the PLU), or the complex PADD guidelines require regulatory decisions (see next section). Thus, some guidelines, like density growth in a particular zone or the conservation of heritage buildings, will be translated directly. Others will be addressed less directly through regulatory tools with less impact, and/or the PLU, with its regulations, will mostly make sure that it does not hinder its implementation through more adequate public policy tools. The example of how environmental issues are taken into consideration in regulations will be developed in the following paragraph.

Finally, we will see in the final section of the article that PLUs should comprise elements related to project assessment faced with sustainable development and the environment.
The following paragraph presents the means made available to PLU regulations to take environmental issues into account.

3.2 PLUs can be used as a tool in favour of sustainable development and environmental protection

Throughout history, laws have become more ambitious in terms of sustainable development. The SRU and Grenelle 2 laws have defined goals for PLUs that cover all urban components in terms of housing, functional and social diversity, equipment, but also the environment. However, it seems that all of these challenges should be dealt with adequately according to the territory and its characteristics. If local authorities are willing to be ambitious in terms of sustainable development, they must fix priorities and make decisions so as to best respond to the challenges of their territory.
Within this "green" legislative framework and the political and urban context of each city, the PLU translates the political development project, and also attempts to translate other supra local policies regarding housing, commuting, trades, etc.
To achieve these goals, its regulatory scope makes it possible for the PLU to have an impact on a number of urban and environmental aspects, with varying levels of prescription and prohibition. Besides systematically defining zoning and building

regulations, the PLU can be regarded as a “tool box”, from which each town may be free to pick the most interesting one to translate a development plan in coherence with territories and laws. Moreover, some PLUs also have to take into consideration the “plans and programmes” European directive regarding the effects of plans on the environment, and prove that the chosen regulations have no impact on the environment.

We will see that the first interesting “tool” is local plan zoning, which allocates specific functions (in particular agricultural and natural ones) to some areas, and defines town planning rules (morphological ones in particular) that are related to them. The second tool directly regards the rules, either written or graphical, that can be applied.

The “zoning” of urban functions, which is designed to reduce nuisance and incompatibility between industrial activities and housing for instance, is widespread in many countries. The use of “buffer zones”, which enable the separation of nuisance sources from housing areas through green areas, is common practice. (Pearce, 2005). In France, at the local level (that of PLUs), these buffer zones exist and are mainly defined in two ways.
First, there are regulatory buffer zones around the sectors presenting a technological or natural risk, or a high level of nuisance such as airport-related sound pollution. These buffer zones have an influence on the chosen types of activity, as well as on building rights, in order to curb the density of houses in the vicinity of nuisance sources in particular. Such zones are mostly the result of State prescriptions and are transcribed as such in the PLU. These prescriptions come on top of zoning and corresponding regulations. This is the case for the *Plans de Prévention des Risques* (Risk prevention plans).

Secondly, as for noise pollution from road infrastructures and industrial activities, the towns that elaborate plans can organize zoning to protect populated areas, without being legally obliged to do so. Thus, areas dedicated to industry and commercial activities can be primarily located in the vicinity of major road networks in order to reduce their impact on populated areas. Guidelines from the building code, which are not taken into account in PLUs, strengthen this scheme as they are directly applied to the building industry.
Finally, areas where construction is no longer allowed are also dedicated to the protection of natural, agricultural and forest spaces. Green areas can also be created through land restriction tools used in PLUs.

Furthermore, the Grenelle laws have made the implementation and protection of *Trames Vertes et Bleues* (which include “ecological corridors”) compulsory. These belts may be favoured through various PLU tools, including zoning. However, it seems quite difficult today to make these belts consistent at the local level (i.e. the town level) as they are defined on a larger scale. (Cormier et al., 2010). These guidelines are recent and it will be interesting to see how PLUs try to overcome these difficulties.

As far as regulations are concerned, local plans can operate in two very different ways. They can either fit into the general everyday town planning framework by "legally" conditioning the building permits filed in the different urban areas; or these regulations act as an expression of a global project (mostly at the neighbourhood level), conducted by local authorities or within the framework of negotiated projects (Rousseaux, 2009; Burkart, 1999). Therefore, it is logical that environmental and sustainable planning efforts should be easier in a "project" town planning approach. This is also the case for the new *Orientations d'Aménagements et de Programmation* (OAP), which were introduced by the Grenelle 2 law and make it possible to define "development guidelines" for a sector that are binding on third parties in terms of accountancy. They would contribute to make town planning more flexible and more controlled at the neighbourhood level.
The various examples we are now going to present mostly apply in the case of building permits that are filed on a daily basis rather than in the case of global projects, for which PLU rules are mainly a framework that were made compatible with these projects' development plans.

The issues of urban shapes and functional diversity are widely addressed in PLUs as they meet the first purpose of local plans. Zoning and regulations allow certain urban functions to be allocated to particular areas, while prohibiting others. The buildings that are expected in each zone are conditioned by rules of height, hold, size, etc. These tools may be used to achieve the quest for a "sustainable" city morphology, even if such a notion is the subject of debate and seems closely linked to the characteristics of each territory (Williams et al., 2000).
These morphological rules, provided they are drafted properly, can have an impact on the amount of sunshine, which helps improve energy performance ratings (Prévost et al., 2011).

As far as integrated devices of renewable energy production are concerned, the recent Grenelle 2 law provides that PLU rules will no longer be allowed to oppose the installation of such equipment. This new law also provides for the possibility to impose energy performance criteria, although we do not know exactly how. Until now, the PLU could not enforce any energy regulations. However, some incentive schemes already existed and are still valuable today since they provide the possibility of increasing constructability provided an effort in favour of energy is made.

Other themes, such as the protection of heritage buildings, social diversity, rainwater management and sanitation per plot, can be found in PLUs.
All these themes may be addressed within the rules of each area in various (more or less pro-active) manners, and by using incentive measures such as derogations under specified conditions. Moreover, they may be taken into consideration as a guideline within the framework of OAPs, for instance in view of a global project at the neighbourhood level.

In this section, we have seen that local town plans in France are provided with a number of tools to integrate the environment in the management of the changing city. Furthermore, although the PLU is sometimes limited in prescription by its regulatory scope (in terms of water or biodiversity for instance), one should bear in mind that territorial management and other actions in favour of the city are also addressed by other public policies. These general interest measures are sometimes more adequate and complement the effects of the PLU. For example, within the cross-industry *Agenda 21*, which takes all sustainable and environmental dimensions into account, the French PLU could act as a lever, on such aspects as the coherence between urban planning and transport (prioritising density along public transport corridors), or the development of new forms of housing such as intermediary housing (through morphological rules).

It is clear that PLUs are provided with sustainable development and environmental tools. Indeed, if there are limits in taking the environmental component into consideration, such limits may be found elsewhere. There may be difficulties in bringing together policies that are defined at different levels, and others in translating urban guidelines on complex territories into concrete terms. This is due to the choice of rules and tools, the impact of which is not always easy to anticipate.
Eventually, there may also be a lack of political ambition in terms of sustainable development, which may result in “minimum” PLUs.

The PLU regulation is the element that is applied to buildings and equipment in concrete terms. The next section will illustrate that this component is not the only one in the PLU from which the environment may benefit. In addition to the diagnosis, the PADD and regulations, the PLU comprises elements pertaining to the environmental assessment of the project. The coming chapter will present its content, contributions and limits.

4. Environmental assessment of urban planning documents: a global approach for less impactful planning, while facing urban complexity

Since the SRU law of 2000, urban planning documents have been required to develop a more transparent approach on the protection of natural areas and resources, as well as on the limitation of pollution and nuisance within guidelines and projects. Besides defining legally consistent urban principles, these documents must include an “environmental profile”, an analysis of the Plan’s main foreseeable effects, and a presentation of the various choices made to define the PADD. Since the 2001 “plans and programmes” European directive, which was translated into French law in 2004, urban documents, including some PLUs, have had to provide reinforced environmental assessment, which sets compensation, reduction and avoidance measures for identified effects, as well as an analysis of the Plan’s effects at the end of a ten-year period following its approval (now a six-year period with the Grenelle 2 law).
This assessment is part of the strategic environmental assessment of policies, plans and programmes that precede projects (Strategic environmental assessment), and

have become common throughout the world (Lichfield, 1997). This strategic assessment can be carried out at different stages: before the process, in order to guide decisions regarding environment, during the implementation, or after the process for ex-post assessment of the plan (Lerond et al., 2003).

Significant PLUs which are not covered by a SCOT (or whose SCOT is not provided with assessment) as well as PLUs which cover an area close to or inside a Natura 2000 area[14], are subject to strengthened environmental assessment, that is under the European directive.
The State has become very strict about the quality of this assessment, especially when the area is related to a Natura 2000 site. Indeed, the State demands that all doubts concerning possible impact of the PLU on such sites be dispelled. Eventually, once the Plan has been created, the State may cancel the plan if it deems the quality of research insufficient (as with the Bouguenais PLU, which was cancelled in February 2011).

The content of the environmental assessment includes the environmental diagnosis of the area, the justification of planning choices, and the impact study. The impact study has to deal with political guidelines, urban planning rules, zoning, as well as with Natura 2000 sites and environmental themes as a whole. This accounts for its complexity since the impact of regulations is difficult to anticipate. As a result, the "impact" is sometimes defined "hypothetically", with no possible quantification. If negative impact is anticipated, the PLU must provide ways of avoiding, reducing, or compensating them[15] (ex-ante assessment).
Finally, the PLU must review its impact at the end of a six-year period following its implementation (ex-post assessment). Feedback in terms of PLU results is currently inexistent as the legislation is very recent. However, PLUs with a monitoring framework are all provided with a system of sustainable development territorial indicators, often in the form of "sets of indicators" that we may call "dashboards". This system of indicators is intended to help actors make decisions, grasp the complexity of the real world and work together (Joerin *et al.*, 2005).

One may tend to think that indicators measuring impact on sites (like Natura sites) are more specific and enable assessment of the actual impact of the PLU since they are based on precise, localized inventories. As for some thematic environmental indicators (that of a dashboard for instance), which provide a record of environmental issues (like water or air quality), from which the impact of the PLU is to be deduced, the analysis seems less direct (i.e. "hypothetically"). However, despite these few drawbacks, all these existing indicators (also in the case of impact studies) are quite useful to assess the changes in the territory and, if need be, to use the PLU or any other public policy which may be more efficient to improve the environment.

[14] "The Natura 2000 network gathers various natural sites in Europe, on land and at sea, that have been identified for the scarcity or fragility of animal and vegetal wild species, and of their habitat." (http://www.gouv.fr)
[15] "Compensation measures", within an impact study on Natura 2000 sites, are the last stage of measures to be set. They prompt the decision of higher authorities.

We have seen that the PLU is strictly controlled by the State in terms of assessment and circumscribed by law. Assessment brings greater attention to environmental issues and, while making people more aware of the crosscutting plan effects, also mobilises other more targeted and even fully dedicated public policies.
However, some limits need mentioning. The complexity of the city seems to make it impossible to precisely and thoroughly assess the impact of urban policies (hence the impact that is sometimes defined "hypothetically"). Furthermore, while modelling methods of urban phenomena are developing, no French town is currently ready to use these complex methods for assessment. The detail level of the requested assessment is often in coherence with the magnitude of the projects and the means (mostly data) available.
Finally, these environmental studies remain the responsibility of local authorities, which steer all projects, particularly those related to planning. Still, local authorities have a duty to favour major urban projects that are supported by representatives. Therefore, we are faced with a potential conflict between the obligation not to harm the environment on the one hand and political requests in terms of development on the other. As a result, the whole issue in terms of assessment is to avoid such impact while making room for development projects. It is up to the State and its competent environmental authorities to be sufficiently demanding while acting as advisors to all projects, including the PLU.

5. Conclusion

The emergence of urban problems and international awareness have brought about changes in the laws that govern French urban planning, by allowing planners to be more pro-active in terms of sustainable planning.

At the city level, PLUs, which have a number of tools available to them to incorporate environmental matters, must implement the recommendations of the SCOT. However, although laws set ambitious general goals, the use of regulatory tools varies considerably according to towns. Furthermore, it is extremely difficult to coordinate regulations that have an impact on intertwined urban themes. These are the restrictive points for handling environmental matters in PLUs.
On the other hand, all plans must provide an analysis of the likely impact through simple (under the SRU law) or strengthened (under the "*Plans et Programmes*" directive) assessment. This appears to be a real improvement in terms of environmentally-friendly planning in France.

Thus, considering what has been discussed in this article, we understand that "cautious" planning involves sensible political decisions. These decisions should be made through anticipating the maximum impact that planning may have on the various components of the city. Political guidelines should also be shared by urban actors, including among citizens (for environmental assessment, we have seen the importance of communication with government services in section 4.). Governance

and consulting are essential, lest the process should not be achieved and public policies should not be coordinated properly.

As far as urban planning is concerned, the anticipation of public policy impact accounts for a closer relationship between representatives, local authorities and the field of urban studies and research. Today, “reports” and the use of developing tools such as modelling are increasingly present before the creation of public policies and within ex-post16 assessment. A model for the complexity of urban rules itself will soon be developed (Brasebin et al., 2011).

Finally, we may hope that the next legislative and regulatory changes will help improve environmental awareness. The Grenelle 1 and 2 laws, though they have not revolutionized urban planning, have provided a number of interesting tools for PLUs, such as the development and programming guidelines, new measures in favour of coherence between urban planning and transport, the setting up of *Trames Vertes et Bleues*, etc. Within a few years’ time, we may witness a reform aimed at simplifying French urban documents, with the hope that these simplifications will allow for more incentives and innovation.

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Cross-border areas in the Euro-Mediterranean context. The case of the Spanish-Moroccan region

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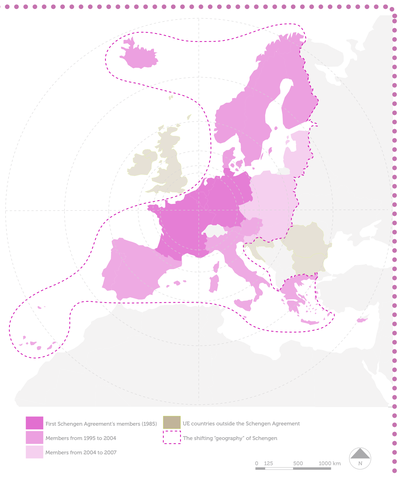
The overlapping geographies of contemporary Europe

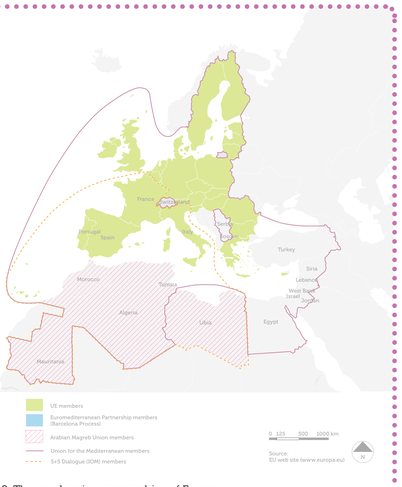
Political borders are places of conflict and encounter, counter-geographies where the main issues of our times are being performed: transnational production processes, global migration movements, gender inequities, security concerns, new colonialisms, capitalistic mechanisms.
In this context, Europe is assuming a more and more complex image, even richer than the Fortress metaphor: a **complex and multilayered geography** where different overlapping political entities, institutions and organizations operate simultaneously at different levels. An expanding nebula without defined boundaries, surrounded by **buffer zones** constantly changing.



1. The Schengen Space

The Mediterranean Border

This image is particularly relevant if we look at one of the most "sensitive" regions of the Schengen Space: the Euro-Mediterranean basin, where geographical elements, symbolical meanings, economical, social and cultural issues overlap creating a **complex fabric of relations and dynamics**.
To date, the Mediterranean can be seen as the land on which complex and contradictory relations are being played across regions and cultures overlooking its basin. In this context, Europe has taken, over the last fifteen years, a growing and crucial role, from the establishment of the Euro-mediterranean Association until the creation of the Union for the Mediterranean.



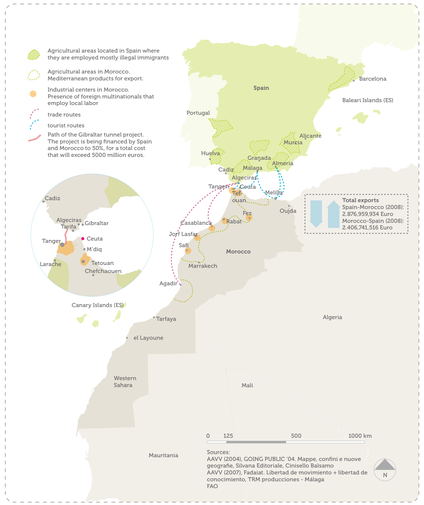
2. The overlapping geographies of Europe

Border regions as laboratories for transnational planning?

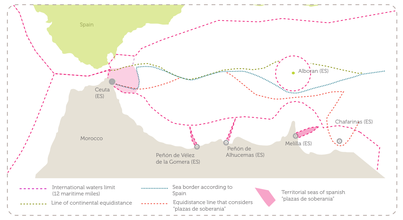
In the context of EU development programs, is it possible to consider border regions not only as sites of transnational capital production, but also as laboratories for new forms of cross-border planning cooperation in the Euro-Mediterranean region? Can we look at them as places of knowledge production and exchange for innovative tools and models of transnational governance and trans-border planning practices at different scales? What can be the role of cultural institutions, research centres and universities in this process of cooperation?

The Moroccan-Spanish border region

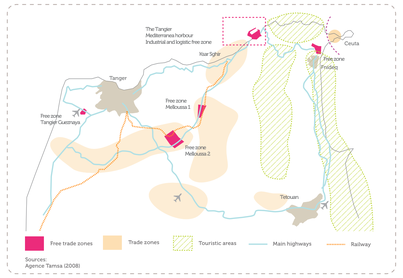
The Moroccan-Spanish region is becoming one of the most important areas in the Euro-Mediterranean Neighbourhood Policy context.
Like other cross-border areas, the northern region of Morocco has lived, in recent years, the increasing presence of multinational factories, the implantation of free trade zones, the implementation of the infrastructure networks and the construction of new production plants.
In this context, the Tanger-Med harbour will catalyse, in the next years, a huge amount of goods and financial fluxes. These are some of the direct and indirect consequences of transnational processes and of European border policies, as well, on local development programs and planning activities.
Moreover Spain and Morocco are involved in a complex relationship of cooperation and dispute on some political and economical crucial issues.



3. The economical relationships between Morocco and Spain: agricoltures areas, industrial plants and sea routes.



4. The sea-border between Spain and Morocco: disputes



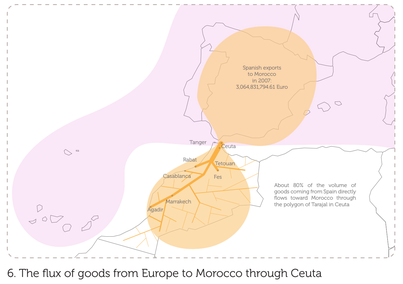
5. Develpment plans for North Morocco

For all these reasons the Spanish-Moroccan cross-border region seems to be a privileged point of observation of three main overlapping and interdependent systems:

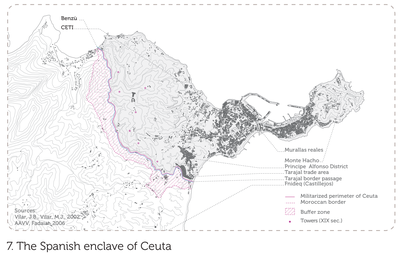
1. the international/transnational level of global market and financial dynamics;
2. the Euro-Mediterranean policies and development programs (UE/Morocco Action Plan);
3. the local spatial planning and administrative systems.

Case study: Ceuta, *the Island*

One of the most sensitive areas of the Spanish - Moroccan border is the iberian enclave of Ceuta. Being considered as part of Spain as "metropolitan territory", Ceuta is at the centre of the disputes between Morocco and Spain. Here the border materializes itself as an element of control and defense: a 8,3 kilometers militarized fence surrounds the city, in order to discourage the illegal entrance of migrants. The presence of the wall acts not only on a political level, but also symbolically as the sign of a function that the enclave had performed in the past: the defense from the "others" (the Arabs during the last four centuries, the migrants today). These spatial elements at different scales (the strait, the productive areas, the enclave and the fence) and the related fluxes (people, goods, information, money) constitute a complex spatial mechanism.



6. The flux of goods from Europe to Morocco through Ceuta



7. The Spanish enclave of Ceuta

Horizon 2020 and cross-border planning

Cross Border Cooperation (CBC) is a key priority in the EU's relations with the neighbourhood, aiming to reinforce cooperation between Member States and partner countries along the external borders of the European Union, around four key objectives: economic and social development; common challenges; efficient and secure borders; and people-to-people cooperation. The new EU Framework Programme (Horizon 2020) is going to have relevant effects on CBC and ENPI Program, particularly regarding the environmental regulation of the Mediterranean Basin. This could be the terrain on which border territories and countries can experiment forms of cooperation in environmental governance and planning.

Expected results

The research aims to set the starting "stock of knowledge" and the methodological background to answer to the research questions, looking for new approaches in the field of cross-border spatial governance and planning practices not only from an European point of view, but, above all, assuming a "south to north" knowledge transfer process.

Methodology

The research will be lead, according to the principles of empiric research, on a multidisciplinary basis: spatial planning, sociology, political studies. In this perspective the research will analyse in depth the actual Euro-Mediterranean Policies, looking at the strategic programs and plans involving the Spanish-Moroccan region. Moreover a particular attention will be addressed at the Moroccan Development programs and Planning strategies.

Acknowledgments

The starting point of the research is the MA thesis "Territori con_divisi: comunità in movimento attraverso la frontiera ispano-marocchina" discussed in 2009, Faculty of Architecture, Politecnico di Milano.
The research will be developed as PhD thesys inside the PhD Course in Territorial Design and Governance at DiAP, Politecnico di Milano.

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Cosmopolitanism, Cotton and Curry in the Original Modern City

Yasminah Beebeejaun and Angela Connelly

Keywords: Cosmopolitanism, multiculturalism, community, Manchester

Abstract: This paper explores the relationship between the 'curry mile' in Manchester, England and the city's cosmopolitan narrative. It questions the relationship between the emergence of seemingly cosmopolitan city spaces and multicultural citizens. The British planning system has attempted to integrate values of multiculturalism in which social difference is recognised. This has enabled the rise of 'ethno-branding' of spaces for multicultural cities wanting to promote their diversity.

There are considerable limitations to this approach, particularly in the way that they hinder the development of ethical community relationships that recognise the deep power differences of ethnic minority groups. Current planning thought embraces diversity and difference, yet remains firmly entrenched in using ethnic lenses that essentialise difference and are myopic in the way that they give little attention to the historical connections between British cities and Empire. We want to draw upon sociological work which reminds us that 'contemporary social analysis must direct our attention to the actors and relationships that shape and respond to struggles against injustice and racism' (Glick-Schiller, 2010). We explored how has planning responded to 'difference' and to what extent does it fit with narratives of economic competitiveness?

We draw upon these insights to extend thinking about the tensions between Manchester's self-imagination as a global, entrepreneurial city with planning policies that seek to corral unruly citizens into manageable ethnic areas and subjects. The Manchester miracle is well rehearsed story on the entrepreneurialism of the Manchester men, focusing on urban planning and development (e.g. Peck & Ward, 2002; Williams, 2003). The paper argues that current planning approaches use a partial representation of ethnicity that, in this case, focused upon ethnic entrepreneurialism. The results of our research highlight a need for planning research and practice to engage with the inequalities caused by these approaches and to reassess their strategies for making local plans and engaging the local community.

Introduction

The Manchester miracle is a well-rehearsed story in the urban planning literature: one of the entrepreneurialism of the Manchester men, economic development (e.g. Peck & Ward, 2002). As the 'shock city' of the nineteenth century that drove forward the Industrial Revolution, the Manchester man became synonymous with cool, hard-headed, entrepreneurial drive and spirit (Tickell and Peck, 1996). From Victorian patriarchs down to the latter day urban elites, the city is promoted as dynamic, entrepreneurial and ready for business. The slogan to accompany the 1995 Unitary Development Framework sums it up in four words 'Manchester: Making it Happen'; an updated version of the well-known saying: 'what Manchester does today, the rest of the world does tomorrow'. Today, it has been restyled as the 'original modern' city, a concept that:

Figure 1: The Curry Mile Banner, Rusholme, Manchester, UK.

> explains Manchester's spirit, its indefatigable energy for progress and change, that 'do something' attitude, that desire to be different that always has and always will exist within the City. Original Modern is what runs through Manchester's blood and it's detectable in the best of what we do. (Marketing Manchester, 2009)

Less than 0.5 km from the University of Manchester, in a long-standing neighbourhood on the main southern gateway to the city, passengers who pause to look from the numerous buses that thunder towards the city centre can easily discern a shift in aesthetics. Moving from south to north, suburban and leafy Didsbury, the landscape gives way to the more densely packed red terracing of Rusholme with its neon street signs. This is Manchester's 'Curry Mile'. Even 20 years ago, Manchester City Council's used the area in order to attract potential new businesses to relocate to the city, describing it as:

> A slice of Asia approximately two miles from the city centre, close to the city's huge education precinct. You can take your pick from over 40 dining establishments, from cheerful and very cheap to grand, from Indian to Pakistani to Kashmiri and other speciality cuisines, your tastebuds may never recover! ... At least 40 restaurants generating £30 million of business in a growing visitor attraction for the region (Manchester City Council 1993).

Curry Mile is frequently cited as a representation of Manchester's diversity; an indication of the city's cosmopolitanism. Drawing upon a wide-range of literature from sociology, history, geography that consider various concepts of 'diaspora'; 'cosmopolitanism'; 'transnationalism', this paper examines the extent to which urban regeneration and planning practices in the city of Manchester market the consumption of difference through the ethno-branding of specific neighbourhoods. The vision of a cosmopolitan city is coterminous with globalisation and world cities. Manchester's rhetoric of entrepreneurialism sits within the concept of cosmopolitan cities as places of globalised and simplified difference. We will investigate the multiple forms of diasporic sociabilities and sensibilities (Glick Schiller et al, 2011) that contribute to a cosmopolitan city by connecting diverse diasporas both within the neighbourhood and across the city. We explore the role of businesses, community and social stakeholders, planners and regeneration professionals as they realise, subvert and negotiate place-making in one neighbourhood. How have representations of British Asian culture been referred to in planning and regeneration policies? Where is 'The Curry Mile' located within urban planning policy in the city of Manchester?

Dissatisfied with the essentialism implied in the celebration of culture and 'multi-cultural cities'; scholars have mined the concepts of 'diaspora'; 'transnationalism' and 'cosmopolitanism'. Yeoh et al (2005, p. 2432) highlights that cosmopolitanism differs from multiculturalism as it tries to 'avoid the pitfalls of essentialism or some kind of zero-sum, all-or-nothing understanding of identity issues within a nation-state framework.' (Vertovec and Cohen, 2002, p. 3). Yet for Devadason, looking at cosmopolitanism in a northern London suburb: 'The multi-ethnic city is often seen as emblematic-and constitutive-of vernacular and everyday forms of cosmopolitanism." (Devadason, 2010, p. 2). While cosmopolitanism may escape the narrow constraints of nation-states and nationalism, it remains bound to global elites and consumption. Moreover, cosmopolitanism is a particular and partial form of difference that becomes commodified for the global, middle-class elite: 'it is a reflexive process of engagement with difference, positioning oneself in relation to others, rather than relying on the established discourses of one community' (Devadason, 2010, p. 2946).

This requires looking beyond the forms of cosmopolitanism created in the city centre which becomes a sanitised space in the global city (Young et al, 2004). They are where we sleep, eat and shop activities also essential to the city's functioning. However, the British planning system operates under a regime of multiculturalism in which social difference is recognised. The rise of ethno-branding has become a key method of multicultural cities wanting to promote their diversity. In a study of Birmingham, McEwan et al (2006) argue that local and transnational diasporic links create unique and competitive products and services. They emphasise that city economies are relational and depend on transnational networks. Space is treated as networked and socially produced through the manufacture and flow of these hybrid goods rather than as a territory or a circumscribed locality. While McEwan et al (2006) are largely positive about the Birmingham experience they express concerns over the rigid and particular representations of ethnicity in policy, the extent to which BAME businesses access mainstream support and, importantly, that ethnic networks may harbour class and gender inequalities. In terms of regeneration, the rise of immigrant communities in decaying inner city areas gave rise to a vision of the ethnic minority entrepreneur as potential urban regenerator. Conversely, Oc and Tiesdell (1999) found in their assessment of Manchester's City Challenge that it suffered from being a top-down strategy that did not take local flexibility into account.

Nina Glick Schiller has recently reminded us that 'contemporary social analysis must direct our attention to the actors and relationships that shape and respond to struggles against injustice and racism' (Glick-Schiller, 2010). Yet, studies tend to focus on the present, neglecting how these networks emerge through time. Although Manchester has been spared some of the fractious relationships seen in other northern British cities that Ash Amin has examined, our case study of 'The

Curry Mile' draws upon his call for historically grounded explorations that 'highlights the powers of situated everyday life in neighbourhoods, workplaces and public spaces, through which historical, global, and local processes intersect to give meaning to living with diversity' (Amin 2002: 975 – 6). Here, the role of urban planners is reduced to tinkering with public spaces with little achieved in terms of ethnic relations.

There is limited work that teases out the power dynamics/ relative positions of ethnic groups within a planning process (Porter, 2010). The representation of ethnicity within planning policy uses ethnic difference to serve specific ends. Robinson (2011) writing about city strategies draws on the work of Tsing (2000) to discuss global 'flows' in which: "Distinctively, she sets herself against the alignment of the global and mobile with the included, connected world and the local or immobile with excluded and marginal groups". (Robinson 2011, p. 25) . Tsing (2000) rightly highlights that

> "Place making is always a cultural as well as political-economic activity. It involves assumptions about the nature of those subjects authorized to participate in the process and the kinds of claims they can reasonably put forth about their position in national, regional, and world classifications and hierarchies of places." (Tsing 2000, p. 338).

We bring together these visions and critiques of cosmopolitanism with pressing issues of ethnic difference and power asymmetries in the case of Manchester, specifically Rusholme. Urban planning helps to create a vision for communities with aspirations to improve the lives of citizens through providing broad frameworks to enact change – most commonly through the built environment and infrastructure but also through policy recommendations, community action plans and neighbourhood plans. Throughout the twentieth century in the UK, rational planners have assumed a largely cultural homogeneous population although one fractured by class differences. We draw upon these insights to extend thinking about the tensions between Manchester's self-imagination as a global, entrepreneurial city with planning policies that seek to corral unruly citizens into manageable ethnic areas and subjects. Our argument is that it is a representation of ethnicity that is partial and, in this case, focused upon ethnic entrepreneurialism.

Manchester: originally modern

The historical record focusses on the political and militaristic realities of managing an empire in which the imperial power (Britain) always assumes itself to be superior and to impose its democracy and social mores on indigenous populations. Drawing upon postmodern interpretations, historians increasingly demonstrate how 'Empire' intertwined with notions of 'Englishness' through commodities such as tea. These imperial connections are found in even the most everyday places including the home and in religious spaces (Hall and Rose 2006;

Driver and Gilbert 1999). The implication is that the relationships and actions of the colonies and colonisers should be rethought to consider that these relations were mutually constitutive.

This is particularly relevant in Manchester, the 'shock city' of the Victorian Age and 'cradle' of the Industrial Revolution. At the height of the Lancashire cotton famine in the late 1840s, the American civil war prevented the export of cotton from this source. Manufacturers turned their attention towards the colonies. One cotton manufacturer, Henry S. Gibbs, describes his experiences:

> …we naturally looked to our Indian possessions, where there was a great increase in the cotton cultivation. Notwithstanding the aversion felt by the workpeople towards "Surat," the poor despised article was eagerly bought by spinners at fabulous prices for want of better material. (Gibbs 1887, pp. 169 – 170)

Bengal was to become the richest market in India for Manchester cotton goods. Partially this was the result of Imperial policies as Britain sought to protect its own industries and Indians developed a taste for the new, mass-produced luxury items from the West (Bansal and Bansal 1984). With however much distaste the cotton spinners regarded 'surat', these 'colonies' played a large part in the making of Manchester both economically and culturally. It is a city built upon continual flows of internal and external migrants. Bill Williams' meticulous work on the Manchester Jewry highlights the immense contribution of this particular group to the continuing entrepreneurialism of late nineteenth century Manchester (Williams, 1996). Paul di Felice makes similar reference to the entrepreneurial character of immigrant Italians in Ancoats in the early twentieth century (Di Felice 2000). Mohammad Siddique Seddon (2007) looks at the contemporary relations between the Muslim and Jewish communities, particularly middle-eastern Muslims to Manchester, to find that 'their solitary appearances were usually temporary, these wandering vagrants and their miserable destitution provided lasting negative archetypes by which later settlers…would be stereotyped (Seddon 2007, p. 74).

Laura Tabili (2011) challenges conventional views that postcolonial migrants arriving after 1948 disrupted the harmony of a culturally and racially homogenous society. She examines the fluidity and flexibility of local and global migration shaped social relations in the north east of Britain and demonstrates that overseas migrants had close ties with existing inhabitants of Tyneside (Tabili 2006, 2011). For Tabili, the response to and acculturation of migrants is shaped inasmuch by local and global forces as they were by national and imperialistic ones. Tabili points out, that only by examining these multiple dimensions of inclusion and otherness, that 'may deepen our understanding that 'racial' conflict did not arrive in Britain with colonised subjects but inhered in Britain's 'imperial social formation' (Tabili 2006, p. 73).

While much of the original street pattern has been obliterated, enough exists to indicate how the Victorian city of Manchester was intertwined in the global reach of the British Empire. The great Manchester commodity of cotton is memorialised in an area to the north of the city. Restyled as 'Ancoats Urban Village', Loom Street, Cotton Street and Spinner Street are in close proximity to Prussia Street, Cornwall Street, Poland Street, Portugal Street, and Bengal Street laid out when the then suburban Ancoats was being planned in the late eighteenth century (figure 2).

Figure 2: Original street pattern in Ancoats, Manchester. 1851 ©Crown Copyright/database right 2011. An Ordnance Survey/EDINA supplied service

When planners came to reconstruct the City of Manchester following war time bombing in 1945, the city was not considered to be in flux and aimed to create homogenous neighbourhoods. The City of Manchester Plan (1945) disparaged a Victorian city whose entrepreneurialism had resulted in environmental degradation and congestion. Comprehensive redevelopment cleared slums to provide motorways, car parking and new modern developments. 'Neighbourhood' centres were created to cover a maximum of 10, 000 people drawn from a cross-section of the community. Several neighbourhoods were grouped into districts with adequate facilities to cultivate 'true citizens' (Nicholson, 1945, 134 – 5). A 1961 plan reaffirmed the 1945 proposals of zoning particular functions to certain areas of the city. Alongside this the city lost 23 per cent of its population between

1951 and 1971, mostly in the inner city areas such as Hulme, Rusholme and Ardwick (Lawless and Brown, 1986: 95).

It was a full 34 years before the 1995 Unitary Development Plan (Manchester: Making it Happen) was officially approved and adopted. This aimed to revitalize a now depressed 'post-industrial' local economy (Manchester City Council, 1995). Regeneration was driven forward by positioning the city on a global stage in order to attract inward flows of investment. Much of this was achieved through the formation of partnership working. Manchester City Council embraced a pragmatic model of working in partnership with the business sector particularly in regards to urban regeneration (Tickell and Peck 1996). Manchester City Council has shown precedent in having the skills, knowledge and motivations of particular individuals, for example under the charismatic leadership of Graham Stringer and Sir Howard Bernstein, for the capacity to act (Williams 2003). More recently active public consultation has tentatively embarked upon incorporating voluntary organisations in its partnership model (Blakeley 2010). So, the local council is developing a role as a coordinator rather than as a regulator or service provider.

The entrepreneurial and business ready vision of the Manchester elite sits uneasily within a formalised planning process. For a city of the size and status of Manchester it has been fragmentary and opaque. The Manchester Plan of 1945 is perhaps the most contemporary clear vision in a formal planning sense – and the quickest to make it to publication. The 1951 plan with its ten year strategy was not published until1961 (a ten year strategy).The Unitary Development Plan was published 34 years later 1995. Manchester City Council is still in the process of formulating their newest statutory document, the Local Development Framework in 2011 although the legislation enacting this process was adopted in 2004.

Meanwhile, the inner city demography altered considerably. In 1961, 3.6% of Manchester's population was born outside of the UK mainly from the 'New Commonwealth and Pakistan' (NCP). By 1991, this proportion was 12.6 % (see table 1). Policies often unintentionally limited the housing market to immigrants and therefore their settlement patterns tended to be in localised and run-down areas of the inner city (Rex, and Moore, 1967). They were predominantly younger and lived in old pre-1919 owner occupied housing stock that was cheap but decrepit. Both the NCP and Irish immigrants were typically associated with 'transience' and both groups correlated with areas of high unemployment, high fertility, large numbers of school children and overcrowding (Manchester City Council 1975).

In the 1970s, Manchester City Council addressed the social problems of Moss Side and Rusholme. The population would be reduced from 41, 000 to 31, 000 by building low density housing. Local elites came to believe Moss Side to be 'a relative success story in terms of race relations' with regulatory rehousing procedures where 'every coloured family has exactly the same rights as a white

family...there were no coloured tags on any applications for tenancies of corporation houses' (*The Guardian*, 2 Nov 1971: 7).

Equality in planning law was further bolstered after the RTPI/CRE report Planning for a Multi-Racial Britain in which the effect was to recognise and promote difference (RTPI/CRE, 1983). Planners, through local and district plans, were urged to formulate culturally sensitive policies and funds were subsequently provided that allowed communities to express their difference through cultural activities and events. In Manchester, recent years have seen a sea-change in specific cultural activities. Festivals, museum exhibitions and community outreach activities allow minority communities to express themselves and present difference as something to be celebrated in the public landscape. How has this played out in one particular neighbourhood?

Representations of the Curry Mile

Until 1959, Rusholme was home to the BBC with its main studios on Dickenson Road. The BBC intended to build its Manchester Headquarters on a site opposite Platt Fields. However, an increase in production required a larger building than could be accommodated and they moved to their present site on Oxford Road (The Manchester Guardian, 17 Dec 1959, p. 18).Barrett and McEvoy (2006) track the development of the Curry Mile from the 1960s. Immigrant communities required goods and services tailored to their cultural specificity. One of the catalysts was the opening of Rusholme cinemas on Sundays to show films from the Indian sub-continent which drew immigrant communities to the area (McEvoy and Hafeez, 2009, 58; The Guardian, 22 Jun, 1961, 21). From 6 in 1966, South Asian owned businesses had risen to 91 by 2006 with 43 of these being restaurants and takeaways. The number of business owned by 'whites and others' declined from 117 to 32 over the same period (Barrett and McEvoy, 2006: 196).

South Asian traders moved into vacant retail sites previously since these were amongst the cheapest. Rusholme's residential designation restricted the nature of that market for retail and consumer firms (Barret and McEvoy 2010). The majority now cater for the particular preferences of one or more minority ethnic groups (e.g. South Asian jewellers, African food suppliers), physically adapted their premises and developed distinctive fascias than those in the former (Figure 3).

Rusholme's population has increased and diversified. Between 1991 and 2001, the population of the Rusholme ward increased by 37.0 % (Manchester City Council, 2003). The 2001 census records the ethnic proportion as significantly higher than the city average. Almost two-thirds (61. 7%) described themselves as white along with significant groupings of Indians (4.7%), Bangladeshi (6.5%), Pakistani (11.5%). The ONS mid-year estimates indicate that this is growing. The number of mosques in Manchester has grown to over 50, many of located in and around

Rusholme [Figure 3]. It is the fastest growing ward in the city with predictions that it will grow even more. (The Manchester Partnership 2010, pp. 24 – 25).

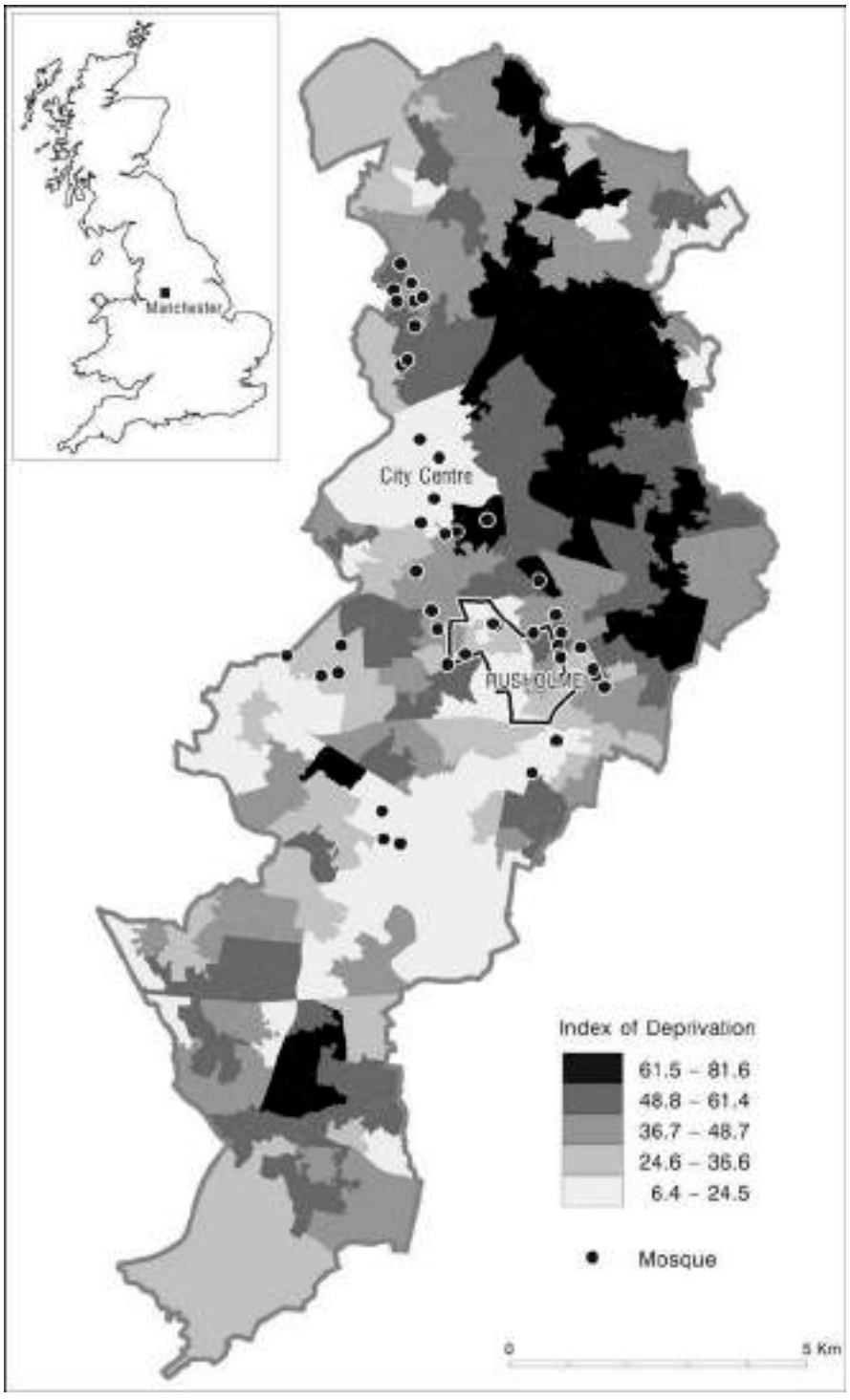

Figure 3: Mosques in Manchester with predominantly South Asian worshippers superimposed over the index of multiple deprivation in the UK.

Within the planning literature, Rusholme is part of a deliberate strategy that reveals a particular type of understanding of the role minorities can serve in the city narrative. Curry Mile is the exotic other; always 'vibrant' yet a deprived community that requires regeneration. We suggest that the planning process has responded in well-defined ways to the emergence of ethnic minorities. Issues of ethnic disadvantage have become the implicit focus of inner city urban programmes which historically tended to have larger BAME populations.

A 1994 City Council commissioned report looked into a potential marketing and economic strategy for Wilmslow Road with an aim of generating more jobs as well as tourism. The businesses were characterised as 'strong and dynamic' (AJA, 1994: 5) and that 'local traders were...independent and resourceful...They also come from a highly entrepreneurial culture.' (AJA, 1994: 72) The report drew contrasts with Chinatown. Firstly, Chinatown's location in the city centre limited potential disturbances to residents. Secondly, they were better placed to cater for business lunches. Thirdly, the organization of the Chinese community through the consulate limited the involvement of the city council to 'set the scene for investment through carrying out environmental improvements' (AJA, 1994, pp. 115). Therefore, it was felt that for Rusholme, specific strategic initiatives should be followed. These were thought to actively encouraging businesses to sign up to existing City Council marketing and tourism departments; to get them to participate in litter schemes; to provide advice to the City Council in producing information on the Asian shops and restaurants; to consult with businesses and to report their ideas on needs and marketing ideas. (AJA, 1994, pp. 106). Around this time, the Rusholme Traders Association decided to take forward the name 'The Curry Mile' and to erect banners to that end at either end of the strip (see figure 1).

These pronouncements sit uneasily when considered against Pnina Werbner's ethnographic studies of Manchester's Muslim diasporas. Her accounts show the shifting nature of so-called ethnic identities that continually interact and become reinterpreted and shaped by many other cross-cutting themes. Untangling the relationships between various factions, blocs and views, she describes a fractured sphere of debate with different discourses through both space (whether it was religious, Pakistani or South Asian) and time. In Werbner's anthropological accounts, the Manchester story is one of relative economic success and the co-operation and competition associated with community life, from the 'fun' spaces of popular culture to a transnational Sufi cult. However, whilst once again the largest minority ethnic grouping, Pakistanis in Manchester are much fewer in number than in Bradford and so have exerted far less power locally. Rather than any sharp boundary defining the ethnic group, it is the centre that imagines the boundary (Werbner 2002, p. 274).

Today, it is less of a homogenous 'Curry Mile'. Shish shops; sushi and Thai food can all be had – often in the same restaurant [Figure 4]. The strip is much more

than restaurants – world food markets, solicitors, newsagents and, particularly, jewellery shops ensure that it is a shopping mecca for the south Asian from across the city. In recent years, it has become a focal point for the Pakistani community's annual Eid celebrations. Curry Mile is not an unqualified success: the rate of business turnover is high. Nor even can it be considered as a truly convivial encounter since the restaurants mainly serve a white clientele who expect low prices. Restaurant staff are often poorly paid and landlords and other business actors remain within the community.

Figure 4: Restaurants on the curry mile now include noodle bars and shish kebabs. Source: Authors.

Our interviews with representatives of the City Council and its partners queried what the 'Curry Mile' offers to Manchester. For one local councillor, the Curry Mile 'generates incredible wealth for the city and the city region and it should continue to do so. There are great opportunities for emergent markets and we have through MIDAS, the inward investment agency, we've had a number of delegations to India in order to draw investment into the city and the city-region'.

Yet in terms of tourism, Curry Mile, and its focal point for celebrations such as Mela and Eid does not seemingly fit with the city's marketing machine::

> For us, we've got to differentiate Manchester from the rest of the UK so if we were promoting nationally or internationally are you going to get an international traveller coming to Manchester to take part in the Mela? No would be the answer… So the scale of events that we have got at the moment that are specifically focussed on ethnic minorities

> would not bring masses of people…It's about those events that might get people into a car or into a train or into a plane and come to Manchester and I think some of those events are too small-scale and not quite unique enough to bring a national or international traveller in.

The current Moss Side and Rusholme Local Plan (Manchester City Council, 2008) indicates the restaurant trade and evening economy 'drives its overall character and is an economic benefit [but] it is not serving the needs of the local community as there is a lack of other retail and service provision, especially large supermarket provision' (Manchester City Council 2008, p. 24 – 5). Diversifying away from the fast food and restaurant trade is backed up with public consultations. Although admirable attempts were made to reach the populations, only thirteen local traders filled in the questionnaire to accompany the consultation. Of these, 11 were White, 1 European and 1 Indian. 108 residents also responded to requests for consultation. The council's aspiration is to launch a long-term strategy 'to issues such as parking management, streetscape, cleanliness, unit frontages, marketing, branding and promotion' (Manchester City Council, 2008, p. 75). One precursor to supporting this approach was a special taskforce that that targeted shopkeepers who persistently violated street environment standards. In the past, the Rusholme Traders Association fulfilled this function. Manchester City Council organised the election of the chairman when the post became vacant around five years ago. Their spokesperson described his role:

> We just like to make sure that the Police are happy with us, the Environmental Health are happy with us we normally go with them and try and sort things out and help them out with the local community. Sometimes they don't get on with one another but I help and explain to them that we don't want to get bigger fines and whatever. Basically, if there is any problem we try to help. I am the community person.

For all its benefits to regional tourist strategies and for providing a central sense of community for Manchester's south Asian community, representations of ethnic entrepreneurialism sit uneasily with some sections of the community. The city council has established working links with certain community members:

> The problem is that when you ask about the question of how the council interfaces with the community, I think the truth is that communities don't know how, they don't have the means and the consultation just passes them by. And the fact is that the council likes to make its job easy. It wants one organisation in one place so that it can tick a box and go 'Woo hoo, I can go home and rest now.' It likes gatekeepers. It likes to keep things in place. It's like that age old thing,

> for me, of colonialism born again. It's in our backyard but its okay because Mr Patel is covering that.

Community groups bid for contracts to provide specialist services. While this gives an ethnically focused service, it equally means that dealing with ethnic difference is contracted out. Hard-to-reach communities thus become ever harder to reach. Ethnic difference has not become internalised into council services. South Asian women are at a particular disadvantage:

> Yes we [South Asian women] have some political organisation but not to the same extent as in places like Bradford or Blackburn. There aren't many female representatives from within our community. There are men but they are motivated by money or their own political interests. They cannot and do not represent a voice for South Asian women.

Tsing contrasts 'global newness' with 'imagined stagnant locals' (Tsing, 2000, p.346). This provides a useful dichotomy with which to consider the different levels of operation between the planning policies of global elites (Manchester man) with the local traders/ ethnic minorities of Rusholme and their inclusion (or not) within the planning strategies. Curry Mile means many different things to many different people at particular points and intersections in time. Yet in urban regeneration it retains an otherness that is not serving the city's ends. These ends reflect traditional stereotypes: dirty, unclean, hard to deal with. Consequently, the community who will most be affected by policies in this area are circumvented in the process.

Discussion and Conclusion

We have attempted to look at representations of diversity and visions of the cosmopolitan city through the lens of one area in Manchester, UK. It suggests that these representations treat Manchester's diversity as thoroughly recent: one in which some groups are the receivers and the others the received. The first argument that we will make is that cities are ephemeral places with a fluidity of people, goods and services. We celebrate it as 'otherness' but, in fact, it is very much 'intertwined' in the history of modern European Cities (whose urban planning story is typically told as the development of capitalism).

The creativity of entrepreneurial ethnic minorities is downplayed in regeneration strategies and, in this case, threatened by planners keen to promote tried and tested means of supermarket regeneration. In the past, the development of the Curry Mile has been left to the entrepreneurs. The Manchester brand is believed to implicitly encompass notions of Manchester's diversity without explicitly stating so even though there is acknowledgement that the Curry Mile has played an important role in strengthening Manchester's bid for investment from countries such as India. For Manchester's south Asian community, representations of ethnic

entrepreneurialism sit uneasily with some sections of the community. Although an extensive community consultation process was initiated for the Moss Side and Rusholme District plan, the response was low and did not reflect the diversity of the area. Community organisations therefore feel that the regeneration plans do not satisfactorily incorporate their views seem lost as to how best to influence it.

Cities such as Manchester have their own projects, compete globally and have their own narratives. Everyone who moves within it has to contribute to that project and all spaces and relationships are shaped by it but the planning narratives seem to ignore this. Our Curry Mile example shows that cities are on-going processes of transformation and plans seem unable to reflect this. It is in those spaces that capital is produced, reproduced, destroyed and accumulated on an unequal basis and that planners seem ill-equipped with the necessary tools to redress this balance or the power to effect a change in local institutional culture.

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HISTORICAL DENSITY FOR CONTEMPORARY CITIES

Michela Barosio [1]

Abstract

During the 18th and 19th century, when the culture of the architectural preservation was born, only religious and political architectural objects were considered as heritage to preserve. In the following century, trough the Restoration Charts and the action World Heritage Centre of UNESCO, the concept of preservation has been extended to many others objects as civil buildings, industrial architectures, natural landscapes and historical cities or their monumental districts. From the Charter of Krakow (2000) the principles for the conservation and restoration of built heritage started to include the preservation of urban tissues instead of single monuments.

This paper considers Urban morphology as a form of heritage to preserve and to consider as a possible model for the developing of the contemporary city. Analyzing the formal relationships between the existing buildings, between the buildings and the public realm and between the different "open" spaces existing in the historical cities, we can identify spatial models to preserve. Those spatial models are very often strictly related to the way of life, to the aesthetical values and to the identity of the inhabitants of the city. That's why morphology and local identity seem to be strictly related: preserving urban shape means to strengthen community's sense of identity. The Turin's "industrial footprint" will be presented as a case study.

The paper will focus on the concept of density, which mainly characterizes the traditional urban tissues of the compact cities, trying to define more precisely the concept of density and its formal and social effects. Depending on the meaning of Density that we are considering (population density, residential density, floor area ratio, gross density, net density…) the fallout on urban design can be very different.

Beside, the paper will try to define new definition of the concept of density that can better describe and orientate our priorities in regenerating the compact city.

The expected outcomes are both on planning education and on planning analysis and practice. Defining new parameters for measuring the urban density means to better understand the urban morphology and, at the same time, to become able to

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design and plan urban transformations being more aware of the physical and morphological fallout of planning.

1. Introduction

During the 18th and 19th century, when the culture of the architectural preservation was born, only religious and political architectural objects were considered as heritage to preserve. In the following century, trough the Restoration Charts and the action World Heritage Centre of UNESCO, the concept of preservation has been extended to many others objects as civil buildings, industrial architectures, natural landscapes and historical cities or their monumental districts. Trough the studies of Viollet-le-Duc and Camillo Sitte in the second half of the XIX century, European culture started to understand the importance of the preservation of some historical urban complexes or monumental districts. But only after the second world war, that seriously damaged the European cities, architects and planners stroke up a debate about the need of restoring and preserving historical city centres[2]. The urban shape began to be perceived as an heritage to preserve and the debate focused on the acknowledgement of the significant characteristics of the traditional urban tissue. The urban studies in Italy developed the typo - morphological analysis of the city whose works investigate the formal constants in urban morphology, in order to construct, or re-construct, the city on its archetypal figures and features[3].
At a world level we must wait the Charter of Krakow (2000) for the principles for the conservation and restoration of built heritage starting to include the preservation of urban tissues instead of single monuments, and the World Haritage Convention of l'UNESCO[4] in the 2005 to connect urban fabric and city's identity.
This paper considers Urban morphology as a form of heritage to preserve and to consider as a possible model for the developing of the contemporary city. Analyzing the formal relationships between the existing buildings, between the buildings and the public realm and between the different "open" spaces existing in the historical cities, we can identify spatial models to preserve. Those spatial models are very often strictly related to the way of life, to the aesthetical values and to the identity of the inhabitants of the city. That's why morphology and local identity seem to be strictly related: preserving urban shape means to strengthen community's sense of identity.

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[2] Ernesto Nathan Rogers, *Continuità o crisi*, in «Casabella», n. 215, aprile-maggio 1957, p.3.

[3] Saverio Muratori, (1959), *Studi per una operante storia urbana di Venezia*, Istituto Poligrafico dello Stato, Libreria dello Stato, Roma.

[4] *« L'inscription des centres historiques et des quartiers anciens est recommandée chaque fois que la densité et la qualité monumentales sont directement révélatrices des caractéristiques d'une ville d'intérêt exceptionnel. Il est déconseillé de faire des propositions ponctuelles portant sur plusieurs monuments isolés mais nullement complémentaires, censés évoquer à eux seuls une ville dont le tissu urbain a perdu toute cohérence. »*
Orientations devant guider la mise en oeuvre de la Convention du patrimoine mondial, Centre du Patrimoine mondial de l'UNESCO, 2005

If the city has always been perceived as more dense than "the rest", dense of commercial traffics, dense of population, dense of buildings, dense of culture and so on, from the late XIX century these "density" become a negative value. In that period the role of urban planners has been initially held by the sanitary engineers who considered the city has a sick body whose worst disease was the building and population density that forbad healthy life conditions[5]. The goal for the urban planners became to rarefy the city to provide air and light to heal the old city. Haussman in Paris, Ceppi in Turin, later on Piacentini in Rome simply tried to design a healthy and modern city. Following those ideals the Modern Movement born fighting against city density and for a completely new and healthy city. On these ideas Lecorbusier built his proposal for the modern city starting with the nearly complete demolition of the historical urban tissues that were, in his mind, to dense and compromised to be healed. Looking at his sketch comparing the historical tissues of Paris, New York and Buenos Aires with Le Corbusier's proposal for the Ville Radieuse his goal is clear: less density. But analysing carefully the drawing and the written theory, the goal becomes slightly different: Le Corbusier preaches for less built space at ground level (as less as possible) but for a densification of population distributed on very high buildings. For modern architects the city has to be crowded, but urban spaces should be free, open to air and light and characterized by nature with trees and lawn. In this vision of the city, life and car traffic should be isolated and separated, the street becomes only a leisure place: no commerce, no traffic, no business.
In this sense we have to distinguish among different meanings of the term density. As we will see on the next paragraph, density can refers to total building area or just to the area occupied on a specific plot or to population present on the plot or even to the functions present on the area. Two areas can have the same population density can, but different building density or different concentration on ground level which means completely different urban shapes. Beside, density doesn't refers only to quantity, but it can also describe quality when she expresses functional mix for an example.
In the period of post-world war II, in Europe, the massive reconstruction of the seriously damaged cities became a priority with two main goals: building many houses as far as possible, and reconstructing the identity of the nations. To reinforce national identity planners and architects started to rebuild the historical cities centres looking at their original shape, at their urban tradition. Sometimes those "new" building has been built "*à l'identique*" exactly how they were before the war, as in many German Cities like Frankfurt, to highlight the link with the tradition of the nations, other times new buildings were built with more contemporary architectural language to remark a distance towards the war and the national values that had led to it. In both cases the reconstruction is the opportunity to increase the density in historical cities keeping the urban characteristic as compact fronts, rhythm and proportions of the façades and of the streets, public spaces at a human scale and, last but not least, the mix of functions. At the same time, the development of the new suburbs didn't follow the same

[5] Guido Zucconi, La città contesa. Dagli ingegneri sanitari agli urbanisti (1885-1942), Jaca Book 1988.

criteria. The new neighbourhoods were designed looking at the garden city's model, with a low density, a lot of green areas, private and public, and over dimensioned public spaces. Hosting a very poor range of functions and nearly no commercial or leisure activities because of their low density, those districts became very often only dormitories. Speaking about low density of those new suburbs is not always correct in the sense that some of them were designed exactly on the garden city models, especially in the Anglo-Saxon area, others, especially in Mediterranean context, were conceived to be high density blocks lost in the middle of nowhere without connections with the traditional city (we can think about the very famous example of Corviale near Rome ore the ZEN in Palermo). This second case is characterized by an important density on the single plot, but by a very low density considering the entire area surrounding. The reconstruction of European cities ended with the petrol crisis together with the end of population exodus from the countryside towards the metropolis. Since then metropolitan areas had to face a new phenomenon: the urban sprawl. The progressive gentrification of the city's centres and the popular myth of the detached house as a personal paradise draw many people to move from the centre towards the suburban areas. Besides, many European countries present a much stronger regulation of the building activity in the city centre and a very softer regulation (o no regulation at all) for the new buildings in the suburban areas. This imbalance led to sprawled settlements not urban neither rural, simply unshaped, with no identity and, of course, with very low density.
In the 1980, la *Strada Nuovissima* fitted out at the *Biennale di Venezia* edited by Paolo Portoghesi, celebrated the importance of the historical concept of Street as urban fundamental element. Nearly sixty years before Le Corbusier exposed his theory of the *Rue Corridor* against historical streets – that in his mind hide sky and light -, arguing for their vanishing and preaching for new urban spaces, opens spaces without continuous façade, where sun and nature could come in, la "*Strada*" was back. But then Urban Design was missing urban shape of the traditional city and starting to understand that historical urban typologies can't aside from density. Moreover, the ecological movement has made the world aware of the waist of land that urban sprawling has ingenerated. That's why in the two last decades the urban debate is come back to the concept of density trying to define it more precisely and to conceive new urban and architectural typologies able to combine high density settlements and life quality, especially referring to residential typologies and public spaces.

2. Urban density: old concept, new challenge

Urban morphology expresses both qualitative and quantitative values. Urban density is a very large concept that has many different definitions and meanings. In the field of town planning it's used both to describe the city and to regulate its transformation, in this second case it's also called index.
Traditionally used to describe the physical proximity level between architectural objects or persons, nowadays digital networks allow us to consider urban density

not only as a physical matter, but also as a more immaterial parameter that shows the consistence of relationships and flows between the inhabitants (or it will be better to say "users") of a specific geographical area. That's why urban density can be considered as a combination of several specific densities (Malavolta 2007).

2.1 Building density

This indicator shows the quantity of square metres or cube meters built on a specific area or district. If the referring area includes streets and public spaces it's called gross density, otherwise if it's calculated only on the building area of the plot it's a net density. In both cases this parameter highlights the relation between solid spaces and open spaces but it doesn't reflects how much there is life in the area, how many people inhabit it.
It's also interesting to note how the unit of measurement affects the meaning of the building density. Considering the building density in square meters of floor means not to take in account the height of the single storey, so that urban settlements with the same storey area, but with very different total heights, and obviously different urban shapes, will be represented with the same building density. On the other side, to express building density in cube meters implies that having higher floors will increase the density value even if the number of inhabitants doesn't growths.
Some additional indicators can be used in order to describe in a more refined way urban shape and, particularly, the organization of space and mass in the city.
The Ground Space Index (GSI) indicates the relationship between the footprint of the building and the available site area. It doesn't take in account the total amount of floor surface but how much the available area is occupied by buildings and how much non-built space is available.
The Profile Density (PD) is the quotient of the surface area developed per horizontal metre of the cross section. It helps to understand how buildings are "deep".
The Façade Index (FI) stands for the ratio of the surface area to the gross floor area. It describes how buildings are compact or more articulated and, therefore, open toward the public space.
The Angle of Obstruction (AO) is determined by the pattern of built/unbuilt space as well as the profile of the ceiling height and the stacking factor. It shows the relationship interior/exterior.

2.2 Residential density

This parameter expresses how many people live in a specific area, it is expressed in people/sqm or in number of dwelling/sqm and it is obtained by multiplying the number of housing units in the area by the number of people who can inhabit in them. When referring strictly to the plot this is a net residential density. When referring to a district or a more large area, including streets and all sort of public space it's called population density and it's a gross density. Considering only people living in the area, this parameter doesn't take in account workers or general users of the area. Those people generate flows as traffic, noise, life that all together contribute

to generate a sense of density in the context. Those people populate some city areas only in specific time slots. We can think about business districts, which are very dense during the day but almost deserted in the evening or about residential suburban areas nearly empty during the day that start living in the late afternoon. To measure this phenomenon we need another parameter.

2.3 Use density

If the quantity of people living in a specific area still significant to describe it, many studies (Martinotti, 1993) demonstrate how the real amount of people in an area is often very different from the quantity of resident people. Many "temporary users" get advantage of services and spaces from areas where they are not "residential". Those city users can be divided on to four different categories: permanent, occasional, quick and touristic. The permanent city users are those who are present in a specific area (different from their residential area) regularly, almost at the same time as workers for an example. Occasional city users are attracted from a specific occasion, a special event as a sport meeting, an art exhibition. Quick city users are people who go to a place for a short time but with a certain regularity as people who move to commercial district but also to facilities as an airport or a maritime port. Touristic city users concentrate their presence in specific year's period. Obviously those four categories, that influence in different way the urban life, often mix.

It's also important to point out that historical European cities are strongly connoted by a mix of uses that guarantee life and urban quality nearly all day long. Those *mixité* has been lost as the zoning law has regulated most of the city's areas.

2.4 Flow density

Also the quantity and the typology of regular movement of people and goods can be considered as a factor of density. For instance we can observe as the sprawled city is characterized by long distance a high speed flows, whereas compact city is characterized by a lot of different short and almost lower flows. We can observe a strong interdependency between the speed, the frequency of the flows and the morphology of the public space. Related to the flows which cross the urban territory, the typology of the mobility infrastructures (roads, paths, railways, bridges, parking, and so on) engender different kind of perception of the space and consequently, a different feeling of density. Sometimes the mobility infrastructures can help reconnecting the urban tissue, and therefore contribute to improve urban density, other times infrastructures create a split inside the city that engenders discontinuity which can be considered as the opposite of the density.

Beside, we have to consider not only material flows and infrastructures, but also immaterial infrastructures such as digital networks. Digital flows contribute to make a city denser, denser of data, of information, of social connections, in a world more participated. In fact participation to city life and to city governance could be considered strictly related to the concept of urban density, a sort of metaphorical density. Nevertheless it's important to but their immaterial character can lead to new urban morphologies: dense of networks but rare of physical meeting places.

2.5 Results

Various combinations betweens those relative densities lead to different urban densities helpful in analyzing contemporary cities but also to plan their transformations and to manage their moving status.
Building density and residential density refer to very physical data. In this sense, interesting Dutch studies (Uytenhaak 2008) have try to define "The laws of density" in order to develop intelligent urban tissues in which density and primary spatial quality can be optimized. Those laws investigate the relationships between building density and different urban pattern (characterized by different higher, depth, or mutual disposition).
User density and flow density refer to more immaterial or non-physical dimensions but their influence on the urban morphology is not less important. First of all because they have a great impact in human perception of urban space and in second hand because power, as the fact of taking decision than can orient and transform city and landscape, and people concentration are traditionally considered as two strictly related phenomenon. A city which is user and flow dense is a city where is possible to reach a high quality of life.

3. Urban regeneration in Turin: the case study of Spina 3

Turin, one of the vertex of the Italian "industrial triangle", started to be massively concerned by the industrial dismantling at the beginning of the Eighty's. In the 1995 the city adopted a new and innovative Urban Planning Regulation[6] that still shaping the transformation of the city. This Plan considered the dismantled industrial areas as "transformation areas" strategic for the urban regeneration. Most of those dismantled areas were located in the centre of the city, along the railways, or along the rivers: that's why they were valuable and strategic areas. Furthermore thanks to their big dimensions those areas allowed important investments and were able to trigger regeneration processes. The innovative character of the PRGC conceived by Gregotti e Cagnardi consisted in designing the master plan of the transformation areas. The regulation plan doesn't limit itself giving functional and quantitative prescriptions, but it contains formal indications and prescriptions for the urban transformations.
In this sense the PRGC is structured by the "*Spina Centrale*", literally the "central backbone", which consists in the re-design of the dismantled areas along the railways and along the river Dora mixing residential, business and commercial buildings with a quite high density and a special attention to public spaces. To make up for the lack of services and public spaces of the city was one of the main goals in redesigning this strategic area. In fact PRGC planned to localized along the Spina several public buildings as the local authority's offices, the new public library, the most important railways station, the enlargement of the Politecnico among others. Moreover, the Plan provides public investments and facilitations for developing productive and manufacturing activities. All those measures contribute in realizing a functional density mixing different activities, planning the settlements of new residences and various activities avoiding zoning. Concerning the residential buildings, the PRGC sets aside 30% of the residential surface for social housing. This improves the social mixing and the use's density as it avoids the gentrification of the area.

[6] PRGC Piano Regolatore Generale Comunale by Gregotti A. and Cagnardi V..

The entire *Spina Centrale* covered an area of nearly 3 millions ha which represents almost 3% of the city's surface. Those dismantled areas were 70% private areas and 30% public areas. The idea of the planner was to give very high building index in exchange of the fulfilment of collective facilities and their following assignment to the City. This process aimed to achieve the proportion of 30% private areas and 70% public areas. The PRGC through various planning tool as PRIU[7] and *Varianti di Piano*[8] defines several formal aspects of the urban tissue as buildings alignment, buildings height, axes of urban development, roads axes, trying to develop the city in coherence with the existing urban fabric. The urban design of the *Spina centrale* conceived a high-density urbanisation with very high costs of infrastructuring borne by the private investors. Those costs could maybe have been afforded in the late Eighty's, during the real estate market boom, but has become non realistic since the real estate market and the industrial investments, together with demography, have started to slow down at the end of the Ninety's.

Comparing the building density of the historical consolidated city, of the city centre, and the building density of the transformation areas is not easy as in the consolidated city the building density is expressed referring to the building plot, so it doesn't include the public areas (net density), while in the transformation areas the building density is referred to the entire area concerned by the regeneration, including public realm (gross density). The average net density of the consolidated city is 1,35 sq m/sq m, while the gross density in the transformation area was established in 0,7 sq m/sq m by the PRGC but has been revised in 0,6 sq m/sq m. That's because planners, together with city administrators, realized that higher building index means higher quantity of public facilities and services to provide. The cost of those services together with the cost of the reclaim of the industrial soil would have made the investments unaffordable. It's interesting to highlight that density is here expressed in square metre instead of cubic metre. This allows architects to experiment less common typological solutions for residential units. As the height of the storey doesn't have any effect on the count of density, duplex and double level flat as well as lofts and open spaces become more and more common. Assuming that transformation areas will be characterized by 70% of public realm and 30 % of private plot, we can say that for a gross density of 0,6 sq m/sq m the net density in those plot would by near to 2 sq m/sq m.

Looking at the density perception, the PRGC also tries to design urban landmarks, urban furniture and visual design to generate a sort of corporate identity trough the city and to characterize the important and representative urban spaces that structure the "backbone" to make them meaningful and visually dense.

The *Spina Centrale* in divided in four sub-areas: *Spina 1*, *Spina 2*, *Spina 3* and *Spina 4* according to their distance from the city centre. *Spina 3* is a very interesting case study related to the topic of the urban density and its different meanings. The sub-Area of *Spina 3* has been transformed through an urban planning for urban regeneration, PRIU, which was to do 28% of residential use, 10% public facilities, 9% tertiary sector (including proximity commerce), 40% *Eurotorino* (a special plan

[7] PRIU *Programmi di Riqualificazione* Urbana means Urban Regenaration Programms.
[8] Zoning Plan Modifications

for research, exhibition, accommodation facilities and tertiary sector) and the rest for shopping mall. Tertiary sector and public facilities could only be located at the ground floor and at the first and second floor of the buildings to avoid the risk of a business centre that will be full of life during the working hours but empty the rest of the time. Now that the development of the local plan is nearly accomplished, we can observe that those two regulations have engendered a remarkable functional density – or use density - on the area of *Spina 3* that is becoming a lively quarter and not a dormitory suburb even if the amount of residences built is enormous (nearly 2300 residential units).

Concerning the building density we have to consider that at the beginning of the XXI century Turin's inhabitants started to leave the city moving towards the first metropolitan belt. To reverse this process, the regeneration of industrial dismantled areas of *Spina 3* tried to redesign the urban fabric following the model of the historical city's centre, that has just been regenerated and gentrificated with a successful real estate operation. In this sense, the industrial settlements are almost totally demolished – loosing the "industrial footprint" as well as a part of identity of Turin – and replaced with an urban tissue with the same building density of the historical city center but differently allocated. Traditional blocks are usually composed by four or five-storied buildings and they are approximately eighty metres in width, while new residential buildings on the area so called Ex-Michelin are seven- to nine-storied and they are more than one hundred in width. As in the historical fabric, the buildings are located on the perimeter of the plot but the façades are not continuous and the inside court is much bigger and green. In another example – always on the area of *Spina* 3 – the high building density of the traditional city is obtained concentrating very tall buildings in the centre of the plot (more than twenty-storied). Those two examples show how we can have almost the same building density with very different urban shapes. However the traditional urban elements are still the reference for the regeneration of this area as we can see in the design of the most important shopping mall conceived as a traditional *Piazza*: commercial and services buildings are located on the perimeter of the plot, their façades are various but harmonized and the inner space is designed as public square with bridges, fountains and mineral surface. The only difference with the classical *Piazza* is that this contemporary square is completely isolated from the rest of the public realm on a lower level separated from the surrounding streets.

4. Conclusions

Two fundamental fallout of the parameter of urban density have been highlighted in this paper: the leading part of the density in defining urban morphology and it's role in making cities alive. In this sense if importance of density indexes in the control of the urban morphology is clear, the role of the different kind of density has to be tested more precisely not only to better analyse existing urban operation, but also to made up more efficient planning indexes.

The use of Density not as an analysing tool but as a planning tool is very clear in the so called "critic reconstruction", a wide operation of urban regeneration with the aim of preserving and renewing the still existing typical European urban fabric that the city of Berlin started in the Ninety's he. This meant to improve and develop the

infrastructure of squares, boulevards and blocks with internal courtyard that characterized the traditional city. To preserve the city's morphology the maximum height has been limited to twenty-one metres. The plan of "critic reconstruction" avoided functional zoning and improved public transportation instead of private traffic. All this measure lead to a tradition urban shape designed trough contemporary architectural language. The regeneration of PariserPlatz and Luisenstadt has been the first step of a general plan for the city that recognized the importance of the different kind of densities at the scale of the entire city.

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MEASURING AFFECT AND INFLUENCES OF NATIONAL PARK TO THE SURROUNDING RESIDENTS OF KUBAH NATIONAL PARK IN SARAWAK, MALAYSIA.

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Abstract

National Parks are reserves of natural, semi-natural, or developed land owned or declared by a sovereign state, restricted from most development, and is set aside for human recreation and environmental protection. There are around 39 gazetted National Parks in Malaysia; 8 in Peninsular Malaysia, 7 in Sabah and 24 in Sarawak. Kubah National Park was gazetted as National Park in 11th May 1989 and opened to the public in 1995. Kubah National Park is one of the smallest National Park in Sarawak, covering only 2230 hectare yet the implication of its establishment and progresses is rather significant to be studied. Among the neighbors of the park are Matang Wildlife Centre, local villages, high schools and a college. This report reviews positive and negative impacts of Kubah National Park to its surrounding residents. An ethnography study and surveys have been carried out recently inquiring the surrounding residents of Kubah National Park of the benefits and implications of the National Park's establishment and progresses towards their lives. This includes changes occurred at their villages domestically and shared communally. The benefits and implications are categorized under five contributing factors which are economic influences, infrastructure influences, congestion influences, social influences and local attitude. The initial inventory of the case study distinguishes 6 traditional villages with an addition of 13 new villages found to be potentially affected by the progresses of Kubah National Park. A minimum number of 400 samples of survey questionnaires have been randomly collected from the residents of these villages and the analysis of the survey will be further discussed in this report in relation to the management of Kubah National Park. The analysis begins with assessment of the population distribution and density of the residents and later highlights the distribution of age, gender, ethnicity and socio-economy of the residents. The critical part of the analysis is evaluating the five contributing factors influencing the residents' opinions of the National Park. In response, the assessments and evaluations result to channels of improvements for National Park's management

of Kubah or any National Park which may encounter similar context and circumstances.

Keywords: National Park Management, Benefits and Implications, Residents' Opinions

1.0 INTRODUCTION

National Parks are areas protected primarily for their natural and cultural heritage. The parks are home to a surfeit of species that reside within their boundaries, many of which are endangered or threatened. National Parks also protect places important to aboriginal people and historical places that exhibit how people lived in the past (Hanke, 2004). The National Management Services outlined that National Parks are protected areas and it is clear defined geographical space, recognized, dedicated and managed, through legal or other effective methods, to realize a lasting conservation of nature with associated ecosystem services and cultural values.

According to population data established by Department of Statistics Malaysia (2010), Sarawak has 2506, 500 people at the area of 124, 450^2 km with population density of 20 people per 1^2 km. It has eight ethnics and Ibans are the biggest ethnic group, followed by Chinese and Malays. Malays are identified to be the main contributor for the growth of Sarawak's economy, tagged along by Chinese and Ibans. Kubah National Park is located at the small district of Padawan, and close to the district of Lundu. At the area of 526.19^2 km, Padawan has 12, 922 people which vary from multiracial communities such as Bidayuhs, Malays, Chinese, Javanese, Ibans and 'Orang Ulu' settlers. On the other hand, Lundu has 34, 576 people and a population density of 17.6 persons per 1^2 km, at the total district area of 1.962^2 km. Kubah National Park has 18 villages surrounding it.

The basis of the survey methodology is built on the objective of the research which is to explore significant contributions or consequences of Kubah National Park to its surrounding residents. In order to achieve this objective, the initial attempt is distinguishing residential areas and their distribution around Kubah National Park.

2.0 METHOD OF QUESTIONNAIRE SURVEY ACTIVITIES

Within 18 villages in the surrounding of Kubah National Park, five are traditional villages and the remaining 13 are new villages. A total of 376 survey samples are gathered from the villages. In order to be inclusive the research extends its location context by collecting survey samples from other areas which are expected to be influenced by development of Kubah National Park. These extra areas have contributed 57 survey samples which totals up to 433 survey samples. Table 2.1 lists residential areas where the survey samples are gathered from.

Table 2.1 Location of Survey Questionnaire Activities

VILLAGES SURROUNDING KNP		OTHER AREAS
TRADITIONAL VILLAGES	**NEW VILLAGES**	
1. Kampung Loba 2. Kambung Loba Rambungan 3. Kampung Sungai Agas Lama 4. Kampung Trombol 5. Unknown Village	1. Kampung Sri Kandong 2. Kampung Temenggong 3. Kampung Rayu 4. Kampung Rayu Iban 5. Kampung Jaya Bakti 6. Kampung Telaga Air 7. Kampung Selang 8. Kampung Selang Laut	1. Bandar Baru Semariang 2. Batu Kawah 3. Kuching 4. Lintang 5. Lok Simpoh 6. Lundu 7. Matang Jaya 8. Semarahan
	9. Kampung Temadak 10. Kampung Sungai Agas Baru 11. Kampung Matang 12. Kampung Matang Batu 10 13. Taman Palma Indah	9. Sentubong 10. Serikin 11. Sungai Aur 12. Sungai Belian 13. Sibu Laut 14. Taman Jublee Mas 15. Taman Palma Indah

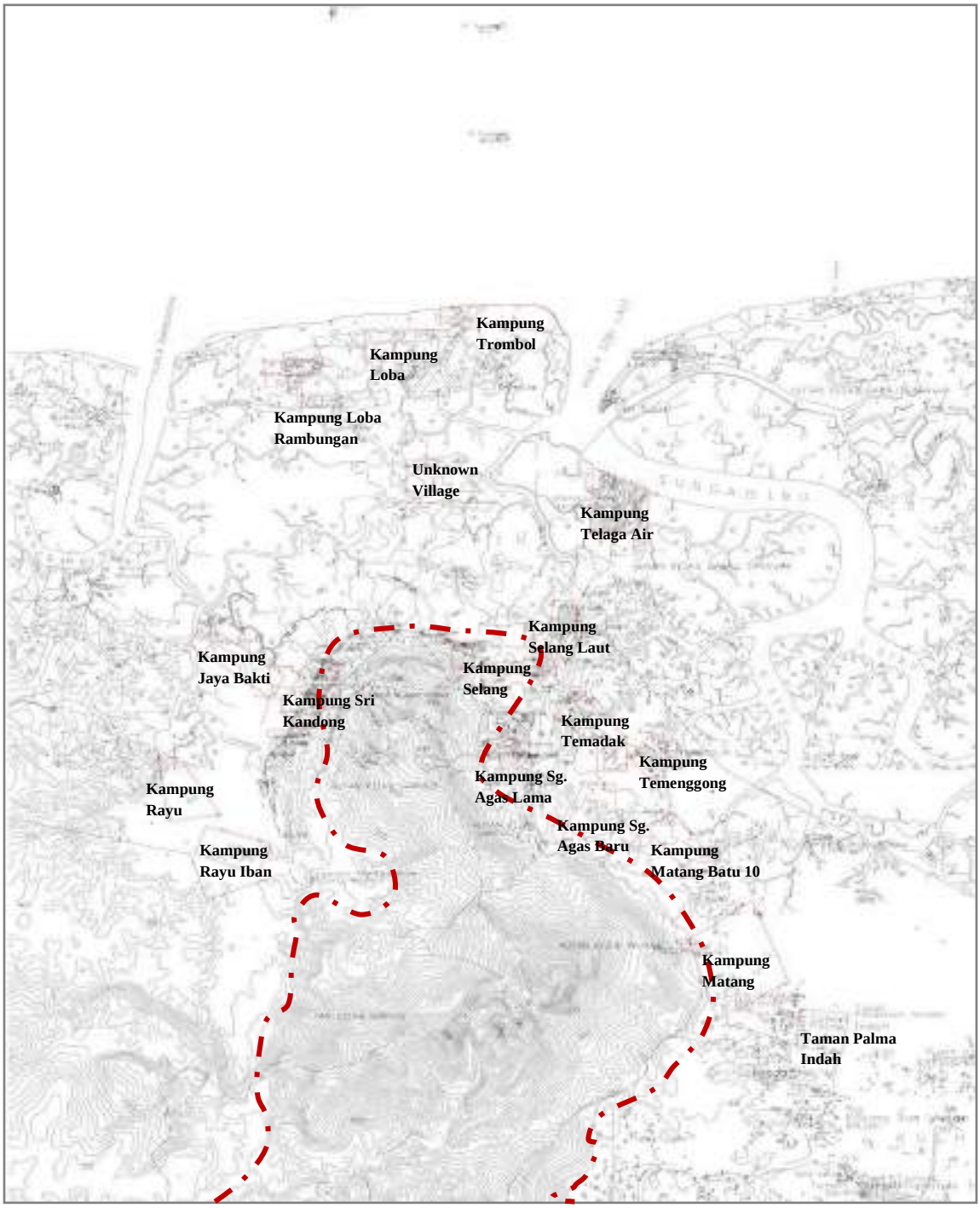


Figure 2.1 Map of Kubah National Park and Its Vicinity

The approaching strategy of the questionnaire survey activities are valued based two characters as the followings:

1. The Amount of Structure: All survey respondents are asked the same questions in an identical approach.
2. The Degree of Directedness: The extent to which direct questions are asked on the issues or topics of interest in the research

Thus, the more structured and direct the approaching strategy, the more generalizable are the answers (Peterson, 2000; Hammersey, 2008).

The questionnaire survey is divided under four general sections:

Section 1	: Respondent's Personal Information
Section 2	: Relationship of Respondents to Kubah National Park
Section 3	: Respondent's Opinions on the Influence of Kubah National Park
Section 4	: Respondent's Opinions on the Management of Kubah National Park

In Section 3, the research indicates five factors of National Park influences to its surrounding residents. The survey addresses scenarios based on these factors to which the respondents would reply according to their knowledge and opinions. These factors are:

1. Economic influences,
2. Infrastructure influences,
3. Congestion influences,
4. Social influences, and
5. Local attitude.

The scenario questions in the five critical factors assess the implications of Kubah National Park. The respondents determine whether the implications are positive or negative based on their opinions and experiences. Most of the questions are structured and direct thus ease the respondents to understand the inquiries. The sampling method of the survey activities is Simple Random Sampling. This means that everyone in the study area has an equal chance to be selected.

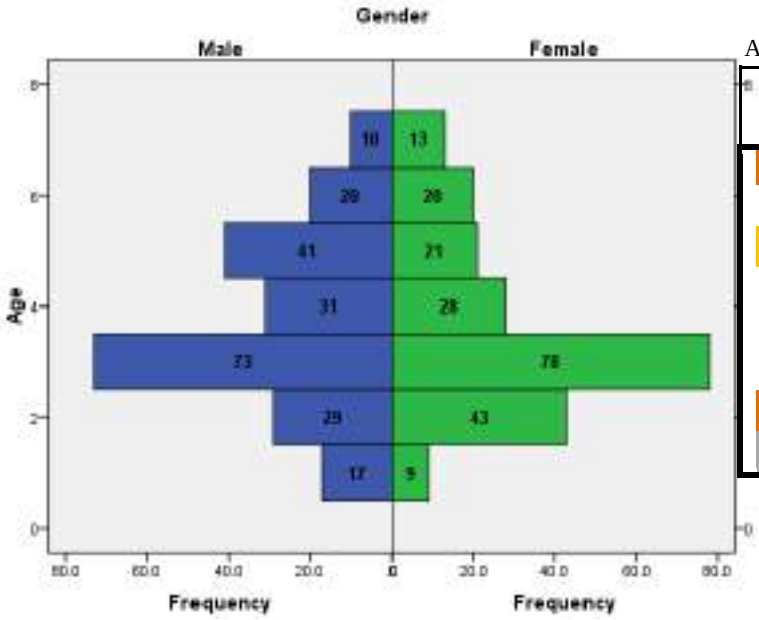
3.0 POPULATION DISTRIBUTION

In total, the respondents are residents of 33 residential areas surrounding Kubah National Park. Table 3.1 classifies the amount of samples collected from each residential area.

Table 3.1: Frequency of Respondents

		Frequency	Percent	Valid Percent
Valid	Traditional Villages	16	3.0	3.7
	New Villages	366	67.5	84.5
	Others	51	9.4	11.8
	Total	433	79.9	100.0

Table 3.1 highlights new villages as the most populated area which in total has contributed over 22% to the whole survey samples. Among the villages of high population density are Kampung Jaya Bakti, Kampung Matang, Kampung Rayu Iban, Kampung Selang, Kampung Selang Laut and Kampung Temenggong. The traditional villages only contribute 3.6% samples. The highest amount of survey samples are gathered from Kampung Telaga Air in new villages which contributes 15.7% to the total survey samples. It is reported that Kampung Telaga Air is the most populated village in comparison to other villages. Additionally it is also the result of villagers migrating from the traditional villages to new villages due to much reliable public facilities such as schools and commercial areas.

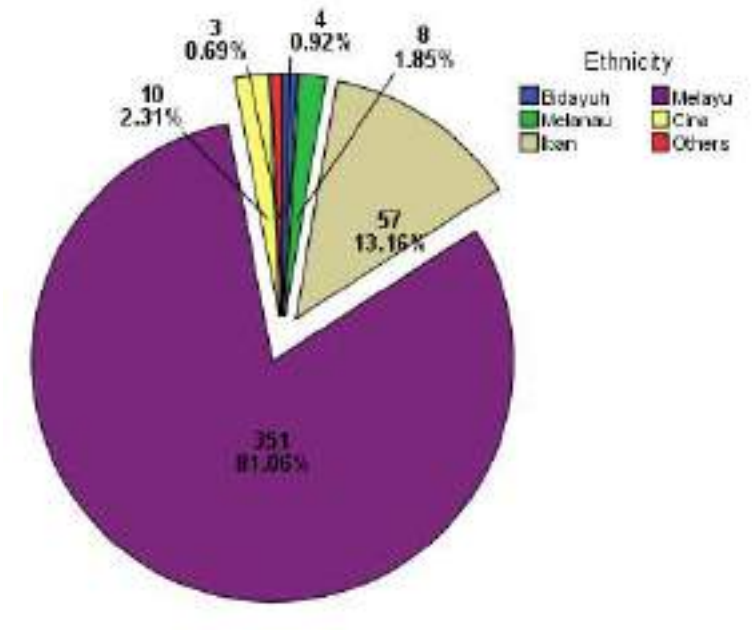


Age * Gender Crosstabulation

Age	Gender		
	Male	Female	Total
10 - 19 yrs old	17	9	26
20 - 29 yrs old	29	43	72
30 - 39 yrs old	73	78	151
40 - 49 yrs old	31	28	59
50 - 59 yrs old	41	21	62
60 - 69 yrs old	20	20	40
>70 yrs old	10	13	23
Total	221	212	433

Figure 3.1: Population Pyramid

The population pyramid as demonstrated in Figure 3.1 shows that the highest density of respondents is from the age of 30 to 39 years old. The smallest amount of respondents is from above the 70s, just shy of a few from the density of the teenage group. Additionally, the population pyramid also indicates that the first three younger age groups have higher density than the last three older age groups. From the age distribution of the total population, it shows that the residents surrounding Kubah National Park has a low death rate and relatively high birthrate. This suggests that the local residents are a rapidly growing population. Since National Parks are known for their strictly protected natural environment, thus promotes health and ecological values; location could be one of the strong contributing factors to the growing population density. Based on the total figures of Male (221) and Female (212), it can be implied that male and female is equally distributed in the population sample.



Ethnicity is an important study as it indicates the behavioral and cultural attributes of the population. According to Figure 3.2, the majority of the respondents are Malays while Iban is 13% of the whole population. The figure shows that the Malays are a significant population of the residents surrounding Kubah National Park, followed by Iban. Just over two percent of the population is the Chinese. Melanau and Bidayuh take up 1.85% and 0.92% of the population respectively.

Figure 3.2: Ethnicity Distribution

A Chi-Square test has been conducted to observe if the ethnicity in the sample represent the population ethnicity in Lundu District. The null hypothesis is the frequency of every ethnicity of the sample (observed frequency) reflects the expected frequency based on the population. The expected frequency is calculated based on the percentage of ethnicities in 2010 provided by Lundu District Office.

Table 3.2: Chi-Square for Goodness of Fit on Ethnicity

Test Statistics

	Ethnicity
Chi-Square	2.690E2
df	5
Asymp. Sig.	.000

a. 1 cells (16.7%) have expected frequencies less than 5. The minimum expected cell frequency is 4.0.

Frequencies

	Ethnicity			
	Category	Observed N	Expected N	Residual

1	Bidayuh	4	121.0	-117.0
2	Melanau	8	4.0	4.0
3	Iban	57	65.0	-8.0
4	Melayu	351	195.0	156.0
5	Cina	10	43.0	-33.0
6	Others	3	5.0	-2.0
Total		433		

Based on Frequencies in Table 3.2, the residual column displays the differences of observed and expected frequencies. All the ethnicities have relatively significant values of residuals. This output indicates differing values of observed and expected frequencies (X^2 (5) = 2.690E2, p = 0.000 < 0.05). Since the value of Chi-Square is not significant, the null hypothesis that observed frequency reflects the expected frequency is rejected. This means that there is lack of accuracy of the sample representing the population. This implies that the population in location chosen for survey does not reflect the overall ethnicity distribution of Lundu population.

Historically, the settlement at the traditional villages has begun over 100 years ago. Lands are owned by individual owners and have been inherited from one generation to another generation. Despite over a century of existence, the traditional villages are considered rather orthodox compared to the new villages. The traditional villages significantly lack infrastructure and facilities improvement which result to absence of electricity and water utilities in majority of the houses. It is reported by the villagers that for daily needs, the villagers have to make use of generators to light their houses at night and either pump the underground water or channel the water from nearby hills for some water supplies. The traditional villages also have little access to their surrounding settlements due to lack of road connections.

Alternatively, the new villages which have been instituted after World War 2 in 1945 experiences decent development of communal necessities such as schools, bus stops and mosques. As reported by the heads of the villages, the development processes significantly upsurge around 20 years ago. Coincidently Kubah National Park was gazetted in 1989 which is a relative year when the villages experience an increase of development. This suggests that the development of Kubah National Park may perhaps be the reason of the development of its surrounding villages. Nevertheless, some villagers believe differently. It is reported by some of the neighboring villagers that the strict protection policies of the National Park has result to slow urbanization progresses of the National Park's neighboring areas.

The following sections discuss five factors of possible influences of Kubah National Park to the surrounding areas from the angle of villagers' lives, experiences and perspectives. These influences are addressed in five categories, Economic influences; Infrastructure influences, Congestion influences, Social influences and Local attitude.

4.0 INFLUENCES OF KUBAH NATIONAL PARK

There are varieties of positive outcomes of National Parks to their surrounding human residents. Apart from the ecological values which are highly promoted, development of the Parks offer opportunities of employments, increase of infrastructure to allow access for outsiders and insiders as well as development of recreational facilities for public use.

In the attempt to distinguish significant impacts of Kubah National Park (KNP) to its surrounding local residents, the survey begins with inquiring the respondents to address positive contributions of Kubah National Park to their lives.

Although there are seven contributions addressed by the respondents, over half of the respondents claim that Kubah National Park has no significant contribution towards their lives. 12.7 % and 10.9% of the respondents claim that progresses of Kubah National Park shows positive outcome to economy and infrastructure aspects respectively. Figure 4.1 and Table 4.1 display the output.

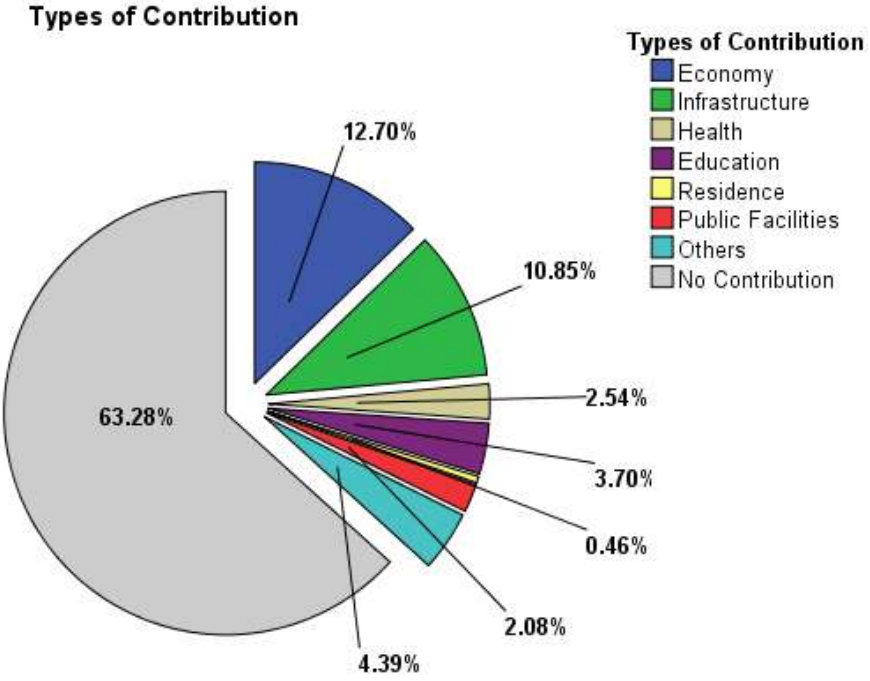


Figure 4.1: Contribution of Kubah National Park

Table 4.1Frequency of KNP Employees

Types of Contribution	Work at KNP?				
	Yes	No	Total	Percent	Cumulative Percent

Economy	23	32	55	12.7	12.7
Infrastructure	5	42	47	10.9	23.6
Health	1	10	11	2.5	26.1
Education	0	16	16	3.7	29.8
Residence	1	1	2	.5	30.3
Public Facilities	0	9	9	2.1	32.3
Others	3	16	19	4.4	36.7
NA	20	254	274	63.3	100.0
Total	53	380	433	100.0	

From the total number of respondents who claim of the economic contribution, 23 of them work for Kubah National Park. Additionally, out of 47 respondents who address the infrastructure contribution, 5 of them are employed by the National Park. This suggests that development of Kubah National Park offers employment opportunities to the villagers. This may perhaps be the factor which affects the perspective of the respondents.

5.0 ECONOMIC INFLUENCE

Socioeconomic is a vital study in understanding the economic growth of an area. Based on income, education and occupation, socioeconomic status can be determined. Socioeconomic status indicates work experiences, individual or family social position in relation to others and education background. Occupational status reflects both income and education background in attaining the job requirement. In the attempt to determine the economic influences of Kubah National Park, the research begins with distinguishing the socioeconomic and occupational status of the residents. The following table shows the occupational status of the respondents.

Table 5.1: Cross tabulation Household Income by Occupation

Family Income	Occupation								
	Government	Private Sector	Public Sector	Student	Pensioner	Unemployed	others	housewife	Total
< RM500	2	0	34	10	5	11	28	10	100
RM500 - RM1000	11	10	74	9	7	6	30	29	176
RM1000 - RM1500	4	5	32	4	4	6	14	0	69
RM1500 - RM2000	8	3	7	3	2	0	5	6	34
RM2000 - RM2500	4	2	6	3	0	0	1	0	16
RM2500 - RM3000	5	3	5	1	0	0	0	0	14
RM3000 - RM3500	2	1	2	0	1	1	0	1	8
> RM3500	8	3	3	0	1	0	0	1	16
Total	44	27	163	30	20	24	78	47	433

Table 5.1 shows that the majority of the respondents work in the Public Sector. 78 of the respondents in the 'others' column are self-employed and work as farmers, fishermen and traders while 21 of the respondents are unemployed. Based on the occupation and household income displayed in the table, it implies that there is a probability that education levels of the respondents are mostly medium or rather low.

Table 5.2: Cross tabulation Household Income by Household Members

Family Income	No. Family Members					
	1 - 3	4 - 6	7 - 9	10 - 12	> 12	Total
< RM500	17	59	17	7	0	100
RM500 - RM1000	23	82	50	17	4	176
RM1000 - RM1500	8	29	23	6	3	69
RM1500 - RM2000	2	16	11	2	3	34
RM2000 - RM2500	1	13	1	1	0	16
RM2500 - RM3000	0	12	2	0	0	14
RM3000 - RM3500	0	5	1	1	1	8
> RM3500	8	6	1	1	0	16
Total	59	222	106	35	11	433

The cross tabulation of table 5.2 shows that majority of the respondents have 4 to 6 household members. 106 of the total respondents have 7 to 9 household members yet only 1 of the respondents receives more than RM 3,500 monthly. Majority of the respondents gain below than RM 1,000 per month. Out of that number, 100 of them gain below RM 500. This suggests socioeconomic status of the respondents is very low. This also implies that majority of the respondents have low education level to attain some high income professions.

Table 5.3: KNP Increase Job Opportunity

KNP Increase Job Opportunity	Work at KNP?		
	Yes	No	Total
Strongly Agree	13	44	57
Agree	18	106	124
Disagree	13	179	192
Strongly Disagree	9	51	60
Total	53	380	433

In the scenario-based inquiry of the questionnaire, majority of the respondents claim that Kubah National Park does not increase job opportunity. Although 31 of the National Park employees agree that Kubah National Park does increase job opportunities, 22 of the employees claim that the National Park does not increase job opportunities.

Table 5.4: KNP Influence Unemployment

Residents		Work at KNP?		
		Yes	No	Total
Traditional Villages	Agree	0	2	2
	Disagree	0	7	7
	Strongly Disagree	2	5	7
	Total	2	14	16
New Villages	Strongly Agree	1	5	6
	Agree	9	41	50
	Disagree	22	193	215
	Strongly Disagree	14	81	95
	Total	46	320	366
Others	Strongly Agree	1	0	1
	Agree	1	8	9
	Disagree	1	28	29
	Strongly Disagree	2	10	12
	Total	5	46	51

As National Parks are also tourists destination, Kubah National Park and its surroundings experiences seasonal tourists' arrival. For residents who make use of the opportunity, tourism-based activity could contribute to their income. Still the tourists arrival is seasonal thus may result to unemployment for these residents as season goes. Based on Table 5.4, 17.3% of the respondents agree that Kubah National Park results to unemployment. Out of the figure, 12 of them are employees of Kubah National Park. Nevertheless, majority of the respondents disagree that the park influences unemployment. Both Table 5.3 and Table 5.4 significantly suggest that Kubah National Park has a low impact on job opportunities or employment in general.

The research attempts to observe the differences of means on perception of Job Opportunities being affected by Kubah National Park of respondents who are employees and are not employees of the National Park based on their level of household income. In order to determine the interactions of the three variables, 'KNP Increase Job Opportunity', Categories of Household Income and Employees of KNP, Factorial Anova is implemented. For this test, three null hypotheses are addressed.

1. Respondents who are Employees of KNP and respondents who are otherwise have the same perception on 'KNP Increase Job Opportunity'.
2. Perception on 'KNP Increase Job Opportunity' is not influenced by Categories of Household Income.
3. There is no interaction between being employees of KNP and Categories of Income. That is the effect of being Employees of KNP or otherwise from different Categories of Household Income is equal.

However, since Factorial Anova is best used for ratio data, it unlikely to obtain a good result if the variable 'KNP Increase Job Opportunity' is an ordinal variable.

Thus, the Likert 4 point agree or disagree scale of 'KNP Increase Job Opportunity' is recoded into Anchored 4 point scale. The rationale for this transformation is to give score for the variable for better understanding on the output of means. The following table shows how the variable is transformed.

'KNP Increase Job Opportunity'

Likert 4 Point		*Strongly Agree*	*Agree*	*Disagree*	*Strongly Disagree*	
Anchored 4 Point	Most Likely	4	3	2	1	Most Unlikely

Table 5.5: Factorial Anova on Employees of KNP, Categories of Household Income and Perception on 'KNP Increase Job Opportunity'

Between-Subjects Factors

		Value Label	N
KNP Employees	1	No	380
	2	Yes	53
HouseholdIncome	1	< RM500	100
	2	RM500 - RM1,999	279
	3	RM2000 - RM3500	38
	4	> RM3500	16

Descriptive Statistics

KNPEmp	HouseholdIncome	Mean	Std. Deviation	N
No	< RM500	1.8293	.69929	82
	RM500 - RM1,999	1.9040	.63908	250
	RM2000 - RM3500	1.9429	.53922	35
	> RM3500	2.3846	.86972	13
	Total	1.9079	.65736	380
Yes	< RM500	1.9444	.63914	18
	RM500 - RM1,999	1.7586	.83045	29
	RM2000 - RM3500	3.0000	1.00000	3
	> RM3500	2.3333	1.15470	3
	Total	1.9245	.82855	53
Total	< RM500	1.8500	.68718	100
	RM500 - RM1,999	1.8889	.66125	279
	RM2000 - RM3500	2.0263	.63616	38
	> RM3500	2.3750	.88506	16
	Total	1.9099	.67954	433

The Descriptive Table displays the means of 'KNP Increase Job Opportunity' scores. Based on the HouseholdIncome and Mean Columns, Income which is more than RM 2000 have mean figure above 2.0 (approaching 'Most Likely'). This suggests there is a possibility that most respondents whose household income are above RM 2000 perceive that most likely KNP Increase Job Opportunity. However, based on KNPEmp column; the row indicating not employees of KNP, only respondents whose household income is above RM 3500 perceive that most likely KNP Increase Job Opportunity. Thus there is a possibility that being employees of KNP or otherwise does not influence perception on 'KNP Increase Job Opportunity'. The following Tests of Between Subject Effects table reveals the significance of the interaction between these three variables.

Tests of Between-Subjects Effects

Dependent Variable:InfluenceUnemp

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	8.297[a]	7	1.185	2.635	.011
Intercept	332.780	1	332.780	739.744	.000
KNPEmp	1.084	1	1.084	2.409	**A** .121
HouseholdIncome	6.119	3	2.040	4.534	**B** .004
KNPEmp * HouseholdIncome	3.828	3	1.276	2.837	**C** .038
Error	191.190	425	.450		
Total	1779.000	433			
Corrected Total	199.487	432			

a. R Squared = .042 (Adjusted R Squared = .026)

The test of Between Subject Effects table displays the significant value for the three conditions of interactions between variables. The first is condition A where the effect of being employees of KNP or otherwise towards perception on 'KNP Increase Job Opportunity'. The p-value for condition A is 0.121 > 0.05, therefore fails to reject the first hypothesis that the effect of being employees of KNP or otherwise is not significant. On average, the perception of 'KNP Increase Job Opportunity' is the same for respondents who are employees of KNP or not employees of KNP. The p-value for condition B indicating the effect of Household Income towards 'KNP Increase Job Opportunity' is 0.04 < 0.05, thus it is significant. Therefore rejects the second null hypothesis that perception on 'KNP Increase Job Opportunity' is not influenced by Categories of Household Income. This means that on average, perception of 'KNP Increase Job Opportunity' is influenced by different categories of household income. Lastly for condition C where all three variables are being interrelated, the p-value is 0.038 < 0.05. Since the p value is significant, the third null hypothesis is also rejected. This shows that there is an interaction between being employees of KNP and Categories of Houshold Income. That is the effect of being Employees of KNP or otherwise from different Categories of Household Income is different. There are two important points which can be concluded from the output.

1. Most respondents whose income are above RM 3500 either they are employees of KNP or otherwise believe that most likely KNP Increase Job Opportunity. Additionally, if the respondents are employees of KNP, the household income level is slightly lower (above RM 2500) for them to believe that most likely KNP Increase Job Opportunity.
2. Despite there are respondents who believe that KNP Increase Job Opportunity, these respondents are considered high income respondents from the rest of the respondents. Respondents whose household income is lower than RM 2000 are 379 in total which takes up more than half of the total respondents. This suggest that vast majority of the respondents especially those whose household income are lower than RM 2000 do not believe that KNP Increase Job Opportunity.

There are two assumptions which can be implied from this result. The first is to suggest that even though Kubah National Park offers employment opportunities, they are not sufficient to cater the whole population or the residents. The second is to imply that the residents may not be entirely accessible or competent to the employment opportunities due to access of information, power distribution in the community or requirement of the job scope.

Table 5.5: KNP Increase Living Cost and Land Value Cross Tabulation

TNK Increase Living Cost	TNK Increase Land Value				
	Strongly Agree	Agree	Disagree	Strongly Disagree	Total
Strongly Agree	42	2	6	0	50
Agree	1	105	14	1	121
Disagree	5	20	153	7	185
Strongly Disagree	1	6	4	66	77
Total	49	133	177	74	433

As the surrounding residents of the strictly protected land and tourism destination, the living cost and land value of the area ought to increase in reflecting the significance of the National Park. Approximately 30% of the respondents agree or strongly agree that both land values and living cost have increased. In spite of this, majority of the respondents disagree that the land value or the living cost has increase significantly. This suggests that Kubah National Park has rather low land value or receives slow reaction from tourism industry. This may be due to nearby tourism locations such as Bako National Park or Kuching which have better tourism attractions, thus dominate most of the tourism responds.

Table 5.7: KNP Increase Economic Standard

	Work at KNP?		
Residents	Yes	No	Total

Traditional Villages	Strongly Agree	0	3	3
	Agree	0	3	3
	Disagree	0	6	6
	Strongly Disagree	2	2	4
	Total	2	14	16
New Villages	Strongly Agree	13	50	63
	Agree	16	103	119
	Disagree	12	127	139
	Strongly Disagree	5	40	45
	Total	46	320	366
Others	Strongly Agree	2	6	8
	Agree	2	18	20
	Disagree	0	16	16
	Strongly Disagree	1	6	7
	Total	5	46	51

Table 5.7 concludes the overall scenario inquiries of Economic Influence of Kubah National Park. Most of the residents disagree that the National Park has increase the surrounding economic standard. Again, this may perhaps due to slow tourism reaction. Kubah National Park is lacking significant tourism attraction in comparison to nearby tourism destinations. Additionally, this may due to the slow development of the surrounding areas. The following sections discuss the infrastructure influences of Kubah National Park.

6.0 INFRASTRUCTURE INFLUENCE

The influence of infrastructure is measured according to the maintenance of the road systems and facilities in the residential areas. At the same time, increase in infrastructure should also contribute to positive outcome to the service quality of shops, restaurants and other businesses.

Table 6.1: KNP Increase Maintenance and Infrastructure Cross Tabulation

TNK Increase Infrastructure	TNK Increase Maintenance of Road System & Facilities				
	Strongly Agree	Agree	Disagree	Strongly Disagree	Total
Strongly Agree	78	10	0	1	89
Agree	23	167	12	2	204
Disagree	9	33	56	3	101
Strongly Disagree	0	5	10	24	39
Total	110	215	78	30	433

Based on Table 6.1 over 60% of the respondents agree or strongly disagree that Kubah National Park has shown positive outcome to surrounding maintenance and

infrastructure development. This implies that the development of Kubah National Park has influenced the development of the surrounding local settlements.

Table 6.2: KNP Increase Service Quality

		KNP Increase Service Quality				
		Strongly Agree	Agree	Disagree	Strongly Disagree	Total
Residents	Traditional Villages	2	8	4	2	16
	New Villages	63	117	142	44	366
	Others	6	21	19	5	51
	Total	71	146	165	51	433

Table 6.2 shows equal number of respondents either agrees or disagrees that Kubah National Park has influenced the service quality of shops, restaurants and other businesses. This suggests that the local residents are still dependent on themselves in the terms of local improvements within the residential areas.

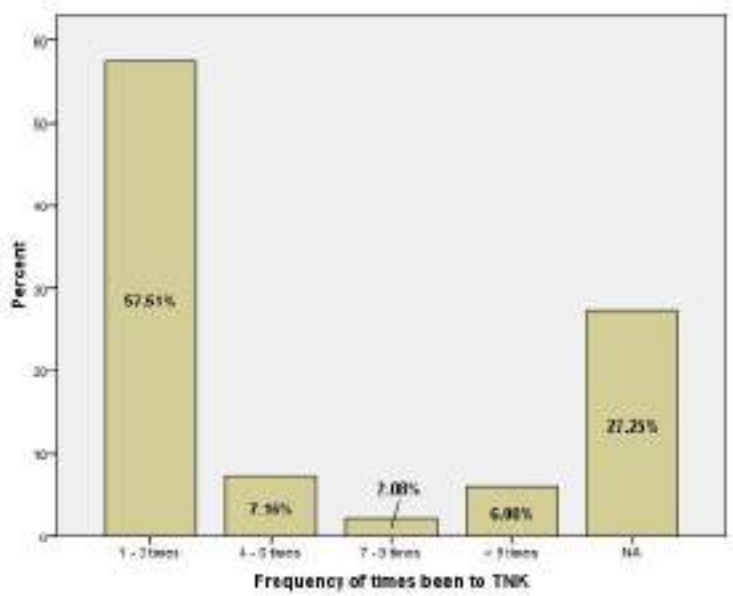


Figure 6.1: Frequency of times have been to KNP

Figure 6.1 indicates that the frequency of times of which the respondents have been to Kubah National Park. The figure shows that just over a quarter of the respondents have not been to Kubah National Park while more than half of the respondents have only been to the Park 1 to 3 time. Nevertheless, as observed during field study, the neighbor of Kubah National Park, Matang Family Center has many visitors. It is reported by some of the respondents that most of them prefer the alternative recreational area as it is more convenient to access. In addition, the attraction of Kubah National Park especially the waterfalls require them to hike and force a way through the forest to reach there when Matang Family Center has a similar attraction and much convenient to reach.

The research attempts to observe if the variable of 'KNP Increase Land Value', affects variable 'KNP Increase Development'. Both of these variables have the same quantity of ordinal levels based on the 4 point Likert Scale Agree or Disagree Questions in the Survey. However, for better understanding on comparison of mean values, the Likert 4 Point Agree or Disagree Scale of both variables is recoded into

Anchored 4 point scale. The rationale for this transformation is to give score for the variable for better understanding on the output of means. The following table shows how the variable is transformed. For this test, Paired Sample T-Test is implemented. The null hypothesis is there is no significant difference between means of 'KNP Increase Land Value' and 'KNP Increase Development'.

'KNP Increase Land Value' and 'KNP Increase Development'

Likert 4 Point		*Strongly Agree*	*Agree*	*Disagree*	*Strongly Disagree*	
Anchored 4 Point	Most Likely	4	3	2	1	Most Unlikely

Table 6.7: Paired Sample T-Test on Land Value and Development

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	KNPLandValue	2.3626	433	.89504	.04301
	KNPDevelopment	2.8014	433	.86725	.04168

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	KNPLandValue & KNPDevelopment	433	.141	.003

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	KNPLandValue - KNPDevelopment	-.43880	1.15533	.05552	-.54793	-.32967	-7.903	432	.000

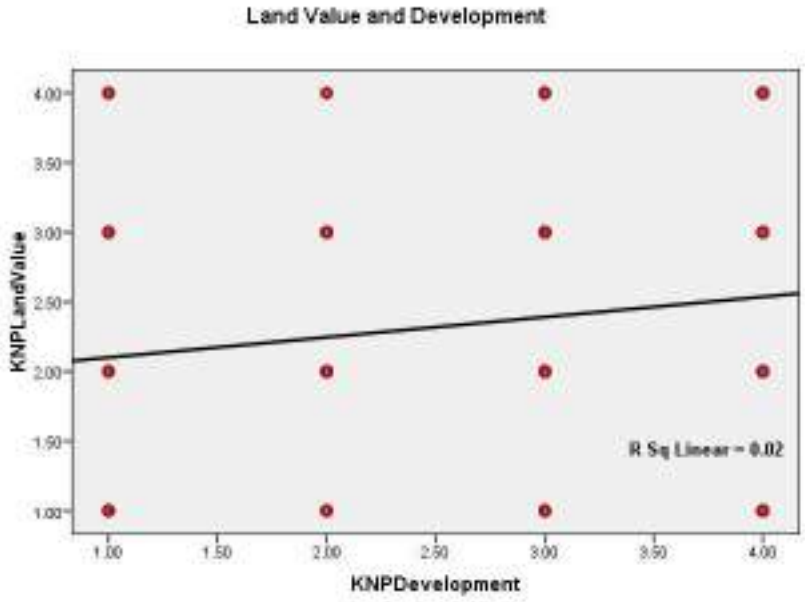


Figure 6.3: Scatter Plot of Land Value and Development

Based on the Paired Samples Statistics Table, the mean of 'KNP Increase Development' is higher than the mean of 'KNP Increase Land Value' with a difference of 0.4388 which implies that more respondents believe that the National Park has increased development than the land value. The Paired Samples Correlation Table shows positive correlation of 0.141 which suggests that as the land value increases, the development also increases. The output of the Paired Samples T-Test indicates that there is a significant difference between the means of 'KNP Increase Development' and 'KNP Increase Land Value' $t(432) = -7.903$, $p = 0.000 < 0.05$. Thus rejects the null hypothesis that there is no significant difference between means of 'KNP Increase Land Value' and 'KNP Increase Development'. The scatter plot also displays a weak yet positive correlation of 0.238 between the two variables which indicates that the increases on land value are correlated with increases in Development. This suggests that Increase in land due to expansion of Kubah National Park affect the surrounding development of the local residents.

Since respondents have been asked a few question based on the two themes Surrounding Development and the score of Living Economic Standard, all the responds have been totaled up into scores in order to observe whether these two themes influence each other. Such inquiries in Living Economic Standard include question on increase in living cost, land value and service charges. On the other hand, inquiries in Surrounding Development include increase in infrastructure, maintenance and surrounding improvements. Another similar scatter plot has been conducted based on the score of the two themes.

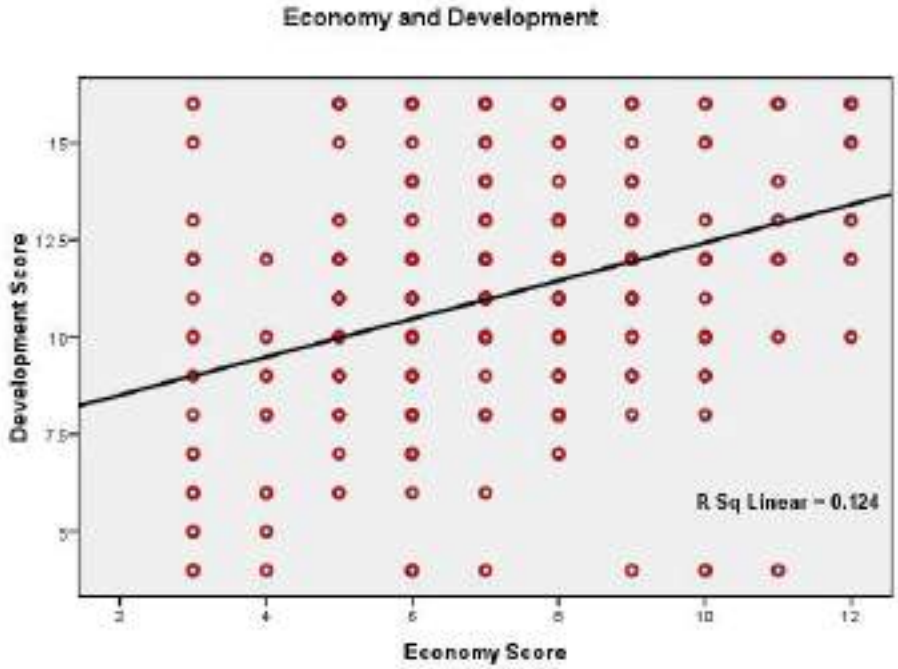


Figure 6.3: Scatter Plot of Living Economic Standard and Surrounding Development

The scatter plot displays positive but correlation of 0.124 for the two variables. This implies that the increases on the score of Living Economic Standard are correlated with increases on the score of Surrounding Development. Thus also suggests that increase in Living Economic Standard due to Kubah National Park has influenced the surrounding development of the local residents.

7.0 CONGESTION INFLUENCE

Factor of congestion refers to density of tourists crowding during seasonal tourists arrival. It has been reported by some of the residents of Kampung Telaga Air that tourists from the National Park stop by in their village to admire the rural environment. At the same time the tourists enjoy witnessing some of their cultural displays especially the wedding ceremonies of the Malays. The research inquires the respondents to address if the tourists have caused crowding in their settlement during peak tourists' season. Vast majority of the respondents disagree that Kubah National Park has result to serious crowding in the area of the National Park itself or the local settlements.

8.0 SOCIAL INFLUENCE AND LOCAL ATTITUDE

Social influence refers to the consequence of tourism activities towards social aspects of the residents. On the other hand local attitude is the responses of the residents regarding the changes occurring in their surroundings.

Table 8.1: KNP offers Opportunities to Interact with Tourists

		Opp. to interact with tourists				
		Strongly Agree	Agree	Disagree	Strongly Disagree	Total
Residents	Traditional Villages	7	4	4	1	16
	New Villages	102	135	112	17	366
	Others	19	21	8	3	51
	Total	128	160	124	21	433

Table 8.2: KNP Tourism Influence Local Culture Changes

		KNP Tourism influence local culture changes				
		Strongly Agree	Agree	Disagree	Strongly Disagree	Total
Residents	Traditional Villages	1	2	5	8	16
	New Villages	47	57	195	67	366
	Others	7	11	24	9	51
	Total	55	70	224	84	433

According to Table 8.1, 33% of the respondents disagree that Kubah National Park creates opportunities for the residents to interact with the tourists. 112 of them are from the New Villages which was reported to receive most tourists' attention. However, vast majority of the respondents agrees or strongly agrees that the National Park has allowed the residents to interact with the tourists. Table 8.2 shows significant amount of respondents disagree that tourism has influenced the culture changes of the local settlement.

Table 8.3: KNP Tourism Increase Cultural Display

		KNP Tourism increase cultural display				
		Strongly Agree	Agree	Disagree	Strongly Disagree	Total
Residents	Traditional Villages	2	3	3	8	16
	New Villages	72	88	158	48	366
	Others	8	11	24	8	51
	Total	82	102	185	64	433

As reported by the villagers, cultural display specifically wedding ceremony is one of the main factors which encourage the tourists to visit their villages. According to table 8.3, 42% of the respondents agree that cultural display has increased due to tourists visits. However cultural display such as weddings in the villages depends on communal cultural events which are not fixed. Thus depending on chance tourists can only witness the cultural display if only there is an event.

Table 8.4: KNP Increase Environmental Appreciation

		KNP increase env. appreciation				
		Strongly Agree	Agree	Disagree	Strongly Disagree	Total
Residents	Traditional Villages	9	6	1	0	16
	New Villages	174	153	28	11	366
	Others	25	18	6	2	51
	Total	208	177	35	13	433

Table 8.4 shows significant number of respondents agrees or strongly agrees that progresses of Kubah National Park have increased the locals' environmental appreciation. This suggests that the locals are aware of their lands' worth and responsive to their surrounding occurrences.

Table 8.5: Locals can Voice out Opinions at KNP

		Locals can voice out opinions on TNK				
		Strongly Agree	Agree	Disagree	Strongly Disagree	Total
TNK dev. cares abt locals	Yes	30	28	13	4	75
	No	55	67	177	59	358
	Total	85	95	190	63	433

Even though the locals have attempted to make a positive use of the National Park, based on table 8.5, the locals have little power to voice their opinions to the Kubah National Park management. Table 8.8 shows significant number of the respondents claims that the management of Kubah National Park has not taken into account their perspective or wellbeing.

9.0 RECOMMENDATION AND CONCLUSION

Kubah National Park is a well acknowledged protected and recreational area for the local residents and the outsiders. The Park has provided the neighboring residents some rare experiences from dealing with escaped endangered animals to common encounters of interaction with tourists from many parts of the world. Apart from the indirect physical effects of economy and infrastructure, Kubah National Park affects the local residents' awareness and appreciation towards natural surroundings. Thus, while the development of Kubah National Park may not be intended to affect the local residents, the influences of the Park have in many ways delivers to the residents some indirect benefits and negative outcomes.

The analysis shows that the local residents are indirectly involved in the progresses of Kubah National Park. However based on the results from the aspect of economic influences, majority of the residents have yet to receive some consideration. Vast majority of the residents are in the group of very low income earners. Provided with the fact that majority of the residents have 4 to 6 and 7 to 9 household members, as

well as considering they are a growing population, some attention towards their economic earnings must be reflected by the management of the Park. Apart from job opportunities, the Park can offer some business or agricultural resources for the residents to make some earnings from. Since it is a National Park protecting rare and endangered species of flora and fauna, the surrounding should also reflect the unique characteristics of Kubah National Park.

It also must be noted than even though the economic aspect has not significantly affecting the local residents, the land value and cost of living as claimed by majority of the respondents are stagnant or could be increasing but very slowly. This suggests that the National Park is lacking tourism responses. Looking from another angle, the residents have responded positively to the development of the National Park. Appreciation of natural environment and willingness to accommodate the tourists are among the positive effort which the residents can contribute to the Park. Community participation methods can be operated allowing the residents to voice their opinions and ideas on how they could assist the National Park attractions. This can also result to a strong and better relationship between the management of the Park and the surrounding local residents.

It is recommended that the resource planning of the surrounding of Kubah National Park to be reviewed. The management should treat the local residents and the surrounding areas as a part of the resource for the progressions of the Park. The rural and cultural characteristics of the villages can be a good attraction for homestays and sightseeing. The villagers who are self-employed and working as fishermen and farmers can play significant roles in promoting the natural characteristics of the Park. More involvement of the local residents is highly urged. Apart from giving back to the community, local involvement would be a good prospect to increase skills and awareness level of the villagers.

Further study should be carried out on the natural and cultural resources of the local residents in determining local participation methods to enhance the surrounding of the park as well as aiding the residents to make more earnings as the land value increases.

THE CONCEPT OF EUROPEAN METROPOLITAN REGIONS IN GERMANY AND ITS IMPACT ON REGIONAL DEVELOPMENT – THE EXAMPLES OF NUREMBERG AND HAMBURG

Swantje Grotheer[1]

Abstract

The Standing Conference of Federal and State Ministers Responsible for Spatial Planning (MKRO) in Germany decided on the "concepts and approaches for the spatial development of Germany" in April 2006. The three concepts are "growth and innovation", "securing services of public interest" and "conservation of resources, shaping of cultural landscapes". They have equal priority and were developed to cope with the main tasks for spatial planning in Germany over the next years. The concept of "growth and innovation" includes the spatial planning concept of the "European Metropolitan Regions in Germany". It names eleven Metropolitan Regions that are recognized as (structurally) "strong" regions that perform as "engines" of growth and development – a role that should be strengthened and enhanced for the positioning of Germany in the global and European economy. At the same time Metropolitan Regions should develop partnerships with peripheral and structurally weak regions for sharing responsibilities and fostering equivalent living conditions. Through the foundation on the federal level of planning in Germany, the concept of European Metropolitan Regions is not an administrative construct or legally binding objective in planning. Each of the eleven Metropolitan Regions defines its "boundaries" and means of regional cooperation and governance in an implementation process.

These processes of implementation in the eleven regions are proceeding with varying speeds. In most of the regions cooperation and forms of governance are based on different types of regional networks. These try to address current and future conditions and challenges of spatial development. The paper will analyze the implementation of the concept of Metropolitan Regions in Nuremberg and Hamburg and the resulting impacts on their regional development through the development of new and the consolidation of existing regional networks.

The value of networking as a means of exchanging information, knowledge and experience for mutual benefit is crucial in terms of the implementation of the concept of European Metropolitan Regions in Germany. Networks and different ways of inter-municipal and regional co-operation play an important and nevertheless differentiated role for the regional development of these regions. Key actors play

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another important role for effective and valuable co-operation and networking. One important challenge of European Metropolitan Regions in Germany, especially in the two analyzed regions, is the co-operation of structurally different sub-regions – economically weak and peripheral regions vs. prosperous and innovative regions – in the frame of one big network. The participation in the metropolitan cooperation is voluntary and mainly serves a harmonization of common objectives, in which the latter may be difficult because of the heterogeneity of these regions.

Nevertheless a range of thematic networks came to existence in the Metropolitan Regions of Hamburg and Nuremberg. They emerged from different existing structures and are relatively new in Nuremberg (constitution of the metropolitan co-operation in 2005). In Hamburg there is a constant advancement of existing co-operation structures. The paper is based on findings of studies in a dissertation that was finished in March 2011.

1. Introduction: The concept of European Metropolitan Regions in Germany

The economic key role of big cities, metropolises and their interlinked regions has become more and more obvious in the processes of European integration and globalization. This led to an increasing relevance of big cities and metropolitan regions within the German spatial development policy, and to the formulation of the spatial planning concept of the European Metropolitan Regions as a strategic concept for the spatial development of Germany.

The term "Metropolitan Region" – that is not always used with the add-on "European" – is used in the scientific community in two ways: Firstly in an analytical understanding and secondly in the political and spatial planning-related practice. To clarify the meaning of this term, it is important to differentiate between these two conceptual understandings of Metropolitan Regions (ARL, 2007, p. 3; Blotevogel, Danielzyk, 2009, p. 24). The analytical understanding functionally assumes metropolitan regions as regional clusters of locations with metropolitan functions or institutions (Blotevogel, Danielzyk, 2009, p. 24). The normative understanding of Metropolitan Regions follows the definition of the Standing Conference of Federal and State Ministers Responsible for Spatial Planning in Germany (MKRO) and leads to an understanding of metropolitan regions as regional cooperation areas with different forms of governance and participation of local and regional actors (Blotevogel, Danielzyk, 2009, p. 24). These regional cooperation areas are predominantly informally organized and based on ***regional networks*** of various regional actors. Their aim is to perform as "engines of growth and development" and to strengthen their metropolitan functions: foster innovation, a good standing in the regional competition, pool political and economic decision-making and to be a gateway to people and other regions.

This paper is based on the second, the normative, political and spatial planning-related, understanding of metropolitan regions and analyses how the concept is implemented in the two Metropolitan Regions Hamburg and Nuremberg.

The federal spatial planning policy document HARA ("Raumordnungspolitischer Handlungsrahmen") was the first document that formulated the normative concept and defined European Metropolitan Regions in Germany as spatial and functional locations with excellent functions in the international competition between regions. In this document they are classified as engines of social, economic and cultural development and shall contribute to the international and European competitiveness of Germany and Europe (BMBS, 1995, p. 27). This document labeled six German regions as Metropolitan regions: Berlin/Brandenburg, Hamburg, Munich, Rhine-Main, Rhine-Ruhr and Stuttgart.

This normative concept was again highlighted and further developed in the "concepts and approaches for the spatial development of Germany" that were adopted by the MKRO in Germany in April 2006. Another five Metropolitan Regions were labeled and finally eleven Metropolitan Regions are recognized as structurally strong regions that perform as "engines" of growth and development in this document. The approval of the new five Metropolitan Regions was a policy decision with two main backgrounds: Firstly, most of the new and potential Metropolitan Regions, especially Rhine-Neckar and Nuremberg, ran for an approval. Secondly, the concept has been further developed with the policy that Metropolitan Regions should develop partnerships with peripheral and structurally weak regions for sharing responsibilities and fostering equivalent living conditions in Germany. A spatially more balanced distribution of Metropolitan Regions in Germany was a necessary basis to achieve this. The concept of Metropolitan Regions was discussed intensively and also very critical in spatial planning practice and in the German scientific planning community between the spatial planning priorities of growth (competitiveness) and equivalence (cohesion) (e.g. Aring; Sinz, 2006, pp. 43).

1.1 The implementation of the concept of European Metropolitan Regions in Germany

Through the foundation on the federal level of planning in Germany, the concept of European Metropolitan Regions is not an administrative construct or legally binding objective in planning. Nevertheless, most regions implemented this concept. Each of the eleven Metropolitan Regions defines its regional "boundaries" and means of regional cooperation and governance. The Metropolitan Regions in Germany established their regional cooperation based on different existing structures and structural preconditions. Their all developed – and some still develop – different forms of regional governance with the influence of a great amount of regional actors. They vary in financing, objectives and structures. The form of regional governance and cooperation are predominantly based on different forms of regional networks.

The European Metropolitan Regions in Germany build up a national platform for an exchange of knowledge and for a further development of the concept of European Metropolitan Regions in Germany, the so called "Initiativkreis Europäische Metropolregionen in Deutschland". In the latest regional monitoring of the German Metropolitan Regions a map is showing the administrative and "self-defined" boundaries of the eleven regions in Germany. The following map shows, that these regions vary very much in their extent.

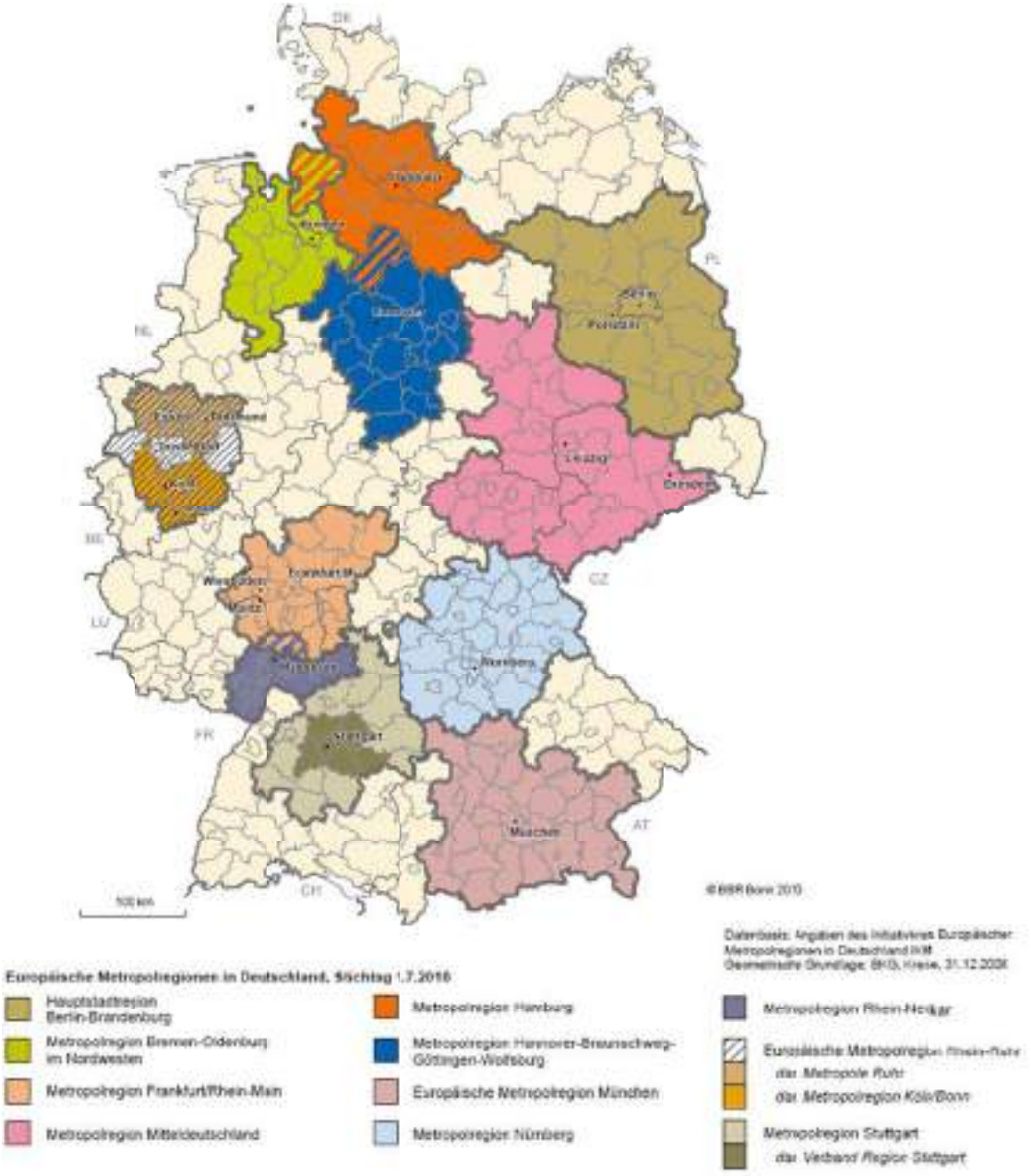

Figure 1. Metropolitan Regions in Germany, 2010 (IKM, BBSR, 2010, p.7)

1.2 Regional networks and regional cooperation and their role in regional development

Regional networks are topics in regional sciences in the light of socio-economic structural changes since the mid-1980s and with their role for in regional development processes. Emerging trends such as knowledge-based society, globalization and regionalization, pluralizing and individualizing, and the upcoming public debt were important triggers for this discussion. The innovation capacity of regions and economies became one of the main factors of success for development that can be positively influenced in a regional milieu with good and high quality communication processes between regional actors (Schubert et al., 2001, p.11).

A regional network is a voluntary, mainly permanent and equal cooperation between at least three regional – private and public – actors of different organizations with interdependent interests. They are based on written or oral agreements. Regional networks are target-oriented, reciprocal and serve for their members as a platform to gain medium to long-term social and economic synergy effects (Adrian, 2003, p.11). The central functions of regional networks are building trust, to reduce uncertainty, consensus-building and to form a framework for negotiations.

Although there are a number of problems that may lead to failure of regional networks, e.g. long time periods to make decisions, problems in coordinating actors with different interests, or differences in power of actors that ideal-typical should be equal (Messner, 1995, pp.214-239), regional networks can affect regional development in different ways:

- Regional networks can replace missing or inadequate institutional decision-making structures on the regional level and thus organize necessary regional processes of coordination;
- Regional networks can contribute to overcoming of sectorial and local perspectives of regional actors.
- Regional networks can serve as forums to identify common problems and innovative forms of action (Schubert, 2001, p. 12).

Finally, regional networks and regional cooperation cause outcomes in three dimensions: Firstly, they have “soft” effects especially in the field of building up trust between actors (developing social capital) with positive effects on regional coordination and the execution of projects. Secondly, substantial outcomes such as plans, programs, projects and agreements can be outcomes of regional networks. Thirdly, regional networks can promote regional development by different means, whereas this is difficult to verify (Diller, 2002, pp.136). It is important for successful regional networks to consist of different actors: political and administrative as well as economic and different interest groups.

2. The Implementation of the concept of European Metropolitan Regions in Hamburg and Nuremberg

The concept of Metropolitan Regions was implemented in different patterns in Nuremberg and Hamburg. In Hamburg an existing administrative cooperation of the three Länder Hamburg, Lower Saxony and Schleswig-Holstein was advanced to a strategic cooperation, which pursues an internationalization strategy for the whole region. The application for the approval as Metropolitan Region in Nuremberg was followed by the development of a new, own, flexible structure characterized by networks with the central objective of increasing the international visibility of the whole region. The development paths of both regions are important for the current Metropolitan cooperation, their structure, actor constellation and impacts of cooperation.

2.1 The Metropolitan Region Hamburg (MRH)

The regional cooperation of the Metropolitan Region Hamburg (MRH) involves administrative districts[2] of the three Länder Hamburg, Lower Saxony and Schleswig Holstein, thus its regional boundary, financing and cooperation is defined in a treaty between these three Länder.[3] The region comprises structurally very different regions and has its economic and population-based focus in Hamburg and its closer surrounding regions. Analyses of the distribution of metropolitan functions in Germany distinctly show that these are concentrated in the city of Hamburg. Nevertheless there is a high interconnectedness between Hamburg and its surrounding area especially in the fields of recreation and living in the surrounding area. These structural preconditions have different influences on the regional cooperation structures.

[2] Administrative districts are “Landkreise” in Lower Saxony and “Kreise” in Schleswig-Holstein. In America it can be compared to the level of “counties”.

[3] The Metropolitan Region Hamburg extended in April 2012 and is now including further administrative districts in Schleswig Holstein and of a now fourth partner-Land Mecklenburg-Vorpommern. This extension is not considered in this paper.

Figure 2. The Metropolitan Region Hamburg, 2011 (map basis: Freie und Hansestadt Hamburg, Landesbetrieb Geoinformation und Vermessung)

Regional cooperation structures and regional networks

The Metropolitan Region Hamburg was developed out of the cooperation of governments between the three Länder Lower Saxony, Hamburg and Schleswig-Holstein. Since the mid-1950s, these Länder worked together with changing intensity on the challenges of the spatial and settlement development in the interlacing area of the city Hamburg. The political actors on the Länder level, here especially the ones from Hamburg, had an important influence on the strengths of the cooperation, the function and mutual suspicion or difficulties.

In the early years, the cooperation was limited to Spatial Planning and the topics infrastructure and settlement development had priority until the 1990s (Bose, 1995, pp.140). The Länder build up funding funds (bilaterally Lower-Saxony and Hamburg as well as Schleswig-Holstein and Hamburg) in the 1960s, which were meant to co-finance infrastructural projects in the municipalities – in the beginning only in the surrounding region and later on also in Hamburg itself as an important instrument in the cooperation. In the midst of the 1990s happened a change in the cooperation which was signalized by the regional development concept decided in the year 1996 and the official use of the title "Metropolitan Region". With regard to the content of this concept, the next regional development concept in the year 2000 was the first one that contained structural policy topics and thus represents the strategic further

development of the regional cooperation. The national discussion about the strategic meaning and the concept of Metropolitan Regions also had an influence on the expansion of themes. Since 1995, the Metropolitan Region Hamburg was already established in the decided scope of action in spatial planning policy and had a stressed meaning in the North German area. There were more strategic re-orientations after the regional development concept 2000 which are related to a stronger consideration of structural policy themes and the international positioning. Thereby the concept of Metropolitan Regions for the region was further developed and formulated. Appropriate structures for the accomplishment of upcoming challenges were discussed – regularly, detailed and comprehensive – and finally decided on a stronger involvement of communal members through the administrative agreement in the year 2005.

The administrative agreement between the three Länder and the participating administrative districts was signed on 1.12.2005 and defines the cooperation in the Metropolitan Region as a voluntary union that is based on voluntary involvement and consensus decisions. Furthermore the agreement defines the bodies and their competences. Key elements are the deciding body (a regional council) where all administrative districts and the three Länder are represented, a strategic body (Lenkungsausschuss) that is deciding on projects and priorities of regional cooperation where a small number of representatives work together and decide in general about the distribution of funding and (thematic) working groups (Facharbeitsgruppen) which are set up of different regional actors.

With the definition of regional networks as it was described above, the working groups can be characterized as regional networks as the only element of the official organizational structure of the Metropolitan Region Hamburg. The other bodies are predominantly regional *political* networks with a limited access and thus cannot be characterized as regional networks. A detailed analysis of the composition of the working groups shows, that these are also dominated by administrative actors of the Länder whereas only relatively few actors of the municipal and administrative districts level or other regional actors participate. Nevertheless, these have the possibility to participate and do this in especially during specific projects.

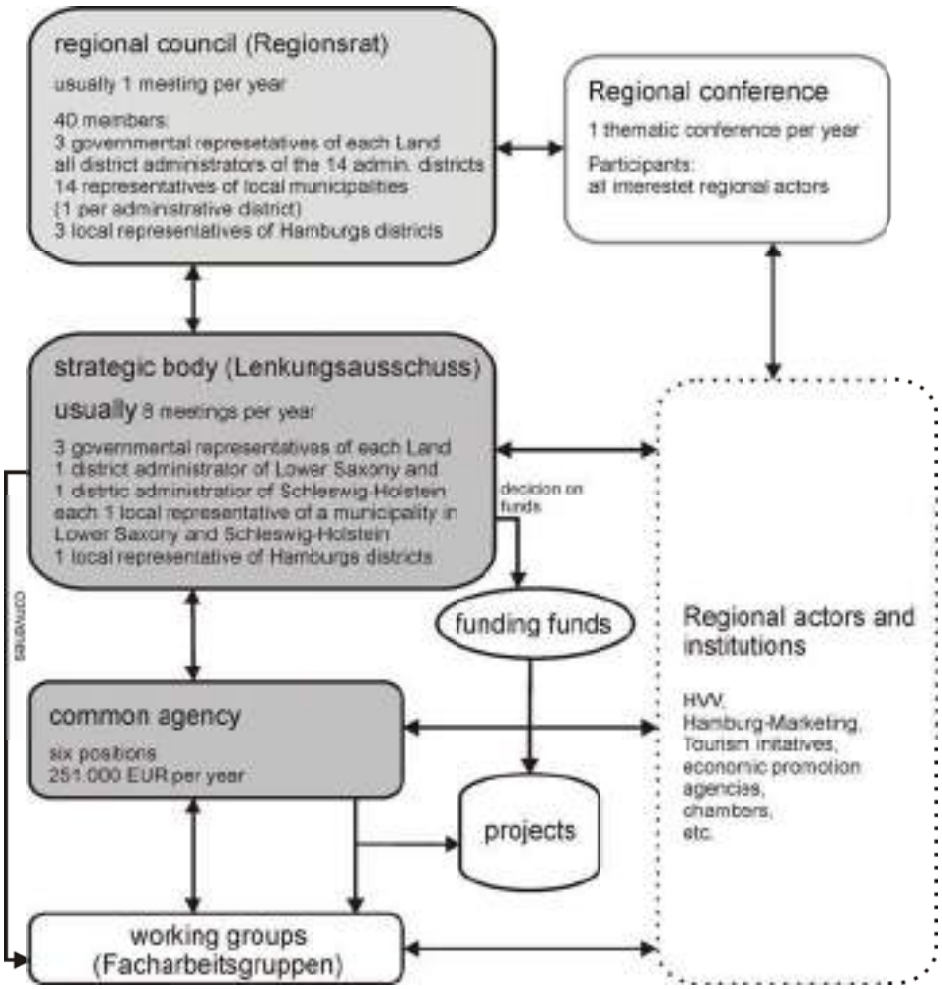

Figure 3. Metropolitan Regions Hamburg – organizational structure based on the administrative agreement 2005

2.2 The Metropolitan Region Nuremberg (EMN)

The Metropolitan Region Nuremberg (EMN) is a voluntary union of northern Bavarian administrative districts and independent cities. It was founded directly after the official approval of the region to be a "Metropolitan Region" by the MKRO in the year 2005. All participating administrative districts and independent cities signed a so called "Charta of the Metropolitan Region Nuremberg" that defined the general principles of the cooperation. These principles are

- voluntariness,
- subsidiarity,
- openness and spatially and thematically dynamic,
- decisions should be made consensually,
- establish a democratic core to decide on the main points of cooperation (council of the Metropolitan Region),
- cooperation at eye level (especially of all different political actors), and

- intensive networking of economic, academic, cultural and administrative actors.

The principle of openness offers all administrative districts and independent cities to decide on the question of they want to become a member of the Metropolitan Region Nuremberg. This has led to some changes in the regional boundary of the cooperation (at the edge of the region) and is now as shown in the following figure.

Figure 4. The Metropolitan Region Nuremberg 2011

The socio-economic structure of this relatively big region is rather heterogeneous. Although much of the economic activity and of the population is concentrated in the core area with the cities Nuremberg-Fuerth-Erlangen-Schwabach and their directly adjoining administrative districts, the regions doesn't have a functionally dominant center. The northern and north-eastern administrative districts tend to be the structurally weakest, especially in terms of ageing and shrinking population.

Regional cooperation structures and regional networks

The regional cooperation structure of the Metropolitan Region Nuremberg was developed with the idea to have a flexible and non-bureaucratic structure based on the principle of "regional governance without government". This guiding principle emphasizes that cooperation and consensus are dominating; all partners are balanced in power. The figure shows the organizational structure of the Metropolitan Region Nuremberg. The principles of the cooperation reflect in this structure: all decisions of

the council are made in consensus and every member – administrative district, independent city and one municipality per administrative district (the municipality with the most inhabitants) has one vote (no matter how many inhabitants the municipality has).

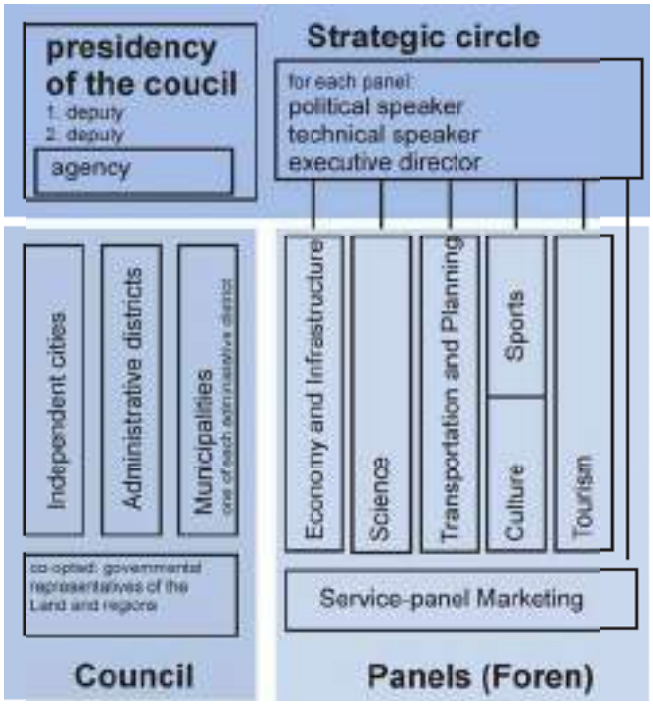

Figure 5. Metropolitan Region Nuremberg – organizational structure

The different panels work on the main topics of the metropolitan cooperation. They are open for interested regional actors and function as regional networks. Each panel has a political speaker, a technical speaker and an executive director which form together with the presidency of the council the strategic circle of the whole cooperation. With this three-person leading managerial task force a balanced consideration of different interests is guaranteed. Furthermore, the three speakers represent the ideas of the Metropolitan Region in different target groups and thus contribute to the dissemination of their ideas and projects.

3. Assessment of the impacts of the Implementation of the concept of European Metropolitan Regions in Hamburg and Nuremberg on regional development

The following results are based on partly structured interviews with political and administrative representatives of members of the Metropolitan Regions Hamburg and Nuremberg (Grotheer, 2011, pp.190).[4]

[4] The results are based on 9 interviews and one written answer of the questions in the Metropolitan Region Hamburg (September 2008) and 38 interviews in the Metropolitan Region Nuremberg (July – September 2008).

3.1 The Metropolitan Region Hamburg

For a conclusive evaluation the political and administrative representatives were asked for an assessment what the Metropolitan Region Hamburg can actually achieve (or not achieve) for the regional and municipal development (expectations and limits of the Metropolitan Region Hamburg). To give a review, the answers were not homogenous. Merely the aspect that the level of the administrative districts and communities can keep their municipal autonomy and that this can't be questioned by the work of the Metropolitan Region or that its influence becomes too high was named as an obvious limit of the work. Following aspects should be achieved:

- Strengthening of the regional awareness, especially by the positive use of important personalities who promote the regional thought,
- To be an initiator for regional projects and contents,
- Strengthening of the international awareness and the publicity of the whole region,
- Development of joint strategies for the regional development, especially in the topics marketing and economy and their realization through projects (sponsorship of funding fonds)
- Handling of topics which can be processed rational on a regional level, especially public transport and industry land-use as well as
- Provision of regional networking structures as an offer for actors to collaborate in projects or themes which match with the own interests.

Two administrative districts that are further away from Hamburg formulated the expectation that economic activities have an increased impact in the further region, which originates into a stronger economic cooperation. This expectation may cause difficulties in the cooperation, because it is necessary to find a balance between the unavoidable competition among municipalities and regional cooperation. There are only some possibilities for a Metropolitan Region to arrange the economic activities in an actual balance but rather represent a platform on which the (administrative) districts can position themselves. Besides the positive expectations, limits of what **should not be achieved** were also formulated. The observance of the municipal autonomy is highlighted as a main priority in this context. In particular the following aspects were named:

- Formal planning cannot be replaced by informal coordination on regional level so that the Metropolitan Region can't take over decisions in own jurisdiction (e.g. regional planning),
- It is not possible to initiate projects which can be realized automatically on-site (Top-down) and
- The cooperation can't lead to an increased centralization or to a rearrangement of the administration (e.g. elimination of administrative districts).

The development of the regional cooperation structures plays an important role in the current work. The concept of the Metropolitan Regions was integrated into existing

structures of cooperation and extended these by strategic and structural policy contents. Based on the development of the cooperation in Metropolitan Regions the official committees are mainly characterized by political and especially administrative actors of the three Länder and more and more also of the administrative districts. The municipal actors were integrated steadier with the administrative agreement in the year 2005. This is still clearly visible in the low participation at the working groups. Besides the originally assigned structures in the Metropolitan Region, further networks originated of different organizational structures for the strategic tasks of international awareness, the linking of companies in the region among themselves with research institutions and economic promotions. To these belongs for example the growth initiative Süderelbe AG, the logistic-initiative Hamburg e.V. or the Hamburg Marketing GmbH. These networks concerning the integration of (administrative) districts are not congruent with the official distinction of the Metropolitan Region, but rather smaller like the Süderelbe AG and the logistic-initiative Hamburg e.V. or bigger like in the case of the Hamburg Marketing GmbH where the partner district Ludwigslust is involved.

However, the possibility to participate in the funding funds or the funding of projects with the cooperation has the highest impact on regional development. Most of the impacts on regional and local level as well as on the level of (administrative) districts and municipalities are generated by this. Projects on local level were realized with direct impacts and improvements due to the funding of infrastructure projects (e.g. Park and Ride facilities, cycle paths, etc.) and touristic facilities (e.g. visitor guidance concepts, etc.). According to the principle of variable geometry in the Metropolitan Region Hamburg it is clear, that not all administrative districts are involved in each project that is funded by the funding funds. This is rated as a central principle by the involved administrative districts based on the precondition that the three Länder provide financing for the funds.

The City of Hamburg is not only the key element of the functioning cooperation but rather an essential influence on the international awareness, the economic power and the potential for innovation in a monocentric Metropolitan Region. This can be classified as an advantage but also as a disadvantage. In each case it is the most urgent precondition for the cooperation and the created impacts on the whole region.

Even though the Metropolitan Region Hamburg works as a voluntary fusion there is still the expectation in the municipal members to integrate themselves partly stronger with their own strengths into the cooperation and the outward marketing as well as to launch regional topics. Occasionally it is pointed out that the capacities of the (administrative) districts and municipalities are not always available in the strength as this is for example the case in the city Hamburg so that with the realization of projects there are partly “different rates”.

3.2 The Metropolitan Region Nuremberg

Expectations on the impact of the Metropolitan Region cooperation for the regional and municipal development are not pitched too high because it is an alliance of municipalities on a voluntary basis. It is mainly designed to offer a platform for mutual exchange and to generate synergy effects. Due to the fact that it is a voluntary alliance, the Metropolitan Region Nuremberg can and will only achieve what each member contributes to it. By means of cooperation another quality can be attained or subjects can be transported. Nonetheless municipal members of the Metropolitan Region expect various aspects that the cooperation shall afford:

They expect an **increase of international awareness** in the competition between regions and the related expectation of a rise of public and private investments in (projects) of the region. A focused marketing of the "Highlights" in the branches tourism, culture, economy and science will be possible via the Metropolitan Region (especially on European Level in Brussels and on fairs). Thus the "title" can be filled in with specific contents and unique features in the international awareness. Closely linked to this is the opportunity to improve the representation of regional interests on the national and international level.

The **strengthening of regional thinking and acting** results into positive links for the development of the participating administrative districts and independent cities. Through the personal communication and the meetings in the committees of the Metropolitan Region, joint problems and challenges can be discussed and most notably joint and better solutions such as the realization of innovative projects can be worked out. Regional cooperation forms a platform for mutual exchange of experiences and beyond that the possibility to manage municipal services in a regional cluster. The facts that they succeeded to define a joint aim in the Metropolitan Region and to work together are important preconditions for this.

The Metropolitan Region can contribute to the regional and local development with the **initiation and realization of projects**. Important examples are the expansion of the regional linked transport system (Verkehrsverbund Grossraum Nuremberg, VGN), which implies an improvement in the transport connection of the region, as well as the MORO-Project (Pilot Projects of Spatial Planning that are funded by the federal spatial planning ministry) that aims at strengthening regional economic cycles and value chains. The new qualities (increase of inner-regional transport connecting qualities and the associated accessibility to cultural facilities and offers) in the location marketing can be used in the administrative districts which are not located central to achieve an increase of attraction for companies.

The array in which the Metropolitan Region Nuremberg can contribute to the development is based on its structure and basic understanding to bring together municipal actors on regional level with other actors voluntarily and issue-specific. The cooperation allows all participating actors to succeed in an early detection of

joint problems and to develop innovative strategies and approaches without complicated or bureaucratic structures.

Although the Metropolitan Region can achieve different aspects for regional and local development there are also limits that are named by the participating administrative districts and independent cities. The focus is set on subsidiarity and the statement that the Metropolitan Region is not in charge of the development on local level of the administrative districts and independent cities, because the challenges there need to be solved by the actors themselves. According to that the adherence of subsidiarity is both: not "being able" to afford it and not "supposed" to. This means that the Metropolitan Regions shall concentrate on such topics and projects that are important on a regional or international level. Furthermore the preservation of peculiarities of partial subspaces shall to be guaranteed, despite of the cooperation under the joint label Metropolitan Region. Rural areas need to be preserved on the one side with their characteristics, diversity and strengths and not to be characterized as "residue" in the area of a Metropolitan Region and on the other side not to overlay their problems and challenges but rather support them specifically although they are a part of a Metropolitan Region.

Conclusion

The Metropolitan Region was founded at the start of the new millennium in the course of the discussion about the development of the "Concepts and Strategies for Spatial Development in Germany". There was no other comparable voluntary cooperation in the Area of Northern Bavaria before. The much smaller region Nuremberg was the only one who disbanded its existing structures of regional cooperation or transferred it into the Metropolitan Region Nuremberg. Along with that the marketing association opened up for further members and transported its messages no longer with the term "Region Nuremberg" but "Metropolitan Region Nuremberg". The cooperation structures in the Metropolitan Region are especially characterized by the principles of voluntariness and same eye level of all partners. This is reflected in the distribution of votes in the democratic core committee, the council of the Metropolitan Region. The structures are featured transparent and flexible to achieve an actual involvement of the administrative districts and independent cities. A very important driving force in the organization and development of the Metropolitan Region was the city Nuremberg with its mayor. This is also displayed in the support of the created structures, especially by the comprehensive personal and financial support of the office in the starting phase.

The official approval as Metropolitan Region, with which different expectations were connected, was a possibility for the city of Nuremberg to improve the outline in the international competition, whereas the integration of the region with further independent cities and administrative districts was a necessary precondition. The other independent cities and administrative districts which jointed the Metropolitan Region are also integrated in a variety of further regional cooperation structures, both on-topic and cross-sectorial initiatives of different spatial extent. Their aims are not

opposed but rather complementary because these cooperation structures primarily address other audiences. Nonetheless a variety of the created committees, working groups, events and conferences are linked to an increased involvement of personal capacities, which are not unlimited. The Bottom-up development and decisions are rated positive for the cooperation in the Metropolitan Region and the created networking in the forums but also in the political committees. A regional spirit of optimism could be generated by the actual approval as Metropolitan Region by the MKRO. Not all municipal actors were integrated equally into the phase of initiation. Some key actors contributed considerably more. To encounter the provisions of a metropolis, the affirmation of participating in the Metropolitan Region of elected rural administrative districts as well as the mayor were of elementary importance in order to underline the characteristics of an urban-rural relationship. Besides the successful formulation of basic aims in the Bad Windsheimer declaration, the Metropolitan Region Nuremberg represents a strategic alliance that succeeded in developing a strategic aim for the economic development under the aegis of the Chamber of Industry and Commerce. Following this strategic aim the further fostering of clusters in the region should be realized. In the forums regional actors of policy, administration, economy, science and society work together, whereas the created platforms in the region serve for generating innovative ideas and realization of projects as well as the transfer of knowledge. The transfer of knowledge between the different rural areas of the Metropolitan Region, which are confronted with similar challenges e.g. West Middle Franconia and Upper Franconia but had so far barely points of contact, can contribute to a sped-up solution approach or the avoidance of faults.

On long-term it is important that projects are successfully realized and that this is also communicated appropriate in the region. An important challenge is the financial sustainability. The membership subscription raised by the region is not very high – especially to avoid entrance barriers at the beginning – but they need to be adequate to sustain the basic structures, e.g. the personal equipment of the office in a necessary extent. The formulated projects created in the forums shall be realized through extern funds. The meaning of the summarized represented central aspects of the implementation of the concept of the Metropolitan Region Nuremberg for local and regional development can be estimated only with difficulties because the cooperation and networking is relatively young. Nonetheless some projects could already be realized and their long-term impacts still need to be evaluated. To these projects belong for example the further strengthening of the in the development outline represented cluster, the strengthening of regional economic cycles by “Original Regional” or effects of the international awareness e.g. by international fair participation. Within Bavaria and Germany the Metropolitan Region succeeded in generating awareness and to position itself as a confident region, even with the created structure.

4. Meaning of the concept of Metropolitan Regions for the regional development in Nuremberg and Hamburg

The difficulty for an analysis of the meaning of the implementation of the concept of Metropolitan Regions for regional and municipal development of the Metropolitan Regions Hamburg and Nuremberg is to trace the development and changes back to the actual work of a Metropolitan Region. In addition to that, the case of the Metropolitan Region Nuremberg is more difficult because it was initiated as recently as the year 2005. The key elements for regional development in the Metropolitan Region Hamburg are the specific funding funds, which are provided with financial means by the three Länder. With these funds communal as well as regional measures and projects are co-financed, which have immediate and mediate impacts. Because a number of infrastructural measurements on municipal level could be financed by these funds, the meaning of Metropolitan Regions on this level is rapidly understandable. The assessment of municipal actors of the Metropolitan Region Hamburg shows very plainly, that the implementation of projects has the highest importance and accordingly also contributes to an involvement of these actors in the cooperation. The Metropolitan Region has developed from a pure administrative cooperation to a strategic oriented, involving the structure of the municipal level in the past years. Nonetheless private and economic regional actors as well as other regional institutions play a marginal role in the official committees and structures of the Metropolitan Region Hamburg, whereby the existing regional networks on that level can be characterized as unbalanced. On the political level an improvement of neighborly agreement and the rise of a common thinking can be noticed – although each side of the Elbe is separate. Based on this improved information exchange, advantages and a speedup of projects and processes of coordination can be achieved. The dominating center Hamburg is adjudicated a changed attitude towards urban hinterlands, wherewith for example potential areas can be used better in the (further and narrower) hinterlands for logistic settlements and the thereby connected effects. The step by step expansion of the HVV is due to the changed regional perspective which boosts especially the surrounding region of Hamburg. The cooperation on the level of Metropolitan Region plays an essential role. However the challenge is to succeed in the step by step development, away from a pure administrative cooperation, to actually achieve its objectives and to realize long-term effects on municipal and regional level.

The networks which originate from a wide and comprehensive integration of economy, science, politics and further social actors in thematic forums, have a significant additional value for the Metropolitan Region Nuremberg. They also have a huge potential for the initiation and implementation of projects for regional and municipal development. At the same time they are connected with well-known risks of networks, such as the problem of the large number of actors and possible slowdown of decision processes or the problem of coordination due to various interests of horizontal actors. For the regional and municipal development – together with the relatively short existing cooperation – the improved possibility for joint

lobbying on Bavarian, national and European level e.g. for the implementation of transportation projects, the possibility of participation in international specialized fairs, the positive regional cooperation as well as good and innovative joint public relations are rated positive due to the Metropolitan Region cooperation. For a number of administrative districts the possibility for integration in the VGN is still an important incentive for the assistance in the Metropolitan Region Nuremberg, which can be supported or impelled by the existing networks there.

Altogether, the implementation of the concept of European Metropolitan Regions distinguished itself by resulting into a number of regional networks, which are a platform for the formulation and implementation of innovative projects for regional development and regional learning processes (learning of good and bad practices of other members in the network). In the case of the Metropolitan Region Hamburg there are mainly political and administrative networks while other regional actors are marginally integrated. The cooperation in the Metropolitan Region Nuremberg essentially relies on the intensive participation of the actors (especially municipal) of the region. On long-term, this can be achieved only when the use and chances of the cooperation are visible. In the Metropolitan Region Hamburg the structures are due to the specific situation of the cooperation of the three Länder basically more stable, although it is formal voluntarily. This is on the one hand an advantage because for instance the financing and the equipment of the agency are being secured comprehensive and on long-term. On the other hand actor structures in the working groups are relatively stable due to the development of the administrative cooperation.

The analysis of both case studies has clearly shown that initial conditions and development paths of regional cooperation play an essential role for the implementation and final organization of the concept of Metropolitan Regions. For other Metropolitan Regions especially projects such as funding of regional economic cycles, setup of a joint regional marketing or cooperation's of research and scientific institutions can be exemplary.

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THE VANNISHING WATERSCAPE OF THE 19th CENTURY BELGRADE: LESSONS FOR ADAPTATION TO THE CLIMATE CHANGE

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Abstract

This paper examines urban history of Belgrade in the 19th century by focusing on transformation of the waterscape in the context of specific social relations and processes of emancipation of Belgrade as the capital of the Princedom, respectively the Kingdom of Serbia, and its transformation from the Ottoman into the European city. Our study of water, thus, explores its role in the socio-political and cultural environment during decisive historical events, in the physical, geographical, and symbolic sense. The historical waterscape consisted of a complex web of small rivers and streams which played a significant role in the urban life and functioning of the city, but have since disappeared in the process of urbanization. In this paper we will try to reconstruct the socio-spatial water network with an insight into its physical, geomorphologic, climatic, medical-hygienic, artistic and symbolic aspects. We will also outline the first modern public water supply system originating from the foundations of the Roman and the Ottoman waterworks, establishment of public baths on the river banks and public fountains in the parks, as well as water features and devices in the city. We will highlight, from a viewpoint of architectural and town planning, the changes in the urban landscape of Belgrade, by looking into artistic and photographic evidence, travel writing, maps and plans which show spontaneous and controlled transformations of its waterscape.

The text is an analysis of the spatiality of the changing relation of society to water, antagonisms and conflicts emerging from it, with the aim to underline the importance of water as a resource, with the view to contemporary environmental concerns. Specifically, we will focus on the Topčider River, which flows into the Sava upstream from the confluence with the Danube. While in the 19th century this river and the area around it held central political, social, cultural and natural significance, today it is one of the most polluted watercourses in Belgrade. Are there lessons to be learned from the urban history which can point to the methods of contemporary water management, as one of the principal aspects of urban sustainability? In this sense, we aim to open a discussion on contemporary waterscape as key to sustainable town planning of Belgrade

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today.

1. Introduction

Synonyms of the phrase *urban landscape* include *townscape*, *cityscape*, *city scene*, *city view*, all of which imply looking or gazing onto a city. Similarly, the term *waterscape*, the topic of this paper, contains the meaning of looking onto water, or within the context of the discipline of urban history, looking into the relationship of the city and water through history. Surveying the scene, including a waterscape, can lead to its better or more profound understanding. Indicative of this is a piece of travel writing from the 19th century, in which the author describes the view gleamed from the Danube's slope in Belgrade:

"I pushed open the door, and there, completely secluded from the bustle of the town, and the view of the stranger, grew the vegetation as luxuriant as ever, relieving with its dark green frame the clear white of the numerous domes and minarets of the Turkish quarter, and the broad-bosomed Danube which filled up the centre of the picture; but the house and stable [...] were tenantless, ruinous, and silent." (Paton, 1845, p. 51)

The central piece of this image is the Danube, viewed from an abandoned house in a Turkish suburb of Belgrade. It is a good metaphor for the dual nature of the character of scenery around Belgrade: an ensemble of landscape elements of an Oriental city against the backdrop of the massive waterway, with the interplay of the two yielding a new quality, despite the ruinous surroundings.

Figure 1. Geologic map of Serbia, detail (Viquesnel, 1842, Pl. XIX)

The first geologic map of Serbia, published in 1842, includes information about the geologic history of the terrain, as well as of the geopolitical situation of the day. The map shows the Belgrade waterscape as an intertwinement of waterways framed by the river border between the great empires of the time. The Belgrade waterscape was shaped

by the interaction of the broader state, politically strategic and economic picture, and the narrower, city context of various cultures and communities.

2. The Belgrade Waterscape

Viewed from Zemun, Belgrade was a city without much life on its rivers, despite its skyline of myriad minarets and domes nestled in the green of gardens and arboreta. Fuelled by fear of the plague, strict quarantine regulations from the first half of the 19th century forced ships to pass by Belgrade, holding as much as possible to the Hungarian side. As opposed to the view from the river, for the sojourner arriving by way of land Belgrade was "unusually colourful, prettier and more European-like of any other city" (Hervé, 1837, in: Momčilović, ed., 1993, p. 49) of the Ottoman Empire. The position of the large rivers, the presence of waterways within the city, as well as a general relationship to water, allowed for the existence of multiple meanings and perceptions of the landscape.

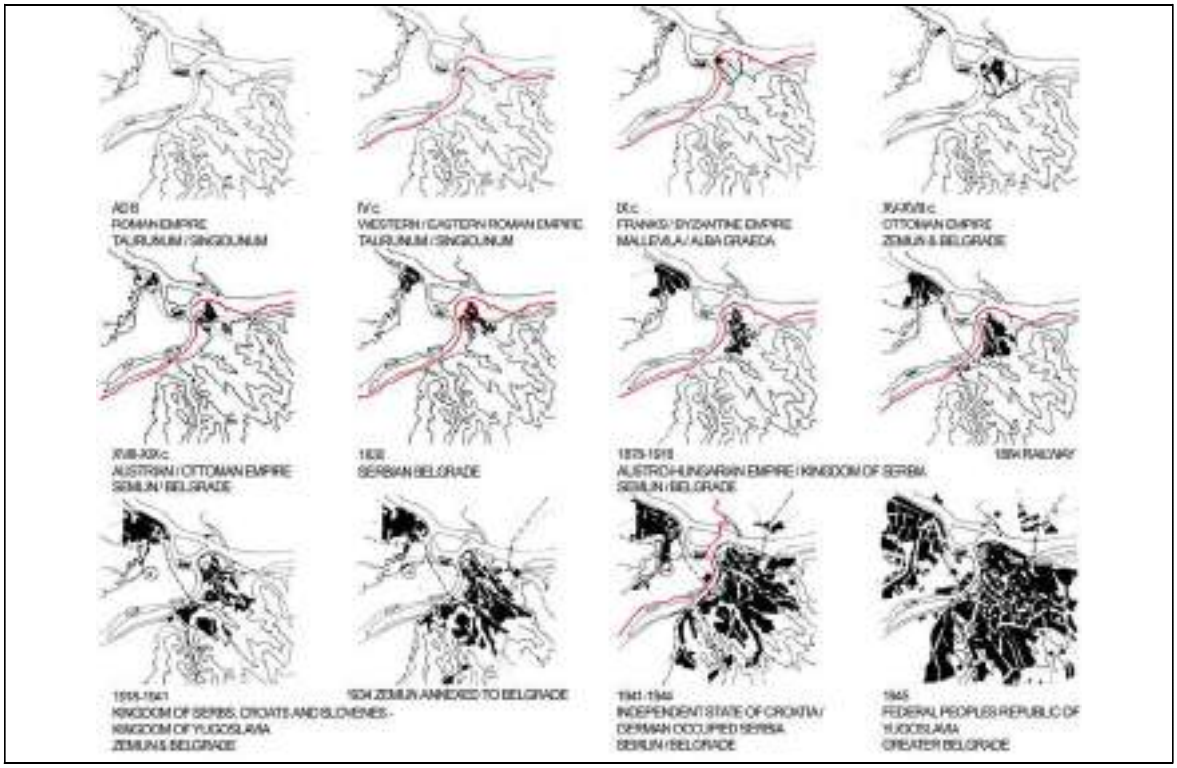

Figure 2. Belgrade's shifting borders, diagram by Ljiljana Blagojević

The very size of the waterways of the Danube and Sava and Belgrade's strategic position as a trading port for goods passing through the Balkans, Asia Minor, and Central Europe, were a decisive influence on the city's urban history, making the surrounding waterscape often a war landscape. As noted by Blagojević (2009, p. 28): "Belgrade's position at the

confluence of the river Sava into the Danube, is marked historically by the condition of constantly shifting borders of divided and conflicting empires. The river Sava marked a geographical and political borderline from the fourth century division of the Roman Empire into the Eastern and Western Empires, until the mid-twentieth century Third Reich's remapping of Europe."

The establishment of the Danube and Sava as the border between the Ottoman and Austrian Empires came in 1739 with the signing of the Treaty of Belgrade. The ratification of the agreement was carried out through the official exchange of letters, precisely on that border, the river Sava. Thanks to its position as a military and trade port, Belgrade was important to the Ottoman Empire for maintaining a political and army presence in the region throughout the 19th century. This affected the form that the urbanization of the city took at that time, and the speed with which it was executed.

2.1. Life on the water and the relationship with the water

Despite the awareness that the river represented a political, state and military border, Belgrade city life still took place on the river banks. A document from 1838, at the very beginning of the partial autonomy of the Principality of Serbia, dealt with the traffic and fishing on the rivers Sava and Danube. The document was addressed to boatmen and fishermen and sanctioned rules of conduct and acceptable ways of using the river, so as not to cause conflict with the Austrian authorities.

The German Karl (Dragutin) Karlovanski was the owner of the first bathing and swimming area on the Sava, opened on June 6th 1847, on the bank below Kalemegdan. Visitors, mostly children and youth, could learn to swim and use the river safely. The pool was approximately 26 meters by 7 meters, and there were 10 changing rooms. "Seeing the scarcity of baths on the river" (*Srbske*, 1856, p. 423), captain Miša Anastasijević built a bathing area in 1854, also on the Sava, near the spot where the Railway bridge stands today, and which was open to all citizens without charge. The demand was so great that during the summer people sometimes waited up to an hour in line to get in. In 1856 the Belgrade municipal government appealed to citizens for donations to help build a general bathing area on the Sava which would allow 50 people at a time to bathe. These bathing areas, "one of the centres of Belgrade life of the day," (Deroko in: *Beograd u*, 1977, p. 26) were made from wooden planks floating on barrels, marking off the area of the pool.

Towards the end of the 19th and beginning of the 20th century, life on the water only intensified compared to previous decades. There was more traffic, industry, entertainment and recreation, as well as an active interest in what could be found on the opposite bank. The public swimming areas were still present, as were now swimming, rowing and diving competitions. The latter were held from the only bridge on the two rivers, the Railway Bridge. The city was deeply engaged with the rivers, even though, or

possibly precisely because *over there* was a foreign land. On the place of today's Belgrade Fair, the Rowing, Fishing and Swimming society built a bathing area on the Sava in 1904, naming it *Six Poplars*. A club house accompanied the bathing area, and soon that whole stretch was livened by rowing practice and competitions. The sports activities, along with all other entertainment and recreation, took place parallel with the water's flow, up to the imaginary line in the middle of the river. Everyone who spent time on the riverbanks and on the water, all the travellers, merchants, fishermen, soldiers, bathers, rowers, or anyone otherwise connected to the river, formed part of the waterscape of Belgrade. All of this was effaced by the regulation of the riverbank, the design of cargo ports and a quay with metal planks, separating the city and its people from the rivers, discontinuing and forever changing an important part of the waterscape.

2.2. The Public Water Supply System

Aside from Sava and Danube, the waterscape of Belgrade was and is made up of other waterways, sources, streams and underground rivers. These had an important role in the past, as they were the backbone of the city's water supply system for a long time. Up until the last decade of the 19th century, Belgrade's water supply system was made up of three systems, all created in different periods, and came out of different traditions and civilizations. These were the Roman, Austrian and Ottoman waterworks. What they had in common was that they sourced the water in the south-eastern part of the Belgrade region, from whence it was channelled to the fortress, meaning old Belgrade within the confines of the Moat. On its way, the old system supplied water to a series of public fountains, usually erected at intersections.

Figure 3. Hydro-geology map of Belgrade. (Dukić, 1970, p. 12-13)

The Austrian system supplied the Sava slope, whereas the Ottoman followed the Bulbulder stream and brought water to fountains in the Turkish parts of town, on the

Danube slope. The Roman waterworks traced its way in between the other two along a canal where Knez Mihailova Street is today, and entered the Belgrade fortress. The Austrian one, otherwise known as the Town waterworks, was the longest of the three, and the Ottoman one, or Bulbulder, was the shortest. The hydro-geological map of Belgrade and the region shows the clearly divided river-basins of the Mokri Lug and Bulbulder streams, which were the major contributors to the old water supply systems.

In addition to these, the citizens of Belgrade used other methods of obtaining water, including wells in gardens and yards, as well as river and collected rain water for washing and cleaning. There were also professional water suppliers who sold water from barrels and skins, carried the city over by carts, on horseback, even by foot. The *sakadžije*, as they were known (from the word *saka* for animal skin used to transport the water), brought drinking water from fountains or streams into the city, the most prized of which was water poured from the Topčider fountain, and which was sometimes up to six times more expensive than river water. They could be seen in Belgrade as late as the beginning of the 20th century, meaning that until that time, there were two ways of obtaining water: the old one and the modern.

Emilijan Josimović, an engineer and mathematician, presented his first modern urban plan of Belgrade in his 1867 publication *Explanation of proposal for urban regularization of that part of Belgrade which lays within the Moat, by a lithographic plan scaled 1/3000*. Prior to publishing the plan, Josimović spent three years surveying the city and assessing the condition of the existing structures as well as the quality of the completed streets and urban sanitary conditions, thus creating the most complete survey of the period. Among Belgrade's shortcomings, ones he thought should be addressed through regulation, Josimović points to the lack of drinking and household water, as well as the lack of a proper sewer system for excess rain and waste water. As an alternative to the existing system that supplied the city from surrounding streams, he suggested supplying Belgrade with treated river water pumped up from the Danube into the upper part of the fortress, from where it would be distributed throughout the city. To solve this important question of city life, Josimović suggests using modern technological devices.

After 1867, a series of regulations were passed, with the goal of improving sanitary and hygienic conditions in Belgrade. Among these, it was forbidden for private individuals to dump household waste water into the existing system of drainage, "since the poorly built street pipes are thus overloaded, blocked, and spill into the street." (Stanojević, 1966, p. 143) Rather, citizens were told to dig septic tanks in their yards for that purpose. Following an epidemic of cholera in Belgrade in 1884, the president of the municipal government, Dr. Vladan Đorđević, declared the construction of a sewer system more important than that of the water supply system. In the end, however, it was the modern water supply system that won the day.

The clearing of forests in the area, as well as the growth in population after 1867

weakened the water sources in the city's surroundings, causing an ever poorer water supply. Even the renewal of the water supply system in 1890-91 which saw the connecting of the Roman and Austrian systems, and then the Austrian and Ottoman ones, the cleaning of sources, the partial replacement of pipes, and the building of several new reservoirs, did not solve the problem. The first step towards the installation of a modern water system was the suggestion of the municipal president Živko Karabiberović in 1880 to charge for the city customs in order to collect funds for a new water system, sewer, schools and roads. The adopted plan for the construction of utility systems in Belgrade finally got underway with the legalization of taxing and earmarking funds in 1884 and 1885. Along with the paving of streets, building street lighting, the water supply and sewer systems were planned for the first phase of construction. The second phase included the building of a quay and a depot, outlined in Josimović's plan. We can see from this that 50% of the projected utility designs were regarding water, that is, access to it and its use. In 1885, the Belgrade municipality founded a "Permanent Technical Committee," in charge of finding solutions to questions regarding water supplying. During the 1888 examination of the Makiška plain, between the villages Ostružnica, Železnik and Žarkovo, it was established that there is a far-reaching and strong network of underground waters, which sloped from Železnik and Žarkovo towards Čukarica and the Sava. It was determined that this water basin could cover the city's water needs, not only for the current population, but taking into account future city growth. The digging of the first wells began in 1889. At the same time, the existing waterworks systems were reconstructed, and the building of a new one was under way. The waterworks system began working on June 29th 1892. Citizens were invited to witness its turning over for public use. The switching on of the fountain at Terazije symbolically marked the event. The municipal president, Milovan Marković, gave the signal, and a jet of water shot several meters into the air, accompanied by the sounds of the military band playing the national anthem. The dignitaries present were served with cups of water. In addition to the dignitaries, the press noted the presence of "several thousand souls." The same evening, a celebration was organized in Kalemegdan, in honour of this "epic moment in the life of Belgrade." The celebration included the lighting of "a thousand lamps," a concert, and fireworks which "made known to all that Belgrade was in every way set upon the path of progress, development, and modern life!" (Lujanović, ed., 1992, p. 30-31)

The nineteenth century Belgrade had some 1,200 private yard and garden wells. Publicly accessible fountains were fed by three old waterworks systems. They numbered around 50 in the city and another 20 built at various water sources. From official and police documents of the first half of the 19th century we can see the importance of their use and maintenance. To that end, the municipality employed a person to "oversee and maintain in good condition all the fountains in the city, as well as in the army barracks, at municipal cost." (Prpa et al., eds., 2003, p. 366) Tensions and conflicts that arose in Belgrade were reflected in the question of water. The agreed-upon and sanctioned ways of water use were often broken, and there were illegal redirections of water flow both by

the Ottoman and Serbian government, as well as by the citizenry. One of the suggestions made in Emilijan Josimović's book was for the city plan to ensure better locations and more space around public fountains, so that the crowds would impede street traffic less.

All the city fountains are woven into the city's history. The "Trećepozivačka" fountain was built alongside the monument in Karađorđe's park in honour of Third Call soldiers killed in the battle of Varovnica, in late 1914. The fountain was probably erected in 1915, in place of the old Bulbulder fountain at the source of the Ottoman water system, on the site that had been used for annual celebrations of Belgrade's Turkish population in the 19th century. The fountain was renovated in 1927 under the patronage of the Society for the Beautifying of Bulbulder, and then again in 1982. The statue of the Serbian soldier, today part of the monument honouring veterans and Third Call soldiers in Karađorđe's park, was initially supposed to be placed on the fountain. Paša's fountain, known also as Šarena (colourful) fountain and Šareni source is at the starting point of the Roman water system, and the likely site of death of Vizier Suleyman Pasha and his entourage in 1807. It was renovated after World War I, in honour of the fighters from Mali Mokri Lug in battles from 1912 until 1918. The Ottoman water system contained along its length certain structures similar to water towers, which served as reservoirs and methods of distributing water among public fountains, in other words, a kind of scale for measuring out water. One of the three locations where these towers could be found got its name from the Turkish word for a scale – Terazije. This infrastructure object was replaced by the Terazije fountain, in the new centre of the city, erected as part of the Austrian water system in 1860, in honour of the second reign of Miloš Obrenović (reigned 1815-39, 1859-60). This fountain drew the largest crowds in the city, and with its location and the fact that water was supplied to that spot, was an important symbolic representation of power. The idea for a fountain at Terazije existed from the middle of the 19th century, during the reign of Prince Aleksandar Karđorđević (1841-58). Two blueprints for the project were created, in 1846 and again in 1855, but neither was executed. The Terazije fountain was moved to Topčider before World War I, when there were plans for the square to get a new road and traffic solution, as well as a new monumental fountain with the statue of the Victor, work of the sculptor Ivan Meštrović. Instead, Terazije saw a fountain 17 meters in diameter, with lion heads, bronze turtles, and a revolving water jet, built in 1927, most likely according to a blueprint by Edouard Lèger, the technical director of the city board at the time, and certain designs of the sculptor Ivan Meštrović. The fountain was taken apart after World War II, as part of the new traffic solution. The original fountain was moved back to Terazije from the yard of the Church of Saint Apostles Peter and Paul in 1976.

The establishment of a modern sewer system in Belgrade began at the dawn of the 20th century. After World War I, the Bulbulder, Mokri Lug, and Čubura streams were incorporated into the new system, their beds paved, and tunnels constructed intermittently. In addition to those three, there are entire rivers coursing through the Belgrade underground that have since been tamed. The strength and importance of

brooks of the past is reflected in the importance of individual streets to the overall traffic network built atop. The underground waters gush in full force when foundations for big structures are struck or trenches for infrastructure are dug. Not much is known about these water networks, since the only extant maps are old, arbitrary, and show old Belgrade sources. In the years prior to World War II, exploration of underground waters was performed, and an operation plan in case of war was developed for the waterworks system. Several wells were dug, mostly in parks, and some of the source fountains were redesigned with a view towards creating an alternative supply system should the need arise. The map of underground water networks was destroyed during the bombing of Belgrade in 1941.

2.3. The Topčider River

In 1831 in Topčider ("cannon valley" in Turkish and Persian) the suburb about five kilometres from the city centre, Prince Miloš built his residence, *Milošev Konak*. In the 18th century, the area was a field surrounding a stream that meandered through the marshy valley, and which was grounds to a few Austrian hunting lodges and summer houses, as well as home to several villages of German settlers. At the beginning of the 19th century, the Turkish artillery units used to perform training practice there, and it was also used for *čair* – a field for horse grazing. Turkish prelates used this area as a resort and hunting ground. For the purpose of the construction of his residence (court) and a supporting complex, Prince Miloš ordered the displacement of local villages and denied the right to the use of land for horse grazing. The formation of the park around the residence began in 1842, when Atanasije Nikolić, an engineer educated in Vienna, was appointed for its arrangement. Nikolić, who was both professor and engineer, also founded a seed-plot in Topčider, as well as the School of Agriculture, the first of its kind in the Balkans. The park in Topčider was the first Serbian park system based on European models of the palace complex located in the "natural, yet cultivated environment." (Milanović, 2008, p. 79) The park replicates the English garden style with its meandering paths, lush vegetation, and abundant presence of still water, as well as with several aquatic devices, and adds to these a few classical elements.

A distinct feature of the park is the Topčider River, which flows through the park. Its path was regulated in 1863, under the supervision of engineer Jakov Slivić. Swimming areas were designated along the sandy beach of the river. The park also contained a steam bath. In the 1880s, at the time of King Milan Obrenović (reigned 1872-89), a fountain was built between the park's obelisk and the glasshouse. The fountain had a decorative bowl in the centre of a basin, containing exotic aquatic plants and the sculpture of a boy with a heron, since demolished. Today, Topčider park with its area of 12.8 hectares is one of the favourite recreation areas in Belgrade. It has three parts: the part near the glasshouse and the drinking fountain that bears the name of Prince Miloš, with an area of 2.5 hectares; the park around Prince Miloš's Residence, with ornamental flower beds *parterre*, measuring 7.1 hectares; and last, the part with a surface of 3.2

hectares containing playgrounds for children and an artificial lake constructed in the second half of the 20th century. The park has more than a thousand trees. There are over one hundred different species of trees and shrubs, among them ten different kinds of flowers. The park in Topčider, along with the forest of Košutnjak, is a unique complex from a natural, ambient, cultural and historical point of view. Košutnjak was once the hunting ground of the Obrenović dynasty, and today, with an area of 267 hectares, it serves as the link between an urban and suburban green, and a reservoir of fresh air that reduces weather extremes and affects the climate of the city.

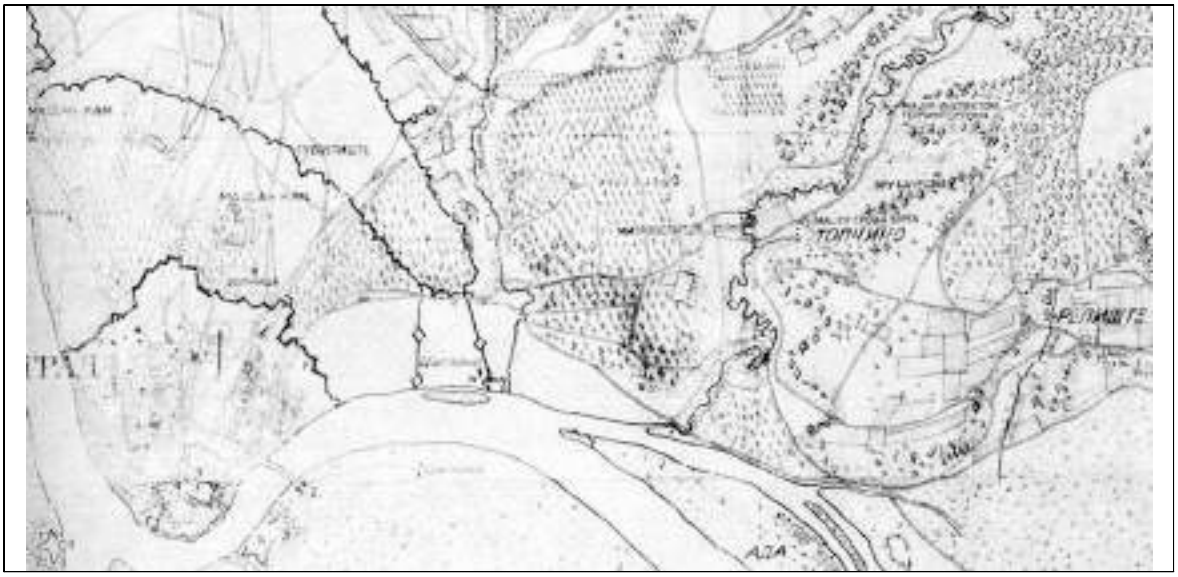

Figure 4. Belgrade and its environs in 1721, by Captain Aman (Miljanić, 1985, p. 48)

The Topčider River is a right bank tributary of the river Sava, and one of the streams that dominates the hilly southern terrain of Belgrade. It is about 30km long and has a basin of 148km^2. Its source is in the Lipovica forest on the mountain Kosmaj, and it flows through four current Belgrade municipalities, various zones and neighbourhoods. Archival records show unplanned expenditure in the budget of the princely grounds, caused by the overflow of the Topčider River in the 1850s. This same decade saw the first geodesic measurement of the Topčider River and park, executed by the cadets of the Gunnery school, that is, the Military Academy, in 1857-58. The oldest maps of the terrain come from the period when the river was first regulated, that is from 1863 when Topčider was officially incorporated into Belgrade. The area saw the Topčider river crossing ferry and a custom house, one of seventeen total on the Sava and Danube.

The current road from Belgrade to Mladenovac passes through the Topčider River valley, as well as the railway, first built in the 1880s, in the directions of Bor, Skopje, and Bar. The Topčider River is regulated in the part that flows through the city proper. It flows into the Sava near the narrow end of Ada Ciganlija, a popular recreation area in

Belgrade. With the newly built bridge passing over that section of Ada, the traffic passing through the Topčider valley has increased significantly. Several ecological incidents have been recorded in the last few years regarding the Topčider River, as it is polluted and characterized by high degree of environmental degradation. The river tends to flood during periods of sudden an abundant rainfall. The execution of the project for "the regulation of small water systems in the basin of the Topčider River" (The Jaroslav Černi Institute for the Development of Water Resources, 2007) should be one of the steps in the final regulation of this water network (which has been planned for over 30 years). This would protect populated areas and roads from flooding, improve the supply of water, increase the quality of the water in the lower portion of the river, and better use the accumulation for purposes of tourism. A project from the Faculty of Forestry for the regulation into a "blue" corridor of one of the streams in the basin of the Topčider River, namely, the Kaljavi stream, already exists. "Kaljavi Potok will be a kind of historical-naturalist reservation, since in addition to the Neolithic settlement nearby, the area is the habitat for some twenty species of endangered birds that do not normally live in the city core, three water sources, and surface lime-stone, a geologic phenomenon in itself." (Jokić-Stamenković, 2011)

3. Conclusion: Lessons To Be Learned

There are certain subtopics of the relations between architecture, urban design, and landscaping that come into consideration with regard to problems of revitalization of coastal areas and water networks in general. Those are:

- urbanism of infrastructure, or complex projects of landscape architecture that integrate infrastructure and city space;
- urban regeneration through the creation of public green areas, walkways, parks, blue and green networks of public city spaces;
- urban ecology and lessons for the fields of architecture and urbanism regarding spatial principles for the improvement of ecologically degraded areas of cities, as well as biodiversity through planning and projects;
- the comprehensive regulation of precipitation in urban environments, i.e., *Sustainable Urban Water Management* (SUWM)

Recent scholarship that gives a theoretical framework for achieving SUWM, or within that, for developing urban water transitions frameworks, defines the relationship of society towards water as a *hydro-social contract*, by which they mean the "pervading values and often implicit agreements between communities, governments and business on how water should be managed." (Brown et al., 2009, p. 848) In the examination of ideological and technological characteristics of this relationship in different historical periods, the authors differentiate six stages: *Water Supply City*, *Sewered City*, *Drained City*, *Waterways City*, *Water Cycle City*, *Water Sustainable City*. The first three stages belong to the 19th and first half of the 20th century. The next two represent a

recommendation for a comprehensive regulation of waters at this time. And the last one is the stage towards which the city aspires to in the future. *Waterways City* promotes, among other things, new normative values in the context of the protection of the natural environment, as well as an integration of urban waters in planning, as an important visual and recreational aspect. *Water Cycle City* includes the protection of water networks in this sense: “finding fit-for purpose diverse water supplies at a range of scales that are also sensitive to the energy and nutrient cycles and ultimately contingent on protecting waterway health.” (Brown et al., 2009, p. 853) Finally, *Water Sustainable City* implies a complete change and integration: “the normative values of environmental repair and protection, supply security, flood control, public health, amenity, liveability and economic sustainability.” (Brown et al., 2009, p. 854)

Based on these interpretations, this paper examines the waterscape of Belgrade of the last two centuries from a historical point of view, as well as forms of regulation of urban waters, in relation to considerations of the hydro-social contract in the present circumstances. With that in mind, first and foremost, we think that it is important to mark the stages already achieved, which are: *Water Supply City*, *Sewered City*, *Drained City*, and to an extent *Waterways City*. It is imperative that in the 21st century, Belgrade turn to a sustainable regulation of urban waters. Also, public green areas demand redefining in accordance with the idea the relation between urban landscape and waterscape. Awareness of climate change and the importance of water as a resource requires a radically new consideration of the relation of water and the city, one that moves the romantic image of the 19th century towards contemporary technical and technological solutions, and moves urban design strategy towards synergy of infrastructure, landscaping and ecological design, place-making, circulation and urban function, with the specific focus on flood risk and stormwater management, as components inherent in the design, rather than an addition to it.

We would argue that lessons to be learned concern the following:

- critical engagement and discussion of still widely open questions of urban landscape and waterscape, and internationalizing the issue in the context of debates worldwide
- recovery of nearly lost comparative advantages of the Belgrade area in reinterpretation of its waterscape in local, regional, as well as, in the European context
- a new generation of strategic schemes of truly sustainable development, open, transparent, and publicly verified offers to strategic partners, and subsequent planning and implementation processes that include regional partners.

4. Acknowledgements

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SYSTEM DYNAMICS AS AN IMPORTANT TOOL FOR THE ESTIMATION OF URBAN PLANNING EFFECTIVENESS

Costas Portokalidis[1] / **Foteini Zygouri**[2]

Abstract

The idea of sustainability, as an entirely acceptable objective, attains a special dimension when it attempts to become a part of the philosophy of urban phenomenon and modern or (super) modern urbanism. Namely, it generates the framework of the goals of the urban planning, since it demonstrates a holistic, dynamic and cooperative approach which cannot at the same time be analyzed by Cartesian procedures, but to become a part of the theoretical of system analysis and especially system dynamics. It obviously accrues that the urban sustainability involves an 'in the egg' and 'by definition' systemic concept. The specific approach leads to the pursuit of appropriate (systemic) procedures in order to actively join the holistic content of the urban sustainability to that of urban planning, which is eventually demonstrated at the level of urban form or morphology. Thus, it accrues the need for clear delimitation and specification of the characteristics of the in question system of analysis, which joins the upper system of the city (urban area). The complexity of the specific system and the need for the emergence of the attributes of the different parameters which it includes, leads to the development of three basic sub-systems of approach with systemic procedures that involves the built space, the free space and the traffic network (infrastructure). Subsequent to the aforementioned the further development of the system is realized, that is the elements that are included in order to create the conditions for the examination of the connections, attachments, interactions etc, between the sub-systems of reference. In conclusion the urban morphology, as complex, open and dynamic system, needs its systemic characteristics to be approached in depth in order to acquire a specific status. Consequently, the general and special attributes which it includes as well as their connection (dependence - influence) with the outer surrounding (institutional-social-financial) environment, generate a specific balance point with specific pop up attributes each time. This fact makes the further approach of effectiveness of the urban dynamics, which is rising as a result of the objectives of the urban planning, which in order to be effective, it must always be a part of the urban sustainability.

Key-Words: Urban form, system dynamics, sustainable urban patterns

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1. Introduction

Focus on design and planning of urban morphology, as a method and a technical process "objectively" and by "default" is a continuous and perpetual revision, by adopting the values, circumstances and general requirements or endorsements of time. It is, in short, the expression of "human affairs" in space, and includes philosophies, ideologies, production systems and perceptions of the times. But in any historical context than today, cities evolved in harmony and well supported by the local natural environment. This balance seems to disrupt the modern context. The traditional process of urban planning and the perception of urbanity, followed by industrial or postindustrial development, economic development, globalization, etc., and expressed mainly by the modern movement and various mechanistic theories.

An early problematic (critical) for this negative evolution, began to be expressed especially after the 60s when environmental skepticism started to grow and established a framework of principles (ecological movement, postmodern criticism, contemporary context, etc.) in response to constantly growing urban problems, such as the general deterioration of urban space, resource consumption, traffic, etc. Subsequently, more comprehensive and integrated concepts have been developed as today's total acceptance of the notion of "urban sustainability",[3] a key objective for planning and of broader perception of spatial phenomena.

The present approach, having as reference the specific search, which is part of an "ultramodern" urbanity, aims to adopt a systemic (holistic) process, to reproach to a fundamental level, the design and planning of the urban morphology. It analyzes individual spatial elements that ultimately include assessing the structural complexity of the status (self-organization). Ultimately, attempts a comprehensive, holistic, comparative and methodical problem with a view to assessing its systemic complexity and dynamic nature presents the design and planning of the urban morphology.

2. System Dynamics

Mainly, the current attempts are focused on understanding and developing the synergies between the different spatial aspects of the city, using analytical methods that lead mostly to one-dimensional studies of the issue through a Cartesian decomposition (UNEP, 1996:15).[4] This approach appears to not be able to provide

[3]There is a widespread concern and discussion about the concept and principles of urban sustainability. For more see Frumkin (2002), Frey (1999), Elkin et al (1991), Blowers (1993), Charter of Aalborg (2004), New Charter of Athens (ECTP, 2003) etc.

[4] Otherwise "Cartesian rationalism": Refers to the so-called analytical thought where every system can be examined in the individual components that it includes. By default, this logical (inclusive) process can not explain the behavior of complex phenomena, nor to analyze influences on different dimensions. Commonly, it is attempted a shift in thinking from the mechanistic (Cartesian) logic

appropriate solutions (answers), especially when is trying to relate with holistic approaches, such as “urban sustainability”. It becomes obvious that any attempt to analyze the dynamics of the urban morphology, it can not be successful enough when it focuses on the individual factors that affect the issue under examination. In contrast, the effort should first put on identifying factors that influence it, then examined in depth the properties and finally to study the interrelationships and interactions that arise between them and the wider environment.

In this problematic, the “system thinking” can contribute to a drafting target (ultimate objective) and identifying the means (process) (Dekleris, 2005). Overall, it is not just legitimate, but necessary, for multidimensional analysis systems, which have dynamic character and focus on conditions such as flexibility, interdisciplinarity and totality (Kousidonis, 2003; Hall, 1993). Thus, the transition from the analytical to the system process (vision), includes an approach that allows:

a) the recognition of the components of a system and the relations that make up the structure,
b) the examination and verification of the relevance,
c) the illustration of the conditions and the implementation through modeling.

From the above mentioned, it appears that the choice of the discrete parts of a system is one of the most important processes for the study. Of course, this process is not followed by strong nor specific physical laws. In contrast, an important question remains of who defines the system and why, since the elements are selected and controlled from a specific observer. Thus, the system is presented as an object, where different observers may give different interpretations. Because of that, in any case and despite of the use of common systemic rules, it remains a "mental construct" between the observer and the real world (Ashby, 1962). To overcome the above problem of relativity in structuring the system, is used a specific process based on system dynamics. This method focuses mainly on the structure and processes within the system, assuming that this can be explained better the dynamic behavior under conditions of "real world". In this sense, the structure and dynamic processes of "reality" can be (re)created in systemic diagrams and on mathematical models, capturing the relationships between cause and effect relationship (Flood & Jackson, 1996; Forrester, 1998).[5]

3. Urban Morphology in System Thinking

3.1 General

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where "the whole equals the sum of its parts" in the belief that "the whole exceeding the sum of its parts".

[5] As it is clear from the above, system analyst construct (study) "sets" and not "parts". Priority is given to the whole (holism) rather than in parts (reductionism). For more see Miller et al (2004), Sterman (2000), Venix (1996) etc.

In system thinking, mainly it is needed a clear definition of the limits and the external environment of each system under study. Thus, the collaborative framework of the city, includes the physical, social, economic, ecological, environmental and institutional subsystems. In all these, there is a distinct subgroup that defines the physical space. With more appropriate way, it can be seen as a form and structure of the city (alternatively morphology), which has a direct and absolute link with the geometric, topological or ontological conception of urban space. More specific, the initial interpretations of urban morphology, described as a (physical) area of the city. Thus, it primarily associated with the geometry of space, through a largely formalistic and rigid approach (Lee & Moudon, 2006; Friedman, 1997).

Then, for the development of a broader and more specific theoretical problem for that matter, a portion of scientists, from very early on, tried to reach terms with systemic effect of morphology and specific constituent elements. Of particular importance are efforts and distinctive works of Lynch (1981) and Alexander et al (1977), who first reconcile the different interpretations and also they introduced a new, more collaborative and systemic approach.[6] In particular, Lynch defined it as "the spatial plan (ground) of large, inert, permanent physical objects" that can be nodes, corridors or areas, and create specific spatial identities such as density peaks, distribution of land uses and activities, access etc. Similarly, Alexander developed the content of the urban morphology more descriptive, mediated by specific spatial rules (patterns) which must meet certain conditions, purposes etc.

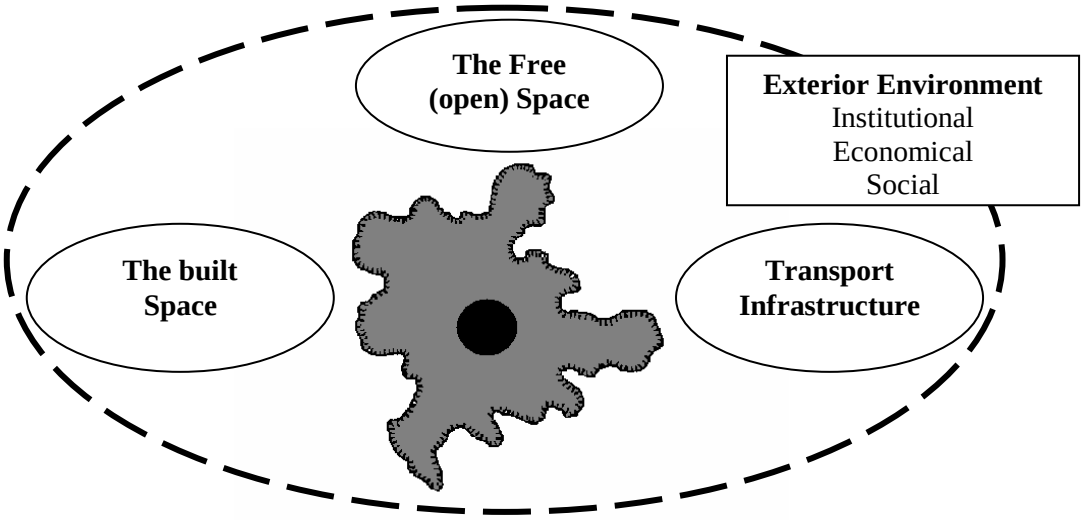
In this era where the concept of "ultramodern" urbanity is in constant change, there is a plethora of alternative approaches that attempt to describe the urban morphology, using new age or stochastic methods, qualitative or quantitative descriptions, etc., which may be based on network analysis, space syntax, fuzzy logic, neural networks etc. In any case, the plural search its contents, highlights the need for a systemic interpretation of how it really works and what dimensions it includes. Therefore, the use of system dynamic approach, as described above, attempts to overcome any weaknesses resulting from this subjective effort and moreover to deal with the limitations of this chaotic, dynamic and evolving system of reference, as the urban morphology (ie it is not static, linear, integrated etc).

In this sense Harvey (1996), supports that a dialectical approach between the theory of urbanization and spatial analysis, can lead to a better understanding of the urban morphology. In other words, she suggests a systemic process in synergy with classical spatial reading. Batty (2008a & b), has analyzed in detail this specific problem and he tried to give the clear content, based on three fundamental concepts for the interpretation of the urban morphology, such as "built (structured) space", “open (free) space“ and “road network” (alternative transport infrastructure). The main aim is the synthesis of natural (space) with the social and the economic environment. Then, the analysis focus on interactions and connections with the urban

[6] Apparently Lynch and Alexander, are not imprinted with a theory this way, but essentially similar holistic approaches used, included in this problematic. Thus, it can be argued that founded largely the spatial perception of the city that is timely and fully compatible with the attempted systemic view.

sustainability (in concordance with the approach of the urban phenomenon as a open, multi-layered and complex system).

Figure 1: The System and the Sub-Systems



Overall and in accordance with the above, Lynch (1981), Alexander et al (1977), Lee & Moudon (2006), Batty (2008a & b), Harvey (1996) and others, through their respective approaches, try to achieve a new global concept that includes all the features of the urban morphology. These efforts, might be enhanced with the (new) system dynamics processes and approaches, introduced by the specific problem. Thus, an attempt is made to introduce the general clarification of the "structural status" of the reference system. This method, involves the recognition and the understanding of the limits between the system and the exterior environment and also the hierarchies, interconnections and interdependencies within the system, as in Figure 1.

This particular system thinking and consideration of the urban morphology, has a twofold objective. Firstly, it is attempted a comprehensive description of a number of specific groups and spatial elements contained in the above three subsystems. Secondly, it is developed a comprehensive assessment of synergies, relationships, convergences and divergences, in order to become enable the emergence the fully knowledge of the urban morphology. This makes possible the "holistic" treatment of the reference system, in absolute identification with what is supported for system dynamic theory (Kropf, 2009; Whitehand, 2009 a & b; Williams et al, 2000).

3.2 The Sub-System of Built Space

According to the above, in the sense (vision) of built space, are included analysis elements (variables) which are critical for urban morphology planning. So, are recognized:

"Density." The spatial dynamic that density develops, is critical. Usually it includes upper and lower limits or thresholds. Generally, it is argued that density planning creates conditions to produce the interactions needed for making effective the urban functions and activities. Thus, its (quantitative) character can affect almost all other elements (parameters) of the spatial reference system. Also, t is considered as an important factor in relation with travel demand, consumption of land and energy, the character of neighborhoods etc. (Williams et al, 2000; TRB, 1996; McLaren, 1992, etc.).

"Compactness". It refers to urban link (connectivity) and intensity of built development. Commonly, compactness attempts to include a third dimension to quantify the density. Thus, it presents more accurate the built complexity and it is of great importance in assessing the overall status of the urban morphology. Also, it is strongly associated with approaches that attempt to examine the nature of expansions or enhancement of urban space (Wheeler, 2004; Scoffham & Vale, 1996; Rudlin & Falk, 1999).

"Land Use". The spatial distribution and in particular the composition of the land use, which varies both horizontally and vertically (ie in the building), it is generally accepted that largely affects the characteristics of the reference system. Thus, in any occasions, the specific land use planning is primarily a dynamic rather than a static phenomenon, and it is influenced by the conditions of market economy and the broader social and institutional environment (externalities) (DETR, 2000; Burton, 2002 etc).

The "quality" of space. It includes all those aspects of the urban morphology that create perceptual relationship with the environment at all spatial scales of reference, such as adaptability, diversity, choice, beauty, nature, etc. Overall, it expresses an important, complex and multifaceted element (Jacobs, 1961; Wheeler, 2004; Tesdeorpf et al, 1997:16; Thorns, 2002; CABE, 2002 & 2004).

As shown above, it becomes clear, that this particular structural configuration, leads to a hierarchy, which needs further study, since it reproduces the strong interrelations between the elements involved. Overall, the density is presented as a priority that is directly associated with the element of compactness and together produce a significant weight in the overall character of the built environment. Then, the land uses, seem to form part set up by the previous two items, causing a number of synergies that characterize the operation subsystem of the overall thinking. Finally, the quality of the space is presented as an independent element for the most point, which attempts to give the subsystem specific features. Overall, it can be said that is introduced a new concept for the interpretation of the creation of the built environment, based on more holistic treatment.

3.3 The Sub-System of Free (open) Space

The natural elements (attributes) of the environment of the city as open spaces (squares, unstructured regions, etc.), materials of urban furniture, greenery, trees, etc., are the free space of the reference system. More specifically, the elements should be made to describe the best qualities of the subsystem are:

The "provision (adequacy)." The quantitative expression between structured (similar subsystem) and unstructured (free) space which can alternatively be expressed as protection, emerges as a critical element for the urban morphology planning. Overall, it can be said that the provision of free space is necessary and sufficient condition for the operation of the subsystem analysis of free space. Below a certain limit, the lack of free space makes very difficult the controlling of whole systems functionality. Thus, such research are primarily designed to examine the appropriate (optimal) frame, in quantitative terms, which must determine the provision of free space (Carys et al, 2003; Heidt & Neef, 2005; Li et al, 2004 etc).

The "contribution." As an element, free space contribution is directly connected with the spatial arrangement of green networks (greenways) in terms of functional integration (distribution) in the urban fabric. Overall and in accordance with the nature of that item, it creates various types of open spaces, from point to very extensive city parks, green corridors etc (Moughtin & Shirley, 2005; Forman & Godron, 1986).

The "quality." This element gives significant properties related to aesthetics, diversity, convenience, land use, etc., in concordance with the element of quality built space, as analyzed above.[7]

Overall, the urban natural and open space interacts primarily with the residential areas (built environment) and it creates social and economic externalities, even in dense populated areas of city centers (Tjallingi, 1995). It is clear that internally in the subsystem approach, the element of provision is strongly linked with the other elements (qualitatively and quantitatively), in a context of system dynamic relations. Thus, the resulting synthetic image (general structural status) is multi-functional and it creates a set of synergies and influences to be considered.

3.4 The Sub-System of Transport Infrastructure

The relationship and interaction between urban space and transport, is crucial at every stage of the urban morphology (Barrett, 1996) and is perhaps the most important aspect of proper operation and efficient planning. Emerged especially after the rapid growth of car use causing a huge impact on the transformation of space-time parameter (Seller and Urry, 2000), where urban elements and spatial synergies accelerated and encouraged. Today, it is fully agreed that the urban morphology associated with, and influence each of the characteristics of the movements and the general transport system (infrastructure), making it as a critical reference subsystem, in this view (CEC, 2007 etc).

The search therefore of critical elements that make up the structural status of the

[7] There is an extensive literature that describes and analyzes this issue. For more see Moughtin et al (2005), Tjallingi (1995), Carys, et al (2003), Heidt - Neef (2005), Pauleit et al (2005), Li et al (2004) etc.

transport system can only focus on the appropriate system dynamic procedures, in order to allow the earliest possible full description. Thus, there is recognition of visa data as:

Provision of adequate infrastructure. As element, is strongly related with the achievements of access to buildings in various locations, operations, etc., because people move to participate in activities, according to parameters such as distance, cost, etc. (externalities). Overall, the systemic approach focuses on the synergies created and alters the accessibility balance of the transport system (e.g. the reduction of infrastructure for the vehicles).[8]

The management of the infrastructure (mobility). The modern approach, based on the urban (sustainable) mobility shifts the attention from the provision of new infrastructure to the appropriate management of existing ones. To achieve this, the transport planning process, includes dynamic approaches that attempt to create appropriate and efficient spatial synergies that ultimately emerged from the car dependence (minimizing manual). This approach is essentially based on the belief that an ideal situation would increase accessibility to the smaller footprint without necessarily creating new infrastructure (Lynch, 1981; Bertolini, 2005; Doust, 2009:14 etc.).

The quality (balance, reliability, equity). This subsystem in order to meet all of the urban planning goals, according to the above respective approaches, should have an extra element that is referred to the appropriate conditions for overall quality. It refers to justice achievement, equal access (equity) etc. for all and especially the application of reliability of the overall operation of the subsystem reference. In a spatial context, expresses the need to provide secure, diverse and integrated transport facilities in the urban environment (Coplák & Raksanyi, 2003; White, 1994, etc.).

The (synergy) of the transport subsystem with the entire urban morphology, includes some new (dynamic) elements, so it is attempted to put an alternative description of transportation, especially now which that urban areas are dominated by theories that focus on public and free space consumption for creating roads and support infrastructure such as parking lots, etc. Also, it can be said that the crucial element is the infrastructure provision, so it occurs in the first level of a hierarchical relationship with other elements. Mobility includes features of a more qualitative and focuses on efficiency and intensity, in order to be created the character of the transport subsystem. Finally, the new element of quality, try to enter some not obvious parameters which are very important and make the system to meet the urban sustainability issues.

4. Conclusions

From the above analysis, it became clear that the systems theory (systemic approach, thought) is able to visualize the relationships between a system, its components and

[8] For instance there are the designed and organic (traditional) urban road networks. The first are highly functional for a traffic operation and can be adapted to modern needs, while the latter have emerged historically without planning and poorer infrastructure (narrow roads, bad junctions etc).

the external environment. Also, system dynamics could help to create a new way of interpreting and studying the spatial effects (as meta-theory. This will fill the positions of Newtonian analytical thinking (analysis and reduction) putting the composition together with the analysis, the regulatory process with the narrative. Thus, the systemic approach focuses on functionalism as a fundamental process, which means that the characteristics of a system, are based on the operation and cooperation of its parts.

In this direction, converging the current general and specific targeting of the design and management of urban morphology, which focuses and integrates most dynamic (systemic) conditions such as flexibility, totality and interdisciplinarity. Therefore, the use of system thinking for a clear definition (interpretation) of the urban morphology, it becomes very important for the development of this problem. Also, the opportunity to focus on the character, the limits and the hierarchy of the elements, gives the opportunity to deal with the real behavior of the reference system.

In this context, once established, the structural interpretation of the urban morphology, the problem focus on the elements of subsystems included as separate entities. Clearly, it concluded that the urban morphologies should be examined as complex (organic) systems. This finding, in general it has very important implications in spatial recognition and urban planning. It also means that scientists, must use systemic versus Cartesian logic. Therefore, the system approach is introduced, may be offered the younger specific theoretical framework, which aims to identify the overall character of the urban morphology.

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COASTAL TOWNS IN CHANGE: A NEW PARADIGMA

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Abstract

This paper presents the first conclusions of a research project concerning the relationships of the architecture and the sea. It studies in particular the coastal cities of the south of Portugal during the XX century.
The coastal cities developed due to the economy of harbors and fishing, very often with locations relatively guarded from the sea.
During the XX century, the traditional location lost importance, because on one hand the coastal areas became safer and on the other hand the charm of the sea landscape attracted the population to the coastal line. It is also important consider that the emerging economy connected to the tourism needed to sell the landscape as an added value.
This change in the attitude towards the sea, promoted great changes in the morphology of the cities, leaving traces that are interesting to study while the older areas don't disappear or are totally adulterated.
We also try to analyze the sustainability of these areas, once they relatively recent in the context of urban history and bare higher maintenance costs by being more exposed to the maritime influence and have very often a seasonal use.
This paper analysis the evolution of urban areas of part of the littoral of Portugal, in the southern coast, with remote occupation, with vestiges of roman occupation that were subject to great urban changes with the destruction
The role of the tourist becomes controversial because he aims more and more landscapes and traditional urban centers instead of areas of recent construction completely decharacterized that are built to welcome them.

1. Introduction

During the XX century the population of Portugal changed significantly, from a relatively stable distribution between rural and urban areas and between the interior and the littoral, to levels of urbanization quite different due to a move of the population towards the littoral.

This change is due to structural reasons common with the socio-economic changes in Europe and in the World, with the growing abandon of agricultural

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activity and the implied increase of the process of urbanization of the population and the choice of milder areas from a climatic point of view; in the Portuguese process this was reinforced by the weight of the tourism sector in the national economy with the development of the tourism "sun and beach" since the 60s of the XX century.

This change of the patterns of urbanization can be evaluated among other aspects by the urban sustainability that has been analyzed in an ongoing research project.

The process of litoralisation associated with the development of tourism has created a kind of urbanization, that has been analyzed in a research project in development.

2. Cities, Sectors of activity and urban morphology

Urban development of cities located in the littoral, was very much connected to the development of harbor activity whether in what concerns merchandises, with some ports important to the national and Iberian economies, connected to cities of bigger dimensions whether in what concerns the fishing activity, with these ports spread along the coast and connected to population agglomerations of diversified dimension.

These urban agglomerations whose urban economy was at least partially related to the fishing harbor present from a morphological point of view a concentration around the harbor and the centre related to it.

From the moment when the tourism sector starts to emerge some agglomerations gain a new economic dynamic related to tourism and its morphology tends to change.

It's this process of change based on the relation between the increase of the resident population, due to the increase of employment, and the increase of dwellings, due to the demand of permanent and seasonal habitation, that we analyze in this paper.

The number of permanent habitants often show a growth that can be considered within average but the growth of urbanized areas that support secondary dwellings and seasonal services change completely the physiognomy of urban space.

3. The Case study of Algarve/Sotavento of Algarve

This theme has great relevance in the urban development of Algarve (region that enclose all the southern strip of Portugal) where a climate of

Mediterranean characteristics enhanced a sharp urbanization biased towards tourism, unlike what happened in other areas of the littoral f the country, where this specificity has a lesser importance.

This paper analyzes in particular the eastern part of Algarve (Sotavento Algarvio – Algarve leeward), an area characterized by having in its territory a group of sand islands, that allows the existence of several haven harbours to the fisherman.

Beyond the fishing villages we find a group of equipments and warehouses, that were used in the tuna fishing (Moreira, 1987).

These sand islands belong nowadays to the Natural Park of Ria Formosa as they constitute a valuable natural heritage.

In the Sotavento Algarvio are located several diversified urban centers, representing various typologies of agglomerations.

3.1 Evolution and distribution of the population of Algarve

Analyzing the distribution of the growth rate of the population between 1950 and 2001 in the Algarve (Fig.1), we note that the municipalities experience great changes with some parishes to submit a demographic dynamics rather than the media, including Se(Faro) and Quarteira.

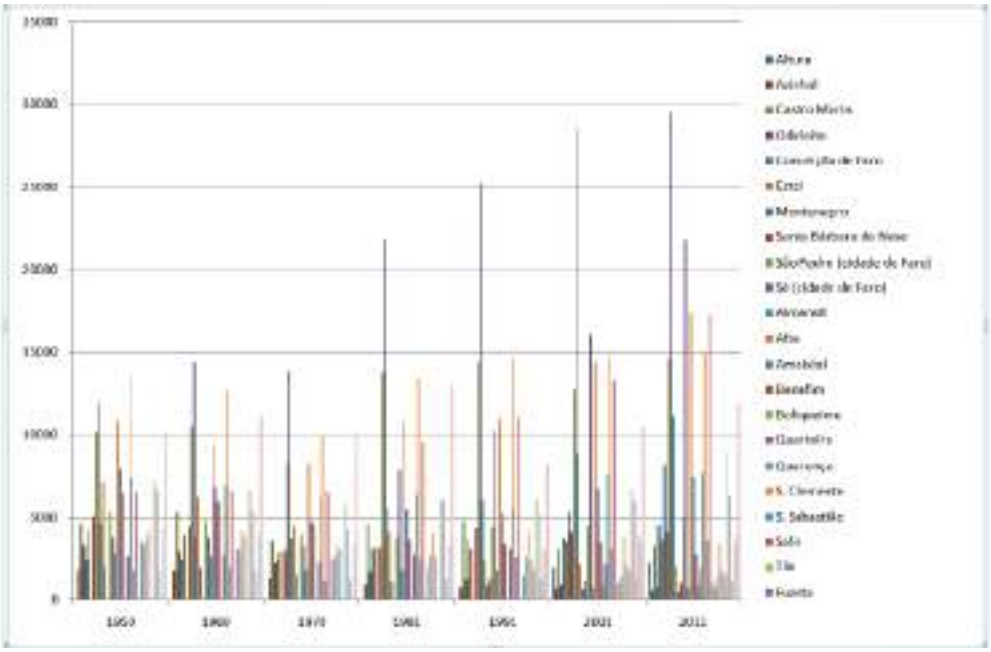

Figure 1. Evolution of the resident population by parish, between 1950 and 2011

Analyzing the distribution of the rate of population growth between 1991 and 2001 in the Algarve (Fig.2), it appears that the counties have very large variations.

Figure2. Population growth rate between 1991 and 2001 of the Algarve, by municipality

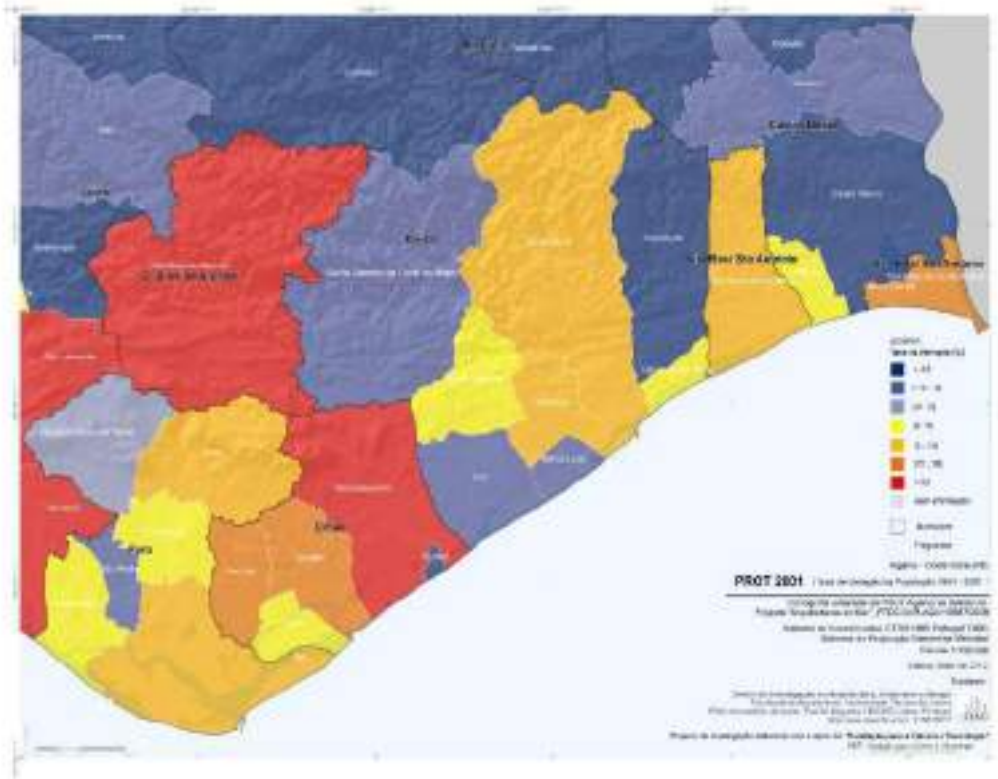

Figure 3. Population growth rate between 1991 and 2001 , by parish

This characteristic is explained by the configuration of the municipalities that include the littoral areas as well as the inner rural ones.
In this decade some areas further away from the coast line already show a growing pressure of construction.

When we analyze on a more detailed scale (Fig.3) we verify that inside the same municipality it's the littoral parishes that show a stronger growth.
Within the studied area, some littoral parishes don't show great demographic dynamic, keeping population densities relatively weak compared to the region average.

3.2 Evolution and distribution of the dwellings

The evolution of the dwellings show another geography.
One of the characteristics of the touristic activities is the need to dwell seasonally an elevated number of persons. This process can be achieved with the use of hotels, and the possibility of maximizing its utilization or, as in the case study, building apartments that are used in short periods of time during the year.

When we analyze the evolution of the data since 1960 we verify that the growth started on a slow note (Fig.4).
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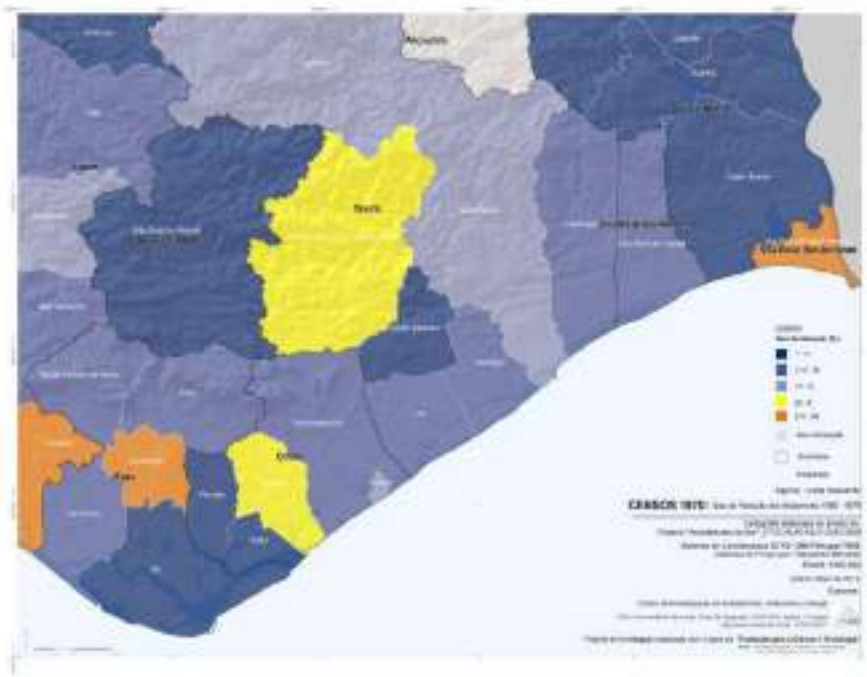

Figure 4. Growth rate of households between 1960 e1970, by parish

In the decade of 1960 the growth of dwellings was still quite weak, tourism was in its starting in this area of Algarve, only in some parishes belonging to cities like Olhão and V.R. Santo António.

But in the decade of 1980 the evolution of the resident population and the dwellings was quite different with a general increase of the population but a much greater increase of the dwellings.

In the map with the situation in 2001(Fig.5) the littoral parishes show densities of dwellings much greater when compared with the average of the region.

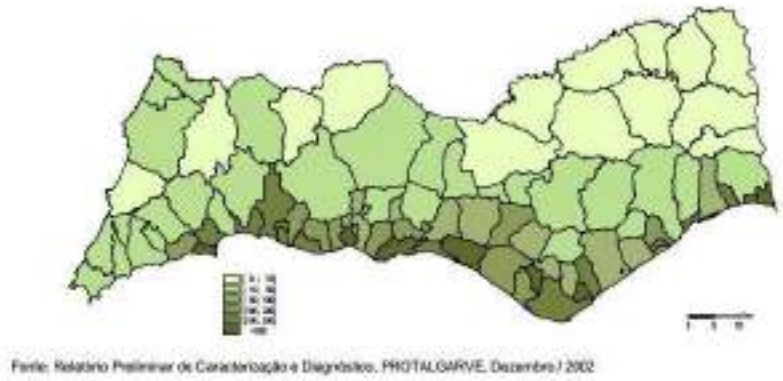

Figure 5 Number of dwellings per km2, by parish (2001)

When we analyze the relationship between the types of occupation of the dwellings (Fig.6) we note that the weight of the seasonal use is quite high in the peripheral areas, but less relevant in the area of study.

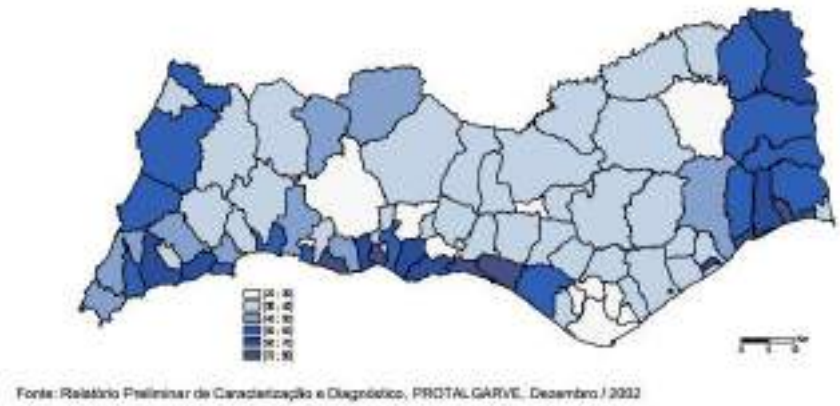

Figure 6. Percentage of housing occupancy seasonal / secondary and vague in total households, by parish (2001)

Comparing the rates of growth of the dwellings in the decades of 1981-1991(Table1) and 2001-2011(Fig7)., we verify the slowing of the construction

in some parishes and the increase in the coastal parishes, namely in those with smaller coastal fronts.

Table 1. Comparison between the rate of change of the population and the dwellings 1981 – 1991

		1981-1991	
Concelhos	Freguesias	Popul.	Aloj
Castro Marin	Castro Marin	3	34
	São Pedro (cidade de Faro)		19
Faro	Sé (cidade de Faro)	4	30
	Almansil	14	46
Loulé	Quarteira	8	68
	Fuzeta	23	40
Olhão	Moncarapacho	9	-1
	Olhão	-17	7
	Pechão	9	15
	Quelfes	2	36
	Luz de Tavira	14	20
Tavira	Santa Maria	0	25
	Santiago	-15	6
V. R. St. Antonio	Vila Nova de Cacela	-10	19
	Vila Real de Santo António	-59	-17

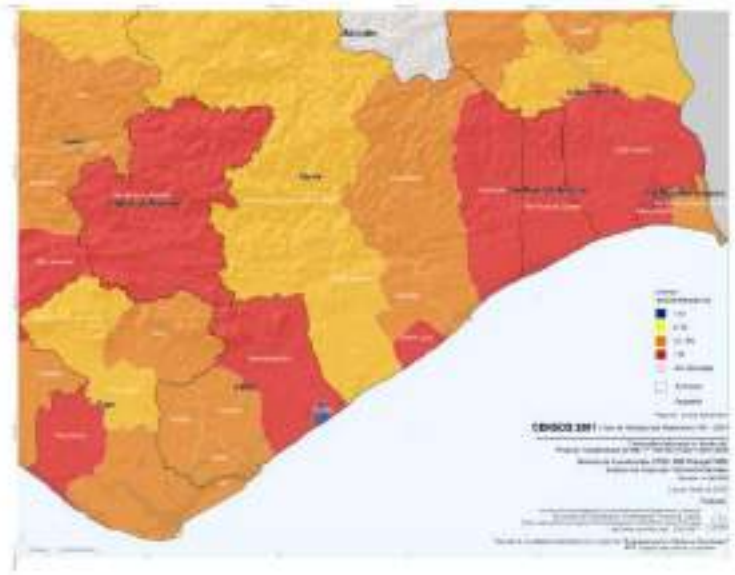

Figure 7. Growth rate of households between 1991 e 2001, by parish

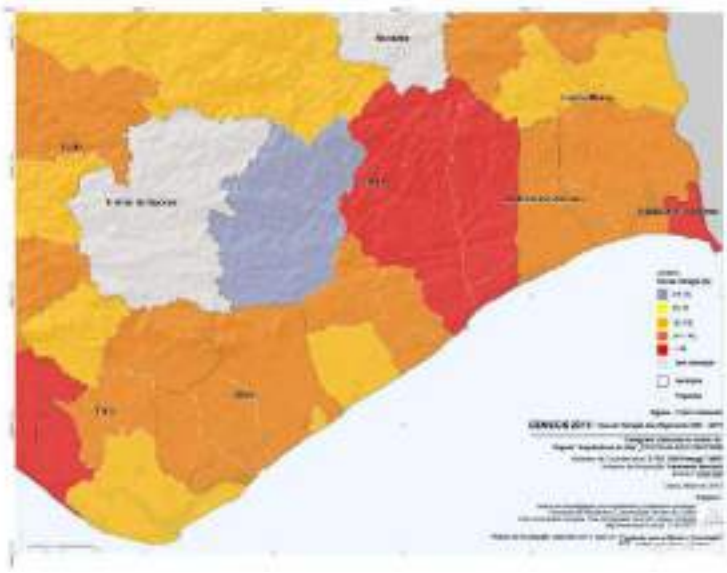

Figure 8. Growth rate of households between 2001 e2011, by parish

3.3 Morphologies

The morphology of the cities has suffered great changes with a significant growth towards north, with a significant seclusion from the coastal front that had been the economic engine, with the tourist
accommodation, occupying former agricultural areas now abandoned (Fig. 9 and 10)

Figure 9. Quarteira Area

Figure 10. Olhão Area

3.4 Results

From this presentation we note that the evolution of the population has not been uniform with the parishes of Fuzeta, Luz de Tavira, Santa Luzia and Monte Gordo a decrease of the resident population in the decade of 2001 corresponding to a significant increase of the dwellings (Fig 11).

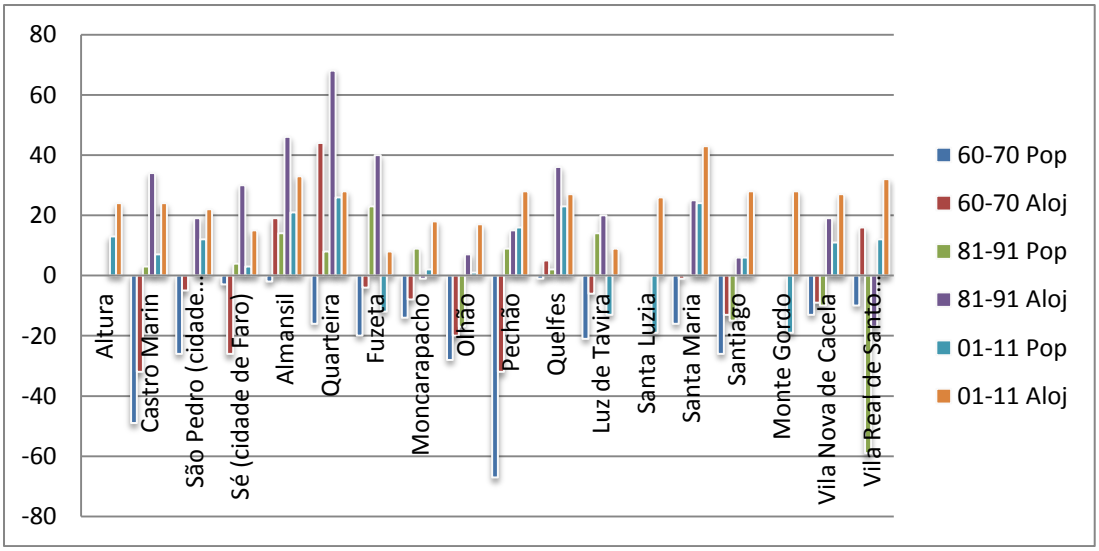

Figure 11. Comparison of rates of change of population and housing, by parish

4. Conclusions

The littoral cities went through an urban behavior, making them more and more unsustainable, when opting for a growth of the dwellings related to seasonal uses.

Littoral areas are being occupied through a process of filing from the coast line towards the interior, in a mostly continuous way.

Its lack of sustainability is also shown by the occupation of inner areas that, considering the population that seeks them because of the existence of beaches, promote the use of individual transportation with the underlying parking problems close to the beaches.

In the Sotavento Algarvio we can consider a new paradigm of urban growth, where the actors are the sea and the beaches and the growth occurs towards the interior in a process of diffusion, quite uninteresting under a perspective of urban sustainability.

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THE EVOLUTION OF THE CONCEPT OF PUBLIC PARTICIPATION IN HERITAGE PLANNING
WITH PARTICULAR FOCOUS ON ICOMOS CHARTERS AND UNESCO OPERATIONAL GUIDELINES

Mojgan Rasouli[1], Dr.Luna Khirfan[2]

Abstract

This paper traces the evolution of public participation in the debates on heritage planning in international charters especially, those that pertain to World Heritage such as ICOMOS charters, the UNESCO Convention on World Heritage, and the various iterations of the Convention's Operational Guidelines.
Public participation has been debated in the planning literature and practice since Paul Davidoff's 1965 landmark article "Advocacy and Pluralism in Planning". Nevertheless, it took over twenty years for the concept of public participation to appear in any of the ICOMOS International charters, and specifically, until 1987 when the Charter of the Conservation of Historic Towns and Urban Areas, also known as the Washington Charter 1987, was first made public. Likewise, the documents issued by UNESCO regarding World Heritage did not, that is, until the late 1980s, address local communities, their representation, or their engagement.
Adopting a longitudinal study this article traces the unfolding of the concept of public participation and its development throughout the decades in the ICOMOS International Charters and the UNESCO Convention and Operational Guidelines on World Heritage. By framing how public participation first developed in the theory and practice of urban and regional planning, this article investigates the public participation introduction and then application in the field of international heritage.
Through this longitudinal historic analysis, this article reveals that the international heritage planning has lagged behind other aspects of urban and regional planning in terms of community engagement and public participation.

Keywords: Public participation, Collaboration, ICOMOS Charters, UNESCO Convention, Operational Guidelines, World heritage.

1. Introduction

Public participation has been debated in the planning literature and practice since Paul Davidoff's (1965) landmark article "Advocacy and Pluralism in Planning" (Davidoff, 1965; Checkoway, 1994). This article seemed to have opened a Pandora's

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Box on the debates of community involvement in the decision-making process {Checkoway, 1994 #529}. Nevertheless, it took over twenty years for the concept of public participation to appear in any of the ICOMOS International Charters, and specifically, until 1987 when the Charter of the Conservation of Historic Towns and Urban Areas, also known as the Washington Charter 1987, was first made public. During that period, there were indeed intermittent mentions of local engagement in some of the national and supra-national documents such as a brief mention in the European Charter of Architectural Heritage, which in 1975 stated that "The public should be properly informed because citizens are entitled to participate in decisions affecting their environment" (The Council of Europe, 1975 , Article 9). A long gap exists until in 1983 ICOMOS Canada introduced the need for "consensus" that involves "public participation" (Canada, 1983, B-Framework).

Likewise, the documents issued by UNESCO regarding World Heritage did not, that is, until the late 1980s, address local communities, their representation, or their engagement in the international heritage planning process.

Through a longitudinal comparative analysis of the urban planning literature, the Operational Guidelines issued by UNESCO's World Heritage Centre and the Charters issued by ICOMOS International, this paper investigates the evolution of the concept of public participation in World Heritage Planning. Spatially, reveals that the participatory planning process lags behind the urban planning theory and practice in general and heritage planning in particular.

2. Research Methodology

This paper adopts a longitudinal study that compares the theories and practices of public participation in urban and regional planning on the one hand, and the 1972 UNESCO Convention Concerning the Protection of the World Cultural and Natural Heritage (herewith referred to as the Convention), its Operational Guidelines, and the ICOMOS International Charters on the other hand. In order to facilitate this comparison, we conduct a review of the urban planning literature that traces the unfolding of the concept of public participation in this field and its development throughout the decades. Likewise, we analyze the content of the UNESCO Convention and all the subsequent Operational Guidelines as well as all the internationally and nationally ICOMOS Charters and documents.

3. Engagement and public participation in planning literature

The notion of public participation emerged in the urban planning dialogue in the mid 1960s when Paul Davidoff (1965) first introduced the advocacy planning theory. While this theory did not call for active participation per se, it nonetheless drew on the legal profession and called for the planner to assume an advocate's role – one who represents, akin to a lawyer, his constituencies. Davidoff's therefore, was a theory that focused on the representation of the interests of those constituencies who are affected by the planning decisions.

Notwithstanding his view on advocacy, Davidoff emphasizes transparency and participation 'The right course of action is always a matter of choice, never of fact […] great care must be taken that choices remain in the area of public view and participation' (Davidoff, 1965, p.332). David Godschalk and William Mills (Godschalk, 1966) introduced what they dubbed "collaborative planning", which similar to Davidoff's drew on another discipline, albeit marketing in this case.

According to Godschalk and Mills, marketing experts are "skilled counsellors" who help consumers in defining their desires and hence, these experts work "with rather than for" the subcommunities (Godschalk, 1966, p.86). Accordingly, representation occurs either by electing representatives from the different pools of subcommunities or by directly involving all the subcommunities to represent themselves (for example by holding a public meeting in a city hall). In that, collaborative planning differs from advocacy planning in its definition of representation, whereas it shifts this definition from "who is representing" to "what is being represented". In collaborative planning thus, the representation becomes less about identifying a representative who may advocate for stakeholders' needs, and more about representing all the interests and the needs of all stakeholders. Accordingly, representation in collaborative planning includes, in addition to the identities, the needs, interests and choices of all subcommunities (Godschalk, 1966). In contrast to this approach that emphasized those influenced by planning decisions, Burke addressed citizen participation through the lens of the planning organization's needs and objectives (Burke, 1968). For Bruke (1968), in a democratic society, public participation becomes a matter of right, and accordingly, he identifies five roles/strategies: review and comment, consultation, advisory, shared decision-making and controlled decision-making.

Building on these notions, Sherry Arnstein (1969) reverts back to the constituencies instead of the institutions in her classic article "A Ladder of Citizen Participation". She identifies three primary levels of participation: non-participation, tokenism, and citizen power whereas non-participation occurs when the planners employ manipulation and therapy in order to appease to their constituencies. In tokenism, planners resolve merely to informing, consultation, or to placation. Lastly, when planners create genuine partnerships with their constituencies, delegate power to them, or allow them to assume complete control over the planning process, then the participatory process reaches a level of citizen empowerment (Figure 1) (Arnstein, 1969).

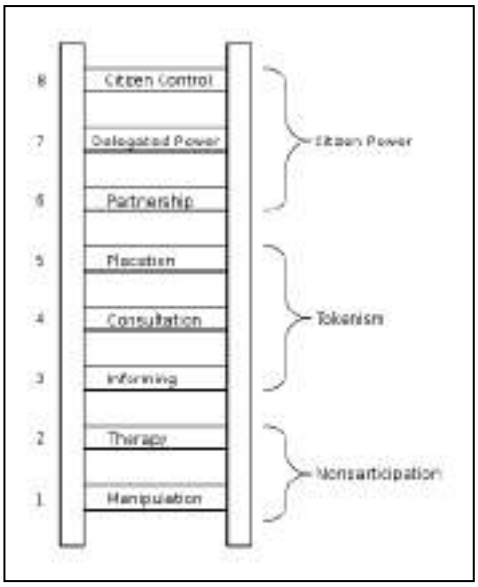

Figure1. Ladder of Public Participation, Arnstein (1969)

Although thorough, none of these debates discussed the timing per se. In other words, missing in these debates were the exact stages of public participation and their relationship to the planning and implementation processes. The notion of timing was first introduced by Nabeel Hamdi and Reinhard Goethert (Hamdi, 1997, p. 72) in their discussion of "the stages of projects and programmes". They propose five stages that commence with initiation during which the problems and needs are identified, and the basic goals, objectives, and scope are defined. Next, comes the planning stage where specific activities are identified including the budget and resources. This is followed by the design stage during which more technical details are developed and then the implementation stage, which witnesses the execution of the various aspects of the plan. Lastly, the maintenance stage incorporates the long-term, on-going repair and upkeep of what was implemented (Hamdi, 1997, p.72).

The next section investigates the transfer of these notions into the debates on World Heritage and pays particular attention to how and when are these notions introduced.

4. Public participation in World Heritage conservation principles

One of the significant achievements for the heritage planning process is the development of conservation principles or guidelines at the international level. The International organizations such as the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the International Council on Monuments and Sites (ICOMOS) initiated these principles or guidelines.

Specify that the ICOMOS Venice charter led to the establishment of the World Heritage principle and eventually, to the UNESCO Convention. Then define the relationship between ICOMOS and UNESCO –the former is an advisory body to the latter, and the latter oversees all matters related to World Heritage Sites. Also, in order to interpret the Convention on World Heritage, UNESCO employs the expertise of ICOMOS, among others to develop what came to be known as the Operational Guidelines, and which have been continuously updated since 1977. Also, ICOMOS continues to design charters to establish international standards with regards to the management of heritage resources around the world. Some of these are adopted by the general assembly of ICOMOS, while are charters adopted by the national committees of ICOMOS, ICOMOS also endorses resolutions and declarations, and lastly other international standards (refer to ICOMOS website: http://www.icomos.org/index.php/en/charters-and-texts).

Given its leadership role in World Heritage, we begin the following review with the UNESCO documents, particularly, the UNESCO Convention and the subsequent operational guidelines that interpret it. The review then continues with the ICOMOS charters, both international and national, and all the documents that it endorses.

4.1 Public participation in UNESCO Convention and Operational Guidelines

To begin with, the 1972 Convention places the emphasis on the international community to unite in the protection and management of world heritage. Naturally, this macro perspective at the international level overlooked the micro perspective of the local communities at World Heritage Sites. A detailed review of the Convention reveals that to this day, the text lacks any mention of the local communities at the micro level with the exception of a brief mention of how World Heritage Sites relate to the daily lives of the local communities: “to adopt a general policy which aims to give the cultural and natural heritage a function in the life of the community and to integrate the protection of that heritage into comprehensive planning programmes” (UNESCO, 1972, Article 5, a).

Likewise, it was not until 1987 that the Operational Guidelines mention anything about the micro level for the first time. This mention highlights ‘informing’ the local inhabitants about the decisions regarding the conservation and protection measures for nearby World Heritage Sites as essential: “…. Informed awareness on the part of the population concerned, without whose active participation any conservation scheme would be impractical, is also essential” (UNESCO, 1987, C, Article 31).

Immediately the following year, the Operational Guidelines maintained this article. However, simultaneously the 1988 revision included an additional article, that instead of increasing the public engagement in the inscription process actually called for secrecy and withholding information about the inscription: “In all cases so as to maintain the objectivity of the evaluation process and to avoid possible embarrassment to those concerned, States Parties should refrain from giving undue

publicity to the fact that a property has been nominated for inscription pending the final decision of the Committee on the nomination in question" (UNESCO, 1988, B, Article 14).

Although the 1988 Operational Guidelines were revised four years later, the 1992 revision maintained the same stipulation regarding 'informing' the 'concerned populations' and also 'refraining from undue publicity' (UNESCO, 1992, B, Article 14).

It was not until the Operational Guidelines of 1994 that a significant development with regards to local engagement was incorporated. In addition to their 'informed awareness' (UNESCO, 1994 , C, Article 34), the 'active participation' of 'concerned populations' is mentioned for the first time and especially, with regards to the conservation schemes: "In all cases, so as to maintain the objectivity of the evaluation process and to avoid possible embarrassment to those concerned, states Parties should refrain from giving undue publicity to the fact that a property has been nominated for inscription pending the final decision of the committee on the nomination in question. Participation of local people in the nomination process is essential to make them feel a shared responsibility with the State Party in the maintenance of the site, but should not prejudice future decision-making by the committee" (UNESCO, 1994, B, Article 14).

Another significant amendment in the 1994 Operational Guidelines is that of introducing the concepts of "collaboration" with and "local communities" instead of "concerned populations" for the very first time in any of the UNESCO documents on World Heritage: "... It is important that due attention be paid to the full range of values represented in the landscape, both cultural and natural. The nominations should be prepared in **collaboration** with and the **full approval** of local communities" (UNESCO, 1994, C, Article 41, emphasis ours).

Once embraced, the concept of local involvement began to appear more conspicuously in the subsequent iterations of the Operational Guidelines. During 1995, a revision was proposed for the Operational Guidelines in which the role of the local people in the nomination process was revised to state that the "Participation of local people in the nomination process is essential". The rationale however, is not to include them in the decision-making process per se, but in order "to make them feel a shared responsibility with the State Party in the maintenance of the site". The same articles goes on to confirm that such participation "should not prejudice future decision-making by the Committee" and thus places limitations on the participatory component suggested earlier (UNESCO, 1995, Article A.2.1).

These amendments remained in effect for the following decade without any changes until 2005 when the revised Operational Guidelines finally requested from State Parties to ensure the participation of all stakeholders at the micro level: "States Parties to the Convention are encouraged to ensure the participation of a wide variety of stakeholders, including site managers, local and regional governments, local

communities, non-governmental organizations (NGOs) and other interested parties and partners in the identification, nomination and protection of World Heritage properties" (UNESCO, 2005, I.C. Article 12).

For the first time, the Operational Guidelines stipulate the need for micro level participation from the outset, that is, at the nomination phase: "Participation of local people in the nomination process is essential to enable them to have a shared responsibility with the State Party in the maintenance of the property. States Parties are encouraged to prepare nominations with the participation of a wide variety of stakeholders, including site managers, local and regional governments, local communities, NGOs and other interested parties." (UNESCO, 2005, II.F. Article 123).

The 2005 Operational Guidelines did not stop at this, but also underscored the participation of local communities at the micro level in the protection and conservation of World Heritage: "Partners in the protection and conservation of World Heritage can be those individuals and other stakeholders, especially local communities, governmental, nongovernmental and private organizations and owners who have an interest and involvement in the conservation and management of a World Heritage property" (UNESCO, 2005, I.I. Article 40).

For the first time, the Operational Guidelines elaborate on the micro level public participation of local communities in more than one article, and within several tasks related to World Heritage. For example, there are article dedicated to the participation of local communities in the preparation of the Tentative Lists, which stands in stark contrast to the 1988 Operational Guidelines that advocated secrecy and withholding information at the earlier stages. Furthermore, the 2005 Operational Guidelines emphasize the micro level participation of local communities in the protection and the management of inscribed World Heritage Sites (UNESCO, 2005, II.F. Articles 111, 117).

The subsequent revisions in 2008 and 2011 maintained the same changes from 2005 regarding the participation of local communities at the micro level.

4.2 Public participation in ICOMOS Documents

The International Council on Monuments and Sites (ICOMOS) documents exist both at the international and the national levels. As mentioned earlier, the ICOMOS documents may be classified into three major categories namely, the ICOMOS international charters as well as the national charters and the various international resolutions and standards that are endorsed by ICOMOS (Table 1).

Table 1. ICOMOS Documents

International ICOMOS Charters	ICOMOS Resolutions / Standards	National ICOMOS Charters
Charter for the Conservation of Historic Towns and Urban Areas, (The Washington Charter) ICOMOS, 1987.	European Charter of the Architectural Heritage, Council of Europe, 1975.	Appleton Charter for the Protection and Enhancement of the Built Environment ICOMOS Canada, 1983.
Charter for the Protection and Management of the Archeological Heritage Sites, ICOMOS 1990.	Resolution of the International Symposium on the conservation of smaller Historic Towns, at the 4th ICOMOS General Assembly, 1975.	The Australia ICOMOS Charter of the Conservation of Places of Cultural Significance, (The Burra Charter), 1999.
International Cultural Tourism Charter, Managing Tourism at Places of Heritage Significance, ICOMOS 1999.	Guidelines for Education and Training in the Conservation of Monuments, Ensembles and Sites, ICOMOS, 1993.	-
Charter on the Built Vernacular Heritage, ICOMOS, 1999.	Nara Document on Authenticity, Japan and UNESCO, 1994.	-
Charter on Cultural Routes ICOMOS, 2008	The Declaration of San Antonio, 1996.	-
Charters on the Principles for the Conservation of Industrial Heritage Sites, ICOMOS, 2011	Principles for the Recording of Monuments, Groups of Buildings and Sites, ICOMOS, 1996.	-
Valetta Principles for the Safeguarding and Management of Historic Cities, Towns and Urban Areas, ICOMOS, 2011	-	-

Beginning with the ICOMOS International Charters, it is not surprising to observe that the Venice Charter, which was adopted in 1964, lacks any mention of micro level participation with the local communities. In fact, the first time that such a notion is mentioned in these international documents appears in the Charter for the Conservation of Historic Towns and Urban Areas, known as the Washington Charter 1987. This charter considered the participation of the residents of historic towns important for the success of “heritage conservation programs”. The Washington Charter even proposed the need for “a general information program” that ensures micro level public involvement, and went to the extent of encouraging school children to participate in these programs (ICOMOS, 1987, Articles 3, 15).

By 1990, the Charter for the Protection and Management of the Archaeological Heritage Sites introduced the notion of public participation as part of the conservation and management policies for heritage sites: “Active participation by the general public must form part of policies for the protection of the archaeological heritage” (ICOMOS, 1990, Article 2).

Interestingly, as early as 1990, this charter firmly advocates local engagement in all aspects related to cultural heritage “Local commitment and participation should be actively sought and encouraged”. It elaborates the significance of such participation for the continuous care of heritage sites “as a means of promoting the maintenance of the archaeological heritage.” Most importantly, this charter acknowledges the micro level links between local communities and their heritage “This principle is especially important when dealing with the heritage of indigenous peoples or local cultural groups” and even empowers local communities to assume ownership of their cultural heritage “In some cases it may be appropriate to entrust responsibility for the protection and management of sites and monuments to indigenous peoples” (ICOMOS, 1990, Article 6).

Even the ICOMOS International Cultural Tourism Charter of 1999 acknowledges the need for “The involvement and co-operation of local and/or indigenous community representatives” among the wide array of other stakeholders in the preparation of plans to “achieve a sustainable tourism industry and enhance the protection of heritage resources for future generations” (ICOMOS, 1999b). This charter therefore encourages the involvement of “host communities and indigenous people” in the management of tourism especially, in the cases when “conflicting interests, responsibilities, and obligations” exist at cultural heritage sites (ICOMOS, 1999b).

Subsequent charters over the next few years address technical aspects of cultural heritage such as structures, timbers, and wall paintings but nevertheless some of them like the 1999 ICOMOS Charter on the Built Vernacular Heritage; briefly mentions the importance of community involvement for the protection and conservation of vernacular heritage (ICOMOS, 1999c).

Local engagement only appears more conspicuously and forcefully in the subsequent charters albeit using different terminology. The 2008 ICOMOS Charter on Cultural Routes or the more recent 2011 ICOMOS Charters on the Principles for the Conservation of Industrial Heritage Sites and the Valetta Principles for the Safeguarding and Management of Historic Cities, Towns and Urban Areas all refer to public participation (ICOMOS, 2008a; ICOMOS, 2011a; ICOMOS, 2011b). However, the 2008 ICOMOS Charter on the Interpretation and Presentation of Cultural Heritage Sites refers to ‘inclusiveness’ (ICOMOS, 2008b, Article 6).

Notably, some of the national ICOMOS charters preceded the international ICOMOS charters in addressing micro level participation. In fact, as early as 1983, the term “public participation” appeared in ICOMOS Canada’s Appleton Charter for the Protection and Enhancement of the Built Environment. This charter refers to

"Legitimate consensus" that "will involve public participation" (ICOMOS Canada, 1983, B). No other national ICOMOS charters matched ICOMOS Canada's approach toward local engagement until the latest 1999 version of Australia ICOMOS' Charter for Places of Cultural Significance, also known as the Burra Charter. The first version of this charter, which dates to 1979, as well as the 1981 and 1988 iterations lack any hint at participatory processes. The 1999 revision however, does recognize "the need to involve people in the decision-making process, particularly those [decisions] that have strong associations with a place" (ICOMOS Australia, 1999a, Background). Moreover, this charter clarifies further that: "Conservation, interpretation and management of a place should provide for the participation of people for whom the place has special associations and meanings, or who have social, spiritual or other cultural responsibilities for the place." (ICOMOS Australia, 1999a, Article 12).

A review of the other resolutions and standards endorsed by ICOMOS reveals that some of them introduced the micro level participatory component relatively early in the cultural heritage debate. More specifically, as early as 1975, the Council of Europe in its European Charter of the Architectural Heritage went beyond 'informing' local communities about decisions regarding cultural heritage, to actually engaging them in the decision-making process: "The public should be properly informed because citizens are entitled to participate in decisions affecting their environment…" (The Council of Europe, 1975, Article 9).

Simultaneously, the General Assembly of ICOMOS reached a set of resolutions at its 1975 International Symposium on the Conservation of Smaller Historic Towns, which was held in Bruges among which a mere mention for the need to encourage local preservation initiatives appears (ICOMOS, 1975, Article 6). By 1993, the Guidelines for Education and Training in the Conservation of Monuments, Ensembles and Sites recommend an understanding of the local community's needs and encourages working with locals as an appropriate strategy for resolving any conflicts that may ensue from conservation practices (ICOMOS, 1993).

Although the 1994 Nara Document on Authenticity requires community consensus in attributing heritage values in one of its appendixes, the 1996 Declaration of San Antonio however, states that the Nara Document excludes the local community from the heritage identification process (ICOMOS, 1994; ICOMOS, 1996). Adopting a North American perspective, the participants in the San Antonio Symposium called for a stronger involvement of the local communities in all the processes of heritage management and especially, at the outset during the definition of cultural heritage and the identification of its significance (ICOMOS, 1996). Likewise, the Principles for the Recording of Monuments, Groups of Buildings and Sites from 1996 also recommend the consideration of local interests and their involvement in the early stages of the documentation of cultural heritage, which eventually leads to decisions about its conservation (ICOMOS, 1996b).

5. Results: A longitudinal comparison of the evolution of public participation in ICOMOS and UNESCO documents

Adopting a longitudinal study this article traces the unfolding concept of public participation and its development throughout the decades in the UNESCO Convention and Operational Guidelines on World Heritage and the ICOMOS International, National Charters and documents.

While the UNESCO Convention was written in 1972, a few years before that (1960's), the debate on public engagement in urban planning had emerged forcefully. Between 1965 and 1970 several theories on public engagement emerged from advocacy, to collaborative to strategic to Arnstein's levels. However, the UNESCO and the ICOMOS documents lag behind in these debates on local engagement (Figure 2).

In other words, for example, while the advocacy planning and following it the collaborative planning, level of participation theories introduced in late 1960s the Washington Charter in 1987 as an International Charter, more than twenty years later, mentions public participation and emphasizes it, and also the UNESCO Operational Guidelines that were contemporary to it, do not follow up on the participation theories, so a gap or even a recession at the international heritage planning documents is obvious in this period (between 1965 and 1987) (Figure 2).

6. Conclusion

The heritage planning debates needs to adapt and incorporate the established principles of participatory and inclusive planning. The analysis reveals that the international heritage debate addresses the timing of participation, especially in the ICOMOS documents and resolutions that discuss the early stages of recording and documenting. However, this analysis also reveals that the international heritage debate still lags behind other planning practices in terms of addressing the levels of participation and the representation of stakeholders. Therefore, this study reveals the need for further studies that lead to models and frameworks that account for the various levels of participation and the different forms of stakeholder representation at all the stages of the heritage management process.

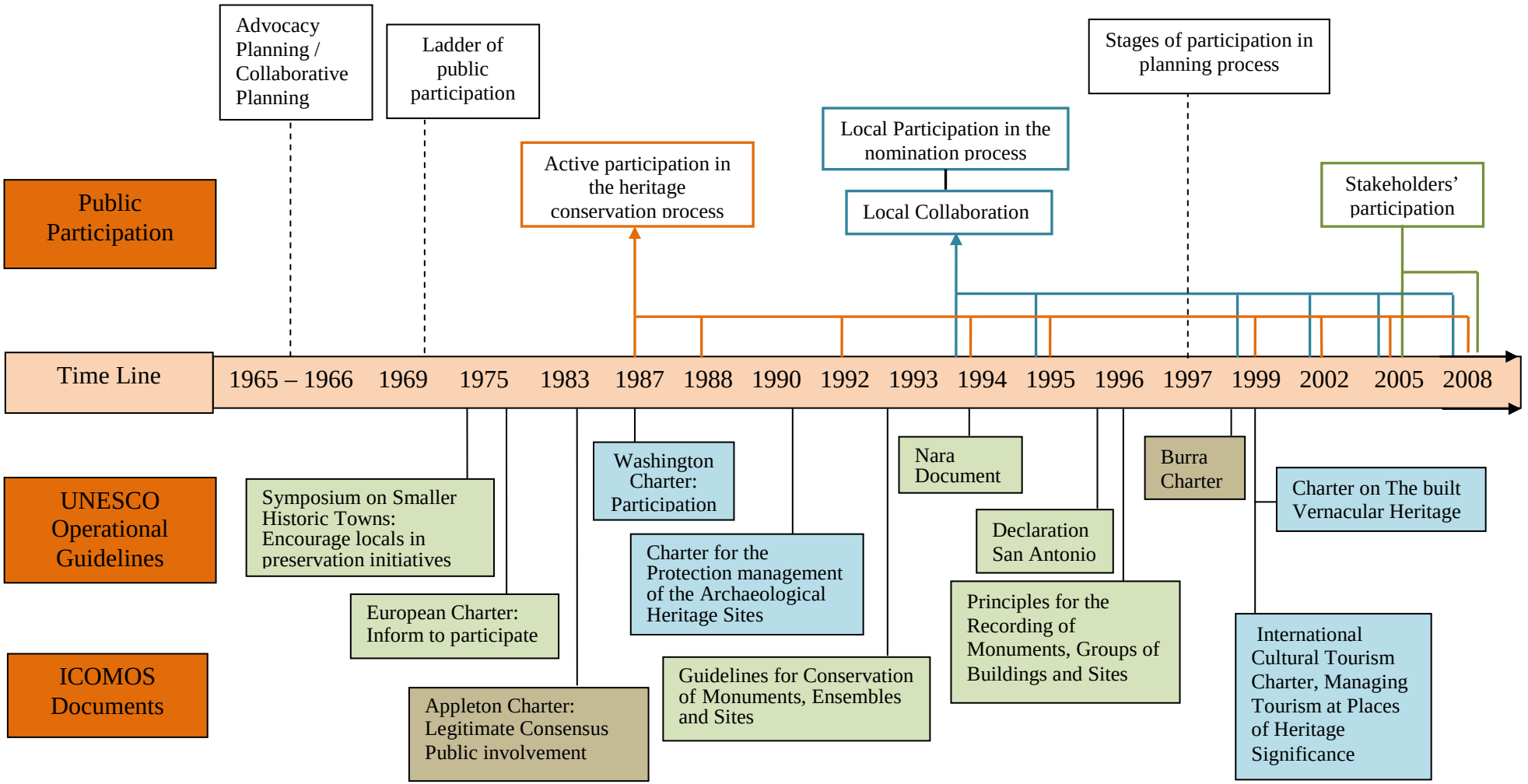

Figure 2. Public Participation, UNESCO and ICOMOS documents in a TIME LINE

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THE COMMUNITY-BASED STUDIO: PARTICIPATORY PLANNING AND URBAN DESIGN WITH STUDENTS AND COMMUNITIES IN CALIFORNIA

ABSTRACT

Originating in the 1960's as a new pedagogical approach, the community-based studio (CBS) offers students the distinct advantage of providing a stage for real-world planning and urban design. While the advantages and challenges of CBS have been discussed in existing literature, the operational steps to maximize the advantages and avoid challenges are useful for faculty interested in CBS. In this paper, three CBS models based on three recent cases are developed. Their advantages and disadvantages in relation to studio learning outcomes are discussed. Building on this discussion, the paper presents a conceptual framework and operational steps for future CBS experiences.

INTRODUCTION

The growing role of planners in interactive, multi-organizational decision-making has led in the past two decades to an ever-increasing need for teaching practices that emphasize interactive and experiential learning. City planning and urban design programs responded to this need by developing in-class simulations of real decision-making situations or "settings" (Christensen, 1993). As an extension, beyond simulations, the Community Based Studio (CBS) has fast gained prominence in planning and design fields (Dorgan, 2008). In 2000, Forsyth, Lu and McGirr's survey found seventeen university-based outreach centers[1] practicing urban design.

Originated in the 1960's as a new pedagogical approach (Sanoff, 2007), the community-based studio provides a distinct advantage by forming the stage for real-world situations. According to Schweitzer et.al.'s classification (2008), CBS covers "problem-based learning" (Shepherd and Cosgrif, 1998), and "service learning" (Roakes and Norris-Tirrell, 2000). A wide body of literature has discussed the advantages of community-based studios, while more recently the number of pieces pointing at potential disadvantages and challenges associated with CBS have increased. Literature in this area, however, could be more explicit in providing methods to avoid potential challenges for faculty interested in pursuing CBS. As Forsyth et al (2000) suggest, the schools pursuing CBS tend to be independent of each other, and efforts tend to be scattered among faculty interested in the model. A larger scale effort to identify methods to avoid challenges in the community based studio is needed, if it is to be further refined so as to be more clearly operationalized.

[1] University-based outreach in planning and design, particularly CBS, differs from Community Design Centers (CDCs), which are often staffed by professionals - since students do the work, for the purpose of learning.

Dorgan's paper (2008) provides an excellent conceptual framework for conducting community based studios. The framework offers four main principles: transparency, capacity, flexibility, and accountability. *Transparency* refers to every participant in the process understanding the definition of the work to be done, and who is doing the work. Participants must have a *capacity* to fulfill their tasks. *Flexibility* is needed to coordinate the studio schedule, project schedule and the academic schedule. Finally, every effort should be made to make sure that the studio work is as close as possible to professional standards, and the class achieves its learning objectives to insure *accountability*.

To date, Dorgan's (2008) framework provides the most comprehensive look into the CBS from an operational point of view. However, this framework stays at the conceptual level; the author does not provide concrete techniques to follow this framework. The objective of this paper is to take this discussion one step further, and operationalize Dorgan's (2008) framework by developing recommendations to avoid potential disadvantages and challenges in the community-based studio process while making the most out of its potential advantages.

This paper presents three CBS models, their implications and a CBS conceptual framework. The intent is to provide a reference set for faculty interested in pursuing CBS, and to fuel further discussion with faculty currently conducting community based studios[2].

1. Advantages, Disadvantages and Challenges of the Community-based Studio

1.1. Advantages

There is a large body of literature discussing the advantages of the community-based studio, substantiating the increasing rate by which the model has been gaining prominence. These advantages can be summarized under five main groups:

1. cognitive skill building in students,
2. the learning process and learning efficiency of students,
3. the professional development of students,
4. the empowerment of students in the educational institution,
5. providing benefits to the community.

1.1.1. Cognitive development

The CBS presents a learning process in which planning and design concepts can be applied in practical means. Shepherd and Cosgrif (1998), for example, argue that problem-based learning helps students learn to practice. Roakes and Norris-Tirrell

[2] The cases introduced in this paper occur in a small, medium and a large city. These scales do not affect the basic learning experiences, but demonstrate that the three models can be applied in any urban setting.

(2000) underline that this process can help students develop skills and competence in a particular area by converting what they have learned within a theoretical framework into application. According to Sanoff (2007), the community based learning process helps the student link all relevant information related to the problem, people and place. The CBS therefore helps develop cognitive skills by allowing the students to identify and respond to problems by integrating the knowledge they have gathered at the conceptual level.

A good example is the very notion of public participation in planning and design. Planning students receive information about community participation in many contemporary curricula. Developing and practicing skills in the area is a different story (Friedmann, 1996). As Arnstein's (1969), Wulz's (1984), Carp's (2004), and Toker's (2012) work indicates in the history of community design, participatory planning and design can be practiced in very different ways, ranging from manipulation to collaborative decision-making. Through CBS, students experience the multiple levels of community participation first-hand, an experience that cannot be provided by assignments or readings.

1.1.2. Knowledge retention

CBS supports students' retention of knowledge. According to Sanoff, "what is learned is likely to be available for use if it is learned in a situation much like that in which it is to be used and immediately preceding the time when it is needed (Sanoff 2007, pp.3)." Knowledge retention in CBS is supported by CBS's capability of making knowledge more memorable and providing motivation for learning actively in a real-world setting (Shepherd and Cosgrif, 1998). Another factor that contributes to knowledge retention in CBS is its capability of bringing the complexity and uncertainty encountered in practical situations into the studio (Roakes and Norris-Tirrell, 2000). This promotes reflective observation and active experimentation, therefore learning by actively responding to a problem.

1.1.3. Professional development

Dalton (2008) identifies a continuum of professional planning roles in the field. This study, which is based on the largest sample selection to date, indicates that professional planners focus on a wide array of activities, and are employed in general purpose governments, special purpose governments, private firms, nonprofit organizations, or universities. Their work activities range from policymaking to administrative, interactive, analytical and political tasks. CBS provides an environment where the students can work on and interrelate these multiple facets of the profession.

A particularly critical skill in the planning profession is communication (Friedmann, 1996). Lusk and Kantrowitz (1990) point at this, and underline that many students, after extensive periods of classroom and studio education, are still challenged by the communication skills required by the profession. This still appears to be the case.

CBS creates an environment where complex communication skills (i.e. verbal, written, visual) can be developed simultaneously. Shepherd and Cosgrif (1998) underline the similarity between CBS and professional practice, in which individuals have to work on their own or in a group setting, therefore thinking about the implications of one's actions. This also helps the student to self-evaluate actions and outcomes, rather than being evaluated by a series of abstract external measurements (Sanoff, 2007). CBS also contributes to the professional development of students through promoting the feeling of responsibility to peers, professionals and the community. Working with a community promotes the feeling of responsibility to the community and the profession (Roakes and Norris-Tirrell, 2000).

1.1.4. Student empowerment

CBS empowers the student by disintegrating the conventional hierarchy in which the teacher is the evaluator and the student is the learner. The teacher assumes a coaching role, helping the students in identifying problems and resources necessary to move towards solutions (Sanoff, 2007). Sanoff emphasizes that in this process "the learner becomes involved in all decision-making processes related to education (2007, pp.3)", and thus is empowered.

1.1.5. Community benefits

Finally, CBS has proven advantageous to all stakeholders in the process, - students, educators and the communities involved. The teaching and learning processes are enhanced by the experience, and the communities eventually receive direct and indirect benefit (Roakes and Norris-Tirrell, 2000). For example, Harris (2004) has recently provided an in-depth account of how rural communities can benefit from service learning activities, in the context of rural northern New York.

1.2. Disadvantages and Challenges

While the advantages of CBS have been acknowledged in the existing literature, an increasing number of authors warn about potential problems the model can create for students, faculty and the community if precautions are not taken.

1.2.1. Potential problems for students

Due to the outreach-based, community oriented nature of CBS, communities that are selected for such projects are more likely to be economically disadvantaged, hence offering more limitations. Forsyth, Lu and McGirr (2000) warn that students may not favor these limitations, and may even question the benefits of working with such communities. Another potential problem may be the students' being intimidated by the range of problems and issues presented by the community. This may put unnecessary pressure on the basic learning objectives, such as learning time management and organization skills.

1.2.2. Potential problems for faculty

The biggest potential problem for faculty undertaking CBS projects is the high likelihood of the project creating additional tasks and hence an increased workload (Forsyth, Lu and McGirr, 2000). Contacting the community, doing preliminary outreach work, organization, and efforts on creating a correspondence between the class timeline and the project development timeline are examples of additional tasks that will appear in many CBS experiences.

1.2.3. Potential problems for the community

Dorgan (2008) warns that CBS may have a larger emphasis on communities' deficiencies rather than their assets. This may indeed be an issue since student involvement may create the perception that the community is incapable of recruiting, or affording, professional help. Related to this, Forsyth, Lu and McGirr (2000) warn that the pre-professional quality of student work may translate into lower quality products, eventually becoming a problem for the community. Perhaps the biggest issue, however, may be that the CBS may raise false hopes about solving significant problems (Forsyth, Lu and McGirr, 2000) in instances of poor execution (Dorgan, 2008). This is particularly risky if key individuals in the community recruit the academic institution but fail to display any examples of implementation.

2. Where does a CBS fit in a Community's Process? Three Models

Due to the variety of projects that CBS can address, it is very hard to develop specific guidelines to avoid the problems mentioned in the previous section. While Dorgan's 2008 framework (discussed in the introduction) is helpful in identifying specific action points to mitigate problems, the literature in the area predominantly provides case-specific actions, not intermediate steps in operationalizing the conceptual framework. The following sections provide specific steps to operationalize Dorgan's framework, by introducing CBS examples from California.

A typical studio planning process includes the following phases: existing conditions analysis (physical and social conditions in and around the project area), conceptual development (i.e. conceptual diagramming, early idea generation), land use decisions (i.e. residential, commercial and public), circulation (i.e. transportation, public transport, streetscaping), development of design guidelines or codes, development of illustrations about physical implications of the plan (i.e. 3D modeling, illustrative site plans, etc.). Depending on the learning objectives of the studio, infrastructure implications, implementation and phasing recommendations may be included (Figure 1). Working with a community adds a new layer of variables on top of the typical work process: outreach before community involvement, community involvement, analysis of collected information from the community, and feedback cycles between the studio and the community.

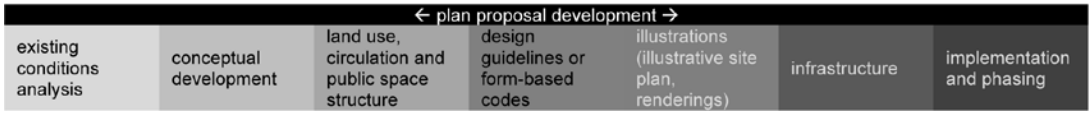

Figure 1. A typical planning process in the studio. Tasks beyond land use, circulation and public space structure depend on learning objectives and studio level.

The main question on the interaction between the studio and the community is about where the studio fits in the community's process. Faculty may consider three different models in which the CBS can fit in the process. Model 1 incorporates community involvement and planning within the studio's timeframe. Model 2 is based on providing findings from a recent community participation process conducted by faculty to the studio. Model 3 involves the teaming up of the studio with a local institution to develop an alternative proposal. Figure 2 identifies the models' components and allocates them into three time frames: pre-studio, during the studio and post-studio. In the three following subsections the advantages and disadvantages of each model will be discussed along with an examination of three cases.

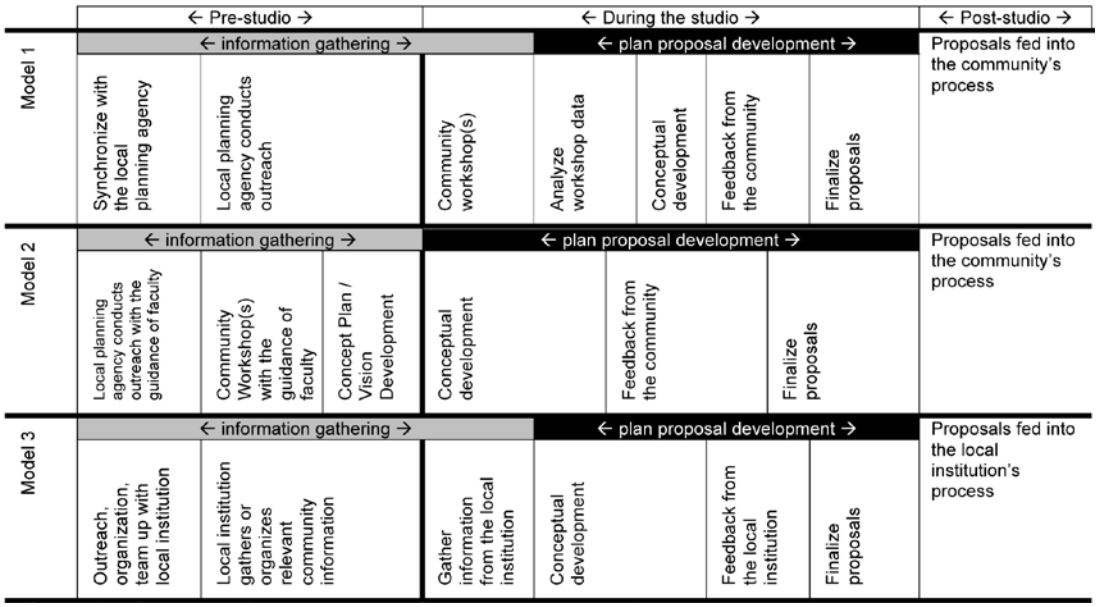

Figure 2. A visual summary of the three CBS models and their timelines with pre-studio and post-studio stages.

2.1. CBS Model 1: Community Involvement and Planning within the Studio's Timeframe

The first way in which the CBS can fit in the community's process is introducing community involvement and the planning process within the studio's timeframe, that is, having the studio and the community's process occur simultaneously. Following this model, in Spring 2009, the author taught a 10-week urban design studio working with the Salinas Redevelopment Agency and community members to develop urban

design plan proposals for Salinas Chinatown[3]. The learning objectives of the second-year intermediate urban design studio that undertook this process were to:

- Develop an intermediate understanding of urban design principles, the urban design process, and urban design plans,
- Develop basic methods and techniques to understand users' needs,
- Develop basic skills in addressing and evaluating design solutions for medium sized urban projects,
- Develop an understanding of the integration of an urban design plan to its context (local and regional), to urban systems, and to larger plans,
- Develop an understanding of the role of the planner in the urban design process, including the development of design guidelines, form-based codes, and other tools during the interaction with architects and landscape architects,
- Develop advanced skills in design representation and graphic, written, verbal communication.

The students were organized into five teams and conducted a site inventory and analysis the beginning of the quarter. Following this, the class attended a community workshop to identify community members' wishes about the future of Chinatown. Two to three students facilitated discussion and a "design your ideal Chinatown" exercise with community members organized as groups around ten tables. Each table was provided with a blank base map of the project area, color markers, and pens. Students worked with the community members and facilitated the discussion as community members made drawings of their "ideal" future on the base maps provided. Following this, each community group presented their findings to the rest of the community, with the help of students. As a result of this process, the students developed a clear understanding of the community's wishes and needs.

Building on this, student teams developed lists of issues that need to be addressed, and started working on five alternative urban design plan proposals. The objective was to present the community with urban design solutions and their implications based on their wishes. Each team developed a land use plan, circulation plan, and form-based codes for the area. These proposals were also illustrated in detail by means of 3D modeling and developing an illustrative site plan for each proposal. Throughout the plan development process, the studio was visited a number of times by the representatives and consultants of Salinas Redevelopment agency to review the work and provide feedback. The final plan documents from each team was presented to the city. Salinas Redevelopment Agency is currently moving forward with their efforts with the help of a group of consultants.

The advantages of this model of community engagement in an urban design studio were several. First, the students gained experience in setting up and facilitated a community workshop at an early stage in their careers. The exercise of converting

[3] Salinas has a population of approximately 150,000. Its economy is based on agricultural production and processing. It serves as the regional hub of Salinas Valley in California.

what they learned from the community into tangible urban design plans increased a sense of ownership of the process. The visits by the representatives and consultants of Salinas Redevelopment agency brought professional feedback into the classroom, adding an increased sense of responsibility to professional planners and designers.

Model 1 had some constraints as well. The main one is the limited amount of time. The particular case described in this section was limited to only ten weeks, and this constraint will be less of an issue in semester-based schools. Nevertheless, working towards the achievement of learning objectives and development of quality project proposals in either time frame requires extensive pre-studio planning as well as constant in-studio attention by faculty. The natural extension of this constraint is the limited amount of time available for community participation. This may be particularly risky if there is not an ongoing pre-studio and post-studio process in place. In the Salinas example, community participation will be continuing using the studio's work, and eventually the community will receive a final plan from the consultants hired. If the community relied on the outreach provided by the studio only, some stakeholders could be left out of the process, endangering the entire project.

2.2. CBS Model 2: Providing findings from a recent community participation process conducted by faculty to the studio

The second model in which a CBS can fit in a community's process is by completing the community outreach and participation component prior to the actual studio dates, and then developing the plan in the studio based on the findings from the community. Following this strategy, in Spring 2008, the author taught a 10-week urban design studio that worked with the City of Delano Community Development Department to produce three urban design plan proposals for Downtown Delano[4]. The project was undertaken in two phases. First, through Winter 2008, a Downtown Concept Plan was developed based on a community participation process with Delano residents. Second, in Spring 2008 quarter, the studio developed three Urban Design Plan Proposals based on the Concept Plan.

Four community workshops were held in the development of the Concept Plan for Downtown Delano. These workshops were held by a project team, which consisted the author and four student assistants that were not going to take the upcoming studio, but were previously trained in a community design methods class.

The first community workshop was held with two planned activities: an awareness walk and focus group interviews. During the awareness walk, participants took photos of what they liked and disliked about downtown using disposable cameras provided by the project team. This activity was followed by focus group interviews,

[4] Delano has a population of approximately 50,000. It is an agricultural town with an enterprise zone, located about 75 miles from Fresno, California. It is one of the many small towns in California's "Central Valley".

during which participants elaborated on their ideas in groups and discussed these with the project team.

Analysis of this information led the project team in the development of an idea generation instrument, to help participants of future workshops identify goals and strategies for the future of downtown. During the second community workshop a discussion of goals, and accompanying strategies to achieve these goals was conducted. The information gathered in the second community workshop was used to develop an action-planning instrument to be used in the third community workshop. This instrument was designed to help the participants identify potential first steps to take, potential project facilitators, and potential funding resources.

During the third workshop participants identified action steps to implement the strategies identified in the previous workshop. The last community workshop was designed to become a capstone event, which focused specifically on space related issues. The project team developed a board game-style “downtown planning game” for this event, which consisted of a plan of the existing downtown, space use icons on stickers, as well as markers. In four groups participants planned their “ideal downtown” through this process. Using the information gathered in these four workshops, the project team developed a concept plan, which included a series of recommendations and implementation strategies for Downtown Delano. The recommendations focused on four areas: (i) land use and economics, (ii) urban form and visual quality, (iii) circulation and transportation, and (iv) public amenities and recreation. The Concept Plan was presented to the City Council, received positive feedback, and then guided the following studio’s urban design proposals.

In the following quarter, the author’s undergraduate urban design studio undertook the task of developing urban design plans based on the concept plan. Three urban design teams were formed, each of which picked one “ideal downtown” scheme developed by Delano residents in workshop four. In-depth study of the concept plan as well as visits from the Community Development Department deepened the studio’ understanding of local issues. Site analysis was conducted with the presence of the Community Development Director. The students were able to visually document the site, and connect their findings to the concept plan developed prior to the studio.

In the conceptual development phase, each urban design team developed one conceptual diagram, each of which responded to Delano residents’ wishes with different solutions. Following this, a group of students representing each team visited the Downtown Delano Street Fair under faculty supervision. Posters displaying the three conceptual diagrams and accompanying urban design concepts were set up at the department stand. Throughout the fair, numerous residents visited the students’ stand. Students explained their conceptual diagrams and the rationale behind them. Residents were asked to provide verbal feedback as well as to leave their comments on note cards provided at the stand. The feedback attained at the street fair further helped the student teams in developing land use ideas.

In the remaining weeks of the studio, the studio received frequent visits from the Community Development Director. Student teams developed land use, circulation and public realm plans. Teams then studied the concept of form-based codes (Parolek, Parolek and Crawford 2008), and developed design guidelines that focused on five main areas: (i) land use and economic development, (ii) circulation, transportation and street networks, (iii) community amenities and recreation, (iv) urban form, visual quality and massing, (v) standards for street furniture, lighting and signs, and (vi) sustainability and natural resources. In the last phase of the project, student teams developed illustrative site plans that represented a variety of solutions for different areas of downtown. Following a presentation to the community, three urban design plan proposals were submitted to the City of Delano Community Development Department.

The main advantage of CBS Model 2, compared to CBS Model 1 was that, it placed less time constraints on the technical development of urban design plan proposals, helping the students to develop their physical and urban design skills. Second, since faculty developed the concept plan, the students were exposed to professional level work conducted on the site prior to the studio. This also reflected on the depth of community participation and development of conceptual diagrams positively. Model 2, however, is limited in providing the students with an actual community participation experience. While the students interacted with the community at a street fair, and received periodical feedback from the Community Development Director, they did not get a chance to experience directly the development and conduct of a community workshop.

2.3. CBS Model 3: Teaming up with a local institution to develop an alternative proposal

The third model that can bring community-level information into the studio involves teaming up with a local institution, one that possesses the information the studio would need to meet its learning objectives. Such an institutional role might be taken on by the local planning agency, a local non-profit organization, or in some cases even a local consultant firm who has worked with the community.

The author's specific plan (also known as area plan or sector plan) oriented graduate studio undertook such a process in Spring 2009. With a focus on the specific plan, this studio shared the learning objectives identified for the two Urban Design Plan studios discussed above, with the addition of the following objectives:

- To foster an understanding of the specific plan in response to the stakeholders' needs;
- To foster an understanding of the role of the contemporary planner in the specific planning process, in relation to other professionals in built environment related disciplines, such as architects, landscape architects, engineers and project managers,

- To provide a collective learning environment for students to engage in planning and designing for urban places that meet human needs within a context of sustainable development.

The studio undertook the Broadway Auto Row Corridor area in Oakland, CA[5] as the site. Originally a stretch that accommodated many of the city's auto dealerships, the site was the subject of a new specific plan study initiated by the City of Oakland. The main issue was how to reuse the lots that had been left by auto dealerships who were relocating and leaving vacancies on the site. In doing so, one of the main concerns was to provide more residential units in the area along with destination retail uses. In this process, the studio approached the problem as an academic exercise, and teamed up with a local non-profit housing organization that had an advocacy role for providing affordable housing in the area.

The studio started with two visits to the site for site inventory and analysis. In these visits, the local non-profit organization and its affiliated organizations were present, giving the students background information about the community, its opportunities, constraints, and the built environment in the project area. Students developed a detailed site inventory and analysis based on these visits.

Following site analysis, the studio studied the information provided by the local non-profit organization, and proceeded with conceptual diagramming and developing land use ideas. Within the first three weeks of the studio, students attended a stakeholders meeting organized by the City and its consultants. This experience gave the students a good understanding of the stakeholders and their positions. Approximately halfway through the studio process, student representatives attended a community workshop organized by the City of Oakland, its consultants and local non-profit organizations. Since the workshop was organized as a larger scale vision identification exercise, student representatives' attendance proved to be a high-quality input opportunity. Students got to learn about many day-to-day issues from the residents, but did not have to spend valuable class time on outreach or workshop design.

Having heard from the community members the studio proceeded with the development of land use, circulation and public space structure decisions, form-based codes, sustainable development strategies, affordable housing strategies and implementation strategies. This process was undertaken with the understanding that the work would be presented to the local non-profit organization. Therefore as the work progressed students had to keep in mind that it would be presented to a group very knowledgeable about the community, but did not necessarily have planning or design expertise.

[5] Oakland has a population of approximately 400,000. It is the second largest city in the San Francisco Bay area, and is located east of San Francisco.

The main advantage of Model 3 was that, while the studio was exposed to community issues and concerns, it did not have to spend time on outreach, event planning and related activities. Attending a stakeholders meeting and a community workshop organized by the city and its consultants also provided the students with the experience of a community workshop, but did not require them to spend time on workshop-oriented activities. With more faculty and student time devoted to the product, the local non-profit organization received higher quality alternatives that would give them leverage in their arguments, and students received more time to work on their plan development skills.

Model 3 also has its obvious disadvantages. Despite the above-mentioned benefits, students did not get the experience of developing, running and analyzing community workshops in this CBS; leaving the students with a need for further training in the area of community design, which may or may not be available in the program they are enrolled. Model 3 can also easily be vulnerable since it is possible that students get exposed to a single set of interests or issues, rather than work with multiple sections of a community. In the case presented here, the focus on affordable housing did provide a good mixture of diverse interests and issues; however this could easily be different depending on the community studied, and the local institution the studio partners with.

2.4. Advantages and Disadvantages of the Three Models

Based on the above discussion, the three models of conducting community-based studios each come with a series of advantages and challenges. These lead to a group of recommendations for faculty to consider while designing a community-based studio (Table 1).

Table 1. Three models for community-based studios: advantages, disadvantages and recommendations.

MODEL	ADVANTAGES	CHALLENGES	RECOMMENDATIONS
CBS MODEL 1: Community Involvement and Planning within the Studio's Timeframe	☐ Students gain experience in setting up and facilitating community workshops at an early stage in their careers. ☐ The exercise of converting what students learn from the community into tangible urban design plans increases a sense of ownership of the process. ☐ The visits by the representatives and consultants of the "client" bring professional feedback into the classroom, adding an increased sense of responsibility.	☐ Limited amount of time. The particular case described in this section was limited to only ten weeks, and this constraint will be less of an issue in semester-based schools. ☐ Limited amount of time available for community participation.	☐ Ensure that there is excellent pre-studio and pre community involvement. There will be minimum time available for in-studio instant modifications. ☐ Ensure that the community understands that the studio has a support function
CBS MODEL 2: Providing findings from a recent community participation process conducted by faculty to the studio	☐ This model places less time constraints on the technical development of urban design plan proposals, helping the students to develop their urban design skills. ☐ The students are exposed to professional level work conducted on the site prior to the studio. ☐ This reflects on the development of conceptual ideas positively.	☐ Limited in providing the students with an actual community participation experience. ☐ While visits by the representatives and consultants of the "client" bring professional feedback, face-to-face community involvement may be limited.	☐ Ensure a feedback mechanism from the community, since the students are indirectly exposed to community participation. ☐ Ensure that the students are presented with an in-depth explanation of the community involvement and concept planning process.
CBS MODEL 3: Teaming up with a local institution to develop an alternative proposal	☐ Attending community workshops organized by the "client" and its consultants provides the students with the experience of a community workshop, but does not require them to spend time on workshop-oriented activities. ☐ With more faculty and student time devoted to the product, the "client" receives higher quality alternatives that would give them leverage in their arguments. ☐ Students received more time to work on their plan development skills.	☐ Students do not get the experience of developing, running and analyzing community workshops. ☐ Students may be exposed to a single set of interests or issues, rather than working with multiple sections of a community.	☐ Ensure a feedback mechanism from the local institution, since the students are indirectly exposed to community participation ☐ Ensure that the students are exposed to a multitude of community interests.

3. A Conceptual Framework for the Community-based Studio

The discussion on the three models of conducting CBS is useful in building a conceptual framework to serve as a reference for faculty interested in CBS. This section builds such a framework by developing recommendations under five main headings, based on the existing literature and this paper.

3.1. The role of the studio in the community's process

It is very important to clearly identify the role of the studio in the community's process. Most often students will be developing technical and community outreach skills along with the studio process. Therefore they will not be able to efficiently perform tasks such as recruiting community participants or identifying strategies in their first attempt. As discussed in the existing literature, this may increase the pressure on students and faculty, while undermining the community's trust in the process.

To mitigate such potential risks, faculty must study the community's process in depth prior to making any commitments and clearly specify the studio's role. A pre-

studio and a post-studio process must be established, and the input to the studio as well as the studio products must be very clearly identified at this stage. For example, a pre-studio conceptual development process has proven very useful and effective for Downtown Delano urban design studio. Also, the fact that community outreach was handled by the Salinas Redevelopment Agency prior to the 2009 studio's involvement helped the studio to focus on learning objectives.

These experiences indicate that taking the following steps may help avoid potential problems. First, the community's expectations need to be specified, and how the community participation will be conducted need to be clarified. On the part of the faculty, this means (i) letting the community or its representatives know what products they will and will not receive, and (ii) specifying the number of community meetings or events that will be held, their intents and outcomes prior to the studio.

Second, considering the time constraints of the studio, the community or its representatives need to understand that the studio may not conduct the entire outreach and organization. In such cases the tasks for outreach and organization need to be identified and allocated to responsible parties within a timeline. On the part of the faculty, this means (i) specifying who will conduct outreach and by which methods (i.e. TV ads, flyers, phone calls…), and (ii) specifying who will organize the community meetings and logistics prior to the studio.

Third, it must be ensured that a post-studio process is in place, so that community members and students can observe further development after the studio. On the part of the faculty, this means specifying how the studio outcomes will be instrumental for the community prior to the studio. For example, the outcomes from the Salinas Chinatown studio were used by the Redevelopment Agency in a follow-up community meeting after the studio, to help sustain the momentum. Student work was displayed, and community members were able to identify ideas that would best accommodate the area's needs from the five alternative plans. This helped the community move forward with the project, and helped the students see the outcomes of their work.

3.2. The process champion

While the faculty needs to make an informed decision about how the studio will fit into the community's process, ultimately neither the students nor the faculty will have a long-term presence in the community. This means the project needs a champion in the community; one who will see that the studio receives the support and the help it needs, and "glues" the process together. The role of this person or entity would also include pushing towards implementation of the studio's products. In these terms, this person or entity would be a key to mitigating the problems discussed in the existing literature. The champion would visit the studio frequently, answer students' questions, and make the process more transparent to the students and the community. The champion would reduce the additional amount of work that would have to be done by the faculty, by helping with outreach, contacting key

people in the community, and providing guidance in scheduling. A very important task for the faculty, therefore, is to identify and encourage such a champion early in the process, and work with this person or entity very closely throughout the process.

3.3. The studio process, developing alternatives and learning objectives

Once the role of the studio is clarified and the process champion is identified, the studio needs to start developing the work. At this point the question is how the studio will respond to the community's request as a whole. At the level of urban design plans and specific plans, while it is possible to develop one plan proposal as an entire class, this strategy also presents a number of problems. First of all, organizing the entire studio to respond to one project problem will create a substantial number of organizational tasks for the faculty, as they need to make an effort to ensure that all students meet the class learning objectives to an equal degree[6]. Second, the faculty will need to make sure that all students undertake an equal share of the workload affiliated with the project. In a quarter or semester long process with more than 15 students achieving such equity in division of labor can become a big challenge, and requires careful screening and assignment of studio members. Third, the faculty need to ensure that this equality in division of labor is paralleled with an effort to make sure that all students get enough experience in all aspects of the project. In a ten to fifteen week process where one proposal is developed by at least fifteen students, students can easily be confined to working in a particular area of the project. For example, a student focusing on writing can end up missing the experience of graphic development, or a student with good graphic skills may miss learning opportunities in strategy development and expressing ideas in a written document. In such cases students may end up achieving only parts of the complete set of intended learning objectives. Working to avoid this while trying to achieve systematic project development will put a significant amount of stress on the faculty member.

One strategy to overcome such problems is to divide the studio into small teams of equal sizes (i.e. three to five students per team), who develop multiple alternatives to the problem posed. This strategy remedies the problems mentioned above, along with some additional advantages. First of all, students are exposed to a moderate amount of stress while engaging in teamwork through the small group process. This is particularly advantageous in reaching a balanced and healthy interaction among team members. Second, faculty can efficiently monitor each team's and team member's progress, since comparing team products regularly in the process easily reveals milestones or objectives that have not been met by individual students or teams. Third, the small group process makes it possible for faculty to efficiently identify and remedy inequalities in labor division, both in terms of workload and in terms of exposure to all aspects of the project. Students can exchange roles and tasks easily, since through the small group process they can closely follow the development of all aspects of work. By taking advantage of this, faculty can make

[6] It is critical for faculty to establish clear learning objectives that can be operationalized through the required assignments and sub-tasks.

sure that students exchange roles and tasks regularly and are exposed to various aspects of the project. Fourth, by monitoring fellow teams' work, students can develop a healthy peer review process, and this contributes to the overall quality of work. Finally, this strategy results in the development of multiple alternative solutions to the same problem, helping the community consider and visualize multiple options.

4. The Community Based Studio: Future Implications

A framework for structuring a CBS is illustrated in Figure 3. As the CBS evolves in contemporary planning education, certain out-of studio factors can contribute to the successful implementation of this framework. The discussion indicates that community-based studios are already under pressure in terms of time, be it under quarter or semester calendars. Starting the community involvement process parallel with training about community participation methods will in many cases only increase this pressure. In addition to timing issues, this may also hinder the quality of community participation that is at the heart of the studio process. Therefore it is crucial to have a course on community participation methods that can be taken prior to, or simultaneously with, the community-based studio.

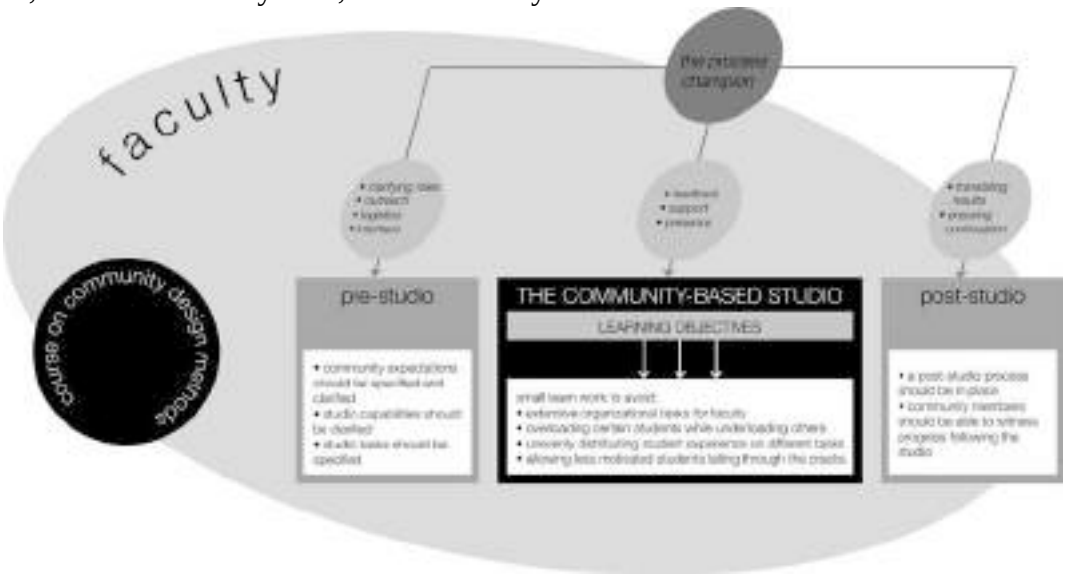

Figure 3. A conceptual model for organizing an effective community-based studio.

This paper has presented three models for conducting community based studios and a conceptual framework for conducting such studios. It has introduced the project champion concept, and pointed out the need for faculty pre-studio involvement as well as continuous studio management. It will be an important task for faculty and researchers interested in the area to build a wider body of literature by analyzing new experiences in CBS, enabling it to evolve and become increasingly effective.

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EMPIRICAL EVIDENCE ON AGRICULTURAL LAND-USE CHANGE IN SARDINIA (ITALY) FROM GIS-BASED ANALYSIS AND A TOBIT MODEL

Corrado Zoppi [1], Sabrina Lai [2]

Abstract

This paper analyzes the quantitative change in agricultural land uses in the Sardinian region in the time period the 2000-2006 EAGGF-based part of the Regional Operational Program (2000-2006 ROP-EAGGF) was implemented, in order to assess if, and to what extent, it was effective in maintaining agricultural land use compared to other signals concerning local development, such as income and urbanization.
The assessment is based on a geographic information system and a Tobit model. The results are a source of important information to address the on-going policies of the 2007-2013 Rural Development Programme, and the question of geographic concentration of investments.

1. Introduction

In this essay we study agricultural land-use change in the Region of Sardinia (Italy) in the time period 2003-2008, which is the period in which the European Agricultural Guidance and Guarantee Fund (EAGGF)-based part of the 2000-2006 Regional Operational Program of Sardinia (2000-2006 ROP-EAGGF) on regional agricultural land use was implemented.
The general objective is to assess whether, and to what extent, the 2000-2006 ROP-EAGGF was effective in maintaining agricultural land use compared to other physical, economic and social characteristics concerning local development.
What we deem of particular interest in this context, in terms of policy assessment, is that the 2000-2006 ROP-EAGGF is the most important program concerning agricultural land use implemented in Sardinia during the first decade of the new century, and quite similar in both strategy and structure to the other 2000-2006 ROP-EAGGF's of several Regions of the European Union (EU) under the 2000-2006 Structural Funds. In Sardinia as elsewhere, investments were spread over almost all of the regional municipalities (only three Sardinian municipalities out of 377 did not receive funds under the 2000-2006 ROP-EAGGF), and represented an important effort to support local development based on the vitality of the traditional primary sector of production. Therefore, the methodological approach proposed and applied

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in this essay could be easily exported to other regional contexts in order to study agricultural land-use change.

The 2000-2006 ROP was a plurifund program based on the EAGGF, the European Regional Development Fund (ERDF), the European Social Fund (ESF) and the Financial Instrument for Fisheries Guidance (FIFG), and it was a fundamental pillar of the 2000-2006 cohesion policy of the European Union concerning Sardinia. The part of the program funded by the EAGGF amounted to around 770 million Euros, that is, approximately a 20 percent of the total investment expenditure of the program. More than 90 percent of the expenditure of the 2000-2006 ROP-EAGGF occurred in the period 2003-2008 (Regione Autonoma della Sardegna, 2009, pp. 18, 53, 56-57). The final executive report of the 2000-2006 ROP-EAGGF (ibid., p. 232) indicates that drastic measures aimed at simplifying payment procedures were adopted only starting from the year 2003, due to dramatic delays in the program implementation, and that only from that year did the program really start. Moreover, the European Commission stated that the expenditure of the 2000-2006 ROP had to be entirely realized and the official statements of account had to be made available to the European Commission by June 30, 2009, due to the impossibility of meeting the original deadline of December 31, 2006.

For this reason, we consider the period 2003-2008 as the most suitable to assess if and to what extent the 2000-2006 ROP-EAGGF succeeded in maintaining agricultural land use. Objectives and operations of the 2000-2006 ROP-EAGGF are discussed in the following section, with reference to the Sardinian agricultural economy.

It has to be put in evidence that what we feel really innovative in the comprehensive discussion of this paper is the intermixed use of Geographic information system (GIS) and econometric models in order to assess agricultural land-use processes related to the implementation of the cohesion policy of the European Union. More precisely, the results of a fairly standard censored regression (Tobit) model are spatially represented and implemented through GIS. The model is founded on, and motivated through, a GIS-based representation of its variables referred to Sardinian municipalities, and in particular of Sardinian agricultural land use, which is the focus of the assessment. The Tobit model results make it clear that there is a strong relationship between agricultural land-use change and the other variables. These results entail some interesting insights concerning investment policies to maintain, reinforce and possibly expand agricultural land use, whose relevance can be clarified only through a spatial representation.

The third section defines a territorial taxonomy of Sardinian municipalities, by analyzing the spatial distribution of 2000-2006 ROP-EAGGF investment and of other characteristics which we believe are effective in describing the physical, economic and social environment of the Sardinian economy. The definition of this taxonomy is carried out by means of a GIS because it requires data integration from a number of sources, as it happens with many problems in geographical analysis (Chrisman, 2002, p. 119). The ability both to integrate a wide variety of geographic data types and to develop new information building on available spatial and non-spatial data makes GIS a powerful support tool for modeling operations (Longley et al., 2001; p. 30); furthermore, GIS readily lends itself to combination with other

technologies and techniques. In the fourth section we implement a censored (Tobit) regression model in order to discuss relations between the variables represented by means of the GIS. In this section, we explain why we choose the Tobit approach to implement our estimates in the context of the on-going literature on regression models. In the concluding section we discuss the implications of the results for the regional investment policy though a GIS-based representation and the exportability of the proposed methodological approach to other regional contexts.

2. The 2000-2006 ROP-EAGGF of Sardinia

The 2000-2006 ROP-EAGGF[3] is based on a set of measures that address several problems pertaining agriculture and rural development in Sardinia. Each measure contains several actions to be implemented through projects financed by the EAGGF.
A first concern of the program is to improve the use of water resources for agriculture in terms of efficiency, effectiveness and productivity, which implies investment in irrigation infrastructure and water resource management (measure 1.2, integrated cycle of water resource management: irrigation systems of agricultural zones; axis 1, natural resources). This is complementary to infrastructural and technological improvements, and capacity building, referred to other aspects of agricultural land use. These concern: i. reduction in production costs; ii. product quality; iii. a better environment for livestock; better living and working conditions for agricultural workforce; iv. conversion of current agricultural production into more profitable crops; v. rural aqueducts, electrical lines and roads. These issues are addressed by measures 4.9 (investment in agricultural firms; axis 4, local development systems), 4.19 (rural reparcelling), and 4.20 (development and improvement of rural infrastructure for agriculture).
Another important question is capacity building and quality of rural life. This is addressed by measure 1.2, in terms of capacity building concerning water resource management, and by measure 4.9, with reference to farm management. Moreover, measure 4.13 (essential services for the economy and the rural population) is concerned with actions aimed at making services available for the rural population, such as ICT-based network services (e.g., online request for documents from the public register's office), centralized laboratories for chemical and micro-biological analyses of agricultural products, etc.
A third important issue is the marketing of the products of Sardinian agriculture. The lack of expertise in dealing with Italian, European and world markets is identified by the 2000-2006 ROP-EAGGF as a difficult obstacle for the future of Sardinian agriculture, and addressed through the tenth and eleventh measures of axis 4 (improvement of transformation and marketing of agricultural products; marketing of agricultural products characterized by a high qualitative level).
Moreover, the program invests (measure 1.9, prevention and control concerning forest fires, and reforestation; measure 4.12, diversification of agricultural activities

[3] The last version of the 2000-2006 ROP-EAGGF was established by Decision C 2007/1991 of the European Commission. This version is available on the Internet, in Italian only, at http://www.sardegnaprogrammazione.it/documenti/1_84_20080409115630.zip (accessed January 2, 2012).

and the like; measure 4.14, promotion of adaptation and development of rural areas; measure 4.17, restoration of the rural environment damaged by fire and natural disasters, and prevention; measure 4.18, professional education referred to all of the 2000-2006 ROP-EAGGF measures; 4.21, young farmers' start-up support) in: i. renovation and conservation of buildings and settlements identified as historical heritage of the rural environment; ii. construction of new rural buildings for exhibitions and conferences concerning rural civilization, recreation and educational activities; iii. conservation of traditional rural productive processes in order to prevent their loss (with particular reference to craftsmanship), even though they are not profitable any longer; iv. (recovered or new) rural paths for bikers, skaters, joggers, and hikers; v. professional education as stated by measure 4.18 above.

Table 1. Measures of the 2000-2006 ROP-EAGG (Regione Autonoma della Sardegna, 2009a, pp. 300, 313, 367-391).

Measure	*Expenditure (million Euros)*	*Type of operations*
1.2 - Integrated cycle of water resource management: irrigation systems of agricultural zones	43.494	Public infrastructure and services
1.9 - Prevention and control concerning forest fires, and reforestation	11.000	Public infrastructure and services
4.9 - Investment in agricultural firms	183.092	Funds granted under the aid regime rules
4.10 - Improvement of transformation and marketing of agricultural products	137.848	Funds granted under the aid regime rules
4.11 - Marketing of agricultural products characterized by a high qualitative level	27.796	Funds granted under the aid regime rules
4.12 - Diversification of agricultural activities and the like	10.000	Funds granted under the aid regime rules
4.13 - Essential services for the economy and the rural population	15.659	Public infrastructure and services
4.14 - Promotion of adaptation and development of rural areas	31.740	Public infrastructure and services
4.17 - Restoration of the rural environment damaged by fire and natural disasters, and prevention	16.000	Public infrastructure and services
4.18 - Professional education referred to all of the 2000-2006 ROP-EAGGF measures	6.000	Education
4.19 - Rural reparcelling	59.957	Feasibility studies; funds granted under the aid regime rules
4.20 – Development and improvement of rural infrastructure for agriculture	143.626	Public infrastructure and services
4.21 - Young farmers' start-up support	84.325	Funds granted under the aid regime rules

It is evident that the thirteen measures of the 2000-2006 ROP-EAGGF show a comprehensive approach which entails addressing several aspects of rural development: conservation of natural resources and of rural cultural heritage, protection from fire and natural disasters, restoration and renovation of rural buildings and settlements, capacity building and professional education, tourism and tourism-related activities, reforestation, and support to agriculture, in terms of infrastructure and services.

Our objective here is not to evaluate the comprehensive impact and effectiveness of the program, but only to assess its impact on agricultural land use. We therefore consider only the subset of measures which finance public infrastructure and services for agricultural land use, that is measures 1.2, 1.9, 4.13, 4.14, 4.17, 4.20. We assume that the other measures, which are essentially funds granted to agricultural firms under the aid regime rules[4], and to promote professional education, do not influence agricultural land use, at least in the short run, even though they could possibly have an impact on rural economy. The investment expenditure referred to the six measures is about one third of the total investment of the 2000-2006 ROP-EAGGF (see Table 1).

Financial support referred to the aid-regime rules is granted to rural entrepreneurs on a small scale in order to accomplish several goals. For instance, these funds were used to increase the firms' physical capital (machinery, plants, buildings) and professional education, to help young farmers' start-ups, to develop rural tourism, to implement land improvement operations, and so on and so forth. In general, funds are granted to rural firms in order to deal with questions related to their present condition, whose improvement should not have generated a quantitative change in agricultural land use, during the period 2003-2008. However, a quantitative impact could have possibly come from an income effect on agricultural land use (expansion) which we try to detect in the model discussed in the fourth section through an income-related explanatory variable. The reason is that an income increase could possibly drive an agricultural firm to buy or rent land suitable for agricultural production if it is available.

3. A GIS-based taxonomy of Sardinian agricultural land use and related variables

Sections should be used to make it easier to follow the paper. Section and sub- In order to analyze agricultural land use in the time frame 2003-2008 and other physical, economic and social characteristics concerning local development, a descriptive table was needed. Since this analysis was to be carried out at the municipal level, by assuming cities as basic spatial units, such table had to have as many rows as Sardinian municipalities are, and as many fields as relevant attributes are. Data from various sources and in various digital formats were therefore collected; some data (e.g. those pertaining to demography, income, and levels of expenditure) were calculated by building on available spreadsheets; some others (e.g. spatial distribution of land uses, or delimitation of coastal landscape units) were derived from available spatial datasets. In other words, integration of available (both spatial and non-spatial) information was required to develop new knowledge and obtain new layers of either spatial or non-spatial information, which called for a GIS-based analysis.

As far as the geographic description of municipalities is concerned, only one shapefile ("Municipal Administrative Boundaries", MAB) was used to implement the GIS. Produced by the Regional Administration of Sardinia and freely

[4] Regulation n. 1999/1257 EC of the European Council, artt. 51 and 52.

downloadable from the Internet[5], this shapefile contains 377 polygons and multi-part polygons, each corresponding to the area included within the administrative boundary of a given municipality. This section aims at explaining how variables relevant to the analysis were identified, and their values calculated for each municipality, by means of GIS.

Data concerning land cover and land-cover changes in the time frame 1990-2006 are provided, at the European level, by the European Environmental Agency[6]. Of particular interest for a study of land-cover changes are two datasets, showing changes between 1990 and 2000 and between 2000 and 2006 (Figure 1), since authors claim to have been able to draw a distinction between real evolution processes and different interpretations of the same subject, and therefore to expunge the latter from the datasets. However, the above data were not used here because their level of detail (e.g. scale of the maps produced and minimum mapping units) did not appear to be appropriate for this study; moreover, the date of production of the datasets would have not allowed for the best possible study of the effects of the ROP-EAGGF in maintaining agricultural land uses, since, as explained earlier in the introduction, the most part of the 2000-2006 program was actually implemented between 2003 and 2008.

We therefore chose to study variables related to land uses on the basis of the 2003[7] and the 2008[8] regional land-use maps, in which land uses are organized according to a four-level hierarchical[9] nomenclature, in compliance with the European project "CORINE Land Cover".

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[5] The shapefile is available at: http://webgis.regione.sardegna.it/scaricocartografiaETL/limitiAmministrativi/limitiAmministrComunali/limitiAmministrComunali.zip (accessed January 10, 2012).

[6] http://www.eea.europa.eu/data-and-maps/data#c11=landuse (accessed January 10, 2012).

[7] Completed in 2003, the "Land Use Map of the Region of Sardinia - 2003 Edition" is a spatial dataset that covers the whole island. Data were mainly obtained from photo interpretation of aerial photographs dating 1997-1998, satellite images and orthoimages, but other vector datasets (e.g. regional digital cartography) were also used; on-site surveys were carried out between 2002 and 2003. The map has a scale of 1:25,000, and it can be freely downloaded from: http://www.sardegnageoportale.it/index.php?xsl=1598&s=141401&v= 2&c=8831&t=1 (accessed January 10, 2012).

[8] The so-called "New Land Use Map of the Region of Sardinia" was completed in 2008 building upon the 2003 land-use map and photo interpretation of satellite images, orthoimages, and ancillary vector datasets. On-site surveys were carried out between 2005 and 2007. Minimum mapping unit (Longley et al., 2001; p.151) of the map equals 0.5 hectares in urban areas and 0.75 hectares in the countryside. The dataset can be freely downloaded from: http://www.sardegnageoportale.it/index.php?xsl=1598&s=141401&v= 2&c=8831&t=1 (accessed January 10, 2012).

[9] This means that the first letter of the code corresponds to a general land use, which is described in greater detail by means of a second letter, and further by means of a third letter, and so on. General class 1 corresponds to "artificial surfaces", class 2 to "agricultural areas", class 3 to "forest and semi-natural areas", class 4 to "wetlands", and class 5 to "water bodies".

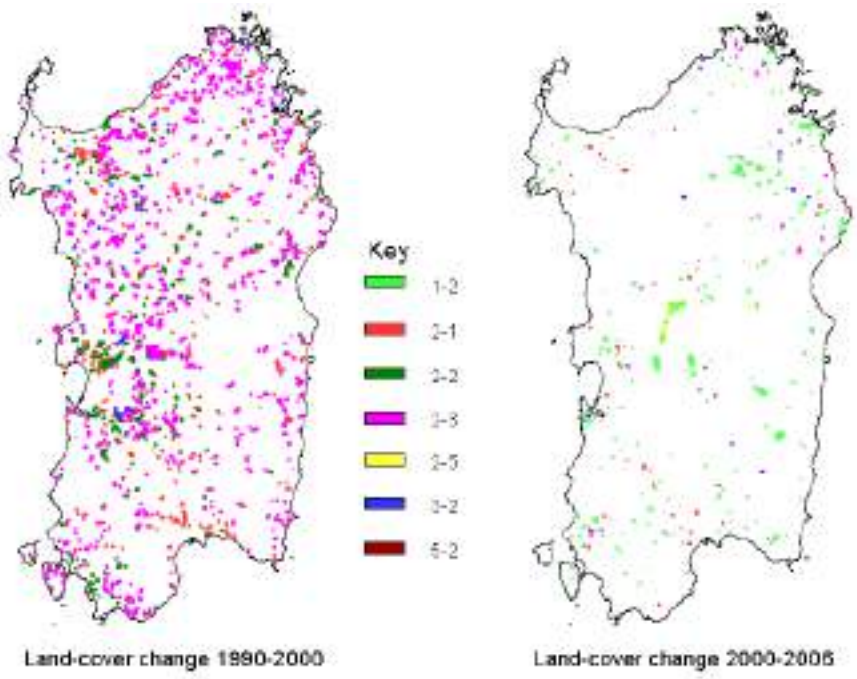

Figure 1. The land-cover changes involving areas classed as agricultural between 1990 and 2000 and between 2000 and 2006 (data from www.eea.europa.eu)

Strictly speaking, the so-called "regional land-use map" is therefore actually a land-cover map, although, thanks to its level of detail, it does also provide reliable information on how land is used by humans, especially as far as agricultural areas and forests are concerned. In the remainder of this paper, the expression "land use" will therefore be used.

According to the two datasets, in Sardinia the amount of land occupied by agriculture has globally increased: Table 2 shows both the nomenclature of agricultural land uses according to the 2003 and the 2008 regional land-use maps and their corresponding area.

In the MAB shapefile, a number of descriptive attribute fields characterizing each Sardinian municipality and related to land uses or land-use changes were at first introduced, and their values were calculated for each municipality. We will however present here only two of these attributes, that is the dependent variable (percentage change in a municipality's agricultural land use between 2003 and 2008) and another land-use related variable that was discovered to have an impact on the dependent variable by running the model presented in the next section.

The attribute "Percentage change in a municipality's agricultural land use between 2003 and 2008" (label: PLUAA3_8) accounts for the increase or decrease in size of a municipality's total agricultural area, which consists of polygons whose codes start with "2", according to the Corine nomenclature. To fill in the values in this field, a series of basic operations (filtering, intersecting, area calculations, dissolving,

summarizing) were performed in gvSIG[10] by using three datasets: the 2003 land-use map, the 2008 land-use map and the MAB layer. In Figure 3.a, Sardinian municipalities are classed according to the values of PLUAA3_8.
The attribute "Percentage change in a municipality's urbanized land between 2003 and 2008" (label: VARUU3_8) accounts for the increase or decrease in size of a municipality's artificial surfaces, which, according to the Corine nomenclature, are characterized by codes starting with "1". A series of basic operations (filtering, intersecting, area calculations, dissolving, summarizing) were performed separately on the 2003 and the 2008 land-use maps so as to obtain the value of the attribute "urbanized land area" for each municipality in the two datasets; next, land-use maps attribute tables were joined to the MAB layer's attribute table and the percentage change was finally calculated for each municipality. In Figure 3.c, Sardinian municipalities are classed according to the values of VARUU3_8.

Table 2. Agricultural land uses in Sardinia according to the 2003 and 2008 land-use maps

2nd level	*3rd level*	*4th level*	*Total area in 2003 [hectares]*	*Total area in 2008 [hectares]*
21 Arable land	211 Non-irrigated arable land	2111 Non-irrigated arable land	144,537.8	251,181.45
		2112 Artificial meadows	142,587.2	164,575.47
	212 Permanently irrigated land	2121 Arable land and horticultural crops in open fields	346,524.70	205,735.63
		2122 Rice fields	4,584.17	4,660.69
		2123 Nurseries	240.08	341.00
		2124 Crops in greenhouses	1,184.98	1,769.04
22 Permanent crops	221 Vineyards		15,957.87	24,686.43
	222 Fruit trees and berry plantations		10,268.18	11,907.84
	223 Olive groves		43,790.91	48,777.62
23 Pastures	231 Pastures		9,517.21	10,316.08
24 Heterogeneous agricultural areas	241 Annual crops associated with permanent crops	2411 Annual crops associated with vineyards	9,608.73	11,714.50
		2412 Annual crops associated with vineyards	163.70	296.13
		2413 Annual crops associated with other permanent crops	53,164.42	58,067.58
	242 Complex cultivation patterns		43,107.79	42,206.07
	243 Land principally occupied by agriculture, with significant areas of natural vegetation		27,271.17	29,282.01
	244 Agro-forestry areas		50,493.25	57,429.67
		TOTAL	***903,002.15***	***922,947.21***

[10] gvSIG is an open source desktop application, freely available at http://www.gvsig.org (accessed January 10, 2012).

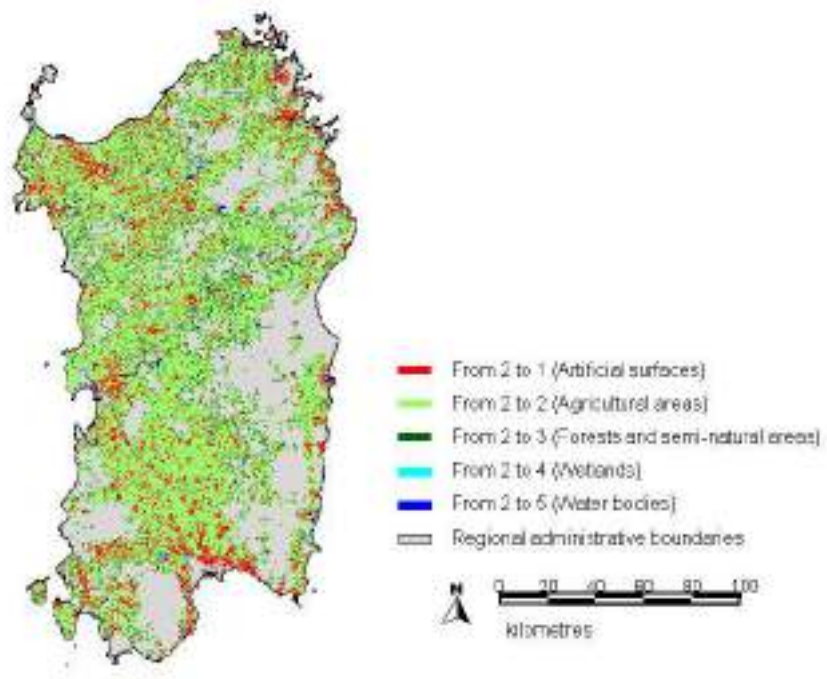

Figure 2. Land-use changes in the 2003-2008 time frame, taking into account only areas that in 2003 were classed as agricultural (Corine land cover first-level code = 2) according to the regional land-use maps (data from http://www.sardegnageoportale.it/)

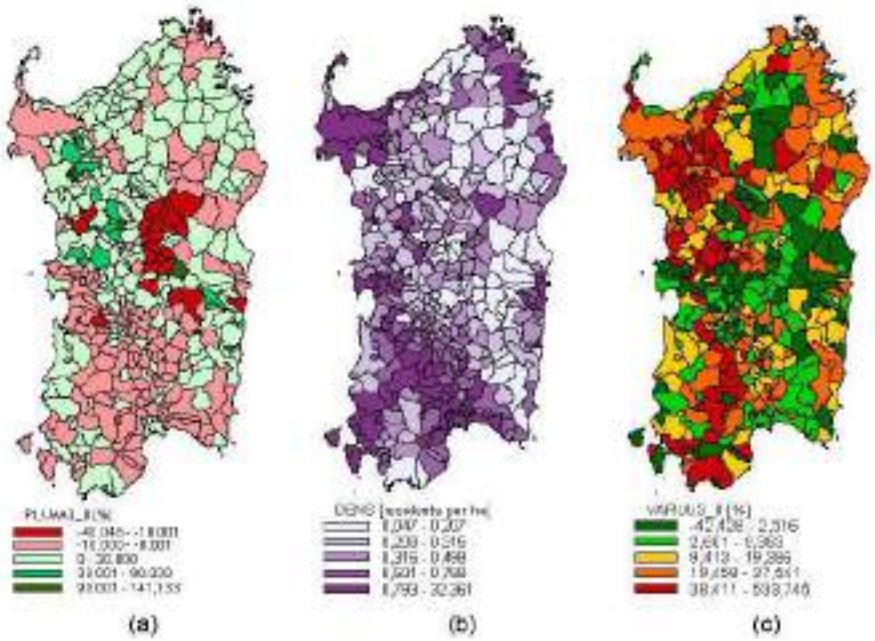

Figure 3. A classification of Sardinian municipalities based on: percentage change in a municipality's agricultural land use between 2003 and 2008 (a); residential density in 2008 (b); percentage change in artificial surfaces between 2003 and 2008 (c)

The four remaining attributes do not deal with land uses, but, respectively, with demography, regional planning, income and implementation of agricultural policy.
The first of these descriptive attributes is the residential density (label: DENS) measured, for each municipality, in residents (as of 2008[11]) per hectare. A choropleth map in which municipalities are categorized into according to their values of residential density in 2008 is provided in Figure 3.b.

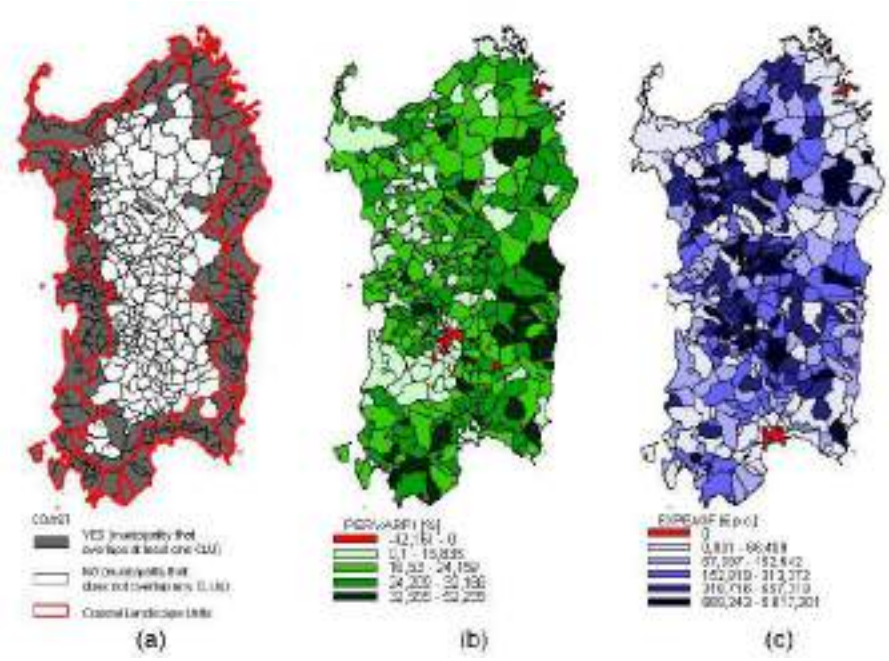

Figure 4. A classification of Sardinian municipalities based on: whether a municipality overlaps at least one coastal landscape unit (a); percentage change in per-capita income in the time frame 2003-2008 (b); 2000-2006 ROP-EAGGF per-capita investment on public infrastructure and services for agriculture (c)

The second attribute (label: COAST) is a dichotomous one (taking only "yes" and "no" values), and it accounts for whether a municipality overlaps at least one coastal landscape unit (CLU), as defined in the Regional Landscape Plan (RLP). Approved in 2006 and currently under revision, the RLP is the first statutory landscape plan with regional dimensions produced in Italy under the National Code of Cultural Heritage and Landscape. The Regional Administration of Sardinian initially focused on coastal areas only, in order to protect a part of the island considered both economically strategic and environmentally fragile, and therefore identified 27 coastal landscape units (Figure 4.a). General rules and restrictions on building activities and transformation of land are in force in those municipalities whose land area overlaps, or is completely contained in, the CLUs.

[11] Data available at http://www.sardegnastatistiche.it (accessed January 10, 2012).

For the remaining municipalities only specific rules concerning preservation of specific and precisely identified landscape features or assets are in force. Whether or not a municipality overlaps a CLU thus directly affects the possibility of producing changes in land uses. In Figure 4.a, Sardinian municipalities are classed according to the value of COAST.
The third attribute is the percentage change in a municipality's per-capita income in the period 2003-2008 (label: PERVARPI). Raw data on per-capita income in 2003 and 2008 were collected from two websites[12] and reorganized into a spreadsheet, later joined to the attribute table of the MAB shapefile. In Figure 4.b, Sardinian municipalities are classed according to the values of PERVARPI.
Finally, the fourth attribute is the 2000-2006 ROP-EAGGF per-capita investment for each municipality on public infrastructure and services for agriculture (label: EXPEAGF). Implementation of projects co-financed through European funds in Italy was monitored, at the national level, by means of a web database called MONIT, from which we selected only those records for which all of the following conditions held true: (i) projects were carried out in Sardinia, (ii) they were funded through the EAGGF, and (iii) funds were granted for public services and infrastructure. Only projects funded through measures 1.2, 1.9, 4.13, 4.14, 4.17, 4.20 of the ROP were therefore selected for the reasons explained in the previous section. A total of Euros 220,793,919.07 had been spent, on these projects, by June 30th 2009. The resulting table had 374 rows, meaning that three of the 377 Sardinian municipalities were not granted any funds for public services and infrastructures through the EAGGF. In Figure 4.c, Sardinian municipalities are categorized into according to the values of EXPEAGF.

4. Agricultural land use change in the context of the 2000-2006 ROP-EAGGF

This section is organized as follows. In the first paragraph, the censored regression (Tobit model) methodology is presented in the context of the case study discussed in this paper. In this paragraph, we explain why we choose the Tobit approach to implement our estimates and which part of the methodology is already used in other papers. Secondly, the results concerning the analysis of the impact of the 2000-2006 ROP-EAGGF on agricultural land use are discussed, in a context characterized by other physical, economic and social variables concerning local development.

4.1 Methodology

We use a censored regression model since the dependent variable of our analysis, that is the percentage change in Sardinian municipalities' agricultural land use in the period 2003-2008, is continuous in the interval between about -40% percent and about 140 percent, while it is not observable below -40 percent. This is the standard technique to deal with phenomena represented by inherently continuous

[12] http://www.sardegnastatistiche.it and http://www.comuni-italiani.it.

variables that for some reasons are not observable (censored) in a region of their variation range.

Censored regression models are also named "Tobit models" with reference to Tobin (1958), who discussed this type of models in the first place. Tobit models have a widespread use in empirical analysis concerning land use and land-use choice. A very interesting application is proposed by Gebremedhin and Swinton (2003), who assess the impact of public intervention and security of tenure rights on the attitude of farmers toward soil conservation in the Tigray region (Northern Ethiopia). Another important essay concerning Ethiopian agriculture (West Shoa Zone, Central Highlands) is discussed by Alene et al. (2000), who apply a Tobit model to estimate the relationship between adoption and intensity of utilization of improved maize varieties, and education, household labour, farm size, extension services, farm income, and timely availability of improved maize seeds. Coomes et al. (2000) apply a Tobit regression to analyze the relationships between non-market mediated access to land and labor, and forest fallow management and duration in the Peruvian Amazon. Pfaffermayr et al. (1991) assess the labor-supply decisions of farm workers between part-time off-farm and full-time in-farm options through probit and Tobit models as possibly dependent on farm size, household characteristics and education. Baidu Forson (1999) applies a Tobit model to analyze the determinants of level and intensity of adoption of innovative technologies for soil conservation and water resource management in Niger, and finds that a very important role is played by degraded farmland, education, risk aversion, and availability of short-term profits. Rajasekharan and Veeraputhran (2002) use Tobit regressions to study the relationship between intercropping decisions and availability of family labor and the type of intercrops during the initial gestation periods of natural rubber cultivation in the Kerala region (India); they find that very important determinants are banana, cassava and pineapple crops.

The aforementioned studies are a very small share of hundreds of published papers that constitute the vast literature related to questions concerning physical, economic and social determinants of agricultural land use analyzed through censored regression models. Common features of these case studies are the continuous and censored nature of the variables representative of the issues, the intermix of physical, economic, social, and agricultural land use phenomena, the identification of spatial units as points of reference for the representation and the assessment of the variables and of their relationships.

In this paper we use a Tobit model to analyze the relation between a censored variable, the percentage change in Sardinian municipalities' agricultural land use in the period 2003-2008, and a set of variables representing physical, economic and social characteristics concerning Sardinian local development. We use a standard Tobit model, based on Greene's (1993, pp. 694-700). For this reason, we think worth proposing just a synthetic description on its implementation, as described below.

We consider a censored or latent dependent variable, y*, which is related to an observable variable, y, as follows:

$y = L$ if $y^* \leq L$;
$y = y^*$ if $y^* > L$. (1)

The model operationalizes by assuming that y* is linearly dependent on a vector of explanatory variables, $x = (x_1,\ldots, x_m)$, through the following relation:

$$y^* = \boldsymbol{\beta}'\mathbf{x} + \varepsilon, \quad (2)$$

where $\beta = (\beta_1,\ldots, \beta_m)$ is a vector of coefficients.

If we substitute (2) in (1) we obtain the following model, which, under the usual hypotheses of ordinary least-squares models concerning the mean, variance and covariance of the ε term[13], can be estimated by the maximum likelihood estimator (MLE), which is unbiased and efficient, even though non-linear (Greene, ibid.):

$y = L$ if $y^* \leq L$;
$y = \boldsymbol{\beta}'\mathbf{x} + \varepsilon$ if $y^* > L$. (3)

The MLE for β is the vector $b = (b_1,\ldots, b_m)$ that maximizes the following maximum likelihood function:

$$\ln L = \sum_{y>L} \frac{1}{2}\left[\ln(2\pi) + \ln(s^2) + \frac{(y-b'x)^2}{s^2}\right] + \sum_{y=L} ln\left[1 - \phi\left[\frac{(y-b'x)}{s}\right]\right] \quad (4)$$

where s^2 is the MLE estimator for the variance of the error term[14] and ϕ is the cumulative normal distribution operator (Greene, *ibid.*).
The values of the vectors of coefficients b_j's which maximize (4) are the solution of the system which comes from equalizing to zero the derivatives of ln L with respect to the m components of vector b.
The values of the estimates b_j's of the vector of coefficients β_j's make it possible to estimate the marginal effects of a change of the vector of explanatory variables x on the censored variable y as follows (Greene, *ibid.*):

. (5)

4.2 The impact of the 2000-2006 ROP-EAGGF on agriculture land use

The analysis of the change in Sardinian municipalities' agricultural land use in the period 2003-2008 is based on the model described in the second part of the first paragraph of this section. The characteristics of vector $x = (x_1,\ldots, x_m)$ and their

[13] The model assumes that the error term ε is normally distributed and: i. $E(\varepsilon|x) = 0$ (i.e., the error terms in the regression have a 0 conditional mean), ii. $Var(\varepsilon) = \sigma^2$ (i.e.: the error term has the same variance at each observation), and iii. $E[\varepsilon_i\ \varepsilon_j|X] = 0$ (i.e.: the error terms are uncorrelated between observations).

[14] $s^2 = \frac{(y-xb)'(y-xb)}{n}$, where y is the vector of observations of the censored variable y and x is the matrix (n,m) of the n observations of the m explanatory variables.

measures are defined, and the results of the model application are reported with reference to: i. the estimates $b = (b_1,\ldots, b_m)$ of the components of vector β, and ii. the marginal effects from (5).

Dependent and explanatory variables, referred to spatial units identified with the 377 municipalities of Sardinia, which correspond to variables y and $x = (x_1,\ldots, x_m)$ of model 1-5, are reported in Table 3. The spatial taxonomy of these variables is described in the preceding section.

The dependent variable is the percentage change of agricultural land use in 2008 with respect to agricultural land use in 2003 and labeled PLUAA3_8. This is a precise quantitative measure concerning the impact of the 2000-2006 ROP-EAGGF on agricultural land use, which is referred, as we put in evidence above, only to the subset of measures which finance public infrastructure and services for agricultural land use, that is measures 1.2, 1.9, 4.13, 4.14, 4.17, 4.20 of the 2000-2006 ROP-EAGGF.

The choice of the explanatory variables that characterize the 377 Sardinian municipalities is motivated as follows. Residential density, which is almost constant between 2003 and 2008, is considered as an important characteristic, since it makes it possible to control for an agglomeration effect which could possibly entail evidence of investment attraction to municipalities where people are more concentrated.

The change in the area of urbanized land after the program's implementation (VARUU3_8) could impact agricultural land-use change. Increasing urbanization could possibly make a municipality comparatively more attractive for investment, and for investment in agriculture, even though new urbanized land could be a detriment to agricultural land use. Therefore, the change in urbanized land should be considered a significant aspect, although the expected impact is fuzzy.

Table 3. Definition of variables and descriptive statistics

Variable	Definition	Mean	St.dev.
PLUAA3_8	Percentage change in a municipality's agricultural land use between 2003 and 2008	4.6660	17.2699
DENS	Residential density of a municipality in 2008 (residents per hectare)	0.7744	2.0981
VARUU3_8	Percentage change in a municipality's urbanized land between 2003 and 2008	22.8301	41.1650
COAST	Dummy - A municipality overlaps a coastal landscape unit as defined by the Regional Landscape Plan	0.4430	0.4974
PERVARPI	Percentage change in a municipality's per-capita income in the period 2003-2008	21.8675	9.5568
EXPEAGF	2000-2006 ROP-EAGGF per-capita expenditure for measures 1.2, 1.9, 4.13, 4.14, 4.17, 4.20 concerning a municipality (Euros per resident)	456.1207	669.9753

The variable that indicates if a municipality is coastal or non-coastal, labeled COAST, aims at assessing if agricultural land-use change is influenced by this characteristic, which is relevant because, since November 2004, when Regional Law no. 8 was approved, Sardinian coastal municipalities have had to make their planning policies consistent with very strict planning rules, especially for areas

included in the coastal zone (Zoppi, 2008)[15]. In particular, new urbanization was almost totally prevented in coastal municipalities, which could eventually have become more attractive for investment in agriculture. We assume that a municipality is coastal if it overlaps a coastal landscape unit as defined by the zoning cartography and implementation rules of the Regional Landscape Plan (*ibid.*).

We use the change in per-capita income from 2003 to 2008 (PERVARPI) as the variable that controls for a possible income effect. As with VARUU3_8, change in per-capita income should be considered a significant aspect, although we do not have a definite expectation on the sign of the coefficient, since increasing per-capita income could possibly make a municipality more willing to invest in agriculture, or displace agriculture if the available investment, coming from increased income, is diverted elsewhere.

The variable that represents the per-capita investment concerning a municipality from the 2000-2006 ROP-EAGGF (EXPEAGF) characterizes the relative importance that the ROP recognizes to a particular municipality's territory, and the level of trust of the regional administration in the capability of generating a positive impact on agricultural land use. This variable's impact on the dependent variable is expected to be positive, since we expect that investment in public infrastructure and services for agricultural land use would help maintaining and possibly increasing a municipality's agricultural land use.

The estimates of the components of vector β, that is the vector $b = (b_1,\ldots, b_m)$ of (4), and the marginal effects of explanatory variables x's on the dependent variable y of (5) are reported in Table 4 and Table 5. The decomposition-based fit measure, which indicates the share of the total variance of the censored variable explained by the model, is about 50%.

The results are significant at 2.5 percent with the exception of VARUU3_8, which is slightly less significant (7.5 percent) and show the expected sign when there is one.

Table 4. Estimates of coefficients of the components of vector β, $b = (b_1,\ldots, b_m)$, calculated by solving the maximization problem expressed by (4)

Variable	Coefficient b_i	Standard error	z-statistic	Hypothesis test: $\beta_i=0$
DENS	0.3479	0.0680	5.116	0.0000
VARUU3_8	0.0394	0.0220	1.791	0.0732
COAST	4.1603	1.8525	2.246	0.0247
PERVARPI	0.2073	0.0737	2.812	0.0049
EXPEAGF	0.0070	0.0007	10.434	0.0000
Decomposition-based fit measure = 0.466				

The marginal effect of residential density (DENS) indicates that an increase of about 3.5 percent of the agricultural land use extension would occur if DENS increased by 10 residents

[15] This law (named "The saving-coast law") identifies the coastal areas as those included in a 2-km belt from the coastal line. The definition of the coastal zone changed after the Regional Landscape Plan (RLP) approval (through Deliberation of the Sardinian Regional Government no. 36/7 of September 5, 2006), which established a new and generally wider limit for the coastal zone.

per hectare, which puts in evidence a significant agglomeration effect.

Table 5. Estimates of the marginal effects of the explanatory variables on the censored variable from (5)

Variable	Marginal effect	Standard error	z-statistic	Hypothesis test: $\beta_i=0$
DENS	0.3470	0.0678	5.119	0.0000
VARUU3_8	0.0393	0.0219	1.791	0.0732
COAST	4.1498	1.8466	2.247	0.0246
PERVARPI	0.2067	0.0736	2.809	0.0050
EXPEAGF	0.0070	0.0007	10.429	0.0000

The dichotomous variable COAST indicates if a municipality belongs to a coastal landscape unit. This variable has a positive and significant marginal effect, which puts in evidence that investment in infrastructure and services to improve agricultural land use is more effective in coastal areas than in inner ones. The results imply, *ceteris paribus*, a 4 percent positive differential in agricultural land use.

The change in a municipality's urbanization also reveals a positive marginal effect, even though not quantitatively strong: approximately only a 3.9 percent of a percentage point for a one percent increase. However, this is important since it shows that increasing urbanization does not seem to prevent conservation or expansion of agricultural land use. From this point of view, the results of the estimates suggest that municipalities characterized by urban expansion should be targeted for agricultural land-use investment.

A positive marginal effect is put in evidence by the variable concerning the percentage increase in real per-capita income as well (a 0.2 percent increase in agricultural land use per a one-percent increase of per-capita income). This observation indicates that, everything else being equal, a positive income effect is supported by the estimates of the model. This implies not only that there is an income effect that does not displace at all agricultural activities, but also that, in principle, whichever policy aiming at increasing local people's income can be considered an indirect support to maintaining and possibly increasing agricultural land use. In other words, we can state that our results suggest that all of the measures of the 2000-2006 ROP-EAGGF have positive impacts on agricultural land use: i. direct measures, that is those here taken into account to define the variable EXPEAGF (measures 1.2, 1.9, 4.13, 4.14, 4.17, 4.20), as we see below; ii. all the other measures, which grant funds to farmers and rural entrepreneurs under the regime of state aids, and, by doing so, increase their income.

Finally, the marginal impact of the investment concerning a municipality from the 2000-2006 ROP-EAGGF is positive, as expected, and highly significant. However, this impact is quantitatively weak, since it indicates that a hundred-Euro increase of per-capita investment implies approximately a 0.7 percent increase in agricultural land use. In other words, this means that an investment of nearly 165 million Euros, that is more than one fifth of the total 2000-2006 ROP-EAGGF expenditure, would have been required to increase the agricultural land use extension in 2008 with respect to 2003 by approximately 63 km^2.

5. Concluding remarks: a spatial representation of policy implications from the model results

This paper proposes a discussion on quantitative change in agricultural land use at the municipal level as a phenomenon influenced by physical, economic, social and investment policy variables. The methodological approach is based on the intermixed use of GIS techniques and econometric models. We feel that the use of a Tobit model based on a GIS-based taxonomy of dependent and explanatory variables could be easily and effectively exported to other European Union regional contexts, since the 2000-2006 ROP's of the European regions at the NUTS 2 level were fairly standard. The reproducibility of the proposed approach makes it possible to assess the results concerning the impact of ROP-EAGGF's on agricultural land-use change and to compare such impacts across regions, at the intra-national and inter-national levels. Moreover, the results are useful not only in terms of ex-post assessment, but also with reference to the definition and implementation of regional policies concerning investment aimed at maintaining and increasing agricultural land use, that is in terms of ex-ante and on-going assessment.

In the rest of this concluding remarks we use GIS to comment and discuss policy implications of our results through a spatial representation. The GIS-based representation is easily reproducible with reference to other contexts of the EU NUTS 2 regions, and it allows for a pretty straightforward spatial interpretation of the results. As we put in evidence above, the impacts of the policy (explanatory) variables on agricultural land-use change do not always have an *a priori* expectation on the sign of the impact; therefore, a comparative analysis of spatial interpretation of results across regions may eventually indicate different policy approaches at the regional level.

Background policy implication for the GIS-based discussion on policy variables that follows is that, as we discussed at the end of previous session, it should be more effective to invest in agriculture in those municipalities characterized by significant values of residential density and in those municipalities whose territory overlaps a coastal landscape unit.

We started by simulating a "what-if" scenario by building upon the results of the Tobit model, and more precisely upon marginal effects presented in Table 5: for each municipality, we estimated the magnitude of the impact on the percentage change in a municipality's agricultural land use between 2003 and 2008 that would be produced if a single explanatory variable increased by a given quantity (that is, ten percentiles in the distribution of that variable). Next, since the values of one explanatory variable (namely, COAST) is fixed, we estimated the magnitude of the impact that would be produced by implementing simultaneously policies that increase the four remaining variables (DENS, VARUU3_8, PERVARPI, EXPEAGF).

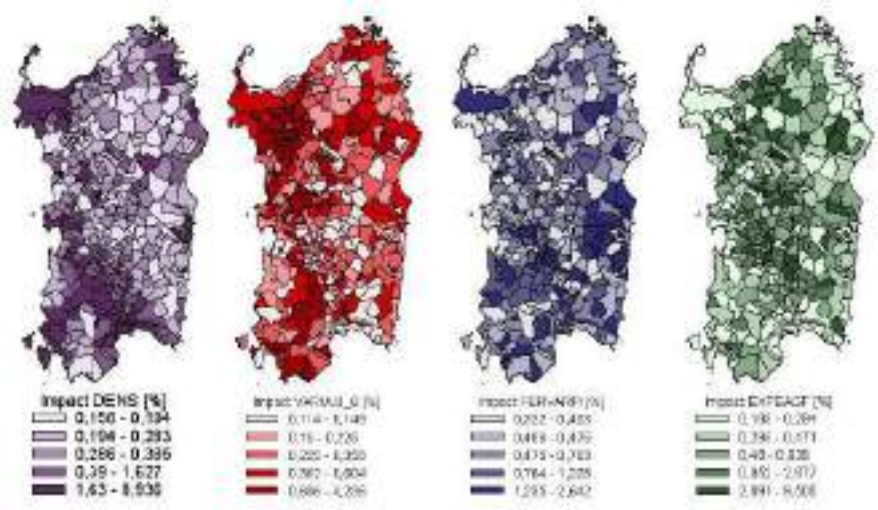

Figure 5. Spatial representation of policy implications: impacts on agricultural land use stemming from policies that increase: a municipality's residential density (a); percentage change in a municipality's urbanized land between 2003 and 2008 (b) per-capita income at the municipal level (c); per-capita investment on public infrastructure and services for agriculture (d)

Figure 5 presents some of the results of the first process: by implementing policies that increase per-capita income, a positive change in agriculture land use between 0.322 percent and 2.642 percent is produced (Figure 5.c); this percentage rises to 0.114 to 4.236 percent when policies that augment the amount of a municipality's urbanized land are put in place (Figure 5.b), and takes the highest values (0.158 to 8.936 percent and 0.193 to 9.506 percent) if policies that intensify residential density or per-capita investment funded through the ROP-EAGGF are implemented (Figures 5.a and 5.d respectively). Some clusters of municipalities taking either the highest or the lowest values are clearly identifiable in these maps, which could provide regional decision-makers with useful insights on the spatial dimension of regional policies aimed at strengthening the above policy variables, if agricultural land uses are to be preserved and increased.

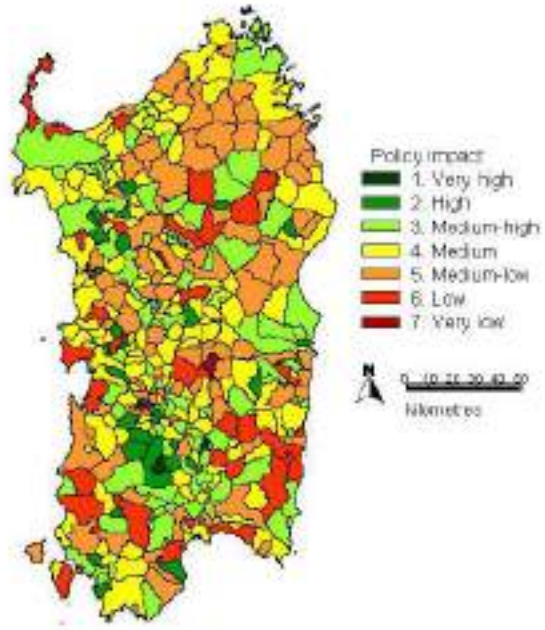

Figure 6. Spatial representation of policy implications: impacts on agricultural land use stemming from policies that increase simultaneously, at the municipal level: residential density, urbanized land, per-capita income, per-capita investment on public infrastructure and services for agriculture

An ever more powerful suggestion for policy makers is provided in Figure 6, which spatially represents, in qualitative terms, impacts on preservation of agricultural land uses produced by implementing policies that increase residential density, urbanized land, per-capita income, per-capita investment on public services and infrastructure for agricultural areas.
Such spatial representations provide decision-makers with clear indications on which are the "best" possible areas that policies should target in order to preserve, and where possible and appropriate to reinforce, agricultural land uses.

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A Critique of Futurists Predictions of Urbanism in the 21st Century and Beyond

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Abstract

Early this century, urban population in the world as a whole has reached an unprecedented number in human history with over 7 billion individuals and today more than half these live in cities. In the life of human societies, milestones such as these encourage a critical assessment of the past to project what the future holds. After all "how well we learn from the lessons our cities teach us will determine whether our urban species will flourish in what can be a new golden age of the city".

This paper attempts to assess how numerous noted scholars since the middle of the last half of the 20th Century predicted the future of urbanism in the 21st Century and beyond. How the rapid acceleration of the use and the phenomenal advancements in the capabilities of digital technologies, particularly information processing and communications would determine the urban future had influenced many of these predictions. However, very few of the predictions, if any, had considered the influence of the unprecedented intensification of urbanism in their forecasts of the urban future. This is the main contention this paper has in its critique of them as it posits that a reciprocal causality exists between digital technologies and urbanization. The critique is cognizant of the fact that cities are increasingly becoming mediated by flows of electronic information and symbols, as evidenced by the progressive digitization of money, services, media, information, education, and logistics while at the same time the demands of the contemporary urban life, work, and play; initiate, sustain, and nurture innovations in digital technologies.

Centrally, the paper explores what the impact of digital technologies will be in the near future on the contemporary spatial, social, economic, geographical, political, and cultural processes that urbanites are engaged in, in mostly in urban areas of the globe. Or more succinctly, it inquires and dares to discover if there is a reciprocal cause-and-effect relationship between digital technologies and urban life as many futurists in the past ignored. Thus the paper focuses the ever-ubiquitous digital technologies and urbanization and inquires how these technologies affect –and are

affected by the broader processes of modernization, internationalization, globalization, industrialization, restructuring, and cultural change.

The four dimensions of urbanism, people, place, process, and time constitute how the futurist scholarship on urbanism is critiqued. This results in the identifications of four **"Romantic Visions" of Post-urban Fantasy,** which then are critiqued in terms of their strengths and weaknesses as well as the commonalities and differences in their assumptions and predictions. The paper's conclusion is that the "end-of-urbanism" forecast by the Romantic Visions unanimously–at least as we have come to understand it, is not valid given the state of urbanism today.

While the paper concludes that cities are here to stay, it recognizes that urbanity will gradually and increasingly function in a different way than only half a century ago as digital technologies continue to alter urban life while the demands of urban living continue to influence how digital technologies may enhance its quality.

1. Introduction – Questions and Axioms

Today, the information age is an increasingly urban age, because, since 2008, more than half of the world's population can be called urbanite. In this second decade of the 21st Century, urban population in the world as a whole has reached 7 billion and still continues to grow at a fast rate. The digital society on the other hand is a society, which is mostly domiciled in cities and metropolitan regions.

Given this state of matters, a prudent question one may be prompted to ask is what the current nexus is (and in the future would be) of the rapid acceleration of the use and the phenomenal advancements in the capabilities of digital technologies, particularly information processing and communications on the one hand, and the intensifying urbanization of the planet on the other. That is, one may wonder, what the impact of these technologies is on the contemporary spatial, social, economic, geographical, political, and cultural processes urbanites are engaged in, in mostly the urban areas of the globe. Or more succinctly posed: is there a cause-and-effect relationship between digital technologies and contemporary urban life? If there is, which is the cause and which is the effect? Are (or aren't) the ever-ubiquitous digital technologies and urbanization constitutive elements of broader processes of modernization, internationalization, globalization, industrialization, restructuring, and cultural change? These constitute the main questions this paper attempts to answer.

Cities continue to be, as they have always been, where financial and human capital is concentrated as more and more of the regionally or nationally focused, if not internationally oriented firms and institutions, flock. At the global scale, these cities attract people with higher disposable incomes who initiate, demand, and nurture cosmopolitan and multicultural social environments. Further, cities are increasingly becoming mediated by flows of electronic information and symbols, as evidenced by the progressive digitization of money, services, media, information, education, and

logistics. In light of these, at the very basic level and isn't it prudent to explore the ways digital technologies help facilitate, nurture, and intensify the urbanization processes at the global scale? Conversely, how do the demands of the contemporary urban life, work, and play; initiate, sustain, and nurture innovations in digital technologies?

A priori, three main axioms can be cited on the nexus between digital technologies and urbanism:

First, digital technologies encourage urbanized entities, mainly service and manufacturing as well as cultural centers, to mostly locate in cities and facilitate them to extend their markets, powers, and control to over ever more distant regional, national, international, and even global hinterlands. Cities after all have the infrastructure to facilitate this influence and consequently affect urbanity. Urban infrastructure in turn helps binds, integrates, and adds economic dynamism to the vast, extended, and multi-centered urban settlements, corridors and regions of our age.

Second, in an intensely complex, multivalent, and currently volatile global economy, and the growing speed, complexity, and riskiness of innovation in all sectors, cities seem to attract a parallel concentration of creative assets and nurture an 'innovative milieu' to sustain the ongoing competitiveness. Creators and innovators of the digital technologies still need to be in the proximity of one another, i.e., in the thick of the innovation process, even though their products can the often be instantaneously sent online to distant markets and users, as well as to local urbanites.

Finally, demand for digital technologies, be it mobile and land-based telephones, satellite and cable TVs, computer networks, electronic commerce, Internet services, etc., is overwhelmingly driven by the growth of metropolitan markets. Global cities, which rely on digital technologies, drive most aspects of innovation and investment necessary for developing and sustaining digital technologies. After all, urban social and economic processes that take place in cities require speed and mobility and in turn result in complexity and dynamism.

2. Previous Futurist Scholarship on the Nexus between Digital Technologies and Urbanism

From the mid 20th century and until the early 1990s, the complex links between cities and the digital information processing and communication technologies had generated a curiously meager body of scholarship in urban studies, mainly because of the relative invisibility of these technologies compared to physical communications systems. Information and communications studies, on the other hand had traditionally tended to neglect the dominant role of modern cities, again until the last decade of the 20th century. There were few, but significant exceptions to these in literature and film, particularly in late 19th and early 20th centuries but most of these had a science fiction slant.

Since the mid 1990s however, notable theoretical, empirical, and policy research on the links between the ever developing digital technologies and the changing nature of cities and urban life have rapidly emerged in urban studies, anthropology, geography, planning, art, sociology, architecture, cultural studies, and transport studies, as well as in information, communication, and media studies. So much so that a sub-discipline seems to be emerging as scholars are positing the reciprocal impact of Internet, mobile phones, Geographical Information Systems (GIS), and Virtual Reality (VR) on urbanism. Currently, urban scholars are particularly interested in the mutual influence of the forms, processes, experiences, and ideas of urban life and the digital technologies in a wide variety of contexts across the world. Nevertheless, debates about both the implications of digital technologies for cities and urban life, and the effects of the cities and urban life on digital technologies, have yet to move to center stage on urban research agenda.

Against the widespread assumption from the 1960s to late 1990s that electronic communications would necessarily work to *undermine* if not outright *threaten* the very existence of cities, notable empirical evidence suggests that the two realms are actually supporting each other. So much so that nowadays coming across counter claims such as the ones that posit that the current and potential use and application of digital technologies within and between cities constitutes a critical, strategic, and positive nexus that underpins the development of human societies, settlements, and, indeed, civilizations is no longer an isolated occurrence in the relevant literature but is more commonplace than the contrarian view.

However, it was only a few decades ago, mostly during the second half of the 20th century, that “dis-urbanists” dominated the urban discourse that was taking place mostly in the western world. Many commentators, business writers, futurists, novelists, utopians, media theorists, architects, planners, and social scientists portrayed digital technologies as being effectively at war with any urban-based activity, which generated the need, or desire, for geographical concentration of people and economic and social processes in cities and urban regions. Their critical justification was that conventional, i.e., face-to-face human interactions would be gradually replaced by growing flows and capabilities of electronic communications. This, it was alleged, might even lead to the gradual dematerialization of advanced societies resulting in a post-urban fantasy. For example:

In 1964, media theorist, the late Marshall McLuhan, known for his aphorisms such as “if it works, it is obsolete” and “turn on, tune in, drop out” (by way of Timothy Leary who wrote a book that had this as its title), suggested that the coming of the “global village” would inevitably mean that “the city as a form of major dimensions must inevitably dissolve like the fading shot in a movie”. (Understanding Media, McLuhan, 1964.)

Urban theorist and professor emeritus at the University of California, Berkeley, the late Melvin Webber argued, around the same time, that in the near future, 'for the

first time in history, it might be possible to locate on a mountain top and to maintain intimate, real-time, and realistic contact with business and other societies. All persons tapped into the global communications network would have ties approximating those used in a given metropolitan region'. Reflecting on the complexity of urban development in an age of rapidly growing communications and mobility, he challenged the conceptual foundations of urban studies, postulating that urban planners and transportation analysts should focus less on the notion of place and more on the linkages and connections, both physical and informational, that bound together what he called “non-place realms.” Seeing the city as, in effect, a giant switchboard, he anticipated the ‘networked society’. In the light of new forms of communication and the prevalence of the automobile, he argued that concentrated, denser urban forms were not necessarily more desirable than more dispersed settlements. (The post-city age in Daedalus, Webber, 1968.)

French philosopher, cultural theorist, and urbanist Paul Virilio, best known for his writings about technology and credited for the often-referenced quote “The speed of light does not merely transform the world; it becomes the world; globalization is the speed of light” also speculated about the urban future shaped by digital technology. In 1993 he observed that the diffusion of digital technologies into cities would mean that 'the city of the past would slowly become a paradoxical agglomeration in which relations of immediate proximity give way to interrelationships over distance’. (Open Sky, Virilio, 1997.)

And at around the same time, i.e., in 1995, Nicholas Negroponte, then the Director of MIT's Media Lab, asserted that 'digital living’ would include less and less dependence upon being in a specific place at a specific time, and the *transmission of place* itself would start to become possible. Soon, he believed, homes would be equipped with 'electronic windows' allowing him, from Boston, to 'see the Alps, hear the cowbells, and smell the (digital) manure in summer'. Thus, while being in Boston, he would, in a way, be 'very much in Switzerland'. (Being Digital, Negroponte, 1995.)

Martin Pawley, an influential British architecture critic, pronounced in 1997 that, 'in urban terms, once time has become instantaneous, space becomes unnecessary. In a space-less city, the whole population might require no more than the 30-atom diameter light beam of an optical computer system'. He foresaw a society with ever-greater technical means of communication becoming paradoxically more insular and dysfunctional. (Terminal Architecture, Pawley,1997.)

Finally, British writer Charles Leadbeater pronounced that 'at the moment (in 2000) it is as if we occupied two worlds at once, especially in our congested cities: the physical world of clogged roads, which is inefficient, slow moving, and rigid; and the immaterial world of computers and communications, in which we can work at the touch of a button. The ease of use and responsiveness of the new, immaterial economy will make us increasingly frustrated with our experience of the cumbersome old economy of physical machines and roads'. (Living on Thin Air: The

New Economy, Leadbetter, 2000.)

Building on these and many other suggestions broadcast by writers that new technologies would overcome the need for spatial proximity, many more authors implied that the spread of digital exchanges at the speed-of-light pace, and the explosion of digital domains, would necessarily imply some catastrophic collapse for cities.

The implications of these predictions seemed depressing for those who cherished and valued vibrant cities in all their physical juxtaposition, conflict, unpredictability, and their social and cultural diversity. If such scenarios were to be believed, human reliance on urban places, urban infrastructures, transport flows, and even the corporeal presence of human bodies could, and would, ultimately be transcended. After 8,000 years, urban life, with all its messy and material ambivalence, its clashing territorialities, and its associated congestion, poverty, conflict, violence, pollution, and social problems, was on the way out. Crudely put, the pure, clean, and limitless realm of (post postmodern) 'cyberspace' would rescue us all urbanites from the dirty, polluted, contested, finite, (modern) city. To believe such authors was to believe that a new post-urban age was being ushered in, which would finally allow the rural utopias of the twentieth-century architects like Frank Lloyd Wright to be realized.

3. Four “Romantic Visions” of Post-urban Fantasy

a. Place - Breakdown of Materiality - Cyberspace:

The romantic vision of the demise of cities, in favor of place-less (non) urbanism stressed the technological basis of a post-urban societal revolution. Rather than seeing the digital technologies as means to be seized upon, shaped, and readily adopted within the fine-grained practices of everyday urban life, such technologies that enabled cyber-spatiality, were cast as a 'dazzling light,' ‘holy grail,’ and 'shining’ above everyday concerns of urbanism.

Replacing physical movement in and around the city would be the limitless domains of dematerialized cyberspace -the digital domain that results from the convergence of computers with digital telecommunications and new media technologies. First coined by science fiction writer William Gibson, the term cyberspace has been defined as 'a parallel universe' or 'a new kind of space, invisible to our direct senses, a space which might become more important than physical space itself’.

The period these romantic visions became the most common was the last two decades of the 20th century when the “information age” reached its pinnacle with the rapid growth of the Internet and world-wide-web, as computing power was doubling every two years and microchips were starting to saturate every domain of life. It seemed very possible that soon every equipment, instrument, appliance -even human

bodies, would be fitted with digital technologies and turned into globally connected digital appliances or terminals linked by broadband telecommunications services over fiber optics and global satellite links.

The “master narrative” or the 'teleology of cyberspace' suggested that digital technologies would transform 'information from something separate and contained within computers to a space we can inhabit'. The world of cyberspace, invariably, was pictured in this romantic discourse as 'a world that exists in the future ... a hope, an expectation, for future fulfillment'.

Architecture scholars who espoused this romantic vision, like Michael Benedikt, a professor at University of Texas-Austin yearned for a future when ‘materiality’ was ‘cast away' because humans could 'inhabit' a virtual world of pure information (Cyberspace: First Steps, Benedikt (ed.), 1992*)*, while software engineer David Gelerntner predicted that ‘reality’ such as cities, would be replaced gradually and piece by piece by its 'software imitation' i.e., the ‘virtual reality’ (Mirror Worlds, Gelerntner, 1991).

Because the software produced reality was immaterial, infinitely extendable, and an absolute substitution for all forms of physical mobility and corporeal presence, 'cyberspace' was thus seen as a force for decontaminating the natural and urban landscapes, redeeming them, saving them from the chain dragging bulldozers of the paper industry, from the diesel smoke of courier and post-office trucks, from jet fuel flames and clogged airports, from billboards, trashy, and pretentious architecture, hour long freeway commutes, ticket lines, choked subways - from all the inefficiencies, chemical and informational pollution, and corruptions associated with moving information attached to things, across, over, and under the vast and bumpy surface of the earth rather than letting it fly free in the soft hail of electrons that was cyberspace, declared - yet again- Michael Benedikt.

By late 1990s, the explosion of wireless infrastructure promised and began to deliver the unhitched computing and communications from fixed locations, as cyberspace advocates predicted. In its wake, a non-spatial world beckoned where digital streams of information, data, images, and video - manipulated and processed through an infinitely complex global skein of computer networks, pervaded every domain of contemporary society.

b. Process - Dawn of the more Egalitarian, Capitalistic, and Ecologically Sensitive Societies – Digital/Electronic “everything””

The second romantic vision of the post-urban discourse involved utopian assumptions that the shifts away from place- and city-based lives made possible by digital technologies could meld communities and mediate democratic processes in ways that would completely replace the political, social, and anthropological roles individuals and communities have played and continue to play in urban places. It was

often uncritically assumed that such a development would automatically lead to shifts towards more democratic, egalitarian, decentralized, and ecologically sensitive societies. As a matter of fact, the digital “revolution” would yield a cultural revolution because information could be transmitted and transmuted in fundamentally limitless ways, enabling the successes already being witnessed in digitally processed economic transactions. A global neoliberal marketplace where individuals engaged seamlessly as consumers with the entire planet based on globally stretched digital technologies was no longer a utopia.

Beyond the tangible, digital technologies would offer the priceless intangibles of friendship, community, and understanding leading to a new democracy dominated neither by vested interests of political parties nor of the crime syndicates or oligarchs. It could narrow the gap that separate capital from labor and it could deepen the bonds between people and planet.

Advocates declared that with reduced (or altogether eliminated) need for face-to-face encounters and interactions; tools to (re)-install some form of idealized Athenian or Jeffersonian democracy were now available in the national and global digital infrastructures. With the capabilities of the digital technologies that would support bi-directional and decentralized communications, communities, and democratic links could be forged irrespective of geography, resuscitating democracy itself.

c. People - End of the Actual Being and the complete substitution of corporeal (i.e. bodily) presence - Cyborg:

The third romantic vision of the post-urban discourse was the most bizarre of all: the progressive blending of digital technologies with human bodies! Society would effectively be dematerialized, as urban activities would effectively migrate into the ever-extending domains of virtual interaction. Thus, cities would become increasingly and conspicuously “old-fashioned” and unfit as political, social, and cultural expression of the time. As a matter of fact, it was claimed, cities would gradually be complemented, and eventually be replaced, by a fast-expanding universe of virtual realities, virtual communities, and digital economies, as well as unlimited and electronically constructed and maintained domains accessible from anywhere and at any time.

In a direct challenge to the human experience of “actual” place, “virtual” domains would increasingly evolve to be experienced immersively through Virtual Reality (VR) technologies. These “places” and the digital media would fuse with the human bodies and nervous systems of their cyborg (cyberneticorganism) hosts ever more seamlessly. Such 'terminal citizens' could, in a sense, 'leave' their physical bodies ('meatspace'), and their local geographies, 'behind' the arrays of technology they used to create, to inhabit the new simulated, replaceable, and infinitely extensible, virtual worlds. Richard Coyne, who is a Professor of Architectural Computing at the University of Edinburg, put it this way: “in a virtual world you can have instant

access to any coordinates in data space. You can be here, there, or any/everywhere, unlike the limited spatially constrained world we usually experience". Expressions such as this summarized the critical seam of the discourse prevalent in this romantic vision, often called Technoromanticism. More and more in this context, the concept of a person or of human beings appears to depend on the attenuated possibilities of cyberspace (Technoromanticism: Digital Narrative, Holism, and the Romance of the Real, Coyne, 1999).

For better -and certainly not worse, the crude and in most cases, bleak fantasies of a complete substitution of corporeal (i.e. bodily) presence and movement within and between urban places to habitation of a virtual domain are now less ubiquitous than during their heyday from 1960s to1990s. Nevertheless, 'at the turn of the twenty-first century', anthropologist Caren Kaplan, currently Professor of Gender and Women's Studies at University of California at Davis, has argued that it is still 'the rhetoric of cyberspace and information technologies that we hear and read, and the discourse is heavily reliant 'on a hyperbole of unlimited power through disembodied mobility'. Whether we encounter theorizations of new cityscapes published by university presses or are exposed to advertisements in magazines, references to boundless space, unfettered mobility, and speedy transfers abound.

d. Time - Collapse of Geographical and Temporal Constraints – Instant Massaging:

The last romantic vision emerging out of the post-urban revolution that is relevant here, involved the assumption that digital technologies would entail a generalized collapse of temporal constraints –mostly manifested by distance- on urbanites' interactions, which urban life is about. After all, people always chose to establish themselves in cities to overcome the "separation in time and space", i.e., distance, with other people whom they engage with in urban processes (service, trade, cultural partake, etc). The city had evolved for 8,000 years of urban history by concentrating human life in geographical territory. Through minimizing space constraints, cities had allowed the time constraints on physical human interaction to be reduced. Even in major metropolitan regions physical, face-to-face contact could be achieved within a reasonable time. The prediction was to continue witnessing the exponential growth of the communication technology in capability, scale, and sophistication to such an extent that they would directly displace, and substitute for the city. It followed that, in the future, the key relationships in the 'digital age' or the 'information society' would not link a person or a group and his/her or their home, their neighborhood, their city, or their nation, by rather, the urban relationships would continuously telescope between the individual and the integrated and planet-wide, digital civilization as a whole. Thus, parallel to the death of cities, the death of distance, by way of cyber space, was presented as both logical and obvious. Inevitably, the digital technologies would be detrimental to the future of urbanism. Since the digital technologies of communication would facilitate 'real time' interactions to occur: time -as a significant inhibitor of human interaction- would thus be no longer relevant in urban life. The underlying logic of this romantic vision was founded on the equating

of distance with time.

4. Critique of the Post-urban Fantasy

In the dialectic discourses that have been taking place in the last half of the 20th century, as posited by the romantic visions delineated here, the digital technologies and urbanism would diverge into polar opposites. However, these visions of the post-urban fantasy were far from being a single or even a unified discourse. They varied significantly in their assumptions, bases, arguments, and even in conclusions, save for the common belief in the death of cities –as we had come to know and experience them. A complex range of philosophical and theoretical antecedents served as bases on which each were put forth. Many had futurism, cyberpunk science fiction, media, and critical theory as their source, though architecture, planning, and urban studies were significant fields of study from which many of the discourses drew their genesis. A significant number of discourses, particularly the ones coming from science fiction, had bleak, cynical, and a pessimistic view and critique of the direction global political, economic, and technological change predicted to take place.

Nevertheless, all the depictions of the future, predicated on the speculated advances in digital technologies, had one commonality: they were based on a general, and thus uncritical, use of the metaphor that cities would simply be 'impacted' by new technologies, particularly those that pertained to communication, and this impact would be in the same way planets are impacted by asteroids. In all the above accounts, digital technologies were portrayed as arriving from 'out there', as a transformative 'force' or 'shock' hitting the fabric of urban society.

To regard new technologies as 'largely unproblematic and even autonomous in shaping the life and form of urbanity reflected the long-standing tendencies within the contemporary culture, and this may be held as the foundation for -and fountain out of which sprang the four “Romantic Visions” of post-urban fantasy outlined previously. In all, digital technologies were generally portrayed as some disembodied, external 'wave' of change which, quite literally, transformed cities and urban life single-handedly. Alvin Toffler, the author of Future Shock, even used the metaphor 'Third Wave' to capture the latest digitally based societal revolution, following on from the First (agricultural) and Second (industrial) revolutions.

This view reflects the classic, deterministic view of the role of new communications and transport innovations in which 'changes in technology lead inexorably to changes in urban form' and urban life, and not the other way round. In this view, the fledgling networked infrastructures like the Internet become little more than 'progenitor[s] of new urban geometries'. Such rhetoric assumes a simple, linear, cause-and-effect chain where the technology itself is as the direct and single causal agent of urban change. Commonly, this intellectual perspective is quickly translated into the broader use of technological and infrastructural depictions of historical urban 'ages': from the 'hydraulic civilizations' of the first urban centers in Mesopotamia, through to the

'steam', 'electric', 'auto', the 'nuclear', and 'information age' metropolises of the past three centuries.

Thus, the critical problem with the romantic fantasies is that they tend to portray technologies as having overwhelming power in ushering in simple and discrete societal shifts, which seem to amount to some naturalistic process of urban and societal evolution. In the process, the parallels and congruencies between historical periods tend to be underplayed or completely disregarded. Further, in the fantastic scenarios of place, processes, people, and time, each romantic vision also implies that all cities would somehow be 'impacted' by digital technologies in similar ways, irrespective of their starkly contrasting geographical positions, sociologies, economies, cultures, political structures, and histories, because technology it is assumed to operate in the same way in the general and at speculative levels. The tendencies of newer technologies to overlay, and subtly combine with, rather than replace, earlier ones are often ignored. And the forms and processes of city life tend to be simply read off as the deterministic result of the intrinsic nature of the new generation of technology.

Such ‘technological determinism' - the reading off of the universal effects of technologies from their intrinsic properties- is nevertheless attractive. It helps to create powerful scenarios, clear stories, and tangible predictions however simplistic they all are. It makes good copy for the media and creates glamorous notions of a new electronic 'frontier' awaiting colonization by those hardy pioneers that are up to the task. Such rhetoric seems to tally well with the early periods of the diffusion of a new set of technologies and practices. This is because, at this stage, people literally see the social world, and the urban landscape around them, gradually filling up over time with new equipment, new artifacts, new practices, and new ways of organizing human experiences -as if coming from nowhere. Above all, technological determinism and the metaphors of their impact accord well with the dominant experience in the Wild West in the U.S. several centuries ago.

What is unfortunate however is that the pervasive reliance on ‘technological determinism' leading to end of city visions actually obscures the complex relationships between new communications and information technologies and cities and urban life that have emerged as these have diffused to be embedded in real everyday lives and practices.

Many urban scholars find the digital technology-related shifts in everyday urban life occurring now to be more intriguing than could possibly have been predicted solely by the generalized scenarios pumped out between the 1960s and 1990s. The architecture critic and Yale University professor Keller Easterling for example, argues that 'the explosion of changes to the world's markets, cities, and means of shipping and communication [are] far more strange and unpredictable than any of the swaggering futurology scenarios'. Thus, there is a desperate need, as many sociologists suggest, to move beyond the deterministic discourses about the 'impacts' of 'cyberspace' on society to look in rich empirical detail at the complex ways in

which digital technologies are being used in real ways, in real urban regions, and in the real world. This is imperative.

Far from being a complete and revolutionary break with the past, most advances in digital technologies retain many intrinsic qualities of and maintain intimate connections with old media, old technologies, old practices, and mostly electromechanical old infrastructures and spaces e.g., telephone systems, broadcasting systems, electricity systems, highway systems, streets, airline systems, logistics systems. The so-called 'information age', then, is best considered not as a revolution but as a complex and subtle amalgam of new technologies and media fused onto, and 'remediating' the old ones. They are allowing for the subtle 'remediation' of TV, newspapers, magazines, radio, telephones, publishing, books, art, video, photography, face-to-face communication, and the social and anthropological experiences, and construction of place. This is happening as established practices subtly combine with, rather than disappear all together, in socially constructed technological patterns. There are a great many more continuities and synergies than many romantic visionaries of the post-urban fantasies would have us believe. We are not experiencing some wholesale and discrete break with the urban past ushered in by the 'impacts' of new technology. Rather, we are experiencing a complex and infinitely diverse range of transformations where new and old practices and media technologies become mutually linked and fused in an ongoing blizzard of change. 'Cyberspace' is very much a part of our contemporary world and it is constituted through a series of remediations. As a digital network, cyberspace remediates the electric communications networks of the past 150 years, the telegraph and the telephone; as virtual reality. It remediates the visual space of painting, film, and television; and as social space while it also remediates such historical places as cities and parks as well as 'non places' such as theme parks and shopping malls. Like other contemporary tele-mediated spaces, cyberspace refashions and extends earlier media, which are in and of themselves embedded in material and social environments.

5. Conclusion

The first problem is obvious: deterministic end of city accounts are simply, empirically wrong.

End of city discourses studiously ignore the fact that fast pace urbanization and growing digital technology use are actually going hand in hand.

The beginning of the 21st Century marked the milestone of the world population being more urbanite than not.

End of city perspectives also ignore the rapid rise in all forms of physical mobility at all geographical scales. These have actually grown in *parallel* with the application of digital technologies; they have not been replaced them.

The growing gridlock of city streets; the staggering rise of global automobile ownership; the exponential growth of airline travel; intensifying levels of consumer and business tourism; growing energy consumption; and a general acceleration of flows of goods, commodities and raw materials at all scales across the world.

Cities of all types across the world continue to be not only the powerhouses for all aspects innovation, research, application of digital technologies, but their demand and installation.

However, current processes of economic, political, social change mostly facilitated by digital technologies, are radically affecting cities. There could be no denying that cities are becoming more diffuse just as the condition of all spaces within societies becomes more generally urban.

The second problem with digital technology-based end of city visions is that they ignore the very material realities that make the supposedly 'virtual' realms of cyberspace' possible. 'Cyberspaces' do not exist on their own; the many supposedly 'virtual' domains and worlds are brought into existence, and constantly facilitated by massive and globally extended sets of material systems and infrastructures.

Because the material bases for cyberspace are usually invisible they tend only to be noticed when they collapse or fail through wars, terrorist attack, natural disasters, or technical failure. Thus, in contrast to the vast and land-hungry infrastructural edifices that sustain transport, electricity and water flows, the myth that cyberspace is an ethereal, unearthly and even immaterial realm continues to retain power.

The third problem with the utopian and anti-urban predictions of end of city visionaries is that they massively over-generalize. They imply that all experiences are the same anywhere and that digital technologies relate to all cities in the same way at all times.

Tough the digital technologies are helping to facilitate significant reconfigurations in the geography, mobility patterns and social economic and cultural dynamics of cities, and in the ways in which urban life is represented, lived and managed, these changes are subtle. They are often counterintuitive and they tend to involve many other processes of change.

The fourth problem with deterministic end of city predictions is that they tend to dramatically overestimate the capabilities of digital technologies to mediate human relationships. At the same time, they dramatically underestimate the complexity, richness, and the continuing anthropological and cultural power generated by co-present human bodies in places, which are predominantly urban.

The penultimate problem with end of the city scenarios is that they -at least in their utopian incarnations- tend to promote simplistic, biased and glossy ideologies of the so-called 'information age'. Many of these have been relentlessly used to improve the

public relations profiles of governments and digital media and telecommunications firms.

The final problem with end of city visions is that, in their depoliticized depictions of cities being 'impacted' by waves of autonomous, future technology, which seem to arrive from elsewhere, they imply that there is little or no space for policy innovation in cities, urban regions, or nations and supranational blocs.

It is the irrefutable reality that the twenty-first century will be a century marked by *both* the deepening urbanization of all parts of our planet *and* a growing reliance on fast-advancing information and communications technologies.

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PUBLIC PARTICIPATION IN LOCAL POLICY DECISION USING GIS-BASED APPLICATION

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Abstract

This paper describes the development of a GIS-based application that provides for the public, local government organizations, public companies and agencies, the ability to communicate in order to propose solutions for a better local policy. A study case was conducted for an urban area in Buzau City, Romania. The key for these new applications of providing public access, and particularly in a more flexible and efficient way, is the use of spatial data in a user friendly structure. One of the main goals is to reduce the costs in the public governance sector while improving citizen feedback, related to information exchange. Public participation using GIS tools is achieved using online requests for problems related to their local neighborhoods. This solution raised some issues in relation to how many of citizens have knowledge about urban politics; governance rules or what is their professional background. On the other hand the Web-based services are popular among different type of users, from regular students to land consultants. This type of applications are meant as a service for all the citizens from urban area, as long as they are not too complex or too technically demanding, quantified in time spent by a person in seeking for help or proposing a solution.

1. Introduction

In Romania public participation in local government agencies and companies is very low due to historic bureaucratization and cloudy organizational structure. Because of two reasons citizen interaction has become sometimes counterproductive and for this, in most cases, the chosen solutions came from specialists. Participation proposal in decision making process, usually attract well-seen community actors who likely in the future will hold local political positions. These actors collect the information from the citizens and filter this type of proposals for future specific agenda, in most cases a political agenda. On the other hand, urban residents are invited to discuss finished local policy plans, instead of being involved in entire development process. The review that came from citizens is considered only an observation because the decisions have been already taken.

According to Romanian's frameworks for public sector, local administration is represented by mayors, local and county councils. Besides these institutions, there

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are a number of commercial companies whose work is closely related to public administration, main activities related with urban networks: water supply and sewerage, central heating systems, electricity, telephones, gas distribution and waste management (Petrescu, 2007). Taking into considerations these aspects we consider that public participation must apply not only for the institutions like mayor or Council County but for all types of public companies mentioned above.

2. Urban Policies and GIS technologies

The increase of urbanization, population density, life quality and public access to information leads to new economic, environmental and decision approach for towns and their inhabitants, as a result of the excessive use of traditional tools related to policy decision and citizen involvement. The opportunity offered to the citizens of the new member states of the European Union to benefit of ITC tools, as well as the acceleration of this trend as a consequence of foreign investment in these countries should be compensated by offering alternative measures, such as of Geographic Informatics Systems (GIS) application's management. Promoting such measures is highly important in these countries, especially if we consider that their citizens do not have satisfactory alternatives to the use of traditional methods, such as telephone or mail interaction with public authorities (Anderson, 2003). Also, it's important to ensure dissemination of best practices in addition to encouraging knowledge sharing by means of the current initiatives. For policy makers and local authority in terms of management key, GIS availability, as a tool in decision making processes has major implication in: public administration and policy; public information and community involvement; and services provision.

Initially, public policies were proposed by architects and engineers, due to the fact that technical-urban aspect was considered the most important key in local development. Starting the 6^{th} decade of the 20^{th} century, urban policies led to a complete abandonment of technical principles, in exchange of urban management's approach. For example, the social component, services, environment, education, culture, research represents the main elements that must be take into consideration in the entire city complex. The main results of the urban development aim to control and improve the community welfare by incorporating all areas of interest and components in local development.

The concept of urban policy must be analyzed from at least three points of view (Teodorof, 2004): (1) in terms of area of interest, urban policy emphasizes functional aspect of habitation, urban area, economic development, economic development, public services improvement and environmental protection; (2) in terms of content, an urban policy represents any principle or government plan on urban issues; approach should be on specific areas of analysis, that reflects the existing situation, based on identification and prioritization of urban issues that arise from data, information and indicators analysis; (3) in terms of process, an urban policy is a cyclical approach, which includes the formulation and evaluation of urban

development goals, planning development, design and implementation, incorporating public investment and consumption.

Public administration also refers to a form of community government or self government from a well-defined area. For this reason a successfully public policy depends on information and technology quality. In addition to this feature, should be considered also how citizens are affected by public choices (right or wrong ones). This requires accurate information, delivered to decision makers in a clearly and easily understandable form, reflected in the most appropriate strategy. In public companies or administrations, large amount of information is often not used due to apparent unrelated connection with financial activity. The public policy making process is an integrated one, however the elaboration stages depends on generated information and future evaluation (Danielson and White, 1998). This correlation is presented in Figure 1. At each stage of the entire development process of a public policy we can integrate the GIS technology for an more logical structure and easily evaluation.

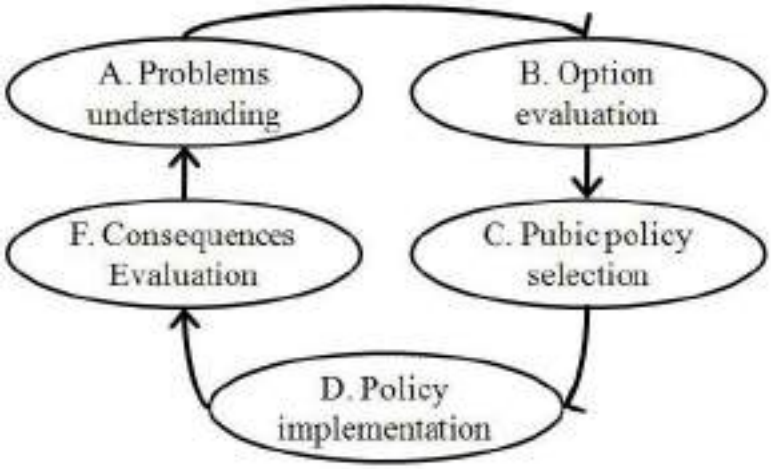

Figure 1. Public policy design steps using cyclical approach (Adaptation after Danielson and White, 1998).

The first step in policy life cycle requires understanding the basic and simpler principle of a problem. When information is presented only as a question or is displayed in charts or graphs form, it's difficult to understand the entire context. For example, if we want to identify and represent industrial area influence related to residential space in a medium dimension city like Buzau. Analysis on diagrams and graphs that are populated with data, like ownership and environment certificates, traffic routes, statistical sales problems, population employment, etc. could not provide similar ensemble analyses compared to maps that correlate all this information in an effective and comprehensive way. Therefore is recommended an increased attention in designing and developing the entire life cycle. For this, at local administration level, public policies aims to be geospatial related, referring in particular at the relationship between citizens an urban space.

This design trough all five steps is a cyclical and reprieve one as the input data is entered and/or processed. At each stage there is an evaluation and feedback component based on the new information developed during the entire process. These loops show that the underlying policy solutions could generate new challenges. Using GIS technology can be extremely useful in promoting the information dissemination to the local community, in a way that citizens can understand all the implication of an public policy troughs the entire process.

An important feature of a solution GIS in developing public policy is to establish a system for collecting, organizing and representing the information in a way that is easy to understand. A good example is the narrative description of a damaged drinking water network, in parallel with the representation of the same networks as a map that contains all specific attributes. GIS provides information visibility trough maps, and allow decision markers to identify problems more quickly and accurately.

3. Project Description

The scope of this application was to provide for citizens and policy maker situated in Buzau City Study area (Figure 2) a new tool to collaborate and interact. This tool will help people to propose better policy decision by improving communication.

Figure 2. Imagery Location of the study area, Buzau City

At the European level we can identify five types of public involvement in local government (Kingston, 2007) and public company decision making:
1. Information: the public authority informs the community (unidirectional process
2. Consultation: the public authority consults the citizens based on a field questionnaire with predefined and closed questions and answers (we used a questionnaire for the Buzau Study Case - Table 1.)

3. Deliberate involvement: the public authority engage local community in consultation process before general policy proposal
4. Government-led active participation – the public authority instigates the local community in proposal with control of the final policy decision
5. Citizen-led active participation – the public authority and local community are actively engaged in the entire process and share the ownership and responsibility related to final decisions

Table 1. Field questionnaire for Buzau Study Case

1. Public services quality	
*Generally, you are satisfied about the quality of public services?	1...10
1.1. You are satisfied about the quality of public services at neighborhood level?	1...10
1.2. You are satisfied about the quality of public services at the city level?	1...10
1.3. You are satisfied related to services modernization at the Mayor and Council level staring 2010?	1...10
2. Communication quality with the public authority	
* Generally, you are satisfied about the communication quality with the public authority?	1...10
2.1. Are you satisfied with the easy contact with the public authority?	1...10
2.2. Are you satisfied related to waiting answering time from the public authority?	1...10
2.3. Are you satisfied related to public announces that came from the public authority?	1...10
3. Tax collection services	
* Generally, you are satisfied about the local tax collection amount?	1...10
3.1. Are you satisfied related to distance to the nearest point of collecting taxes?	1...10
3.2. Are you satisfied related to waiting time for paying local taxes?	1...10
3.3. Are you satisfied related to charge taxes amount?	1...10
…….	
12. How do you want to get involved in the future decision process?	
12. 1. Using classical tools phone/fax/printed mail	Yes/No
12. 2. Directly at the public authority headquarter thought a printed form.	Yes/No
12. 3. Using web application with online forms.	Yes/No
12. 4. Using web application, online maps and graphical tools that contain street, zip and cadastral number reference .	Yes/No
5. Using web-mobile application.	Yes/No
Socio-demographic characteristics	
Street	……..
Cadastral no.	……..
Housing type	.....
Age category?	.....
e-mail address	.....

Observations	.....

3.1. Buzau City – geodatabase structure

The largest amount of information that Buzau local administration operates has a geographic component, which specify the exact location of an object. Information related to assignation, area, properties, roads, schools, parks contains the geographical component as a mandatory requirement. Although computer use has become common in Romania, the GIS technology penetration in the public administration is performed in a slow rate. The main problems consist in high costs of creating spatial database. As the same time, as important are organizational costs, inevitably involved in introduction of new operational technologies (Anderson, 2003). GIS application related urban policy management are naturally implemented in the municipalities, county councils or public companies, and are not limited to simple informatics cadastral applications. This information could includes a variety of other application related to: private and public property, construction and restrictions licenses, planning areas, traffic analysis, emergency and disaster management, design and record of utility networks, territorial organization and systematization

Because we needed an urban area, with sufficient information provided by different institutions were we could perform various analyses we chose a surface of 3.4sq km located in District 4, Buzau City. As a general concept the geographic database contain both high density data, located strictly in Buzau urban area, as well as buffer information like county roads (figure 3 and 4).

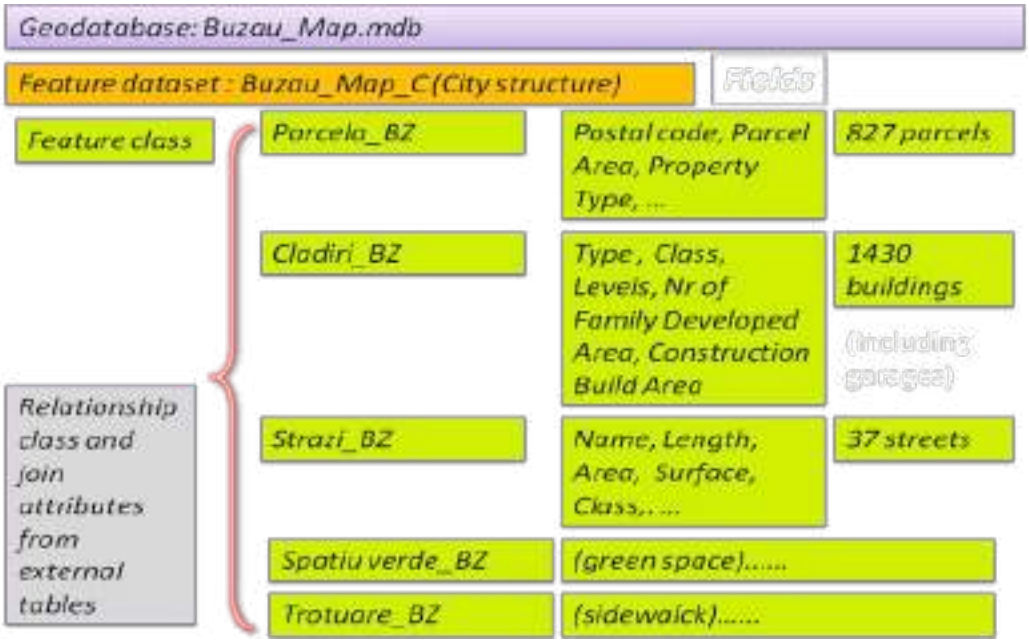

Figure 3. Geodatabase structure, Buzau City

It took about 6 months to construct the geodatabase that included exact location of parcels and buildings, total surface of streets, sidewalks and green space and an estimated condition of the land. We used ArcGIS Desktop to manage, analyze and visualize this type of data. The Buzau City Geodatabase consists in about 1430 building objects, 827 parcels distributed on 37 streets. For the study to be more concluding the property form is reprehended by public and private property according to local construction authorization.

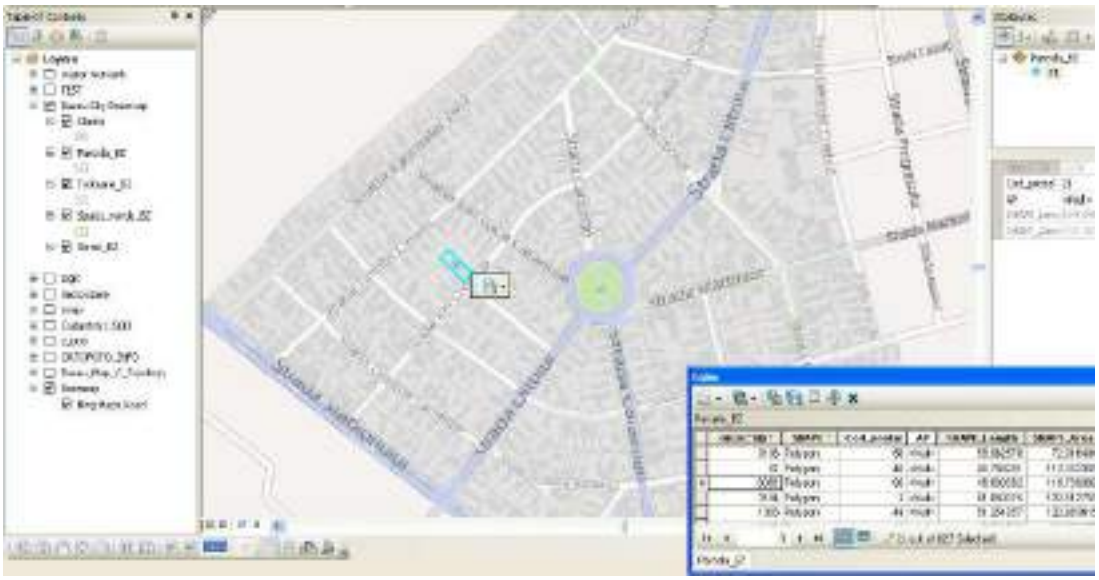

Figure 4. Study case map and attribute table for parcels, Buzau City

In terms of data management information approach, the system includes tools for inclusion, visualization and understands the relationship between different types of data to produce new information (figure 5).

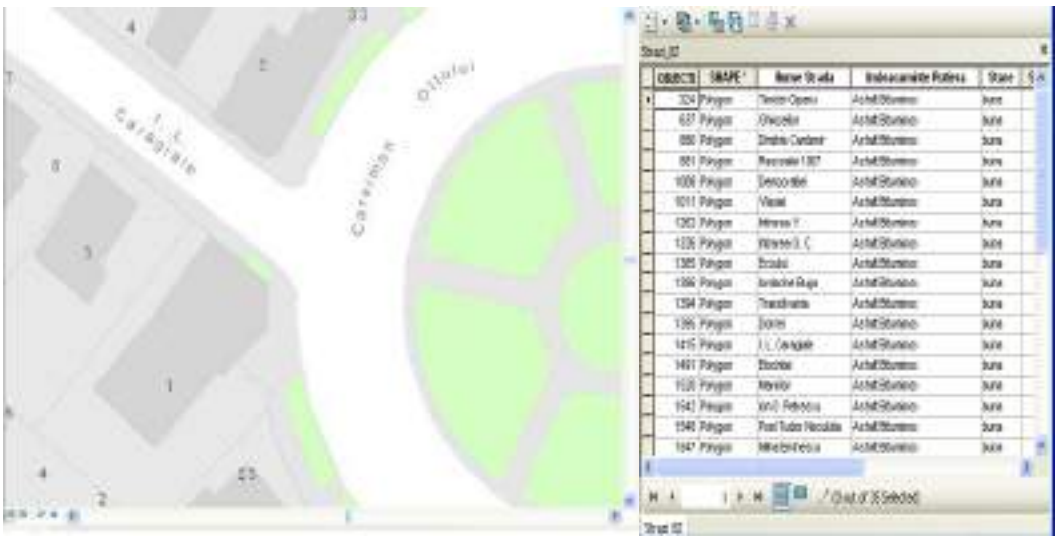

Figure 5. Study case map and attribute table for streets, Buzau City

The geodatabase allows decision makers to evaluate dependencies and interdependencies of these relationships based on this information. Also the stakeholders are able to assist and present this information on a consistent manner trough the citizens. This new approach also affects local authorities and public companies, which tend to be organized in regionalized structure.

3.2. Buzau City - web-GIS application

The internet offers new opportunities for distributing both geo-processing tools and geographic data to a wider range of potential users (Zhao, 2002). The web application system will allow, beyond a simple geographical storage, creation and management of new indicators resulting from intersection of available and relevant technical data with non technical information, enabling the simulation of the entire urban area evolution.

The web application provides the general public and other interested parties the ability to communicate service requests to their public company (the water company was used in this example). This interactive web application includes a base map constructed for the study case from Buzau City, and a simple tool to submit new service requests and comments, visualize past requests related to water distribution network. This base map provides a consumer representation of parcel information and can be used to locate the network, structures, etc. by geographic coordination (Figure 6.).

Figure 6. Web application for the study case

After submitting a request the user will be able to see past and future intervention from the company operator:
- Assigned – the request is assigned at the operator level for future solution (the user can complete with comments related to his problem);
- Unassigned – the request is unassigned at the operator level (the user will not be able to post new comments until the request is assigned);
- Closed – the request was solved by the network operator.
We must mention that due large amount of data included in the GIS application some tests were conducted only on specific type of services like water distribution network.

Example of the programming code from Buzau_Public_Request application used:

```
var manageTemplateParts = [];
manageTemplateParts.push(dojo.string.substitute("Change service request STATUS to <a href='javascript:assignRequest(${OBJECTID});'>Assigned</a>", requestFeature.attributes));
manageTemplateParts.push(dojo.string.substitute("Change service request STATUS to <a href='javascript:closeRequest(${OBJECTID});'>Closed</a>", requestFeature.attributes));
manageTemplateParts.push(dojo.string.substitute("<a href='javascript:deleteRequest(${OBJECTID});hideAttributeInfo();'>Delete</a> service request.", requestFeature.attributes));
……
if (requestStatus === 'Unassigned') {
     if (commentsTable.loaded) {
       esri.show(addCommentsContentsPane.domNode);
       if (comments.length === 0) {
         addCommentsTitleNode.innerHTML = "Be the first to add a comment";
       }
     } else {
       esri.hide(addCommentsContentsPane.domNode);
       addCommentsWarningPane.containerNode.innerHTML = "Adding new comments is currently unavailable...";
     }
   } else {
     esri.hide(addCommentsContentsPane.domNode);
     addCommentsWarningPane.containerNode.innerHTML = "New comments can only be added to unassigned service requests.";
   }
```

In the process of collecting request, we introduced the concept of citizen-sensors, because some information provided by the citizen will not have a technical character but will be solved in by the operator. The application provides the following main functions: reporting a problem, and visualize past requests from other citizens and exploring the digital map. The Previous example use design elements and includes parcels, buildings, roads and water distribution network features. We used ArcGIS

Server to publish and visualize Buzau geodatabase. Now any citizens, from District 4, can easily view imagery or cadastral plans of their neighborhood and get involved in reporting problems, or propose new solution related to local policy (Figure 7). The location and the comments are sent to the university department, which return a confirmation form, streamlining the procedure for citizens and public authority. In the future when the application will be developed all comments from the application will be send directly to the public authority server.

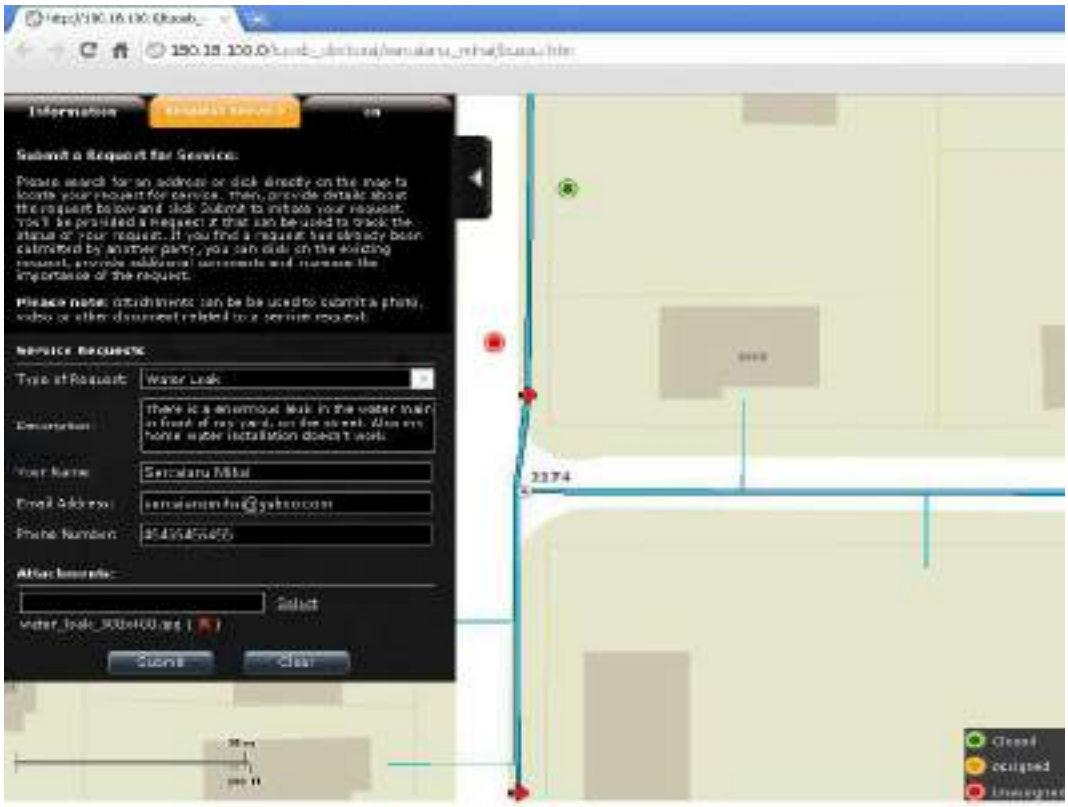

Figure 7. Citizen request solution for Buzau web-application

Based on, classification and quantification of water losses, recorded, the water company will be able to take decisions in accordance with the needs from the field. Technological solutions used to solve problems are justified not just by a simple analysis, but also future insertion in the progress reports the new indicators obtained.
The contributions are directly related to the development and use of information technologies. Digital technologies reinvigorated an already engaged community by creating proactive (rather than reactive) participatory field requests. In addition, some of the techniques that were used to revitalize the participatory process were made due to use of computer-mediated communication and visualization technologies. For instance, the use of a safe/neutral electronic space (the web site application), which allowed citizens to post request and comments, made it possible for citizens to share their real problems, placed in a specific geographic point.

Here are some examples of services that can be offered to citizens through a single

portal and the possibility of extending municipal coverage to other companies or public administration: (1) urban equipment, for example request installation or equipment maintenance; (2) request information related to local budget; (3) providing information about particular maps, for example cadastral plans info; (4) abandoned car lifting; (5) submitting street visibility problems , abundant vegetation, public land construction; (6) animals controls, rendering requests for abandoned pets; (7) report for clogged drains and missing sewer caps; (8) providing information about low pressure on water distribution systems; (9) unmarked constructions sites; (10) social services or police request; (11) road signs and street lighting proposal

3.3. Partial results and future application development

For real time solution the project we need the pilot test, based on requests collected from the field. For that, a more detailed impression of the users and the usage of the GIS-based web applications would be a valuable tool for evaluation and the strategy of further development. At this point, most of the GIS-based applications are targeted toward relatively specific user groups whose general abilities to comprehend and use GIS in specific tasks might not be known but can be estimated quite well. Still, there is a need to get a clearer impression of the understanding of the concepts of GIS among nonprofessional users. This paper presented a solution that can be combined with the water company software. Results of the research project may prove to be valuable at a much broader range than just develop the GIS-based applications at the regional and municipal web sites, as knowledge of users' understanding is crucial for the success of the transition toward digital management.

Although for the pilot phase of the study we considered as sufficient the 200 questionnaires for the field survey, their number cannot be relevant in the evaluation stage at the entire city level (Figure 8).

Figure 8. Field survey questionnaire area

For a relevant and complete conclusion related to perception related to public participation field data must be combined with information collected from the web application. To involve citizens in the scheme of reducing water losses several conditions must be met. According to William Huxhold, good decisions require good information (Huxhold, 1991). The first requirement was to complete the GIS database and the web portal, through which citizens can submit a applications request for reporting problems occurred in their neighborhood and may acquire assistance to remedy the problem. By generating a „claim number", issued in real time, the beneficiary can observe the progress report of the application and identify those responsible for his request. The online communities is be able to seek for help, may need different intervention requests, and provide multiple lines of communication and dissemination trough a single portal. Responsibility for solving the problem is in charge of public authority. If the public authority is not in charge or the proposal is to complex information will be transited to other urban networks companies, such as district heating networks.

In a possible application development and a diversification of services offered to citizens all public authorities companies who manage other urban area or network utilities can benefit from this experience. In the near future, it will identify possible development opportunities for citizen involvement in the system to evaluate environment impact or reduce losses from all municipal companies from Romania. Data quality and analysis in future applications will be made depending on input, type and quality of data, and analytical methods.

After implementing the system, traditional channels such as telephone or written requests are recorded in a second phase, but not eliminated entirely. At the institutional level this solutions will be used simultaneously spatial databases,

satellite imagery, internet services, new technologies and specialists' knowledge. Also, problems can arise in the implementation phase such as: citizen access to a poor developed infrastructure (computers, web); poor security and classification in acquisition phase; in case of extreme failures other networks could be affected; real time informatics system performance; reticence of some citizens to use modern technologies.

4. Conclusions

Implementing an informatics system and a database by digitizing all physical maps, developing the virtual infrastructure for disseminate relevant information will lead to renewal of underground urban infrastructure. Using GIS for information analysis relating to urban elements from urban areas is becoming increasingly common. Among other facilities, a GIS allows data to be structured by different information levels. Each information layer stores in a geodatabase a number of objects and related attributes of these objects. The GIS solution will allow, beyond simple geographical information storage, creation and implementing new indicators, resulting from the processing of existing information. Digital maps can be used as such (query, visualization, print) in the external portal by exploiting the spatial information and attributes included by each geodatabase feature class or by combining the information included in several themes. With this interactive digital maps citizen can request the solution of various problems

GIS data dissemination means making information available to several departments or beneficiaries, which opens broad prospects in cooperation between citizens, professionals, municipal companies and local government. In parallel with application bootstrapping is absolutely necessary to observe the database operation from the beginning of data acquisition through external web portal. It will follow if: data is stored in a predefined logical form; the entire functionality is unaffected by wrong access from the users; data is secured and national frameworks are respected; the information can be summarized in parallel to multiple users; the geographic data base can be exported to other potential user; the index mechanism is fully operational and reports can be searched; application with identical properties can be grouped.

The novelty rate that the project presents is the implementation trough GIS technology in a modern form the integrated network management, applied to urban area environment, and also the involving of citizens in decisional support for proposing new and modern public policy. The greatest risk is that the project will not be able to recover quite pronounced gap between dynamics and necessary need of information from the field.

From this analysis we identify in the future: (1) cooperation possibilities between citizen – public company – local authority, in terms of policy decision management; (2) future analysis of current capacity at national level in implementing Geographical Informatics Systems (GIS) technologies; (2) future possibilities and involvement degree of citizens in the systems of reducing water losses using spatial databases; (3)

analyzing the necessary changes to ensure minimum operation criteria of the new system.

For Buzau City administration this GIS-based application will inspire other departments to create or develop similar application for environmental protection, cultural heritage or touristic development.

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SOCIO-SPATIAL DIMENSIONS IN SUSTAINABLE RESOURCE AND ENERGY MANAGEMENT IN BULGARIA

Elena Dimitrova[1]

Abstract

Resource and energy efficiency are issues of growing attention in European policy. The role of urban planning and design in achieving practical results is explicitly stressed upon in numerous European documents (Leipzig Charter, 2007; Toledo Declaration, 2010; Energy Roadmap 2050, 2011). This raises questions about how spatial planning could effectively contribute, and whose expertise and what procedures it could rely upon in defining and evaluating efficiency. Urban structure has been discussed as an important factor in planning literature (Naess, 2006) and broader considerations than the economic ones have been recommended in the evaluation of planning concepts (Miller & Patassini, 2007). Current situation in Bulgaria is still characterized by high energy consumption and admittedly low energy and resource efficiency (EC/COM, 2011). The efforts undertaken at the national level during the recent decade have resulted in raising public awareness in the field of energy efficiency and in increasing practical experience in resource and energy management at the municipal level. Current action is however mainly focused on technical measures to diminish resource and energy consumption through building insulation and energy saving heating/ lighting systems. Despite the already considerable experience in municipal energy planning in the country (Eneffect, 2004; Ecoenergy, 2012) and the published national guidelines insist upon the energy efficiency assessment of spatial strategies and plans at all levels (WRDPW, 2009), no practical steps have been undertaken yet in Bulgaria to explicitly address spatial planning implications of energy and resource efficiency. Recent attempts to promote imported assessment tools (BREEAM, LEED, DGBG, etc.), are rather fragmentary and technocratic. The market mechanisms applied lack sensitivity to the peculiarities of the national planning and sociocultural context and are broadly neglecting social injustice (Babourkova, 2010). Based on the teaching experience in the Programme in Urbanism and on current studies at UACEG, Sofia, the paper discusses the need for re-defining tasks and priorities of spatial planning education in order to more effectively include considerations about energy and resource efficiency. The comparative analysis of two case studies from the recent educational practice in the programme outlines a number of aspects – the applied methodological approach, related and influencing international events, the contact established with stakeholders throughout the project elaboration, and the further development potential of the

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projects - contributions to planning practice, research and education. The results provide evidence that if issues of energy and resource efficiency are effectively addressed at all educational levels in direct dialogue with the local level in Bulgaria, this would have a manifold contribution in building the needed professional capacity for implementing integrated planning approaches and in encouraging experts' sensitivity to issues of social and environmental justice.

1. Introduction

Resource and energy efficiency are major issues in the process to a sustainable future and are recently ones of growing urgency in the European policy field. Since the Rio Summit in 1992 an increasing number of policy documents and research reports pose and discuss issues of efficiency with regard to spatial planning. This raises numerous questions about how spatial planning could practically contribute in the process, whose responsibility and expertise it could rely upon in defining and applying criteria in evaluating plan efficiency with regard to energy and resource use, at what stages of the planning process and through what procedures it should be done. All these have direct implications to the way planning education tasks and priorities are defined and implemented. The paper traces currently existing policy framework at the EU and Bulgarian national level and outlines the main efficiency aspects concerned in the planning field. It then analyses the interpretation of two topics with major importance to energy and resource efficiency (mobility and the spatial pattern of the settlement network) in two educational projects at UACEG. The efficiency of the educational approaches and results is estimated with regard to their further development potential and complex contributions to planning practice, research and education.

2. Resource and energy efficiency aspects in the planning field

The set of documents express societal expectations for spatial planning and design to contribute to achieving higher resource and energy efficiency in the process to sustainable development. This raises questions for research to answer about how spatial planning could effectively contribute, and whose expertise and what procedures it could rely upon in defining and evaluating efficiency.

2.1. EU policy documents

There was a clear message at Rio Summit to architects and planners about their responsibilities in the process towards a more sustainable future - Agenda 21 stated that there should be 'shelter for all' provided in a world of one billion homeless people, spatial planning and management should be improved and integrated approaches to building the urban infrastructure (electricity, water supply and sewage, waste collection, etc.) should be developed. Two aspects were actually addressed in the document – the importance of the planning and design results (from the urban system to the single building) but also of the planning process itself – the actors

involved and their interactions. The message was further detailed through European policy documents – Aalborg Charter, 1994; Goteborg Action Plan, 2001/2006; etc.

The Leipzig Charter on European Sustainable Cities (Informal Ministerial Meeting on Urban Development and Territorial Cohesion, 2007) was the one to explicitly stresses on the need for improving the energy efficiency of cities and towns. It outlined four priority issues in the SD process - political debate on implementing the principles at all levels, the introduction of integrated planning and a balanced territorial organization; the need for holistic strategies and coordinated action at all levels, the modernization of infrastructure networks and the improvement of the energy efficiency of cities. It also recommended particular attention to four measures to increase energy efficiency at the urban level – improvement of public transport, refurbishment of residential buildings, efficient resource use; reasonable use of the territory resulting in compact urban structures. Toledo Declaration (Informal Ministerial Meeting on Urban Development, 2010) confirmed that 'the core battle for urban sustainability lies in achieving the maximum possible eco-efficiency in the existing urban fabrics of cities'. The outlined key issues there comprise: (a) reducing transport needs by the promotion of proximity and mixed-uses schemes, while at the same time stimulating a more sustainable mobility; (b) improving the management of energy and material resources and flows in the city; (c) recycling land (by means of urban regeneration, the redevelopment or reuse of abandoned, derelict or unused areas, etc.). It is also stressed upon there that *'strategies and actions should be unitary, and address the whole complexity of urban development, taking into account the role of each part of the city in the whole structure'*. Stating that the role of local organizations and cities will be much greater in the energy systems of the future, the Energy Roadmap 2050 (EC/COM, 2011) foresees the need to answer *'questions on to what extent urban and spatial planning can contribute to saving energy in the medium and long term'*.

2.2. Key research questions on energy and resource use, and efficiency in planning

Recent European studies on energy and resource efficiency (EEA, 2011) outline that, generally, most countries in Europe nowadays interpret resource efficiency quite broadly (including raw materials, energy sources, biomass, waste, land and soil, water and biodiversity), which is *'largely in line with the European Commission's interpretation in documents published to date'*. According to the EEA report findings spatial planning issues have not been explicitly related to resource efficiency - in the national policy documents in Europe the term has appeared mainly in national sustainable development and environmental strategies and action plans, strategies and plans related to climate change; and economic reform programmes. According to the survey in 31 European countries, the top three priority resources are energy sources, biomass and raw materials, while half of the countries have also listed

waste, land and soil, and water as priority resources. Formulated strategic objectives for resource efficiency tend to be fairly general in nature, most often referring to ensuring more efficient use of natural resources, materials and energy; increasing recycling of waste; improving the share of renewables in the overall energy mix; and preventing waste or decoupling waste generation from economic growth (all reported by more than half of the countries). Concerning consumption areas with significant environmental impacts, several countries have reported having objectives and/or targets in the fields of housing (typically for energy efficiency in buildings and sometimes for appliances and electricity use); mobility (typically for increased use of biofuels in transport and fuel-efficiency standards for cars); and food (typically on the amount of land under organic farming). Indicators related to water, land use and forestry are relatively widespread. Only a few countries have established mechanisms to coordinate work on resource efficiency nationally. Some countries have set up 'specialised agencies' or research consortia to support policy development. The involvement of regional and local level administrations in policy making seems to be limited. Factors frequently reported to drive resource efficiency policy have been roughly grouped into those related to the environment and those related to the economy. From the responses on knowledge gaps and information needs, it has appeared that countries are most interested in information on how best to integrate resource efficiency into other policies and in sharing information and experience on good practice in policy implementation. EU policy initiatives have proved to be a strong driver of national policies, indicating both an opportunity and a need for EU resource efficiency policies to provide guidance and strategic direction. Conclusions have been drawn about efforts needed to ensure that resource efficiency policies are coherent with other key policies and about initiatives on institutional development and capacity-building, stimulating inter-institutional collaboration and strengthening coordination mechanisms to improve policy coherence and consistency. Social and cultural aspects related to resource and energy efficiency have not been explicitly mentioned in the report except indirectly in the conclusion that *'one possible approach could be for EU resource-related policies to use broad interpretations of 'resource efficiency' but leave it to the countries to decide which policies and resources are most relevant in their national context'*.

Urban structure has been already discussed as an important factor in planning literature (Naess, 2006) and research reports have focused on urban sprawl (EEA, 2010). European studies have already focused on mobility and transport issues and their linkages to urban development (EC, 2009; EEA, 2009). All these have outlined the importance of the urbanization mode and transport to the efficient use of land and energy resources and focused attention to the need for long term visions and strategies to impact behavioural modes but have not touched explicitly issues of social and environmental justice. Claiming the importance of place-based policy interventions, Davoudi argues in 2009 that on the ground of efficiency, place matters

because market failures and the unintended consequences of government policy impact on different places in different ways.

Efficiency is also a research issue still to more carefully focus upon as broader considerations than the economic ones have been recommended in the evaluation of planning concepts (Miller & Patassini, 2007). Development aspects in peripheral areas in SEE would also require innovative approaches and higher sensitivity to social equity and territorial cohesion (Dimitrova & Burov, 2011).

2.3. Energy efficiency in the planning field at the national level in Bulgaria

In Bulgaria energy efficiency issues are among the targets of the practical implementation of the National Strategic Reference Framework (NSRF) for the period 2007-2013 (Priority 4: Support for balanced territorial development) (MRDPW, 2007). NSRF is based on the national Regional Development Plan and the Operational programme on Regional Development (2007-2013), Part 3.8: Infrastructure development – energy infrastructure, including renewable energy sources and energy efficiency. The important accent is there put on the development of various types of urban centres and the improvement of their linkages with the adjacent rural regions. Transport infrastructure development is outlined as an important factor for the future spatial organization of the regions.

A major focus in the recommended updating on the implementation of the Regional Development Plans at level 2 for the period 2009-2013 (MRDPW, 2009) is the need for synchronization between regional and spatial plans and the cohesion aspects of development. The implementation of visualizations and maps is therefore strongly recommended in order to fully identify intraregional disparities and peculiarities of the regions. It is also recommended to explicitly outline the role of the Regional Development Plan for increasing energy efficiency, renewable energy resources (RES) implementation, and for green-house gas emissions reduction. Yet, there are no indicators mentioned on energy consumption and energy efficiency within the recommended indicator set. A similar approach is recommended to updating the mid-term documents – Integrated Development Strategies, at level 3 (district level) for the period 2009-2013. It is expected that the access to services and the service quality provided by the transport and energy infrastructure should be analyzed to estimate changes since the beginning of the strategy implementation and to identify current priority needs. Municipal development plans should, according the Guidelines, aim at identifying the common needs of neighbouring municipalities, defining common priorities and coordinating joint action. The rationale staying behind is the effort to concentrate existing capacity and resources, to improve EU funding accessibility and to support territorial cohesion and local partnership. The role of the Municipal Development Plan should be also estimated with regard to its role for increasing energy efficiency. Yet, in the recommendations on updating of the SWOT analysis there are no explicit energy accents. Neither is there such an accent traceable in the six strategic indicators chosen - concerning territories, emissions, expenditures and erosion.

On-going procurement procedures for the elaboration of integrated urban plans could have been a good chance for integrating more holistic considerations about resource and energy efficiency in the spatial planning process (MRDPW, 2011).

3. The response of planning education to the energy and resource efficiency challenge in Bulgaria: case study analysis

The review of current policy documents provides clear indications about needed proactive professional position is support of formulating integral qualitative requirements to both planning processes and products so that issues of resource and energy efficiency could be related to issues of social equity and environmental justice. Two educational projects addressing different aspects of efficiency and interested in integrated planning that guarantees *'equal opportunities for access to resources closely linked to European cultural roots'* (Girard et al, 2007) have been analyzed and results compared. The main research question addressed is how could planning education integrate aspects of energy and resource efficiency in a socio-culturally sensitive manner in order to more efficiently contribute to enhancing the professional capacity of the current planning system in Bulgaria for facing the challenge of energy and resource efficiency.

3.2. Project description

The two projects were developed in the winter semester of 2010/2011 at different levels of the Programme in Urbanism at UACEG, Sofia – a programme established 10 years ago and designed to be sensitive to EU processes and to the local context of Bulgaria – socio-cultural, spatial and institutional. Team working has been required in project A and encouraged in Project B. A general principle has been also followed in both – the topic of each projects was chosen (and detailed argumentation provided for the choice) by its authors.

Project A: BSc Programme in Urbanism programme, Course project, Teaching module in Sustainable development (optional), 3rd semester, 2010/2011;

Project title: Flexible (demand responsive) group and night transport in Razlog municipality; Students' team: Tsvetelina Kalinova and Aneta Stoycheva; Tutors: E. Dimitrova, A. Burov. H. Nikolov

The module introduces applied issues of sustainable development policy at the local level in Bulgaria. Case-study based approach is implemented as a way to encourage context sensitive and creative thinking and is responsive to priority issues and ongoing activities in Bulgarian municipalities (Dimitrova, 2011). The particular project has chosen to address mobility challenges and traffic conflicts in an internationally attractive skiing area (with considerable tourist flows causing high pressure on the environment) within a sparsely populated mountain region where market based transport services have become highly inefficient and are currently

strongly reduced and replaced by increased private car traffic (thus causing traffic conflicts but also additional economic, social and cultural marginalization of certain groups among the local population). The undertaken SWOT analysis of the existing situation regarding the natural conditions, inhabitants' and tourists' peculiarities, needs and mobility patterns, transport infrastructure and services (accessibility and reliability) has outlined the strengths and weaknesses of the area. The user groups identified and contacted were working people, pupils, youths, tourists, retired people, and people with disabilities. Contacted stakeholders belonged to municipal authorities, private transport companies, tourist agencies, local hotel owners. Material needs and infrastructure shortcomings but also behavioural patterns and attitudes were identified through field observations, a survey and a number of semi-structured interviews. The message of the project - addressed to all the actors and presented to the local community - contained a comprehensive list of tourist sites and possible routes of the DRPT, an analysis of the 24-hour transport demand (Figure 1) and recommendations about the distribution of responsibilities and possible benefits in order to achieve a 'win-win' situation in the municipality.

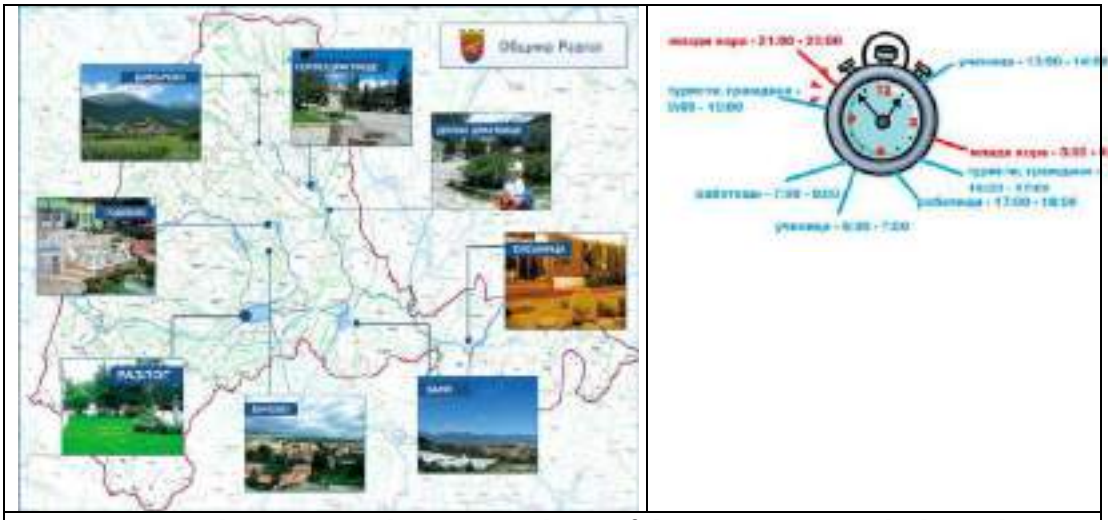

Figure 1. Razlog municipality: (a) Analysis of the tourist potential; (b) 24-hour distribution of the transport demand

Project B: MSc in Urbanism Programme, Diploma project;

Project title: Spatial concept for the development of Gabrovo municipality with a time horizon till 2035; Authors: Dimitrina Pironkova, Mila Yolova; Supervisors: E. Dimitrova, A. Burov.

The declared objective of the diploma project is the elaboration of a spatial concept for the long-term development of Gabrovo municipality (time horizon 2035), based on the estimation of available resource potential and the sustainable development concept priorities. The challenge addressed is the difficulty in sustaining high quality and attractive living environment in an inner periphery of the country - a rural area of abundant natural resources and cultural heritage yet with aging and shrinking

population and high unemployment rate, which makes efficiency issues particularly important to approach and re-formulate. The development of the project goes through several stages: analysis of the existing situation, formulation of sustainable development principles and identification of the development potential of the territory, elaboration of a spatial concept, strategy and action plan. The methodological approach applied by the project team integrates a set of integrative planning tools – (a) landscape ecological analysis, outlining the results of the interaction between local natural, social and cultural processes (Figures 1 and 2) and the identification of areas and settlements with development potential (Figure 3); and (b) back-casting, identifying development and planning priorities at consecutive time horizons with regard to the future state aimed at.

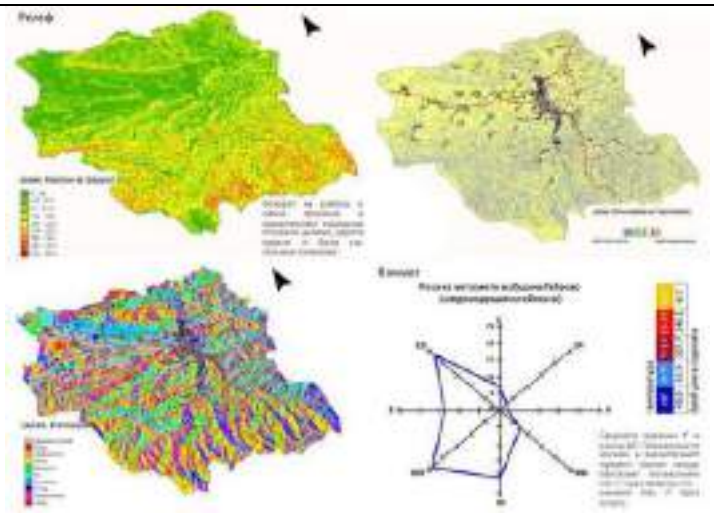

Figure 1. Analysis of the natural characteristics of Gabrovo municipality

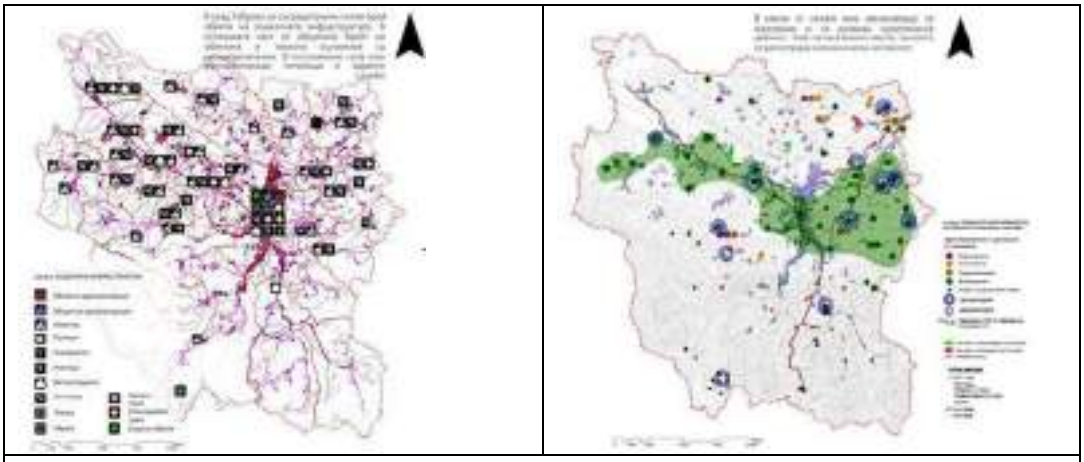

Figure 2. (a) Analysis of existing social infrastructure; and (b) Identification of settlements with development potential (economic activity, tourism development, stable/increasing population

Vision – horizon 2035:
- Competitiveness
- High quality of life
- Favourable age structure

Stages in achieving:
- Innovative technologies
- Educated population and favourable business climate
- Improved quality of the environment

Action to undertake in 2010-15:
- Information campaign
- Broad public debate

Figure 3. The 'backcasting' method applied

The project proposes a spatial concept for the development of the settlement network in the municipality with time horizon 2035 and a more detailed proposal for a fragment area with a time horizon 2015 (Figure 4). It also envisages four activity packages: (i) regeneration of the physical environment; (ii) improvement of transport accessibility; (iii) agriculture development; and (iv) landscape preservation. Each of the packages is structured with regard to priority actions recommended, funding opportunities, actors' benefits and responsibilities.

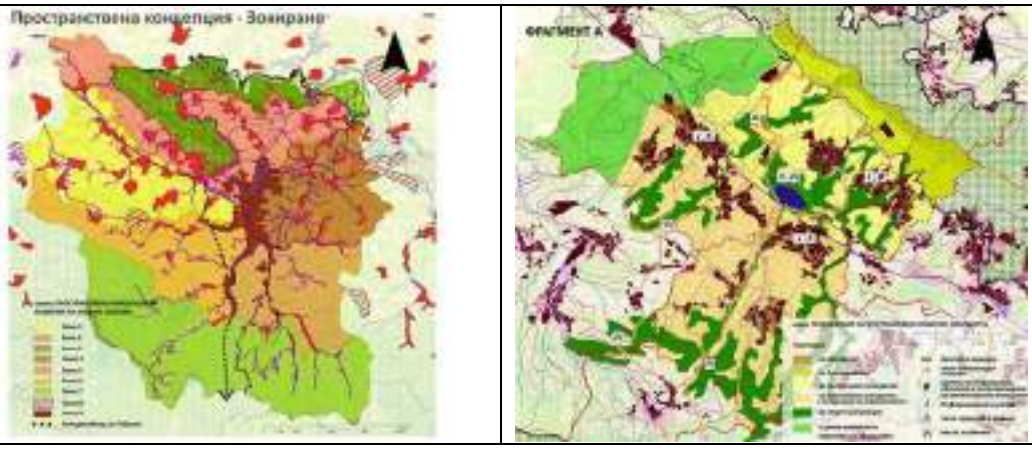

Figure 4. Spatial concept: (a) zoning proposal; (b) spatial development – a fragment

3.2. Comparative analysis of the two projects

The comparison is focused upon several characteristics of the projects: issues addressed, methodological approaches applied, factors influencing the choice of the

topic and development of the project, contacts with potential end-users and stakeholders during the project development and after the end of the project work, and the identified project potential to further contribute to planning practice, research and education (Table 1).

Table 1. Comparison of case studies

	Methodology applied	*Influencing factors/events*	*Project development potential*		
			Practice	*Research*	*Education*
A	SWOT analysis; Field observations; Survey; Interviews; Brain storming.	Bulgarian-Flemish conference (2009) and Flemish traffic modeling seminar (2010) at UACEG; INTERREG IVC, MMOVE Project	Ideas for Razlog Municipal Action Plan	University research project on Demand Responsive Transport, BN118/2011	On-going development of: • An optimal teaching module on Resource and Energy Efficiency, MSc Programme in Urbanism; • Interdisciplinary post-graduate qualification course, UACEG.
B	+ Landscape-ecological approach; GIS based analysis; Back-casting.	ERASMUS intensive project Atoms&Bits (2010), IUAV Venice; International *Planning Days* in Gabrovo (2010).	Graduates joining in the team of Gabrovo Integrated Plan;	Future PhD thesis?	

4. Results

Although the two projects are developed at different stages of the programme, the results of the comparison confirm a number of common factors and similarities in the development process. Neither of the projects was initially designed to explicitly focus on resource and energy efficiency issues. They were both however motivated to search for sustainable development options based on existing resources, development potential and cultural identity of the areas. As a result of the undertaken analyses the teams of both projects came to realize that providing for resource and energy efficiency is crucial to solving the identified social and environmental development problems.

The methodologies applied in the two projects were influenced by the issues addressed but they were also adequate to the professional experience of their authors. The methodological approaches of Project A are based on the initial and comparatively modest professional knowledge and skills acquired during the first year of study. The project has strongly focused upon the observation and interpretation of the real life situation (problems, needs, available resources) in the particular municipality and on the direct dialogue with stakeholders and end users. Positive and creative conceptual thinking and searching for adequate analysis and evaluation criteria and instruments are strongly encouraged. The methodological

approaches at the end of the programme (the diploma semester) build upon previous experience but also comprise much more sophisticated instruments.

Both projects have developed within the context of intensive international professional communication - in the University and in the municipalities. Students participated and were strongly influenced by the contacts – both in choosing the topics of their projects and methodological approaches to apply. Project A was developed after a series of joint Bulgarian-Flemish events organized in the UACEG, discussing issues of mobility and illustrating the implementation of. Although 2nd year students were naturally not capable of mastering and implementing the specialized software for traffic modeling in one semester, they were motivated to search for efficient solutions of the identified transport problems in Razlog municipality. The INTERREG IVC MMOVE project going on at the municipality in parallel with the course project was a chance for getting acquainted with advanced EU practice in achieving higher energy efficiency of mobility but also, by being involved in technical support to the surveys, to become aware of important social and cultural issues in the municipality. The diploma project (Project B) was developed by two graduates who had just attended the summer workshop of the Atoms & Bits project (Intensive Erasmus programme) at IUAV, Italy, where climate change and resource efficiency issues were discussed in parallel with current challenges of globalization and digital technologies; backcasting was also introduced there as an effective planning method. Joining in the international *Planning Days* event in the city of Gabrovo at the beginning of the diploma semester and getting acquainted with the landscape-ecological planning approach promoted by the Italian partners from Nichelino municipality in the EU project (MRDPW, 2008) in the municipal project, motivated the two diploma students to interpret the situation in the municipality from the broader perspective of efficiently using the territory but also the social and cultural resource in the municipality and by implementing innovative and integrated planning tools.

Although developed within different levels of the programme, both projects proved to have considerable further development potential. They were both able and motivated to provide useful feedback to planning practice – in Razlog municipality students' results were reported back to the municipality and were considered a useful source of ideas for the Action Plan currently developed. After the successful diploma defense the two graduates were invited to present their results at the regional *Location Centre* 2011 event in Gabrovo, and later on – to join in the team contracted to develop the new Integrated Plan of Gabrovo municipality. The educational process within project A also inspired a small university research project on the perspectives for implementing demand responsive transport in Bulgaria. Project B is hopefully the basis for a future PhD study on landscape-ecological planning (still to be confirmed). Both projects provided important experience in conceptualizing resource and energy efficiency while regarding broader spatial and social issues in the planning field. They confirmed that issues of resource and energy efficiency have multiple dimensions and should be much better integrated in the educational process at all levels. That was the reason for considering the possibilities for developing two new

teaching modules to be hopefully integrated into the curriculum – one addressing REE at the master level of the programme in Urbanism and the other – at the interdisciplinary post-graduate level at UACEG.

5. Conclusions

Despite the progress made there are important challenges still to face in increasing the professional sensitivity to energy and resource efficiency implications in spatial planning and in developing holistic and innovative approaches at different levels. In order to be able to cope with these challenges, spatial planning needs to re-consider traditionally applied technocratic and growth-oriented concepts and carefully re-define its objectives so that social and cultural dimensions could be effectively considered and evaluated in the planning process. The early introduction of the energy and resource efficiency topic in the planning education process is of key importance for raising professional awareness about it and for encouraging students' commitment to and motivation for developing context sensitive REE planning concepts. It seems to be of key importance all educational levels to be involved and continuity in addressing the REE issues throughout the educational process - persistently encouraged. Closer interdisciplinary communication and collaboration developed in the process would be of particular importance for applying integrated approaches to planning and evaluation and thus contribute to adequate capacity building for promoting REE in the spatial planning field.

Acknowledgement

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Developing Integrated knowledge management framework for policy-making in Tehran

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Abstract

Calling for enhanced integration of varying policy areas are driven from the assertions that regarding the varied and multiple agencies involved in metropolitan planning and policy-making, there are problems of communication and transfer of information. This makes these agencies to be unaware of others' aims, intentions, policies and programmes. Accordingly they may be contradictory instead of coordinated and competing instead of participating. In this context the most general purpose of policy integration, including sectoral integration, territorial integration, and organizational integration, is to improve efficiency and effectiveness by considering the consequences of policy implementation beyond the specific policy domains. More specifically, policy integration has been considered as an important mechanism for contributing to sustainable development. One vital source for setting up any mechanism towards achieving integration is knowledge. One major challenge in policy-making processes in metropolitan systems worldwide is the lack of relevant, accurate, available and integrated information which altogether makes up a knowledge base. Thus organising a knowledge base framework for policy-making, especially in the metropolitan areas that planning and policy-making is more complicated - mainly due to the multiplicity of stakeholders - can make arrangements for an integrated and probably more efficient policy-making environment which reduces duplication and lack of coordination while promotes consistency between policies. This requires knowledge management initiative that has been envisaged as a tool to integrate, store, retrieve, disseminate and manage information and knowledge plus aiming at facilitating the processes of collecting, maintaining, sharing and utilising information and knowledge. Providing a framework that integrates multiple information and knowledge in metropolitan planning will support any initiation towards integrated policy- making. Tehran is a metropolis with many decision-making agents and stakeholders with varying aims, aspirations and policies responding to their institutional agendas. This has caused incompatibility and competition among decision-makers, politicians and also decisions, per se. While there is no requirement concerning integration of the policies or the knowledge base of the policies. It is in this context that there is a need to propose a knowledge management and a knowledge base framework. The proposed framework is intended to facilitate integration, sharing and reusing knowledge to, first, ensure that all

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Decision-making agencies involved in metropolitan planning use consistent information and knowledge and second, to support detecting inconsistencies among different decisions which is made at different levels of decision-making by different agencies involved in metropolitan planning and management in Tehran. Accordingly, this paper has adopted a dual aim of first analysing the existing situation of Tehran in terms of its using consistent information and knowledge in policy-making by different agents and second to envisage the ways and means of promoting knowledge and information integration Tehran metropolitan planning.

1. Introduction: Issue under study, aim and purpose

Metropolitan policy- making is a domain of intense involvement of an ever increasing variety of agendas and actors, possessing a range of interests, which make decisions at a number of different levels (Breda-Vázquez, et al, 2010). As a result, metropolitan policy- making is composed of multiple, linked decisions (Han & Lai, 2011) and the essential element of planning system in order to achieve the overall desired goals rather than the achievement of sector-orientated goals is integration of varying policy areas. In an integrated policy framework, considering the consequences of policy implementation beyond the specific policy domains, may improve efficiency and effectiveness of planning system.

In this context, the idea of integrated knowledge management framework is one dimension of policy integration (Kidd, 2007: p. 165; Stead and Meijers, 2009) which is needed to support making contradictory instead of coordinated and competing instead of participating decisions.

In this article, in one hand, the concept of Integrated knowledge management framework would be discussed and in the other hand, how planning system in Tehran could be developed on this basis of setting up and applying such a framework would be proposed to achieve the dual aim of this paper, which are (a) providing a knowledge management framework to support coordination and cooperation among all decision-making agencies involved in metropolitan planning, and (b) supporting detection of inconsistencies different decisions which is made at different levels of decision-making in Tehran.

In order to achieve these aims a method comprising a four staged process has been devised as follows and as is shown in Figure (1):

- First stage involves studying the conceptual framework produced by reviewing and summing-up the findings of the parallel experiences worldwide.
- Second stage involves analysing the current state of information and knowledge frameworks in Tehran in terms of their integration so as to find the strengths and weaknesses of such frameworks.
- Third stage, based on the conceptual framework produced by reviewing and summing-up the findings of the parallel worldwide experiences as well as the analysis done in the second stage, involves proposing a framework for an integrated knowledge management framework in Tehran.

- Fourth stage involves the application of the proposed framework in the third stage in Tehran to promote knowledge and information integration in Tehran metropolitan planning.

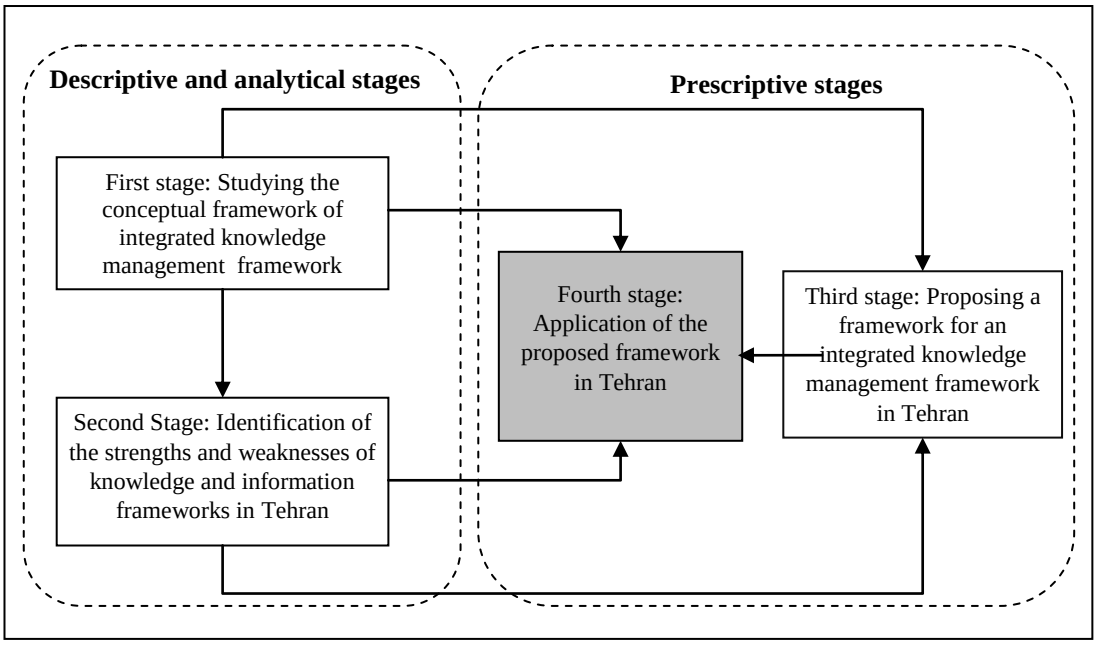

Figure 1. Flowchart depicting the method adopted in achieving the aims of this paper

2. Conceptual framework

Urban spatial planning involves making decisions and taking actions which has wide-ranging and diverse spatial information requirements. Information plays a central role in urban spatial planning.Information requirements of urban spatial planning include the collection, manipulation and analysis of spatial structure. One major challenge in existing urban spatial planning - on both fields of knowledge and practice - is the lack of relevant, accurate and available information or in other words an appropriate decision support system (DSS) along with a knowledge management framework (KMF) which not only establishes a DSS but also converts information to knowledge.

1-2. Knowledge management

For holistic understanding of knowledge management, it is necessary to intruduce knowledge. There are wide-ranging definitions of knowledge. A comprehensive definition has defined knowledge as “a fluid mix of framed experience, contextual information, values and expert insight that provides a framework for evaluating and incorporating new experiences and information” (Otim, 2006). Also, knowledge is defind from a dual perspective of practical and general, as follows (Dongsong, et al, 2002):

- Specific and practical definition of knowledge defines knowledge as applied information that actively guides task execution, problem-solving, and decision making.
- General definition of knowledge, defines knowledge as any fact, event, rule, hypothesis, or model that increases understanding or performance in a domain or discipline.

In the applied perspective "knowledge is to know when, why and which information is needed, how information could be obtained and processed, and where information can be found to achieve a desired objective" (Dongsong, et al, 2002).

Knowledge management is a concept which there is no general agreement on its definition, though some of its relevant definitions are listed below:

- knowledge management is "a discipline that promotes an integrated approach to identifying, managing, sharing, and reusing all of information assets by using advanced technology" (Dongsong, et al, 2002).
- Knowledge management is the creation and subsequent management of an environment which encourages knowledge to be created, shared, learnt, enhanced, organised and utilised (Sujit, et al, 2011).
- Knowledge management is "the practice of selectively applying knowledge from previous experiences of decision making to current and future decision making activities with the express purpose of improving the organisation's effectiveness"(Otim, 2006).
- Knowledge management is "the creation, organisation, sharing and use of knowledge for development results"(UNDP, 2007).
- Knowledge management is "about facilitating the process by which knowledge is created, shared and utilised"(Seneviratne, et al, 2010).

The process of Knowledge Management or what is known as the Knowledge Management Cycle (KMC) has three main essentials as follows (Sujit, et al, 2011):

Management: This focuses on capturing, organising and facilitating knowledge.
Application: This focuses on effective retrieval of relevant content through advanced searches and mining headed for conducting knowledge-related work and tasks.
Organizations: This focus on learning, sharing and collaborating.

Main processes of knowledge management are (Otim, 2006):
The process of knowledge creation: This can be done by (a) acquiring external knowledge, or (b) by means of creating knowledge in the process of learning.
The process of retention of knowledge: To keep knowledge available, some kind of memory is needed. Retention of knowledge refers to the process of storing knowledge and making its retrieval possible.
The process of knowledge sharing: Its aim is to make sure that (existing) knowledge is obtained and shared - or in other words knowledge disseminates or transferred - at the right place.

The process of application or use of knowledge: The other three knowledge processes (mentioned above) are supplementary to this process, i.e., the application of knowledge.

2-2. Policy- making and information and knowledge management in metropolitan planning

Knowledge management that aims at facilitating the processes of collecting, maintaining, sharing and utilising information and knowledge in policy- making can provide a framework that integrates multiple information in order to subsequently analyse and manage information.

1-2-2. The importance of information and knowledge management in policy-making in metropolitan planning

The major point about the adoption of any planning approaches, in any country or urban/metropolitan area, is that of their process, the different stages of the adopted process and the alteration of the process to the local circumstances as well as the information requirements of each of the stages. Almost all of these stages not only require spatial information but also require considerable information processing and analysis. Information requirements of the planning process, especially problem formulation and evaluation of the existing conditions, require the collection, manipulation and analysis of spatial features with the aim of being able to input in the subsequent stages of the planning process to produce plans, whether with strategic or operational nature. Not only problem definition but also problem formulation and the evaluation of circumstances require the collection; manipulation and analysis of spatial/aspatial information (Daneshpour, 2007).

The act of management requires agencies to use more detailed information for routine operations. These different requirements concerning information can "explain the existence of various specialised ad hoc systems in urban planning, such as management information system (MIS), land information system (LIS), and urban GIS".

Considering the above mentioned importance of information and knowledge, policy - making could be seen as a process of analysing information and using knowledge to resolve problems. During the policy-making process, the problems should be detected, relevant information should be gathered and the right judgment should be made so as to make appropriate decisions. In this context, policy-making is by and large faced with a variety of challenge such as (Daneshpour, et al, 2012):

- Gathering relevant information in a timely and accurate manner;
- Synchronized acquisition and analysis of distributed information;
- Reusing knowledge (or consider past experiences) to facilitate current decision making;
- Organising, sharing and managing the information efficiently; and
- Dynamically changing the situation under study.

Accordingly, using integrated, accurate, reliable and timely information has an important role in achieving the aims and objectives of any attempt related to policy-making.

2-2-2. Challenges related to information and knowledge in policy-making in metropolitan planning

One main barrier of effective planning in urban/metropolitan areas worldwide is related to their information system and knowledge base. These barriers can be listed as the following:

- Information and knowledge on disaster management are fragmented (Seneviratne, et al, 2010), widely distributed and owned by a great number of organizations/agents (Dongsong, et al, 2002).
- Information, experiences, approaches, adopted modalities and generated/created knowledge of previous planning documents remain in individual or institutional domains and are not usually translated to and transformed into applied knowledge for future policy-making for the communities (Seneviratne, et al, 2010; Sujit, et al, 2011).
- Information and knowledge coordination, sharing and creation on any stages of policy-making and planning is usually inadequate and ineffective (Seneviratne et al, 2010).
- The linkages among all agencies involved in metropolitan policy-making is usually weak and inefficient and this fact inhibits an efficient management approach and an integrated and an appropriate coping mechanism (Sujit et al, 2011).

3-3-2. The functions of knowledge management Frameworks in metropolitan policy-making

Though there is no way of integrating all aspects of metropolitan policy- making, efforts can be made to integrate and manage their information and knowledge requirements. knowledge management can undoubtedly maintain a decision-support system for planning in urban/metropolitan areas. This will have possible consequences for all levels, forms and aspects of decision-making, including urban/metropolitan planning. In this respect, some functions of knowledge management frameworks can be listed as below:

- Knowledge management frameworks can act as a tool to store, retrieve, disseminate and manage information related to urban/metropolitan planning (Sujit, et al, 2011).
- Knowledge management frameworks can facilitate the entire process of acquisition, sharing, management, and utilisation of information and knowledge for the support of urban/metropolitan planning processes (Dongsong, et al. 2002; Otim, 2006).
- Knowledge management frameworks can avoid repeating past errors of practice, highlight good practice to be replicated and make lesson-learning (UNDP, 2007).

- Knowledge management frameworks make it possible to learn from and leverage past experience in the management of current problems (Otim, 2006) and to build a culture of learning from previous lessons and the adoption of best practices in urban/metropolitan planning processes (Seneviratne, et al, 2010).

3. Analyzing the current state of metropolitan policy-making related information and knowledge in Tehran

Tehran, as the case study of this paper, is a metropolitan with many agencies which are involved in policy- making. The content, quality and especially integration of policies which is made in different agencies play / have important role in the life of its residents. This has been one of the most important challenges of the country generally as well as in planning, decision-making and managing this city. This requires not only an integrated method of planning and management but also an appropriate information system and knowledge base for the two areas of knowledge and practice. Information required for policy-making in Tehran is fragmented and is in the possession of diverse agencies/organisations. This is while this information system and knowledge base is not capable to be converted to an appropriate DSS and KMF.

The lack of reliability, consistency and coordination of urban/metropolitan planning related information and knowledge in Tehran has stemmed from factors such as (a) administrative inefficiencies, (b) resource limitations, (c) the shortage of skilled personnel and technical expertise and (d) the lack of funding or political will to support the construction of an appropriate and integrated DSS and KMF system. These factors, in addition, reflect a disapproval of the policy makers; urban planners and managers for the different aspects of application and importance of information systems and knowledge basis in any urban/metropolitan planning activity especially when continuance and sustainability reveal themselves as important agendas, locally and internationally (Daneshpour, 2007).

The main challenges of urban/metropolitan planning processes related information and knowledge in the case of Tehran can be listed as below:

- There is a large gap between the goals and priorities of different agencies/organisations which are involved in Tehran's policy-making. In other words, policy- making - as a vital part of planning activity - has been done without due consideration to integration between main actors.
- While there are many formal and informal sources of information in any urban/metropolitan area of Tehran, the official procedures are usually incapable of sharing and integrating necessary information to support policy-making, planning and managing in Tehran.
- Besides information deficiency in cities, there are many concealed and unused information potentialities that not included in or part of an established and effective DSS and KMF system.
- There is varied and multiple agencies/organisations involved in different stages of policy-making which perform the tasks such as research and action.

Accordingly it can be deduced that the information and knowledge required for operating policy- making within the broad context of urban planning in Tehran is fragmented.

- There is the lack of information and knowledge coordination at the different stages of urban/metropolitan planning in Tehran.
- Agencies involved in urban/metropolitan planning in Tehran have their own information sources, while others are not aware of the available information of the other agencies that might aid them and provide a support system for their task of policy-making.
- There is not relevant, accurate and available information system and knowledge base concerning urban planning in general and policy-making in particular in Tehran.

These challenges could be discussed in terms of the main processes of knowledge management (Table 1).

Table 1. Tehran metropolitan policy – making status in terms of Main processes of knowledge management

Main processes of knowledge management	Tehran metropolitan policy – making status
The process of knowledge creation	• Lack of relevant, accurate and available information system and knowledge base concerning urban planning in general and policy-making in particular.
The process of retention of knowledge	• Lack of mechanisms of knowledge upgrading, including agreed upon periods of knowledge upgrading. • existence of concealed and unused information potentialities that not included in or part of an established and effective DSS and KMF system.
The process of knowledge sharing	• Incapability of the official procedures in sharing and integrating necessary information, produced in many formal and informal sources of information • Lack of information and knowledge coordination at the different stages of metropolitan planning in Tehran. • Unawareness of agencies involved in metropolitan planning in Tehran the available information of the other agencies that might aid them and provide a support system for their task of policy-making.
The process of application or use of knowledge	• Lack of consideration to integration between main actors involved in Tehran metropolitan policy-making. • Incapability of varied and multiple agencies involved in Tehran metropolitan planning in using fragmented information required for operating policy-making.

4. Proposing a framework for an integrated knowledge management Framework for policy-making in Tehran

Knowledge management Framework in this paper has been envisaged as a tool to share, integrate, store, retrieve, disseminate and manage information and knowledge related to urban/metropolitan planning in Tehran. The main functions of knowledge management Framework in urban plannig process of Tehran are to enhance and develop the integrated policy-making and to support decision making within the urban/metropolitan planning context. Using comprehensive, integrated, accurate and reliable information and knowledge in this city may enhance the process of urban planning, and the quality of policies which is made in Tehran.

Two essential principles for establishing an appropriate information and knowledge management framework for integrating policy-making and supporting decisions making in urban planning context of Tehran are first defining the purpose of the framework, and second investigating the existing information system in Tehran in order to integrate the two (UNDP, 2007). In Tehran the main proposes of the proposed knowledge management Frameworks are:

- Integrating multiple information and knowledge related to metropolitan policy-making in order to subsequently analyse, manage information and create knowledge.
- Integrating sector-orientated policies of different agencies involved in urban planning activity.

Establishment of a knowledge base can facilitate the processes of knowledge creation, knowledge sharing, knowledge integrating and use of knowledge among the different stages of urban/metropolitan planning process and all agencies involved in the process. Such a knowledge base insures / support achievement of managing information and knowledge and knowledge management framework proposes in Tehran.

5. Application of knowledge management framework for policy-making in Tehran

A comprehensive knowledge management Framework is presented here in support of integrated policy-making in metropolitan area of Tehran. The core of the proposed framework is the knowledge base with a set of involved knowledge management processes for knowledge acquisition, organisation, creation, sharing and integrating. This knowledge base must evolve incrementally over the time (Figure 2).

The proposed framework is intended to facilitate integrating, sharing and reusing knowledge in order to support integrated policy-making in metropolitan planning in Tehran. The proposed framework - as a comprehensive, consistent and dependable knowledge base which will facilitate managing knowledge - can help achieving an efficient and effective urban/metropolitan process which can be integrated in order to

reduce making the contradictory, inconsistent and conflicting polices and to improve efficiency and effectiveness of planning system in Tehran.

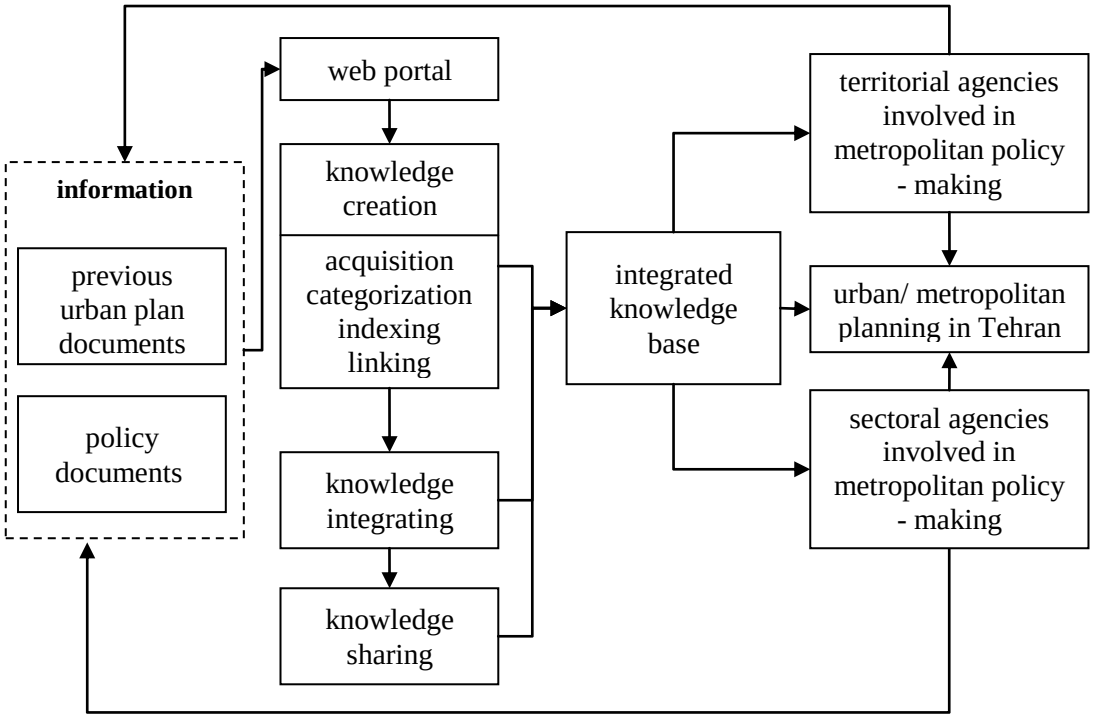

Figure 2. The proposed knowledge management framework of integrated policy-making in metropolitan planning process of Tehran

6. Conclusions

One important point about using the methods devised in the more developed countries of the world is that general principles and analytical tools that have been developed there is not feasible in the less developed countries of the world without considerable modifications and adaptations. So there is a need to develop new approaches to launch an appropriate decision support system (DSS) along with a knowledge management framework (KMF), appropriate to the varying conditions.

Knowledge management framework, in this paper, is envisaged as a tool to integrate, store, retrieve, disseminate and manage information and knowledge related to policy-making in urban/metropolitan area. Policy-making activity involves merging a variety of information in order to analyse the different elements of the applicable spatial structure and their interaction. Integration of incoherent, incomplete and dispersed information that have diverse information sources can reduce information gaps and strengthen the decisions to solve problems in an urban/metropolitan area.

This paper made an attempt to present a comprehensive knowledge management framework in support of policy-making process within a broader context of urban/

metropolitan planning. It advocates multiple knowledge management processes that create, maintain and share the knowledge, provide consistent support to decision-makers and recommend possible solutions based on the knowledge base which includes the past experiences and other agencies' decisions. In addition, being aware of other sectoral / territorial agencies decisions, may provide them with the necessary requirements of avoiding from making incompatible, contradictory, and conflicting policies. Summing up, such framework provide an important element of an integrated policy making in Tehran metropolitan planning.

The proposed knowledge management framework is intended to evolve incrementally while the framework must allow the urban/metropolitan agencies/organisations to transcend the existing limitations and redundancies created by fragmented information and knowledge.

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RESPONDING TO NEOLIBERAL RAILWAY POLICIES IN SUB-SAHARAN AFRICA

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Abstract

Colonial railways play key roles in many less developed countries (LDCs), particularly in sub-Saharan Africa (SSA) where transportation infrastructure—of any mode—is relatively sparse. Colonial powers built scores of railways in SSA, but these lines have generally fallen into disrepair since independence despite the important and mostly unmeasured contributions they make to the urban and rural areas they serve. In fact, researchers and practitioners often portray colonial railways in a negative light because they require subsidies for operations or to rehabilitate infrastructure. Typically, the only time these railways receive praise is for their ability to transport bulk goods, which raises critiques of neocolonial resource extraction. Very few researchers call attention to railways' potential benefits including their contribution to food security, education, public health and safety, household wellbeing, affordable public transportation, and the environment. Using a review of the literature, official reports, newspaper articles and interviews with key actors who have participated in railway rehabilitation, this paper calls attention to colonial railways' benefits that have been mostly disregarded.

This paper also scrutinizes why railways continue to diminish despite their benefits. It argues that ideological framings within the development and transportation fields have unduly influenced railway service in LDCs. Namely, SSA lines have not fared well under these fields' positivist framings. Positivism, particularly in transportation planning, has promoted the view that decisions can be made objectively and that efficiency (e.g., economic) is the ultimate guiding principle. The overwhelming core of transportation planning research is positivist in nature and mostly concerned with empirical observation, predictive models and data analysis (Simon 1996; Willson 2001). Flyvbjerg notes that although "many planning researchers consider positivism a long-dead phenomenon of the 1960s and 1970s," others have argued that positivism has decreased "only on the surface of things" (Flyvbjerg 2004).

International development institutions (IDIs) have largely grounded their evaluations and policies in positivist terms. Their adherence to positivism manifests itself in what many experts, particularly critics, have termed neoliberal theory. Neoliberal adherents believe in free market resource allocation and the removal of "state 'distortions' of markets" (including transportation subsidies) so as to create the conditions for macro-scale economic growth and prosperity (Ferguson 2006; Murray and Overton 2011). Notwithstanding this goal's appeal, this paper demonstrates how neoliberal perspectives systematically disregard or undervalue important dimensions of railway service simply because they so often require governmental support.

This paper concludes by discussing the application of Friedmann's conception of *alternative development* to the transportation sector (Friedmann 1992). Whereas neoliberal evaluations feign objectivity despite their underlying normative motivations, alternative development openly embraces a substantive rationality. This paper considers how this more humanist model built on a "moral justification" and its espousal of "inclusive democracy" can change transportation decision-making processes in LDCs as well as the perception of colonial railways. This examination also facilitates the discussion of the compatibility or incompatibility of the neoliberal perspective with democratic participation in transportation decision-making.

1. Introduction

Colonial railways play key roles in many less developed countries (LDCs), particularly in sub-Saharan Africa (SSA) where transportation infrastructure—of any mode—is relatively sparse. Colonial powers built scores of railways in SSA, but these lines have generally fallen into disrepair since independence despite the important and mostly unmeasured contributions they make to the urban and rural areas they serve. Very few researchers call attention to railways' contributions to household wellbeing, food security, education, public health and safety, social stability, cultural heritage, and environmental protection. In fact, researchers and practitioners often portray colonial railways in a negative light because they require subsidies to operate or maintain. Typically, the only time these railways receive praise is for their ability to transport bulk goods, which may make them "profitable" but also raises critiques of neocolonial resource extraction. It is unsurprising, therefore, that so many railways in SSA which provide tangible benefits yet run a deficit are in poor shape or have already closed.

Articulating the many benefits provided by colonial railways raises the question about why these factors are rarely considered in transportation investment decisions affecting them. Many benefits outlined here are not easily measured or have complex causal connections to railways. Transportation planning is highly positivist and mostly concerned with empirical observation, predictive models and data analysis (Simon, 1996, pp. 2, 35; Willson, 2001, p.22). The social sciences largely view transportation planning as "unimaginative" or "technical" due in large part to the transportation field's strong disciplinary "ethos of 'rational science'" that focuses on technical design issues, empirical measurement or analyses using an uncritical lens of neoclassical economics (Simon, 1996, p.1). This prevailing positivist emphasis, particularly with an emphasis on financial performance, has been readily apparent under what many experts, particularly critics, have termed neoliberal theory.

Neoliberal theory also adopts an ideological stance whereby the state and public are largely removed from decisions about transportation services, and this has unduly harmed colonial railways. Although the same actors pushing neoliberal policies have increasingly made an effort to involve the public in transportation service decisions in LDCs, it is not certain that these efforts are effective or even intended to serve the public interest. Powerful actors who influence transportation decision-making

processes in LDCs, particularly international development institutions (IDIs), have largely set the goals and determined the measures that will be used to determine whether a colonial railway merits support.

This paper draws upon a review of the primary and secondary sources as well as interviews with focus groups and key actors who have participated in the rehabilitation of the Fianarantsoa-Côte Est railway (FCE) in Madagascar to better understand the worth of colonial railways and how their value has so often been minimized. The next section discusses the general trajectory of colonial railways in SSA and is followed by a section highlighting the underappreciated benefits that many of these railways provide. The subsequent section provides a discussion on neoliberal theory and how it impacts railways. This paper concludes by looking at how alternative development perspectives could help correct the neoliberal ideology that biases evaluations.

2. Railways in SSA: From Robust to Rust

Railways played a large role in colonial powers' development vision for SSA. At the time, colonial railways received extensive and often uncritical support that enabled their realization. Governments helped secure loans and laborers for railway construction while contending that these lines would enable indigenous populations to live in civilized, developed territories. Colonial administrators sometimes claimed that their greatest contribution to material welfare in Africa was the development of new markets through their investment in transportation technology (Austen and Headrick, 1983, p.177; Moore and Vaughan, 1994, p.135). Colonial supporters and critics alike also saw railways as key to ending the backbreaking practice of porterage that caused the abuse and suffering of many indigenous people (ILO, 1927, p.61; cf. Pourtier, 2007, p.192).

In reality, colonial railways were not the humanitarian endeavor their proponents sought to portray them as. Indigenous people suffered and died in great numbers while working as forced laborers to construct these railways. Colonial profiteers and administrators strongly lobbied their governments to recruit these workers and to provide financing because these transportation infrastructures facilitated the exploitation of new territory and the transport of their merchandise. Governments surely found it desirable to support their national railway manufacturers and the contractors who built these lines. Local administrations strove to make their territories economically self-sufficient at a minimum and, ideally, generate a surplus production for export (Sharp, 2003, p.78). The footprints of these railroads, which almost invariably run from the countries' ports to strategic hinterlands, reveal the desire by colonial powers to assert political and military control, access natural resources and create new markets for their own economic advantage (Hilling, 1996, p.77; Simon, 1996, p.50; Gray, 1999, p.87; Pourtier, 2007, p.192).

The end of colonialism removed a major source of financing as well as some of the initial justifications for subsidizing their infrastructure and operations. These

railways had long depended upon colonial subsidies for operations and free indigenous labor for maintenance and renewal projects. Even "profitable" railway operations received government subsidies for infrastructure rehabilitation work and rolling stock replacement. Many railways had also benefited from colonial policies prohibiting roads from directly competing with these lines (Taaffe et al., 1963, p.513). Newly independent countries largely eliminated these policies, and some even built trunk roads that duplicated railway routes and cut into their revenue (Griffiths, 1995, p.186). This made railway maintenance work even more challenging, which led to a "downward spiral" where lines' decreased reliability further increased the appeal of road-based travel and a further decline in revenue (Hilling, 1996, p.110).

Keeping the trains running in SSA has been anything but simple without their former resources and due to their declining ridership. Harsh climatic conditions present a pervasive challenge to maintaining railway service – particularly in the tropical counties where intense tropical storms frequently cut lines by causing landslides and washouts. Armed conflicts have led to the destruction of railway infrastructure. Even standard use has taken its toll on infrastructure and rolling stock, because the lack of functional transport options has meant overloading – resulting in broken axles, cracked rails and failed traction motors. The lack of domestically produced equipment and spare parts, particularly in SSA, has increased the expense of maintaining these lines because everything must be imported (Moriarty and Beed, 1989, p.128). Those railways that remained open following independence had to defer essential maintenance and cut back on service.

While all countries have limited budgetary resources for transportation provision, the gaps between LDCs' resources and their transportation needs are indeed greater than in developed countries. This is particularly true in SSA where governments have had to make tough decisions on how to allocate scarce resources. The relatively high costs necessary to maintain even basic railway operations and their geographically concentrated benefits may explain LDCs investing more on roadways. Railways not only vie for their share of renewal funding against other transportation investments, but also compete against other publicly funded services such as healthcare, education and security. In many cases, governments have had to borrow money from international development institutions (IDIs) to keep railways running. Yet these funds would only be provided if the railways (and governments) met the stipulations of these IDIs. This has shaped the outcome for many railways, including leading to many of them being closed.

These financial and external pressures have not benefited SSA railways. Railways extend roughly 90,000 kilometers across the African continent (Pourtier, 2007, p.190) and serve tens of millions of people.[1] When one looks at the broader statistics

[1] Just three colonial-era railways, the Republic of Congo's Congo Ocean Railway, the Democratic Republic of Congo's Matadi-Kinshasa Railway and Angola's Benguela Railway, serve populated areas totaling more than 11 million people.

of roadway and railway provision in LDCs, though, each country added thousands of kilometers of paved roadways in the first three decades after independence whereas at least half of their trackage figures actually declined (Simon, 1996, p.18-19). Even the conditions on some of the largest railways can be extremely poor (Hilling, 1996, pp.104-105). Railways in SSA have suffered steadily declining ridership, which is sometimes attributed to a lack of demand or a lack of available rolling stock (Bullock and Gwilliam, 2010, p.233). Regardless of the reasons, it is clear that fewer railways still provide passenger transport service.

3. The Benefits of SSA Railways

Even as railways have disappeared, their importance has not necessarily diminished. Gakenheimer notes that existing transportation systems in LDCs are woefully inadequate to serve existing demand (Gakenheimer, 1999, p.673). Many colonial-era railways continue to serve as the backbone of national or regional transportation systems and they support the livelihoods of millions of people. The lines that still do offer passenger service act as lifeline transportation service for vulnerable populations. Simon notes, “rail transport, both intraurban and interurban, forms an integral part of many poor countries’ transport systems and is utilised particularly by the poorer segments of the population, for example, long-distance migrants and commuting workers” (Simon, 1996, p.23).

Railways are often measured by their national economic impact (i.e., GDP), but they clearly stimulate local economies and preserve livelihood in rural areas. Examining the benefits these railways provide at the household and individual level makes this especially clear. Individuals make their living by working for these lines, by transporting their wares on them or even by selling goods to their passengers. This injects valuable cash into the local economy and allows households to pay for education, medicine, clothing or other products of primary necessity (PPN) such as lighting fuel, salt or staple foods. In the case of the FCE railway in Madagascar, nearly 100,000 people depend on railway for their livelihood – mostly because if there were no train, many villagers would not be able to get their goods to market (Freudenberger, 2003, p.140). In Mozambique, the railway increases the revenue of local farmers and merchants more than if they relied solely on the local market (Béranger, 2006, p.350). This has proved essential for reducing malnutrition by providing revenues to the population selling their agricultural products (ibid., p.355).

Evaluating the financial benefits of shipping goods on a railway versus other modes is a complicated task. Railways are recognized for their ability to ship goods at a lower cost than competing transportation modes, particularly for line-haul traffic on mineral lines (Bullock and Gwilliam, 2010, p.235). Their usefulness and value are shown in the number of colonial-era railways still serving a large private interest such as a mine or logging concession (Simon, 1996, p.17). Bullock and Gwilliam rightly point out, though, that the savings are not necessarily as clear for general freight that must still be transferred from the railway to their ultimate destination by other means (ibid.). Yet decreasing railway service would raise the price of

transporting all goods on the roadways (Béranger, 2006, pp.349-350), which would have a particularly significant impact on smallholders' profits. Evaluating these shipments must happen at an individual level and considerable variation will occur based on such variables as the weight of the good, the quantity being shipped, how it is stored (e.g., crates, containers, sacks, etc.) how perishable the good is, the distance traveled, etc.

When these lines run well, they often reduce the cost of goods imported to villages. Conversely, a reduction of train service can increase the price of consumer goods either from a lack of alternatives or a lack of competition. In villages not served by a paved roadway, the railway serves as the "regulator of exchange and the prices of foodstuffs" (Béranger, 2006, p.350). When the FCE railway service is cut due to a derailment or landslide, the price of PPN increases dramatically. After a series of cyclones halted train service on the FCE, the price of rice in village shops increased by 30 to 50 percent overnight (Freudenberger and Freudenberger, 2002, p.189).

Railways also increase household security by maintaining connections between families across great distances. In countries with little to no social safety net, personal relationships provide a lifeline to families in both rural and urban areas. Railways help structure urban-rural relations by acting as an economic regulator, an integrator and a means of repatriation (Béranger, 2006, p.355). For example, many rural communities have no educational offerings for children beyond the primary school level. Households can afford to send their school-aged children to secondary schools and universities because the fares on a public service are affordable and because they can furnish them with food they have grown themselves. Rural households can also send food to relatives and friends in need of support. Urban migrants also maintain connections to their rural families, which they support through remittances (World Bank, 2010, p.126). This support can be reciprocated, if necessary, with medicines, money or consumer goods not available in the countryside. Moreover, railways can help maintain these connections for less money than by roads.

For decades, IDIs have assumed that roads could provide these same or superior benefits to household livelihood. In practice, though, road-based travel can actually have a regressive effect. While it is possible for trucks to meet all the needs of village households, road-based transportation may be more expensive. Many villagers living along the FCE prefer the railway to road-based travel because the former is cheaper (Men's focus group interview, Tolongoina, 23 September 2009). They can ship one box, basket, luggage or chicken at a time and the money saved in transportation costs benefits the entire household. With the exception of clients regularly transporting large amount of merchandise, train users pay the same fees and the price structure does not depend on market fluctuations dictated by profit maximization.

Road-based alternatives exist, but middlemen often maintain a monopoly in bringing goods to market. Sometimes the state of road infrastructure can create a monopoly situation. Villagers along the FCE have noted decrepit road bridges can block out

very large trucks (Men's focus group interview, Sahasinaka, 18 September 2009). Small road bridges have been sabotaged in Madagascar to create monopoly situations where large truck operators can continue to serve villages and block out smaller vans and cars that can no longer reach these areas. So although the train may be said to have a monopoly along its route, political pressure and the goal of public service usually keeps the fares low. Gwilliam et al. (2010) note that one of the biggest passenger transport challenges in urban settings is that minibus cartels "self-regulation" means that supply is often "inadequate and expensive" (Gwilliam et al., 2010, p.224).[2] They also allude to this monopoly power that road-transport service providers have in rural communities (ibid., 223). As Simon notes, "unbridled competition is often no more desirable or efficient than total regulation" (Simon, 1996, p.170).

Breaking these monopoly situations would seem like an option if the roads were well maintained, but the ability to purchase, operate and maintain a motor vehicle is also out of the question for the vast majority of rural households. Even a bicycle is a luxury only the most prosperous social strata can afford in Mozambique (Béranger, 2006, p.347). It is also important to ask whether it is responsible to encourage more automobile use in a climate of ever-increasing fuel prices? While fuel prices affect public transportation too, these increases are spread out among more users.

Railways may also offer geographical benefits such as leading to greater population densities than along roadways. In Mozambique, districts with a railway presence had a much higher average density than those areas served exclusively by roads (ibid., p.343). The denser development along railways enables the state to save money on public services while providing those people living in railway-adjacent communities with the opportunity to participate in regional markets (ibid., p.344). Dispersing the population more—moving them farther from health services—increases healthcare-related costs for everyone and likely adversely impacts people's health. The accessibility of services may in fact help stem urban migration to already overburdened cities (ibid., p.343).

When villagers must go to the city for such needs as medical attention, the railway provides a relatively dependable and cheap means of doing so. Many roads become impassable during certain times of the year, making this mode less predictable. Moreover, when someone needs medical attention, they don't have to rent out an entire taxi-bus (if this is even an option) to evacuate a person to more sophisticated healthcare facilities in the urban areas (Women's focus group interview, Tolongoina, 22 September 2009). Women in Tolongoina stated that about 20 pregnant women go to the major regional hospital each year to deliver. The ones who cannot wait for the train will have to rent a car for 100,000 Ariary, which is equivalent to 50 working-day's worth of pay and is roughly five times the standard railway fare (ibid.). This

[2] "Self-regulation" may be a more politically palatable way of saying colluding.

could be why in Mozambique, the regions served by rail rather than just roads have a higher life expectancy and lower infant mortality rate (Béranger, 2006, pp.340, 344).

Railways also play an important function in keeping accidents to a minimum. Roadway accidents are significant cause of death in Africa. If railways and roadways were compared for safety, roadways would lose almost every time no matter how the numbers are parsed (Simon, 1996, p.179). Chilson's book *Riding the Demon* describes the fear that grips many Africans when they use the roads (Chilson, 1999, p.15). Gakenheimer attributes the risk to "weak driver discipline" (Gakenheimer, 1999, p.675). Yet the state of the vehicles and roadways also surely contribute to the risk, which comes at such a high price. Simon notes, "apart from the overall cost in terms of lives, medical treatment, damage and repairs, among the dead are many religious, political and business leaders and other professionals for whom long-distance work-related travel is regular. Developing countries can ill afford to lose so many skilled people" (Simon, 1996, p.179). On a continent that suffers from extremely high accident fatality rates, railways provide a relatively safe alternative for users to carry out business and personal activities.

Railways also protect the infrastructure investments because their ability to carry heavy loads reduces damage to the existing roadway network. A railway closure would likely shift such traffic to roads, but this comes at a price for society at large since heavy trucks do the most damage to roads. When they are overloaded, particularly during bad weather, they accelerate roads' degradation. Roadwork costs are increasing due to a lack of competing contractors and rising inputs, which some researchers suggest are likely to remain on an upward trajectory (Gwilliam et al., 2010, p.225). Fossil fuel costs also play a large role in the costs of roadwork both for powering the equipment needed to construct roads, but also for the asphalt used to pave the road – and these costs will continue to rise along with oil prices.

Railways also provide key environmental benefits and are recognized as the "more environmentally-friendly mode" of transportation in a Western context (Caïd 2006). This can also apply to SSA depending on how the railways are used and the alternatives that exist. If a mine or a lumber operation is going to operate anyway, it is better to put these materials on a single train rather than many trucks. This is because a railway is highly fuel-efficient when its rolling stock is used efficiently. In addition, both motor vehicles and railways run on refined fossil fuels, much of which is actually imported. Reducing fuel consumption therefore reduces greenhouse gas emissions even from reducing fuel shipments.

Railways also produce secondary environmental benefits. A dispersed population potentially increases the footprint of agricultural or urban development (Béranger, 2006, p.344). Moreover, ensuring a reliable train service allows farmers producing cash crops to eschew expensive transportation alternatives or avoid turning to subsistence production. An analysis of the FCE railway in Madagascar shows its operation protected nearly 100,000 hectares of tropical forest that holds some of the most unique biodiversity in the world (Freudenberger, 2003, p.141). Freudenberger

notes that "the [FCE] railway actually facilitates control over natural resources exploitation by centralizing transport rather than dispersing it among a multitude of small carriers, as happens with road networks" (ibid.).

One of the most challenging benefits to evaluate railways' worth is their less tangible impact on culture and society. Indigenous populations paid a hefty price for these colonial railways. Building a railway demanded thousands of men over many years. Jones puts it succinctly when he states, "the main thing that the railroad consumed in Africa was labor" (Jones, 2002, p.xix). Railway projects involved physically demanding and dangerous work including blasting, trenching, grading and tunneling. Colonial powers frequently realized railway projects only by forcing the indigenous population to build the infrastructure on which future trains would operate. Colons used forced labor for many activities, but one observer found that "the evils associated with forced labour are generally found to be most intense" on large public works projects, including constructing and even maintaining railways (Goudal, 1929, p.634). Railway projects came to epitomize many of the abuses associated with colonialism: "their size and the number of workers employed on them, besides bringing them more to public notice, has special dangers which are less evident in other cases of compulsion, and the literature on this subject is particularly unhappy reading" (ILO, 1929, p.246).

Users of the FCE, though, actually used its lamentable past to unify people behind its protection, which benefited the entire country. During the 2002 political crisis when bridges across the country were being bombed, villagers actually camped out at bridges and tunnels along the line for up to four months to prevent saboteurs from attacking these vital infrastructure points. Many of these men attributed their actions to the sense of heritage and the sacrifice of their ancestors to The heritage value of the FCE actually led many villagers along the line to protect its vulnerable infrastructure points. One only need look at the conflicts and wars that have closed or interrupted railway links in Angola, Côte d'Ivoire, Eritrea, Ethiopia, Mozambique and the Republic of Congo to see the very real threat to the FCE (Bullock and Gwilliam, 2010, pp.229, 232).

If a railway can bring people together, can the lack of one lead to conflict? This is a difficult question to answer given how intertwined causality is with other factors at play in pushing a "fragile state" into an armed conflict.[3] Sometimes the benefits of a railway system are only noticed once a railway closes, such as the case of the Sierra Leone Government Railway (SLGR). The World Bank made the closure of the SLGR a loan condition for a highway infrastructure project (Abraham and Sesay, 1993). This requirement did not trouble the government; President Siaka Stevens

[3] The World Bank calls certain countries "fragile states" if they are "low-income countries that face particularly severe development challenges, such as weak governance, limited administrative capacity, violence, or the legacy of conflict" (Briceño-Garmendia, Smits and Foster, 2008 in Foster and Briceño-Garmendia, 2010, p.51).

purportedly wanted to uproot the railway because it provided an important economic link to the constituents of his political rivals (Richards, 2001, p.71). Richards suggests that cutting off railway service only served to alienate the area from the rest of the country and enable the Revolutionary United Front to build an alternative regime 'from below' (Richards, 1996, p.140). Shortly before his death, former-President Stevens stated that the only decision he regretted making during his presidency was closing down the railway (Abraham and Sesay, 1993, p.120). Although there is no evidence to confirm whether the World Bank also came to regret this decision, clearly the costs of the country's lengthy civil war and post-conflict reconstruction cost the government, its people and the international community many times the savings of closing the railway.

4. The Partiality Hiding Behind Rationality: Neoliberal Theory and Railways

If colonial-era railways in SSA provide so many benefits, why have they been closing down with ever-increasing frequency? A major reason for this can be attributed to prevailing ideologies guiding development and transportation decision-making as well as the power of those who adhere to them. Namely, the prevailing values and rationalities of modernization theory, and the more recent neoliberal theory, continue to drive transportation decision-making processes in LDCs. These two theories have strong roots in the ostensibly positivistic fields of engineering and economics. Flyvbjerg notes that while "many planning researchers consider positivism a long-dead phenomenon of the 1960s and 1970s," others have argued persuasively that positivism has decreased "only on the surface of things" (Flyvbjerg, 2004, p.286).

Unfortunately for those users who rely on them, colonial-era railway benefits are frequently overlooked or discounted in positivistic analyses. Especially prominent is the assumption that higher measures of economic growth on a national scale (e.g., GDP or GNP) translate into increased development (Friedman, 1992, p.38).[4] Easily calculated measures appeal to the transportation field's prevailing disciplinary culture that tends to elevate presumably neutral and objective forms of quantifiable information above all others. As such, transportation experts and professionals tend to focus on design issues, developing better performance measures and crafting ever-more sophisticated models for analyses aimed at explaining the transportation systems we have or ought to have when using "rational" criteria. Simon notes that positivism, rational science and modernization theory "form the conceptual foundation of the major international financial institutions and development agencies, like the IMF, World Bank and regional development banks, and most UN agencies" that impact transportation decisions (Simon, 1996, p.35).

[4] Such metrics can be instructive when used appropriately and critically. Many times, though, an average is used to mask serious inequity (Rodney, 1981, p.15).

The transportation field has fallen victim to what Flyvbjerg calls the "rational fallacy." The rational fallacy "consists of raising analysis and rationality into the most important mode of operation for human activity, and allowing these to dominate our view of human activity: so much so that other equally important modes of human understanding and behavior are made invisible" (Flyvbjerg, 2001, p. 23). Indeed, by focusing so heavily on measures, models and technical processes, the transportation field too often leaves concealed the true genesis of planning decisions. This does not mean that those attributes the transportation field has traditionally investigated do not matter. Flyvbjerg asserts, "we should not criticize rules, logic, signs and rationality in themselves. We should criticize only the dominance of these phenomena to the exclusion of others in modern society and in social science" (Flyvbjerg, 2001, p.49). Correcting the rational fallacy requires transportation experts to carefully scrutinize such factors as the actors involved, their interaction with each other, their explicit and implicit motivations, and the ways they impact transportation provision.

The temptation to continue to follow a "positivist" (and purportedly objective) approach instead of a normative one, though, is strong because it can provide the various actors involved in transportation decision-making with some political advantage or cover (Simon, 1996, pp.56-57). Although portraying their goals as consistent with positivist ideals of rationality and objectivity, neoliberal adherents are motivated by specific ideological positions that are far from neutral. They believe free market resource allocation and the removal of "state 'distortions' of markets" (including transportation subsidies) will create better opportunities for macro-scale economic growth and prosperity (Ferguson, 2006, p.11; Murray and Overton, 2011, p.308). Following the Washington Consensus in 1980, the predominant development agenda of neoliberalism called for this "disengagement of the state" (Diouf, 1997, p.309) and "structural adjustment" policies limited the types of transportation projects that LDCs could fund (Hilling, 1996, p.317). The prevailing neoliberal ideology that governments should participate as little as possible in transportation provision means that colonial-era railways, which usually require some form state support, has remained strong.

An influential World Bank publication called *The Railways Problem* provides an insightful look into how the language and ideas of neoliberalism specifically affected railways. In this report, the Bank took the position that governments needed to take action on railways because they had "become a bottleneck to development as well as a growing drain on Government financial resources" (World Bank, 1983, executive summary). The report continued by noting, "unfortunately, Government authorities, and the general public, often perceive railways as a public service, to be shielded from commercial pressure" (ibid., p.i). The Bank cautioned governments that they "should not only avoid arbitrary interventions and uneconomic investments but also take positive action to steadily strengthen the functioning of the transport market by: derestricting competing modes and taxing them more appropriately; demanding and supporting suppression of uneconomic railway services; [and] increasing railway management's own decision-making powers" (ibid.). This report also criticizes the

use of public subsidies for unprofitable lines and encourages strong measures to avoid them (ibid., pp.32-33, 39-40). Above all else, "economic efficiency, as demonstrated by railways' ability to attract traffic at prices related to costs, is what is sought" (ibid., p.39).

Neoliberal adherents advance two main solutions to the "railway problem." First, they suggest the replacement of railways by roadways. For example, Bullock and Gwilliam state that the "only solution" for isolated villages served exclusively by rail should in the long-term is "to create feeder roads for motorized access, enabling more cost-effective means of transporting goods and greatly improving accessibility to such locations" (Bullock and Gwilliam, 2010, p.235). The problem with replacing railways with roads is multifold, though, as discussed in the section above. The second proposal for which neoliberal supporters advocate is some degree of privatization of railways. This has most often taken the form of concessioning. In that arrangement, the state retains ownership of the right-of-way and infrastructure, while private operators takeover the rolling stock and operations. Since the neoliberal theory became so influential, "most national economies and national railways have been liberalized" (ibid., p.229).

Privatization and economic liberalization have produced mixed results and scholars are still debating the virtues and vices of the neoliberal approach. Researchers, politicians and activists have widely critiqued neoliberal policies, such as structural adjustment programs, for having the opposite of their stated development goal in that they caused great social and environmental harm (Friedmann, 1992, p.5; Ferguson, 2006, p.71). Although proponents of privatization decry the unresponsiveness of publicly run transportation, "private sector inefficiency and corruption are also well known" (Simon, 1996, p.166). Specifically, concessionaires can subjugate the public interest to private ones by creating a monopoly situation or through an asymmetric transfer of information (Pourcet, 2006, p.212). Simon argues "there is no evidence that private monopolies are necessarily more efficient than public monopolies or any reason why they should be" (Simon, 1996, pp.166-167). Even supporters of railway concessions state that this strategy has met with mixed results (Bullock and Gwilliam, 2010, p.229). Neoliberal policies have, nonetheless, hit unprofitable railways harshly. Simon notes that "since the 1980s, concern with liberalization and privatization of state owned and operated infrastructure under structural adjustment and economic recovery programmes…has seen underutilized branch lines and even some main lines closed in a few countries in the South" (Simon, 1996, p.17).

Despite pushback from critics that attempts to broaden the scope of transportation investment decisions, the neoliberal perspective and related policy recommendations remain dominant even today. In a recent book published by the World Bank, the authors note, "as long as the railways are government operated, bureaucratic constraints will prevent them from competing successfully" (Bullock and Gwilliam, 2010, p.229). They go on to say that "today, few railways outside South Africa, other than dedicated mineral lines, are essential to the functioning of the economy" (ibid.). IDIs' perspectives remain influential because they are the largest source of non-state

funding for transportation projects in LDCs (Hilling, 1996, p.102), and colonial railways must compete with other modes.

Support from IDIs clearly influences how decisions are made. Schroeder explains that because much of the road construction and maintenance in LDCs is externally financed by IDIs, this brings these institutions—and their experts staff and consultants—in as "stakeholders" (Schroeder, 1997, p.396). He notes that IDIs' "roles in the process are seldom entirely passive" (ibid.) In fact, IDIs have the power to provide or block financing that could help these distressed countries and their crumbling transportation systems. For example, the World Bank's railways report noted above asserts that if governments and railways departed from the "basic objectives of a structural change program," then the Bank "should be quite ready to cease approvals for new commitments out of the loan, or even suspend its disbursements or call the loan" (World Bank, 1983, p.40). The World Bank threatened both the Malagasy government and the Kenyan government with such actions related to their unprofitable railways (Galenson and Thompson, 1994, p.13; Freudenberger, 2003, p.140).

The key point that neoliberal theory simultaneously ignores and masks is the importance power plays in project evaluations – including what aspects are considered benefits or liabilities. Believing that the most rational argument will prevail is highly problematic when considering the fact that power can determine who participates in the process as well as what counts as "rational." Yet this power is also self-reinforcing because the process used excludes actors who could potentially impact these decisions by arguing in favor of certain railway benefits. As Foucault would contend, "power produces rationality and truth; rationality and truth produce power" (Flyvbjerg, 2001, p.124). Power is clearly intertwined with the rationalities at work in decisions about colonial railways. Paraphrasing Pascal, Flyvbjerg argues, "power has a rationality that rationality does not know. Rationality, on the other hand, does not have a power that power does not know" (Flyvbjerg, 1998, p.234).

Should we then eschew metrics and performances when evaluating transportation investments and services? Taking this position arguably takes decision-making to the other undesirable extreme. Foucault argues, "to respect rationalism as an ideal should never constitute a blackmail to prevent analysis of the rationalities really at work" (Foucault, 1980, p.317 in Flyvbjerg, 2001, p.98). It is entirely possible, therefore, to unmask the real motivations behind decisions while also using a process that considers quantitative information for many of the benefits railways provide but are not currently considered. In other words, making debates transparent and open to public participation does not mean we should abandon performance measures, but it means that we can better understand how certain actors and their underlying normative values influence the types of transportation services countries provide.

5. Conclusion

The preceding sections of this paper made the argument that colonial-era railways in SSA have significant value despite their crumbling infrastructure and increasingly unreliable service. Their benefits extend to millions of people living in the regions they serve, the natural environment and even to a more stable society. Yet the evaluations and measures that have traditionally been used to decide what transportation service in which to invest has adversely affected railways. Ideologies underlying neoliberal theory, the power of actors making evaluations and the rationalizations they have employed have had a particularly strong impact on these lines.

So how should decisions about these railways be made if the current neoliberal-influenced approach monopolizes power in such a way as to influence transportation decision-making? Understanding how power influences transportation information, values, and decisions, particularly about railways, means that constructive steps can be taken to ensure a transparent and fair process. Having a genuine public participation process that could identify the benefits of a particular railway would be a key remediating step. Nietzsche has argued, "objective research is not contemplation without interest" as positivist researchers presume; rather, it uses "a *variety* of perspectives and affective interpretations in the service of knowledge" (Nietzsche, 1969, p.119 in Flyvbjerg, 2001, p.139). The same should be true for decisions about colonial railways and the decision-making process should be broadened to allow more voices to meaningfully participate, which is consistent with Friedmann's conception of what one of the principle ends of *alternative development* should be: the political dimension of "inclusive democracy" (Friedmann, 1992, p.34).

Applying Friedmann's conception of alternative development and its embrace of substantive rationality in the transportation sector offers a counterpoint to prevailing neoliberal ideology. Abandoning the pretense of neutrality by using a more humanist model built on a "moral justification" and its espousal of "inclusive democracy" can change transportation decision-making processes to better incorporate long-ignored variables of colonial railways. Understanding and acting, therefore, should be based on a "context-dependent common world view and interests among a reference group, well aware that different groups typically have different world views and different interests" (Flyvbjerg, 2001, p.101). This can help develop better goals and measures for these lines.

Arriving at this point, though, requires active public participation in the transportation decision-making process and requires a shift in existing power relations. As Sen states, "in arriving at an 'agreed' range for social evaluation…there has to be some kind of a reasoned 'consensus' on weights, or at least on a range of weights. This is a 'social choice' exercise, and it requires public discussion and a democratic understanding and acceptance" (Sen, 1999, pp.78-79). He goes on to say, "public debates and discussions, permitted by political freedoms and civil rights, can

also play a major part in the formation of values. Indeed, even the identification of needs cannot but be influenced by the nature of public participation and dialogue" (ibid., p.158). In balancing current neoliberal ideology, it is essential to realize genuine inclusive democracy that no longer ignores the many benefits of railways in SSA.

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STRATEGIES WITHOUT PLANS, PLANS WITHOUT STRATEGIES

(Draft version)

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Abstract

Key words: metropolitan areas, governance, urban and detailed plans, strategy

Most of Southern European metropolitan areas experienced a considerable growth on recent decades. Some works reported how differentiated was the growth on metropolitan areas in countries like Portugal, Spain, France or Italy. In the Portuguese case, it is evident the contrast in terms of urban characteristics between the two main metropolitan areas of Lisbon and Oporto.

Lisbon Metropolitan Area witnessed a deep change in the three last decades. During this period the planning system emerged from almost non - existent to a consolidated status, where national, regional and local levels take place. Important steps have been given in terms of designing a vision to the region. Although the hierarchy of plans is clear in legal terms, not always local planning has been able to implement the visions designed at a regional level.

At local level, land use plans are mandatory for the municipalities. Since the 90's of last century all the country turned to be completely covered by these kinds of plans. On the other hand, urban and detailed plans are not mandatory which creates a larger variety of situations, from municipality to municipality.

A multileveled planning system is an opportunity to discuss important governance related issues: local elected decision makers versus regional non elected decision makers; the need of deal with certain issues at a multi – municipality level versus the local autonomy that symbolizes many conquers related with the establishment of a democratic regime are some of the critical questions.

The data used to this presentation is based on the large number of urban and of detailed plans that were aproved in the last two decades in the 18 municipalities that compose Lisbon Metropolitan Area. These plans play an important role on urban regeneration but at the same time it is evident the unclear relation with other strategical (and less physical) planning tools. In this context remains the question: what is the role of plans in implementing strategies?

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1. Introduction

This paper argues that spatial planning tools have not been able to integrate important strategic components, both from bottom as well as from top levels. Strategies are mainly designed at upper (national and regional) levels and less also at a local level. For that matter, we will focus on how spatial planning in a metropolitan context has been dealing with former urban territories, among of which, illegal sttlements play an important role. It is our aim to show that lack of strategy has an important role on urban design and on the design of urban structures.

The history of strategic planning is already very reach although recent, in Portugal. However, strategic plans tend to be seen as a paralel process to spatial planning practice. In adition to that, other strategic documents have been produced and implemented in contexts that hardly link to spatial policies. Altough sometimes both are focused on a local level (and even on the same territorial context), they have very superficial encounter on the ground.

The diversity of territories, of patterns of urbanization and of planning problems are just an evidence of the need of a better integration between strategies and plans. Strategic planning has been seen as a paradigm to solve unsuficiencies on way plans were design on the second post war.

On a first part of this paper, we will focus in the concepts that can build bridges between strategic and spatial planning. Considering that a certain level of uncertainty is part of the process of planning, we will focus into a more specific context: the lack of prediction related with dynamics of illegal settlements. Additionally, we will take in consideration how spatial planning deals with illegal settlements in a metropolitan context.

For this matter, we will take in account the Portuguese spatial planning experience on dealing with illegal urban settlements. This example is particularly relevant, having in consideration how important are the illegal settlements to explain urban sprawl that happened on the last three decades, mainly around the Portuguese capital, Lisbon. These peripheral areas of the Portuguese capital, which were marked during the 70´s and 80´s of last century by illegal settlements, turned to be strategically located on the metropolitan frame of accessibilities.

Changes on some of these territories are due to new infrastructures, mostly implemented without a proper evaluation of their impact on pre - existent urban structures, mainly due to new forms of occupation. To discuss these matters we deeply find necessary to create new models in terms of spatial planning, assuming the complexity of built territories, often composed by several layers of occupation, corresponding to patterns of urbanization. Most of the urban sprawl we know around the largest Portuguese cities was based on dichotomies such as rich areas versus poor areas or legal versus illegal areas.

One of the most important of these dichotomies lays on the fact that a significant part of today's urban territories were illegally urbanized. To deal with this reality we will discuss the integration between strategy and spatial planning. The two main questions to be approached with this paper are: How has strategic plan been used in relation with spatial planning (particularly in urban areas)? Which kind of questions are evolved on strategy's design? Therefore, will focus on the last two decades of urban planning in Lisbon Metropolitan Area

2. New questions on strategy posed by the regional scale

Lisbon Metropolitan Area was established in the early 90's of last century after a period of fast territorial and demographic growth. We find different patterns of occupation between intensive occupation along major transportation axis and extensive growth in less accessible areas,. In the last decade, a new wave of occupation associated with private transportation affected dispersed areas, but also in consolidated areas. The combination of patterns from the last thirty years is visible in several studies, which analysed recent trends (Instituto de Ciências Sociais, 2000, FONT, 2003; SILVA, 2010).

The first study, coordinated by the geographer João Ferrão (ICS, 2000), is a contribute to identify the dimension and the limits of built occupation in Lisbon Metropolitan Area, with in comparison with eight other metropolitan areas in the Iberian Peninsula – Porto, Barcelona, Bilbao, Madrid, Malaga, Seville, Valencia and Zaragoza. In this study the main criteria to analyse these nine metropolitan areas is the proximity of constructions, based on the pattern defined by UN – HABITAT to characterize built continuity – a maximum distance of 200 meters between constructions. After the classification of all the metropolitan areas based on the number of continuous built spaces, the pattern of occupation is also defined by the combination of number of continuous spaces with the number of municipalities, density and the amount of population. Density is a way to measure dispersion. This study shows that reduced dispersion in Iberian metropolitan areas is linked with a higher number of continuous spaces.

In the second study - *Explosiò de la Ciutat* edited by Antoni Font and published for the 2004 world forum in Barcelona - Lisbon Metropolitan Area is compared with twelve other metropolitan areas from southern Europe - Porto, Madrid, Barcelona, Valencia, Donostia/Bayonne, Marseille, Montpellier, Milan, Bologna, Genoa, Naples and Veneto–Central. This comparison is made in terms of patterns of occupation: with several or with a single nucleus, with or without a dominant nucleus, with dispersed or concentrated growth, with linear our reticular occupation. The study concludes that Lisbon Metropolitan Area combines in a unique way among the thirteen metropolitan areas two of these characteristics: it is a mono – nucleus territory with areas of dispersed occupation. In general terms, to the whole of metropolitan territories on analysis in this study, the patterns are used as a main

contribution to define eight contemporaneous morphologies of built areas in addition to pre existent occupations: compact settlements, reinterpretation of central urban areas (due to the change on cities' organization and economy), new settlements disconnected from pre - existences, residential "garden – city"type of occupations, isolated occupations and linear occupations. We see by this "catalogue" of forms a not very clear criteria to classify different types of occupation (contributing to clarify approaches of this kind is one contribution, by learning from the process): in one specific one, the (residential) function is identified and it is referred to the typology of buildings; in others the main focus to identify forms is the relation with the pre – existent built areas; and finally there are some definitions in which the density (compact, linear and dispersed) is the main reference. In comparison with other metropolitan areas, identifies patterns of occupation.

These approaches tend to focus on patterns, but in a physical, built way. We tried to characterize the recent settlements in Lisbon Metropolitan Area based on data related with relevant changes in Lisbon Metropolitan Area in the last decade (SILVA, 2010). The analysis of this data allowed us to identify four – plus - one trends in Lisbon Metropolitan Area. The criteria were centred on the relation that new occupations established with the build and non build territory and pre – existent urban structures. We identified as major trends: the emergence of singular elements, large settlements isolated from other constructions, re – use of pre – existent central areas and the renovation of suburbs. A common characteristic (as well as a conclusion of the research) was the lack of structure between emergent and pre – existent elements. Regarding the planning tools, we found a "thematic" approach, more concerned with problems, than with solutions. This general conclusion leaded us to the need of new approaches. The following examples will help to understand by where these new approaches can go.

3. Illegal settlements and spatial planning approach: looking for strategy among different agents' behaviours

Our interest on how strategic tools work within spatial planning is a consequence of the study of the urban developments of the last decades that had place in an important part of Lisbon Metropolitan Area. The process of illegal division of land with urban purposes started to take place in the early 60's of last century and lasted almost three decades. Rooted in a context of lack of public regulation, the selling of small plots of land allowed the creation of thousands of small land owners. Normally, they were "recruited" in specific geographic areas of the country or out of it. There are records of some of these illegal entrepreneurs having office in Paris during the 60's and 70's in order to sell plots of land to Portuguese immigrants residing there.

This business was very successful, since the acquisition of lots was seen as a way of investment of their incomes. In general in Portugal and particularly in the middle-class suburbs around Lisbon, these transactions were very common. Prices in the early 70's were around 150 € for a plot of 300 square meters. The rules established

by the seller allowed buyers to pay it in instalments of 2.5 € per month. Gradually, these land owners start to organize themselves. As buyers get their plots of land they started individual processes of construction. Soon and without any spatial planning tool a structure started to emerge from this sum of individual initiatives.

One can distinguish two main periods in this process. Official records report the starting of illegal settlements in the early 60's, related with the increasing value of land, due to the construction of the then called Salazar Bridge inaugurated few years later in 1966. In the late 60's an important water flood affects the outskirts of Lisbon and made visible the increasing expression of illegal settlements. The censorship at the time had difficulties on suppressing the facts from the media. So, the old regime internally knew what was happening, didn't interact with the process and tried to disguise it when it became a problem.

The following period was marked by double standards in the way of dealing with illegal settlements. The establishment of a democratic regime with the revolution of 25th of April of 1974 is obviously an important milestone mark to take in account. At the early days of the democratic regime, left wing parties won the first local elections on most of the suburban municipalities of Lisbon Metropolitan Area. On one hand, these forces leaded by the Portuguese Communist Party were very close to the growth of the ecological political movements in Portugal.

This fact made them have a position against settlements that would affect ecosystems and landscapes. On the other hand, one part of illegal occupations were the new living places for people that escaped from worse conditions in early suburbanized areas around the capital. So, local authorities dealt with this fact with ambiguity, repressing and supporting illegal settlements, depending on the fact of being created to be a permanent residence (considered as a social need) or a temporary one (in this case, less relevant and more punishable).

The sum of thousands of small land owners' actions contributed to design the urban structure of many territories in a very specific way. Uses appeared to be organized more based in the sum of individual interests which influenced the rules that later were created through urban and detailed plans. The reasons that enhanced changes were based on individual needs and aims – first of all legalizing their constructions (mainly their new "homes"), later getting potable water and after sewage systems and proper public spaces. Strategic needs, from the spatial planners'point of view seek structured spaces, hierarchically organized. Private land owners on illegal settlements deliver disorganized spaces, lacking structure. What is the missing link between one and the others? Some features probably were missing to spatial planners and probably land owners do not reach to see ahead of their private interests.

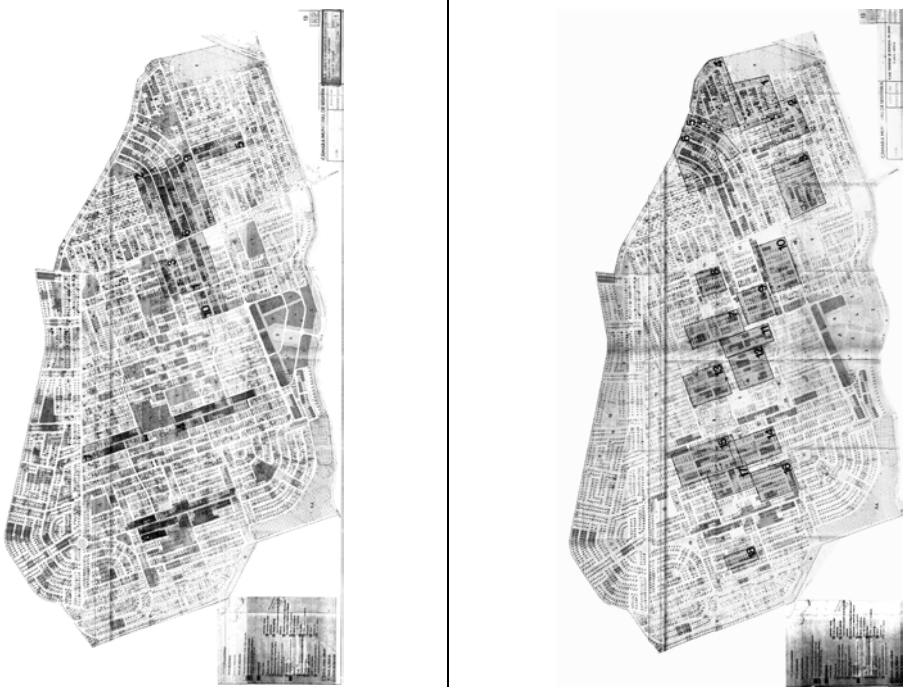

Figure 1. New typologies in one former illegal settlement in Lisbon Metropolitan Area (Quinta do Conde, in the municipality of Sesimbra)
(Credit: municipality of Sesimbra)

The reaction of spatial planning was to respond to individual behaviours superposing new features to pre existent ones. The following image (see Figure 1) shows how the first urban plan designed solutions based on new typologies. Since the first areas to be occupied were illegal, the new occupations previewed by the urban plan contradict the former occupations.

4. Description of the method of interaction between administration / planners and residents

The planning's methodology mostly used is based on Portuguese current law for spatial planning instruments (Regime Jurídico de Instrumentos de Gestão Territorial – Decree–Law 380/99) and simultaneously according to the Portuguese act for public administration procedures (Código de Procedimento Administrativo). These two legal instruments define in main lines: that any individual or institution has the right to know at any moment the status of a certain procedure taken by public administration (which includes the design of spatial plans), according to Código de Procedimento Administrativo; that any individual or institution is asked to participate in two different moments of the process – at the beginning, after being designed the "Opportunity" and the "Current situation" ("Oportunidade" and "Termos de Referência") and before the plan is approved by local authorities. In the first moment there is no proposal and at the second moment the proposal is technically concluded.

According to our experience, there are at least two different types of participatory processes which depend of the scale of people's evolvement with the planning process. Although the official discourse focuses on the virtues of participation, an exemplar process is when everything works in smooth way without many changes to the original ideas, despite of the fact that is important for the success of a plan to have a much participated process. In terms of acceptance contributions are always welcome.

How spatial planning does interacts with tactics and strategies

Sometimes spatial planning takes different directions from urban dynamics. Under the form of scenarios we present two of these situations in which spatial planning orients growth in one direction while tactics tends to create other types of dynamics. Figure 2 illustrates how spatial patterns are much more diverse, while spatial planning tends to be concentrated on hierarchical solutions.

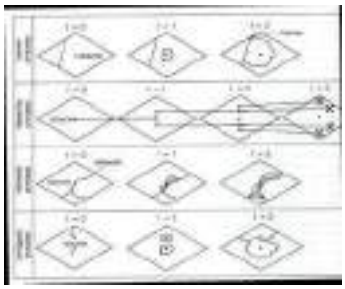

Figure 2. Spatial patterns produced through time, according to different processes: contiguity, network, hierarchy and barrier (BENNETT, 1978)
(Credit: AA. VV., 2000)

Functional organization

Functional organization can be seen as the result of the arrangement of different activities in a territory. Concentration and proximity to other activities are some of the criteria that help to organize and to plan a territory. The sum of multiple actions of several individuals creates a very different territory from the above described in functional terms. The sum of actions might not seem to make sense at a local scale, in the way that spatial planners look at urban territories, but often they make sense in terms of the daily life of residents, of connections between residence and work of employees, of stage of life – where the cycle "work abroad – accumulating savings – investing in a project for the end of active life – creating a small business close or together with the residence" has a crucial role.

Attractiveness

Shaping a territory in a broader scale is the result of metropolitan, when not national, trends. The change of patterns of occupation might give different interpretations to a same place. In the case of these illegally urbanized territories, periphery and

centrality have been two different concepts that spatial planning at a regional scale has seen in terms of "one **or** the other" and never "one **and** the other". Illegal territories were integrated on urban forms were part of more complex systems that in their way made sense. Designing centralities at a regional scale has implications to ancient peripheries.

On the experience of planning

Based on the experience of Lisbon Metropolitan Area research on how does spatial planning deals with illegal settlements, we identified two main behaviours. Unless we are talking about territories with attractiveness in metropolitan terms (which means centrality promoted by infra structures that benefit remote areas from qualities like tunnel – effect), spatial planning tends to deal with illegal settlements isolating it from the rest in terms of planning tools and in terms of urban structure. In 1995, an act was approved by the Portuguese govern usually known like *Lei das AUGI* (*AUGI* is the Portuguese acronym for urban areas generated in an illegal way). This act had as main goals to ease, using exceptional rules, the urban renewal of illegal settlements. The application of this law since then until 2007 was made by analysing the plans approved to these areas.

The result of this research shows that the appliance of this law promoted the production of much more planning tools. Some suburban municipalities that in previous periods had a very scarce production of plans are suddenly the largest producers of this kind of plans. Looking at those produced with the goal of renewal of illegal urban areas we can see that the achievements at the level of the urban structure and at the level of what can these areas mean in a new (metropolitan) context are almost null. Most of the plans produced "only" (only is a lot, having in consideration the fact that these plan represented de agreement designed to answer to the expectations of thousands of small land owners) a design closer to the original subdivision of rural land, with exception to the creation of public and collective spaces demanded by national law. Sometimes these spaces, in order to not to affect small land – owners' interests were reduced to the minimum or to below the minimum legal needs, even occupying space from protected areas included in agricultural and / or ecological national reserve.

On the opposite ground we found areas that were re – designed not because of the need of urban renewal but in order to adapt originally illegal urban areas to new challenges (in territorial terms). In this case planners were called to answer to external needs. The pressure of car – traffic, the preservation of important ecological corridors and the interest on reusing due to the plus value brought by new accessibilities were the key – ideas that remained from opportunities and the threats identified by these plans. In these scenario people's expectations were taken to second plan.

Vila Franca de Xira is a municipality in the north east sector of Lisbon Metropolitan Area, where over a rural structure emerged during last century one of the largest

industrial areas, benefiting by the proximity to main transportation infrastructures (which includes the port of Lisbon and some of the first railways – from the mid XIX century - and motorways ever built in Portugal). The industrial prosperity achieved since the Second World War until the oil crisis in 1973 and the Portuguese revolution only one year later in April, the 25th, was responsible by the localization of heavy industries in this municipality. Important migratory movements towards the capital started to occur since the early sixties. After the Portuguese revolution of 1974, the independence of former African colonies promoted a new migratory movement responsible by the arrival to the country of around one million people (more than one tenth of Portuguese population at the time). Most of these migrants / war refugees were settled in Lisbon and its suburbs. The demographic pressure around the capital provoked the emergence of a relevant amount of illegal districts in the municipality of Vila Franca de Xira. At the same time, this territory entered into industrial decay in the 80's and gradually was transformed in a suburb of Lisbon. After the approval of its first land use plan in the 90's and as a way to plan the renewal of those illegal settlements, Vila Franca de Xira turned to be one of the metropolitan municipalities with more approved detailed plans.

Sesimbra is a municipality in the south west tip of the south bank of Lisbon's Metropolitan Area. It remained like a rural forested area until 30 years ago. A relevant part of recent occupations emerged illegally, slowly but surely with the construction of the first bridge over the Tagus River close to Lisbon inaugurated in the mid – sixties of last century. The large – size estate that dominated the south bank's territory originated very few in number but very extensive in surface illegal occupations. The pressure in part motivated by its large scale made the municipality react earlier than others. In the mid 80's a significant part of the illegal areas had urban plans (this legal frame at the time was more flexible, than the one from detailed plans that were not so frequently used). The construction in the 90's of an important number of new infrastructures together with the fast raise of the number car - owners stimulated an intensive use of the area. While the first occupants were sometimes aiming for a secondary house in a pleasant environment the new comers hope to have a decent suburbia life; while the first land – owners saw the bought of land as an investment of a life time savings, the new buyers of dwellings correspond often to young families in transit from worse residential areas to better urban conditions that includes the need of sports and school facilities. In the case of Sesimbra, the solutions tend to neglect the first group while privileging the latest ones. In addition, they tend to impose solutions adapted to the large scale of these territories. Some of these places become the best connected territories in which the main concerns in terms of spatial planning are different from the first example: centrality, connectivity and poly nuclear net.

5. Conclusions

Both strategic and spatial planning tools play an important role in the consolidation of complex territories such as Lisbon Metropolitan Area. It can help planners to pay more attention to the processes related with consolidation of urban structures. The

inclusion of the concept of bottom – up tactics into spatial planning can help in particular the interpretation of emergent territorial dynamics.

Bottom – up methodologies have been included into spatial planning. Because of that, we started the interpretation by distinguishing this concept from our perception of self – organization. Self – organization does not only influence the way spatial planning is conceived. It can also influence the interpretation of the territory itself, connecting residential settlement with professional, leisure, or other activities. In that respect, self – organization is an important contribution to the interpretation of urban structures.

We had focus in a specific territorial dynamic that in our point of view would fit better into the concept of tactics versus strategy, the illegal urban processes and local planning versus regional planning. In the case of Lisbon Metropolitan Area, illegal settlements, despite of the differences presented between the north bank (represented here by Vila Franca de Xira) and the south bank (with the example of Sesimbra) had in common the fact that in both cases, a sum of thousands of actions would generate a whole not pre – perceived by those individuals / agents.

The intervention of municipalities and central administration on spatial planning was in many cases focused on the production of plans. We identified two typologies of "planning behaviours" taking in consideration, the integration with metropolitan networks, size of the areas affected by illegal occupation and its functional vocation. Firstly, the connection with metropolitan networks did n't prove to be by itself a factor that influences urban renewal. The fact that seems to make a difference between different cases is the moment in which these networks started to affect the territory.

In the case of Vila Franca de Xira, infrastructure networks were pre-existent when illegal settlements arise. Those infrastructures were the reason to the location of industries for almost one century. Illegal areas were located close to industries and then later when de - industrialization started they benefited from the proximity to the motor way and secondarily due to the rail way connections to Lisbon. The small size of spatial planning interventions, the availability of spaces for non – residential uses and the reinforcement of the municipality of Lisbon as a tertiary pole, influencing this area to turn into a suburb contributed, to the consolidation of the original occupations, recreating former systems. Therefore, planning processes revealed to be too focused on problems and not looking for solutions that could contribute to create new or to enhance old urban structures and to allow new uses.

In the case of Sesimbra, metropolitan networks are very recent and arrived after illegal occupation had already a considerable development. New rail ways, new motor ways linking to a more recent bridge over the river Tagus built only in late 90's of last century, attracted new inhabitants creating a new suburban pattern. Non – residential areas arrive after illegal settlements and, due to ecological constraints and measures to control urban sprawl, they have to compete with pre – existent illegal

residential occupations. The aim of urban renewal might tend to forget the importance of pre – existences. The concept of urban structure was super – imposed to a self – organized territory. Public discussions of plans proposals revealed a latent conflict between older residents wanting nothing to change, new residents that found a cheap place to leave while this area was not so close to metropolitan networks and those who see the opportunity of new vocations for these territories. Larger illegal settlements were approached like future big urban areas, which promoted the inclusion of new functions and of new built typologies.

While seeing non planned areas uniquely as illegal actions, the practice of spatial planners tend, on one hand to be just focused on legalizing these areas, providing them with all the facilities they need; on the other hand, they tend also to look to infrastructures as an opportunity to establish new uses. But if we add to these needs the fact that pre existent occupations have patterns at different scales then we are more able to discuss what should better plans bring to the territory.

Maybe it is too daring to declare that illegal settlements have to be accepted, which is not our point of view. Illegal settlements brought many impacts to the territory that had cost decades and enormous amounts of money to solve (and still going on). But we tend to not evaluate and forget the costs of inverting tendencies and starting processes letting others unfinished. Strategies tend to be designed on an up-to-bottom direction which, both at the regional and at a local level. But up to bottom decisions taken at a local level do not take necessarily in consideration decisions taken at a regional level.

As Oriol Bohigas (Bohigas, 1986) once wrote, “there is nothing worse than educated people when they get wrong” (“no hay nada peor que la gente de bien cuando se equivoca”)

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Climate Change Mitigation and Adaptation: A Comparative Study of Local Governments Actions in NSW Australia and Nevada USA

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Climate Change is perhaps the most pressing problem faced by humanity in the 21st century. Climate Change is occurring on global scale through the build-up of greenhouse gases in the atmosphere. However its impacts are often felt locally in vulnerable, low lying and densely populated regions. Climate change is predicted to affect climatic conditions by increasing the intensity and frequency of precipitation and heat waves. As a result regions and local areas will face more frequent and extreme flooding, droughts and heat-wave events. These conditions will threaten lives and properties of people in localities all over the world. Dry, hot and coastal communities like Nevada USA and NSW Australia

In Sydney, a significant proportion of the population resides in a coastal location, with impacts of climate change literally on their doorstep. Inland councils are also at risk with rising temperatures and increasing intensity and frequency of natural weather events. This research examines responses and the strategic directions of local councils in the Sydney Metropolitan region, Australia, in regards to climate change. Key documents, policies, and environmental planning instruments were analysed for their usefulness. Mitigation and Adaptation action are essential to combating the present and future impacts, and thus are the key to managing climate change. One such example of a mitigative response is through the Cities for Climate Protection (CCP) program. The case studies of two coastal and two non- coastal councils conducted as part of this research provide insight into the development of climate change responses.

Nevada, located in the southwest of the USA is a very hot and dry place. In the Southern end of Nevada, the Clark County and the Cities of Las Vegas and Henderson have a population of two million. Climate change is likely to threaten the water supply in the region as well as make an already very hot region hotter. Interviews were carried out with officials at the Southern Nevada Regional Transport Authority and planning and sustainability sections of the City of Las Vegas and the City of Henderson to learn about their mitigation and adaptation measures in relation

to climate change. I have organized meeting with a few more people at the City of Las Vegas and neighbouring City of Henderson.

Analysing responses of the local councils in Sydney Metro NSW and those of authorities in Southern Nevada helped in determining usefulness of various policies, instruments and programs in the two individual regions. Also the comparison of policy cultures and choice of instruments in the two regions led to several important and interesting findings.

1. Introduction

This study is an outcome of research in Sydney NSW Australia on local authorities actions on climate change mitigation and adaptation. Analysing key documents, policies, and environmental planning instruments, this research examines responses and the strategic directions of local councils in the Sydney Metropolitan region, in regards to climate change. Mitigation and Adaptation action are essential to combating the present and future impacts, and thus are the key to managing climate change. One such example of a mitigative response is through the Cities for Climate Protection (CCP) program. This research in particular looks at the action on climate change mitigation and adaptation at local level through the prism of CCP which seems to have wide traction with local councils in NSW.

In this research, case studies of two coastal and two non- coastal councils provide insights into the development of climate change responses. Analysing their responses helps determine the usefulness of various policies, instruments and programs. Analysis and comparison of the case studies has revealed a number of interesting findings along the themes of state government (of New South Wales) and local councils (in NSW) interactions and the understanding, desire, capabilities and action of (small) councils in addressing this huge challenge.

A somewhat similar study was latter conducted in Southern Nevada USA. This researcher spent two months in at the University of Nevada as a visiting scholar. During that time a number of interviews at the local agencies were conducted. The interviewees were asked about their agencies' actions on climate change mitigation and adaptation. Secondary material on that topic was also collected from those agencies. Field visits were also part of this exercise.

This paper presents findings from the two individual case studies as well as spells out commonalities, differences in approaches and lessons to be learnt from both sides.

2. Climate Change Mitigation and Adaptation at Local Governments in NSW

Climate Change is probably the most important and the most urgent issue faced at all levels of governance in the 21st century. Climate Change is occurring through the build up of greenhouse gases in the atmosphere on global scale; however its impacts are often felt locally in vulnerable, low lying and densely populated regions. In Sydney NSW, a significant proportion of the population resides in coastal locations, with impacts of climate change literally on their doorstep. Inland councils are also at risk due to rising temperatures and increasing intensity and frequency of natural weather events. Mitigation and adaptation are key to managing climate change. A comparative study of two coastal and two non-coastal local councils was conducted in the Sydney region of NSW with regard to their strategic responses to climate change reveals that some mitigation activity is in place, but that large-scale adaptation is limited.

2.2 Cities for Climate Protection (CCP)

One example of a mitigative response is the Cities for Climate Protection program. The International Council for Local Environmental Initiatives (ICLEI) set up Cities for Climate Protection (CCP) in 1993 (ICLEI, 1993; UN, 2006). ICLEI has become an internationally recognised organisation comprising local councils from over 900 cities, towns, counties and their associations (ICLEI, 2008c). Significant goals of the CCP program as stated in 'An International Campaign to Reduce Urban Emissions of Greenhouse Gases' (1993) include:

- Strengthening of local commitments to reduce urban emissions of greenhouse gases;
- Dissemination of planning and management tools to facilitate the development of cost effective CO2 reduction policies;
- Research and development of best practices and development of local model projects for reducing energy use in buildings and transport; and
- Enhancing national and international ties so that municipal level actions to reduce emissions are included in national action plans and future international deliberations.

ICLEI provides projects, program support, technical and policy support, workshops and training resources, opportunities for networking and information exchange, and recognition events. One of many tools it has created for local governments is a software package which can calculate, forecast, and monitor greenhouse gas emissions (Bulkeley & Betsill, 2003).

The CCP program is implemented through a strategic milestone framework, as follows (ICLEI, 2008a; ICLEI 2008b):

1. **Establish an inventory** of greenhouse emissions from all operations (corporate sector), and an analysis of sources of emissions from the community as a whole (community sector). Following this, a Business As Usual (BAC) forecast is undertaken to inform Council of its future projections.
2. **Set goals** to be achieved by a stated year in the future. Goals are usually expressed as a percentage of corporate and community emissions.
3. **Action plan**—a strategy toward achieving goals set in milestone 2 set out as a blueprint in the form of a Local Action Plan (LAP), containing:
4. **Implement and quantify** actions outlined in the LAP. Report reductions in greenhouse gas emissions as well as financial cost savings.
5. **Monitor and review** progress. Involves:

In Australia, CCP is a collaborative initiative between ICLEI, which delivers the framework to councils and works with them to develop and implement strategy, and the Department of the Environment, Water, Heritage and the Arts, which provides policy and funding support. There are currently over 230 councils participating in CCP in Australia, representing about 84% of the nation's population. New South Wales has (in 2008):

- 25 councils in the CCP Plus category;
- 12 councils completing milestone 5; and
- 22 councils completing milestones 1-4.
  (Department of Environment, Water, Heritage and the Arts, 2008)

CCP Plus is an extended arm of the CCP program for councils that have moved beyond milestone 5. CCP Plus aims to bolster greenhouse gas reduction goals by offering focused support in key areas of organisational review, planning, action projects, and corporate and community sectors. It requires yearly contributions to the annual CCP measures report (ICLEI, 2008b).

Following are case studies of two coastal and two non-coastal local councils in Sydney. Examination is made of each council's actions and priorities regarding climate change, their level of implementation of the CCP program, and their adoption of policies for mitigation and adaptation. A coastal council for the purposes of this article refers to a council with significant frontage to foreshore, estuarine and/or coastal waters, and also membership to a regional organisation (in this case SCCG).

2.3 Local Council Case Study 1: Ashfield Council

Inland Ashfield City Council is 12km south west of Sydney's central business district. The local government area (LGA) covers 8.3 square kilometres. It has a population of approximately 39,000 (ABS, 2006a).

Ashfield's vision is to be 'a community which protects and enhances its native and existing flora and native fauna and contributes to the wider responsibilities for the whole community to preserve the earth's environment.' In recent years the council has indicated ongoing commitment to environmental initiatives. It has adopted the Sustainable Streets program, established a staff sustainability committee and developed the GreenWay Coordination Strategy, the Cooks River Sustainability Initiative and Sustainable Ashfield. Ashfield has also adopted the Cities for Climate Protection program. A political declaration was completed in 2003, and they achieved milestone 2 in 2005. The Local Action Plan, part of milestone 3, is currently at draft stage.

Ashfield's LGA is growing at approximately 2% per year (ABS, 2006a). It is highly urbanised and dense. The area consists predominantly of residential buildings, with a moderate commercial element; industrial uses are minimal. The population makeup of this council suggests a very multicultural mix, and also contains an ageing population - 23.7% of the people are over 55 years of age. Department of Environment and Climate Change document 'Who Cares (DECC 2007) reveals that younger populations and people from English speaking households are more likely to be concerned and knowledgeable about climate change. Considering the makeup of Ashfield Council, it was important that the correct groups were targeted by educative campaigns.

Ashfiled Council's current management plan is for 2008-2012. The council also produces supplementary documents in the form of a Strategic Plan providing broad, long term action plans, and operational plans outlining management plan actions and key performance indicators on a yearly basis. The management plan is predominantly aimed at the community. While the council strives to achieve sustainable development, the plan doesn't necessarily indicate climate change specific action. It needs to be more specific to deliver clarity to the community and direction to the corporate sector. However, the Strategic Plan comprehensively outlines actions and reports on the progress of these tasks. The management plan does recognise commitment to ongoing implementation of the CCP program, and the achievement of milestone 3.

Ashfield's State of the Environment Report (SOE) is divided into 7 themes. Greenhouse gas emissions come under the heading of Atmosphere. The main pressures highlighted under this section are motor vehicle emissions and smoke from solid wood fire heaters. The regional pollution index indicates that increasing use of private automobiles is impacting significantly on local air quality.

Cities for Climate Protection (CCP) Milestones – ASHFIELD COUNCIL

1. **Establish an inventory**

   For the corporate sector, significant sources of emissions are from waste and street lighting. For the community sector, significant sources of emissions are from residential areas and transportation. Figures 1.1 and 1.2 indicate the emission distribution of Ashfield's corporate and community sectors.

2. **Set goals**

   Ashfield has committed to a reduction goal of 20% by 2010 from the baseline year of 1998 for the corporate sector, and 20% by 2010 from 1996 levels for the community sector. Selection of baseline and goal years has been influenced by goal setting by other Australian councils. 64% of Australian councils have endorsed a 20% or greater community reduction goal, while 90% of Australian councils have endorsed a 20% or greater corporate reduction goal (Ashfield Council, 2008). It is interesting to note the council 'following suit' rather than attempting to take initiative by leading reduction goals. However, 20% is a significant reduction goal, and it is recognised that considerable, innovative actions will be needed to reach it.

3. **Action plan**

   The draft LAP outlines actions to be taken, some of which include:

   Corporate actions

   - Staff energy awareness through education and campaigns, e.g. more efficient operating of appliances in the office;
   - Establishment of an internal sustainability committee;
   - Greater energy efficiency in office equipment through implementation of Energy Star Software on computers and installation of energy efficient flat screen monitors;
   - Retrofit of council buildings with light timers and sensors and, where possible, use of photovoltaic systems;
   - Audits on air conditioning systems and lighting in council buildings;
   - Participation in SSROC street lighting review; and

- Fleet vehicle policy review including introduction of 4-cylinder vehicles and diesel utes.

Community actions

- Promotion of reduction of greenhouse gases and energy efficiency including efficient heating and cooling through newsletters, websites and carnivals;
- Development of open space network that allows continuous pedestrian and bicycle access across the region;
- The Sustainability Street Program: providing education to residents regarding reducing energy, water and waste in their homes, and avenues for residents to become involved in local environmental projects; and
- Participation in regional projects such as the GreenWay project to provide walking and cycling linkages between the Cooks River and Iron Cove.

The majority of these actions have yet to be implemented and timeframes for their completion are absent from the plan.

Implementation

The Ecological Sustainable Development (ESD) policy adopted by Council in 2003 demonstrates Council's commitment to incorporating environmental policy development and state of the environment reporting into all aspects of operations, from management plans to development assessment. The public availability of this document signals intention to address environmental issues, and opens the council to scrutiny regarding its decisions on environmental issues.

Environmental Planning Instruments of Ashfield have been under revision. The new LEP is currently being prepared, consistent with the State Government standard instrument, including specific provisions to achieve Council's development outcomes. The DCP is also being updated to ensure consistency with the LEP. Appointment of an environmental officer has assisted in implementing environmental goals in these planning instruments.

Ashfield has a 'Building Design and Sustainability' DCP in Part D2 of the Act. This is an advisory document for ESD in residential and other development. However, state (BASIX) and national (Building Code of Australia) legislation already sets out requirements in accordance with sustainability. The purpose of Part D2 is to identify building designs that exhibit greater standards than set by existing legislation.

Adaptation

Whilst the council is aware of adaptative measures, there is little evidence of comprehensive action. The council states that adaptation is a capacity issue, but it would seem that it views adaptation as a large-scale, high-cost activity involving infrastructure development and ongoing high maintenance, rather than inclusive of education programs and modified urban design.

2.4 Local Council Case Study 2: Burwood Council

Inland Burwood Council is 14km south west of the Sydney CBD. The LGA covers 7.26 square kilometres. It has a population of approximately 31,000 (ABS, 2006b).

Burwood Council has not traditionally been environmentally aware. However, the council has indicated its concern about climate change through installation of energy efficient appliances and supply of rebates. Actions to date include production of the Green Action Plan, implementation of the Fridge Buyback Scheme, and participation in the regional group Inner West Regional Recycling Group (IWRRG). Burwood has also adopted the CCP program. A political declaration was completed in May 2006 and they achieved milestone 2 in 2007. The LAP, part of milestone 3, is currently at draft stage.

Burwood Council's current management plan covers 2008/09- 2010/11. Its vision is 'to make Burwood vibrant, prosperous, progressive and proud of its history and heritage'. Its statement of goals indicates that Council aims for 'environmental sustainability' to be achieved through objectives outlined in the Burwood Town Planning Scheme. The operational component of the management plan outlines key tasks relating to waste management, transportation networks, community support services, recreation services, health and environment.

Within the health and environment theme, a section on 'public health and pollution control' states Council's objectives 'to minimise the occurrence of pollution incidents in the council area' and 'to improve the environment through pollution control'.

The council indicates that, in order to reduce pollution, it is important to maintain regulatory and educative functions. How they will do this is unclear. The main service provision seems to be investigations into pollution complaints.

The management plan points to the Green Action Plan (GAP) as its primary document in environmental management. The GAP is a council-specific initiative with a particular focus on greenhouse gas emissions and climate change impacts in the local area. In some ways it is similar to an LAP, the milestone 3 requirement for the CCP program.

The council's SOE report is a 10 page document. Each of its 5 themes are identified in line with the LGA 1993. In 'Air,' objectives are to reduce greenhouse gas emissions and reduce instances of air pollution within the LGA. Assessments of corporate and community activities include:

- Council Chambers, Enfield Swimming Pool and the Library produce nearly half of all greenhouse gases in the corporate sector; and
- There is significant growth in the transport sector, in terms of the private car.

(Burwood Council, 2007b)

Involvement in the CCP program has been relatively recent. The management plan refers to the program under discussion of the GAP. In the annual report, current progress in the program is indicated.

Cities for Climate Protection (CCP) Milestones – BURWOOD COUNCIL

1. **Establish an inventory**
   For the corporate sector, significant sources of emissions are from buildings and street lighting. For the community sector, significant sources of emissions are from residential and commercial uses. Figures 2.1 and 2.2 indicate the respective distribution of emissions.

2. **Set goals**
   Burwood has committed to a reduction goal of 20% by 2012 from the baseline year 2005/06 for the corporate sector; and 20% by 2010 from 2001 levels for the community sector. Selection of baseline and goal years was due to the availability of data necessary for completion of the inventory. Lack of available data from other years indicates insufficiency and/or inadequacy in greenhouse gas emission recording instruments.

3. **Action plan**
   The LAP is in draft format, not yet available for public viewing.

Implementation

The council aims, through the GAP, to educate the community and outline operations being implemented. The GAP brings 'all of the council's "green" actions into one accessible document' (Burwood Council, 2008a). It contains the corporate GAP and the community GAP.

The corporate GAP addresses energy efficiency in council operations. Outlined below are some of the initiatives in the corporate GAP:

Reduction of energy usage

- Solar lighting has been trialled in Flockhart Park, Enfield. Further installations of solar lighting are planned; an expensive exercise. Vandalism of facilities has occurred and is costly to repair.

Council fleet management

- Council has encouraged downsizing of employee vehicles to fuel-efficient varieties. The council fleet has downsized to four-cylinder modes.
- A hybrid vehicle was purchased in 2006 for the council's car pooling system.
- The council's truck fleet now uses low sulphur content diesel, which reduces black smog and sulphur dioxide.

Office equipment

- Paper recycling systems have been introduced at the council offices, Library and the Woodstock Centre.
- Printer and toner cartridges are recycled.

The community GAP addresses environmental impacts of community activities.

- BASIX is mentioned as a community action, though it is a State requirement that new development be energy and water efficient to meet certain standards.
- Tree plantings have been an ongoing council initiative, with over 900 trees planted in the past 2 years.
- Examples of promotion of energy efficient practices include water tank rebates, recycling programs, and distribution of environmental fact sheets and an environmental events calendar.
- Second-Hand Saturday is a council-organised event that has been running for the past 6 years. It promotes reuse of items and reduces landfill.

The GAP is a good starter's document for the community and demonstrates some strategic direction. Whilst there is a comprehensive list of initiatives, it lacks statements of goals and plans for action. One might expect the production of the 'milestone 3' LAP to address environmental action with more detail.

The purpose of Burwood Council's ESD policy is to integrate sustainable development into the council's operations through economic, environmental and social considerations. Consequently, ESD principles have been incorporated into the new Burwood Town Centre LEP and DCP.

The LEP has been exhibited for public comment. It seeks to replace two former draft LEPs for 2 town centre precincts to maximise development opportunities. It aims for sustainable development features such as:

- Integrated approach to planning, management, development and economic use of land;
- Mixed balance of land uses;
- Development that encourages use of public transport and reduces reliance on, and the consequential environmental impacts of, private vehicles; and
- Development that promotes energy efficiency in relation to water conservation and aims to ensure waste and noise minimisation.

A particular DCP refers to 'Environmental Management', consisting of measures to maximise energy efficiency, minimise waste and conserve water. DCP No.8 refers to General Residential development. A specific clause, Part 5.4 'Energy Efficiency', requires that all development consider:

- Efficient building orientation toward north and east;
- Internal design that minimises heating and cooling; and
- Maximum natural ventilation.

Adaptation

There is a lack of available information regarding adaptive measures to be taken by this council. Sea level rise is an issue of State significance currently being addressed on a regional scale by SSROC; however, it does not appear to be of concern to Burwood council at present.

2.5 Local Council Case Study 3: Botany Bay Council

Coastal Botany Bay Council is 13 km south of Sydney's CBD. The LGA covers 10.3 square kilometres. It has a population of approximately 31,000 (ABS, 2006c).

Emission sources from Botany Bay are unique in that, both presently and historically, most pollution originates from the airport and from heavy industry. The area has traditionally been industrially used, the port being the major service for importing and exporting goods. Development of heavy industry depended on the water supplies off the Bay.

The planned airport expansion includes a development proposed by the State to facilitate required infrastructure. Sydney Airport's approved master plan will see a significant increase in flights, and increased activity from the airport will exacerbate pressure on development. Airport noise and flight paths mean that roughly 33% of the LGA is unsuitable for residential development. Restrictions on development are coupled by amenity impacts on existing residents and reductions in land value. The planned Botany Port expansion will impact not only this LGA, but also adjacent councils such as Rockdale Council. There is likely to be increased truck movement, and disturbances caused by freighting along the railway corridors.

Actions specifically addressing reduction of emissions have included trials of solar lighting at bus stops, adoption of hybrid vehicles for the council fleet, and implementation of an Energy Efficiency DCP. Botany Bay has also adopted the CCP program. A political declaration was completed in May 2001 and they achieved milestone 2 in 2002. The LAP is currently at draft stage.

The Botany Bay Council management plan is separated into principal activities undertaken, each detailing performance targets and measurements. There are no visions or goals in this document. The objective outlined in the Health and Environment section pledges 'to contribute to a safe living and working environment by providing a public health service which aims to meet community needs while satisfying statutory requirements' (Botany Bay Council, 2006). The plan doesn't point to any particular mechanism of managing greenhouse gases and climate change, but mentions review of the Energy Efficiency DCP as an ongoing activity.

Part 3 of the State of the Environment report is titled Air and Greenhouse. The main pressures outlined are climate change and air pollution. The report provides a brief summary of the principles of the greenhouse effect. Air pollution is identified as primarily derived from industry and automobile emissions. Two responses to climate change are recorded under Air and Greenhouse: extended trials of solar lighting at

bus stops, with investigation into possible future locations for solar lighting, and purchase of two hybrid vehicles for the council fleet, aiming to reduce corporate emissions and set an example for the community.

Botany Bay Council monitors air pollution through participation in ANSTO's (Australian Nuclear Science and Technology Organisation) fine particle Aerosol Sampling project. The project monitors and characterises particles at Mascot through the collection of filter samples taken twice a week (Botany Bay Council, 2007). The particles recorded are becoming smaller and affect human health and visible air quality.

Cities for Climate Protection (CCP) – BOTANY BAY COUNCIL

Botany Bay Council joined the CCP program in 2001. Currently they are completing milestone 3, and the LAP has been in draft for over 6 months. The other councils examined in this article have recorded superior CCP progress in a shorter timeframes.

There are many reasons for Botany Bay's slow progress with CCP. Firstly, the council is very small: the amount of office staff is limited. For instance, there is one environmental scientist who reports to the Director of Assets and Management. This person is responsible for many other tasks including review of development applications regarding environmental issues. This is a significant task, as the council has significant industrial areas and contaminated sites that require careful management. Secondly, and perhaps consequently, there has been a high staff changeover rate.

Resources at Botany Bay Council are very tight, and although the council is debt free, to undertake a significant project could result in an unmanageable debt. The Water Savings action plan has recently been completed in full, and Council states that this has taken priority over completion of the CCP milestone 3 report.

Milestones

1. **Establish an inventory**
   Council have committed to a reduction goal of 20% by 2012 from the baseline year of 1999/2000 for the corporate sector, and 20% by 2012 from 1996 levels for the community sector.

4. **Set goals**
   Some actions to be implemented from the LAP include development of an internal working group, retrofitting lights with fluorescents, installing light sensors, training internal staff, managing energy efficiency in the Aquatic Centre, trialling fuels and developing a bike plan.

5. **Action plan**
   Currently being drafted.

Implementation

Botany Bay is to also review its current environmental instruments in order to comply with the new standard instrument set by the State Government.

The Botany Bay Local Environmental Plan includes a specific section on the greenhouse effect and global warming—the first to be encountered in these case studies. Clause 22 of the LEP stipulates that applications for significant developments submit documents addressing global warming, water pollution, energy consumption and groundwater contamination wherever applicable. Developers are also to take into account any possible adverse effects on the development itself as a result of climate change due to the greenhouse effect (Botany Bay Council, 1995).

Botany Bay adopted an Energy Efficiency DCP in 2000. This plan was developed in the context of previous initiatives such as the SSROC Greenhouse Strategy 1992 and the Energy Efficient Development discussion paper 1993 (Botany Bay Council, 2000).

The objectives of the current DCP are to:

- Improve energy and water efficiency of all residential, commercial and industrial development;
- Reduce greenhouse gas emissions and conserve non-renewable energy sources;
- Promote residential, commercial and industrial developments that are more comfortable to live/work in and cost less to run; and
- Provide means by which the development community can uniformly and effectively implement and demonstrate compliance with the objectives of the LEP (1995), in particular clause 22.

Adaptation

The council seems to be waiting upon certainties before taking any significant action. There has not been any significant adaptation action to date. There have been discussions on risk of land, and on significant risks relating to sea level rise and flooding (any amount of sea level rise can potentially cover the whole LGA).

2.6 Local Council Case Study 4: Rockdale Council

Coastal Rockdale City Council is 12km south of Sydney's CBD. The LGA covers 30 square kilometres. Rockdale has a population of approximately 92,000 (ABS, 2006d).

The Rockdale LGA is growing at a rate of approximately 4% per year (ABS, 2006d). The majority of the area is residential, encompassing both low-density housing and higher density areas along the railway corridor. However, industry is also a significant emitter of greenhouse gases. In Rockdale, much of the LGA is very low

lying and vulnerable, comprising foreshore and bushland. A rise in the water table will have a significant effect; also a rise in sea level will immerse proportions of the LGA. Land is increasingly flood prone, decreasing house prices and creating issues around damage liability.

The council has been active with climate change policy development, including participation in the Greenfleet program, implementation of a Solid-Fuel-Heater-Buy-Back Program, creation of the Environmental Policy in 2003 and consequent adoption of the Environmental Plan. Rockdale has also adopted the CCP program. A political declaration was completed in 1999, just one year after the program's inception. As part of CCP Plus, Council embarked on the Greenhouse Purchasing program in 2006 and the Sustainable Transport program in 2007.

Rockdale Council's current management plan is for 2008/09- 2010/11. Rockdale's vision for the natural environment is for 'an ecologically sustainable city which protects and enhances its natural environment'. There is evidence that the council is committed to environmental sustainability. The strategic direction outlined in the city's succinct vision statement provides focus for managing environmental quality. The management plan points to the Environmental Policy (2003) as the backbone of environmental decision-making. It led to the production of the Environmental Plan: a key tool for reporting to the community on the progress and direction of environmental initiatives. The plan was produced in 2003 and underwent review in 2006.

Rockdale's State of the Environment Report contains seven themes. 'Atmosphere' is marked by an absence of objectives or goals. Pressures from community and corporate activities include:

- 70% of residents use cars for at least part of their journeys to work;
- Local air quality is affected by pollution from the M5 east motorway;
- Significant emissions come from the industry sector; and
- Adjacent land use by the Port Botany expansion and Sydney Airport Master Plan creates emissions and other stresses.

(Rockdale Council, 2007b)

Rockdale joined the CCP program in 1999 and has recorded significant progress. They achieved milestone 5 in 2005 and graduated from the program shortly after. The management plan identifies involvement in the CCP program as a demonstration of Rockdale's seriousness about environmental matters. It is clear that CCP provided leverage for action, and that through it various other environmental initiatives were made possible.

Cities for Climate Protection (CCP) Milestones – ROCKDALE COUNCIL

1. **Establish an inventory**
   Significant corporate sector emissions are from street lighting and buildings. Significant community sector emissions are from industrial and residential

activity. Figures 3.1 & 3.2 indicate the distribution of emissions for the corporate and community sectors.

2. **Set goals**
   Rockdale has committed to a reduction goal of 20% by 2010 from the baseline year of 1995 for the corporate sector, and 20% by 2010 from 1995 levels for the community sector.

3. **Action plan**
   A local action plan was produced. Completed projects therein include:

Corporate Actions

- Reduction of greenhouse gas emissions from office equipment including retrofitting the council administration building with fluorescent lamps, monitoring equipment and acquiring LG Flatron monitors with star ratings;
- Retrofitting council streetlights: replacement of 10,000 20 watt lights with 360 mercury vapour lights; and
- Updating Council's fleet to 4-cylinder vehicles and trialling alternate fuel vehicles.

Community Actions

- Energy conservation workshops to increase residents' awareness of energy efficient practices in the home;
- Newsletters, website and displays encouraging energy efficient appliances and water heating, and renewable green power;
- Information provided to local commercial and industrial businesses regarding energy audit guidelines and use of green power; and
- Facilitation of more bicycle storage areas in parks and shopping centres, encouraging cycling as a realistic transportation option.

A full list of completed projects is contained in the SOE report and Environmental Plan.

Rockdale have progressed to CCP Plus. Since 2005 they have participated in two further projects, Greenhouse Purchasing and Sustainable Transport.

<u>Greenhouse Purchasing</u>

Rockdale joined the Greenhouse Purchasing project in 2005. The plan requires review of existing council policies and practices by staff from the supply and environmental departments. A staff survey was also conducted.

Rockdale's Greenhouse Purchasing action plan identifies its key issues as:

- Updating the environmental policy and the environmental purchasing policy;
- Greenhouse purchasing criteria to be considered for tenders;
- Ensuring suppliers meet greenhouse purchasing criteria;

- Ensuring staff make informed decisions regarding sustainable purchasing through checklists, tracking systems and the like; and
- Educating staff through workshops and regular updates.

(Rockdale Council, 2006)

It is clear that Rockdale has a good platform for purchasing policies, and even though implementation has been minimal, staff have already been considering greenhouse issues in purchasing decisions.

Sustainable Transport

Rockdale's Sustainable Transport action plan states the following key goals:

- To integrate sustainable transport objectives and principles into all priority strategic planning projects;
- To encourage an integrated approach to sustainable transport issues across Council departments;
- To actively promote alternative transport modes to both staff and the community; and
- To reduce greenhouse gas emissions by the council vehicle fleet.

(Rockdale Council, 2007c)

In the past, Rockdale Council has had problems with lack of community awareness, lack of strategy/plan coordination, and limited influence on the State Government regarding sustainable transport. More recently, these issues have been partially addressed through their environmental policy, their management plan and their fleet policy, and through strategic planning via their Transport Traffic Plan.

Implementation

Environmental Policy

The Rockdale City Council Environmental Policy was developed and adopted in 2003 to achieve ESD through council decision-making processes. The policy specifies that council staff must:

- Comply with all applicable laws, regulations and standards, and apply additional standards that minimise environmental impacts resulting from operations or services;
- Communicate openly with the community about environmental issues;
- Ensure that environmental and social costs are considered when evaluating services provided by and to Council;
- Ensure that employees, local community and suppliers of goods and services are aware of their environmental responsibilities in relation to council business;
- Establish programs to protect the environment; and

- Provide employees and external parties with the necessary resources in order to comply with the requirements of Council's Environment Policy.

(Rockdale Council, 2003a)

The Environmental Plan is a key strategic document outlining the need for protection of the atmosphere globally, regionally and locally. Locally, carbon monoxide, sulphur dioxide, lead and other toxins are highlighted as key pollutants. The Environmental Plan outlines the need for ESD and cites an array of documents produced locally and regionally. Actions, listed in table format, span issues, action to be taken, departments responsible, performance indicators and completion timeframes. Categories in this table are designed to ensure uniformity with the 2006 SOE report.

The council is developing a new LEP, consistent with the NSW Government standard instrument. This plan aims to incorporate the targets of the Sydney Metropolitan Strategy. A new clause will deal with flood height and flood prone land. It is unclear how other environmental objectives will be incorporated.

Council has identified a high proportion of emissions from private automobiles. In 2004, Rockdale Council developed a draft Transport and Parking DCP setting controls for car parking provision in developments and encouraging alternative travel modes. Another DCP is currently being adopted to ensure that new development takes into account freight, car, cycling, walking and public transport. The plan aims to improve social inclusion, widen transport choices and reduce greenhouse emissions.

Adaptation

Preston (2008) state that Rockdale Council has a low adaptive capacity for climate change. There is a high degree of sensitivity due to its geographic position, topography and coastline. Given the circumstances, there is a great need to take stock of adaptation in this LGA.

Council seems to be aware of the concept of adaptation. There is regard for addressing risk management and liability issues involving the community. The management plan contains an objective for adaptation to climate change: 'to develop mechanisms to enable Council to adapt to climate change' (Rockdale Council, 2007a), and a deadline to achieve it: June 2009.

Climate Change modelling in Manly Council has revealed that a 1% sea level rise will result in the immersion of a significant amount of Manly's LGA. This flood model represents the higher end of realistic predicted emissions, and demonstrates the potential impacts sea level rise will have on a specific area. There is no such tool in use at Rockdale Council.

2.7 Comparative study of Climate Change Mitigation and Adaptation Strategies

There is a difference in environmental policy between the examined coastal councils and the non-coastal councils. Inland Burwood and Ashfield Councils have undertaken moderate climate change action.

In the non-coastal LGAs, a notable feature of the study is that councils appear to be motivated by issues involving their citizens' health, rather than the wider global fight to address climate change.

The two coastal councils are very low lying and vulnerable to sea level rise and storm activity. Awareness of this issue is expressed in both councils' documents, but actions have been limited. Rockdale has incorporated an adaptation objective into the management plan, and an adaptation plan is currently being produced. There is no evidence that Botany Bay is undertaking adaptive actions.

The most prominent difference between the actions of all these councils is their relative progress with CCP. Rockdale is very advanced, while Botany Bay has been very slow in progress, and Ashfield and Burwood have progressed at a moderate rate.

3 Climate Change Prevention and Adaptation in Southern Nevada

As mentioned before, this research is partly an outcome of two month long visit in 2011 of the University of Nevada Las Vegas (UNLV) as research scholar with the Water Resources and Environmental Engineering Department of the university. During that visit this scholar interviewed city and regional planners, transport planners and engineers, sustainability related staff and administrators at the Mountain Brooking Institute, UNLV, City of Las Vegas, City of Henderson, and RTC (Regional Transport Commission) of Southern Nevada. This author attended a number of sustainability seminars, workshops, presentations and exhibitions at UNLV and in Greater LV. A number of reports were also collected during the above mentioned interviews, and attendances. In addition this author extensively travelled on the RTC public transport for observations.

3.1 City of Las Vegas

At the City of Las Vegas, the Sustainability Officer Deputy Director Planning were interviewed. The two officials highlighted the liveability improvement initiatives of the city. They cited Downtown Centennial Plan, 10 feet sidewalks and 5 feet tree lined amenity zones buffering the pedestrians from traffic. As far as climate change is concerned, the city took a half-hearted measure which has been described below. However, not much progress could be made on this initiative. What the city of Las

Vegas does have on sustainability is the claim/motto that, “sustainability is more than just being green - it is a way to ensure that current and future generations will enjoy the quality of life we have all worked so hard to achieve”. The city has taken the following actions to back up its commitment to be “beyond green”:

Las Vegas City Council Adopted a Sustainable Community Strategy having three components: city operations; city codes and policies; and community involvement.

> City Operations: Goals included, working to reduce the city’s carbon footprint by 10 percent in 2011, 20 percent by 2020, and 30 percent by 2030. Also, to reduce the city’s electricity use by 5 percent per unit by 2011.
>
> City Codes, Regulations and Policies: Goals included, adopting an energy code that is 30 percent more efficient than the current code by 2011. Also, to work with the Green Building Council to revise the Green Building Program to include more mandates and incentives.
>
> Community Involvement: Goals included having a fully implemented residential solar rebate program by 2009. Also, to provide incentives for residents to take part in home energy audits by 2009.

Greenhouse Gas Emissions Reduction

The city of Las Vegas had a brief brush with action on climate change. In 2007, the city of Las Vegas had joined the International Council for Local Environmental Initiatives (ICLEI) Local Governments for Sustainability Campaign. The Local Governments for Sustainability Campaign incorporates a five-milestone structure that participating local governments work through: (1) establish a emission baseline; (2) setting a reduction target for emissions; (3) develop a local action plan to achieve the emission reduction target; (4) implement the local action plan; and (5) measuring our emission reduction results.

The city is still on phase 1 - establishing a baseline. The baseline is established by conducting an analysis of the city’s greenhouse gas emissions. The city began conducting these studies in August 2007, beginning with city facilities and buildings. The city of Las Vegas uses ICLEI’s Clean Air and Climate Protection (CACP) 2009 software to complete our greenhouse gas emissions analysis of city operations. CACP software serves as a one-stop emissions management tool for calculating and tracking the City’s greenhouse gas emissions and criteria air pollutants associated with electricity, fuel use, and waste disposal.

Climate Protection Resolution (US Conf. of Mayors): The city of Las Vegas works with businesses, organizations, government agencies and consumers to reduce emissions of the greenhouse gases that contribute to global climate change. On Aug. 2, 2006, the City Council signed the Climate Protection Resolution.

Alternative Fuels Program for city owned vehicles

The city of Las Vegas has been member of the U.S. Department of Energy's Clean Cities Program since October 1993. It entered the program with 50 fuel flexible vehicles. The city has gradually expanded its Alternative Fuels Program. The program has converted 90 percent of city's non-emergency fleet, approximately 1,350 vehicles. The alternative fuels used in the program are Compress Natural Gas (CNG), Biodiesel (B20) blend, Oxy gasoline and hydrogen. The city also uses Hybrid vehicles (http://www.lasvegasnevada.gov/sustainingglasvegas/16078.htm)

Urban Forestry Initiative i.e. planting

The city regularly participates in Arbor Day activities and is currently planting new trees under the Nevada Nursery Greening Project.

Trails

The city develops trails throughout the area that provide recreation opportunities, promote health and fitness, enhance economic opportunities, serve as a buffer and contribute to the conservation of natural resources.

Complete Streets

Complete streets are pedestrian friendly streets that allow for multiple modes of transportation, including cars, bicycles and transit. The city is upgrading streets in the community to make them more sustainable.

3.2 City of Henderson

In discussion with the City of Henderson it again came out that climate change is a dirty word. The officials of this wealthy city can only present their climate change related concerns and initiatives rapped in the efficiency and green sustainable feel good covers. The city houses the trendy parts of the city and has worked with the developers on providing new urbanist type residential development. The city has greened the bus stops by planting bushes around the stops, in actively replacing street light globe with more efficient varieties, and is promoting active living by maintaining a number of nature trails that can be used for walking or bicycling.

Increase energy efficiency

The City of Henderson received a large state rebate for facility retrofit program. The rebate helped to fund LED lighting fixtures in City Hall, Convention Centre and Civic Plaza parking lots. These highly efficient fixtures feature two-level motion sensors, one that brightens when a vehicle approaches and one that lowers to standby when the vehicle passes, reducing annual energy costs.

Weatherization and HOME Rehab Programs: Over 500 income-qualified home owners received $1.3 million in assistance to make energy-efficient improvements and reduce their energy costs. Common retrofits include insulation, reduce air leakage, repair or replace heating and air conditioning (HVAC) systems, replace refrigerators and perform general health and safety inspections.

Green Buildings and sustainable urban design

Henderson was one of the fastest-growing cities in the USA for two decades till the Global Financial Crisis. A vast majority of Henderson's housing stock was built after 1990. The City's first energy code, the 1989 Model Energy Code, was adopted in 1992. Henderson thus claims to largely have been built with energy efficiency in mind.

Public buildings in the city are being extended and built with higher energy efficiency criteria. The Detention Centre that recently completed expansion was remodel incorporating cost-saving upgrades for energy efficiency and water conservation, including energy efficient lighting, highly-efficient air conditioning and heating equipment and drought tolerant landscaping.

Also the Heritage Park Aquatics Facility and Senior Centre were designed and constructed to meet high standards of energy efficiency, water conservation, occupant safety and comfort. In 2011, the City had applied for Gold Leadership in Energy and Environmental Design (LEED) certification from the U.S. Green Building Council.

3.3 RTC Regional Transport Commission of Southern Nevada

The Regional Transportation Commission of Southern Nevada (RTC) is responsible for providing a safe, convenient and effective regional transportation system for its two million residents and 39 million visitors. The RTC is both a transit authority and the transportation planning agency for Southern Nevada. The RTC functions as the Metropolitan Planning Organization (MPO) for the region. It is responsible for overseeing the transportation planning process and for directing funding generated from various local, state and federal sources for transportation purposes.

This author interviewed transport planners at RTC as well as participated (as an observer) in one of the stakeholders meeting on sustainability initiatives for the future of transport in Southern Nevada.

In the interview with the transport planners at the RTC it came out that the Commission is not engaged in any direct climate change abatement or greenhouse gas reduction scheme even though "reduce greenhouse gas carbon footprint" is one of its long-range goals. It is concerned about the sustainability in general terms and has a number of initiatives in place for the same. In addition to the specific green programs it deems its bus service as a contribution to sustainability as well. Some of its initiatives are listed below:

Sustainability policy

The RTC has the following sustainability goals are listed below. Climate change abatement or is not one of its sustainability policy goals. Description of the sustainability programs that follows the goals list provides a flavour of the nature of the measures taken for sustainability in Southern Nevada region.

- Implement transportation systems that improve air quality in Southern Nevada;
- Develop fully-integrated transit mode options;
- Integrate the transit system geographically;
- Secure funding for expansion, operation and maintenance of the transit system and routes; and
- Enhance public awareness and support of the regional transportation system.
- Bus Rapid Transit(R T C)
- The RTC is currently working on building a rapid transit system that will connect downtown Las Vegas, the Las Vegas Convention Centre, the Strip, Henderson and North Las Vegas. (R T C).

The Electric Bike Share (E-Bike) (R T C)

The new Electric Bike Share Program is for the government staff who need to get around downtown. RTC promotes the E-Bikes as state of the art in sustainable transportation that can help the environment through reduced air pollution and traffic congestion.

RTC claims, sunny and dry climate makes Las Vegas a suitable place for cycling, particularly for short trips. The RTC tested the concept through a pilot program in summer 2010 with the cooperation of other government agencies. RTC hopes to make the program available to public soon
(http://www.rtcsnv.com/cycling/ebike.cfm)

Public transportation improvements

RTC has a network of bus service of which Bus Rapid Transit (BRT) line is light rail style limited stop fast service. RTC is planning to extend that service to several key corridors and by constructing stations and other amenities in mixed traffic operations where dedicated lanes cannot be created.

Bonneville Transfer Centre

RTC is built the BTC which houses Las Vegas Valley's transit services, including park and ride express routes. It has a commuter cycling station which has the capability of accommodating up to 120 bicycles. The bike station is a first for Las Vegas. It has other amenities such as restrooms with showers, 24-hour access and a bicycle repair shop and service area.

LEED Gold Certified Green Buildings

As a partner with the community, the RTC has designed and delivered a building that is also environmentally friendly. To achieve LEED Gold certified building water reclamation; use of recycled materials; energy-efficient cooling systems; and architectural practices such as the right building position and shade systems were adopted.

Bikes and Buses

All RTC transit vehicles are fitted with bicycle racks. RTC transit carries more than 55,000 bikes on buses per month. This author in his two months of heavy RTC bus use observed frequent use of the bicycle racks fitted in front of all busses.

Westcliffe transit centre park and ride

The Westcliffe Transit Centre is located near Summerlin Parkway. It has been provided with "sustainable features" include more than 140 parking and ride spaces, a climate-controlled transit centre and water efficient landscaping.

Facilities

RTC Facilities Department has made following sustainable improvements: Intelligent illumination systems have been installed in RTC buildings. These systems automatically switch off the lights when the rooms are not in use. The RTC facilities is also exploring use of LED exterior lighting on their premises again to save energy.

The RTC has implemented a no idle program with operating vendors, performing timely maintenance and repairs, including adjusting and maintaining proper tire pressure. These measures save fuel.

Conclusion and recommendations

As far as Sydney NSW is concerned it was found that transport emissions are by far the biggest contributors toward overall emissions in the community sector. This needs to be acknowledged and addressed. There has been little pressure on councils to act, from the State Government or from the community. There is a need to review urban design and environmental planning instruments to encourage alternate forms of transport. The situation in Southern Nevada is no different. Like Sydney most sustainability measures are in house applied to the buildings they hold and the staff they employ. While the local authorities in both regions have made efforts to reduce their environmental footprints, they have not been vocal/forceful when it comes to communities' impact on the environment in general and climate change in particular.

In Sydney NSW motivations for climate change action and joining CCP have largely been tied up with asset management and insurance premiums. Councils are taking economic precautions rather than addressing climate change. Councils are meanwhile becoming more vulnerable as a result of climate change impacts, and are likely to experience an increase in lawsuits.

Terms such as *sustainability* and *ecologically sustainable development* are over-used in policy documents and reporting, or used vaguely. It is recommended that councils research and employ more specific and accurate terminologies. That is true for both NSW and Southern Nevada. A lot advertisement of green credentials in S. Nevada pointed to sloganeering and marketing more than substance on sustainability/green credentials.

In NSW Coastal councils seem to be more aware of climate change impacts and adaptation than non-coastal councils, as they are under more immediate threat.

In interviews in Southern Nevada (Las Vegas) it came out that individuals and agencies and are dismissive of peak oil and climate change. One of the interviewees asserted that Las Vegas is already sustainable due to limitations on its expansion. The same person implied peak oil is myth and climate change a hoax.

In S. Nevada planning and sustainability officials at various agencies admitted climate change is not an easy topic to broach. They have to tackle it indirectly portraying it to be an efficiency measure or a green/quality of life issue in general.

It was observed in S. Nevada it was a unified opinion that the solution to any sustainability problems has to technological and has to be delivered by private

enterprise. This inclination can be seen in the sustainability measure outlined by various authorities such as Green Building initiatives.

In both regions there are talks about what how much GHG emission has been avoided and will be avoided. However no mention is made of how much it should be or what difference has the carbon savings and environmental measures have practically made.

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Rental Housing Development in a Shrinking City: The Case of New Orleans after Hurricane Katrina

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Rental Housing Development in a Shrinking City: The Case of New Orleans after Hurricane Katrina

Abstract:
New Orleans was a shrinking city when it was devastated by hurricanes Katrina and Rita in 2005. New Orleans's rental housing sustained significant damage, and Louisiana received an additional allocation of LIHTCs to help rebuild the rental housing stock. New Orleans was also a city that had experienced decades-long population loss before the hurricanes that had resulted in excess developed land and housing units, a situation that the hurricanes exacerbated. This paper examines impacts that the different types of LIHTC projects—scattered site, multifamily, and detached singles and doubles—had on rebuilding the urban fabric in a way that would result in sustainable neighborhoods for a smaller population. We analyzed nine select projects to determine their infill, continuity, land use and density impacts. No single project provided enough infill to stabilize the neighborhood where it was built. The scattered site and detached unit projects used more land per unit, but the analysis demonstrated that infill and continuity were dimensions needed to ensure maximum impact from new development.

Introduction: New Rental Housing in Depopulating Cities, a Solution or a Problem?

New Orleans needed rental housing after the devastating flooding that followed the 2005 hurricanes Katrina and Rita. Wind, rain and flooding effected 70% or 134,000 of the city's occupied housing units (GNOCDC, 2009) and approximately 67% of the rental units (GNOCDC, 2006). Half the structures had major damage (GNOCDC, 2009). The rental housing damage impacted many New Orleanians since 54% of the population lived rented their housing.

Because New Orleans had lost population since 1960—at first losing residents but retaining households as household size decreased but, in later decades, losing both residents and households—the disaster occurred in a shrinking city context. The 2010 census count of 343,829 residents was over 70% of the 2005 estimate but closer to 55% of over 627,000 people who made the city home in 1960 (GNOCDC, 2011). In addition, suburban subdivisions within the city boundaries added housing units in the 1960s, 1970s and 1980s. These trends cumulatively resulted in a city that had widespread property abandonment before 2005 and increased blighted property and vacant land as a result of the 2005 disaster.

Although rental housing redevelopment was necessary, new development had the potential to exacerbate the pervasive problem with derelict buildings. Would new development shift people from one area to other, leading to new patterns of blight and settlement? Would new construction discourage repair of existing housing? Or could new development and strategic rehabilitation contribute to developing a sustainable urban form for a smaller population? To examine the impact of new development in a depopulated city, we evaluated the form and pattern of rental housing financed through Low Income Housing Tax Credit (LIHTC) program. We chose to examine LIHTC projects because LIHTCs are a significant source of public funding in U.S. shrinking cities. Lan Deng (2012) has estimated that if Detroit received LIHTC investment

proportionate to its share of the state's population in 2001, the total LIHTC investment would a third of the city's Community Development Block Grant allocation, a major source of public funding to urban areas. Between 1986 and 2006, the LIHTC program contributed to 1.6 million units, about one sixth of all multifamily units built (Schwartz, 2010, 103). Forty five projects with a total of over 5000 units were built in New Orleans during the period we examined.

The focus of this paper is to examine what contributes to patterns that would maximize land stewardship. We evaluated the LIHTC projects in relation to three urban form dimensions that contribute to increased sustainability—density, continuity and infill—to illustrate how characteristics of the new development, and not only the extent of new development, impact neighborhood rebuilding in a depopulating growth situation. In the case of shrinking cities, using more abandoned land is a net positive and this was an additional dimension that we examined. No project or projects as built stabilized the neighborhood with a smaller population. Infill and continuity contributed most to stabilizing depopulating cities.

New Orleans is an extreme case to consider redevelopment in a shrinking city. It received massive damage and a significant influx of redevelopment funds. New Orleans rate of redevelopment greatly exceeds that which shrinking cities experience. From excess public facilities to vacant land, New Orleans "recovery" nevertheless has been shaped by long term shrinkage and the recovery reflects an intensified process of depopulation and shifting resettlement patterns. In this paper, we first explain prior research that shaped this analysis. We then turn to the post-Katrina period in New Orleans, and explain the rental housing recovery programs. A comparison of the total development and operating costs of nine projects follows, along with our analysis of their neighborhood impacts. Finally, we include a discussion about the differences between within-neighborhood and among-neighborhood impacts.

Conceptual Underpinnings: Sustainable form without growth?

Scholars define urban form in various ways. We draw on Glen Bramley and Karren Kirk's (2005, p. 356) definition of urban form as "the size, shape, and intensity of urban settlements and the spatial organisation of different types of land use within them." Based on an analysis of the sustainability and environmental planning literature, Yosef Jabareen (2006) identified seven design concepts that contribute to sustainable urban forms: compactness, sustainable transport, density, mixed land uses, diversity, passive solar design, and greening. When synthesizing the characteristics of sprawl, an imprecise concept poised as the antithesis of sustainable form, George Galster *et al* (2001) define sprawl as scoring low values on one or more of eight land use dimensions: density, continuity, concentration, clustering, centrality, nuclearity, mixed uses and proximity.

This paper is based on the premise that distinct interventions will be required to increase sustainability in shrinking cities. Some considerations in shrinking cities parallel sustainability concerns in growing areas including efficient infrastructure and urban services (that in some contexts would come with compactness) and greening interventions from stormwater management to tree coverage and urban gardening. Other concerns diverge. Shrinking cities have underutilized disturbed land that impacts remaining residents and encourages movement in outlying areas. The question of land stewardship is critical to create vibrant smaller cities and ensure residents can thrive. How can excess land be managed and used? What settlement patterns will stabilize shrinking cities? For this paper, we include land use and shape of settlement within a city or smaller urban division, down to the design of specific projects. Although the units are smaller than many scholars who examine urban form, the connections

among site specific design, neighborhood infill and a sustainable region interrelate, as we discuss in our analysis.

Observers have heralded the possibilities of greening shrinking cities because urban land becomes increasingly available (Lawson and Harmon, 2012; Oswalt, 2006). Relaxed zoning ordinances also could facilitate mixed land uses when neighborhood populations decline (Hollander, 2011). Planning however is more influential in areas with high demand (Bramley and Kirk, 2006), and policies have different impacts in fast and slow growth areas although local governments do not always take this into account (Leo and Brown, 2000; Leo and Anderson, 2006). Although the general objectives are consistent with sustainability in growing areas, adapting shrinking cities must take into account sparser settlement in already developed areas and infrastructure designed for populations that exceed current residency. We propose that rebuilding a sustainable urban form in shrinking cities also requires performance outcomes that reflect decreasing densities in which settlement patterns result in good land stewardship and infrastructure and urban services that are maintainable long-term. In contrast with growing areas, shrinking cities require both infill and lowering densities (Ehrenfeucht and Nelson, 2011). Actions to retrofit cities to smaller populations can become contradictory. For example infrastructure efficiency has different density requirements than land stewardship, revitalization in one neighborhood can draw residents from other neighborhoods, and decreasing densities can make public services more expensive. In addition, slow growth regions with cities that are losing residents can still growing on the outskirts (Couch, Karecha, Nuissl, and Rink, 2004).

This paper focuses on the question of land stewardship because millions of people live in cities with a glut of property and no ready way to facilitate its use. How to facilitate effective land stewardship in areas with diminishing property demand remains a pervasive issue. In the

U.S., planning responses to population loss and property decline have focused on strategies to attract private investment. In many cities, central neighborhoods have higher levels of housing abandonment (Cohen, 2001; Accordino and Johnson, 2000; Keenan, Lowe and Spence, 1999), and evidence suggests that significant targeted investment such as in Richmond, Virginia's Neighborhoods in Bloom program can increase property values and spur localized improvements (Galster, Tatian and Accordino, 2006). Targeted efforts alone are inadequate to address the magnitude and types of problems generated by widespread depopulation, and they can lead to a zero sum game for the city or region with persistent and widespread depopulation by moving investment from one area to another rather than stimulating new development (Couch, Karecha, Nuissl and Rink, 2005).

Urban residents, public officials and planners or other urban professionals have disagreed about what types of interventions are acceptable. Proposals to close off neighborhoods have been consistently resisted (Shiffman, 2005-2006; Rybczynski and Linneman, 1999; Nelson, Ehrenfeucht and Laska, 2007). In post-Katrina planning processes, residents and public officials made an explicit decision to retain the city's neighborhoods (Ehrenfeucht and Nelson, 2011, 2012). "Shrinking the footprint" or decommissioning neighborhood or occupied areas became analogous with denying African American residents the right to return to the city after the flooding has subsided (Nelson, Ehrenfeucht and Laska, 2008). Even in Youngstown, Ohio, where residents agreed through an extensive planning process to reduce or eliminate services to depopulated areas, when specific households were offered relocation assistance, they opted against moving.

On a parcel and block level, individuals legally and informally absorb underused parcels into their properties, but neighborhoods with high rates of homeownership and residents with

higher incomes are better able to integrate unused properties into occupied parcels and create larger lot, less dense neighborhoods (Hollander, 2010). In neighborhoods with rental property, market rate rents do not support significant rehabilitation of aging buildings. Rental property owners have less incentive to integrate abutting properties and are not present to occupy or maintain them, and the occupants have less property control. Stronger neighborhoods can also thrive amongst struggling neighborhoods.

Even real estate development to facilitate growth is a common economic development strategy in U.S. shrinking cities, it has never changed a city's circumstances. National aid can help offset local market disadvantage by giving cities or regions more bargaining power (Savitch and Kantor, 2002). No federal policies help U.S. cities address population loss however. Instead New Orleans was in a "dependent private" bargaining context with few resources, but also little public aid. In the case of Detroit, this situation results in strategies oriented towards attracting new business (Savitch and Kantor, 2002: 223-266). U.S. cities with weak market positions nevertheless can have influence. Margaret Dewar (2006, 2007) has found that land management strategies can impact how effectively vacant land is reused even when demand is weak. Land banking, bundling and selective sales, and selling property to abutting property owners result in higher reuse rates and maintenance than tax sale auctions.

For this paper, we examine new development financed with tax credits allocated through Low Income Housing Tax Credit program. We chose the LIHTC projects for three reasons. First, as we stated in the introduction, LIHTC are a significant source of public subsidy and new development in shrinking US cities. Second, state agencies that allocate LIHTCs have significant leeway to incentivize different types of development. Through developing a Qualified Allocation Plan, each state develops criteria on which to evaluate proposed projects. In case of the LIHTC

program, states have the possibility of taking growth patterns seriously. Because shrinkage is common, twelve of the largest 50 U.S. cities lost population in consecutive decades from 1980 to 2000 and 9 of the 50 largest cities lost population steadily between 1950 and 2000 (Beauregard, 2009), rethinking how policies function in different growth scenarios is both necessary and possible.

Although housing development can be a mechanism to stimulate neighborhood revitalization (Schill and Wachter, 2001), and Alan Mallach (2006) has argued that housing policies in weak market areas *should* be neighborhood development policies, how to best build housing in areas with surplus land and housing structures remains unclear. When Lan Deng (2012) investigated the impact of LIHTC projects in Detroit, she found that the projects alone were insufficient to stimulate neighborhood change—based on demographic and property value change—and most were located in neighborhoods with stronger real estate markets and relatively more demand. The final reason to examine LIHTC projects is that even though housing investment can help revitalize neighborhoods, in areas with limited demand, new housing in one area can also negatively impact another. As the rental market loosens, rents fall and housing can be readily available. Low rents and neighborhood decline also discourage reinvestment in rental housing however and maintenance decreases. Housing quality and neighborhood decline, not affordability, become primary concerns. If housing quality is declining, many residents would prefer new housing units if available. In a city losing population, moves among neighborhoods will impact residents in other neighborhoods and patterns of property abandonment (Beauregard, 2012).Youngstown, a city often used as the forward thinking example of planning for a smaller population, declined LIHTCs (Beauregard, 2012).

LIHTC Development in Post-Katrina New Orleans

Despite the need for rental housing in the years following Katrina, much damaged property sat unrepaired. From 2004, before the hurricanes, to 2008, rents spiked 27% in the New Orleans metropolitan area and 41% in New Orleans (Plyer *et al*, 2009). The percentage of households that were cost burdened increased significantly to 66% in 2008 with almost all low income households in this category (Plyer *et al*, 2009). Prior to the hurricanes, much housing had been affordable because vacancy was high, but when the structures were damaged they were not profitable to rebuild.[1]

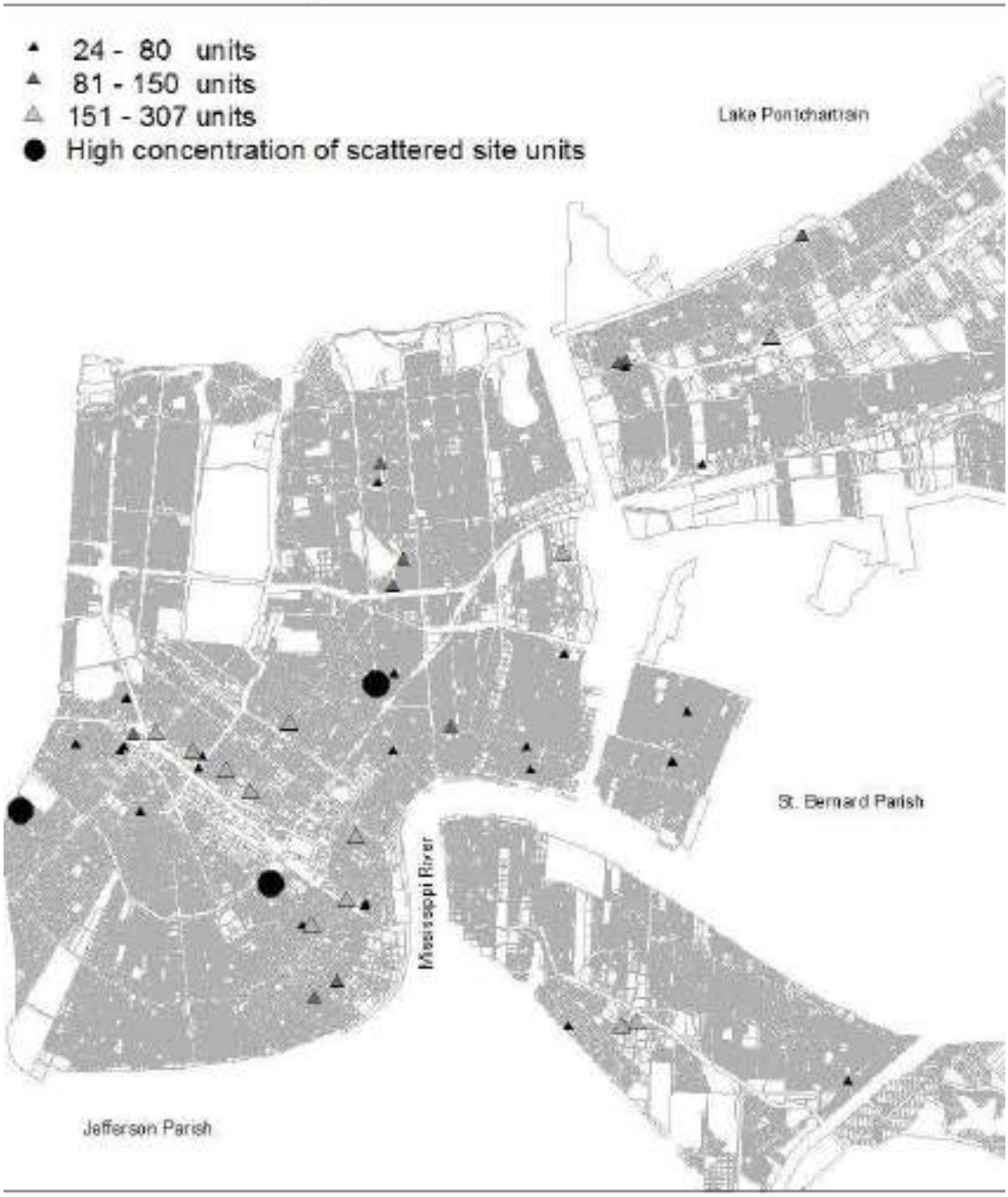
With high development costs, environmental risk that made conventional financing difficult, and uncertain rents, developers and existing property owners depended on public funds to repair or build housing. Two programs addressed rental housing redevelopment in Louisiana. In December 2005, the U.S. Congress adopted the Gulf Opportunity Zone (GO Zone) to encourage private development in the impacted region. The Louisiana Housing Finance Agency administered a multifamily program that, between 2006 and 2008, received a $170 million special allocation of Low Income Housing Tax Credits for rental housing recovery in the GO Zone. An additional $667 million of Community Development Block Grants was allocated for a "piggyback" program to incentivize new developments to serve populations with lower incomes and special needs (Clark and Rose, 2007). The state's Road Home housing recovery program also included a competitive small landlord program that reimbursed landlords of properties with four or fewer units for eligible repair costs.

[1] The rental rate remains high. In 2008, the rental rate had declined from 54% in 2000 to 47% (compared with 34% in the abutting Jefferson Parish and 33% nationally) (GNOCDC, 2009, Housing Production Needs). The 2010 census count however showed that the rental figure had again increased to 52%.

In New Orleans, 46 projects for a total of 5,157 housing units were built using LIHTCs.[2] The project ranged from 24 to 307 units with an average size of 113 units (figure 1) Most projects were constructed on a single site although three projects were on individual parcels scattered throughout the city. Figure one identifies the location of the highest concentration of the scattered site parcels by a circle. This paper addresses three interrelated questions about the LIHTC projects. How did the LIHTC projects impact the neighborhoods where they were built? How did the LIHTC projects respond to the conditions of population loss and property abandonment? And, given the location and patterns of development, what possible impacts will the LIHTC projects have on property stewardship across the city?

[2] The projects include those that received tax credit allocations after the hurricanes and were substantially put into service by 2011. One scattered site project considered in this analysis is still under construction but the buildings are mostly constructed, and rented as they are finished, and therefore adequate for this analysis. We excluded public housing redevelopment projects that utilized LIHTCs.

Figure 1: LIHTC projects built after the 2005 hurricanes in New Orleans.



A 2007 analysis of the LIHTC applications for the state of Louisiana indicated that the LIHTC allocations would contribute to rebuilding damaged housing (Clark and Rose, 2007).

Although some existing housing complexes in New Orleans were repaired, most projects were multifamily new construction. Other projects included new singles or doubles on single and scattered sites. During this period one adaptive reuse project was built with LIHTC tax credits.

To evaluate the impact of the projects, we selected a subsection of projects for closer analysis. To identify the scattered site projects, we requested all applications from the Louisiana Housing Finance Agency (LHFA) for projects that were described as scattered site. This designation included projects that were detached units on single sites and projects with singles or doubles on noncontiguous, individual parcels. Nine projects fit this criterion and we examined all nine projects. One project had two phases that were counted as a single project, and we excluded one project. This resulted in seven projects for comparison that ranged from 15 detached doubles on a single site to 166 properties. Three projects were built on individual parcels scattered throughout the city (two affordable doubles, one mixed income singles) and four projects were detached, single site projects (two doubles, two singles). Doubles are a common housing type in New Orleans. We also chose two award winning single site multifamily mixed income projects to include in the comparison.[3] These projects were located in two areas that typified the resettlement shifts that were facilitated by the hurricanes and responded to changing market dynamics where both were in up and coming areas. In the following subsections, we first briefly describe the projects. We then outline a cost comparison of the selected projects. Third, we

[3] In 2010, Domain Companies, the Crescent Club's developer, received an Affordable Housing Finance honor. The landscape design for The Muses Apartments in New Orleans received the President's Award of Excellence by the Louisiana Chapter of the American Society of Landscape Architects. In 2010, the Muses also won a Novogradac Journal of Tax Credits Development of Distinction award for Overcoming Significant Obstacles.

compare the neighborhood impacts based on urban from dimensions that impact land stewardship in shrinking cities.

The Projects Of the nine projects, four—Louisiana Freedmen Homes, Indiana Homes, Elmwood Homes, and Orleans Place—were single site projects with detached units. In this case, a single site means that the parcel or parcels were contiguous and uninterrupted (except by streets). All four of these projects were affordable. Louisiana Freedmen Homes was the smallest project and comprised of 15 detached doubles. The project was located in Gert Town, a disinvested centrally located neighborhood. Each two story building fronts a street. The 30 doubles of Orleans Place front three newly developed streets (figure 2). The shared common space behind the houses is enclosed similar to a condominium complex. Indiana and Elmwood Homes were single detached houses on adjacent undeveloped tracts resulting in a new single family development with 100 houses (figure 3).

Figure 2: Orleans Place

Figure 3: Indiana / Elmwood Homes

The three scattered site projects, Classic Construction, Crescent Garden Homes and Opportunity Homes, were comprised of singles and doubles on single infill parcels throughout the city (figures 4 and 5). Most but not all properties were in centrally located neighborhoods, and each concentrated units in particular (but not the same) neighborhoods. Many parcels were blighted or vacant prior to redevelopment. Crescent Garden Homes was the only project of the three that was a mix of new construction and renovation as well as being mixed income. The new construction was modular with different designs that included both one and two story structures. Fewer existing structures were renovated. When structures were renovated, Crescent Garden Homes would repair two adjacent houses. The restricted and unrestricted units were interspersed, and adjacent or nearby buildings would be alternatively designated affordable and market rate.

Figure 4: Scattered site project parcels

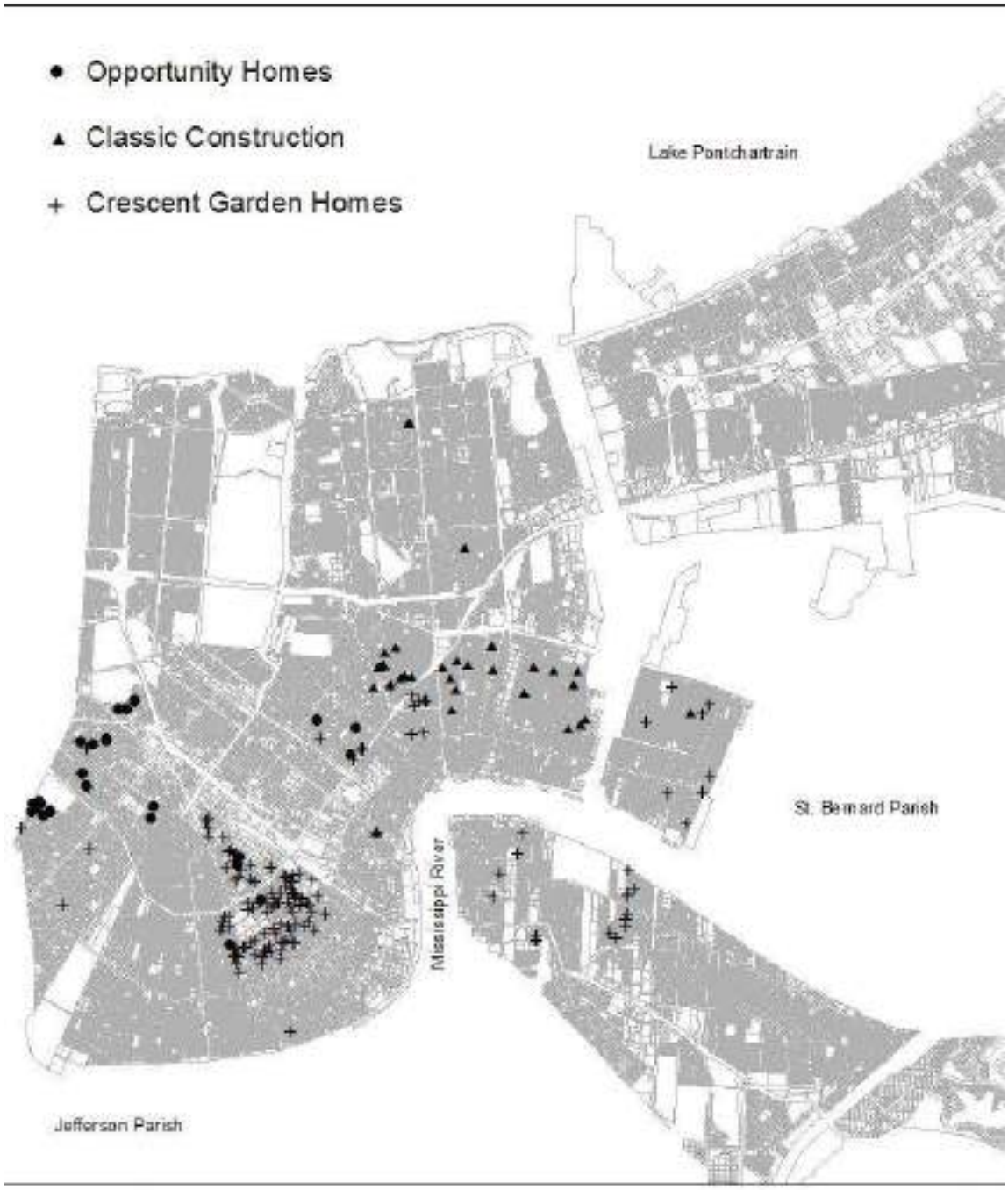


Figure 5: House built by Crescent Garden Homes

The two single site, multifamily mixed income new construction projects were gated structures built in areas with significant market potential. The Muses, a 263 unit project on a 4.8 acre site, was located in Central City, less than a mile from the Warehouse District, a gentrifying neighborhood adjacent to downtown, close to the gentrified Lower Garden District, and a block away a prominent thoroughfare that is lined with hotels, restaurants and other viable businesses. Central City had extensive pre-Katrina disinvestment, vacant land and blighted property, but that also retained historic housing stock. The Muses was the city's first LEED NC-Silver multifamily structure. The area near the Muses site also received significant public investment in the post-Katrina period. In 2010 the Mayor's Office authorized the New Orleans Redevelopment Authority (NORA) to invest over $10 million of Community Development Block Grant money in several commercial corridors, and NORA allocated $2 million to commercial projects on Oretha Castle (O.C.) Haley Boulevard, a historic corridor in Central City close to the Muses. Through a gap financing program, NORA provided financing for 14 commercial projects along

O.C. Haley Boulevard, including a 20,000 square foot building where NORA planned to relocate its offices. NORA also worked with other partners and sources of funding to develop over 50 single-family houses and 70 rentals units for seniors on currently blighted property in nearby residential areas (NORA, 2010). Numerous other residential and commercial projects have been constructed in the vicinity, and the city was to make $300,000 in street improvements (Elie, 2009). The site is only minutes from downtown, the historic French Quarter and the revitalizing Warehouse District.

The 226 unit multifamily Crescent Club was located along Tulane Avenue (figure 6). Tulane Avenue was an underdeveloped six lane arterial prior to the hurricanes. In the years after the hurricanes, it developed rapidly in response to plans for proposed medical district in the vicinity. In 2011, site preparation for two major hospitals had begun. The site was only minutes from downtown.

Figure 6: The Crescent Club corner elevation

Development and Operating Cost Comparison Table one compares development costs, land costs, subsidies and operating costs across the projects.[4] To compare total development costs among the projects, we drew on the project reviews available in the LHFA's

[4] Because some projects did not have finalized cost certifications, the final development costs may differ somewhat from the figures used. Given the multiple subsidies that LIHTC projects receive, total subsidies were difficult to analyze. The terms of the subsidy sources also varied. For the purposes of this paper, we only considered subsidies that were cash transfers or equivalent, which was primarily LIHTC, CDBG and HOME and TCAP funding. We did not consider FHA or GSE mortgage insurance or similar government backed programs. In addition, we did not consider PILOTS, nonprofit tax exemptions, accelerated depreciation, and other tax treatment nor the philanthropic funding that some projects received. To calculate the value of the LIHTCs, we conducted a simplified analysis of the credit award over ten years with a 7.78% present value credit (PVC) rate for the "9%" credits. The PVC rate is designed to adjust the present value of the LIHTC award to 70% of eligible basis for 9% credits at the time of closing the transaction.

LIHTC application files.[5] Costs for all projects regardless of physical arrangement (scattered single site, scattered multi-sites, large single site), income mix, and construction type (new or rehab) varied considerably.

Anticipating that scattered site development would be more expensive, initially the objective was to account for tradeoffs between development types and housing units. Since the purpose of the program is to construct rental housing, if multifamily development cost less per unit, for example, and therefore provided more housing for equal expenditures but had less neighborhood impact, this would be a tradeoff when considering total project impact. Although we anticipated substantially higher land costs and operating costs for the scattered site projects, the land costs varied greatly and the operating costs varied less than anticipated. Direct tradeoffs were not apparent.

Prior research about LIHTCs suggests that the financing tool incentivizes higher quality and therefore more expensive materials (Eriksen, 2008). We did not consider qualitative differences among the projects. The LIHTC projects had different styles, tenant mixes, locations, amenities and aesthetics, all of which influence costs, desirability to tenants and attractiveness to investors. The multifamily projects provided amenities for the households unavailable to the other projects.

[5] The affordable projects had a mix of income restricted units but all the units have rent restrictions. Mixed income projects had both income restricted affordable units and market rate or unrestricted units and the market rate and affordable units are indistinguishable.

Table 1: Comparison of development and operating costs[6]

	Total units	Bldgs	Per unit cost	Per unit subsidy	Per unit operations	Per unit land cost
Scattered Site Projects						
Crescent Garden Homes	166	166	174,095	135,621	5,136	7,303
Classic Construction	112	56	232,496	184,199	4,171	17,588
Opportunity Homes	54	30	147,668	119,658	4,161	9,603
Multifamily Single Site Projects						
Crescent Club	228	2	228,865	156,596	4,528	9,816
Muses Total	263	3	224,896	175,528	4,655	35,765
Single Site Detached Dwelling Projects						
Indiana Homes*	60	60	245,399	216,171	4,161	30,833
Louisiana Freedmen	30	15	149,965	128,845	4,173	16,033
Elmwood Homes*	40	40	214,286	150,814	4,469	11,624
Orleans Place	60	30	260,419	224,148	4,610	10,833

*Sites are adjacent with seamless boundaries between projects

The costs among the projects that we evaluated were more similar than a previous analysis of LIHTC applications. In 2007, the Bureau of Governmental Research (BGR) found little difference between the total development costs for the proposed mixed income and affordable only developments state wide ($177,000 mixed income per unit, $174,000 affordable per unit), but a greater difference in Orleans Parish ($210,000 per mixed income unit versus $184,000 per affordable only unit). Public housing redevelopments cost on average 40% more or

[6] *Sources:* LIHTC Applications, available from the Louisiana Housing Finance Agency

$273,000 per unit, and adaptive reuse projects also cost significantly more per unit (BGR, 2007, Public Investment, Private Developers, 5).

Neighborhood Impact Analysis To maximize the possibility of land stewardship, occupancy patterns and levels must facilitate regular maintenance. In other words, otherwise unoccupied or blighted properties need to be used. We evaluated the projects across the following dimensions: infill; continuity; total land used by project; and, increased density by project. In a shrinking city context, better outcomes would come from infilling vacant or blighted previously developed parcels, creating continuous development patterns within and among neighborhoods, using more rather than less previously developed land, and creating densities that would facilitate infill throughout the city given realistic population projections.

The Impact of Infill

We defined infill as occupying developed parcels at the neighborhood scale. Did the project use previously developed land? Although in growing areas, virtually all parcels are occupied, in shrinking areas, this stops being a realistic outcome. Infill therefore must create patterns of settlement where residents' reach extends to land that would be abandoned. When parcels are unused in areas where residents can lay permanent claim, residents are more likely maintain abandoned properties and often absorb unmaintained parcels, either formally or informally, into their property.

To ranking highly on an infill criterion, a project had to be developed on previously developed parcels, regardless whether parcels were a vacant lot or had a structure at the time of construction. All scattered site projects used parcels that had been previously occupied by

existing housing. The scattered site projects used blighted and abandoned parcels within neighborhoods acquired through various sources including properties unsold at tax sales. Many of the parcels were blighted at the time they were acquired by the developer. The Crescent Club was located on a site previously occupied by a commercial use that was no longer operating. The Muses was built on vacant property within a residential area with some commercial uses.

The single site detached projects varied. Louisiana Freedmen Homes was located on a vacant block within a neighborhood with significant occupancy as well as notable disinvestment (figure 7). Orleans Place (figure 8), Indiana Homes and Elmwood Homes however were new greenfield developments within the city boundaries. Like Louisiana Freedmen Homes and the Muses, the sites were sizable undeveloped tracts. Unlike the Louisiana Freedmen Homes and the Muses, these developments abut additional undeveloped land that was located against physical barriers (a canal in the case of Indiana and Elmwood Homes and the Intercoastal Waterway in the case of Orleans Place). Figures 7 and 8 compare the location of Louisiana Freedmen Homes and Orleans Place. Although the land is platted, the parcels to the east and west of Orleans Place have never been developed. Prior to the development of Orleans Place, the development ended at the road that runs along the development's northern boundary.

Figure 7: Louisiana Freedmen Homes

Figure 8: Orleans Place

Stewardship Requires Continuity

Did the project help create continuous development within the neighborhood? To contribute to the creation of continuous development, a project needed seamless boundaries with surrounding properties. The scattered site projects had less impact on given block than the single site project that occupied entire blocks and neighborhoods. Although each scattered site project had sites concentrated in a given neighborhood, in most cases, a block only has one or two new structures. Figures 9 and 10 compare similar areas for two scattered site projects. These areas were chosen for comparison because they show the maximum unit density for the projects. However, the houses were at similar scales and patterns, contributing to rebuilding the urban fabric. At times, the new houses contributed notable infill such as where Classic Construction built numerous units on contiguous parcels (figure 11 and the largest rectangle in figure 10).

Figures 9: Crescent Garden Homes

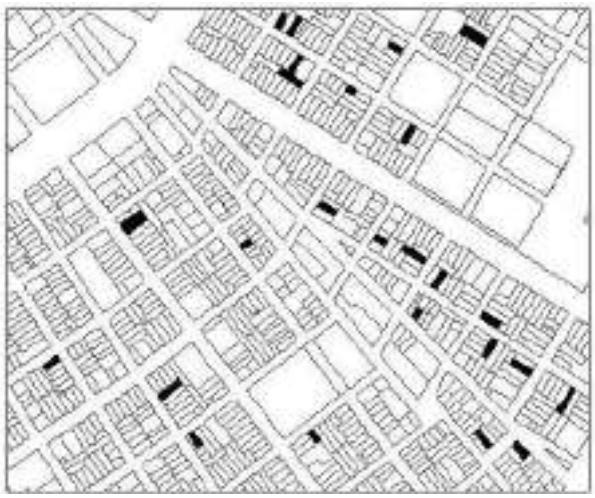


Figure 10: Classic Construction

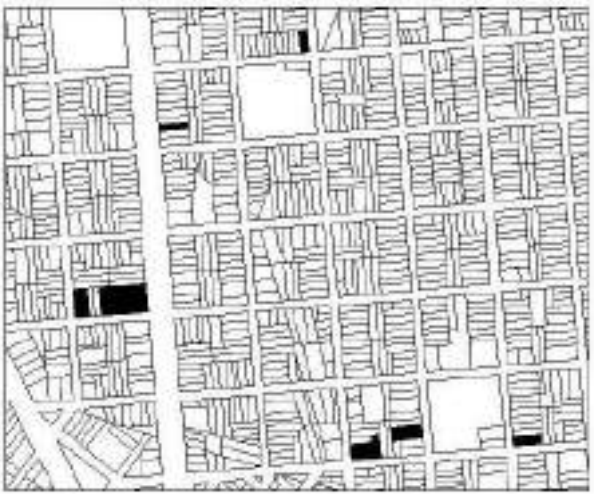


Figure 11: Classic Construction four adjacent doubles

In most locations, the blocks were occupied houses but had often one or more derelict structure or vacant land. In these cases, the incremental changes could lead to neighborhood stabilization. In some locations, however, single houses were built among many empty lots and derelict structures (figure 12) or, in few cases, the single units in areas that were very sparsely populated (figure 13). These units created no greater continuity.

Figure 12: New Crescent Garden Homes unit (3rd from left) between boarded structures

Figure 13: Crescent Garden Homes unit in a sparsely population part of the Lower Ninth Ward

The two multifamily projects—the Muses and the Crescent Club—were secured or gated buildings. The Muses has abruptly different character than the surrounding neighborhoods.

Therefore, it had a low continuity impact. Although similar in scale and massing, the Crescent Club is consistent with other blocky multistory buildings along the six lane thoroughfare where it is sited, and therefore has higher continuity impact. The four projects that were detached singles and doubles on single sites were extended development with form consistent with the surrounding neighborhoods although the three greenfield parcels (Orleans Place, Elmwood Homes and Indiana Homes) extended the developed area, thereby being continuous, but without being infill.

Using Land Is Good

In a shrinking city, land needs to be occupied and used. Which projects directly provided most stewardship? Table two shows the land used by each project. Overall, the Crescent Garden Homes scattered site project and the detached single site projects, Orleans Place, Elwood Homes and Indiana Homes, covered the most land. Louisiana Freedmen Homes developed a large vacant parcel that could otherwise have become blighted. The multifamily structures used less land per unit but were located on unused land in occupied neighborhoods.

Table 2: Lots occupied and total land area used

	Rehab	Total units	Bldgs	Parcels	Land area in square feet
Scattered Site Projects					
Crescent Garden Homes	Yes	166	166	166	550,000
Classic Construction Total	No	112	56	56	190,000
Opportunity Homes	NA	54	23	23	102,000
Multifamily Single Site Projects					
Crescent Club	No	228	2	36**	160,000
Muses Total	No	263	3	40**	180,000

Single Site Detached Dwelling Projects					
Indiana and Elmwood Homes*	No	100	100	210**	945,000
Louisiana Freedmen	No	29	15	16**	72,000
Orleans Place	No	60	30	65**	295,000

* Projects are have seamless boundaries on adjacent parcels

** Assuming an average parcel size of 4,500 sf

To show the contrast between the impact of the Muses as a single site project and available land if it were a scattered site project, we depict the Muses surrounded by vacant parcels (figure 14). The development's 263 units cover a 40 block equivalent (assuming a 4500 square foot lot size). Central City, where the Muses is located, had a moderate population recovery since the hurricanes. Approximately 60% of the neighborhood's 2000 population returned and the neighborhood had a 40% vacancy rate in 2010 according to the 2010 census counts. The vacancy rate had been 21 percent in 2000 and empty lots and derelict structures peppered the neighborhood. Since the hurricanes, additional buildings had been demolished, indicating that both vacant structures and parcels abound. Within five blocks to the north, east and west of the site, over 200 parcels were vacant. From the Muses site to the freeway between Central City and the Warehouse District, around 100 parcels lay vacant.

Figure 14: The Muses with surrounding vacant parcels

The Right Densities?

Determining what densities will make sense in shrinking cities requires a neighborhood scale analysis in conjunction with a citywide analysis. What densities make sense in a shrinking city? In May 2010 analysis, the Greater New Orleans Community Data found that 7,409

residential addresses were habitable but vacant (Plyer and Ortitz, 2010).[7] The 2010 census count of 47,738 vacant housing units, approximately 25% of the total, includes unrepaired but secured housing (US Census Bureau, 2010; Plyer and Ortitz, 2010). The 2010 census count also showed that 16% of all rental units were vacant.

In 2010, the LHFA estimated the rental vacancy rate at approximately ten percent with LIHTC projects reporting higher occupancy, and mixed income projects reporting waiting lists for the rental units (LHFA, 2010). The waiting lists could partially be explained by the fact that market rents remain high and the nonrestricted units were rented for less than attainable market rents. This also suggests that when new construction is available, it is preferable to some residents than other available rentals. However, given limited demand, this can lead to further deferred maintenance of older construction and abandonment of properties for which no demand emerges.

Return rates have varied significantly by neighborhood. Most flooded neighborhoods have significantly more vacant units than they had prior to the storm, despite the fact that many badly damaged structures were demolished. New Orleans has 13 planning districts and 73 officially designated neighborhoods. Table 3 compares vacancy rates by planning district, with some select neighborhoods included for comparison.

Table 3: 2010 population and vacancy by planning district with select neighborhood comparison

[7] Total unoccupied residences include blighted residences, empty residential lots and vacant but habitable residences.

Planning district/neighborhood	2010 population as percent of 2000 population[8]	Vacancy rate (2010)[9]
Mid-City Total	60.4	31.3
Village de L'Est Total	62.0	14.9
New Orleans East Total	68.4	23.4
Gentilly Total	69.1	23.7
Lower Ninth Ward Total	28.5	44.8
Lakeview Total	75.8	20.1
City Park	96.3	12.4
Lakeview	64.7	21.4
Bywater Total	56.1	33.3
St. Claude	58.2	39.0
Marigny	94.5	20.3
Viavant/Venetian Isles Total	47.5	27.2
Uptown-Carrollton Total	86.2	19.5
Hollygrove	63.3	32.9
Audubon/University	106.5	10.4
Central City/Garden District Total	74.6	27.0
Milan	70.7	29.2
Garden District	97.8	12.9
French Quarter/CBD Total	102.0	39.2
Algiers Total	92.0	18.2
Old Aurora	106.2	12.7
Behrman	77.3	24.8
New Aurora/English Turn Total	101.7	12.5
Total New Orleans	70.9	25.1

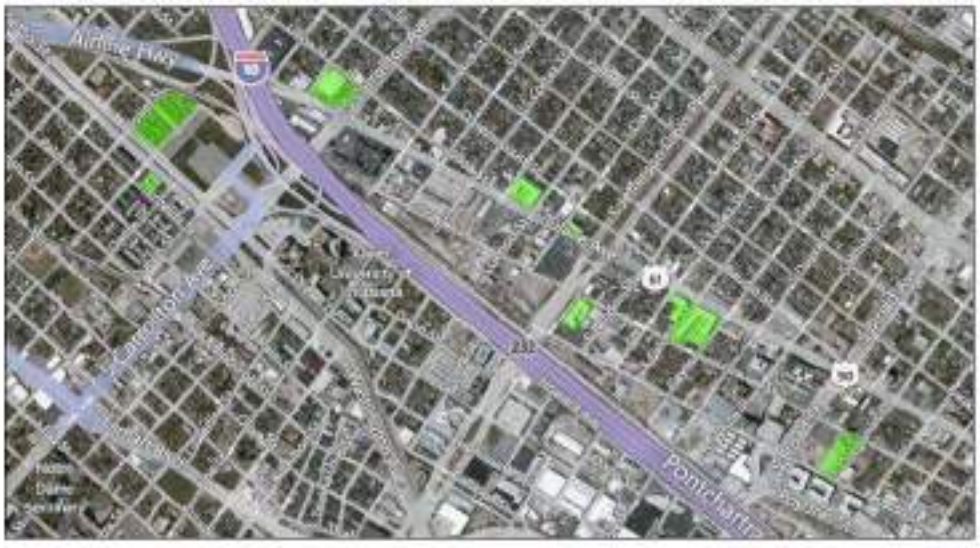
[8] *Source*: Allison Plyer and Elaine Ortiz, "The Loss of Children from New Orleans Neighborhoods," *Greater New Orleans Community Data Center*, April 15, 2011, http://www.gnocdc.org/LossOfChildrenInNewOrleansNeighborhoods/index.html.

[9] *Source*: Allison Plyer, "Population Loss and Vacant Housing in New Orleans Neighborhoods," *Greater New Orleans Community Data Center*, April 15, 2011, http://www.gnocdc.org/PopulationLossAndVacantHousing/index.html.

New construction was also disproportionately located in areas with stronger demand and less damage. New construction without additional population growth will further reduce demand for unrepaired property and vacant housing units. A number of major changes will impact patterns of redevelopment and settlement, including more multifamily projects built or proposed in centrally located neighborhoods.

The Crescent Club is a key example of a development trend that emerged post Katrina in response to an expanded medical district that will contain two new hospital and associated facilities. The Tulane Avenue corridor where the Crescent Club is located had suffered much disinvestment in the prior decades, resulting in available land and unoccupied structures. Close to nine hundred new tax credit units were built along or in close proximity to this corridor since 2005, and additional units using historic tax credits were also constructed. The apartments along Tulane Avenue have onsite amenities and are attracting residents to almost a 1000 units that did not exist prior to the hurricanes, decreasing demand for other units.

Figure 15: LIHTC properties along Tulane Avenue



It is important to also note that rental properties with fewer than ten units—small rental properties—house two out of three renter households and a fifth of U.S. households (Mallach, 2009). More than a third of US rentals are single family properties and another third have between 2 and 9 units, although this varies significantly by US region. Large apartment complexes tend to be at either end of the housing market—either upscale or affordable units—but over 70% of low income renters nonetheless live in one to four unit properties (Mallach, 2009). Singles and doubles were the most common rentals in New Orleans pre-Katrina. Because of the low rents and high risk, conventional financing for repairs was difficult. Many small landlords did not have resources to rebuild their properties, and the properties were not cost effective to repair. Although LIHTCs can be used for renovations, the costs associated with the program makes it only useful for developments greater than $1,000,000 and therefore not useful for small landlords, resulting in singles and doubles with a higher chance of abandonment.

Concluding Discussion

We made three primary determinations. First, singles and doubles whether on single sites or individual, non contiguous parcels used more land per unit. However, this alone did not create occupancy patterns that will reduce the burden on public agencies or create livable neighborhoods. The infill characteristics, the total land used considered in conjunction with it contribution to creating continuous development—including whether it seamlessly blends into the neighborhood and its relationship to hard boundaries—best captures how new development will contribute to rebuilding the urban fabric in a sustainable way. Second, sites—whether small or large—in outlying and undeveloped areas contribute less to reducing blight and facilitating viable, smaller cities. Unmaintained naturalistic property have less negative impact that blighted

and abandoned neighborhood parcels. Badly placed units could lead to "new blight," a phrase used to describe abandoned post-Katrina construction. Third, no single project was adequate to fill out a neighborhood. Louisiana Freemen Homes and Classic Construction properties that were built in adjoining lots made most impact per unit built. The Muses and Crescent Club provided the largest concentration of units—and therefore residents—but did not have an equivalent infill impact per unit. As a gated complex in a residential neighborhood, the Muses was separated from the adjoining blocks.

Making available property for effective infill would require a city wide strategy. Given the high levels of blight and abandonment and the New Orleans' 2011 efforts to establish a functional land bank, it could be possible for the city to acquire and make property available. If a city with excess land had a functioning land bank or other mechanisms with which to make residential parcels available for redevelopment, this would remove a barrier to creating dense multiple site scattered site projects and instead could facilitate clustered redevelopment.

Conclusions

In 2011, New Orleans was still growing slowly but it was unlikely to return to a size that available and proposed housing would be occupied. Before Katrina, the city had cheaper housing and lower income residents than the surrounding parishes, but the flood damaged more housing in New Orleans and rents increased significantly. When property values decline, some people are attracted to cheaper housing and a city and region could attract new residents with lower incomes but this would be limited. The opportunities in growing regions attract more newcomers than does affordable housing in depopulating areas. Population loss can increase rental stock, when moving owners cannot sell their house or sell low to an investor. When rents stagnate and

demand is limited, the incentives for property owners to maintain rental property decreases. People will move within the city and region for a better deal or better neighborhood. Nevertheless, because not everyone moves, efforts that result in local moves can depopulate some neighborhoods and stimulate additional blight that remaining residents live with.

In areas experiencing population loss, projects should be evaluated on their impact to the urban fabric. Does the project eliminate or reduce immediate blight? Will it create an urban fabric conducive to a safe and occupied neighborhood? New development that uses public money should also be evaluated based on its impact on blight reduction. In this analysis, the projects that occupied more lots and were lower density had a greater impact.

To the extent that new housing simply provides existing residents with better choices, LIHTC projects could provide better housing and result in additional abandonment when residents move to new housing. New LIHTC investments add to the housing stock, increasing the supply of housing overall. In 2011, New Orleans faced the potential of continued decline even when experiencing modest growth. All public investment in new development should take long term impacts into consideration so that one investment does not cause problems that require additional public investment in future years.

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Risk communication in earthquake planning: the case of Kalamata city, Greece

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Key words: earthquake planning; risk communication; mitigation; social vulnerability

Abstract

Cities are complex systems, vulnerable to threats from natural hazards. This paper describes the comprehensive strategy of hazard mitigation plans in Kalamata city in terms of risk communication. Historically, earthquakes in Greece have been seen as the major hazard. In recent times, there have been few large earthquakes that have affected people and infrastructure. The paper also considers the relationship between risk communication and earthquake planning and tries to discuss the following questions: how can risk communication reduce the disaster risk and increase the disaster risk awareness? In which ways can risk communication at local level contribute to maintain resilience in a city context, such as the context of the city of Kalamata or a larger scale urban complex? The case study this presentation refers to is the city of Kalamata, located in southern Greece. It is about a city that suffers often from earthquakes as it is located in one of the most seismic areas in Greece. The most effective seismic event has been one of 6.2 Richter that happened on September 13th 1986. It resulted in 26 people dead, 80 injured and severely damaged 2000 buildings (the 20% of the city's buildings). Although the earthquake destroyed a huge part of the city and its suburbs, the recovery was one of the most successful in Greece, creating various opportunities for the city. Today, the city of Kalamata with approximately 60,000 inhabitants is considered an earthquake-prone-city. As a result, pre- and post-event planning actions that observe preparedness and awareness in Kalamata are of great importance. In this context, the formulation of risk communication, including education and training, is examined in connection with social vulnerability of city's population groups, in order to enhance resilience and coping capacity of the city. Hence, risk communication and risk awareness monitoring has been considered important in all cases of potentially vulnerable groups and actors: decision makers, stakeholders, planners, vulnerable citizen groups.

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1. Introduction

Risk communication has become an important issue in disaster risk management in the past decades. Several research studies introduced the concept of risk communication and its developing process. Its meaning in risk governance depends mostly on two parameters: the socio-cultural context of the society and the scale of the community (e.g. rural areas, small cities or megacities). Some attempts to adapt the risk communication process with the socio-cultural context in local scale were done by the municipality of Kalamata city, Greece. Thus, there should be some adjustments made before communicating the risks to the community. This study combines discussions on social vulnerability, risk communication and participatory approach for disaster preparedness in Kalamata city. Moreover, this study tries to address the problems and needs of disaster risk reduction for local communities. Nevertheless, they have been of importance to provide basic concepts in understanding the current threat.

2. The role of communication in risk management

Communication in risk management is of utmost importance, as it is the key-link between stakeholders and civil society to understand the risk itself and cope with it. It also allows them to recognize not only their role in risk governance, but also their own responsibilities. As a result, effective communication is the way to create trust and have the desired outcomes in risk management. According to the IRGC, the effective communication has to be at the core of any successful activity to assess and manage risks.

The field of risk communication was initially developed as a way to bridge the gap between the experts' assessments and how these assessments could be communicated to the society. At this concept, there were many discussions in the objective of educating the public concerning risks and finding the most appropriate practices to achieve the desired results in risk management.

Recent risk communication strategies stress a two-way communication process in which people that take part in are both members of the public and risk managers. According to Leiss, the objective of this communication effort is to build mutual trust between the public and the relevant stakeholders. The ultimate goal of risk communication is to assist stakeholders in understanding the rationale of risk assessment results and risk management decisions, and to help them arrive at a balanced judgement that reflects the factual evidence about the matter at hand in relation to their own interests and values. (IRGC, 2005)

Taking everything into account, risk communication is a necessary aspect at risk handling chain, from the framing of the risk to its monitoring. While communicating the risks it is important to reflect the nature of the risks under consideration, their context and the social involvement in them. For these reasons it is crucial to ensure that people involved in risk communication understand fully the risk governance strategies, for example how they are to be involved, and, where and

when appropriate, what their responsibilities are, and, the others outside the immediate risk management process are informed and engaged.

3. The main functions of risk communication

Recent approaches in risk governance list four major functions in risk communication process. (Morgan et al. 1992) The four functions that are basic in achieving effective communication are:

- *Education and enlightenment:* inform the public about risks and how to handle them, including risk assessment and management;
- *Risk training and inducement of behavioral changes:* help people cope with risks and potential disasters;
- *Creation of confidence in institutions responsible for the assessment and management of risk:* create trust by giving people the assurance that the existing risk governance policies can handle risks effectively.
- *Involvement in risk-related decisions and conflict resolution:* give stakeholders and representatives of the public the opportunity to participate in risk management efforts. Although, risk communication implies a stronger role for risk professionals. (IRGC, 2005)

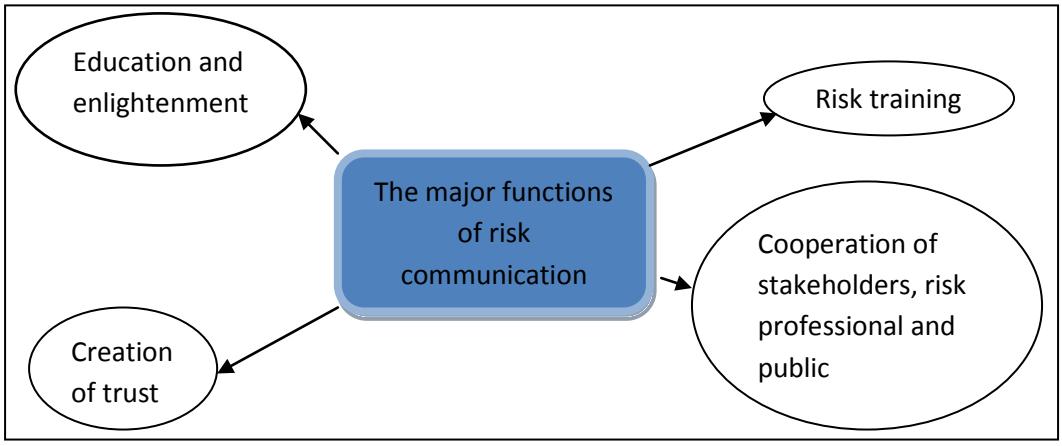

Figure 1. The major functions of risk communication

4. Earthquake risk communication

Earthquake threat is inherently less visible than other threats in the minds of most people. Rare or low-probability events of great severity and events that the public is not familiar with, such as earthquakes, are the most difficult to be mitigated. The

communication in seismic risk is influenced by features and factors that are connected to the actual seismic environment of each study area. For example, in areas with high seismicity the earthquake risk-related information are put forward and in areas with low seismicity the population is kept aware about the actual risk situation.

Other important factors influencing risk communication is the nature and the source of the information. The differences on the information are related to different approaches of the problem between the author and his client. For instance, we can get different approaches from a scientific article or a report for stakeholders that refer to the same problem.

Last but not least factor influencing communication is the receiver of the information. It is different to report to a professional user and different to an unprofessional. Professional users have the knowledge to understand the information correctly. In contrast, the unprofessional users have limited information on the subject of natural risks (J. M. Gaspar-Escribano and T. Iturrioz, 2011).

5. Case study: Kalamata city, Greece

Kalamata is the second-largest city of the Peloponnese in southern Greece. The capital and chief port of the Messenia prefecture, it lies along the Nedon River at the head of the Messenian Gulf. It lies 238 km SW of Athens. The 2001 census recorded 57,620 inhabitants, but it is a busy city and on a regular daily basis there are more than 90,000 people working and circulating in it.

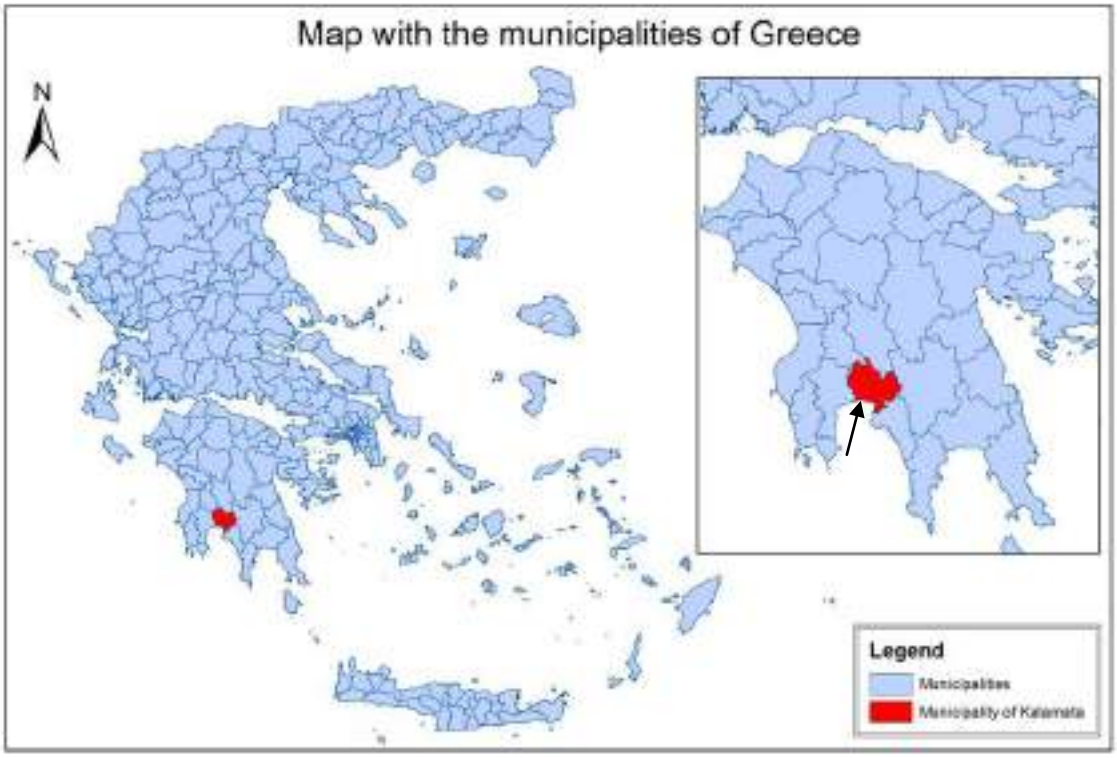

Figure 2. Map with the municipalities of Greece

Figure 3. The study area from Google Earth

6. The disaster in 1986

The September 13, 1986 Kalamata earthquake is one of the most destructive, but least studied earthquakes in Greece the last 30 years with magnitude *M*w 5.9 (USGS), following by only one aftershock two days later with magnitude Mw 4.8 (USGS). According to an analysis of pre-seismic and post-seismic leveling data, the 1986 earthquake caused because of the reactivation of a segmented, blind fault, part of a major fault zone associated with several earthquakes during the last 200 years in the area.

7. The geotectonic regime of the area

The area is affected by earthquake activity, because of its position in relation to the Hellenic Arc system. Kalamata is located very close (<70 km) to the Hellenic (Ionian) Trench region in which the subduction zone of the African plate below the European (Aegean) plate exists. (Fountoulis, 2004) The Messinia district located within the tectonic zone of the Hellenic Arc, is known to have suffered from several destructive earthquakes associated with this zone since historical times. (Elnashai et al., 1987) The area also is affected more frequently by small to medium size earthquakes not directly associated with the Hellenic Arc tectonic activity rather than by large shocks situated in the Arc.

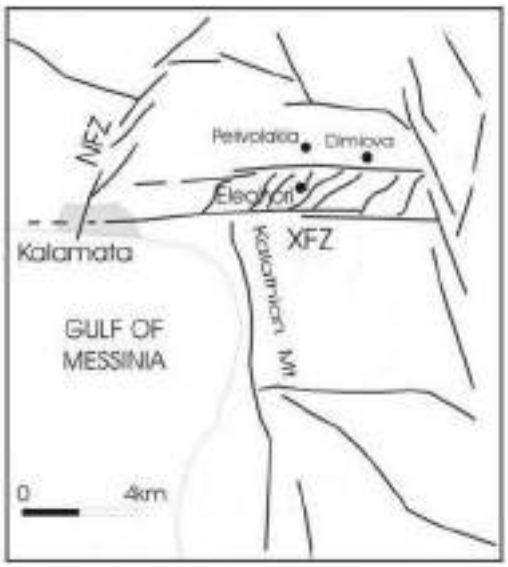

Figure 4: Sketch map of smaller order neotectonic macrostructures in the study area, XFZ:Xerilas Fault zone, NFZ:Nedon Fault Zone, Source: Mariolakos & Fountoulis, 2004. Modified by the author.

8. The need of earthquake planning in Kalamata Metropolitan Area

For the implementation of disaster preparedness to local community, in this study, the geotectonic and geological regime of the area described above are taken into account as prominent factors in selecting what planning strategies should be followed. Other factors considered in planning are connected with the social-economic vulnerability of the city and the lessons learnt from the event in 13th September 1986.

Before the main seismic event in Kalamata in 1986, few things had been done about earthquake planning. The emergency plan called "Xenokratis-Earthquakes" created by OASP (the Greek Organisation for Earthquake Planning and Protection) was under discussion and was not ready on how it could be followed by the city that period. Today, the emergency plan "Xenokratis-Earthquakes" is made by the local authorities following the legislation and taking into consideration the current conditions of the city (concerning the population, the town plan, the socio-economic vulnerabilities, etc). Although the current plan needs improvements and updating not only for the city of Kalamata but also for the districts of the municipality according to the new administrative reformation.

The scope of the study is restricted to local/urban scale risk analysis in the city of Kalamata, which is of moderate-to-high seismic activity. In the task of risk communication should be considered the direct ground-shaking and the physical damage of normal-importance buildings, the damage of infrastructures and lifelines and the social vulnerability related to the lack of preparedness and resilience of the society as a whole. In this work, the source of information is basically scientific and embraces contributions and interviews from the stakeholders of the city. Their roles are different and complement each other. Whereas a lot of discussion exists on how to bridge the communication gap between professionals with distinct backgrounds to external users. Finally, the receiver of the information considered in this work is varied.

9. Risk communication actions in the city of Kalamata

The main role of risk communication strategies is to increase disaster awareness as well as reduce the disaster risk. To fully assess this matter, we started the discussion from the theoretical concept of risk communication and we continue on how the theoretical concept is applied or not in our case.

With the imminent danger of earthquake, the role of risk communication is not put into priority. This implies that previous information and awareness of the earthquakes in Kalamata were low, despite the fact that there were recorded many earthquakes in the area before the event in 1986. Prior to the earthquake on September 13th 1986, it was obvious that there had not been any preparation done against earthquake disasters. Therefore, a key point of risk communication in spatial planning ahead of risks would be a form of warning the public and creating trust.

A type of warning about the seismic risk is provided through schools students' education. The actions taken at schools follow the instructions of OASP. According to the instructions, the students should get informed about the earthquakes and how to act in case of emergency. Each school has its own emergency plan and conduct earthquake drills once every three months. At this point, we have to mention that the municipality of Kalamata has gathered all the emergency plans from the schools.

Lots of discussions and conflicts about the ways of education in achieving a good level of risk communication are between the local authorities and the local rescue teams. From the one hand, the local rescue teams propose educational seminars for all the volunteers, the firemen, the policemen and generally the stakeholders involved in risk management of the area, especially on coordination issues. Apart from the educational seminars, they propose real time drills with the participation of the stakeholders and the public as well. On the other hand, the authorities support that such activities are too expensive and could cause panic at the public and fears of a big upcoming earthquake event. Therefore, there are no actions at all at this part.

The only exception is a seminar on the seismic risk in the area that was held in 2nd December 2011. It was organized by the local authorities and OASP with the participation of professionals such as planners, seismologists and geologists. The scope of the seminar was to inform the stakeholders about the local conditions for the seismic regime of the area and the risk management policies for the new administrative reformation of the municipality. However, these seminars are organized for the members of the Civil Protection. Of course they are open to the public, but they are not widely known. The local media, therefore, simply report such events without any further attention.

Nevertheless, the municipality has taken some actions in earthquake planning according to the 'Xenokratis-Earthquakes' plan for all the phases of risk management. The planning concerns the cooperation of the stakeholders (authorities, police, fire service, coastguard and volunteer teams), but it does not include the participation of the public. One of the actions that took place and was discussed a lot by the public and the local media, was the signing of the places of public gathering after earthquakes, that are planned for the city, during October and November 2011. The places of gathering in Kalamata are 27 and also have been tested for their suitability by a committee of engineerers and planners. This step could characterized as an effective way of communicating the earthquake risk to the public. However, it is an one-sided approach that provides information and it is not related with the actual meaning of risk communication in risk governance.

10. Suggestions on the current planning

Taking into account the current political and economic situation in Greece, issues of civil protection are not on the agenda. Although that's not an excuse of not taking actions that could inform and educate the public, especially at an earthquake-prone city such as Kalamata city.

Some suggestions in communicating the seismic risk in the city of Kalamata could be more seminars about earthquakes. Such seminars, except from their educational purposes, should create awareness and less fear to the public. The goals of the seminars will be to provide information about the actual risk in the area, as it is part of the citizens' lives and they have to adapt with it. Of course, the cooperation of professionals and stakeholders should play an important role at this stage, as the seminars could mislead the public, e.g. to thoughts of an upcoming destructive earthquake event.

Another suggestion has to do with the earthquake drills. It is basic while communicating the risk, to apply what you learn through this communication. The local authorities could organize open earthquake drills not only in schools, but also in the hospital of the city, in hotels and in other public buildings. Furthermore, these drills could be based on "Xenokratis – Earthquakes" plans and on different scenarios of effects with the participation of scientists, stakeholders, public and volunteers.

The actions described above should be supported by the local media (tv channels, radio, newspapers, websites). In this way the public could be informed about the citys' earthquake planning and how the citizens could be a part of this plan. The effective approach through the information from the social media will create trust and openness.

11. Discussion and Conclusions

This paper poses and tries to analyze the following questions: how can risk communication reduce the disaster risk and increase the disaster risk awareness? And in which ways can risk communication at local level contribute to maintain resilience in a city context, such as the context of the city of Kalamata or a larger scale urban complex?

Kalamata is the political, economic, social and cultural center of Messenia Prefecture. For years, this city has attracted people from the surrounding rural areas and is becoming more and more attractive as actions for development take place (the new National Road, the port, the airport). Hence, the vulnerability in seismic risk is obvious in the city of Kalamata. The general plan for earthquakes in the city could characterized as satisfactory in all phases of planning (prevention, emergency, rehabilitation). However, it needs improvements on the task of risk communication. Risk communication enables the concept of participatory at higher level. The way to achieve this can be done by introducing this concept at a meeting / workshop / seminar with many stakeholders who are involved with related

disasters (Sagala, 2007) and the public, in order to increase the disaster awareness in the society.

The issue of warning in risk communication is closely related with the social vulnerability and the worries of the public about the actual risk. This aspect requires specific attention, as it could lead to a failure in the implementation process of the warning. Consequently, this research contributes to the knowledge on whether risk communication is achieved or not in our case study. Furthermore, the main seismic event 26 years ago and the continuous events of smaller scale present different complexities of problems given the different natures of the disaster. Thus, this study offers distinct contributions by proposing options of risk communication implementation. Risk communication strategies aim to make the regulatory process more open and trustworthy, with the public participation more helpful to identify practical means and the role of scientists more accountable. In the Kalamata, however, the local authorities do not give the appropriate importance.

In relation with earthquake disaster preparedness, Kalamata should make best use of the opportunity of the direct disaster experience. This is true regarding earthquake issues because such events cannot be predicted accurately. Thus, risk communication aims to develop the participation of stakeholders and public as a means of creating common values in the process of risk management before, during and after a hazard event as a whole. However this research needs to be improved regarding data to be collected from the field through a quantitative research including the publics' concerns for the seismic risk.

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SOUNDSCAPE APPROACH FOR A HOLISTIC URBAN DESIGN

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Abstract

In the last decade we are witnessing a paradigm shift in our understanding of urban space; now it is defined with human experience rather than physical quantities. The full spectrum of human experience is usually summed up with the term 'atmosphere' and encompasses the influence of color, light, texture of materials, temperature, humidity, odor, and sound on individuals.

Within this trend soundscape research has developed its tools, like soundwalking and laboratory listening experiments coupled with sound recordings, in order to achieve a multidimensional holistic approach to understand soundscapes and necessities of local people.

However laboratory experimentation, usually focusing on audio characteristics of a place, underestimates the cooperation between sensory modalities which plays a complex role on overall satisfaction of end users. Therefore, an ecological assessment of environments should take into account the multisensory and interdependent nature of human perception.

In this preliminary study it is aimed to demonstrate the potentiality of a multisensory (audio-visual) evaluation technique, involving the end users during the design process and administration. The presented technique employs immersive virtual reality and auralization technology for a realistic presentation of environmental stimuli in laboratory conditions and captures various objective and subjective psychological responses of individuals to evaluate satisfaction due to presented environment. The multisensory evaluation technique has been applied to a case study in historic neighborhood Triana of Seville (Spain). This initial study is concluded with a demonstrative virtual reality application and with insights on possible future directions on multisensory evaluation supported soundscape and urban design.

1. Introduction

As space and spatial issues became the new paradigm of architectural theory at the end of the twentieth century, all disciplines are getting more involved with space,

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architecture or engineering has no more right to it than any other. Space which is conceptual as well as physical, an embodiment of social relations and ideology, holds the person within. And spatial studies, within and in-between different disciplines, focus on relationships between people and their environments in order to promote spaces in line with the nature of these relationships.

The full spectrum of human experiences is being considered in a wide variety of fields; the design of consumer goods, marketing and the design of private and virtual spaces amongst others. The reason for this interest is demonstrated in several recent studies which reveal the significant impact that spatial cues have on individuals' behavior and can be consequently employed to increase retail performance, inform successful spatial designs and improve quality of life. Especially the places which are subject to purchase of goods and services are increasingly being conceived with their sensual characteristics. And multisensory design is getting much more important to enhance interaction and to intensify the sensorial experiences of people, related to the goods, services, spaces. Colors, lights, tactile properties of materials, temperature, humidity, odors, and sounds are increasingly considered with their physical properties, semantics and the way that they are perceived.

In line with this global trend, in last decades, the scientific society has seen the gap between individuals' experiences and the actions taken (in a conventional manner) to improve acoustic quality of environments. These conventional methods and actions taken were successful to a certain extent, especially regarding higher levels of noise exposure conditions (so called black areas), but do not offer any action for relatively lower levels of noise exposure (so called grey areas that are characterized with 55-65 dBA). It is estimated that 180 million people (roughly % 37 of EU 27 population) live in these grey areas where noise exposure is assumed to be acceptable and not harmful for individuals' health but still can cause serious annoyance that plays an important role affecting the overall well-being and quality of life of the exposed population. Noise annoyance is a multi-faceted concept where context-related perceptual factors play an important role as well as the noise level. Especially in these so called grey areas where the line between pleasant and unpleasant sound and consequently its effects on people become vague (Maffei et al. 2010). Noise annoyance may vary from one community to other due to these factors (Staples 1997; Lercher & Botteldooren 2006). Standard relationships and models, not considering the complex interactions that occur when people hear sounds - sounds recall memories and previous experiences trigger a multisensory processing which leads to identification of the source, finally form judgments as a function of the context in which the sound is heard - , can mislead the noise impact assessment when it is applied to different contexts, to different communities (Lercher et al. 2008). Thus ecological assessment of sound environments should take into account the variability among different communities or group of people exposed to noise and also the multisensory and interdependent nature of human perception.

In this context, soundscape research took on a new significance in sound related research field, since it involves not only physical measurements but also the

cooperation of human/social sciences, and it considers environmental sounds as a 'resource' rather than a 'waste'. Research into soundscapes encompass the entire context of the physical and psychosocial environment which often includes listening walks (soundwalks)(Adams 2008; Fiebig et al. 2010). The participation of local people (so called local experts) within soundwalks and social surveys is of vital importance, as their local knowledge is important in providing additional context on the area being studied (Schulte-Fortkamp 2010). This development of soundscape research is coming into prominence, pushing all non-visual senses of human to create an integral part of architecture, urban design and planning.

Soundwalks and social surveys taking place in real life settings offer significant advantages in order to get reliable and unprecedented insights into individuals' experiences in their environments. However, in general, they are costly, and not applicable to assess future scenarios (new projects). For this reason, usually, new methods are preferred for investigation in laboratory conditions. The biggest challenge in laboratory experimentation is to stimulate the participants' feelings and emotions (such as pleasantness, excitement, contentment) in order to have realistic reactions to the sonic simulated environment. In other words, in laboratory conditions, it is crucial to make participants experience sound and the complex environment (multisensory environmental stimuli) together (Otto et al. 1999). Conventional laboratory experimentation can not overcome this challenge since it focuses on just audio characteristics of a place and underestimates the cooperation between sensory modalities which plays a complex role on overall satisfaction of people. Thus, recently, several researchers worked on new methods employing high-end technology, like immersive virtual reality (IVR) systems, in laboratory conditions and focused on new user friendly interfaces to present audio and contextual information, and analyze participants' reactions to them. IVR systems offer satisfactory realism through high quality audio-video display and high level of interaction. The potentiality of various types of virtual reality systems in sound related studies is under study. Virtual reality systems can be utilized for dissemination of the results of noise maps (McDonald et al. 2009), soundscape design and urban design and planning (Brambilla et al. 2009; Fiebig & Genuit 2009; Drettakis et al. 2007; Jallouli et al. 2008; Curcuruto et al. 2010).

In this paper it is aimed to present the design of an innovative multisensory (audio-visual) evaluation technique that enhances soundscape laboratory studies and offers integration of soundscape approach and contemporary architectural and urban design practices. This technique employs immersive virtual reality and auralization technology for a realistic presentation of environmental stimuli in laboratory conditions. The tools to capture various objective and subjective psychological responses of individuals to evaluate satisfaction due to presented environment are also described within this technique. And a preliminary case study, which takes place in the historic neighbourhood Triana of Seville (Spain) and partially employs the multisensory evaluation system, is presented. The gained insights and possible future uses of the technique to support a more holistic urban design approach are explained.

2. Virtual reality and auralization

The term 'Virtual Reality' (VR) is defined in many ways since it serves wide range of activities; basically psychological therapy, technical training and education in numerous fields, social and professional networking, gaming, art and any kind of design activity including urban design. Consequently the term has gained a broader definition; VR is an environment generated in the computer, which the user can operate and interact with in real time. A contemporary and more specific definition of virtual reality is given by Burdea et al.(Burdea & Coiffet 2003), "Virtual Reality is a high-end user-computer interface that involves real time simulation and interactions through multiple sensorial channels, these sensorial modalities are visual, auditory, tactile, smell and taste". On the other hand, immersive virtual reality systems seek to give the user a sense of physically "being there" during virtual reality experience. These systems employ various output devices (effectors) in order to reproduce full spectrum of sensory information.

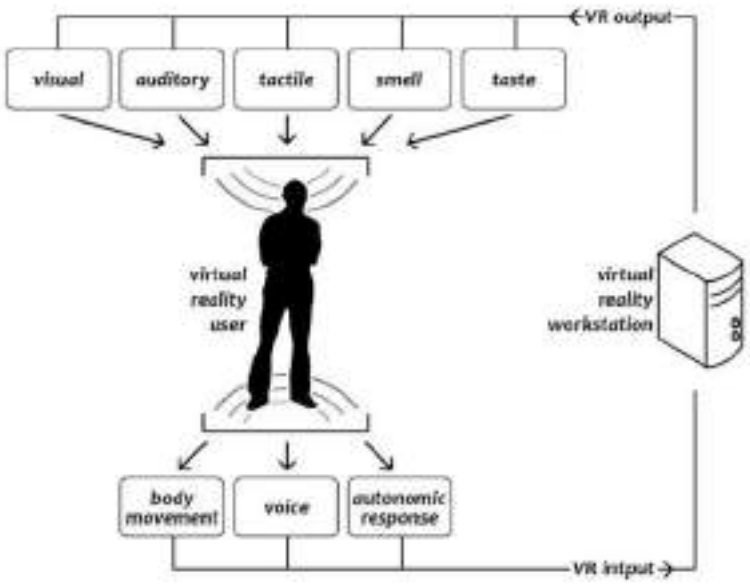

Figure 1. Range of possible input (sensors) and output (effectors) devices for a IVR system (adapted,(Biocca & Delaney 1995).

Realistic audio representation is important in the immersive virtual environment applications as it enhance the sense of immersion and spatiality. Due to high computational load of dynamic environments in virtual reality, audio has been a secondary issue after video. However, recently, scientific research is engaged in improving the auralization systems which is "the technique of creating audible sound file from numerical (simulated, measured, or synthesized) data" (Vorländer 2008a). Auralization techniques for indoor environments are notably advanced but for complex outdoor environments it is still an important challenge to achieve real-time auralization due to computational shortcomings. In order to lower computational load

of auralization for complex outdoor environments with relatively higher number of sources and higher level of interaction, perceptually plausible resulting sounds are usually aimed rather than physically correct results, in outdoor auralization processes (Tsingos et al. 2004; Funkhouser et al. 1999; Vorländer 2008b).

3. Methodology: Multisensory evaluation system

The proposed methodology, in its first step, involves audio-visual rendering processes to design virtual environments (VE) to represent different environmental conditions (e.g. existing situation and future projects). Second step, virtual reality immersion, is the presentation of the virtual environments to participants (end users) with use of IVR hardware. The final step, psychological assessment, is based on capturing and analysing objective and subjective reactions of participants due to presented virtual environments. The variations in reactions of the participants are interpreted with the variations in presented VEs' audio and video characteristics. In this way, useful and guiding insights of people can be integrated into the urban decision making and design processes.

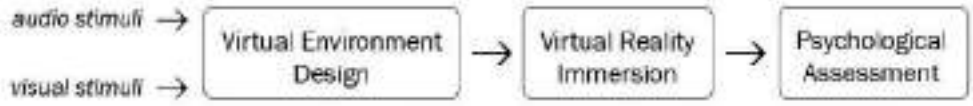

Figure 2. Scheme of IVR approach for multisensory assessment.

3.1 Virtual environment design

Audio stimuli design: The proposed auralization technique is based on an offline (not real-time) processing in order to avoid high computation load during the VR immersion. In this technique sound samples that represent sound sources in the virtual environment, are convolved with signal processing algorithms, in order to obtain auralized sounds for multiple receiver points which cover the possible walk area (e.g. grid-distributed receivers) and head orientation of the participant. These resulting auralized sounds are linked to the corresponding coordinates in the VE. Later, during the VR immersion, the body position and the head orientation of the participant, which is updated in real-time, determines which auralized sound files will be reproduced. In order to have a seamless reproduction of these sound files, linear interpolation is used when participant passes between predefined receiver points and when the participant has different head orientation angles than the predefined ones.

Visual stimuli design: The visual stimuli are designed in three steps: 3D modelling, texture mapping and IVR enhancement (Figure 3). In the first step 3D models of the desired environments are prepared using well-known software that enables 3D data (CAD, BIM or GIS) creation. In the texture mapping step, two series of images can be used to match to the prepared 3D model: in situ taken photos and/or rendered images (through texture baking). This helps to produce a visual result that seems to

have more richness than could otherwise be achieved with a limited number of polygons and since it eliminates necessity to use real-time shading, causes reduction in computational load during the VR immersion. In the third step, the prepared VR material (3D models, textures, sounds, etc.) must be put together to constitute the final VR application and this process of gathering must be done defining roles of each element, the interactions between these elements and the participant and basic physics of the overall VR environment.

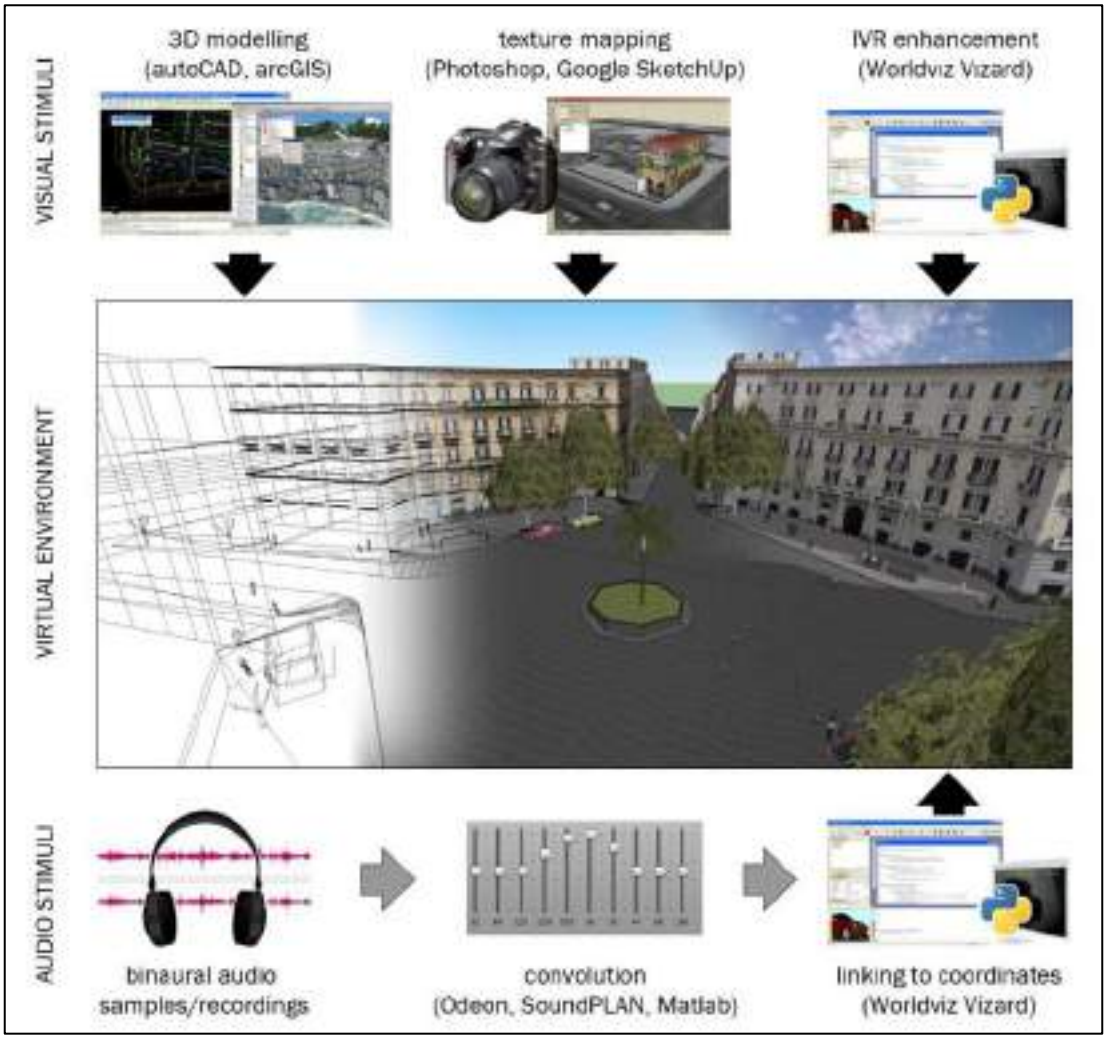

Figure 3. Virtual environment design scheme and preferred software by authors.

3.2 Virtual reality immersion

There is a wide range of effector and sensor hardware offering different levels of immersion and usage for such studies. The visual interfaces are the most advanced effectors of VR systems; they are supposed to provide images to the human eye that is "indistinguishable from that experienced in reality in terms of quality, update rate, and extent". Head mounted displays (HMD) and cave automatic virtual environment (projection on walls of a room-sized cube, a.k.a CAVE) systems are the

most accurate and well-known interfaces. The authors preferred to use a VR toolkit based on HMD which is more affordable and easier to deploy respect to CAVE system. The preferred VR toolkit employs two workstations; one to process motion tracking data and the other to be used by the operator to run VR applications. Visual stimuli is presented to VR user through nVisor SX60 head mounted display. The VR navigation is obtained by a position tracker system (Precision Position Tracker-PPT X4) with 4 optical sensors to track 3DOF position of worn markers. At least one marker is placed on HMD in order to track head position and additional markers can be used on different parts of the VR users body (like hand, arm, leg) regarding requirements of the VR experimentation. Additionally a 3DOF orientation sensor (InterSense Inertia Cube 3) is located on HMD in order to achieve 6DOF motion tracking (3DOF position and 3DOF orientation). The processed position tracking data, orientation data and the data from running VR application are merged by a video control unit (Stereoscopic SX) in order to obtain final video stimuli to be reproduced at HMD. The audio channel is processed by workstation and directly sent to the earphones (Pioneer SE-CL17-H) worn by the VR user. The data flow between workstations and optical sensors of the position tracking system is realized through a wired network employing a generic router. The system is tested and calibrated prior to each experiment session to get the accurate levels of presented audio and visual stimuli.

Figure 4. Immersive VR system of the Laboratory of Cognitive Science and Immersive Virtual Reality (CSVR) of the Second University of Naples.

Before the experimental procedure, in the recruitment phase it is important to pay attention to set criteria for inclusion or exclusion of people in the experiment.

According to the target of the study, the test subjects must be chosen in order to have results generalizable for a target end user group (of the studied project).

Figure 5. Test phase of psychological assessment.

The testing phase consists of different VEs (scenarios) prepared according to the aims of the case study. Also the duration of each scenario presented can vary regarding the objectives of the study. However in order to avoid obtrusive durations of the entire test, usually 3 minutes duration for each scenario is well accepted. To avoid any spurious effect deriving from sequence and order factors, the order of presentation of the scenarios should be quasirandomized. And, the order of the tasks (regarding psychological assessment) should be counterbalanced within each scenario and across subjects. Then, during each scenario, subject completes dedicated tasks and at the ending fills out the questionnaire (regarding psychological assessment).

3.3 Psychological assessment

The final step is designed to capture and interpret reactions of the users, employing various objective and subjective assessment measures. Subjective measures evaluate individuals' preferences regarding composing elements of the presented environment and overall satisfaction through questionnaires. Subjective reactions to the environments are assessed by means of dedicated questionnaires devised according to ISO/TS 15666:2003. Questionnaire is designed to be answered after the presentation of each VR scenario and the items (questions) in it are categorized in three groups regarding audio aspects, visual aspects and overall (audio and visual together) aspects.

On the other hand, especially when audio stimuli have an interfering character, they can cause decrease in comprehension of speech, in short term memory and executive functions. Also visual distraction can require higher levels of attentional resources. Such problems have a great influence on people's performance in their social and professional life. For this reason, in order to achieve a more complete evaluation, various objective measures (cognitive tasks) and speech intelligibility (how comprehendible speech is) which basically measure the burden of decreased cognitive capacity from environmental stimuli are introduced.

The captured variations in reactions of the users should be interpreted with the variations in presented scenarios' audio and visual characteristics using analysis of variance (ANOVA) calculations.

4. Case study: Triana – Calle San Jacinto

The proposed multisensory assessment method has been applied on case studies in order to see potential uses (basically for solutions in acoustics related issues) in architecture (Basturk et al. 2010; Maffei, Basturk, et al. 2011) and environmental decision making processes (Maffei et al. 2010; Maffei, T. Iachini, et al. 2011). The case study applications are varied with different scales and characteristics of environments.

In this case study (Basturk et al. 2011) the possible future audio and visual impacts of relevant legislative efforts of the General Directorate of Climate Change and Urban Environment of Andalusia (Spain) were depicted in virtual representation of "San Jacinto" street of Seville. It was aimed to test applicability of the method in public participation processes for this reason the multisensory evaluation method was applied partially just to prepare VR simulations of chosen conditions.

4.1 Preparation of the Virtual Triana

Several exploratory surveys have been carried out at different times of the day, in order to reveal the daily life dynamics as well as the built environment. These surveys are coupled with soundwalks, monitoring the acoustic character of the area and recording binaural audio signals. Photo and video acquisition were carried out in situ at the same time. After the exploratory surveys a representative part of the street (150 meters long pedestrian area) was chosen to be studied. And it is decided to prepare the VEs regarding three conditions; 1) the actual situation at daytime, 2) sodium-vapor lamp lighting at nighttime 3) LED lamp lighting at nighttime, all three accompanied with appropriate audio stimuli.

Figure 6. Scenes from calle San Jacinto.

The audio stimuli are prepared extracting representative tracks from the soundwalk recordings. For the daylight scenario a 2 minute long audio stimuli is extracted from

the soundwalk 18 February 2011, 14:00. The sodium-vapor lighting scenario has the audio stimuli extracted from the soundwalk 7 March 2011, 21:00. The LED lighting scenario has the audio stimuli extracted from the soundwalk 25 February 2011, 21:00. The three dimensional model of the study area is prepared and the images acquired in situ are mapped on the 3D model in order to depict existing daylight situation. Other two scenarios with LED and sodium-vapor lighting are simulated with appropriate lighting simulation software and resulting textures are mapped (texture baking) on the 3D model in order to present in final VR simulation. The chosen sodium-vapor light has 70 W power and 100 lm/W efficacy whilst LED light has 42 W power and 80 lm/W luminous efficacy. After that, the prepared visual stimuli are merged with corresponding audio stimuli in virtual reality application and dynamic components (people and cars) are added and programmed to act in a realistic way.

Figure 7. Snapshots of three prepared scenarios.

5. Discussion and future directions

The preliminary case study demonstrates the possible changes in urban environment due to the new regional regulation on an interactive virtual reality platform. The prepared simulations were influential for the local government and got positive feedback regarding its applicability. It is promising for further studies that can take advantage of intuitive and life-like presentation capability to achieve more democratic and transparent procedures in governing urban areas. The General Directorate of Climate Change and Urban Environment of Andalusia has been one of the first governmental bodies that consider such an innovative approach to evaluate urban environments that facilitates public information and participation obtaining public opinion to improve regulatory and decision making processes. A complete application of the whole multisensory assessment method is in consideration.

On the other hand, the presented multisensory evaluation technique offers an unprecedented understanding of perceived qualities of spaces. It is capable of detecting adverse effects of unsatisfactory qualities on general well-being and quality of life. And also, the technique facilitates to place the end user in the center of spatial decision making processes introducing a life-like interface. Thus, it both improves soundscape (especially in laboratory settings) studies and offers a tool that is capable of integrating interactive lights, tactile properties of materials, temperature, humidity, odors and surely sounds as well as other contextual aspects into architectural and urban design practices.

Today soundscape research step forward to emancipate architectural and urban acoustics from narrow noise control approach that grasps sound as a function of solely decibels. And it tries to piece together all sensory experiences and contextual factors in order to better understand soundscapes, to improve experienced qualities of environments through sound. Reminding Mirko Zardini's question "Is it possible to combine the different approaches to contemporary urbanism with a "sensorial urbanism," capable of offering a broader understanding of urban settings, interested in describing the character and atmosphere of places, and aiming to contribute to a new definition of public space ?"(Zardini 2005), we believe that soundscape approach is inciting a movement in architecture and urban design opposing the dominance of the eye and develops new tools to combine different approaches for a new *sensorial urbanism*.

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URBAN REGENERATION IN TURKEY: THE CHALLENGE OF REGENERATING APARTMENT BLOCKS

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Abstract

For decades, urban growth and new housing production have been the priorities of Turkish urban planning and housing policies. This attitude could have been considered relevant and satisfactory at the earlier stages of urbanization. Currently, developing regeneration strategies to maintain and improve the standards of living and quality in existing urban environments is the major challenge of urban planning. Urban development and residential investment strategy of the public sector, however, is extensive housing production by means of new construction and urban transformation projects. Furthermore, urban transformation is reduced to physical redevelopment of squatter housing areas, decayed historical parts of the cities and more recently disaster prone areas. Consequently, improvement and redevelopment needs of the existing urban areas containing authorized housing stock are totally ignored.

This study argues that, beyond the concerns of current urban transformation efforts, the challenge of urban planning in Turkey is to regenerate the neighbourhoods of apartment blocks, which dominate the urban areas. Regeneration of apartment blocks is defined as a challenge in this study since almost all of this stock is privately owned, all types of repair-maintenance and rehabilitation activities are totally dependent on individual flat owners' decisions, redevelopment is difficult to undertake since it requires unanimous decisions of flat owners, and apartment blocks dominate the urban housing stock in Turkey.

Based on the findings of a recent research on households' reinvestment behaviour in apartment blocks of Ankara, this study provides a number of clues in designing urban regeneration strategies for neighbourhoods containing apartment blocks. Accordingly, (1) distinct urban environments require different types of tools and mechanisms of intervention, (2) physical component of regeneration is not sufficient alone to cope with multifaceted problems; social, economic, environmental, and cultural dimensions of regeneration could also be emphasized depending on the nature of problems in different neighbourhoods, (3) physical component of regeneration is not confined to redevelopment, investments for repairs-maintenance and rehabilitation of the existing housing areas could be complementary interventions, (4) public guidance and supervision is necessary to monitor tendencies of reinvestment as well as to trigger reinvestment capacities of households, (5) an

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effective collaboration of public and private sectors, and resident households could provide viable regeneration strategies.

1. Introduction

For decades, 'urban growth' and 'new housing production' have been the priorities of Turkish urban planning and housing policies. This attitude could have been considered relevant and satisfactory at the earlier stages of urbanization. However, Turkey is experiencing a new phase of urbanization today, characterised by a reduced pace of population increase and slowed down rural to urban migration, where a surplus in housing stock exists (Özdemir Sarı, 2011). A major challenge of urban planning at this phase of urbanization is to develop regeneration strategies to maintain and improve the standards of living and quality in existing urban environments. Current urban development and residential investment strategy of the public sector, however, is extensive housing production by means of new construction, particularly on the periphery of major cities, and transformation of squatter housing areas and decayed historical parts of the cities which are very attractive due to their locational advantages. As a result of this strategy, annual housing production had artificially increased during 2002-2010, at an accelerated rate never observed in the last 25 years of Turkish urbanization history. Annual new housing construction reached almost to 850,000 units in 2010, which comprises nearly 4 per cent of the existing urban housing stock in Turkey. Furthermore, 'urban transformation' is reduced to physical redevelopment of squatter housing areas and decayed historical parts of the cities. Even more strikingly, Turkish housing policy is now on the verge of a 'bulldozer era' due to the current efforts of the public sector to transform disaster prone areas developing new legislation. In such a policy environment; maintenance, rehabilitation, and comprehensive redevelopment needs of the existing urban areas, particularly those containing authorized housing stock, are almost totally ignored by urban planning and housing policies in Turkey.

This study argues that, beyond the concerns of current urban transformation efforts, the challenge of urban planning in Turkey is to regenerate the neighbourhoods of apartment blocks. Nearly 70 per cent of Turkish urban households live in flats by year 2010 (TURSTAT, 2011). Almost all of the apartment stock is privately owned, and all types of reinvestments (investments for repairs-maintenance and rehabilitation) and redevelopment decisions are almost totally dependent on individual flat owners' behaviour in the free market. In this stock, decision-making power on buildings is unconditionally fragmented, minimizing the probability of producing joint decisions, neglecting the comprehensive or building level redevelopment needs in urban areas at future stages of urban lifecycle (Balamir, 1975). The above mentioned factors increase the difficulty of regenerating urban environments containing apartment blocks.

This study is organised in five sections including this introduction. In the next section, current concerns in the urban regeneration policies and programmes in Europe and in Turkey are briefly discussed. In the third section, an overview of the

Flat Ownership Law with respect to maintenance and demolition issues are provided, and factors that work against regeneration of apartment blocks are discussed. Findings of a recent research on households' reinvestment decisions in the apartment stock of Ankara are presented in the fourth section and based on these findings, a number of clues to regenerate neighbourhoods of apartment blocks in Turkey are presented. Final section of the study provides a number of conclusions.

2. Current concerns in the urban regeneration policies and programmes

Urban space is produced under distinct social, economic, political and technological circumstances. These circumstances change in time necessitating the transformation of urban space and thus design of planned interventions for the regeneration of urban areas. In Europe, urban regeneration policies and programmes have experienced various changes over the years and have been redefined numerous times. The first generation policies and projects emerged as deliberate efforts to get rid of the poorest slum areas in inner city, and were characterized by physical determinism and emphasis on the built environment (Carmon, 1997). Gradually, policies and programmes of urban regeneration became more sensitive to social and economic problems. In the Western European countries, for instance, slum clearance operations were followed by preservation of old historic buildings and housing rehabilitation (Skifter Andersen, 1999). Economic slowdown of the 1970s affected public policies and emphasis on economic development resulted in urban restructuring and revival of city centres (Carmon, 1997). Over the years, it became clear that physical interventions were not enough to cope with spatial concentration of physical, social, and economic problems. Integrated area-based approach to regeneration was emerged, particularly in the UK, as a solution to cope with multifaceted problems in urban areas simultaneously (Cameron et al., 2004). Currently, in many European countries there is growing interest in integrated area-based approach to urban regeneration.

Major support to integrated area-based regeneration model comes from the policies of the European Union (EU). Since 1990s urban dimension in EU policies are becoming more significant (Atkinson, 2001; Carpenter, 2006). Issues such as quality of life, safety, social inclusion, social equality, poverty reduction, better housing conditions and environmental sustainability are among the most discussed topics of the European urban agenda. In order to improve the living conditions of citizens in deprived neighbourhoods and to promote sustainable urban development, the EU has promoted the integrated area-based regeneration approach. Currently, within the context of integrated urban development and regeneration approach, EU policies emphasise economic growth and jobs, environmental aspects (i.e. energy efficiency and climate change), social exclusion, poverty, crime, integration of migrants and ethnic minorities, gender equality, demographic change, urban sprawl, architecture, culture and good governance (Piskorz & Goulet, 2009). In this framework, physical regeneration is considered together with social, economic, environmental and cultural aspects of urban life and development.

In Turkey, on the other hand, urban regeneration has become a current topic in the planning agenda particularly following the general elections of 2002. Legal documents and discussions in Turkey employ the term 'urban transformation' to refer regeneration policies and programmes. The 'Action Plan', declared by the government after the elections, highlighted 'prevention of squatter housing construction' and 'initiation of an extensive housing construction program' under the 'Urbanization and Settlement' heading of the plan (JDP, 2003). Housing construction was seen as a short-term solution to the unemployment problem in this period. To develop a legal framework for 'urban transformation', a series of legislation drafts were prepared, and most of them were enacted. However, these arrangements have been criticised by NGOs, academia, and by the different branches of Turkish Union of Chambers of Engineers and Architects on the grounds that these efforts were rent / profit-oriented, bypassing current legislations, and independent from the existing planning and urban development system and legislation (Özdemir-Sarı, 2010). Following the general elections of 2007, government declared a new 'Action Plan' which redefined the context of 'urban transformation' as 'urban renewal and squatter housing transformation' as part of the housing production process (JDP, 2008); yet, major dimensions of the policy remained unchanged. ***Displacement***, ***clearance and redevelopment***, ***large-scale and expensive public operations*** are the major characteristics of the current 'urban transformation' proposals and projects. Social and economic components of regeneration such as community participation or empowerment are totally ignored in Turkey (Özdemir, 2009). 'Urban transformation' is clearly reduced to transformation of squatter housing areas and decayed historical parts of the cities. As a result, improvement and redevelopment needs of the existing urban areas containing authorized housing stock are totally ignored.

In 2012, discussions gained a new dimension with the introduction of a new draft law concerning the transformation of disaster prone areas. As of May 2012, this draft law is on the agenda of the Grand National Assembly of Turkey and is expected to be enacted in the coming days. There are numerous points to be criticised in this draft law; however, the most significant aspects to be emphasized here are that (1) the entire country could be a subject of this law either as 'urban transformation area' or 'reserved areas for new urban development to be used for relocation purposes', and (2) Turkish housing policy is now on the verge of a 'bulldozer era' since major tool of intervention defined in this law is clearance and redevelopment.

In such a policy environment not only the social and economic components of urban regeneration but also maintenance, rehabilitation and redevelopment needs of the existing urban areas containing authorized housing stock are almost totally ignored by urban planning and housing policies in Turkey.

3. The challenge of regenerating apartment blocks in Turkey

This study argues that, beyond the concerns of current urban transformation efforts, the challenge of urban planning in Turkey is to regenerate the neighbourhoods of apartment blocks. Majority of the building stock in these neighbourhoods has been

produced within a short span of time without adequate technical supervision and ageing altogether (Balamir, 1975; 2002). Furthermore, sufficient standards in infrastructure, open spaces, green areas, etc. are not attained in most of these neighbourhoods. Before discussing why regeneration becomes a challenge in urban areas containing apartment blocks, it is useful to mention a number of points regarding the management and decision-making processes in apartment blocks.

In Turkey, apartment blocks dominate the existing urban housing stock. This stock is regulated through the 'Flat Ownership Law' (1965). The Law defines two main parts of the property as 'individually owned and independently usable parts' and 'commonly-owned parts' (independent and common parts hereafter). According to the Flat Ownership Law:

- **Maintenance of the independent parts**: Flat owners are compelled to maintain and preserve the architectural, aesthetic, as well as structural qualities of the property. On the other hand, this means that individual owners have rights to freely enjoy the control of investments in their own dwelling units / independent parts. They can do repairs and alteration freely in their individual flats, unless no damage is done to the main structure.
- **Maintenance of the common parts**: Flat owners together have the responsibility to undertake maintenance, preservation, retrofitting, and repairs. None of the flat owners is entitled to carry out repairs, construction, and paint in different colours without a written consent obtained from four fifth of the flat owners.
- **Urgent retrofitting of the main structure**: If there is an event of urgency confirmed by a court decision, for instance if the main structure requires urgent retrofitting, then consent of the flat owners is not sought.
- **Demolition of the main structure**: Demolition requires unanimous decisions of flat owners unless this operation is ordered legally as a safety precaution.

It is possible to identify a number of factors that work against regeneration of neighbourhoods of apartment blocks in Turkey. These are; (1) private ownership, (2) fragmented ownership structure, (3) lack of a management level at neighbourhood scale, (4) lack of public guidance, supervision, and funds, (5) extent of the problem.

1. **Private ownership**: It is not possible to ignore the question of agency in regeneration of apartment blocks. Almost all of the apartment stock, both owner-occupied and rented sector, is under private ownership. As explained above, all types of reinvestment activities and redevelopment decisions are reserved for the individual flat owners rather than public authority (excluding an event of urgency confirmed by a court decision). In other words, rehabilitation or redevelopment of the apartment blocks could take place only if flat owners decide to do it.
2. **Fragmented ownership structure**: In Flat Ownership system, decision-making power on buildings is unconditionally fragmented and the possibility of producing joint decisions is minimized (Balamir, 1975). Yet, as mentioned above, both maintenance of the common parts and demolition of the main structure require collective decision-making. As Balamir (1975) emphasize,

fragmented ownership structure in Flat Ownership system is to hinder realization of redevelopment decisions in the free market environment at future stages of urban lifecycle, leading large section of the Turkish cities into paralysis.

3. **Management level**: Flat Ownership Law defines management of individual building and building block. Lack of a management level at neighbourhood scale is an obstacle to consider regeneration as an opportunity to maintain and reorganize open and built spaces, social and technical infrastructure, etc. in neighbourhood environment. In other words, Flat Ownership system confines the content of regeneration to rehabilitation or redevelopment of buildings.
4. **Public guidance, supervision, funds**: Unlike European examples, no specific policy exists in Turkey to consider reinvestment processes and redevelopment in the existing housing stock, and there is no tool or mechanism to supervise or encourage flat owners' reinvestments (Özdemir Sarı, 2011).
5. **Extent of the problem**: Apartment blocks dominate the urban housing stock in Turkey. By year 2010, nearly 70 per cent of urban households live in flats (TURKSTAT, 2011). In other words, high-rise living affects wider sections of the society and urban areas compared to single-family housing. This means that acquisition of the decaying stock by the public sector or compulsory purchase measures to improve the quality of existing housing environments are unlikely.

Considering these factors, not only social, economic, and environmental dimensions of regeneration but also physical dimension of regeneration becomes a challenge in Turkey. Obviously, regenerating the neighbourhoods of apartment blocks is not a task that could completely be undertaken in the free market environment or by the public sector. Individual flat owners' investment capacity, decisions, and behaviour become significant in this context.

4. Households' reinvestment behaviour in apartment blocks: implications for urban regeneration policies

A recent research by Özdemir Sarı (2010), based on a household survey conducted in apartment blocks of urban Ankara during 2007-2008, displays a number of crucial findings which are relevant for the regeneration of neighbourhoods containing apartment blocks[2]. Accordingly;

- Substantial amount of capital is engaged in reinvestment work. Nearly 33 per cent of owner-occupier respondents and 28 per cent of tenant respondents were engaged in reinvestment activities in the year preceding the survey. Average annual reinvestment expenditures for owner-occupiers who carried out reinvestments were nearly 1650 Euro whereas it was 380 Euro for tenants.
- More than four fifth of the total reinvestment spending was realized in the owner-occupied sector. Tenants were less likely to engage in reinvestment activities, and their expenditures were small. However, no information was available on reinvestment expenditures of the owners in the rented sector.

[2] Refer to Appendix for details of the data source employed in Özdemir Sarı (2010).

- In the owner-occupied sector, circumstances of necessity and urgency were the determiner of reinvestment behaviour for almost half of the owner-occupiers. Owner-occupiers frequently engaged in and planned to undertake consumption enhancing investments. Reinvestments essential for the survival of the housing stock, however, were less often demanded. Tenants, on the other hand, were more likely to engage in reinvestments when it became inevitable.
- Among households who engaged in some type of reinvestment work, the share of households who employ consumer loans to finance reinvestment activities was only 4 per cent.
- Results also revealed that, for all tenure modes, the foremost obstacle to undertake planned reinvestments was the high costs of the reinvestment projects. For tenants, 'having the consent of the home owner' stood as a second major problem. Contrary to expectations, 'unavailability of skilled labour' was the third problem reported by owner-occupiers following the 'time constraints/having no spare time' to undertake reinvestments. On the other hand, 9 per cent of all respondents reported that the need for unanimous / collective decisions of flat owners in the apartment was a major obstacle to undertake the planned reinvestments.
- Furthermore, multivariate analyses of the survey data displayed that, for all tenure modes, **reinvestment works were less likely for** younger household heads, households having more than 40 years length of stay in the dwelling, households living in apartments where no reinvestment activity is observed in common parts, households who evaluated their dwellings as small-sized, and households who rated their neighbourhood environment as extremely poor or below the average. Moreover, **voluminous reinvestment expenditures were less likely for** households in the lowest end of the income scale, tenants, and households living in apartments where no reinvestment activity is observed in common parts.
- As a consequence, high rates of depreciation and loss of quality are expected to appear basically in the neighbourhoods where (1) lowest income households are agglomerated, (2) rented dwellings dominate the housing stock, and (3) apartment blocks are not maintained in good order.

1. **Lowest income households**: The study reveals that the lowest income households spend less for reinvestments compared to other income groups. Furthermore, there is a match between households in the lowest end of the income scale and lowest end of the housing stock in terms of dwelling age, dwelling size, and rental value. In other words, households who are unable / unwilling to maintain their dwellings already occupy the stock where deterioration is more likely due to aging and overutilization compared to other dwellings.

2. **Rental stock**: Empirical evidence displays that tenants' reinvestment expenditures are quite low compared to owner-occupiers' expenditures. Most of these expenditures undertaken by tenants are known to be for non-discretionary repair-maintenance works. Repairer tenants more frequently engage in painting, regular repair-maintenance, and repairs in electrical system or plumbing which are essential works for their own consumption.

Investigation of reinvestments by rental stock owners is required in order to understand the extent of disrepair in the rental stock. Yet, it is a fact that rental stock owners undertake reinvestment works with investment considerations only, either to secure their initial investments or to capitalize higher rental income where possible.

3. **Lack of repair-maintenance in common parts of the apartment**: Empirical results display that, repair-maintenance works undertaken by joint efforts of flat owners in common parts of the apartment block (particularly installations / infrastructure repairing) trigger individual reinvestment decisions and large scale reinvestment works. On the contrary, lack of these activities discourages households' reinvestments in their independent parts. In apartment blocks where rate of owner-occupancy is lower, flat owners abstain from maintaining common parts. This in turn decreases the likelihood of individual reinvestment decisions (both for owner-occupiers and tenants), and size of the expenditures (for owner-occupiers) in these apartments.

These issues identified above provide a number of clues in designing urban regeneration strategies for neighbourhoods containing apartment blocks. First of all, it is clear that ***spatial definition of the problem at local / neighbourhood level*** is inevitable. Experiences all over the world display that there is no single or standard solution to the problems in urban areas. Rather, distinct urban environments require different types of tools and mechanisms to intervene. Therefore, it is necessary to explore social, spatial, and economic characteristics of the area under consideration for regeneration prior to any intervention. For instance, as empirical findings display, both spatial concentration of the lowest income households and rental stock indicate to the likelihood of high depreciation rates and loss of quality in neighbourhoods. Although the observed problem in both cases is the depreciation of the housing stock and decline in neighbourhood quality, a global regeneration strategy to cope with physical deficiencies of the built environment could not achieve success in the long run. In the first case, where the problem stems from the inability of the lowest income households to maintain the lowest end of the stock, integrated regeneration strategies that include influential social and economic components along with physical regeneration could be remedies. In the second case, where the problem has its source in the disinvestment in rental stock, physical regeneration accompanied with policy measures for monitoring the reinvestments in the rented sector could provide solutions.

Secondly, ***integrated approach to regeneration*** is more likely to provide viable options. It is not feasible or operational to focus only the physical component of regeneration. Integrated approach including physical, social, economic, environmental, and even cultural dimensions of regeneration, where necessary, could provide feasible regeneration options. As in the example given above, if the reason of high depreciation rates in the housing stock and loss of neighbourhood quality is the failure of households to maintain their dwelling units due to income constraints, then redevelopment or rehabilitation of the built environment by the aid of public sector

would not be a solution alone in the long run, since reinvestment capacity of the resident households remains the same.

Another clue is that, ***diversified intervention methods under physical regeneration*** are essential. Physical component of regeneration does not only refer to redevelopment. Reinvestment in the existing housing stock and built environment is an indispensable component of physical regeneration. As Helleman and Wassenberg (2004) highlight, in the context of renewing large-scale housing estates in Europe, demolition is no longer a valid intervention method in most countries. Reinvestment and redevelopment interventions could be planned complementarily to achieve success in urban regeneration. It is a fact that at some stage of life-cycle, redevelopment is inevitable for building stock. As mentioned previously, demolition of the buildings under Flat Ownership Law requires unanimous decisions of flat owners (unless this operation is ordered legally as a safety precaution) and this is an obstacle for redevelopment. Therefore, first, strategies and models for redeveloping apartment stock are to be developed. Certainly, these strategies and models have to consider not only the individual building level but also interventions in the neighbourhood level. In addition to these, reinvestment strategies have to be designed. It is a fact that reinvestments could extend economic life of the housing stock, preserve asset values and ensure value increases, improve the standards of housing services and living environments, and help to adjust housing consumption with regard to the current needs and trends, etc. (Özdemir Sarı, 2011).

Moreover, it is clear that ***public guidance and supervision*** in reinvestment processes is an imperative. As mentioned previously, recent information displays that a substantial amount of capital is invested by households, particularly by owner-occupiers', in repairs-maintenance, and rehabilitation of the flats. Yet, findings display that there is a demand for consumption enhancing investments rather than the investments essential for the survival of the housing stock. This implies that there is a need for monitoring the tendencies of reinvestments so as to ensure the structural elements of dwellings are maintained regularly. Moreover, empirical findings mentioned above display that a number of household, dwelling, and neighbourhood characteristics discourage individual reinvestment decisions and size of the reinvestment expenditures. These findings suggest that policy measures are not only required for monitoring purposes but also for triggering reinvestment capacities of households who are unable or unwilling to reinvest their dwelling units.

Finally, ***a combination of financial resources*** is required in urban regeneration. Conditions described above display that regenerating neighbourhoods of apartment blocks is not a task that can be achieved solely by public or private sector investments. Regeneration policies and programmes have to be designed considering an effective collaboration of public and private sector, and resident households. Households' investment capacity is significant to maintain the quality and living standards in neighbourhoods, whereas public supervision and funding is essential to monitor and trigger households' reinvestment decisions in the existing housing stock.

Public and private sector investments in the neighbourhood, on the other hand, are required to maintain and increase the attractiveness of urban environments.

5. Conclusions

Currently, there is growing interest in integrated area-based regeneration approaches in many European countries. This model of regeneration is supported also by the EU policies to tackle physical, social, economic, and environmental problems in urban areas and to ensure sustainable urban development. On the contrary, current urban development and regeneration strategy of the public sector in Turkey depend solely on new housing construction and redevelopment to cope with the problems in squatter housing areas, decayed historical parts of the cities and more recently disaster prone areas. The major line of argument in this paper is that the challenge of urban planning in Turkey is to regenerate neighbourhoods of apartment blocks. As discussed in this paper, current circumstances and attributes of the Flat Ownership system display that not only social, economic, environmental dimensions of regeneration but also physical dimension becomes a challenge in Turkey. Recent research on households' reinvestment behaviour, on the other hand, provides a number of clues for designing viable regeneration strategies. Accordingly; defining problems and solutions spatially; considering social, economic, environmental, and cultural dimensions of regeneration, as well as the physical dimension; adopting reinvestment and redevelopment interventions complementarily; designing policy measures for monitoring reinvestment tendencies and triggering reinvestment capacities of households; and developing an effective collaboration between public, private sectors, and resident households could provide viable regeneration strategies. Regenerating the neighbourhoods of apartment blocks could be an opportunity for urban planners to reorganize and redesign urban environments in order to improve the quality of life in cities.

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Appendix

The data source employed in Özdemir Sarı (2010) is a survey sample obtained through the 'Household Mobility in Housing Stock' project, a Scientific Research Project funded by Middle East Technical University. The sample of the survey was selected from the records of apartment blocks which were registered to Flat Ownership books in the Deeds Offices in Ankara. These records cover information related to buildings and individual flats in the central districts of Ankara metropolitan area namely; Çankaya, Yenimahalle, Keçiören, Altındağ, Mamak. The records were obtained from the local Deeds Offices of those districts and converted to a combined list ordered with respect to date of registration for a systematic sampling. Every 20^{th} record was selected (5 per cent sampling) in order to implement a household questionnaire. Every household in the surveyed buildings (regardless of mode of tenure) was encouraged to participate in the multiple-choice questionnaire. Households were not interviewed face-to-face, rather the questionnaire forms were distributed to the households and after a convenient time period a surveyor collected the questionnaires. More than 8000 households in approximately 950 buildings were visited. The response rate however remained approximately 25 per cent.

Urban Planners with Renewable Energy Skills – UP-RES

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Abstract

Missing link to energy and emissions

Traditionally, energy and emissions have not been integrated into the urban planning processes. Only in a very few planning schools in the world the spatial planners are educated with understanding on energy, and on renewable energy sources (RES) and energy efficiency (EE) in particular.

Relevance of the work to planning education

To fight Climate Change, however, such new understanding has become essential. The understanding may materialize in the following two ways:

- The energy experts and the urban planners shall start working together with all spatial development plans regardless existing or new building areas. In order to facilitate such co-working, training shall be provided to both types of professional to help them to understand each other.
- The training shall be extended to bachelor and master level education in parallel to the continued education of professionals.

UP-RES (Urban Planners with Renewable Energy Skills) Project as a part of the Intelligent Energy Europe framework programme provides pilot training to
spatial and energy planners in five EU countries as well as material support to other universities to adopt such training into their curricula.

The training material designed to other planning schools in Europe will be made freely downloadable in 10 languages by mid July 2012 on the web page: http://aaltopro2.aalto.fi/projects/up-res/materials.html

Methodology

During 2012, the pilot training is carried out in five European countries, namely in Hungary, Spain, Germany, U.K. and in Finland, the latter being the country of the coordinator.

The project work started with the competence and training needs analysis. Based on the analysis, the training concept was designed specifically for each country. Practical examples and best practice cases of combined spatial and RES planning have been collected and used in the pilot training. Real cases have been identified in which win-win situations have been achieved when both the lifecycle costs and the emissions could be substantially reduced compared to the traditional way of spatial planning. The pilot training is underway during the period Oct. 2011 – June 2012.

Pilot Training Approach

The core of the training is the structure comprising ten modules. Each module typcally comprises two days of training.

The module titles are as follows:

M1	SUSTAINABILITY CONCEPTS IN REGIONAL AND URBAN PLANNING: A HOLISTIC VISION
M2	ENERGY. FORMS - TRANSFORMATION - MARKET OUTLOOK
M3	ENERGY DEMAND REDUCTION STRATEGIES: POTENTIAL IN URBAN PLANNING
M4	ENERGY DEMAND REDUCTION STRATEGIES: POTENTIAL IN NEW BUILDINGS AND REFURBISHMENT
M5	ENERGY RESOURCES AND RENEWABLE ENERGY TECNOLOGIES
M6	ENERGY DISTRIBUTION: DISTRICT HEATING AND COOLING
M7	THE RIGHT SCALE FOR EVERY ENERGY CONCEPT: HEAT AND COOL DENSITY (DEMAND SIDE), POTENTIAL ON SUPPLY SIDE
M8	NEW MANAGEMENT CONCEPTS IN THE ENERGY MARKET
M9	ENERGY PLANNING
M10	NEW TRANSPORT MODELS AND URBAN AND INTER-URBAN MOBILITY

The above listed Modules will be described in the attached documents, including the objective, the main contents and the information sources available to design local training of the particular module.

Country Specific Differences

Designing and implementing the training heavily depends on the local circumstances, and therefore, has to be adjusted to the local needs and conditions. Therefore, various approaches were chosen in the five countries to implement the pilot training, as follows:

Finland:

- In Spring 2011 already, 7 one-day courses were organized in the cities of Espoo, Kuopio, Oulu, Turku, Tampere, Seinäjoki and Jyväskylä to market the long pilot training course.
- During Fall 2011-Spring 2012, a 9 months lasting long course of 8 modules of two days each was organized for 26 urban and regional planners.
- Moreover, a voluntary excursion of three days to Germany was arranged.

Hungary:

- By Summer 2011, 3 short courses were implemented.

- The long course with as much as 60 ECTS credits was organized during Oct 2011-July 2012rs.
-

Germany: ...

- Six short courses of 2 days each were organized in Germany with 182 participants in Dresden, Frankfurt, Munich, Hamburg, Chemnitz and Berlin.
- The long course of 9 months was expected to start in June 2012.

Spain:

- Four information days were organised in the Chamber of Architect's regional head-quarters in Girona, Tarragona and Barcelona
- The long course with 10 modules were implemented during Oct. 2011-June 2012. The long term course was structured in ten modules with an extension between 12 and 18 hours each.

United Kingdom:

- In total 5 short courses of 3 days each were implemented in UK by February 2012 but more expected later on.
- According to the project agreement, there will be no long courses in UK.

Structure of Training Material

The material at hand consists of the selected training materials of ten modules, for each of which a general description of the module objectives, approaches and the contents has been created. As annexes slides have been given to present some 3-5 key topics of the particular training module, some 300 slides altogether. Internet links have also been given for searching more information from the web in English language.

Methodologies of Training

In the pilot training several methodologies were applied, as follows:

- Sometimes a facilitator was chosen for each module to link the learned energy issues to urban planning
- Lectures were based on slides and discussions
- Excursions both locally and internationally were organized to best practice locations
- Exercises were carried out by the trainees in small groups and individually about issues combining RES and EE to spatial planning
- Distant learning was used to reduce the need of travelling and to save time
- Movies were shown to trainees such as, for instance, Inconvenient Truth, District Cooling,
- Expert panel, or expert clinic, advisory services were applied to support the trainees to carry out their exercises.

Example of Training Module

Here an example of the contents of a training module is presented. It has been a combination of team work, lecturers and an excursion, for example.

M5	ENERGY RESOURCES AND RENEWABLE ENERGY TECNOLOGIES
Fasilitator: N.N.	**13.-14.2.2012**
Time	**1st Day: Familiarization with RES**
9.00-9.15	Introduction to Module Topics
9.15-10.30	Presentation of RES technologies and applications
10.30-10.45	*Break*
10.45-12.00	Based on the presentation ,five groups of trainees search for information from Internet. One group specifically for solar electric, solar heat, wind, biomass and the fifth group for waste to energy.
12.00-12.45	*Break*
12.45-14.00	Five groups continue
14.00-14.15	*Break*
14.15-145.30	Presentation of the results of five group works
15.30-16.00	Conclusion
	2nd Day: Rural Energy Supply
9.00-10.30	Local economy: impacts of RES on rural economy and survival
10.30-10.45	*Break*
10.45-12.00	Off-grid village based on RES (Kempele, Finland)
12.00-12.45	*Break*
12.45-14.00	Agricultural waste to liquid fuel
14.00-14.15	*Break*
14.15-16.15	Excursion to a bio mass fuelled CHP plant

Expected outcome

In summer 2012, the UP-RES project has provided support to extend similar training of urban planners with renewable energy and energy efficiency skills to other planning schools in Europe by means of publishing training materials. These downloadable materials comprise:

- The module structure of training;
- Introductory reading of the general approach and the content of each training module;
- Sources in literature and internet for more detailed information; and,
- Some 300 slides and supporting texts as well as shared experiences

The material is available in 10 European languages such as:

- English
- Finnish
- French
- German
- Hungarian
- Italian
- Polish
- Romanian
- Spanish
- Swedish

From fall 2012 on, the material is expected help extend such training to other European planning schools that consider integral spatial and RES planning as an important approach to fighting Climate Change.

The material above is freely downloadable. However, we would need to keep record on how, where and when such material has been applied in order to report on the use to the project sponsors, primarily the EU.

POST DISASTER RELOCATION AND RESETTLEMENT PROCESS IN TURKEY

Binali TERCAN [1]

Abstract

Disasters are events that occur in uncertain periods of time and threaten a society or a relatively self-sufficient part of a society with major unwanted consequences. They are mostly unavoidable events coming in unexpected times. However, setting of pre and post disaster activities like mitigation, preparedness, response, recovery and development have very important roles in reducing the future hazard risks in disaster prone areas.

Resettlement after disaster or from disaster prone areas has been a major policy in post-disaster reconstruction, especially in developing countries. Resettlement can result in significant adverse impacts on the resettled population. Conversely, a well-planned and managed resettlement process can produce positive long-term development outcomes.

The major concern of this study is to make a critical evaluation of the relations and the role of planning in post disaster relocation process by examining the outcomes of previous different kinds of disasters and defining the importance of site selection and relocation in post disaster planning process, for reducing the future hazard risks in different examples of Turkey.

By this study it is exposed that, post disaster relocation processes are important for reducing future hazard risk in disaster prone area. Within these processes, site selection studies in urban and rural areas, relying on geological criteria are one of the most important steps. However, it is not going to be effective unless other criteria such as socio-cultural, traditional, economic, psychological, legal and institutional coordination are not taken into consideration systematically.

Keywords: relocation, resettlement, site selection, earthquake and disaster management.

1. Natural Hazards in Turkey

1.1. Introduction To Natural Hazards In Turkey

The Republic of Turkey is located within the sector bounded approximately by the. Latitudes 36°- 42° N and longitudes 26°-44° E occupying an area of 775,000 sq. km with a population of approximately 74 million. It lies between the Black Sea and the Mediterranean Sea, bridging Europe and Asia.

As a result of its geology, seismicity, topography and climate, Turkey is exposed to various kinds of natural hazards sometimes causing substantial losses of life and

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property. The percentage of houses damaged by natural disasters in Turkey in the last 100 years is indicated in Table 1.

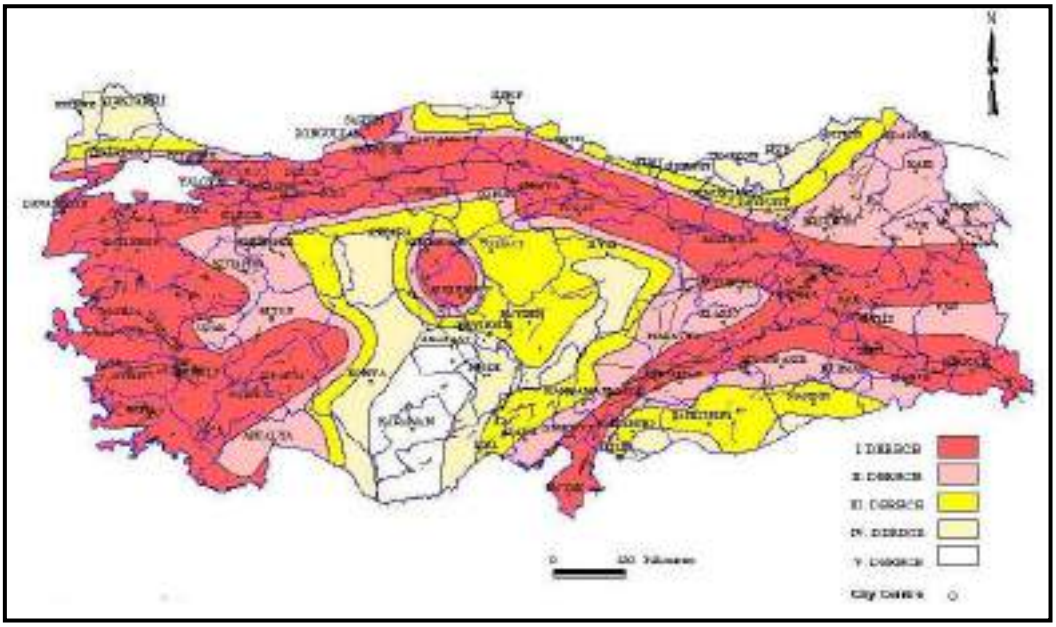
Table 1: % of the Total Number of Houses Damaged in Turkey by Natural Disasters During Last 100 years

Types of Natural Disasters	% of the Total Number
Earthquakes	76
Landslides	10
Floods	09
Rock Falls	4
Avalanches, Storms, Excessive Rain	1

Source: (AİGM,2001; BIB, 2000; Ergünay, 2007)Türkiye'nin afet profili

The data in this table indicates that of all types of natural disasters earthquakes represent the greatest hazard, causing about three-fourths of dwelling destruction and a higher share of fatalities and monetary losses. In the period since 1960 the impact of floods, landslides and rock falls has had a decreasing tendency as a result of regulating river flow and more effective land use planning measures. We can anticipate that earthquakes will engender the major natural threat that faces Turkey in the future (Table 2).

Figure 1: Earthquake Hazard Figure of Turkey



Source: Özmen, 2000. ; GDDA, 1996.

Table 2: Distribution of Population, Land Area. Industry and Dams with Respect to the Seismic Hazard Zones

Earthquake Zone	Population (%)	Surface area (%)	Major Industrial Centres (%)	Dams (%)
First degree (I > IX)	44	42	24,7	10,4
Second degree (I = VIII)	26	24	48,8	20,8
Third degree (I = VII)	15	18	12,0	33,3
Fourth degree (I = VI)	13	12	12,6	27,1
No Hazard Zone (I < V)	2	4	1,7	8,4

Source: Özmen, 2000

In Turkey the Disaster and Emergency Management is legally required, through Act No 7269, to serve the public in its needs for protection from consequences of all types of natural disasters, and to take all preventive and protective measures for this purpose.

1.2. Disaster Management System in Turkey

Historically Turkey has suffered significant losses of life and property due to earthquakes and other forms of natural hazards. This has led to the acquisition of long standing experience and the gradual evaluation of a centralised disaster management system, culminating in 1959 with Law No. 7269 entitled “Measures and Assistance to be put into Effect Regarding Natural Disasters Affecting the Life of the General Public. Despite three revisions and a substantial amendment in 1968 contained in Law No. 1051, Law 7269 still forms the blue print for the comprehensive approach to disaster response, planning and management now evident in Turkey. The basic aim of Law No. 7269 is to enable the administrative structure of the government to manage disasters in a timely and efficient way, so that Losses and human sufferings are minimised and rehabilitation can be implemented effectively.

1.3. The National Disaster Management Institutional Framework in Turkey

The process of institutionalizing natural disaster mitigation and disaster management planning in Turkey can be broken down into three distinctive periods.

1.3.1. The Pre-1944 Era

During the Ottoman times, the central authority responded to natural disasters by enacting post event assistance and relief measures on a case specific basis. There was little evidence of mitigation policies, instead there was a reliance on rapidly enacted

measures intended only to address the requirements of post-disaster periods: Following the Great Istanbul Earthquake of 1509 each household was awarded 22 gold coin and a central authority was established to organize rebuilding the 1070 houses that had collapsed. However, an edict was proclaimed prohibiting the construction of houses built on artificial fills, and of stone masonry buildings.

Even into the post-republic (1923) era there appears to exist no long-range or systematic policy for the reduction of disaster losses. Given the absence of policy there was of course no planning towards its realization. Any actions taken did not originate from a coherent policy designed to prevent damages from future earthquakes but were merely to dress wounds arising from any fresh catastrophe. Such an approach continued until a disastrous and sustained chain of earthquakes was unleashed by the 26th December 1939 event in the city of Erzincan with an average period of 7 months between events. 4 further major earthquakes occurred killing 43,319 persons and destroying 200.000 homes.

Although the rehabilitation measures in Erzincan were enabled with the instrument of a special law enacted specifically for that earthquake the government realized that a change of policy was needed. Recognizing that rebuilding collapsed houses did not constitute an adequate form of combating earthquake losses it was decided that legal and physical preparedness were essential ingredients towards reducing future losses. A law entitled Measures to be Put into Effect Prior and Subsequent to Ground Tremors', No. 4623 was passed on 22 July 1944. (AFEM,1994, pp.2)

1.3.2. The 1944-1959 Period

For the first time a longer term policy was enacted towards reducing the future vulnerability to earthquakes with the state assuming those responsibilities that could not be carried out by individuals. This included the requirement of the central government authority to make an assessment of the earthquake resistance of all public buildings: means to ensure that development and settlement programs were to take the earthquake threat into consideration and an understanding that technical expertise within Turkey needed to be strengthened: universities sent personnel abroad for technical experience and the Ministry of Public Works initiated education and training courses for engineers and technical professionals.

Institutionally The Ministry of Public Works and Settlement was made responsible for overseeing the implementation of law 4623 and to draw up national building codes. The ministry also established a technical unit called the "Technical Earthquake Services directorate." The outputs of this renewed thinking and the collaboration between government agencies, the Ministry of Public Works, and the universities included;

- Development of hazard Figures
- Earthquake design regulations
- Introduction of geological survey
- Establishment and better definition of mandates for Provincial and sub provincial rescue and relief committees.
- Bye-laws aimed at providing the principles for research and training in mitigation activities.

1.3.3. The Post-1959 Period

Law No. 4623 carried stipulations only in relation to earthquakes, and did not contain provisions for other forms of natural disaster such as floods, landslides, rock falls etc. which had become more prevalent during the decade from 1950. In response the national assembly passed a law in 1959 entitled "Measures and Assistance's to Be Put into effect Regarding Natural Disasters Affecting the Life of the General Public", No. 7269, which superseded the 1944 law. The basic philosophy of Law No. 4623, was maintained but its scope was widened to include other forms of natural disasters. The law created a new ministry called the Ministry of Reconstruction and Resettlement (Replaced in 1983 by the Ministry of Public Works and Settlement (MPWS). and, in effect. charged it with the mandate of coordinating and implementing all the states obligations to the citizens of the country in conjunction with natural disasters. Although regularly revised and substantially amended by Law No. 1051 in 1958, it in law 7269 which farms the basis of the Disaster Management system in Turkey (Erdik,1993).

An important shift occured in the disaster management structure of Turkey in 2009. A new department called "Disaster and Emergency Management Presidency" (DEMP) under Prime Ministry was established in December, 17 2009. Turkey is prone to major types of disasters.

Disaster management structure was governed by three main actors until 2009 in Turkey. They were; General Directorate of Disaster Affairs under Ministry of Public Works and Settlement, General Directorate of Civil Defence under Ministry of Interior and Turkey Emergency Management General Directorate under Prime Ministry. With the Law n.5902 issued in 2009, the activities of those three departments were ended and the new Presidency has become operative since 17 December 2009. Most of the duties of those three actors will be performed by DEMP. The law N: 5902 defines the central and provincial level structure of the new unit. According to this law there are six departments at central levels. In each city, there is a provincial disaster and emergency management directorate that is directly attached to the governor of the city.

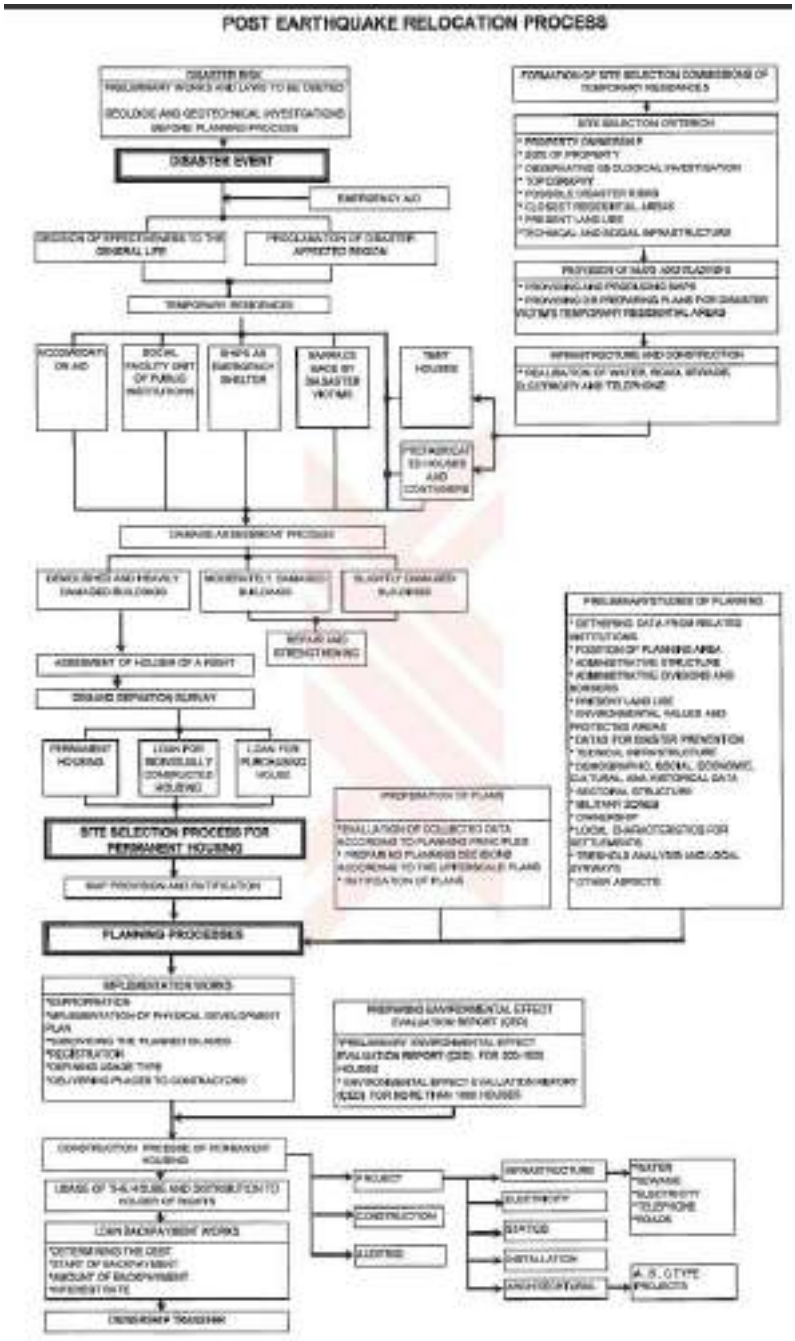
2. Post Earthquake Recovery Works and Relocation Process in Turkey

2.1. Damage and Need Assessment

When 17 August Marmara Earthquake happened, preliminary damage assessment processes had started immediately after the relief operations, synchronous with debris removal works (Figure 2). Parallel to these studies aiming at quick removal of the debris, the necessary activities to protect the legal right of the disaster victims pertaining to probable construction faults were carried out. According to the results of preliminary damage assessment, the initial tents erected to meet the urgent shelter need, field hospitals and kitchens serving hot meals were set up.

After the preliminary damage assessment, definite damage assessment works starts as preliminary damage assessment. Definite damage assessment results were listed and conveyed to the citizens as written announcement for one week. For five days objection time had given to the disaster victims. After that, objection acceptance and evaluation time take about one week. When the damage assessment of a building completed, demolition works start.

Figure 2 Post Earthquake Relocation Process



Source: Tercan, B., 2001

2.2. Provision of Temporary Housing

Several types of natural disasters (especially earthquakes) create a sudden and massive demand for alternative housing as a result of the widespread destruction of traditional and illegally constructed buildings.

According to the data taken from damage assessment groups, large scale temporary residential works are started.

There is an important time factor in solving the demand for shelter after disaster. Tents and other short-term solutions can usually be organized overnight, but large-scale camps of prefabricated buildings may take 8-10 weeks to plan, construct and assign units to families. Potential problems include financing the purchase of units and paying the labor required the logistics of transportation and the difficulty of acquiring land.

Starting from the initial stages of rescue and relief operations, the governmental efforts have been accompanied by voluntary initiatives both national and foreign in nature.

After August 17th and November 12th Marmara Earthquakes in Turkey, temporary residential problems were solved in many ways as indicated in (Figure 2). At first stages, the problem was solved by tents and barracks, which made by disaster victims. Then, most registered amount of the victims, were settled in tents. After relief operation, some of the disaster victims were settled to the ships of Greater Municipality of Istanbul and Turkish Navigation Administration Company. Others were settled to holiday villages of public institutions. The most expensive type of the temporary residents were prefabricated and container houses. The last groups of the disaster victims are supported by rent aid.

Self-Build Temporary Shelters: Most of the barracks made by disaster victims were settled just close to their demolished or damaged buildings. Although there is not a definite number about them, it is assumed that these are the most portions of the temporary residents of earthquake region.

Tent houses: Just after the earthquake, Turkish Red Crescent Association and other institutions distributed their tent stocks to the disaster victims. Because of the huge demand for tents, in addition to the donated and aid tents, The Ministry of Foreign Affairs imported 23.288 tents at first stage. (Başbakanlık;2000: 49) Totally 113.924 tents were distributed to the Marmara Earthquake Region.

Site selections, site surveys and ‘Tent City’ plans (Figure 3) related to aggregated (mass) tent residential areas, accomplished by the proposals of the Governorates and members of the Provincial Directorates of the Ministries.

During the site selection; Size of the area, distance to the settlement centre, location, ownership pattern (priority was given to the public ownership), infrastructure, geological land characteristics, land use and function in the existing plans, flood conditions, ground water level etc. were considered as selection criterions. (MoPWS, 2000, pp.17; Başbakanlık 2000, pp.53)

In order to take accommodation aid (100 million TL, about $150 in 1999), some of the disaster victims prolonged staying time in tent residents.

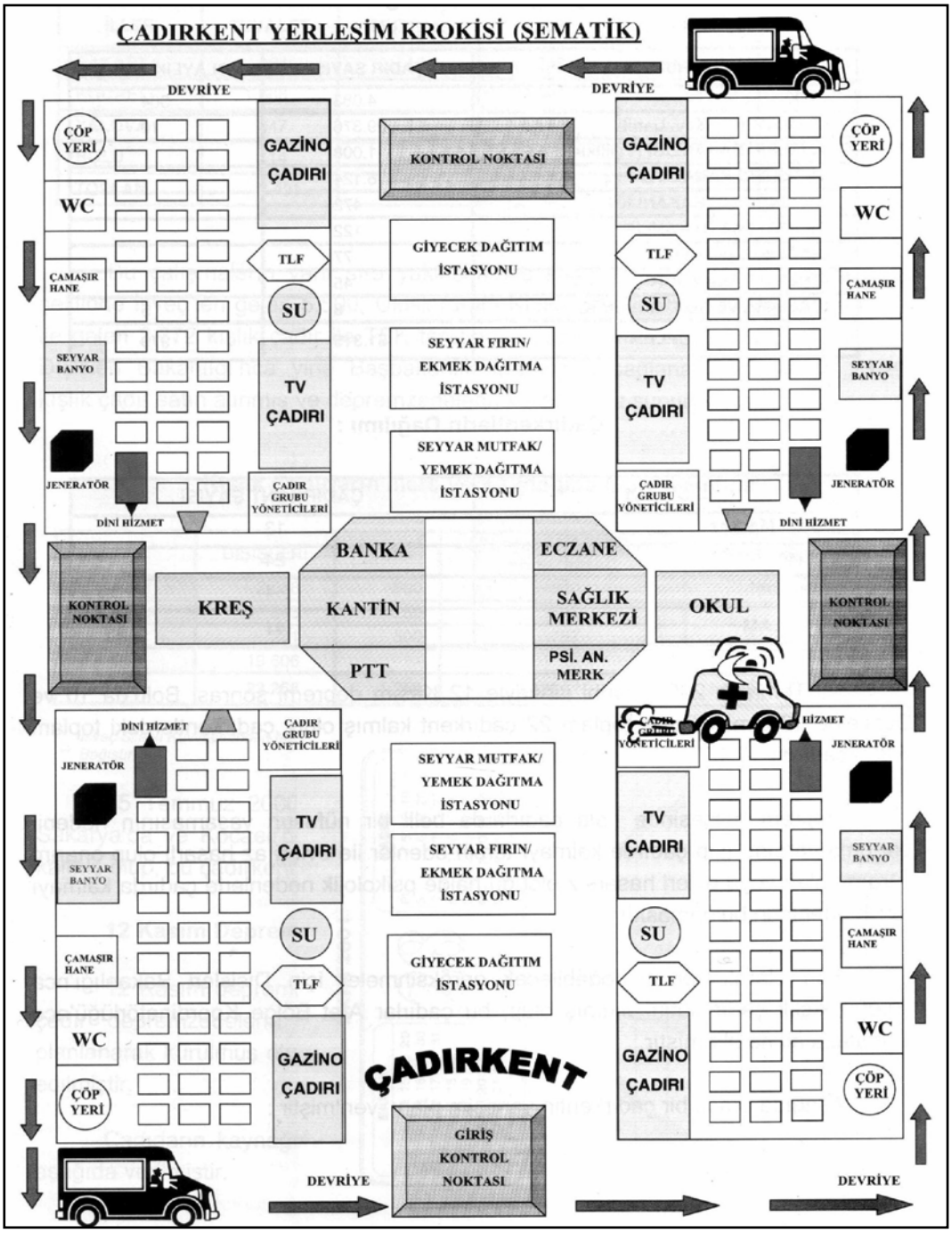


Figure 3: A Tent City Plan
(Başbakanlık,2000, pp.52)

Prefabricated temporary houses and containers: The government determined that people could be temporarily housed for the coming winter in prefabricated housing units. The Department of Public Works awarded contracts to 25 Turkish companies to produce and install approximately 26,000 of these units in the affected areas by the end of November, 1999 in Marmara Region. In addition, approximately 8,000 units were donated and erected by the private sector and foreign countries that included Japan, USA, Germany, Italy, Israel, Greece, Iraq, Russia, Czech Republic and the Cyprus Federation. Spain provided a soft loan in the amount of $400 million USD for use in purchasing housing and other goods from Spain. While several Canadian companies taught to participate in this work.

To define the number of the prefabricated houses a ‘demand definition survey’ had done by State Institute of Statistics and Ministry of Public Works and Settlement.

30 m2 prefabricated temporary housing units project was preferred. Site selection, site surveys for ‘Prefabricated temporary housing residential area’ plans were done, as tent cities, by the proposals of the Governorates, persons of the Provincial Directorates of the Ministries and municipalities.

The General Directorate of Bank of Provinces constructed all infrastructure works of the selected areas.

Ships as an emergency shelter: A few days after the August 17 Earthquake, ships of TDİ AŞ, ships of Greater Municipality of Istanbul and some private company’s ships were used as emergency shelter from August 26, till end of April 2000 for 1800 disaster victims.

Although, most of the ships were used for accommodation, some of them were serving health services for the injured peoples too.

Holiday villages and social facility units of public institutions: In addition to other temporary residential modes, some of the disaster victims were settled in Holiday villages and social facility units of many public institutions and Ministries. For those

mass disaster victims, 42.338 bed capacities were prepared. But only 5.257 person after 17 August Earthquake and 3.333 person after 12 November, totally 8.590 disaster victims were applied from all Marmara Region.

Government supported transportation, accommodation and feeding expenses. Also children of the disaster victims had had educational facilities.

Accommodation aid: According to The Disaster Law 7269, disaster victims whose houses were demolished, heavily damaged or moderately damaged, gains right to take accommodation aid although they are owner of the house or tenant.

In overall Disaster region, 119.418 families had taken 100 millions TL (about $150) as accommodation aid. (Başbakanlık, 2000 ; MoPWS, 2000)

2.3. Assessment of Holder of a Right (Beneficiaries)

Holders of a right assessment works have been made according to the 'Regulation About Assessment of Holder of a Right' of Law 7269. In assessment period, two things are very important. One is damage assessment result and the other is property ownership relation.

Assessment of holder of right processes began with a preliminary study about province, damage assessments results, guiding and participating the victims of disaster. Then demand and contracting application period started. This period took about three months. Assessment of Holder of a Right Commission was formed and this commission evaluated the applications in one month. Results of the applications were declared for one week and one week was given for objections. After the objections were evaluated in one month they were declared again. Conditions of some damage assessment and assessment of holder of a right, which are matter for the courts have not terminated.

Owner of a demolished or heavily damaged house or workplace gains the right of a new house or workplace, if he provides ownership conditions. Owner of a moderately or slightly damaged house or workplace gains the right of strengthening or repairing his house or workplace, also if he provides ownership conditions.

To clarify the number of houses by which method were going to be constructed, a 'demand definition survey' was made by State Institute of Statistics and Ministry of

Public Works and Settlement. According to this survey as shown in (Table 3) 5.248 of 13.895 victims of disaster who had heavily damaged or demolished houses became holder of a right and demanded a new house. 2517 victims of disaster who had heavily damaged or demolished houses as holder of a right, demanded to build his new house by himself. And 419 victims of disaster, who have heavily damaged or demolished workplaces as holder of a right, demanded a new workplace in the Province of Yalova.

Table.3: Holder of the right

DAMAGE CLASSIFICATION	VICTIM OF DISASTERS		APPLICANTS			
	Residence	Workplaces	House	EYY	4133	Workplaces
Collapsed/Heavily Damaged	13 895	751	5 248	2 517	-	419
Moderately Damaged	14 540	1 159	7 898	-	75	634
SUB TOTAL	28 435	1 910	13 146	2 517	75	1 053
TOTAL	30 345		16 791			
REALISATION			5 533			

Source : GDDA;2001

2.3.1. Housing Tenure and Restoration Policy

There is a clear contrast between policies depending on housing tenure. There is a deep support for property owners while there is no policy at all for tenants

No policy for permanent housing is planned for those who lived in rented housing prior to the disaster. There is, in principle, no policy in Turkey to provide social rented housing. Some housing has been supplied as public official's accommodation and as a disaster measure in exceptional cases. Supply of social housing is not included in the general housing policy, so it is practically impossible to supply such housing on a mass scale after a disaster

A system to subsidize rent for the victims has been prepared. This is a temporary measure however and applied only to those who do not intend to live in temporary housing. There is no system to provide rent subsidy as a permanent housing measure.

In contrast, several measures are planned such as housing supply trough construction of new housing sites and provision of long-term loans with low-interest for those who own some real estate such as owner occupied housing. The development of new housing sites is limited to the disaster victims who has owner of the rights. Interest rate of the loan is planned at either zero or somewhere near zero, with a grace period of 2 years, and a term of repayment of 20 years. We have to be aware of the fact that

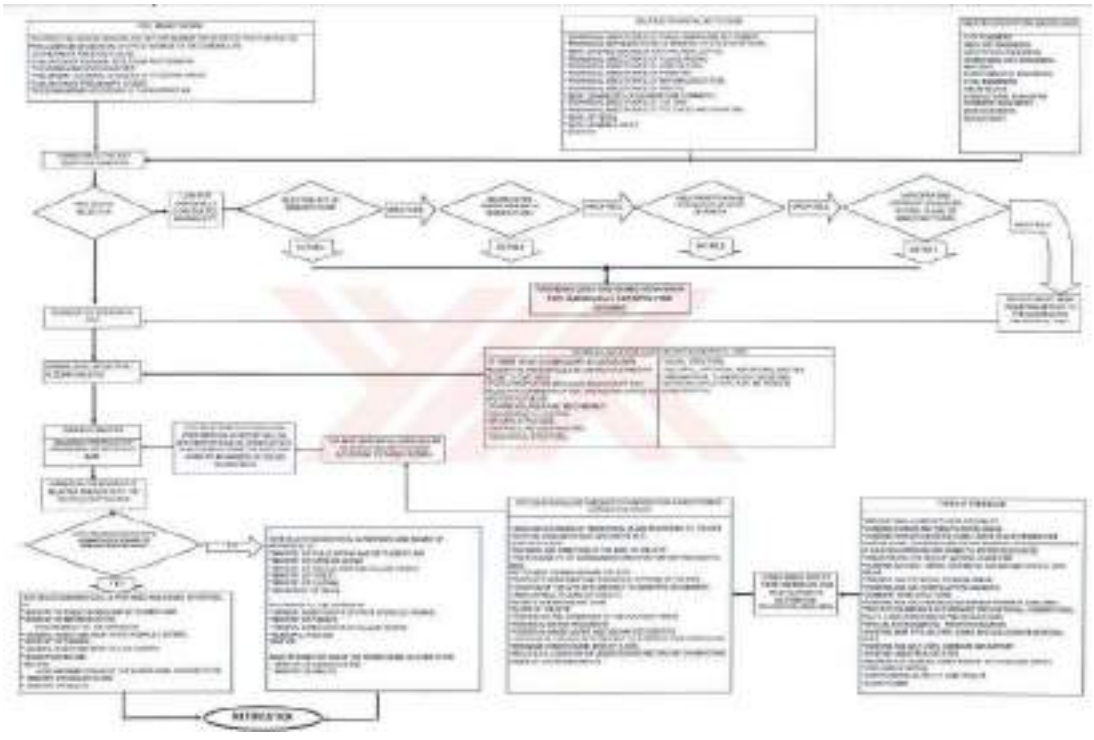
inflation has been high in Turkey since the end of the 1970s, meaning that eligible victims can acquire housing at a very low cost because their debt will decrease rapidly.

In many cases in Turkey, tenants are living in housing, which belongs to their relatives or acquaintances. There is a possibility that the circumstances of tenants will deteriorate due to a shortage of absolute number of rental housing units, a steep rise in the rental housing market and the collapse of the quake-affected tenant's income.

2.4. Site Selection Processes for Permanent Housing

For post disaster recovery works of Marmara Earthquake in 1999, by the help of General Directorate of Disaster Affairs, General Directorate of Technical Research and Implementation, General Directorate of Bank of Provinces, Municipalities and The governor(s) of the province(s) where empowered to organize preliminary works for site selection (Figure 3), according to the 16th article of Disaster Law (7269-1051: On Measures and Assistance to be Put into Effect Regarding Natural Disasters Affecting the Life of the General Public: May 25. 1959).

Figure 3: Site Selection Process of Disaster Victim Relocation Areas .



2.5. Provision of Figures and Physical Planning Processes

After the completion of site selection period, The General Directorate of Disaster Affairs had completed the geological and geo-technical studies on the urban development areas assigned by the General Directorate of Technical Research and Implementation. At the end of this study, permanent housing areas have been classified as “the areas with no need for a geo-technical study”, “the areas that need geo-technical studies”, and “the areas which should be used as green areas as the soil sedimentation is very hard”. Consequently, geologically and/or geo-technically unsuitable areas for habitation were developed.

2.5.1. Providing and Updating Base Figures for Relocation:

It is known that, like superstructure, Marmara Earthquake had affected many types of infrastructures. A linear strip about 160 km, which passes along many residential areas, was deformed between 0.6 m. and 2.6 meters. Province of

Because of this deformation, The General Directorate of Bank of Provinces updated all of the base maps of earthquake region by using GPS technology.

At first, the base maps of tent cities were prepared or updated. Then, base maps of prefabricated temporary residential areas provided. During the construction of prefabricated houses, base maps of suitable alternative areas of permanent residential areas were done. Between these alternatives, base maps of selected permanent residential areas were revised and presented for preparing development plans.

2.5.2. Upper Scale and Lower Scale Planning Studies:

Determination of permanent housing areas has started just after the completion of the studies related to allocation of land for prefabricated temporary housing. The main aim of the post earthquake planning activities undertaken related to permanent housing was to meet the housing need that has appeared after the earthquake, in the light of regional and rural development inputs of those

settlement areas which were considered suitable with respect to their soil and surface conditions, and data on damage level and eligibility for permanent housing. Within this scope, a dual approach including both new “Urban Development Areas” and “Settlement Areas of Disaster Victims” which were eligible for housing aid was adopted.

1/25 000 scale territorial planning studies, that determine the permanent housing areas on macro scale, have been prepared. Master and Implementation Plans, scaled respectively at 1/5 000 and 1/1 000 for the areas designated as the “Ministry of public Works and Settlement Implementation Areas” where dwellings for the beneficiaries according to the provision of the Law on Disasters will be located, are being prepared by either the General Directorate of Bank of Provinces and the General Directorate of Technical Research and Implementation, aiming at creating new, modern and self-sufficient residential units with adequate housing areas, pedestrian-traffic systems, urban green and recreation areas (parks, gardens for children, squares, etc.), technical and social infrastructure. (MoPWS, 2000, pp.29)

Out of the “Ministry of public Works and Settlement Implementation Areas”, where the Ministry had done implementation, the General Directorate of Technical Research and Implementation had controlled and ratified the plans prepared by the World Bank PIU.

1/25 000 scale territorial plans for the resettlement of disaster victims have been based on geologic and geo-technical ground studies by paying attention to spatial and social needs of the target settlements.

2.5.3. Expropriation:

After the process of site selection for permanent housing areas have finished, the expropriation studies started. General Directorate of Disaster Affairs and Prime Ministry PIU required for permanent housing and General Directorate of Highways required for the expropriation of service roads.

3.Conclusion

Although, no one knows where or when the next earthquake will occur, nobody has an idea of its scale or the number of people who may suffer from its consequences, nor whether it will happen in the city or in a rural area, we know that earthquakes are inevitable and they will come.

Governments and relief agencies, planners, engineers and geologists are striving to minimize their possible effects in seismic areas by surveying and implementing scientific methods to every step of the disaster hazard reduction and prevention process (Mitigation, Preparedness, Emergency Relief, Rehabilitation, and Reconstruction).

Reducing the risk of disasters involves activities such as improving the conditions of elements at risk, which either reduce or modify the scale and intensity of the threat faced.

To understand the nature and size of the risk for any society, we have to know both of the 'Hazard' and 'Vulnerability' (Disaster Risk = Hazard + Vulnerability).

Although risk reduction works (mitigation and preparedness) are often done before disasters, recovery process (relief, rehabilitation and reconstruction) after the earthquake disaster becomes a risk reduction work for the next earthquake. So the relocation gains quite importance in reducing the damages of the future disasters together with the aim of decreasing the current disaster damages.

The consequences of relocation itself may even be more harmful than the impact of the disaster. While a disaster may kill and injure many, disturb community organizations and economies and destroy infrastructure and dwellings, it rarely remove everything and structures of organization emerge from the rubble, often quite rapidly as the society undertakes the task of reconstruction.

On the basis of the preceding analysis of relocation experiences a number of conclusions can be drawn and lessons learned. The main conclusion is that too often relocations appear to have caused unnecessary suffering for the people involved. It is clear that any attempt to remove people from their existing physical, social and economic environment will have far- reaching implications for their lives. However, on

the basis of the more positive relocation experiences, it appears that negative implications can be limited if a number of conditions are fulfilled.

For this reason, site of reconstruction is one of the most important steps of the relocation process. Site selection can be done in two ways: selecting existing place of the damaged buildings or selecting a new residential area for reconstruction. If the situation is not surveyed well, both methods may have many advantages and disadvantages.

Involuntary resettlement often involves removal from an environment in which the society has evolved centuries old patterns of adaptation. This relationship to the environment may be based on economic, political or socio-cultural factors or a combination of any or all three. Economic dimensions such as soil fertility, resource availability, overall productivity or access to employment or labor resources; political factors such as territoriality, leadership structures and inter-group relations; and cultural factors such as the intimate (privacy) connections between environment and religion, cosmology, world view, and individual and cultural identity may all play significant roles in the relationships of a society to its land base and general environment.

It is for these reasons that many current researchers consider relocation must be avoided in development projects or minimized after the disasters. Otherwise, from the perspective of displaced people un-participated or forced relocation becomes a new disaster.

Unfortunately, the opportunity for participation in the decision-making by the relocates was in most cases rather limited, and this partially explains the lack of success.

Housing policy and urban planning in Turkey has been strongly characterized by centralization of power. Regarding the programs related to earthquake restoration, however, almost all power is temporarily transferred to the central government. This presents the problem of how they build up the relationships between the central government and municipalities, and between regional offices of the central government and municipalities.

Without agreeing with the national and regional development plans, by leaving aside planning discipline and thought, people have been encouraged to flow in the region which is known as settled on the earthquake region and the most important industry

region of the country, for to constitute cheap labor deposits in this region; coastal filling areas, fresh water reservoirs, productive agricultural areas, forests and plain lands have been opened for settlement and industry. In other words, plans have been prepared of the disaster existing, by being unplanned. Consequently, the planning precautions used to reduce the effects of natural disasters have been neglected, particularly during physical planning activities.

Nearly all of the central-government policies have encouraged private property house production and poor people who essentially have the need of residence have been put out of terms. Production of low-income housing, public housing and rental housing could not find any implementation area.

There is a clear contrast between policies depending on housing tenure. There is strong support for property owners while there is no policy at all for tenants. No policy for permanent housing is planned for those who lived in rented housing prior to the disaster, at least for now. There is, in principle, no policy in Turkey to provide social rented housing. Some housing has been supplied as public official's accommodation and as a disaster measure in exceptional cases.

However, it seems impossible for many prefabricated residential areas to turn back to the former use because of their infrastructures and bad effects to the environment. For additional permanent housing areas, the prefabricated residential areas were re-evaluated but most of them were not suitable because of their geological structures and ownership patterns.

If the site of earthquake-damaged buildings doesn't have any other disaster risks like flood, landslide, rock-fall, avalanche etc. relocation to a new site may also create many problems in the future.

Design of the houses also plays a very important role on occupancy. Housing design and construction are often blamed for the reaction towards or failure of post-disaster resettlement projects. Faulty construction and inferior materials in houses become quickly evident with use and create difficult living conditions, particularly regarding thermal protection in different seasons. Houses are cited as being too small for large rural extended families.

Traditional houses have evolved over time as functional to the needs of the household unit. The design of resettlement houses is often inappropriate for domestic activities, which require different kinds of spaces for different uses according to seasons. The design deficiencies of the state provided houses in rural areas of previous cases were modified by the occupants, in the form of alterations and extensions to them.

Construction materials of traditional houses are also very important for the seismic risk. Mud mortar, rubble stone masonry wall, flat earth roofed dwelling units are the most common houses in the rest of Eastern Anatolia.

This poor workmanship with poor mortar material resulted in total collapse of almost all the dwellings in Lice and the poor masonry workmanship caused the damage of cement-lime mortar masonry buildings as well. Construction of heavy roofs with inadequate connections to the walls and the generally poor quality wall construction caused total collapse of many houses and accounted for large losses of lives.

In many regions of Anatolia, it is unfortunately impossible to prevent large loss of life since there are houses with mud mortared rubble masonry walls and heavy flat earth roofs. For this reason, the aim should be the improvement of local housing construction practice.

Locations and specifications of these selected sites show that these areas are not selected after detailed surveys based on urbanization, environmental, infrastructure, property ownership and sociological principles. The institutional priorities had been omitted. In fact, even though these areas were selected only according to the geological criteria, there are still many speculations about their geological structures.

Consequently, by this study it is exposed that, post disaster relocation processes are important for reducing future hazard risk in an earthquake prone area. Within these processes, site selection studies relying on geological criteria are one of the most important steps. However, it is not going to be effective unless other criteria such as socio-cultural, traditional, economic, psychological, legal and institutional are not taken into consideration systematically.

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Towards an adaptive approach to spatial development: insights from the 'leisuring' of landscapes

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Keywords: adaptive planning, complexity theory, leisure landscapes, non-linearity

Abstract. The capacity to adapt has become a crucial property to sustain spatial and socio-economic development of a region, due to the impact of relative autonomously changing contextual circumstances (e.g. climate, economy, politics, demography, life styles) that impact and alter the way urban and rural territories are used, and which are to a certain extent beyond the control of planners. In this paper it is argued that, to avoid and mitigate negative influences that may perturb desirable situations, a degree of robustness is needed. Simultaneously, co-evolving and benefitting from new emergent situations requires a degree of flexibility. The 'adaptive capacity' to anticipate to autonomously changing circumstances relates to the ability to timely adjust the balance between robustness and flexibility. The paper is illustrated by the shift rural territories tend to undergo, especially in the vicinity of urban areas, increasingly becoming *leisure oriented landscapes.* Leisure-oriented landscapes are understood as multifunctional places: next to the more traditional land uses such as nature, agriculture and forestry land uses emerge that revolve around the qualities of space such as tourism, recreation, suburban and exurban living, and leisure. This paper aims to clarify how this shift comes about and discusses the impacts on spatial development, planning and decision-making. It is argued that for its development planners are confronted with a paradox: retaining essential spatial qualities that provide localities with potential for leisure-related developments requires robustness whereas flexibility is relevant to give room to the adaptive behaviour of actors trying to acquire a better 'fit' given local characteristics and dynamic contextual developments.

1. Introduction

The capacity to adapt has become a crucial property to sustain spatial and socio-economic development of a region, due to the impact of relative autonomously changing contextual circumstances (e.g. climate, economy, politics, demography, life styles) that impact and alter the way urban and rural territories are used. Space and place can, hence, considered to be constantly *out-of-equilibrium,* caught up in persistent process of *becoming* (De Roo et al., 2012). Planners become aware that development trajectories

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are not necessarily linear and predictable, but tend to unfold non-linearly as well. With non-linearity we mean that the object of planning (e.g. a neighborhood, city, region) is not only dynamic, it is moreover able to change in fundamental ways as will also be illustrated in this paper. Non-linearity implies there are to a greater or lesser extent uncertainties involved in how development trajectories unfold towards the future.

Such a perspective emphasizes the need for approaches that embrace uncertainty and offer anticipative strategies next to strategies aimed at reducing uncertainty. It emphasizes that planning needs to co-evolve along with the processes that drive spatial change, instead of trying to control and confine dynamics, and promote the capacities to manage emergent non-linearity. Hence, in a dynamic reality, regions will need to develop adaptive capacity that allows to reinvent themselves through the adapting of constituent elements, organization, institutions and their relations in response to dynamics. The lack of such capacity may result in negative (socio-economic, environmental) externalities and regional lock-in (cf. Grabher, 1993; Martin, 2010). As such, managing non-linearity requires approaches to spatial planning that stimulate the adaptive capacity of regions so to agilely deal with dynamics: a capacity that enables actors to simultaneously avoid and mitigate (potential) negative impacts on desirable trajectories as well as explore and benefit from the potentials of nascent or emergent novel development trajectories (e.g. to avoid lock-in situations).

This paper builds on an emerging body of literature that explores complexity theories, and aims to further refine these insights. It contributes by providing insight in to the mechanisms behind non-linearity and contributes to the existing body of literature on strategic spatial planning by discussing *adaptive* planning strategies. The paper is illustrated by the shift rural territories tend to undergo, especially in the vicinity of urban areas, increasingly becoming *leisure-oriented landscapes* (Slee, 2005; Woods, 2005). In these territories usages such as tourism, recreation, leisure and suburban and exurban living emerge next to the more traditional agriculture, forestry and nature. This shift, and ongoing dynamics, pose novel challenges for planners to deal with. Our aim is to better understand the impact and consequences of such non-linear development for spatial planning practices. Relating mechanism behind non-linearity, processes that drive spatial change, and spatial planning allows us to comment on stimulating the adaptive capacity of localities through spatial planning.

The first part of this paper provides a background on how leisure-oriented landscapes come about. We provide theoretical and conceptual support to better understand the coming about of non-linearity and the need for adaptive capabilities in the context of spatial planning (section two). This theoretical framework is used to clarify the emergence of leisure-oriented landscapes (section three). In the second part of the paper, conditions for (further) development are explored. Here, we draw on the theoretical insights presented and operationalize these insights in the context of leisure-oriented landscapes. Finally, we have the ingredients to discuss the co-evolution of planning

strategies, so to guide the process of emergent multifunctional, more leisure-oriented landscapes in their evolution.

2. Towards a dynamic-adaptive perspective on spatial development

The body of literature on adaptation and non-linearity increases in several fields that relate to spatial and economic development. Authors try to find sets of concepts and theories that allow them to describe the inherent dynamic nature of the phenomena they study. Fields that are addressed are, amongst others socio-ecological systems (Gunderson & Holling, 2002; Folke, 2005; Gerrits, 2008), socio-technical systems (Geels 2010, Geels & Schot, 2007), climate change (Pahl-Wostl, 2007; Gupta et al, 2010), socio-economic systems and evolutionary economics that focuses on the innovation of firms and industries (Simmie & Martin, 2010; Martin 2010; Boschma & Frenken, 2007) and complex adaptive systems (Wolfram, 2002; Holland, 2006). Generally the concept of adaptation is explained as a capacity to respond to multi-level change, and to improve systems to improved states or a better fit with their environments/contexts (e.g. Folke et al., 2005).

The interest in exploring the concept of adaptation relates to the desire to anticipate processes that drive change, but which take place on a contextual or macro level and are to a certain extent beyond the influence of actors that are influenced by them. The processes occurring at these abstract levels are considered having an autonomous character. Examples from the above mentioned fields are climate change (Gupta et al, 2010), exogenous socio-technical landscapes (Geels, 2010), external shocks (Martin, 2010) disturbance events, crisis and surprise stemming from external forces (Folke, 2005; Gunderson & Holling, 2002) and the external environment (Waldrop, 1992). To cope with such processes the constituents of a system (e.g. constituent parts, individual actors, organizations and governments) tend to respond by altering behavior, undertaking interventions and changing frameworks that govern their behavior. Hence, system change can be understood as a confluence of top-down, and bottom-up processes, partly autonomous in nature and partly consisting of planned actions, which simultaneously interact and influence one another.

To structure the interactions processes that make up for dynamics, multi-level perspectives are introduced. In this respect, Geels & Schot (2007) observe niches, regimes and ‘landscapes’ in socio-technical systems. In the context of socio-economic systems micro, meso and macro levels are distinguished (Dopfer, 2004). Holling (2004) introduces multiple levels of scale related to the panachy model (see also Gunderson & Holling, 2002). Interactions between levels of scale are considered persistent since macro and meso dynamics open up opportunities for micro-level (niche) developments. Simultaneously, micro level novelties (niches) can work their way up to the meso (regime) level and, potentially, to the macro (landscape) level. Change, therefore occurs as a result of being mutually receptive to multi-layered interactions (Geels, 2005; see

also Jessop, 2005) making it difficult to comprehend an entire system and to exactly calculate or predict the outcomes of system dynamics.

To relate adaptation to the coming about of non-linear development trajectories of territories, we will elaborate on theories about complex adaptive systems. The growing awareness that spatial developments is affected by multiple interconnected and interrelated processes that take place at different levels of scale, has led to the interest in exploring the scope of complexity theories in the realm of planning and spatial development (Urry, 2003; Allen, 2003, Batty, 2005; Byrne, 2005; Manson & O'Sullivan, 2006; De Roo & Silva; 2010; De Roo et al. 2012). Our main interest lies with the mechanisms that provide for the adaptive behavior of complex adaptive systems. Complex adaptive systems are open systems which neither show predicable linear behaviour, nor fully chaotic and unpredictable behaviour. Instead, their development can be understood as endless sequence of adaptation, re-organization whereby it moves, over time, towards different and new equilibria (which will never be fully reached). They are always to be out-of-equilibrium to a greater of lesser extent. Because equilibria tend to differ fundamentally from one another in terms of constituent parts and their relations, it is hence argued that complex adaptive systems evolve in a non-linear manner (Waldrop 1992; Phelan 1995).

The dynamic nature of complex adaptive systems is attributed to adaptive capacity of the constituent parts to self-organize. They are capable to endlessly reconfigure and realign themselves and their relations in response to contextual change, and in response to one another (Cilliers, 2000), due to feedback (evaluating, learning, scanning and interpreting information that comes from its environment) and feed-forward (predicting, planning) processes (Portugali, 1999; 2008). In other words, the constituents 'co-evolve' in response to one another (Garnsey & McGlade, 2006),

Local, self-organized changes, responding to (contextual, environmental) dynamics, build on historic events – they are path dependent – they do not necessarily imply a (linear) continuation of historical paths (Belussi, 1998; Van Notten, 2005). Patterns created in the past can be (gradually) changed and renewed as constituents 'adapt' to acquire a better 'fit' in response to one another and the possibilities and constraints stemming from the contextual environment (Holland, 1995; Cilliers, 1998, Folke et al, 2005). The 'adaptive properties' that allow them to perform such behaviour is an essential property to deal with the perturbations caused by (autonomous) dynamics. By reconfiguring and performing non-linear development, complex adaptive systems retain their capacity to adapt, crucial for 'survival' in future situations. Hence, it implies a certain degree of restlessness resulting from a persistent process of *becoming* (De Roo, 2012). These 'adaptive properties' are an appealing mechanism in the context of a persistently dynamic nature of spatial change as well as in terms of sustainability.

Studying adaptation in the context of spatial development

Inspired by the theoretical discussion provided above, we put forward a multi-layered analytical framework presented in figure 1 (cf. Hartman et al., 2011) to catch the planning issue as a composition of the material, organizational and institutional dimensions, which are interrelated and interact on various levels of scale, the macro, meso and micro. The framework differentiates three levels of scale to understand the persistently dynamic nature of spatial change, as a confluence of an autonomously changing context (macro-trends and events) and (self-organizing) responses and innovations at the micro level. The intermediate meso-level is referred to as the geographical scale at which functionally cohesive patterns emerge spatially, as a result of micro-macro interactions. From a planning perspective this is the level at which micro-level (self-organized) innovations can be related to developments elsewhere so to put them in a relational perspective, and to make it apparent whether planners' attention is required to stimulate or dampen its emergence or to enhance the interactions between the micro (local) and macro (global). As such, our analytical framework does not pursue a fixed geographical scale. Depending on the planning issue addressed the scale could vary in size (e.g. neighbourhood, city, urban region, network). The boundaries of the issue under study ('the spatial system') are likely to be pragmatic and normative (cf. Martin & Sunley, 2007). The framework as it is presented addresses a 'slice in time'. Considering this multi-layered analytical framework at various moments in time helps to clarify the evolving relation between emergent non-linear development trajectories and planning.

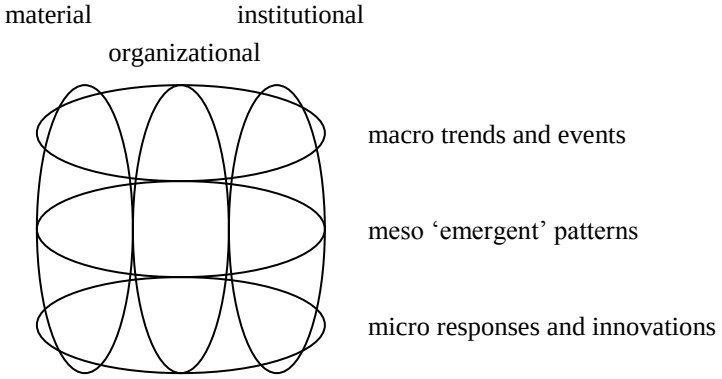

Figure 1: multi-level analytical framework (adapted from Hartman et al., 2011)

In the following sections the framework is used as a guide to clarify the emergence of leisure-oriented landscapes – as emergent patterns which become apparent at the meso level due to multilevel interactions. We clarify how the spatial transformations come about by relating local spatial dynamics and innovations to macro trends and events. The framework emphasizes that such material transformations (in a physical, morphologic sense) have an organizational and institutional dimension as well. The organizational

dimension refers to the actors involved and their coalitions who observe potentialities and are willing to undertake spatial transformations. The institutional dimension refers to formal and informal rules, cultures, customs, values and norms including political-administrative institutions and their interventions in terms of laws, guidelines, zoning plans, financial support and formal decision-making procedures (Healey, 2007). Adaptation can be seen as the (spontaneous) response, change and development of a system at the meso, being the result of interactions from and between the global and local and to which the system transforms, allowing a better fit (enhancing its connectivity and the potentiality of its connections) with its context and in between the global and local (compare Cilliers, 1998; p90; Folke et al. 2005).

3. The emergence of leisure-oriented landscapes

Urban areas and their surrounding countrysides become increasingly intertwined, forming urban regions. These countrysides go through a transition, becoming leisure-oriented landscapes to a greater or lesser extent. This transition manifests itself by actors introducing new functions and land uses related to tourism, recreation, leisure, sub-urban and exurban living and working that thrive by the *qualities of space*. We use the notion 'leisuring' to refer to the transformative processes of places associated with developments designed to serve residential, recreational and touristic demands (cf. Bunce, 2008). Guided by the framework presented in fig. 1, we aim to clarify that this shift unfolds rather autonomously as a confluence of processes coming from the 'outside' contextual environment and responses by local authorities and (policy) entrepreneurs.

The autonomous nature of this shift relates to persistent dynamics that stem from interactions between the macro (global) and micro (local). Places are constantly in motion due to the high interconnectivity of places and people, known as the network society (Castells, 1996), and the dynamisms that go with the fluidity of contemporary processes (see Bauman, 2000; De Roo & Silva, 2010). The increasing global interconnectivity and the relatively low cost of instant communication and high speed transportation, flows of people, goods, and thoughts are less influenced by distance as a limiting factor. The enhanced cross border interaction as the result of political-administrative action reinforces this trends, through organizations and institutions operating at the macro-level such as EU, NAFTA, WTO, UN, GATT (see McCann, 2008). Physically and virtually, networks stretch across the world. As a result 'cultures, economies, social worlds, politics and environments all become driven by logics of increasingly intense interconnections and flows, over larger and larger geographical scales' as it is well put by Graham & Healey (1999; p11). Consequently, at local, regional and even national levels actors are forced to move along with the processes they cannot influence directly (Urry, 2003). To continue to participate in the globally interconnected economy means actors (have to) conform and adapt to the international 'rules of the game'.

In this context, McCann (2008) observes that processes related to globalization makes spatial and economic development 'curved'. Employment tends to concentrate in urban areas where industries, services, logistics, and the development of knowledge and technologies cluster. However, simultaneously, throughout Europe (former) rural and peri-urban territories experience an influx of urbanites and visitors (recreating, visiting, living) as well as policies and regulations aimed at protecting landscapes, heritage, nature and other amenity values considered important by the (predominantly urban) society. This relates to the global shift to the service economy that is accompanied by people gaining more free time and disposable income (Antrop, 2005), by enhanced communication and mobility, and by society showing an increasing interest in nature, landscapes, (cultural and build) heritage and quality of life (Williams & Shaw, 2009). In response (policy) entrepreneurs adapt by adopting initiatives relating to tourism, recreation, suburban and exurban living, health care, wellness, and cottage industries.

The development trajectories of coutrysides are, consequently, fundamentally changed, when compared to their pasts, traditionally revolving around agriculture and nature. Moreover, farmers tend to (co-)adapt as well finding niches such as biological farming, energy production, the maintenance and development of nature, education, health care as well as activities related to leisure (wellness, recreation, tourism). These activities can offer relative advantages (Rogers, 2003) and can overtake the primary agricultural activity in time. However, whilst the relative economic importance of the agricultural sector is declining, it is nevertheless spatially and socio-culturally still quite dominant and important for retaining the characteristics and amenity value of localities (Slee, 2005). The changing circumstances have create societal and political *windows of opportunity,* (see Kingdon, 2002) strengthening the receptiveness to explore new paths of development.

For the emergence of leisure-oriented landscapes, important driving forces of change are confluences of factors such as demography, economy, technology, ecology and political-institutional and social-cultural aspects (cf. Gillespie, 2007, Johnson, Scholes & Whittington, 2005). Well-known composite macro-trends are (e.g.) globalization, urbanization, sustainability and climate change. Landscapes are reshaped morphologically and spatial-economically as market parties, governments, NGOs and individuals respond to multilevel changes, altering their behavior and actions, generating new developments to suit newly emerging societal needs. It is out of the interconnectedness and interactions between the global and the local, and the potentialities these contain, where new opportunities and issues continuously arise in a relatively autonomous manner. It can as such be argued indeed that landscapes evolve over time, a result of planned actions and unplanned events (Antrop, 2006).

As a consequence of interacting (f)actors on multiple levels of scales, together creating a highly complex process, planners have become aware that the way development trajectories unfold towards the future is at least partly uncertain (Albrechts, 2006; De

Roo & Silva, 2010). Dynamics can be(come) too complex to comprehensively understand and plan for (Healey, 2007). This should make planners modest with respect to their ability to control development trajectories of places (cf. Urry, 2003). Moreover, accepting that development trajectories evolve non-linearly, as systems adapt to changing circumstances, requires the material, organizational and institutional dimensions to co-adapt or co-evolve. It emphasizes the importance of adaptive capabilities to guide places in their evolution, and so to be able to profit from autonomously emerging opportunities and to avoid negative impacts.

Whereas some regions are capable to adapt to changing circumstances, others are not. Martin & Sunley (2006; p395) see that regions become locked into paths of development and over time lose dynamism, whereas others are able to avoid this danger by 'reinventing' themselves through the successive creation of new development paths (see also Garud & Karnøe, 2001; Martin & Sunley, 2010). In tourism literature, this is also referred to as the life cycle approach (see Butler, 1980). In the absence of reinvention, the danger of getting in to a lock-in situation increases (Grabher 1993; Arthur; 1995, Martin, 2010). In lock-in situations the potential of new, alternative developments may not be recognized as they may be only 'weak signals' (Ansoff, 1975), and consequently suppressed in favor of vested activities, that are established and have proven themselves in the past (Geels, 2005). As a result regions may become highly specialized and potentially become less resilient (Simmie & Martin, 2010) and 'victims of their earlier success' (Boschma & Lambooy, 1999; p416) especially when a spatial-functional lock-in is reinforced by a cognitive and/or political lock-in (Grabher, 1993; Hassink, 2010). The ability to deviate from a vested development trajectory is then constrained by rigidly retaining traditional spatial patterns, policies, strategies and institutional settings that once supported economic growth in an area but do no longer. In the following section we characterize leisure landscapes to distinguish conditions for development and discuss consequences for material, organisational and institutional dimensions.

4. Characterizing leisure-oriented landscapes

The becoming of leisure-oriented landscapes, implies that the meaning and values attributed to landscapes change fundamentally (Buijs et al, 2006). Landscapes are no longer confined to the production of food and fiber, or to nature. Landscapes are also interpreted as commodities, utilizable for tourism, recreation, living purposes. They serve as means that offer potential for development or as a décor for producing experiences (cf. Pine & Gilmore, 1999). For leisure-related occupancies, explicitly subjective aspects matter such as aesthetics, authenticity, identity, sense of place and belonging (amongst others Tuan, 1977, 1990; Relph, 1976).

The importance of amenity and experiential values is also related to changes in the field of tourism, recreation and leisure. Enormous growth has been realized in these sectors, and it is expected to do so in the future (see UNWTO, 2011). The innovations in communication and transportation technology improved the action radius of people, and

reinforced the accessibility of places and the competition between them. The result is an increase of dynamics and diversity, and initiatives diffuse over urban as well as rural areas. Entrepreneurs tend to specialize and develop niches to deal with the competitive nature of the industry (Brinkhuijsen et al., 2007). On the one hand, tourism and recreation become more intense and active. On the other hand, experiences are sought that are more extensive, revolving around relaxation, tranquility, culture, identity, spirituality, etc. Overall, the products, services and places are not only chosen for their functional value only but increasingly so for their experiential value (Pine & Gillmore, 1999).

Similarities can be found in the housing sector. For living, people tend to diffuse over wide geographical surfaces settling in the urban, peri-urban and rural areas in search for the experiential values that fit their life styles. The urban cores provide high density, highly dynamics places. The city's edges offer the benefits of both the urban and its countrysides, where developments are known as suburbanization. In addition, exurbanization is coined to describe the phenomena of 'very-low-density, amenity-seeking, post-productivist residential settlements in rural areas', wherein the inhabitants 'have deliberately chosen the rural landscape as a setting for their homes' (Taylor, 2011; p324). Agian, landscape amenity and experiential value are important factors. Bruegmann (2005) adds that these low-density areas lay beyond the suburbs but are still an integral part of the urban system. Similarly, rural areas face an influx of highly specialized, small businesses (e.g. consultants, architects, designers, artists, webmasters) that operate in supra-regional or international networks (so-called cottage industries by Tordoir, 2010).

In the context of place and landscapes, the physical dimension requires planners to take into account not only the functional, tangible aspects of a place, but also intangible, hedonistic aspects (Buijs et al, 2006) that provide for a sense of place and belonging (Steele, 1981). Relevant are the presence and accessibility of natural (nature, ecology, landscape) and built environment (infrastructure, heritage) as well as their aesthetics, identities, authenticity and uniqueness. Moreover, initiatives depend on the availability of experiences, creating a need for things to do and interesting stories about places, people, culture, histories made available in interesting ways (e.g. events, technologies). For experiencing, giving and deriving meaning, being crucial aspects of leisure, less tangible aspects may be more important than physical ones (Caalders, 2002; Metz, 2002). These observation opts for more integrative, holistic approaches that revolve around landscape amenity and spatial quality, compared to approaches that deal with sectors (e.g. nature, infrastructure, housing, water) individually.

How the development of leisure-oriented landscapes become spatially manifest, and the extent to which, is shaped by the way people perceive *cognizable* sets of biotic and abiotic elements in *expressive* terms (Keulartz et al., 2004): what do we like, what do we find ugly, exciting, adventurous, safe, or what makes us find belonging in a place? These

perceptions attached to or derived from elements provide people with the incentives for visiting, living or establishing tourism businesses, or refrain them from such actions. As such, perceptions are important for providing a place with potential for leisure-related developments. Perceptions are also relevant since they shape how places and their future development trajectories are judged normatively (Keulartz et al., 2004): what elements should be preserved or protected and what elements may be adjusted, transformed and added? To address such questions the notion *spatial quality* is introduced (Rapoport, 1970; Moulaert et al. 2011). Spatial quality can be attributed to (sets of) factors, (amongst others) as a means to describe the elements that are perceived as conditions for making a place worth visiting, living in, starting businesses in – i.e. the aspects that provide localities with potential for leisure-related developments.

5. A planners' adaptation to stimulate the 'leisuring' of landscapes

Although leisure-oriented initiatives can offer formidable potential for spatial and socio-economic development, it can also be(come) a force that shapes the physical and socio-economic landscape negatively. The impact of spatial interventions can differ greatly, ranging from low-impact being in symbiosis with its (natural) environment to high impact developments that transform landscapes and benefit from a location but do not contribute to enhancing landscapes. A spectrum is put forward in figure 2 to capture this range of relations between leisure and landscape more conceptually (see Hartman et al., 2011; Cadieux & Hurley, 2011).

At one end interventions can be positioned that revolve around development and taking opportunities for (socio)economic development. This refers to developments that emerge in or near attractive places, where functionality is dominant and the focus is mainly on economic returns over the enhancement of landscape qualities. Brinkhuijsen et al. (2007) observe that these can take parasitic forms, when relations with their surroundings are purely functional, and matter mostly in terms of location. To indemnify places from (potential) negative perturbations, a traditional planning approach is to spatially separate different types of land use through zoning (Hartman & De Roo, 2009; Hartman et al., 2011). At this extreme, we can position places that are devoted predominantly to development to support leisure complexes (e.g. hotels, B&B's, theme parks, bungalow parks) as well as suburban neighborhoods, business parks and agricultural or silvicultural production.

At the other end interventions can be put that respect preserving place-based qualities and mitigating risks of disrupting these qualities. Leisure-oriented initiatives can be considered incompatible with nature and heritage when it causes deterioration. In addition, as is also described earlier, impacts may be considered negative when hampering the development abilities of agriculture (e.g. limiting up scaling, rationalizing landscapes) and forestry (e.g. co-use, amenity values) and alter rural communities (gentrification, exclusion) and lifestyles (Theobald, 2005). Through planning perturbing developments may be completely avoided or limited to low impact initiatives to protect

particular landscapes or activities. At this extreme, localities may be positioned that revolve mainly around nature, landscape or heritage, as a result of protective measures (Holmes, 2006; 2008).

The extremes mainly serve a conceptual purpose, because in reality landscapes hardly consist out of functionally separated land uses. As Holmes (2008), rightly notes many places are more or less multifunctional (also see Evans et al. 2002, Wilson, 2001). Moreover, spatially separating functions runs in against the autonomous development of emergent leisure-oriented landscapes: a process of actors trying to utilize the potentialities of landscapes and translate them into marketable activities by linking macro processes (changing life styles, increasing demand for leisure) to local characteristics (place-based qualities). Hence, stimulating leisure-oriented landscapes concerns developing the gradient in between the extremes, revolving around synergies between preservation and adaptation (figure 2).

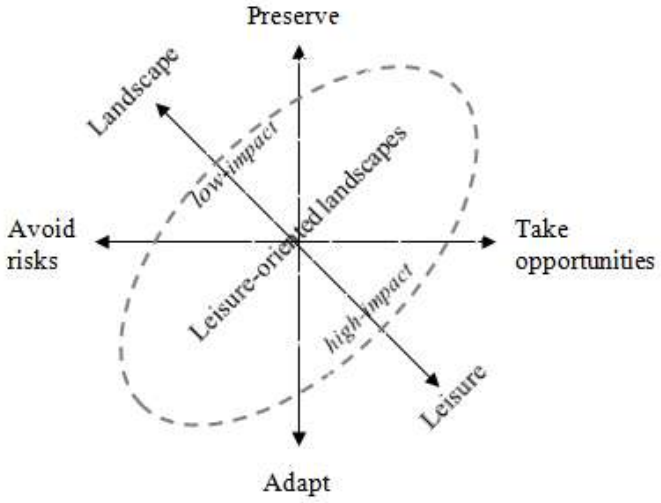

Figure 2: leisure-oriented initiatives in relation to landscape and carrying capacity

In this context, planning is important along to two lines (which relate to the extremes on the continuum that are set out in fig. 2). First, interventions to retain in the past acquired spatial qualities that are important for providing places with potentialities to attract visitors, inhabitants and (leisure-related) businesses. This emphasizes the need for a degree of *robustness*. Second, interventions to adapt places in order to co-evolve along with contextual, societal dynamics i.e. adding new functionalities to existing landscapes and building, introducing new types of land use or transforming places more fundamentally so to acquire a better fit between the local and the contextual. This emphasizes the need to promote a degree of *flexibility*.

- A degree of **robustness** represents a focus on *being*: interventions aim at preserving and sustaining in the past acquired spatial qualities. Potentially disruptive impacts are avoided or mitigated in order to minimize negative impacts so to preserve and protect expressive factors perceived as important for (future) leisure-related developments. A place its (perceived) carrying capacity determines whether and in what form developments are possible.

- A degree of **flexibility** represents a focus on *becoming*: interventions focus on utilizing as well as transforming pre-existing landscape elements (to a greater or lesser extent) so to enhance, expand existing qualities or introduce alternative, novel spatial qualities that provide a better 'fit' with current and expected future societal demands. Although these processes of adaptation may build on earlier developments – path dependencies – the focus leans towards deviating from historic development trajectories, stimulating non-linearity.

From a complexity perspective, emphasizing the persistency of dynamics, planners are challenged to balance the degrees of robustness and flexibility. Whereas robustness is needed to adhere to certain qualities and development trajectories, a sole focus on robustness may inhibit the capacity to adapt to changing circumstances and result in negative locked-in situations. Flexibility is needed to co-evolve along with contextual dynamics and provide room for the innovative, self-organizing behavior actors. However, a sole focus on flexibility ('laissez faire') may result in chaotic situation that negatively affect development potentialities for the future. Balancing robustness and flexibility is a strategic planning and decision-making issue that requires ideas about and perspectives on place-based amenity values, and where improvements can be realized. Moreover, processes driving spatial development will (likely) change over time, resulting in the emergence of new perceptions on the use and development of space, giving rise to novel land use claims, and the submergence of traditional ones. What constitutes spatial quality is temporal in time and place as it is dependent on actors that have an interest and on their perception – which can both change in time. The balancing act is therefore an iterative process of monitoring, adjusting and adapting perspectives on carrying capacity, spatial quality and development.

6. Reflection: towards an adaptive planning approach to spatial development?

In this paper we have illustrated that, from a planning perspective, the transition territories undergo becoming leisure-oriented landscape occurs in a relatively autonomous manner. To guide these territories in their evolution, this paper has illustrated the need for the co-evolution of material, organisational, institutional dimensions in order to anticipate multilevel processes that drive spatial change. Moreover, in this context, we observe that there is a need for adaptive planning approaches. Adaptive planning refers to (strategic) planning approaches that stimulate

the adaptive capacity of places, enabling regions to timely anticipate to emergent non-linearity.

To discuss adaptive planning approaches to spatial development, we focus on the mechanisms behind the processes that drive spatial change. Here, we draw on insights from complexity theories and complex adaptive systems in particular. The emergence of leisure-oriented landscapes adds to these insights that managing spatial dynamics and non-linearity requires planners to constantly balance robustness and flexibility. On the one hand they are burdened with the task to guard over a degree of robustness in order to sustain the development opportunities of places and societies towards the future. For leisure-oriented landscapes a degree of robustness is needed to sustain spatial qualities of places, and avoid and mitigate negative impacts. However, on the other hand, anticipating dynamics and non-linearity provides an argument not to become too robust, and for planners to stimulate a degree of flexibility as well. This is a paradox planners are confronted with.

Combining these insights we can deduce several conditions for managing non-linear development. First, the importance of self-organisation which refers to the adaptive behaviour of actors trying to acquire a better 'fit' given local circumstances and macro trends. Their actions may serve as guides for how development trajectories unfold towards the future: a continuation of historic paths or the emergence of alternative paths? Second, the importance of feedback and feedforward processes (see Pahl-Wostl 2007; Walker et al. 2002; Portugali, 2008). Feedback encompasses identifying emerging and 'submerging' developments, trends and issues. It allows recognizing the potentialities of niche developments, and assessing whether to support or constrain them. To formulate criteria for assessment, feed-forward processes are crucial. This refers to the efforts that revolve around exploring possible and desirable future states, and the subsequent strategic planning actions and interventions that are considered needed to capture opportunities or deal with potential issues (cf. Van Dijk, 2011; Myers & Kitsuse, 2000).

What are the implications for planning? Feed-forward processes are important for stimulating robustness: creating ideas, perspectives and (formal) strategic visions about potential and desirable future states and appointing crucial factors (e.g. spatial qualities) that need to be retained or adapted (compare fig. 2). In the context of leisure-oriented landscapes, governance structures become appropriate constellations to incorporate multiple actors and (policy) sectors involved as well as to take in to account intangible factors (Hultman & Hall, 2012). Moreover, trend watching and monitoring (e.g.) economic, demographic, environmental and political change at various levels of scale help to observe processes that indicate or inhibit non-linearity. It is about reflexivity: recognizing early (warning) signals indicating processes of self-organisation and emergent new development trajectories, and the submerging land uses and the danger of negative locked-in situations. This revolves around feedback to identify when regions

and planning systems tend to become too robust, whether to simulate flexibility, and whether to adapt dimensions (fig. 1).

Stimulating flexibility benefits from (purposefully) linking macro trends and events to micro responses, requiring room for experimenting and self-organisation that may lead to alternative development trajectories that deviate from the past. Actors need to learn and become aware how new initiatives can offer relative advantages (see Rogers, 2003), how they help cope with unfolding urgencies, under which conditions development emerges, and which (alternative) approaches and strategies are required. Micro-initiatives by the actions of innovators and early adopters can serve as (small scale) trials or experiments that empower actors to observe and showcase their 'relative advantages' over others in terms of e.g. socio-economic development or impact on the environment. The awareness of relative advantages can provide incentives and mobilize resources to further explore potentialities. It could increase the receptivity to adapt organizational and institutional dimensions, when conditions for development require to deviate from past trajectories, routines and approaches (Geels, 2005; Martin, 2010).

The (case of the) emerging leisure-oriented landscapes illustrates that adaptation can be a contested process. Stimulating robustness, revolving around preserving factors important for the quality of space, can be inconsistent with simultaneously stimulating flexibility, allowing for actors, societies and regions to acquire a better fit (to co-adapt) to changing circumstances. Nevertheless, crucial to managing non-linearity is to support multiple development trajectories: not to fully specialize but to keep multiple options open for future development trajectories, so to agilely shift when beneficial or necessary (for example specialized diversification, Pike et al., 2009; smart specialization, McCann, 2011; related and unrelated variety, Frenken et al., 2007; pluripotential, Hartman et al., 2011). The dynamic reality, spatial development is a persistent process of adapting, experimenting, innovating, evaluating and learning. Developing the adaptive abilities to do so is likely to become increasingly important, given the (contextual, largely autonomous) forces driving local and regional spatial dynamics.

7. References

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Past and present of the development of mega transport projects (MTP) in Greece: changing paradigms, priorities, challenges and outcomes

This paper reviews the history of infrastructure development in Greece with special reference to transport and mega transport projects. This review starts from the late 19th century and extends until today trying to trace the major political, economic and social challenges that have historically influenced the formulation of MTPs in the country. We propose a periodisation according to broad periods related both to socio - political change and changes in the priorities of the country that reflect the transformations of the accumulation regime, thus combining principal political and economic eras affecting the planning, funding and delivery of construction infrastructure and consequently MTPs.

The emphasis is placed largely in the periods after late-eighties, which we regard as the most insightful for analysing the formulation of the present context of planning and delivery of large-transport projects. The analysis of the current context is then supported by a subsequent discussion on the specific institutional, legal and funding circumstances that are relevant to the development of MTPs. The paper concludes with our reflections on today's relevant harsh dilemmas and questions, regarding the MTPs that are in the construction and planning phase, given the relative severity of broader challenges such as EU governance, privatization, financial globalisation, car-dependency, modern technology, environmental protection and the economic and institutional sustainability of the state.

Past and present of the development of mega transport projects (MTP) in Greece: changing paradigms, priorities, challenges and outcomes

1. From the 19th century to the 2nd WW

Greece, when becoming an independent country in 1830, was already considerably lagging behind the western European world which was already half way through the first industrial revolution. Technical progress thanks to the stream of inventions was going on giving birth to new systems of infrastructures for most human activities. Steam was already in action since the beginning of the 18th century, and put in to industrial duties in the textile factories from the last third of that century. Portland cement was already invented in 1824 while the lathe was invented in 1830, the year Greece gained officially its independence. Steam engines and trains had started from 1825 and the gas lighting of London had taken place during 1812-1820.

The new country, during the first half of the 19th century, had to organize and efforts were put to plan and construct the capital, Athens. It was not until the late 19th century that the construction of the first major infrastructure projects started. The first wave of infrastructure development in Greece took place mostly under the Trikoupis[1] governments during the late part of the 19th century.

According to Tsokopoulos (1999), the major construction works in the end of the 19th century and in the beginning of the 20th, comprise railways and road works, the construction of the Corinth canal, electrification, the water system of Athens, Construction (rearrangement) of the Port of Piraeus, and the reconstruction of Thessaloniki (after the 1917 fire). Haikalis et al (2002) add the exsiccation of the Kopais Lake, and the construction of important buildings. This first wave of infrastructure works the so-called Trikoupis projects established the pre-conditions for the industrial spring of the mid-war period that was swiftly interrupted by the later developments (Minor Asia disaster of 1922 and 2nd World War).

The Trikoupis projects, especially the railways programme, expressed the efforts to build a modern and cohesive state. It is to be noted, of course, that at the time transport was only railways. For the early part of the twentieth century, Kafkoula and Vitopoulou (2002) note that exemplary projects of the period from the first world war until the Metaxas Dictatorship (1936-1940) such as the reconstruction of Thessaloniki and other Northern Greece cities (mid-thirties) had been planned and carried out by the Ministry of Transport (which was responsible for planning and public works). They add that the well-staffed ministry had developed confidence in planning knowledge and tools which did not completely vanish after the extreme political conservatism that overrun the country after 1945. Yet, in terms of major transport projects no mega projects were planned during the first half of the twentieth century after the Trikoupis wave.

[1] Harilaos Trikoupis was prime minister of Greece during 1875, 1880, 1882-85, 1886-1890, 1992-1993, and 1893-1895.

2. The Period of Intensive Rehabilitation (1948-1962)

Between 1945 (or 1948: end of civil war) and 1962 the main infrastructure projects were those related to the rehabilitation of the country after the 2nd WW and the civil war that followed. Greece suffered most from the German occupation (1941-1945), and its entire infrastructure was practically destroyed. Just the destroyed buildings in the whole of the country accounted for 23.3% of the entire building stock (Haikalis et al, 2002: 51). So besides the development challenges that most countries had to face, Greece had to deal with the particular problems that had been created by the Nazis.

The effort for rehabilitation included the reconstruction, construction and resurfacing of the road network, the reconstruction of the rail networks, the clearance of the Corinth canal from the remainders of the blown rail bridge and from train coaches thrown into it by the retreating Nazis, the construction of a new generation of bridges, the construction and reconstruction of ports, the irrigation works of Athens and Thessaloniki, the construction of hydroelectric dams, the further electrification, the expansion of the telephone network, as well as important defence works. Especially the construction of the large hydroelectric dams, the planning and construction of which gradually passed on to Greek hands became crucial for the development of the country and of the construction sector.

The whole enterprise was financially supported by Marshall Plan and by AMAG (American Aid to Greece, until 1953, when the devaluation of the drachma took place and monetary stability started to be achieved), in the form of aid or loans. *From 1953 the projects continued under a dynamic programme of the Ministry of Public Works, while by virtue of the programme many local contractors, often lacking capital themselves, were also set up in business (Munkman, 1958: 193-201)* (Skayannis, 1990: 165).

The post war infrastructure wave, the rehabilitation of the country, lasted until 1962, and marked the rise of a new branch of Greek economy the one of construction capital. Despite the debates on the development trajectory[2] of the country and the efforts made for re-industrialization, little was at the time achieved in the field of manufacturing industry, while due to the pressing needs construction proliferated. It is very indicative that four economic plans were made and none of them worked, as the real economy had taken its own track.

Construction developed along two lines gradually comprising two fractions of capital: one of housing to cover the vast new needs and one of 'contractors' (often being small and lacking the means) to undertake public works, as the vicious circle of urbanisation started to feed infrastructure.

The big construction activity was conducted via centrally controlled projects and combined many aims at the same time (e.g. civil, military). In the absence of

[2] see the Zolotas-Varvaressos debate and the positions of Batsis

significant manufacturing growth, the new post civil-war regime of accumulation was infrastructure biased (Skayannis, 1990). The corresponding infrastructure of this particular stage was one of extensive provision of the very basic infrastructures where there was no space for a limited number of mega projects, but for a number of major projects instead. As far as transport is concerned, road building was the main issue serving the emerging market and the socio-spatial integration of the country. All infrastructures built served as a necessary precondition for the next stage of industrial production take-off.

3. The Period of Intensive Accumulation (1962-1973)

During the first part of this period (1962-1967), public infrastructure kept its pace (completion of various works) but did not really increase its magnitudes. The demand for housing increased rapidly. The most significant infrastructure projects were important road works (such as the Athens-Thessaloniki National Road) and land reclamation projects including drainage and flood preventing works, as well as the National Airport of Athens, and several power stations (including hydroelectric dams). In a few occasions the Greek construction companies collaborated with non-Greek western companies.

During the second part of this period (military dictatorship of 1967-1973), the economy utilised its already built infrastructure. A substantial part of construction was sustained by the building of huge hotels (Benas, 1976: 293).

Construction capital progressively tended to be centralised: in 1972, there were 624 companies. Six of them together with their satellites had 29% of the sector's working capital, while between 1967-1973 when the sum of profits of all companies reached 6 bill.drs, five of them alone accounted for 3.3 bill. drs (TEE Bulletin, No 838:20, cited in Benas, 1976: 297). As a result, and despite its powerful presence in most parts of the economy, foreign capital did not manage to decisively control the 'technical companies'. In 1972, it controlled only 0.7% of the technical firms' total assets (Giannitsis, 1978: 200).

Evidently, there has been a process of transformation from a small scale craft-like production to a more organised, large scale and industrial-like one. This concentration and centralisation is pointed out by Tarpagos who argues that an oligopolistic nucleus was formed in the construction activity, which, by the end of the period, reached its limits in the domestic market and pursued an 'imperialist' expansion abroad (Tarpagos, 1985: 105).

At the public finance level, there was an attempt to apply a restricted version of Keynesianism via public spending in conjunction with the need to complete territorial integration that would effectively lead to market and economic integration. This made construction and other public works play a prominent role. In Greece it may be that the most unifying social element of the construction activity (including housing sustained by rampant urbanization) has been its role as a stimulant of the

economy, partly because of the backward linkages and partly because of the rest of the effects that generate a 'virtuous' cycle.

It was during the first part of this period that the developmental necessities led to the construction of a mega transport project of the period, the 'National Road' linking the major cities of Patras, Athens, and Thessaloniki, extended to the northern border of Evzonoi (PATHE). This link actually materialized the renowned 'S' shape of the Greek development axis[3]. Yet at the same time, the optimism of the private car (and all related interests) signalled the termination of urban tramways in Athens and the first visualisation of the Athens metro (1962 Smith study).

The 'National Roads' (highways) along with some technically advanced bridges constituted the major transport projects of this period. These projects had not been the result of comprehensive planning methods and procedures. Serious cost overruns and delays were taking place due to inadequate studies which in many occasions were not taking into account the full range of relevant technical and financial risks. There are cases where the needed additional and supplementary works were not anticipated in the studies, geological studies were not prepared, the expropriations were not finalized (and proved to be very time consuming and expensive for the state) and also cases where lack of adequate financing halted the progress of the projects (Haikalis et al, 2002: 84). The attempt of developing Egnatia[4] Motorway in 1971 illustrates the transition of the intensive accumulation period to the period of crisis. In 1971 the dictatorship, in an effort to overcome international economic isolation, signed a contract with the US company 'Mac Donald' for the study, financing, and project management of the Egnatia motorway. According to the contract, the construction would be done by Greek companies. After substantial segments of the road were tendered, the US company decided to exit the contract. A Greek consortium of 12 companies undertook the study and construction of the project. The consortium invested significant amounts to mechanical equipment in order to cope with the technical difficulties of the project but the democratic government after 1974 decided to halt the project and direct funding mainly to defence projects. Some of the contactors faced severe financial problems due to the investments that had already done and other focused their activity to Middle East and Africa in order to be viable and keep their activity in Greece (Haikalis et al, 2002: 84).

The legal, political and institutional context together with the urgency of infrastructure upgrade did not leave space for the involvement of stakeholders in the decision making. There are signs that decision- making was strictly taking place at high levels of government under non-transparent procedures especially during the dictatorship. The Greek socio-political context of this era (and later as well) was

[3] For the history, the meaning, and the 'political economy' of 'S' see P.Skayannis, 2009.
[4] Egnatia (after the name and the footprint of the Roman Via Egnatia) connects the west (city of Igoumenitsa) to the east (city of Alexandroupolis) of Northern Greece. In the Roman times, it was connecting Durrës with Byzantium (Constantinople, today's Istanbul).

underpinned by a quite unease and at the same time distanced relationship between the State and citizens. Politicians together with some high-level public servants have played the most decisive role in the planning of major projects. Moreover, environmental concerns were not high rated in the agenda, if not missing at all.

4. The Period of Crisis and After (1974-1981)

The economy since the 1974 recession was facing serious difficulties because of the unfavourable international situation (1973 oil crisis), the dictatorship's catastrophic policies that led to the Cyprus crisis (1974) generating the need for increased defence expenses.

The crisis resulted in a drastic restructuring of the production structure of the country (smaller manufacturing units, switch to traditional branches) and a decisive switch of Greek construction capital to overseas activities. As a result, during this period, due to a) the reduced public investments which previously sustained construction, b) the reduced urbanisation rates which previously sustained the excessive investments in housing, c) the over accumulation in the broader construction sector in the previous period, and d) the reduction of the opportunities for investment in manufacturing industry, there was a considerable expansion in the private sector's construction activity abroad. This was one of the major responses of the Greek local and cosmopolitan capital, especially the infrastructure geared one, to the (post crisis) worsening conditions of accumulation within the country (Skayannis, 1990).

Eventually, there were more than 70 fairly large Greek companies engaged in design and execution of construction operating in the Middle East and North Africa, mainly Saudi Arabia and Libya, 15 of which very large (Koutsoyannis, 1984: 135-6). The budget of some companies was virtually multiple of the budget of the Public Investment Programme of the Greek State (Tarpagos, 1985: 108-11).

Given the situation described, the state did not proceed to any major public infrastructure investments in the transport sector, neither organised any major transport projects, besides point interventions in the urban centres.

5. The first period of PASOK[5] (1981-1986)

During this period, PASOK tried to achieve a modernisation of capitalism employing Keynesian tools and bringing about a limited level of welfare state regulations previously non-existent. Consequently, such policies bore a high risk of public deficit increase, endangering the economy. The state investments meant to assist the valorisation opportunities of local capital, not only in manufacturing but also in the traditionally strong infrastructure field, did not suffice to regenerate economic

[5] PASOK: Pan-Hellenic Socialist Movement, led by Andreas Papandreou. It won the October 1981 elections.

activity at the desired level. A growing deficit in the public sector has, since that period, been observed.

In 1985 the government negotiated the terms of a loan with the EEC. The terms were based on a 'stabilisation programme' less strict than what an IMF one would have been. It was an austerity programme that managed to destroy the then existing social consensus around the PASOK government.

Under these circumstances, the government in 1986 announced the 'six grand projects'. Most of them were already under consideration in one way or another. They appeared in the Regional Development Programme 1986-1990 that was submitted to the EEC in early April, 1986 (*Eleftherotypia*, 4/4/1986: 39; *Ta Nea*, 4/4/1986: 18). However, they were advertised as such in early February 1987. These projects are: 1) the new Athens airport in Spata, 2) the Athens metro, 3) the motorways programme, 4) the diversion of the Acheloos river, 5) the Rio-Antirio suspension bridge, 6) the electrification and modernisation of the railways (see *Ta Nea*, 11/2/1987: 16; *To Vima*, 15/2/1987; *Ta Nea*, 21/2/1987: 11; *To Vima*, 25/2/1987: 25) (P.Skayannis, 1990: 191).

So in its second phase, based on the EEC guidelines, PASOK, attempting to stimulate the economy and escape the minimal investment situation, tried to manage the crisis with a) strict incomes policy; b) a macro-economic regulation based on austerity packages; c) a resort to large scale construction under a considerably different legal framework facilitating 'conglomerates' of design and construction firms, and d) further infrastructure provision policy with increasing emphasis on self-financing of the projects, a pretext for a certain kind of privatisation. These were accompanied by the adoption of a pro-EEC perspective and efforts to re-establish links with foreign capital. So, the initial attempt to establish a regulation based on quasi-keynesian policies by linking wages to the cost of living, crashed in the absence of investments and the slowdown of output, only to be slightly reversed by the virtual neo-liberal stabilisation programme of the last period, based on the EEC guidelines.

The coming neo-liberal approach became also evident in the case of transport construction projects. Kaltsounis (2004) refers to a particularly interesting case during the 1980s which was the attempt to establish a public authority that would undertake the design, construction, operation and maintenance of the major road network of the country on a self-financing basis using credit capital. The Ministry of Environment, Planning and Public Works (MoEPPW) formed a working committee to investigate the potential of such a venture and the National Road Fund (authority responsible for toll collection in Greek roads) conducted pilot studies which showed very promising results regarding the self-financing possibilities of the entire national road network. At the same period other relevant studies showed that the users of the road network would be willing to pay in tolls adequate amount to sustain the viability of the planned public authority. The reason for this was that the existing road network was in such bad condition that users would pay up high tolls to use a better

network given also that the consumption ability of the population by that time had been significantly increased. However, the international economic climate of deregulation and free competition had already been dominant. Moreover, the emergence of easily moving private capital and know-how on transport PPPs around the world brought a neo-liberal stance on the issue. The idea of a public authority as initially envisaged was abandoned and instead the promotion of a concession-based type of road development started being planned.

6. The CFS periods (1986–1993, 1994–1999, 2000–2006) and the Olympics: The overdue realization of the contemporary MTPs in Greece

A third wave of large infrastructure development of Greece was mature to happen and was made possible with the EEC Community Support Frameworks (CSF) (the beginning of this wave was marked by the, previously mentioned, repeated announcements of the six grand projects by A. Papandreou, in the 80s). Before the CFSs all major transport projects were entirely financed by public funds and in many cases the delayed realization of many major projects was due to the lack of available capital.

The period from 1984 to 1993 (Integrated Mediterranean Programmes and CSF I) was marked by small scale interventions rather that major infrastructures. The first CSF gave Greece a chance to advance on management, especially through the positive reaction of the private sector. The rigidities and inflexibility of the public sector left a lot of gaps in economic and bureaucratic management and the first CSF was only partly successful.

However, the EEC[6] Structural Funds' reform in 1988 qualified Greece as a full Objective 1 status country and gave the opportunity to the country to maximally benefit from the significantly increased EEC funding. According to the new set up, a National Plan is submitted by the government to the EC in support of its request for aid from the Structural Funds. The official agreement between the Commission and the Greek state on the amount and form of EU assistance for the National Development Plan takes the form of a CSF. The above process of preparing a comprehensive development plan in order to claim structural aid has been an extremely important exercise for the Greek state. This procedure forced the Greek government to approach the transport sector in a more strategic way and to start putting in the pipeline major transport interventions in the view of substantial inflow of EU funds.

In the early nineties the flagship study "*Greece 2010*" commissioned by the Ministry of Economy and Finance (to be used as feedback into the National Strategic Development Plan for CSF II) took a strategic view on transport planning considering the European and international dimension of transport development. The study (MoEF, 2005) identified the priority transport axes for the development of the

[6] On 1 November 1993 with the Maastricht Treaty, EU succeeded the EEC.

country's Highway network. Their development was combined with major investment projects in points of access (ports, airports) and secondary transport networks. Starting from late eighties but essentially in 1990 and 1991, a great effort took place at the MoEPPW in order for all priority MTPs, which had been identified and incompletely studied in the past, to be finally realized. Designs and studies were completed and the final decisions were made with outstanding effectiveness, compared to the past. Also, for the first time new methods of procurement, management and financing were studied and introduced for Mega Transport Projects (MTPs) such the Athens Metro, the new Athens International Airport, the Attiki Odos, the Rio-Antirio Bridge and the Egnatia Motorway (Papaioannou & Peleka 2006). The tendering, negotiating and procurement process of all those projects essentially took place within the period from 1991 to 1996. They were all developed with the heavy support of CSF II and CSF III funds, either by private sector consortia through PPPs (concession-type for the case of Rio-Antirio Bridge and Attiki Odos and joint – venture PPP for the case of new Athens airport) or by project-specific public companies operating under private sector rules, governing all phases of project development (Attiko Metro, Egnatia).

The implementation of the CSF II transport programmes was the first crucial test in dealing with large-scale projects. However, the Greek state's implementation mechanisms proved inefficient in many cases causing substantial delays in the programmed works of the pre-mentioned MTPs (MoEF, 2005). In any case, the second, and the third CSFs (1994-1999 and 2000-2006) performed better due to the experience gained in-between. The urgency of the Olympic projects (and the continuous exhortation of the Olympic Committee to speed up) gave a major chance to Greece to improve effective planning measures and complete works on time (see evaluation reports of the CSFs). So the Olympic Games together with the availability of funding worked as a window of opportunity for Greece to advance with projects that were lying in the drawers and were seen with inhibition by the administration for a long time. For example, the Athens metro had been initially proposed by the renowned 'Smith Study' (1962), but never really started until it became an Olympic must. However, it is important to note that a) the delays have been alleged to be 'artificial' so that the 'urgency' could force to assigning projects to specific firms that could cope with urgency and pressure, and b) that projects were speeded up by the Hellenic Olympic Committee and the collaborating Ministries by bypassing the law and even by violating Rights and court decisions, or employing special new legislation, just for this matter.

This wave of MTPs significantly contributed to the radical restructuring, consolidation and growth of the construction sector. The large magnitudes required, led to important mergers and acquisitions so that the domestic construction sector could stay in the game either undertaking MTPs by themselves or by establishing consortia with major international players in the MTPs market. The opening and strengthening of the infrastructure market in Greece was further reinforced by the large privatization shift in MTP development. The involvement in transport infrastructure became more attractive since projects became larger, more technically

demanding and more importantly because profits for private firms could be made from long-term exploitation of transport projects and not only from construction.

During the period of the first three CSFs, Greece gradually switched from the target of internal integration to the target of European Integration. In the first CSF there was no prioritization of quality or sustainability, and the works were spread all over the country in order to satisfy urgent needs and to meet political obligations. The second CSF (1994-1999) gave priority to 'heavier' interventions, in the form of big transport projects, targeting by and large the improvement of transport infrastructure in the Athens metropolitan area. The railway programme came again as one of the priorities, while new forms of partnering with the private sector emerged. During that period, a great effort took place in order to improve the organization, the procedures and the institutions for planning, studying and implementing large projects in the transport sector. New authorities were established to study, procure, and execute large projects (such as Egnatia SA, Ergose SA for the construction of rail projects) but also new organizational structures within the public administration to undertake EU requirements for prioritizing and monitoring EU funded projects (Christofakis, 2007). In the third CSF (2000–2006), a major funding stake targeted again the big transport infrastructure projects such as the Thessaloniki Metro, the continuation of Egnatia and PATHE. Also, a further shift towards partnering with the private sector took place. The major transport PPPs that had been initiated before 2000, such as Athens International Airport, Attiki Odos, Rio–Antirio Bridge were completed in the period before 2006 and a number of new (fourth wave) large transport PPPs were envisaged, planned and studied within the third CSF.

7. A recent generation of MTPs and the post-2008 economic recession.

The post-Olympic optimism and the sense of 'achievability' within the 'ecosystem' of MTPs' advocates in the country had fueled a momentum which was to be kept in the era thereafter. This was manifested by the great number of new MTPs that, by 2008, were either procured or (most of them) already in initial phase of their construction (MoEPPW, 2007; Petroutsatou, 2012). Those projects were the Thessaloniki Metro, the Thessaloniki Submerged Tunnel and the Concession Programme of Major Greek Highways consisting of the Ionian Corridor, the Central and Peripheral Peloponnese Corridors, Segments of PATHE, and Central Greece Corridor E65 (MoEPPW, 2007; Petroutsatou, 2012). The total costs of the above projects was estimated to be more than €9 billion, while except the Thessaloniki Metro all other projects were procured through BOT type concessions (MoEPPW, 2007). The completion of the construction of those projects, according to the contracts' provisions was between (depending on the project) 2011 and 2014 (Petroutsatou 2012; Ypodomes 2012).

In early 2008, the forecasts, despite the deepening of global financial crisis which could affect the country's fiscal responsibilities, were still optimistic (BMI 2008). However, one year later, the picture was quite different. The severe downward trend in construction that started in 2007 was forecasted to continue while the activity in

the infrastructure sector in the meanwhile had been very little. Large PPPs that were in the pipeline such as the Thessaloniki's Submerged Tunnel and the Port concession were abandoned and others that were being planned started appearing as rather unachievable. As the global financial crisis was deteriorating and liquidity was dying up in the financial system, the public debt and the budget deficits were severe threats to the Greek economy and major constraints on the attempts to implement stimulus plans through infrastructure development either through public investments or private PPP capital (BMI, 2009). In the next years, again, progress remained marginal in all major transport projects. The delivery of Thessaloniki Metro was postponed to 2015, instead of 2012 which was the initial contracts' delivery time. The expansion programme of Athens Metro was, as well, progressing very slowly and eventually stalled due to the SIEMENS scandal. Also, the future of the motorways concession programme started appearing very uncertain given the inability of the government to continue the funding at the initially planned pace, the serious expropriation delays (they were programmed according to the contracts to finish by 2009), the decreasing toll revenues (which according to the concession contracts was planned to partially fund construction) and the obvious expression of reluctance by the banks to keep injecting money into those large road PPPs (BMI, 2010, Petroutsatou, 2012). For example, in this context the construction of E65 stopped.

In 2010 the country faced an acute insolvency threat and agreed to receive a financial support of 110 billion from IMF, EC and ECB, with a repayment period of 5 years (Law 3845). After almost two years, in early 2012 and with the country not having at all escaped the insolvency danger, a new bail-out of additional financial support and a mechanism of alleviation of debt repayment obligations was agreed (Law 4046). According to the above agreements, the government has to implement unprecedented austerity measures and reforms which also directly affect the funding, ownership, management and operation of enterprises and projects in the transport sector. Due to the strict targets and the tight inspection of the lending bodies (IMF, EC), during the two years' period a number of relevant developments have speeded-up (some of them not so successfully due to unions' opposition and the lack of effectiveness of the responsible government bodies), aiming at (quickly) reducing expenditure and enhancing revenues. Those quite unpopular developments that are being planned to be promoted in a 'fast-track' mode, have caused big protests and are strongly criticized as neo-liberal, lacking a strategic long-term approach and ignoring democratic values and practices. Indicative of the new policy orientation is the restructuring of the Hellenic Railways Organisation (Law 3891) and the reform of public transport organizations in metropolitan Athens (Law 3920), which both aim at consolidation, privatization of a great number of activities and operations, cutting lines, increasing fares and transfer of employees to other state organizations. Other indicative developments include the Privatization Action Plan regarding Ports and the regional airports concessions (MoEF 2010).

As far as other specific MTPs are concerned, the most crucial remarks have to do with:

- The intention to privatize the operation of Egnatia (and increase toll fares) so as the, currently public and loss-making multi-billion highway (which also suffers from serious traffic decrease due to the economic recession and the fuel price increase), to stop burdening heavily the state budgets (*Agelioforos* 8/12/2010; Ypodomes Portal*).*
- The serious delays in the construction progress of the Thessaloniki Metro and the extensions of Athens Metro (related to the SIEMENS scandal), and the delays in programmed tenders of their new lines. Those delays are related to budget constraints but also to archeological and contracting issues that diachronically delay such projects in Greece (MoI 2010b; Ypodomes potal).
- In 2010, the Extension of Attiki Odos adapted to a new alignment that was more environmental friendly, economical and compatible with the revised Regulatory Plan of Athens/Attiki (RPA-2021) which was under preparation (GRReporter 2010; ORPA 2010). However the most recent updates from media reveal that the major Greek construction companies seem to have successfully lobbied with the Ministry for another alignment which ignores the restrictions of RPA-2021 (esp. the connection between the old and the new international airport). The new project is a highway network in Attiki region of a much higher budget than any other proposed in the past (Ypodomes portal). Media also comment that the conflict of RPA-2021 with this new project has led to the resignation of the former president of ORPA (Ypodomes portal) and the halting of the procedure for the RPA-2021 to be filed for voting in the parliament.
- The New airport of Heraklion in Crete is intended to be redesigned to be smaller and more economical and thus more attractive to sponsors that will bid in a tender of a Joint-venture PPP with the Greek state. An initial tender in 2010, based on the original designs and specifications has not been successful after two postponements of the bids opening (Reuters News 2011b; Ypodomes portal).

During this last period of MTPs development in Greece, there is an apparent trend towards implementing large transport projects through various forms of PPPs and privatization, the governments intending to further push ahead towards this direction. However, despite these strong ambitions towards seeking private investment in transport, the present macro-economic, political, social and institutional context in Greece makes investors and banks quite disinclined to enter into contracts which they perceive as very risky.

The case of the highways PPPs that are currently under construction is very illustrative of the above mentioned context which comprises not only the new challenges and risks that the recession has brought about but also the diachronically persisting institutional and managerial impediments. These projects have experienced huge delays and budget overruns due to the lengthy expropriation procedures, alterations of the project design due to archeological excavations and public utilities arrangements (Lambropoulos, 2010; Petroutsatou, 2012). Such delays fall into the

responsibility of the public sector (according to the concession contracts) and give the right to the banks and the concessionaires to impeach the contracts. The public sector, on the other hand, despite its intentions to implement new legislative and institutional mechanisms (for speeding up environmental consents, expropriation procedures and archeological excavations) to combat delays, has not moved much towards this direction, yet. In addition, it is important to note that the recession has caused serious traffic decline (less economic transactions, increase of petrol retail prices, etc). In addition, more (around 14%) austerity-hit road users have been refusing to pay tolls (Reuters News 2011a). In this context, banks have suspended funding for those road MTPs (Reuters News 2011a; Lambropoulos, 2010) causing almost an absolute stagnation in the projects' progress.

With the aim of providing a stimulus in the economy and a positive impact on employment, the government and the EU are currently negotiating on a mechanism that will allow Greece to re-allocate its 2007-2013 Structural Aid to support infrastructure investment (BMI 2012). Those funds are aimed to support a 're-set' in the road PPP contracts in combination with the introduction of reduced toll fares (which will make transport affordable in the current recession conditions) and concession extensions (Reuters News 2011a).

8. Some general remarks

Apart from the specific comments that add to the discussion in each of the sections of this paper, we can draw some broad conclusions from the historical evolution of MTPs development in Greece. It is apparent that, to a great extent, MTPs are realized in waves. This means that MTPs are realized in "bundles" and also that there are always long periods of relative low MTPs' magnitudes between the waves' peaks. Apparently, within those long periods certain conditions and generators lead to the emergence of the waves. However, despite the fact that MTPs' waves need long times to be realized, they are always interrupted by very severe circumstances such as wars, dictatorships and harsh financial crises. As a final point, it also appears that MTPs' waves go along with general infrastructural waves while MTPs are almost always regarded as the "flagship" ones. A further research would be required to see if to what extent and in what way the infrastructure construction waves in Greece are linked to cyclical economic crises of national and international capital.

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